nalcor energy
LOWER CHURCHILL PROJECT

LOWER CHURCHILL PROJECT

BID EVALUATION AND AWARD RECOMMENDATION

CH0031–SUPPLY AND INSTALL MECHANICAL AND ELECTRICAL AUXILIARIES (MF)

	TITLE	NAME	SIGNATURE	DATE
PREPARED BY:	Contract Administrator	Philip Bursey		6-Jun-2017
REVIEWED BY:	Package Leader	David Wright		6 JUN 2017
REVIEWED BY:	Project Controls Manager	Tanya Power	Tanya Power	07-Jun-2017
REVIEWED BY:	Area Manager	Paul Adams	FOR	7-JUN-2017
APPROVED BY:	Project Manager	Scott O'Brien		7-Jun-2017
APPROVED BY:	Supply Chain Manager	Pat Hussey		7 June 2017
REVIEWED BY:	Deputy Project Director	Lance Clarke		7 June 2017
APPROVED BY:	Project Director	Paul Harrington	P. Harrington	7 June 2017

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1.0 PURPOSE

The purpose of this document is to provide the results of the Bid Evaluation and to recommend a preferred Bidder for CH0031 – Supply and Install Mechanical and Electrical Auxiliaries (MF). The Award Recommendation is based on evaluating the following criteria:

- Commercial
- Technical
- Quality
- Health and Safety
- Environmental
- Benefits

The Bid Evaluation was completed in accordance with the approved Bid Evaluation Plan dated 22-Jan-2015.

2.0 RECOMMENDATION

The Overall Scoring Matrix is included in Appendix 1. Bidders are ranked as follows:

1. Cahill-Ganotec Joint Venture (C-G) – **91.7**%
2. Black & McDonald Limited (B&M) – 79.9%

Based on the above, and in accordance with the included evaluation, it is recommended that CH0031 – Supply and Install Mechanical and Electrical Auxiliaries (MF) is awarded to **Cahill-Ganotec Joint Venture** for an estimated Contract Value of **$189,293,887.68**. This estimated Contract Value is calculated using the Bidder's material take off quantities.

Details of the comparison to budget, specific and non-specific growth, and escalation considerations are included in Appendix 2.

3.0 BIDDERS LIST

RFPs were issued to the following approved Bidders:

- **Black & McDonald Limited**
- **Cahill-Ganotec Joint Venture**
- Groupe Plombaction Inc. Joint Venture
- Aecon Industrial, a Division of Aecon Group Inc.
- Pennecon Energy Ltd.
- Andritz Hydro Canada Inc.
- **Alberici Constructors, Inc., Lorneville Mechanical Contractors Ltd. and Sunny Corner Enterprises Inc. Joint Venture (LASC)**

The following Bidders declined to submit an RFP:

- Groupe Plombaction Inc. Joint Venture
- Aecon Industrial, a Division of Aecon Group Inc.

- Pennecon Energy Ltd.
- Andritz Hydro Canada Inc.

4.0 SCOPE

The scope of Work includes design, supply, installation, registration and completions of mechanical piping systems, heating ventilation and cooling (HVAC) systems, auxiliary electrical systems, assembly and installation of major electrical equipment supplied by Company's Other Contractors, all connections, cabling, site testing, Completions of all electrical and mechanical installation made by Contractor, removal and disposal of all temporary electrical and mechanical installations. Supply and installation of architectural interior works for the Muskrat Falls Powerhouse are also included.

CH0031 has a significant amount of mechanical and electrical equipment (both supplied by the nominated CH0031 Contractor and Company's other Suppliers) to be installed and commissioned by the CH0031 Contractor. There are a number of important interfaces with this equipment installed by the CH0031 Contractor and the Powerhouse Protection, Control and Monitoring System provided by the CH0030 Contractor.

The Spillway concrete works, gates, stop logs, towers, hoists, Spillway electrical building, as well as power supply and controls for the Spillway for the diversion phase will be by Company's Other Contractors but final connection to the Powerhouse power supply and controls is a component of the CH0031 Work.

The Intake concrete works, the Intake trash rack, Intake bulkhead gates, Intake gates and hoists and hoist Motor Control Centers (MCC) will be by Company's Other Contractors, but the power supply to the MCCs in the Intake and Intake building ancillary services as well as final connection to the Powerhouse power supply and controls is a component of the CH0031 Work.

The Work will also consist of supplying detailed documentation for design, quality control, and operation and maintenance for all work required by the Agreement, and the training of Company's personnel.

5.0 RFP SCHEDULE

RFPs were issued on 10-Jun-2014 with a closing date of 16-Jan-2015. Proposals were received from the following three (3) Bidders before the closing date and time and were opened on 22-Jan-2015 at LCP's office in St. John's, NL.

- Black & McDonald Limited
- Cahill-Ganotec Joint Venture
- Alberici Constructors, Inc., Lorneville Mechanical Contractors Ltd. and Sunny Corner Enterprises Inc. Joint Venture (LASC)

Bids were distributed to evaluation team members on 23-Jan-2015.

Proposal clarification began on the 10-Feb-2015 and continued with all three Bidders up to the 30-Jun-2016. Pursuant to the Interim Bid Evaluation and Short List Recommendation (Attachment 11) approved on 30-Jun-2016, evaluation of the LASC proposal was discontinued as of the approval date. Clarification of the, Black & McDonald Limited and Cahill-Ganotec Joint Venture, proposals have continued to 2-Jun-2017.

6.0 EVALUATION TEAM

Evaluation Team	Representative
Commercial	Philip Bursey
Commercial - Legal	Denes Bajzak
Technical	David Wright (Lead) / Jim Slade / Gord Haines / Scott Penney / Antoine Gemayel / Martin Landry / Albert Mitchelmore
Quality	Paul Fraser
Risk Management	Tony Scott
Benefits	Maria Moran
Health & Safety	Grant Skinner
Environment	Lyndsay Haynes
Cost Controller	Jill Hawkins
Planner	Andrew Whitty

Commercial Steering Committee

Deputy Project Director – Lance Clarke
Supply Chain Manager – Pat Hussey
Project Manager - Muskrat Falls Generation - Scott O'Brien

7.0 EVALUATION CRITERIA

The following weighted evaluation criteria was agreed by the Evaluation Team and used to assess Bidder's Proposals.

Criteria	Weighted Rating (%)
Commercial	60%
Technical	40%
Quality	Pass/Fail
Benefits	In Commercial
Risk	Pass/Fail
Health & Safety	Pass/Fail
Environmental	Pass/Fail

For Health & Safety, Bidders had to obtain a score of 70% or greater to pass. For Environmental, Bidders had to obtain a score of 60% or greater to pass. For Risk, Bidders had to obtain a score

of 60% or greater to pass. For Quality, Bidders had to obtain a score of 60% or greater to pass.

8.0 COMMERCIAL EVALUATION

8.1 Proposal Price

Since the Schedule of Price Breakdown (Appendix A2.1) included in the RFP was issued without estimated quantities for the Price Items, as part of their Proposal, Bidders were required to perform their own material take off and include their estimated quantities in the Schedule of Price Breakdown.

It was originally intended that, for evaluation purposes, Bidders Proposal Price would be calculated using the highest quantity, from each Bidder's Proposal, for each Price Item. However, due to some significant quantity differences plus significantly different pricing, for the same Price Items, applying the maximum quantity from each Bidders proposal resulted in a significant skewing (increase) in the Proposal Price for B&M.

As a result of the above described issue, Proposals were compared based on Company's material take off with the addition of any new line items added by Bidders. This comparison did not result in a significant change in either Proposal Price.

The proposal price calculated using the above described method, including the below described normalization, is as follows

	B&M	C-G
Estimated Proposal Price	$238,235,845.00	$186,312,180.34
Normalization	$41,345,774.66	$51,272,415.96
Total	$279,581,619.66	$237,584,596.30
Score / 10	8.2	10.0

8.2 Pricing Model

The RFP was issued to Bidders requesting two pricing options **fixed price** and **fixed price with target cost of labour with labour maximum (LMAX)**. LMAX is intended as the maximum dollar value of labour for which Company can be charged, with all labour costs above LMAX being the risk of Contractor. Both Bidders have submitted proposals based on the fixed price target cost of labour option, which includes fixed pricing for the materials and equipment component of the Price, however both have proposed variants on the labour component of the Price and neither has agreed to an LMAX.

Black & McDonald Limited's (B&M) proposal was most consistent with the RFP instructions, including no OH&P applied to labour above the target cost of labour and cost sharing for labour above the target cost of labour. B&M's proposal, however, does not include an LMAX and based on the way cost sharing has been applied in the proposal the risk to Company increases as the cost of labour goes up. Based on the Bidder markup on labour (20.42%) and way labour

cost sharing has been applied, assuming none of the labour growth was attributable to Company, labour would reach twice the target cost before Contractor's OH&P earned, up to the target cost of labour, would be reduced to $0.00. As part of the normalization process Bidders cost sharing model was applied as if the labour increases 60% over the target cost of labour (or 1,000,000 hours).

Cahill-Ganotec Joint Venture (C-G) proposal does not include an LMAX and applies a sliding scale for OH&P which varies based on the relationship to the target cost of labour. Labour, up to the target cost of labour, will have a fixed markup (13%) and any labour above the target cost of labour, which is not attributable to Company, will be subject to a decreasing OH&P rate. Based on the way the variable OH&P has been applied in the C-G proposal, assuming none of the labour growth was attributable to Company, labour would reach twice the target cost before Contractor's OH&P earned, up to the target cost of labour, would be reduced to $0.00. As part of the normalization process, so that proposals were compared with an approximately equivalent number of hours, Bidders variable OH&P model was applied to approximately 1,000,000 hours.

For both Bidders for any labour incurred, above two times the target cost of labour, would result in a loss to the Contractor.

8.3 Liquidated Damages

The RFP requires liquidated damages (LD) at specified amounts (per day) for critical milestones which are capped at 10% of the Contract Price.

B&M has not yet agreed to the specified daily amounts and has agreed to an LD cap of 5% of the Contract Price. This non-conformance is priced in the normalization.

C-G has accepted the liquidated damages with a cap of 5% of the Agreement Price. This non-conformance is priced in the normalization. Application of LDs will be applied after a 15 day grace period and will be stepped up to the full LD daily amounts after a period of 60 days. The full daily LDs agreed are 17% lower than those specified in the RFP, however are of adequate value for their purpose.

8.4 Performance Security

Both Bidders have agreed to provide a 15% letter of credit during the performance of the Work and a 5% letter of credit for the warranty period.

C-G has indicated that they will provide separate letters of credit from the joint venture partners totaling the required 15%.

C-G has also indicated that they may opt to provide an additional letter of credit in lieu of mechanics lien withholding, at their own expense. The percentage of the LOC proposed for this

purpose has not yet been negotiated. C-G has also indicated that they may want an overall upfront payment of up to 10% of the Agreement Price and have been advised that if this is agreed they will have to provide an LOC of an equivalent value.

8.5 Normalization

It was planned that each Bidder's proposal would be compared based on their proposed LMAX labour value. As stated above neither Bidder's proposal included an actual LMAX, however the B&M proposal stated a non-fixed LMAX of the target cost of labour plus 60% which proved to be approximately 1,000,000 man hours. As part of the normalization B&M's cost sharing model and C-G's variable OH&P model were applied to their respective proposals at approximately 1,000,000 hours.

In accordance with the Bid Evaluation Plan the following normalization was conducted:

- The difference between the Company required LD cap of 10% and the cap offered by Bidder was added to the Bidders Price. Specifically 5% of the proposal Price was added to both C-G and B&M's proposals as normalization.
- The difference between Company's normally established Mark-ups (Materials – 5%; Rented Equipment – 5%; Third Party – 5%) and Bidders proposed mark-ups were applied to $5,000,000, for each category, and added to Bidder's proposals as normalization.

Company's experience on the average hourly cost of labour at the MF Site is approximately $96.00 per hour. B&M's proposal price included an average hourly rate of $105.14 while C-G's proposal price included an average hourly rate of $90.40. Both Bidders proposals were adjusted to reflect Company's experience rate.

Assuming a turn around on a bi-weekly basis (140 hours) at an estimated cost of $800.00 per trip each Bidder's travel costs were normalized to approximately 1,000,000 hours.

Hypothetical change quantities have been develop by the technical team, for comparison/evaluation purposes, and applied to the Rates for Changes. The total of this calculation has been added to each Bidders Proposal Price

8.6 Article Exceptions

Agreement Articles have been materially negotiated and agreed with B&M which include some alternative language which has been previously approved on other agreements. A liability cap of 100% of the Contract Price has been agreed using LCP standard wording.

Agreement Articles have been materially negotiated and agreed with C-G which include some alternative which has been previously approved on other agreements and/or has been discussed and agreed by Company General Counsel. A liability cap of 100% of the Contract Price has been agreed using LCP standard wording.

8.7 Summary

Based on the commercial evaluation **Cahill-Ganotec Joint Venture** is the commercially recommended Bidder.

The pricing model of the recommended Bidder includes fixed unit rates for Materials Cost and Equipment Cost and an estimate of the Manpower Cost for each Price Item. The summation of the as installed quantities, of the Materials Costs and Equipment Costs, for Price Items forms the fixed price for the Non Labour Component of the Price. The summation of the Manpower Cost associated with the as installed quantities of Price Items forms the Target Cost of Labour. PLA Labour, with the exception of Disallowed Items, will be reimbursable at cost based on labour equipment and materials sheets submitted by Contractor and approved by Company, the summation of which forms the Reimbursable Cost of Labour. Labour Overhead and Profit will be applied to the Reimbursable Cost of Labour on a sliding scale which varies based on the relationship to the Adjusted Target Cost of Labour. The Reimbursable Cost of Labour, up to the Adjusted Target Cost of Labour, will have a fixed markup (13%) with any Reimbursable Cost of Labour above the Adjusted Target Cost of Labour, subject to a decreasing OH&P rate as indicated in the below table.

Reimbursable Cost of Labour Overhead and Application of Overhead and Profit Banding	**Overhead and Profit Multiplier**
0 to ACTL	0.13
Greater than ACTL less than or equal to ACTLx1.17	0.07
Greater than ACTLx1.17 less than or equal to ACTLx1.34	0.03
Greater than ACTLx1.34 less than or equal to ACTLx1.51	0.00
Greater than ACTLx1.51 less than or equal to ACTLx1.68	-0.23
Greater than ACTLx1.68 less than or equal to ACTLx1.85	-0.56
Greater than ACTLx1.85 less than or equal to ACTLx2.02	-0.07
Greater than ACTLx2.02	-0.07

Based on the above application of OH&P, Reimbursable Cost of Labour will be twice the Adjusted Target Cost of Labour before Contractor's OH&P earned, up to the Adjusted Target Cost of Labour, would be reduced to $0.00.

To assist the recommended Bidder in remaining cash neutral during the execution of the Work, Company has agreed to prefund for labour on a monthly basis, based on monthly labour forecasts, with reconciliations at the end of each month to address under or over payments. The percentage of such prefunding may be reduced based upon the recommended Bidder's PLA Labour productivity.

8.8 Detailed Bid Tabulation

See detailed bid tabulation attached in Appendix 4.

8.9 Proposed Incentive Scheme

Currently the Agreement only includes punitive mechanisms to marshal Contractor towards meeting schedule milestone dates and to efficiently use PLA Labour. **The early deliverables for this Work will be very challenging to achieve from a schedule perspective and are the most important milestones from a Company perspective.** The ability to achieve these already challenging milestones will be further complicated by the multiple interfaces with other Contractors working on Site, which if not managed effectively by Contractor, will increase the likelihood of schedule delay. Additionally, it will make it more difficult for the Contractor to maintain a high level of productivity from its PLA Labour force. As a result the risk of delay related claim is significant if the Contractor is not motivated to be flexible with its schedule and tightly in control of its labour during the execution of the Work. In order to focus the Contractor's attention toward achieving the milestone dates critical to Company while, at the same time, effectively and efficiently managing the use of PLA Labour and redirecting the Contractor's focus from the opportunity of additional profit through claim, it is recommended that Company, following award to the successful Bidder, introduce an incentive scheme, such as the one outlined below, focused on schedule performance and efficient use of PLA Labour which makes it more profitable for Contractor to cooperate than to argue for Change.

The incentive scheme should be based on hard dates and values specified by Company, which can only be modified at the sole discretion of Company and not by Contractor change request or claim include bonuses of a material value:

1) for the achievement of M-UN1-1 (Unit 1 complete), M-UN2-1 (Unit 2 complete) and M-GEN-1 (Units 1-4 Intake gates complete) by hard dates specified by Company.
2) a sliding scale bonus for completing the Work under, at or close to the Target Cost of Labour. In order to discourage change requests or claims for delay, such bonus should include a provision which reduces the value of the bonus by the value of each change request or claim for delay submitted by the Contractor.

9.0 TECHNICAL EVALUATION

The Technical Evaluation is included in Appendix 5.

10.0 HEALTH & SAFETY EVALUATION

The Health and Safety Evaluation is included in Appendix 6.

11.0 ENVIRONMENTAL EVALUATION

The Environmental Evaluation is included in Appendix 7.

12.0 QUALITY ASSURANCE EVALUATION

The Quality Evaluation is included in Appendix 8.

13.0 BENEFITS EVALUATION

The Provincial Benefits Evaluation is included in Appendix 9.

14.0 RISK MANAGEMENT EVALUATION (IF APPLICABLE)

The Risk Management Evaluation is included in Appendix 10.

15.0 ATTACHMENTS

Attachment 1 – Overall Scoring Matrix
Attachment 2 – Executive Summary
Attachment 3 – Bid Opening Record
Attachment 4 – Commercial Evaluation
Attachment 5 – Technical Evaluation
Attachment 6 – Health and Safety Evaluation
Attachment 7 – Environmental Evaluation
Attachment 8 – Quality Assurance Evaluation
Attachment 9 – Benefits Evaluation
Attachment 10 – Risk Management Evaluation
Attachment 11 – Interim Bid Evaluation and Short List Recommendation

Attachment 1

Overall Scoring Matrix

OVERALL SCORING MATRIX

CH0031 - Supply & Install Mechanical and Electrical Auxiliaries (MF)

NOTE: Each subsection is rated on a scale 1 - 10, then multiplied by the weighted value (weighting) for the item to calculate the item value.

SUMMARY OF PROPOSAL RESULTS

		Black & McDonald Limited		Cahill-Ganotec Joint Venture	
Criteria:	item wgtg	Rating 0-10	Item Value	Rating 0-10	Item Value
Points value of Section 1 Commercial	**57.5%**	8.2	**47.2**	10.0	**57.5**
NL Benefits	**2.5%**	5.5	**1.4**	8.5	**2.1**
TOTAL Commercial			**48.5**		**59.6**
Points value of Section 2 Technical	**40%**	7.8	**31.4**	8.0	**32.1**
OVERALL RATING			**79.9**		**91.7**
Quality (must be = or > than 60% to Pass)			Pass		Pass
Health & Safety (must be = or > than 70% to Pass)			Pass		Pass
Environmental (must be = or > than 60% to Pass)			Pass		Pass
Risk (must be = or > than 60% to Pass)			Pass		Pass
RANKING			2		1

Overall Comments:

Attachment 2

Executive Summary

Estimated Contract Value and Comparison to Budget

5-Jun-17

The Lump Sum final value for this award is indicated in Table 1-Contract Value and Comparison to Budget

Table 1-Contract Value and Comparison to Budget

Description (all amount in CAD)		Amount
Total Contract Value	a	$ 189,293,888
Escalation (Note 1)	b	$ -
Forecast Specific Growth Allowance (Note 2)	d	$ [redacted]
Forecast Non-specific Growth Allowance (Note 3)	e	$
Forecast Total Contract Value	f=a+b+c+d+e	$
Original Control Budget	g	$
Budget transfers and scope changes (Note 4)	h	$
DG3 Escalation allowance	I	$
Current Control Budget	j=f+g+h+i	$
Variance (Note 5)	k=f-j	$

Note 1: **Escalation**

- Contract value includes all escalation $ -

Sub Total Escalation $ -

Note 2: **Specific growth** (i.e. Part of the scope not included in the contract value but to be awarded later)
For details refer to attached sheet

[redacted]

$
$
$
Sub Total Specific $

Note 3 : **Non-Specific growth** (i.e. Additional scope that may or may not be added to the contract at a later stage)
For details refer to attached sheet

[redacted]

$
Sub Total Non-Specific $

Note 4 : **Budget revisions**

- Transfer of Electrical Scope to CH0032 (SC0003) -$
- Transfer of Fire Detection System Scope to CH0032 (SC0003) -$
- Electro-mechanical Embedments Scope transfer to CH0007 (SC0020) -$
- Transfer of Station Service Transformers Scope to PH0035 (SC0065) -$
- Transfer of Air Transportation to SM0709 (SC0124) -$
- Transfer of Station Service Transformers Scope from PH0035 (SC0207) $
- Transfer of HV Cable Drops & Terminations Scope to CT0319 (SC0280) -$
- Transfer of HV Cable Drops & Terminations Scope to CT0319 (SC0280) $

$

Conclusion:

The Forecasted Total Contract Value of [redacted] inclusive of escalation, specified and un-specified growth, represents a [redacted] variance compared to the Current Control Budget which will be requested from Contingency with a PCN.

CH0031-001 - Mechanical and Electrical Auxiliaries

Basis of calculation

Revised 3-MAY-2017

Note 1: **Escalation**		$ -
1.1 Included in contract price	N/A	
Note 2: **Specified Growth**		$ [redacted]
2.1 [redacted]		
2.2		
2.3		
Note 3: **Non-specified Growth**		$ [redacted]
3.1 [redacted]		
Note 4: **Budget Transfers & Scope Changes**		$ [redacted]
4.1 [redacted]		
4.2		
4.3		
4.4		
4.5		
4.6		
4.7		
4.8		

SNC·LAVALIN

Project Cost Status

PROJECT: 505573 : LOWER CHURCHILL PROJECT

CLIENT: Nalcor Energy

nalcor energy

CMRPPCOSTAT

Grouped by:C.P.; PO/Contract
Period 070 From: 2017-03-30 To: 2017-04-26
Report Setting: cost report JF
Project Currency: CAD
Report Currency: CAD at the rate of: 1.00000000

	Budget			Total Commitment	Outstanding Changes	Trends	Unawarded Scope (Unalloc. Budget)	Incurred this Period	Incurred to Date	Current Forecast	Forecast Variance	Variance (Bud. - Fcst)
	Original	Sc.Ch.&Trans	Revised									
	(1)	(2)	(3=1+2)	(4)					(7)	(5)	(Curr-Prev)	(6=3-5)
CH0031 - Mechanical and Electrical Auxiliaries (M												
CH0031 - Mechanical and Electrical Auxiliaries (M (CAD)	[redacted]			[redacted]							0	0
Sub Total for : CH0031 - Mechanical and Electrical Auxiliaries (M											0	0
Grand Total:											0	0

Attachment 3

Bid Opening Record

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BID OPENING RECORD
(Confidential)

Project Name: Lower Churchill Project
Company: Muskrat Falls Corporation

Package No.: CH0031
Package Title: Supply and Install Mechanical and Electrical Auxiliaries (MF)

Bid Evaluation Plan is Approved: Yes ☒ No ☐
Date Bid Evaluation Plan was Approved: - 22-Jan-2015

RFP Closing Date: 16-Jan-2015 RFP Closing Time: 16:00
Bid Opening Date: 19-Jan-2015 Bid Opening Time: 13:30

No.	Bidder Name	Bid Received (Date and Time)	Currency	Unevaluated Price	Remarks
1.	Black & McDonald Limited	16-Jan-2015 2:53 PM	CAD	$ 157,600,000	
2.	Cahill-Ganotec Joint Venture	16-Jan-2015 3:20 PM	CAD	$ 149,737,000	
3.	LASC Muskrat Falls Joint Venture	15-Jan-2015 10:30 AM	CAD	$ 252,084,162.75	
4.					

Additional Comments:

Present at Opening			
Name	**Title**	**Signature**	**Date**
Philip Bursey	Contracts Lead		22-Jan-2015
Kim Ball	Contracts Coordinator		22-Jan-15
Jill Hawkins	Cost Controller		22-Jan-2015

Attachment 4

Commercial Evaluation

SUMMARY BID TAB

		Black & McDonald Limited						Cahill-Ganotec Joint Venture					
No	PRICE ITEM DESCRIPTION	TOTAL LABOUR HOURS	LABOUR OH&P	COST OF LABOUR	MATERIALS	EQUIPMENT	TOTAL PRICE	TOTAL LABOUR HOURS	LABOUR OH&P	COST OF LABOUR	MATERIALS	EQUIPMENT	TOTAL PRICE
ST01	SUB-TOTAL INDIRECT COSTS (GENERAL)	230,878	3,688,651	24,591,006	94,148,680	4,611,769	127,040,106	13,102	153,987	1,184,517	39,873,545	4,864,998	46,077,047
ST02	SUB-TOTAL PIPING/MECHANICAL - DESIGN AND ENGINEERING	0	-	-	114,855	-	114,855	0	-	-	232,008	701	232,709
ST03	SUB-TOTAL PIPING/MECHANICAL - SUPPLY AND INSTALLATION	142,346	2,283,815	15,225,431	15,798,602	1,880,315	35,188,162	147,521	1,733,792	13,336,862	15,399,093	5,117,369	35,587,116
ST04	SUB-TOTAL HVAC SYSTEM - SUPPLY, INSTALLATION	38,979	636,639	4,244,262	4,196,270	6,134,639	15,211,810	89,790	1,055,282	8,117,556	10,555,677	3,720,727	23,449,242
ST05	SUB-TOTAL ELECTRICAL - DESIGN AND ENGINEERING	0	-	-	114,855	-	114,855	0	-	-	254,537	769	255,307
ST06	SUB-TOTAL ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	142,513	2,270,854	15,139,025	19,049,918	3,050,550	39,510,346	198,977	2,338,471	17,988,240	19,245,706	7,841,642	47,414,059
ST07	SUB-TOTAL ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	25,116	400,207	2,668,047	915,313	537,618	4,521,185	50,090	588,690	4,528,385	641,465	1,078,563	6,837,102
ST08	SUB-TOTAL ARCHITECTURAL - SUPPLY & INSTALL	90,610	1,331,459	8,876,390	1,995,279	219,767	12,422,895	154,013	1,810,081	13,923,696	1,510,932	3,576,463	20,821,172
ST09	SUB-TOTAL DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLATION	1,512	24,311	162,073	398,858	20,434	605,676	1,458	17,137	131,822	588,387	149,202	886,547
ST10	SUB-TOTAL PIPING/MECHANICAL - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	4,046	65,632	437,544	209,924	107,248	820,347	8,835	103,835	798,730	107,862	188,039	1,198,466
ST11	SUB-TOTAL HVAC SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	1,000	17,220	114,800	94,485	-	226,505	1,595	18,744	144,188	76,234	34,116	273,283
ST12	SUB-TOTAL ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	15,211	242,377	1,615,849	276,808	255,713	2,390,748	16,054	188,678	1,451,371	1,158,963	344,595	3,143,607
ST13	SUB-TOTAL DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	429	6,898	45,985	4,097	11,373	68,353	881	10,359	79,683	25,594	20,887	136,523
ST14	**TOTAL CONTRACT PRICE (pre-normalization)**	**692,639**	**10,968,062**	**73,120,412**	**137,317,945**	**16,829,426**	**238,235,845**	**682,316**	**8,019,056**	**61,685,049**	**89,670,003**	**26,938,072**	**186,312,180**
ST15	Total Normalization	296,997	-	21,884,632	19,461,143	-	41,345,775	316,684	496,731	34,218,951	16,556,734	-	51,272,416
ST16	**TOTAL NORMALIZED CONTRACT PRICE**	**989,636**	**10,968,062**	**95,005,043**	**156,779,089**	**16,829,426**	**279,581,620**	**999,000**	**8,515,787**	**95,904,000**	**106,226,737**	**26,938,072**	**237,584,596**
ST17	Score / 10						8.2						10.0

6-Jun-2017

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

						Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR												Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	[illegible]
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
		GENERAL																												
1	0000.01	Mobilization	LS	1	1	16349.8	2,114,581.18	16349.8	317,187.18	317,187.18	2,114,581.18	6,575,590.01	6,575,590.01	1,664,992.37	1,664,992.37	10,672,350.74	10,672,350.74	1.0	8157.0	737,435.95	8,156.95	95,866.67	95,866.67	737,435.95	143,108.02	143,108.02	940,697.35	940,697.35	1,917,108.00	1,917,108.00
2	0000.02	Site Installation	LS	1	1	0.0	-	0.0	-	0.00	0.00	16,825,940.72	16,825,940.72	500,232.00	500,232.00	17,326,172.72	17,326,172.72	1.0	0.0	0.00	0.00	0.00	0.00	0.00	465,787.59	465,787.59	3,625,777.29	3,625,777.29	4,091,564.88	4,091,564.88
3	0000.03	Demobilization	LS	1	1	1006.0	137,763.42	1006.0	20,664.51	20,664.51	137,763.42	89,663.30	89,663.30	93,926.45	93,926.45	342,017.69	342,017.69	1.0	4945.3	447,080.86	4,945.27	58,120.51	58,120.51	447,080.86	86,294.74	86,294.74	298,523.63	298,523.63	890,019.74	890,019.74
PM	Added	Project Management / Staff Labour	LS	0	1	0.0	-	0.0	-	0.00	0.00	65,020,863.62	65,020,863.62	285,000.00	285,000.00	65,305,863.62	65,305,863.62	1.0	0.0	0.00	0.00	0.00	0.00	0.00	34,202,483.60	34,202,483.60	0.00	0.00	34,202,483.60	34,202,483.60
3b	Added	0	LS	0	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4		Estimate of Travel Allowances - Trades Labour	Est	1	1							$5,479,302.56	$5,479,302.56			5,479,302.56	5,479,302.56	1.0							$4,975,871.23	$4,975,871.23			4,975,871.23	4,975,871.23
4a		Performance Bond	$/$1000	0	1								$0.00			0.00	0.00	0.0								$0.00			0.00	
4b		Payment Bond	$/$1000	0	1								$0.00			0.00	0.00	0.0								$0.00			0.00	
4c		Letter of Credit	$/$1000	0	1								$0.00			0.00	0.00	0.0								$0.00			0.00	
4d		Assignment Rights in Accordance with **Article 30.1 (d)**	LS	0	1								$0.00			0.00	0.00	0.0								$0.00			0.00	
B&M-0002	Added	General Foreman	LS	0	1	26026.0	3,163,941.27	26026.0	474,591.19	474,591.19	3,163,941.27	0.00	0.00	0.00	0.00	3,638,532.46	3,638,532.46	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0003	Added	Foreman	LS	0	1	47380.7	5,592,182.40	47380.7	838,827.36	838,827.36	5,592,182.40	0.00	0.00	0.00	0.00	6,431,009.77	6,431,009.77	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0004	Added	Labourers	LS	0	1	43710.3	4,511,812.47	43710.3	676,771.87	676,771.87	4,511,812.47	0.00	0.00	0.00	0.00	5,188,584.34	5,188,584.34	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0005	Added	Operators	LS	0	1	30697.3	3,263,247.04	30697.3	489,487.06	489,487.06	3,263,247.04	0.00	0.00	0.00	0.00	3,752,734.10	3,752,734.10	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0006	Added	Teamsters	LS	0	1	13013.0	1,332,691.77	13013.0	199,903.77	199,903.77	1,332,691.77	0.00	0.00	0.00	0.00	1,532,595.53	1,532,595.53	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0007	Added	Carpenters	LS	0	1	45465.0	3,763,390.21	45465.0	564,508.53	564,508.53	3,763,390.21	0.00	0.00	2,067,617.87	2,067,617.87	6,395,516.62	6,395,516.62	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0008	Added	Painters	LS	0	1	2400.0	180,000.00	2400.0	27,000.00	27,000.00	180,000.00	157,320.00	157,320.00	0.00	0.00	364,320.00	364,320.00	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0009	Added	Sheetmetal General Foreman	LS	0	1	4830.0	531,396.60	4830.0	79,709.49	79,709.49	531,396.60	0.00	0.00	0.00	0.00	611,106.09	611,106.09	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST01		SUB-TOTAL INDIRECT COSTS (GENERAL)			$ -			230878.1		$3,688,650.95	$24,591,006.36		$94,148,680.22		$4,611,768.69		$127,040,106.22	0.0			13102.2		$153,987.19	$1,184,516.81		$39,873,545.18		$4,864,998.26		$46,077,047.44
		PIPING/MECHANICAL SYSTEMS																												
		PIPING/MECHANICAL - DESIGN AND ENGINEERING																												
5	3343.010	WFS (Fire Protection Water)	LS	1	1	0.0	-	0.0	-	0.00	0.00	114,000.00	114,000.00	0.00	0.00	114,000.00	114,000.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	122,570.22	122,570.22	370.34	370.34	122,940.55	122,940.55
6	3310.010	Mechnical Shaft Plaftorm/Staging Design and Engineering	LS	1	1	0.0	-	0.0	-	0.00	0.00	855.00	855.00	0.00	0.00	855.00	855.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	109,437.69	109,437.69	330.66	330.66	109,768.35	109,768.35
ST02		SUB-TOTAL PIPING/MECHANICAL - DESIGN AND ENGINEERING			$ -			0.0		$0.00	$0.00		$114,855.00		$0.00		$114,855.00	0.0			0.0		$0.00	$0.00		$232,007.91		$701.00		$232,708.91
		PIPING/MECHANICAL - SUPPLY AND INSTALLATION						0.0													0.0									
		WPS (Domestic Water)																												
7	3352.001	Water treatment plant: Sand & Antracite Filter 3352-FR-6000	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	26,906.34	26,906.34	2,205.61	2,205.61	46,503.59	46,503.59	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	206,799.93	206,799.93	44,072.85	44,072.85	262,598.51	262,598.51
8	3352.002	Water treatment plant: Anionic Exchanger 3352-FR-6001	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	37,351.02	37,351.02	2,205.61	2,205.61	56,948.27	56,948.27	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	317.47	317.47	2,502.62	2,502.62	14,545.81	14,545.81
9	3352.003	Water treatment plant: Anionic control Panel 3352-CP-6001	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	5,818.32	5,818.32	1,654.21	1,654.21	20,516.26	20,516.26	1.0	15.9	1,440.41	15.9	187.25	187.25	1,440.41	300.30	300.30	398.97	398.97	2,326.93	2,326.93
10	3352.004	Water treatment plant: Activated Carbon Filter 3352-FR-6002	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	30,387.90	30,387.90	2,205.61	2,205.61	49,985.15	49,985.15	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	317.47	317.47	2,502.62	2,502.62	14,545.81	14,545.81
11	3352.005	Water treatment plant: Cartridge Filter 3352-FR-6003	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	6,016.98	6,016.98	2,205.61	2,205.61	25,614.23	25,614.23	1.0	103.1	9,321.75	103.1	1,211.83	1,211.83	9,321.75	190.59	190.59	2,229.12	2,229.12	12,953.29	12,953.29
12	3352.006	Water treatment plant: UV Sterilizer 3352-UV-6000	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	21,684.00	21,684.00	2,205.61	2,205.61	41,281.25	41,281.25	1.0	103.1	9,321.75	103.1	1,211.83	1,211.83	9,321.75	190.59	190.59	2,229.12	2,229.12	12,953.29	12,953.29
13	3352.007	Water treatment plant: Injection of Sodium Hypochlorite 3352-P-6002 / 6003	ea	2	2	69.9	7,561.58	139.8	1,134.24	2,268.47	15,123.16	10,842.00	21,684.00	1,102.81	2,205.61	20,640.62	41,281.25	2.0	35.9	3,241.96	71.7	421.45	842.91	6,483.91	0.00	0.00	761.91	1,523.82	4,425.32	8,850.63
14	3352.008	Water treatment plant: Tank 3352-HTK-6000 / 6001	ea	2	2	52.4	5,671.19	104.9	850.68	1,701.36	11,342.37	2,038.77	4,077.54	827.10	1,654.21	9,387.74	18,775.48	2.0	78.4	7,085.59	156.8	921.13	1,842.25	14,171.17	123.63	247.26	1,690.11	3,380.22	9,820.45	19,640.91
15	3352.009	Water treatment plant: Static Mixer 3352-SM-6000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	2,138.10	2,138.10	1,102.81	1,102.81	11,936.72	11,936.72	1.0	35.9	3,249.58	35.9	422.45	422.45	3,249.58	0.00	0.00	763.71	763.71	4,435.73	4,435.73
16	3352.010	Water treatment plant: Flow Meter 3352-FQI-6000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	3,878.88	3,878.88	1,102.81	1,102.81	13,677.50	13,677.50	1.0	12.8	1,153.43	12.8	149.95	149.95	1,153.43	360.36	360.36	343.63	343.63	2,007.36	2,007.36
17	3352.011	Water treatment plant: Control Panel 3352-CP-6004	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	7,559.10	7,559.10	1,654.21	1,654.21	22,257.04	22,257.04	1.0	15.9	1,440.41	15.9	187.25	187.25	1,440.41	300.30	300.30	398.97	398.97	2,326.93	2,326.93
18	3352.012	Water treatment plant: Treated Water Tank 3352-TK-6000	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	14,720.88	14,720.88	2,205.61	2,205.61	34,318.13	34,318.13	1.0	213.0	19,252.11	213.0	2,502.77	2,502.77	19,252.11	658.26	658.26	4,657.05	4,657.05	27,070.19	27,070.19
19	3352.013	Water treatment plant: Distribution Pump 3352-P-6000 / 6001	ea	2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	10,179.12	20,358.24	2,205.61	4,411.22	29,776.37	59,552.73	2.0	90.1	8,141.29	180.1	1,058.37	2,116.73	16,282.57	8,649.80	17,299.61	3,654.75	7,309.49	21,504.20	43,008.40
20	3352.014	Water treatment plant: Hydropneumatic Tank 3352-TK-6001	ea	1	1	52.4	5,671.19	52.4	850.68	850.68	5,671.19	6,182.67	6,182.67	827.10	827.10	13,531.64	13,531.64	1.0	96.7	8,743.64	96.7	1,136.67	1,136.67	8,743.64	6,555.70	6,555.70	3,374.71	3,374.71	19,810.72	19,810.72
21	3352.015	Main water heater 3352-WHTR-7002	ea	1	1	52.4	5,671.19	52.4	850.68	850.68	5,671.19	33,325.21	33,325.21	827.10	827.10	40,674.18	40,674.18	1.0	48.2	4,355.87	48.2	566.26	566.26	4,355.87	43,589.65	43,589.65	9,799.41	9,799.41	58,311.19	58,311.19
22	3352.016	Control room water heater 3352-WHTR-7000	ea	1	1	35.0	3,780.79	35.0	567.12	567.12	3,780.79	1,127.53	1,127.53	551.40	551.40	6,026.84	6,026.84	1.0	48.2	4,355.87	48.2	566.26	566.26	4,355.87	1,326.09	1,326.09	1,290.66	1,290.66	7,538.89	7,538.89
23	3352.017	Eyewash water heater 3352-WHTR-6000 / 7001 / 7003	ea	3	3	35.0	3,780.79	104.9	567.12	1,701.36	11,342.37	22,086.66	66,259.98	551.40	1,654.21	26,985.97	80,957.92	3.0	25.5	2,304.10	76.5	299.53	898.60	6,912.29	30,224.65	90,673.94	6,626.50	19,879.49	39,454.77	118,364.32
24	3352.018	Emergency shower and eyewash 3352-ESY-6000	ea	1	1	52.4	5,671.19	52.4	850.68	850.68	5,671.19	8,779.59	8,779.59	827.10	827.10	16,128.56	16,128.56	1.0	48.1	4,350.33	48.1	565.54	565.54	4,350.33	2,359.83	2,359.83	1,497.49	1,497.49	8,773.19	8,773.19
25	3352.019	Emergency shower and eyewash 3352-ESY-7000 to 7004	ea	4	4	52.4	5,671.19	209.7	850.68	3,402.71	22,684.74	19,449.99	77,799.96	827.10	3,308.42	26,798.96	107,195.83	4.0	48.1	4,347.29	192.3	565.15	2,260.59	17,389.14	12,563.59	50,254.37	3,551.05	14,204.20	21,027.08	84,108.30
26	3352.020	Water closet 3352-WC-6000 / 6001 / 7000 to 7004 / 8000 to 8003	ea	11	11	17.5	1,890.40	192.3	283.56	3,119.15	20,794.35	714.93	7,864.23	275.70	3,032.72	3,164.59	34,810.45	11.0	28.9	2,609.60	317.5	339.25	3,731.72	28,705.56	553.92	6,093.09	724.81	7,972.92	4,227.57	46,503.30
27	3352.021	Urinal 3352-UR-7000 / 7001	ea	2	2	26.2	2,835.59	52.4	425.34	850.68	5,671.19	1,585.39	3,170.79	413.55	827.10	5,259.88	10,519.76	2.0	28.8	2,606.32	57.7	338.82	677.64	5,212.64	1,077.47	2,154.94	829.44	1,658.88	4,852.05	9,704.10
28	3352.022	Lavatory 3352-LAV-6001 / 7000 to 7004 / 8000 to 8003	ea	10	10	17.5	1,890.40	174.8	283.56	2,835.59	18,903.95	543.93	5,439.30	275.70	2,757.01	2,993.59	29,935.86	10.0	9.6	869.37	96.2	113.02	1,130.19	8,693.74	220.54	2,205.45	248.72	2,487.17	1,451.65	14,516.54
29	3352.023	Lavatory 3352-LAV-6000 / 6002	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	1,096.60	2,193.20	275.70	551.40	3,546.26	7,092.52	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	126.43	252.87	230.88	461.76	1,345.04	2,690.07
30	3352.024	Kitchen sink 3352-SK-7000	ea	1	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	1,242.03	1,242.03	413.55	413.55	4,916.51	4,916.51	1.0	9.7	874.78	9.7	113.72	113.72	874.78	259.70	259.70	257.86	257.86	1,506.06	1,506.06
31	3352.025	Mop sink 3352-MS-6000 / 7000 / 8000	ea	3	3	26.2	2,835.59	78.7	425.34	1,276.02	8,506.78	7,618.27	22,854.82	413.55	1,240.66	11,292.76	33,878.28	3.0	19.2	1,737.55	57.7	225.88	677.64	5,212.64	5,695.54	17,086.61	1,555.00	4,665.01	9,213.97	27,641.91
32	3352.026	Service sink 3352-SS-8000	ea	1	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	7,536.19	7,536.19	413.55	413.55	11,210.68	11,210.68	1.0	9.7	874.78	9.7	113.72	113.72	874.78	5,683.45	5,683.45	1,349.81	1,349.81	8,021.77	8,021.77
33	3352.027	Multi station sink 3352-SKM-6000	ea	1	1	52.4	5,671.19	52.4	850.68	850.68	5,671.19	11,720.79	11,720.79	827.10	827.10	19,069.76	19,069.76	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	6,045.33	6,045.33	1,523.34	1,523.34	9,041.22	9,041.22
34	3352.028	Shower fitting 3352-SH-7000 / 7001	ea	2	2	52.4	5,671.19	104.9	850.68	1,701.36	11,342.37	769.95	1,539.90	827.10	1,654.21	8,118.92	16,237.84	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	370.32	740.64	279.97	559.95	1,638.02	3,276.03
35	3352.029	Air vent 3352-AV-8000 / 8001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	5,575.02	11,150.03	137.85	275.70	6,799.84	13,599.69	2.0	11.0	989.85	21.9	128.68	257.36	1,979.70	260.46	520.92	285.07	570.14	1,664.06	3,328.12
36	3352.030	Pressure safety valve 3352-PSV-6000 / 6001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	124.90	249.81	137.85	275.70	1,349.73	2,699.47	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	104.77	209.54	176.18	352.36	1,026.64	2,053.27
37	3352.031	Pressure indicator 3352-PI-6000 to 6010	ea	11	11	8.7	945.20	96.1	141.78	1,559.58	10,397.17	700.54	7,705.90	137.85	1,516.36	1,925.36	21,179.01	11.0	3.7	329.95	40.2	42.89	471.83	3,629.44	84.95	934.41	94.64	1,041.09	552.43	6,076.76
38	3352.032	Pressure switch 3352-PSL-6000, 3352-PSLL-6000, 3352-PSH-6000, 3352-PSHH-6000	ea	4	4	8.7	945.20	35.0	141.78	567.12	3,780.79	464.62	1,858.50	137.85	551.40	1,689.45	6,757.81	4.0	7.3	659.90	29.2	85.79	343.15	2,639.59	419.73	1,678.91	239.59	958.35	1,405.00	5,619.99
39	3352.033	Pressure control valve 3352-PCV-6000	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	1,479.22	1,479.22	137.85	137.85	2,704.05	2,704.05	1.0	6.4	575.32	6.4	74.79	74.79	575.32	1,704.41	1,704.41	478.35	478.35	2,832.88	2,832.88
40	3352.034	Temperature indicator 3352-TE-7000 / 3352-TI-7000, 3352-TE-6000 / 3352-TI-6000	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	294.76	589.53	137.85	275.70	1,519.59	3,039.19	2.0	3.7	329.95	7.3	42.89	85.79	659.89	246.41	492.83	127.15	254.30	746.40	1,492.81
41	3352.035	Control Panel 3352-CP-6005	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	55,387.27	55,387.27	11,545.45	11,545.45	68,829.82	68,829.82
B&M-0010	Added	Drinking Fountain 3352-DF-7000	ea	0	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	2,611.39	2,611.39	413.55	413.55	6,285.88	6,285.88	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	3352.036	Pipe NPS 1/2 Type K , Piping Specification NB11	m	214	214	1.3	139.51	276.0	20.93	4,478.31	29,855.39	17.24	3,690.07	20.35	4,354.21	198.03	42,377.98	214.0	0.8	73.88	174.9	9.60	2,055.45	15,811.13	13.57	2,903.54	20.10	4,300.40	117.15	25,070.52
43	3352.037	Pipe NPS 1/2 Sch.10S, Piping Specification SB11	m	1	1	1.0	104.63	1.0	15.70	15.70	104.63	23.57	23.57	15.26	15.26	159.16	159.16	1.0	3.9	351.85	3.9	45.74	45.74	351.85	10.73	10.73	84.85	84.85	493.17	493.17
44	3352.038	Elbow 45 degrees NPS 1/2 Type K , Piping Specification NB11	ea	1	1	1.8	198.49	1.8	29.77	29.77	198.49	74.68	74.68	28.95	28.95	331.89	331.89	1.0	0.2	16.64	0.2	2.16	2.16	16.64	1.00	1.00	4.11	4.11	23.92	23.92
45	3352.039	Elbow 90 degrees NPS 1/2 Type K, Piping Specification NB11	ea	144	144	0.8	85.07	113.3	12.76	1,837.46	12,249.76	8.15	1,173.17	12.41	1,786.55	118.38	17,046.94	144.0	0.2	22.16	35.3	2.88	414.92	3,191.73	0.51	73.83	5.31	764.97	30.87	4,445.45
46	3352.040	Tee NPS 1/2 Type K, Piping Specification NB11	ea	13	13	1.0	113.42	13.6	17.01	221.18	1,474.51	11.04	143.58	16.54	215.05	158.02	2,054.31	13.0	0.5	44.29	6.4	5.76	74.85	575.77	1.04	13.46	10.62	138.02	61.70	802.10
47	3352.041	Coupling SW/FNPT NPS 1/2, Piping Specification NB11	ea	2	2	0.5	56.71	1.0	8.51	17.01	113.42	8.06	16.13	8.27	16.54	81.55	163.11	2.0	0.2	22.10	0.5	2.87	5.75	44.21	1.65	3.31	5.53	11.06	32.16	64.32
48	3352.042	Weld NPS 1/2, Piping Specification NB11	ea	364	364	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	363.6	1.3	118.00	474.5	15.34	5,577.01	42,900.08	0.00	0.00	27.73	10,082.15	161.07	58,559.24
49	3352.043	Ball Valve NPS 1/2, Valve Specification VBA08	ea	60	60	3.3	354.45	196.6	53.17	3,190.04	21,266.95	26.17	1,569.93	51.69	3,101.64	485.48	29,128.56	60.0	1.3	118.10	78.4	15.35	921.20	7,086.18	9.11	546.51	29.59	1,775.37	172.15	10,329.27
50	3352.044	Pipe insulation NPS 1/2	Linear meter	215	215	1.4	142.38	302.5	21.36	4,591.81	30,612.04	37.48	8,058.89	8.55	1,838.25	209.77	45,100.98	215.0	3.3	302.12	718.5	39.28	8,444.32	64,956.29	166.54	35,805.92	87.06	18,716.87	594.99	127,923.40
51	3352.045	Pipe identification NPS 1/2	Linear meter	215	215	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	215.0	0.6	50.57	120.3	6.57	1,413.36	10,872.03	12.06	2,593.75	14.31	3,077.27	83.52	17,956.42
52	3352.046	Pipe NPS 3/4 Type K, Piping Specification NB11	m	230	230	1.5	162.76	346.1	24.41	5,615.32	37,435.50	27.12	6,236.49	23.74	5,459.72	238.03	54,747.03	230.0	0.8	68.30	173.8	8.88	2,042.24	15,709.51	14.04	3,229.26	18.88	4,342.10	110.10	25,323.10
53	3352.047	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	1	1	1.1	116.26	1.1	17.44	17.44	116.26	27.68	27.68	16.96	16.96	178.33	178.33	1.0	0.6	49.91	0.6	6.49	6.49	49.91	3.74	3.74	12.48	12.48	72.61	72.61
54	3352.048	Elbow 45 degrees NPS 3/4 Type K, Piping Specification NB11	ea	4	4	1.8	198.49	7.3	29.77	119.09	793.97	74.68	298.72	28.95	115.79	331.89	1,327.57	4.0	0.1	8.32	0.4	1.08	4.33	33.28	1.49	5.95	2.25	9.01	13.14	52.57
55	3352.049	Elbow 90 degrees NPS 3/4 Type K, Piping Specification NB11	ea	71	71	1.0	113.42	74.5	17.01	1,207.96	8,053.08	11.91	845.36	16.54	1,174.49	158.89	11,280.90	71.0	0.2	22.18	17.4	2.88	204.73	1,574.88	1.17	83.01	5.45	386.83	31.68	2,249.46
56	3352.050	Tee NPS 3/4 Type K, Piping Specification NB11	ea	3	3	1.4	155.96	4.3	23.39	70.18	467.87	17.13	51.39	22.75	68.24	219.23	657.68	3.0	0.6	49.91	1.7	6.49	19.46	149.73	1.70	5.11	12.08	36.25	70.18	210.55
57	3352.051	Tee Reducing NPS 3/4 x 1/2 Type K, Piping Specification NB11	ea	3	3	1.4	155.96	4.3	23.39	70.18	467.87	15.72	47.16	22.75	68.24	217.82	653.45	3.0	0.5	44.57	1.5	5.79	17.38	133.71	1.71	5.13	10.82	32.46	62.89	188.68
58	3352.052	Union NPS 3/4 Type K, Piping Specification NB11	ea	2	2	1.8	198.49	3.7	29.77	59.55	396.98	187.74	375.48	28.95	57.90	444.95	889.91	2.0	0.3	27.39	0.6	3.56	7.12	54.77	5.67	11.35	7.58	15.16	44.20	88.40
59	3352.053	Concentric Reducer NPS 3/4 x 1/2 Type K, Piping Specification NB11	ea	16	16	1.0	113.42	16.8	17.01	272.22	1,814.78	19.51	312.08	16.54	264.67	166.48	2,663.75	16.0	0.3	24.75	4.4	3.22	51.47	395.94	1.08	17.35	6.03	96.54	35.08	561.30
60	3352.054	Concentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	1	8.5	921.57	8.5	138.24	138.24	921.57	448.22	448.22	134.40	134.40	1,642.43	1,642.43	1.0	0.7	66.54	0.7	8.65	8.65	66.54	21.57	21.57	19.98	19.98	116.75	116.75
61	3352.055	Cap NPS 3/4 Type K, Piping Specification NB11	ea	3	3	0.7	70.89	2.0	10.63	31.90	212.67	156.26	468.77	10.34	31.02	248.12	744.35	3.0	0.2	20.80	0.7	2.70	8.11	62.39	0.79	2.36	5.05	15.14	29.33	87.99
62	3352.056	Flange Slip-On 150RF NPS 3/4 c/w hardware , Piping Specification SB11	ea	1	1	8.8	952.29	8.8	142.84	142.84	952.29	492.03	492.03	138.88	138.88	1,726.04	1,726.04	1.0	0.5	45.40	0.5	5.90	5.90	45.40	24.94	24.94	15.69	15.69	91.94	91.94
63	3352.057	Flange SW 150RF NPS 3/4 c/w hardware, Piping Specification SB11	ea	3	3	8.8	952.29	26.4	142.84	428.53	2,856.86	492.03	1,476.09	138.88	416.65	1,726.04	5,178.13	3.0	1.3	119.57	4.0	15.54	46.63	358.71	0.68	2.04	28.24	84.71	164.03	492.10
64	3352.058	Weld NPS 3/4, Piping Specification NB11	ea	246	246	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	245.9	1.3	117.99	320.9	15.34	3,771.04	29,008.00	0.00	0.00	27.73	6,817.31	161.05	39,596.35
65	3352.059	Quick connect FNPT NPS 3/4, Hansen Series HK	ea	1	1	2.8	301.28	2.8	45.19	45.19	301.28	87.65	87.65	43.94	43.94	478.06	478.06	1.0	2.6	231.52	2.6	30.10	30.10	231.52	29.18	29.18	60.29	60.29	351.09	351.09
66	3352.060	Ball Valve NPS 3/4, Valve Specification VBA08	ea	3	3	4.3	460.78	12.8	69.12	207.35	1,382.35	35.13	105.38	67.20	201.61	632.23	1,896.70	3.0	3.0	274.96	9.1	35.74	107.23	824.87	33.95	101.84	71.45	214.36	416.10	1,248.30
67	3352.061	Ball Valve NPS 3/4, Valve Specification VBA14	ea	1	1	7.3	793.97	7.3	119.09	119.09	793.97	329.00	329.00	115.79	115.79	1,357.85	1,357.85	1.0	2.6	231.52	2.6	30.10	30.10	231.52	91.26	91.26	72.78	72.78	425.66	425.66
68	3352.062	Ball Valve NPS 3/4, Valve Specification VBA11	ea	1	1	5.5	595.47	5.5	89.32	89.32	595.47	136.15	136.15	86.85	86.85	907.79	907.79	1.0	2.6	231.52	2.6	30.10	30.10	231.52	100.39	100.39	74.63	74.63	436.64	436.64
69	3352.063	Pipe insulation NPS 3/4	Linear meter	231	231	1.4	142.38	325.0	21.36	4,933.59	32,890.57	37.62	8,690.22	8.55	1,975.05	209.91	48,489.43	231.0	3.3	302.35	772.5	39.31	9,079.61	69,843.14	171.58	39,636.01	88.11	20,353.82	601.35	138,912.58
70	3352.064	Pipe identification NPS 3/4	Linear meter	231	231	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	231.0	0.6	50.43	128.9	6.56	1,514.55	11,650.36	12.06	2,786.79	14.28	3,299.04	83.34	19,250.74
71	3352.065	Pipe NPS 1 Type K, Piping Specification NB11	m	44	44	1.5	162.76	66.2	24.41	1,074.24	7,161.57	32.44	1,427.32	23.74	1,044.47	243.35	10,707.60	44.0	0.9	80.28	39.1	10.44	459.23	3,532.52	18.38	808.78	22.57	993.02	131.67	5,793.55
72	3352.066	Pipe NPS 1 Sch.10s , Piping Specification SB11	m	23	23	1.4	151.14	32.1	22.67	521.42	3,476.15	39.80	915.40	22.04	506.97	235.65	5,419.95	23.0	0.6	49.91	12.7	6.49	149.23	1,147.93	4.61	106.05	12.65	291.04	73.66	1,694.25
73	3352.067	Elbow 90 degrees NPS 1 Type K, Piping Specification NB11	ea	7	7	1.1	120.51	7.8	18.08	126.54	843.59	18.46	129.19	17.58	123.03	174.62	1,222.35	7.0	0.2	22.21	1.7	2.89	20.21	155.46	2.52	17.63	5.73	40.08	33.34	233.38
74	3352.068	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	36	36	5.9	638.01	212.4	95.70	3,445.25	22,968.30	125.39	4,514.17	93.05	3,349.77	952.15	34,277.49	36.0	0.7	66.54	26.6	8.65	311.41	2,395.44	9.64	347.12	17.58	632.88	102.41	3,686.85
75	3352.069	Tee SW Class 3000 NPS 1, Piping Specification SB11	ea	6	6	7.9	850.68	47.2	127.60	765.61	5,104.07	199.11	1,194.67	124.07	744.39	1,301.46	7,808.74	6.0	1.5	131.71	8.8	17.12	102.73	790.26	9.64	57.85	32.90	197.37	191.37	1,148.22
76	3352.070	Tee Reducing NPS 1 x 1/2 Type K, Piping Specification NB11	ea	5	5	1.6	170.14	7.9	25.52	127.60	850.68	27.23	136.13	24.81	124.07	247.69	1,238.47	5.0	0.5	44.06	2.4	5.73	28.64	220.28	5.15	25.74	11.39	56.95	66.32	331.61
77	3352.071	Tee Reducing NPS 1 x 3/4 Type K, Piping Specification NB11	ea	2	2	1.6	170.14	3.1	25.52	51.04	340.27	27.23	54.45	24.81	49.63	247.69	495.39	2.0	0.5	41.59	0.9	5.41	10.81	83.18	5.15	10.30	10.81	21.62	62.95	125.91
78	3352.072	Tee Reducing SW Class 3000 NPS 1 x 1/2, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1	180.77	180.77	1,205.13	196.49	196.49	175.76	175.76	1,758.14	1,758.14	1.0	1.5	131.71	1.5	17.12	17.12	131.71	9.64	9.64	32.90	32.90	191.37	191.37
79	3352.073	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	4	5.9	638.01	23.6	95.70	382.81	2,552.03	580.55	2,322.21	93.05	372.20	1,407.31	5,629.25	4.0	0.7	66.54	3.0	8.65	34.60	266.16	18.64	74.57	19.39	77.56	113.22	452.89
80	3352.074	Concentric Reducer NPS 1 x 1/2 Type K, Piping Specification NB11	ea	2	2	1.6	170.14	3.1	25.52	51.04	340.27	42.31	84.61	24.81	49.63	262.78	525.55	2.0	0.4	33.27	0.7	4.33	8.65	66.54	5.73	11.46	8.97	17.93	52.29	104.58
81	3352.075	Concentric Reducer NPS 1 x 3/4 Type K, Piping Specification NB11	ea	2	2	1.6	170.14	3.1	25.52	51.04	340.27	42.31	84.61	24.81	49.63	262.78	525.55	2.0	0.3	24.78	0.5	3.22	6.44	49.56	2.17	4.35	6.26	12.52	36.44	72.88
82	3352.076	Concentric Reducer SW Class 3000 NPS 1 x 3/4, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	448.22	1,792.89	134.40	537.62	1,642.43	6,569.71	4.0	0.7	66.54	3.0	8.65	34.60	266.16	21.57	86.29	19.98	79.94	116.75	466.99
83	3352.077	Cap NPS 1 Type K, Piping Specification NB11	ea	1	1	0.7	77.98	0.7	11.70	11.70	77.98	6.54	6.54	11.37	11.37	107.59	107.59	1.0	0.2	22.18	0.2	2.88	2.88	22.18	1.87	1.87	5.59	5.59	32.52	32.52
84	3352.078	Cap SW Class 3000 NPS 1, Piping Specification SB11	ea	1	1	4.6	496.23	4.6	74.43	74.43	496.23	176.90	176.90	72.37	72.37	819.93	819.93	1.0	0.7	66.54	0.7	8.65	8.65	66.54	8.68	8.68	17.38	17.38	101.26	101.26
85	3352.079	Flange Slip-on 150RF NPS 1 c/w hardware, Piping Specification SB11	ea	2	2	8.8	952.29	17.6	142.84	285.69	1,904.57	492.03	984.06	138.88	277.77	1,726.04	3,452.09	2.0	1.3	115.53	2.6	15.02	30.04	231.06	0.81	1.61	27.32	54.63	158.67	317.34
86	3352.080	Flange SW 150RF NPS 1 c/w hardware, Piping Specification SB11	ea	12	12	8.8	952.29	105.7	142.84	1,714.12	11,427.44	492.03	5,904.36	138.88	1,666.62	1,726.04	20,712.53	12.0	0.7	62.53	8.3	8.13	97.55	750.38	21.97	263.70	19.12	229.44	111.76	1,341.06
87	3352.081	Weld NPS 1, Piping Specification NB11	ea	178	178	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	177.6	1.3	118.03	231.8	15.34	2,724.74	20,959.51	0.00	0.00	27.74	4,925.79	161.12	28,610.03
88	3352.082	Ball Valve NPS 1, Valve Specification VBA11	ea	4	4	7.3	793.97	29.4	119.09	476.38	3,175.86	202.60	810.38	115.79	463.18	1,231.45	4,925.80	4.0	2.6	231.52	10.2	30.10	120.39	926.08	127.75	511.01	80.13	320.50	469.50	1,877.99
89	3352.083	Pipe insulation NPS 1	Linear meter	67	67	1.4	145.32	96.2	21.80	1,460.49	9,736.57	40.56	2,717.60	8.55	572.85	216.23	14,487.51	67.0	3.3	302.18	223.9	39.28	2,631.99	20,246.05	185.55	12,431.69	90.89	6,089.77	617.90	41,399.50
90	3352.084	Pipe identification NPS 1	Linear meter	67	67	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.0	0.6	50.49	37.4	6.56	439.76	3,382.76	12.06	808.28	14.29	957.72	83.41	5,588.52
91	3352.085	Pipe Type K NPS 1-1/4, Piping Specification NB11	m	1	1	1.7	186.01	1.7	27.90	27.90	186.01	40.78	40.78	27.13	27.13	281.82	281.82	1.0	0.8	70.68	0.8	9.19	9.19	70.68	23.28	23.28	21.30	21.30	124.44	124.44
92	3352.086	Concentric Reducer Type K 1-1/4 x 1/2, Piping Specification NB11	ea	2	2	1.6	170.14	3.1	25.52	51.04	340.27	42.31	84.61	24.81	49.63	262.78	525.55	2.0	0.4	33.27	0.7	4.33	8.65	66.54	5.73	11.46	8.97	17.93	52.29	104.58
93	3352.087	Weld NPS 1-1/4, Piping Specification NB11	ea	4	4	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	2.0	177.00	7.8	23.01	92.04	707.99	0.00	0.00	41.60	166.39	241.61	966.42
94	3352.088	Pipe insulation NPS 1-1/4	Linear meter	1	1	1.4	146.11	1.4	21.92	21.92	146.11	41.93	41.93	8.55	8.55	218.50	218.50	1.0	3.4	304.74	3.4	39.62	39.62	304.74	191.62	191.62	92.57	92.57	628.55	628.55
95	3352.089	Pipe identification NPS 1-1/4	Linear meter	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.6	49.68	0.6	6.46	6.46	49.68	12.06	12.06	14.10	14.10	82.30	82.30
96	3352.090	Pipe NPS 1-1/2 Type K, Piping Specification NB11	m	160	160	1.7	186.01	275.2	27.90	4,464.36	29,762.38	50.10	8,016.57	27.13	4,340.64	291.15	46,583.96	160.0	0.8	73.57	130.2	9.56	1,530.31	11,771.64	30.31	4,849.38	23.39	3,742.81	136.84	21,894.14
97	3352.091	Elbow 90 degrees NPS 1-1/2 Type K, Piping Specification NB11	ea	11	11	1.6	170.14	17.3	25.52	280.72	1,871.49	55.16	606.79	24.81	272.94	275.63	3,031.95	11.0	0.2	22.07	2.7	2.87	31.56	242.81	4.09	45.04	6.01	66.13	35.05	385.54
98	3352.092	Tee NPS 1-1 /2 Type K, Piping Specification NB11	ea	2	2	2.2	241.03	4.5	36.15	72.31	482.05	65.47	130.93	35.15	70.30	377.80	755.60	2.0	0.5	43.32	1.0	5.63	11.26	86.65	6.68	13.35	11.53	23.05	67.16	134.32
99	3352.093	Tee Reducing NPS 1-1/2 x 1-1/2 x 1/2 Type K, Piping Specification NB11	ea	15	15	2.2	241.03	33.4	36.15	542.31	3,615.38	70.29	1,054.39	35.15	527.28	382.62	5,739.36	15.0	0.5	44.02	7.3	5.72	85.83	660.25	8.44	126.63	12.04	180.67	70.23	1,053.38

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
100	3352.094	Tee Reducing NPS 1-1/2 x K 1-1/2 x 3/4 Type K, Piping Specification NB11	ea	10	10	2.2	241.03	22.3	36.15	361.54	2,410.25	60.41	604.10	35.15	351.52	372.74	3,727.42	10.0	0.5	44.06	4.9	5.73	57.27	440.56	8.44	84.41	12.05	120.53	70.28	702.77
101	3352.095	Tee Reducing NPS 1-1/2 x 1-1/2 x 1 Type K, Piping Specification NB11	ea	2	2	2.2	241.03	4.5	36.15	72.31	482.05	60.41	120.82	35.15	70.30	372.74	745.48	2.0	0.5	42.98	1.0	5.59	11.17	85.95	8.44	16.88	11.80	23.60	68.80	137.61
102	3352.096	Concentric Reducer NPS 1-1/2 x 1-1/2 x 1/2 Type K, Piping Specification NB11	ea	1	1	1.6	170.14	1.6	25.52	25.52	170.14	42.31	42.31	24.81	24.81	262.78	262.78	1.0	0.2	16.64	0.2	2.16	2.16	16.64	5.73	5.73	5.05	5.05	29.59	29.59
103	3352.097	Concentric Reducer NPS 1-1/2 x 1-1/2 x 3/4 Type K, Piping Specification NB11	ea	1	1	1.6	170.14	1.6	25.52	25.52	170.14	42.31	42.31	24.81	24.81	262.78	262.78	1.0	0.3	24.96	0.3	3.24	3.24	24.96	5.73	5.73	7.02	7.02	40.95	40.95
104	3352.098	Concentric Reducer NPS 1-1/2 x 1-1/2 x 1 Type K, Piping Specification NB11	ea	1	1	1.6	170.14	1.6	25.52	25.52	170.14	47.41	47.41	24.81	24.81	267.88	267.88	1.0	0.2	16.64	0.2	2.16	2.16	16.64	5.73	5.73	5.05	5.05	29.59	29.59
105	3352.099	Cap NPS 1-1/2 Type K, Piping Specification NB11	ea	3	3	0.9	99.25	2.8	14.89	44.66	297.74	21.86	65.59	14.47	43.42	150.47	451.41	3.0	0.2	20.80	0.7	2.70	8.11	62.39	3.30	9.90	5.55	16.65	32.35	97.05
106	3352.100	Weld NPS 1-1/2, Piping Specification NB11	ea	141	141	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140.9	2.0	177.00	275.8	23.01	3,241.18	24,932.19	0.00	0.00	41.60	5,859.42	241.61	34,032.79
107	3352.101	Pipe insulation NPS 1-1/2	Linear meter	160	160	1.5	147.36	233.0	22.10	3,536.65	23,577.66	42.73	6,836.35	8.55	1,368.00	220.74	35,318.66	160.0	3.3	302.53	535.4	39.33	6,292.56	48,404.28	210.39	33,662.76	95.96	15,352.92	648.20	103,712.52
108	3352.102	Pipe identification NPS 1-1/2	Linear meter	160	160	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	160.0	0.6	50.35	89.1	6.55	1,047.25	8,055.74	12.06	1,930.25	14.26	2,281.79	83.22	13,315.03
109	3352.103	Pipe NPS 2 Type K, Piping Specification NB11	m	91	91	2.1	232.52	195.6	34.88	3,173.88	21,159.19	74.59	6,787.41	33.91	3,085.93	375.89	34,206.42	91.0	10.9	982.28	988.7	127.70	11,620.36	89,387.38	64.69	5,887.15	243.87	22,192.58	1,418.54	129,087.47
110	3352.104	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	25	25	2.3	244.14	56.4	36.62	915.54	6,103.61	56.83	1,420.82	35.61	890.17	373.21	9,330.15	25.0	0.7	66.54	18.5	8.65	216.26	1,663.50	8.99	224.71	17.45	436.29	101.63	2,540.76
111	3352.105	Elbow 45 degrees NPS 2 Type K, Piping Specification NB11	ea	1	1	1.8	198.49	1.8	29.77	29.77	198.49	74.68	74.68	28.95	28.95	331.89	331.89	1.0	0.1	9.98	0.1	1.30	1.30	9.98	5.49	5.49	3.45	3.45	20.22	20.22
112	3352.106	Elbow 90 degrees NPS 2 Type K, Piping Specification NB11	ea	17	17	1.8	198.49	31.2	29.77	506.15	3,374.36	74.68	1,269.56	28.95	492.13	331.89	5,642.19	17.0	0.2	22.00	4.1	2.86	48.63	374.06	10.81	183.80	7.35	124.91	43.02	731.40
113	3352.107	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	18	18	8.5	921.57	153.4	138.24	2,488.23	16,588.22	171.71	3,090.86	134.40	2,419.28	1,365.92	24,586.59	18.0	0.7	66.54	13.3	8.65	155.70	1,197.72	9.64	173.56	17.58	316.44	102.41	1,843.42
114	3352.108	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	268.91	1,075.63	175.76	703.04	1,830.56	7,322.25	4.0	1.5	131.71	5.8	17.12	68.49	526.84	9.64	38.57	32.90	131.58	191.37	765.48
115	3352.109	Tee Reducing NPS 2 x 3/4 Type K, Piping Specification NB11	ea	8	8	2.6	276.47	20.5	41.47	331.76	2,211.76	90.86	726.86	40.32	322.57	449.12	3,592.96	8.0	0.5	43.90	3.9	5.71	45.66	351.20	13.69	109.50	13.07	104.59	76.37	610.95
116	3352.110	Tee Reducing NPS 2 x 1 1/2 Type K, Piping Specification NB11	ea	1	1	2.6	276.47	2.6	41.47	41.47	276.47	73.82	73.82	40.32	40.32	432.08	432.08	1.0	2.3	209.84	2.3	27.28	27.28	209.84	25.32	25.32	54.41	54.41	316.84	316.84
117	3352.111	Tee Reducing SW Class 3000 NPS 2 x 3/4, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	238.38	953.54	175.76	703.04	1,800.04	7,200.16	4.0	1.5	131.71	5.8	17.12	68.49	526.84	9.64	38.57	32.90	131.58	191.37	765.48
118	3352.112	Tee Reducing SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	266.81	1,067.25	175.76	703.04	1,828.47	7,313.87	4.0	1.5	131.71	5.8	17.12	68.49	526.84	9.64	38.57	32.90	131.58	191.37	765.48
119	3352.113	Concentric Reducer NPS 2 x 3/4 Type K, Piping Specification NB11	ea	1	1	1.8	198.49	1.8	29.77	29.77	198.49	47.85	47.85	28.95	28.95	305.06	305.06	1.0	0.4	33.27	0.4	4.33	4.33	33.27	5.73	5.73	8.97	8.97	52.29	52.29
120	3352.114	Concentric Reducer NPS 2 x 1 1/2 Type K, Piping Specification NB11	ea	1	1	1.8	198.49	1.8	29.77	29.77	198.49	47.85	47.85	28.95	28.95	305.06	305.06	1.0	1.3	119.57	1.3	15.54	15.54	119.57	13.42	13.42	30.80	30.80	179.33	179.33
121	3352.115	Concentric Reducer SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	1	1	8.5	921.57	8.5	138.24	138.24	921.57	183.09	183.09	134.40	134.40	1,377.29	1,377.29	1.0	0.7	66.54	0.7	8.65	8.65	66.54	21.57	21.57	19.98	19.98	116.75	116.75
122	3352.116	Coupling NPS 2, Robar model 1506	ea	1	1	3.9	421.09	3.9	63.16	63.16	421.09	520.15	520.15	61.41	61.41	1,065.81	1,065.81	1.0	0.4	33.27	0.4	4.33	4.33	33.27	70.04	70.04	21.92	21.92	129.56	129.56
123	3352.117	Union NPS 2 Type K, Piping Specification NB11	ea	3	3	1.8	198.49	5.5	29.77	89.32	595.47	187.74	563.22	28.95	86.85	444.95	1,334.86	3.0	1.6	140.84	4.7	18.31	54.93	422.53	101.39	304.18	53.51	160.54	314.06	942.17
124	3352.118	Flange Slip-On SS 150RF NPS 2 c/w hardware, Piping Specification SB11	ea	8	8	8.8	952.29	70.4	142.84	1,142.74	7,618.29	492.03	3,936.24	138.88	1,111.08	1,726.04	13,808.35	8.0	1.1	99.89	8.8	12.99	103.89	799.15	47.59	380.69	33.06	264.46	193.52	1,548.18
125	3352.119	Weld NPS 2, Piping Specification NB11	ea	169	169	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	169.0	2.6	236.00	441.2	30.68	5,185.02	39,884.80	0.00	0.00	55.46	9,373.51	322.15	54,443.34
126	3352.120	Ball Valve NPS 2, Valve Specification VBA08	ea	2	2	7.7	829.41	15.3	124.41	248.82	1,658.82	103.08	206.15	120.96	241.93	1,177.86	2,355.73	2.0	3.5	313.42	6.9	40.74	81.49	626.84	107.00	213.99	95.20	190.40	556.36	1,112.72
127	3352.121	Ball Valve NPS 2, Valve Specification VBA11	ea	10	10	14.7	1,587.93	146.8	238.19	2,381.90	15,879.32	406.63	4,066.27	231.59	2,315.89	2,464.34	24,643.38	10.0	2.0	181.61	20.1	23.61	236.09	1,816.10	58.40	584.02	54.44	544.45	318.07	3,180.66
128	3352.122	Check valve NPS 2, Valve Specification VCH12	ea	1	1	14.7	1,587.93	14.7	238.19	238.19	1,587.93	1,669.22	1,669.22	231.59	231.59	3,726.93	3,726.93	1.0	1.9	176.07	1.9	22.89	22.89	176.07	191.64	191.64	79.96	79.96	470.56	470.56
129	3352.123	Globe valve NPS 2, Valve Specification VGL05	ea	1	1	14.7	1,587.93	14.7	238.19	238.19	1,587.93	2,061.65	2,061.65	231.59	231.59	4,119.36	4,119.36	1.0	3.8	346.59	3.8	45.06	45.06	346.59	1,536.80	1,536.80	390.85	390.85	2,319.29	2,319.29
130	3352.124	Globe valve NPS 2, Valve Specification VGL06	ea	1	1	14.7	1,587.93	14.7	238.19	238.19	1,587.93	2,061.65	2,061.65	231.59	231.59	4,119.36	4,119.36	1.0	3.8	346.59	3.8	45.06	45.06	346.59	1,536.80	1,536.80	390.85	390.85	2,319.29	2,319.29
131	3352.125	Pipe insulation NPS 2	Linear meter	116	116	1.5	149.20	171.0	22.38	2,596.15	17,307.64	45.55	5,284.31	8.55	991.80	225.69	26,179.89	116.0	3.6	326.25	418.6	42.41	4,919.82	37,844.74	212.09	24,602.48	100.50	11,658.03	681.25	79,025.06
132	3352.126	Pipe identification NPS 2	Linear meter	116	116	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.0	0.6	50.57	64.9	6.57	762.63	5,866.40	12.06	1,399.41	14.31	1,660.42	83.52	9,688.87
133	3352.127	Pipe NPS 2-1/2 Type K, Piping Specification NB11	m	19	19	2.1	232.52	40.8	34.88	662.68	4,417.85	98.95	1,880.13	33.91	644.31	400.26	7,604.98	19.0	6.0	538.33	113.1	69.98	1,329.67	10,228.22	67.83	1,288.73	140.17	2,663.24	816.31	15,509.86
134	3352.128	Pipe NPS 2-1/2 Sch.10S, Piping Specification SB11	m	1	1	2.6	279.02	2.6	41.85	41.85	279.02	79.30	79.30	40.69	40.69	440.87	440.87	1.0	0.4	33.27	0.4	4.33	4.33	33.27	11.92	11.92	10.23	10.23	59.74	59.74
135	3352.129	Elbow 45 degrees NPS 2-1/2 Type K, Piping Specification NB11	ea	2	2	2.2	241.03	4.5	36.15	72.31	482.05	192.47	384.95	35.15	70.30	504.80	1,009.61	2.0	1.3	115.76	2.6	15.05	30.10	231.52	26.91	53.81	32.62	65.23	190.33	380.66
136	3352.130	Elbow 90 degrees NPS 2-1/2 Type K, Piping Specification NB11	ea	7	7	2.2	241.03	15.6	36.15	253.08	1,687.18	192.47	1,347.31	35.15	246.06	504.80	3,533.63	7.0	2.5	229.56	17.8	29.84	208.90	1,606.89	23.37	163.59	58.65	410.58	341.42	2,389.95
137	3352.131	Tee NPS 2-1/2 Type K, Piping Specification NB11	ea	1	1	3.1	340.27	3.1	51.04	51.04	340.27	240.03	240.03	49.63	49.63	680.97	680.97	1.0	3.4	303.09	3.4	39.40	39.40	303.09	36.16	36.16	78.51	78.51	457.15	457.15
138	3352.132	Concentric Reducer Type K 2-1/2 x 1 1/2, Piping Specification NB11	ea	1	1	2.2	241.03	2.2	36.15	36.15	241.03	194.67	194.67	35.15	35.15	507.00	507.00	1.0	2.4	214.88	2.4	27.93	27.93	214.88	18.49	18.49	54.21	54.21	315.52	315.52
139	3352.133	Concentric Reducer Type K 2-1/2 x 2, Piping Specification NB11	ea	2	2	2.2	241.03	4.5	36.15	72.31	482.05	195.88	391.75	35.15	70.30	508.21	1,016.42	2.0	2.4	214.54	4.7	27.89	55.78	429.07	18.48	36.97	54.14	108.28	315.05	630.09
140	3352.134	Victaulic Coupling NPS 2-1/2, Style 07	ea	24	24	0.5	53.17	11.8	7.98	191.40	1,276.02	67.55	1,621.23	7.75	186.10	136.45	3,274.75	24.0	0.7	66.54	17.8	8.65	207.60	1,596.96	59.69	1,432.46	27.67	663.98	162.54	3,901.01
141	3352.135	Victaulic Coupling NPS 2-1/2, Style 77	ea	7	7	0.3	37.22	2.4	5.58	39.08	260.52	479.24	3,354.65	5.43	38.00	527.46	3,692.24	7.0	0.7	66.54	5.2	8.65	60.55	465.78	34.54	241.79	22.60	158.20	132.33	926.32
142	3352.136	Victaulic Coupling NPS 2-1/2 Copper x 2-1/2 SS, Style 667	ea	4	4	0.5	53.17	2.0	7.98	31.90	212.67	67.55	270.21	7.75	31.02	136.45	545.79	4.0	0.7	66.54	3.0	8.65	34.60	266.16	52.03	208.11	26.11	104.45	153.33	613.33
143	3352.137	Victaulic Tee Reducing NPS 2-1/2 x 3/4, Style 25	ea	1	1	6.5	701.81	6.5	105.27	105.27	701.81	215.83	215.83	102.35	102.35	1,125.26	1,125.26	1.0	3.1	280.05	3.1	36.41	36.41	280.05	103.48	103.48	86.65	86.65	506.59	506.59
144	3352.138	Victaulic Tee Reducing NPS 2-1/2 x 1, Style 25	ea	1	1	6.5	701.81	6.5	105.27	105.27	701.81	215.83	215.83	102.35	102.35	1,125.26	1,125.26	1.0	3.1	280.05	3.1	36.41	36.41	280.05	103.48	103.48	86.65	86.65	506.59	506.59
145	3352.139	Weld NPS 2-1/2, Piping Specification NB11	ea	33	33	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.0	4.0	358.35	130.8	46.59	1,537.32	11,825.52	0.00	0.00	84.22	2,779.17	489.15	16,142.01
146	3352.140	Ball Valve NPS 2-1/2, Valve Specification VBA08	ea	1	1	13.0	1,403.62	13.0	210.54	210.54	1,403.62	227.66	227.66	204.71	204.71	2,046.53	2,046.53	1.0	4.2	379.17	4.2	49.29	49.29	379.17	167.92	167.92	122.91	122.91	719.29	719.29
147	3352.141	Pipe insulation NPS 2-1/2	Linear meter	20	20	1.5	150.59	29.8	22.59	451.76	3,011.76	50.67	1,013.46	8.55	171.00	232.40	4,647.98	20.0	5.1	460.34	101.8	59.84	1,196.89	9,206.84	260.66	5,213.29	134.04	2,680.74	914.89	18,297.75
148	3352.142	Pipe identification NPS 2-1/2	Linear meter	20	20	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.0	0.6	50.41	11.2	6.55	131.06	1,008.14	12.06	241.28	14.28	285.51	83.30	1,665.99
149	3352.143	Pipe NPS 3 Type K, Piping Specification NB11	m	1	1	2.4	255.77	2.4	38.37	38.37	255.77	134.43	134.43	37.30	37.30	465.87	465.87	1.0	6.2	561.61	6.2	73.01	73.01	561.61	70.86	70.86	146.26	146.26	851.74	851.74
150	3352.144	Pipe NPS 3 Sch.10S, Piping Specification SB11	m	1	1	3.4	372.03	3.4	55.80	55.80	372.03	118.53	118.53	54.26	54.26	600.63	600.63	1.0	0.4	33.27	0.4	4.33	4.33	33.27	18.79	18.79	11.60	11.60	67.99	67.99
151	3352.145	Tee Reducing NPS 3 x 2 Type K, Piping Specification NB11	ea	1	1	3.8	408.33	3.8	61.25	61.25	408.33	288.04	288.04	59.55	59.55	817.17	817.17	1.0	6.8	609.99	6.8	79.30	79.30	609.99	50.28	50.28	153.47	153.47	893.04	893.04
152	3352.146	Concentric Reducer NPS 3 x 2 Type K, Piping Specification NB11	ea	1	1	2.6	283.56	2.6	42.53	42.53	283.56	216.84	216.84	41.36	41.36	584.29	584.29	1.0	2.9	263.40	2.9	34.24	34.24	263.40	5.73	5.73	63.06	63.06	366.43	366.43
153	3352.147	Eccentric Reducer SW NPS 3 x 2 Sch.10S, Piping Specification SB11	ea	1	1	18.3	1,977.83	18.3	296.67	296.67	1,977.83	117.04	117.04	288.45	288.45	2,679.99	2,679.99	1.0	0.6	49.91	0.6	6.49	6.49	49.91	8.00	8.00	13.35	13.35	77.75	77.75
154	3352.148	Coupling SW/MNPT NPS 3, Piping Specification NB11	ea	1	1	3.1	340.27	3.1	51.04	51.04	340.27	48.39	48.39	49.63	49.63	489.33	489.33	1.0	0.2	22.08	0.2	2.87	2.87	22.08	2.80	2.80	5.75	5.75	33.51	33.51
155	3352.149	Cap NPS 3 Type K, Piping Specification NB11	ea	1	1	1.4	155.96	1.4	23.39	23.39	155.96	98.50	98.50	22.75	22.75	300.60	300.60	1.0	3.3	296.68	3.3	38.57	38.57	296.68	26.74	26.74	75.12	75.12	437.11	437.11
156	3352.150	Weld NPS 3, Piping Specification NB11	ea	11	11	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	5.4	490.77	59.7	63.80	701.79	5,398.42	0.00	0.00	115.34	1,268.69	669.90	7,368.90
157	3352.151	Pipe insulation NPS 3	Linear meter	1	1	1.5	155.77	1.5	23.37	23.37	155.77	52.61	52.61	8.55	8.55	240.30	240.30	1.0	5.2	467.32	5.2	60.75	60.75	467.32	284.27	284.27	140.05	140.05	952.39	952.39
158	3352.152	Pipe identification NPS 3	Linear meter	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.2	16.41	0.2	2.13	2.13	16.41	4.02	4.02	4.66	4.66	27.23	27.23
B&M-0011	Added	2.5" coupling, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	40	2.2	241.03	89.1	36.15	1,446.15	9,641.02	79.77	3,190.93	35.15	1,406.08	392.10	15,684.17	40.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0012	Added	2" coupling, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	10	1.8	198.49	18.4	29.77	297.74	1,984.92	21.22	212.17	28.95	289.49	278.43	2,784.31	10.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0013	Added	1.25" 90 elbow, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	40	1.4	148.87	55.1	22.33	893.21	5,954.75	32.15	1,286.19	21.71	868.46	225.07	9,002.61	40.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0014	Added	3" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	3.7	404.07	3.7	60.61	60.61	404.07	298.92	298.92	58.93	58.93	822.53	822.53	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0015	Added	2" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	7	2.6	276.47	17.9	41.47	290.29	1,935.29	79.75	558.28	40.32	282.25	438.02	3,066.11	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0016	Added	1.25" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	3	1.8	198.49	5.5	29.77	89.32	595.47	37.61	112.82	28.95	86.85	294.82	884.46	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0017	Added	1" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	4	1.6	170.14	6.3	25.52	102.08	680.54	25.03	100.11	24.81	99.25	245.50	981.99	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0018	Added	2.5"x1" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	2.2	241.03	2.2	36.15	36.15	241.03	185.92	185.92	35.15	35.15	498.25	498.25	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0019	Added	1.5"x1.25" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	1.6	170.14	1.6	25.52	25.52	170.14	42.16	42.16	24.81	24.81	262.63	262.63	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0020	Added	2.5"x2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	4	3.1	340.27	12.6	51.04	204.16	1,361.08	278.84	1,115.38	49.63	198.51	719.78	2,879.13	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0021	Added	2.5"x1.5" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	3.1	340.27	3.1	51.04	51.04	340.27	313.94	313.94	49.63	49.63	754.87	754.87	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0022	Added	2.5"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	2	3.1	340.27	6.3	51.04	102.08	680.54	335.41	670.82	49.63	99.25	776.35	1,552.70	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0023	Added	2.5"x1" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	3	3.1	340.27	9.4	51.04	153.12	1,020.81	335.41	1,006.23	49.63	148.88	776.35	2,329.04	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0024	Added	2.5"x3/4" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	2	3.1	340.27	6.3	51.04	102.08	680.54	335.41	670.82	49.63	99.25	776.35	1,552.70	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0025	Added	2.5"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	3.1	340.27	3.1	51.04	51.04	340.27	335.41	335.41	49.63	49.63	776.35	776.35	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0026	Added	2"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	2	2.6	276.47	5.1	41.47	82.94	552.94	73.82	147.64	40.32	80.64	432.08	864.17	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0027	Added	2"x1" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	2.6	276.47	2.6	41.47	41.47	276.47	93.40	93.40	40.32	40.32	451.66	451.66	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0028	Added	2"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	6	2.6	276.47	15.3	41.47	248.82	1,658.82	107.09	642.53	40.32	241.93	465.35	2,792.10	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0029	Added	1.5"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	3	2.2	241.03	6.7	36.15	108.46	723.08	62.08	186.23	35.15	105.46	374.41	1,123.22	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0030	Added	1"x3/4" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	1.1	120.51	1.1	18.08	18.08	120.51	21.89	21.89	17.58	17.58	178.05	178.05	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0031	Added	1"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	21	2.2	241.03	46.8	36.15	759.23	5,061.53	31.05	652.06	35.15	738.19	343.38	7,211.01	21.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0032	Added	2.5" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	1.2	134.69	1.2	20.20	20.20	134.69	42.51	42.51	19.64	19.64	217.05	217.05	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0033	Added	2" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	1.0	113.42	1.0	17.01	17.01	113.42	12.37	12.37	16.54	16.54	159.35	159.35	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0034	Added	1/2" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	56	0.5	56.71	29.4	8.51	476.38	3,175.86	32.14	1,799.77	8.27	463.18	105.63	5,915.20	56.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0035	Added	1.25" FNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	9	0.7	77.98	6.5	11.70	105.27	701.81	53.83	484.43	11.37	102.35	154.87	1,393.86	9.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0036	Added	1" FNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	1	0.7	77.98	0.7	11.70	11.70	77.98	19.27	19.27	11.37	11.37	120.31	120.31	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0037	Added	2" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	2	1.0	113.42	2.1	17.01	34.03	226.85	88.09	176.19	16.54	33.08	235.07	470.15	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0038	Added	1" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	6	0.7	77.98	4.3	11.70	70.18	467.87	18.00	108.01	11.37	68.24	119.05	714.30	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0039	Added	3/4" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	4	0.7	70.89	2.6	10.63	42.53	283.56	11.34	45.35	10.34	41.36	103.20	412.80	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0040	Added	1/2" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	56	0.5	56.71	29.4	8.51	476.38	3,175.86	7.19	402.56	8.27	463.18	80.68	4,517.98	56.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0041	Added	1.25" union, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea	0	5	1.4	148.87	6.9	22.33	111.65	744.34	116.43	582.14	21.71	108.56	309.34	1,546.69	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0042	Added	1/2" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter	0	6	1.1	116.26	6.6	17.44	106.33	708.90	8.79	53.62	16.96	103.39	159.45	972.24	6.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0043	Added	2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	6	1.8	191.40	10.6	28.71	172.26	1,148.42	14.22	85.34	27.91	167.49	262.25	1,573.50	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0044	Added	1/2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	4	1.2	134.69	5.0	20.20	80.81	538.78	8.30	33.19	19.64	78.57	182.84	731.34	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
B&M-0045	Added	2"x1" reducer, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	2	1.8	191.40	3.5	28.71	57.42	382.81	15.95	31.89	27.91	55.83	263.97	527.95	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0046	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	3	1.8	191.40	5.3	28.71	86.13	574.21	24.42	73.26	27.91	83.74	272.45	817.35	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0047	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea	0	2	0.5	59.07	1.1	8.86	17.72	118.15	15.44	30.89	8.62	17.23	91.99	183.99	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0048	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea	0	1	0.5	59.07	0.5	8.86	8.86	59.07	41.67	41.67	8.62	8.62	118.22	118.22	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0049	Added	2" UNION SS Socket Weld FNPT ASTM A182	ea	0	1	14.4	1,556.03	14.4	233.40	233.40	1,556.03	154.46	154.46	226.94	226.94	2,170.83	2,170.83	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0050	Added	2" swing check valve, class 150 (300CWP or WOG), bronze body to ASTM B62 (C83600), brass disc/seat - SI - Crane model 1342, Kitz model C150YR or equal VCH09	ea	0	3	7.7	829.41	23.0	124.41	373.23	2,488.23	241.09	723.26	120.96	362.89	1,315.87	3,947.62	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0051	Added	1.25" swing check valve, class 150 (300CWP or WOG), bronze body to ASTM B62 (C83600), brass disc/seat - SI - Crane model 1342, Kitz model C150YR or equal VCH09	ea	0	4	5.8	630.92	23.3	94.64	378.55	2,523.68	168.32	673.27	92.02	368.06	985.89	3,943.56	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0052	Added	1/2" ball check valve, PVC body/ball, PTFE seat - SOC - Hayward model TC, Chemline model BT or equal VCH10	ea	0	1	1.3	141.78	1.3	21.27	21.27	141.78	174.85	174.85	20.68	20.68	358.57	358.57	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0053	Added	1.5" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SJ - Crane model LF9202 or equal VBA08	ea	0	2	6.5	701.81	13.0	105.27	210.54	1,403.62	79.97	159.94	102.35	204.71	989.40	1,978.81	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0054	Added	1.25" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SJ - Crane model LF9202 or equal VBA08	ea	0	12	5.8	630.92	70.0	94.64	1,135.65	7,571.03	61.88	742.55	92.02	1,104.18	879.45	10,553.42	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0055	Added	1" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SJ - Crane model LF9202 or equal VBA08	ea	0	4	5.2	567.12	21.0	85.07	340.27	2,268.47	47.04	188.14	82.71	330.84	781.93	3,127.73	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0056	Added	1/2" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal VBA09	ea	0	2	1.3	141.78	2.6	21.27	42.53	283.56	491.52	983.03	20.68	41.36	675.24	1,350.48	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0057	Added	2" COMBINATION AUTOMATIC AIR VENT/VACUUM OR AUTOMATIC AIR VENT ONLY 3352-AV-80XX	ea	0	1	14.7	1,587.93	14.7	238.19	238.19	1,587.93	11,560.27	11,560.27	231.59	231.59	13,617.98	13,617.98	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0058	Added	Pipe Insulation - All Sizes	ea	0	1	2703.0	276,069.46	2703.0	41,410.42	41,410.42	276,069.46	79,539.45	79,539.45	0.00	0.00	397,019.34	397,019.34	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		SDS (Wastewater)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
159	3353.010	Septic pumping station 3353-SPS-5000	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	21,798.00	21,798.00	2,205.61	2,205.61	41,395.25	41,395.25	1.0	104.6	9,453.46	104.6	1,228.95	1,228.95	9,453.46	19,640.91	19,640.91	6,175.93	6,175.93	36,499.25	36,499.25
160	3353.020	Pump 3353-P-5000 / 5001	ea	2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	9,093.84	18,187.68	2,205.61	4,411.22	28,691.09	57,382.17	2.0	71.7	6,483.22	143.4	842.82	1,685.64	12,966.43	8,192.49	16,384.98	3,173.02	6,346.03	18,691.54	37,383.07
161	3353.030	Level switch 3353-LSL-5000 / 5001 / 3353-LSH-5000 / 5001 / 3353-LSHH-5000	ea	5	5	52.4	5,671.19	262.2	850.68	4,253.39	28,355.93	1,020.92	5,104.60	827.10	4,135.52	8,369.89	41,849.44	5.0	25.3	2,289.13	126.6	297.59	1,487.93	11,445.63	664.42	3,322.11	671.74	3,358.72	3,922.88	19,614.39
162	3353.040	Control Panel 3353-CP-5000	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	59,957.89	59,957.89	12,465.62	12,465.62	74,320.62	74,320.62
163	3353.050	Pipe NPS 1-1/2 Sch.DWV, Piping Specification PA01	m	7	7	1.3	139.51	9.0	20.93	146.49	976.58	35.32	247.21	20.35	142.43	216.10	1,512.71	7.0	5.8	527.28	40.8	68.55	479.82	3,690.94	7.36	51.50	125.40	877.79	728.58	5,100.06
164	3353.060	Elbow 45 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	6	6	1.7	184.31	10.2	27.65	165.88	1,105.88	14.71	88.27	26.88	161.29	253.55	1,521.32	6.0	0.2	14.83	1.0	1.93	11.57	89.00	2.16	12.94	3.92	23.52	22.84	137.04
165	3353.070	Elbow 90 degrees Sch DWV NPS 1 1/2, Piping Specification PA01	ea	7	7	1.7	184.31	11.9	27.65	193.53	1,290.19	16.15	113.04	26.88	188.17	254.99	1,784.93	7.0	0.3	29.05	2.3	3.78	26.43	203.33	2.54	17.76	7.34	51.36	42.70	298.88
166	3353.080	"P" Drain Trap SW NPS 1-1/2, Piping Specification PA01	ea	13	13	1.7	184.31	22.2	27.65	359.41	2,396.08	28.36	368.65	26.88	349.45	267.20	3,473.59	13.0	0.3	29.67	4.3	3.86	50.14	385.68	9.29	120.79	8.84	114.96	51.66	671.56
167	3353.090	Tee wye SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	1	1	2.4	255.20	2.4	38.28	38.28	255.20	23.46	23.46	37.22	37.22	354.17	354.17	1.0	0.7	66.54	0.7	8.65	8.65	66.54	4.39	4.39	16.52	16.52	96.10	96.10
168	3353.100	Pipe identification NPS 1-1/2	Linear meter	7	7	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.6	50.81	3.9	6.60	46.23	355.65	12.06	84.45	14.37	100.58	83.84	586.91
169	3353.110	Pipe NPS 2 Sch.DWV, Piping Specification PA01	m	36	36	1.3	139.51	46.4	20.93	753.36	5,022.40	33.24	1,196.76	20.35	732.48	214.03	7,705.00	36.0	10.9	988.79	393.7	128.54	4,627.53	35,596.42	16.98	611.37	235.80	8,488.77	1,370.11	49,324.08
170	3353.120	Pipe NPS 2 Sch.40, Piping Specification PA02	m	81	81	1.5	162.76	121.9	24.41	1,977.57	13,183.81	18.21	1,475.06	23.74	1,922.77	229.13	18,559.21	81.0	1.2	106.34	95.3	13.82	1,119.72	8,613.22	9.94	805.50	26.99	2,186.41	157.10	12,724.85
171	3353.130	Elbow 45 degrees Sch.DWV NPS 2, Piping Specification PA01	ea	30	30	1.8	191.40	53.1	28.71	861.31	5,742.08	17.96	538.72	27.91	837.44	265.99	7,979.55	30.0	0.2	14.77	4.9	1.92	57.61	443.14	3.31	99.29	4.14	124.14	24.14	724.18
172	3353.140	Elbow 45 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	15	15	1.8	191.40	26.5	28.71	430.66	2,871.04	19.82	297.37	27.91	418.72	267.85	4,017.79	15.0	0.3	25.28	4.2	3.29	49.29	379.18	6.99	104.84	7.35	110.22	42.90	643.53
173	3353.150	Elbow 90 degrees SW Sch.DWV NPS 2, Piping Specification PA01	ea	4	4	1.8	191.40	7.1	28.71	114.84	765.61	18.68	74.70	27.91	111.66	266.70	1,066.81	4.0	0.3	29.34	1.3	3.81	15.26	117.38	3.80	15.20	7.66	30.64	44.62	178.48
174	3353.160	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA01	ea	4	4	1.8	191.40	7.1	28.71	114.84	765.61	18.68	74.70	27.91	111.66	266.70	1,066.81	4.0	0.4	33.27	1.5	4.33	17.30	133.08	8.17	32.69	9.48	37.92	55.25	220.98
175	3353.170	Sanitary Tee SW Sch.DWV NPS 2, Piping Specification PA01	ea	5	5	2.5	269.38	12.5	40.41	202.04	1,346.91	35.36	176.78	39.29	196.44	384.43	1,922.16	5.0	0.6	58.33	3.2	7.58	37.92	291.67	6.67	33.35	15.05	75.26	87.64	438.19
176	3353.180	Sanitary Tee Reducing SW Sch.DWV NPS 2 2 x 2 x 1 1/2, Piping Specification PA01	ea	11	11	2.5	269.38	27.4	40.41	444.48	2,963.19	35.36	388.91	39.29	432.16	384.43	4,228.75	11.0	0.7	58.83	7.2	7.65	84.13	647.12	5.75	63.23	14.98	164.82	87.21	959.30
177	3353.190	Drain Trap SW Sch.DWV NPS 2, Piping Specification PA01	ea	1	1	1.8	191.40	1.8	28.71	28.71	191.40	33.04	33.04	27.91	27.91	281.07	281.07	1.0	0.4	33.27	0.4	4.33	4.33	33.27	17.51	17.51	11.33	11.33	66.44	66.44
178	3353.200	Tee Reducing SW Sch.DWV NPS 2 2 x 2 x 1 1/2, Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	35.36	35.36	39.29	39.29	384.43	384.43	1.0	0.7	66.54	0.7	8.65	8.65	66.54	8.17	8.17	17.29	17.29	100.65	100.65
179	3353.210	Tee Wye SW Sch.DWV NPS 2, Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	28.52	28.52	39.29	39.29	377.59	377.59	1.0	0.7	66.54	0.7	8.65	8.65	66.54	8.17	8.17	17.29	17.29	100.65	100.65
180	3353.220	Tee Wye Reducer SW Sch.DWV NPS 2 2 x 2 x 1 1/2 Sch DWV, Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	35.36	35.36	39.29	39.29	384.43	384.43	1.0	0.7	66.54	0.7	8.65	8.65	66.54	8.17	8.17	17.29	17.29	100.65	100.65
181	3353.230	Concentric Reducer Sch.DWV NPS 2 x 1 1/2, Piping Specification PA01	ea	5	5	1.8	191.40	8.8	28.71	143.55	957.01	15.03	75.14	27.91	139.57	263.05	1,315.27	5.0	0.4	32.98	1.8	4.29	21.43	164.88	3.65	18.26	8.48	42.42	49.40	247.00
182	3353.240	Coupling SW Sch.DWV NPS 2 , Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	24.21	24.21	39.29	39.29	373.29	373.29	1.0	0.4	33.27	0.4	4.33	4.33	33.27	8.17	8.17	9.48	9.48	55.25	55.25
183	3353.250	Union SW Sch.DWV NPS 2, Piping Specification SB11	ea	2	2	8.5	921.57	17.0	138.24	276.47	1,843.14	1,191.56	2,383.12	134.40	268.81	2,385.77	4,771.53	2.0	0.3	29.67	0.7	3.86	7.71	59.34	4.89	9.78	7.96	15.91	46.37	92.75
184	3353.260	Ball Valve NPS 2, Valve Specification VBA09	ea	2	2	2.1	226.85	4.2	34.03	68.05	453.69	980.01	1,960.02	33.08	66.17	1,273.97	2,547.94	2.0	2.3	208.87	4.6	27.15	54.31	417.75	62.15	124.29	61.60	123.21	359.78	719.55
185	3353.270	Ball Valve NPS 2, Valve Specification VBA10	ea	1	1	2.1	226.85	2.1	34.03	34.03	226.85	980.01	980.01	33.08	33.08	1,273.97	1,273.97	1.0	2.9	263.40	2.9	34.24	34.24	263.40	78.73	78.73	77.76	77.76	454.12	454.12
186	3353.280	Check Valve NPS 2, Valve Specification VCH10	ea	2	2	2.1	226.85	4.2	34.03	68.05	453.69	366.93	733.85	33.08	66.17	660.88	1,321.77	2.0	2.4	214.54	4.7	27.89	55.78	429.07	150.53	301.06	80.72	161.45	473.68	947.36
187	3353.290	Pipe identification NPS 2	Linear meter	117	117	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	117.0	0.6	50.49	65.3	6.56	767.91	5,906.97	12.06	1,411.49	14.29	1,672.39	83.41	9,758.75
188	3353.300	Pipe NPS 3 Sch.DWV, Piping Specification PA01	m	83	83	1.5	162.76	124.9	24.41	2,026.40	13,509.33	39.18	3,251.64	23.74	1,970.25	250.09	20,757.61	83.0	8.5	768.41	705.5	99.89	8,291.10	63,777.68	20.00	1,659.97	184.61	15,322.90	1,072.91	89,051.64
189	3353.310	Elbow 45 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	43	43	2.5	269.38	107.1	40.41	1,737.51	11,583.40	31.39	1,349.83	39.29	1,689.36	380.47	16,360.09	43.0	0.1	10.66	5.1	1.39	59.57	458.26	8.62	370.52	4.24	182.29	24.90	1,070.65
190	3353.320	Elbow 60 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	35.70	35.70	39.29	39.29	384.78	384.78	1.0	0.2	16.64	0.2	2.16	2.16	16.64	11.64	11.64	6.26	6.26	36.70	36.70
191	3353.330	Elbow 90 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	13	13	2.5	269.38	32.4	40.41	525.29	3,501.96	35.70	464.11	39.29	510.74	384.78	5,002.09	13.0	0.2	21.98	3.2	2.86	37.15	285.78	10.16	132.09	7.21	93.75	42.21	548.78
192	3353.340	Elbow 90 degrees SW Sch.40 NPS 3, Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	35.70	35.70	39.29	39.29	384.78	384.78	1.0	0.4	33.27	0.4	4.33	4.33	33.27	11.64	11.64	10.17	10.17	59.40	59.40
193	3353.350	Sanitary Tee SW Sch.DWV NPS 3, Piping Specification PA01	ea	4	4	3.6	389.89	14.4	58.48	233.94	1,559.58	46.34	185.37	56.86	227.45	551.58	2,206.33	4.0	0.5	41.25	1.8	5.36	21.45	164.98	24.50	98.01	14.63	58.51	85.74	342.94
194	3353.360	Sanitary Tee Reducing SW Sch.DWV NPS 3 x 3 x 2, Piping Specification PA01	ea	1	1	3.6	389.89	3.6	58.48	58.48	389.89	46.34	46.34	56.86	56.86	551.58	551.58	1.0	0.5	43.90	0.5	5.71	5.71	43.90	12.22	12.22	12.78	12.78	74.61	74.61
195	3353.370	Drain Trap SW Sch.DWV NPS3, Piping Specification PA01	ea	15	15	2.5	269.38	37.4	40.41	606.11	4,040.72	107.52	1,612.81	39.29	589.31	456.60	6,848.95	15.0	0.3	24.96	4.1	3.24	48.66	374.33	7.83	117.49	7.44	111.63	43.47	652.11
196	3353.380	Tee Wye PVC SW Sch.DWV NPS 3, Piping Specification PA01	ea	9	9	3.6	389.89	32.4	58.48	526.36	3,509.05	46.34	417.08	56.86	511.77	551.58	4,964.25	9.0	0.5	44.06	4.4	5.73	51.55	396.50	15.85	142.64	13.54	121.90	79.18	712.59
197	3353.390	Tee Wye Reducer SW Sch.DWV NPS 3 x 3 x 2, Piping Specification PA01	ea	5	5	3.6	389.89	18.0	58.48	292.42	1,949.47	52.09	260.44	56.86	284.32	557.33	2,786.65	5.0	0.5	41.25	2.3	5.36	26.81	206.23	13.08	65.39	12.33	61.64	72.01	360.05
198	3353.400	Concentric Reducer SW Sch.DWV NPS 3 x 2, Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	34.26	34.26	39.29	39.29	383.34	383.34	1.0	0.2	16.64	0.2	2.16	2.16	16.64	8.52	8.52	5.62	5.62	32.94	32.94
199	3353.410	Concentric Reducer Male/Female SW Sch.DWV NPS 3 x 2, Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	34.26	34.26	39.29	39.29	383.34	383.34	1.0	0.2	16.64	0.2	2.16	2.16	16.64	11.64	11.64	6.26	6.26	36.70	36.70
200	3353.420	Coupling Sch.DWV NPS 3, Piping Specification PA01	ea	13	13	2.5	269.38	32.4	40.41	525.29	3,501.96	24.21	314.72	39.29	510.74	373.29	4,852.71	13.0	0.2	21.31	3.1	2.77	36.02	277.09	9.01	117.12	6.82	88.70	39.92	518.93
201	3353.430	Pipe identification NPS 3	Linear meter	83	83	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.0	0.6	50.38	46.3	6.55	543.56	4,181.23	12.06	1,001.31	14.27	1,184.23	83.26	6,910.34
202	3353.440	Pipe NPS 4 Sch.DWV, Piping Specification PA01	m	130	130	1.7	186.01	223.6	27.90	3,627.29	24,181.94	52.18	6,782.96	27.13	3,526.77	293.22	38,118.96	130.0	6.9	625.59	899.6	81.33	10,572.50	81,326.91	28.98	3,767.44	152.86	19,871.50	888.76	115,538.34
203	3353.450	Elbow 45 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	28	28	5.3	574.21	148.7	86.13	2,411.67	16,077.81	51.72	1,448.09	83.74	2,344.84	795.80	22,282.41	28.0	0.2	14.43	4.5	1.88	52.51	403.94	16.99	475.67	6.81	190.70	40.10	1,122.83
204	3353.460	Elbow 90 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	1	1	5.3	574.21	5.3	86.13	86.13	574.21	54.59	54.59	83.74	83.74	798.67	798.67	1.0	0.3	27.73	0.3	3.60	3.60	27.73	17.10	17.10	9.96	9.96	58.39	58.39
205	3353.470	Sanitary Tee Reducing SW Sch.DWV 4 x 4 x 2, Piping Specification PA01	ea	1	1	7.9	850.68	7.9	127.60	127.60	850.68	82.04	82.04	124.07	124.07	1,184.39	1,184.39	1.0	0.6	57.54	0.6	7.48	7.48	57.54	28.10	28.10	19.18	19.18	112.30	112.30
206	3353.480	Tee Wye SW Sch.DWV NPS 4, Piping Specification PA01	ea	8	8	7.9	850.68	62.9	127.60	1,020.81	6,805.42	82.04	656.36	124.07	992.53	1,184.39	9,475.12	8.0	0.6	56.84	5.0	7.39	59.11	454.71	25.15	201.21	18.42	147.36	107.80	862.40
207	3353.490	Tee Wye Reducer SW Sch.DWV NPS 4 x 4 x 2, Piping Specification PA01	ea	4	4	7.9	850.68	31.5	127.60	510.41	3,402.71	81.76	327.03	124.07	496.26	1,184.10	4,736.41	4.0	0.6	57.88	2.6	7.52	30.10	231.52	23.10	92.38	18.25	73.01	106.75	427.01
208	3353.500	Tee Wye Reducer SW Sch.DWV NPS 4 x 4 x 3, Piping Specification PA01	ea	14	14	7.9	850.68	110.1	127.60	1,786.42	11,909.49	79.17	1,108.41	124.07	1,736.92	1,181.52	16,541.24	14.0	0.6	57.73	8.9	7.51	105.07	808.24	22.83	319.69	18.16	254.30	106.24	1,487.30
209	3353.510	Coupling SW Sch.DWV NPS 4, Piping Specification PA01	ea	5	5	5.3	574.21	26.5	86.13	430.66	2,871.04	41.66	208.31	83.74	418.72	785.75	3,928.73	5.0	0.3	28.32	1.6	3.68	18.41	141.61	10.25	51.23	8.72	43.59	50.97	254.84
210	3353.520	Flexible Coupling NPS 4 x 4, Fernco series 1056	ea	1	1	0.5	57.42	0.5	8.61	8.61	57.42	13.58	13.58	8.37	8.37	87.99	87.99	1.0	0.4	33.27	0.4	4.33	4.33	33.27	10.51	10.51	9.92	9.92	58.02	58.02
211	3353.530	Cap SW Sch.DWV NPS 4, Piping Specification PA01	ea	2	2	5.3	574.21	10.6	86.13	172.26	1,148.42	51.72	103.43	83.74	167.49	795.80	1,591.60	2.0	0.4	33.27	0.7	4.33	8.65	66.54	5.84	11.67	9.00	18.00	52.43	104.86
212	3353.540	Pipe identification NPS 4	Linear meter	130	130	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	130.0	0.6	50.54	72.7	6.57	854.20	6,570.77	12.06	1,568.33	14.31	1,859.98	83.49	10,853.28
213	3353.550	Pipe NPS 6 Sch.DWV, Piping Specification PA01	m	4	4	2.6	279.02	10.3	41.85	167.41	1,116.09	99.47	397.86	40.69	162.77	461.04	1,844.14	4.0	4.4	398.81	17.6	51.84	207.38	1,595.22	50.50	201.98	103.89	415.56	605.04	2,420.14
214	3353.560	Concentric Reducer SW Sch.DWV NPS 6 x 4, Piping Specification PA01	ea	2	2	11.6	1,254.75	23.2	188.21	376.42	2,509.50	134.88	269.75	183.00	365.99	1,760.84	3,521.67	2.0	0.3	23.01	0.5	2.99	5.98	46.03	60.76	121.51	17.64	35.28	104.40	208.81
215	3353.570	Pipe identification NPS 6	Linear meter	4	4	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.5	47.77	2.1	6.21	24.84	191.08	12.07	48.26	13.66	54.63	79.70	318.81
B&M-0059	Added	6"x3" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	1	11.6	1,254.75	11.6	188.21	188.21	1,254.75	173.66	173.66	183.00	183.00	1,799.62	1,799.62	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0060	Added	4"x2" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	2	5.3	574.21	10.6	86.13	172.26	1,148.42	35.14	70.28	83.74	167.49	779.22	1,558.45	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0061	Added	3"x1.5" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	1	2.5	269.38	2.5	40.41	40.41	269.38	32.83	32.83	39.29	39.29	381.90	381.90	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0062	Added	4"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	1	7.9	850.68	7.9	127.60	127.60	850.68	86.35	86.35	124.07	124.07	1,188.70	1,188.70	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0063	Added	3"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	2	3.6	389.89	7.2	58.48	116.97	779.79	49.21	98.43	56.86	113.73	554.46	1,108.91	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0064	Added	4" cleanout, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	1	5.3	574.21	5.3	86.13	86.13	574.21	60.34	60.34	83.74	83.74	804.42	804.42	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0065	Added	3" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter	0	3	1.5	162.76	4.6	24.41	74.43	496.23	46.24	140.99	23.74	72.37	257.16	784.02	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0066	Added	2" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter	0	64	1.5	162.76	96.4	24.41	1,563.13	10,420.80	18.21	1,165.93	23.74	1,519.80	229.13	14,669.66	64.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0067	Added	3/4" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter	0	6	1.1	116.26	6.6	17.44	106.33	708.90	9.69	59.08	16.96	103.39	160.34	977.70	6.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0068	Added	2" coupling, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	10	1.8	191.40	17.7	28.71	287.10	1,914.03	15.08	150.85	27.91	279.15	263.11	2,631.12	10.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0069	Added	3" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	1	2.5	269.38	2.5	40.41	40.41	269.38	25.07	25.07	39.29	39.29	374.15	374.15	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0070	Added	2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	7	1.8	191.40	12.4	28.71	200.97	1,339.82	14.22	99.56	27.91	195.40	262.25	1,835.75	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0071	Added	3/4" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	4	1.2	134.69	5.0	20.20	80.81	538.76	8.59	34.34	19.64	78.57	183.12	732.49	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0072	Added	2" wye, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	1	2.5	269.38	2.5	40.41	40.41	269.38	49.49	49.49	39.29	39.29	398.57	398.57	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0073	Added	3"x2" reducer, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	1	2.5	269.38	2.5	40.41	40.41	269.38	30.31	30.31	39.29	39.29	379.39	379.39	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0074	Added	2"x3/4" reducing wye, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	1	2.5	269.38	2.5	40.41	40.41	269.38	55.81	55.81	39.29	39.29	404.89	404.89	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0075	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	2	1.8	191.40	3.5	28.71	57.42	382.81	24.42	48.84	27.91	55.83	272.45	544.90	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0076	Added	3" transition coupling - HDPE to PVC	ea	0	1	2.5	269.38	2.5	40.41	40.41	269.38	139.12	139.12	39.29	39.29	488.20	488.20	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0077	Added	3/4" ball check valve, PVC body/ball, PTFE seat - SOC - Hayward model TC, Chemline model BT or equal	ea	0	1	1.3	141.78	1.3	21.27	21.27	141.78	174.85	174.85	20.68	20.68	358.57	358.57	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0078	Added	3" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal	ea	0	1	3.5	382.81	3.5	57.42	57.42	382.81	1,303.11	1,303.11	55.83	55.83	1,799.16	1,799.16	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0079	Added	3/4" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal	ea	0	1	1.3	141.78	1.3	21.27	21.27	141.78	578.45	578.45	20.68	20.68	762.17	762.17	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ASS (Low Pressure Compressed Air)						0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
216	3441.010	Low pressure compressor 3441-COM-5000 / 5001	ea	2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	64,230.34	128,460.67	2,205.61	4,411.22	83,827.59	167,655.17	2.0	214.4	19,384.50	428.8	2,519.99	5,039.97	38,769.00	661,123.23	1,322,246.46	137,656.80	275,313.60	820,684.52	1,641,369.03
217	3441.020	Air filter 3441-FR-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	2,417.25	4,834.51	137.85	275.70	3,642.08	7,284.16	2.0	17.9	1,620.98	35.9	210.73	421.45	3,241.96	0.00	0.00	380.95	761.91	2,212.66	4,425.32
218	3441.030	Air tank 3441-TK-5000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	45,073.45	45,073.45	1,102.81	1,102.81	54,872.07	54,872.07	1.0	102.2	9,238.57	102.2	1,201.01	1,201.01	9,238.57	176.44	176.44	2,206.72	2,206.72	12,822.75	12,822.75
219	3441.040	Oil-water separator 3441-OWS-5000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	3,573.72	3,573.72	1,102.81	1,102.81	13,372.34	13,372.34	1.0	28.3	2,557.10	28.3	332.42	332.42	2,557.10	36.20	36.20	608.24	608.24	3,533.97	3,533.97
220	3441.050	Drain trap 3441-YV-0001 / 5000 / 6000	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	586.18	1,758.54	137.85	413.55	1,811.01	5,433.02	3.0	7.3	659.90	21.9	85.79	257.36	1,979.70	300.59	901.77	215.60	646.81	1,261.88	3,785.64
221	3441.060	Pressure indicator 3441-PI-5000 to 5002	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	700.54	2,101.61	137.85	413.55	1,925.36	5,776.09	3.0	3.7	329.95	11.0	42.89	128.68	989.85	84.11	252.32	94.48	283.43	551.43	1,654.28
222	3441.070	Pressure safety valve 3441-PSV-5000	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	626.56	626.56	137.85	137.85	1,851.39	1,851.39	1.0	7.3	659.89	7.3	85.79	85.79	659.89	291.83	291.83	213.84	213.84	1,251.35	1,251.35
223	3441.080	Pipe NPS 1/2 Sch.STD, Piping Specification GB11	m	6	6	0.8	81.38	4.5	12.21	73.24	488.29	13.65	81.91	11.87	71.21	119.11	714.66	6.0	12.8	1,159.57	77.0	150.74	904.47	6,957.45	6.28	37.69	273.78	1,642.69	1,590.38	9,542.30
224	3441.090	Elbow 45 degrees FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	2	2	1.7	184.31	3.4	27.65	55.29	368.63	10.65	21.29	26.88	53.76	249.49	498.98	2.0	0.2	16.64	0.4	2.16	4.33	33.28	0.92	1.84	4.09	8.17	23.81	47.62
225	3441.100	Elbow 90 degrees FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	5	5	1.7	184.31	8.5	27.65	138.24	921.57	10.65	53.24	26.88	134.40	249.49	1,247.44	5.0	0.4	37.99	2.1	4.94	24.69	189.93	0.81	4.07	9.09	45.46	52.83	264.15
226	3441.110	Tee FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	1	1	2.5	265.84	2.5	39.88	39.88	265.84	15.22	15.22	38.77	38.77	359.70	359.70	1.0	0.8	74.17	0.8	9.64	9.54	74.17	1.03	1.03	17.64	17.64	102.48	102.48
227	3441.120	Flexible Hose Flexitube FNPT NPS 1/2	ea	2	2	1.7	187.86	3.5	28.18	56.36	375.72	75.95	151.89	27.40	54.80	319.38	638.76	2.0	2.6	231.52	5.1	30.10	60.20	463.04	23.35	46.69	59.11	118.23	344.08	688.16
228	3441.130	Ball Valve NPS 1/2, Valve Specification VBA07	ea	3	3	2.4	260.87	7.2	39.13	117.39	782.62	197.99	593.96	38.05	114.14	536.04	1,608.12	3.0	2.2	198.25	6.6	25.77	77.32	594.75	91.26	273.79	64.96	194.89	380.25	1,140.74

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
229	3441.140	Pipe identification NPS 1/2	Linear meter	6	6	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.6	50.76	3.4	6.60	39.59	304.58	12.07	72.39	14.36	86.14	83.78	502.71
230	3441.150	Pipe NPS 3/4 Sch.STD, Piping Specification GB11	m	94	94	0.9	93.01	80.8	13.95	1,311.41	8,742.70	19.49	1,832.28	13.56	1,275.06	140.02	13,161.45	94.0	1.2	111.60	116.0	14.51	1,363.70	10,489.99	7.76	729.16	27.79	2,612.10	161.65	15,194.95
231	3441.160	Elbow 90 degrees FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	54	54	2.3	251.66	125.7	37.75	2,038.44	13,589.58	14.63	790.07	36.70	1,981.95	340.74	18,400.04	54.0	0.4	37.55	22.4	4.88	263.61	2,027.75	1.16	62.39	9.06	489.12	52.65	2,842.87
232	3441.170	Elbow 90 degrees SW Sch.STD NPS 3/4, Piping Specification CB11	ea	2	2	6.4	687.63	12.7	103.14	206.29	1,375.26	40.93	81.86	100.29	200.57	931.99	1,863.98	2.0	0.6	49.91	1.1	6.49	12.98	99.82	1.12	2.24	11.94	23.88	69.46	138.92
233	3441.180	Tee FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	1	1	3.4	368.63	3.4	55.29	55.29	368.63	21.22	21.22	53.76	53.76	498.91	498.91	1.0	0.9	83.18	0.9	10.81	10.81	83.18	1.48	1.48	19.86	19.86	115.33	115.33
234	3441.190	Tee Reducing FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	1	1	3.4	368.63	3.4	55.29	55.29	368.63	22.20	22.20	53.76	53.76	499.88	499.88	1.0	0.9	83.18	0.9	10.81	10.81	83.18	2.45	2.45	20.04	20.04	116.49	116.49
235	3441.200	Union FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	1	1	2.3	251.66	2.3	37.75	37.75	251.66	19.50	19.50	36.70	36.70	345.61	345.61	1.0	0.4	37.63	0.4	4.89	4.89	37.63	4.74	4.74	9.80	9.80	57.06	57.06
236	3441.210	Concentric Reducer FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	2	2	2.3	251.66	4.7	37.75	75.50	503.32	14.63	29.26	36.70	73.41	340.74	681.48	2.0	0.5	43.90	1.0	5.71	11.41	87.81	1.08	2.16	10.54	21.07	61.23	122.45
237	3441.220	Excentric Reducer FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	1	1	2.3	251.66	2.3	37.75	37.75	251.66	14.63	14.63	36.70	36.70	340.74	340.74	1.0	0.6	49.91	0.6	6.49	6.49	49.91	1.84	1.84	12.09	12.09	70.34	70.34
238	3441.230	Y Strainer FNPT NPS 3/4	ea	1	1	3.0	322.55	3.0	48.38	48.38	322.55	302.79	302.79	47.04	47.04	720.76	720.76	1.0	3.3	296.68	3.3	38.57	38.57	296.68	122.57	122.57	94.40	94.40	552.22	552.22
239	3441.240	Weld NPS 3/4, Piping Specification GB11	ea	4	4	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.6	57.24	2.5	7.44	29.77	228.97	91.40	365.62	31.80	127.19	187.89	751.55
240	3441.250	Quick connect FNPT NPS 3/4, Hansen Series 5500	ea	48	48	2.8	301.28	133.7	45.19	2,169.23	14,461.52	87.65	4,207.23	43.94	2,109.12	478.06	22,947.10	48.0	3.3	300.06	159.3	39.01	1,872.35	14,402.68	30.64	1,470.84	76.69	3,680.96	446.39	21,426.83
241	3441.260	Ball Valve NPS 3/4, Valve Specification VBA05	ea	61	61	2.4	262.29	147.9	39.34	2,399.98	15,999.83	194.98	11,894.02	38.25	2,333.47	534.87	32,627.29	61.0	2.2	200.08	135.0	26.01	1,586.60	12,204.61	34.68	2,115.38	54.00	3,294.15	314.77	19,200.73
242	3441.270	Ball Valve NPS 3/4, Valve Specification VBA06	ea	52	52	2.4	262.29	125.1	39.34	2,045.88	13,639.20	37.08	1,928.18	38.25	1,989.19	376.97	19,602.45	52.0	2.2	200.12	115.1	26.02	1,352.82	10,406.28	10.93	568.40	49.23	2,560.06	286.30	14,887.56
243	3441.280	Pipe identification NPS 3/4	Linear meter	94	94	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.0	0.6	50.58	52.6	6.58	618.11	4,754.68	12.06	1,134.03	14.32	1,345.72	83.54	7,852.54
244	3441.290	Pipe NPS 1 Sch.STD, Piping Specification GB11	m	154	154	1.0	104.63	149.0	15.70	2,417.03	16,113.54	23.87	3,676.34	15.26	2,350.05	159.46	24,556.96	154.0	1.2	111.65	190.2	14.51	2,235.27	17,194.38	11.81	1,818.63	28.62	4,407.07	166.59	25,655.35
245	3441.300	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification CB11	ea	4	4	6.4	687.63	25.4	103.14	412.58	2,750.53	40.93	163.72	100.29	401.15	931.99	3,727.96	4.0	0.6	49.91	2.2	6.49	25.95	199.64	1.23	4.90	11.98	47.91	69.60	278.40
246	3441.310	Tee FNPT Sch.STD NPS 1, Piping Specification GB11	ea	34	34	3.0	326.09	102.5	48.91	1,663.08	11,087.17	20.14	684.64	47.56	1,616.99	442.70	15,051.87	34.0	0.8	75.23	28.3	9.78	332.51	2,557.79	2.60	88.45	18.20	618.93	105.81	3,597.68
247	3441.320	Concentric Reducer FNPT Sch.STD NPS 1 x 3/4, Piping Specification GB11	ea	69	69	2.1	223.30	142.5	33.50	2,311.19	15,407.90	13.69	944.39	32.57	2,247.14	303.05	20,910.62	69.0	0.6	49.91	38.0	6.49	447.69	3,443.79	1.84	127.26	12.09	834.46	70.34	4,853.20
248	3441.330	Excentric Reducer FNPT Sch.STD NPS 1 x 1/2, Piping Specification GB11	ea	3	3	2.1	223.30	6.2	33.50	100.49	669.91	13.69	41.06	32.57	97.70	303.05	909.16	3.0	0.6	49.91	1.7	6.49	19.46	149.73	1.28	3.85	11.98	35.93	69.66	208.98
249	3441.340	Victaulic Coupling NPS 1, Style 77	ea	179	179	0.3	37.22	61.6	5.58	999.28	6,661.87	27.67	4,952.41	5.43	971.59	75.89	13,585.15	179.0	0.4	37.09	73.4	4.82	862.97	6,638.22	30.64	5,485.28	14.88	2,664.41	87.44	15,650.87
250	3441.350	Victaulic Coupling NPS 1, Style 07	ea	97	97	0.3	37.22	33.4	5.58	541.51	3,610.06	33.16	3,216.65	5.43	526.50	81.39	7,894.73	97.0	0.4	37.52	40.3	4.88	473.18	3,639.82	29.91	2,901.10	14.84	1,439.48	87.15	8,453.58
251	3441.360	Victaulic Elbow 90 degrees NPS 1, Style 10	ea	86	86	3.0	322.55	256.5	48.38	4,160.88	27,739.19	65.56	5,638.02	47.04	4,045.57	483.53	41,583.66	86.0	0.4	37.62	35.8	4.89	420.56	3,235.07	44.80	3,852.49	17.86	1,535.89	105.16	9,044.01
252	3441.370	Victaulic Elbow 45 degrees NPS 1, Style 11	ea	17	17	3.0	322.55	50.7	48.38	822.50	5,483.33	65.56	1,114.49	47.04	799.71	483.53	8,220.03	17.0	0.2	18.99	3.6	2.47	41.97	322.88	44.80	761.54	13.48	229.20	79.74	1,355.59
253	3441.380	Victaulic tee NPS 1, Style 20	ea	2	2	4.4	471.42	8.7	70.71	141.43	942.83	117.44	234.88	68.75	137.51	728.33	1,456.65	2.0	0.8	74.17	1.6	9.64	19.28	148.34	85.42	170.84	34.63	69.26	203.86	407.72
254	3441.390	Weld NPS 1, Piping Specification GB11	ea	8	8	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	3.6	327.41	29.0	42.56	340.51	2,619.31	9.66	77.27	77.40	619.23	457.04	3,656.33
255	3441.400	Ball Valve NPS 1, Valve Specification VBA06	ea	3	3	3.0	322.55	8.9	48.38	145.15	967.65	42.09	126.26	47.04	141.12	460.06	1,380.17	3.0	2.2	197.78	6.6	25.71	77.14	593.35	20.08	60.23	50.52	151.57	294.10	882.29
256	3441.410	Pipe identification NPS 1	Linear meter	154	154	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	154.0	0.6	50.44	85.9	6.56	1,009.75	7,767.33	12.06	1,857.84	14.28	2,199.46	83.34	12,834.39
257	3441.420	Flange Threaded 150RF Sch.STD NPS 1 1/2 c/w Hardware, Piping Specification GB11	ea	2	2	8.8	952.29	17.6	142.84	285.69	1,904.57	492.03	984.06	138.88	277.77	1,726.04	3,452.09	2.0	0.6	49.91	1.1	6.49	12.98	99.82	8.58	17.16	13.46	26.92	78.44	156.88
258	3441.430	Pipe NPS 2 Sch.STD, Piping Specification GB11	m	1038	1,038	1.3	139.51	1339.0	20.93	21,721.89	144,812.60	47.14	48,933.19	20.35	21,119.95	227.93	236,587.63	1,038.0	2.9	263.66	3,027.2	34.28	35,578.09	273,677.65	34.60	35,919.29	68.93	71,549.75	401.47	416,724.79
259	3441.440	Tee FNPT NPS 2, Piping Specification GB11	ea	26	26	4.4	471.42	113.3	70.71	1,838.53	12,256.85	33.50	871.10	68.75	1,787.58	644.39	16,754.05	26.0	0.8	74.86	21.5	9.73	253.04	1,946.43	6.73	175.01	18.95	492.67	110.27	2,867.15
260	3441.450	Tee Reducing FNPT NPS 2 x 2 x 1, Piping Specification GB11	ea	2	2	4.4	471.42	8.7	70.71	141.43	942.83	37.70	75.40	68.75	137.51	648.58	1,297.16	2.0	0.9	83.18	1.8	10.81	21.63	166.36	3.07	6.14	20.16	40.32	117.22	234.45
261	3441.460	Union FNPT NPS 2, Piping Specification GB11	ea	1	1	3.0	322.55	3.0	48.38	48.38	322.55	38.03	38.03	47.04	47.04	456.01	456.01	1.0	0.4	33.27	0.4	4.33	4.33	33.27	16.16	16.16	11.07	11.07	64.82	64.82
262	3441.470	Concentric Reducer FNPT NPS 2 x 3/4, Piping Specification GB11	ea	26	26	0.5	59.07	14.2	8.86	230.39	1,535.95	7.00	181.91	8.62	224.01	83.55	2,172.26	26.0	0.5	41.86	12.0	5.44	141.48	1,088.28	3.47	90.21	10.54	273.93	61.30	1,593.90
263	3441.480	Flexible Hose Flexitube FNPT NPS 2	ea	2	2	5.4	584.84	10.8	87.73	175.45	1,169.68	195.92	391.83	85.30	170.59	953.78	1,907.56	2.0	5.7	511.55	11.3	66.50	133.00	1,023.10	58.37	116.73	131.97	263.93	768.39	1,536.77
264	3441.490	Flange SW 150RF NPS 2 c/w hardware, Piping Specification GB11	ea	4	4	3.0	322.55	11.9	48.38	193.53	1,290.19	28.90	115.60	47.04	188.17	446.87	1,787.49	4.0	26.6	2,404.61	106.4	312.60	1,250.40	9,618.44	28.45	113.80	570.84	2,283.38	3,316.50	13,266.02
265	3441.500	Flange Slip-On 150RF NPS 2 c/w Hardware, Piping Specification GB11	ea	3	3	3.0	322.55	8.9	48.38	145.15	967.65	28.90	86.70	47.04	141.12	446.87	1,340.61	3.0	0.5	41.59	1.4	5.41	16.22	124.77	8.21	24.64	11.43	34.28	66.64	199.91
266	3441.510	Hansen Quick connect B20H51 Brass FNPT NPS 2	ea	13	13	7.3	786.88	94.6	118.03	1,534.41	10,229.40	184.99	2,404.82	114.76	1,491.89	1,204.66	15,660.52	13.0	5.0	449.82	64.7	58.48	760.20	5,847.67	627.05	8,151.69	231.96	3,015.45	1,367.31	17,775.00
267	3441.520	Victaulic coupling NPS 2, Style 77	ea	155	155	0.4	47.85	68.6	7.18	1,112.53	7,416.85	39.99	6,198.82	6.98	1,081.70	102.00	15,809.89	155.0	0.4	37.54	64.4	4.88	756.41	5,818.56	34.55	5,354.75	15.78	2,445.50	92.74	14,375.22
268	3441.530	Victaulic coupling NPS 2, Style 07	ea	359	359	0.4	47.85	158.8	7.18	2,576.76	17,178.38	47.68	17,116.08	6.98	2,505.35	109.68	39,376.56	359.0	0.4	37.51	149.0	4.88	1,750.77	13,467.42	41.62	14,942.53	17.20	6,173.36	101.21	36,334.08
269	3441.540	Victaulic Concentric Reducer NPS 2 x 3/4, Style 50	ea	1	1	3.0	322.55	3.0	48.38	48.38	322.55	72.45	72.45	47.04	47.04	490.43	490.43	1.0	0.5	41.36	0.5	5.38	5.38	41.36	60.94	60.94	21.99	21.99	129.66	129.66
270	3441.550	Victaulic cap NPS 2, Style 60	ea	5	5	0.2	24.81	1.1	3.72	18.61	124.06	29.06	145.31	3.62	18.09	61.21	306.07	5.0	0.4	36.32	2.0	4.72	23.61	181.61	38.61	193.03	16.31	81.55	95.96	479.80
271	3441.560	Victaulic Elbow 90 degrees NPS 2, Style 10	ea	92	92	3.0	322.55	274.4	48.38	4,451.17	29,674.48	65.56	6,031.37	47.04	4,327.82	483.53	44,484.84	92.0	0.4	37.56	38.2	4.88	449.26	3,455.87	44.80	4,121.27	17.85	1,641.90	105.09	9,668.30
272	3441.570	Victaulic Elbow 90 degrees NPS 2, Style 100	ea	23	23	3.0	322.55	68.6	48.38	1,112.79	7,418.62	85.00	1,954.94	47.04	1,081.96	502.97	11,568.31	23.0	0.4	37.31	9.5	4.85	111.56	858.14	62.72	1,442.56	21.40	492.10	126.28	2,904.36
273	3441.580	Victaulic Elbow 45 degrees NPS 2, Style 11	ea	29	29	3.0	322.55	86.5	48.38	1,403.09	9,353.91	65.56	1,901.19	47.04	1,364.21	483.53	14,022.40	29.0	0.2	18.86	6.0	2.45	71.12	547.06	44.80	1,299.10	13.45	390.10	79.57	2,307.39
274	3441.590	Victaulic tee NPS 2, Style 20	ea	26	26	4.4	471.42	113.3	70.71	1,838.53	12,256.85	117.44	3,053.49	68.75	1,787.58	728.33	18,936.45	26.0	0.8	75.17	21.6	9.77	254.08	1,954.43	85.42	2,220.85	34.86	906.43	205.22	5,335.79
275	3441.600	Victaulic Tee Reducing NPS 2 x 2 x 1, Style 25	ea	36	36	4.4	471.42	156.9	70.71	2,545.65	16,971.02	137.05	4,933.76	68.75	2,475.11	747.93	26,925.55	36.0	0.8	74.90	29.8	9.74	350.53	2,696.40	103.48	3,725.43	38.44	1,383.73	226.56	8,156.09
276	3441.610	Victaulic Expansion Joint NPS 2, Style 155	ea	14	14	3.1	340.27	44.0	51.04	714.57	4,763.80	2,258.36	31,617.10	49.63	694.77	2,699.30	37,790.23	14.0	0.6	49.91	7.7	6.49	90.84	698.74	2,497.36	34,963.07	514.50	7,203.04	3,068.26	42,955.69
277	3441.620	Ball Valve NPS 2, Valve Specification VBA05	ea	13	13	5.4	584.84	70.3	87.73	1,140.44	7,602.93	449.35	5,841.61	85.30	1,108.84	1,207.22	15,693.82	13.0	3.3	300.73	43.2	39.09	508.23	3,909.47	102.21	1,328.72	91.25	1,186.29	533.29	6,932.71
278	3441.630	Ball Valve NPS 2, Valve Specification VBA07	ea	15	15	3.0	326.09	45.2	48.91	733.71	4,891.40	247.49	3,712.28	47.56	713.38	670.05	10,050.76	15.0	3.3	300.28	49.8	39.04	585.55	4,504.22	269.54	4,043.12	124.84	1,872.53	733.70	11,005.43
279	3441.640	Check valve NPS 2, Valve Specification VCH06	ea	1	1	3.0	326.09	3.0	48.91	48.91	326.09	534.24	534.24	47.56	47.56	956.80	956.80	1.0	3.3	296.68	3.3	38.57	38.57	296.68	187.99	187.99	107.57	107.57	630.81	630.81
280	3441.650	Pipe identification NPS 2	Linear meter	1038	1,038	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,038.0	0.6	49.96	573.6	6.49	6,741.75	51,859.59	96.88	100,559.55	31.25	32,432.99	184.58	191,593.88
B&M-0080	Added	2" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter	0	6	2.3	244.14	14.5	36.62	234.47	1,563.12	56.82	363.81	35.61	227.97	373.20	2,389.37	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0081	Added	1" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea	0	1	0.5	59.07	0.5	8.86	8.86	59.07	33.41	33.41	8.62	8.62	109.96	109.96	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0082	Added	3/4" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea	0	1	0.5	59.07	0.5	8.86	8.86	59.07	31.00	31.00	8.62	8.62	107.55	107.55	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0083	Added	1/2" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea	0	2	0.5	59.07	1.1	8.86	17.72	118.15	29.98	59.96	8.62	17.23	106.53	213.06	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0084	Added	1.5" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea	0	1	0.5	59.07	0.5	8.86	8.86	59.07	67.74	67.74	8.62	8.62	144.29	144.29	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0085	Added	1" coupling, MI, galvanized, Class 150, A197, B16 - THD	ea	0	1	2.1	223.30	2.1	33.50	33.50	223.30	13.41	13.41	32.57	32.57	302.78	302.78	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0086	Added	1" 45 elbow, MI, galvanized, Class 150, A197, B16 - THD	ea	0	34	2.1	223.30	70.2	33.50	1,138.85	7,592.30	14.52	493.68	32.57	1,107.29	303.89	10,332.11	34.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0087	Added	1" 90 elbow, MI, galvanized, Class 150, A197, B16 - THD	ea	0	80	2.1	223.30	165.2	33.50	2,679.64	17,864.24	13.86	1,108.74	32.57	2,605.38	303.22	24,257.99	80.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0088	Added	2" Elbow 90 SW class 3000 SS ASTM A182 F304L	ea	0	1	14.4	1,556.03	14.4	233.40	233.40	1,556.03	104.53	104.53	226.94	226.94	2,120.90	2,120.90	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0089	Added	1"x1/2" reducer, MI, galvanized, Class 150, A197, B16 - THD	ea	0	2	2.1	223.30	4.1	33.50	66.99	446.61	13.69	27.37	32.57	65.13	303.05	606.10	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0090	Added	1"x3/4" reducing tee, MI, galvanized, Class 150, A197, B16 - THD	ea	0	34	3.0	326.09	102.5	48.91	1,663.08	11,087.17	21.44	729.08	47.56	1,616.99	444.01	15,096.32	34.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0091	Added	2" flange, THD, SS, B16.5 RF, ASTM A105N - 150#	ea	0	4	3.0	322.55	11.9	48.38	193.53	1,290.19	38.49	153.98	47.04	188.17	456.47	1,825.87	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0092	Added	1/2" union, MI, galvanized, Class 150, A197, B16 - THD	ea	0	1	1.7	184.31	1.7	27.65	27.65	184.31	14.81	14.81	26.88	26.88	253.65	253.65	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0093	Added	1" adapter nipple, Galv. DI, GRVxTHD - VICTAULIC 40	ea	0	1	0.5	59.07	0.5	8.86	8.86	59.07	10.63	10.63	8.62	8.62	87.18	87.18	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0094	Added	3/4" adapter nipple, Galv. DI, GRVxTHD - VICTAULIC 40	ea	0	1	0.5	59.07	0.5	8.86	8.86	59.07	12.51	12.51	8.62	8.62	89.06	89.06	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0095	Added	2" 45 elbow, LR, Galv. DI, ASTM A536 GR 65 Max Rating 1000# - Victaulic 110	ea	0	2	3.0	322.55	6.0	48.38	96.76	645.10	82.96	165.93	47.04	94.08	500.94	1,001.87	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0096	Added	2"x1" conc reducer, Galv. DI, ASTM A536 GR 65 Max Rating 1000# - Victaulic 50	ea	0	1	3.0	322.55	3.0	48.38	48.38	322.55	47.69	47.69	47.04	47.04	465.66	465.66	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0097	Added	3/4" flexible coupling, Galv. DI, ASTM A536 - Victaulic 77	ea	0	1	0.3	37.22	0.3	5.58	5.58	37.22	26.42	26.42	5.43	5.43	74.65	74.65	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0098	Added	1/2" ball valve - THD VBA06	ea	0	2	1.7	187.86	3.5	28.18	56.36	375.72	31.42	62.83	27.40	54.80	274.85	549.70	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0099	Added	1/2" low level purge trap	ea	0	1	2.4	262.29	2.4	39.34	39.34	262.29	1,450.18	1,450.18	38.25	38.25	1,790.07	1,790.07	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0100	Added	2" KAESER Filter (Supplied with Equipment) 3441-FR-5000	ea	0	1	8.7	945.20	8.7	141.78	141.78	945.20	49.66	49.66	137.85	137.85	1,274.49	1,274.49	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0101	Added	2" KAESER Filter (Supplied with Equipment) 3441-FR-5001	ea	0	1	8.7	945.20	8.7	141.78	141.78	945.20	49.66	49.66	137.85	137.85	1,274.49	1,274.49	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		AHS (High Pressure Compressed Air)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
281	3442.010	Compressor 3442-COM-5000 / 5001		2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	184,628.94	369,257.88	2,205.61	4,411.22	204,226.19	408,452.38	2.0	185.3	16,753.23	370.6	2,177.92	4,355.84	33,506.46	341.67	683.33	4,006.04	8,012.09	23,278.86	46,557.72
282	3442.020	Control Panel 3442-CP-5000	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	113,829.51	113,829.51	1,654.21	1,654.21	128,527.45	128,527.45	1.0	15.9	1,440.41	15.9	187.25	187.25	1,440.41	294.75	294.75	397.86	397.86	2,320.28	2,320.28
283	3442.030	Air tank 3442-TK-5000 / 5001		2	2	63.4	6,852.68	126.7	1,027.90	2,055.80	13,705.37	109,667.44	219,334.88	999.42	1,998.84	118,547.44	237,094.89	2.0	102.2	9,238.58	204.4	1,201.01	2,402.03	18,477.15	178.20	356.40	2,207.08	4,414.15	12,824.86	25,649.73
284	3442.040	Pressure Damper 3442-PD-5000 / 5001	ea	2	2	63.4	6,852.68	126.7	1,027.90	2,055.80	13,705.37	21,787.21	43,574.43	999.42	1,998.84	30,667.22	61,334.44	2.0	109.3	9,881.84	218.6	1,284.64	2,569.28	19,753.67	242.98	485.96	2,371.30	4,742.59	13,780.75	27,561.50
285	3442.050	Oil-Water Separator 3442-OWS-5000	ea	1	1	63.4	6,852.68	63.4	1,027.90	1,027.90	6,852.68	3,348.40	3,348.40	999.42	999.42	12,228.41	12,228.41	1.0	56.6	5,114.20	56.6	664.85	664.85	5,114.20	73.13	73.13	1,216.63	1,216.63	7,068.81	7,068.81
286	3442.060	Pressure Safety Valve 3442-PSV-5000 / 5001	ea	2	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
287	3442.070	Y-strainer 3442-STR-1000 / 2000/ 3000 / 4000 / 5000 / 5001		6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	440.56	2,643.37	172.31	1,033.88	1,971.60	11,829.58	6.0	4.8	431.61	28.7	56.11	336.66	2,589.68	136.18	817.05	128.85	773.10	752.75	4,516.49
288	3442.080	Y-strainer 3442-STR-5002 / 5003		2	2	26.2	2,835.59	52.4	425.34	850.68	5,671.19	552.82	1,105.65	413.55	827.10	4,227.31	8,454.61	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
289	3442.090	Y-strainer 3442-STR-5004		1	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	552.82	552.82	413.55	413.55	4,227.31	4,227.31	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
290	3442.100	Solenoid Valve 3442-YV-5000 / 5001	ea	2	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	1,665.90	3,331.81	412.93	825.87	2,451.68	4,903.35
291	3442.110	Pressure Regulator 3442-PCV-5000 / 5001	ea	2	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
292	3442.120	Pressure Indicator 3442-PI-1000 / 2000 / 3000 / 4000 / 5000 / 5001 / 5002 / 5003 / 5004 / 6000	ea	10	10	8.7	945.20	87.4	141.78	1,417.80	9,451.98	700.54	7,005.37	137.85	1,378.51	1,925.36	19,253.65	10.0	4.7	428.93	47.5	55.76	557.61	4,289.33	110.43	1,104.31	123.04	1,230.38	718.16	7,181.64
293	3442.130	Pressure Transmitter 3442-PT-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	338.11	676.23	137.85	275.70	1,562.94	3,125.88	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	1,823.93	3,647.85	522.29	1,044.58	3,091.90	6,183.81
294	3442.140	Pressure Expansion Valve 3442-PEV-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	338.11	676.23	137.85	275.70	1,562.94	3,125.88	2.0	3.7	329.95	7.3	42.89	85.79	659.89	35.02	70.04	84.60	169.19	492.45	984.91
B&M-0102	Added	Instument Panel for Govenor Air	ea	0	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	31,889.44	31,889.44	2,205.61	2,205.61	51,486.69	51,486.69	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0103	Added	Instrumentation Panel and Reducing Brake Air Pressure Station	ea	0	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	166,907.79	166,907.79	2,205.61	2,205.61	186,505.04	186,505.04	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
295	3442.150	Pipe NPS 1/2 Sch.40S, Piping Specification SB11	m	1	1	1.0	104.63	1.0	15.70	15.70	104.63	23.57	23.57	15.26	15.26	159.16	159.16	1.0	44.0	3,976.03	44.0	516.88	516.88	3,976.03	154.84	154.84	965.60	965.60	5,613.35	5,613.35
296	3442.160	Olet FNPT NPS 1/2 Sch.40S, Piping Specification SB11	ea	1	1	2.2	236.30	2.2	35.44	35.44	236.30	24.93	24.93	34.46	34.46	331.13	331.13	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.54	10.54	13.84	13.84	80.78	80.78
297	3442.170	Ball Valve NPS 1/2, Valve Specification VBA12	ea	2	2	3.7	400.53	7.4	60.08	120.16	801.06	117.28	234.57	58.41	116.83	636.31	1,272.61	2.0	3.7	329.95	7.3	42.89	85.79	659.90	109.52	219.04	99.59	199.17	581.95	1,163.90
298	3442.180	Pipe identification NPS 1/2	Linear meter	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	11.67	2.35	2.35	14.02	14.02
299	3442.190	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	6	6	1.1	116.26	6.4	17.44	104.63	697.56	27.68	166.07	16.96	101.73	178.33	1,069.99	6.0	1.8	160.53	10.7	20.87	125.22	963.20	9.91	59.43	39.72	238.33	231.03	1,386.18
300	3442.200	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	m	21	21	1.1	116.26	22.1	17.44	359.24	2,394.94	27.68	570.16	16.96	349.29	178.33	3,673.63	20.6	0.6	49.91	11.3	6.49	133.66	1,028.15	4.23	87.05	12.57	258.99	73.20	1,507.84
301	3442.210	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	20	20	5.6	602.56	111.4	90.38	1,807.69	12,051.27	117.55	2,350.92	87.88	1,757.60	898.37	17,967.48	20.0	0.6	54.00	11.9	7.02	140.41	1,080.09	5.37	107.34	13.77	275.45	80.16	1,603.29
302	3442.220	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	6	6	5.6	602.56	33.4	90.38	542.31	3,615.38	94.50	567.02	87.88	527.28	875.33	5,251.99	6.0	0.4	33.27	2.2	4.33	25.95	199.62	8.74	52.46	9.58	57.50	55.92	335.53
303	3442.230	Tee SW Class 3000 NPS 3/4, Piping Specification SB11	ea	6	6	7.2	779.79	43.3	116.97	701.81	4,678.73	187.61	1,125.64	113.73	682.36	1,198.09	7,188.54	6.0	1.2	108.33	7.2	14.08	84.50	650.00	7.11	42.63	26.89	161.34	156.41	938.47
304	3442.240	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	2	5.6	602.56	11.1	90.38	180.77	1,205.13	482.63	965.26	87.88	175.76	1,263.46	2,526.92	2.0	0.6	52.68	1.2	6.85	13.70	105.36	14.67	29.34	15.33	30.67	89.53	179.07
305	3442.250	Weld NPS 3/4, Piping Specification SB11	ea	74	74	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.0	0.5	47.97	39.3	6.24	461.47	3,549.77	16.06	1,188.56	14.35	1,062.01	84.62	6,261.82
306	3442.260	Ball Valve NPS 3/4, Valve Specification VBA12	ea	8	8	5.5	595.47	44.0	89.32	714.57	4,763.80	135.93	1,087.45	86.85	694.77	907.57	7,260.58	8.0	3.2	286.63	25.4	37.26	298.09	2,293.00	38.78	310.28	75.17	601.35	437.84	3,502.72
307	3442.270	Needle Valve NPS 3/4, Valve Specification VNE04	ea	1	1	1.1	119.31	1.1	17.90	17.90	119.31	6.27	6.27	17.40	17.40	160.87	160.87	1.0	3.2	289.06	3.2	37.58	37.58	289.06	0.00	0.00	67.93	67.93	394.56	394.56
308	3442.280	Pipe identification NPS 3/4	Linear meter	27	27	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.0	0.6	51.18	15.3	6.65	179.65	1,381.92	12.06	325.72	14.46	390.37	84.36	2,277.67
309	3442.290	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	1	1	1.4	151.14	1.4	22.67	22.67	151.14	39.80	39.80	22.04	22.04	235.65	235.65	1.0	0.6	49.91	0.6	6.49	6.49	49.91	4.56	4.56	12.64	12.64	73.60	73.60
310	3442.300	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	189	189	1.4	151.14	264.1	22.67	4,284.74	28,564.91	39.80	7,522.17	22.04	4,166.00	235.65	44,537.82	189.0	4.2	376.33	786.7	48.92	9,246.37	71,125.94	18.05	3,411.06	92.08	17,402.38	535.37	101,185.75
311	3442.310	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	57	57	5.9	638.01	336.3	95.70	5,454.97	36,366.48	125.39	7,147.43	93.05	5,303.81	952.15	54,272.69	57.0	0.6	53.88	34.0	7.00	399.27	3,071.29	8.11	462.43	14.30	814.90	83.30	4,747.89
312	3442.320	Elbow 90 degrees FNPT Sch.40S NPS 1, Piping Specification SB11	ea	4	4	5.9	638.01	23.6	95.70	382.81	2,552.03	125.39	501.57	93.05	372.20	952.15	3,808.61	4.0	0.7	66.54	3.0	8.65	34.60	266.16	8.70	34.79	17.39	69.57	101.28	405.12
313	3442.330	Tee SW Class 3000 NPS 1, Piping Specification SB11	ea	13	13	7.9	850.68	102.3	127.60	1,658.82	11,058.81	199.11	2,588.45	124.07	1,612.85	1,301.46	16,918.94	13.0	1.2	107.21	15.4	13.94	181.18	1,393.73	10.49	136.31	27.31	355.00	158.94	2,066.23
314	3442.340	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	4	5.9	638.01	23.6	95.70	382.81	2,552.03	580.55	2,322.21	93.05	372.20	1,407.31	5,629.25	4.0	0.6	52.68	2.3	6.85	27.39	210.72	22.61	90.45	16.93	67.72	99.07	396.28
315	3442.350	Union SW / FNPT Class 3000 NPS 1, Piping Specification SB11	ea	4	4	5.9	638.01	23.6	95.70	382.81	2,552.03	580.55	2,322.21	93.05	372.20	1,407.31	5,629.25	4.0	0.7	66.54	3.0	8.65	34.60	266.16	18.64	74.57	19.39	77.56	113.22	452.89
316	3442.360	Concentric Reducer SW Class 3000 NPS 1 x 3/4, Piping Specification SB11	ea	1	1	8.5	921.57	8.5	138.24	138.24	921.57	448.22	448.22	134.40	134.40	1,642.43	1,642.43	1.0	0.7	66.54	0.7	8.65	8.65	66.54	21.57	21.57	19.98	19.98	116.75	116.75
317	3442.370	Flexible Connector Penflex 800SS MNPT NPS 1	ea	2	2	3.2	343.82	6.4	51.57	103.14	687.63	204.80	409.60	50.14	100.29	650.33	1,300.66	2.0	0.7	66.54	1.5	8.65	17.30	133.08	61.51	123.01	28.02	56.03	164.71	329.43
318	3442.380	Flange SW 150RF NPS 1 c/w Hardware , Piping Specification SB11	ea	4	4	7.2	783.33	29.0	117.50	470.00	3,133.33	352.68	1,410.72	114.24	456.98	1,367.76	5,471.02	4.0	16.5	1,490.32	65.9	193.74	774.96	5,961.26	34.62	138.48	357.22	1,428.87	2,075.89	8,303.57
319	3442.390	Weld NPS 1, Piping Specification SB11	ea	171	171	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	171.0	0.7	65.92	124.7	8.57	1,465.40	11,272.30	1.03	175.66	15.50	2,649.68	91.01	15,563.04
320	3442.400	Ball Valve NPS 1, Valve Specification VBA12	ea	12	12	7.3	793.97	88.1	119.09	1,429.14	9,527.59	206.90	2,482.85	115.79	1,389.54	1,235.76	14,829.12	12.0	3.2	287.82	38.2	37.42	449.00	3,453.83	186.57	2,238.88	105.20	1,262.45	617.01	7,404.16
321	3442.410	Pipe identification NPS 1	Linear meter	190	190	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190.0	0.6	50.38	105.9	6.55	1,244.43	9,572.52	12.06	2,292.16	14.27	2,711.14	83.26	15,820.25
322	3442.420	Pipe NPS 2 Sch40, Piping Specification SB11	m	151	151	2.3	244.14	340.9	36.62	5,529.87	36,865.83	71.27	10,761.55	35.61	5,376.63	387.64	58,533.89	151.0	2.5	224.79	375.5	29.22	4,412.68	33,943.73	31.31	4,727.79	59.10	8,924.73	344.43	52,008.93
323	3442.430	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	172.91	691.65	134.40	537.62	1,367.12	5,468.47	4.0	0.3	28.77	1.3	3.74	14.96	115.07	37.45	149.78	14.30	57.20	84.25	337.01
324	3442.440	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	22	22	8.5	921.57	187.5	138.24	3,041.17	20,274.49	171.71	3,777.71	134.40	2,956.90	1,365.92	30,050.28	22.0	0.6	54.00	13.1	7.02	154.45	1,188.10	31.16	685.49	18.96	417.23	111.15	2,445.28

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
325	3442.450	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	7	7	8.5	921.57	59.6	138.24	967.65	6,450.97	1,191.56	8,340.91	134.40	940.83	2,385.77	16,700.36	7.0	0.6	54.48	4.2	7.08	49.58	381.39	56.71	397.00	24.22	169.56	142.50	997.53
326	3442.460	Union SW/ FNPT Class 3000 NPS 2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	1,191.56	4,766.23	134.40	537.62	2,385.77	9,543.06	4.0	0.6	53.72	2.4	6.98	27.93	214.88	57.40	229.59	24.18	96.73	142.28	569.13
327	3442.470	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1	180.77	180.77	1,205.13	268.91	268.91	175.76	175.76	1,830.56	1,830.56	1.0	1.3	115.07	1.3	14.96	14.96	115.07	44.57	44.57	36.01	36.01	210.61	210.61
328	3442.480	Tee Reducing SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	3	3	11.1	1,205.13	33.4	180.77	542.31	3,615.38	238.38	715.15	175.76	527.28	1,800.04	5,400.12	3.0	1.2	107.44	3.6	13.97	41.90	322.32	95.67	287.02	44.51	133.53	261.59	784.78
329	3442.490	Tee Reducing SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	5	5	11.1	1,205.13	55.7	180.77	903.85	6,025.64	266.81	1,334.06	175.76	878.80	1,828.47	9,142.34	5.0	1.2	108.97	6.0	14.17	70.83	544.84	95.68	478.39	44.87	224.35	263.68	1,318.41
330	3442.500	Half Coupling SW Class 3000 NPS 2, Piping Specification SB11	ea	2	2	8.5	921.57	17.0	138.24	276.47	1,843.14	171.71	343.43	134.40	268.81	1,365.92	2,731.84	2.0	0.6	54.07	1.2	7.03	14.06	108.14	10.56	21.13	14.83	29.67	86.49	172.99
331	3442.510	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	4.6	496.23	4.6	74.43	74.43	496.23	176.90	176.90	72.37	72.37	819.93	819.93	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.62	10.62	13.87	13.87	80.89	80.89
332	3442.520	Flexible Connector Penflex 800SS MNPT NPS 2	ea	2	2	4.4	471.42	8.7	70.71	141.43	942.83	369.51	739.01	68.75	137.51	980.39	1,960.78	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	204.89	409.78	196.34	392.68	1,146.92	2,293.84
333	3442.530	Expansion Joint U Type Connectall NPS 2	ea	3	3	4.4	471.42	13.1	70.71	212.14	1,414.25	451.38	1,354.14	68.75	206.26	1,062.26	3,186.79	3.0	7.3	659.90	21.9	85.79	257.36	1,979.70	2,419.18	7,257.55	642.13	1,926.38	3,807.00	11,420.99
334	3442.540	Concentric Reducer Sch.10s NPS 2 x 1, Piping Specification SB11	ea	1	1	8.5	921.57	8.5	138.24	138.24	921.57	183.09	183.09	134.40	134.40	1,377.29	1,377.29	1.0	0.7	66.54	0.7	8.65	8.65	66.54	35.78	35.78	22.83	22.83	133.80	133.80
335	3442.550	Weld NPS 2, Piping Specification SB11	ea	110	110	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	110.0	2.1	191.61	233.1	24.91	2,740.06	21,077.40	1.00	110.49	45.03	4,953.83	262.56	28,881.78
336	3442.560	Ball Valve NPS 2, Valve Specification VBA12	ea	2	2	14.7	1,587.93	29.4	238.19	476.38	3,175.86	392.26	784.53	231.59	463.18	2,449.97	4,899.95	2.0	4.7	429.07	9.5	55.78	111.56	858.14	310.28	620.56	163.30	326.61	958.43	1,916.86
337	3442.570	Pipe identification NPS 2	Linear meter	151	151	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	151.0	1.1	102.52	171.2	13.33	2,012.39	15,479.95	16.35	2,468.55	27.38	4,135.00	159.58	24,095.90
338	3442.580	Flange SW 150RF NPS 6 c/w Hardware, Piping Specification SB11	ea	2	2	19.4	2,101.88	38.9	315.28	630.56	4,203.77	246.46	492.93	306.55	613.09	2,970.18	5,940.35	2.0	3.3	302.45	6.7	39.32	78.64	604.91	3.94	7.89	71.88	143.75	417.59	835.19
339	3442.590	Blind Flange 150RF NPS 6 c/w Hardware, Piping Specification SB11	ea	2	2	19.4	2,101.88	38.9	315.28	630.56	4,203.77	246.46	492.93	306.55	613.09	2,970.18	5,940.35	2.0	6.1	549.91	12.2	71.49	142.98	1,099.83	72.43	144.87	143.82	287.64	837.66	1,675.31
B&M-0104	Added	2" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea	0	2	0.5	59.07	1.1	8.86	17.72	118.15	84.98	169.96	8.62	17.23	161.53	323.06	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0105	Added	1.5" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea	0	2	0.5	59.07	1.1	8.86	17.72	118.15	67.74	135.48	8.62	17.23	144.29	288.59	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0106	Added	1/2" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea	0	2	0.5	59.07	1.1	8.86	17.72	118.15	39.01	78.03	8.62	17.23	115.57	231.13	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0107	Added	2" coupling, 304SS, Vic-Press - 597	ea	0	15	8.5	921.57	127.8	138.24	2,073.53	13,823.52	119.05	1,785.69	134.40	2,016.07	1,313.25	19,698.80	15.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0108	Added	1" coupling, 304SS, Vic-Press - 597	ea	0	16	5.9	638.01	94.4	95.70	1,531.22	10,208.13	86.19	1,379.07	93.05	1,488.79	912.95	14,607.21	16.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0109	Added	1/2" 90 elbow, 304SS, Vic-Press - 590	ea	0	2	4.3	460.78	8.5	69.12	138.24	921.57	106.51	213.01	67.20	134.40	703.61	1,407.22	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0110	Added	1"x3/4" reducer, 304SS, Vic-Press - 582	ea	0	1	5.9	638.01	5.9	95.70	95.70	638.01	146.64	146.64	93.05	93.05	973.40	973.40	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0111	Added	1"x3/4" reducing tee, 304SS, Vic-Press - 593	ea	0	1	7.9	850.68	7.9	127.60	127.60	850.68	168.89	168.89	124.07	124.07	1,271.23	1,271.23	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0112	Added	2"x1/2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea	0	1	11.1	1,205.13	11.1	180.77	180.77	1,205.13	313.20	313.20	175.76	175.76	1,874.85	1,874.85	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0113	Added	3/4" male adapter, 304SS, Vic-Press - 596	ea	0	2	5.6	602.56	11.1	90.38	180.77	1,205.13	143.28	286.56	87.88	175.76	924.11	1,848.22	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0114	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea	0	2	4.3	460.78	8.5	69.12	138.24	921.57	133.14	266.28	67.20	134.40	730.24	1,460.48	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0115	Added	3" blind flange, SS, B16.5 RF, ASTM A182 F304L - 150# (Tapped)	ea	0	2	12.2	1,315.01	24.3	197.25	394.50	2,630.01	109.19	218.39	191.78	383.57	1,813.24	3,626.47	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0116	Added	1/2" tube, smls SS, Rb 80 or less, thickness 3.00: to ASTM A269 Grade 316L	Linear meter	0	6	0.7	71.15	4.2	10.67	68.33	455.54	44.49	284.86	10.38	66.44	136.69	875.16	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0117	Added	1/2" 90 union elbow, SS, A182 Gr 316 - Swagelok or equal	ea	0	4	1.1	119.31	4.4	17.90	71.58	477.23	48.36	193.42	17.40	69.60	202.96	811.84	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0118	Added	1/2" thread adapter, SS, A182 Gr 316 - Swagelok or equal	ea	0	2	3.7	400.53	7.4	60.08	120.16	801.06	49.26	98.51	58.41	116.83	568.28	1,136.55	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0119	Added	1/2" ball valve, SS - THD - Swagelok 60T Series or equal VBA14	ea	0	1	1.1	119.31	1.1	17.90	17.90	119.31	293.55	293.55	17.40	17.40	448.15	448.15	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0120	Added	1" Expansion joint U-type Connectall - PE (Supplied with Equipment)	ea	0	2	3.2	343.82	6.4	51.57	103.14	687.63	18.07	36.13	50.14	100.29	463.60	927.19	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
340	3443.020	WFS (Fire Protection Water)	LS	1	1	0.0	-	0.0	-	0.00	0.00	6,042,000.00	6,042,000.00	0.00	0.00	6,042,000.00	6,042,000.00	1.0	26448.3	2,391,081.99	26,448.3	310,840.66	310,840.66	2,391,081.99	5,244,850.35	5,244,850.35	590,230.91	590,230.91	8,537,003.91	8,537,003.91
340b	Added	Piping EA	0	0	11	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.00	0.00	0.00	0.00	0.00	1.03	11.30	0.00	0.04	1.03	11.33
		WCD (Clear Water Drainage)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
341	3444.001	Drainage pump 3444-P-5000 to 5002	ea	3	3	229.4	24,811.44	688.2	3,721.72	11,165.15	74,434.32	159,914.18	479,742.55	3,618.58	10,855.75	192,065.92	576,197.76	3.0	143.0	12,928.55	429.0	1,680.71	5,042.13	38,785.64	145,527.04	436,581.13	32,336.75	97,010.24	192,473.05	577,419.14
342	3444.002	Submersible pump 3444-P-0001	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	124.1	11,218.27	124.1	1,458.38	1,458.38	11,218.27	51,712.21	51,712.21	13,047.47	13,047.47	77,436.33	77,436.33
343	3444.003	Oil skimmer 3444-OS-0001	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	62.0	5,609.14	62.0	729.19	729.19	5,609.14	18,382.40	18,382.40	5,019.09	5,019.09	29,739.82	29,739.82
344	3444.004	Air vent 3444-AV-0001 to 0003	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	10,979.98	32,939.95	137.85	413.55	12,204.81	36,614.44	3.0	3.7	329.95	11.0	42.89	128.68	989.85	6,530.07	19,590.22	1,392.21	4,176.64	8,295.13	24,885.40
345	3444.005	Air vent 3444-AV-5000 to 0002	ea	3	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	5,661.93	16,985.79	379.09	1,137.27	9,030.21	27,090.62	3.0	3.7	329.95	11.0	42.89	128.68	989.85	3,300.06	9,900.17	741.93	2,225.79	4,414.83	13,244.50
346	3444.006	Air vent 3444-AV-5003	ea	1	1	28.4	3,071.89	28.4	460.78	460.78	3,071.89	11,105.41	11,105.41	448.01	448.01	15,086.10	15,086.10	1.0	3.7	329.95	3.7	42.89	42.89	329.95	8,137.50	8,137.50	1,715.83	1,715.83	10,226.16	10,226.16
347	3444.007	Pressure Indicator 3444-PI-0001 to 0003	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	700.54	2,101.61	137.85	413.55	1,925.36	5,776.09	3.0	3.7	329.95	11.0	42.89	128.68	989.85	84.95	254.84	94.64	283.93	552.43	1,657.30
348	3444.008	Level Switch 3444-LSLL-0001 / 3444-LSHH-0001	ea	2	2	45.9	4,962.29	91.8	744.34	1,488.69	9,924.58	983.67	1,967.34	723.72	1,447.43	7,414.02	14,828.04	2.0	16.6	1,497.25	33.1	194.64	389.28	2,994.49	1,096.12	2,192.24	572.55	1,145.10	3,360.56	6,721.12
349	3444.009	Level Transmitter 3444-LT-0001	ea	1	1	45.9	4,962.29	45.9	744.34	744.34	4,962.29	18,342.14	18,342.14	723.72	723.72	24,772.49	24,772.49	1.0	24.6	2,227.85	24.6	289.62	289.62	2,227.85	5,652.55	5,652.55	1,661.60	1,661.60	9,831.62	9,831.62
350	3444.010	Oil sheen detector 3444-LSH-0001	ea	1	1	45.9	4,962.29	45.9	744.34	744.34	4,962.29	29,774.20	29,774.20	723.72	723.72	36,204.55	36,204.55	1.0	28.3	2,557.79	28.3	332.51	332.51	2,557.79	26,779.21	26,779.21	5,992.46	5,992.46	35,661.97	35,661.97
351	3444.011	Current transmitter 3444-IT-5000 to 5002	ea	3	3	45.9	4,962.29	137.6	744.34	2,233.03	14,886.86	379.15	1,137.46	723.72	2,171.15	6,809.50	20,428.50	3.0	6.4	576.26	19.1	74.91	224.74	1,728.77	128.19	384.57	161.24	483.71	940.60	2,821.79
352	3444.012	Control Panel 3444-CP-5000	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	60,135.84	60,135.84	12,501.45	12,501.45	74,534.39	74,534.39
353	3444.013	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	9	9	1.1	116.26	9.7	17.44	156.95	1,046.33	22.98	206.78	16.96	152.60	173.63	1,562.66	9.0	1.8	159.97	15.9	20.80	187.17	1,439.73	7.62	68.60	39.13	352.17	227.52	2,047.67
354	3444.014	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	9	5.6	602.56	50.1	90.38	813.46	5,423.07	117.55	1,057.92	87.88	790.92	898.37	8,085.37	9.0	0.6	53.14	5.3	6.91	62.18	478.28	5.37	48.30	13.57	122.13	78.99	710.89
355	3444.015	Weld NPS 3/4, Piping Specification SB11	ea	18	18	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.0	1.1	98.99	19.7	12.87	231.65	1,781.91	137.39	2,472.97	50.68	912.16	299.93	5,398.69
356	3444.016	Pipe identification NPS 3/4	Linear meter	9	9	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.6	50.04	5.0	6.50	58.54	450.33	12.07	108.59	14.19	127.71	82.80	745.17
357	3444.017	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	11	11	1.4	151.14	15.4	22.67	249.38	1,662.51	36.45	400.90	22.04	242.47	232.30	2,555.25	11.0	1.8	164.97	20.1	21.45	235.91	1,814.72	346.43	3,810.69	108.52	1,193.68	641.36	7,055.00
358	3444.018	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	15	15	5.9	638.01	88.5	95.70	1,435.52	9,570.13	125.39	1,880.90	93.05	1,395.74	952.15	14,282.29	15.0	0.6	56.54	9.4	7.35	110.26	848.14	203.25	3,048.80	54.21	813.13	321.36	4,820.33
359	3444.019	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	7	7	3.9	425.34	27.5	63.80	446.61	2,977.37	43.11	301.74	62.03	434.23	594.28	4,159.94	7.0	0.4	37.99	2.9	4.94	34.57	265.90	6.29	44.03	10.19	71.35	59.41	415.85
360	3444.020	Ball valve NPS 1, Valve Specification VBA11	ea	10	10	7.3	793.97	73.4	119.09	1,190.95	7,939.66	202.60	2,025.95	115.79	1,157.95	1,231.45	12,314.51	10.0	3.7	329.95	36.5	42.89	428.93	3,299.48	182.52	1,825.18	114.29	1,142.88	669.65	6,696.47
361	3444.021	Weld NPS 1, Piping Specification SB11	ea	64	64	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.0	0.5	42.18	29.9	5.48	350.97	2,699.80	170.65	10,921.41	44.13	2,824.03	262.44	16,796.22
362	3444.022	Pipe identification NPS 1	Linear meter	11	11	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.6	51.65	6.3	6.71	73.86	568.14	12.06	132.70	14.57	160.24	84.99	934.93
363	3444.023	Pipe NPS 1-1/2 Sch.DWV, Piping Specification PA01	m	246	246	1.3	139.51	317.3	20.93	5,147.96	34,319.75	35.32	8,687.79	20.35	5,005.31	216.10	53,160.80	246.0	3.6	326.41	888.2	42.43	10,438.58	80,296.74	7.36	1,809.46	78.19	19,235.21	454.39	111,779.98
364	3444.024	"P" Drain Trap SW NPS 1-1/2, Piping Specification PA01	ea	17	17	1.7	184.31	29.0	27.65	470.00	3,133.33	28.36	482.08	26.88	456.98	267.20	4,542.39	17.0	0.3	29.16	5.5	3.79	64.44	495.71	9.29	157.94	8.72	148.30	50.96	866.39
365	3444.025	Elbow 90 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	38	38	1.7	184.31	64.8	27.65	1,050.59	7,003.91	16.15	613.64	26.88	1,021.47	254.99	9,689.62	38.0	0.3	29.16	12.3	3.79	144.06	1,108.18	2.54	96.42	7.36	279.85	42.86	1,628.51
366	3444.026	Elbow 45 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	32	32	1.7	184.31	54.5	27.65	884.71	5,898.03	14.71	470.79	26.88	860.19	253.55	8,113.71	32.0	0.2	14.70	5.2	1.91	61.15	470.37	2.16	69.03	3.89	124.44	22.66	724.99
367	3444.027	Elbow 22.5 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	8	8	2.5	269.38	19.9	40.41	323.26	2,155.06	24.21	193.67	39.29	314.30	373.29	2,986.28	8.0	0.2	16.64	1.4	2.16	17.31	133.12	9.81	78.44	5.88	47.07	34.49	275.94
368	3444.028	Tee wye SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	10	10	5.3	574.21	53.1	86.13	861.31	5,742.08	40.23	402.26	83.74	837.44	784.31	7,843.09	10.0	0.7	59.03	6.5	7.67	76.74	590.29	4.39	43.88	14.76	147.56	85.85	858.47
369	3444.029	Coupling Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	3	3	2.5	269.38	7.5	40.41	121.22	808.14	24.21	72.63	39.29	117.86	373.29	1,119.86	3.0	0.3	29.23	1.0	3.80	11.40	87.70	1.72	5.17	7.22	21.65	41.97	125.92
370	3444.030	Pipe insulation NPS 1-1/2	Linear meter	120	120	1.5	147.36	174.7	22.10	2,652.49	17,683.24	42.73	5,127.26	8.55	1,026.00	220.74	26,488.99	120.0	3.3	302.22	400.8	39.29	4,714.63	36,266.40	201.83	24,219.87	94.19	11,303.08	637.53	76,503.98
371	3444.031	Pipe identification NPS 1-1/2	Linear meter	246	246	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	246.0	0.6	50.45	137.3	6.56	1,613.41	12,410.82	12.06	2,967.74	14.29	3,514.21	83.36	20,506.19
372	3444.032	Pipe NPS 2 Sch.40, Piping Specification PA02	m	6	6	1.5	162.76	9.0	24.41	146.49	976.58	18.21	109.26	23.74	142.43	229.13	1,374.76	6.0	6.3	568.14	37.7	73.86	443.15	3,408.84	10.11	60.68	135.56	813.35	787.67	4,726.01
373	3444.033	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	6	6	1.8	191.40	10.6	28.71	172.26	1,148.42	14.22	85.34	27.91	167.49	262.25	1,573.50	6.0	0.3	30.00	2.0	3.90	23.40	179.97	8.47	50.80	8.75	52.52	51.12	306.70
374	3444.034	Pipe identification NPS 2	Linear meter	6	6	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.6	51.28	3.4	6.67	40.00	307.69	12.06	72.39	14.48	86.88	84.49	506.96
375	3444.035	Pipe NPS 3 Sch.STD, Piping Specification CB11	m	10	10	2.8	302.27	27.9	45.34	453.41	3,022.74	50.23	502.29	44.08	440.85	441.93	4,419.29	10.0	3.6	327.39	36.2	42.56	425.61	3,273.89	19.81	198.05	80.93	809.29	470.68	4,706.84
376	3444.036	Elbow 90 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	2	2	12.7	1,375.26	25.4	206.29	412.58	2,750.53	81.86	163.72	200.57	401.15	1,863.98	3,727.96	2.0	1.3	121.08	2.7	15.74	31.48	242.15	6.13	12.26	29.69	59.37	172.63	345.26
377	3444.037	Elbow 45 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	2	2	12.7	1,375.26	25.4	206.29	412.58	2,750.53	81.86	163.72	200.57	401.15	1,863.98	3,727.96	2.0	0.7	66.54	1.5	8.65	17.30	133.08	16.31	32.62	18.92	37.85	110.42	220.84
378	3444.038	Flange Welding Neck 150RF Sch.STD NPS 3 c/w hardware, Piping Specification CB11	ea	2	2	8.3	893.21	16.5	133.98	267.96	1,786.42	67.72	135.44	130.27	260.54	1,225.18	2,450.36	2.0	18.5	1,674.35	37.0	217.67	435.33	3,348.70	28.90	57.79	399.32	798.63	2,320.23	4,640.46
379	3444.039	Olet BW Sch.STD NPS 3, Piping Specification CB11	ea	1	1	8.1	874.31	8.1	131.15	131.15	874.31	92.05	92.05	127.51	127.51	1,225.01	1,225.01	1.0	1.3	115.07	1.3	14.96	14.96	115.07	35.56	35.56	34.20	34.20	199.79	199.79
380	3444.040	Victaulic Coupling NPS 3, Style 07	ea	1	1	0.5	53.17	0.5	7.98	7.98	53.17	67.55	67.55	7.75	7.75	136.45	136.45	1.0	0.7	66.54	0.7	8.65	8.65	66.54	48.13	48.13	25.33	25.33	148.65	148.65
381	3444.041	Weld NPS 3, Piping Specification CB11	ea	10	10	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	3.8	342.85	37.9	44.57	445.70	3,428.45	20.85	208.49	84.74	847.43	493.01	4,930.08
382	3444.042	Ball valve NPS 3, Valve Specification VBA01	ea	1	1	6.4	694.72	6.4	104.21	104.21	694.72	2,323.25	2,323.25	101.32	101.32	3,223.50	3,223.50	1.0	5.1	461.65	5.1	60.01	60.01	461.65	1,158.99	1,158.99	341.83	341.83	2,022.48	2,022.48
383	3444.043	Pipe painting NPS 3	Linear meter	10	10	0.9	89.04	9.4	13.36	133.56	890.39	1.77	17.68	0.00	0.00	104.16	1,041.63	10.0	0.0	0.00	0.0	0.00	0.00	0.00	255.42	2,554.25	51.42	514.24	306.85	3,068.49
384	3444.044	Pipe identification NPS 3	Linear meter	10	10	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.6	50.32	5.6	6.54	65.41	503.19	12.06	120.64	14.25	142.55	83.18	831.78
385	3444.045	Pipe NPS 3 Sch.DWV, Piping Specification PA01	m	95	95	1.5	162.76	143.0	24.41	2,319.37	15,462.49	39.18	3,721.75	23.74	2,255.10	250.09	23,758.72	95.0	1.9	170.42	179.1	22.15	2,104.72	16,190.17	20.00	1,899.90	44.08	4,187.42	256.65	24,382.20
386	3444.046	Elbow 90 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	9	9	2.5	269.38	22.4	40.41	363.66	2,424.43	35.70	321.30	39.29	353.59	384.78	3,462.99	9.0	0.2	21.19	2.1	2.75	24.79	190.72	10.16	91.45	7.03	63.25	41.13	370.21
387	3444.047	Elbow 45 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	14	14	2.5	269.38	34.9	40.41	565.70	3,771.34	31.39	439.48	39.29	550.02	380.47	5,326.54	14.0	0.1	10.60	1.6	1.38	19.28	148.34	8.62	120.63	4.22	59.15	24.81	347.41
388	3444.048	Elbow 22.5 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	1	1	2.5	269.38	2.5	40.41	40.41	269.38	35.70	35.70	39.29	39.29	384.78	384.78	1.0	0.2	16.64	0.2	2.16	2.16	16.64	19.82	19.82	7.89	7.89	46.52	46.52
389	3444.049	Tee wye SW Sch.DWV NPS 3, Piping Specification PA01	ea	7	7	3.6	389.89	25.2	58.48	409.39	2,729.26	49.21	344.50	56.86	398.04	554.46	3,881.19	7.0	0.5	42.38	3.3	5.51	38.57	296.68	15.85	110.94	13.15	92.07	76.89	538.26
390	3444.050	Coupling Sch.DWV NPS 3, Piping Specification PA01	ea	9	9	2.5	269.38	22.4	40.41	363.66	2,424.43	24.21	217.88	39.29	353.59	373.29	3,359.57	9.0	0.2	22.00	2.2	2.86	25.74	197.97	9.01	81.08	6.98	62.85	40.85	367.63
391	3444.051	"P" Drain Trap SW Sch.DWV NPS 3, Piping Specification PA01	ea	5	5	2.5	269.38	12.5	40.41	202.04	1,346.91	107.52	537.60	39.29	196.44	456.60	2,282.98	5.0	0.2	22.24	1.2	2.89	14.46	111.21	76.81	384.07	20.69	103.46	122.64	613.19
392	3444.052	Flexible coupling NPS 3, Fernco Series 1056	ea	1	1	0.4	47.85	0.4	7.18	7.18	47.85	11.32	11.32	6.98	6.98	73.33	73.33	1.0	0.2	16.64	0.2	2.16	2.16	16.64	9.83	9.83	5.90	5.90	34.53	34.53
393	3444.053	Pipe identification NPS 3	Linear meter	95	95	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	1,108.97	2.35	222.90	14.02	1,331.87
394	3444.054	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	2	2	3.5	383.66	7.1	57.55	115.10	767.31	67.23	134.45	55.95	111.91	564.38	1,128.77	2.0	13.6	1,228.99	27.2	159.77	319.54	2,457.98	30.08	60.15	294.89	589.77	1,713.72	3,427.44
395	3444.055	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	2	2	15.9	1,715.53	31.7	257.33	514.66	3,431.07	105.83	211.65	250.20	500.40	2,328.89	4,657.78	2.0	1.4	129.16	2.9	16.79	33.58	258.32	56.89	113.77	41.81	83.61	244.64	489.29
396	3444.056	Flange Welding Neck 150RF Sch.STD NPS 4 c/w hardware, Piping Specification CB11	ea	2	2	11.4	1,229.94	22.7	184.49	368.98	2,459.88	94.91	189.81	179.38	358.76	1,688.71	3,377.43	2.0	30.1	2,722.08	60.2	353.87	707.74	5,444.16	46.62	93.24	649.11	1,298.23	3,771.68	7,543.36
397	3444.057	Flange Slip-on 150RF NPS 4 c/w hardware, Piping Specification CB11	ea	2	2	11.4	1,229.94	22.7	184.49	368.98	2,459.88	94.91	189.81	179.38	358.76	1,688.71	3,377.43	2.0	2.0	181.61	4.0	23.61	47.22	363.22	20.84	41.67	46.87	93.74	272.92	545.85
398	3444.058	Olet BW Sch.STD NPS 4, Piping Specification CB11	ea	1	1	9.4	1,016.09	9.4	152.41	152.41	1,016.09	113.72	113.72	148.19	148.19	1,430.41	1,430.41	1.0	1.8	164.98	1.8	21.45	21.45	164.98	46.59	46.59	48.15	48.15	281.17	281.17
399	3444.059	Weld NPS 4, Piping Specification CB11	ea	6	6	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	4.7	429.13	28.5	55.79	334.72	2,574.79	28.29	169.73	106.51	639.04	619.71	3,718.28
400	3444.060	Ball valve NPS 4, Valve Specification VBA01	ea	1	1	11.0	1,187.40	11.0	178.11	178.11	1,187.40	2,524.38	2,524.38	173.18	173.18	4,063.07	4,063.07	1.0	6.2	561.47	6.2	72.99	72.99	561.47	1,555.05	1,555.05	445.03	445.03	2,634.55	2,634.55
401	3444.061	Pipe identification NPS 4	Linear meter	2	2	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.6	50.48	1.1	6.56	13.13	100.96	12.06	24.13	14.29	28.59	83.40	166.80
402	3444.062	Pipe NPS 4 Sch.DWV, Piping Specification PA01	m	112	112	1.7	186.01	192.6	27.90	3,125.05	20,833.67	52.18	5,843.78	27.13	3,038.45	293.22	32,840.95	112.0	0.5	47.34	58.7	6.15	689.32	5,302.43	28.98	3,245.61	16.96	1,899.59	99.44	11,136.95
403	3444.063	Elbow 90 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	16	16	5.3	574.21	84.9	86.13	1,378.10	9,187.32	54.59	873.44	83.74	1,339.91	798.67	12,778.77	16.0	0.3	28.85	5.1	3.75	60.01	461.65	17.43	278.81	10.29	164.62	60.32	965.09
404	3444.064	Elbow 45 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	2	2	5.3	574.21	10.6	86.13	172.26	1,148.42	51.72	103.43	83.74	167.49	795.80	1,591.60	2.0	0.2	16.64	0.4	2.16	4.33	33.27	16.99	33.98	7.33	14.66	43.12	86.24
405	3444.065	Elbow 22.5 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	6	6	5.3	574.21	31.9	86.13	516.79	3,445.25	57.46	344.78	83.74	502.47	801.55	4,809.28	6.0	0.2	13.86	0.9	1.80	10.81	83.18	24.81	148.85	8.25	49.51	48.72	292.35
406	3444.066	Concentric reducer Sch.DWV NPS 4, Piping Specification PA01	ea	2	2	11.6	1,254.75	23.2	188.21	376.42	2,509.50	134.88	269.75	183.00	365.99	1,760.84	3,521.67	2.0	0.2	16.64	0.4	2.16	4.33	33.28	12.42	24.84	6.42	12.84	37.64	75.29
407	3444.067	Tee wye SW Sch.DWV NPS 4, Piping Specification PA01	ea	1	1	7.9	850.68	7.9	127.60	127.60	850.68	82.04	82.04	124.07	124.07	1,184.39	1,184.39	1.0	0.6	49.91	0.6	6.49	6.49	49.91	25.16	25.16	16.80	16.80	98.35	98.35
408	3444.068	Coupling Sch.DWV NPS 4, Piping Specification PA01	ea	3	3	5.3	574.21	15.9	86.13	258.39	1,722.62	41.66	124.99	83.74	251.23	785.75	2,357.24	3.0	0.3	28.85	1.0	3.75	11.25	86.55	17.00	51.01	10.20	30.61	59.81	179.44
409	3444.069	Flexible coupling NPS 4, Fernco Series 1056	ea	2	2	0.5	57.42	1.1	8.61	17.23	114.84	13.58	27.17	8.37	16.75	87.99	175.98	2.0	0.4	33.27	0.7	4.33	8.65	66.54	10.51	21.01	9.92	19.84	58.02	116.05
410	3444.070	Pipe identification NPS 4	Linear meter	112	112	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	1,307.42	2.35	262.79	14.02	1,570.21
411	3444.071	Pipe NPS 6 Sch.STD, Piping Specification CB11	m	1	1	4.6	499.92	4.6	74.99	74.99	499.92	109.89	109.89	72.91	72.91	757.71	757.71	1.0	10.8	978.16	10.8	127.16	127.16	978.16	50.39	50.39	240.03	240.03	1,395.75	1,395.75
412	3444.072	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	3	3	14.0	1,513.50	42.0	227.02	681.07	4,540.49	129.41	388.24	220.73	662.20	2,090.67	6,272.00	3.0	43.6	3,939.70	130.7	512.16	1,536.48	11,819.10	79.22	237.67	941.84	2,825.51	5,472.92	16,418.76
413	3444.073	Flange Slip-on 150RF NPS 6 c/w hardware, Piping Specification CB11	ea	1	1	14.0	1,513.50	14.0	227.02	227.02	1,513.50	111.69	111.69	220.73	220.73	2,072.94	2,072.94	1.0	2.6	239.14	2.6	31.09	31.09	239.14	256.48	256.48	107.84	107.84	634.55	634.55
414	3444.074	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
415	3444.075	Cap NFPT Sch.STD NPS 6 , Piping Specification CB11	m	1	1	9.5	1,025.07	9.5	153.76	153.76	1,025.07	64.03	64.03	149.50	149.50	1,392.36	1,392.36	1.0	3.1	280.05	3.1	36.41	36.41	280.05	8.58	8.58	67.54	67.54	392.58	392.58
416	3444.076	Weld NPS 6, Piping Specification CB11	ea	3	3	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.00	0.0	0.00	0.00	0.00	466.32	1,398.95	93.88	281.64	560.20	1,680.59
417	3444.077	Butterfly valve NPS 6, Valve Specification VBU01	ea	1	1	16.1	1,736.80	16.1	260.52	260.52	1,736.80	507.82	507.82	253.30	253.30	2,758.44	2,758.44	1.0	7.5	676.53	7.5	87.95	87.95	676.53	501.92	501.92	260.04	260.04	1,526.43	1,526.43
418	3444.078	Check valve NPS 6, Valve Specification VCH02	ea	1	1	16.1	1,736.80	16.1	260.52	260.52	1,736.80	3,838.83	3,838.83	253.30	253.30	6,089.45	6,089.45	1.0	7.5	676.53	7.5	87.95	87.95	676.53	6,570.62	6,570.62	1,481.83	1,481.83	8,816.92	8,816.92
419	3444.079	Pipe identification NPS 6	Linear meter	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.5	48.56	0.5	6.31	6.31	48.56	12.06	12.06	13.84	13.84	80.77	80.77
420	3444.080	Pipe NPS 10 Sch.STD, Piping Specification CB11	m	5	5	7.1	767.31	35.5	115.10	575.48	3,836.56	238.20	1,190.98	111.91	559.54	1,232.51	6,162.56	5.0	3.0	270.92	15.0	35.22	176.10	1,354.61	105.76	528.79	84.96	424.81	496.86	2,484.32
421	3444.081	Flange Welding Neck 150RF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	12	12	22.9	2,481.14	275.3	372.17	4,466.06	29,773.73	246.14	2,953.73	361.86	4,342.30	3,461.32	41,535.81	12.0	11.2	1,015.79	134.8	132.05	1,584.63	12,189.50	173.99	2,087.82	273.75	3,285.04	1,595.58	19,147.00
422	3444.082	Flange Welding Neck 150FF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	3	3	22.9	2,481.14	68.8	372.17	1,116.51	7,443.43	246.14	738.43	361.86	1,085.57	3,461.32	10,383.95	3.0	2.9	263.40	8.7	34.24	102.73	790.20	91.95	275.85	80.42	241.25	470.01	1,410.03
423	3444.083	Olet BW Sch.STD NPS 10, Piping Specification CB11	ea	3	3	22.3	2,410.25	66.9	361.54	1,084.61	7,230.76	579.11	1,737.33	351.52	1,054.56	3,702.42	11,107.27	3.0	0.8	71.63	2.4	9.31	27.93	214.88	436.46	1,309.39	104.71	314.12	622.11	1,866.32
424	3444.084	Victaulic Coupling NPS 10, Style 77	ea	3	3	2.7	292.42	8.1	43.86	131.59	877.26	338.08	1,014.23	42.65	127.94	717.01	2,151.02	3.0	0.8	71.63	2.4	9.31	27.93	214.88	297.43	892.30	76.71	230.14	455.08	1,365.25
425	3444.085	Weld NPS 10, Piping Specification CB11	ea	15	15	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.0	4.6	411.97	68.4	53.56	803.35	6,179.62	472.64	7,089.55	191.69	2,875.41	1,129.86	16,947.93
426	3444.086	Butterfly valve NPS 10, Valve Specification VBU01	ea	3	3	26.6	2,874.58	79.7	431.19	1,293.56	8,623.75	1,534.30	4,602.89	419.24	1,257.72	5,259.30	15,777.91	3.0	10.6	955.04	31.7	124.15	372.46	2,865.11	1,110.31	3,330.94	447.98	1,343.95	2,637.49	7,912.46
427	3444.087	Check valve NPS 10, Valve Specification VCH02	ea	3	3	26.6	2,874.58	79.7	431.19	1,293.56	8,623.75	5,164.08	15,492.24	419.24	1,257.72	8,889.09	26,667.26	3.0	9.9	896.50	29.8	116.55	349.64	2,689.50	14,583.13	43,749.40	3,146.65	9,439.95	18,742.83	56,228.48

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
428	3444.088	Pipe identification NPS 10	Linear meter	5	5	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.5	49.49	2.7	6.43	32.17	247.46	12.06	60.32	14.06	70.30	82.05	410.26
429	3444.089	Olet BW Sch.STD NPS 12, Piping Specification CB11	ea	3	3	31.0	3,355.45	93.1	503.32	1,509.95	10,066.36	893.22	2,679.65	489.37	1,468.11	5,241.36	15,724.07	3.0	1.0	87.80	2.9	11.41	34.24	263.40	724.58	2,173.73	166.51	499.53	990.30	2,970.90
430	3444.090	Flange Welding Neck 150RF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	3	3	27.2	2,941.93	81.6	441.29	1,323.87	8,825.78	330.71	992.14	429.06	1,287.18	4,142.99	12,428.97	3.0	4.3	390.49	13.0	50.76	152.29	1,171.46	118.24	354.71	115.57	346.72	675.06	2,025.18
431	3444.091	Weld NPS 12, Piping Specification CB11	ea	2	2	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.0	0.00	0.0	0.00	0.00	0.00	1,521.66	3,043.32	306.35	612.70	1,828.01	3,656.02
432	3444.092	Pipe identification NPS 12	Linear meter	3	3	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	35.02	2.35	7.04	14.02	42.06
433	3444.093	Pipe NPS 24 Sch.STD, Piping Specification CB11	m	43	43	12.0	1,302.10	517.7	195.32	8,398.57	55,990.49	699.74	30,089.03	189.90	8,165.84	2,387.07	102,643.93	43.0	24.6	2,227.16	1,059.3	289.53	12,449.80	95,767.69	328.30	14,117.00	589.51	25,348.92	3,434.50	147,683.40
434	3444.094	Elbow 90 degrees BW Sch.STD NPS 24, Piping Specification SB11	ea	2	2	90.0	9,729.63	179.9	1,459.44	2,918.89	19,459.26	1,494.88	2,989.77	1,419.00	2,838.00	14,102.96	28,205.92	2.0	1.9	173.30	3.8	22.53	45.06	346.59	626.09	1,252.19	166.78	333.57	988.70	1,977.40
435	3444.095	Elbow 45 degrees BW Sch.STD NPS 24, Piping Specification SB11	ea	2	2	90.0	9,729.63	179.9	1,459.44	2,918.89	19,459.26	1,128.89	2,257.78	1,419.00	2,838.00	13,736.96	27,473.93	2.0	0.9	82.49	1.8	10.72	21.45	164.98	104.35	208.70	40.39	80.78	237.95	475.90
436	3444.096	Tee BW Sch.STD NPS 24, Piping Specification SB11	ea	1	1	132.4	14,316.20	132.4	2,147.43	2,147.43	14,316.20	2,307.08	2,307.08	2,087.92	2,087.92	20,858.63	20,858.63	1.0	3.8	346.59	3.8	45.06	45.06	346.59	986.90	986.90	280.14	280.14	1,658.68	1,658.68
437	3444.097	Victaulic Coupling NPS 24, Style 77	ea	1	1	4.5	485.34	4.5	72.80	72.80	485.34	1,176.15	1,176.15	70.78	70.78	1,805.08	1,805.08	1.0	1.9	173.30	1.9	22.53	22.53	173.30	1,060.51	1,060.51	254.23	254.23	1,510.56	1,510.56
438	3444.098	Victaulic Coupling NPS 24, Style W77	ea	1	1	4.5	485.34	4.5	72.80	72.80	485.34	1,176.15	1,176.15	70.78	70.78	1,805.08	1,805.08	1.0	2.2	198.25	2.2	25.77	25.77	198.25	1,060.50	1,060.50	260.11	260.11	1,544.63	1,544.63
439	3444.099	Weld NPS 24, Piping Specification CB11	ea	10	10	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	13.6	1,226.91	135.7	159.50	1,594.98	12,269.11	740.66	7,406.55	437.10	4,371.02	2,564.17	25,641.67
440	3444.100	Pipe identification NPS 24	Linear meter	43	43	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.0	0.6	50.28	23.9	6.54	281.08	2,162.16	12.06	518.77	14.25	612.61	83.13	3,574.61
B&M-0121	Added	6" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter	0	6	5.5	592.92	35.1	88.94	569.42	3,796.15	101.83	651.93	86.47	553.64	870.16	5,571.15	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0122	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter	0	6	1.9	209.27	12.4	31.39	200.97	1,339.82	34.79	222.73	30.52	195.40	305.97	1,958.92	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0123	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter	0	6	1.2	127.89	7.6	19.18	122.82	818.78	18.50	118.43	18.65	119.41	184.22	1,179.44	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0124	Added	10" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea	0	3	34.5	3,732.35	103.5	559.85	1,679.56	11,197.05	627.03	1,881.10	544.34	1,633.01	5,463.57	16,390.72	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0125	Added	6" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea	0	1	20.6	2,229.48	20.6	334.42	334.42	2,229.48	188.97	188.97	325.16	325.16	3,078.03	3,078.03	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0126	Added	24" cap, CS, STD, ASTM A234 Gr WPB, smls - BW	ea	0	2	41.4	4,473.15	82.7	670.97	1,341.94	8,946.30	527.49	1,054.98	652.38	1,304.76	6,323.99	12,647.98	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0127	Added	24"x1" WOL, CS, STD, ASTM A234 Gr WPB	ea	0	1	2.6	283.56	2.6	42.53	42.53	283.56	30.66	30.66	41.36	41.36	398.11	398.11	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0128	Added	10"x2" SOL, FS, 3000#	ea	0	3	5.2	567.12	15.7	85.07	255.20	1,701.36	47.68	143.05	82.71	248.13	782.58	2,347.74	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0129	Added	10"x1" SOL, FS, 3000#	ea	0	6	2.6	283.56	15.7	42.53	255.20	1,701.36	20.29	121.72	41.36	248.13	387.73	2,326.41	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0130	Added	4" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter	0	6	3.4	372.03	22.0	55.80	357.28	2,381.90	118.53	758.91	54.26	347.38	600.63	3,845.48	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0131	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea	0	6	0.5	59.07	3.3	8.86	53.17	354.45	15.44	92.66	8.62	51.69	91.99	551.97	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0132	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea	0	3	0.5	59.07	1.6	8.86	26.58	177.22	25.99	77.96	8.62	25.85	102.54	307.61	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0133	Added	2" union, class 3000, SS ASTM A182 F304L - SW	ea	0	3	14.4	1,556.03	43.2	233.40	700.21	4,668.09	154.46	463.37	226.94	680.81	2,170.83	6,512.49	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0134	Added	4" flange, WN, SS, B16.5 RF, Sch 10S, ASTM A182 F304L - 150#	ea	0	1	15.8	1,708.44	15.8	256.27	256.27	1,708.44	172.30	172.30	249.17	249.17	2,386.18	2,386.18	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0135	Added	1" weld adapter, 304SS, Vic-Press - 561	ea	0	6	5.9	638.01	35.4	95.70	574.21	3,828.05	153.82	922.93	93.05	558.30	980.58	5,883.49	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0136	Added	1" male adapter, 304SS, Vic-Press - 596	ea	0	3	5.9	638.01	17.7	95.70	287.10	1,914.03	150.83	452.49	93.05	279.15	977.59	2,932.77	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0137	Added	1" union, 304SS, Vic-Press - 584	ea	0	6	5.9	638.01	35.4	95.70	574.21	3,828.05	580.55	3,483.32	93.05	558.30	1,407.31	8,443.87	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0138	Added	2" pipe, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - PE	Linear meter	0	34	1.3	139.51	43.3	20.93	701.81	4,678.73	33.24	1,114.86	20.35	682.36	214.03	7,177.76	33.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0139	Added	2" 45 elbow, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	16	1.8	191.40	28.3	28.71	459.37	3,062.44	17.96	287.32	27.91	446.64	265.99	4,255.76	16.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0140	Added	2" 90 elbow, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	17	1.8	191.40	30.1	28.71	488.08	3,253.84	18.68	317.48	27.91	474.55	266.70	4,533.95	17.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0141	Added	4" Adapter Hub x MIPT, PVC DWV	ea	0	5	5.3	574.21	26.5	86.13	430.66	2,871.04	64.65	323.23	83.74	418.72	808.73	4,043.64	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0142	Added	4"x1.5" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	1	5.3	574.21	5.3	86.13	86.13	574.21	56.90	56.90	83.74	83.74	800.99	800.99	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0143	Added	2"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea	0	3	2.5	269.38	7.5	40.41	121.22	808.14	42.88	128.65	39.29	117.86	391.96	1,175.88	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0144	Added	3" Clean-Out Watts Model CO-203NH-R-1	ea	0	1	2.5	269.38	2.5	40.41	40.41	269.38	84.08	84.08	39.29	39.29	433.15	433.15	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0145	Added	2" Clean-Out Watts Model CO-203NH-R-1	ea	0	1	1.8	191.40	1.8	28.71	28.71	191.40	74.70	74.70	27.91	27.91	322.72	322.72	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0146	Added	1.5" Clean-Out Watts Model CO-203NH-R-1	ea	0	3	1.7	184.31	5.1	27.65	82.94	552.94	67.14	201.42	26.88	80.64	305.98	917.95	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0147	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	3	1.8	191.40	5.3	28.71	86.13	574.21	24.42	73.26	27.91	83.74	272.45	817.35	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0148	Added	4" 45 elbow, SS, SCH 10S, ASTM A403 WP304L - VICTAULIC 411SS	ea	0	1	4.7	510.41	4.7	76.56	76.56	510.41	210.13	210.13	74.44	74.44	871.53	871.53	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0149	Added	4" 90 elbow, LR, Sch 10S, ASTM A403 WP304L - VICTAULIC 410SS	ea	0	1	4.7	510.41	4.7	76.56	76.56	510.41	216.51	216.51	74.44	74.44	877.91	877.91	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0150	Added	4" flexible coupling, SS ASTM A-890 GROOVED - VICTAULIC 77DX	ea	0	2	0.5	58.48	1.1	8.77	17.55	116.97	983.88	1,967.77	8.53	17.06	1,059.67	2,119.34	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0151	Added	4" rigid coupling, Galv. DI, ASTM A536 - Victaulic 89	ea	0	2	0.5	58.48	1.1	8.77	17.55	116.97	145.16	290.31	8.53	17.06	220.94	441.89	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0152	Added	6" quick connect, camlock type A, SS316, FNPT c/w dust cap type DC, SS316 /w brass chain & hooks	ea	0	1	16.1	1,736.80	16.1	260.52	260.52	1,736.80	450.36	450.36	253.30	253.30	2,700.98	2,700.98	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0153	Added	2" ball valve, SS, full port, 3pc - SW - Velan VTP-2000 or equal VBA11	ea	0	3	14.7	1,587.93	44.0	238.19	714.57	4,763.80	406.63	1,219.88	231.59	694.77	2,464.34	7,393.01	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WDS (Dewatering)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
441	3445.010	Dewatering pump 3445-P-5000 to 5002	ea	3	3	229.4	24,811.44	688.2	3,721.72	11,165.15	74,434.32	208,544.30	625,632.91	3,618.58	10,855.75	240,696.04	722,088.12	3.0	189.5	17,130.08	568.4	2,226.91	6,680.73	51,390.24	178,108.27	534,324.80	39,883.61	119,650.83	237,348.87	712,046.60
442	3445.020	Submerisble pump 3445-P-0001	ea	1	1	124.5	13,469.07	124.5	2,020.36	2,020.36	13,469.07	40,418.20	40,418.20	1,964.37	1,964.37	57,872.00	57,872.00	1.0	71.7	6,483.91	71.7	842.91	842.91	6,483.91	37,164.70	37,164.70	9,006.03	9,006.03	53,497.55	53,497.55
443	3445.030	Air vent 3445-AV-0001 / 1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 / 5000 to 5002	ea	12	12	8.7	945.20	104.9	141.78	1,701.36	11,342.37	5,575.02	66,900.20	137.85	1,654.21	6,799.84	81,598.14	12.0	7.3	659.90	87.6	85.79	1,029.44	7,918.77	3,330.12	39,961.39	825.52	9,906.29	4,901.32	58,815.89
444	3445.040	Air vent 3445-AV-0002 to 0004	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	10,979.98	32,939.95	137.85	413.55	12,204.81	36,614.44	3.0	7.3	659.90	21.9	85.79	257.36	1,979.70	6,560.13	19,680.40	1,475.81	4,427.42	8,781.63	26,344.88
445	3445.050	Pressure indicator 3445-PI-0001 to 0004 / 1000 / 2000 / 3000 / 4000	ea	8	8	24.0	2,599.29	192.3	389.89	3,119.15	20,794.35	787.45	6,299.60	379.09	3,032.72	4,155.73	33,245.82	8.0	3.7	329.95	29.2	42.89	343.15	2,639.59	84.95	679.56	94.64	757.16	552.43	4,419.46
446	3445.060	Differential pressure indicator 3445-PDI-0001	ea	1	1	24.0	2,599.29	24.0	389.89	389.89	2,599.29	3,092.60	3,092.60	379.09	379.09	6,460.88	6,460.88	1.0	14.6	1,319.80	14.6	171.57	171.57	1,319.80	2,997.04	2,997.04	913.57	913.57	5,401.98	5,401.98
447	3445.070	Pressure switch 3445-PSLH-0001 / 0002	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	927.46	1,854.93	137.85	275.70	2,152.29	4,304.59	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	890.15	1,780.30	334.30	668.59	1,970.13	3,940.27
448	3445.080	Level switch 3445-LSLL-0001 / 3445-LSHH-0001	ea	2	2	45.9	4,962.29	91.8	744.34	1,488.69	9,924.58	983.67	1,967.34	723.72	1,447.43	7,414.02	14,828.04	2.0	16.6	1,497.25	33.1	194.64	389.28	2,994.49	695.38	1,390.76	491.87	983.75	2,879.14	5,758.29
449	3445.090	Level tarnsmitter 3445-LT-0001	ea	1	1	45.9	4,962.29	45.9	744.34	744.34	4,962.29	18,342.14	18,342.14	723.72	723.72	24,772.49	24,772.49	1.0	24.6	2,227.85	24.6	289.62	289.62	2,227.85	5,652.55	5,652.55	1,661.60	1,661.60	9,831.62	9,831.62
450	3445.100	Current transmitter 3445-IT-5000 to 5002	ea	3	3	45.9	4,962.29	137.6	744.34	2,233.03	14,886.86	379.15	1,137.46	723.72	2,171.15	6,809.50	20,428.50	3.0	6.4	576.26	19.1	74.91	224.74	1,728.77	128.19	384.57	161.24	483.71	940.60	2,821.79
451	3445.110	Control Panel 3445-CP-5000	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	64,323.65	64,323.65	13,344.56	13,344.56	79,565.31	79,565.31
452	3445.120	Monorail hoist 3445-HO-0001	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	8,790.13	8,790.13	2,205.61	2,205.61	28,387.38	28,387.38	1.0	191.6	17,322.32	191.6	2,251.90	2,251.90	17,322.32	9,600.59	9,600.59	6,003.85	6,003.85	35,178.66	35,178.66
453	3445.130	Pipe NPS 1/2 Sch.10S, Piping Specification SB11	m	9	9	1.0	104.63	8.7	15.70	141.26	941.70	18.88	169.90	15.26	137.34	154.47	1,390.20	9.0	0.7	61.30	6.1	7.97	71.72	551.66	162.04	1,458.40	47.03	423.26	278.34	2,505.04
454	3445.140	Elbow 90 degrees SW Class 3000 NPS 1/2, Piping Specification CB11	ea	1	1	6.4	687.63	6.4	103.14	103.14	687.63	40.93	40.93	100.29	100.29	931.99	931.99	1.0	0.5	49.63	0.5	6.45	6.45	49.63	46.04	46.04	20.93	20.93	123.05	123.05
455	3445.150	Ball valve NPS 1/2, Valve Specification VBA11	ea	1	1	3.7	400.53	3.7	60.08	60.08	400.53	107.23	107.23	58.41	58.41	626.25	626.25	1.0	3.2	289.06	3.2	37.58	37.58	289.06	91.26	91.26	86.31	86.31	504.20	504.20
456	3445.160	Ball valve NPS 1/2, Valve Specification VBA14	ea	1	1	1.1	119.31	1.1	17.90	17.90	119.31	293.55	293.55	17.40	17.40	448.15	448.15	1.0	3.2	287.98	3.2	37.44	37.44	287.98	107.60	107.60	89.34	89.34	522.36	522.36
457	3445.170	Pipe identification NPS 1/2	Linear meter	9	9	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.6	52.00	5.2	6.76	60.84	468.01	12.06	108.58	14.65	131.86	85.48	769.29
458	3445.180	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	9	9	1.1	116.26	9.7	17.44	156.95	1,046.33	22.98	206.78	16.96	152.60	173.63	1,562.66	9.0	1.8	160.09	15.9	20.81	187.31	1,440.82	7.62	68.61	39.16	352.43	227.68	2,049.16
459	3445.190	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	9	5.6	602.56	50.1	90.38	813.46	5,423.07	117.55	1,057.92	87.88	790.92	898.37	8,085.37	9.0	0.6	54.99	5.5	7.15	64.34	494.94	5.37	48.33	14.01	126.07	81.52	733.68
460	3445.200	Weld NPS 3/4, Piping Specification SB11	ea	18	18	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.0	1.1	98.99	19.7	12.87	231.65	1,781.91	138.75	2,497.48	50.95	917.10	301.56	5,428.13
461	3445.210	Pipe identification NPS 3/4	Linear meter	9	9	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.6	50.04	5.0	6.50	58.54	450.33	12.07	108.59	14.19	127.71	82.80	745.17
462	3445.220	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	11	11	1.4	151.14	15.4	22.67	249.38	1,662.51	36.44	400.80	22.04	242.47	232.29	2,555.15	11.0	1.9	168.74	20.5	21.94	241.29	1,856.11	14.43	158.78	42.56	468.18	247.67	2,724.37
463	3445.230	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	6	6	3.9	425.34	23.6	63.80	382.81	2,552.03	43.11	258.63	62.03	372.20	594.28	3,565.67	6.0	0.4	38.59	2.6	5.02	30.10	231.52	4.71	28.24	10.02	60.09	58.32	349.95
464	3445.240	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	17	17	5.9	638.01	100.3	95.70	1,626.92	10,846.14	125.39	2,131.69	93.05	1,581.84	952.15	16,186.59	17.0	0.6	53.83	10.1	7.00	118.96	915.04	8.08	137.33	14.28	242.70	83.18	1,414.03
465	3445.250	Lateral SW Class 3000 NPS 2, Piping Specification SB11	ea	2	2	11.1	1,205.13	22.3	180.77	361.54	2,410.25	268.91	537.82	175.76	351.52	1,830.56	3,661.13	2.0	1.5	131.71	2.9	17.12	34.24	263.42	9.64	19.28	32.90	65.79	191.37	382.74
466	3445.260	Concentric Reducer SW Class 3000 NPS 1 x 1/2, Piping Specification SB11	ea	2	2	8.5	921.57	17.0	138.24	276.47	1,843.14	448.22	896.44	134.40	268.81	1,642.43	3,284.86	2.0	0.6	54.07	1.2	7.03	14.06	108.14	221.52	443.05	57.30	114.61	339.92	679.85
467	3445.270	Weld NPS 1, Piping Specification SB11	ea	50	50	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.0	0.4	39.78	22.0	5.17	258.60	1,989.23	180.29	9,014.37	45.48	2,273.85	270.72	13,536.04
468	3445.280	Ball valve NPS 1, Valve Specification VBA11	ea	14	14	7.3	793.97	102.8	119.09	1,667.33	11,115.52	202.60	2,836.33	115.79	1,621.12	1,231.45	17,240.31	14.0	3.2	287.22	44.5	37.34	522.73	4,021.03	127.76	1,788.67	93.22	1,305.10	545.54	7,637.53
469	3445.290	Pipe identification NPS 1	Linear meter	11	11	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.6	50.59	6.2	6.58	72.35	556.54	12.06	132.70	14.32	157.51	83.56	919.11
470	3445.300	Pipe NPS 1 Sch.40, Piping Specification PA02	m	28	28	1.1	116.26	30.1	17.44	488.29	3,255.26	11.29	316.16	16.96	474.76	161.95	4,534.46	28.0	3.2	285.70	88.5	37.14	1,039.93	7,999.49	4.32	120.83	68.01	1,904.32	395.16	11,064.58
471	3445.310	Elbow 90 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	23	23	1.2	134.69	28.6	20.20	464.58	3,097.89	9.52	218.94	19.64	451.81	184.06	4,233.31	23.0	0.3	29.29	7.5	3.81	87.57	673.59	2.23	51.33	7.33	168.64	42.66	981.13
472	3445.320	Pipe identification NPS 2	LS	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.6	50.91	0.6	6.62	6.62	50.91	12.06	12.06	14.39	14.39	83.99	83.99
473	3445.330	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	3	3	2.3	244.14	6.8	36.62	109.87	732.43	56.82	170.47	35.61	106.82	373.20	1,119.59	3.0	0.7	66.54	2.2	8.65	25.95	199.62	8.99	26.97	17.45	52.35	101.63	304.89
474	3445.340	Pipe NPS 2 Sch.40S, Piping Specification SB11	m	10	10	2.3	244.14	22.6	36.62	366.22	2,441.45	56.83	568.33	35.61	356.07	373.21	3,732.06	10.0	4.1	369.60	40.9	48.05	480.48	3,695.98	30.44	304.36	92.99	929.89	541.07	5,410.70
475	3445.350	Elbow 90 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	3	3	8.5	921.57	25.6	138.24	414.71	2,764.70	171.71	515.14	134.40	403.21	1,365.92	4,097.76	3.0	0.7	66.54	2.2	8.65	25.95	199.62	8.35	25.04	17.31	51.93	100.85	302.54
476	3445.360	Elbow 90 degrees BW Sch.40S NPS 2, Piping Specification SB11	ea	8	8	8.5	921.57	68.2	138.24	1,105.88	7,372.54	171.71	1,373.71	134.40	1,075.24	1,365.92	10,927.37	8.0	0.7	66.54	5.9	8.65	69.20	532.32	8.35	66.77	17.31	138.49	100.85	806.79
477	3445.370	Elbow 45 degrees BW Sch.40S NPS 2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	172.91	691.65	134.40	537.62	1,367.12	5,468.47	4.0	0.3	28.77	1.3	3.74	14.96	115.07	5.29	21.18	7.83	31.31	45.63	182.51
478	3445.380	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	3	3	7.6	827.05	22.9	124.06	372.17	2,481.14	98.20	294.59	120.62	361.86	1,169.92	3,509.77	3.0	0.4	38.36	1.3	4.99	14.96	115.07	8.67	26.01	10.76	32.28	62.77	188.31
479	3445.390	Flange Welding Neck 150RF Sch.10S NPS 2 c/w hardware, Piping Specification SB11	ea	4	4	8.8	952.29	35.2	142.84	571.37	3,809.15	492.03	1,968.12	138.88	555.54	1,726.04	6,904.18	4.0	2.7	243.30	10.8	31.63	126.52	973.22	12.23	48.91	59.64	238.57	346.80	1,387.21
480	3445.400	Reducing tee BW Sch.10S NPS 2 x 2 x 1, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	266.81	1,067.25	175.76	703.04	1,828.47	7,313.87	4.0	1.2	107.21	4.7	13.94	55.75	428.84	23.14	92.57	29.86	119.43	174.15	696.59
481	3445.410	Concentric Reducer BW Sch.10S NPS 2 x 1, Piping Specification SB11	ea	1	1	8.5	921.57	8.5	138.24	138.24	921.57	183.09	183.09	134.40	134.40	1,377.29	1,377.29	1.0	0.6	49.91	0.6	6.49	6.49	49.91	9.64	9.64	13.67	13.67	79.71	79.71
482	3445.420	Weld NPS 2, Piping Specification SB11	ea	34	34	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.0	1.5	139.51	52.5	18.14	616.63	4,743.30	230.37	7,832.46	79.08	2,688.66	467.09	15,881.05
483	3445.430	Ball valve NPS 2, Valve Specification VBA11	ea	8	8	14.7	1,587.93	117.5	238.19	1,905.52	12,703.46	406.63	3,253.02	231.59	1,852.71	2,464.34	19,714.71	8.0	4.8	430.98	38.1	56.03	448.22	3,447.83	310.28	2,482.23	163.75	1,310.03	961.04	7,688.31
484	3445.440	Pipe identification NPS 2	Linear meter	13	13	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	151.75	2.35	30.50	14.02	182.26
485	3445.450	Pipe NPS 2 Sch.40, Piping Specification PA02	m	6	6	1.5	162.76	9.0	24.41	146.49	976.58	18.21	109.26	23.74	142.43	229.13	1,374.76	6.0	6.3	568.14	37.7	73.86	443.15	3,408.84	10.12	60.73	135.56	813.35	787.68	4,726.07
486	3445.460	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	6	6	1.8	191.40	10.6	28.71	172.26	1,148.42	14.22	85.34	27.91	167.49	262.25	1,573.50	6.0	0.3	29.27	1.9	3.80	22.83	175.60	9.47	56.83	8.78	52.71	51.33	307.96
487	3445.470	Pipe identification NPS 2	Linear meter	6	6	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	70.04	2.35	14.08	14.02	84.12
488	3445.480	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
489	3445.490	Elbow 45 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	20.6	2,229.48	20.6	334.42	334.42	2,229.48	143.19	143.19	325.16	325.16	3,032.25	3,032.25	1.0	1.3	115.07	1.3	14.96	14.96	115.07	19.37	19.37	30.95	30.95	180.34	180.34
490	3445.500	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	1	1	14.0	1,513.50	14.0	227.02	227.02	1,513.50	129.41	129.41	220.73	220.73	2,090.67	2,090.67	1.0	68.4	6,187.23	68.4	804.34	804.34	6,187.23	293.15	293.15	1,513.11	1,513.11	8,797.83	8,797.83
491	3445.510	Weld NPS 6, Piping Specification CB11	ea	2	2	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.0	0.00	0.0	0.00	0.00	0.00	719.93	1,439.85	144.94	289.88	864.87	1,729.73
492	3445.520	Ball valve NPS 6, Valve Specification VBA01	ea	1	1	16.1	1,736.80	16.1	260.52	260.52	1,736.80	4,727.96	4,727.96	253.30	253.30	6,978.58	6,978.58	1.0	7.5	676.53	7.5	87.95	87.95	676.53	2,867.35	2,867.35	736.27	736.27	4,368.10	4,368.10
493	3445.530	Pipe painting NPS 6	Linear meter	1	1	0.9	89.04	0.9	13.36	13.36	89.04	3.54	3.54	0.00	0.00	105.93	105.93	1.0	0.0	0.00	0.0	0.00	0.00	0.00	37.48	37.48	7.54	7.54	45.02	45.02
494	3445.540	Pipe identification NPS 6	Linear meter	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	11.67	2.35	2.35	14.02	14.02
495	3445.550	Pipe NPS 8 Sch.STD, Piping Specification CB11	m	9	9	5.7	616.17	51.3	92.43	831.84	5,545.57	164.30	1,478.66	89.86	808.78	962.76	8,664.85	9.0	18.9	1,709.36	170.2	222.22	1,999.95	15,384.21	98.22	883.95	421.50	3,793.47	2,451.29	22,061.58
496	3445.560	Elbow 90 degrees BW Sch.STD NPS 8, Piping Specification CB11	ea	4	4	26.6	2,878.13	106.4	431.72	1,726.88	11,512.51	225.19	900.76	419.76	1,679.02	3,954.79	15,819.17	4.0	0.6	57.88	2.6	7.52	30.10	231.52	51.49	205.98	23.97	95.88	140.87	563.48
497	3445.570	Elbow 45 degrees BW Sch.STD NPS 8, Piping Specification CB11	ea	4	4	26.6	2,878.13	106.4	431.72	1,726.88	11,512.51	199.55	798.20	419.76	1,679.02	3,929.15	15,716.61	4.0	0.3	28.77	1.3	3.74	14.96	115.07	40.46	161.84	14.91	59.63	87.87	351.50
498	3445.580	Flange Welding Neck 150RF Sch.STD NPS 8 c/w hardware, Piping Specification CB11	ea	4	4	17.4	1,882.12	69.6	282.32	1,129.27	7,528.50	176.78	707.11	274.50	1,097.98	2,615.72	10,462.86	4.0	21.7	1,965.31	87.0	255.49	1,021.96	7,861.25	342.97	1,371.87	530.92	2,123.70	3,094.69	12,378.78
499	3445.590	Concentric Reducer BW Sch.STD NPS 8 x 6, Piping Specification CSB11	ea	4	4	34.1	3,686.27	136.3	552.94	2,211.76	14,745.08	1,792.89	7,171.54	537.62	2,150.47	6,569.71	26,278.86	4.0	0.4	33.27	1.5	4.33	17.30	133.08	23.53	94.13	12.56	50.24	73.69	294.76
500	3445.600	Weld NPS 8, Piping Specification CB11	ea	20	20	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.0	3.8	346.47	76.7	45.04	900.82	6,929.39	310.88	6,217.54	144.01	2,880.26	846.40	16,928.02
501	3445.610	Butterfly valve NPS 8, Valve Specification VBu01	ea	4	4	19.5	2,105.43	77.9	315.81	1,263.26	8,421.71	996.89	3,987.55	307.06	1,228.25	3,725.19	14,900.77	4.0	7.9	717.78	31.8	93.31	373.24	2,871.11	775.70	3,102.79	324.86	1,299.43	1,911.64	7,646.57
502	3445.620	Pipe painting NPS 8	Linear meter	9	9	1.0	90.45	8.6	13.57	122.11	814.07	4.71	42.43	0.00	0.00	108.74	978.62	9.0	0.0	0.00	0.0	0.00	0.00	0.00	130.44	1,174.00	26.26	236.36	156.71	1,410.36
503	3445.630	Pipe identification NPS 8	Linear meter	9	9	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.6	52.00	5.2	6.76	60.84	468.01	12.06	108.58	14.65	131.86	85.48	769.29
504	3445.640	Pipe NPS 12 Sch.STD, Piping Specification CB11	m	5	5	8.3	895.20	41.4	134.28	671.40	4,475.98	287.32	1,436.59	130.56	652.79	1,447.35	7,236.77	5.0	3.3	301.42	16.7	39.18	195.92	1,507.11	129.52	647.62	96.91	484.57	567.05	2,835.23
505	3445.650	Flange Welding Neck 150RF Sch.STD NPS 12 c/w hardware, Piping Specification CB11	ea	9	9	27.2	2,941.93	244.8	441.29	3,971.60	26,477.35	330.71	2,976.42	429.06	3,861.54	4,142.99	37,286.92	9.0	5.9	530.14	52.8	68.92	620.26	4,771.22	171.37	1,542.30	159.09	1,431.82	929.51	8,365.61
506	3445.660	Flange Welding Neck 150FF Sch.STD NPS 12 c/w hardware, Piping Specification CB11	ea	3	3	27.2	2,941.93	81.6	441.29	1,323.87	8,825.78	370.04	1,110.13	429.06	1,287.18	4,182.32	12,546.96	3.0	39.4	3,563.36	118.3	463.24	1,389.71	10,690.07	883.78	2,651.35	1,015.36	3,046.09	5,925.74	17,777.22
507	3445.670	Weld NPS 12, Piping Specification CB11	ea	12	12	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.0	6.6	592.80	78.7	77.06	924.77	7,113.59	345.30	4,143.55	208.50	2,501.97	1,223.66	14,683.87
508	3445.680	Victaulic Coupling NPS 12, Style 77	ea	3	3	18.5	1,995.55	55.4	299.33	898.00	5,986.65	527.92	1,583.77	291.04	873.11	3,113.84	9,341.52	3.0	1.2	112.29	3.7	14.60	43.79	336.88	539.88	1,619.65	135.08	405.25	801.86	2,405.57
509	3445.690	Butterfly valve NPS 12, Valve Specification VBU01	ea	3	3	31.6	3,413.35	94.7	512.00	1,536.01	10,240.04	1,903.03	5,709.10	497.81	1,493.44	6,326.19	18,978.58	3.0	15.1	1,366.10	45.3	177.59	532.78	4,098.30	2,473.11	7,419.33	818.95	2,456.86	4,835.76	14,507.27

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

Black & McDonald Limited — FIXED PRICE TARGET COST OF LABOUR — LABOUR COMPONENT 0.15 — NON LABOUR COMPONENT — Delta $353,645.00

Cahill-Ganotec Joint Venture — FIXED PRICE TARGET COST OF LABOUR — LABOUR COMPONENT 0.13 — NON LABOUR COMPONENT

					Black & McDonald Limited				Cahill-Ganotec Joint Venture			
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
510	3445.700	Check valve NPS 12, Valve Specification VCH02	ea	3	3	1,493.44	12,620.50	37,861.49	3.0	12,992.43	25,802.23	77,406.68
511	3445.710	Pipe painting NPS 12	Linear meter	5	5	0.00	163.10	815.52	5.0	155.63	185.73	928.63
512	3445.720	Pipe identification NPS 12	Linear meter	5	5	0.00	0.00	0.00	5.0	70.30	82.05	410.26
513	3445.730	Pipe NPS 16 Sch.STD, Piping Specification CB11	m	9	9	1,342.89	1,831.80	16,486.24	9.0	818.10	533.55	4,801.95
514	3445.740	Elbow 90 degrees Long RadiusSch.STD NPS 16, Piping Specification SB11	ea	3	3	2,794.58	9,007.30	27,021.89	3.0	201.56	397.01	1,191.03
515	3445.750	Flange Welding Neck 150RF Sch.STD NPS 16 c/w hardware, Piping Specification CB11	ea	3	3	1,774.14	5,824.88	17,474.64	3.0	270.90	528.88	1,586.65
516	3445.760	Victaulic Coupling NPS 16, Style 231	ea	3	3	1,231.35	10,329.05	30,987.14	3.0	3,188.65	6,337.68	19,013.05
517	3445.770	Weld NPS 16, Piping Specification CB11	ea	12	12	0.00	0.00	0.00	12.0	5,535.00	2,692.55	32,310.66
518	3445.780	Pipe painting NPS 16	Linear meter	9	9	0.00	217.47	1,957.24	9.0	507.73	336.63	3,029.65
519	3445.790	Pipe identification NPS 16	Linear meter	9	9	0.00	0.00	0.00	9.0	126.87	82.27	740.41
520	3445.800	Pipe NPS 20 Sch.STD, Piping Specification CB11	m	1	1	169.56	2,062.32	2,062.32	1.0	337.93	1,974.14	1,974.14
521	3445.810	Flange Welding Neck 150RF Sch.STD NPS 20 c/w hardware, Piping Specification CB11	ea	2	2	1,572.53	7,776.77	15,553.54	2.0	245.70	721.92	1,443.84
522	3445.820	Weld NPS 20, Piping Specification CB11	ea	2	2	0.00	0.00	0.00	2.0	763.20	2,237.24	4,474.47
523	3445.830	Check valve NPS 20, Valve Specification VCH01	ea	1	1	861.74	24,227.22	24,227.22	1.0	3,364.27	20,007.16	20,007.16
524	3445.840	Pipe painting NPS 20	Linear meter	1	1	0.00	230.23	230.23	1.0	52.29	311.98	311.98
525	3445.850	Pipe identification NPS 20	Linear meter	1	1	0.00	0.00	0.00	1.0	14.10	82.30	82.30
526	3445.860	Pipe NPS 24 Sch.STD, Piping Specification CB11	m	3	3	569.71	2,387.07	7,161.20	3.0	365.53	717.05	2,151.15
527	3445.870	Tee Sch.STD NPS 24, Piping Specification CB11	ea	1	1	2,087.92	20,858.63	20,858.63	1.0	278.18	1,646.95	1,646.95
528	3445.880	Reducing tee Sch.STD NPS 24 x 16, Piping Specification CB11	ea	3	3	6,263.77	22,209.70	66,629.09	3.0	860.43	1,698.49	5,095.48
529	3445.890	Cap BW Sch.STD NPS 24, Piping Specification CB11	ea	1	1	900.51	8,453.18	8,453.18	1.0	77.24	454.11	454.11
530	3445.900	Concentric Reducer BW Sch.STD NPS 24 x 20, Piping Specification CB11	ea	1	1	1,419.00	13,683.34	13,683.34	1.0	93.64	553.89	553.89
531	3445.910	Eccentric Reducer BW Sch.STD NPS 24 x 20, Piping Specification CB11	ea	1	1	1,419.00	13,837.76	13,837.76	1.0	107.45	635.93	635.93
532	3445.920	Weld NPS 24, Piping Specification CB11	ea	10	10	0.00	0.00	0.00	10.0	2,174.10	1,297.30	12,973.00
533	3445.930	Pipe painting NPS 24	Linear meter	3	3	0.00	232.59	697.76	3.0	261.45	520.03	1,560.09
534	3445.940	Pipe identification NPS 24	Linear meter	3	3	0.00	0.00	0.00	3.0	44.71	86.95	260.84
B&M-0154	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter	0	6	195.40	305.97	1,958.92	6.4	0.00	0.00	0.00
B&M-0155	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter	0	6	119.41	184.22	1,179.44	6.4	0.00	0.00	0.00
B&M-0156	Added	12" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea	0	3	2,011.41	6,414.28	19,242.83	3.0	0.00	0.00	0.00
B&M-0157	Added	12" flange, SO, CS, B16.5 RF, STD bore, ASTM A105N - 150#	ea	0	3	1,287.18	4,182.32	12,546.96	3.0	0.00	0.00	0.00
B&M-0158	Added	12"x2" SOL, FS, 3000#	ea	0	3	248.13	782.58	2,347.74	3.0	0.00	0.00	0.00
B&M-0159	Added	12"x1" SOL, FS, 3000#	ea	0	6	248.13	387.73	2,326.41	6.0	0.00	0.00	0.00
B&M-0160	Added	2" male adapter, 304SS, Vic-Press - S96	ea	0	9	1,209.64	1,402.13	12,619.18	9.0	0.00	0.00	0.00
B&M-0161	Added	1" male adapter, 304SS, Vic-Press - S96	ea	0	36	3,349.77	977.59	35,193.20	36.0	0.00	0.00	0.00
B&M-0162	Added	1/2" 90 elbow, 304SS, Vic-Press - S90	ea	0	4	268.81	703.61	2,814.44	4.0	0.00	0.00	0.00
B&M-0163	Added	1"x1/2" reducer, 304SS, Vic-Press - S82	ea	0	1	93.05	1,001.83	1,001.83	1.0	0.00	0.00	0.00
B&M-0164	Added	2" union, 304SS, Vic-Press - S84	ea	0	3	403.21	2,385.77	7,157.30	3.0	0.00	0.00	0.00
B&M-0165	Added	1" union, 304SS, Vic-Press - S84	ea	0	19	1,767.94	1,407.31	26,738.92	19.0	0.00	0.00	0.00
B&M-0166	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	3	83.74	272.45	817.35	3.0	0.00	0.00	0.00
B&M-0167	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	5	98.22	187.79	938.96	5.0	0.00	0.00	0.00
B&M-0168	Added	8" QUICK COUPLING RITE 8in MALE ADAPTOR x FEMALE TREAD PART A No 800A-A ALUM.	ea	0	4	808.49	2,299.65	9,198.58	4.0	0.00	0.00	0.00
B&M-0169	Added	20" flexible coupling, Galv. DI, ASTM A536 - Victaulic 77	ea	0	2	1,040.08	5,910.38	11,820.76	2.0	0.00	0.00	0.00
B&M-0170	Added	20" 90 elbow, SR, Galv. DI, ASTM A536 GR 65 Max Rating 250# - Victaulic W10	ea	0	1	511.25	7,126.39	7,126.39	1.0	0.00	0.00	0.00
B&M-0171	Added	20" BUTTERFLY VALVE LUG BRAY SERIES 31 c/w GEAR OPERATOR VBU01	ea	0	2	1,824.80	11,308.35	22,616.70	2.0	0.00	0.00	0.00
B&M-0172	Added	20" SS INLET STRAINER, OPENINGS 12mm (SEE DETAIL PD13)	ea	0	1	861.74	12,994.57	12,994.57	1.0	0.00	0.00	0.00
B&M-0173	Added	1" Y-strainer	ea	0	1	47.04	720.76	720.76	1.0	0.00	0.00	0.00
		OLS (Lubricating/Hydraulic Oil)				$0.00				$0.00	$0.00	
535	3446.010	Oil storage tank 3446-TK-6000 / 6001	ea	2	2	5,031.55	100,152.50	200,304.99	2.0	37,838.64	111,860.34	223,720.67
536	3446.020	Level transmitter 3446-LT-6000 / 6001	ea	2	2	1,654.21	32,724.68	65,449.36	2.0	11,413.96	33,930.77	67,861.54
537	3446.030	Mobile pumping-filtering unit 3446-OMP-5000	ea	1	1	1,102.81	95,562.21	95,562.21	1.0	14,968.86	89,320.28	89,320.28
538	3446.040	Pipe NPS 1/2 Sch.XS, Piping Specification CB11	m	1	1	13.56	131.30	131.30	1.0	29.20	172.96	172.96
539	3446.050	Olet SW Class 3000 NPS 1/2, Piping Specification CB11	ea	2	2	48.25	231.99	463.97	2.0	21.53	62.66	125.32
540	3446.060	Weld NPS 1/2, Piping Specification CB11	ea	6	6	0.00	0.00	0.00	6.0	213.46	212.29	1,273.71
541	3446.070	Ball valve NPS 1/2, Valve Specification VBA02	ea	2	2	265.71	1,314.48	2,628.95	2.0	118.89	347.35	694.69
542	3446.080	Pipe painting NPS 1/2	Linear meter	1	1	0.00	54.91	54.91	1.0	21.15	126.21	126.21
543	3446.090	Pipe identification NPS 1/2	Linear meter	1	1	0.00	0.00	0.00	1.0	2.35	14.02	14.02
544	3446.100	Pipe NPS 2 Sch.STD, Piping Specification CB11	m	975	975	26,450.80	267.31	260,627.34	975.0	55,913.27	333.46	325,119.33
545	3446.110	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification CB11	ea	193	193	22,348.36	1,093.34	211,014.82	193.0	2,264.02	68.60	13,239.19
546	3446.120	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification CB11	ea	10	10	1,157.95	1,097.06	10,970.61	10.0	78.32	46.01	460.06
547	3446.130	Elbow 45 degrees BW Sch.STD NPS 2, Piping Specification CB11	ea	23	23	4,613.18	1,863.98	42,871.60	23.0	165.66	42.31	973.21
548	3446.140	Tee SW Class 3000 NPS 2, Piping Specification CB11	ea	21	21	3,604.11	1,617.70	33,971.66	21.0	455.14	126.52	2,656.97
549	3446.150	Expansion joint SS316L Plain ends x 12in long	ea	8	8	550.02	994.75	7,958.03	8.0	945.07	688.10	5,504.83
550	3446.160	Union SW Class 3000 NPS 2, Piping Specification CB11	ea	16	16	1,852.71	1,093.34	17,493.46	16.0	185.11	67.64	1,082.27
551	3446.170	Flange Welding Neck 150RF Sch.STD NPS 2 c/w hardware, Piping Specification CB11	ea	6	6	493.16	772.60	4,635.60	6.0	1,588.68	1,538.48	9,230.90
552	3446.180	Flange Slip-On 150RF NPS 2 c/w hardware, Piping Specification CB11	ea	3	3	246.58	787.49	2,362.46	3.0	33.02	64.13	192.40
553	3446.190	Weld NPS 2, Piping Specification CB11	ea	785	785	0.00	0.00	0.00	785.3	29,686.06	225.81	177,326.03
554	3446.200	Quick connect NPS 2, DRY LINK STYLE 260 HOUSING STD SS 316 SEAL VITON	ea	23	23	1,581.32	994.75	22,879.33	23.0	611.27	157.17	3,615.02
555	3446.210	Ball valve NPS 2, Valve Specification VBA02	ea	32	32	4,251.32	1,554.36	49,739.37	32.0	4,080.01	749.60	23,987.13
556	3446.220	Check valve NPS 2, Valve Specification VCH04	ea	13	13	1,727.10	1,733.91	22,540.77	13.0	1,410.42	636.17	8,270.22
557	3446.230	Pipe painting NPS 2	Linear meter	975	975	0.00	92.20	89,891.79	975.0	9,484.50	58.05	56,594.72
558	3446.240	Pipe identification NPS 2	Linear meter	975	975	0.00	0.00	0.00	975.0	13,932.39	83.38	81,298.52
B&M-0174	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter	0	6	195.40	305.73	1,957.42	6.4	0.00	0.00	0.00
B&M-0175	Added	2" coupling, class 3000, FS ASTM A105 - SW	ea	0	109	12,621.61	1,083.56	118,107.95	109.0	0.00	0.00	0.00
B&M-0176	Added	2" SW flange, CS, FF, Class 150, ASTM A105N, 150#	ea	0	28	2,301.42	774.28	21,679.85	28.0	0.00	0.00	0.00
B&M-0177	Added	2" SW flange, CS, RF, Class 150, ASTM A105N, 150#	ea	0	2	164.39	774.28	1,548.56	2.0	0.00	0.00	0.00
		ODS (Oily Water Drainage)				$0.00				$0.00	$0.00	
559	3447.010	Oil Skimmer 3447-OS-6000	ea	1	1	0.00	0.00	0.00	1.0	5,768.39	34,100.14	34,100.14
560	3447.020	Oil sheen detector 3447-LSH-5000	ea	1	1	0.00	0.00	0.00	1.0	5,669.67	33,769.74	33,769.74
561	3447.030	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	37	37	2,070.28	564.38	20,882.19	37.0	4,656.07	732.54	27,103.95
562	3447.040	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	8	8	2,001.59	2,328.89	18,631.12	8.0	315.61	229.49	1,835.91
563	3447.050	Elbow 45 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	4	4	1,000.80	2,322.61	9,290.45	4.0	79.75	116.05	464.21
564	3447.060	Weld NPS 4, Piping Specification CB11	ea	28	28	0.00	0.00	0.00	28.0	2,157.66	456.26	12,775.30
565	3447.070	Pipe painting NPS 4	Linear meter	37	37	0.00	106.16	3,928.06	37.0	383.87	61.91	2,290.61
566	3447.080	Pipe identification NPS 4	Linear meter	37	37	0.00	0.00	0.00	37.0	525.67	82.91	3,067.61
567	3447.090	Pipe NPS 6 Sch.STD, Piping Specification CB11	m	36	36	2,624.73	757.71	27,277.44	36.0	2,843.73	460.41	16,574.93
568	3447.100	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	4	4	1,300.62	3,044.25	12,176.98	4.0	335.78	488.19	1,952.77
569	3447.110	Weld NPS 6, Piping Specification CB11	ea	10	10	0.00	0.00	0.00	10.0	1,797.16	1,056.43	10,564.33
570	3447.120	Pipe painting NPS 6	Linear meter	36	36	0.00	105.61	3,801.96	36.0	504.02	83.54	3,007.50
571	3447.130	Pipe identification NPS 6	Linear meter	36	36	0.00	0.00	0.00	36.0	512.68	83.10	2,991.57
B&M-0178	Added	1/2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea	0	1	8.62	88.42	88.42	1.0	0.00	0.00	0.00
B&M-0179	Added	1/2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea	0	1	8.62	88.42	88.42	1.0	0.00	0.00	0.00
B&M-0180	Added	1/2" Ball Valve Carbon Socket Weld, Full Port VBA02	ea	0	1	58.41	626.25	626.25	1.0	0.00	0.00	0.00
B&M-0181	Added	1/2" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea	0	1	29.98	349.02	349.02	1.0	0.00	0.00	0.00
B&M-0182	Added	1/2"x16" SOL, SS, 3000#	ea	0	1	34.46	331.13	331.13	1.0	0.00	0.00	0.00
B&M-0183	Added	Pipe Insulation - All Sizes	ea	0	1	0.00	35,567.73	35,567.73	1.0	0.00	0.00	0.00
		WCS (Raw/Cooling Water)				$0.00				$0.00	$0.00	
572	3448.001	Self cleaning strainer 3448-STM-1000 / 2000 / 3000 / 4000	ea	4	4	5,514.03	83,864.55	335,458.21	4.0	63,447.75	94,368.94	377,475.74
573	3448.002	Strainer 3448-STR-1000 2000 / 3000 / 4000	ea	4	4	5,514.03	37,899.31	151,597.26	4.0	407.27	591.37	2,365.47
574	3448.003	Air vent 3448-AV-1001 / 2001 / 3001 / 4001 / 6000 to 6003	ea	8	8	1,102.81	6,799.84	54,398.76	8.0	7,272.94	5,387.82	43,102.55
575	3448.004	Pressure indicator 3448-PI-1000 to 1002 / 2000 to 2002 / 3000 to 3002 / 4000 to 4002	ea	12	12	1,654.21	1,925.36	23,104.37	12.0	1,133.70	551.42	6,617.07
576	3448.005	Differential pressure indicator 3448-PDI-1000 / 2000 / 3000 / 4000	ea	4	4	551.40	4,230.51	16,922.05	4.0	3,630.32	5,366.31	21,465.26
577	3448.006	Differential pressure switch 3448-PDS-1000 / 2000 / 3000 / 4000	ea	4	4	551.40	2,872.59	11,490.35	4.0	1,637.48	2,418.11	9,672.44
578	3448.007	temperature transmitter 3448-TT-1001 / 1003 / 2001 / 2003 / 3001 / 3003 / 4001 / 4003	ea	8	8	1,102.81	3,526.71	28,213.69	8.0	13,141.25	9,703.31	77,626.44
579	3448.008	Control Panel 3448-CP-1001 / 2001 / 3001 / 4001	ea	4	4	6,616.84	39,493.64	157,974.58	4.0	7,583.79	11,250.58	45,002.32
580	3448.009	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	8	8	135.65	178.34	1,426.73	8.0	314.70	228.73	1,829.82
581	3448.010	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	5	5	439.40	898.37	4,491.87	5.0	70.01	81.51	407.54
582	3448.011	Olet SW Class 3000 NPS 3/4, Piping Specification SB11	ea	1	1	44.80	434.97	434.97	1.0	14.09	82.14	82.14
583	3448.012	Weld NPS 3/4, Piping Specification SB11	ea	14	14	0.00	0.00	0.00	14.0	647.11	275.16	3,852.20
584	3448.013	Ball valve NPS 3/4, Valve Specification VBA11	ea	1	1	86.85	907.79	907.79	1.0	86.02	502.87	502.87
585	3448.014	Pipe identification NPS 3/4	Linear meter	8	8	0.00	0.00	0.00	8.0	111.86	81.60	652.83
586	3448.015	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	7	7	154.30	232.30	1,626.07	7.0	295.22	245.39	1,717.70
587	3448.016	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	2	2	44.08	235.65	471.30	2.0	1,756.70	5,215.28	10,430.56
588	3448.017	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	12	12	1,116.59	952.15	11,425.83	12.0	170.77	82.92	995.01
589	3448.018	Olet SW Class 3000NPS 1, Piping Specification SB11	ea	20	20	1,240.66	594.28	11,885.56	20.0	323.20	94.42	1,888.46
590	3448.019	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	6	6	558.30	1,407.31	8,443.87	6.0	81.27	79.20	475.18
591	3448.020	Victaulic coupling NPS 1, Style 77	ea	4	4	21.71	75.89	303.58	4.0	65.98	96.59	386.36

CH0031 - Supply and Install Electrical and Mechanical Auxilliaries

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
592	3448.021	Weld NPS 1, Piping Specification SB11	ea	76	76	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.0	0.5	45.25	38.0	5.88	447.02	3,438.63	224.70	17,077.36	55.77	4,238.50	331.60	25,201.51
593	3448.022	Ball valve NPS 1, Valve Specification VBA11	ea	12	12	7.3	793.97	88.1	119.09	1,429.14	9,527.59	202.60	2,431.14	115.79	1,389.54	1,231.45	14,777.41	12.0	3.2	287.32	38.1	37.35	448.22	3,447.83	127.76	1,533.14	93.25	1,118.95	545.68	6,548.14
594	3448.023	Pipe insulation NPS 1	Linear meter	9	9	1.4	145.28	12.9	21.79	196.13	1,307.56	41.04	369.36	8.55	76.95	216.67	1,950.01	9.0	3.3	300.68	29.9	39.09	351.79	2,706.10	184.63	1,661.64	90.44	813.97	614.83	5,533.51
595	3448.024	Pipe identification NPS 1	Linear meter	9	9	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.6	50.76	5.1	6.60	59.38	456.80	12.06	108.58	14.36	129.22	83.78	753.98
596	3448.025	Pipe NPS 1 Sch.40, Piping Specification PA02	m	68	68	1.1	116.26	73.1	17.44	1,185.84	7,905.63	11.29	767.81	16.96	1,152.98	161.95	11,012.27	68.0	3.5	317.50	238.8	41.27	2,806.67	21,589.75	4.32	293.55	75.49	5,133.01	438.57	29,822.97
597	3448.026	Elbow 90 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	20	20	1.2	134.69	24.9	20.20	404.07	2,693.81	9.52	190.38	19.64	392.87	184.06	3,681.14	20.0	0.3	29.67	6.6	3.86	77.14	593.35	0.99	19.86	7.17	143.44	41.69	833.78
598	3448.027	Elbow 45 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	4	4	1.2	134.69	5.0	20.20	80.81	538.76	9.52	38.08	19.64	78.57	184.06	736.23	4.0	0.3	24.72	1.1	3.21	12.86	98.89	1.04	4.17	6.02	24.08	35.00	140.00
599	3448.028	Pipe identification NPS 1	Linear meter	68	68	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.0	0.6	50.78	38.2	6.60	448.88	3,452.95	12.06	820.35	14.36	976.65	83.81	5,698.83
600	3448.029	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	7	7	1.8	197.64	12.8	29.65	207.52	1,383.49	44.87	314.11	28.82	201.77	300.98	2,106.89	7.0	2.0	178.77	13.8	23.24	162.68	1,251.37	16.96	118.70	45.43	317.99	264.39	1,850.74
601	3448.030	Pipe NPS 1-1/2 Sch.40S, Piping Specification SB11	m	1	1	1.8	197.64	1.8	29.65	29.65	197.64	44.87	44.87	28.82	28.82	300.98	300.98	1.0	0.7	66.54	0.7	8.65	8.65	66.54	11.47	11.47	17.95	17.95	104.62	104.62
602	3448.031	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	16	16	8.2	886.12	131.1	132.92	2,126.69	14,177.96	155.49	2,487.81	129.24	2,067.76	1,303.76	20,860.23	16.0	0.6	53.63	9.5	6.97	111.56	858.14	19.98	319.64	16.63	266.04	97.21	1,555.37
603	3448.032	Union SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	1,191.56	4,766.23	134.40	537.62	2,385.77	9,543.06	4.0	0.6	53.72	2.4	6.98	27.93	214.88	40.35	161.41	20.75	83.00	121.80	487.22
604	3448.033	Weld NPS 1-1/2, Piping Specification SB11	ea	48	48	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.0	0.6	57.39	30.5	7.46	358.11	2,754.66	238.91	11,467.67	61.40	2,947.16	365.16	17,527.60
605	3448.034	Ball valve NPS 1-1/2, Valve Specification VBA11	ea	4	4	11.0	1,187.40	43.9	178.11	712.44	4,749.62	295.09	1,180.35	173.18	692.70	1,833.78	7,335.11	4.0	3.2	288.71	12.8	37.53	150.13	1,154.83	209.90	839.58	110.11	440.44	646.24	2,584.98
606	3448.035	Pipe identification NPS 1-1/2	Linear meter	8	8	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.6	52.14	4.6	6.78	54.22	417.09	12.06	96.50	14.68	117.46	85.66	685.27
607	3448.036	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	58	58	2.3	244.14	130.9	36.62	2,124.06	14,160.38	56.83	3,296.31	35.61	2,065.20	373.21	21,645.94	58.0	2.1	190.59	122.3	24.78	1,437.05	11,054.26	23.79	1,379.93	49.58	2,875.72	288.74	16,746.97
608	3448.037	Pipe NPS 2 Sch.40S, Piping Specification SB11	m	1	1	2.3	244.14	2.3	36.62	36.62	244.14	56.83	56.83	35.61	35.61	373.21	373.21	1.0	0.6	53.72	0.6	6.98	6.98	53.72	17.51	17.51	16.15	16.15	94.36	94.36
609	3448.038	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	46	46	8.5	921.57	392.0	138.24	6,358.82	42,392.12	171.71	7,898.86	134.40	6,182.61	1,365.92	62,832.40	46.0	0.6	53.95	27.5	7.01	322.65	2,481.92	31.56	1,451.67	19.03	875.54	111.56	5,131.79
610	3448.039	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	8	8	8.5	921.57	68.2	138.24	1,105.88	7,372.54	172.91	1,383.29	134.40	1,075.24	1,367.12	10,936.95	8.0	0.3	25.94	2.3	3.37	26.98	207.55	34.72	277.80	13.09	104.71	77.13	617.05
611	3448.040	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	12	12	8.5	921.57	102.3	138.24	1,658.82	11,058.81	1,191.56	14,298.70	134.40	1,612.85	2,385.77	28,629.19	12.0	0.6	53.14	7.1	6.91	82.90	637.71	56.37	676.39	23.84	286.04	140.25	1,683.04
612	3448.041	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	268.91	1,075.63	175.76	703.04	1,830.56	7,322.25	4.0	1.2	107.09	4.7	13.92	55.69	428.37	47.03	188.10	34.63	138.54	202.68	810.70
613	3448.042	Concentric Reducer SW Class 300 0NPS 2 x 1, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	183.09	732.34	134.40	537.62	1,377.29	5,509.17	4.0	0.7	62.04	2.7	8.06	32.26	248.15	21.58	86.32	18.93	75.70	110.61	442.44
614	3448.043	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	8	8	7.6	827.05	61.2	124.06	992.46	6,616.38	98.20	785.58	120.62	964.96	1,169.92	9,359.38	8.0	0.6	52.04	4.6	6.77	54.12	416.33	32.30	258.42	18.73	149.87	109.84	878.74
615	3448.044	Victaulic coupling NPS 2, Style 77	ea	4	4	0.4	47.85	1.8	7.18	28.71	191.40	39.99	159.97	6.98	27.91	102.00	408.00	4.0	0.6	53.72	2.4	6.98	27.93	214.88	41.95	167.80	21.07	84.28	123.73	494.90
616	3448.045	Weld NPS 2, Piping Specification SB11	ea	218	218	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	218.3	0.9	80.79	195.1	10.50	2,292.47	17,634.40	259.61	56,669.79	71.15	15,530.19	422.05	92,126.86
617	3448.046	Ball valve NPS 2, Valve Specification VBA11	ea	21	21	14.7	1,587.93	308.3	238.19	5,001.99	33,346.57	406.63	8,539.17	231.59	4,863.37	2,464.34	51,751.10	21.0	21.7	1,957.90	454.8	254.53	5,345.07	41,115.92	269.98	5,669.58	514.49	10,804.28	2,996.90	62,934.84
618	3448.047	Pipe insulation NPS 2	Linear meter	51	51	1.5	149.19	75.2	22.38	1,141.32	7,608.80	45.86	2,338.97	8.55	436.05	225.98	11,525.14	51.0	3.6	323.26	182.4	42.02	2,143.23	16,486.35	210.87	10,754.24	99.73	5,085.98	675.88	34,469.80
619	3448.048	Pipe identification NPS 2	Linear meter	51	51	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.0	0.6	50.71	28.6	6.59	336.24	2,586.42	12.06	615.25	14.35	731.70	83.72	4,269.61
620	3448.049	Pipe NPS 4 Sch.10S, Piping Specification SB11	m	55	55	3.4	372.03	189.2	55.80	3,069.25	20,461.64	118.53	6,519.39	54.26	2,984.19	600.63	33,034.47	55.0	2.0	178.38	108.5	23.19	1,275.44	9,811.05	49.92	2,745.71	51.97	2,858.53	303.47	16,690.73
621	3448.050	Elbow 45 degrees BW Sch.10S NPS 4, Piping Specification SB11	ea	4	4	24.4	2,644.19	97.8	396.63	1,586.51	10,576.76	156.78	627.11	385.64	1,542.55	3,583.23	14,332.94	4.0	0.5	41.25	1.8	5.36	21.45	164.98	13.95	55.80	12.50	50.01	73.06	292.23
622	3448.051	Flange Welding Neck 150RF Sch.10S NPS 4 c/w hardware, Piping Specification SB11	ea	16	16	15.8	1,708.44	252.7	256.27	4,100.27	27,335.12	172.30	2,756.79	249.17	3,986.64	2,386.18	38,178.81	16.0	2.3	209.34	37.1	27.21	435.42	3,349.39	31.71	507.35	55.58	889.30	323.84	5,181.46
623	3448.052	Olet BW Sch.10S NPS 4, Piping Specification SB11	ea	8	8	14.6	1,583.21	117.1	237.48	1,899.85	12,665.65	371.38	2,971.04	230.90	1,847.20	2,422.97	19,383.73	8.0	0.9	84.57	7.5	10.99	87.95	676.53	654.52	5,236.14	151.64	1,213.15	901.72	7,213.77
624	3448.053	Victaulic Elbow 90 degrees NPS 4, Style 410SS	ea	12	12	4.7	510.41	56.6	76.56	918.73	6,124.88	188.59	2,263.12	74.44	893.27	850.00	10,200.01	12.0	0.9	83.87	11.1	10.90	130.84	1,006.48	217.49	2,609.91	63.50	761.98	375.77	4,509.21
625	3448.054	Victaulic Elbow 45 degrees NPS 4, Style 410SS	ea	4	4	4.7	510.41	18.9	76.56	306.24	2,041.63	210.13	840.51	74.44	297.76	871.53	3,486.14	4.0	0.5	41.25	1.8	5.36	21.45	164.98	199.05	796.18	49.77	199.07	295.42	1,181.67
626	3448.055	Victaulic Coupling NPS 4, Style 77DX	ea	8	8	0.5	58.48	4.3	8.77	70.18	467.87	983.88	7,871.06	8.53	68.24	1,059.67	8,477.35	8.0	2.0	181.61	16.1	23.61	188.87	1,452.88	81.88	655.02	59.16	473.28	346.26	2,770.05
627	3448.056	Victaulic Coupling NPS 4, Style 77	ea	12	12	0.5	58.48	6.5	8.77	105.27	701.81	983.88	11,806.59	8.53	102.35	1,059.67	12,716.03	12.0	0.9	83.82	11.1	10.90	130.75	1,005.81	914.90	10,978.85	203.89	2,446.71	1,213.51	14,562.12
628	3448.057	Victaulic Coupling NPS 4, Style 89	ea	16	16	0.5	58.48	8.7	8.77	140.36	935.75	145.16	2,322.51	8.53	136.47	220.94	3,535.09	16.0	2.0	181.61	32.2	23.61	377.75	2,905.76	192.51	3,080.08	81.43	1,302.93	479.16	7,666.53
629	3448.058	Weld NPS 4, Piping Specification SB11	ea	48	48	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.9	7.9	710.78	376.3	92.40	4,422.05	34,015.80	181.96	8,708.13	203.26	9,727.35	1,188.40	56,873.33
630	3448.059	Pipe insulation NPS 4	Linear meter	55	55	2.8	279.06	151.6	41.86	2,302.23	15,348.22	55.55	3,055.37	8.55	470.25	385.02	21,176.08	55.0	6.2	560.67	341.1	72.89	4,008.80	30,836.91	346.41	19,052.50	169.07	9,299.11	1,149.04	63,197.33
631	3448.060	Pipe identification NPS 2	Linear meter	55	55	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	642.03	2.35	129.05	14.02	771.08
632	3448.061	Pipe NPS 6 Sch.10S, Piping Specification SB11	m	48	48	4.5	488.29	216.7	73.24	3,515.68	23,437.83	191.59	9,196.42	71.21	3,418.26	824.34	39,568.24	48.0	6.5	588.19	312.3	76.47	3,670.32	28,233.24	33.01	1,584.36	144.88	6,954.20	842.54	40,442.12
633	3448.062	Olet BW Sch.10S NPS 6, Piping Specification SB11	ea	7	7	22.7	2,457.51	159.1	368.63	2,580.39	17,202.60	992.51	6,947.60	358.41	2,508.88	4,177.07	29,239.47	7.0	1.9	174.48	13.5	22.68	158.78	1,221.37	454.70	3,182.90	132.55	927.84	784.41	5,490.90
634	3448.063	Flange Welding Neck 150RF Sch.10S NPS 6 c/w hardware, Piping Specification SB11	ea	8	8	19.4	2,101.88	155.5	315.28	2,522.26	16,815.07	246.46	1,971.71	306.55	2,452.36	2,970.18	23,761.40	8.0	3.6	323.17	28.6	42.01	336.10	2,585.39	5.50	43.98	77.06	616.46	447.74	3,581.93
635	3448.064	Victaulic Elbow 90 degrees NPS 6, Style 410SS	ea	12	12	8.4	903.85	100.3	135.58	1,626.92	10,846.14	473.95	5,687.37	131.82	1,581.84	1,645.19	19,742.27	12.0	1.4	125.12	16.6	16.27	195.18	1,501.40	574.22	6,890.65	145.01	1,740.11	860.61	10,327.35
636	3448.065	Victaulic Coupling NPS 6, Style 89	ea	32	32	1.4	148.87	44.0	22.33	714.57	4,763.80	140.80	4,505.50	21.71	694.77	333.71	10,678.64	32.0	1.4	125.78	44.5	16.35	523.25	4,025.01	129.40	4,140.81	55.61	1,779.58	327.15	10,468.65
637	3448.066	Weld NPS 6, Piping Specification SB11	ea	29	29	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.9	10.1	910.56	290.6	118.37	3,415.89	26,276.08	269.20	7,768.45	267.71	7,725.35	1,565.84	45,185.77
638	3448.067	Pipe insulation NPS 6	Linear meter	48	48	3.0	298.73	141.7	44.81	2,150.88	14,339.17	64.58	3,099.89	8.55	410.40	416.67	20,000.34	48.0	7.5	680.03	361.1	88.40	4,243.40	32,641.57	491.78	23,605.23	219.49	10,535.39	1,479.70	71,025.60
639	3448.068	Pipe identification NPS 6	Linear meter	48	48	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.0	0.6	50.66	26.9	6.59	316.10	2,431.56	12.06	579.07	14.33	688.04	83.64	4,014.77
640	3448.069	Pipe NPS 10 Sch.10S, Piping Specification SB11	m	62	62	6.8	732.43	419.9	109.87	6,811.63	45,410.89	494.45	30,656.14	106.82	6,622.87	1,443.57	89,501.53	62.0	2.8	253.23	173.7	32.92	2,040.99	15,699.96	207.72	12,878.45	101.33	6,282.49	595.19	36,901.89
641	3448.070	Elbow 90 degrees Long Radius Sch.10S NPS 10, Piping Specification SB11	ea	4	4	48.4	5,238.76	193.8	785.81	3,143.25	20,955.03	544.85	2,179.41	764.04	3,056.15	7,333.46	29,333.84	4.0	2.5	222.85	9.9	28.97	115.88	891.41	212.19	848.76	95.09	380.38	559.11	2,236.43
642	3448.071	Eccentric Reducer Sch.10S NPS 10 x 6, Piping Specification SB11	ea	4	4	48.4	5,238.76	193.8	785.81	3,143.25	20,955.03	849.83	3,399.31	764.04	3,056.15	7,638.44	30,553.75	4.0	1.1	103.28	4.6	13.43	53.71	413.13	182.98	731.92	61.11	244.44	360.80	1,443.20
643	3448.072	Victaulic coupling NPS 10, Style 89	ea	12	12	2.7	292.42	32.4	43.86	526.36	3,509.05	357.05	4,284.58	42.65	511.77	735.98	8,831.76	12.0	2.5	224.38	29.8	29.17	350.03	2,692.55	498.77	5,985.20	153.15	1,837.76	905.46	10,865.54
644	3448.073	Victaulic Elbow 90 degrees NPS 10, Style 410SS	ea	4	4	15.7	1,694.27	62.7	254.14	1,016.56	6,777.07	1,553.24	6,212.97	247.10	988.39	3,748.75	14,994.99	4.0	2.5	222.85	9.9	28.97	115.88	891.41	1,970.21	7,880.84	449.03	1,796.11	2,671.06	10,684.25
645	3448.074	Weld NPS 10, Piping Specification SB11	ea	25	25	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.9	22.2	2,009.45	552.5	261.23	6,493.40	49,949.20	113.30	2,816.37	494.66	12,295.86	2,878.64	71,554.83
646	3448.075	Pipe insulation NPS 10	Linear meter	62	62	3.5	355.21	217.6	53.28	3,303.45	22,023.01	88.41	5,481.23	8.55	530.10	505.45	31,337.80	62.0	9.0	816.61	560.0	106.16	6,581.88	50,629.88	717.29	44,472.11	289.09	17,923.40	1,929.15	119,607.27
647	3448.076	Pipe identification NPS 10	Linear meter	62	62	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.0	0.6	50.76	34.8	6.60	409.09	3,146.84	12.06	747.97	14.36	890.15	83.78	5,194.05
648	3448.077	Pipe NPS 12 Sch.STD, Piping Specification CB11	m	13	13	8.3	895.20	107.6	134.28	1,745.63	11,637.56	287.32	3,735.14	130.56	1,697.26	1,447.35	18,815.59	13.0	2.5	222.72	32.0	28.95	376.39	2,895.30	191.88	2,494.46	90.97	1,182.65	534.52	6,948.80
649	3448.078	Elbow 45 degrees Sch.STD NPS 12, Piping Specification CB11	ea	2	2	42.5	4,597.21	85.0	689.58	1,379.16	9,194.41	357.89	715.78	670.47	1,340.94	6,315.15	12,630.30	2.0	0.7	60.54	1.3	7.87	15.74	121.07	122.19	244.39	38.83	77.65	229.42	458.85
650	3448.079	Tee BW Sch.STD NPS 12, Piping Specification CB11	ea	3	3	61.7	6,670.73	185.0	1,000.61	3,001.83	20,012.20	603.99	1,811.97	972.88	2,918.64	9,248.22	27,744.65	3.0	1.9	176.07	5.8	22.89	68.67	528.20	196.16	588.49	80.87	242.62	475.99	1,427.97
651	3448.080	Cap BW Sch.STD NPS 12, Piping Specification CB11	ea	2	2	28.5	3,087.25	57.1	463.09	926.18	6,174.50	225.99	451.99	450.26	900.51	4,226.59	8,453.18	2.0	1.0	90.81	2.0	11.80	23.61	181.61	50.27	100.53	31.47	62.93	184.34	368.68
652	3448.081	Weld NPS 12, Piping Specification CB11	ea	15	15	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.0	5.7	519.65	86.2	67.55	1,013.31	7,794.69	411.87	6,178.10	204.49	3,067.28	1,203.56	18,053.39
653	3448.082	Pipe insulation NPS 12	Linear meter	13	13	4.1	410.45	52.7	61.57	800.37	5,335.82	98.43	1,279.56	8.55	111.15	578.99	7,526.91	13.0	10.9	982.58	141.3	127.74	1,660.56	12,773.57	891.69	11,591.93	353.60	4,596.84	2,355.61	30,622.91
654	3448.083	Pipe identification NPS 12	Linear meter	13	13	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.0	0.5	49.26	7.1	6.40	83.26	640.44	12.06	156.84	14.01	182.08	81.74	1,062.63
655	3448.084	Pipe painting NPS 12	Linear meter	13	13	1.4	135.68	18.6	20.35	264.57	1,763.83	7.07	91.94	0.00	0.00	163.10	2,120.34	13.0	0.0	0.00	0.0	0.00	0.00	0.00	180.37	2,344.78	36.31	472.07	216.68	2,816.84
656	3448.085	Pipe NPS 14 Sch.10S, Piping Specification SB11	m	89	89	9.7	1,046.33	861.0	156.95	13,968.56	93,123.71	1,086.85	96,729.59	152.60	13,581.47	2,442.73	217,403.32	89.0	10.6	961.46	946.5	124.99	11,124.06	85,569.72	406.53	36,181.31	307.80	27,394.37	1,800.78	160,269.47
657	3448.086	Elbow 90 degrees Long Radius Sch.10S NPS 14, Piping Specification SB11	ea	20	20	77.2	8,347.28	1543.6	1,252.09	25,041.83	166,945.54	1,174.33	23,486.66	1,217.39	24,347.89	11,991.10	239,821.92	20.0	1.6	147.82	32.7	19.22	384.33	2,956.37	512.35	10,247.00	137.89	2,757.77	817.27	16,345.46
658	3448.087	Elbow 45 degrees Sch.10S NPS 14, Piping Specification SB11	ea	4	4	77.2	8,347.28	308.7	1,252.09	5,008.37	33,389.11	1,017.16	4,068.63	1,217.39	4,869.58	11,833.92	47,335.68	4.0	0.8	74.17	3.3	9.64	38.57	296.68	307.41	1,229.62	79.32	317.29	470.54	1,882.17
659	3448.088	Flange Welding Neck 150FF Sch.10S NPS 14 c/w hardware, Piping Specification SB11	ea	20	20	47.8	5,171.41	956.3	775.71	15,514.24	103,428.25	883.06	17,661.22	754.22	15,084.32	7,584.40	151,688.03	20.0	6.0	541.67	119.8	70.42	1,408.35	10,833.48	460.87	9,217.40	220.09	4,401.73	1,293.05	25,860.96
660	3448.089	Flange Welding Neck 150RF Sch.10S NPS 14 c/w hardware, Piping Specification SB11	ea	52	52	47.8	5,171.41	2486.4	775.71	40,337.02	268,913.46	883.06	45,919.17	754.22	39,219.23	7,584.40	394,388.88	52.0	6.4	578.11	332.3	75.15	3,908.02	30,061.72	9.64	501.39	137.80	7,165.81	800.71	41,636.94
661	3448.090	Flange Slip-On 150RF NPS 14 c/w hardware, Piping Specification SB11	ea	8	8	47.8	5,171.41	382.5	775.71	6,205.70	41,371.30	690.01	5,520.07	754.22	6,033.73	7,391.35	59,130.79	8.0	14.0	1,266.25	112.1	164.61	1,316.90	10,129.99	373.06	2,984.50	372.69	2,981.55	2,176.62	17,412.94
662	3448.091	Tee BW Sch.10S NPS 14, Piping Specification SB11	ea	12	12	115.0	12,441.16	1380.4	1,866.17	22,394.10	149,293.97	1,700.68	20,408.16	1,814.46	21,773.53	17,822.48	213,869.76	12.0	3.3	295.64	39.2	38.43	461.19	3,547.64	774.20	9,290.39	225.35	2,704.14	1,333.61	16,003.37
663	3448.092	Eccentric Reducer BW Sch.10S NPS 14 x 6, Piping Specification SB11	ea	8	8	77.2	8,347.28	617.4	1,252.09	10,016.73	66,778.22	1,236.65	9,893.22	1,217.39	9,739.16	12,053.42	96,427.32	8.0	1.0	90.81	8.0	11.80	94.44	726.44	694.32	5,554.59	161.13	1,289.01	958.06	7,664.47
664	3448.093	Victaulic coupling NPS 14, Style W77	ea	20	20	3.9	421.09	77.9	63.16	1,263.26	8,421.71	520.15	10,402.99	61.41	1,228.25	1,065.81	21,316.21	20.0	1.6	147.89	32.7	19.23	384.52	2,957.85	424.75	8,495.01	120.27	2,405.40	712.14	14,242.78
665	3448.094	Victaulic coupling NPS 14, Style 89	ea	20	20	3.9	421.09	77.9	63.16	1,263.26	8,421.71	482.19	9,643.85	61.41	1,228.25	1,027.85	20,557.07	20.0	1.6	147.47	32.6	19.17	383.43	2,949.45	641.64	12,832.71	163.84	3,276.71	972.11	19,442.30
666	3448.095	Victaulic Elbow 90 degrees NPS 14, Style W100SS	ea	12	12	18.0	1,943.86	215.7	291.58	3,498.96	23,326.37	3,124.56	37,494.77	283.50	3,401.99	5,643.51	67,722.09	12.0	1.6	148.51	19.7	19.31	231.68	1,782.15	4,202.43	50,429.19	880.96	10,571.52	5,251.21	63,014.54
667	3448.096	Victaulic Eccentric Reducer NPS 14 x 10, Style W51SS	ea	4	4	18.0	1,943.86	71.9	291.58	1,166.32	7,775.46	2,348.31	9,393.24	283.50	1,134.00	4,867.25	19,469.01	4.0	1.0	90.81	4.0	11.80	47.22	363.23	2,978.44	11,913.78	620.98	2,483.91	3,702.04	14,808.14
668	3448.097	Weld NPS 14, Piping Specification SB11	ea	193	193	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	192.7	14.7	1,330.39	2,835.9	172.95	33,330.09	256,385.30	500.09	96,375.30	413.09	79,608.01	2,416.52	465,698.70
669	3448.098	Butterfly Valve NPS 14, Valve Specification VBU01	ea	28	28	39.7	4,288.83	1110.3	643.33	18,013.10	120,087.36	2,127.15	59,560.15	625.50	17,513.94	7,684.81	215,174.55	28.0	13.7	1,237.31	383.2	160.85	4,503.80	34,644.65	1,633.53	45,738.84	619.66	17,350.42	3,651.35	102,237.71
670	3448.099	Check Valve FF NPS 14, Valve Specification VCH01	ea	4	4	39.7	4,288.83	158.6	643.33	2,573.30	17,155.34	9,849.23	39,396.94	625.50	2,501.99	15,406.89	61,627.57	4.0	13.7	1,237.31	54.7	160.85	643.40	4,949.24	7,756.98	31,027.94	1,852.47	7,409.87	11,007.61	44,030.45
671	3448.100	Pipe insulation NPS 14	Linear meter	89	89	4.3	433.38	381.1	65.01	5,785.66	38,571.04	107.00	9,523.04	8.55	760.95	613.94	54,640.68	89.0	12.4	1,117.24	1,099.9	145.24	12,926.45	99,434.21	725.87	64,602.40	344.08	30,622.77	2,332.42	207,585.82
672	3448.101	Pipe identification NPS 14	Linear meter	89	89	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	89.0	0.6	50.39	49.6	6.55	583.07	4,485.14	12.06	1,073.70	14.27	1,270.23	83.28	7,412.14
673	3448.102	Pipe NPS 16 Sch.10S , Piping Specification SB11	m	114	114	10.7	1,162.59	1225.4	174.39	19,880.34	132,535.62	1,201.99	137,026.76	169.56	19,329.43	2,708.53	308,772.15	114.0	2.7	240.15	302.8	31.22	3,559.09	27,377.60	556.71	63,465.08	168.52	19,211.30	996.61	113,613.07
674	3448.103	Flange Welding Neck 150RF Sch.10S NPS 16 c/w hardware, Piping Specification SB11	ea	7	7	55.2	5,965.38	386.1	894.81	6,263.65	41,757.65	1,137.44	7,962.07	870.01	6,090.07	8,867.63	62,073.44	7.0	1.0	88.42	6.8	11.49	80.46	618.91	12.48	87.38	23.29	163.04	135.68	949.79
675	3448.104	Blind Flange 150RF NPS 16 c/w hardware, Piping Specification SB11	ea	1	1	55.2	5,965.38	55.2	894.81	894.81	5,965.38	1,243.66	1,243.66	870.01	870.01	8,973.85	8,973.85	1.0	1.8	164.98	1.8	21.45	21.45	164.98	647.57	647.57	169.15	169.15	1,003.14	1,003.14
676	3448.105	Reducing Tee BW Sch.10S NPS 16 x 16 x 14, Piping Specification SB11	ea	4	4	131.8	14,255.94	527.3	2,138.39	8,553.57	57,023.78	1,826.37	7,305.48	2,079.13	8,316.54	20,299.84	81,199.36	4.0	3.7	338.27	15.0	43.97	175.90	1,353.07	1,069.68	4,278.70	294.85	1,179.41	1,746.77	6,987.08
677	3448.106	Eccentric Reducer BW Sch.10S NPS 16 x 12, Piping Specification SB11	ea	1	1	88.8	9,609.12	88.8	1,441.37	1,441.37	9,609.12	1,094.24	1,094.24	1,401.43	1,401.43	13,546.15	13,546.15	1.0	1.1	98.44	1.1	12.80	12.80	98.44	757.71	757.71	175.68	175.68	1,044.63	1,044.63
678	3448.107	Victaulic Reducing Tee NPS 16 x 16 x 14, Style W77	ea	20	20	25.2	2,728.44	504.6	409.27	8,185.31	54,568.77	4,446.94	88,938.77	397.92	7,958.49	7,982.57	159,651.34	20.0	3.7	338.27	74.9	43.97	879.50	6,765.35	6,293.99	125,879.73	1,346.64	26,932.76	8,022.87	160,457.34
679	3448.108	Victaulic coupling NPS 16, Style W77	ea	20	20	4.7	505.30	93.4	75.80	1,515.91	10,106.05	662.72	13,254.41	73.70	1,473.90	1,317.51	26,350.27	20.0	1.9	168.94	37.4	21.96	439.25	3,378.84	545.65	10,912.94	149.56	2,991.13	886.11	17,722.16
680	3448.109	Weld NPS 16, Piping Specification SB11	ea	36	36	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.3	21.4	1,933.82	776.2	251.40	9,122.12	70,170.14	212.27	7,702.50	496.84	18,028.32	2,894.34	105,023.08
681	3448.110	Butterfly Valve NPS 16, Valve Specification VBU01	ea	3	3	45.7	4,944.57	137.2	741.68	2,225.05	14,833.70	2,797.93	8,393.78	721.13	2,163.40	9,205.31	27,615.93	3.0	15.6	1,413.14	46.9	183.71	551.13	4,239.43	2,327.09	6,981.28	800.61	2,401.84	4,724.56	14,173.68
682	3448.111	Pipe insulation NPS 16	Linear meter	114	114	4.8	484.29	545.5	72.64	8,281.40	55,209.36	407.32	46,434.71	8.55	974.70	972.81	110,900.17	114.0	10.0	907.95	1,144.9	118.03	13,455.87	103,506.66	809.44	92,276.10	323.82	36,915.72	2,159.25	246,154.35
683	3448.112	Pipe identification NPS 16	Linear meter	114	114	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	114.0	0.6	50.39	63.5	6.55	746.82	5,744.75	12.06	1,375.30	14.27	1,627.00	83.28	9,493.87
B&M-0184	Added	3" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter	0	13	2.9	313.90	37.2	47.09	602.92	4,019.45	101.30	1,297.12	45.78	586.21	508.06	6,505.70	12.8	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0185	Added	12" pipe, SS, Sch 40S, ASTM A312 TP304L, smls - BE	Linear meter	0	6	11.2	1,209.10	71.6	181.36	1,161.18	7,741.17	1,194.74	7,649.23	176.34	1,129.00	2,761.54	17,680.57	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0186	Added	6" pipe, SS, Sch 40S, ASTM A312 TP304L, smls - BE	Linear meter	0	6	6.1	662.68	39.2	99.40	636.41	4,242.76	380.45	2,435.79	96.65	618.78	1,239.17	7,933.74	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0187	Added	6" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter	0	6	4.6	499.92	29.6	74.99	480.10	3,200.68	109.89	703.60	72.91	466.80	757.71	4,851.17	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0188	Added	2" nipple x 4" long, brass, Sch 40, Smls - TOExPOE	ea	0	4	0.5	59.07	2.2	8.86	35.44	236.30	5.98	23.91	8.62	34.46	82.53	330.11	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0189	Added	2" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - PExTHD	ea	0	1	0.5	59.07	0.5	8.86	8.86	59.07	41.67	41.67	8.62	8.62	118.22	118.22	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0190	Added	6" 90 elbow, SR, Sch 10S SS ASTM A403 WP 304 - BE	ea	0	4	30.8	3,335.37	123.4	500.30	2,001.22	13,341.47	318.90	1,275.58	486.44	1,945.76	4,641.01	18,564.03	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0191	Added	3" flange, WN, SS, B16.5 RF, Sch 10S, ASTM A182 F304L - 150#	ea	0	8	12.2	1,315.01	97.3	197.25	1,578.01	10,520.05	212.74	1,701.89	191.78	1,534.28	1,916.78	15,334.23	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0192	Added	16"x6" WOL, SS, ASTM A182-F304L	ea	0	6	22.7	2,457.51	136.3	368.63	2,211.76	14,745.08	992.51	5,955.09	358.41	2,150.47	4,177.07	25,062.40	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0193	Added	16"x2" SOL, SS, 3000#	ea	0	4	7.6	827.05	30.6	124.06	496.23	3,308.19	98.20	392.79	120.62	482.48	1,169.92	4,679.69	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0194	Added	16"x1" SOL, SS, 3000#	ea	0	4	3.9	425.34	15.7	63.80	255.20	1,701.36	43.11	172.42	62.03	248.13	594.28	2,377.11	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0195	Added	12"x2" SOL, FS, 3000#	ea	0	1	5.2	567.12	5.2	85.07	85.07	567.12	47.68	47.68	82.71	82.71	782.58	782.58	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0196	Added	12"x1.25" SOL, FS, 3000#	ea	0	1	3.3	354.45	3.3	53.17	53.17	354.45	29.86	29.86	51.69	51.69	489.17	489.17	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0197	Added	12"x3/4" SOL, FS, 3000#	ea	0	1	2.0	212.67	2.0	31.90	31.90	212.67	18.72	18.72	31.02	31.02	294.30	294.30	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0198	Added	14"x1/2" TOL, SS, 3000#	ea	0	4	2.2	236.30	8.7	35.44	141.78	945.20	24.93	99.71	34.46	137.85	331.13	1,324.54	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0199	Added	4"x1/2" TOL, SS, 3000#	ea	0	4	2.2	236.30	8.7	35.44	141.78	945.20	24.93	99.71	34.46	137.85	331.13	1,324.54	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0200	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	8	1.2	134.69	10.0	20.20	161.63	1,077.53	13.25	106.03	19.64	157.15	187.79	1,502.33	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0201	Added	1" weld adapter, 304SS, Vic-Press - 561	ea	0	16	5.9	638.01	94.4	95.70	1,531.22	10,208.13	153.82	2,461.16	93.05	1,488.79	980.58	15,689.30	16.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0202	Added	1" male adapter, 304SS, Vic-Press - 596	ea	0	8	5.9	638.01	47.2	95.70	765.61	5,104.07	150.83	1,206.64	93.05	744.39	977.59	7,820.71	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0203	Added	2"x1" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea	0	12	11.1	1,205.13	133.7	180.77	2,169.23	14,461.52	266.81	3,201.75	175.76	2,109.12	1,828.47	21,941.62	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0204	Added	4"x3" conc reducer, Sch 10S, ASTM A403 WP304L - VICTAULIC 450SS	ea	0	8	4.7	510.41	37.8	76.56	612.49	4,083.25	163.74	1,309.95	74.44	595.52	825.15	6,601.21	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0205	Added	2" rigid coupling, Galv. DI, ASTM A536 - Victaulic 07	ea	0	4	0.3	37.22	1.4	5.58	22.33	148.87	47.12	188.47	5.43	21.71	95.35	381.38	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0206	Added	3" flexible coupling, A890 SS - VICTAULIC 77DX	ea	0	8	0.4	47.85	3.5	7.18	57.42	382.81	508.01	4,064.06	6.98	55.83	570.01	4,560.11	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0207	Added	6" flexible coupling, GALVANIZED, DUCTILE IRON, ASTM A-536 - VICTAULIC W77	ea	0	3	1.4	148.87	4.1	22.33	66.99	446.61	159.93	479.78	21.71	65.13	352.84	1,058.51	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0208	Added	14" flexible coupling, SS A351 CF8M - VICTAULIC 77S	ea	0	12	3.9	421.09	46.7	63.16	757.95	5,053.03	6,518.21	78,218.51	61.41	736.95	7,063.87	84,766.44	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0209	Added	3/4" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea	0	1	2.8	301.28	2.8	45.19	45.19	301.28	87.65	87.65	43.94	43.94	478.06	478.06	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0210	Added	2" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, [illegible]	ea	0	4	7.7	829.41	30.7	124.41	497.65	3,317.64	103.08	412.31	120.96	483.86	1,177.86	4,711.45	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0211	Added	14" BUTTERFLY VALVE LUG BRAY SERIES 31 C/W GEAR OPERATOR - VBU01 (Supplied with Equipment)	ea	0	12	39.7	4,288.83	475.9	643.33	7,719.90	51,466.01	225.35	2,704.25	625.50	7,505.97	5,783.01	69,396.14	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

Black & McDonald Limited
FIXED PRICE TARGET COST OF LABOUR

LABOUR COMPONENT 0.15 — NON LABOUR COMPONENT — Delta $353,645.00

Columns: EST. QTY A; PLA LABOUR HOURS (per unit) B; LABOUR COST (per unit) C; TOTAL LABOUR HOURS; LABOUR OH&P (per unit) D = C x %; LABOUR OH&P (Ext.) E = A x D; COST OF LABOUR (Ext.) F = A x C; MAT. COST (per unit) G; MAT. TOTAL COST; EQUIP. COST (per unit) H; TOTAL EQUIP. COST; UNIT PRICE I = C + D + G + H; TOTAL PRICE J = A x J

Cahill-Ganotec Joint Venture
FIXED PRICE TARGET COST OF LABOUR

LABOUR COMPONENT 0.13 — NON LABOUR COMPONENT

Columns: EST. QTY A; PLA LABOUR HOURS (per unit) B; LABOUR COST (per unit) C; TOTAL LABOUR HOURS; LABOUR OH&P (per unit) D = C x %; LABOUR OH&P (Ext.) E = A x D; COST OF LABOUR (Ext.) F = A x C; MAT. COST (per unit) G; MAT. TOTAL COST; EQUIP. COST (per unit) H; TOTAL EQUIP. COST; UNIT PRICE I = C + D + G + H; TOTAL PRICE J = A x J

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS
B&M-0212	Added	6" pipe spools (Andritz Supplied)	Linear meter	0	30	4.5	488.29	137.6
B&M-0213	Added	4" pipe spools (Andritz Supplied)	Linear meter	0	30	3.4	372.03	104.9
B&M-0214	Added	6" valves/specials (Andritz Supplied)	ea	0	24	16.1	1,736.80	385.4
B&M-0215	Added	4" valves/specials (Andritz Supplied)	ea	0	24	11.0	1,187.40	263.5
B&M-0216	Added	Pipe Insulation - All Sizes	ea	0	1	5416.1	553,171.91	5416.1
		WSS (Service Water)						0.0
684	3449.001	Service water pump 3449-P-6000 to 6002	ea	3	3	139.8	15,123.16	419.5
685	3449.002	Y-strainer 3449-STR-5000 / 5001 / 8000 to 8004	ea	7	7	17.5	1,890.40	122.4
686	3449.003	Y-strainer 3449-STR-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001	ea	8	8	17.5	1,890.40	139.8
687	3449.004	Pump suction diffuser 3449-PSD-6000 to 6002	ea	3	3	8.7	945.20	26.2
688	3449.005	Air vent 3449-AV-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 / 5000 / 5001 / 5002 / 8000 to 8004	ea	16	16	8.7	945.20	139.8
689	3449.006	Air vent 3449-AV-6000 / 8005	ea	2	2	8.7	945.20	17.5
690	3449.007	Pressure indicator 3449-PI-6000 to 6005	ea	6	6	8.7	945.20	52.4
691	3449.008	Pressure transmitter 3449-PT-6000 / 6001	ea	2	2	8.7	945.20	17.5
691.1	691.100	**HVAC Temperature transmitter (supply by HVAC and installed by Piping)**	ea	30	30	8.7	945.20	262.2
691.2	691.200	**HVAC Pressure transmitter (supply by HVAC and installed by Piping)**	ea	30	30	8.7	945.20	262.2
692	3449.009	Variable frequency drive 3449-VFD-6000 to 6002	ea	3	3	52.4	5,671.19	157.3
693	3449.010	Control panel 3449-CP-6000 to 6003	ea	4	4	104.9	11,342.37	419.5
694	3449.011	Pipe NPS 1/2 Sch.10S , Piping Specification SB11	m	2	2	1.0	104.63	1.9
695	3449.012	Pipe NPS 1/2 Sch.40S, Piping Specification SB11	m	1	1	1.0	104.63	1.0
696	3449.013	Pipe NPS 1/2 Sch.80S, Piping Specification SB11	m	1	1	1.0	104.63	1.0
697	3449.014	Elbow 90 degrees SW Class 3000 NPS 1/2, Piping Specification SB11	ea	2	2	5.6	602.56	11.1
698	3449.015	Olet FNPT Sch.40S NPS 1/2, Piping Specification SB11	ea	26	26	2.2	236.30	56.8
699	3449.016	Olet SW Class 3000 NPS 1/2, Piping Specification SB11	ea	6	6	2.2	236.30	13.1
700	3449.017	Union PE/NPT Sch.40S NPS 1/2, Piping Specification SB11	ea	5	5	4.3	460.78	21.3
701	3449.018	Weld NPS 1/2, Piping Specification SB11	ea	84	84	0.0	-	0.0
702	3449.019	Ball Valve NPS 1/2, Valve Specification VBA11	ea	16	16	3.7	400.53	59.3
703	3449.020	Pipe insulation NPS 1/2	Linear meter	4	4	1.4	142.39	5.6
704	3449.021	Pipe identification NPS 1/2	Linear meter	4	4	0.0	-	0.0
705	3449.022	Pipe NPS 1/2 Sch.40 , Piping Specification PA02	m	18	18	1.1	116.26	19.3
706	3449.023	Pipe NPS 1/2 Sch.80, Piping Specification PA02	m	1	1	1.1	116.26	1.1
707	3449.024	Elbow 90 degrees Sch.40 NPS 2, Piping Specification PA02	ea	13	13	1.2	134.69	16.2
708	3449.025	Elbow 45 degrees Sch.40 NPS 2, Piping Specification PA02	ea	8	8	1.8	191.40	14.2
709	3449.026	Union Sch.40 NPS 1/2, Piping Specification PA02	ea	5	5	1.2	134.69	6.2
710	3449.027	Tee Sch.40 NPS 1/2, Piping Specification PA02	ea	2	2	2.4	255.20	4.7
711	3449.028	Pipe identification NPS 1/2	Linear meter	19	19	0.0	-	0.0
712	3449.029	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	70	70	1.1	116.26	75.2
713	3449.030	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	m	3	3	1.1	116.26	3.2
714	3449.031	Olet SW Class 3000 NPS 3/4, Piping Specification SB11	ea	36	36	2.8	307.19	102.3
715	3449.032	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	109	109	5.6	602.56	607.3
716	3449.033	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	29	29	5.6	602.56	161.6
717	3449.034	Elbow 45 degrees BE Sch.10s NPS 3/4, Piping Specification SB11	ea	2	2	5.6	602.56	11.1
718	3449.035	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	21	21	5.6	602.56	117.0
719	3449.036	Reducing Tee SW Class 3000 NPS 3/4 x 3/4 x 1/2, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1
720	3449.037	Quick connect NPS 3/4, Hansen Series HK	ea	39	39	2.8	301.28	108.6
721	3449.038	Weld NPS 3/4, Piping Specification SB11	ea	506	506	0.0	-	0.0
722	3449.039	Victaulic coupling NPS 3/4, Style 77	ea	9	9	0.3	37.22	3.1
723	3449.040	Ball Valve NPS 3/4, Valve Specification VBA11	ea	51	51	5.5	595.47	280.8
724	3449.041	Pipe insulation NPS 3/4	Linear meter	74	74	1.4	142.38	104.1
725	3449.042	Pipe identification NPS 3/4	Linear meter	74	74	0.0	-	0.0
726	3449.043	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	28	28	1.4	151.14	39.1
727	3449.044	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	6	6	1.4	151.14	8.4
728	3449.045	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	6	6	5.9	638.01	35.4
729	3449.046	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	41	41	3.9	425.34	161.2
730	3449.047	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	6	6	5.9	638.01	35.4
731	3449.048	Weld NPS 1 Piping Specification SB11	ea	127	127	0.0	-	0.0
732	3449.049	Victaulic coupling NPS 1, Style 77	ea	1	1	0.3	37.22	0.3
733	3449.050	Ball Valve NPS 1, Valve Specification VBA11	ea	8	8	7.3	793.97	58.7
734	3449.051	Pipe insulation NPS 1	Linear meter	34	34	1.4	145.28	48.8
735	3449.052	Pipe identification NPS 1	Linear meter	34	34	0.0	-	0.0
736	3449.053	Pipe NPS 1-1/4 Sch.10S, Piping Specification SB11	m	3	3	1.8	197.64	5.5
737	3449.054	Pipe NPS 1-1/4 Sch.40S, Piping Specification SB11	m	3	3	1.8	197.64	5.5
738	3449.055	Coupling Stainless Steel Compression MNPT 1.25inx1.25in	ea	4	4	8.5	921.57	34.1
739	3449.056	Victaulic coupling NPS 1-1/4, Style 77	ea	8	8	0.3	37.22	2.8
740	3449.057	Victaulic coupling NPS 1-1/4, Style 77DX	ea	2	2	0.3	37.22	0.7
741	3449.058	Pipe insulation NPS 1-1/4	Linear meter	6	6	1.4	146.29	8.7
742	3449.059	Pipe identification NPS 1-1/4	Linear meter	6	6	0.0	-	0.0
743	3449.060	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	131	131	1.8	197.64	239.4
744	3449.061	Pipe NPS 1-1/2 Sch.40S, Piping Specification SB11	m	1	1	1.8	197.64	1.8
745	3449.062	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	90	90	8.2	886.12	737.4
746	3449.063	Elbow 45 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	21	21	8.2	886.12	172.1
747	3449.064	Union SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	6	6	8.2	886.12	49.2
748	3449.065	Tee SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	30	30	11.1	1,205.13	334.3
749	3449.066	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 1/2, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1
750	3449.067	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 3/4, Piping Specification SB11	ea	30	30	11.1	1,205.13	334.3
751	3449.068	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 1, Piping Specification SB11	ea	2	2	11.1	1,205.13	22.3
752	3449.069	Concentric Reducer SW Class 3000 NPS 1-1/2 x 1, Piping Specification SB11	ea	8	8	8.2	886.12	65.5
753	3449.070	Concentric Reducer SW Class 3000 NPS 1-1/2 x 1-1/4, Piping Specification SB11	ea	2	2	8.2	886.12	16.4
754	3449.071	Eccentric Reducer SW Class 3000 NPS 1-1/2 x 1-1/4, Piping Specification SB11	ea	2	2	18.3	1,977.83	36.6
755	3449.072	Concentric Reducer SW Class 3000 NPS 2 x 1-1/2, Piping Specification SB11	ea	2	2	8.5	921.57	17.0
756	3449.073	Olet SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	8	8	7.6	827.05	61.2
757	3449.074	Weld NPS 1-1/2 Piping Specification SB11	ea	532	532	0.0	-	0.0
758	3449.075	Victaulic coupling NPS 1-1/2, Style 77	ea	18	18	0.3	37.22	6.2
759	3449.076	Victaulic coupling NPS 1-1/2, Style 77DX	ea	8	8	0.3	37.22	2.8
760	3449.077	Victaulic coupling NPS 1-1/2, Style 489	ea	3	3	0.5	58.48	1.6
761	3449.078	Victaulic concentric reducer NPS 1-1/2 x 1-1/4, Style 50	ea	11	11	3.0	322.55	32.8
762	3449.079	Victaulic Tee NPS 1-1/2, Style 420SS	ea	2	2	4.7	506.86	9.4
763	3449.080	Ball Valve NPS 1-1/2, Valve Specification VBA11	ea	23	23	11.0	1,187.40	252.5
764	3449.081	Pipe insulation NPS 1-1/2	Linear meter	132	132	1.5	147.36	192.2
765	3449.082	Pipe identification NPS 1-1/2	Linear meter	132	132	0.0	-	0.0
766	3449.083	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	276	276	2.3	244.14	623.0
767	3449.084	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	29	29	8.5	921.57	247.1
768	3449.085	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	5	5	8.5	921.57	42.6
769	3449.086	Elbow 90 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	3	3	8.5	921.57	25.6
770	3449.087	Elbow 45 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	1	1	8.5	921.57	8.5
771	3449.088	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	7.6	827.05	7.6
772	3449.089	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	2	2	8.5	921.57	17.0
773	3449.090	Eccentric Reducer SW Class 3000 NPS 2 x 3/4, Piping Specification SB11	ea	1	1	18.3	1,977.83	18.3
774	3449.091	Reducing Tee SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	9	9	11.1	1,205.13	100.3
775	3449.092	Reducing Tee SW Class 3000 NPS 2 x 2 x 1-1/2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6
776	3449.093	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	3	3	4.6	496.23	13.8
777	3449.094	Weld NPS 2 Piping Specification SB11	ea	165	165	0.0	-	0.0
778	3449.095	Victaulic elbow 90 degrees NPS 2, Style 410SS	ea	13	13	3.0	322.55	38.8
779	3449.096	Victaulic elbow 45 degrees NPS 2, Style 411SS	ea	2	2	3.8	408.33	7.6
780	3449.097	Victaulic coupling NPS 2, Style 89	ea	40	40	0.4	47.85	17.7
781	3449.098	Victaulic coupling NPS 2, Style 77DX	ea	24	24	0.3	37.22	8.3
782	3449.099	Victaulic coupling NPS 2, Style 77	ea	7	7	0.4	47.85	3.1
783	3449.100	Victaulic coupling NPS 2, Style 07	ea	3	3	0.3	37.22	1.0
784	3449.101	Victaulic tee NPS 2, Style 420SS	ea	3	3	4.4	471.42	13.1
785	3449.102	Victaulic concentric reducer NPS 2 x 3/4, Style 50	ea	6	6	3.0	322.55	17.9
786	3449.103	Pipe insulation NPS 2	Linear meter	276	276	1.5	149.21	406.9
787	3449.104	Pipe identification NPS 2	Linear meter	276	276	0.0	-	0.0
788	3449.105	Pipe NPS 2-1/2 Sch.10S , Piping Specification SB11	m	192	192	2.6	279.02	495.3
789	3449.106	Elbow 90 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	74	74	18.3	1,977.83	1353.3
790	3449.107	Elbow 45 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	5	5	18.3	1,977.83	91.4
791	3449.108	Tee BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	16	16	27.4	2,963.19	438.4
792	3449.109	Reducing Tee BW Sch.10S NPS 2-1/2 x 2-1/2 x 2, Piping Specification SB11	ea	1	1	27.4	2,963.19	27.4
793	3449.110	Union SW Class 3000 NPS 2-1/2, Piping Specification SB11	ea	2	2	10.2	1,105.88	20.5
794	3449.111	Concentric Reducer BW Sch.10S NPS 2-1/2 x 1-1/2, Piping Specification SB11	ea	2	2	8.5	921.57	17.0
795	3449.112	Concentric Reducer BW Sch.10S NPS 4 x 2-1/2, Piping Specification SB11	ea	1	1	17.0	1,843.14	17.0
796	3449.113	Flange Welding Neck 150RF Sch.10S NPS 2-1/2 c/w hardware, Piping Specification SB11	ea	40	40	10.9	1,180.32	436.5
797	3449.114	Flange Slip-On 150RF NPS 2-1/2 c/w hardware, Piping Specification SB11	ea	8	8	10.9	1,180.32	87.3
798	3449.115	Olet BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	11	11	9.2	992.46	100.9

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00
						0.15											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
799	3449.116	Weld NPS 2-1/2 Piping Specification SB11	ea	316	316	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800	3449.117	Victaulic Elbow 90 degrees NPS 2-1/2, Style 410SS	ea	31	31	3.1	340.27	97.5	51.04	1,582.25	10,548.41	196.52	6,092.11	49.63	1,538.41	637.46	19,761.19
801	3449.118	Victaulic Elbow 45 degrees NPS 2-1/2, Style 411SS	ea	12	12	3.8	408.33	45.3	61.25	734.99	4,899.90	168.10	2,017.23	59.55	714.62	697.23	8,366.73
802	3449.119	Victaulic coupling NPS 2-1/2, Style 77DX	ea	95	95	0.3	37.22	32.7	5.58	530.34	3,535.63	479.24	45,527.36	5.43	515.65	527.46	50,108.98
803	3449.120	Victaulic coupling NPS 2-1/2, Style 77	ea	2	2	0.3	37.22	0.7	5.58	11.17	74.43	479.24	958.47	5.43	10.86	527.46	1,054.93
804	3449.121	Victaulic coupling NPS 2-1/2, Style 07	ea	13	13	0.4	47.85	5.8	7.18	93.31	622.06	63.36	823.65	6.98	90.72	125.36	1,629.74
805	3449.122	Victaulic concentric reducer NPS 2-1/2 x 2, Style 52	ea	8	8	3.1	340.27	25.2	51.04	408.33	2,722.17	161.52	1,292.15	49.63	397.01	602.46	4,819.66
806	3449.123	Victaulic concentric reducer NPS 2-1/2 x 2, Style 50	ea	24	24	3.1	340.27	75.5	51.04	1,224.98	8,166.51	138.37	3,320.87	49.63	1,191.03	579.31	13,903.38
807	3449.124	Ball Valve NPS 2-1/2, Valve Specification VBA01	ea	24	24	5.7	616.74	136.9	92.51	2,220.27	14,801.80	2,080.71	49,937.11	89.95	2,158.74	2,879.91	69,117.91
808	3449.125	Pipe insulation NPS 2-1/2	Linear meter	192	192	1.5	150.59	285.7	22.59	4,336.91	28,912.73	51.25	9,840.84	8.55	1,641.60	232.98	44,732.08
809	3449.126	Pipe identification NPS 2-1/2	Linear meter	192	192	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
810	3449.127	Pipe NPS 3 Sch.STD, Piping Specification CB11	m	69	69	2.8	302.27	192.8	45.34	3,128.54	20,856.92	50.23	3,465.79	44.08	3,041.84	441.93	30,493.09
811	3449.128	Elbow 90 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	11	11	12.7	1,375.26	139.9	206.29	2,269.18	15,127.89	81.86	900.43	200.57	2,206.30	1,863.98	20,503.81
812	3449.129	Elbow 45 degrees BW Sch.STD NPS3, Piping Specification CB11	ea	1	1	12.7	1,375.26	12.7	206.29	206.29	1,375.26	81.86	81.86	200.57	200.57	1,863.98	1,863.98
813	3449.130	Flange Welding Neck 150RF Sch.STD NPS 3 c/w hardware, Piping Specification CB11	ea	4	4	8.3	893.21	33.0	133.98	535.93	3,572.85	67.72	270.87	130.27	521.08	1,225.18	4,900.72
814	3449.131	Weld NPS 3 Piping Specification CB11	ea	38	38	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
815	3449.132	Victaulic coupling NPS 3, Style 77	ea	2	2	0.5	53.17	1.0	7.98	15.95	106.33	55.01	110.01	7.75	15.51	123.90	247.81
816	3449.133	Victaulic coupling NPS 3, Style 07	ea	5	5	0.5	53.17	2.5	7.98	39.88	265.84	67.55	337.76	7.75	38.77	136.45	682.24
817	3449.134	Victaulic expansion joint JT NPS 3, Style 155	ea	1	1	6.4	694.72	6.4	104.21	104.21	694.72	3,865.53	3,865.53	101.32	101.32	4,765.78	4,765.78
818	3449.135	Victaulic Elbow 90 degrees NPS 3, Style 100	ea	2	2	3.5	382.81	7.1	57.42	114.84	765.61	124.86	249.73	55.83	111.66	620.92	1,241.84
819	3449.136	Victaulic Elbow 90 degrees NPS 3, Style 100	ea	2	2	3.5	382.81	7.1	57.42	114.84	765.61	124.86	249.73	55.83	111.66	620.92	1,241.84
820	3449.137	Ball Valve NPS 3, Valve Specification VBA01	ea	2	2	6.4	694.72	12.8	104.21	208.42	1,389.44	2,323.25	4,646.51	101.32	202.64	3,223.50	6,447.00
821	3449.138	Pipe insulation NPS 3	Linear meter	69	69	1.5	155.68	106.1	23.35	1,611.26	10,741.71	52.36	3,612.85	8.55	589.95	239.94	16,555.77
822	3449.139	Pipe identification NPS 3	Linear meter	69	69	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
823	3449.140	Pipe painting NPS 3	Linear meter	69	69	0.9	89.04	64.8	13.36	921.56	6,143.72	1.77	121.99	0.00	0.00	104.16	7,187.27
824	3449.141	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	445	445	3.5	383.66	1578.5	57.55	25,609.02	170,726.80	67.23	29,915.48	55.95	24,899.36	564.38	251,150.66
825	3449.142	Elbow 90 degrees Sch.STD NPS 4, Piping Specification CB11	ea	7	7	15.9	1,715.53	111.0	257.33	1,801.31	12,008.74	105.83	740.79	250.20	1,751.39	2,328.89	16,302.23
826	3449.143	Flange Welding Neck 150RF Sch.STD NPS 4 c/w hardware, Piping Specification CB11	ea	9	9	11.4	1,229.94	102.3	184.49	1,660.42	11,069.45	94.91	854.15	179.38	1,614.40	1,688.71	15,198.42
827	3449.144	TeeBW Sch. STD NPS 4, Piping Specification CB11	ea	2	2	23.7	2,559.12	47.3	383.87	767.74	5,118.25	161.00	322.00	373.23	746.46	3,477.22	6,954.44
828	3449.145	Reducing Tee BW Sch.STD NPS 4 x 4 x 2-1/2, Piping Specification CB11	ea	1	1	23.7	2,559.12	23.7	383.87	383.87	2,559.12	163.55	163.55	373.23	373.23	3,479.78	3,479.78
829	3449.146	Reducing lateral BW Sch.STD NPS 4 x 2, Piping Specification CB11	ea	1	1	23.7	2,559.12	23.7	383.87	383.87	2,559.12	2,241.67	2,241.67	373.23	373.23	5,557.89	5,557.89
830	3449.147	Concentric reducer BW Sch.STD NPS 4 x 3, Piping Specification CB11	ea	1	1	15.9	1,715.53	15.9	257.33	257.33	1,715.53	101.76	101.76	250.20	250.20	2,324.83	2,324.83
831	3449.148	Eccentric reducer BW Sch.STD NPS 4 x 2, Piping Specification CB11	ea	1	1	15.9	1,715.53	15.9	257.33	257.33	1,715.53	101.76	101.76	250.20	250.20	2,324.83	2,324.83
832	3449.149	Eccentric reducer BW Sch.STD NPS 6 x 4, Piping Specification CB11	ea	3	3	20.6	2,229.48	61.8	334.42	1,003.27	6,688.45	137.76	413.28	325.16	975.47	3,026.82	9,080.47
833	3449.150	Cap BW Sch.STD NPS 4, Piping Specification CB11	ea	6	6	7.9	854.22	47.4	128.13	768.80	5,125.33	53.36	320.16	124.58	747.50	1,160.30	6,961.79
834	3449.151	Olet BW Sch.STD NPS 4, Piping Specification CB11	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33
835	3449.152	Weld NPS 4 Piping Specification CB11	ea	117	117	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
836	3449.153	Victaulic coupling NPS 4, Style 07	ea	9	9	0.5	58.48	4.9	8.77	78.95	526.36	88.54	796.85	8.53	76.77	164.33	1,478.93
837	3449.154	Victaulic coupling NPS 4, Style 77	ea	20	20	0.7	79.75	14.7	11.96	239.25	1,595.02	92.16	1,843.16	11.63	232.62	195.50	3,910.06
838	3449.155	Victaulic coupling NPS 4, Style 177	ea	2	2	0.5	58.48	1.1	8.77	17.55	116.97	983.88	1,967.77	8.53	17.06	1,059.67	2,119.34
839	3449.156	Victaulic transition coupling NPS 4, Style 997	ea	1	1	0.5	58.48	0.5	8.77	8.77	58.48	983.88	983.88	8.53	8.53	1,059.67	1,059.67
840	3449.157	Victaulic reducing tee NPS 4 x 4 x 2, Style 25	ea	1	1	7.2	779.79	7.2	116.97	116.97	779.79	199.19	199.19	113.73	113.73	1,209.68	1,209.68
841	3449.158	Victaulic reducing tee NPS 4 x 4 x 2-1/2, Style 25	ea	1	1	7.2	779.79	7.2	116.97	116.97	779.79	239.81	239.81	113.73	113.73	1,250.29	1,250.29
842	3449.159	Victaulic reducing tee NPS 4 x 4 x 3, Style 25	ea	1	1	7.2	779.79	7.2	116.97	116.97	779.79	239.81	239.81	113.73	113.73	1,250.29	1,250.29
843	3449.160	Victaulic eccentric reducer NPS 4 x 2, Style 51	ea	1	1	4.7	510.41	4.7	76.56	76.56	510.41	906.28	906.28	74.44	74.44	1,567.69	1,567.69
844	3449.161	Victaulic elbow 90 degrees NPS 4, Style 100	ea	2	2	4.9	524.58	9.7	78.69	157.38	1,049.17	197.07	394.14	76.51	153.01	876.85	1,753.70
845	3449.162	Butterfly valve NPS 4, Valve Specification VBU01	ea	3	3	11.0	1,187.40	32.9	178.11	534.33	3,562.21	323.82	971.45	173.18	519.53	1,862.51	5,587.52
846	3449.163	Pipe insulation NPS 4	Linear meter	445	445	2.8	279.04	1226.9	41.86	18,625.70	124,171.34	55.65	24,766.39	8.55	3,804.75	385.10	171,368.18
847	3449.164	Pipe identification NPS 4	Linear meter	445	445	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
848	3449.165	Pipe painting NPS 4	Linear meter	445	445	1.0	90.45	424.7	13.57	6,037.72	40,251.45	2.36	1,049.04	0.00	0.00	106.38	47,338.20
849	3449.166	Pipe NPS 6 Sch.STD , Piping Specification CB11	m	360	360	4.6	499.92	1664.0	74.99	26,995.41	179,969.42	109.89	39,562.19	72.91	26,247.33	757.71	272,774.35
850	3449.167	Elbow 90 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	12	12	20.6	2,229.48	247.4	334.42	4,013.07	26,753.82	155.18	1,862.20	325.16	3,901.87	3,044.25	36,530.95
851	3449.168	Elbow 45 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	2	2	20.6	2,229.48	41.2	334.42	668.85	4,458.97	143.19	286.38	325.16	650.31	3,032.25	6,064.50
852	3449.169	Tee BW Sch.STD NPS 6, Piping Specification CB11	ea	4	4	30.8	3,335.37	123.4	500.30	2,001.22	13,341.47	233.24	932.97	486.44	1,945.76	4,555.35	18,221.42
853	3449.170	Eccentric reducer BW Sch.STD NPS 6 x 4, Piping Specification CB11	ea	2	2	20.6	2,229.48	41.2	334.42	668.85	4,458.97	137.76	275.52	325.16	650.31	3,026.82	6,053.65
854	3449.171	Eccentric reducer BW Sch.STD NPS 8 x 6, Piping Specification CB11	ea	1	1	26.6	2,878.13	26.6	431.72	431.72	2,878.13	185.95	185.95	419.76	419.76	3,915.55	3,915.55
855	3449.172	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	29	29	14.0	1,513.50	405.8	227.02	6,583.72	43,891.44	129.41	3,752.95	220.73	6,401.27	2,090.67	60,629.37
856	3449.173	Reducing lateral BW Sch.STD NPS 6 x 1-1/2, Piping Specification CB11	ea	1	1	8.1	874.31	8.1	131.15	131.15	874.31	92.05	92.05	127.51	127.51	1,225.01	1,225.01
857	3449.174	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33
858	3449.175	Weld NPS 6 Piping Specification CB11	ea	126	126	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
859	3449.176	Victaulic elbow 90 degrees NPS 6, Style 100	ea	8	8	8.7	942.83	69.7	141.43	1,131.40	7,542.68	471.20	3,769.57	137.51	1,100.05	1,692.96	13,543.70
860	3449.177	Victaulic elbow 45 degrees NPS 6, Style 110	ea	1	1	8.4	903.85	8.4	135.58	135.58	903.85	469.15	469.15	131.82	131.82	1,640.39	1,640.39
861	3449.178	Victaulic elbow 45 degrees NPS 6, Style 11	ea	2	2	8.4	903.85	16.7	135.58	271.15	1,807.69	226.13	452.26	131.82	263.64	1,397.37	2,794.75
862	3449.179	Victaulic coupling NPS 6, Style 07	ea	15	15	1.1	122.28	17.0	18.34	275.14	1,834.27	153.51	2,302.69	17.83	267.52	311.97	4,679.62
863	3449.180	Victaulic coupling NPS 6, Style 77	ea	35	35	1.1	122.28	39.6	18.34	642.00	4,279.97	158.53	5,548.49	17.83	624.21	316.99	11,094.66
864	3449.181	Victaulic reducing tee NPS 6 x 6 x 4, Style 25	ea	1	1	13.0	1,403.62	13.0	210.54	210.54	1,403.62	483.64	483.64	204.71	204.71	2,302.51	2,302.51
865	3449.182	Victaulic reducing tee NPS 6 x 6 x 2, Style 25	ea	4	4	13.0	1,403.62	51.9	210.54	842.17	5,614.47	468.28	1,873.13	204.71	818.83	2,287.15	9,148.61
866	3449.183	Victaulic eccentric reducer NPS 6 x 4, Style 51	ea	3	3	8.4	903.85	25.1	135.58	406.73	2,711.54	1,599.56	4,798.67	131.82	395.46	2,770.80	8,312.40
867	3449.184	Butterfly valve NPS 6, Valve Specification VBU01	ea	10	10	16.1	1,736.80	160.6	260.52	2,605.20	17,368.01	507.82	5,078.15	253.30	2,533.01	2,758.44	27,584.37
868	3449.185	Pipe insulation NPS 6	Linear meter	360	360	3.0	298.75	1062.7	44.81	16,132.64	107,550.94	64.36	23,171.18	8.55	3,078.00	416.48	149,932.76
869	3449.186	Pipe identification NPS 6	Linear meter	360	360	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
870	3449.187	Pipe painting NPS 6	Linear meter	360	360	1.0	90.45	343.6	13.57	4,884.45	32,562.97	2.36	848.66	0.00	0.00	106.38	38,296.07
871	3449.188	Pipe NPS 8 Sch.STD, Piping Specification CB11	m	9	9	5.7	616.17	51.3	92.43	831.84	5,545.57	164.30	1,478.66	89.86	808.78	962.76	8,664.85
872	3449.189	Eccentric reducer BW Sch.STD NPS 8 x 4, Piping Specification CB11	ea	1	1	26.6	2,878.13	26.6	431.72	431.72	2,878.13	189.70	189.70	419.76	419.76	3,919.30	3,919.30
873	3449.190	Weld NPS 8 Piping Specification CB11	ea	2	2	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
874	3449.191	Victaulic reducing tee NPS 8 x 8 x 6, Style 25	ea	3	3	18.1	1,960.10	54.4	294.02	882.05	5,880.31	895.97	2,687.91	285.87	857.60	3,435.96	10,307.87
875	3449.192	Victaulic coupling NPS 8, Style 89	ea	6	6	2.7	292.42	16.2	43.86	263.18	1,754.52	357.05	2,142.29	42.65	255.89	735.98	4,415.88
876	3449.193	Pipe insulation NPS 8	Linear meter	9	9	3.2	322.51	28.7	48.38	435.39	2,902.58	75.22	676.95	8.55	76.95	454.65	4,091.87
877	3449.194	Pipe identification NPS 8	Linear meter	9	9	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
878	3449.195	Pipe painting NPS 8	Linear meter	9	9	1.0	90.45	8.6	13.57	122.11	814.07	4.71	42.43	0.00	0.00	108.74	978.62
B&M-0217	Added	2.5" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter	0	6	2.4	255.77	15.1	38.37	245.63	1,637.55	43.12	276.08	37.30	238.83	374.56	2,398.09
B&M-0218	Added	1" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter	0	6	1.1	116.26	6.9	17.44	111.65	744.34	14.12	90.39	16.96	108.56	164.77	1,054.94
B&M-0219	Added	3/4" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter	0	6	0.9	93.01	5.5	13.95	89.32	595.47	11.39	72.92	13.56	86.85	131.91	844.56
B&M-0220	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter	0	6	1.2	127.89	7.6	19.18	122.82	818.78	18.50	118.43	18.65	119.41	184.22	1,179.44
B&M-0221	Added	3/4" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter	0	6	1.0	104.63	6.2	15.70	100.49	669.91	11.39	72.91	15.26	97.70	146.98	941.00
B&M-0222	Added	3" cap, CS, STD, ASTM A234 Gr WPB, smls - BW	ea	0	1	6.4	691.18	6.4	103.68	103.68	691.18	43.50	43.50	100.80	100.80	939.15	939.15
B&M-0223	Added	8"x4" WOL, CS, STD	ea	0	1	9.4	1,016.09	9.4	152.41	152.41	1,016.09	113.72	113.72	148.19	148.19	1,430.41	1,430.41
B&M-0224	Added	6"x2.5" WOL, CS, STD	ea	0	5	7.2	779.79	36.1	116.97	584.84	3,898.94	77.82	389.09	113.73	568.63	1,088.30	5,441.50
B&M-0225	Added	4"x2.5" WOL, CS, STD	ea	0	5	7.2	779.79	36.1	116.97	584.84	3,898.94	77.82	389.09	113.73	568.63	1,088.30	5,441.50
B&M-0226	Added	8"x1" SOL, CS, 3000#	ea	0	4	2.6	283.56	10.5	42.53	170.14	1,134.24	20.29	81.14	41.36	165.42	387.73	1,550.94
B&M-0227	Added	6"x2.5" SOL, CS, 3000#	ea	0	1	7.2	779.79	7.2	116.97	116.97	779.79	91.03	91.03	113.73	113.73	1,101.52	1,101.52
B&M-0228	Added	6"x1.5" SOL, CS, 3000#	ea	0	1	3.9	425.34	3.9	63.80	63.80	425.34	33.58	33.58	62.03	62.03	584.75	584.75
B&M-0229	Added	6"x1" SOL, CS, 3000#	ea	0	7	2.6	283.56	18.4	42.53	297.74	1,984.92	20.29	142.00	41.36	289.49	387.73	2,714.14
B&M-0230	Added	6"x3/4" SOL, CS, 3000#	ea	0	4	2.0	212.67	7.9	31.90	127.60	850.68	18.70	74.81	31.02	124.07	294.29	1,177.15
B&M-0231	Added	4"x2" SOL, CS, 3000#	ea	0	1	5.2	567.12	5.2	85.07	85.07	567.12	47.68	47.68	82.71	82.71	782.58	782.58
B&M-0232	Added	4"x1.5" SOL, CS, 3000#	ea	0	6	3.9	425.34	23.6	63.80	382.81	2,552.03	33.58	201.49	62.03	372.20	584.75	3,508.53
B&M-0233	Added	4"x1" SOL, CS, 3000#	ea	0	2	2.6	283.56	5.2	42.53	85.07	567.12	20.29	40.57	41.36	82.71	387.73	775.47
B&M-0234	Added	4"x3/4" SOL, CS, 3000#	ea	0	13	2.0	212.67	25.6	31.90	414.71	2,764.70	18.70	243.12	31.02	403.21	294.29	3,825.74
B&M-0235	Added	3"x1.5" SOL, CS, 3000#	ea	0	2	3.9	425.34	7.9	63.80	127.60	850.68	33.58	67.16	62.03	124.07	584.75	1,169.51
B&M-0236	Added	3"x3/4" SOL, CS, 3000#	ea	0	5	2.0	212.67	9.8	31.90	159.50	1,063.35	18.70	93.51	31.02	155.08	294.29	1,471.44
B&M-0237	Added	1"x2" TOL, CS, 3000#	ea	0	3	5.2	567.12	15.7	85.07	255.20	1,701.36	36.52	109.56	82.71	248.13	771.42	2,314.25
B&M-0238	Added	2.5"x3/4" TOL, SS, 3000#	ea	0	4	2.8	307.19	11.4	46.08	184.31	1,228.76	32.79	131.16	44.80	179.21	430.86	1,723.43
B&M-0239	Added	1.25" weld adapter, 304SS, Vic-Press - 561	ea	0	29	7.2	779.79	209.1	116.97	3,392.08	22,613.85	203.77	5,909.20	113.73	3,298.08	1,214.25	35,213.21
B&M-0240	Added	1" weld adapter, 304SS, Vic-Press - 561	ea	0	8	5.9	638.01	47.2	95.70	765.61	5,104.07	153.82	1,230.58	93.05	744.39	980.58	7,844.65
B&M-0241	Added	1/2" weld adapter, 304SS, Vic-Press - 561	ea	0	30	4.3	460.78	127.8	69.12	2,073.53	13,823.52	110.99	3,329.82	67.20	2,016.07	708.10	21,242.93
B&M-0242	Added	1.5" male adapter, 304SS, Vic-Press - 596	ea	0	6	8.2	886.12	49.2	132.92	797.51	5,316.74	176.73	1,060.41	129.24	775.41	1,325.01	7,950.07
B&M-0243	Added	1.25" male adapter, 304SS, Vic-Press - 596	ea	0	14	7.2	779.79	100.9	116.97	1,637.55	10,917.03	171.15	2,396.06	113.73	1,592.18	1,181.63	16,542.83
B&M-0244	Added	1" male adapter, 304SS, Vic-Press - 596	ea	0	4	5.9	638.01	23.6	95.70	382.81	2,552.03	150.83	603.32	93.05	372.20	977.59	3,910.36
B&M-0245	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea	0	15	4.3	460.78	63.9	69.12	1,036.76	6,911.76	133.14	1,997.08	67.20	1,008.03	730.24	10,953.63
B&M-0246	Added	2" coupling, 304SS, Vic-Press - 597	ea	0	46	8.5	921.57	392.0	138.24	6,358.82	42,392.12	119.05	5,476.13	134.40	6,182.61	1,313.25	60,409.67
B&M-0247	Added	1.5" coupling, 304SS, Vic-Press - 597	ea	0	4	8.2	886.12	32.8	132.92	531.67	3,544.49	107.91	431.63	129.24	516.94	1,256.18	5,024.73
B&M-0248	Added	1" coupling, 304SS, Vic-Press - 597	ea	0	1	5.9	638.01	5.9	95.70	95.70	638.01	86.19	86.19	93.05	93.05	912.95	912.95
B&M-0249	Added	3/4" coupling, 304SS, Vic-Press - 597	ea	0	11	5.6	602.56	61.3	90.38	994.23	6,628.20	80.14	881.54	87.88	966.68	860.97	9,470.65
B&M-0250	Added	3/4" tee, 304SS, Vic-Press - 592	ea	0	1	7.2	779.79	7.2	116.97	116.97	779.79	187.61	187.61	113.73	113.73	1,198.09	1,198.09
B&M-0251	Added	1.5" cap, 304SS, Vic-Press - 540	ea	0	2	4.6	496.23	9.2	74.43	148.87	992.46	147.27	294.54	72.37	144.74	790.31	1,580.61
B&M-0252	Added	3/4" cap, 304SS, Vic-Press - 540	ea	0	2	3.3	354.45	6.6	53.17	106.33	708.90	107.80	215.60	51.69	103.39	567.11	1,134.22
B&M-0253	Added	2"x3/4" reducer, 304SS, Vic-Press - 582	ea	0	1	8.5	921.57	8.5	138.24	138.24	921.57	234.26	234.26	134.40	134.40	1,428.46	1,428.46
B&M-0254	Added	2"x1/2" reducing tee, 304SS, Vic-Press - 593	ea	0	2	11.1	1,205.13	22.3	180.77	361.54	2,410.25	232.40	464.80	175.76	351.52	1,794.05	3,588.11
B&M-0255	Added	1"x3/4" reducing tee, 304SS, Vic-Press - 593	ea	0	1	7.9	850.68	7.9	127.60	127.60	850.68	168.89	168.89	124.07	124.07	1,271.23	1,271.23

	Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
		LABOUR COMPONENT						NON LABOUR COMPONENT					
		0.13											
No	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
799	316.4	2.8	250.58	877.1	32.58	10,307.83	79,290.99	138.03	43,677.34	86.29	27,306.15	507.48	160,582.31
800	31.0	0.5	47.90	16.4	6.23	193.02	1,484.76	168.30	5,217.37	45.14	1,399.33	267.56	8,294.48
801	12.0	0.4	37.73	5.0	4.90	58.86	452.74	150.62	1,807.40	39.19	470.28	232.44	2,789.27
802	95.0	0.7	66.54	70.3	8.65	821.77	6,321.30	34.54	3,281.44	22.60	2,146.96	132.33	12,571.47
803	2.0	0.5	47.82	1.1	6.22	12.43	95.63	445.20	890.40	100.87	201.74	600.10	1,200.21
804	13.0	0.5	46.68	6.7	6.07	78.88	606.78	56.51	734.69	22.34	290.48	131.60	1,710.83
805	8.0	0.5	45.40	4.0	5.90	47.22	363.23	112.39	899.11	33.30	266.37	196.99	1,575.93
806	24.0	0.5	46.00	12.2	5.98	143.53	1,104.11	132.37	3,176.98	37.46	899.09	221.82	5,323.73
807	24.0	4.4	401.19	106.5	52.15	1,251.71	9,628.51	840.24	20,165.84	263.45	6,322.74	1,557.03	37,368.79
808	192.0	4.1	369.54	784.8	48.04	9,223.79	70,952.22	234.16	44,958.52	112.61	21,621.87	764.36	146,756.40
809	192.0	0.6	50.47	107.2	6.56	1,259.69	9,689.89	12.06	2,316.27	14.29	2,743.58	83.38	16,009.43
810	69.0	2.6	239.20	182.6	31.10	2,145.64	16,504.90	20.85	1,438.60	60.41	4,168.51	351.56	24,257.66
811	11.0	1.3	121.07	14.7	15.74	173.13	1,331.81	6.13	67.44	29.69	326.56	172.63	1,898.94
812	1.0	0.7	66.54	0.7	8.65	8.65	66.54	16.31	16.31	18.92	18.92	110.42	110.42
813	4.0	69.9	6,318.25	279.6	821.37	3,285.49	25,272.98	76.59	306.36	1,500.30	6,001.20	8,716.51	34,866.02
814	37.9	5.1	457.45	191.6	59.47	2,251.31	17,317.77	85.13	3,222.75	123.42	4,672.47	725.47	27,464.30
815	2.0	1.4	124.08	2.7	16.13	32.26	248.15	48.12	96.25	38.85	77.70	227.18	454.35
816	5.0	1.3	121.07	6.7	15.74	78.70	605.37	59.69	298.45	40.47	202.36	236.97	1,184.87
817	1.0	1.3	115.07	1.3	14.96	14.96	115.07	4,262.15	4,262.15	885.12	885.12	5,277.30	5,277.30
818	2.0	1.4	124.08	2.7	16.13	32.26	248.15	66.16	132.33	42.49	84.97	248.85	497.71
819	2.0	1.5	131.71	2.9	17.12	34.24	263.42	78.05	156.10	46.67	93.34	273.55	547.10
820	2.0	5.1	461.65	10.2	60.01	120.03	923.30	1,158.99	2,317.98	341.83	683.66	2,022.48	4,044.97
821	69.0	5.2	471.31	359.7	61.27	4,227.63	32,520.24	286.90	19,796.33	141.26	9,747.08	960.74	66,291.28
822	69.0	0.6	50.28	38.4	6.54	451.04	3,469.51	12.06	832.43	14.25	983.01	83.13	5,735.98
823	69.0	0.0	0.00	0.0	0.00	0.00	0.00	47.07	3,247.80	9.48	653.86	56.55	3,901.66
824	445.0	3.0	274.26	1,350.0	35.65	15,866.07	122,046.66	28.85	12,838.31	70.26	31,267.44	409.03	182,018.48
825	7.0	1.8	160.22	12.4	20.83	145.80	1,121.55	10.67	74.66	39.80	278.61	231.52	1,620.62
826	9.0	57.1	5,161.81	513.9	671.03	6,039.31	46,456.26	74.20	667.79	1,228.04	11,052.35	7,135.08	64,215.71
827	2.0	3.6	321.63	7.1	41.81	83.62	643.26	18.39	36.78	79.29	158.58	461.12	922.25
828	1.0	3.5	313.32	3.5	40.73	40.73	313.32	19.98	19.98	77.66	77.66	451.70	451.70
829	1.0	4.0	363.23	4.0	47.22	47.22	363.23	16.31	16.31	88.65	88.65	515.41	515.41
830	1.0	1.3	115.07	1.3	14.96	14.96	115.07	8.95	8.95	28.83	28.83	167.82	167.82
831	1.0	1.1	98.44	1.1	12.80	12.80	98.44	8.95	8.95	24.92	24.92	145.11	145.11
832	3.0	1.6	145.29	4.8	18.89	56.66	435.86	15.20	45.61	37.21	111.62	216.58	649.75
833	6.0	1.8	159.43	10.6	20.73	124.36	956.58	4.54	27.22	38.38	230.29	223.07	1,338.45
834	1.0	1.8	164.98	1.8	21.45	21.45	164.98	34.33	34.33	45.69	45.69	266.45	266.45
835	116.6	6.7	608.60	784.7	79.12	9,222.87	70,945.15	74.22	8,651.53	156.91	18,290.73	918.84	107,110.29
836	9.0	1.8	158.74	15.8	20.64	185.72	1,428.62	78.77	708.93	53.16	478.47	311.30	2,801.74
837	20.0	1.8	159.55	35.3	20.74	414.84	3,191.07	81.07	1,621.46	53.82	1,076.39	315.19	6,303.76
838	2.0	1.7	156.66	3.5	20.37	40.73	313.32	81.07	162.14	53.14	106.29	311.24	622.48
839	1.0	2.0	181.61	2.0	23.61	23.61	181.61	260.14	260.14	95.06	95.06	560.42	560.42
840	1.0	3.5	313.32	3.5	40.73	40.73	313.32	95.98	95.98	92.95	92.95	542.98	542.98
841	1.0	3.5	313.32	3.5	40.73	40.73	313.32	119.38	119.38	97.67	97.67	571.11	571.11
842	1.0	3.5	313.32	3.5	40.73	40.73	313.32	125.27	125.27	98.85	98.85	578.17	578.17
843	1.0	1.1	98.44	1.1	12.80	12.80	98.44	84.69	84.69	40.18	40.18	236.11	236.11
844	2.0	1.7	156.66	3.5	20.37	40.73	313.32	102.25	204.49	57.40	114.81	336.68	673.35
845	3.0	6.3	566.55	18.8	73.65	220.95	1,699.65	410.66	1,231.99	215.82	647.47	1,266.69	3,800.07
846	445.0	6.2	564.16	2,777.0	73.34	32,636.90	251,053.09	348.57	155,114.31	170.13	75,707.28	1,156.21	514,511.58
847	445.0	0.6	50.48	248.5	6.56	2,920.47	22,465.13	12.06	5,368.45	14.29	6,360.43	83.40	37,114.47
848	445.0	0.0	0.00	0.0	0.00	0.00	0.00	51.53	22,932.43	10.38	4,616.88	61.91	27,549.32
849	360.0	3.9	356.92	1,421.3	46.40	16,703.75	128,490.42	50.92	18,332.82	94.13	33,888.02	548.38	197,415.01
850	12.0	2.6	239.26	31.8	31.10	373.24	2,871.11	25.75	308.96	61.41	736.96	357.52	4,290.28
851	2.0	1.4	124.08	2.7	16.13	32.26	248.15	19.37	38.74	33.06	66.12	192.64	385.27
852	4.0	5.3	478.28	21.2	62.18	248.71	1,913.12	44.14	176.55	121.30	485.19	705.89	2,823.56
853	2.0	1.8	164.98	3.6	21.45	42.89	329.96	15.20	30.40	41.83	83.65	243.45	486.90
854	1.0	0.4	33.27	0.4	4.33	4.33	33.27	23.30	23.30	12.50	12.50	73.40	73.40
855	29.0	28.8	2,602.16	834.7	338.28	9,810.14	75,462.65	56.17	1,628.95	622.85	18,062.79	3,619.47	104,964.54
856	1.0	6.0	544.84	6.0	70.83	70.83	544.84	24.53	24.53	132.98	132.98	773.18	773.18
857	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
858	126.4	9.0	812.37	1,136.1	105.61	13,351.90	102,706.95	91.57	11,576.64	208.14	26,315.40	1,217.69	153,950.90
859	8.0	2.6	239.15	21.2	31.09	248.71	1,913.16	254.98	2,039.83	107.54	860.29	632.75	5,061.99
860	1.0	1.3	115.07	1.3	14.96	14.96	115.07	171.55	171.55	61.59	61.59	363.17	363.17
861	2.0	1.5	131.71	2.9	17.12	34.24	263.42	171.55	343.10	65.50	131.00	385.88	771.77
862	15.0	2.7	239.96	39.8	31.20	467.93	3,599.44	420.22	6,303.29	141.00	2,114.93	832.37	12,485.59
863	35.0	2.6	239.32	92.6	31.11	1,088.90	8,376.17	140.19	4,906.66	84.47	2,956.36	495.09	17,328.09
864	1.0	5.3	478.29	5.3	62.18	62.18	478.29	253.74	253.74	163.49	163.49	957.70	957.70
865	4.0	5.3	478.29	21.2	62.18	248.71	1,913.15	254.63	1,018.54	163.67	654.67	958.77	3,835.07
866	3.0	1.6	148.34	4.9	19.28	57.85	445.01	128.77	386.31	60.79	182.36	357.18	1,071.53
867	10.0	7.5	681.44	75.4	88.59	885.87	6,814.39	659.87	6,598.70	293.00	2,929.98	1,722.89	17,228.94
868	360.0	7.5	680.90	2,711.4	88.52	31,866.16	245,124.30	382.52	137,706.93	197.65	71,152.35	1,349.58	485,849.74
869	360.0	0.6	50.51	201.1	6.57	2,363.80	18,183.07	12.06	4,343.02	14.30	5,147.66	83.44	30,037.55
870	360.0	0.0	0.00	0.0	0.00	0.00	0.00	69.54	25,034.77	14.00	5,040.15	83.54	30,074.92
871	9.0	0.7	65.62	6.5	8.53	76.77	590.54	78.84	709.54	31.29	281.62	184.28	1,658.48
872	1.0	0.4	33.27	0.4	4.33	4.33	33.27	26.98	26.98	13.25	13.25	77.82	77.82
873	2.0	14.6	1,319.80	29.2	171.57	343.15	2,639.59	65.22	130.43	321.75	643.50	1,878.34	3,756.67
874	3.0	1.3	115.76	3.8	15.05	45.15	347.28	507.60	1,522.81	129.40	388.20	767.81	2,303.44
875	6.0	0.6	57.77	3.8	7.51	45.06	346.59	214.19	1,285.12	56.70	340.18	336.16	2,016.95
876	9.0	7.9	714.97	71.2	92.95	836.52	6,434.74	580.35	5,223.17	243.51	2,191.59	1,631.78	14,686.02
877	9.0	0.6	51.65	5.1	6.71	60.43	464.85	12.06	108.57	14.57	131.10	85.00	764.96
878	9.0	0.0	0.00	0.0	0.00	0.00	0.00	130.44	1,174.00	26.26	236.35	156.71	1,410.35
B&M-0217	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0218	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0219	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0220	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0221	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0222	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0223	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0224	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0225	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0226	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0227	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0228	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0229	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0230	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0231	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0232	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0233	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0234	13.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0235	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0236	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0237	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0238	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0239	29.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0240	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0241	30.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0242	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0243	14.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0244	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0245	15.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0246	46.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0247	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0248	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0249	11.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0250	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0251	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0252	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0253	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0254	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0255	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Black & McDonald Limited – FIXED PRICE TARGET COST OF LABOUR (LABOUR COMPONENT 0.15; NON LABOUR COMPONENT; Delta $353,645.00)

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS
B&M-0256	Added	1.25" union, 304SS, Vic-Press - 584	ea	0	19	7.2	779.79	137.0
B&M-0257	Added	2" flange adapter, 304SS, Vic-Press - 595	ea	0	4	8.8	952.29	35.2
B&M-0258	Added	4"x2.5" conc reducer, SS, Sch 10S, ASTM A403 WP 304L - BE	ea	0	1	24.4	2,644.19	24.4
B&M-0259	Added	1/2" tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L	Linear meter	0	24	0.7	71.15	16.0
B&M-0260	Added	1/2" 90 elbow, Swagelok to ASTM A182 Grade 316 - COMP	ea	0	6	1.1	119.31	6.6
B&M-0261	Added	1/2" union tee - SWAGELOK SS-810-3 or equal	ea	0	12	1.6	169.92	18.9
B&M-0262	Added	1/2" female adapter - SWAGELOK SS-8-TA-7-8 or equal	ea	0	12	1.1	119.31	13.2
B&M-0263	Added	1/2" male adapter - SWAGELOK SS-8-TA-1-8 or equal	ea	0	12	1.1	119.31	13.2
B&M-0264	Added	1" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter	0	12	1.1	116.26	13.1
B&M-0265	Added	1" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	8	1.2	134.69	10.0
B&M-0266	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	4	1.2	134.69	5.0
B&M-0267	Added	1" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea	0	2	3.7	400.53	7.4
B&M-0268	Added	2" rubber exp joint, GARLOCK EZ-FLOW style 206, 150#, FF FLG, 6" F/F c/w chlorobutyl tube & retaining rings	ea	0	1	4.4	471.42	4.4
B&M-0269	Added	8" Zero-Flex Rigid Coupling, Galvanized, Ductile Iron - Victaulic 07	ea	0	6	1.7	186.09	10.3
B&M-0270	Added	3/4" flexible coupling, A890 SS - VICTAULIC 77DX	ea	0	6	0.3	37.22	2.1
B&M-0271	Added	2.5" 45 elbow, LR, SS, SCH 10S, ASTM A351 CF8M 316 - VICTAULIC 110	ea	0	12	3.1	340.27	37.8
B&M-0272	Added	2" 45 elbow, LR, SS, SCH 10S, ASTM A351 CF8M 316 - VICTAULIC 110	ea	0	2	3.0	322.55	6.0
B&M-0273	Added	6"x2.5" reducing tee, Galv. DI, ASTM A536 GR 65 Max Rating 1000# - VICTAULIC 25	ea	0	2	13.0	1,403.62	26.0
B&M-0274	Added	6" WAFER SWING CHECK VALVE RITE 210 150# FF CS VCH01	ea	0	3	16.1	1,736.80	48.2
B&M-0275	Added	3/4" Ball Valve Carbon Socket Weld, Full Port VBA02	ea	0	3	2.9	319.00	8.8
B&M-0276	Added	2" ball valve, SS, full port, 3pc - SW - Velan VTP-2000 or equal VBA11	ea	0	4	14.7	1,587.93	58.7
B&M-0277	Added	1/2" ball valve, SS - THD - Swagelok 60T Series or equal VBA14	ea	0	6	1.1	119.31	6.6
B&M-0278	Added	2" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea	0	8	14.7	1,587.93	117.5
B&M-0279	Added	1.25" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea	0	5	9.1	988.91	45.7
B&M-0280	Added	1" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea	0	2	7.3	793.97	14.7
B&M-0281	Added	1.25" control valve - THD 3351-FCV-VCC-0001/002,3351-FCV-VCR-0001/002,3351-FCV-VER-0001,3351-FCV-VDS-0001/002 (Cost included with Controls)	ea	0	7	5.4	584.84	37.9
B&M-0282	Added	2" FLOW CONTROL VALVE BELIMO 3351-FCV-VMR-0005 3351-FCV-VMR-0001-0008 (Supplied with Equipment) (Cost included with Controls)	ea	0	8	5.4	584.84	43.3
B&M-0283	Added	Pipe Insulation - All Sizes	ea	0	1	7209.9	736,376.71	7209.9
		ABR (Brake Air)						0.0
879	344A.01	Air tank 344A-TK-5000	ea	1	1	69.9	7,561.58	69.9
880	344A.02	Y-strainer 344A-STR-1000 / 2000 / 3000 / 4000 / 5000	ea	5	5	8.7	945.20	43.7
881	344A.03	Y-strainer 344A-STR-5001	ea	1	1	8.7	945.20	8.7
882	344A.04	Y-strainer 344A-STR-5002	ea	1	1	8.7	945.20	8.7
883	344A.05	Orifice Plate 344A-FO-5000 / 5001	ea	2	2	8.7	945.20	17.5
884	344A.06	Pressure Safety Valve 344A-PSV-5000 / 5001	ea	2	2	8.7	945.20	17.5
885	344A.07	Pressure indicator 344A-PI-5000 / 5001 / 6000	ea	3	3	8.7	945.20	26.2
886	344A.08	Pressure transmitter 344A-PT-5000 / 5001	ea	2	2	8.7	945.20	17.5
887	344A.09	Oil-Water Separator 344A-OWS-5000	ea	1	1	69.9	7,561.58	69.9
888	344A.10	Drain trap 344A-YV-5000	ea	1	1	8.7	945.20	8.7
889	344A.11	Solenoid Valve 344A-YV-5001	ea	1	1	8.7	945.20	8.7
890	344A.12	Ball Valve NPS 1/8, Valve Specification VBA14	ea	2	2	1.1	119.31	2.2
891	344A.13	Pipe NPS 1/2 Sch.10S , Piping Specification SB11	mm	150	150	1.0	104.63	145.1
892	344A.14	Ball Valve NPS 1/2, Valve Specification VBA11	ea	2	2	3.7	400.53	7.4
893	344A.15	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	13	13	1.1	116.26	14.0
894	344A.16	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	mm	150	150	1.1	116.26	161.2
895	344A.17	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	9	5.6	602.56	50.1
896	344A.18	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	2	5.6	602.56	11.1
897	344A.19	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	1	1	5.6	602.56	5.6
898	344A.20	Tee SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	2	7.2	779.79	14.4
899	344A.21	Concentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	1	8.5	921.57	8.5
900	344A.22	Excentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	1	18.3	1,977.83	18.3
901	344A.23	Weld NPS 3/4, Piping Specification SB11	ea	34	34	0.0	-	0.0
902	344A.24	Ball Valve NPS 3/4, Valve Specification VBA02	ea	2	2	2.9	319.00	5.9
903	344A.25	Ball Valve NPS 3/4, Valve Specification VBA11	ea	1	1	5.5	595.47	5.5
904	344A.26	Pipe identification NPS 3/4	Linear meter	13	13	0.0	-	0.0
905	344A.27	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	163	163	1.4	151.14	227.8
906	344A.28	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	40	40	5.9	638.01	236.0
907	344A.29	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	4	5.9	638.01	23.6
908	344A.30	Weld NPS 1, Piping Specification SB11	ea	111	111	0.0	-	0.0
909	344A.31	Ball Valve NPS 1, Valve Specification VBA11	ea	4	4	7.3	793.97	29.4
910	344A.32	Ball Valve NPS 1, Valve Specification VBA14	ea	2	2	7.3	793.97	14.7
911	344A.33	Check Valve NPS 1, Valve Specification VCH14	ea	2	2	14.7	1,587.93	29.4
912	344A.34	Pipe identification NPS 1	Linear meter	163	163	0.0	-	0.0
913	344A.35	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	178	178	2.3	244.14	402.8
914	344A.36	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	14	14	8.5	921.57	119.3
915	344A.37	Union SW/ FNPT Class 3000 NPS 2, Piping Specification SB11	ea	1	1	8.5	921.57	8.5
916	344A.38	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	2	2	11.1	1,205.13	22.3
917	344A.39	Tee Reducing SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1
918	344A.40	Tee Reducing SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	5	5	11.1	1,205.13	55.7
919	344A.41	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	4.6	496.23	4.6
920	344A.42	Excentric Reducer SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	4	4	18.3	1,977.83	73.1
921	344A.43	Slip-on Flange SW 150RF NPS 2 c/w hardware, Piping Specification SB11	ea	6	6	8.8	952.29	52.8
922	344A.44	Weld Neck Flange 150RF Sch.10S NPS 2 c/w hardware, Piping Specification SB11	ea	4	4	8.8	952.29	35.2
923	344A.45	Victaulic coupling NPS 2, Style 77	ea	8	8	0.3	37.22	2.8
924	344A.46	Victaulic Expansion joint NPS 2, Style 155	ea	4	4	3.1	340.27	12.6
925	344A.47	Weld NPS 2, Piping Specification SB11	ea	73	73	0.0	-	0.0
926	344A.48	Ball Valve NPS 2, Valve Specification VBA11	ea	3	3	14.7	1,587.93	44.0
927	344A.49	Pipe identification NPS 2	Linear meter	178	178	0.0	-	0.0
B&M-0284	Added	1/2" weld adapter, 304SS, Vic-Press - 561	ea	0	1	4.3	460.78	4.3
B&M-0285	Added	1.5" male adapter, 304SS, Vic-Press - 596	ea	0	1	8.2	886.12	8.2
B&M-0286	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea	0	2	4.3	460.78	8.5
B&M-0287	Added	2" coupling, 304SS, Vic-Press - 597	ea	0	21	8.5	921.57	178.9
B&M-0288	Added	1" coupling, 304SS, Vic-Press - 597	ea	0	12	5.9	638.01	70.8
B&M-0289	Added	1"x2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea	0	1	11.1	1,205.13	11.1
B&M-0290	Added	1" flange adapter, 304SS, Vic-Press - 595	ea	0	4	7.2	783.33	29.0
B&M-0291	Added	3/4" tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L	Linear meter	0	13	0.7	71.15	8.4
B&M-0292	Added	3/4" 90 elbow, Swagelok to ASTM A182 Grade 316 - COMP	ea	0	5	1.5	162.69	7.5
B&M-0293	Added	3/4" tee, Swagelok to ASTM A182 Grade 316 - COMP	ea	0	2	2.2	235.00	4.3
B&M-0294	Added	3/4" union, Swagelok to ASTM A182 Grade 316 - COMP	ea	0	4	1.5	162.69	6.0
B&M-0295	Added	3/4" male adapter, Swagelok to ASTM A182 Grade 316 - COMPxTHD	ea	0	5	1.5	162.69	7.5
B&M-0296	Added	3/4" Flexible Connector Penflex 800 SS MNPT	ea	0	1	5.5	595.47	5.5
B&M-0297	Added	2" flexible coupling, SS ASTM A-890 GROOVED - VICTAULIC 77DX	ea	0	6	0.3	37.22	2.1
		WTS (Shaft Seal Water)						0.0
928	344B.01	Sand filter 344B-FR-6000 to 6003	ea	4	4	209.7	22,684.74	839.0
929	344B.02	Y-strainer 344B-STR-6000 / 6001	ea	2	2	8.7	945.20	17.5
930	344B.03	Lubrication water pump 344B-P-5000 / 5001	ea	2	2	139.8	15,123.16	279.7
931	344B.04	Sight flow indicator 344B-FG-6000	ea	1	1	17.5	1,890.40	17.5
932	344B.05	Air vent 344B-AV-5000 / 6000 TO 6004	ea	6	6	8.7	945.20	52.4
933	344B.06	Pressure indicator 344B-PI-6000 to 6006 / 5000 to 5006 / 5010 to 5013	ea	18	18	8.7	945.20	157.3
934	344B.07	Pressure transmitter 344B-PT-5000 / 5001	ea	2	2	8.7	945.20	17.5
935	344B.08	Differential pressure switch 344B-PDSH-6000 to 6004	ea	5	5	8.7	945.20	43.7
936	344B.09	Differential pressure indicator 344B-PDI-6000	ea	1	1	8.7	945.20	8.7
937	344B.10	Flow switch 344B-FSL-5000 to 5005	ea	6	6	8.7	945.20	52.4
938	344B.11	Variable frequency drive 344B-VFD-5000 / 5001	ea	2	2	52.4	5,671.19	104.9
939	344B.12	Control Panel 344B-CP-5000 to 5002	ea	3	3	104.9	11,342.37	314.6
940	344B.13	Tube NPS 1/2 thickness 1.65, Piping Specification SB13	m	12	12	0.7	71.15	7.9
941	344B.14	Elbow 90 degrees Swagelok NPS 1/2, Piping Specification SB13	ea	18	18	1.1	119.31	19.9
942	344B.15	Needle valve NPS 1/2, Valve Specification VNE02	ea	6	6	1.1	119.31	6.6
943	344B.16	Pipe insulation NPS 1/2	Linear meter	4	4	1.4	142.39	5.6
944	344B.17	Pipe identification NPS 1/2	Linear meter	4	4	0.0	-	0.0
945	344B.18	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	1	1	1.1	116.26	1.1
946	344B.19	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	2	5.6	602.56	11.1
947	344B.20	Weld NPS 3/4 Piping Specification SB11	ea	8	8	0.0	-	0.0
948	344B.21	Ball Valve NPS 3/4, Valve Specification VBA11	ea	2	2	5.5	595.47	11.0
949	344B.22	Pipe insulation NPS 3/4	Linear meter	4	4	1.4	142.37	5.6
950	344B.23	Pipe identification NPS 3/4	Linear meter	4	4	0.0	-	0.0
951	344B.24	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	2	2	1.4	151.14	2.8

Black & McDonald Limited (continued)

No	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
B&M-0256	116.97	2,222.40	14,815.97	987.80	18,768.21	113.73	2,160.81	1,998.28	37,967.39
B&M-0257	142.84	571.37	3,809.15	492.03	1,968.12	138.88	555.54	1,726.04	6,904.18
B&M-0258	396.63	396.63	2,644.19	154.44	154.44	385.64	385.64	3,580.89	3,580.89
B&M-0259	10.67	260.31	1,735.38	22.58	550.83	10.38	253.09	114.78	2,799.62
B&M-0260	17.90	107.38	715.85	48.36	290.13	17.40	104.40	202.96	1,217.76
B&M-0261	25.49	305.86	2,039.07	66.38	796.61	24.78	297.39	286.58	3,438.94
B&M-0262	17.90	214.75	1,431.69	34.48	413.76	17.40	208.80	189.08	2,269.01
B&M-0263	17.90	214.75	1,431.69	23.51	282.07	17.40	208.80	178.11	2,137.32
B&M-0264	17.44	212.67	1,417.80	11.29	137.70	16.96	206.78	161.95	1,974.94
B&M-0265	20.20	161.63	1,077.53	9.52	76.15	19.64	157.15	184.06	1,472.48
B&M-0266	20.20	80.81	538.76	13.25	53.02	19.64	78.57	187.79	751.17
B&M-0267	60.08	120.16	801.06	128.78	257.55	58.41	116.83	647.80	1,295.59
B&M-0268	70.71	70.71	471.42	383.87	383.87	68.75	68.75	994.75	994.75
B&M-0269	27.91	167.48	1,116.51	221.93	1,331.60	27.14	162.84	463.07	2,778.43
B&M-0270	5.58	33.50	223.30	299.61	1,797.68	5.43	32.57	347.84	2,087.05
B&M-0271	51.04	612.49	4,083.25	187.39	2,248.64	49.63	595.52	628.32	7,539.90
B&M-0272	48.38	96.76	545.10	121.70	243.40	47.04	94.08	539.67	1,079.34
B&M-0273	210.54	421.09	2,807.24	467.03	934.05	204.71	409.42	2,285.90	4,571.79
B&M-0274	260.52	781.56	5,210.40	1,065.14	3,195.42	253.30	759.90	3,315.76	9,947.28
B&M-0275	47.85	143.55	957.01	149.63	448.89	46.52	139.57	563.01	1,689.03
B&M-0276	238.19	952.76	6,351.73	406.63	1,626.51	231.59	926.36	2,464.34	9,857.35
B&M-0277	17.90	107.38	715.85	293.55	1,761.29	17.40	104.40	448.15	2,688.92
B&M-0278	238.19	1,905.52	12,703.46	2,061.65	16,493.18	231.59	1,852.71	4,119.36	32,954.87
B&M-0279	148.34	741.68	4,944.57	339.24	1,696.21	144.23	721.13	1,620.72	8,103.59
B&M-0280	119.09	238.19	1,587.93	257.18	514.36	115.79	231.59	1,286.03	2,572.07
B&M-0281	87.73	614.08	4,093.89	30.73	215.11	85.30	597.07	788.59	5,520.15
B&M-0282	87.73	701.81	4,678.73	30.73	245.84	85.30	682.36	788.59	6,308.74
B&M-0283	110,456.51	110,456.51	736,376.71	176,040.61	176,040.61	0.00	0.00	1,022,873.83	1,022,873.83
ABR (Brake Air)	$0.00				$0.00		$0.00		
879	1,134.24	1,134.24	7,561.58	40,796.33	40,796.33	1,102.81	1,102.81	50,594.95	50,594.95
880	141.78	708.90	4,725.99	306.16	1,530.82	137.85	689.25	1,530.99	7,654.96
881	141.78	141.78	945.20	338.11	338.11	137.85	137.85	1,562.94	1,562.94
882	141.78	141.78	945.20	338.11	338.11	137.85	137.85	1,562.94	1,562.94
883	141.78	283.56	1,890.40	626.56	1,253.13	137.85	275.70	1,851.39	3,702.78
884	141.78	283.56	1,890.40	626.56	1,253.13	137.85	275.70	1,851.39	3,702.78
885	141.78	425.34	2,835.59	700.54	2,101.61	137.85	413.55	1,925.36	5,776.09
886	141.78	283.56	1,890.40	110.11	220.23	137.85	275.70	1,334.94	2,669.88
887	1,134.24	1,134.24	7,561.58	3,573.72	3,573.72	1,102.81	1,102.81	13,372.34	13,372.34
888	141.78	141.78	945.20	1,203.46	1,203.46	137.85	137.85	2,428.29	2,428.29
889	141.78	141.78	945.20	626.56	626.56	137.85	137.85	1,851.39	1,851.39
890	17.90	35.79	238.62	293.55	587.10	17.40	34.80	448.15	896.31
891	15.70	2,354.25	15,695.01	23.57	3,535.62	15.26	2,289.01	159.16	23,873.89
892	60.08	120.16	801.06	107.23	214.46	58.41	116.83	626.25	1,252.50
893	17.44	226.71	1,511.37	22.99	298.93	16.96	220.42	173.65	2,257.43
894	17.44	2,615.83	17,438.90	27.68	4,151.63	16.96	2,543.35	178.33	26,749.71
895	90.38	813.46	5,423.07	117.55	1,057.92	87.88	790.92	898.37	8,085.37
896	90.38	180.77	1,205.13	94.50	189.01	87.88	175.76	875.33	1,750.66
897	90.38	90.38	602.56	482.63	482.63	87.88	87.88	1,263.46	1,263.46
898	116.97	233.94	1,559.58	187.61	375.21	113.73	227.45	1,198.09	2,396.18
899	138.24	138.24	921.57	448.22	448.22	134.40	134.40	1,642.43	1,642.43
900	296.67	296.67	1,977.83	117.04	117.04	288.45	288.45	2,679.99	2,679.99
901	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
902	47.85	95.70	638.01	149.63	299.26	46.52	93.05	563.01	1,126.02
903	89.32	89.32	595.47	136.15	136.15	86.85	86.85	907.79	907.79
904	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
905	22.67	3,695.30	24,635.35	36.44	5,939.05	22.04	3,592.90	232.29	37,862.61
906	95.70	3,828.05	25,520.34	125.39	5,015.74	93.05	3,721.97	952.15	38,086.10
907	95.70	382.81	2,552.03	580.55	2,322.21	93.05	372.20	1,407.31	5,629.25
908	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
909	119.09	476.38	3,175.86	202.60	810.38	115.79	463.18	1,231.45	4,925.80
910	119.09	238.19	1,587.93	329.00	658.00	115.79	231.59	1,357.85	2,715.71
911	238.19	476.38	3,175.86	1,669.22	3,338.45	231.59	463.18	3,726.93	7,453.87
912	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
913	36.62	6,534.04	43,560.27	56.82	10,138.44	35.61	6,352.97	373.20	66,585.72
914	138.24	1,935.29	12,901.95	171.71	2,404.00	134.40	1,881.66	1,365.92	19,122.90
915	138.24	138.24	921.57	1,191.56	1,191.56	134.40	134.40	2,385.77	2,385.77
916	180.77	361.54	2,410.25	268.91	537.82	175.76	351.52	1,830.56	3,661.13
917	180.77	180.77	1,205.13	238.38	238.38	175.76	175.76	1,800.04	1,800.04
918	180.77	903.85	6,025.64	266.81	1,334.06	175.76	878.80	1,828.47	9,142.34
919	74.43	74.43	496.23	176.90	176.90	72.37	72.37	819.93	819.93
920	296.67	1,186.70	7,911.30	117.04	468.14	288.45	1,153.81	2,679.99	10,719.95
921	142.84	857.06	5,713.72	492.03	2,952.18	138.88	833.31	1,726.04	10,356.26
922	142.84	571.37	3,809.15	492.03	1,968.12	138.88	555.54	1,726.04	6,904.18
923	5.58	44.66	297.74	39.43	315.47	5.43	43.42	87.66	701.29
924	51.04	204.16	1,361.08	2,258.36	9,033.46	49.63	198.51	2,699.30	10,797.21
925	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
926	238.19	714.57	4,763.80	406.63	1,219.88	231.59	694.77	2,464.34	7,393.01
927	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0284	69.12	69.12	460.78	110.99	110.99	67.20	67.20	708.10	708.10
B&M-0285	132.92	132.92	886.12	176.73	176.73	129.24	129.24	1,325.01	1,325.01
B&M-0286	69.12	138.24	921.57	133.14	266.28	67.20	134.40	730.24	1,460.48
B&M-0287	138.24	2,902.94	19,352.92	119.05	2,499.97	134.40	2,822.49	1,313.25	27,578.33
B&M-0288	95.70	1,148.42	7,656.10	86.19	1,034.30	93.05	1,116.59	912.95	10,955.41
B&M-0289	180.77	180.77	1,205.13	333.84	333.84	175.76	175.76	1,895.50	1,895.50
B&M-0290	117.50	470.00	3,133.33	352.68	1,410.72	114.24	456.98	1,367.76	5,471.02
B&M-0291	10.67	136.66	911.08	39.07	500.34	10.38	132.87	131.27	1,680.95
B&M-0292	24.40	122.02	813.46	82.38	411.90	23.73	118.64	293.20	1,466.02
B&M-0293	35.25	70.50	470.00	100.33	200.65	34.27	68.55	404.85	809.70
B&M-0294	24.40	97.62	650.77	80.37	321.47	23.73	94.91	291.19	1,164.77
B&M-0295	24.40	122.02	813.46	25.79	128.93	23.73	118.64	236.61	1,183.04
B&M-0296	89.32	89.32	595.47	199.35	199.35	86.85	86.85	970.99	970.99
B&M-0297	5.58	33.50	223.30	457.39	2,744.34	5.43	32.57	505.62	3,033.71
WTS (Shaft Seal Water)	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
928	3,402.71	13,610.85	90,738.98	141,446.16	565,784.63	3,308.42	13,233.67	170,842.03	683,368.12
929	141.78	283.56	1,890.40	23,425.36	46,850.73	137.85	275.70	24,650.19	49,300.39
930	2,268.47	4,536.95	30,246.33	7,370.16	14,740.32	2,205.61	4,411.22	26,967.41	53,934.81
931	283.56	283.56	1,890.40	18,799.89	18,799.89	275.70	275.70	21,249.55	21,249.55
932	141.78	850.68	5,671.19	1,608.04	9,648.27	137.85	827.10	2,832.87	16,997.24
933	141.78	2,552.03	17,013.56	569.12	10,244.25	137.85	2,481.31	1,793.95	32,291.15
934	141.78	283.56	1,890.40	3,620.64	7,241.27	137.85	275.70	4,845.46	9,690.93
935	141.78	708.90	4,725.99	3,789.78	18,948.88	137.85	689.25	5,014.60	25,073.02
936	141.78	141.78	945.20	18,750.22	18,750.22	137.85	137.85	19,975.05	19,975.05
937	141.78	850.68	5,671.19	810.61	4,863.69	137.85	827.10	2,035.44	12,212.66
938	850.68	1,701.36	11,342.37	297.99	595.98	827.10	1,654.21	7,646.96	15,293.92
939	1,701.36	5,104.07	34,027.12	84,748.50	254,245.50	1,654.21	4,962.63	99,446.44	298,339.31
940	10.67	128.07	853.81	22.58	271.01	10.38	124.52	114.78	1,377.41
941	17.90	322.13	2,147.54	48.36	870.40	17.40	313.20	202.96	3,653.27
942	17.90	107.38	715.85	228.91	1,373.47	17.40	104.40	383.51	2,301.09
943	21.36	85.44	569.57	38.46	153.85	8.55	34.20	210.77	843.07
944	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
945	17.44	17.44	116.26	22.99	22.99	16.96	16.96	173.65	173.65
946	90.38	180.77	1,205.13	117.55	235.09	87.88	175.76	898.37	1,796.75
947	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
948	89.32	178.64	1,190.95	136.15	272.29	86.85	173.69	907.79	1,815.58
949	21.36	85.42	569.48	43.11	172.46	8.55	34.20	215.39	861.57
950	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
951	22.67	45.34	302.27	39.80	79.60	22.04	44.08	235.65	471.30

Cahill-Ganotec Joint Venture – FIXED PRICE TARGET COST OF LABOUR (LABOUR COMPONENT 0.13; NON LABOUR COMPONENT)

No	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
B&M-0256	19.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0257	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0258	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0259	24.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0260	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0261	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0262	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0263	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0264	12.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0265	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0266	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0267	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0268	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0269	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0270	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0271	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0272	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0273	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0274	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0275	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0276	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0277	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0278	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0279	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0280	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0281	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0282	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0283	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ABR (Brake Air)				0.0	$0.00				$0.00		$0.00	$0.00	
879	1.0	102.2	9,238.57	102.2	1,201.01	1,201.01	9,238.57	176.44	176.44	2,206.72	2,206.72	12,822.75	12,822.75
880	5.0	4.8	433.23	24.0	56.32	281.60	2,166.15	136.18	680.88	129.23	646.16	754.96	3,774.79
881	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
882	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
883	2.0	3.7	329.95	7.3	42.89	85.79	659.89	30.35	60.70	83.65	167.30	486.84	973.68
884	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	30.35	60.70	161.20	322.39	937.24	1,874.47
885	3.0	3.7	329.95	11.0	42.89	128.68	989.85	280.60	841.81	134.03	402.10	787.48	2,362.44
886	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	1,886.41	3,772.83	534.87	1,069.73	3,166.97	6,333.94
887	1.0	28.3	2,557.10	28.3	332.42	332.42	2,557.10	36.57	36.57	608.32	608.32	3,534.41	3,534.41
888	1.0	7.3	659.90	7.3	85.79	85.79	659.90	59.53	59.53	167.07	167.07	972.30	972.30
889	1.0	6.4	575.32	6.4	74.79	74.79	575.32	58.66	58.66	147.01	147.01	855.78	855.78
890	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	59.53	119.07	167.07	334.15	972.30	1,944.59
891	150.0	1.6	148.34	246.0	19.28	2,892.63	22,251.00	177.36	26,604.74	70.58	10,586.56	415.57	62,334.94
892	2.0	3.1	280.05	6.2	36.41	72.81	560.10	100.39	200.78	86.02	172.04	502.87	1,005.74
893	13.0	2.2	197.78	28.4	25.71	334.25	2,571.18	39.36	511.66	54.41	707.27	317.26	4,124.37
894	150.0	0.6	49.91	82.5	6.49	973.25	7,486.50	4.23	633.86	12.57	1,885.83	73.20	10,979.44
895	9.0	0.6	53.14	5.3	6.91	62.18	478.28	5.37	48.30	13.57	122.13	78.99	710.89
896	2.0	0.4	33.27	0.7	4.33	8.65	66.54	8.74	17.49	9.58	19.17	55.92	111.84
897	1.0	0.6	53.14	0.6	6.91	6.91	53.14	11.90	11.90	14.88	14.88	86.83	86.83
898	2.0	1.2	107.21	2.4	13.94	27.87	214.42	7.11	14.21	26.62	53.25	154.88	309.76
899	1.0	0.7	66.54	0.7	8.65	8.65	66.54	21.57	21.57	19.98	19.98	116.75	116.75
900	1.0	0.7	66.54	0.7	8.65	8.65	66.54	9.64	9.64	17.58	17.58	102.41	102.41
901	34.0	0.4	33.37	12.5	4.34	147.49	1,134.54	120.56	4,099.16	31.98	1,087.47	190.25	6,468.66
902	2.0	3.7	329.95	7.3	42.89	85.79	659.90	310.28	620.56	140.01	280.02	823.13	1,646.26
903	1.0	3.2	286.05	3.2	37.19	37.19	286.05	100.38	100.38	87.43	87.43	511.05	511.05
904	13.0	0.2	16.41	2.3	2.13	27.74	213.36	4.02	52.24	4.66	60.62	27.23	353.95
905	163.0	1.9	171.63	309.4	22.31	3,636.80	27,975.36	15.19	2,476.25	43.39	7,073.31	252.53	41,161.72
906	40.0	0.6	54.03	23.9	7.02	280.97	2,161.31	8.11	324.51	14.33	573.28	83.50	3,340.07
907	4.0	0.6	53.83	2.4	7.00	27.99	215.30	13.43	53.71	15.35	61.41	89.61	358.42
908	111.3	0.8	75.35	92.8	9.80	1,090.09	8,385.31	107.94	12,012.12	39.17	4,359.54	232.26	25,847.06
909	4.0	3.2	288.71	12.8	37.53	150.13	1,154.83	127.76	511.05	93.57	374.28	547.57	2,190.29
910	2.0	3.2	288.71	6.4	37.53	75.06	577.42	91.26	182.52	86.22	172.44	503.72	1,007.44
911	2.0	3.7	329.95	7.3	42.89	85.79	659.90	912.59	1,825.18	261.26	522.52	1,546.69	3,093.39
912	163.0	0.2	16.41	28.9	2.13	347.77	2,675.16	4.02	654.96	4.66	760.06	27.23	4,437.95
913	178.4	3.2	291.06	574.4	37.84	6,751.07	51,931.32	23.85	4,255.83	73.21	13,061.42	425.96	75,999.63
914	14.0	0.6	53.94	8.3	7.01	98.17	755.17	34.85	487.89	19.69	275.72	115.50	1,616.95
915	1.0	0.6	53.72	0.6	6.98	6.98	53.72	25.26	25.26	17.71	17.71	103.67	103.67
916	2.0	1.2	107.44	2.4	13.97	27.93	214.88	44.57	89.14	34.22	68.44	200.20	400.39
917	1.0	1.3	115.07	1.3	14.96	14.96	115.07	95.67	95.67	46.31	46.31	272.01	272.01
918	5.0	1.2	108.97	6.0	14.17	70.83	544.84	95.68	478.39	44.87	224.35	263.68	1,318.41
919	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.62	10.62	13.87	13.87	80.89	80.89
920	4.0	0.7	66.54	3.0	8.65	34.60	266.16	9.64	38.57	17.58	70.32	102.41	409.65
921	6.0	3.0	272.18	18.1	35.38	212.30	1,633.11	5.11	30.67	65.00	389.98	377.68	2,266.05
922	4.0	0.7	66.54	3.0	8.65	34.60	266.16	31.05	124.20	21.90	87.60	128.14	512.56
923	8.0	0.6	53.76	4.8	6.99	55.91	430.07	397.41	3,179.30	92.64	741.15	550.80	4,406.43
924	4.0	0.6	53.72	2.4	6.98	27.93	214.88	2,508.49	10,033.97	517.65	2,070.58	3,086.84	12,347.37
925	73.0	1.5	135.13	109.1	17.57	1,282.40	9,864.58	139.46	10,180.81	59.55	4,347.38	351.71	25,675.16
926	3.0	3.4	308.76	10.2	40.14	120.42	926.28	132.98	398.93	99.34	298.01	581.21	1,743.63
927	178.0	0.6	50.42	99.3	6.55	1,166.62	8,973.97	12.06	2,147.39	14.28	2,541.32	83.31	14,829.30
B&M-0284	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0285	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0286	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0287	21.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0288	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0289	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0290	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0291	12.8	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0292	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0293	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0294	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0295	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0296	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0297	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WTS (Shaft Seal Water)				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
928	4.0	122.5	11,074.09	490.0	1,439.63	5,758.52	44,296.34	220,142.26	880,569.04	46,922.89	187,691.55	279,578.86	1,118,315.45
929	2.0	4.7	429.07	9.5	55.78	111.56	858.14	0.00	0.00	100.84	201.68	585.69	1,171.38
930	2.0	91.3	8,257.05	182.7	1,073.42	2,146.83	16,514.09	5,920.52	11,841.04	3,132.49	6,264.97	18,383.47	36,766.94
931	1.0	9.4	851.21	9.4	110.66	110.66	851.21	245.14	245.14	249.39	249.39	1,456.40	1,456.40
932	6.0	7.3	659.90	43.8	85.79	514.72	3,959.39	30.35	182.10	161.20	967.17	937.23	5,623.39
933	18.0	3.6	329.95	65.7	42.89	772.08	5,939.07	542.81	9,770.60	186.82	3,362.84	1,102.48	19,844.58
934	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	7,963.56	15,927.12	1,758.36	3,516.71	10,467.61	20,935.21
935	5.0	7.3	659.90	36.5	85.79	428.93	3,299.48	1,263.06	6,315.28	409.37	2,046.86	2,418.11	12,090.56
936	1.0	14.6	1,319.80	14.6	171.57	171.57	1,319.80	2,967.37	2,967.37	907.59	907.59	5,366.33	5,366.33
937	6.0	3.7	329.95	21.9	42.89	257.36	1,979.70	623.36	3,740.14	203.04	1,218.24	1,199.24	7,195.45
938	2.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
939	3.0	18.6	1,678.86	55.7	218.25	654.75	5,036.57	24,784.70	74,354.09	5,384.35	16,153.06	32,066.16	96,198.48
940	12.0	253.3	22,898.19	3,039.4	2,976.76	35,721.18	274,778.28	889.58	10,674.96	5,560.51	66,726.11	32,325.04	387,900.52
941	18.0	0.7	66.54	13.3	8.65	155.70	1,197.72	39.49	710.84	23.58	424.44	138.26	2,488.70
942	6.0	3.2	288.82	19.2	37.55	225.28	1,732.92	279.59	1,677.54	124.17	744.99	730.12	4,380.74
943	4.0	3.3	300.90	13.3	39.12	156.47	1,203.62	165.87	663.48	86.70	346.82	592.60	2,370.39
944	4.0	0.6	50.68	2.2	6.59	26.36	202.74	12.06	48.26	14.34	57.36	83.68	334.71
945	1.0	0.6	49.91	0.6	6.49	6.49	49.91	3.74	3.74	12.48	12.48	72.61	72.61
946	2.0	0.6	53.88	1.2	7.00	14.01	107.76	6.20	12.40	13.91	27.82	81.00	161.99
947	8.0	1.4	123.78	11.0	16.09	128.73	990.24	145.86	1,166.84	58.45	467.63	344.18	2,753.45
948	2.0	3.2	288.82	6.4	37.55	75.09	577.64	88.22	176.43	85.64	171.27	500.22	1,000.44
949	4.0	3.3	302.30	13.4	39.30	157.19	1,209.19	171.37	685.49	88.07	352.30	601.04	2,404.17
950	4.0	0.2	16.41	0.7	2.13	8.53	65.65	4.02	16.07	4.66	18.65	27.23	108.91
951	2.0	0.6	55.45	1.2	7.21	14.42	110.91	0.43	0.87	13.12	26.24	76.22	152.43

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT							NON LABOUR COMPONENT				
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
952	3448.25	Weld NPS 1 Piping Specification SB11	ea	4	4	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.3	26.28	1.2	3.42	13.66	105.11	256.46	1,025.84	57.81	231.23	343.96	1,375.85
953	3448.26	Ball Valve NPS 1, Valve Specification VBA11	ea	2	2	7.3	793.97	14.7	119.09	238.19	1,587.93	202.60	405.19	115.79	231.59	1,231.45	2,462.90	2.0	3.2	289.06	6.4	37.58	75.15	578.11	127.76	255.53	93.66	187.31	548.05	1,096.10
954	3448.27	Pipe insulation NPS 1	Linear meter	2	2	1.4	145.13	2.9	21.77	43.54	290.27	41.31	82.63	8.55	17.10	216.77	433.53	2.0	3.5	312.76	6.9	40.66	81.32	625.52	192.06	384.12	94.07	188.15	639.55	1,279.10
955	3448.28	Pipe identification NPS 1	Linear meter	2	2	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.6	50.63	1.1	6.58	13.16	101.27	12.06	24.13	14.33	28.65	83.60	167.21
956	3448.29	Pipe NPS 1 Sch.40, Piping Specification PA02	m	12	12	1.1	116.26	12.9	17.44	209.27	1,395.11	11.29	135.50	16.96	203.47	161.95	1,943.34	12.0	3.3	293.90	39.0	38.21	458.49	3,526.84	5.07	60.87	70.09	841.12	407.28	4,887.32
957	3448.30	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification PA02	ea	4	4	1.2	134.69	5.0	20.20	80.81	538.76	9.52	38.08	19.64	78.57	184.06	736.23	4.0	0.3	30.27	1.3	3.93	15.74	121.07	2.86	11.42	7.69	30.76	44.75	178.99
958	3448.31	Elbow 45 degrees SW Class 3000 NPS 1, Piping Specification PA02	ea	2	2	1.2	134.69	2.5	20.20	40.41	269.38	9.52	19.04	19.64	39.29	184.06	368.11	2.0	0.2	16.64	0.4	2.16	4.33	33.28	2.53	5.07	4.42	8.85	25.76	51.52
959	3448.32	Pipe identification NPS 1	Linear meter	12	12	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	140.08	2.35	28.16	14.02	168.24
960	3448.33	Flange Welding Neck 150RF Sch.10S NPS 1-1/4 c/w hardware, Piping Specification SB11	m	4	4	7.4	798.69	29.5	119.80	479.22	3,194.77	449.25	1,796.98	116.48	465.94	1,484.23	5,936.90	4.0	10.4	940.29	41.6	122.24	488.95	3,761.14	17.08	68.32	224.42	897.68	1,304.02	5,216.09
961	3448.34	Eccentric reducer SW Class 3000 NPS 2 x 1-1/4, Piping Specification SB11	m	4	4	18.3	1,977.83	73.1	296.67	1,186.70	7,911.30	117.04	468.14	288.45	1,153.81	2,679.99	10,719.95	4.0	0.7	62.04	2.7	8.06	32.26	248.15	7.99	31.95	16.19	64.75	94.28	377.11
962	3448.35	Weld NPS 1-1/4 Piping Specification SB11	ea	12	12	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.0	0.0	0.00	0.0	0.00	0.00	0.00	257.01	3,084.08	51.74	620.91	308.75	3,704.98
963	3448.36	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	106	106	1.8	197.64	193.7	29.65	3,142.49	20,949.93	44.88	4,757.46	28.82	3,055.41	300.99	31,905.29	106.0	3.3	298.06	349.4	38.75	4,107.31	31,594.71	16.50	1,748.99	73.37	7,777.40	426.68	45,228.42
964	3448.37	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	30	30	8.2	886.12	245.8	132.92	3,987.55	26,583.68	155.49	4,664.64	129.24	3,877.05	1,303.76	39,112.92	30.0	0.6	54.99	18.2	7.15	214.47	1,649.80	19.98	599.31	16.95	508.37	99.07	2,971.96
965	3448.38	Reducing tee SW Class 3000 NPS 1-1/2 x 1-1/2 x 1/2, Piping Specification SB11	ea	6	6	11.1	1,205.13	66.9	180.77	1,084.61	7,230.76	196.49	1,178.93	175.76	1,054.56	1,758.14	10,548.87	6.0	1.2	108.13	7.2	14.06	84.34	648.81	63.08	378.45	38.11	228.67	223.38	1,340.27
966	3448.39	Flange Slip-On 150RF NPS 1-1/2 c/w hardware, Piping Specification SB11	m	8	8	8.0	860.13	63.6	129.02	1,032.16	6,881.04	452.47	3,619.79	125.44	1,003.55	1,567.07	12,536.54	8.0	3.2	287.04	25.4	37.32	298.52	2,296.34	1.97	15.72	67.85	542.84	394.18	3,153.42
967	3448.40	Cap SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	1	1	4.6	496.23	4.6	74.43	74.43	496.23	176.90	176.90	72.37	72.37	819.93	819.93	1.0	0.6	57.54	0.6	7.48	7.48	57.54	8.20	8.20	15.18	15.18	88.39	88.39
968	3448.41	Weld NPS 1-1/2 Piping Specification SB11	ea	110	110	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	110.1	0.5	40.78	49.7	5.30	583.84	4,491.08	250.14	27,550.73	59.81	6,587.62	356.02	39,213.26
969	3448.42	Victaulic coupling NPS 1-1/2, Style 07	ea	8	8	0.3	37.22	2.8	5.58	44.66	297.74	47.12	376.95	5.43	43.42	95.35	762.77	8.0	0.6	49.91	4.4	6.49	51.91	399.28	34.54	276.33	18.69	149.51	109.63	877.03
970	3448.43	Victaulic elbow 90 degrees NPS 1-1/2, Style 410SS	ea	1	1	3.0	322.55	3.0	48.38	48.38	322.55	133.26	133.26	47.04	47.04	551.23	551.23	1.0	0.6	54.99	0.6	7.15	7.15	54.99	103.11	103.11	33.68	33.68	198.93	198.93
971	3448.44	Victaulic tee degrees NPS 1-1/2, Style 420SS	ea	2	2	4.7	506.86	9.4	76.03	152.06	1,013.72	307.84	615.69	73.92	147.84	964.66	1,929.32	2.0	0.9	83.18	1.8	10.81	21.63	166.36	260.14	520.28	71.92	143.84	426.05	852.11
972	3448.45	Ball Valve NPS 1-1/2, Valve Specification VBA11	ea	4	4	11.0	1,187.40	43.9	178.11	712.44	4,749.62	295.09	1,180.35	173.18	692.70	1,833.78	7,335.11	4.0	3.7	329.95	14.6	42.89	171.57	1,319.80	209.89	839.55	119.79	479.17	702.52	2,810.09
973	3448.46	Pipe insulation NPS 1-1/2	Linear meter	106	106	1.5	147.35	154.3	22.10	2,342.88	15,619.18	42.77	4,533.92	8.55	906.30	220.78	23,402.27	106.0	3.4	309.57	363.0	40.24	4,265.91	32,814.56	206.93	21,934.88	96.51	10,230.07	653.26	69,245.52
974	3448.47	Pipe identification NPS 1-1/2	Linear meter	106	106	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	106.0	0.6	50.17	58.7	6.52	691.39	5,318.42	12.06	1,278.70	14.22	1,507.37	82.98	8,795.89
975	3448.48	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	230	230	2.3	244.14	519.2	36.62	8,422.99	56,153.25	56.82	13,069.39	35.61	8,189.58	373.20	85,835.20	230.0	3.2	287.21	730.7	37.34	8,587.65	66,058.84	19.41	4,464.16	71.41	16,423.55	415.37	95,534.20
976	3448.49	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	10	10	8.5	921.57	85.2	138.24	1,382.35	9,215.68	171.71	1,717.14	134.40	1,344.04	1,365.92	13,659.22	10.0	0.6	54.12	6.0	7.04	70.36	541.23	20.22	202.18	16.79	167.90	98.17	981.66
977	3448.50	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	172.91	691.65	134.40	537.62	1,367.12	5,468.47	4.0	0.3	27.50	1.2	3.57	14.30	109.99	26.97	107.89	11.89	47.57	69.93	279.74
978	3448.51	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	268.91	1,075.63	175.76	703.04	1,830.56	7,322.25	4.0	1.3	115.07	5.1	14.96	59.84	460.28	44.57	178.28	36.01	144.05	210.61	842.44
979	3448.52	Reducing tee SW Class 3000 NPS 2 x 2 x 1-1/2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	283.87	1,135.48	175.76	703.04	1,845.53	7,382.10	4.0	1.1	99.02	4.4	12.87	51.49	396.09	700.69	2,802.75	164.34	657.35	976.92	3,907.68
980	3448.53	Reducing tee SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1	180.77	180.77	1,205.13	266.81	266.81	175.76	175.76	1,828.47	1,828.47	1.0	1.3	115.07	1.3	14.96	14.96	115.07	95.67	95.67	46.31	46.31	272.01	272.01
981	3448.54	Reducing tee SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	2	2	11.1	1,205.13	22.3	180.77	361.54	2,410.25	238.38	476.77	175.76	351.52	1,800.04	3,600.08	2.0	1.2	107.44	2.4	13.97	27.93	214.88	95.67	191.35	44.51	89.02	261.59	523.19
982	3448.55	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	3	3	4.6	496.23	13.8	74.43	223.30	1,488.69	176.90	530.69	72.37	217.11	819.93	2,459.79	3.0	0.6	54.99	1.8	7.15	21.45	164.98	15.15	45.46	15.97	47.92	93.27	279.80
983	3448.56	Weld NPS 2 Piping Specification SB11	ea	109	109	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	108.9	2.2	199.46	240.2	25.93	2,822.61	21,712.38	150.96	16,433.16	76.96	8,378.09	453.31	49,346.24
984	3448.57	Victaulic coupling NPS 2, Style 07	ea	2	2	0.3	37.22	0.7	5.58	11.17	74.43	47.12	94.24	5.43	10.86	95.35	190.69	2.0	0.6	53.72	1.2	6.98	13.97	107.44	41.95	83.90	21.07	42.14	123.73	247.45
985	3448.58	Victaulic coupling NPS 2, Style 77	ea	6	6	0.3	37.22	2.1	5.58	33.50	223.30	39.43	236.60	5.43	32.57	87.66	525.97	6.0	0.6	54.99	3.7	7.15	42.89	329.95	54.71	328.24	23.94	143.63	140.79	844.72
986	3448.59	Victaulic coupling NPS 2, Style 89	ea	2	2	0.3	37.22	0.7	5.58	11.17	74.43	62.81	125.62	5.43	10.86	111.04	222.08	2.0	0.6	54.07	1.2	7.03	14.06	108.13	56.76	113.53	24.13	48.27	141.99	283.99
987	3448.60	Victaulic tee degrees NPS 2, Style 420SS	ea	2	2	4.7	506.86	9.4	76.03	152.06	1,013.72	307.84	615.69	73.92	147.84	964.66	1,929.32	2.0	1.2	107.44	2.4	13.97	27.93	214.88	262.32	524.65	78.07	156.13	461.80	923.59
988	3448.61	Victaulic concentric reducer NPS 2 x 1-1/2, Style 50	ea	2	2	3.1	340.27	6.3	51.04	102.08	680.54	125.85	251.70	49.63	99.25	566.79	1,133.57	2.0	0.6	57.54	1.3	7.48	14.96	115.07	100.72	201.45	33.80	67.60	199.54	399.08
989	3448.62	Victaulic expansion joint JT NPS 2, Style 155	ea	1	1	3.1	340.27	3.1	51.04	51.04	340.27	2,258.36	2,258.36	49.63	49.63	2,699.30	2,699.30	1.0	0.6	49.91	0.6	6.49	6.49	49.91	2,497.36	2,497.36	514.50	514.50	3,068.26	3,068.26
990	3448.63	Ball Valve NPS2, Valve Specification VBA11	ea	4	4	14.7	1,587.93	58.7	238.19	952.76	6,351.73	406.63	1,626.51	231.59	926.36	2,464.34	9,857.35	4.0	4.8	432.26	19.1	56.19	224.78	1,729.05	310.28	1,241.12	164.05	656.22	962.79	3,851.16
991	3448.64	Check Valve NPS2, Valve Specification VCH12	ea	2	2	14.7	1,587.93	29.4	238.19	476.38	3,175.86	1,669.22	3,338.45	231.59	463.18	3,726.93	7,453.87	2.0	4.7	429.07	9.5	55.78	111.56	858.14	1,249.71	2,499.43	352.44	704.87	2,087.00	4,174.00
992	3448.65	Pipe insulation NPS 2	Linear meter	230	230	1.5	149.21	339.1	22.38	5,147.83	34,318.85	45.01	10,351.66	8.55	1,966.50	225.15	51,784.83	230.0	3.6	324.38	825.2	42.17	9,698.90	74,606.93	211.60	48,667.39	100.07	23,016.04	678.21	155,989.26
993	3448.66	Pipe identification NPS 2	Linear meter	230	230	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	230.0	0.6	50.39	128.2	6.55	1,506.79	11,590.69	12.06	2,774.70	14.27	3,282.61	83.28	19,154.79
994	3448.67	Pipe NPS 2-1/2 Sch.10S, Piping Specification SB11	m	6	6	2.6	279.02	15.5	41.85	251.12	1,674.13	79.30	475.81	40.69	244.16	440.87	2,645.22	6.0	2.5	225.51	15.0	29.32	175.90	1,353.07	3,192.02	19,152.12	695.63	4,173.81	4,142.48	24,854.89
995	3448.68	Elbow 90 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	4	4	18.3	1,977.83	73.1	296.67	1,186.70	7,911.30	116.05	464.20	288.45	1,153.81	2,679.00	10,716.01	4.0	0.5	49.56	2.2	6.44	25.77	198.25	9.60	38.42	13.58	54.33	79.19	316.77
996	3448.69	Tee BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	1	1	27.4	2,963.19	27.4	444.48	444.48	2,963.19	179.55	179.55	432.16	432.16	4,019.39	4,019.39	1.0	1.1	98.44	1.1	12.80	12.80	98.44	17.83	17.83	26.72	26.72	155.78	155.78
997	3448.70	Reducing tee BW Sch.10S NPS 2-1/2 x 2-1/2 x 1, Piping Specification SB11	ea	1	1	27.4	2,963.19	27.4	444.48	444.48	2,963.19	660.44	660.44	432.16	432.16	4,500.27	4,500.27	1.0	1.0	93.35	1.0	12.14	12.14	93.35	25.10	25.10	26.99	26.99	157.58	157.58
998	3448.71	Eccentric reducer BW Sch.10S NPS 2-1/2 x 2, Piping Specification SB11	m	2	2	18.3	1,977.83	36.6	296.67	593.35	3,955.65	117.04	234.07	288.45	576.91	2,679.99	5,359.98	2.0	0.6	49.91	1.1	6.49	12.98	99.82	8.00	15.99	13.35	26.71	77.75	155.50
999	3448.72	Flange Welding Neck 150RF Sch.10S NPS 2-1/2 c/w hardware, Piping Specification SB11	m	3	3	10.9	1,180.32	32.7	177.05	531.14	3,540.95	130.45	391.36	172.14	516.42	1,659.96	4,979.87	3.0	7.8	703.80	23.4	91.49	274.48	2,111.40	42.25	126.76	173.91	521.73	1,011.46	3,034.37
1000	3448.73	Weld NPS 2-1/2 Piping Specification SB11	ea	21	21	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.0	0.5	41.29	9.6	5.37	112.73	867.17	277.53	5,828.09	65.50	1,375.47	389.69	8,183.45
1001	3448.74	Butterfly valve NPS 2-1/2, Valve Specification VBU01	ea	1	1	5.7	616.74	5.7	92.51	92.51	616.74	219.14	219.14	89.95	89.95	1,018.34	1,018.34	1.0	4.2	379.86	4.2	49.38	49.38	379.86	173.40	173.40	124.18	124.18	726.82	726.82
1002	3448.75	Pipe insulation NPS 2-1/2	Linear meter	6	6	1.5	150.59	8.9	22.59	135.53	903.53	51.45	308.69	8.55	51.30	233.17	1,399.05	6.0	4.1	369.01	24.5	47.97	287.83	2,214.06	233.81	1,402.88	112.45	674.71	763.25	4,579.47
1003	3448.76	Pipe identification NPS 2-1/2	Linear meter	6	6	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.5	48.56	3.2	6.31	37.87	291.33	12.06	72.38	13.84	83.05	80.77	484.63
1004	3448.77	Flange Welding Neck 150RF Sch.10S NPS 4 c/w hardware, Piping Specification SB11	m	3	3	15.8	1,708.44	47.4	256.27	768.80	5,125.33	172.30	516.90	249.17	747.50	2,386.18	7,158.53	3.0	30.1	2,716.76	90.2	353.18	1,059.54	8,150.29	80.94	242.81	654.77	1,964.32	3,805.65	11,416.96
1005	3448.78	Elbow 90 degrees BW Sch.10S NPS 4, Piping Specification SB11	ea	2	2	24.4	2,644.19	48.9	396.63	793.26	5,288.38	166.91	333.82	385.64	771.27	3,593.37	7,186.73	2.0	0.9	82.49	1.8	10.72	21.45	164.98	23.23	46.46	24.06	48.13	140.51	281.02
1006	3448.79	Weld NPS 2 Piping Specification SB11	ea	7	7	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	3.5	318.94	24.7	41.46	290.24	2,232.59	5.65	39.55	74.97	524.81	441.03	3,087.19
1007	3448.80	Victaulic coupling NPS 4, Style 07	ea	1	1	0.5	58.48	0.5	8.77	8.77	58.48	88.54	88.54	8.53	8.53	164.33	164.33	1.0	0.9	83.18	0.9	10.81	10.81	83.18	79.39	79.39	35.53	35.53	208.92	208.92
1008	3448.81	Butterfly valve NPS 4, Valve Specification VBU01	ea	1	1	11.0	1,187.40	11.0	178.11	178.11	1,187.40	323.82	323.82	173.18	173.18	1,862.51	1,862.51	1.0	6.2	561.47	6.2	72.99	72.99	561.47	410.67	410.67	214.63	214.63	1,259.76	1,259.76
1009	3448.82	Pipe insulation NPS 4	Linear meter	3	3	2.8	278.95	8.3	41.84	125.53	836.85	57.70	173.09	8.55	25.65	387.04	1,161.11	3.0	6.8	617.06	20.5	80.22	240.65	1,851.19	381.23	1,143.70	186.08	558.24	1,264.59	3,793.78
1010	3448.83	Pipe identification NPS 4	Linear meter	3	3	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.6	53.82	1.8	7.00	20.99	161.45	12.07	36.20	15.07	45.20	87.94	263.83
B&M-0298	Added	4" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter	0	6	3.4	372.03	22.0	55.80	357.28	2,381.90	118.55	759.03	54.26	347.38	600.65	3,845.60	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0299	Added	1" weld adapter, 304SS, Vic-Press - 561	ea	0	2	5.9	638.01	11.8	95.70	191.40	1,276.02	153.82	307.64	93.05	186.10	980.58	1,961.16	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0300	Added	1" male adapter, 304SS, Vic-Press - 596	ea	0	1	5.9	638.01	5.9	95.70	95.70	638.01	150.83	150.83	93.05	93.05	977.59	977.59	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0301	Added	2" coupling, 304SS, Vic-Press - 597	ea	0	17	8.5	921.57	144.9	138.24	2,350.00	15,666.65	119.05	2,023.79	134.40	2,284.88	1,313.25	22,325.31	17.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0302	Added	1.5" coupling, 304SS, Vic-Press - 597	ea	0	4	8.2	886.12	32.8	132.92	531.67	3,544.49	107.91	431.63	129.24	516.94	1,256.18	5,024.73	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0303	Added	2"x1.25" reducer, 304SS, Vic-Press - 582	ea	0	4	8.5	921.57	34.1	138.24	552.94	3,686.27	177.40	709.60	134.40	537.62	1,371.61	5,486.43	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0304	Added	1"x2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea	0	5	11.1	1,205.13	55.7	180.77	903.85	6,025.64	333.84	1,669.22	175.76	878.80	1,895.50	9,477.50	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0305	Added	1" union, 304SS, Vic-Press - 584	ea	0	1	5.9	638.01	5.9	95.70	95.70	638.01	580.55	580.55	93.05	93.05	1,407.31	1,407.31	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0306	Added	1" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	2	1.2	134.69	2.5	20.20	40.41	269.38	9.52	19.04	19.64	39.29	184.06	368.11	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0307	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea	0	1	1.2	134.69	1.2	20.20	20.20	134.69	13.25	13.25	19.64	19.64	187.79	187.79	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0308	Added	1/2" female adapter - SWAGELOK SS-8-TA-7-8 or equal	ea	0	6	1.1	119.31	6.6	17.90	107.38	715.85	25.66	153.96	17.40	104.40	180.26	1,081.59	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0309	Added	2" 90 elbow, LR, Sch 10S, ASTM A403 WP304L - VICTAULIC 410SS	ea	0	5	3.1	340.27	15.7	51.04	255.20	1,701.36	134.19	670.96	49.63	248.13	575.13	2,875.65	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0310	Added	2" cap, Sch 10S, ASTM A403 WP304L - VICTAULIC 60SS	ea	0	1	1.6	177.22	1.6	26.58	26.58	177.22	84.40	84.40	25.85	25.85	314.06	314.06	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0311	Added	2" rigid coupling, Galv. DI, ASTM A536 - Victaulic 89	ea	0	19	0.3	37.22	6.5	5.58	106.07	707.13	62.81	1,193.41	5.43	103.13	111.04	2,109.73	19.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0312	Added	Pipe Insulation - All Sizes	ea	0	1	659.6	67,367.56	659.6	10,105.13	10,105.13	67,367.56	19,454.16	19,454.16	0.00	0.00	96,926.86	96,926.86	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WLS (Piezometer and Water Level)							$0.00				$0.00		$0.00							$0.00				$0.00		$0.00	$0.00	
1011	344C.01	Level tranmitter 344C-LT-6000 / 9000 / 9001	ea	3	3	52.4	5,671.19	157.3	850.68	2,552.03	17,013.56	5,038.11	15,114.33	827.10	2,481.31	12,387.08	37,161.23	3.0	21.1	1,904.37	63.2	247.57	742.70	5,713.11	5,463.62	16,390.86	1,547.52	4,642.56	9,163.08	27,489.24
1012	344C.02	Pressure transmitter 344C-PT-1000 / 2000/ 3000 / 4000	ea	4	4	8.7	945.20	35.0	141.78	567.12	3,780.79	1,867.96	7,471.86	137.85	551.40	3,092.79	12,371.17	4.0	7.3	659.90	29.2	85.79	343.15	2,639.59	1,843.97	7,375.88	526.33	2,105.30	3,115.98	12,463.92
1013	344C.03	Pressure indicator 344C-PI-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001	ea	8	8	8.7	945.20	69.9	141.78	1,134.24	7,561.58	700.54	5,604.29	137.85	1,102.81	1,925.36	15,402.92	8.0	3.7	329.95	29.2	42.89	343.15	2,639.59	548.24	4,385.91	187.92	1,503.33	1,109.00	8,871.98
1014	344C.04	Intrumentation cabinet 344C-IC-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 (Detail PD14 and PD15)	ea	8	8	104.9	11,342.37	839.0	1,701.36	13,610.85	90,738.98	6,295.98	50,367.83	1,654.21	13,233.67	20,993.92	167,951.32	8.0	111.3	10,066.56	890.8	1,308.65	10,469.23	80,532.50	14,559.03	116,472.24	5,296.90	42,375.19	31,231.14	249,849.15
B&M-0313	Added	tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L (1/2")	Linear meter	0	73	0.7	71.15	48.1	10.67	780.92	5,206.15	22.58	1,652.50	10.38	759.28	114.78	8,398.85	73.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0314	Added	UNION 90' ELBOW SWAGELOK SS-810-9 (1/2")	ea	0	16	1.1	119.31	17.7	17.90	286.34	1,908.92	48.36	773.69	17.40	278.40	202.96	3,247.35	16.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0315	Added	UNION TEE SWAGELOK SS -81 0- 3 (1/2")	ea	0	60	1.6	169.92	94.3	25.49	1,529.31	10,195.37	66.38	3,983.07	24.78	1,486.93	286.58	17,194.68	60.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0316	Added	UNION CROSS SWAGELOK SS-810-4 (1/2")	ea	0	36	2.2	235.00	78.2	35.25	1,269.00	8,459.99	93.36	3,360.99	34.27	1,233.83	397.88	14,323.82	36.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0317	Added	CAP SWAGELOK SS-810-C (1/2")	ea	0	8	0.6	65.08	4.8	9.76	78.09	520.61	18.36	146.86	9.49	75.93	102.69	821.50	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0318	Added	FEMALE ADAPTER (1 / 2" - 1 / 4") SWAGELOK SS-8-TA-7-4	ea	0	8	1.1	119.31	8.8	17.90	143.17	954.46	25.66	205.28	17.40	139.20	180.26	1,442.11	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0319	Added	FEMALE ADAPTER (1 /2" - 1 /2") SWAGELOK SS- 8- TA- 7- 8	ea	0	12	1.1	119.31	13.2	17.90	214.75	1,431.69	34.48	413.76	17.40	208.80	189.08	2,269.01	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0320	Added	QUICK CONNECT (1/ 2")	ea	0	12	1.1	119.31	13.2	17.90	214.75	1,431.69	138.42	1,661.01	17.40	208.80	293.02	3,516.26	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0321	Added	SHOCK ABSORBER (1/4")	ea	0	8	1.1	119.31	8.8	17.90	143.17	954.46	42.18	337.43	17.40	139.20	196.78	1,574.26	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0322	Added	HILLOCK HEX NIPPLE (1/ 4")	ea	0	12	1.1	119.31	13.2	17.90	214.75	1,431.69	27.81	333.78	17.40	208.80	182.42	2,189.03	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0323	Added	purge valve - SWAGELOK SS-4PS8 or equal	ea	0	20	1.1	119.31	22.1	17.90	357.92	2,386.15	72.34	1,446.87	17.40	348.00	226.95	4,538.95	20.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0324	Added	NEEDLE VALVE SWAGELOK SS-18-KS (1/2")	ea	0	160	1.1	119.31	176.5	17.90	2,853.38	19,089.21	228.91	36,625.75	17.40	2,784.03	383.51	61,362.38	160.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0325	Added	SS DIAPHRAGM SEAL WINTERS D40 WITH SILICON FILL (1 /2")	ea	0	20	1.1	119.31	22.1	17.90	357.92	2,386.15	1,528.85	30,577.06	17.40	348.00	1,683.46	33,669.14	20.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Mechanical Shop Equipment						0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
1015	3440.001	Welding machine 3440-W-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	23,936.47	23,936.47	5,136.70	5,136.70	30,600.56	30,600.56
1016	3440.002	Welding fume extractor 3440-WFE-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	8,976.81	8,976.81	2,124.94	2,124.94	12,629.14	12,629.14
1017	3440.003	Victaulic pipe prep machine 3440-PPT-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	17,860.23	17,860.23	3,913.39	3,913.39	23,301.02	23,301.02
1018	3440.004	Milling Machine 3440-VM-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	48.6	4,393.31	48.6	571.13	571.13	4,393.31	23,229.97	23,229.97	5,709.29	5,709.29	33,903.70	33,903.70
1019	3440.005	Radial drilling machine 3440-RAD-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	67.3	6,083.25	67.3	790.82	790.82	6,083.25	30,350.72	30,350.72	7,540.03	7,540.03	44,764.82	44,764.82
1020	3440.006	Hydraulic press 3440-HYDP-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	16,284.33	16,284.33	4,151.96	4,151.96	24,636.25	24,636.25
1021	3440.007	Belt grinding machine 3440-BS-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	29.9	2,703.36	29.9	351.44	351.44	2,703.36	5,014.87	5,014.87	1,644.95	1,644.95	9,714.62	9,714.62
1022	3440.008	Iron worker 3440-IW-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	37,354.73	37,354.73	8,393.96	8,393.96	49,948.65	49,948.65
1023	3440.009	Engine lathe 3440-L-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	30,292.35	30,292.35	6,972.13	6,972.13	41,464.45	41,464.45
1024	3440.010	Band saw 3440-BANDS-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	37.4	3,378.51	37.4	439.21	439.21	3,378.51	7,470.95	7,470.95	2,298.10	2,298.10	13,586.76	13,586.76
1025	3440.011	Drilling machine 3440-DP-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	22.4	2,028.21	22.4	263.67	263.67	2,028.21	17,475.01	17,475.01	3,994.82	3,994.82	23,761.71	23,761.71
1026	3440.012	Bench grinder 3440-BGNR-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	2,171.24	2,171.24	754.79	754.79	4,453.43	4,453.43
1027	3440.013	Threading machnie 3440-PTHDR-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	23,813.64	23,813.64	5,111.97	5,111.97	30,453.01	30,453.01
1028	3440.014	Jib crane 3440-JIBC-6000 / 6001	ea	2	2	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	48.6	4,393.32	97.2	571.13	1,142.26	8,786.63	5,019.54	10,039.08	2,043.06	4,086.12	12,027.05	24,054.09
1029	3440.015	Floor handling crane 3440-CGM-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	67.3	6,083.25	67.3	790.82	790.82	6,083.25	20,428.37	20,428.37	5,542.40	5,542.40	32,844.85	32,844.85
1030	3440.016	Plasma cutter 3440-PLAC-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	11.2	1,013.42	11.2	131.74	131.74	1,013.42	3,475.37	3,475.37	937.85	937.85	5,558.38	5,558.38
1031	3440.017	Small cutting 3440-WT-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	11.2	1,013.42	11.2	131.74	131.74	1,013.42	1,094.86	1,094.86	458.60	458.60	2,698.62	2,698.62
1032	3440.018	Working table 3440-WT-6001 / 6002	ea	2	2	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	22.4	2,027.52	44.9	263.58	527.16	4,055.04	2,796.94	5,593.87	1,039.59	2,079.19	6,127.63	12,255.25
1033	3440.019	Work cart 3440-WT-6003	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	7.5	676.53	7.5	87.95	87.95	676.53	5,241.34	5,241.34	1,214.22	1,214.22	7,220.03	7,220.03
		Instrumentation						0	$0.00				$0.00		$0.00						0	$0.00				$0.00		$0.00	$0.00	
1034	3440.020	Detail AT1	ea	52	52	10.2	1,103.92	530.8	165.59	8,610.58	57,403.84	557.07	28,967.85	161.00	8,371.97	1,987.58	103,354.23	52.0	3.7	336.29	193.4	43.72	2,273.35	17,487.30	517.89	26,930.43	183.30	9,531.56	1,081.20	56,222.64
1035	3440.021	Detail AT2	ea	13	13	10.2	1,103.92	132.7	165.59	2,152.64	14,350.96	557.07	7,241.96	161.00	2,092.99	1,987.58	25,838.56	13.0	4.2	380.71	54.7	49.49	643.40	4,949.24	597.59	7,768.68	209.78	2,727.18	1,237.58	16,088.49
1036	3440.022	Detail AT3	ea	5	5	7.8	846.00	39.1	126.90	634.50	4,230.00	529.44	2,647.21	123.38	616.92	1,625.73	8,128.63	5.0	3.7	329.95	18.3	42.89	214.47	1,649.74	482.81	2,414.05	174.74	873.72	1,030.39	5,151.97
1037	3440.023	Detail AT4	ea	25	25	14.4	1,561.84	361.0	234.28	5,856.92	39,046.12	898.18	22,454.52	227.78	5,694.61	2,922.09	73,052.17	25.0	16.4	1,478.17	408.8	192.16	4,804.06	36,954.28	1,302.89	32,572.30	609.70	15,242.45	3,582.92	89,573.08
1038	3440.024	Detail AT5	ea	9	9	14.4	1,561.84	130.0	234.28	2,108.49	14,056.60	898.18	8,083.63	227.78	2,050.06	2,922.09	26,298.78	9.0	14.6	1,319.80	131.4	171.57	1,544.16	11,878.17	1,189.00	10,700.96	549.55	4,945.92	3,229.91	29,069.21
1039	3440.025	Detail AT6	ea	38	38	4.4	472.60	166.0	70.89	2,693.81	17,958.76	37.26	1,415.82	68.93	2,619.16	649.67	24,687.55	38.0	0.9	82.49	34.7	10.72	407.49	3,134.52	0.00	0.00	19.39	736.66	112.60	4,278.67

CH0031 - Supply and Install Electrical and Mechanical Auxiliaries

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1040	3440.026	Detail AT7	ea	3	3	52.5	5,676.36	157.5	851.45	2,554.36	17,029.08	4,426.77	13,280.31	827.86	2,483.58	11,782.45	35,347.34	3.0	65.7	5,939.08	197.1	772.08	2,316.24	17,817.24	6,949.94	20,849.82	2,794.97	8,384.92	16,456.08	49,368.23
1041	3440.027	Detail AT8	ea	1	1	51.9	5,611.28	51.9	841.69	841.69	5,611.28	4,364.93	4,364.93	818.37	818.37	11,636.27	11,636.27	1.0	220.8	19,961.91	220.8	2,595.05	2,595.05	19,961.91	1,532.71	1,532.71	4,999.92	4,999.92	29,089.59	29,089.59
1042	3440.028	Detail AT9	ea	9	9	59.5	6,440.44	535.9	966.07	8,694.59	57,963.92	3,943.15	35,488.32	939.29	8,453.65	12,288.94	110,600.47	9.0	48.7	4,399.32	438.0	571.91	5,147.20	39,593.87	3,395.91	30,563.23	1,717.59	15,458.31	10,084.74	90,762.62
1043	3440.029	Detail AT10	ea	1	1	34.5	3,726.44	34.5	558.97	558.97	3,726.44	2,834.09	2,834.09	543.48	543.48	7,662.98	7,662.98	1.0	146.0	13,197.95	146.0	1,715.73	1,715.73	13,197.95	7,067.75	7,067.75	4,524.63	4,524.63	26,506.06	26,506.06
1043.1	Added	Detail AT11 (No Spec, No Drawings)	ea	0	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1043.2	Added	Detail AT12 (No Spec, No Drawings)	ea	0	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Piping support						0	$0.00				$0.00		$0.00	$0.00	$0.00				0	$0.00				$0.00		$0.00	$0.00	$0.00
1044	3440.030	S-C50-06	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	1,024.47	3,073.40	275.70	827.10	3,474.12	10,422.37	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	432.09	1,296.27	556.15	1,668.46	3,244.10	9,732.29
1045	3440.031	S-C50-07	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	1,134.29	3,402.88	275.70	827.10	3,583.95	10,751.85	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	561.27	1,683.80	582.16	1,746.49	3,399.28	10,197.84
1046	3440.032	S-C50-12	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	1,938.48	3,876.95	275.70	551.40	4,388.13	8,776.27	2.0	32.3	2,920.33	64.6	379.64	759.29	5,840.66	2,281.21	4,562.41	1,145.59	2,291.18	6,726.77	13,453.54
1047	3440.033	S-C51-06	ea	3	3	4.4	472.60	13.1	70.89	212.67	1,417.80	840.24	2,520.72	68.93	206.78	1,452.65	4,357.96	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	427.08	1,281.24	555.15	1,665.45	3,238.08	9,714.25
1048	3440.034	S-C51-07	ea	3	3	4.4	472.60	13.1	70.89	212.67	1,417.80	918.07	2,754.22	68.93	206.78	1,530.49	4,591.46	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	552.41	1,657.22	580.39	1,741.16	3,388.65	10,165.94
1049	3440.035	S-C52-03	ea	1	1	2.2	236.30	2.2	35.44	35.44	236.30	20.29	20.29	34.46	34.46	326.49	326.49	1.0	9.7	874.78	9.7	113.72	113.72	874.78	44.92	44.92	214.63	214.63	1,248.05	1,248.05
1050	3440.036	S-C53-01	ea	6	6	15.3	1,654.10	91.8	248.11	1,488.69	9,924.58	91.94	551.65	241.24	1,447.43	2,235.39	13,412.35	6.0	5.2	465.98	30.9	60.58	363.47	2,795.90	31.67	189.99	115.89	695.33	674.12	4,044.69
1051	3440.037	S-C53-02	ea	5	5	15.3	1,654.10	76.5	248.11	1,240.57	8,270.48	94.19	470.95	241.24	1,206.19	2,237.64	11,188.19	5.0	9.7	874.09	48.4	113.63	568.16	4,370.45	40.13	200.66	213.51	1,067.53	1,241.36	6,206.80
1052	3440.038	S-C53-03	ea	4	4	15.3	1,654.10	61.2	248.11	992.46	6,616.38	107.31	429.25	241.24	964.96	2,250.76	9,003.05	4.0	9.7	874.43	38.7	113.68	454.70	3,497.73	60.02	240.07	217.59	870.34	1,265.71	5,062.85
1053	3440.039	S-C53-13	ea	1	1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	91.78	91.78	241.24	241.24	2,235.23	2,235.23	1.0	5.1	461.65	5.1	60.01	60.01	461.65	9.50	9.50	110.41	110.41	641.57	641.57
1054	3440.040	S-D51-02	ea	4	4	19.7	2,126.69	78.7	319.00	1,276.02	8,506.78	301.09	1,204.35	310.16	1,240.66	3,056.95	12,227.80	4.0	24.5	2,210.66	97.8	287.39	1,149.54	8,842.63	294.93	1,179.74	578.92	2,315.67	3,371.89	13,487.58
1055	3440.041	S-D55-02	ea	38	38	21.8	2,362.99	830.2	354.45	13,469.07	89,793.78	470.64	17,884.17	344.63	13,095.82	3,532.71	134,242.84	38.0	25.2	2,281.44	959.0	296.59	11,270.32	86,694.78	706.41	26,843.71	678.39	25,778.89	3,962.83	150,587.69
1056	3440.042	S-D57-02	ea	7	7	24.0	2,599.29	168.2	389.89	2,729.26	18,195.06	551.89	3,863.26	379.09	2,653.63	3,920.17	27,441.20	7.0	25.7	2,326.08	180.1	302.39	2,116.73	16,282.57	811.90	5,683.27	710.12	4,970.83	4,150.49	29,053.40
1057	3440.043	S-D59-01	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	304.01	912.02	310.16	930.49	3,059.87	9,179.61	3.0	32.3	2,920.09	96.9	379.61	1,138.84	8,760.28	38.29	114.88	693.97	2,081.92	4,031.97	12,095.91
1058	3440.044	S-D60-01	ea	1	1	24.0	2,599.29	24.0	389.89	389.89	2,599.29	387.49	387.49	379.09	379.09	3,755.77	3,755.77	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	131.08	131.08	712.55	712.55	4,142.83	4,142.83
1059	3440.045	S-E50-04	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	340.92	1,022.77	241.24	723.72	2,484.37	7,453.12	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	695.91	2,087.73	447.67	1,343.02	2,622.42	7,867.27
1060	3440.046	S-E50-06	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	355.53	1,066.58	241.24	723.72	2,498.97	7,496.92	3.0	19.3	1,743.09	57.8	226.60	679.81	5,229.27	758.50	2,275.51	562.36	1,687.08	3,290.56	9,871.67
1061	3440.047	S-E50-07	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	414.98	1,244.95	241.24	723.72	2,558.43	7,675.30	3.0	19.3	1,743.09	57.8	226.60	679.81	5,229.27	939.66	2,818.99	598.83	1,796.48	3,508.18	10,524.54
1062	3440.048	S-E50-08	ea	16	16	15.3	1,654.10	244.7	248.11	3,969.83	26,465.53	448.31	7,172.91	241.24	3,859.82	2,591.76	41,468.09	16.0	25.7	2,327.55	411.9	302.58	4,841.30	37,240.79	1,079.21	17,267.40	764.28	12,228.49	4,473.62	71,577.98
1063	3440.049	S-E50-13	ea	1	1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	535.94	535.94	241.24	241.24	2,679.39	2,679.39	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	1,300.51	1,300.51	947.98	947.98	5,547.68	5,547.68
1064	3440.050	S-E51-04	ea	1	1	10.9	1,181.50	10.9	177.22	177.22	1,181.50	262.61	262.61	172.31	172.31	1,793.64	1,793.64	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	564.83	564.83	419.98	419.98	2,457.37	2,457.37
1065	3440.051	S-E51-06	ea	6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	274.79	1,648.71	172.31	1,033.88	1,805.82	10,834.92	6.0	19.3	1,746.10	115.9	226.99	1,361.96	10,476.58	627.42	3,764.54	536.67	3,220.05	3,137.19	18,823.12
1066	3440.052	S-E51-07	ea	6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	332.70	1,996.22	172.31	1,033.88	1,863.74	11,182.43	6.0	19.3	1,746.10	115.9	226.99	1,361.96	10,476.58	808.58	4,851.48	573.15	3,438.88	3,354.82	20,128.89
1067	3440.053	S-E51-08	ea	8	8	10.9	1,181.50	87.4	177.22	1,417.80	9,451.98	367.10	2,936.76	172.31	1,378.51	1,898.13	15,185.04	8.0	25.7	2,327.55	206.0	302.58	2,420.65	18,620.39	948.13	7,585.05	737.89	5,903.14	4,316.15	34,529.23
1068	3440.054	S-E51-11	ea	1	1	10.9	1,181.50	10.9	177.22	177.22	1,181.50	455.06	455.06	172.31	172.31	1,986.09	1,986.09	1.0	29.6	2,672.86	29.6	347.47	347.47	2,672.86	895.81	895.81	808.51	808.51	4,724.66	4,724.66
1069	3440.055	S-E51-13	ea	1	1	10.9	1,181.50	10.9	177.22	177.22	1,181.50	455.06	455.06	172.31	172.31	1,986.09	1,986.09	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	1,169.42	1,169.42	921.60	921.60	5,390.22	5,390.22
1070	3440.056	S-E52-04	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	372.12	1,116.37	241.24	723.72	2,515.57	7,546.72	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	842.23	2,526.69	477.13	1,431.39	2,798.20	8,394.59
1071	3440.057	S-E52-10	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	548.71	1,646.14	241.24	723.72	2,692.16	8,076.48	3.0	25.7	2,326.28	77.2	302.42	907.25	6,978.83	1,601.70	4,805.09	869.17	2,607.51	5,099.56	15,298.68
1072	3440.058	S-E53-08	ea	4	4	10.9	1,181.50	43.7	177.22	708.90	4,725.99	403.58	1,614.34	172.31	689.25	1,934.62	7,738.48	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	1,123.03	4,492.12	772.80	3,091.21	4,524.53	18,098.11
1073	3440.059	S-E54-08	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	486.83	3,894.66	275.70	2,205.61	2,936.49	23,491.91	8.0	25.8	2,328.19	206.0	302.66	2,421.31	18,625.48	1,079.21	8,633.69	764.43	6,115.46	4,474.49	35,795.95
1074	3440.060	S-E55-01	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	226.60	226.60	275.70	275.70	2,676.26	2,676.26	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	91.81	91.81	371.34	371.34	2,159.73	2,159.73
1075	3440.061	S-E56-01	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	195.65	586.96	275.70	827.10	2,645.31	7,935.93	3.0	5.1	461.65	15.3	60.01	180.04	1,384.95	61.64	184.91	120.90	362.70	704.20	2,112.60
1076	3440.062	S-E57-05	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	126.38	126.38	137.85	137.85	1,351.21	1,351.21	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	92.79	92.79	324.94	324.94	1,890.29	1,890.29
1077	3440.063	S-H50-01	ea	2	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	113.53	227.06	172.31	344.63	1,644.57	3,289.13	2.0	4.5	404.12	8.9	52.54	105.07	808.24	104.03	208.05	115.92	231.83	676.60	1,353.20
1078	3440.064	S-H51-10	ea	9	9	19.7	2,126.69	177.0	319.00	2,871.04	19,140.25	181.68	1,635.15	310.16	2,791.48	2,937.55	26,437.92	9.0	2.2	200.79	20.0	26.10	234.92	1,807.10	140.65	1,265.89	75.51	679.56	443.05	3,987.47
1079	3440.065	S-H51-11	ea	6	6	19.7	2,126.69	118.0	319.00	1,914.03	12,760.17	174.01	1,044.06	310.16	1,860.99	2,929.87	17,579.24	6.0	9.6	871.55	57.8	113.30	679.81	5,229.27	91.68	550.10	223.28	1,339.70	1,299.81	7,798.87
1080	3440.066	S-H51-12	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	166.90	166.90	310.16	310.16	2,922.76	2,922.76	1.0	7.3	659.89	7.3	85.79	85.79	659.89	68.67	68.67	168.91	168.91	983.26	983.26
1081	3440.067	S-H51-13	ea	2	2	19.7	2,126.69	39.3	319.00	638.01	4,253.39	178.37	356.74	310.16	620.33	2,934.23	5,868.46	2.0	3.5	317.36	7.0	41.26	82.51	634.73	71.31	142.61	88.94	177.88	518.87	1,037.73
1082	3440.068	S-H51-14	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	172.68	172.68	310.16	310.16	2,928.54	2,928.54	1.0	7.3	659.89	7.3	85.79	85.79	659.89	93.53	93.53	173.92	173.92	1,013.12	1,013.12
1083	3440.069	S-H51-20	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	180.88	180.88	310.16	310.16	2,936.74	2,936.74	1.0	4.4	396.50	4.4	51.55	51.55	396.50	148.75	148.75	123.13	123.13	719.93	719.93
1084	3440.070	S-H52-20	ea	4	4	17.5	1,890.40	69.9	283.56	1,134.24	7,561.58	194.97	779.87	275.70	1,102.81	2,644.62	10,578.49	4.0	7.3	662.67	29.3	86.15	344.59	2,650.69	128.50	514.02	181.61	726.44	1,058.93	4,235.73
1085	3440.071	S-H52-21	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	207.85	415.71	275.70	551.40	2,657.51	5,315.02	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	172.15	344.29	170.36	340.72	994.99	1,989.97
1086	3440.072	S-H52-22	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	205.48	410.97	275.70	551.40	2,655.14	5,310.28	2.0	5.1	461.65	10.2	60.01	120.03	923.30	54.00	108.00	119.37	238.74	695.04	1,390.07
1087	3440.073	S-H53	ea	1	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	450.68	450.68	413.55	413.55	4,125.16	4,125.16	1.0	5.4	486.61	5.4	63.26	63.26	486.61	504.81	504.81	215.99	215.99	1,270.66	1,270.66
1088	3440.074	S-J50-01	ea	28	28	4.4	472.60	122.4	70.89	1,984.92	13,232.77	238.14	6,668.06	68.93	1,929.91	850.56	23,815.65	28.0	6.4	574.55	177.9	74.69	2,091.35	16,087.33	389.80	10,914.48	213.50	5,978.13	1,252.55	35,071.29
1089	3440.075	S-J50-02	ea	4	4	4.4	472.60	17.5	70.89	283.56	1,890.40	235.75	942.99	68.93	275.70	848.16	3,392.65	4.0	2.6	231.52	10.2	30.10	120.39	926.08	109.47	437.89	76.46	305.84	447.55	1,790.20
1090	3440.076	S-J50-03	ea	1	1	4.4	472.60	4.4	70.89	70.89	472.60	235.75	235.75	68.93	68.93	848.16	848.16	1.0	2.6	231.52	2.6	30.10	30.10	231.52	109.47	109.47	76.46	76.46	447.55	447.55
1091	3440.077	S-J50-04	ea	12	12	4.4	472.60	52.4	70.89	850.68	5,671.19	235.75	2,828.98	68.93	827.10	848.16	10,177.95	12.0	3.2	286.05	38.0	37.19	446.23	3,432.56	385.46	4,625.50	144.83	1,737.93	853.52	10,242.22
1092	3440.078	S-J50-05	ea	6	6	4.4	472.60	26.2	70.89	425.34	2,835.59	238.14	1,428.87	68.93	413.55	850.56	5,103.35	6.0	6.4	574.64	38.1	74.70	448.22	3,447.83	389.80	2,338.81	213.53	1,281.16	1,252.67	7,516.02
1093	3440.079	S-J50-06	ea	3	3	4.4	472.60	13.1	70.89	212.67	1,417.80	238.14	714.43	68.93	206.78	850.56	2,551.68	3.0	4.9	439.93	14.6	57.19	171.57	1,319.80	284.61	853.84	160.69	482.07	942.43	2,827.29
1094	3440.080	S-J50-08	ea	1	1	4.4	472.60	4.4	70.89	70.89	472.60	235.53	235.53	68.93	68.93	847.94	847.94	1.0	2.6	231.52	2.6	30.10	30.10	231.52	109.47	109.47	76.46	76.46	447.55	447.55
1095	3440.081	S-J50-09	ea	10	10	4.4	472.60	43.7	70.89	708.90	4,725.99	237.74	2,377.35	68.93	689.25	850.15	8,501.49	10.0	5.1	461.65	51.1	60.01	600.15	4,616.50	110.24	1,102.43	130.69	1,306.95	762.60	7,626.03
1096	3440.082	S-J50-10	ea	2	2	4.4	472.60	8.7	70.89	141.78	945.20	237.74	475.47	68.93	137.85	850.15	1,700.30	2.0	5.1	461.65	10.2	60.01	120.03	923.30	110.24	220.49	130.69	261.39	762.60	1,525.21
1097	3440.083	S-J50-11	ea	6	6	4.4	472.60	26.2	70.89	425.34	2,835.59	237.74	1,426.41	68.93	413.55	850.15	5,100.89	6.0	6.4	574.64	38.1	74.70	448.22	3,447.83	321.28	1,927.66	199.73	1,198.37	1,170.35	7,022.08
1098	3440.084	S-J50-12	ea	4	4	4.4	472.60	17.5	70.89	283.56	1,890.40	236.13	944.53	68.93	275.70	848.55	3,394.19	4.0	2.6	231.52	10.2	30.10	120.39	926.08	109.66	438.64	76.50	305.98	447.77	1,791.09
1099	3440.085	S-J50-20	ea	2	2	6.6	708.90	13.1	106.33	212.67	1,417.80	255.65	511.30	103.39	206.78	1,174.27	2,348.55	2.0	4.4	396.50	8.8	51.55	103.09	793.00	263.08	526.16	146.15	292.30	857.28	1,714.56
1100	3440.086	S-J51-10	ea	74	74	17.5	1,890.40	1293.4	283.56	20,983.39	139,889.25	175.16	12,962.16	275.70	20,401.91	2,624.82	194,236.71	74.0	5.2	474.22	388.2	61.65	4,562.02	35,092.46	84.02	6,217.24	128.36	9,498.93	748.25	55,370.64
1101	3440.087	S-J51-11	ea	146	146	17.5	1,890.40	2551.9	283.56	41,399.66	275,997.72	173.22	25,289.39	275.70	40,252.42	2,622.87	382,939.19	146.0	2.7	242.93	392.3	31.58	4,610.73	35,467.17	77.89	11,371.25	72.77	10,624.63	425.16	62,073.78
1102	3440.088	S-J51-12	ea	82	82	17.5	1,890.40	1433.3	283.56	23,251.86	155,012.42	173.30	14,210.76	275.70	22,607.52	2,622.96	215,082.56	82.0	2.8	249.94	226.7	32.49	2,664.40	20,495.38	76.97	6,311.43	74.24	6,087.37	433.64	35,558.59
1103	3440.089	S-J51-13	ea	11	11	17.5	1,890.40	192.3	283.56	3,119.15	20,794.35	178.28	1,961.09	275.70	3,032.72	2,627.94	28,907.30	11.0	7.3	664.06	80.8	86.33	949.60	7,304.62	102.36	1,125.97	176.67	1,943.37	1,029.41	11,323.56
1104	3440.090	S-J51-14	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	179.46	1,435.68	275.70	2,205.61	2,629.12	21,032.93	8.0	9.7	874.32	77.4	113.66	909.29	6,994.56	107.89	863.08	227.20	1,817.59	1,323.07	10,584.52
1105	3440.091	S-J51-15	ea	29	29	17.5	1,890.40	506.9	283.56	8,223.22	54,821.46	174.57	5,062.48	275.70	7,995.34	2,624.22	76,102.51	29.0	2.2	200.40	64.3	26.05	755.52	5,811.70	82.85	2,402.53	63.78	1,849.54	373.08	10,819.28
1106	3440.092	S-J51-17	ea	13	13	17.5	1,890.40	227.2	283.56	3,686.27	24,575.14	182.01	2,366.07	275.70	3,584.12	2,631.66	34,211.60	13.0	9.7	873.07	125.5	113.50	1,475.49	11,349.96	120.23	1,562.98	229.39	2,982.07	1,336.19	17,370.51
1107	3440.093	S-J51-18	ea	52	52	17.5	1,890.40	908.9	283.56	14,745.08	98,300.56	175.31	9,116.29	275.70	14,336.48	2,624.97	136,498.41	52.0	5.1	461.65	265.7	60.01	3,120.75	24,005.80	29.53	1,535.75	114.43	5,950.56	665.63	34,612.86
1108	3440.094	S-J51-19	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	174.05	1,392.37	275.70	2,205.61	2,623.70	20,989.62	8.0	2.6	231.52	20.5	30.10	240.78	1,852.16	27.04	216.28	59.85	478.79	348.50	2,788.02
1109	3440.095	S-J51-20	ea	24	24	17.5	1,890.40	419.5	283.56	6,805.42	45,369.49	184.70	4,432.79	275.70	6,616.84	2,634.36	63,224.53	24.0	4.4	400.07	106.2	52.01	1,248.23	9,601.78	117.83	2,827.82	117.74	2,825.87	687.65	16,503.71
1110	3440.096	S-J51-200	ea	4	4	17.5	1,890.40	69.9	283.56	1,134.24	7,561.58	197.46	789.85	275.70	1,102.81	2,647.12	10,588.48	4.0	9.7	874.43	38.7	113.68	454.70	3,497.73	161.10	644.40	237.94	951.75	1,387.15	5,548.59
1111	3440.097	S-J51-201	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	193.97	581.92	275.70	827.10	2,643.63	7,930.89	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	148.95	446.84	186.38	559.13	1,087.28	3,261.83
1112	3440.098	S-J51-203	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	182.96	365.92	275.70	551.40	2,632.62	5,265.23	2.0	2.6	231.52	5.1	30.10	60.20	463.04	39.68	79.36	62.41	124.81	363.70	727.40
1113	3440.099	S-J51-205	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	183.18	1,282.29	275.70	1,929.91	2,632.84	18,429.89	7.0	2.2	200.79	15.6	26.10	182.72	1,405.52	114.14	799.01	70.17	491.18	411.20	2,878.42
1114	3440.100	S-J51-21	ea	18	18	17.5	1,890.40	314.6	283.56	5,104.07	34,027.12	183.77	3,307.83	275.70	4,962.63	2,633.42	47,401.64	18.0	4.4	400.50	79.7	52.06	937.17	7,208.97	115.62	2,081.10	117.40	2,113.19	685.58	12,340.43
1115	3440.101	S-J51-22	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	185.28	1,296.98	275.70	1,929.91	2,634.94	18,444.57	7.0	4.4	400.08	31.0	52.01	364.07	2,800.53	125.75	880.27	119.34	835.38	697.18	4,880.24
1116	3440.102	S-J51-23	ea	70	70	17.5	1,890.40	1223.5	283.56	19,849.15	132,327.67	186.23	13,035.86	275.70	19,299.10	2,635.88	184,511.79	70.0	4.5	407.47	315.5	52.97	3,707.98	28,522.90	126.49	8,854.19	121.23	8,485.88	708.16	49,570.95
1117	3440.103	S-J51-24	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	186.23	372.45	275.70	551.40	2,635.88	5,271.77	2.0	4.6	413.03	9.1	53.69	107.39	826.06	75.34	150.69	112.24	224.47	654.30	1,308.61
1118	3440.104	S-J51-25	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	184.64	369.27	275.70	551.40	2,634.29	5,268.59	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	120.04	240.07	159.87	319.73	932.38	1,864.77
1119	3440.105	S-J51-26	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	181.40	544.19	275.70	827.10	2,631.05	7,893.16	3.0	2.6	231.52	7.7	30.10	90.29	694.56	36.60	109.79	61.78	185.33	359.99	1,079.97
1120	3440.106	S-J51-27	ea	9	9	17.5	1,890.40	157.3	283.56	2,552.03	17,013.56	186.23	1,676.04	275.70	2,481.31	2,635.88	23,722.94	9.0	4.4	400.93	39.9	52.12	469.09	3,608.37	127.33	1,146.00	119.86	1,078.74	700.24	6,302.19
1121	3440.107	S-J51-28	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	190.78	381.57	275.70	551.40	2,640.44	5,280.88	2.0	4.4	400.08	8.9	52.01	104.02	800.15	88.65	177.29	111.87	223.74	652.60	1,305.20
1122	3440.108	S-J51-29	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	190.37	190.37	275.70	275.70	2,640.03	2,640.03	1.0	4.4	396.50	4.4	51.55	51.55	396.50	128.50	128.50	119.06	119.06	695.60	695.60
1123	3440.109	S-J51-31	ea	6	6	17.5	1,890.40	104.9	283.56	1,701.36	11,342.37	198.56	1,191.33	275.70	1,654.21	2,648.21	15,889.27	6.0	5.5	499.68	33.2	64.96	389.75	2,998.05	146.91	881.48	147.01	882.05	858.56	5,151.34
1124	3440.110	S-J51-32	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	198.56	198.56	275.70	275.70	2,648.21	2,648.21	1.0	4.4	396.50	4.4	51.55	51.55	396.50	148.58	148.58	123.10	123.10	719.72	719.72
1125	3440.111	S-J51-33	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	195.25	390.51	275.70	551.40	2,644.91	5,289.82	2.0	4.5	404.12	8.9	52.54	105.07	808.24	136.23	272.47	122.40	244.80	715.29	1,430.58
1126	3440.112	S-J51-34	ea	9	9	17.5	1,890.40	157.3	283.56	2,552.03	17,013.56	200.11	1,800.96	275.70	2,481.31	2,649.76	23,847.87	9.0	11.5	1,039.75	103.5	135.17	1,216.51	9,357.75	175.10	1,575.90	279.61	2,516.51	1,629.63	14,666.67
1127	3440.113	S-J51-35	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	192.43	1,347.04	275.70	1,929.91	2,642.09	18,494.63	7.0	11.5	1,039.75	80.5	135.17	946.17	7,278.25	175.10	1,225.70	279.61	1,957.28	1,629.63	11,407.41
1128	3440.114	S-J51-40	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	207.49	622.48	275.70	827.10	2,657.15	7,971.45	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	171.58	514.75	128.92	386.76	754.28	2,262.85
1129	3440.115	S-J51-41	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	225.63	451.27	275.70	551.40	2,675.29	5,350.58	2.0	4.5	404.12	8.9	52.54	105.07	808.24	204.55	409.09	136.15	272.30	797.35	1,594.71
1130	3440.116	S-J51-50	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	239.49	239.49	275.70	275.70	2,689.15	2,689.15	1.0	4.5	404.12	4.5	52.54	52.54	404.12	236.76	236.76	142.64	142.64	836.05	836.05
1131	3440.117	S-J52-20	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	313.09	313.09	482.48	482.48	4,599.99	4,599.99	1.0	6.4	578.11	6.4	75.15	75.15	578.11	328.27	328.27	201.95	201.95	1,183.48	1,183.48
1132	3440.118	S-J52-21	ea	3	3	30.6	3,308.19	91.8	496.23	1,488.69	9,924.58	312.16	936.49	482.48	1,447.43	4,599.06	13,797.18	3.0	3.2	286.05	9.5	37.19	111.56	858.14	325.86	977.59	132.83	398.49	781.93	2,345.78
1133	3440.119	S-J52-30	ea	4	4	30.6	3,308.19	122.4	496.23	1,984.92	13,232.77	322.07	1,288.28	482.48	1,929.91	4,608.97	18,435.87	4.0	14.5	1,307.32	57.8	169.95	679.81	5,229.27	337.84	1,351.35	375.25	1,501.02	2,190.36	8,761.45
1134	3440.120	S-J52-31	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	322.07	5,153.11	482.48	7,719.64	4,608.97	73,743.48	16.0	9.6	872.27	154.4	113.39	1,814.32	13,956.28	337.84	5,405.42	273.01	4,368.18	1,596.51	25,544.19
1135	3440.121	S-J52-32	ea	8	8	30.6	3,308.19	244.7	496.23	3,969.83	26,465.53	374.28	2,994.22	482.48	3,859.82	4,661.18	37,289.40	8.0	11.5	1,039.75	92.0	135.17	1,081.34	8,318.00	175.10	1,400.80	279.61	2,236.89	1,629.63	13,037.04
1136	3440.122	S-J52-33	ea	8	8	30.6	3,308.19	244.7	496.23	3,969.83	26,465.53	308.77	2,470.18	482.48	3,859.82	4,595.67	36,765.36	8.0	9.6	872.35	77.2	113.41	907.25	6,978.83	291.44	2,331.55	263.69	2,109.53	1,540.89	12,327.16
1137	3440.123	S-J52-34	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	305.44	4,887.12	482.48	7,719.64	4,592.34	73,477.49	16.0	9.6	872.27	154.4	113.39	1,814.32	13,956.28	278.00	4,447.93	260.96	4,175.41	1,524.62	24,393.94
1138	3440.124	S-J52-40	ea	4	4	30.6	3,308.19	122.4	496.23	1,984.92	13,232.77	352.98	1,411.94	482.48	1,929.91	4,639.88	18,559.53	4.0	4.4	399.96	17.7	51.99	207.98	1,599.84	400.93	1,603.71	174.71	698.85	1,027.59	4,110.38
1139	3440.125	S-J52-60	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	358.43	358.43	482.48	482.48	4,645.33	4,645.33	1.0	4.4	396.50	4.4	51.55	51.55	396.50	465.42	465.42	186.88	186.88	1,100.34	1,100.34
1140	3440.126	S-J52-70	ea	3	3	30.6	3,308.19	91.8	496.23	1,488.69	9,924.58	418.66	1,255.99	482.48	1,447.43	4,705.56	14,116.68	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	599.06	1,797.17	214.98	644.95	1,267.82	3,803.47
1141	3440.127	S-J53-01	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	153.59	460.76	241.24	723.72	2,297.03	6,891.10	3.0	2.2	200.79	6.7	26.10	78.31	602.37	116.35	349.06	70.61	211.84	413.86	1,241.57
1142	3440.128	S-J54-80	ea	2	2	32.8	3,544.49	65.5	531.67	1,063.35	7,088.98	619.41	1,238.82	516.94	1,033.88	5,212.52	10,425.03	2.0	2.6	231.52	5.1	30.10	60.20	463.04	59.39	118.79	66.36	132.73	387.37	774.75
1143	3440.129	S-J54-90	ea	6	6	32.8	3,544.49	196.6	531.67	3,190.04	21,266.95	638.42	3,830.52	516.94	3,101.64	5,231.52	31,389.15	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	1,357.40	8,144.41	367.60	2,205.61	2,178.52	13,071.13
1144	3440.130	S-J55-01	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	77.86	77.86	137.85	137.85	1,302.69	1,302.69	1.0	2.6	231.52	2.6	30.10	30.10	231.52	44.43	44.43	63.35	63.35	369.40	369.40
1145	3440.131	S-J56-40	ea	4	4	15.3	1,654.10	61.2	248.11	992.46	6,616.38	217.75	871.00	241.24	964.96	2,361.20	9,444.79	4.0	4.4	401.58	17.8	52.20	208.82	1,606.31	333.79	1,335.15	161.57	646.30	949.14	3,796.58
1146	3440.132	S-J57-30	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	417.80	417.80	310.16	310.16	3,173.67	3,173.67	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	564.29	564.29	419.88	419.88	2,456.73	2,456.73
1147	3440.133	S-J57-40	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	488.73	488.73	310.16	310.16	3,244.60	3,244.60	1.0	14.5	1,311.48	14.5	170.49	170.49	1,311.48	771.95	771.95	463.63	463.63	2,717.56	2,717.56
1148	3440.134	S-J58-05	ea	2	2	15.3	1,654.10	30.6	248.11	496.23	3,308.19	288.83	577.66	241.24	482.48	2,432.28	4,864.56	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	489.17	978.34	406.69	813.39	2,377.84	4,755.68
1149	3440.135	S-J59-04	ea	2	2	15.3	1,654.10	30.6	248.11	496.23	3,308.19	193.38	386.75	241.24	482.48	2,336.83	4,673.65	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	172.32	344.64	342.91	685.82	1,997.21	3,994.41
1150	3440.136	S-J59-05	ea	6	6	15.3	1,654.10	91.8	248.11	1,488.69	9,924.58	202.13	1,212.78	241.24	1,447.43	2,345.58	14,073.48	6.0	14.4	1,303.15	86.5	169.41	1,016.46	7,818.90	194.15	1,164.91	345.34	2,072.07	2,012.06	12,072.33
1151	3440.137	S-J60-10	ea	2	2	19.7	2,126.69	39.3	319.00	638.01	4,253.39	382.94	765.88	310.16	620.33	3,138.80	6,277.61	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	352.94	705.88	276.48	552.96	1,617.14	3,234.27
1152	3440.138	S-J60-11	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	456.39	456.39	310.16	310.16	3,212.25	3,212.25	1.0	7.3	659.89	7.3	85.79	85.79	659.89	589.49	589.49	273.76	273.76	1,608.93	1,608.93
1153	3440.139	S-J60-21	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	460.33	1,380.98	310.16	930.49	3,216.19	9,648.57	3.0	5.1	461.65	15.3	60.01	180.04	1,384.95	183.44	550.31	145.43	436.28	850.53	2,551.58
1154	3440.140	S-J60-22	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	463.73	1,391.18	310.16	930.49	3,219.59	9,658.77	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	610.85	1,832.56	279.37	838.11	1,642.18	4,926.53
1155	3440.141	S-J60-40	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	483.82	1,451.45	310.16	930.49	3,239.68	9,719.04	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	990.48	2,971.43	355.80	1,067.39	2,098.22	6,294.67
1156	3440.142	S-J61-01	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	309.67	309.67	275.70	275.70	2,759.32	2,759.32	1.0	4.4	396.50	4.4	51.55	51.55	396.50	521.94	521.94	198.26	198.26	1,168.24	1,168.24
1157	3440.143	S-J62-20	ea	6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	162.54	975.21	172.31	1,033.88	1,693.57	10,161.42	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	145.07	870.44	123.53	741.18	722.12	4,332.73
1158	3440.144	S-J63-20	ea	3	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	318.06	954.17	379.09	1,137.27	3,686.33	11,059.00	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	345.01	1,035.03	377.03	1,131.08	2,200.87	6,602.62
1159	3440.145	S-J63-30	ea	3	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	322.63	967.88	379.09	1,137.27	3,690.90	11,072.71	3.0	5.1	461.65	15.3	60.01	180.04	1,384.95	440.63	1,321.90	197.21	591.63	1,159.51	3,478.52
1160	3440.146	S-J63-40	ea	2	2	24.0	2,599.29	48.1	389.89	779.79	5,198.59	328.36	656.72	379.09	758.18	3,696.64	7,393.28	2.0	5.1	461.65	10.2	60.01	120.03	923.30	18.75	37.49	112.26	224.53	652.67	1,305.35
1161	3440.147	S-J63-50	ea	6	6	24.0	2,599.29	144.2	389.89	2,339.36	15,595.76	335.08	2,010.47	379.09	2,274.54	3,703.36	22,220.14	6.0	5.1	461.65	30.7	60.01	360.09	2,769.90	202.75	1,216.53	149.31	895.88	873.73	5,242.40

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
1162	3440.148	S-J63-60	ea	2	2	24.0	2,599.29	48.1	389.89	779.79	5,198.59	350.03	700.05	379.09	758.18	3,718.30	7,436.61	2.0	5.7	517.11	11.4	67.22	134.45	1,034.21	435.96	871.91	209.30	418.60	1,229.59	2,459.17
1163	3440.149	S-J64-10	ea	3	3	4.4	472.60	13.1	70.89	212.67	1,417.80	192.48	577.44	68.93	206.78	804.89	2,414.68	3.0	5.1	461.65	15.3	60.01	180.04	1,384.95	126.61	379.83	133.99	401.96	782.26	2,346.78
1164	3440.150	S-J64-20	ea	8	8	4.4	472.60	35.0	70.89	567.12	3,780.79	202.15	1,617.22	68.93	551.40	814.57	6,516.53	8.0	4.4	400.13	35.4	52.02	416.14	3,201.06	74.03	592.22	108.94	871.52	635.12	5,080.94
1165	3440.151	S-K50-10	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,179.96	1,179.96	482.48	482.48	5,466.86	5,466.86	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	3,075.09	3,075.09	1,305.26	1,305.26	7,679.54	7,679.54
1166	3440.152	S-L50-20	ea	8	8	13.1	1,417.80	104.9	212.67	1,701.36	11,342.37	419.99	3,359.89	206.78	1,654.21	2,257.23	18,057.83	8.0	4.4	400.38	35.4	52.05	416.39	3,203.00	252.05	2,016.39	144.84	1,158.71	849.31	6,794.49
1167	3440.153	S-L50-21	ea	1	1	13.1	1,417.80	13.1	212.67	212.67	1,417.80	399.59	399.59	206.78	206.78	2,236.83	2,236.83	1.0	4.4	396.50	4.4	51.55	51.55	396.50	221.58	221.58	137.79	137.79	807.42	807.42
1168	3440.154	S-L50-30	ea	16	16	13.1	1,417.80	209.7	212.67	3,402.71	22,684.74	691.55	11,064.84	206.78	3,308.42	2,528.79	40,460.71	16.0	4.4	400.54	70.9	52.07	833.13	6,408.67	254.54	4,072.64	145.38	2,326.06	852.53	13,640.49
1169	3440.155	S-L50-40	ea	8	8	13.1	1,417.80	104.9	212.67	1,701.36	11,342.37	453.36	3,626.87	206.78	1,654.21	2,290.60	18,324.81	8.0	5.1	461.65	40.9	60.01	480.12	3,693.20	130.66	1,045.28	134.80	1,078.43	787.13	6,297.03
1170	3440.156	S-L51-01	ea	16	16	11.5	1,240.57	183.5	186.09	2,977.37	19,849.15	812.95	13,007.23	180.93	2,894.87	2,420.54	38,728.62	16.0	11.5	1,039.75	184.0	135.17	2,162.68	16,636.00	291.83	4,669.34	303.11	4,849.76	1,769.86	28,317.79
1171	3440.157	S-L52-20	ea	4	4	19.7	2,126.69	78.7	319.00	1,276.02	8,506.78	1,238.44	4,953.75	310.16	1,240.66	3,994.30	15,977.20	4.0	4.4	399.96	17.7	51.99	207.98	1,599.84	1,355.60	5,422.40	366.91	1,467.66	2,174.47	8,697.88
1172	3440.158	S-L52-21	ea	5	5	15.3	1,654.10	76.5	248.11	1,240.57	8,270.48	912.54	4,562.69	241.24	1,206.19	3,055.99	15,279.94	5.0	4.4	399.27	22.1	51.90	259.52	1,996.33	805.68	4,028.39	256.04	1,280.19	1,512.89	7,564.44
1173	3440.159	S-L52-40	ea	9	9	19.7	2,126.69	177.0	319.00	2,871.04	19,140.25	1,215.32	10,937.87	310.16	2,791.48	3,971.18	35,740.64	9.0	4.4	399.57	39.8	51.94	467.50	3,595.17	1,176.49	10,588.39	330.76	2,976.87	1,958.77	17,628.93
1174	3440.160	S-L52-41	ea	9	9	19.7	2,126.69	177.0	319.00	2,871.04	19,140.25	1,282.59	11,543.28	310.16	2,791.48	4,038.45	36,346.05	9.0	4.4	399.57	39.8	51.94	467.50	3,596.17	1,270.50	11,434.54	349.69	3,147.22	2,071.71	18,645.43
1175	3440.161	S-L53-01	ea	3	3	39.3	4,253.39	118.0	638.01	1,914.03	12,760.17	1,776.24	5,328.71	620.33	1,860.99	7,287.96	21,863.89	3.0	25.7	2,326.28	77.2	302.42	907.25	6,978.84	1,342.65	4,027.95	817.02	2,451.05	4,788.36	14,365.09
1176	3440.162	S-L53-02	ea	1	1	39.3	4,253.39	39.3	638.01	638.01	4,253.39	1,740.02	1,740.02	620.33	620.33	7,251.75	7,251.75	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	291.83	291.83	411.60	411.60	2,400.02	2,400.02
1177	3440.163	S-L54-50	ea	6	6	20.2	2,185.77	121.3	327.87	1,967.19	13,114.62	1,417.95	8,507.72	318.78	1,912.68	4,250.37	25,502.21	6.0	16.6	1,501.40	99.7	195.18	1,171.09	9,008.40	466.93	2,801.60	446.86	2,681.14	2,610.37	15,662.23
1178	3440.164	S-L54-51	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	1,325.20	1,325.20	310.16	310.16	4,081.06	4,081.06	1.0	4.4	396.50	4.4	51.55	51.55	396.50	1,124.14	1,124.14	319.50	319.50	1,891.69	1,891.69
1179	3440.165	S-L54-61	ea	2	2	22.4	2,422.07	44.8	363.31	726.62	4,844.14	1,434.78	2,869.56	353.24	706.49	4,573.40	9,146.80	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,146.91	2,293.81	325.88	651.76	1,929.44	3,858.88
1180	3440.166	S-L54-62	ea	1	1	21.8	2,362.99	21.8	354.45	354.45	2,362.99	1,385.30	1,385.30	344.63	344.63	4,447.37	4,447.37	1.0	4.4	396.50	4.4	51.55	51.55	396.50	1,163.04	1,163.04	327.33	327.33	1,938.42	1,938.42
1181	3440.167	S-L54-70	ea	3	3	31.1	3,367.27	93.4	505.09	1,515.27	10,101.80	1,675.16	5,025.48	491.09	1,473.28	6,038.61	18,115.83	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	1,406.72	4,220.17	377.58	1,132.75	2,238.09	6,714.27
1182	3440.168	S-L54-71	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.38	1,588.87	3,177.74	482.48	964.96	5,875.77	11,751.54	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,295.21	2,590.41	355.73	711.47	2,107.59	4,215.19
1183	3440.169	S-L54-80	ea	6	6	33.9	3,662.64	203.2	549.40	3,296.38	21,975.85	1,743.42	10,460.52	534.17	3,205.03	6,489.63	38,937.77	6.0	4.4	400.13	26.6	52.02	312.10	2,400.80	1,408.37	8,450.24	377.58	2,265.47	2,238.10	13,428.61
1184	3440.170	S-L54-90	ea	2	2	32.2	3,485.42	64.5	522.81	1,045.62	6,970.83	1,701.39	3,402.79	508.32	1,016.65	6,217.95	12,435.89	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,342.84	2,685.68	365.32	730.65	2,164.82	4,329.63
1185	3440.171	S-L55-01	ea	15	15	14.2	1,535.95	213.0	230.39	3,455.88	23,039.19	727.19	10,907.78	224.01	3,360.11	2,717.53	40,762.97	15.0	4.4	400.38	66.4	52.05	780.73	6,005.63	664.58	9,968.68	227.89	3,418.37	1,344.89	20,173.41
1186	3440.172	S-L56	ea	4	4	48.1	5,198.59	192.3	779.79	3,119.15	20,794.35	3,953.64	15,814.55	758.18	3,032.72	10,690.19	42,760.76	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	3,983.06	15,932.24	1,348.60	5,394.41	7,960.36	31,841.43
1187	3440.173	S-L57	ea	4	4	131.1	14,177.96	524.4	2,126.69	8,506.78	56,711.86	9,546.38	38,185.51	2,067.76	8,271.04	27,918.80	111,675.20	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	9,322.09	37,288.35	2,423.48	9,693.94	14,374.27	57,497.07
1188	3440.174	S-L59-10	ea	5	5	13.7	1,476.87	68.3	221.53	1,107.65	7,384.36	524.84	2,624.18	215.39	1,076.96	2,438.63	12,193.15	5.0	7.3	663.22	36.7	86.22	431.10	3,316.12	390.74	1,953.70	234.53	1,172.67	1,374.72	6,873.58
1189	3440.175	S-L59-20	ea	2	2	14.2	1,535.95	28.4	230.39	460.78	3,071.89	524.30	1,048.60	224.01	448.01	2,514.65	5,029.30	2.0	4.5	404.12	8.9	52.54	105.07	808.24	383.50	767.00	172.18	344.35	1,012.33	2,024.66
1190	3440.176	S-L59-30	ea	6	6	14.7	1,595.02	88.5	239.25	1,435.52	9,570.13	3,040.83	18,244.99	232.62	1,395.74	5,107.73	30,646.38	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	389.26	2,335.58	172.69	1,036.14	1,015.47	6,092.84
1191	3440.177	S-L60	ea	4	4	41.0	4,430.61	163.9	664.59	2,658.37	17,722.46	3,022.85	12,091.40	646.18	2,584.70	8,764.23	35,056.93	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	3,227.82	12,911.28	1,059.88	4,239.51	6,259.22	25,036.86
1192	3440.178	S-L61	ea	4	4	54.1	5,848.41	216.3	877.26	3,509.05	23,393.64	3,843.36	15,373.45	852.95	3,411.81	11,421.99	45,687.95	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	4,008.65	16,034.59	1,217.07	4,868.29	7,197.24	28,788.96
1193	3440.179	S-L62	ea	4	4	56.8	6,143.78	227.2	921.57	3,686.27	24,575.14	6,124.27	24,497.08	896.03	3,584.12	14,085.65	56,342.61	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	6,824.44	27,297.78	1,783.97	7,135.87	10,579.93	42,319.73
1194	3440.180	S-L64-10	ea	2	2	21.8	2,362.99	43.7	354.45	708.90	4,725.99	1,196.80	2,393.59	344.63	689.25	4,258.87	8,517.73	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	1,010.85	2,021.71	511.73	1,023.46	3,004.56	6,009.11
1195	3440.181	S-L65-01	ea	5	5	24.0	2,599.29	120.2	389.89	1,949.47	12,996.47	1,220.55	6,102.74	379.09	1,895.45	4,588.82	22,944.12	5.0	14.5	1,309.82	72.4	170.28	851.38	6,549.08	1,005.26	5,026.30	510.21	2,551.06	2,995.56	14,977.82
1196	3440.182	S-L65-02	ea	1	1	24.0	2,599.29	24.0	389.89	389.89	2,599.29	1,142.95	1,142.95	379.09	379.09	4,511.23	4,511.23	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	466.93	466.93	446.86	446.86	2,610.37	2,610.37
1197	3440.183	S-L66-01	ea	2	2	13.7	1,476.87	27.3	221.53	443.06	2,953.74	841.79	1,683.59	215.39	430.78	2,755.59	5,511.18	2.0	4.5	404.12	8.9	52.54	105.07	808.24	724.50	1,448.99	240.84	481.68	1,421.99	2,843.98
1198	3440.184	S-L67-10	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	958.04	958.04	224.01	224.01	2,948.39	2,948.39	1.0	11.5	1,039.75	11.5	135.17	135.17	1,039.75	291.83	291.83	303.11	303.11	1,769.86	1,769.86
1199	3440.185	S-L67-20	ea	2	2	14.2	1,535.95	28.4	230.39	460.78	3,071.89	785.19	1,570.38	224.01	448.01	2,775.54	5,551.07	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	529.81	1,059.63	242.36	484.72	1,424.65	2,849.31
1200	3440.186	S-L67-21	ea	3	3	14.2	1,535.95	42.6	230.39	691.18	4,607.84	814.73	2,444.18	224.01	672.02	2,805.07	8,415.22	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	568.30	1,704.91	270.80	812.41	1,591.05	4,773.16
1201	3440.187	S-L67-22	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	929.29	929.29	224.01	224.01	2,919.63	2,919.63	1.0	6.4	578.11	6.4	75.15	75.15	578.11	728.91	728.91	282.61	282.61	1,664.78	1,664.78
1202	3440.188	S-L71-20	ea	24	24	18.6	2,008.55	445.7	301.28	7,230.76	48,205.08	999.85	23,996.30	292.93	7,030.39	3,602.61	86,462.53	24.0	6.4	574.73	152.6	74.72	1,793.16	13,793.56	1,095.14	26,283.33	355.55	8,533.20	2,100.14	50,403.25
1203	3440.189	S-L71-21	ea	13	13	18.6	2,008.55	241.4	301.28	3,916.66	26,111.09	1,077.87	14,012.25	292.93	3,808.13	3,680.63	47,848.13	13.0	11.5	1,039.75	149.5	135.17	1,757.18	13,516.75	291.83	3,793.84	303.11	3,940.43	1,769.86	23,008.20
1204	3440.190	S-L72-20	ea	2	2	19.7	2,126.69	39.3	319.00	638.01	4,253.39	1,419.54	2,839.09	310.16	620.33	4,175.41	8,350.81	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	1,142.14	2,284.28	435.36	870.73	2,565.22	5,130.45
1205	3440.191	S-L72-30	ea	8	8	19.7	2,126.69	157.3	319.00	2,552.03	17,013.56	1,337.41	10,699.31	310.16	2,481.31	4,093.28	32,746.22	8.0	9.6	872.35	77.2	113.41	907.25	6,978.83	1,240.78	9,926.21	454.82	3,638.53	2,681.35	21,450.82
1206	3440.192	S-L72-40	ea	4	4	19.7	2,126.69	78.7	319.00	1,276.02	8,506.78	1,468.87	5,875.48	310.16	1,240.66	4,224.73	16,898.93	4.0	9.6	871.17	38.5	113.25	453.01	3,484.70	1,416.27	5,665.08	489.87	1,959.48	2,890.57	11,562.26
1207	3440.193	S-L72-41	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	1,527.47	1,527.47	310.16	310.16	4,283.33	4,283.33	1.0	9.7	874.78	9.7	113.72	113.72	874.78	1,498.06	1,498.06	507.18	507.18	2,993.75	2,993.75
1208	3440.194	S-L73-20	ea	8	8	14.2	1,535.95	113.6	230.39	1,843.14	12,287.57	1,174.15	9,393.18	224.01	1,792.06	3,164.49	25,315.94	8.0	16.6	1,501.40	132.9	195.18	1,561.46	12,011.20	291.83	2,334.67	411.60	3,292.82	2,400.02	19,200.15
1209	3440.195	S-L75-20	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	402.69	402.69	224.01	224.01	2,393.04	2,393.04	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	466.93	466.93	446.86	446.86	2,610.37	2,610.37
1210	3440.196	S-L76-30	ea	4	4	14.7	1,595.02	59.0	239.25	957.01	6,380.08	807.70	3,230.80	232.62	930.49	2,874.60	11,498.39	4.0	16.6	1,501.40	66.4	195.18	780.73	6,005.60	466.93	1,867.74	446.86	1,787.42	2,610.37	10,441.49
1211	3440.197	S-L77-40	ea	1	1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	811.14	811.14	241.24	241.24	2,954.59	2,954.59	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	466.93	466.93	446.86	446.86	2,610.37	2,610.37
1212	3440.198	S-L78-20	ea	1	1	14.7	1,595.02	14.7	239.25	239.25	1,595.02	1,330.30	1,330.30	232.62	232.62	3,397.20	3,397.20	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	466.93	466.93	446.86	446.86	2,610.37	2,610.37
1213	3440.199	S-L79	ea	1	1	22.9	2,481.14	22.9	372.17	372.17	2,481.14	1,258.50	1,258.50	361.86	361.86	4,473.67	4,473.67	1.0	6.4	578.11	6.4	75.15	75.15	578.11	1,312.14	1,312.14	400.03	400.03	2,365.44	2,365.44
1214	3440.200	S-M50-01	ea	9	9	22.4	2,422.07	201.6	363.31	3,269.79	21,798.62	1,789.52	16,105.65	353.24	3,179.18	4,928.14	44,353.24	9.0	22.1	1,996.33	198.7	259.52	2,335.71	17,966.97	466.93	4,202.41	563.17	5,068.52	3,285.96	29,573.61
1215	3440.201	S-M50-02	ea	9	9	22.4	2,422.07	201.6	363.31	3,269.79	21,798.62	1,898.48	17,086.28	353.24	3,179.18	5,037.10	45,333.88	9.0	22.1	1,996.33	198.7	259.52	2,335.71	17,966.97	466.93	4,202.41	563.17	5,068.52	3,285.96	29,573.61
1216	3440.202	S-M51-01	ea	2	2	59.0	6,380.08	118.0	957.01	1,914.03	12,760.17	4,025.68	8,051.35	930.49	1,860.99	12,293.26	24,586.53	2.0	32.3	2,919.64	64.6	379.55	759.11	5,839.28	2,444.34	4,888.68	1,178.26	2,356.52	6,921.80	13,843.59
1217	3440.203	S-M52-01	ea	3	3	28.9	3,130.97	86.8	469.65	1,408.94	9,392.90	2,875.58	8,626.75	456.63	1,369.89	6,932.83	20,798.48	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	466.93	1,400.80	563.17	1,689.51	3,285.96	9,857.87
1218	3440.204	S-M52-02	ea	3	3	28.9	3,130.97	86.8	469.65	1,408.94	9,392.90	2,666.94	8,000.82	456.63	1,369.89	6,724.18	20,172.55	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	1,080.23	3,240.69	686.64	2,059.92	4,022.72	12,068.16
1219	3440.205	S-M53-08	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	420.92	3,367.35	275.70	2,205.61	2,870.57	22,964.60	8.0	9.7	874.43	77.4	113.68	909.41	6,995.46	298.55	2,388.44	265.61	2,124.88	1,552.27	12,418.19
1220	3440.206	S-M53-09	ea	16	16	17.5	1,890.40	279.7	283.56	4,536.95	30,246.33	461.32	7,381.10	275.70	4,411.22	2,910.98	46,575.60	16.0	12.9	1,163.02	205.8	151.19	2,419.09	18,608.37	369.94	5,919.09	347.81	5,564.92	2,031.97	32,511.47
1221	3440.207	S-M54-01	ea	5	5	21.8	2,362.99	109.2	354.45	1,772.25	11,814.97	452.01	2,260.05	344.63	1,723.13	3,514.08	17,570.40	5.0	16.6	1,501.40	83.1	195.18	975.91	7,507.00	1,209.34	6,046.68	596.31	2,981.55	3,502.23	17,511.14
1222	3440.208	S-M54-02	ea	4	4	21.8	2,362.99	87.4	354.45	1,417.80	9,451.98	621.82	2,487.27	344.63	1,378.51	3,683.89	14,735.55	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	820.93	3,283.70	711.98	2,847.92	4,161.60	16,646.41
1223	3440.209	S-M55-02	ea	3	3	6.6	708.90	19.7	106.33	319.00	2,126.69	261.51	784.53	103.39	310.16	1,180.13	3,540.40	3.0	3.1	280.05	9.3	36.41	109.22	840.15	101.96	305.87	86.35	259.04	504.76	1,514.28
1224	3440.210	S-M55-03	ea	10	10	6.6	708.90	65.5	106.33	1,063.35	7,088.98	261.59	2,615.86	103.39	1,033.88	1,180.21	11,802.07	10.0	2.6	231.52	25.6	30.10	300.98	2,315.20	432.09	4,320.89	141.41	1,414.11	835.12	8,351.18
1225	3440.211	S-M55-05	ea	6	6	6.6	708.90	39.3	106.33	638.01	4,253.39	262.47	1,574.81	103.39	620.33	1,181.09	7,086.53	6.0	5.1	461.65	30.7	60.01	360.09	2,769.90	561.21	3,367.25	221.48	1,328.87	1,304.35	7,826.11
1226	3440.212	S-M55-06	ea	40	40	6.6	708.90	262.2	106.33	4,253.39	28,355.93	265.16	10,606.47	103.39	4,135.52	1,183.78	47,351.31	40.0	4.7	426.47	188.7	55.44	2,217.66	17,058.91	111.27	4,450.72	122.63	4,905.13	715.81	28,632.42
1227	3440.213	S-M55-07	ea	3	3	6.6	708.90	19.7	106.33	319.00	2,126.69	272.23	816.68	103.39	310.16	1,190.85	3,572.54	3.0	9.7	874.78	29.0	113.72	341.16	2,624.34	135.08	405.25	232.77	698.30	1,356.35	4,069.06
1228	3440.214	S-M55-08	ea	10	10	6.6	708.90	65.5	106.33	1,063.35	7,088.98	305.13	3,051.28	103.39	1,033.88	1,223.75	12,237.49	10.0	9.7	873.07	96.6	113.50	1,135.00	8,730.74	198.04	1,980.41	245.06	2,450.55	1,429.67	14,296.70
1229	3440.215	S-M55-09	ea	7	7	6.6	708.90	45.9	106.33	744.34	4,962.29	322.62	2,258.35	103.39	723.72	1,241.24	8,688.70	7.0	14.5	1,308.11	101.3	170.05	1,190.38	9,156.77	260.74	1,825.18	359.92	2,519.44	2,098.82	14,691.76
1230	3440.216	S-M56-01	ea	20	20	6.6	708.90	131.1	106.33	2,126.69	14,177.96	313.11	6,262.22	103.39	2,067.76	1,231.73	24,634.64	20.0	7.3	664.06	146.9	86.33	1,726.55	13,281.13	198.15	3,963.07	195.96	3,919.15	1,144.49	22,889.90
1231	3440.217	S-M56-04	ea	2	2	6.6	708.90	13.1	106.33	212.67	1,417.80	357.67	715.34	103.39	206.78	1,276.29	2,552.58	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	301.07	602.15	368.83	737.66	2,151.88	4,303.75
1232	3440.218	S-M57-05	ea	4	4	6.6	708.90	26.2	106.33	425.34	2,835.59	264.33	1,057.32	103.39	413.55	1,182.95	4,731.80	4.0	4.4	396.50	17.6	51.55	206.18	1,586.00	111.64	446.58	115.66	462.64	675.35	2,701.39
1233	3440.219	S-M58-01	ea	4	4	7.6	827.05	30.6	124.06	496.23	3,308.19	262.08	1,048.33	120.62	482.48	1,333.81	5,335.23	4.0	2.6	231.52	10.2	30.10	120.39	926.08	193.00	771.98	93.27	373.08	547.88	2,191.53
1234	3440.220	S-M58-02	ea	3	3	7.6	827.05	22.9	124.06	372.17	2,481.14	262.10	786.29	120.62	361.86	1,333.82	4,001.46	3.0	2.6	231.52	7.7	30.10	90.29	694.56	14.19	42.58	57.27	171.81	333.08	999.25
1235	3440.221	S-M58-05	ea	2	2	7.6	827.05	15.3	124.06	248.11	1,654.10	410.56	821.12	120.62	241.24	1,482.29	2,964.57	2.0	5.1	461.65	10.2	60.01	120.03	923.30	15.35	30.70	111.59	223.17	648.60	1,297.20
1236	3440.222	S-M58-06	ea	9	9	7.6	827.05	68.8	124.06	1,116.51	7,443.43	484.81	4,363.26	120.62	1,085.57	1,556.53	14,008.78	9.0	4.4	401.35	40.0	52.17	469.57	3,612.11	403.05	3,627.47	175.47	1,579.19	1,032.04	9,288.34
1237	3440.223	S-M58-07	ea	46	46	7.6	827.05	351.8	124.06	5,706.63	38,044.21	567.78	26,117.87	120.62	5,548.49	1,639.50	75,417.20	46.0	9.7	872.85	444.1	113.47	5,219.63	40,151.02	532.45	24,492.63	312.33	14,367.09	1,831.10	84,230.37
1238	3440.224	S-M58-08	ea	42	42	7.6	827.05	321.2	124.06	5,210.40	34,736.01	291.55	12,244.90	120.62	5,066.02	1,363.27	57,257.33	42.0	9.7	872.80	405.5	113.46	4,765.49	36,657.62	183.38	7,702.06	242.04	10,165.69	1,411.69	59,290.86
1239	3440.225	S-M59-01	ea	3	3	6.6	708.90	19.7	106.33	319.00	2,126.69	230.19	690.56	103.39	310.16	1,148.81	3,446.42	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	348.52	1,045.55	377.73	1,133.19	2,205.08	6,615.25
1240	3440.226	S-M60-01	ea	1	1	39.3	4,253.39	39.3	638.01	638.01	4,253.39	815.86	815.86	620.33	620.33	6,327.58	6,327.58	1.0	22.1	1,996.33	22.1	259.52	259.52	1,996.33	13.17	13.17	471.83	471.83	2,740.85	2,740.85
1241	3440.227	S-M61-20	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,127.95	1,127.95	482.48	482.48	5,414.85	5,414.85	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	2,325.41	2,325.41	774.42	774.42	4,572.40	4,572.40
1242	3440.228	S-M61-21	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.38	921.69	1,843.39	482.48	964.96	5,208.59	10,417.19	2.0	9.7	874.78	19.4	113.72	227.44	1,749.56	1,202.02	2,404.03	447.58	895.16	2,638.10	5,276.20
1243	3440.229	S-M61-30	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.38	1,220.51	2,441.03	482.48	964.96	5,507.41	11,014.82	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	2,199.86	4,399.71	648.31	1,296.62	3,835.89	7,671.77
1244	3440.230	S-M61-31	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	807.87	12,925.89	482.48	7,719.64	5,094.77	81,516.26	16.0	11.8	1,064.10	188.3	138.33	2,213.33	17,025.64	1,275.10	20,401.57	506.79	8,108.64	2,984.32	47,749.18
1245	3440.231	S-M61-40	ea	16	16	32.8	3,544.49	524.4	531.67	8,506.78	56,711.86	1,277.31	20,437.04	516.94	8,271.04	5,870.42	93,926.72	16.0	14.5	1,309.49	231.8	170.23	2,723.73	20,951.76	2,211.45	35,383.14	752.97	12,047.51	4,444.13	71,106.14
1246	3440.232	S-M61-41	ea	4	4	32.8	3,544.49	131.1	531.67	2,126.69	14,177.96	1,277.31	5,109.26	516.94	2,067.76	5,870.42	23,481.68	4.0	9.6	871.17	38.5	113.25	453.01	3,484.70	2,211.45	8,845.79	649.96	2,599.84	3,845.83	15,383.34
1247	3440.233	S-M61-42	ea	5	5	32.8	3,544.49	163.9	531.67	2,658.37	17,722.46	864.00	4,320.00	516.94	2,584.70	5,457.10	27,285.52	5.0	9.6	871.17	48.2	113.25	566.26	4,355.87	1,431.04	7,155.22	492.84	2,464.22	2,908.31	14,541.57
1248	3440.234	S-M62-30	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,220.44	1,220.44	482.48	482.48	5,507.34	5,507.34	1.0	9.7	874.78	9.7	113.72	113.72	874.78	2,337.01	2,337.01	676.09	676.09	4,001.59	4,001.59
1249	3440.235	S-M62-31	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	807.87	807.87	482.48	482.48	5,094.77	5,094.77	1.0	9.7	874.09	9.7	113.63	113.63	874.09	1,274.92	1,274.92	462.10	462.10	2,724.75	2,724.75
1250	3440.236	S-M62-32	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,260.12	1,260.12	482.48	482.48	5,547.02	5,547.02	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	2,187.52	2,187.52	746.66	746.66	4,406.74	4,406.74
1251	3440.237	S-M62-40	ea	2	2	32.8	3,544.49	65.5	531.67	1,063.35	7,088.98	1,277.31	2,554.63	516.94	1,033.88	5,870.42	11,740.84	2.0	14.4	1,303.15	28.8	169.41	338.82	2,606.30	2,211.45	4,422.89	751.48	1,502.97	4,435.49	8,870.98
1252	3440.238	S-M62-41	ea	3	3	32.8	3,544.49	98.3	531.67	1,595.02	10,633.47	865.90	2,597.70	516.94	1,550.82	5,459.00	16,377.01	3.0	9.7	874.78	29.0	113.72	341.16	2,624.34	1,246.94	3,740.81	456.61	1,369.84	2,692.05	8,076.16
1253	3440.239	S-M63-05	ea	10	10	7.6	827.05	76.5	124.06	1,240.57	8,270.48	264.90	2,649.01	120.62	1,206.19	1,336.63	13,366.26	10.0	5.1	461.65	51.1	60.01	600.15	4,616.50	13.42	134.24	111.20	1,112.00	646.29	6,462.89
1254	3440.240	S-M66-01	ea	16	16	14.2	1,535.95	227.2	230.39	3,686.27	24,575.14	283.68	4,538.81	224.01	3,584.12	2,274.02	36,384.34	16.0	9.7	873.05	154.5	113.50	1,815.94	13,968.77	843.00	13,487.95	374.90	5,998.33	2,204.44	35,271.00
1255	3440.241	S-M66-02	ea	12	12	14.2	1,535.95	170.4	230.39	2,764.70	18,431.35	317.72	3,812.63	224.01	2,688.09	2,308.06	27,696.78	12.0	9.7	873.05	115.9	113.50	1,361.96	10,476.58	887.17	10,645.99	383.79	4,605.48	2,257.50	27,090.01
1256	3440.242	S-M67-20	ea	2	2	38.2	4,135.24	76.5	620.29	1,240.57	8,270.48	1,440.11	2,880.22	603.10	1,206.19	6,798.73	13,597.46	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	2,306.44	4,612.89	669.77	1,339.54	3,963.94	7,927.87
1257	3440.243	S-M67-40	ea	3	3	50.3	5,434.89	150.8	815.23	2,445.70	16,304.66	1,532.86	4,598.57	792.64	2,377.93	8,575.62	25,726.85	3.0	9.7	874.32	29.0	113.66	340.98	2,622.96	2,954.85	8,864.56	800.36	2,401.09	4,743.20	14,229.60
1258	3310.020	Mechanical Shaft Plaftorm/Staging	LS	1	1	174.8	18,903.95	174.8	2,835.59	2,835.59	18,903.95	3,843.30	3,843.30	2,757.01	2,757.01	28,339.86	28,339.86	1.0	1173.4	106,078.60	1,173.4	13,790.22	13,790.22	106,078.60	43,599.98	43,599.98	33,707.83	33,707.83	197,176.62	197,176.62
1258a	Added	House Keeping pads for MECH Equipment	ea	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	3527.4	318,895.68	3,527.38	41,456.44	41,456.44	318,895.68	6,111.00	6,111.00	76,175.49	76,175.49	442,638.61	442,638.61
1258b	Added	Pipe Supports With no Pay Item	ea	0	2,144	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,144.0	4.4	401.65	9,525.28	52.21	111,948.26	861,140.48	63.61	136,385.14	107.20	229,838.51	624.68	1,339,312.42
B&M-0326	Added	S-A51	ea	0	3	2.2	236.30	6.6	35.44	106.33	708.90	17.38	52.15	34.46	103.39	323.59	970.77	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0327	Added	S-C52-02	ea	0	1	2.2	236.30	2.2	35.44	35.44	236.30	24.83	24.83	34.46	34.46	331.04	331.04	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0328	Added	S-E52-05	ea	0	1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	383.65	383.65	241.24	241.24	2,527.10	2,527.10	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0329	Added	S-E52-07	ea	0	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	470.56	1,411.67	241.24	723.72	2,614.00	7,842.01	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0330	Added	S-E52-08	ea	0	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	557.46	1,672.39	241.24	723.72	2,700.91	8,102.74	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0331	Added	S-H54-01	ea	0	7	19.7	2,126.69	137.6	319.00	2,233.03	14,886.86	422.14	2,954.95	310.16	2,171.15	3,178.00	22,245.99	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0332	Added	S-H54-02	ea	0	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	422.14	1,266.41	310.16	930.49	3,178.00	9,534.00	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0333	Added	S-H54-03	ea	0	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	422.14	1,266.41	310.16	930.49	3,178.00	9,534.00	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0334	Added	S-H55-01	ea	0	3	10.9	1,181.50	32.8	177.22	531.67	3,544.49	376.20	1,128.59	172.31	516.94	1,907.23	5,721.69	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0335	Added	S-J51-202	ea	0	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	193.97	387.95	275.70	551.40	2,643.63	5,287.26	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0336	Added	S-J65-01	ea	0	1	10.9	1,181.50	10.9	177.22	177.22	1,181.50	263.88	263.88	172.31	172.31	1,794.92	1,794.92	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0337	Added	S-L54-30	ea	0	6	20.2	2,185.77	121.3	327.87	1,967.19	13,114.62	1,396.95	8,381.68	318.78	1,912.68	4,229.36	25,376.17	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0338	Added	S-L58-10	ea	0	45	6.6	708.90	295.0	106.33	4,785.06	31,900.42	240.37	10,816.55	103.39	4,652.46	1,158.99	52,154.50	45.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0339	Added	S-L73	ea	0	8	14.2	1,535.95	113.6	230.39	1,843.14	12,287.57	1,167.02	9,336.16	224.01	1,792.06	3,157.37	25,258.93	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0340	Added	S-M53-07	ea	0	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	420.92	3,367.35	275.70	2,205.61	2,870.57	22,964.60	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0341	Added	S-M56-03	ea	0	2	6.6	708.90	13.1	106.33	212.67	1,417.80	385.20	770.39	103.39	206.78	1,303.82	2,607.63	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0342	Added	S-M57-06	ea	0	6	6.6	708.90	39.3	106.33	638.01	4,253.39	385.20	2,311.17	103.39	620.33	1,303.82	7,822.90	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0343	Added	S-M65	ea	0	3	13.1	1,417.80	39.3	212.67	638.01	4,253.39	1,107.75	3,323.24	206.78	620.33	2,944.99	8,834.97	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0344	Added	S-M68	ea	0	4	13.1	1,417.80	52.4	212.67	850.68	5,671.19	404.12	1,616.48	206.78	827.10	2,241.36	8,965.44	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST03		SUB-TOTAL PIPING/MECHANICAL - SUPPLY AND INSTALLATION	$ -		$ -			142346.1		$2,283,814.65	$15,225,431.01		$15,798,601.62		$1,880,315.12		$35,188,162.40	0.0			147521.0		$1,733,792.09	$13,336,862.23		$15,399,092.84		$5,117,368.55		$35,587,115.71
		0	0.00																											
		HVAC SYSTEMS	0																											
		HVAC SYSTEMS - SUPPLY AND INSTALLATION	0																											
1259	3351.010	EDD (Dewatering gallery supply and Exhaust)	LS	1	1	3027.8	320,919.06	3027.8	48,137.86	48,137.86	320,919.06	296,518.43	296,518.43	87,653.45	87,653.45	753,228.79	753,228.79	1.0	3693.6	333,924.99	3,693.6	43,410.25	43,410.25	333,924.99	203,124.55	203,124.55	111,424.10	111,424.10	691,883.89	691,883.89

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00
									0.15								
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1260	3351.020	EGR (Exhaust for Trans., Storage and Garbage rooms)	LS	1	1	94.2	10,212.90	94.2	1,531.94	1,531.94	10,212.90	2,846.90	2,846.90	13,120.43	13,120.43	27,712.16	27,712.16
1261	3351.030	EKH (Kitchen range exhaust)	LS	1	1	27.7	3,174.22	27.7	476.13	476.13	3,174.22	1,166.11	1,166.11	3,961.52	3,961.52	8,777.97	8,777.97
1262	3351.040	END (Exhaust North RCC Dom)	LS	1	1	141.2	15,016.37	141.2	2,252.45	2,252.45	15,016.37	6,482.62	6,482.62	13,093.70	13,093.70	36,845.14	36,845.14
1263	3351.050	EOR (Exhaust oil Storage Room)	LS	1	1	66.9	7,282.23	66.9	1,092.33	1,092.33	7,282.23	847.88	847.88	11,859.51	11,859.51	21,081.95	21,081.95
1264	3351.060	ESB (South service bay vent and exhaust)	LS	1	1	424.9	45,975.56	424.9	6,896.33	6,896.33	45,975.56	19,436.59	19,436.59	22,883.46	22,883.46	95,191.95	95,191.95
1265	3351.070	ESP (Exhaust for Waste Water treatment Room)	LS	1	1	242.6	27,460.18	242.6	4,119.03	4,119.03	27,460.18	29,514.84	29,514.84	35,287.66	35,287.66	96,381.70	96,381.70
1266	3351.080	ESR (Ventilate and exhaust Oil/water Interceptor Room)	LS	1	1	258.8	29,360.51	258.8	4,404.08	4,404.08	29,360.51	26,307.63	26,307.63	41,768.59	41,768.59	101,840.80	101,840.80
1267	3351.090	ESW (Exhaust Storage, Washrooms and Janitor rooms)	LS	1	1	566.0	64,465.94	566.0	9,669.89	9,669.89	64,465.94	58,414.23	58,414.23	52,729.11	52,729.11	185,279.17	185,279.17
1268	3351.100	EWT (Exhaust and Ventilate the Wastewater Treatment Room)	LS	1	1	405.0	43,881.25	405.0	6,582.19	6,582.19	43,881.25	16,612.24	16,612.24	21,392.33	21,392.33	88,468.01	88,468.01
1269	3351.110	PSC (Pressurize 4 Stairwells)	LS	1	1	1442.1	159,761.37	1442.1	23,964.21	23,964.21	159,761.37	169,092.24	169,092.24	140,502.08	140,502.08	493,319.89	493,319.89
1270	3351.120	VCC (Control Room, Communication Room and assoc. space)	LS	1	1	2960.5	316,522.16	2960.5	47,478.32	47,478.32	316,522.16	114,980.96	114,980.96	362,922.09	362,922.09	841,903.54	841,903.54
1271	3351.130	VCR (Ventilation and Cooling for Compressor Room)	LS	1	1	287.1	32,405.65	287.1	4,860.85	4,860.85	32,405.65	8,313.14	8,313.14	178,923.90	178,923.90	224,503.55	224,503.55
1272	3351.140	VDA (Ventilate Dewatering, Drainage and Draft tube galleries)	LS	1	1	67.8	7,649.77	67.8	1,147.47	1,147.47	7,649.77	5,365.40	5,365.40	19,963.27	19,963.27	34,125.92	34,125.92
1273	3351.150	VDT (Ventilate Draft Tube Gallery)	LS	1	1	148.6	17,058.13	148.6	2,558.72	2,558.72	17,058.13	18,083.59	18,083.59	25,999.38	25,999.38	63,699.82	63,699.82
1274	3351.160	VEG (Diesel Emergency Generator)	LS	1	1	1218.3	127,765.53	1218.3	19,164.83	19,164.83	127,765.53	101,847.49	101,847.49	34,568.39	34,568.39	283,346.24	283,346.24
1275	3351.170	VEL (Ventilate and Exhaust Elevator Machine Room)	LS	1	1	159.4	17,137.35	159.4	2,570.60	2,570.60	17,137.35	4,691.03	4,691.03	21,106.49	21,106.49	45,505.47	45,505.47
1276	3351.180	VER (Ventilate Electrical Battery and Charger Rooms)	LS	1	1	3054.0	323,971.80	3054.0	48,595.77	48,595.77	323,971.80	146,800.76	146,800.76	344,381.53	344,381.53	863,749.87	863,749.87
1277	3351.190	VFP (Ventilate the Fire Pump Room)	LS	1	1	78.8	8,979.41	78.8	1,346.91	1,346.91	8,979.41	6,988.32	6,988.32	13,843.96	13,843.96	31,158.60	31,158.60
1278	3351.200	VIG (Ventilation for Lower inspection galleries)	LS	1	1	171.0	19,353.14	171.0	2,902.97	2,902.97	19,353.14	1,258.44	1,258.44	72,085.58	72,085.58	95,600.13	95,600.13
1279	3351.210	VIL (Ventilate and Exhaust Intake Gate Hoist Building)	LS	1	1	1372.9	154,660.52	1372.9	23,199.08	23,199.08	154,660.52	30,959.61	30,959.61	221,122.00	221,122.00	429,941.20	429,941.20
1280	3351.220	VMR (Machine Hall Main Supply and Exhaust)	LS	1	1	8806.8	988,253.27	8806.8	148,237.99	148,237.99	988,253.27	1,218,861.07	1,218,861.07	3,386,009.35	3,386,009.35	5,741,361.68	5,741,361.68
1281	3351.230	VMS (Warehouse and Workshop spaces)	LS	1	1	1163.0	132,192.16	1163.0	19,828.82	19,828.82	132,192.16	123,796.81	123,796.81	191,712.06	191,712.06	467,529.86	467,529.86
1282	3351.240	VND (Ventilate North RCC Dam)	LS	1	1	182.9	20,028.84	182.9	3,004.33	3,004.33	20,028.84	12,752.68	12,752.68	23,835.04	23,835.04	59,620.88	59,620.88
1283	3351.250	VOF (Offices and admin spaces on Mezz. 1 & 2)	LS	1	1	8386.9	889,462.07	8386.9	133,419.31	133,419.31	889,462.07	455,297.95	455,297.95	399,088.57	399,088.57	1,877,267.91	1,877,267.91
1284	3351.260	VCD (Ventilate Centre Transition Dam)	LS	1	1	428.9	47,643.44	428.9	7,146.52	7,146.52	47,643.44	25,714.65	25,714.65	41,537.97	41,537.97	122,042.58	122,042.58
1285	3351.270	VSD (Ventilate South Dam)	LS	1	1	360.4	39,870.82	360.4	5,980.62	5,980.62	39,870.82	19,260.28	19,260.28	36,271.77	36,271.77	101,383.49	101,383.49
1286	3351.280	EMCS (Energy Monitoring and Control System)	LS	1	1	0.0	-	0.0	-	0.00	0.00	1,032,698.64	1,032,698.64	0.00	0.00	1,032,698.64	1,032,698.64
1286.1	3351.290	EBR (Exhaust Battery Room)	LS	1	1	1157.2	130,138.15	1157.2	19,520.72	19,520.72	130,138.15	118,317.60	118,317.60	113,629.70	113,629.70	381,606.17	381,606.17
1286.2	3351.300	EWH (Exhaust Welding Hood)	LS	1	1	93.9	10,334.33	93.9	1,550.15	1,550.15	10,334.33	4,095.48	4,095.48	21,157.49	21,157.49	37,137.45	37,137.45
1286.3	3351.310	ESC (Smoke Exhaust)	LS	1	1	2062.8	219,674.47	2062.8	32,951.17	32,951.17	219,674.47	110,997.43	110,997.43	143,219.17	143,219.17	506,842.25	506,842.25
1286.4	3351.320	VSA (Spiral Case Access)	LS	1	1	120.1	13,651.52	120.1	2,047.73	2,047.73	13,651.52	7,948.77	7,948.77	39,009.67	39,009.67	62,657.68	62,657.68
1286.5	Added	House Keeping Pads for HVAC Equipment	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0		0				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
ST04		SUB-TOTAL HVAC SYSTEM - SUPPLY, INSTALLATION	$ -		$ -			38978.5		$636,639.31	$4,244,262.09		$4,196,269.82		$6,134,639.22		$15,211,810.45
		0		0													
		ELECTRICAL - SUPPLY AND INSTALLATION		0													
		ELECTRICAL - DESIGN AND ENGINEERING	0														
1287	3343.020	Fire Detection System - Electrical Engineering	LS	1	1	0.0	-	0.0	-	0.00	0.00	28,500.00	28,500.00	0.00	0.00	28,500.00	28,500.00
1288	3000.270	Cable Tray Structural Support Design and Engineering	LS	1	1	0.0	-	0.0	-	0.00	0.00	85,500.00	85,500.00	0.00	0.00	85,500.00	85,500.00
1289	3310.030	Electrical Shaft Platform/Staging Structural Design and Engineering	LS	1	1	0.0	-	0.0	-	0.00	0.00	855.00	855.00	0.00	0.00	855.00	855.00
ST05		SUB-TOTAL ELECTRICAL - DESIGN AND ENGINEERING	$ -		$ -			0.0		$0.00	$0.00		$114,855.00		$0.00		$114,855.00
		0	0														
		ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	0														
1290	3340.010	Spillway Feeder Transformer, 1250 kVA, dry type, 600 V primary, 25/14.4 kV solidly grounded secondary, 60 Hz, NEMA 2 enclosure, air natural cooled (ANN)	ea	1	1	254.4	27,022.53	254.4	4,053.38	4,053.38	27,022.53	122,955.66	122,955.66	5,445.10	5,445.10	159,476.68	159,476.68
1291	3340.020	Spillway Feeder Transformer, 1250 kVA, dry type, 600 V primary, 25/14.4 kV solidly grounded secondary, 60 Hz, NEMA 2 enclosure, air natural cooled (ANN) - Alternate Design Option	ea	1	1	128.8	13,682.29	128.8	2,052.34	2,052.34	13,682.29	89,007.00	89,007.00	2,757.01	2,757.01	107,498.65	107,498.65
1292	3340.030	Spillway Feeder Switchgear, 600 V, 3 phase, 3 wire, 1600 A, 42 kA IC, NEMA 1A enclosure	ea	1	1	1307.6	138,900.93	1307.6	20,835.14	20,835.14	138,900.93	499,803.90	499,803.90	27,988.87	27,988.87	687,528.84	687,528.84
1293	3435.010	Station Service Transformer, 2500 kVA, dry type, 15 kV primary, 600/347 V solidly grounded secondary, 60 Hz, NEMA Type 2 enclosure, air natural cooled (ANN), off-load tap changer ± 2 x 2.5%.	ea	4	4	368.3	39,122.81	1473.2	5,868.42	23,473.68	156,491.23	162,444.23	649,776.92	7,883.34	31,533.36	215,318.80	861,275.19
1294	3433.010	Station Service Switchgear, 600 V, 3 phase, 3 wire, 3200 A, 42 kA IC, NEMA 1A enclosure	ea	4	4	257.6	27,364.59	1030.4	4,104.69	16,418.75	109,458.34	561,577.26	2,246,309.02	5,514.03	22,056.12	598,560.56	2,394,242.24
1295	3433.020	Unit Motor Control Centre, 600 V, 3 phase, 3 wire, 800 A, 42 kA IC, NEMA 2 enclosure	ea	4	4	305.9	32,495.45	1223.6	4,874.32	19,497.27	129,981.78	455,762.16	1,823,048.65	6,547.91	26,191.64	499,679.84	1,998,719.34
1296	3290.010	Intake MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 3R enclosure	ea	2	2	128.8	13,682.29	257.6	2,052.34	4,104.69	27,364.59	554,032.38	1,108,064.76	2,757.01	5,514.03	572,524.03	1,145,048.06
1297	3340.040	Essential Service MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 2 enclosure	ea	1	1	386.4	41,046.88	386.4	6,157.03	6,157.03	41,046.88	944,517.29	944,517.29	8,271.04	8,271.04	999,992.25	999,992.25
1298	3340.050	Common Station Service MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 2 enclosure	ea	4	4	177.1	18,813.15	708.4	2,821.97	11,287.89	75,252.61	478,349.76	1,913,399.06	3,790.90	15,163.58	503,775.79	2,015,103.14
1299	3000.001	Panelboard, 400 A, 600 V, 3 phase, 3 wire, 60 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, complete with breakers as indicated	ea	4	4	16.9	1,795.80	67.6	269.37	1,077.48	7,183.20	20,630.99	82,523.96	361.86	1,447.43	23,058.02	92,232.08
1300	3000.002	Panelboard, 400 A, 600 V, 3 phase, 3 wire, 72 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, complete with breakers as indicated	ea	1	1	19.3	2,052.34	19.3	307.85	307.85	2,052.34	26,921.89	26,921.89	413.55	413.55	29,695.64	29,695.64
1301	3000.003	Panelboard, 225 A, 600 V, 3 phase, 3 wire, 42 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	5	5	9.7	1,026.17	48.3	153.93	769.63	5,130.86	21,068.74	105,343.69	206.78	1,033.88	22,455.61	112,278.06
1302	3000.004	Panelboard, 225 A, 600 V, 3 phase, 3 wire, 60 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	6	6	12.9	1,368.23	77.3	205.23	1,231.41	8,209.38	5,172.33	31,033.98	275.70	1,654.21	7,021.49	42,128.97
1303	3000.005	Panelboard, 100 A, 600/347 V, 3 phase, 4 wire, 30 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	11	11	9.7	1,026.17	106.3	153.93	1,693.18	11,287.89	9,759.94	107,359.31	206.78	2,274.54	11,146.81	122,614.92
1304	3000.006	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 72 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	1	1	9.7	1,026.17	9.7	153.93	153.93	1,026.17	2,349.94	2,349.94	206.78	206.78	3,736.81	3,736.81
1305	3000.007	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 66 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	4	4	9.7	1,026.17	38.6	153.93	615.70	4,104.69	1,827.82	7,311.27	206.78	827.10	3,214.69	12,858.76
1306	3000.008	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 42 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	9	9	9.7	1,026.17	86.9	153.93	1,385.33	9,235.55	2,397.82	21,580.36	206.78	1,860.99	3,784.69	34,062.22
1307	3000.009	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 30 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	2	2	6.4	684.11	12.9	102.62	205.23	1,368.23	3,042.16	6,084.33	137.85	275.70	3,966.75	7,933.49
1308	3000.010	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	3	3	6.4	684.11	19.3	102.62	307.85	2,052.34	1,006.41	3,019.23	137.85	413.55	1,930.99	5,792.98
B&M-0345	Added	Panelboard, 100A, 120/240V, 1 phase, 3 wire, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers	ea	0	5	6.4	684.11	32.2	102.62	513.09	3,420.57	1,148.62	5,743.12	137.85	689.25	2,073.21	10,366.04
1309	3000.011	Panelboard, 100 A, 208/120 V, 3 phase, 4 wire, 30 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers and installed in a NEMA 4X Enclosure with Anti-condensation heater and thermostat	ea	1	1	6.4	684.11	6.4	102.62	102.62	684.11	2,928.16	2,928.16	137.85	137.85	3,852.75	3,852.75
1310	3000.012	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 60 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	2	2	11.3	1,197.20	22.5	179.58	359.16	2,394.40	11,276.01	22,552.03	241.24	482.48	12,894.03	25,788.07
1311	3000.013	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 40 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	2	2	11.3	1,197.20	22.5	179.58	359.16	2,394.40	8,961.81	17,923.63	241.24	482.48	10,579.83	21,159.67
1312	3000.014	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	4	4	6.4	684.11	25.8	102.62	410.47	2,736.46	5,208.16	20,832.66	137.85	551.40	6,132.75	24,530.99
1313	3000.015	600 Volt, 3-Pole, 100A Electrically Held contactor complete with 120V Coil, Undervoltage Relay (with 125Vdc rated alarm contacts), 347/120V, 100VA control Power transformer and fusing mounted in a NEMA 12 Enclosure	ea	11	11	12.9	1,368.23	141.7	205.23	2,257.58	15,050.52	5,015.58	55,171.38	275.70	3,032.72	6,864.74	75,512.19
1314	3000.016	1065 mm x 760 mm x 250 mm deep NEMA 4X stainless steel enclosure with hinged door to house parking area panelboard, complete with 150 W anticondensation heater and thermostat.	ea	1	1	25.8	2,736.46	25.8	410.47	410.47	2,736.46	2,340.42	2,340.42	551.40	551.40	6,038.75	6,038.75
1315	3000.017	Dry-type Isolation Transformer, 45 kVA, three phase, 600 V delta primary, 600/347 V wye secondary, NEMA 2 enclosure.	ea	4	4	16.1	1,710.29	64.4	256.54	1,026.17	6,841.15	4,900.76	19,603.05	344.63	1,378.51	7,212.22	28,848.87
1316	3000.018	Dry-type Isolation Transformer, 45 kVA, three phase, 600 V delta primary, 600/347 V wye secondary, NEMA 3R enclosure.	ea	2	2	19.3	2,052.34	38.6	307.85	615.70	4,104.69	5,284.69	10,569.39	413.55	827.10	8,058.44	16,116.88
1317	3000.019	Dry-type Distribution Transformer, 30 kVA, three phase, 600 V delta primary, 208/120 V wye secondary, NEMA 2 enclosure.	ea	13	13	12.9	1,368.23	167.4	205.23	2,668.05	17,786.98	4,218.15	54,835.95	275.70	3,584.12	6,067.31	78,875.09
1318	3000.020	Dry-type Distribution Transformer, 30 kVA, three phase, 600 V delta primary, 208/120 V wye secondary, NEMA 3R enclosure.	ea	2	2	12.9	1,368.23	25.8	205.23	410.47	2,736.46	4,642.23	9,284.46	275.70	551.40	6,491.39	12,982.79
1319	3340.060	Battery Charger, 125 Vdc, 37.5 kW (Station Control and Protection), 600 V, 3 phase input.	ea	4	4	103.2	10,961.96	412.8	1,644.29	6,577.18	43,847.84	71,651.76	286,607.04	2,208.86	8,835.45	86,466.88	345,867.51
1320	3340.070	125 Vdc Battery Bank (Station Control and Protection), 60 cell, lead acid batteries, 2320 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	2	2	966.0	102,617.20	1932.0	15,392.58	30,785.16	205,234.39	130,067.00	260,133.99	20,677.61	41,355.22	268,754.38	537,508.77
1321	3340.080	125 Vdc Distribution Switchboard (Station Control and Protection), 400 A, 14 kA IC	ea	2	2	64.4	6,841.15	128.8	1,026.17	2,052.34	13,682.29	65,966.85	131,933.70	1,378.51	2,757.01	75,212.67	150,425.35
1322	3340.090	Battery Charger, 125 Vdc, 55 kW (Field Flashing and Emerg. Ltg), 600 V, 3 phase input.	ea	2	2	467.7	49,678.94	935.3	7,451.84	14,903.68	99,357.88	93,674.96	187,349.93	10,010.43	20,020.85	160,816.17	321,632.34
1323	3340.100	125 Vdc Battery Bank (Field Flashing and Emerg. Ltg), 60 cell, lead acid batteries, 2350 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	1	1	966.0	102,617.20	966.0	15,392.58	15,392.58	102,617.20	139,957.34	139,957.34	20,677.61	20,677.61	278,644.73	278,644.73
1324	3340.110	125 Vdc Distribution Switchboard (Field Flashing and Emerg. Ltg), 400 A, 14kA IC	ea	1	1	64.4	6,841.15	64.4	1,026.17	1,026.17	6,841.15	70,008.29	70,008.29	1,378.51	1,378.51	79,254.11	79,254.11
1325	3340.120	Battery Charger, 48 Vdc, 10 kW (Telecommunications), 600 V, 3 phase input.	ea	4	4	38.6	4,104.69	154.6	615.70	2,462.81	16,418.75	38,501.67	154,006.68	827.10	3,308.42	44,049.16	176,196.66
1326	3340.130	48 Vdc Battery Bank (Telecommunications), 24 cell, lead acid batteries, 1800 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	2	2	347.8	36,942.19	695.5	5,541.33	11,082.66	73,884.38	59,629.46	119,258.93	7,443.94	14,887.88	109,556.92	219,113.85
1327	3340.140	48 Vdc Distribution Switchboard (Telecommunications), 400 A, 14 kA IC	ea	2	2	48.3	5,130.86	96.6	769.63	1,539.26	10,261.72	29,907.61	59,815.21	1,033.88	2,067.76	36,841.98	73,683.95
1328	3340.150	Uninterruptible Power Supply (UPS), 10 kVA, 125 Vdc input and 600 Vac single phase bypass input, 120 Vac, 60 Hz output.	ea	2	2	38.6	4,104.69	77.3	615.70	1,231.41	8,209.38	108,236.61	216,473.22	827.10	1,654.21	113,784.10	227,568.21
1328a	Added	UPS, 90 kVA, 125 Vdc input and 600 Vac 3 Ph bypass input, 120 Vac Output	ea	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
		LABOUR COMPONENT						NON LABOUR COMPONENT					
					0.13								
No	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1260	1.0	1083.6	97,961.57	1,083.6	12,735.00	12,735.00	97,961.57	54,605.09	54,605.09	31,559.36	31,559.36	196,861.02	196,861.02
1261	1.0	203.3	18,378.71	203.3	2,389.23	2,389.23	18,378.71	13,832.27	13,832.27	6,670.56	6,670.56	41,270.78	41,270.78
1262	1.0	317.2	28,672.29	317.2	3,727.40	3,727.40	28,672.29	12,378.04	12,378.04	8,507.94	8,507.94	53,285.66	53,285.66
1263	1.0	92.2	8,331.90	92.2	1,083.15	1,083.15	8,331.90	8,808.65	8,808.65	3,514.79	3,514.79	21,738.49	21,738.49
1264	1.0	211.9	19,153.68	211.9	2,489.98	2,489.98	19,153.68	32,757.46	32,757.46	10,662.83	10,662.83	65,063.95	65,063.95
1265	1.0	133.6	12,076.41	133.6	1,569.93	1,569.93	12,076.41	15,141.71	15,141.71	5,597.55	5,597.55	34,385.60	34,385.60
1266	1.0	705.8	63,811.85	705.8	8,295.54	8,295.54	63,811.85	39,313.93	39,313.93	21,466.64	21,466.64	132,887.96	132,887.96
1267	1.0	984.0	88,954.53	984.0	11,564.09	11,564.09	88,954.53	57,515.11	57,515.11	30,317.43	30,317.43	188,351.15	188,351.15
1268	1.0	153.7	13,891.13	153.7	1,805.85	1,805.85	13,891.13	13,467.95	13,467.95	5,614.81	5,614.81	34,779.74	34,779.74
1269	1.0	3914.6	353,903.54	3,914.6	46,007.46	46,007.46	353,903.54	248,256.96	248,256.96	124,627.68	124,627.68	772,795.64	772,795.64
1270	1.0	5320.8	481,032.33	5,320.8	62,534.20	62,534.20	481,032.33	404,624.46	404,624.46	182,951.16	182,951.16	1,131,142.15	1,131,142.15
1271	1.0	313.9	28,375.62	313.9	3,688.83	3,688.83	28,375.62	82,255.67	82,255.67	22,506.39	22,506.39	136,826.51	136,826.51
1272	1.0	1013.0	91,577.48	1,013.0	11,905.07	11,905.07	91,577.48	38,298.76	38,298.76	27,065.11	27,065.11	168,846.42	168,846.42
1273	1.0	292.3	26,429.19	292.3	3,435.79	3,435.79	26,429.19	188,527.90	188,527.90	43,444.29	43,444.29	261,837.17	261,837.17
1274	1.0	1692.4	152,997.90	1,692.4	19,889.73	19,889.73	152,997.90	101,633.12	101,633.12	52,805.68	52,805.68	327,326.43	327,326.43
1275	1.0	153.5	13,874.50	153.5	1,803.69	1,803.69	13,874.50	15,488.57	15,488.57	6,017.71	6,017.71	37,184.46	37,184.46
1276	1.0	5009.5	452,888.24	5,009.5	58,875.47	58,875.47	452,888.24	369,826.56	369,826.56	170,198.18	170,198.18	1,051,788.45	1,051,788.45
1277	1.0	86.3	7,803.72	86.3	1,014.48	1,014.48	7,803.72	12,156.81	12,156.81	4,093.61	4,093.61	25,068.62	25,068.62
1278	1.0	357.1	32,285.09	357.1	4,197.06	4,197.06	32,285.09	8,811.76	8,811.76	8,566.77	8,566.77	53,860.68	53,860.68
1279	1.0	4744.0	428,883.76	4,744.0	55,754.89	55,754.89	428,883.76	1,799,842.07	1,799,842.07	452,658.07	452,658.07	2,737,138.78	2,737,138.78
1280	1.0	16522.7	1,493,745.55	16,522.7	194,186.92	194,186.92	1,493,745.55	4,112,783.74	4,112,783.74	1,142,937.11	1,142,937.11	6,943,653.33	6,943,653.33
1281	1.0	2038.5	184,293.14	2,038.5	23,958.11	23,958.11	184,293.14	116,486.01	116,486.01	62,428.30	62,428.30	387,165.56	387,165.56
1282	1.0	1059.3	95,768.38	1,059.3	12,449.89	12,449.89	95,768.38	65,522.70	65,522.70	33,386.42	33,386.42	207,127.39	207,127.39
1283	1.0	12423.6	1,123,162.94	12,423.6	146,011.18	146,011.18	1,123,162.94	863,230.63	863,230.63	410,873.79	410,873.79	2,543,278.54	2,543,278.54
1284	1.0	919.9	83,163.78	919.9	10,811.29	10,811.29	83,163.78	44,994.59	44,994.59	26,580.31	26,580.31	165,549.97	165,549.97
1285	1.0	773.7	69,949.19	773.7	9,093.39	9,093.39	69,949.19	49,360.39	49,360.39	24,642.63	24,642.63	153,045.60	153,045.60
1286	1.0	17630.3	1,593,882.29	17,630.3	207,204.70	207,204.70	1,593,882.29	1,293,721.85	1,293,721.85	467,394.78	467,394.78	3,562,203.61	3,562,203.61
1286.1	1.0	1295.3	117,098.61	1,295.3	15,222.82	15,222.82	117,098.61	94,185.83	94,185.83	43,591.98	43,591.98	270,099.24	270,099.24
1286.2	1.0	398.6	36,030.98	398.6	4,684.03	4,684.03	36,030.98	88,951.82	88,951.82	25,740.32	25,740.32	155,407.15	155,407.15
1286.3	1.0	292.3	26,429.19	292.3	3,435.79	3,435.79	26,429.19	35,016.34	35,016.34	12,379.51	12,379.51	77,260.83	77,260.83
1286.4	1.0	71.4	6,450.64	71.4	838.58	838.58	6,450.64	44,333.44	44,333.44	10,065.77	10,065.77	61,688.43	61,688.43
1286.5	1.0	5888.7	532,372.68	5,888.70	69,208.45	69,208.45	532,372.68	26,422.64	26,422.64	130,434.97	130,434.97	758,438.74	758,438.74
				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
ST04	0.0			89790.2		$1,055,282.25	$8,117,555.80		$10,555,677.35		$3,720,726.54		$23,449,241.94
1287	1.0	0.0	0.00	0.0	0.00	0.00	0.00	72,141.33	72,141.33	217.98	217.98	72,359.30	72,359.30
1288	1.0	0.0	0.00	0.0	0.00	0.00	0.00	72,958.46	72,958.46	220.44	220.44	73,178.90	73,178.90
1289	1.0	0.0	0.00	0.0	0.00	0.00	0.00	109,437.69	109,437.69	330.66	330.66	109,768.35	109,768.35
ST05	0.0			0.0		$0.00	$0.00		$254,537.48		$769.08		$255,306.56
1290	1.0	193.3	17,474.81	193.3	2,271.73	2,271.73	17,474.81	87,619.63	87,619.63	21,746.93	21,746.93	129,113.10	129,113.10
1291	1.0	188.0	16,999.30	188.0	2,209.91	2,209.91	16,999.30	75.32	75.32	4,010.24	4,010.24	23,294.77	23,294.77
1292	1.0	164.0	14,828.29	164.0	1,927.68	1,927.68	14,828.29	257,961.49	257,961.49	55,419.17	55,419.17	330,136.62	330,136.62
1293	4.0	259.0	23,411.13	1,035.8	3,043.45	12,173.79	93,644.50	133,889.20	535,556.78	32,457.31	129,829.22	192,801.07	771,204.29
1294	4.0	263.7	23,840.20	1,054.8	3,099.23	12,396.90	95,360.80	459,882.49	1,839,529.98	98,189.00	392,756.02	585,010.92	2,340,043.70
1295	4.0	592.0	53,521.05	2,368.0	6,957.74	27,830.95	214,084.21	356,547.74	1,426,190.94	84,360.49	337,441.96	501,387.01	2,005,548.06
1296	2.0	447.3	40,440.93	894.7	5,257.32	10,514.64	80,881.86	453,509.25	907,018.50	100,807.32	201,614.64	600,014.82	1,200,029.64
1297	1.0	982.4	88,818.66	982.4	11,546.43	11,546.43	88,818.66	831,432.45	831,432.45	188,262.48	188,262.48	1,120,060.02	1,120,060.02
1298	4.0	644.1	58,226.64	2,576.2	7,569.46	30,277.85	232,906.54	379,524.13	1,518,096.53	90,092.11	360,368.45	535,412.34	2,141,649.37
1299	4.0	59.3	5,362.36	237.3	697.11	2,788.43	21,449.45	25,289.52	101,158.06	6,351.66	25,406.66	37,700.65	150,802.60
1300	1.0	59.3	5,362.36	59.3	697.11	697.11	5,362.36	26,097.95	26,097.95	6,514.42	6,514.42	38,671.84	38,671.84
1301	5.0	37.8	3,418.44	189.1	444.40	2,221.98	17,092.18	18,319.20	91,596.02	4,491.51	22,457.56	26,673.55	133,367.75
1302	6.0	56.7	5,125.30	340.1	666.29	3,997.73	30,751.80	13,817.79	82,906.74	3,986.40	23,918.39	23,595.78	141,574.66
1303	11.0	25.2	2,280.53	277.5	296.47	3,261.16	25,085.82	11,381.54	125,196.91	2,827.36	31,100.91	16,785.89	184,644.79
1304	1.0	56.7	5,125.30	56.7	666.29	666.29	5,125.30	2,267.33	2,267.33	1,661.00	1,661.00	9,719.92	9,719.92
1305	4.0	56.7	5,125.30	226.8	666.29	2,665.16	20,501.20	1,731.97	6,927.89	1,553.21	6,212.85	9,076.77	36,307.10
1306	9.0	41.0	3,702.92	368.6	481.38	4,332.41	33,326.24	4,285.65	38,570.85	1,733.05	15,597.45	10,202.99	91,826.94
1307	2.0	50.4	4,552.75	100.7	591.86	1,183.72	9,105.50	1,429.99	2,859.97	1,357.86	2,715.71	7,932.45	15,864.90
1308	3.0	56.7	5,125.30	170.1	666.29	1,998.87	15,375.90	944.33	2,832.98	1,394.64	4,183.92	8,130.56	24,391.67
B&M-0345	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1309	1.0	25.2	2,280.53	25.2	296.47	296.47	2,280.53	1,755.14	1,755.14	889.31	889.31	5,221.45	5,221.45
1310	2.0	25.2	2,280.53	50.5	296.47	592.94	4,561.06	10,938.35	21,876.71	2,738.14	5,476.27	16,253.49	32,506.98
1311	2.0	25.2	2,280.53	50.5	296.47	592.94	4,561.06	10,108.84	20,217.69	2,571.13	5,142.25	15,256.97	30,513.94
1312	4.0	25.2	2,280.53	100.9	296.47	1,185.87	9,122.11	5,071.91	20,287.64	1,557.06	6,228.25	9,205.97	36,823.87
1313	11.0	21.4	1,932.56	235.2	251.23	2,763.56	21,258.13	4,229.97	46,529.65	1,305.78	14,363.60	7,719.54	84,914.93
1314	1.0	26.7	2,410.84	26.7	313.41	313.41	2,410.84	3,424.27	3,424.27	1,255.97	1,255.97	7,404.49	7,404.49
1315	4.0	40.0	3,614.19	159.9	469.84	1,879.38	14,456.75	4,965.47	19,861.87	1,849.06	7,396.25	10,898.56	43,594.25
1316	2.0	40.0	3,614.20	80.0	469.85	939.69	7,228.40	5,333.18	10,666.36	1,923.09	3,846.18	11,340.32	22,680.64
1317	13.0	52.0	4,703.85	676.4	611.50	7,949.51	61,150.08	4,530.43	58,895.53	2,017.57	26,228.36	11,863.35	154,223.49
1318	2.0	38.4	3,468.63	76.7	450.92	901.84	6,937.25	3,723.51	7,447.01	1,564.82	3,129.63	9,207.87	18,415.73
1319	4.0	56.7	5,125.30	226.8	666.29	2,665.16	20,501.20	54,600.43	218,401.73	12,196.99	48,787.98	72,589.02	290,356.06
1320	2.0	335.2	30,301.24	670.3	3,939.16	7,878.32	60,602.48	234,118.47	468,236.95	54,255.32	108,510.64	322,614.20	645,228.39
1321	2.0	97.8	8,837.92	195.5	1,148.93	2,297.86	17,675.83	63,284.33	126,568.67	14,817.81	29,635.62	88,088.99	176,177.98
1322	2.0	56.7	5,125.30	113.4	666.29	1,332.58	10,250.60	63,424.43	126,848.85	13,973.49	27,946.99	83,189.51	166,379.02
1323	1.0	335.2	30,301.25	335.2	3,939.16	3,939.16	30,301.25	234,118.47	234,118.47	54,255.32	54,255.32	322,614.21	322,614.21
1324	1.0	97.8	8,837.92	97.8	1,148.93	1,148.93	8,837.92	70,076.77	70,076.77	16,185.30	16,185.30	96,248.92	96,248.92
1325	4.0	52.5	4,742.67	209.8	616.55	2,466.19	18,970.67	28,826.96	115,307.85	6,918.21	27,672.84	41,104.39	164,417.55
1326	2.0	335.2	30,301.24	670.3	3,939.16	7,878.32	60,602.48	83,757.34	167,514.68	23,983.75	47,967.49	141,981.49	283,962.98
1327	2.0	97.8	8,837.92	195.5	1,148.93	2,297.86	17,675.83	37,964.36	75,928.72	9,720.24	19,440.49	57,671.45	115,342.90
1328	2.0	57.9	5,233.44	115.8	680.35	1,360.69	10,466.88	58,167.26	116,334.52	12,940.50	25,881.00	77,021.55	154,043.10
1328a	1.0	322.4	29,149.19	322.43	3,789.39	3,789.39	29,149.19	130,629.65	130,629.65	33,149.61	33,149.61	196,717.84	196,717.84

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
1329	3340.160	Uninterruptible Power Supply (UPS) Distribution Switchboard, 225 A, 120 Vac, single phase, 60 Hz	ea	2	2	48.3	5,130.86	96.6	769.63	1,539.26	10,261.72	41,003.23	82,006.45	1,033.88	2,067.76	47,937.60	95,875.19	2.0	57.9	5,233.44	115.8	680.35	1,360.69	10,466.88	24,266.70	48,533.39	6,115.45	12,230.90	36,295.93	72,591.86
1329a	Added	UPS Panelboard 100A 120 Vac for operation on 120 Vac 2 W system NEMA 12	ea	0	5	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	25.2	2,280.53	126.13	296.47	1,482.34	11,402.65	1,121.76	5,608.81	761.80	3,808.98	4,460.56	22,302.79
		Heavy Duty Safety Switch, 600 V, three phase, unfused, visible blade, NEMA 12 enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1330	3000.021	30 Amp	ea	156	156	4.0	427.57	627.9	64.14	10,005.18	66,701.18	358.22	55,882.41	86.16	13,440.45	936.08	146,029.21	156.0	7.5	677.82	1,169.6	88.12	13,746.20	105,740.03	286.71	44,726.64	217.02	33,855.10	1,269.67	198,067.98
1331	3000.022	60 Amp	ea	5	5	5.6	598.60	28.2	89.79	448.95	2,993.00	399.14	1,995.68	120.62	603.10	1,208.15	6,040.73	5.0	8.2	737.53	40.8	95.88	479.39	3,687.65	314.43	1,572.17	236.64	1,183.18	1,384.48	6,922.39
1332	3000.023	100 Amp	ea	14	14	8.1	855.14	112.7	128.27	1,795.80	11,972.01	560.26	7,843.66	172.31	2,412.39	1,715.99	24,023.85	14.0	8.8	795.56	123.2	103.42	1,447.92	11,137.86	438.64	6,140.93	275.28	3,853.89	1,612.90	22,580.60
1333	3000.024	200 Amp	ea	10	10	10.5	1,111.69	104.7	166.75	1,667.53	11,116.86	835.39	8,353.85	224.01	2,240.07	2,337.83	23,378.32	10.0	10.2	920.25	101.8	119.63	1,196.33	9,202.53	709.46	7,094.60	359.11	3,591.05	2,108.45	21,084.51
1334	3000.025	400 Amp	ea	4	4	15.3	1,624.77	61.2	243.72	974.86	6,499.09	1,994.39	7,977.58	327.40	1,309.58	4,190.28	16,761.11	4.0	26.4	2,385.20	105.5	310.08	1,240.30	9,540.80	1,786.79	7,147.17	920.28	3,681.13	5,402.35	21,609.41
		Heavy Duty Safety Switch, 600 V, three phase, unfused, visible blade, NEMA 4X enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1335	3000.026	30 Amp	ea	62	62	4.0	427.57	249.6	64.14	3,976.42	26,509.44	723.02	44,827.27	86.16	5,341.72	1,300.88	80,654.85	62.0	8.4	761.44	522.2	98.99	6,137.22	47,209.41	633.82	39,296.62	306.55	19,006.33	1,800.80	111,649.59
1336	3000.027	60 Amp	ea	1	1	5.6	598.60	5.6	89.79	89.79	598.60	758.24	758.24	120.62	120.62	1,567.25	1,567.25	1.0	8.4	762.49	8.4	99.12	99.12	762.49	668.19	668.19	313.72	313.72	1,843.53	1,843.53
1337	3000.028	100 Amp	ea	2	2	8.1	855.14	16.1	128.27	256.54	1,710.29	1,711.66	3,423.32	172.31	344.63	2,867.39	5,734.78	2.0	9.5	856.76	19.0	111.38	222.76	1,713.52	1,545.39	3,090.78	512.47	1,024.94	3,026.00	6,052.00
1338	3000.029	200 Amp	ea	2	2	14.5	1,539.26	29.0	230.89	461.78	3,078.52	2,490.93	4,981.85	310.16	620.33	4,571.24	9,142.47	2.0	11.3	1,024.51	22.7	133.19	266.37	2,049.01	2,263.65	4,527.30	696.51	1,393.02	4,117.85	8,235.70
1339	3000.030	400 Amp	ea	2	2	20.9	2,223.37	41.9	333.51	667.01	4,446.75	3,072.97	6,145.94	448.01	896.03	6,077.86	12,155.73	2.0	26.4	2,388.67	52.8	310.53	621.05	4,777.33	2,771.56	5,543.12	1,119.36	2,238.72	6,590.11	13,180.21
1340	3000.031	Combination magnetic motor starter and visible blade disconnect, NEMA size 1, with electronic overload, NEMA 12 enclosure.	ea	3	3	8.4	889.35	25.1	133.40	400.21	2,668.05	1,837.26	5,511.79	179.21	537.62	3,039.22	9,117.67	3.0	13.9	1,259.26	41.8	163.70	491.11	3,777.78	1,778.27	5,334.82	653.96	1,961.87	3,855.19	11,565.58
1341	3000.032	Combination magnetic motor starter and visible blade disconnect, NEMA size 1, with electronic overload, NEMA 4X enclosure.	ea	12	12	21.7	2,308.89	260.8	346.33	4,156.00	27,706.64	2,704.12	32,449.43	465.25	5,582.96	5,824.59	69,895.02	12.0	16.8	1,520.47	201.8	197.66	2,371.93	18,245.63	2,472.85	29,674.18	855.18	10,262.16	5,046.16	60,553.90
1342	3000.033	Splitter box, 400 Amp, 600 V, three phase, three wire, NEMA 4X enclosure.	ea	2	2	9.7	1,026.17	19.3	153.93	307.85	2,052.34	3,437.50	6,874.99	206.78	413.55	4,824.37	9,648.74	2.0	14.7	1,330.89	29.4	173.02	346.03	2,661.77	2,972.16	5,944.33	911.15	1,822.30	5,387.22	10,774.43
		Industrial type electric Blower Unit Heater, 600 V, three phase, complete with built-in thermostat and controls, heating capacity as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1343	3000.034	2.0 kW	ea	9	9	4.8	513.09	43.5	76.96	692.67	4,617.77	895.14	8,056.30	103.39	930.49	1,588.58	14,297.23	9.0	8.2	744.77	74.1	96.82	871.38	6,702.96	1,990.56	17,915.08	575.78	5,182.06	3,407.94	30,671.49
1344	3000.035	2.5 kW	ea	13	13	4.0	427.57	52.3	64.14	833.76	5,558.43	1,076.36	13,992.73	86.16	1,120.04	1,654.23	21,504.96	13.0	8.4	762.49	109.7	99.12	1,288.60	9,912.34	2,365.15	30,746.95	655.36	8,519.71	3,882.12	50,467.60
1345	3000.036	3.0 kW	ea	12	12	4.8	513.09	58.0	76.96	923.55	6,157.03	1,082.57	12,990.86	103.39	1,240.66	1,776.01	21,312.10	12.0	9.2	829.43	110.1	107.83	1,293.91	9,953.13	1,048.40	12,580.75	406.00	4,871.95	2,391.64	28,699.73
1346	3000.037	5.0 kW	ea	21	21	5.6	598.60	118.3	89.79	1,885.59	12,570.61	725.66	15,238.77	120.62	2,533.01	1,534.67	32,227.97	21.0	8.6	781.10	181.4	101.54	2,132.41	16,403.19	734.38	15,422.03	331.42	6,959.82	1,948.45	40,917.45
1347	3000.038	7.5 kW	ea	11	11	6.4	684.11	70.8	102.62	1,128.79	7,525.26	1,550.63	17,056.98	137.85	1,516.36	2,475.22	27,227.39	11.0	10.3	930.86	113.3	121.01	1,331.14	10,239.50	1,135.31	12,488.40	447.33	4,920.67	2,634.52	28,979.70
1348	3000.039	10 kW	ea	37	37	12.9	1,368.23	476.6	205.23	7,593.67	50,624.48	1,342.42	49,669.54	275.70	10,200.96	3,191.59	118,088.65	37.0	11.3	1,017.73	416.5	132.30	4,895.27	37,655.93	1,032.05	38,185.96	446.96	16,537.53	2,629.05	97,274.68
1349	3000.040	15 kW	ea	13	13	16.1	1,710.29	209.3	256.54	3,335.06	22,233.73	1,683.98	21,891.72	344.63	4,480.15	3,995.44	51,940.66	13.0	12.3	1,111.63	159.9	144.51	1,878.66	14,451.21	1,276.03	16,588.34	518.15	6,735.91	3,050.32	39,654.12
1350	3000.041	Explosion-proof electric Blower Unit Heater, 3.5 kW, 600 V, three phase, complete with built-in thermostat and controls.	ea	8	8	9.7	1,026.17	77.3	153.93	1,231.41	8,209.38	4,782.70	38,261.58	206.78	1,654.21	6,169.57	49,356.57	8.0	16.8	1,520.64	134.6	197.68	1,581.47	12,165.13	4,139.50	33,116.00	1,190.76	9,526.10	7,048.59	56,388.69
1351	3000.042	Architectural sloped top baseboard electric heater, 2.5 kW, 208 V, single phase, with low-voltage relay.	ea	8	8	3.2	342.06	25.8	51.31	410.47	2,736.46	330.30	2,642.36	68.93	551.40	792.59	6,340.69	8.0	1.7	149.88	13.3	19.48	155.87	1,199.03	236.45	1,891.60	82.83	662.62	488.64	3,909.13
1352	3000.043	Convector heater, commercial type with sloped top, 5 kW, 600 V, three phase, with low-voltage relay.	ea	34	34	9.7	1,026.17	328.4	153.93	5,233.48	34,889.85	751.95	25,566.43	206.78	7,030.39	2,138.83	72,720.14	34.0	5.8	523.10	196.7	68.00	2,312.10	17,785.36	626.45	21,299.20	249.06	8,467.91	1,466.60	49,864.57
1353	3000.044	Forced-air heater, commercial type, 2.5 kW, 208 V, single phase, with low-voltage relay.	ea	11	11	6.4	684.11	70.8	102.62	1,128.79	7,525.26	383.31	4,216.40	137.85	1,516.36	1,307.89	14,386.80	11.0	3.1	284.33	34.6	36.96	406.59	3,127.59	302.02	3,322.24	127.63	1,403.90	750.94	8,260.31
1354	3000.045	Forced-air heater, commercial type, 5.0 kW, 600 V, three phase, with low-voltage relay.	ea	4	4	9.7	1,026.17	38.6	153.93	615.70	4,104.69	998.75	3,995.01	206.78	827.10	2,385.63	9,542.50	4.0	5.2	474.13	21.0	61.64	246.55	1,896.52	839.90	3,359.59	280.52	1,122.08	1,656.18	6,624.74
1355	3000.046	Electric infrared radiant heater, industrial type, NEMA 4X construction, 10 kW, 600 V, three phase, without controls.	ea	28	28	12.9	1,368.23	360.6	205.23	5,746.56	38,310.42	997.65	27,934.19	275.70	7,719.64	2,846.81	79,710.82	28.0	14.4	1,299.20	402.4	168.90	4,729.08	36,377.57	2,345.79	65,682.24	777.60	21,772.79	4,591.49	128,561.68
		Power outlet - interlocked receptacle and unfused switch, 600 V, three phase, three wire, NEMA 12 enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1356	3000.047	30 Amp	ea	4	4	4.8	513.09	19.3	76.96	307.85	2,052.34	1,236.53	4,946.11	103.39	413.55	1,929.97	7,719.86	4.0	9.5	853.98	37.8	111.02	444.07	3,415.92	1,167.34	4,669.34	435.71	1,742.83	2,568.04	10,272.16
1357	3000.048	60 Amp	ea	38	38	6.4	684.11	244.7	102.62	3,899.45	25,996.36	1,319.62	50,145.75	137.85	5,238.33	2,244.21	85,279.88	38.0	10.0	904.06	380.0	117.53	4,466.04	34,354.16	1,243.34	47,246.94	462.78	17,585.76	2,727.71	103,652.90
		Power outlet - interlocked receptacle and unfused switch, 600 V, three phase, three wire, NEMA 4X enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1358	3000.049	30 Amp	ea	4	4	4.8	513.09	19.3	76.96	307.85	2,052.34	2,133.71	8,534.83	103.39	413.55	2,827.15	11,308.58	4.0	10.0	904.07	40.0	117.53	470.12	3,616.27	2,069.81	8,279.26	629.18	2,516.71	3,720.59	14,882.35
1359	3000.050	60 Amp	ea	13	13	4.8	513.09	62.8	76.96	1,000.52	6,670.12	2,158.79	28,064.25	103.39	1,344.04	2,852.23	37,078.93	13.0	10.0	903.59	129.9	117.47	1,527.06	11,746.61	2,095.50	27,241.44	634.23	8,245.03	3,750.78	48,760.15
1360	3000.051	100 Amp	ea	4	4	6.4	684.11	25.8	102.62	410.47	2,736.46	4,461.46	17,845.86	137.85	551.40	5,386.05	21,544.19	4.0	11.0	997.82	44.2	129.72	518.87	3,991.27	4,389.31	17,557.24	1,118.18	4,472.73	6,635.03	26,540.10
1361	3000.052	200 Amp	ea	1	1	9.7	1,026.17	9.7	153.93	153.93	1,026.17	4,610.56	4,610.56	206.78	206.78	5,997.43	5,997.43	1.0	12.6	1,140.96	12.6	148.32	148.32	1,140.96	7,641.51	7,641.51	1,806.58	1,806.58	10,737.37	10,737.37
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, straight lengths, widths as follows:	0.00					0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
1362	3000.053	150 mm	m	200	200	4.1	434.41	817.9	65.16	13,032.38	86,882.56	94.01	18,801.84	87.54	17,507.05	681.12	136,223.83	200.0	2.7	246.72	545.8	32.07	6,414.66	49,343.51	87.37	17,474.84	75.57	15,114.59	441.74	88,347.60
1362a	Added	4" Channel Tray	m	0	4,572	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,572.0	1.2	104.29	5,273.96	13.56	61,983.62	476,797.06	42.67	195,068.75	33.10	151,326.69	193.61	885,176.12
1363	3000.054	300 mm	m	1700	1,700	3.8	407.05	6514.1	61.06	103,797.29	691,981.96	89.97	152,950.05	82.02	139,436.03	640.10	1,088,165.34	1,700.0	3.7	334.92	6,297.8	43.54	74,016.51	569,357.80	105.55	179,430.25	99.96	169,931.41	583.96	992,735.97
1364	3000.055	450 mm	m	300	300	4.0	429.28	1212.3	64.39	19,317.69	128,784.58	98.40	29,520.58	86.50	25,950.40	678.58	203,573.25	300.0	3.5	315.83	1,048.0	41.06	12,317.37	94,748.98	108.00	32,399.59	95.97	28,790.28	560.85	168,256.22
1365	3000.056	600 mm	m	4100	4,100	4.4	466.91	18020.7	70.04	287,148.57	1,914,323.81	121.62	498,639.11	94.08	385,740.86	752.65	3,085,852.35	4,100.0	3.4	307.36	13,939.0	39.96	163,821.04	1,260,161.88	107.07	438,986.61	93.79	384,535.90	548.17	2,247,505.43
1366	3000.057	750 mm	m	2000	2,000	4.7	502.82	9466.8	75.42	150,847.28	1,005,648.53	119.61	239,219.41	101.32	202,640.60	799.18	1,598,355.82	2,000.0	3.4	305.86	6,766.3	39.76	79,522.59	611,712.23	107.50	214,998.22	93.52	187,046.06	546.64	1,093,279.10
		Horizontal 90 degree turn, 600mm radius, Cable Tray Section, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1367	3000.058	300 mm	ea	32	32	8.9	940.66	283.4	141.10	4,515.16	30,101.04	259.67	8,309.52	189.54	6,065.43	1,530.97	48,991.15	32.0	18.7	1,694.31	599.7	220.26	7,048.35	54,218.06	544.62	17,427.85	507.84	16,250.72	2,967.03	94,944.98
1368	3000.059	450 mm	ea	22	22	9.3	983.41	203.7	147.51	3,245.27	21,635.13	269.75	5,934.57	198.16	4,359.53	1,598.84	35,174.50	22.0	19.2	1,733.06	421.7	225.30	4,956.54	38,127.26	552.15	12,147.29	518.46	11,406.03	3,028.96	66,637.12
1369	3000.060	600 mm	ea	87	87	9.7	1,026.17	840.4	153.93	13,391.54	89,276.96	280.72	24,422.93	206.78	17,989.52	1,667.60	145,080.96	87.0	20.3	1,836.18	1,767.0	238.70	20,767.24	159,747.98	561.49	48,849.48	544.57	47,377.78	3,180.95	276,742.48
1370	3000.061	750 mm	ea	47	47	10.5	1,111.69	491.9	166.75	7,837.39	52,249.26	311.44	14,637.75	224.01	10,528.35	1,813.89	85,252.74	47.0	21.4	1,931.79	1,004.3	251.13	11,803.23	90,794.04	587.17	27,596.98	572.21	26,893.91	3,342.30	157,088.15
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1371	3000.062	150 mm	ea	3	3	8.9	940.66	26.6	141.10	423.30	2,821.97	259.67	779.02	189.54	568.63	1,530.97	4,592.92	3.0	17.7	1,598.91	53.1	207.86	623.58	4,796.74	567.33	1,701.98	489.98	1,469.94	2,864.08	8,592.23
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 45 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1372	3000.063	300 mm	ea	32	32	8.1	855.14	257.6	128.27	4,104.69	27,364.59	232.96	7,454.58	172.31	5,514.03	1,388.68	44,437.89	32.0	17.8	1,608.56	569.4	209.11	6,691.62	51,474.01	525.30	16,809.63	483.79	15,481.36	2,826.77	90,456.63
1373	3000.064	600 mm	ea	30	30	8.9	940.66	265.7	141.10	4,232.96	28,219.73	247.27	7,418.08	189.54	5,686.34	1,518.57	45,557.11	30.0	18.9	1,712.46	568.3	222.62	6,678.59	51,373.77	533.47	16,004.17	509.85	15,295.64	2,978.41	89,352.17
1374	3000.065	750 mm	ea	8	8	9.7	1,026.17	77.3	153.93	1,231.41	8,209.38	264.31	2,114.46	206.78	1,654.21	1,651.18	13,209.45	8.0	18.9	1,712.63	151.5	222.64	1,781.13	13,701.00	545.15	4,361.17	512.24	4,097.95	2,992.66	23,941.25
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 45 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1375	3000.066	150 mm	ea	4	4	8.1	855.14	32.2	128.27	513.09	3,420.57	241.06	964.24	172.31	689.25	1,396.79	5,587.16	4.0	17.2	1,552.70	68.7	201.85	807.40	6,210.80	533.47	2,133.89	472.31	1,889.24	2,760.33	11,041.33
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical inside 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1376	3000.067	300 mm	ea	1	1	8.9	940.66	8.9	141.10	141.10	940.66	246.13	246.13	189.54	189.54	1,517.43	1,517.43	1.0	15.1	1,365.55	15.1	177.52	177.52	1,365.55	386.39	386.39	398.72	398.72	2,328.17	2,328.17
1377	3000.068	600 mm	ea	6	6	9.7	1,026.17	58.0	153.93	923.55	6,157.03	259.41	1,556.43	206.78	1,240.66	1,646.28	9,877.68	6.0	16.7	1,507.88	100.1	196.02	1,176.14	9,047.26	394.56	2,367.36	433.81	2,602.84	2,532.27	15,193.60
1378	3000.069	750 mm	ea	4	4	10.5	1,111.69	41.9	166.75	667.01	4,446.75	269.15	1,076.59	224.01	896.03	1,771.59	7,086.38	4.0	17.7	1,603.65	71.0	208.47	833.90	6,414.60	398.06	1,592.25	457.02	1,828.08	2,667.21	10,668.82
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical inside 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1379	3000.070	150 mm	ea	2	2	8.9	940.66	17.7	141.10	282.20	1,881.32	293.90	587.79	189.54	379.09	1,565.20	3,130.39	2.0	14.1	1,271.28	28.1	165.27	330.53	2,542.55	435.42	870.83	386.42	772.85	2,258.38	4,516.76
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical exterior 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1380	3000.071	300 mm	ea	22	22	8.9	940.66	194.8	141.10	3,104.17	20,694.47	246.13	5,414.84	189.54	4,169.99	1,517.43	33,383.47	22.0	15.1	1,366.10	332.4	177.59	3,907.04	30,054.19	386.39	8,500.54	398.84	8,774.56	2,328.92	51,236.32
1381	3000.072	450 mm	ea	9	9	9.3	983.41	83.3	147.51	1,327.61	8,850.73	252.65	2,273.88	198.16	1,783.44	1,581.74	14,235.67	9.0	15.6	1,413.93	140.8	183.81	1,654.30	12,725.36	389.89	3,509.01	410.79	3,697.09	2,398.42	21,585.76
1382	3000.073	600 mm	ea	7	7	9.7	1,026.17	67.6	153.93	1,077.48	7,183.20	259.41	1,815.84	206.78	1,447.43	1,646.28	11,523.95	7.0	16.7	1,507.94	116.8	196.03	1,372.23	10,555.59	394.56	2,761.92	433.82	3,036.76	2,532.36	17,726.50
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical exterior 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1383	3000.074	150 mm	ea	1	1	8.9	940.66	8.9	141.10	141.10	940.66	293.90	293.90	189.54	189.54	1,565.20	1,565.20	1.0	14.1	1,271.27	14.1	165.27	165.27	1,271.27	435.42	435.42	386.43	386.43	2,258.39	2,258.39
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, riser sections, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1384	3000.075	150mm	ea	2	2	4.4	470.33	8.9	70.55	141.10	940.66	171.69	343.37	94.77	189.54	807.34	1,614.67	2.0	9.7	874.78	19.4	113.72	227.44	1,749.55	315.03	630.06	269.01	538.01	1,572.53	3,145.06
1385	3000.076	300mm	ea	70	70	4.8	513.09	338.1	76.96	5,387.40	35,916.02	182.66	12,785.90	103.39	7,237.16	876.09	61,326.48	70.0	9.7	874.38	677.0	113.67	7,956.88	61,206.78	312.85	21,899.21	268.48	18,793.37	1,569.37	109,856.24
1386	3000.077	450mm	ea	56	56	5.2	555.84	293.0	83.38	4,669.08	31,127.22	193.51	10,836.66	112.00	6,272.21	944.74	52,905.16	56.0	9.7	874.34	541.6	113.66	6,365.23	48,963.28	312.85	17,519.37	268.47	15,034.18	1,569.32	87,882.05
1387	3000.078	600mm	ea	252	252	5.6	598.60	1420.0	89.79	22,627.09	150,847.28	203.95	51,394.39	120.62	30,396.09	1,012.96	255,264.85	252.0	9.7	874.36	2,437.2	113.67	28,644.05	220,338.83	312.85	78,837.16	268.47	67,654.82	1,569.34	395,474.86
1388	3000.079	750mm	ea	30	30	6.0	641.36	181.1	96.20	2,886.11	19,240.72	198.01	5,940.30	129.24	3,877.05	1,064.81	31,944.18	30.0	9.7	874.36	290.1	113.67	3,410.00	26,230.76	312.85	9,385.38	268.47	8,054.13	1,569.34	47,080.27
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 300mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1389	3000.080	300 mm	ea	12	12	12.5	1,325.47	149.7	198.82	2,385.85	15,905.67	391.29	4,695.50	267.09	3,205.03	2,182.67	26,192.05	12.0	31.8	2,870.53	381.0	373.17	4,478.03	34,446.40	917.92	11,015.07	859.42	10,313.03	5,021.04	60,252.54
1390	3000.081	600 mm	ea	5	5	12.9	1,368.23	64.4	205.23	1,026.17	6,841.15	428.39	2,141.95	275.70	1,378.51	2,277.56	11,387.78	5.0	31.7	2,869.72	158.7	373.06	1,865.32	14,348.60	975.89	4,879.46	870.90	4,354.51	5,089.58	25,447.89
1391	3000.082	750 mm	ea	12	12	13.7	1,453.74	164.2	218.06	2,616.74	17,444.92	489.14	5,869.64	292.93	3,515.19	2,453.87	29,446.49	12.0	32.5	2,936.27	389.8	381.72	4,580.58	35,235.24	1,927.27	23,127.25	1,078.08	12,936.97	6,323.34	75,880.04
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 450mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1392	3000.083	300mm	ea	6	6	12.5	1,325.47	74.9	198.82	1,192.92	7,952.83	405.99	2,435.92	267.09	1,602.51	2,197.37	13,184.19	6.0	32.8	2,966.08	196.8	385.59	2,313.54	17,796.45	974.73	5,848.35	893.31	5,359.84	5,219.70	31,318.18
1393	3000.084	450mm	ea	1	1	12.9	1,368.23	12.9	205.23	205.23	1,368.23	409.09	409.09	275.70	275.70	2,258.26	2,258.26	1.0	32.8	2,966.08	32.8	385.59	385.59	2,966.08	974.73	974.73	893.31	893.31	5,219.70	5,219.70
1394	3000.085	600mm	ea	6	6	13.7	1,453.74	82.1	218.06	1,308.37	8,722.46	434.56	2,607.39	292.93	1,757.60	2,399.30	14,395.82	6.0	32.8	2,965.38	196.8	385.50	2,313.00	17,792.28	980.56	5,883.37	894.32	5,365.91	5,225.76	31,354.56
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 600mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1395	3000.086	300mm	ea	20	20	12.5	1,325.47	249.6	198.82	3,976.42	26,509.44	422.15	8,443.03	267.09	5,341.72	2,213.53	44,270.61	20.0	33.9	3,060.39	677.0	397.85	7,957.02	61,207.84	975.89	19,517.85	915.71	18,314.20	5,349.85	106,996.91
1396	3000.087	450mm	ea	11	11	12.9	1,368.23	141.7	205.23	2,257.58	15,050.52	432.10	4,753.05	275.70	3,032.72	2,281.26	25,093.87	11.0	33.9	3,060.21	372.4	397.83	4,376.10	33,662.29	982.90	10,811.86	917.08	10,087.83	5,358.01	58,938.07
1397	3000.088	600mm	ea	42	42	13.7	1,453.74	574.8	218.06	9,158.58	61,057.23	442.41	18,581.13	292.93	12,303.18	2,407.15	101,100.13	42.0	33.9	3,060.30	1,421.7	397.84	16,709.25	128,532.66	987.57	41,477.76	918.04	38,557.62	5,363.74	225,277.28
1398	3000.089	750mm	ea	1	1	14.5	1,539.26	14.5	230.89	230.89	1,539.26	455.46	455.46	310.16	310.16	2,535.77	2,535.77	1.0	33.9	3,060.35	33.9	397.84	397.84	3,060.35	994.57	994.57	919.46	919.46	5,372.22	5,372.22
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 750mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1399	3000.090	300mm	ea	10	10	12.5	1,325.47	124.8	198.82	1,988.21	13,254.72	426.83	4,268.26	267.09	2,670.86	2,218.20	22,182.05	10.0	34.9	3,155.96	349.1	410.27	4,102.75	31,559.60	980.56	9,805.62	939.11	9,391.09	5,485.91	54,859.06
1400	3000.091	450mm	ea	5	5	12.9	1,368.23	64.4	205.23	1,026.17	6,841.15	437.80	2,188.98	275.70	1,378.51	2,286.96	11,434.80	5.0	34.9	3,155.87	174.5	410.26	2,051.31	15,779.33	988.73	4,943.67	940.73	4,703.66	5,495.59	27,477.97
1401	3000.092	600mm	ea	28	28	13.7	1,453.74	383.2	218.06	6,105.72	40,704.82	448.11	12,547.02	292.93	8,202.12	2,412.85	67,559.69	28.0	34.9	3,155.97	977.5	410.28	11,487.72	88,367.11	993.40	27,815.27	941.70	26,367.50	5,501.34	154,037.60
1402	3000.093	750mm	ea	25	25	14.5	1,539.26	362.3	230.89	5,772.22	38,481.45	461.73	11,543.15	310.16	7,754.10	2,542.04	63,550.92	25.0	34.9	3,156.16	872.8	410.30	10,257.53	78,904.10	1,000.41	25,010.16	943.15	23,578.81	5,510.02	137,750.59

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
		Teck 90 1000 V Power Cable, Class B stranded copper conductors insulated with XLPE type RW90, complete with bare grounding conductor to CSA C22.2 No.131, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket, number of conductors and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1403	3000.094	1C #4/0 AWG	m	100	100	0.3	30.27	28.5	4.54	454.08	3,027.21	32.54	3,254.45	6.10	609.99	73.46	7,345.73	100.0	0.4	38.96	43.1	5.07	506.54	3,896.50	34.94	3,494.36	16.19	1,619.24	95.17	9,516.64
1404	3000.095	1C #500 kcmil	m	500	500	0.4	43.27	203.7	6.49	3,245.27	21,635.13	56.49	28,246.65	8.72	4,359.53	114.97	57,486.58	500.0	0.5	47.96	265.2	6.23	3,117.31	23,979.29	61.72	30,858.16	23.70	11,848.03	139.61	69,802.78
1405	3000.096	1C #750 kcmil	m	600	600	0.4	47.72	269.5	7.16	4,294.53	28,630.20	86.63	51,976.28	9.62	5,769.05	151.12	90,670.06	600.0	0.7	62.26	413.2	8.09	4,856.22	37,355.56	95.89	57,534.97	33.94	20,362.37	200.18	120,109.12
1406	3000.097	2C #12 AWG	m	16000	16,000	0.2	16.86	2539.1	2.53	40,459.07	269,727.12	4.51	72,093.88	3.40	54,350.66	27.29	436,630.72	16,000.0	0.2	22.42	3,967.2	2.91	46,625.18	358,655.20	4.04	64,644.43	6.08	97,303.84	35.45	567,228.65
1407	3000.098	2C #10 AWG	m	3000	3,000	0.1	15.22	429.9	2.28	6,849.70	45,664.65	5.25	15,763.93	3.07	9,201.54	25.83	77,479.82	3,000.0	0.3	29.07	964.8	3.78	11,338.85	87,221.90	5.22	15,664.70	7.88	23,652.15	45.96	137,877.60
1408	3000.099	2C #8 AWG	m	1700	1,700	0.2	22.40	358.5	3.36	5,713.21	38,088.08	7.03	11,951.21	4.51	7,674.84	37.31	63,427.35	1,700.0	0.4	32.16	604.7	4.18	7,106.34	54,664.13	7.12	12,098.69	8.99	15,282.66	52.44	89,151.81
1409	3000.100	2C #6 AWG	m	1000	1,000	0.2	26.34	247.9	3.95	3,950.76	26,338.41	10.34	10,336.70	5.31	5,307.25	45.93	45,933.13	1,000.0	0.4	33.69	372.6	4.38	4,379.60	33,689.22	11.19	11,190.79	10.17	10,170.46	59.43	59,430.08
1410	3000.101	2C #4 AWG	m	300	300	0.3	27.54	77.8	4.13	1,239.10	8,260.68	16.03	4,809.72	5.55	1,664.55	53.25	15,974.06	300.0	0.4	33.27	111.0	4.33	1,297.53	9,981.00	20.59	6,177.54	11.97	3,589.56	70.15	21,045.63
1411	3000.102	2C #1 AWG	m	700	700	0.3	33.69	222.0	5.05	3,537.73	23,584.85	22.59	15,812.86	6.79	4,752.40	68.13	47,687.84	700.0	0.4	38.81	300.5	5.05	3,531.62	27,166.30	21.57	15,099.49	13.46	9,424.39	78.89	55,221.81
1412	3000.103	2C #1/0 AWG	m	50	50	0.3	34.21	16.1	5.13	256.54	1,710.29	29.97	1,498.43	6.89	344.63	76.20	3,809.89	50.0	0.4	36.55	20.2	4.75	237.59	1,827.65	31.71	1,585.30	14.97	748.69	87.98	4,399.23
1413	3000.104	2C #2/0 AWG	m	900	900	0.3	35.92	304.3	5.39	4,848.66	32,324.42	30.24	27,216.91	7.24	6,513.45	78.78	70,903.43	900.0	0.4	37.93	377.6	4.93	4,437.76	34,136.64	30.33	27,295.77	15.02	13,517.94	88.21	79,388.12
1414	3000.105	2C #4/0 AWG	m	200	200	0.4	42.76	80.5	6.41	1,282.71	8,551.43	43.75	8,749.01	8.62	1,723.13	101.53	20,306.29	200.0	0.5	43.25	95.7	5.62	1,124.55	8,650.35	47.89	9,577.32	19.81	3,961.13	116.57	23,313.35
1415	3000.106	3C #12 AWG	m	16000	16,000	0.2	20.52	3091.2	3.08	49,256.25	328,375.03	5.22	83,483.95	4.14	66,168.36	32.96	527,283.60	16,000.0	0.2	20.09	3,555.1	2.61	41,782.78	321,406.03	4.13	66,035.86	5.55	88,829.87	32.38	518,054.54
1416	3000.107	3C #10 AWG	m	600	600	0.2	17.96	101.4	2.69	1,616.22	10,774.81	6.10	3,661.86	3.62	2,171.15	30.37	18,224.04	600.0	0.3	27.01	179.3	3.51	2,106.73	16,205.62	5.63	3,375.12	7.48	4,488.06	43.63	26,175.53
1417	3000.108	3C #8 AWG	m	4500	4,500	0.2	22.40	949.1	3.36	15,123.21	100,821.40	8.19	36,868.17	4.51	20,315.75	38.47	173,128.52	4,500.0	0.3	29.20	1,453.4	3.80	17,081.59	131,396.81	8.35	37,591.44	8.54	38,448.31	49.89	224,518.15
1418	3000.109	3C #6 AWG	m	1500	1,500	0.2	22.92	323.6	3.44	5,156.51	34,376.76	12.05	18,073.76	4.62	6,927.00	43.02	64,534.04	1,500.0	0.3	28.71	476.3	3.73	5,598.18	43,062.93	12.36	18,535.62	9.23	13,852.13	54.03	81,048.87
1419	3000.110	3C #4 AWG	m	1100	1,100	0.2	26.34	272.7	3.95	4,345.84	28,972.26	16.28	17,903.71	5.31	5,837.98	51.87	57,059.78	1,100.0	0.4	34.24	416.6	4.45	4,896.07	37,662.09	18.10	19,907.32	11.69	12,858.99	68.48	75,324.47
1420	3000.111	3C #2 AWG	m	4000	4,000	0.3	30.79	1159.2	4.62	18,471.10	123,140.64	22.57	90,290.08	6.20	24,813.13	64.18	256,714.95	4,000.0	0.5	43.80	1,937.8	5.69	22,774.15	175,185.75	24.59	98,357.83	15.24	60,973.20	89.32	357,290.93
1421	3000.112	3C #1 AWG	m	300	300	0.3	33.69	95.2	5.05	1,516.17	10,107.79	26.06	7,816.62	6.79	2,036.74	71.59	21,477.33	300.0	0.4	35.63	118.2	4.63	1,389.74	10,690.28	32.93	9,877.85	15.00	4,501.03	88.20	26,458.90
1421a	Added	3C #1/0 AWG	m	0	245	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	245.0	0.4	38.61	104.64	5.02	1,229.85	9,460.39	37.17	9,107.77	16.56	4,056.96	97.37	23,854.97
1422	3000.113	3C #2/0 AWG	m	2400	2,400	0.3	35.92	811.4	5.39	12,929.77	86,198.45	37.43	89,842.58	7.24	17,369.19	85.97	206,339.98	2,400.0	0.5	48.34	1,283.4	6.28	15,083.50	116,026.95	39.18	94,040.64	19.25	46,200.85	113.06	271,351.94
1423	3000.114	3C #4/0 AWG	m	2400	2,400	0.4	42.07	950.5	6.31	15,146.30	100,975.32	53.86	129,274.06	8.48	20,346.77	110.73	265,742.45	2,400.0	0.5	49.08	1,302.9	6.38	15,313.22	117,794.02	59.89	143,730.78	23.59	56,620.05	138.94	333,458.09
1424	3000.115	3C #250 kcmil	m	25	25	0.5	48.23	11.4	7.23	180.86	1,205.75	81.83	2,045.77	9.72	242.96	147.01	3,675.35	25.0	0.5	48.26	13.3	6.27	156.84	1,206.45	82.54	2,063.57	27.96	698.98	165.03	4,125.85
1425	3000.116	3C #500 kcmil	m	4600	4,600	0.6	62.77	2718.0	9.42	43,309.59	288,730.59	121.40	558,418.63	12.65	58,179.91	206.23	948,638.71	4,600.0	0.9	83.88	4,267.9	10.90	50,159.37	385,841.32	156.25	718,733.73	51.17	235,378.03	302.20	1,390,112.45
1425a	Added	3C #500 kcmil Tray Cable	m	0	700	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	700.0	1.0	87.62	678.42	11.39	7,973.30	61,333.07	148.11	103,675.57	50.41	35,286.75	297.53	208,268.69
1426	3000.117	4C #12 AWG	m	1600	1,600	0.2	19.16	288.5	2.87	4,597.25	30,648.34	6.38	10,214.11	3.86	6,175.71	32.27	51,635.41	1,600.0	0.4	32.99	583.9	4.29	6,862.33	52,787.18	6.22	9,956.15	9.01	14,410.20	52.51	84,015.86
1427	3000.118	4C #10 AWG	m	900	900	0.2	19.67	166.6	2.95	2,655.22	17,701.47	7.55	6,794.70	3.96	3,566.89	34.13	30,718.27	900.0	0.3	25.63	255.2	3.33	2,999.09	23,069.95	7.06	6,349.91	7.44	6,700.18	43.47	39,119.14
1428	3000.119	4C #8 AWG	m	200	200	0.2	21.89	41.2	3.28	656.75	4,378.33	9.34	1,868.26	4.41	882.24	38.93	7,785.58	200.0	0.3	29.94	66.2	3.89	778.44	5,988.02	9.59	1,918.94	8.97	1,793.60	52.40	10,479.00
1429	3000.120	4C #6 AWG	m	50	50	0.2	26.34	12.4	3.95	197.54	1,316.92	16.20	809.81	5.31	265.36	51.79	2,589.64	50.0	0.6	51.92	28.7	6.75	337.50	2,596.13	19.24	961.77	16.08	803.76	93.98	4,699.16
1430	3000.121	4C #4 AWG	m	50	50	0.3	27.54	13.0	4.13	206.52	1,376.78	22.50	1,124.81	5.55	277.42	59.71	2,985.53	50.0	0.4	35.58	19.7	4.63	231.29	1,779.15	26.21	1,310.74	13.64	682.00	80.06	4,003.18
1430a	Added	4C #3 AWG	m	0	11	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.4	33.65	4.09	4.37	48.12	370.16	29.26	321.89	13.80	151.80	81.09	891.97
1431	3000.122	4C #2 AWG	m	700	700	0.3	30.79	202.9	4.62	3,232.44	21,549.61	30.48	21,338.88	6.20	4,342.30	72.09	50,463.24	700.0	0.4	39.89	308.9	5.19	3,630.06	27,923.58	29.06	20,341.00	15.23	10,657.61	89.36	62,552.25
1432	3000.123	4C #2/0 AWG	m	1900	1,900	0.3	36.43	651.6	5.46	10,382.29	69,215.30	46.91	89,130.63	7.34	13,947.05	96.14	182,675.27	1,900.0	0.6	50.75	1,066.5	6.60	12,534.51	96,419.30	48.45	92,053.20	21.68	41,192.64	127.47	242,199.65
1433	3000.124	4C #4/0 AWG	m	100	100	0.4	44.81	42.2	6.72	672.14	4,480.95	72.11	7,210.91	9.03	902.92	132.67	13,266.92	100.0	0.6	55.90	61.8	7.27	726.76	5,590.43	88.29	8,828.79	30.91	3,091.29	182.37	18,237.27
		Teck 90 1000 V Power Cable Terminations (includes Glands and Termination kit) per Cable Type and Size	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1434	3000.125	1C #4/0 AWG	ea	8	8	2.1	222.34	16.7	33.35	266.80	1,778.70	39.58	316.64	44.80	358.41	340.07	2,720.55	8.0	3.2	289.88	25.7	37.68	301.48	2,319.07	119.18	953.48	92.12	736.98	538.88	4,311.01
1435	3000.126	1C #250 kcmil	ea	12	12	2.7	285.62	32.3	42.84	514.11	3,427.41	93.90	1,126.80	57.55	690.63	479.91	5,758.96	12.0	4.5	408.62	54.2	53.12	637.45	4,903.48	38.66	463.95	103.82	1,245.79	604.22	7,250.67
1436	3000.127	1C #500 kcmil	ea	52	52	5.6	598.60	293.0	89.79	4,669.08	31,127.22	77.10	4,009.11	120.62	6,272.21	886.11	46,077.61	52.0	4.7	422.01	242.7	54.86	2,852.79	21,944.55	80.50	4,186.12	115.39	6,000.07	672.76	34,983.54
1437	3000.128	1C #750 kcmil	ea	56	56	7.2	769.63	405.7	115.44	6,464.88	43,099.22	116.01	6,496.45	155.08	8,684.60	1,156.16	64,745.15	56.0	5.3	483.25	299.3	62.82	3,518.05	27,061.94	105.33	5,898.75	134.78	7,547.50	786.18	44,026.25
1438	3000.129	2C #12 AWG	ea	378	378	1.8	189.37	673.8	28.40	10,737.07	71,580.50	44.76	16,919.90	38.16	14,423.64	300.69	113,661.11	378.0	2.6	232.88	973.7	30.27	11,443.69	88,028.38	20.95	7,920.49	58.95	22,282.57	343.06	129,675.13
1439	3000.130	2C #10 AWG	ea	54	54	1.8	188.13	95.6	28.22	1,523.87	10,159.10	44.52	2,403.95	37.91	2,047.08	298.78	16,134.00	54.0	2.6	232.91	139.1	30.28	1,635.00	12,576.89	19.79	1,068.46	58.72	3,170.87	341.69	18,451.22
1440	3000.131	2C #8 AWG	ea	44	44	1.8	188.13	77.9	28.22	1,241.67	8,277.79	44.52	1,958.78	37.91	1,667.99	298.78	13,146.23	44.0	2.6	234.79	114.3	30.52	1,343.01	10,330.85	16.87	742.19	58.58	2,577.33	340.76	14,993.37
1441	3000.132	2C #6 AWG	ea	22	22	2.6	273.65	56.7	41.05	903.03	6,020.21	55.00	1,210.02	55.14	1,213.09	424.83	9,346.34	22.0	3.0	272.65	66.3	35.44	779.77	5,998.25	26.21	576.55	69.35	1,525.75	403.65	8,880.32
1442	3000.133	2C #4 AWG	ea	4	4	3.1	324.95	12.2	48.74	194.97	1,299.82	61.39	245.57	65.48	261.92	500.57	2,002.28	4.0	3.8	339.66	15.0	44.16	176.62	1,358.64	26.21	104.83	85.10	340.40	495.12	1,980.48
1443	3000.134	2C #1 AWG	ea	10	10	2.9	307.85	29.0	46.18	461.78	3,078.52	67.93	679.26	62.03	620.33	483.99	4,839.89	10.0	3.1	278.85	30.8	36.25	362.51	2,788.52	35.41	354.12	72.66	726.63	423.18	4,231.78
1444	3000.135	2C #1/0 AWG	ea	6	6	3.8	401.92	22.7	60.29	361.73	2,411.50	74.76	448.53	80.99	485.92	617.95	3,707.69	6.0	4.4	401.81	26.7	52.23	313.41	2,410.84	49.58	297.46	104.41	626.46	608.03	3,648.17
1445	3000.136	2C #2/0 AWG	ea	16	16	4.3	453.23	68.3	67.98	1,087.74	7,251.62	125.70	2,011.18	91.33	1,461.22	738.23	11,811.76	16.0	4.6	416.83	73.8	54.19	867.00	6,669.23	49.58	793.23	107.94	1,727.08	628.53	10,056.53
1446	3000.137	2C #4/0 AWG	ea	22	22	5.0	530.19	109.8	79.53	1,749.62	11,664.15	126.17	2,775.69	106.83	2,350.36	842.72	18,539.82	22.0	5.1	456.80	111.2	59.38	1,306.45	10,049.59	49.58	1,090.69	117.34	2,581.38	683.10	15,028.10
1447	3000.138	3C #12 AWG	ea	956	956	2.3	239.44	2154.8	35.92	34,335.71	228,904.76	59.64	57,018.25	48.25	46,124.86	383.25	366,383.58	956.0	2.8	254.00	2,686.0	33.02	31,567.68	242,828.31	20.95	20,031.71	63.91	61,101.13	371.89	355,528.84
1448	3000.139	3C #10 AWG	ea	134	134	2.3	239.44	302.0	35.92	4,812.75	32,084.98	59.64	7,992.10	48.25	6,465.20	383.25	51,355.02	134.0	3.1	284.10	421.1	36.93	4,949.08	38,069.82	27.37	3,668.12	72.28	9,685.46	420.69	56,372.48
1449	3000.140	3C #8 AWG	ea	204	204	2.3	239.44	459.8	35.92	7,326.87	48,845.79	63.92	13,039.17	48.25	9,842.54	387.52	79,054.37	204.0	3.4	304.99	688.2	39.65	8,088.46	62,218.94	27.37	5,584.30	77.19	15,746.62	449.21	91,638.32
1450	3000.141	3C #6 AWG	ea	44	44	3.1	324.95	134.6	48.74	2,144.70	14,298.00	70.13	3,085.53	65.48	2,881.08	509.30	22,409.30	44.0	3.6	322.04	156.7	41.86	1,842.04	14,169.56	27.37	1,204.46	81.19	3,572.54	472.47	20,788.60
1451	3000.142	3C #4 AWG	ea	40	40	3.7	393.37	148.1	59.00	2,360.20	15,734.64	78.14	3,125.44	79.26	3,170.57	609.77	24,390.84	40.0	4.1	373.30	165.2	48.53	1,941.18	14,932.16	32.24	1,289.67	94.22	3,768.92	548.30	21,931.94
1452	3000.143	3C #2 AWG	ea	162	162	3.5	376.26	573.8	56.44	9,143.19	60,954.61	84.29	13,655.45	75.82	12,282.50	592.81	96,035.76	162.0	5.0	451.07	808.3	58.64	9,499.53	73,073.28	50.74	8,220.54	116.22	18,828.31	676.68	109,621.65
1453	3000.144	3C #1 AWG	ea	2	2	3.9	410.47	7.7	61.57	123.14	820.94	86.78	173.55	82.71	165.42	641.53	1,283.05	2.0	5.2	473.61	10.5	61.57	123.14	947.22	50.74	101.49	121.52	243.04	707.44	1,414.88
1453a	Added	3C #1/0 AWG	ea	0	14	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	6.1	555.53	86.03	72.22	1,011.06	7,777.36	47.37	663.19	140.09	1,961.31	815.21	11,412.91
1454	3000.145	3C #2/0 AWG	ea	62	62	5.2	547.29	319.4	82.09	5,089.81	33,932.09	111.27	6,898.55	110.28	6,837.40	850.93	52,757.85	62.0	5.9	537.64	368.7	69.89	4,333.35	33,333.43	76.64	4,751.41	141.78	8,790.42	825.95	51,208.60
1455	3000.146	3C #4/0 AWG	ea	60	60	6.1	649.91	367.1	97.49	5,849.18	38,994.53	118.72	7,123.00	130.96	7,857.49	997.07	59,824.21	60.0	6.6	592.66	393.3	77.05	4,622.75	35,559.61	76.64	4,598.13	154.71	9,282.77	901.05	54,063.26
1456	3000.147	3C #250 kcmil	ea	4	4	8.1	855.14	32.2	128.27	513.09	3,420.57	133.62	534.46	172.31	689.25	1,289.34	5,157.38	4.0	7.3	656.09	29.0	85.29	341.17	2,624.35	92.49	369.95	172.81	691.24	1,006.68	4,026.71
1457	3000.148	3C #500 kcmil	ea	132	132	16.1	1,710.29	2125.2	256.54	33,863.67	225,757.83	202.66	26,751.47	344.63	45,490.75	2,514.12	331,863.73	132.0	10.1	912.62	1,332.5	118.64	15,660.61	120,466.24	151.42	19,987.70	244.96	32,335.37	1,427.65	188,449.93
1457a	Added	3C #500 kcmil - Tray Cable	ea	0	8	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	7.5	680.87	60.25	88.51	708.10	5,446.93	16.17	129.34	163.27	1,306.14	948.81	7,590.51
1458	3000.149	4C #12 AWG	ea	84	84	2.7	290.75	229.9	43.61	3,663.43	24,422.89	74.77	6,280.46	58.59	4,921.27	467.71	39,288.06	84.0	3.1	282.21	262.2	36.69	3,081.70	23,705.39	22.12	1,858.16	70.78	5,945.21	411.79	34,590.46
1459	3000.150	4C #10 AWG	ea	66	66	2.7	290.75	180.6	43.61	2,878.41	19,189.42	79.04	5,216.80	58.59	3,866.71	471.99	31,151.34	66.0	3.5	314.45	229.6	40.88	2,697.96	20,753.51	28.54	1,883.73	79.65	5,256.62	463.51	30,591.81
1460	3000.151	4C #8 AWG	ea	6	6	2.7	290.75	16.4	43.61	261.67	1,744.49	79.04	474.25	58.59	351.52	471.99	2,831.94	6.0	3.8	340.87	22.6	44.31	265.88	2,045.20	28.54	171.25	85.86	515.14	499.58	2,997.46
1461	3000.152	4C #6 AWG	ea	18	18	3.5	376.26	63.8	56.44	1,015.91	6,772.73	88.29	1,589.30	75.82	1,364.72	596.81	10,742.66	18.0	4.3	384.71	76.6	50.01	900.22	6,924.77	33.41	601.36	97.14	1,748.49	565.27	10,174.84
1462	3000.153	4C #4 AWG	ea	4	4	4.2	444.67	16.7	66.70	266.80	1,778.70	93.26	373.04	89.60	358.41	694.24	2,776.96	4.0	4.9	445.71	19.7	57.94	231.77	1,782.83	51.91	207.65	115.20	460.81	670.76	2,683.05
1462a	Added	4C #3 AWG	ea	0	4	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	5.3	483.49	21.39	62.85	251.41	1,933.94	51.91	207.65	124.08	496.30	722.33	2,889.30
1463	3000.154	4C #2 AWG	ea	38	38	4.2	444.67	159.1	66.70	2,534.64	16,897.63	100.66	3,825.06	89.60	3,404.91	701.64	26,662.25	38.0	5.7	517.45	217.5	67.27	2,556.21	19,663.16	51.91	1,972.63	132.06	5,018.26	768.69	29,210.27
1464	3000.155	4C #2/0 AWG	ea	34	34	6.3	667.01	213.5	100.05	3,401.76	22,678.40	131.36	4,466.18	134.40	4,569.75	1,032.83	35,116.09	34.0	7.4	670.45	252.1	87.16	2,963.39	22,795.28	91.78	3,120.38	176.04	5,985.44	1,025.43	34,864.49
1465	3000.156	4C #4/0 AWG	ea	2	2	5.2	547.29	10.3	82.09	164.19	1,094.58	122.67	245.33	110.28	220.56	862.33	1,724.67	2.0	8.0	720.90	16.0	93.72	187.43	1,441.79	93.66	187.31	188.28	376.56	1,096.55	2,193.09
1466	3000.157	AC-90 cable, 2C #12 AWG, 600 V. XLPE insulation, copper conductors, interlocking aluminum armour	m	500	500	0.3	28.05	132.0	4.21	2,103.65	14,024.35	3.71	1,856.03	5.65	2,825.94	41.62	20,809.97	500.0	0.2	22.04	121.9	2.87	1,432.86	11,021.97	2.17	1,087.32	5.62	2,809.23	32.70	16,351.39
1467	3000.158	3/C # 1 AWG, 25 kV Shielded, Armoured Power Cable, Type HVTECK, 100% insulation.	m	250	250	0.4	37.63	88.6	5.64	1,410.99	9,406.58	118.43	29,607.54	7.58	1,895.45	169.28	42,320.55	250.0	0.7	58.91	162.9	7.66	1,914.59	14,727.61	80.50	20,124.93	30.05	7,512.86	177.12	44,279.99
1468	3000.159	3/C # 1 AWG, 25 kV Shielded, Armoured Power Cable, Type HVTECK, 100% insulation terminations including glands, and termination kits	ea	2	2	20.5	2,180.62	41.1	327.09	654.18	4,361.23	1,241.24	2,482.48	439.40	878.80	4,188.35	8,376.69	2.0	43.1	3,900.47	86.3	507.06	1,014.12	7,800.93	4,341.50	8,682.99	1,790.72	3,581.44	10,539.74	21,079.49
1469	3000.160	Mineral Insulated Power Cable, 2-hour fire rated, 1/C # 250 kcmil solid copper conductor, 600 V magnesium oxide insulation, seamless copper sheath.	m	750	750	1.0	111.17	784.9	16.68	12,506.47	83,376.47	119.40	89,552.21	22.40	16,800.56	269.65	202,235.71	750.0	1.1	99.79	827.8	12.97	9,729.35	74,841.19	172.10	129,077.94	58.10	43,575.50	342.97	257,223.98
1470	3000.161	Mineral Insulated Power Cable, 2-hour fire rated, 1/C # 250 kcmil Termination including glands and termination kit	ea	6	6	6.0	641.36	36.2	96.20	577.22	3,848.14	1,787.97	10,727.81	129.24	775.41	2,654.76	15,928.58	6.0	8.2	745.50	49.5	96.92	581.49	4,473.03	236.61	1,419.69	222.84	1,337.05	1,301.88	7,811.26
1470a	Added	Free Issue Connectors to CH0030 Contractor	ea	0	581	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	581.0	0.1	6.53	41.97	0.85	493.27	3,794.42	17.08	9,922.35	4.97	2,889.37	29.43	17,099.41
		Teck 90 600 V Control Cable, Class B stranded copper conductors insulated with XLPE type RW90, overall shield with tinned copper drain wire, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket (grey in colour), to CSA C22.2 No.131 and CSA 22.2 No. 239, number of conductors and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1471	3000.162	4C # 14 AWG	m	8800	8,800	0.2	17.10	1416.8	2.57	22,575.78	150,505.22	4.78	42,025.48	3.45	30,327.16	27.89	245,433.65	8,800.0	0.2	22.22	2,162.5	2.89	25,415.63	195,504.83	6.84	60,203.77	6.60	58,067.09	38.54	339,191.32
1472	3000.163	4C # 12 AWG	m	1800	1,800	0.2	19.16	324.6	2.87	5,171.91	34,479.38	5.83	10,485.39	3.86	6,947.68	31.71	57,084.35	1,800.0	0.3	29.51	587.5	3.84	6,904.24	53,109.52	8.66	15,594.87	8.68	15,621.17	50.68	91,229.80
1473	3000.164	4C # 8 AWG	m	2100	2,100	0.2	25.65	507.2	3.85	8,081.10	53,874.03	11.07	23,254.63	5.17	10,855.75	45.75	96,065.51	2,100.0	0.4	37.53	871.7	4.88	10,245.20	78,809.21	15.70	32,966.66	11.98	25,158.37	70.09	147,179.44
1474	3000.165	5C # 16 AWG	m	200	200	0.2	17.10	32.2	2.57	513.09	3,420.57	5.15	1,030.36	3.45	689.25	28.27	5,653.28	200.0	0.2	17.36	38.4	2.26	451.26	3,471.20	7.96	1,591.68	5.68	1,136.22	33.25	6,650.36
1475	3000.166	8C # 14 AWG	m	9800	9,800	0.2	17.79	1640.9	2.67	26,146.86	174,312.41	7.06	69,184.94	3.58	35,124.37	31.10	304,768.58	9,800.0	0.3	28.89	3,131.9	3.76	36,808.90	283,145.38	11.15	109,302.63	9.04	88,548.78	52.84	517,805.68
1476	3000.167	12C # 14 AWG	m	4200	4,200	0.2	20.69	818.2	3.10	13,037.51	86,916.77	9.23	38,772.57	4.17	17,513.94	37.20	156,240.78	4,200.0	0.4	33.11	1,538.1	4.30	18,077.03	139,054.09	14.03	58,930.06	10.61	44,543.91	62.05	260,605.09
1477	3000.168	20C # 14 AWG	m	3500	3,500	0.2	25.31	834.0	3.80	13,288.93	88,592.85	13.67	47,847.80	5.10	17,851.67	47.88	167,581.25	3,500.0	0.4	37.85	1,465.4	4.92	17,223.01	132,484.73	18.11	63,369.28	12.54	43,893.73	73.42	256,970.75
1478	3000.169	30C # 14 AWG	m	700	700	0.2	26.34	173.6	3.95	2,765.53	18,436.89	18.76	13,132.91	5.31	3,715.08	54.36	38,050.41	700.0	0.6	57.79	447.4	7.51	5,258.58	40,450.60	29.82	20,872.05	19.58	13,708.57	114.70	80,289.79
1479	3000.170	40C # 14 AWG	m	400	400	0.3	27.54	103.7	4.13	1,652.14	11,014.25	25.05	10,019.92	5.55	2,219.40	62.26	24,905.70	400.0	0.7	59.65	263.9	7.76	3,102.00	23,861.57	37.95	15,181.86	21.66	8,664.31	127.02	50,809.74
		Teck 90 600 V Control Cable Terminations for the , number of conductors and conductor sizes as follows: (includes Cable Glands, and termination kits)	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1480	3000.171	4C # 14 AWG	ea	208	208	2.9	307.85	602.8	46.18	9,604.97	64,033.13	53.21	11,067.47	62.03	12,902.83	469.27	97,608.40	208.0	3.3	300.99	692.5	39.13	8,138.70	62,605.35	22.12	4,601.17	75.19	15,639.51	437.43	90,984.72
1481	3000.172	4C # 12 AWG	ea	112	112	3.1	324.95	342.6	48.74	5,459.23	36,394.90	65.85	7,375.27	65.48	7,333.66	505.03	56,563.06	112.0	3.8	339.15	420.2	44.09	4,938.05	37,984.97	22.12	2,477.55	84.16	9,425.81	489.52	54,826.39
1482	3000.173	4C # 8 AWG	ea	106	106	3.6	386.52	385.7	57.98	6,145.74	40,971.63	63.20	6,698.72	77.89	8,255.88	585.58	62,071.97	106.0	4.4	395.88	464.2	51.46	5,455.19	41,962.99	28.54	3,025.38	98.78	10,470.99	574.67	60,914.55
1483	3000.174	5C # 16 AWG	ea	8	8	3.2	342.06	25.8	51.31	410.47	2,736.46	61.16	489.31	68.93	551.40	523.46	4,187.64	8.0	3.4	306.04	27.1	39.78	318.28	2,448.28	23.29	186.31	76.61	612.90	445.72	3,565.76
1484	3000.175	8C # 14 AWG	ea	276	276	5.1	538.74	1399.7	80.81	22,303.85	148,692.32	118.32	32,655.85	108.56	29,961.86	846.43	233,613.88	276.0	5.1	460.15	1,404.8	59.82	16,510.09	127,000.70	33.21	9,166.15	114.83	31,692.41	668.00	184,369.35
1485	3000.176	12C # 14 AWG	ea	98	98	6.9	735.42	678.5	110.31	10,810.72	72,071.48	134.12	13,144.21	148.19	14,522.58	1,128.05	110,548.98	98.0	6.6	595.33	645.3	77.39	7,584.46	58,341.99	37.88	3,712.24	147.54	14,458.60	858.14	84,097.29
1486	3000.177	20C # 14 AWG	ea	106	106	11.3	1,197.20	1194.6	179.58	19,035.49	126,903.27	213.25	22,604.33	241.24	25,571.31	1,831.27	194,114.40	106.0	10.2	924.27	1,083.7	120.15	12,736.41	97,972.38	52.09	5,521.17	227.70	24,136.50	1,324.21	140,366.45
1487	3000.178	30C # 14 AWG	ea	26	26	16.1	1,710.29	418.6	256.54	6,670.12	44,467.45	317.94	8,266.43	344.63	8,960.30	2,629.40	68,364.29	26.0	14.5	1,310.55	376.9	170.37	4,429.67	34,074.42	82.26	2,138.82	324.56	8,438.58	1,887.75	49,081.48
1488	3000.179	40C # 14 AWG	ea	20	20	21.7	2,308.89	434.7	346.33	6,926.66	46,177.74	418.40	8,367.92	465.25	9,304.93	3,538.86	70,777.25	20.0	19.5	1,765.90	390.7	229.57	4,591.34	35,318.01	93.94	1,878.71	433.92	8,678.49	2,523.33	50,466.55
		Armoured Control and Instrumentation Cable (ACIC) 600 V, twisted pairs/triads of stranded tinned copper conductors with PVC insulation, individual and overall shield with tinned copper drain wire, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket (grey in colour), to CSA C22.2 No.131 and CSA 22.2 No. 239, number of pairs/triads and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1489	3000.180	2P # 16 AWG	m	13000	13,000	0.2	17.10	2093.0	2.57	33,350.59	222,337.26	5.37	69,789.49	3.45	44,801.49	28.48	370,278.84	13,000.0	0.2	19.51	2,804.8	2.54	32,964.32	253,571.66	8.40	109,260.66	6.28	81,590.06	36.72	477,386.69
1490	3000.181	4P # 16 AWG	m	1400	1,400	0.2	17.10	225.4	2.57	3,591.60	23,944.01	7.24	10,133.23	3.45	4,824.78	30.35	42,493.62	1,400.0	0.2	21.03	325.7	2.73	3,827.45	29,441.92	12.26	17,158.24	7.41	10,373.68	43.43	60,801.30
1491	3000.182	2T # 16 AWG	m	800	800	0.2	17.10	128.8	2.57	2,052.34	13,682.29	6.12	4,896.66	3.45	2,757.01	29.24	23,388.31	800.0	0.2	21.03	186.1	2.73	2,186.78	16,821.35	10.27	8,215.48	7.01	5,607.26	41.04	32,830.88
1492	3000.183	4T # 16 AWG	m	200	200	0.2	17.10	32.2	2.57	513.09	3,420.57	8.95	1,789.60	3.45	689.25	32.06	6,412.52	200.0	0.3	25.19	55.7	3.27	654.99	5,038.37	16.42	3,283.96	9.23	1,845.24	54.11	10,822.56
1493	3000.184	3P # 22 AWG	m	300	300	0.2	17.10	48.3	2.57	769.63	5,130.86	5.38	1,613.95	3.45	1,033.88	28.49	8,548.32	300.0	0.3	24.96	84.0	3.24	973.44	7,488.00	7.23	2,167.74	7.32	2,195.76	42.75	12,824.94
1493a	Added	4P # 20 AWG	m	0	150	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.0	0.2	16.65	27.63	2.17	324.76	2,498.18	10.82	1,622.41	6.09	913.74	35.73	5,359.10

Black & McDonald Limited – FIXED PRICE TARGET COST OF LABOUR – LABOUR COMPONENT (0.15)

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C
1494	3000.185	4P # 18 AWG	m	700	700	0.2	17.10	112.7	2.57	1,795.80	11,972.01
1495	3000.186	6P # 18 AWG	m	100	100	0.2	20.52	19.3	3.08	307.85	2,052.34
1495a	Added	18P # 18 AWG	m	0	830	0.0	-	0.0	-	0.00	0.00
1495b	Added	12P #14 AWG	m	0	2,625	0.0	-	0.0	-	0.00	0.00
		Armoured Control and Instrumentation Cable (ACIC) 600 V Terminations including Glands and Terminations kits, number of pairs/triads and conductor sizes as follows:	0.00					0.0	$0.00		
1496	3000.187	2P # 16 AWG	ea	358	358	2.7	290.75	979.8	43.61	15,513.21	104,088.04
1497	3000.188	4P # 16 AWG	ea	50	50	4.7	495.98	233.5	74.40	3,719.87	24,799.16
1498	3000.189	2T # 16 AWG	ea	32	32	3.7	393.37	118.5	59.00	1,888.16	12,587.71
1499	3000.190	4T # 16 AWG	ea	8	8	6.6	701.22	52.8	105.18	841.46	5,609.74
1500	3000.191	3P # 22 AWG	ea	16	16	3.7	393.37	59.2	59.00	944.08	6,293.85
1500a	Added	4P # 20 AWG	ea	0	14	0.0	-	0.0	-	0.00	0.00
1501	3000.192	4P # 18 AWG	ea	38	38	4.7	495.98	177.4	74.40	2,827.10	18,847.36
1502	3000.193	6P # 18 AWG	ea	6	6	6.6	701.22	39.6	105.18	631.10	4,207.31
1502a	Added	8P # 18 AWG	ea	0	46	0.0	-	0.0	-	0.00	0.00
1502b	Added	12P # 14 AWG	ea	0	40	0.0	-	0.0	-	0.00	0.00
1503	3000.194	Armoured CAT6 ethernet cable, 4 twisted pairs of 23 AWG copper conductors with polyolefin insulation, overall shielded, PVC inner jacket, interlocking aluminum armour, and low temperature (-40°C) PVC outer jacket (yellow or blue in colour as applicable to indicate data or telephone cable).	m	15000	15,000	0.2	20.52	2898.0	3.08	46,177.74	307,851.59
1504	3000.195	Armoured CAT6 ethernet cable, 4 twisted pairs of 23 AWG terminations	ea	822	822	2.5	265.09	2051.3	39.76	32,686.14	217,907.62
1505	3000.196	Low voltage control cable, CSA type LVT, 300 V, 4C 18 AWG copper conductors with PVC insulation, overall shield, unarmoured, PVC outer jacket (grey in colour), to CSA C22.2 No.35.	m	300	300	0.0	2.80	7.9	0.42	126.22	841.46
1505a	Added	2C # 22 OS Shielded LVT PVC Outer Jacket 300 V	m	0	176	0.0	-	0.0	-	0.00	0.00
1505b	Added	4C # 22 OS Shielded LVT PVC Outer Jacket 300 V	m	0	30	0.0	-	0.0	-	0.00	0.00
1506	3000.197	Low voltage control cable, CSA type LVT, 300 V, 4C 18 AWG terminations	0.00	0	0	0.0	-	0.0	-	0.00	0.00
1506a	Added	2C # 22 OS Shielded LVT PVC Outer Jacket 300 V Terminations	ea	0	66	0.0	-	0.0	-	0.00	0.00
1506b	Added	4C # 22 OS Shielded LVT PVC Outer Jacket 300 V	ea	0	12	0.0	-	0.0	-	0.00	0.00
1507	3000.198	Fibre Optical OM3 multi-mode cable, 50/125 µm core/cladding, 12 x 900 µm tight buffered cables, interlocking steel armour, FT-4 PVC outer jacket (orange in colour).	m	4000	4,000	0.2	25.65	956.0	3.85	15,392.58	102,617.20
1507a	Added	Armored 12C SM FO FT-4 PVC outer jacket Orange in colour	m	0	2,570	0.0	-	0.0	-	0.00	0.00
1508	3000.199	Fibre Optical OM3 multi-mode cable Terminations	ea	36	36	2.0	213.79	72.5	32.07	1,154.44	7,696.29
1508a	Added	Armored 12C SM FO FT-4 PVC outer jacket Orange in colour - Terminations	ea	0	38	0.0	-	0.0	-	0.00	0.00
1509	3290.020	Intake MCC Copper Busway assembly (between 3290-MCC-82-A001/B001), low impedance compact type, totally enclosed, sprinkler-proof, 1200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	346.2	36,771.16	346.2	5,515.67	5,515.67	36,771.16
1510	3000.200	Copper Busway assembly (between 3433-SWG-82-A002 and 3340-SWG-82-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	471.7	50,111.40	471.7	7,516.71	7,516.71	50,111.40
1511	3000.201	Copper Busway assembly (between 3433-SWG-82-B001 and 3340-SWG-82-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	471.7	50,111.40	471.7	7,516.71	7,516.71	50,111.40
1512	3000.202	Copper Busway assembly (between 3340-SWG-82-0001 and 3340-T-81-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	471.7	50,111.40	471.7	7,516.71	7,516.71	50,111.40
1513	3433.030	Copper Busway assembly (between 3433-SWG-82-A001/A002), low impedance compact type, totally enclosed, sprinkler-proof, 3200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	730.9	77,647.01	730.9	11,647.05	11,647.05	77,647.01
1514	3433.040	Copper Busway assembly (between 3433-SWG-82-B001/B002), low impedance compact type, totally enclosed, sprinkler-proof, 3200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	730.9	77,647.01	730.9	11,647.05	11,647.05	77,647.01
1515	3000.203	Fluorescent Light fixture, type F1 , Suspended or Ceiling Mounted, fibreglass reinforced polyester housing, enclosed and gasketted polycarbonate lens, suitable for damp or wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V	ea	288	288	3.8	401.37	1088.2	60.21	17,339.37	115,595.83
1516	3000.204	Fluorescent Light fixture, type F2, Wall Mounted, fibreglass reinforced polyester housing, enclosed and gasketted polycarbonate lens, suitable for damp or wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V	ea	94	94	5.2	556.05	492.0	83.41	7,840.30	52,268.64
1517	3000.205	Fluorescent Light fixture, type F3, Suspended or Ceiling Mounted, polyester enamel steel housing, one-piece prismatic wrap-around lens, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	48	48	5.5	581.65	262.8	87.25	4,187.85	27,919.02
1518	3000.206	Fluorescent Light fixture, type F4, Wall Mounted, polyester enamel steel housing, one-piece prismatic wrap-around lens, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	91	91	4.5	482.94	413.7	72.44	6,592.07	43,947.12
1519	3000.207	Fluorescent Light fixture, type F5, Suspended or Ceiling Mounted, industrial striplight with reflector and wireguard, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	218	218	3.9	415.24	852.1	62.29	13,578.37	90,522.48
1520	3000.208	Fluorescent Light fixture, type F10, Wall Mounted, industrial striplight with reflector and wireguard, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	33	33	10.1	1,067.93	331.8	160.19	5,286.24	35,241.58
1521	3000.209	Fluorescent Light fixture, type F6, fibreglass reinforced polyester housing, suitable for vapor, dust and wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	30	30	10.7	1,131.96	319.7	169.79	5,093.83	33,958.86
1522	3000.210	Fluorescent Light fixture, type F7, 1220 mm x 610 mm steel housing with 100 mm deep parabolic louver, recessed in T-bar ceiling, 3 x 32 W lamps, premium electronic ballast, 347 V.	ea	34	34	38.9	4,135.67	1323.7	620.35	21,091.89	140,612.63
1523	3000.211	Fluorescent Light fixture, type F8, 1220 mm x 610 mm steel housing with 100 mm deep parabolic louver, recessed in T-bar ceiling, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	16	16	13.2	1,398.64	210.7	209.80	3,356.74	22,378.29
1524	3000.212	Fluorescent Light fixture, type F9, 1220 mm x 610 mm steel housing with pattern 19 lens, recessed in T-bar ceiling, 3 x 32 W lamps, premium electronic ballast, 347 V.	ea	22	22	13.2	1,398.64	289.7	209.80	4,615.52	30,770.15
1525	3000.213	Fluorescent Light fixture, type F11, decorative type with acrylic diffuser, wall-mounted, 2 x 13 W quad tube 4-pin lamps, electronic ballast, 120 V.	ea	2	2	41.4	4,397.37	82.8	659.61	1,319.21	8,794.74
1526	3000.214	Fluorescent Light fixture, type F12, wall-mounted bedlight with pull-chain switch, 1220 mm x 168 mm x 130 mm steel housing with K12 prismatic lens, 3 x 32 W lamps, premium electronic ballast, 120 V.	ea	2	2	82.8	8,794.74	165.6	1,319.21	2,638.42	17,589.49
1527	3000.215	Metal Halide Light fixture, type H2, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 175 W metal halide lamp, HPF ballast, 347 V.	ea	141	141	18.2	1,931.27	2563.4	289.69	40,846.43	272,309.52
1528	3000.216	LED Low Bay Light fixture, type L1, cast aluminum housing, suspended from open ceiling, 220 W LED array and driver, 347 V.	ea	122	122	6.9	729.82	838.2	109.47	13,355.73	89,038.23
1529	3000.217	LED Low Bay Light fixture, type L2, cast aluminum housing, suspended from ceiling, 143 W LED array and driver, 347 V, Medium Optic	ea	136	136	6.6	699.54	895.6	104.93	14,270.66	95,137.75
1530	3000.218	LED Low Bay Light fixture, type L3, cast aluminum housing, suspended from ceiling, 110 W LED array and driver, 347 V, Medium Optic	ea	24	24	14.8	1,569.67	354.6	235.45	5,650.82	37,672.12
1531	3000.219	LED Low Bay Light fixture, type L4, cast aluminum housing, suspended from ceiling, 110 W LED array and driver, 347 V, Aisle Optic	ea	1	1	243.5	25,871.14	243.5	3,880.67	3,880.67	25,871.14
1532	3000.220	LED Low Bay Light fixture, type L5, cast aluminum housing, suspended from ceiling, 143 W LED array and driver, 347 V, Wide Optic	ea	17	17	18.9	2,004.74	320.8	300.71	5,112.08	34,080.52
1533	3000.221	LED Light fixture, type L6, 610 mm x 610 mm housing recessed in T-bar ceiling, opalescent lens, 60 W LED array and driver, 347 V.	ea	64	64	5.8	614.72	370.4	92.21	5,901.36	39,342.37
1534	3000.222	LED Light fixture, type L7, mounting yoke for surface mounting and adjustable aiming, 44 W LED array and driver, 347 V, 40 degree beam angle	ea	57	57	6.0	638.64	342.7	95.80	5,460.40	36,402.64
1535	3000.223	LED Light fixture, type L8, mounting yoke for surface mounting and adjustable aiming, 44 W LED array and driver, 347 V, 20 degree beam angle	ea	20	20	11.2	1,187.33	223.5	178.10	3,561.98	23,746.52
1536	3000.224	LED Light fixture, type L9, square housing recessed in ceiling, 150 mm aperature with clear reflector, 30 W LED array and driver, 1500 lumen, 347 V.	ea	48	48	6.5	694.25	313.7	104.14	4,998.62	33,324.12
1537	3000.225	LED Light fixture, type L10, wet location housing recessed in ceiling, fresnel lens, 19 W LED array and driver, 900 lumen, 120 V.	ea	2	2	82.8	8,794.74	165.6	1,319.21	2,638.42	17,589.49
1538	3000.226	High Pressure Sodium Light fixture, type W2, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 250 W high pressure sodium lamp, HPF ballast, 347 V.	ea	5	5	26.1	2,775.54	130.6	416.33	2,081.65	13,877.70
1539	3000.227	High Pressure Sodium Light fixture, type W4, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 150 W high pressure sodium lamp, HPF ballast, 347 V.	ea	14	14	7.9	839.27	110.6	125.89	1,762.48	11,749.84
1540	3000.228	High Pressure Sodium Light fixture, type W5, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 100 W high pressure sodium lamp, HPF ballast, 347 V.	ea	25	25	4.5	482.95	113.7	72.44	1,811.08	12,073.86
1541	3000.229	High Pressure Sodium Light fixture, type W6, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 70 W high pressure sodium lamp, HPF ballast, 347 V.	ea	1	1	14.9	1,579.81	14.9	236.97	236.97	1,579.81

Black & McDonald Limited – NON LABOUR COMPONENT (Delta $353,645.00)

No	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
1494	6.37	4,460.14	3.45	2,412.39	29.49	20,640.33
1495	8.22	821.59	4.14	413.55	35.95	3,595.34
1495a	0.00	0.00	0.00	0.00	0.00	0.00
1495b	0.00	0.00	0.00	0.00	0.00	0.00
(Armoured Control and Instrumentation Cable heading)		$0.00		$0.00		
1496	51.97	18,604.32	58.59	20,973.99	444.91	159,279.56
1497	93.94	4,697.09	99.94	4,997.09	764.26	38,213.21
1498	70.82	2,266.15	79.26	2,536.45	602.45	19,278.47
1499	131.64	1,053.13	141.30	1,130.38	1,079.34	8,634.71
1500	70.82	1,133.07	79.26	1,268.23	602.45	9,639.23
1500a	0.00	0.00	0.00	0.00	0.00	0.00
1501	89.67	3,407.34	99.94	3,797.79	759.99	28,879.59
1502	131.64	789.85	141.30	847.78	1,079.34	6,476.03
1502a	0.00	0.00	0.00	0.00	0.00	0.00
1502b	0.00	0.00	0.00	0.00	0.00	0.00
1503	8.75	131,276.21	4.14	62,032.84	36.49	547,338.37
1504	227.89	187,323.89	53.42	43,908.91	586.16	481,826.56
1505	0.97	290.23	0.57	169.56	4.76	1,427.46
1505a	0.00	0.00	0.00	0.00	0.00	0.00
1505b	0.00	0.00	0.00	0.00	0.00	0.00
1506	0.00	0.00	0.00	0.00	0.00	0.00
1506a	0.00	0.00	0.00	0.00	0.00	0.00
1506b	0.00	0.00	0.00	0.00	0.00	0.00
1507	15.54	62,169.74	5.17	20,677.61	50.21	200,857.12
1507a	0.00	0.00	0.00	0.00	0.00	0.00
1508	1,725.52	62,118.73	43.08	1,550.82	2,014.45	72,520.28
1508a	0.00	0.00	0.00	0.00	0.00	0.00
1509	60,980.49	60,980.49	7,409.48	7,409.48	110,676.80	110,676.80
1510	13,831.83	13,831.83	10,097.57	10,097.57	81,557.51	81,557.51
1511	35,956.95	35,956.95	10,097.57	10,097.57	103,682.63	103,682.63
1512	10,375.35	10,375.35	10,097.57	10,097.57	78,101.03	78,101.03
1513	69,739.17	69,739.17	15,646.06	15,646.06	174,679.29	174,679.29
1514	72,851.37	72,851.37	15,646.06	15,646.06	177,791.49	177,791.49
1515	390.87	112,570.59	80.88	23,292.84	933.33	268,798.63
1516	419.66	39,448.25	112.05	10,532.26	1,171.16	110,089.44
1517	494.47	23,734.57	117.20	5,625.75	1,280.57	61,467.20
1518	450.13	40,962.10	97.31	8,855.45	1,102.82	100,356.75
1519	367.20	80,049.78	83.67	18,240.50	928.40	202,391.13
1520	462.30	15,255.91	215.19	7,101.26	1,905.61	62,884.99
1521	1,568.80	47,063.90	228.09	6,842.79	3,098.65	92,959.39
1522	736.29	25,033.82	833.35	28,333.78	6,325.65	215,072.13
1523	343.60	5,497.58	281.83	4,509.28	2,233.87	35,741.89
1524	411.70	9,057.44	281.83	6,200.26	2,301.97	50,643.37
1525	1,202.43	2,404.87	886.08	1,772.16	7,145.49	14,290.98
1526	1,857.54	3,715.09	1,772.16	3,544.32	13,743.66	27,487.32
1527	1,057.55	149,115.23	389.16	54,871.02	3,667.68	517,142.20
1528	2,198.75	268,247.01	147.06	17,941.42	3,185.10	388,582.39
1529	1,605.46	218,342.39	140.96	19,170.49	2,550.89	346,921.29
1530	1,946.06	46,705.45	316.29	7,591.02	4,067.48	97,619.41
1531	11,458.57	11,458.57	5,213.10	5,213.10	46,423.49	46,423.49
1532	2,116.36	35,978.14	403.96	6,867.31	4,825.77	82,038.04
1533	642.15	41,097.87	123.87	7,927.58	1,472.96	94,269.19
1534	642.98	36,649.74	128.69	7,335.22	1,506.11	85,847.99
1535	1,017.40	20,348.02	239.25	4,784.98	2,622.07	52,441.49
1536	642.75	30,852.24	139.89	6,714.89	1,581.04	75,889.87
1537	1,706.69	3,413.37	1,772.16	3,544.32	13,592.80	27,185.61
1538	741.68	3,708.38	559.28	2,796.39	4,492.82	22,464.12
1539	391.26	5,477.57	169.12	2,367.62	1,525.54	21,357.51
1540	338.83	8,470.75	97.32	2,432.91	991.54	24,788.60
1541	641.37	641.37	318.34	318.34	2,776.48	2,776.48

Cahill-Ganotec Joint Venture – FIXED PRICE TARGET COST OF LABOUR – LABOUR COMPONENT (0.13) / NON LABOUR COMPONENT

No	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
1494	700.0	0.3	24.96	196.0	3.24	2,271.36	17,472.00	7.23	5,058.06	7.32	5,123.44	42.75	29,924.86
1495	100.0	0.3	22.18	25.0	2.88	288.34	2,218.00	9.16	916.36	7.06	706.24	41.29	4,128.94
1495a	830.0	0.2	16.67	153.07	2.17	1,799.00	13,838.44	19.65	16,311.96	7.88	6,536.26	46.37	38,485.66
1495b	2,625.0	0.5	44.91	1,303.93	5.84	15,324.83	117,883.28	33.25	87,289.32	17.25	45,277.89	101.25	265,775.32
(Armoured Control and Instrumentation Cable heading)				0.0	$0.00				$0.00		$0.00	$0.00	
1496	358.0	4.7	428.86	1,698.3	55.75	19,959.31	153,533.17	30.56	10,940.08	106.94	38,285.08	622.12	222,717.63
1497	50.0	8.9	800.98	443.0	104.13	5,206.36	40,048.94	49.06	2,453.12	198.12	9,905.94	1,152.29	57,614.36
1498	32.0	6.5	583.13	206.4	75.81	2,425.82	18,660.12	34.92	1,117.37	144.07	4,610.37	837.93	26,813.68
1499	8.0	9.4	851.39	75.3	110.68	885.44	6,811.08	57.39	459.11	211.64	1,693.14	1,231.10	9,848.77
1500	16.0	7.1	641.88	113.6	83.44	1,335.11	10,270.08	39.63	634.10	158.83	2,541.24	923.78	14,780.53
1500a	14.0	4.5	404.71	62.67	52.61	736.58	5,665.98	27.96	391.41	100.74	1,410.39	586.03	8,204.35
1501	38.0	8.8	792.99	333.3	103.09	3,917.37	30,133.62	46.40	1,763.26	195.69	7,436.30	1,138.17	43,250.55
1502	6.0	12.1	1,096.59	72.8	142.56	855.34	6,579.54	59.36	356.15	269.67	1,618.00	1,568.17	9,409.03
1502a	46.0	13.8	1,250.15	636.10	162.52	7,475.88	57,506.78	75.22	3,460.10	308.95	14,211.55	1,796.83	82,654.31
1502b	40.0	21.3	1,922.68	850.69	249.95	9,997.94	76,907.22	117.75	4,709.96	475.56	19,022.57	2,765.94	110,637.69
1503	15,000.0	0.2	16.67	2,766.4	2.17	32,513.01	250,100.05	66.82	1,002,354.39	17.37	260,576.99	103.04	1,545,544.44
1504	822.0	3.1	283.16	2,574.6	36.81	30,258.33	232,756.37	27.83	22,878.81	70.09	57,615.02	417.89	343,508.53
1505	300.0	0.6	50.02	166.0	6.50	1,950.92	15,007.08	0.89	268.20	11.94	3,580.90	69.36	20,807.10
1505a	176.0	0.0	3.95	7.68	0.51	90.29	694.56	0.24	41.91	0.98	171.66	5.67	998.42
1505b	30.0	0.1	5.13	1.70	0.67	20.00	153.88	0.45	13.59	1.30	38.90	7.55	226.37
1506	0.0	0.7	60.70	0.0	7.89	0.00	0.00	0.00	0.00	14.27	0.00	82.86	0.00
1506a	66.0	0.3	26.55	19.38	3.45	227.80	1,752.34	0.00	0.00	6.24	411.82	36.24	2,391.97
1506b	12.0	0.6	53.14	7.05	6.91	82.90	637.72	0.00	0.00	12.49	149.87	72.54	870.50
1507	4,000.0	0.2	17.61	779.1	2.29	9,156.58	70,435.26	11.00	44,001.63	6.35	25,411.98	37.25	149,005.45
1507a	2,570.0	0.2	19.47	553.61	2.53	6,506.45	50,049.65	8.07	20,739.43	6.20	15,937.79	36.28	93,233.33
1508	36.0	13.6	1,228.50	489.2	159.70	5,749.36	44,225.84	978.84	35,238.09	293.98	10,583.11	2,661.01	95,796.40
1508a	38.0	13.6	1,228.52	516.38	159.71	6,068.87	46,683.63	11.61	441.37	291.06	11,060.20	1,690.90	64,254.07
1509	1.0	731.7	66,146.45	731.7	8,599.04	8,599.04	66,146.45	61,392.51	61,392.51	27,905.28	27,905.28	164,043.28	164,043.28
1510	1.0	216.5	19,576.51	216.5	2,544.95	2,544.95	19,576.51	10,757.00	10,757.00	6,766.42	6,766.42	39,644.88	39,644.88
1511	1.0	426.6	38,567.99	426.6	5,013.84	5,013.84	38,567.99	34,100.80	34,100.80	15,929.42	15,929.42	93,612.05	93,612.05
1512	1.0	130.4	11,792.20	130.4	1,532.99	1,532.99	11,792.20	7,112.92	7,112.92	4,203.35	4,203.35	24,641.46	24,641.46
1513	1.0	701.9	63,454.18	701.9	8,249.04	8,249.04	63,454.18	67,820.09	67,820.09	28,566.60	28,566.60	168,089.91	168,089.91
1514	1.0	716.9	64,810.02	716.9	8,425.30	8,425.30	64,810.02	71,067.13	71,067.13	29,538.96	29,538.96	173,841.41	173,841.41
1515	288.0	11.1	999.26	3,183.3	129.90	37,412.45	287,788.11	284.34	81,890.33	292.09	84,121.08	1,705.60	491,211.99
1516	94.0	12.8	1,155.15	1,201.1	150.17	14,115.95	108,584.23	302.51	28,435.58	332.38	31,243.72	1,940.21	182,379.49
1517	48.0	10.7	966.09	512.9	125.59	6,028.40	46,372.32	320.16	15,367.50	291.50	13,992.04	1,703.34	81,760.27
1518	91.0	12.8	1,155.07	1,162.7	150.16	13,664.43	105,111.01	343.50	31,258.78	340.61	30,995.84	1,989.34	181,030.06
1519	218.0	15.5	1,403.09	3,383.3	182.40	39,763.46	305,872.80	420.03	91,566.68	414.31	90,319.35	2,419.83	527,522.29
1520	33.0	10.9	984.18	359.2	127.94	4,222.11	32,477.80	297.64	9,821.96	291.22	9,610.17	1,700.97	56,132.04
1521	30.0	15.5	1,403.02	465.6	182.39	5,471.79	42,090.68	1,298.94	38,968.22	591.24	17,737.23	3,475.60	104,267.92
1522	34.0	9.5	856.19	322.0	111.30	3,784.35	29,110.38	270.81	9,207.54	255.74	8,695.08	1,494.04	50,797.36
1523	16.0	9.3	841.34	148.9	109.37	1,749.98	13,461.37	238.02	3,808.31	245.65	3,930.34	1,434.37	22,950.00
1524	22.0	9.5	856.07	208.3	111.29	2,448.35	18,833.44	239.30	5,264.68	249.37	5,486.06	1,456.02	32,032.53
1525	2.0	11.1	1,003.02	22.2	130.39	260.79	2,006.04	376.97	753.95	311.62	623.24	1,822.01	3,644.01
1526	2.0	11.1	1,003.02	22.2	130.39	260.79	2,006.04	381.02	762.05	312.43	624.86	1,826.87	3,653.74
1527	141.0	16.8	1,523.04	2,375.4	198.00	27,917.34	214,748.80	409.03	57,673.84	440.29	62,080.36	2,570.36	362,420.35
1528	122.0	14.1	1,271.45	1,715.8	165.29	20,165.24	155,117.21	1,829.88	223,245.71	667.21	81,399.94	3,933.84	479,928.10
1529	136.0	14.1	1,271.53	1,912.8	165.30	22,480.60	172,927.66	1,628.46	221,470.44	626.68	85,228.26	3,691.96	502,106.96
1530	24.0	14.1	1,271.45	337.5	165.29	3,966.92	30,514.74	1,628.46	39,083.02	626.66	15,039.83	3,691.85	88,604.51
1531	1.0	14.0	1,265.73	14.0	164.54	164.54	1,265.73	1,516.61	1,516.61	602.80	602.80	3,549.69	3,549.69
1532	17.0	14.1	1,271.60	239.1	165.31	2,810.24	21,617.20	1,628.46	27,683.80	626.70	10,653.83	3,692.06	62,765.06
1533	64.0	10.0	906.65	641.8	117.86	7,543.29	58,025.29	290.59	18,597.69	271.58	17,381.00	1,586.68	101,547.27
1534	57.0	13.4	1,209.33	762.5	157.21	8,961.11	68,931.61	521.94	29,750.50	389.29	22,189.49	2,277.77	129,832.71
1535	20.0	15.3	1,379.27	305.1	179.31	3,586.10	27,585.40	547.50	10,949.97	434.37	8,687.49	2,540.45	50,808.95
1536	48.0	9.0	810.37	430.3	105.35	5,056.73	38,897.94	575.34	27,616.54	306.28	14,701.52	1,797.35	86,272.73
1537	2.0	9.0	811.70	18.0	105.52	211.04	1,623.40	301.76	603.51	251.51	503.03	1,470.49	2,940.98
1538	5.0	15.1	1,365.55	75.5	177.52	887.61	6,827.75	416.79	2,083.93	404.83	2,024.16	2,364.69	11,823.44
1539	14.0	14.3	1,292.35	200.1	168.01	2,352.07	18,092.87	348.91	4,884.70	373.96	5,235.48	2,183.22	30,565.13
1540	25.0	14.1	1,271.27	351.5	165.27	4,131.63	31,781.75	323.40	8,084.96	363.87	9,096.75	2,123.80	53,095.10
1541	1.0	14.1	1,271.27	14.1	165.27	165.27	1,271.27	300.05	300.05	359.18	359.18	2,095.76	2,095.76

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
1542	3000.230	High Pressure Sodium Light fixture, type P3, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, mounting yoke for pole-mounting, 400 W high pressure sodium lamp, HPF ballast, 347 V, complete with 7620 mm aluminum pole.	ea	7	7	92.5	9,820.92	647.2	1,473.14	10,311.96	68,746.41	5,194.87	36,364.08	1,978.94	13,852.57	18,467.86	129,275.02	7.0	18.5	1,672.97	129.5	217.49	1,522.40	11,710.76	1,358.41	9,508.90	666.66	4,666.60	3,915.52	27,408.64
1543	3000.231	Exit Sign, fixture type X, LED with "Running-Man" pictogram, universal mounting, with charging system and self-powered Ni-Cad battery for minimum 90 minutes of operation, 347 V input.	ea	82	82	3.4	365.84	282.4	54.88	4,499.89	29,999.29	438.19	35,931.83	73.72	6,044.93	932.63	76,475.94	82.0	13.1	1,187.88	1,077.4	154.42	12,662.83	97,406.39	316.04	25,914.98	342.80	28,109.29	2,001.14	164,093.49
1544	3000.232	Light Switch, single pole, 15 Amp, 347 Volt	ea	84	84	0.4	42.76	33.8	6.41	538.74	3,591.60	28.18	2,367.46	8.62	723.72	85.97	7,221.52	84.0	5.6	504.59	468.8	65.60	5,510.10	42,385.42	43.47	3,651.15	127.34	10,696.26	740.99	62,242.93
1545	3000.233	Light Switch, three-way, 15 Amp, 347 Volt	ea	12	12	0.8	85.51	9.7	12.83	153.93	1,026.17	32.43	389.14	17.23	206.78	148.00	1,776.01	12.0	9.9	894.19	118.7	116.24	1,394.94	10,730.28	140.65	1,687.83	238.46	2,861.56	1,389.55	16,674.60
1546	3000.234	Light Switch, maintained contact pushbutton ON-OFF, 15 Amp, 347 Volt	ea	8	8	1.6	171.03	12.9	25.65	205.23	1,368.23	639.42	5,115.33	34.46	275.70	870.56	6,964.49	8.0	9.5	861.93	76.3	112.05	896.41	6,895.44	114.99	919.94	225.72	1,805.74	1,314.69	10,517.52
1547	3000.235	Dimming Light Switch, for use with electronic fluorescent dimming ballasts, 15 Amp, 347 Volt	ea	7	7	0.8	85.51	5.6	12.83	89.79	598.60	281.52	1,970.63	17.23	120.62	397.09	2,779.64	7.0	3.3	294.50	22.8	38.28	267.99	2,061.48	16.82	117.73	72.60	508.19	422.20	2,955.39
1548	3000.236	Lighting Control Panel, complete with control transformer, 12-pole mechanically held lighting contactor, ON/OFF pushbuttons and indicating lights, NEMA 12 enclosure.	ea	6	6	6.4	684.11	38.6	102.62	615.70	4,104.69	7,076.67	42,460.02	137.85	827.10	8,001.25	48,007.52	6.0	19.3	1,748.98	116.1	227.37	1,364.21	10,493.90	5,349.11	32,094.66	1,487.95	8,927.70	8,813.41	52,880.47
1549	3000.237	Aluminum Light poles including luminaire and mounting brackets	ea	4	4	6.4	684.11	25.8	102.62	410.47	2,736.46	1,316.09	5,264.36	137.85	551.40	2,240.67	8,962.69	4.0	18.5	1,672.97	74.0	217.49	869.94	6,691.86	1,358.41	5,433.65	666.66	2,666.63	3,915.52	15,662.08
1550	3000.238	Lighting Relay Panel, complete with control transformer, 24-pole electronic relay scanner, (Qty. 24) output control relays, NEMA 12 enclosure.	ea	7	7	6.4	684.11	45.1	102.62	718.32	4,788.80	22,592.34	158,146.41	137.85	964.96	23,516.93	164,618.49	7.0	21.9	1,977.62	153.1	257.09	1,799.63	13,843.31	4,551.37	31,859.59	1,381.08	9,667.54	8,167.15	57,170.07
1551	3000.239	Lighting Contactor, 600 Volts, three-pole, 100 Amp, complete with control relay and undervoltage relay timer, NEMA 12 enclosure.	ea	5	5	12.9	1,368.23	64.4	205.23	1,026.17	6,841.15	9,218.53	46,092.66	275.70	1,378.51	11,067.70	55,338.48	5.0	20.7	1,870.87	103.5	243.21	1,216.06	9,354.33	4,011.48	20,057.39	1,247.29	6,236.47	7,372.85	36,864.25
1552	3000.240	Occupancy Sensor, for use with electronic lighting control system.	ea	4	4	3.2	342.06	12.9	51.31	205.23	1,368.23	24.83	99.33	68.93	275.70	487.12	1,948.49	4.0	4.1	374.31	16.6	48.66	194.64	1,497.25	74.88	299.50	103.05	412.19	600.90	2,403.58
1553	3000.241	Power Connection Junction Box for lighting and receptacle distribution, complete with terminal mounting rail, terminal blocks rated 600 Volts, conductor size range from 8 AWG to 14 AWG, jumpers, barriers, end blocks, etc. as required.	ea	80	80	4.0	427.57	322.0	64.14	5,130.86	34,205.73	442.04	35,363.58	86.16	6,892.54	1,019.91	81,592.71	80.0	6.5	587.85	520.2	76.42	6,113.65	47,028.11	167.08	13,366.10	171.79	13,743.24	1,003.14	80,251.11
1554	3000.242	Convenience Receptacle, 20 A, 120 V, duplex, CSA type 5-20R, complete with surface mounted type FD cast outlet box and sheet steel cover.	ea	303	303	4.3	455.78	1300.0	68.37	20,715.07	138,100.47	114.28	34,628.34	91.84	27,827.58	730.27	221,271.46	303.0	6.9	623.50	2,089.7	81.05	24,559.49	188,919.18	57.02	17,276.48	158.01	47,876.99	919.58	278,632.14
1555	3000.243	GFI Receptacle, 20 A, 120 V, duplex, CSA type 5-20R, complete with surface mounted type FD cast outlet box and single-lift weatherproof cover.	ea	144	144	8.3	885.71	1200.6	132.86	19,131.44	127,542.95	260.86	37,564.07	178.47	25,700.21	1,457.91	209,938.68	144.0	9.5	861.47	1,372.2	111.99	16,126.68	124,051.39	97.74	14,074.01	222.13	31,987.37	1,293.33	186,239.45
1556	3000.244	Grounding conductor, Bare Soft Drawn Copper, size 2/0 AWG	m	2340	2,340	0.1	11.29	248.6	1.69	3,962.05	26,413.67	9.26	21,657.80	2.27	5,322.42	24.51	57,355.94	2,340.0	0.5	47.55	1,230.6	6.18	14,463.64	111,258.78	9.10	21,296.58	13.01	30,435.03	75.84	177,454.03
1557	3000.245	Grounding conductor, Bare Soft Drawn Copper, size 4/0 AWG	m	2985	2,985	0.1	14.25	400.5	2.14	6,382.02	42,546.80	14.49	43,261.81	2.87	8,573.28	33.76	100,763.92	2,985.0	0.2	22.23	734.0	2.89	8,626.49	66,357.63	14.04	41,911.01	8.05	24,032.79	47.21	140,927.93
1558	3000.246	Grounding conductor, Bare Soft Drawn Copper, size 500 kcmil	m	1600	1,600	0.2	22.40	337.5	3.36	5,377.14	35,847.61	33.66	53,856.84	4.51	7,223.38	63.94	102,304.97	1,600.0	0.5	44.10	780.5	5.73	9,173.54	70,565.70	32.15	51,432.15	16.84	26,938.61	98.82	158,110.00
1559	3000.247	Detail 36 - Ground Connection to small equipment ground bar (panelboard, control cabinet, etc.)	ea	71	71	0.8	85.51	57.2	12.83	910.73	6,071.52	21.81	1,548.84	17.23	1,223.43	137.39	9,754.52	71.0	4.8	432.40	339.6	56.21	3,991.01	30,700.11	75.54	5,363.59	116.83	8,294.81	680.98	48,349.52
1560	3000.248	Detail 37 - Bonding to outside of equipment enclosure (switch, power outlet, etc.)	ea	279	279	0.4	42.76	112.3	6.41	1,789.39	11,929.25	17.01	4,746.36	8.62	2,403.77	74.80	20,868.77	279.0	0.7	64.65	199.5	8.40	2,344.91	18,037.75	11.09	3,094.81	17.43	4,862.20	101.58	28,339.67
1561	3000.249	Detail 41 - System grounding for small distribution transformer	ea	19	19	0.4	42.76	7.6	6.41	121.85	812.39	9.37	178.11	8.62	163.70	67.16	1,276.05	19.0	4.1	366.62	77.0	47.66	905.55	6,965.73	73.21	1,390.91	100.90	1,917.07	588.38	11,179.26
1562	3000.250	Detail 43 - Ground Connection to large equipment ground bar (switchgear MCC, etc. - similar to Detail 36)	ea	48	48	1.3	142.52	64.4	21.38	1,026.17	6,841.15	482.79	23,173.99	28.72	1,378.51	675.41	32,419.81	48.0	5.7	517.83	274.9	67.32	3,231.23	24,855.64	120.07	5,763.44	145.87	7,001.78	851.09	40,852.09
1563	3000.251	Detail 45 - Connection for power transformer grounding (similar to Detail 46)	ea	10	10	1.0	102.62	9.7	15.39	153.93	1,026.17	69.01	690.10	20.68	206.78	207.70	2,076.97	10.0	2.7	243.25	26.9	31.62	316.22	2,432.49	113.24	1,132.39	79.97	799.65	468.08	4,680.76
1564	3000.252	Detail 46 - 1/C bonding to metal surface (i.e. cable tray, etc.)	ea	77	77	1.0	111.50	80.8	16.73	1,287.85	8,585.64	44.68	3,440.23	22.47	1,730.03	195.37	15,043.75	77.0	0.3	30.37	25.9	3.95	303.98	2,338.29	39.69	3,056.08	15.13	1,164.80	89.13	6,863.16
1565	3000.253	Detail 47 - 2/C bonding to metal surface (i.e. cable tray, etc.)	ea	222	222	1.0	102.62	214.5	15.39	3,417.15	22,781.02	39.37	8,740.08	20.68	4,590.43	178.06	39,528.68	222.0	0.3	30.37	74.6	3.95	876.36	6,741.20	57.20	12,698.27	18.65	4,140.77	110.16	24,456.61
1566	3000.254	Detail 48 - Compression type cable splice connector	ea	439	439	0.8	85.51	353.4	12.83	5,631.12	37,540.79	21.31	9,356.46	17.23	7,564.56	136.89	60,092.93	439.0	0.3	27.75	134.7	3.61	1,583.72	12,182.47	15.45	6,783.97	9.63	4,228.85	56.44	24,779.00
1567	3000.255	Detail 54 - Connection to small motor disconnect switch (similar to Detail 37)	ea	77	77	1.6	171.03	124.0	25.65	1,975.38	13,169.21	33.79	2,601.92	34.46	2,653.63	264.94	20,400.14	77.0	2.9	261.39	222.6	33.98	2,616.52	20,127.11	65.16	5,017.19	74.55	5,740.26	435.08	33,501.09
1568	3000.256	Detail 55 - Connection to large motor disconnect switch and motor frame	ea	25	25	2.4	256.54	60.4	38.48	962.04	6,413.57	52.88	1,322.03	51.69	1,292.35	399.60	9,990.00	25.0	5.0	451.85	125.0	58.74	1,468.53	11,296.35	117.88	2,947.04	129.93	3,248.13	758.40	18,960.04
1569a	Added	Grounding of Misc Mechanical Equipment & Fixed Steel Objects	ea	0	507	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	507.0	4.7	422.51	2,369.45	54.93	27,847.53	214,211.75	165.63	83,974.00	132.64	67,249.04	775.70	393,282.31
1569	3000.257	Fire Detection System	LS	1	1	5031.3	534,464.57	5031.3	80,169.68	80,169.68	534,464.57	316,715.61	316,715.61	107,695.90	107,695.90	1,039,045.75	1,039,045.75	1.0	8940.4	808,265.47	8,940.4	105,074.51	105,074.51	808,265.47	296,761.15	296,761.15	200,797.73	200,797.73	1,410,898.86	1,410,898.86
1570	3000.258	Shielded twisted pair cable, interlocking armour and overall PVC jacket, CSA type FAS 105, stranded copper conductors, 16 AWG, one (1) pair	m	5000	5,000	0.2	17.10	805.0	2.57	12,827.15	85,514.33	4.23	21,142.11	3.45	17,231.34	27.34	136,714.94	5,000.0	0.2	13.69	757.4	1.78	8,901.01	68,469.31	3.37	16,851.51	3.90	19,483.93	22.74	113,705.76
1571	3000.259	Shielded twisted pair cable, interlocking armour and overall PVC jacket, CSA type FAS 105, stranded copper conductors, 14 AWG, one (1) pair	m	5000	5,000	0.1	12.83	603.8	1.92	9,620.36	64,135.75	4.35	21,756.08	2.58	12,923.51	21.69	108,435.70	5,000.0	0.2	18.67	1,032.7	2.43	12,136.61	93,358.52	3.37	16,849.91	5.07	25,332.94	29.54	147,677.98
1572	3000.260	Telecom System	LS	1	1	2727.3	289,722.55	2727.3	43,458.38	43,458.38	289,722.55	312,224.31	312,224.31	58,379.79	58,379.79	703,785.04	703,785.04	1.0	1133.1	102,440.84	1,133.1	13,317.31	13,317.31	102,440.84	234,810.30	234,810.30	71,348.47	71,348.47	421,916.92	421,916.92
1573	3000.261	Plant Security and Access Control System	LS	1	1	1125.4	119,549.03	1125.4	17,932.36	17,932.36	119,549.03	47,490.24	47,490.24	24,089.42	24,089.42	209,061.05	209,061.05	1.0	17.5	1,579.04	17.5	205.28	205.28	1,579.04	378.16	378.16	447.24	447.24	2,609.71	2,609.71
1574	3000.262	Water Tight seal around cables running thru Roof metal Sleeves	LS	1	1	161.0	17,102.87	161.0	2,565.43	2,565.43	17,102.87	12,641.62	12,641.62	3,446.27	3,446.27	35,756.19	35,756.19	1.0	75.6	6,830.50	75.6	887.97	887.97	6,830.50	2,626.50	2,626.50	2,134.05	2,134.05	12,479.02	12,479.02
1575	3310.040	Electrical Shaft Platforms/Staging	LS	1	1	128.8	13,682.29	128.8	2,052.34	2,052.34	13,682.29	3,843.30	3,843.30	2,757.01	2,757.01	22,334.95	22,334.95	1.0	1105.8	99,974.53	1,105.8	12,996.69	12,996.69	99,974.53	38,743.86	38,743.86	31,295.63	31,295.63	183,010.71	183,010.71
1575a	Added	House Keeping Pads For Electrical Equipment	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	6423.4	580,710.19	6,423.37	75,492.32	75,492.32	580,710.19	24,864.24	24,864.24	141,481.25	141,481.25	822,548.01	822,548.01
1575b	Added	Removal of Temp Construction Power to OH Crane, Elevator & Elec Panels	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	209.9	18,972.07	209.85	2,466.37	2,466.37	18,972.07	1,751.00	1,751.00	4,811.24	4,811.24	28,000.69	28,000.69
1575c	Added	Removal of Temp Construction Power to Spillway E House	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	251.8	22,766.48	251.83	2,959.64	2,959.64	22,766.48	0.00	0.00	5,350.46	5,350.46	31,076.58	31,076.58
1575d	Added	Removal of Temp 125 V DC System in Spillway E House	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	209.9	18,972.07	209.85	2,466.37	2,466.37	18,972.07	0.00	0.00	4,458.72	4,458.72	25,897.16	25,897.16
1575e	Added	Trenching from Pit # 3 to Control Building	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.00	0.00	0.00	0.00	153,722.86	153,722.86	464.47	464.47	154,187.33	154,187.33
1575f	Added	Design & Supply of ATS & Load Management System	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.00	0.00	0.00	0.00	870,029.66	870,029.66	2,628.77	2,628.77	872,658.43	872,658.43
ST06		SUB-TOTAL ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	$ -		$ -			142513.1		$2,270,853.68	$15,139,024.53		$19,049,918.08		$3,050,549.92		$39,510,346.21	0.0			198976.9		$2,338,471.16	$17,988,239.72		$19,245,705.90		$7,841,642.49		$47,414,059.27
		0	$ -																											
		ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	0																											
1576	3460.010	Generator Step Up Transformer Unit 1 - Installation, Assembly	LS	1	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1577	3460.020	Generator Step Up Transformer Unit 2 - Installation, Assembly	LS	1	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1578	3460.030	Generator Step Up Transformer Unit 3 - Installation, Assembly	LS	1	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1579	3460.040	Generator Step Up Transformer Unit 4 - Installation, Assembly	LS	1	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1580	3436.010	Installation, Assembly of Unit 1 IPB	LS	1	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1581	3436.020	Installation, Assembly of Unit 2 IPB	LS	1	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1582	3436.030	Installation, Assembly of Unit 3 IPB	LS	1	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1583	3436.040	Installation, Assembly of Unit 4 IPB	LS	1	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1584	3438.010	Unit 1 Generator Circuit Breaker - Installation, Assembly	LS	1	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1585	3438.020	Unit 2 Generator Circuit Breaker - Installation, Assembly	LS	1	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1586	3438.030	Unit 3 Generator Circuit Breaker - Installation, Assembly	LS	1	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1587	3438.040	Unit 4 Generator Circuit Breaker - Installation, Assembly	LS	1	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
B&M-0346	Added	Spare Generator Step Up Transformer as per technical spec sect.48 01 10 paragraph 3.2.7	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	671.5	60,710.61	671.53	7,892.38	7,892.38	60,710.61	115,799.67	115,799.67	14,617.77	14,617.77	199,020.43	199,020.43
1587a	Added	Generator Circuit Breaker House Keeping pads	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	1228.1	111,027.83	1,228.10	14,433.62	14,433.62	111,027.83	5,267.02	5,267.02	27,153.56	27,153.56	157,882.03	157,882.03
ST07		SUB-TOTAL ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	$ -		$ -			25116.0		$400,207.07	$2,668,047.12		$915,313.12		$537,617.92		$4,521,185.23	0.0			50089.5		$588,690.01	$4,528,384.72		$641,464.81		$1,078,562.58		$6,837,102.12
		0	$ -																											
		ARCHITECTURAL	0																											
		POWERHOUSE ARCHITECTURAL - SUPPLY & INSTALL	0																											
1588	3320.010	Concrete Unit Masonry wall Type B2a Height = full height	m2	1600	1,600	5.6	552.48	8960.0	82.87	132,595.20	883,968.00	64.35	102,964.80	6.27	10,032.00	705.98	1,129,560.00	1,600.0	9.4	845.47	14,963.1	109.91	175,857.08	1,352,746.75	50.00	79,999.82	208.76	334,021.43	1,214.14	1,942,625.08
1589	3320.020	Concrete Unit Masonry wall Type B2b height = 2.8m	m2	440	440	5.6	552.48	2464.0	82.87	36,463.68	243,091.20	64.35	28,315.32	6.27	2,758.80	705.98	310,629.00	440.0	10.8	976.08	4,750.5	126.89	55,831.85	429,475.80	69.40	30,537.54	243.37	107,081.14	1,415.74	622,926.33
1590	3320.030	Concrete Unit Masonry wall Type B2c height = 4.5m	m2	75	75	5.6	552.48	420.0	82.87	6,215.40	41,436.00	64.35	4,826.48	6.27	470.25	705.98	52,948.13	75.0	11.5	1,039.00	861.9	135.07	10,130.26	77,925.07	73.95	5,546.17	259.07	19,430.12	1,507.09	113,031.62
1591	3320.040	Concrete Unit Masonry wall Type B2d height = 5.2m	m2	200	200	5.6	552.48	1120.0	82.87	16,574.40	110,496.00	64.35	12,870.60	6.27	1,254.00	705.98	141,195.00	200.0	6.0	541.00	1,196.8	70.33	14,065.89	108,199.18	39.18	7,835.21	135.03	27,005.83	785.53	157,106.11
1592	3320.050	Concrete Unit Masonry wall Type B2e height = 3.0m	m2	40	40	5.6	552.48	224.0	82.87	3,314.88	22,099.20	64.35	2,574.12	6.27	250.80	705.98	28,239.00	40.0	10.2	918.09	406.2	119.35	4,774.09	36,723.78	133.02	5,320.84	242.55	9,701.86	1,413.01	56,520.57
1593	3320.060	Concrete Unit Masonry wall Type B2f height = 5.0m	m2	150	150	5.6	552.48	840.0	82.87	12,430.80	82,872.00	64.35	9,652.95	6.27	940.50	705.98	105,896.25	150.0	11.7	1,054.31	1,749.3	137.06	20,559.08	158,146.77	75.02	11,252.73	262.88	39,432.29	1,529.27	229,390.87
1594	3320.070	Concrete Unit Masonry wall Type B3a Height =3.0m	m2	35	35	5.6	552.48	196.0	82.87	2,900.52	19,336.80	64.35	2,252.36	6.27	219.45	705.98	24,709.13	35.0	25.9	2,338.36	905.3	303.99	10,639.53	81,842.58	164.68	5,763.69	582.70	20,394.60	3,389.73	118,640.40
1595	3320.080	Concrete Unit Masonry wall Type B4a height = 2.8m	m2	60	60	5.6	552.48	336.0	82.87	4,972.32	33,148.80	83.94	5,036.29	8.11	486.32	727.40	43,643.74	60.0	9.9	898.99	596.6	116.87	7,012.09	53,939.19	64.17	3,850.29	224.19	13,451.67	1,304.22	78,253.25
1596	3320.090	Concrete Unit Masonry wall Type B4b height = full height	m2	65	65	5.6	552.48	364.0	82.87	5,386.68	35,911.20	83.94	5,455.98	8.11	526.85	727.40	47,280.71	65.0	10.3	930.06	668.7	120.91	7,858.99	60,453.76	17.08	1,110.05	222.02	14,431.01	1,290.06	83,853.81
1597	3320.100	Partition Wall W1a height = 6.5m	m2	1005	1,005	5.4	529.20	5427.0	79.38	79,776.90	531,846.00	55.96	56,242.41	6.61	6,645.06	671.15	674,510.37	1,005.0	10.7	968.03	10,761.2	125.84	126,473.64	972,874.16	60.24	60,539.34	239.63	240,827.87	1,393.75	1,400,715.00
1598	3320.110	Partition Wall W1b height = 4.5m	m2	2265	2,265	5.4	529.20	12231.0	79.38	179,795.70	1,198,638.00	55.96	126,755.29	6.61	14,976.18	671.15	1,520,165.17	2,265.0	6.6	593.36	14,865.9	77.14	174,714.85	1,343,960.39	41.02	92,907.50	147.71	334,555.15	859.22	1,946,137.88
1599	3320.120	Partition WallW1c height = 4.5m	m2	30	30	5.4	529.20	162.0	79.38	2,381.40	15,876.00	55.96	1,678.88	6.61	198.36	671.15	20,134.64	30.0	18.6	1,683.54	558.7	218.86	6,565.80	50,506.13	107.75	3,232.42	417.35	12,520.44	2,427.49	72,824.78
1600	3320.130	Partition Wall W2a height = 3.2m	m2	15	15	5.4	529.20	81.0	79.38	1,190.70	7,938.00	55.96	839.44	6.61	99.18	671.15	10,067.32	15.0	147.8	13,362.93	2,217.2	1,737.18	26,057.71	200,443.95	3,007.06	45,105.84	3,745.89	56,188.29	21,853.05	327,795.79
1601	3320.140	Partition Wall W2b height = 4.5m	m2	1060	1,060	5.4	529.20	5724.0	79.38	84,142.80	560,952.00	55.96	59,320.36	6.61	7,008.72	671.15	711,423.88	1,060.0	10.7	967.05	11,338.6	125.72	133,259.59	1,025,073.77	67.71	71,771.68	240.90	255,356.90	1,401.38	1,485,461.94
1602	3320.150	Partition Wall W2c height = 5.45m	m2	45	45	5.4	529.20	243.0	79.38	3,572.10	23,814.00	55.96	2,518.32	6.61	297.54	671.15	30,201.96	45.0	10.7	967.70	481.7	125.80	5,661.04	43,546.43	88.09	3,964.13	245.16	11,032.13	1,426.75	64,203.73
1603	3320.160	Partition Wall W3a height = 4.5m	m2	225	225	5.4	529.20	1215.0	79.38	17,860.50	119,070.00	55.96	12,591.59	6.61	1,487.70	671.15	151,009.79	225.0	8.0	719.17	1,789.8	93.49	21,035.58	161,812.19	61.32	13,797.21	181.36	40,805.98	1,055.34	237,450.96
1604	3320.170	Partition Wall W4a height = 4.5m	m2	70	70	5.4	529.20	378.0	79.38	5,556.60	37,044.00	55.96	3,917.38	6.61	462.84	671.15	46,980.82	70.0	13.9	1,260.41	975.9	163.85	11,469.69	88,228.35	146.62	10,263.56	325.73	22,801.28	1,896.61	132,762.87
1605	3320.180	Partition Wall W5a height = 4.5m	m2	15	15	5.4	529.20	81.0	79.38	1,190.70	7,938.00	55.96	839.44	6.61	99.18	671.15	10,067.32	15.0	8.2	742.07	123.1	96.47	1,447.04	11,131.05	62.78	941.63	187.04	2,805.53	1,088.35	16,325.24
1606	3320.190	Partition Wall W6a height = 3.2m	m2	70	70	5.4	529.20	378.0	79.38	5,556.60	37,044.00	48.96	3,427.41	5.95	416.56	663.49	46,444.57	70.0	10.1	916.97	710.0	119.21	8,344.46	64,188.15	57.54	4,027.46	227.09	15,895.98	1,320.80	92,456.05
1607	3320.200	Shaft Wall W7a height = 3.2m	m2	230	230	5.4	529.20	1242.0	79.38	18,257.40	121,716.00	76.95	17,698.50	8.60	1,976.99	694.13	159,648.89	230.0	11.7	1,057.18	2,689.6	137.43	31,609.74	243,151.83	54.62	12,563.04	259.45	59,673.51	1,508.69	346,998.12
1608	3320.210	Shaft Wall W8a = 1.520 mm	m2	230	230	5.4	529.20	1242.0	79.38	18,257.40	121,716.00	76.95	17,698.50	8.60	1,976.99	694.13	159,648.89	230.0	6.9	621.20	1,580.4	80.76	18,573.99	142,876.88	17.01	3,911.26	149.42	34,365.61	868.38	199,727.74
1609	3320.220	Shaft Wall W9a	m2	960	960	5.4	529.20	5184.0	79.38	76,204.80	508,032.00	69.95	67,152.38	7.93	7,617.02	686.46	659,006.21	960.0	8.6	773.97	8,218.6	100.62	96,591.27	743,009.79	53.22	51,088.21	192.61	184,903.61	1,120.41	1,075,592.88
1610	3320.230	Shaft Wall W9b	m2	10	10	5.4	529.20	54.0	79.38	793.80	5,292.00	69.95	699.50	7.93	79.34	686.46	6,864.65	10.0	98.5	8,908.62	985.4	1,158.12	11,581.21	89,086.20	745.96	7,459.62	2,243.83	22,438.29	13,056.53	130,565.32
1611	3320.240	Shaft Partition Wall W10a height = 4.5m	m2	150	150	5.4	529.20	810.0	79.38	11,907.00	79,380.00	125.91	18,886.95	13.20	1,980.18	747.69	112,154.13	150.0	24.9	2,248.18	3,730.2	292.26	43,839.54	337,227.26	312.83	46,923.87	591.34	88,700.38	3,444.61	516,691.06
1612	3320.250	Shaft Partition Wall W10b height = full height	m2	70	70	5.4	529.20	378.0	79.38	5,556.60	37,044.00	69.95	4,896.53	7.93	555.41	686.46	48,052.54	70.0	10.6	958.05	741.8	124.55	8,718.21	67,063.15	43.27	3,028.93	233.87	16,370.63	1,359.73	95,180.92
1613	3320.260	Partition Wall W11	m2	10	10	5.4	529.20	54.0	79.38	793.80	5,292.00	41.97	419.75	5.30	53.01	655.86	6,558.56	10.0	98.5	8,908.62	985.4	1,158.12	11,581.21	89,086.20	447.58	4,475.80	2,183.77	21,837.69	12,698.09	126,980.90
1614	3320.270	Plenum Partition Wall W12a	m2	45	45	5.4	529.20	243.0	79.38	3,572.10	23,814.00	153.90	6,925.50	15.83	712.56	778.31	35,024.16	45.0	13.6	1,228.00	611.3	159.64	7,183.82	55,260.15	188.05	8,462.39	326.46	14,690.65	1,902.16	85,597.01
1615	3320.280	Partition Wall W13a height = 3.0m	m2	55	55	5.4	529.20	297.0	79.38	4,365.90	29,106.00	125.91	6,925.22	13.20	726.07	747.69	41,123.18	55.0	9.4	845.64	514.5	109.93	6,046.36	46,510.47	327.64	18,019.95	264.70	14,558.52	1,547.91	85,135.30
1616	3320.290	Closure C1a height = 4.5m	m2	150	150	5.4	529.20	810.0	79.38	11,907.00	79,380.00	19.59	2,937.78	3.19	478.80	631.36	94,703.58	150.0	9.9	890.86	1,478.1	115.81	17,371.81	133,629.33	12.27	1,840.50	211.84	31,775.39	1,230.78	184,617.04
1617	3320.300	Closure C2a height = 4.5m	m2	105	105	5.4	529.20	567.0	79.38	8,334.90	55,566.00	27.98	2,937.44	3.98	417.75	640.53	67,256.09	105.0	9.9	890.86	1,034.7	115.81	12,160.27	93,540.53	17.71	1,859.29	212.93	22,357.72	1,237.31	129,917.80
1618	3320.310	Closure C3a height = 4.5m	m2	10	10	5.4	529.20	54.0	79.38	793.80	5,292.00	76.95	769.50	8.60	85.96	694.13	6,941.26	10.0	9.9	890.86	98.5	115.81	1,158.12	8,908.62	67.53	675.28	222.96	2,229.61	1,297.16	12,971.63
1619	3320.320	Closure C4a height = 4.5m	m2	505	505	5.4	529.20	2727.0	79.38	40,086.90	267,246.00	34.98	17,662.48	4.64	2,343.10	648.20	327,338.48	505.0	9.9	890.86	4,976.3	115.81	58,485.11	449,885.44	11.30	5,704.97	211.64	106,878.25	1,229.61	620,953.76
1620	3320.330	Closure C4b height = 3m	m2	70	70	5.4	529.20	378.0	79.38	5,556.60	37,044.00	34.98	2,448.26	4.64	324.79	648.20	45,373.65	70.0	9.9	890.86	689.8	115.81	8,106.85	62,360.37	21.15	1,480.50	213.62	14,953.67	1,241.45	86,901.38
1621	3320.340	Closure C5a height = 4.5m	m2	20	20	5.4	529.20	108.0	79.38	1,587.60	10,584.00	27.98	559.51	3.98	79.57	640.53	12,810.68	20.0	9.9	890.86	197.1	115.81	2,316.24	17,817.24	57.11	1,142.18	220.86	4,417.27	1,284.65	25,692.93
1622	3320.350	Closure C6a height = 4.5m	m2	80	80	5.4	529.20	432.0	79.38	6,350.40	42,336.00	125.91	10,073.04	13.20	1,056.10	747.69	59,815.54	80.0	9.9	890.86	788.3	115.81	9,264.97	71,268.98	87.10	6,967.80	226.90	18,152.07	1,320.67	105,653.81
1623	3320.360	Closure C7a height = 4.5m	m2	130	130	5.4	529.20	702.0	79.38	10,319.40	68,796.00	27.98	3,636.83	3.98	517.22	640.53	83,269.45	130.0	9.9	890.86	1,281.0	115.81	15,055.57	115,812.09	21.83	2,837.97	213.76	27,788.91	1,242.27	161,494.54
1624	3320.370	Closure C7b height = 4.5m	m2	2	2	5.4	529.20	10.8	79.38	158.76	1,058.40	27.98	55.95	3.98	7.96	640.53	1,281.07	2.0	9.9	890.73	19.7	115.79	231.59	1,781.45	50.01	100.02	219.40	438.80	1,275.93	2,551.86
1625	3320.380	Closure C8a height = 4.5m	m2	5	5	5.4	529.20	27.0	79.38	396.90	2,646.00	27.98	139.88	3.98	19.89	640.53	3,202.67	5.0	9.9	890.86	49.3	115.81	579.06	4,454.31	41.09	205.44	217.64	1,088.19	1,265.40	6,327.00
1626	3320.390	Closure C9a height = 4.5m	m2	5	5	5.4	529.20	27.0	79.38	396.90	2,646.00	34.98	174.88	4.64	23.20	648.20	3,240.98	5.0	9.9	890.90	49.3	115.82	579.08	4,454.48	75.64	378.22	224.60	1,123.02	1,306.96	6,534.81

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1627	3320.400	Closure C9b height = 4.5m	m2	35	35	5.4	529.20	189.0	79.38	2,778.30	18,522.00	34.98	1,224.13	4.64	162.39	648.20	22,686.83	35.0	9.9	890.86	344.9	115.81	4,053.42	31,180.17	46.91	1,641.73	218.81	7,658.33	1,272.39	44,533.65
1628	3320.410	Closure C10a height = 4.5m	m2	25	25	5.4	529.20	135.0	79.38	1,984.50	13,230.00	27.98	699.39	3.98	99.47	640.53	16,013.36	25.0	9.9	890.85	246.4	115.81	2,895.27	22,271.34	32.26	806.52	215.86	5,396.45	1,254.78	31,369.58
1629	3320.420	Door type DT-1A	ea	14	14	10.0	980.00	140.0	147.00	2,058.00	13,720.00	1,943.14	27,203.98	184.32	2,580.41	3,254.46	45,562.39	14.0	20.9	1,885.42	292.0	245.10	3,431.47	26,395.92	1,839.60	25,754.41	813.46	11,388.45	4,783.59	66,970.25
1630	3320.430	Door type DT-1B	ea	11	11	10.0	980.00	110.0	147.00	1,617.00	10,780.00	1,943.14	21,374.56	184.32	2,027.47	3,254.46	35,799.02	11.0	18.2	1,649.75	200.7	214.47	2,359.14	18,147.20	2,015.60	22,171.59	793.51	8,728.58	4,673.32	51,406.50
1631	3320.440	Door type DT-1C	ea	102	102	10.0	980.00	1020.0	147.00	14,994.00	99,960.00	1,943.14	198,200.42	184.32	18,800.15	3,254.46	331,954.57	102.0	18.2	1,649.74	1,861.3	214.47	21,875.62	168,273.99	1,737.93	177,268.91	737.60	75,235.66	4,339.75	442,654.18
1632	3320.450	Door type DT-2A	ea	22	22	10.0	980.00	220.0	147.00	3,234.00	21,560.00	3,886.28	85,498.22	367.29	8,080.27	5,380.57	118,372.50	22.0	18.2	1,649.75	401.5	214.47	4,718.27	36,294.39	3,305.89	72,729.69	1,053.28	23,172.07	6,223.38	136,914.42
1633	3320.460	Door type DT-2B	ea	7	7	10.0	980.00	70.0	147.00	1,029.00	6,860.00	3,886.28	27,203.98	367.29	2,571.00	5,380.57	37,663.98	7.0	18.2	1,649.74	127.7	214.47	1,501.27	11,548.21	5,800.52	40,603.65	1,555.51	10,888.57	9,220.24	64,541.69
B&M-0347	Added	Door type DT-3	ea	0	1	10.0	980.00	10.0	147.00	147.00	980.00	3,886.28	3,886.28	367.29	367.29	5,380.57	5,380.57	1.0	18.3	1,649.74	18.25	214.47	214.47	1,649.74	4,144.25	4,144.25	1,222.06	1,222.06	7,230.52	7,230.52
1634	3320.470	Coiling counter doors (roller shutters)	ea	7	7	28.0	2,744.00	196.0	411.60	2,881.20	19,208.00	4,171.27	29,198.90	463.48	3,244.35	7,790.35	54,532.45	7.0	51.1	4,619.29	357.7	600.51	4,203.55	32,335.00	1,751.00	12,257.02	1,438.12	10,066.86	8,408.92	58,862.43
1635	3320.480	Interior Windows	ea	7	7	20.0	1,960.00	140.0	294.00	2,058.00	13,720.00	2,590.86	18,135.99	287.87	2,015.11	5,132.73	35,929.10	7.0	36.5	3,299.49	255.5	428.93	3,002.53	23,096.42	484.44	3,391.11	872.96	6,110.71	5,085.82	35,600.77
1636	3320.490	Plastic laminated window sills	Linear meter	7	7	3.3	321.44	23.1	48.22	337.51	2,250.08	63.74	446.16	7.08	49.56	440.47	3,083.31	7.0	6.0	541.11	41.9	70.34	492.41	3,787.77	116.73	817.13	150.67	1,054.69	878.86	6,152.01
1637	3320.500	Cement board circulation floors in mechanical space on elevation 29.50 and 38.97	m2	325	325	1.7	167.23	552.5	25.08	8,152.46	54,349.75	41.97	13,641.81	5.30	1,722.83	239.59	77,866.85	325.0	3.1	281.51	1,012.0	36.60	11,893.90	91,491.52	19.20	6,241.47	70.03	22,758.42	407.34	132,385.31
1638	3320.510	Ceramic Floor finish tiles and baseboards in washrooms	m2	165	165	2.4	232.85	396.0	34.93	5,763.04	38,420.25	69.95	11,541.82	7.93	1,309.18	345.66	57,034.28	165.0	4.3	391.98	715.4	50.96	8,408.00	64,676.93	89.34	14,740.59	110.11	18,167.68	642.38	105,993.20
1639	3320.520	Vinyl Composite tiles flooring	m2	2305	2,305	1.7	170.40	3918.5	25.56	58,915.80	392,772.00	27.98	64,483.76	3.98	9,170.67	227.91	525,342.23	2,305.0	3.2	286.86	7,313.8	37.29	85,955.92	661,207.08	27.15	62,585.09	72.88	167,993.38	424.18	977,742.47
1640	3320.530	Vinyl base	Linear meter	800	800	1.2	115.37	960.0	17.31	13,844.40	92,296.00	16.79	13,433.76	2.93	2,343.84	152.40	121,918.00	800.0	2.1	194.21	1,718.5	25.25	20,197.55	155,365.76	4.77	3,818.03	46.60	37,281.91	270.83	216,663.25
1641	3320.540	Epoxy paint floor in warehouse	m2	1050	1,050	2.4	230.73	2520.0	34.61	36,339.98	242,266.50	41.97	44,073.54	5.30	5,566.05	312.62	328,246.07	1,050.0	4.3	388.42	4,511.2	50.49	53,018.85	407,837.30	7.41	7,779.72	92.78	97,414.02	539.10	566,049.88
1642	3320.550	Cementitious Fireproofing on steel structural members	m2	1150	1,150	2.5	243.43	2875.0	36.51	41,991.68	279,944.50	69.95	80,442.96	7.77	8,941.02	357.67	411,320.16	1,150.0	4.5	409.80	5,212.8	53.27	61,264.52	471,265.57	74.60	85,785.89	111.33	128,025.27	648.99	746,341.25
1643	3320.560	Cementitious Fireproofing on metal lath	m2	1395	1,395	1.6	158.41	2232.0	23.76	33,147.29	220,981.95	69.95	97,580.81	7.77	10,845.85	259.90	362,555.90	1,395.0	2.9	266.67	4,114.9	34.67	48,361.19	372,009.16	74.60	104,062.02	77.69	108,378.00	453.63	632,810.37
1644	3320.570	Plenum roof type PC1	m2	20	20	8.1	793.80	162.0	119.07	2,381.40	15,876.00	209.86	4,197.25	23.31	466.26	1,146.05	22,920.91	20.0	14.8	1,336.29	295.6	173.72	3,474.36	26,725.86	104.21	2,084.29	335.03	6,700.59	1,949.25	38,985.10
1645	3320.580	Mineral Acoustical Panels ceiling systems in offices, lobbies, communication room, lunch room and sleeping room	m2	1100	1,100	1.6	160.54	1760.0	24.08	26,489.10	176,594.00	41.97	46,172.28	4.66	5,128.86	231.26	254,384.24	1,100.0	3.0	270.25	3,288.3	35.13	38,646.02	297,277.10	28.05	30,852.76	69.16	76,075.94	402.59	442,851.82
1646	3320.590	Ceramic and Mineral fibre composite acoustical panels in washrooms ceiling tiles	m2	230	230	1.7	167.23	391.0	25.08	5,769.44	38,462.90	41.97	9,654.20	4.66	1,072.40	238.95	54,958.94	230.0	3.1	281.51	716.2	36.60	8,417.01	64,746.24	13.14	3,023.14	68.80	15,824.94	400.05	92,011.33
1647	3320.600	Gypsum board ceiling in battery rooms	m2	170	170	1.7	167.23	289.0	25.08	4,264.37	28,429.10	41.97	7,135.72	4.66	792.64	238.95	40,621.82	170.0	3.1	281.51	529.3	36.60	6,221.32	47,856.29	86.93	14,777.97	83.66	14,222.12	488.69	83,077.70
1648	3320.610	Kitchen upper and lower cabinets	Linear meter	9	9	39.4	3,857.28	334.9	578.59	4,918.03	32,786.88	1,699.60	14,446.63	188.84	1,605.15	6,324.32	53,756.69	8.5	71.8	6,493.46	610.5	844.15	7,175.28	55,194.44	802.54	6,821.62	1,687.63	14,344.87	9,827.79	83,536.21
1649	3320.620	Glazed ceramic wall finish tiles and baseboards in washrooms	m2	370	370	4.1	400.08	1517.0	60.01	22,204.44	148,029.60	55.96	20,706.16	6.21	2,298.81	522.27	193,239.01	370.0	7.4	673.49	2,756.4	87.55	32,394.94	249,191.88	61.06	22,592.43	170.57	63,112.20	992.68	367,291.46
1650	3320.630	Urethane in Storage Rooms	m2	1445	1,445	0.6	57.15	867.0	8.57	12,387.26	82,581.75	41.97	60,653.59	4.66	6,737.46	112.36	162,360.06	1,445.0	1.1	96.21	1,537.8	12.51	18,073.58	139,027.51	7.46	10,783.19	24.11	34,844.45	140.30	202,728.72
1651	3320.640	Painting on masonry walls	m2	4190	4,190	0.6	57.15	2514.0	8.57	35,918.78	239,458.50	7.00	29,328.32	0.78	3,248.09	73.50	307,953.69	4,190.0	1.1	96.21	4,459.2	12.51	52,407.40	403,133.88	2.53	10,604.09	23.12	96,877.28	134.37	563,022.65
1652	3320.650	Painting on gypsum wall and ceilings	m2	8220	8,220	0.6	57.15	4932.0	8.57	70,465.95	469,773.00	7.00	57,536.71	0.78	6,372.14	73.50	604,147.81	8,220.0	1.1	96.21	8,748.0	12.51	102,813.24	790,871.05	3.63	29,806.19	23.34	191,867.09	135.69	1,115,357.57
1653	3320.660	Washroom accessories	LS	1	1	337.0	33,026.00	337.0	4,953.90	4,953.90	33,026.00	17,319.87	17,319.87	1,924.43	1,924.43	57,224.21	57,224.21	1.0	615.0	55,596.40	615.0	7,227.53	7,227.53	55,596.40	27,105.53	27,105.53	18,523.01	18,523.01	108,452.47	108,452.47
1654	3320.670	Lockers in Lockers Rooms	LS	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1655	3320.680	Signage	LS	1	1	587.0	57,526.00	587.0	8,628.90	8,628.90	57,526.00	19,010.40	19,010.40	2,112.27	2,112.27	87,277.57	87,277.57	1.0	1071.2	96,840.03	1,071.2	12,589.20	12,589.20	96,840.03	68,989.52	68,989.52	36,648.20	36,648.20	215,066.96	215,066.96
1656	3320.690	Appliances and furniture	LS	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0348	Added	Paint Doors & Frames	ea	0	185	6.0	588.00	1110.0	88.20	16,317.00	108,780.00	15.55	2,876.68	1.73	320.57	693.48	128,294.24	185.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0349	Added	Paint "Egress Path" on floors	m2	0	982	0.5	52.92	491.0	7.94	7,795.12	51,967.44	7.00	6,873.61	0.78	761.25	68.63	67,397.41	982.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0350	Added	Conc Housekeeping Pads	m2	0	760	4.5	440.49	3420.0	66.07	50,215.86	334,772.40	442.53	336,319.15	49.17	37,367.83	998.26	758,675.24	760.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST08		SUB-TOTAL ARCHITECTURAL - SUPPLY & INSTALL			$ -			90609.8		$1,331,458.53	$8,876,390.20		$1,995,278.81		$219,767.23		$12,422,894.77	0.0			154013.3		$1,810,080.52	$13,923,696.34		$1,510,931.86		$3,576,463.07		$20,821,171.79
		POWERHOUSE DIESEL GENERATOR SYSTEM																												
		DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLALTION																												
1657	3437.010	Emergency Diesel Generator Set	LS	1	1	306.0	32,800.44	306.0	4,920.07	4,920.07	32,800.44	175,458.51	175,458.51	4,135.52	4,135.52	217,314.54	217,314.54	1.0	291.8	26,379.29	291.8	3,429.31	3,429.31	26,379.29	238,400.84	238,400.84	54,195.75	54,195.75	322,405.19	322,405.19
1658	3437.020	Diesel Fuel System	LS	1	1	1206.0	129,272.23	1206.0	19,390.84	19,390.84	129,272.23	223,399.76	223,399.76	16,298.81	16,298.81	388,361.64	388,361.64	1.0	1166.3	105,442.26	1,166.3	13,707.49	13,707.49	105,442.26	349,986.00	349,986.00	95,006.42	95,006.42	564,142.17	564,142.17
ST09		SUB-TOTAL DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLATION			$ -			1512.0		$24,310.90	$162,072.67		$398,858.26		$20,434.34		$605,676.17	0.0			1458.1		$17,136.80	$131,821.55		$588,386.85		$149,202.17		$886,547.37
		COMMISSIONING																												
		PIPING/MECHANICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1659	3352.153	WPS (Domestic Water)	LS	1	1	548.6	59,332.73	548.6	8,899.91	8,899.91	59,332.73	22,419.45	22,419.45	14,543.25	14,543.25	105,195.33	105,195.33	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1660	3353.580	SDS (Wastewater)	LS	1	1	234.0	25,307.80	234.0	3,796.17	3,796.17	25,307.80	4,024.72	4,024.72	6,203.28	6,203.28	39,331.97	39,331.97	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1661	3441.660	ASS (Low Pressure Compressed Air)	LS	1	1	247.0	26,713.79	247.0	4,007.07	4,007.07	26,713.79	4,148.88	4,148.88	6,547.91	6,547.91	41,417.65	41,417.65	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1662	3442.600	AHS (High Pressure Compressed Air)	LS	1	1	317.2	34,306.13	317.2	5,145.92	5,145.92	34,306.13	4,819.36	4,819.36	8,408.90	8,408.90	52,680.30	52,680.30	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1663	3443.030	WFS (Fire Protection Water)	LS	1	1	0.0	-	0.0	-	0.00	0.00	100,320.00	100,320.00	0.00	0.00	100,320.00	100,320.00	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	107,861.79	107,861.79	9,689.37	9,689.37	162,572.66	162,572.66
1664	3444.101	WCD (Clear Water Drainage)	LS	1	1	291.2	31,494.15	291.2	4,724.12	4,724.12	31,494.15	4,571.03	4,571.03	7,719.64	7,719.64	48,508.95	48,508.95	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1665	3445.950	WDS (Dewatering)	LS	1	1	330.2	35,712.11	330.2	5,356.82	5,356.82	35,712.11	4,943.52	4,943.52	8,753.52	8,753.52	54,765.97	54,765.97	1.0	755.5	68,299.43	755.5	8,878.93	8,878.93	68,299.43	0.00	0.00	16,051.36	16,051.36	93,229.72	93,229.72
1666	3446.250	OLS (Lubricating/Hydraulic Oil)	LS	1	1	226.2	24,464.20	226.2	3,669.63	3,669.63	24,464.20	3,950.22	3,950.22	5,996.51	5,996.51	38,080.56	38,080.56	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1667	3447.140	ODS (Oily Water Drainage)	LS	1	1	208.0	22,495.82	208.0	3,374.37	3,374.37	22,495.82	3,776.39	3,776.39	5,514.03	5,514.03	35,160.62	35,160.62	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1668	3448.113	WCS (Raw/Cooling Water)	LS	1	1	358.8	38,805.29	358.8	5,820.79	5,820.79	38,805.29	22,134.28	22,134.28	9,511.70	9,511.70	76,272.06	76,272.06	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1669	3449.196	WSS (Service Water)	LS	1	1	377.0	40,773.67	377.0	6,116.05	6,116.05	40,773.67	20,780.50	20,780.50	9,994.18	9,994.18	77,664.41	77,664.41	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1670	344A.50	ABR (Brake Air)	LS	1	1	273.0	29,525.76	273.0	4,428.86	4,428.86	29,525.76	4,397.21	4,397.21	7,237.16	7,237.16	45,589.00	45,589.00	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1671	344B.84	WTS (Shaft Seal Water)	LS	1	1	400.4	43,304.45	400.4	6,495.67	6,495.67	43,304.45	5,614.00	5,614.00	10,614.51	10,614.51	66,028.63	66,028.63	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1672	344C.05	WLS (Piezometer and Water Level)	LS	1	1	234.0	25,307.80	234.0	3,796.17	3,796.17	25,307.80	4,024.72	4,024.72	6,203.28	6,203.28	39,331.97	39,331.97	1.0	839.4	75,888.26	839.4	9,865.47	9,865.47	75,888.26	0.00	0.00	17,834.85	17,834.85	103,588.59	103,588.59
1673	3440.244	Mechanical Shop Equipment	LS	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	188.9	17,075.55	188.9	2,219.82	2,219.82	17,075.55	0.00	0.00	4,013.01	4,013.01	23,308.38	23,308.38
ST10		SUB-TOTAL PIPING/MECHANICAL - SINGLE CONTRACTOR DYNAMIC COMMISSIONING			$ -			4045.6		$65,631.56	$437,543.70		$209,924.27		$107,247.88		$820,347.42	0.0			8834.9		$103,834.93	$798,730.20		$107,861.79		$188,039.28		$1,198,466.19
		HVAC SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1674	3351.290	EDD (Dewatering gallery supply and Exhaust)	LS	1	1	40.0	4,592.00	40.0	688.80	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	5,280.80	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1675	3351.300	EGR (Exhaust for Trans., Storage and Garbage rooms)	LS	1	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1676	3351.310	EKH (Kitchen range exhaust)	LS	1	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1677	3351.320	END (Exhaust North RCC Dom)	LS	1	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1678	3351.330	EOR (Exhaust oil Storage Room)	LS	1	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1679	3351.340	ESB (South service bay vent and exhaust)	LS	1	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1680	3351.350	ESP (Exhaust for Waste Water treatment Room)	LS	1	1	120.0	13,776.00	120.0	2,066.40	2,066.40	13,776.00	0.00	0.00	0.00	0.00	15,842.40	15,842.40	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1681	3351.360	ESR (Ventilate and exhaust Oil/water Interceptor Room)	LS	1	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1682	3351.370	ESW (Exhaust Storage, Washrooms and Janitor rooms)	LS	1	1	24.0	2,755.20	24.0	413.28	413.28	2,755.20	0.00	0.00	0.00	0.00	3,168.48	3,168.48	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1683	3351.380	EWT (Exhaust and Ventilate the Wastewater Treatment Room)	LS	1	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1684	3351.390	PSC (Pressurize 4 Stairwells)	LS	1	1	40.0	4,592.00	40.0	688.80	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	5,280.80	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1685	3351.400	VCC (Control Room, Communication Room and assoc. space)	LS	1	1	42.0	4,821.60	42.0	723.24	723.24	4,821.60	0.00	0.00	0.00	0.00	5,544.84	5,544.84	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1686	3351.410	VCR (Ventilation and Cooling for Compressor Room)	LS	1	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1687	3351.420	VDA (Ventilate Dewatering, Drainage and Draft tube galleries)	LS	1	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1688	3351.430	VDT (Ventilate Draft Tube Gallery)	LS	1	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1689	3351.440	VEG (Diesel Emergency Generator)	LS	1	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1690	3351.450	VEL (Ventilate and Exhaust Elevator Machine Room)	LS	1	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1691	3351.460	VER (Ventilate Electrical Battery and Charger Rooms)	LS	1	1	40.0	4,592.00	40.0	688.80	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	5,280.80	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1692	3351.470	VFP (Ventilate the Fire Pump Room)	LS	1	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1693	3351.480	VIG (Ventilation for Lower inspection galleries)	LS	1	1	8.0	918.40	8.0	137.76	137.76	918.40	0.00	0.00	0.00	0.00	1,056.16	1,056.16	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1694	3351.490	VIL (Ventilate and Exhaust Intake Gate Hoist Building)	LS	1	1	48.0	5,510.40	48.0	826.56	826.56	5,510.40	0.00	0.00	0.00	0.00	6,336.96	6,336.96	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1695	3351.500	VMR (Machine Hall Main Supply and Exhaust)	LS	1	1	270.0	30,996.00	270.0	4,649.40	4,649.40	30,996.00	0.00	0.00	0.00	0.00	35,645.40	35,645.40	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1696	3351.510	VMS (Warehouse and Workshop spaces)	LS	1	1	42.0	4,821.60	42.0	723.24	723.24	4,821.60	0.00	0.00	0.00	0.00	5,544.84	5,544.84	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1697	3351.520	VND (Ventilate North RCC Dam)	LS	1	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1698	3351.530	VOF (Offices and admin spaces on Mezz. 1 & 2)	LS	1	1	120.0	13,776.00	120.0	2,066.40	2,066.40	13,776.00	0.00	0.00	0.00	0.00	15,842.40	15,842.40	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1699	3351.540	VCD (Ventilate Centre Transition Dam)	LS	1	1	12.0	1,377.60	12.0	206.64	206.64	1,377.60	0.00	0.00	0.00	0.00	1,584.24	1,584.24	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1700	3351.550	VSD (Ventilate South Dam)	LS	1	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701	3351.560	EMCS (Energy Monitoring and Control System)	LS	1	1	0.0	-	0.0	-	0.00	0.00	94,485.48	94,485.48	0.00	0.00	94,485.48	94,485.48	1.0	293.8	26,560.90	293.8	3,452.92	3,452.92	26,560.90	76,234.30	76,234.30	6,472.55	6,472.55	112,720.66	112,720.66
1701.1	3351.670	EBR (Exhaust Battery Room)	LS	1	1	40.0	4,592.00	40.0	688.80	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	5,280.80	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.2	3351.580	EWH (Exhaust Welding Hood)	LS	1	1	5.0	574.00	5.0	86.10	86.10	574.00	0.00	0.00	0.00	0.00	660.10	660.10	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.3	3351.590	ESC (Smoke Exhaust)	LS	1	1	26.0	2,984.80	26.0	447.72	447.72	2,984.80	0.00	0.00	0.00	0.00	3,432.52	3,432.52	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.4	3351.600	VSA (Spiral Case Access)	LS	1	1	5.0	574.00	5.0	86.10	86.10	574.00	0.00	0.00	0.00	0.00	660.10	660.10	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
								0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0		$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
ST11		SUB-TOTAL HVAC SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING			$ -			1000.0		$17,220.00	$114,800.00		$94,485.48		$0.00		$226,505.48	0.0			1594.9		$18,744.43	$144,187.92		$76,234.30		$34,116.46		$273,283.11
		ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1702	3433.050	Station Service Switchgear, MCC and Connected Equipment	LS	1	1	5924.5	629,353.60	5924.5	94,403.04	94,403.04	629,353.60	35,882.89	35,882.89	99,597.17	99,597.17	859,236.70	859,236.70	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	297,670.52	297,670.52	10,262.87	10,262.87	352,954.89	352,954.89
1702a	Added	ATS & Load Management System Commissioning	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	314.8	28,458.80	314.79	3,699.64	3,699.64	28,458.80	72,958.46	72,958.46	6,908.68	6,908.68	112,025.58	112,025.58
1703	3340.170	Common Station Service MCC, Essential MCC and Connected Equipment	LS	1	1	1537.5	163,327.06	1537.5	24,499.06	24,499.06	163,327.06	9,312.17	9,312.17	25,847.02	25,847.02	222,985.30	222,985.30	1.0	3777.4	341,497.19	3,777.4	44,394.63	44,394.63	341,497.19	198,447.02	198,447.02	80,856.47	80,856.47	665,195.31	665,195.31
1704	3000.263	Intake Distribution Equipment and Building Systems	LS	1	1	492.0	52,264.66	492.0	7,839.70	7,839.70	52,264.66	2,979.89	2,979.89	8,271.04	8,271.04	71,355.30	71,355.30	1.0	1888.7	170,748.60	1,888.7	22,197.32	22,197.32	170,748.60	99,223.51	99,223.51	40,428.23	40,428.23	332,597.66	332,597.66
1705	3435.020	Station Service Transformers	LS	1	1	492.0	52,264.66	492.0	7,839.70	7,839.70	52,264.66	2,979.89	2,979.89	8,271.04	8,271.04	71,355.30	71,355.30	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1706	3460.050	GSU Ancillary Systems	LS	1	1	328.0	34,843.11	328.0	5,226.47	5,226.47	34,843.11	1,986.60	1,986.60	5,514.03	5,514.03	47,570.20	47,570.20	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1707	3000.264	Powerhouse Gallery Electrical Distribution	LS	1	1	861.0	91,463.15	861.0	13,719.47	13,719.47	91,463.15	5,214.81	5,214.81	14,474.33	14,474.33	124,871.77	124,871.77	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	211,871.37	211,871.37	10,003.63	10,003.63	266,896.50	266,896.50
1708	3000.265	Turbine Floor Electrical Distribution	LS	1	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	198,447.02	198,447.02	9,963.07	9,963.07	253,431.58	253,431.58
1709	3000.266	Generator Floor Electrical Distribution	LS	1	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	49,611.75	49,611.75	9,513.36	9,513.36	104,146.61	104,146.61
1710	3000.267	North Dam, North Transition Dam, Centre Transition Dam and South Transition Dam Electrical Distribution and Systems	LS	1	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1711	3000.268	Turbine Floor Lighting System	LS	1	1	287.0	30,487.72	287.0	4,573.16	4,573.16	30,487.72	1,738.27	1,738.27	4,824.78	4,824.78	41,623.92	41,623.92	1.0	314.8	28,458.80	314.8	3,699.64	3,699.64	28,458.80	0.00	0.00	6,688.24	6,688.24	38,846.68	38,846.68
1712	3000.269	Generator Floor Lighting System	LS	1	1	287.0	30,487.72	287.0	4,573.16	4,573.16	30,487.72	1,738.27	1,738.27	4,824.78	4,824.78	41,623.92	41,623.92	1.0	314.8	28,458.80	314.8	3,699.64	3,699.64	28,458.80	0.00	0.00	6,688.24	6,688.24	38,846.68	38,846.68
1713	3443.040	Fire Detection System - ELECTRICAL	LS	1	1	1025.0	108,884.71	1025.0	16,332.71	16,332.71	108,884.71	57,508.11	57,508.11	17,231.34	17,231.34	199,956.87	199,956.87	1.0	1322.1	119,524.71	1,322.1	15,538.21	15,538.21	119,524.71	30,733.61	30,733.61	28,182.93	28,182.93	193,979.46	193,979.46
1714	3460.060	Generator Step Up Transformer Unit 1	LS	1	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1715	3460.070	Generator Step Up Transformer Unit 2	LS	1	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1716	3460.080	Generator Step Up Transformer Unit 3	LS	1	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1717	3460.090	Generator Step Up Transformer Unit 4	LS	1	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1718	3436.050	Unit 1 Isolated Phase Bus	LS	1	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1719	3436.060	Unit 2 Isolated Phase Bus	LS	1	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1720	3436.070	Unit 3 Isolated Phase Bus	LS	1	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1721	3436.080	Unit 4 Isolated Phase Bus	LS	1	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1722	3438.050	Unit 1 Generator Circuit Breaker	LS	1	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1723	3438.060	Unit 2 Generator Circuit Breaker	LS	1	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29

COMMERCIAL BID TABULATION
COMPANY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR											
					LABOUR COMPONENT						NON LABOUR COMPONENT				Delta	$353,645.00		LABOUR COMPONENT						NON LABOUR COMPONENT					
					0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1724	3438.070	Unit 3 Generator Circuit Breaker	LS	1	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1725	3438.080	Unit 4 Generator Circuit Breaker	LS	1	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
B&M-0351	Added	Testing of Spare Generator Transformer as per sect 48 01 10 Item # 3.2.4	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST12		SUB-TOTAL ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING			$ -			15211.0		$242,377.36	$1,615,849.05		$276,808.35		$255,713.14		$2,390,747.94	8.0			16054.0		$188,678.19	$1,451,370.67		$1,158,963.26		$344,595.24		$3,143,607.36
		POWERHOUSE DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1726	3437.030	POWERHOUSE DIESEL GENERATOR SYSTEM	LS	1	1	429.0	45,984.93	429.0	6,897.74	6,897.74	45,984.93	4,097.35	4,097.35	11,372.69	11,372.69	68,352.71	68,352.71	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	25,593.83	25,593.83	20,887.32	20,887.32	136,522.58	136,522.58
ST13		SUB-TOTAL DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						429.0		$6,897.74	$45,984.93		$4,097.35		$11,372.69		$68,352.71				881.4		$10,358.75	$79,682.68		$25,593.83		$20,887.32		$136,522.58
ST14		TOTAL CONTRACT PRICE (pre-normalization)						692,639		$10,968,061.75	$73,120,411.66		$137,317,945.43		$16,829,426.16		$238,235,845.00				682,316		$8,019,056.32	$61,685,048.64		$89,670,003.35		$26,938,072.02		$186,312,180.34
		NORMALIZATION																												
		Labour Contingency in accordance with Bidder Cost Sharing Proposal at LMAX	LS			105.57	296,997.00	0.00		31,353,281.45							31,353,281.45	Labour	90.41	316,683.62		496,730.52	28,629,891.86								29,126,622.37
		Adjustment for blended hourly rate ($96/hour used)				-9.57				-9,468,649.92							-9,468,649.92		5.59				5,589,059.50								5,589,059.50
		Cost Plus Changes												Markup		DIT											Markup		DIT	
		Materials Markup (Contractor Markup - 5%)	%	$000000									250,000.00	10.00%		5.00%	250,000.00									400,000.00	13.00%		8.00%	400,000.00
		Rented Equipment Markup (Contractor Markup - 5%)	%	$000000									250,000.00	10.00%		5.00%	250,000.00									400,000.00	13.00%		8.00%	400,000.00
		Third Party Services Markup (Contractor Markup - 5%)	%	$000000									150,000.00	8.00%		3.00%	150,000.00									400,000.00	13.00%		8.00%	400,000.00
		Travel Costs Markup (based on RFP 0%)	%	0									0.00	0.00%		0.00%	0.00									0.00	0.00%		0.00%	0.00
		Markup on spares		$000000									350,000.00	12.00%		7.00%	350,000.00									0.00				0.00
		PLA Labour Travel Cost Estimate - Based on Normalized labour Hours & Turnaround Sched Less amount Estimated in Item 4 above.	Trips		7069	Based on 14 Day 10 Hr Shifts							$175,897.44			800	175,897.44	7,136.0	Based on 14 Day 10 Hr Shifts							$732,928.77			800	732,928.77
		Performance Security																												
		50% Performance Bond	$/$1000																											
		50% Payment Bond	$/$1000																											
		15% Letter of Credit during Performance of Work	Year		4							1,072,061.30	4,288,245.21				4,288,245.21	4.0							838,404.81	3,353,619.25				3,353,619.25
		5% Letter of Credit Warranty Period	Year		1							416,912.73	1,250,738.19				1,250,738.19	3.0							279,468.27	838,404.81				838,404.81
					%													%												
		Liquidated Damages Cap - Amount less than 10% of Price			0.0500								11,911,792				11,911,792.25	0.0500								9,315,609				9,315,609.02
		Rates for Changes Comparison	Lot		1							$ 834,470.04	834,470			$ 834,470.04	834,470.04	1.0								1,116,172.24			$ 1,116,172.24	1,116,172.24
ST15		Total Normalization						296,997.00	0.00	21,884,631.53			19,461,143.13				41,345,774.66									16,556,734.09				51,272,415.96
ST16		TOTAL NORMALIZED CONTRACT PRICE						989,636.29	10,968,061.75	95,005,043.19			156,779,088.56		16,829,426.16		279,581,619.66				999,000.00		8,515,786.84	95,904,000.00		106,226,737.44				237,584,596.30
ST17		Score / 10								105,973,105							8.2						104,419,787							10.0

6-Jun-2017

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

**	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
		GENERAL																												
1	0000.01	Mobilization	LS	1	1	16349.8	2,114,581.18	16349.8	317,187.18	317,187.18	2,114,581.18	6,575,590.01	6,575,590.01	1,664,992.37	1,664,992.37	10,672,350.74	10,672,350.74	1.0	8157.0	737,435.95	8,156.95	95,866.67	95,866.67	737,435.95	143,108.02	143,108.02	940,697.35	940,697.35	1,917,108.00	1,917,108.00
2	0000.02	Site Installation	LS	1	1	0.0	-	0.0	-	0.00	0.00	16,825,940.72	16,825,940.72	500,232.00	500,232.00	17,326,172.72	17,326,172.72	1.0	0.0	0.00	0.00	0.00	0.00	0.00	465,787.59	465,787.59	3,625,777.29	3,625,777.29	4,091,564.88	4,091,564.88
3	0000.03	Demobilization	LS	1	1	1006.0	137,763.42	1006.0	20,664.51	20,664.51	137,763.42	89,663.30	89,663.30	93,926.45	93,926.45	342,017.69	342,017.69	1.0	4945.3	447,080.86	4,945.27	58,120.51	58,120.51	447,080.86	86,294.74	86,294.74	298,523.63	298,523.63	890,019.74	890,019.74
PM	Added	Project Management / Staff Labour			1	0.0	-	0.0	-	0.00	0.00	65,020,863.62	65,020,863.62	285,000.00	285,000.00	65,305,863.62	65,305,863.62	1.0	0.0	0.00	0.00	0.00	0.00	0.00	34,202,483.60	34,202,483.60	0.00	0.00	34,202,483.60	34,202,483.60
3b	Added	Project Management / Staff Labour			0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4		Estimate of Travel Allowances - Trades Labour	Est	1	1							$5,479,302.56	$5,479,302.56			5,479,302.56	5,479,302.56	1.0							$4,975,871.23	$4,975,871.23			4,975,871.23	4,975,871.23
4a		Performance Bond	$/$1000	0	1								$0.00			0.00	0.00	0.0								$0.00			0.00	
4b		Payment Bond	$/$1000	0	1								$0.00			0.00	0.00	0.0								$0.00			0.00	
4c		Letter of Credit	$/$1000	0	1								$0.00			0.00	0.00	0.0								$0.00			0.00	
4d		Assignment Rights in Accordance with **Article 30.1 (d)**	LS	0	1								$0.00			0.00	0.00	1.0								$0.00			0.00	
B&M-0002	Added	General Foreman	LS		1	26026.0	3,163,941.27	26026.0	474,591.19	474,591.19	3,163,941.27	0.00	0.00	0.00	0.00	3,638,532.46	3,638,532.46	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0003	Added	Foreman	LS		1	47380.7	5,592,182.40	47380.7	838,827.36	838,827.36	5,592,182.40	0.00	0.00	0.00	0.00	6,431,009.77	6,431,009.77	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0004	Added	Labourers	LS		1	43710.3	4,511,812.47	43710.3	676,771.87	676,771.87	4,511,812.47	0.00	0.00	0.00	0.00	5,188,584.34	5,188,584.34	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0005	Added	Operators	LS		1	30697.3	3,263,247.04	30697.3	489,487.06	489,487.06	3,263,247.04	0.00	0.00	0.00	0.00	3,752,734.10	3,752,734.10	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0006	Added	Teamsters	LS		1	13013.0	1,332,691.77	13013.0	199,903.77	199,903.77	1,332,691.77	0.00	0.00	0.00	0.00	1,532,595.53	1,532,595.53	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0007	Added	Carpenters	LS		1	45465.0	3,763,390.21	45465.0	564,508.53	564,508.53	3,763,390.21	0.00	0.00	2,067,617.87	2,067,617.87	6,395,516.62	6,395,516.62	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0008	Added	Painters	LS		1	2400.0	180,000.00	2400.0	27,000.00	27,000.00	180,000.00	157,320.00	157,320.00	0.00	0.00	364,320.00	364,320.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0009	Added	Sheetmetal General Foreman	LS		1	4830.0	531,396.60	4830.0	79,709.49	79,709.49	531,396.60	0.00	0.00	0.00	0.00	611,106.09	611,106.09	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST01		**SUB-TOTAL INDIRECT COSTS (GENERAL)**						230878.1		$3,688,650.95	$24,591,006.36		$94,148,680.22		$4,611,768.69		$127,040,106.22				13102.2		$153,987.19	$1,184,516.81		$39,873,545.18		$4,864,998.26		$46,077,047.44
		PIPING/MECHANICAL SYSTEMS																												
		PIPING/MECHANICAL - DESIGN AND ENGINEERING																												
5	3343.010	WFS (Fire Protection Water)	LS	0	1	0.0	-	0.0	-	0.00	0.00	114,000.00	114,000.00	0.00	0.00	114,000.00	114,000.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	122,570.22	122,570.22	370.34	370.34	122,940.55	122,940.55
6	3310.010	Mechnical Shaft Plaftorm/Staging Design and Engineering	LS	0	1	0.0	-	0.0	-	0.00	0.00	855.00	855.00	0.00	0.00	855.00	855.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	109,437.69	109,437.69	330.66	330.66	109,768.35	109,768.35
ST02		**SUB-TOTAL PIPING/MECHANICAL - DESIGN AND ENGINEERING**						0.0		$0.00	$0.00		$114,855.00		$0.00		$114,855.00				0.0		$0.00	$0.00		$232,007.91		$701.00		$232,708.91
		PIPING/MECHANICAL - SUPPLY AND INSTALLATION						0.0																						
		WPS (Domestic Water)																												
7	3352.001	Water treatment plant: Sand & Antracite Filter 3352-FR-6000	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	26,906.34	26,906.34	2,205.61	2,205.61	46,503.59	46,503.59	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	206,799.93	206,799.93	44,072.85	44,072.85	262,598.51	262,598.51
8	3352.002	Water treatment plant: Anionic Exchanger 3352-FR-6001	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	37,351.02	37,351.02	2,205.61	2,205.61	56,948.27	56,948.27	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	317.47	317.47	2,502.62	2,502.62	14,545.81	14,545.81
9	3352.003	Water treatment plant: Anionic control Panel 3352-CP-6001	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	5,818.32	5,818.32	1,654.21	1,654.21	20,516.26	20,516.26	1.0	15.9	1,440.41	15.9	187.25	187.25	1,440.41	300.30	300.30	398.97	398.97	2,326.93	2,326.93
10	3352.004	Water treatment plant: Activated Carbon Filter 3352-FR-6002	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	30,387.90	30,387.90	2,205.61	2,205.61	49,985.15	49,985.15	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	317.47	317.47	2,502.62	2,502.62	14,545.81	14,545.81
11	3352.005	Water treatment plant: Cartridge Filter 3352-FR-6003	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	6,016.98	6,016.98	2,205.61	2,205.61	25,614.23	25,614.23	1.0	103.1	9,321.75	103.1	1,211.83	1,211.83	9,321.75	190.59	190.59	2,229.12	2,229.12	12,953.29	12,953.29
12	3352.006	Water treatment plant: UV Sterilizer 3352-UV-6000	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	21,684.00	21,684.00	2,205.61	2,205.61	41,281.25	41,281.25	1.0	103.1	9,321.75	103.1	1,211.83	1,211.83	9,321.75	190.59	190.59	2,229.12	2,229.12	12,953.29	12,953.29
13	3352.007	Water treatment plant: Injection of Sodium Hypochlorite 3352-P-6002 / 6003	ea	2	2	69.9	7,561.58	139.8	1,134.24	2,268.47	15,123.16	10,842.00	21,684.00	1,102.81	2,205.61	20,640.62	41,281.25	2.0	35.9	3,241.96	71.7	421.45	842.91	6,483.91	0.00	0.00	761.91	1,523.82	4,425.32	8,850.63
14	3352.008	Water treatment plant: Tank 3352-HTK-6000 / 6001	ea	2	2	52.4	5,671.19	104.9	850.68	1,701.36	11,342.37	2,038.77	4,077.54	827.10	1,654.21	9,387.74	18,775.48	2.0	78.4	7,085.59	156.8	921.13	1,842.25	14,171.17	123.63	247.26	1,690.11	3,380.22	9,820.45	19,640.91
15	3352.009	Water treatment plant: Static Mixer 3352-SM-6000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	2,138.10	2,138.10	1,102.81	1,102.81	11,936.72	11,936.72	1.0	35.9	3,249.58	35.9	422.45	422.45	3,249.58	0.00	0.00	763.71	763.71	4,435.73	4,435.73
16	3352.010	Water treatment plant: Flow Meter 3352-FQI-6000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	3,878.88	3,878.88	1,102.81	1,102.81	13,677.50	13,677.50	1.0	12.8	1,153.43	12.8	149.95	149.95	1,153.43	360.36	360.36	343.63	343.63	2,007.36	2,007.36
17	3352.011	Water treatment plant: Control Panel 3352-CP-6004	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	7,559.10	7,559.10	1,654.21	1,654.21	22,257.04	22,257.04	1.0	15.9	1,440.41	15.9	187.25	187.25	1,440.41	300.30	300.30	398.97	398.97	2,326.93	2,326.93
18	3352.012	Water treatment plant: Treated Water Tank 3352-TK-6000	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	14,720.88	14,720.88	2,205.61	2,205.61	34,318.13	34,318.13	1.0	213.0	19,252.11	213.0	2,502.77	2,502.77	19,252.11	658.26	658.26	4,657.05	4,657.05	27,070.19	27,070.19
19	3352.013	Water treatment plant: Distribution Pump 3352-P-6000 / 6001	ea	2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	10,179.12	20,358.24	2,205.61	4,411.22	29,776.37	59,552.73	2.0	90.1	8,141.29	180.1	1,058.37	2,116.73	16,282.57	8,649.80	17,299.61	3,654.75	7,309.49	21,504.20	43,008.40
20	3352.014	Water treatment plant: Hydropneumatic Tank 3352-TK-6001	ea	1	1	52.4	5,671.19	52.4	850.68	850.68	5,671.19	6,182.67	6,182.67	827.10	827.10	13,531.64	13,531.64	1.0	96.7	8,743.64	96.7	1,136.67	1,136.67	8,743.64	6,555.70	6,555.70	3,374.71	3,374.71	19,810.72	19,810.72
21	3352.015	Main water heater 3352-WHTR-7002	ea	1	1	52.4	5,671.19	52.4	850.68	850.68	5,671.19	33,325.21	33,325.21	827.10	827.10	40,674.18	40,674.18	1.0	48.2	4,355.87	48.2	566.26	566.26	4,355.87	43,589.65	43,589.65	9,799.41	9,799.41	58,311.19	58,311.19
22	3352.016	Control room water heater 3352-WHTR-7000	ea	1	1	35.0	3,780.79	35.0	567.12	567.12	3,780.79	1,127.53	1,127.53	551.40	551.40	6,026.84	6,026.84	1.0	48.2	4,355.87	48.2	566.26	566.26	4,355.87	1,326.09	1,326.09	1,290.66	1,290.66	7,538.89	7,538.89
23	3352.017	Eyewash water heater 3352-WHTR-6000 / 7001 / 7003	ea	3	3	35.0	3,780.79	104.9	567.12	1,701.36	11,342.37	22,086.66	66,259.98	551.40	1,654.21	26,985.97	80,957.92	3.0	25.5	2,304.10	76.5	299.53	898.60	6,912.29	30,224.65	90,673.94	6,626.50	19,879.49	39,454.77	118,364.32
24	3352.018	Emergency shower and eyewash 3352-ESY-6000	ea	1	1	52.4	5,671.19	52.4	850.68	850.68	5,671.19	8,779.59	8,779.59	827.10	827.10	16,128.56	16,128.56	1.0	48.1	4,350.33	48.1	565.54	565.54	4,350.33	2,359.83	2,359.83	1,497.49	1,497.49	8,773.19	8,773.19
25	3352.019	Emergency shower and eyewash 3352-ESY-7000 to 7004	ea	4	5	52.4	5,671.19	262.2	850.68	4,253.39	28,355.93	19,449.99	97,249.95	827.10	4,135.52	26,798.96	133,994.79	5.0	48.1	4,347.29	240.4	565.15	2,825.74	21,736.43	12,563.59	62,817.96	3,551.05	17,755.25	21,027.08	105,135.38
26	3352.020	Water closet 3352-WC-6000 / 6001 / 7000 to 7004 / 8000 to 8003	ea	11	11	17.5	1,890.40	192.3	283.56	3,119.15	20,794.35	714.93	7,864.23	275.70	3,032.72	3,164.59	34,810.45	11.0	28.9	2,609.60	317.5	339.25	3,731.72	28,705.56	553.92	6,093.09	724.81	7,972.92	4,227.57	46,503.30
27	3352.021	Urinal 3352-UR-7000 / 7001	ea	2	2	26.2	2,835.59	52.4	425.34	850.68	5,671.19	1,585.39	3,170.79	413.55	827.10	5,259.88	10,519.76	2.0	28.8	2,606.32	57.7	338.82	677.64	5,212.64	1,077.47	2,154.94	829.44	1,658.88	4,852.05	9,704.10
28	3352.022	Lavatory 3352-LAV-6001 / 7000 to 7004 / 8000 to 8003	ea	10	10	17.5	1,890.40	174.8	283.56	2,835.59	18,903.95	543.93	5,439.30	275.70	2,757.01	2,993.59	29,935.86	10.0	9.6	869.37	96.2	113.02	1,130.19	8,693.74	220.54	2,205.45	248.72	2,487.17	1,451.65	14,516.54
29	3352.023	Lavatory 3352-LAV-6000 / 6002	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	1,096.60	2,193.20	275.70	551.40	3,546.26	7,092.52	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	126.43	252.87	230.88	461.76	1,345.04	2,690.07
30	3352.024	Kitchen sink 3352-SK-7000	ea	1	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	1,242.03	1,242.03	413.55	413.55	4,916.51	4,916.51	1.0	9.7	874.78	9.7	113.72	113.72	874.78	259.70	259.70	257.86	257.86	1,506.06	1,506.06
31	3352.025	Mop sink 3352-MS-6000 / 7000 / 8000	ea	3	3	26.2	2,835.59	78.7	425.34	1,276.02	8,506.78	7,618.27	22,854.82	413.55	1,240.66	11,292.76	33,878.28	3.0	19.2	1,737.55	57.7	225.88	677.64	5,212.64	5,695.54	17,086.61	1,555.00	4,665.01	9,213.97	27,641.91
32	3352.026	Service sink 3352-SS-8000	ea	1	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	7,536.19	7,536.19	413.55	413.55	11,210.68	11,210.68	1.0	9.7	874.78	9.7	113.72	113.72	874.78	5,683.45	5,683.45	1,349.81	1,349.81	8,021.77	8,021.77
33	3352.027	Multi station sink 3352-SKM-6000	ea	1	1	52.4	5,671.19	52.4	850.68	850.68	5,671.19	11,720.79	11,720.79	827.10	827.10	19,069.76	19,069.76	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	6,045.33	6,045.33	1,523.34	1,523.34	9,041.22	9,041.22
34	3352.028	Shower fitting 3352-SH-7000 / 7001	ea	2	2	52.4	5,671.19	104.9	850.68	1,701.36	11,342.37	769.95	1,539.90	827.10	1,654.21	8,118.92	16,237.84	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	370.32	740.64	279.97	559.95	1,638.02	3,276.03
35	3352.029	Air vent 3352-AV-8000 / 8001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	5,575.02	11,150.03	137.85	275.70	6,799.84	13,599.69	2.0	11.0	989.85	21.9	128.68	257.36	1,979.70	260.46	520.92	285.07	570.14	1,664.06	3,328.12
36	3352.030	Pressure safety valve 3352-PSV-6000 / 6001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	124.90	249.81	137.85	275.70	1,349.73	2,699.47	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	104.77	209.54	176.18	352.36	1,026.64	2,053.27
37	3352.031	Pressure indicator 3352-PI-6000 to 6010	ea	11	11	8.7	945.20	96.1	141.78	1,559.58	10,397.17	700.54	7,705.90	137.85	1,516.36	1,925.36	21,179.01	11.0	3.7	329.95	40.2	42.89	471.83	3,629.44	84.95	934.41	94.64	1,041.09	552.43	6,076.76
38	3352.032	Pressure switch 3352-PSL-6000, 3352-PSLL-6000, 3352-PSH-6000, 3352-PSHH-6000	ea	4	4	8.7	945.20	35.0	141.78	567.12	3,780.79	464.62	1,858.50	137.85	551.40	1,689.45	6,757.81	4.0	7.3	659.90	29.2	85.79	343.15	2,639.59	419.73	1,678.91	239.59	958.35	1,405.00	5,619.99
39	3352.033	Pressure control valve 3352-PCV-6000	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	1,479.22	1,479.22	137.85	137.85	2,704.05	2,704.05	1.0	6.4	575.32	6.4	74.79	74.79	575.32	1,704.41	1,704.41	478.35	478.35	2,832.88	2,832.88
40	3352.034	Temperature indicator 3352-TE-7000 / 3352-TI-7000, 3352-TE-6000 / 3352-TI-6000	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	294.76	589.53	137.85	275.70	1,519.59	3,039.19	2.0	3.7	329.95	7.3	42.89	85.79	659.89	246.41	492.83	127.15	254.30	746.40	1,492.81
41	3352.035	Control Panel 3352-CP-6005	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	55,387.27	55,387.27	11,545.45	11,545.45	68,829.82	68,829.82
B&M-0010	Added	Drinking Fountain 3352-DF-7000	ea		1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	2,611.39	2,611.39	413.55	413.55	6,285.88	6,285.88	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	3352.036	Pipe NPS 1/2 Type K , Piping Specification NB11	m	214	417	1.3	139.51	538.0	20.93	8,727.96	58,186.37	17.24	7,191.72	20.35	8,486.09	198.03	82,592.14	255.0	0.8	73.88	208.4	9.60	2,449.25	18,840.36	13.57	3,459.83	20.10	5,124.31	117.15	29,873.75
43	3352.037	Pipe NPS 1/2 Sch.10S, Piping Specification SB11	m	1	0	1.0	104.63	0.0	15.70	0.00	0.00	23.57	0.00	15.26	0.00	159.16	0.00	49.0	3.9	351.85	190.7	45.74	2,241.27	17,240.52	10.73	525.84	84.85	4,157.64	493.17	24,165.27
44	3352.038	Elbow 45 degrees NPS 1/2 Type K , Piping Specification NB11	ea	1	0	1.8	198.49	0.0	29.77	0.00	0.00	74.68	0.00	28.95	0.00	331.89	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	1.00	0.00	4.11	0.00	23.92	0.00
45	3352.039	Elbow 90 degrees NPS 1/2 Type K, Piping Specification NB11	ea	144	392	0.8	85.07	308.3	12.76	5,001.99	33,346.57	8.15	3,193.63	12.41	4,863.37	118.38	46,405.57	166.0	0.2	22.16	40.7	2.88	478.32	3,679.35	0.51	85.11	5.31	881.84	30.87	5,124.62
46	3352.040	Tee NPS 1/2 Type K, Piping Specification NB11	ea	13	57	1.0	113.42	59.8	17.01	969.77	6,465.15	11.04	629.54	16.54	942.90	158.02	9,007.37	57.0	0.5	44.29	27.9	5.76	328.19	2,524.52	1.04	59.01	10.62	605.18	61.70	3,516.90
47	3352.041	Coupling SW/FNPT NPS 1/2, Piping Specification NB11	ea	2	1	0.5	56.71	0.5	8.51	8.51	56.71	8.06	8.06	8.27	8.27	81.55	81.55	53.0	0.2	22.10	13.0	2.87	152.29	1,171.46	1.65	87.71	5.53	292.97	32.16	1,704.43
48	3352.042	Weld NPS 1/2, Piping Specification NB11	ea	364	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	925.0	1.3	118.00	1,207.3	15.34	14,189.05	109,146.57	0.00	0.00	27.73	25,651.04	161.07	148,986.66
49	3352.043	Ball Valve NPS 1/2, Valve Specification VBA08	ea	60	59	3.3	354.45	193.4	53.17	3,136.87	20,912.50	26.17	1,543.76	51.69	3,049.95	485.48	28,643.08	63.0	1.3	118.10	82.3	15.35	967.26	7,440.49	9.11	573.84	29.59	1,864.14	172.15	10,845.73
50	3352.044	Pipe insulation NPS 1/2	Linear meter	215	0	1.4	142.38	0.0	21.36	0.00	0.00	37.48	0.00	8.55	0.00	209.77	0.00	254.8	3.3	302.12	851.6	39.28	10,008.03	76,984.86	166.54	42,436.44	87.06	22,182.85	594.99	151,612.18
51	3352.045	Pipe identification NPS 1/2	Linear meter	215	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.1	0.6	50.57	48.2	6.57	566.26	4,355.87	12.06	1,039.19	14.31	1,232.90	83.52	7,194.22
52	3352.046	Pipe NPS 3/4 Type K, Piping Specification NB11	m	230	143	1.5	162.76	214.7	24.41	3,483.53	23,223.51	27.12	3,868.87	23.74	3,386.99	238.03	33,962.90	250.0	0.8	68.30	188.9	8.88	2,219.82	17,075.55	14.04	3,510.06	18.88	4,719.68	110.10	27,525.11
53	3352.047	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	1	0	1.1	116.26	0.0	17.44	0.00	0.00	27.68	0.00	16.96	0.00	178.33	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	3.74	0.00	12.48	0.00	72.61	0.00
54	3352.048	Elbow 45 degrees NPS 3/4 Type K, Piping Specification NB11	ea	4	0	1.8	198.49	0.0	29.77	0.00	0.00	74.68	0.00	28.95	0.00	331.89	0.00	2.0	0.1	8.32	0.2	1.08	2.16	16.64	1.49	2.98	2.25	4.51	13.14	26.29
55	3352.049	Elbow 90 degrees NPS 3/4 Type K, Piping Specification NB11	ea	71	34	1.0	113.42	35.7	17.01	579.46	3,856.41	11.91	404.82	16.54	562.43	158.89	5,402.12	116.0	0.2	22.18	28.5	2.88	334.50	2,573.05	1.17	135.62	5.45	632.01	31.68	3,675.17
56	3352.050	Tee NPS 3/4 Type K, Piping Specification NB11	ea	3	3	1.4	155.96	4.3	23.39	70.18	467.87	17.13	51.39	22.75	68.24	219.23	657.68	0.0	0.6	49.91	0.0	6.49	0.00	0.00	1.70	0.00	12.08	0.00	70.18	0.00
57	3352.051	Tee Reducing NPS 3/4 x 1/2 Type K, Piping Specification NB11	ea	3	3	1.4	155.96	4.3	23.39	70.18	467.87	15.72	47.16	22.75	68.24	217.82	653.45	20.0	0.5	44.57	9.9	5.79	115.88	891.41	1.71	34.19	10.82	216.38	62.89	1,257.86
58	3352.052	Union NPS 3/4 Type K, Piping Specification NB11	ea	2	0	1.8	198.49	0.0	29.77	0.00	0.00	187.74	0.00	28.95	0.00	444.95	0.00	53.0	0.3	27.39	16.1	3.56	188.69	1,451.49	5.67	300.72	7.58	401.66	44.20	2,342.56
59	3352.053	Concentric Reducer NPS 3/4 x 1/2 Type K, Piping Specification NB11	ea	16	5	1.0	113.42	5.2	17.01	85.07	567.12	19.51	97.53	16.54	82.71	166.48	832.42	20.0	0.3	24.75	5.5	3.22	64.34	494.92	1.08	21.69	6.03	120.68	35.08	701.63
60	3352.054	Concentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	0	8.5	921.57	0.0	138.24	0.00	0.00	448.22	0.00	134.40	0.00	1,642.43	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
61	3352.055	Cap NPS 3/4 Type K, Piping Specification NB11	ea	3	1	0.7	70.89	0.7	10.63	10.63	70.89	156.26	156.26	10.34	10.34	248.12	248.12	4.0	0.2	20.80	0.9	2.70	10.81	83.18	0.79	3.14	5.05	20.18	29.33	117.32
62	3352.056	Flange Slip-On 150RF NPS 3/4 c/w hardware , Piping Specification SB11	ea	1	0	8.8	952.29	0.0	142.84	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	8.0	0.5	45.40	4.0	5.90	47.22	363.23	24.94	199.52	15.69	125.52	91.94	735.49
63	3352.057	Flange SW 150RF NPS 3/4 c/w hardware, Piping Specification SB11	ea	3	0	8.8	952.29	0.0	142.84	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	4.0	1.3	119.57	5.3	15.54	62.18	478.28	0.68	2.72	28.24	112.95	164.03	656.13
64	3352.058	Weld NPS 3/4, Piping Specification NB11	ea	246	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	402.0	1.3	117.99	524.6	15.34	6,166.01	47,430.86	0.00	0.00	27.73	11,146.96	161.05	64,743.83
65	3352.059	Quick connect FNPT NPS 3/4, Hansen Series HK	ea	1	0	2.8	301.28	0.0	45.19	0.00	0.00	87.65	0.00	43.94	0.00	478.06	0.00	0.0	2.6	231.52	0.0	30.10	0.00	0.00	29.18	0.00	60.29	0.00	351.09	0.00
66	3352.060	Ball Valve NPS 3/4, Valve Specification VBA08	ea	3	3	4.3	460.78	12.8	69.12	207.35	1,382.35	35.13	105.38	67.20	201.61	632.23	1,896.70	3.0	3.0	274.96	9.1	35.74	107.23	824.87	33.95	101.84	71.45	214.36	416.10	1,248.30
67	3352.061	Ball Valve NPS 3/4, Valve Specification VBA14	ea	1	0	7.3	793.97	0.0	119.09	0.00	0.00	329.00	0.00	115.79	0.00	1,357.85	0.00	0.0	2.6	231.52	0.0	30.10	0.00	0.00	91.26	0.00	72.78	0.00	425.66	0.00
68	3352.062	Ball Valve NPS 3/4, Valve Specification VBA11	ea	1	0	5.5	595.47	0.0	89.32	0.00	0.00	136.15	0.00	86.85	0.00	907.79	0.00	0.0	2.6	231.52	0.0	30.10	0.00	0.00	100.39	0.00	74.63	0.00	436.64	0.00
69	3352.063	Pipe insulation NPS 3/4	Linear meter	231	0	1.4	142.38	0.0	21.36	0.00	0.00	37.62	0.00	8.55	0.00	209.91	0.00	249.6	3.3	302.35	834.9	39.31	9,811.95	75,476.53	171.58	42,832.97	88.11	21,995.52	601.35	150,116.96
70	3352.064	Pipe identification NPS 3/4	Linear meter	231	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.4	0.6	50.43	47.1	6.56	553.29	4,256.06	12.06	1,018.06	14.28	1,205.19	83.34	7,032.60
71	3352.065	Pipe NPS 1 Type K, Piping Specification NB11	m	44	95	1.5	162.76	143.2	24.41	2,322.35	15,482.34	32.44	3,085.67	23.74	2,258.00	243.35	23,148.35	90.0	0.9	80.28	79.9	10.44	939.33	7,225.61	18.38	1,654.32	22.57	2,031.19	131.67	11,850.45
72	3352.066	Pipe NPS 1 Sch.10s , Piping Specification SB11	m	23	0	1.4	151.14	0.0	22.67	0.00	0.00	39.80	0.00	22.04	0.00	235.65	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	4.61	0.00	12.65	0.00	73.66	0.00
73	3352.067	Elbow 90 degrees NPS 1 Type K, Piping Specification NB11	ea	7	26	1.1	120.51	29.0	18.08	470.00	3,133.33	18.46	479.84	17.58	456.98	174.62	4,540.15	52.0	0.2	22.21	12.8	2.89	150.13	1,154.83	2.52	130.94	5.73	297.76	33.34	1,733.66
74	3352.068	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	36	0	5.9	638.01	0.0	95.70	0.00	0.00	125.39	0.00	93.05	0.00	952.15	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	9.64	0.00	17.58	0.00	102.41	0.00
75	3352.069	Tee SW Class 3000 NPS 1, Piping Specification SB11	ea	6	0	7.9	850.68	0.0	127.60	0.00	0.00	199.11	0.00	124.07	0.00	1,301.46	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
76	3352.070	Tee Reducing NPS 1 x 1/2 Type K, Piping Specification NB11	ea	5	0	1.6	170.14	0.0	25.52	0.00	0.00	27.23	0.00	24.81	0.00	247.69	0.00	9.0	0.5	44.06	4.4	5.73	51.55	396.50	5.15	46.33	11.39	102.52	66.32	596.89
77	3352.071	Tee Reducing NPS 1 x 3/4 Type K, Piping Specification NB11	ea	2	1	1.6	170.14	1.6	25.52	25.52	170.14	27.23	27.23	24.81	24.81	247.69	247.69	2.0	0.5	41.59	0.9	5.41	10.81	83.18	5.15	10.30	10.81	21.62	62.95	125.91
78	3352.072	Tee Reducing SW Class 3000 NPS 1 x 1/2, Piping Specification SB11	ea	1	0	11.1	1,205.13	0.0	180.77	0.00	0.00	196.49	0.00	175.76	0.00	1,758.14	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
79	3352.073	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	0	5.9	638.01	0.0	95.70	0.00	0.00	580.55	0.00	93.05	0.00	1,407.31	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	18.64	0.00	19.39	0.00	113.22	0.00
80	3352.074	Concentric Reducer NPS 1 x 1/2 Type K, Piping Specification NB11	ea	2	0	1.6	170.14	0.0	25.52	0.00	0.00	42.31	0.00	24.81	0.00	262.78	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	5.73	0.00	8.97	0.00	52.29	0.00
81	3352.075	Concentric Reducer NPS 1 x 3/4 Type K, Piping Specification NB11	ea	2	0	1.6	170.14	0.0	25.52	0.00	0.00	42.31	0.00	24.81	0.00	262.78	0.00	8.0	0.3	24.78	2.2	3.22	25.77	198.25	2.17	17.39	6.26	50.09	36.44	291.51
82	3352.076	Concentric Reducer SW Class 3000 NPS 1 x 3/4, Piping Specification SB11	ea	4	0	8.5	921.57	0.0	138.24	0.00	0.00	448.22	0.00	134.40	0.00	1,642.43	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
83	3352.077	Cap NPS 1 Type K, Piping Specification NB11	ea	1	5	0.7	77.98	3.6	11.70	58.48	389.89	6.54	32.70	11.37	56.86	107.59	537.94	3.0	0.2	22.18	0.7	2.88	8.65	66.54	1.87	5.61	5.59	16.76	32.52	97.57
84	3352.078	Cap SW Class 3000 NPS 1, Piping Specification SB11	ea	1	0	4.6	496.23	0.0	74.43	0.00	0.00	176.90	0.00	72.37	0.00	819.93	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.68	0.00	17.38	0.00	101.26	0.00
85	3352.079	Flange Slip-on 150RF NPS 1 c/w hardware, Piping Specification SB11	ea	2	0	8.8	952.29	0.0	142.84	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	3.0	1.3	115.53	3.8	15.02	45.06	346.59	0.81	2.42	27.32	81.95	158.67	476.01
86	3352.080	Flange SW 150RF NPS 1 c/w hardware, Piping Specification SB11	ea	12	0	8.8	952.29	0.0	142.84	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	19.0	0.7	62.53	13.1	8.13	154.45	1,188.10	21.97	417.52	19.12	363.27	111.76	2,123.35
87	3352.081	Weld NPS 1, Piping Specification NB11	ea	178	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	220.0	1.3	118.03	287.2	15.34	3,375.78	25,967.53	0.00	0.00	27.74	6,102.75	161.12	35,446.06
88	3352.082	Ball Valve NPS 1, Valve Specification VBA11	ea	4	0	7.3	793.97	0.0	119.09	0.00	0.00	202.60	0.00	115.79	0.00	1,231.45	0.00	0.0	2.6	231.52	0.0	30.10	0.00	0.00	127.75	0.00	80.13	0.00	469.50	0.00
89	3352.083	Pipe insulation NPS 1	Linear meter	67	0	1.4	145.32	0.0	21.80	0.00	0.00	40.56	0.00	8.55	0.00	216.23	0.00	89.9	3.3	302.18	300.5	39.28	3,532.22	27,170.89	185.55	16,683.74	90.89	8,172.68	617.90	55,559.53
90	3352.084	Pipe identification NPS 1	Linear meter	67	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.4	0.6	50.49	17.0	6.56	199.51	1,534.67	12.06	366.70	14.29	434.49	83.41	2,535.37
91	3352.085	Pipe Type K NPS 1-1/4, Piping Specification NB11	m	1	99	1.7	186.01	169.9	27.90	2,756.20	18,374.64	40.78	4,027.78	27.13	2,679.82	281.82	27,838.43	4.0	0.8	70.68	3.1	9.19	36.41	280.05	23.28	92.23	21.30	84.39	124.44	493.07
92	3352.086	Concentric Reducer Type K 1-1/4 x 1/2, Piping Specification NB11	ea	2	0	1.6	170.14	0.0	25.52	0.00	0.00	42.31	0.00	24.81	0.00	262.78	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	5.73	0.00	8.97	0.00	52.29	0.00
93	3352.087	Weld NPS 1-1/4, Piping Specification NB11	ea	4	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	199.0	2.0	177.00	389.6	23.01	4,578.96	35,222.74	0.00	0.00	41.60	8,277.87	241.61	48,079.56
94	3352.088	Pipe insulation NPS 1-1/4	Linear meter	1	0	1.4	146.11	0.0	21.92	0.00	0.00	41.93	0.00	8.55	0.00	218.50	0.00	4.0	3.4	304.74	13.4	39.62	156.98	1,207.50	191.62	759.29	92.57	366.79	628.55	2,490.56
95	3352.089	Pipe identification NPS 1-1/4	Linear meter	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.6	49.68	0.7	6.46	8.65	66.54	12.06	16.16	14.10	18.89	82.30	110.23
96	3352.090	Pipe NPS 1-1/2 Type K, Piping Specification NB11	m	160	135	1.7	186.01	232.8	27.90	3,777.01	25,180.07	50.10	6,782.31	27.13	3,672.34	291.15	39,411.73	134.8	0.8	73.57	109.7	9.56	1,288.96	9,915.10	30.31	4,084.56	23.39	3,152.52	136.84	18,441.15
97	3352.091	Elbow 90 degrees NPS 1-1/2 Type K, Piping Specification NB11	ea	11	28	1.6	170.14	44.0	25.52	714.57	4,763.80	55.16	1,544.56	24.81	694.77	275.63	7,717.70	77.0	0.2	22.07	18.8	2.87	220.95	1,699.65	4.09	315.27	6.01	462.92	35.05	2,698.80
98	3352.092	Tee NPS 1-1 /2 Type K, Piping Specification NB11	ea	2	3	2.2	241.03	6.7	36.15	108.46	723.08	65.47	196.40	35.15	105.46	377.80	1,133.39	8.0	0.5	43.32	3.8	5.63	45.06	346.59	6.68	53.41	11.53	92.21	67.16	537.26

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
					EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
99	3352.093	Tee Reducing NPS 1-1/2 x 1-1/2 x 1/2 Type K, Piping Specification NB11	ea	15	21	2.2	241.03	46.8	36.15	759.23	5,061.53	70.29	1,476.15	35.15	738.19	382.62	8,035.11	12.0	0.5	44.02	5.8	5.72	68.67	528.20	8.44	101.30	12.04	144.54	70.23	842.71
100	3352.094	Tee Reducing NPS 1-1/2 x K 1-1/2 x 3/4 Type K, Piping Specification NB11	ea	10	0	2.2	241.03	0.0	36.15	0.00	0.00	60.41	0.00	35.15	0.00	372.74	0.00	9.0	0.5	44.06	4.4	5.73	51.55	396.50	8.44	75.97	12.05	108.48	70.28	632.50
101	3352.095	Tee Reducing NPS 1-1/2 x 1-1/2 x 1 Type K, Piping Specification NB11	ea	2	3	2.2	241.03	6.7	36.15	108.46	723.08	60.41	181.23	35.15	105.46	372.74	1,118.22	5.0	0.5	42.98	2.4	5.59	27.93	214.88	8.44	42.21	11.80	59.00	68.80	344.02
102	3352.096	Concentric Reducer NPS 1-1/2 x 1-1/2 x 1/2 Type K, Piping Specification NB11	ea	1	0	1.6	170.14	0.0	25.52	0.00	0.00	42.31	0.00	24.81	0.00	262.78	0.00	1.0	0.2	16.64	0.2	2.16	2.16	16.64	5.73	5.73	5.05	5.05	29.59	29.59
103	3352.097	Concentric Reducer NPS 1-1/2 x 1-1/2 x 3/4 Type K, Piping Specification NB11	ea	1	3	1.6	170.14	4.7	25.52	76.56	510.41	42.31	126.92	24.81	74.44	262.78	788.33	2.0	0.3	24.96	0.6	3.24	6.49	49.91	5.73	11.46	7.02	14.04	40.95	81.90
104	3352.098	Concentric Reducer NPS 1-1/2 x 1-1/2 x 1 Type K, Piping Specification NB11	ea	1	2	1.6	170.14	3.1	25.52	51.04	340.27	47.41	94.81	24.81	49.63	267.88	535.75	1.0	0.2	16.64	0.2	2.16	2.16	16.64	5.73	5.73	5.05	5.05	29.59	29.59
105	3352.099	Cap NPS 1-1/2 Type K, Piping Specification NB11	ea	3	3	0.9	99.25	2.8	14.89	44.66	297.74	21.86	65.59	14.47	43.42	150.47	451.41	4.0	0.2	20.80	0.9	2.70	10.81	83.18	3.30	13.20	5.55	22.20	32.35	129.40
106	3352.100	Weld NPS 1-1/2, Piping Specification NB11	ea	141	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	133.0	2.0	177.00	260.4	23.01	3,060.39	23,541.45	0.00	0.00	41.60	5,532.57	241.61	32,134.41
107	3352.101	Pipe insulation NPS 1-1/2	Linear meter	160	0	1.5	147.36	0.0	22.10	0.00	0.00	42.73	0.00	8.55	0.00	220.74	0.00	134.7	3.3	302.53	450.8	39.33	5,298.41	40,757.01	210.39	28,344.47	95.96	12,927.35	648.20	87,327.24
108	3352.102	Pipe identification NPS 1-1/2	Linear meter	160	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.5	0.6	50.35	25.4	6.55	298.09	2,293.00	12.06	549.43	14.26	649.49	83.22	3,790.01
109	3352.103	Pipe NPS 2 Type K, Piping Specification NB11	m	91	132	2.1	232.52	283.2	34.88	4,593.66	30,624.40	74.59	9,823.65	33.91	4,466.36	375.89	49,508.08	122.0	10.9	982.28	1,325.6	127.70	15,578.94	119,838.03	64.69	7,892.66	243.87	29,752.69	1,418.54	173,062.33
110	3352.104	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	25	0	2.3	244.14	0.0	36.62	0.00	0.00	56.83	0.00	35.61	0.00	373.21	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.99	0.00	17.45	0.00	101.63	0.00
111	3352.105	Elbow 45 degrees NPS 2 Type K, Piping Specification NB11	ea	1	0	1.8	198.49	0.0	29.77	0.00	0.00	74.68	0.00	28.95	0.00	331.89	0.00	5.0	0.1	9.98	0.6	1.30	6.49	49.91	5.49	27.46	3.45	17.26	20.22	101.12
112	3352.106	Elbow 90 degrees NPS 2 Type K, Piping Specification NB11	ea	17	71	1.8	198.49	130.3	29.77	2,113.93	14,092.90	74.68	5,302.27	28.95	2,055.35	331.89	23,564.45	39.0	0.2	22.00	9.5	2.86	111.56	858.14	10.81	421.65	7.35	286.57	43.02	1,677.92
113	3352.107	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	18	0	8.5	921.57	0.0	138.24	0.00	0.00	171.71	0.00	134.40	0.00	1,365.92	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	9.64	0.00	17.58	0.00	102.41	0.00
114	3352.108	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	0	11.1	1,205.13	0.0	180.77	0.00	0.00	268.91	0.00	175.76	0.00	1,830.56	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
115	3352.109	Tee Reducing NPS 2 x 3/4 Type K, Piping Specification NB11	ea	8	4	2.6	276.47	10.2	41.47	165.88	1,105.83	90.86	363.43	40.32	161.29	449.12	1,796.48	6.0	0.5	43.90	2.9	5.71	34.24	263.40	13.69	82.12	13.07	78.44	76.37	458.21
116	3352.110	Tee Reducing NPS 2 x 1 1/2 Type K, Piping Specification NB11	ea	1	2	2.6	276.47	5.1	41.47	82.94	552.94	73.82	147.64	40.32	80.64	432.08	864.17	25.0	2.3	209.84	58.0	27.28	681.97	5,245.91	25.32	632.88	54.41	1,360.30	316.84	7,921.06
117	3352.111	Tee Reducing SW Class 3000 NPS 2 x 3/4, Piping Specification SB11	ea	4	0	11.1	1,205.13	0.0	180.77	0.00	0.00	238.38	0.00	175.76	0.00	1,800.04	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
118	3352.112	Tee Reducing SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	4	0	11.1	1,205.13	0.0	180.77	0.00	0.00	266.81	0.00	175.76	0.00	1,828.47	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
119	3352.113	Concentric Reducer NPS 2 x 3/4 Type K, Piping Specification NB11	ea	1	0	1.8	198.49	0.0	29.77	0.00	0.00	47.85	0.00	28.95	0.00	305.06	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	5.73	0.00	8.97	0.00	52.29	0.00
120	3352.114	Concentric Reducer NPS 2 x 1 1/2 Type K, Piping Specification NB11	ea	1	1	1.8	198.49	1.8	29.77	29.77	198.49	47.85	47.85	28.95	28.95	305.06	305.06	4.0	1.3	119.57	5.3	15.54	62.18	478.26	13.42	53.66	30.80	123.21	179.33	717.33
121	3352.115	Concentric Reducer SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	1	0	8.5	921.57	0.0	138.24	0.00	0.00	183.09	0.00	134.40	0.00	1,377.29	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
122	3352.116	Coupling NPS 2, Robar model 1506	ea	1	0	3.9	421.09	0.0	63.16	0.00	0.00	520.15	0.00	61.41	0.00	1,065.81	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	70.04	0.00	21.92	0.00	129.56	0.00
123	3352.117	Union NPS 2 Type K, Piping Specification NB11	ea	3	21	1.8	198.49	38.5	29.77	625.25	4,168.32	187.74	3,942.52	28.95	607.92	444.95	9,344.01	54.0	1.6	140.84	84.1	18.31	988.71	7,605.47	101.39	5,475.16	53.51	2,889.69	314.06	16,959.04
124	3352.118	Flange Slip-On SS 150RF NPS 2 c/w hardware, Piping Specification SB11	ea	8	0	8.8	952.29	0.0	142.84	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	18.0	1.1	99.89	19.9	12.99	233.75	1,798.08	47.59	856.56	33.06	595.03	193.52	3,483.41
125	3352.119	Weld NPS 2, Piping Specification NB11	ea	169	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.0	2.6	236.00	597.8	30.68	7,025.86	54,045.09	0.00	0.00	55.46	12,701.38	322.15	73,772.33
126	3352.120	Ball Valve NPS 2, Valve Specification VBA08	ea	2	14	7.7	829.41	107.4	124.41	1,741.76	11,611.75	103.08	1,443.07	120.96	1,693.50	1,177.86	16,490.09	13.0	3.5	313.42	45.1	40.74	529.68	4,074.45	107.00	1,390.96	95.20	1,237.60	556.36	7,232.69
127	3352.121	Ball Valve NPS 2, Valve Specification VBA11	ea	10	1	14.7	1,587.93	14.7	238.19	238.19	1,587.93	406.63	406.63	231.59	231.59	2,464.34	2,464.34	1.0	2.0	181.61	2.0	23.61	23.61	181.61	58.40	58.40	54.44	54.44	318.07	318.07
128	3352.122	Check valve NPS 2, Valve Specification VCH12	ea	1	0	14.7	1,587.93	0.0	238.19	0.00	0.00	1,669.22	0.00	231.59	0.00	3,726.93	0.00	3.0	1.9	176.07	5.8	22.89	68.67	528.20	191.64	574.92	79.96	239.88	470.56	1,411.67
129	3352.123	Globe valve NPS 2, Valve Specification VGL05	ea	1	0	14.7	1,587.93	0.0	238.19	0.00	0.00	2,061.65	0.00	231.59	0.00	4,119.36	0.00	0.0	3.8	346.59	0.0	45.06	0.00	0.00	1,536.80	0.00	390.85	0.00	2,319.29	0.00
130	3352.124	Globe valve NPS 2, Valve Specification VGL06	ea	1	0	14.7	1,587.93	0.0	238.19	0.00	0.00	2,061.65	0.00	231.59	0.00	4,119.36	0.00	0.0	3.8	346.59	0.0	45.06	0.00	0.00	1,536.80	0.00	390.85	0.00	2,319.29	0.00
131	3352.125	Pipe insulation NPS 2	Linear meter	116	0	1.5	149.20	0.0	22.38	0.00	0.00	45.55	0.00	8.55	0.00	225.69	0.00	122.5	3.6	326.25	442.2	42.41	5,196.77	39,975.13	212.09	25,987.42	100.50	12,314.29	681.25	83,473.61
132	3352.126	Pipe identification NPS 2	Linear meter	116	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.4	0.6	50.57	23.2	6.57	272.32	2,094.77	12.06	499.70	14.31	592.90	83.52	3,459.69
133	3352.127	Pipe NPS 2-1/2 Type K, Piping Specification NB11	m	19	205	2.1	232.52	440.5	34.88	7,145.69	47,637.96	98.95	20,273.56	33.91	6,947.68	400.26	82,004.90	214.0	6.0	538.33	1,274.3	69.98	14,976.27	115,202.11	67.83	14,515.16	140.17	29,996.47	816.31	174,690.02
134	3352.128	Pipe NPS 2-1/2 Sch.10S, Piping Specification SB11	m	1	0	2.6	279.02	0.0	41.85	0.00	0.00	79.30	0.00	40.69	0.00	440.87	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	11.92	0.00	10.23	0.00	59.74	0.00
135	3352.129	Elbow 45 degrees NPS 2-1/2 Type K, Piping Specification NB11	ea	2	0	2.2	241.03	0.0	36.15	0.00	0.00	192.47	0.00	35.15	0.00	504.80	0.00	2.0	1.3	115.76	2.6	15.05	30.10	231.52	26.91	53.81	32.62	65.23	190.33	380.66
136	3352.130	Elbow 90 degrees NPS 2-1/2 Type K, Piping Specification NB11	ea	7	26	2.2	241.03	57.9	36.15	940.00	6,266.66	192.47	5,004.30	35.15	913.95	504.80	13,124.91	12.0	2.5	229.56	30.5	29.84	358.11	2,754.66	23.37	280.44	58.65	703.84	341.42	4,097.05
137	3352.131	Tee NPS 2-1/2 Type K, Piping Specification NB11	ea	1	2	3.1	340.27	6.3	51.04	102.08	680.54	240.03	480.07	49.63	99.25	680.97	1,361.94	8.0	3.4	303.09	26.8	39.40	315.21	2,424.71	36.16	289.24	78.51	628.07	457.15	3,657.24
138	3352.132	Concentric Reducer Type K 2-1/2 x 1 1/2, Piping Specification NB11	ea	1	1	2.2	241.03	2.2	36.15	36.15	241.03	194.67	194.67	35.15	35.15	507.00	507.00	1.0	2.4	214.88	2.4	27.93	27.93	214.88	18.49	18.49	54.21	54.21	315.52	315.52
139	3352.133	Concentric Reducer Type K 2-1/2 x 2, Piping Specification NB11	ea	2	4	2.2	241.03	8.9	36.15	144.62	964.10	195.88	783.51	35.15	140.61	508.21	2,032.83	4.0	2.4	214.54	9.5	27.89	111.56	858.14	18.48	73.94	54.14	216.55	315.05	1,260.19
140	3352.134	Victaulic Coupling NPS 2-1/2, Style 07	ea	24	0	0.5	53.17	0.0	7.98	0.00	0.00	67.55	0.00	7.75	0.00	136.45	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	59.69	0.00	27.67	0.00	162.54	0.00
141	3352.135	Victaulic Coupling NPS 2-1/2, Style 77	ea	7	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	34.54	0.00	22.60	0.00	132.33	0.00
142	3352.136	Victaulic Coupling NPS 2-1/2 Copper x 2-1/2 SS, Style 667	ea	4	0	0.5	53.17	0.0	7.98	0.00	0.00	67.55	0.00	7.75	0.00	136.45	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	52.03	0.00	26.11	0.00	153.33	0.00
143	3352.137	Victaulic Tee Reducing NPS 2-1/2 x 3/4, Style 25	ea	1	0	6.5	701.81	0.0	105.27	0.00	0.00	215.83	0.00	102.35	0.00	1,125.26	0.00	0.0	3.1	280.05	0.0	36.41	0.00	0.00	103.48	0.00	86.65	0.00	506.59	0.00
144	3352.138	Victaulic Tee Reducing NPS 2-1/2 x 1, Style 25	ea	1	0	6.5	701.81	0.0	105.27	0.00	0.00	215.83	0.00	102.35	0.00	1,125.26	0.00	0.0	3.1	280.05	0.0	36.41	0.00	0.00	103.48	0.00	86.65	0.00	506.59	0.00
145	3352.139	Weld NPS 2-1/2, Piping Specification NB11	ea	33	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140.0	4.0	358.35	554.9	46.59	6,521.96	50,168.89	0.00	0.00	84.22	11,790.41	489.15	68,481.26
146	3352.140	Ball Valve NPS 2-1/2, Valve Specification VBA08	ea	1	2	13.0	1,403.62	26.0	210.54	421.09	2,807.24	227.66	455.33	204.71	409.42	2,046.53	4,093.06	2.0	4.2	379.17	8.4	49.29	98.58	758.33	167.92	335.83	122.91	245.83	719.29	1,438.57
147	3352.141	Pipe insulation NPS 2-1/2	Linear meter	20	0	1.5	150.59	0.0	22.59	0.00	0.00	50.67	0.00	8.55	0.00	232.40	0.00	214.0	5.1	460.34	1,089.5	59.84	12,804.93	98,499.47	260.66	55,774.47	134.04	28,679.88	914.89	195,758.75
148	3352.142	Pipe identification NPS 2-1/2	Linear meter	20	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.3	0.6	50.41	40.3	6.55	473.99	3,646.07	12.06	872.62	14.28	1,032.57	83.30	6,025.24
149	3352.143	Pipe NPS 3 Type K, Piping Specification NB11	m	1	4	2.4	255.77	8.7	38.37	140.36	935.75	134.43	491.81	37.30	136.47	465.87	1,704.39	1.0	6.2	561.61	6.2	73.01	72.99	561.47	70.86	70.85	146.26	146.22	851.74	851.53
150	3352.144	Pipe NPS 3 Sch.10S, Piping Specification SB11	m	1	0	3.4	372.03	0.0	55.80	0.00	0.00	118.53	0.00	54.26	0.00	600.63	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	18.79	0.00	11.60	0.00	67.99	0.00
151	3352.145	Tee Reducing NPS 3 x 2 Type K, Piping Specification NB11	ea	1	0	3.8	408.33	0.0	61.25	0.00	0.00	288.04	0.00	59.55	0.00	817.17	0.00	1.0	6.8	609.99	6.8	79.30	79.30	609.99	50.28	50.28	153.47	153.47	893.04	893.04
152	3352.146	Concentric Reducer NPS 3 x 2 Type K, Piping Specification NB11	ea	1	1	2.6	283.56	2.6	42.53	42.53	283.56	216.84	216.84	41.36	41.36	584.29	584.29	0.0	2.9	263.40	0.0	34.24	0.00	0.00	5.73	0.00	63.06	0.00	366.43	0.00
153	3352.147	Eccentric Reducer SW NPS 3 x 2 Sch.10S, Piping Specification SB11	ea	1	0	18.3	1,977.83	0.0	296.67	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	8.00	0.00	13.35	0.00	77.75	0.00
154	3352.148	Coupling SW/MNPT NPS 3, Piping Specification NB11	ea	1	0	3.1	340.27	0.0	51.04	0.00	0.00	48.39	0.00	49.63	0.00	489.33	0.00	127.0	0.2	22.08	31.0	2.87	364.59	2,804.57	2.80	355.66	5.75	730.72	33.51	4,255.54
155	3352.149	Cap NPS 3 Type K, Piping Specification NB11	ea	1	1	1.4	155.96	1.4	23.39	23.39	155.96	98.50	98.50	22.75	22.75	300.60	300.60	1.0	3.3	296.68	3.3	38.57	38.57	296.68	26.74	26.74	75.12	75.12	437.11	437.11
156	3352.150	Weld NPS 3, Piping Specification NB11	ea	11	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	5.4	490.77	21.7	63.80	255.20	1,963.06	0.00	0.00	115.34	461.34	669.90	2,679.60
157	3352.151	Pipe insulation NPS 3	Linear meter	1	0	1.5	155.77	0.0	23.37	0.00	0.00	52.61	0.00	8.55	0.00	240.30	0.00	1.0	5.2	467.32	5.2	60.75	60.74	467.20	284.27	284.20	140.05	140.01	952.39	952.15
158	3352.152	Pipe identification NPS 3	Linear meter	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.2	16.41	0.2	2.13	2.16	16.64	4.02	4.07	4.66	4.73	27.23	27.60
B&M-0011	Added	2.5" coupling, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		40	2.2	241.03	89.1	36.15	1,446.15	9,641.02	79.77	3,190.93	35.15	1,406.08	392.10	15,684.17	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0012	Added	2" coupling, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		10	1.8	198.49	18.4	29.77	292.74	1,984.92	21.22	212.17	28.95	289.49	278.43	2,784.31	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0013	Added	1.25" 90 elbow, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		40	1.4	148.87	55.1	22.33	893.21	5,954.75	32.15	1,286.19	21.71	868.46	225.07	9,002.61	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0014	Added	3" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	3.7	404.07	3.7	60.61	60.61	404.07	298.92	298.92	58.93	58.93	822.53	822.53	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0015	Added	2" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		7	2.6	276.47	17.9	41.47	290.29	1,935.29	79.75	558.28	40.32	282.25	438.02	3,066.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0016	Added	1.25" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		3	1.8	198.49	5.5	29.77	89.32	595.47	37.61	112.82	28.95	86.85	294.82	884.46	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0017	Added	1" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		4	1.6	170.14	6.3	25.52	102.08	680.54	25.03	100.11	24.81	99.25	245.50	981.99	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0018	Added	2.5"x1" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	2.2	241.03	2.2	36.15	36.15	241.03	185.92	185.92	35.15	35.15	498.25	498.25	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0019	Added	1.5"x1.25" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	1.6	170.14	1.6	25.52	25.52	170.14	42.16	42.16	24.81	24.81	262.63	262.63	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0020	Added	2.5"x2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		4	3.1	340.27	12.6	51.04	204.16	1,361.08	278.84	1,115.38	49.63	198.51	719.78	2,879.13	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0021	Added	2.5"x1.5" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	3.1	340.27	3.1	51.04	51.04	340.27	313.94	313.94	49.63	49.63	754.87	754.87	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0022	Added	2.5"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		2	3.1	340.27	6.3	51.04	102.08	680.54	335.41	670.82	49.63	99.25	776.35	1,552.70	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0023	Added	2.5"x1" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		3	3.1	340.27	9.4	51.04	153.12	1,020.81	335.41	1,006.23	49.63	148.88	776.35	2,329.04	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0024	Added	2.5"x3/4" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		2	3.1	340.27	6.3	51.04	102.08	680.54	335.41	670.82	49.63	99.25	776.35	1,552.70	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0025	Added	2.5"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	3.1	340.27	3.1	51.04	51.04	340.27	335.41	335.41	49.63	49.63	776.35	776.35	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0026	Added	2"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		2	2.6	276.47	5.1	41.47	82.94	552.94	73.82	147.64	40.32	80.64	432.08	864.17	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0027	Added	2"x1" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	2.6	276.47	2.6	41.47	41.47	276.47	93.40	93.40	40.32	40.32	451.66	451.66	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0028	Added	2"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		6	2.6	276.47	15.3	41.47	248.82	1,658.82	107.09	642.53	40.32	241.93	465.35	2,792.10	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0029	Added	1.5"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		3	2.2	241.03	6.7	36.15	108.46	723.08	62.08	186.23	35.15	105.46	374.41	1,123.22	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0030	Added	1"x3/4" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	1.1	120.51	1.1	18.08	18.08	120.51	21.89	21.89	17.58	17.58	178.05	178.05	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0031	Added	1"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		21	2.2	241.03	46.8	36.15	759.23	5,061.53	31.05	652.06	35.15	738.19	343.38	7,211.01	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0032	Added	2.5" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	1.2	134.69	1.2	20.20	20.20	134.69	42.51	42.51	19.64	19.64	217.05	217.05	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0033	Added	2" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	1.0	113.42	1.0	17.01	17.01	113.42	12.37	12.37	16.54	16.54	159.35	159.35	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0034	Added	1/2" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		56	0.5	56.71	29.4	8.51	476.38	3,175.86	32.14	1,799.77	8.27	463.18	105.63	5,915.20	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0035	Added	1.25" FNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		9	0.7	77.98	6.5	11.70	105.27	701.81	53.83	484.43	11.37	102.35	154.87	1,393.86	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0036	Added	1" FNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	0.7	77.98	0.7	11.70	11.70	77.98	19.27	19.27	11.37	11.37	120.31	120.31	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0037	Added	2" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		2	1.0	113.42	2.1	17.01	34.03	226.85	88.09	176.19	16.54	33.08	235.07	470.15	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0038	Added	1" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		6	0.7	77.98	4.3	11.70	70.18	467.87	18.00	108.01	11.37	68.24	119.05	714.30	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0039	Added	3/4" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		4	0.7	70.89	2.6	10.63	42.53	283.56	11.34	45.35	10.34	41.36	103.20	412.80	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0040	Added	1/2" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		56	0.5	56.71	29.4	8.51	476.38	3,175.86	7.19	402.56	8.27	463.18	80.68	4,517.98	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0041	Added	1.25" union, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		5	1.4	148.87	6.9	22.33	111.65	744.34	116.43	582.14	21.71	108.56	309.34	1,546.69	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0042	Added	1/2" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		6	1.1	116.26	6.6	17.44	106.33	708.90	8.79	53.62	16.96	103.39	159.45	972.24	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0043	Added	2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		6	1.8	191.40	10.6	28.71	172.26	1,148.42	14.22	85.34	27.91	167.49	262.25	1,573.50	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
B&M-0044	Added	1/2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		4	1.2	134.69	5.0	20.20	80.81	538.76	8.30	33.19	19.64	78.57	182.84	731.34	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0045	Added	2"x1" reducer, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		2	1.8	191.40	3.5	28.71	57.42	382.81	15.95	31.89	27.91	55.83	263.97	527.95	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0046	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		3	1.8	191.40	5.3	28.71	86.13	574.21	24.42	73.26	27.91	83.74	272.45	817.35	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0047	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea		2	0.5	59.07	1.1	8.86	17.72	118.15	15.44	30.89	8.62	17.23	91.99	183.99	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0048	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	41.67	41.67	8.62	8.62	118.22	118.22	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0049	Added	2" UNION SS Socket Weld FNPT ASTM A182	ea		1	14.4	1,556.03	14.4	233.40	233.40	1,556.03	154.46	154.46	226.94	226.94	2,170.83	2,170.83	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0050	Added	2" swing check valve, class 150 (300CWP or WOG), bronze body to ASTM B62 (C83600), brass disc/seat - SJ - Crane model 1342, Kitz model C150YR or equal VCH09	ea		3	7.7	829.41	23.0	124.41	373.23	2,488.23	241.09	723.26	120.96	362.89	1,315.87	3,947.62	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0051	Added	1.25" swing check valve, class 150 (300CWP or WOG), bronze body to ASTM B62 (C83600), brass disc/seat - SJ - Crane model 1342, Kitz model C150YR or equal VCH09	ea		4	5.8	630.92	23.3	94.64	378.55	2,523.68	168.32	673.27	92.02	368.06	985.89	3,943.56	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0052	Added	1/2" ball check valve, PVC body/ball, PTFE seat - SOC - Hayward model TC, Chemline model BT or equal VCH10	ea		1	1.3	141.78	1.3	21.27	21.27	141.78	174.85	174.85	20.68	20.68	358.57	358.57	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0053	Added	1.5" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SJ - Crane model LF9202 or equal VBA08	ea		2	6.5	701.81	13.0	105.27	210.54	1,403.62	79.97	159.94	102.35	204.71	989.40	1,978.81	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0054	Added	1.25" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SJ - Crane model LF9202 or equal VBA08	ea		12	5.8	630.92	70.0	94.64	1,135.65	7,571.03	61.88	742.55	92.02	1,104.18	879.45	10,553.42	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0055	Added	1" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SJ - Crane model LF9202 or equal VBA08	ea		4	5.2	567.12	21.0	85.07	340.27	2,268.47	47.04	188.14	82.71	330.84	781.93	3,127.73	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0056	Added	1/2" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal VBA09	ea		2	1.3	141.78	2.6	21.27	42.53	283.56	491.52	983.03	20.68	41.36	675.24	1,350.48	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0057	Added	2" COMBINATION AUTOMATIC AIR VENT/VACUUM OR AUTOMATIC AIR VENT ONLY 3352-AV-80XX	ea		1	14.7	1,587.93	14.7	238.19	238.19	1,587.93	11,560.27	11,560.27	231.59	231.59	13,617.98	13,617.98	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0058	Added	Pipe Insulation - All Sizes	ea		1	2703.0	276,069.46	2703.0	41,410.42	41,410.42	276,069.46	79,539.45	79,539.45	0.00	0.00	397,019.34	397,019.34	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		SDS (Wastewater)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
159	3353.010	Septic pumping station 3353-SPS-5000	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	21,798.00	21,798.00	2,205.61	2,205.61	41,395.25	41,395.25	1.0	104.6	9,453.46	104.6	1,228.95	1,228.95	9,453.46	19,640.91	19,640.91	6,175.93	6,175.93	36,499.25	36,499.25
160	3353.020	Pump 3353-P-5000 / 5001	ea	2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	9,093.84	18,187.68	2,205.61	4,411.22	28,691.09	57,382.17	2.0	71.7	6,483.22	143.4	842.82	1,685.64	12,966.43	8,192.49	16,384.98	3,173.02	6,346.03	18,691.54	37,383.07
161	3353.030	Level switch 3353-LSL-5000 / 5001 / 3353-LSH-5000 / 5001 / 3353-LSHH-5000	ea	5	5	52.4	5,671.19	262.2	850.68	4,253.39	28,355.93	1,020.92	5,104.60	827.10	4,135.52	8,369.89	41,849.44	5.0	25.3	2,289.13	126.6	297.59	1,487.93	11,445.63	664.42	3,322.11	671.74	3,358.72	3,922.88	19,614.39
162	3353.040	Control Panel 3353-CP-5000	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	59,957.89	59,957.89	12,465.62	12,465.62	74,320.62	74,320.62
163	3353.050	Pipe NPS 1-1/2 Sch.DWV, Piping Specification PA01	m	7	61	1.3	139.51	78.7	20.93	1,276.02	8,506.78	35.32	2,153.43	20.35	1,240.66	216.10	13,176.88	77.0	5.8	527.28	449.1	68.55	5,278.05	40,600.36	7.36	566.50	125.40	9,655.73	728.58	56,100.63
164	3353.060	Elbow 45 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	6	25	1.7	184.31	42.6	27.65	691.18	4,607.84	14.71	367.80	26.88	672.02	253.55	6,338.84	10.0	0.2	14.83	1.6	1.93	19.28	148.34	2.16	21.57	3.92	39.20	22.84	228.40
165	3353.070	Elbow 90 degrees Sch DWV NPS 1 1/2, Piping Specification PA01	ea	7	35	1.7	184.31	59.6	27.65	967.65	6,450.97	16.15	565.20	26.88	940.83	254.99	8,924.65	21.0	0.3	29.05	6.8	3.78	79.30	609.99	2.54	53.28	7.34	154.08	42.70	896.64
166	3353.080	"P" Drain Trap SW NPS 1-1/2, Piping Specification PA01	ea	13	11	1.7	184.31	18.7	27.65	304.12	2,027.45	28.36	311.94	26.88	295.69	267.20	2,939.19	15.0	0.3	29.67	4.9	3.86	57.85	445.01	9.29	139.37	8.84	132.64	51.66	774.87
167	3353.090	Tee wye SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	1	2	2.4	255.20	4.7	38.28	76.56	510.41	23.46	46.93	37.22	74.44	354.17	708.34	1.0	0.7	66.54	0.7	8.65	8.65	66.54	4.39	4.39	16.52	16.52	96.10	96.10
168	3353.100	Pipe identification NPS 1-1/2	Linear meter	7	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.6	0.6	50.81	15.5	6.60	182.39	1,402.98	12.06	333.13	14.37	396.79	83.84	2,315.29
169	3353.110	Pipe NPS 2 Sch.DWV, Piping Specification PA01	m	36	232	1.3	139.51	298.9	20.93	4,848.86	32,325.76	33.24	7,702.69	20.35	4,714.50	214.03	49,591.81	156.0	10.9	988.79	1,706.2	128.54	20,052.65	154,251.14	16.98	2,649.26	235.80	36,784.65	1,370.11	213,737.70
170	3353.120	Pipe NPS 2 Sch.40, Piping Specification PA02	m	81	9	1.5	162.76	13.8	24.41	223.30	1,488.69	18.21	166.56	23.74	217.11	229.13	2,095.67	74.0	1.2	106.34	87.0	13.82	1,022.95	7,868.87	9.94	735.89	26.99	1,997.46	157.10	11,625.17
171	3353.130	Elbow 45 degrees Sch.DWV NPS 2, Piping Specification PA01	ea	30	32	1.8	191.40	56.6	28.71	918.73	6,124.88	17.96	574.63	27.91	893.27	265.99	8,511.52	29.0	0.2	14.77	4.7	1.92	55.69	428.37	3.31	95.98	4.14	120.00	24.14	700.04
172	3353.140	Elbow 45 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	15	9	1.8	191.40	15.9	28.71	258.39	1,722.62	19.82	178.42	27.91	251.23	267.85	2,410.67	47.0	0.3	25.28	13.1	3.29	154.45	1,188.10	6.99	328.50	7.35	345.36	42.90	2,016.41
173	3353.150	Elbow 90 degrees SW Sch.DWV NPS 2, Piping Specification PA01	ea	4	56	1.8	191.40	99.1	28.71	1,607.78	10,718.54	18.68	1,045.83	27.91	1,563.23	266.70	14,935.38	18.0	0.3	29.34	5.8	3.81	68.67	528.20	3.80	68.39	7.66	137.90	44.62	803.16
174	3353.160	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA01	ea	4	0	1.8	191.40	0.0	28.71	0.00	0.00	18.68	0.00	27.91	0.00	266.70	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.17	0.00	9.48	0.00	55.25	0.00
175	3353.170	Sanitary Tee SW Sch.DWV NPS 2, Piping Specification PA01	ea	5	0	2.5	269.38	0.0	40.41	0.00	0.00	35.36	0.00	39.29	0.00	384.43	0.00	13.0	0.6	58.33	8.4	7.58	98.58	758.33	6.67	86.71	15.05	195.68	87.64	1,139.30
176	3353.180	Sanitary Tee Reducing SW Sch.DWV NPS 2 2 x 2 x 1 1/2, Piping Specification PA01	ea	11	0	2.5	269.38	0.0	40.41	0.00	0.00	35.36	0.00	39.29	0.00	384.43	0.00	23.0	0.7	58.83	15.0	7.65	175.90	1,353.07	5.75	132.21	14.98	344.62	87.21	2,005.80
177	3353.190	Drain Trap SW Sch.DWV NPS 2, Piping Specification PA01	ea	1	2	1.8	191.40	3.5	28.71	57.42	382.81	33.04	66.08	27.91	55.83	281.07	562.13	0.0	0.4	33.27	0.0	4.33	0.00	0.00	17.51	0.00	11.33	0.00	66.44	0.00
178	3353.200	Tee Reducing SW Sch.DWV NPS 2 2 x 2 x 1 1/2, Piping Specification PA01	ea	1	0	2.5	269.38	0.0	40.41	0.00	0.00	35.36	0.00	39.29	0.00	384.43	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.17	0.00	17.29	0.00	100.65	0.00
179	3353.210	Tee Wye SW Sch.DWV NPS 2, Piping Specification PA01	ea	1	10	2.5	269.38	24.9	40.41	404.07	2,693.81	28.52	285.18	39.29	392.87	377.59	3,775.94	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.17	0.00	17.29	0.00	100.65	0.00
180	3353.220	Tee Wye Reducer SW Sch.DWV NPS 2 2 x 2 x 1 1/2 Sch DWV, Piping Specification PA01	ea	1	20	2.5	269.38	49.8	40.41	808.14	5,387.63	35.36	707.12	39.29	785.75	384.43	7,688.64	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.17	0.00	17.29	0.00	100.65	0.00
181	3353.230	Concentric Reducer Sch.DWV NPS 2 x 1 1/2, Piping Specification PA01	ea	5	9	1.8	191.40	15.9	28.71	258.39	1,722.62	15.03	135.24	27.91	251.23	263.05	2,367.49	14.0	0.4	32.98	5.1	4.29	60.01	461.65	3.65	51.14	8.48	118.79	49.40	691.59
182	3353.240	Coupling SW Sch.DWV NPS 2 , Piping Specification PA01	ea	1	0	2.5	269.38	0.0	40.41	0.00	0.00	24.21	0.00	39.29	0.00	373.29	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.17	0.00	9.48	0.00	55.25	0.00
183	3353.250	Union SW Sch.DWV NPS 2, Piping Specification SB11	ea	2	0	8.5	921.57	0.0	138.24	0.00	0.00	1,191.56	0.00	134.40	0.00	2,385.77	0.00	5.0	0.3	29.67	1.6	3.86	19.28	148.34	4.89	24.46	7.96	39.78	46.37	231.86
184	3353.260	Ball Valve NPS 2, Valve Specification VBA09	ea	2	2	2.1	226.85	4.2	34.03	68.05	453.69	980.01	1,960.02	33.08	66.17	1,273.97	2,547.94	3.0	2.3	208.87	6.9	27.15	81.46	626.62	62.15	186.44	61.60	184.81	359.78	1,079.33
185	3353.270	Ball Valve NPS 2, Valve Specification VBA10	ea	1	0	2.1	226.85	0.0	34.03	0.00	0.00	980.01	0.00	33.08	0.00	1,273.97	0.00	0.0	2.9	263.40	0.0	34.24	0.00	0.00	78.73	0.00	77.76	0.00	454.12	0.00
186	3353.280	Check Valve NPS 2, Valve Specification VCH10	ea	2	2	2.1	226.85	4.2	34.03	68.05	453.69	366.93	733.85	33.08	66.17	660.88	1,321.77	4.0	2.4	214.54	9.5	27.89	111.56	858.14	150.53	602.12	80.72	322.90	473.68	1,894.72
187	3353.290	Pipe identification NPS 2	Linear meter	117	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.1	0.6	50.49	42.5	6.56	499.76	3,844.32	12.06	918.61	14.29	1,088.41	83.41	6,351.10
188	3353.300	Pipe NPS 3 Sch.DWV, Piping Specification PA01	m	83	140	1.5	162.76	211.1	24.41	3,423.98	22,826.52	39.18	5,494.24	23.74	3,329.10	250.09	35,073.84	130.0	8.5	768.41	1,104.9	99.89	12,986.06	99,892.75	20.00	2,599.95	184.61	23,999.72	1,072.91	139,478.47
189	3353.310	Elbow 45 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	43	37	2.5	269.38	92.2	40.41	1,495.07	9,967.11	31.39	1,161.48	39.29	1,453.64	380.47	14,077.29	48.0	0.1	10.66	5.7	1.39	66.50	511.55	8.62	413.60	4.24	203.49	24.90	1,195.14
190	3353.320	Elbow 60 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	1	0	2.5	269.38	0.0	40.41	0.00	0.00	35.70	0.00	39.29	0.00	384.78	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	11.64	0.00	6.26	0.00	36.70	0.00
191	3353.330	Elbow 90 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	13	66	2.5	269.38	164.4	40.41	2,666.88	17,779.17	35.70	2,356.23	39.29	2,592.97	384.78	25,395.25	21.0	0.2	21.98	5.1	2.86	60.01	461.65	10.16	213.38	7.21	151.45	42.21	886.49
192	3353.340	Elbow 90 degrees SW Sch.40 NPS 3, Piping Specification PA01	ea	1	0	2.5	269.38	0.0	40.41	0.00	0.00	35.70	0.00	39.29	0.00	384.78	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	11.64	0.00	10.17	0.00	59.40	0.00
193	3353.350	Sanitary Tee SW Sch.DWV NPS 3, Piping Specification PA01	ea	4	0	3.6	389.89	0.0	58.48	0.00	0.00	46.34	0.00	56.86	0.00	551.58	0.00	4.0	0.5	41.25	1.8	5.36	21.45	164.98	24.50	98.01	14.63	58.51	85.74	342.94
194	3353.360	Sanitary Tee Reducing SW Sch.DWV NPS 3 x 3 x 2, Piping Specification PA01	ea	1	0	3.6	389.89	0.0	58.48	0.00	0.00	46.34	0.00	56.86	0.00	551.58	0.00	3.0	0.5	43.90	1.5	5.71	17.12	131.71	12.22	36.67	12.78	38.34	74.61	223.83
195	3353.370	Drain Trap SW Sch.DWV NPS3, Piping Specification PA01	ea	15	1	2.5	269.38	2.5	40.41	40.41	269.38	107.52	107.52	39.29	39.29	456.60	456.60	2.0	0.3	24.96	0.6	3.24	6.49	49.91	7.83	15.67	7.44	14.88	43.47	86.95
196	3353.380	Tee Wye PVC SW Sch.DWV NPS 3, Piping Specification PA01	ea	9	14	3.6	389.89	50.5	58.48	818.78	5,458.52	46.34	648.79	56.86	796.09	551.58	7,722.17	9.0	0.5	44.06	4.4	5.73	51.55	396.50	15.85	142.64	13.54	121.90	79.18	712.59
197	3353.390	Tee Wye Reducer SW Sch.DWV NPS 3 x 3 x 2, Piping Specification PA01	ea	5	5	3.6	389.89	18.0	58.48	292.42	1,949.47	52.09	260.44	56.86	284.32	557.33	2,786.65	4.0	0.5	41.25	1.8	5.36	21.45	164.98	13.08	52.31	12.33	49.31	72.01	288.04
198	3353.400	Concentric Reducer SW Sch.DWV NPS 3 x 2, Piping Specification PA01	ea	1	3	2.5	269.38	7.5	40.41	121.22	808.14	34.26	102.79	39.29	117.86	383.34	1,150.02	3.0	0.2	16.64	0.6	2.16	6.49	49.91	8.52	25.55	5.62	16.87	32.94	98.82
199	3353.410	Concentric Reducer Male/Female SW Sch.DWV NPS 3 x 2, Piping Specification PA01	ea	1	0	2.5	269.38	0.0	40.41	0.00	0.00	34.26	0.00	39.29	0.00	383.34	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	11.64	0.00	6.26	0.00	36.70	0.00
200	3353.420	Coupling Sch.DWV NPS 3, Piping Specification PA01	ea	13	3	2.5	269.38	7.5	40.41	121.22	808.14	24.21	72.63	39.29	117.86	373.29	1,119.86	24.0	0.2	21.31	5.7	2.77	66.50	511.55	9.01	216.21	6.82	163.75	39.92	958.02
201	3353.430	Pipe identification NPS 3	Linear meter	83	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.9	0.6	50.38	24.5	6.55	287.46	2,211.22	12.06	529.54	14.27	626.28	83.26	3,654.49
202	3353.440	Pipe NPS 4 Sch.DWV, Piping Specification PA01	m	130	108	1.7	186.01	186.2	27.90	3,019.91	20,132.71	52.18	5,647.16	27.13	2,936.22	293.22	31,736.00	126.0	6.9	625.59	871.9	81.33	10,247.19	78,824.54	28.98	3,651.52	152.86	19,260.07	888.76	111,983.31
203	3353.450	Elbow 45 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	28	17	5.3	574.21	90.3	86.13	1,464.23	9,761.53	51.72	879.20	83.74	1,423.65	795.80	13,528.61	32.0	0.2	14.43	5.1	1.88	60.01	461.65	16.99	543.63	6.81	217.94	40.10	1,283.23
204	3353.460	Elbow 90 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	1	14	5.3	574.21	74.3	86.13	1,205.84	8,038.91	54.59	764.26	83.74	1,172.42	798.67	11,181.43	3.0	0.3	27.73	0.9	3.60	10.81	83.18	17.10	51.29	9.96	29.87	58.39	175.16
205	3353.470	Sanitary Tee Reducing SW Sch.DWV 4 x 4 x 2, Piping Specification PA01	ea	1	0	7.9	850.68	0.0	127.60	0.00	0.00	82.04	0.00	124.07	0.00	1,184.39	0.00	2.0	0.6	57.54	1.3	7.48	14.96	115.07	28.10	56.21	19.18	38.36	112.30	224.59
206	3353.480	Tee Wye SW Sch.DWV NPS 4, Piping Specification PA01	ea	8	5	7.9	850.68	39.3	127.60	638.01	4,253.39	82.04	410.22	124.07	620.33	1,184.39	5,921.95	9.0	0.6	56.84	5.7	7.39	66.50	511.55	25.15	226.36	18.42	165.78	107.80	970.19
207	3353.490	Tee Wye Reducer SW Sch.DWV NPS 4 x 4 x 2, Piping Specification PA01	ea	4	6	7.9	850.68	47.2	127.60	765.61	5,104.07	81.76	490.55	124.07	744.39	1,184.10	7,104.62	4.0	0.6	57.88	2.6	7.52	30.10	231.52	23.10	92.38	18.25	73.01	106.75	427.01
208	3353.500	Tee Wye Reducer SW Sch.DWV NPS 4 x 4 x 3, Piping Specification PA01	ea	14	16	7.9	850.68	125.8	127.60	2,041.63	13,610.85	79.17	1,266.75	124.07	1,985.05	1,181.52	18,904.28	14.0	0.6	57.73	8.9	7.51	105.07	808.24	22.83	319.69	18.16	254.30	106.24	1,487.30
209	3353.510	Coupling SW Sch.DWV NPS 4, Piping Specification PA01	ea	5	2	5.3	574.21	10.6	86.13	172.26	1,148.42	41.66	83.33	83.74	167.49	785.75	1,571.49	14.0	0.3	28.32	4.4	3.68	51.55	396.50	10.25	143.45	8.72	122.06	50.97	713.56
210	3353.520	Flexible Coupling NPS 4 x 4, Fernco series 1056	ea	1	0	0.5	57.42	0.0	8.61	0.00	0.00	13.58	0.00	8.37	0.00	87.99	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	10.51	0.00	9.92	0.00	58.02	0.00
211	3353.530	Cap SW Sch.DWV NPS 4, Piping Specification PA01	ea	2	0	5.3	574.21	0.0	86.13	0.00	0.00	51.72	0.00	83.74	0.00	795.80	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	5.84	0.00	9.00	0.00	52.43	0.00
212	3353.540	Pipe identification NPS 4	Linear meter	150	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.8	0.6	50.54	23.9	6.57	280.97	2,161.31	12.06	515.87	14.31	611.80	83.49	3,569.95
213	3353.550	Pipe NPS 6 Sch.DWV, Piping Specification PA01	m	4	18	2.6	279.02	47.2	41.85	765.61	5,104.07	99.47	1,819.50	40.69	744.39	461.04	8,433.57	6.0	4.4	398.81	26.5	51.84	311.07	2,392.83	50.50	302.97	103.89	623.35	605.04	3,630.21
214	3353.560	Concentric Reducer SW Sch.DWV NPS 6 x 4, Piping Specification PA01	ea	2	2	11.6	1,254.75	23.2	188.21	376.42	2,509.50	134.88	269.75	183.00	365.99	1,760.84	3,521.67	5.0	0.3	23.01	1.3	2.99	14.96	115.07	60.76	303.79	17.64	88.20	104.40	522.02
215	3353.570	Pipe identification NPS 6	Linear meter	4	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.5	47.77	1.1	6.21	12.80	98.44	12.07	24.86	13.66	28.14	79.70	164.25
B&M-0059	Added	6"x3" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	11.6	1,254.75	11.6	188.21	188.21	1,254.75	173.66	173.66	183.00	183.00	1,799.62	1,799.62	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0060	Added	4"x2" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		2	5.3	574.21	10.6	86.13	172.26	1,148.42	35.14	70.28	83.74	167.49	779.22	1,558.45	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0061	Added	3"x1.5" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	2.5	269.38	2.5	40.41	40.41	269.38	32.83	32.83	39.29	39.29	381.90	381.90	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0062	Added	4"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	7.9	850.68	7.9	127.60	127.60	850.68	86.35	86.35	124.07	124.07	1,188.70	1,188.70	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0063	Added	3"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		2	3.6	389.89	7.2	58.48	116.97	779.79	49.21	98.43	56.86	113.73	554.46	1,108.91	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0064	Added	4" cleanout, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	5.3	574.21	5.3	86.13	86.13	574.21	60.34	60.34	83.74	83.74	804.42	804.42	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0065	Added	3" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		3	1.5	162.76	4.6	24.41	74.43	496.23	46.24	140.99	23.74	72.37	257.16	784.02	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0066	Added	2" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		64	1.5	162.76	96.4	24.41	1,563.12	10,420.80	18.21	1,165.93	23.74	1,519.80	229.13	14,669.66	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0067	Added	3/4" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		6	1.1	116.26	6.6	17.44	106.33	708.90	9.69	59.08	16.96	103.39	160.34	977.70	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0068	Added	2" coupling, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		10	1.8	191.40	17.7	28.71	287.10	1,914.03	15.08	150.85	27.91	279.15	263.11	2,631.12	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0069	Added	3" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	2.5	269.38	2.5	40.41	40.41	269.38	25.07	25.07	39.29	39.29	374.15	374.15	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0070	Added	2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		7	1.8	191.40	12.4	28.71	200.97	1,339.82	14.22	99.56	27.91	195.40	262.25	1,835.75	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0071	Added	3/4" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		4	1.2	134.69	5.0	20.20	80.81	538.76	8.59	34.34	19.64	78.57	183.12	732.49	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0072	Added	2" wye, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	2.5	269.38	2.5	40.41	40.41	269.38	49.49	49.49	39.29	39.29	398.57	398.57	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0073	Added	3"x2" reducer, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	2.5	269.38	2.5	40.41	40.41	269.38	30.31	30.31	39.29	39.29	379.39	379.39	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0074	Added	2"x3/4" reducing wye, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	2.5	269.38	2.5	40.41	40.41	269.38	55.81	55.81	39.29	39.29	404.89	404.89	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0075	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		2	1.8	191.40	3.5	28.71	57.42	382.81	24.42	48.84	27.91	55.83	272.45	544.90	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0076	Added	3" transition coupling - HDPE to PVC	ea		1	2.5	269.38	2.5	40.41	40.41	269.38	139.12	139.12	39.29	39.29	488.20	488.20	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
B&M-0077	Added	3/4" ball check valve, PVC body/ball, PTFE seat - SOC - Hayward model TC, Chemline model BT or equal	ea		1	1.3	141.78	1.3	21.27	21.27	141.78	174.85	174.85	20.68	20.68	358.57	358.57	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0078	Added	3" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal	ea		1	3.5	382.81	3.5	57.42	57.42	382.81	1,303.11	1,303.11	55.83	55.83	1,799.16	1,799.16	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0079	Added	3/4" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal	ea		1	1.3	141.78	1.3	21.27	21.27	141.78	578.45	578.45	20.68	20.68	762.17	762.17	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ASS (Low Pressure Compressed Air)						0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
216	3441.010	Low pressure compressor 3441-COM-5000 / 5001	ea	2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	64,230.34	128,460.67	2,205.61	4,411.22	83,827.59	167,655.17	2.0	214.4	19,384.50	428.8	2,519.99	5,039.97	38,769.00	661,123.23	1,322,246.46	137,656.80	275,313.60	820,684.52	1,641,369.03
217	3441.020	Air filter 3441-FR-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	2,417.25	4,834.51	137.85	275.70	3,642.08	7,284.16	4.0	17.9	1,620.98	71.7	210.73	842.91	6,483.91	0.00	0.00	380.95	1,523.82	2,212.66	8,850.63
218	3441.030	Air tank 3441-TK-5000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	45,073.45	45,073.45	1,102.81	1,102.81	54,872.07	54,872.07	1.0	102.2	9,238.57	102.2	1,201.01	1,201.01	9,238.57	176.44	176.44	2,206.72	2,206.72	12,822.75	12,822.75
219	3441.040	Oil-water separator 3441-OWS-5000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	3,573.72	3,573.72	1,102.81	1,102.81	13,372.34	13,372.34	2.0	28.3	2,557.10	56.6	332.42	664.85	5,114.20	36.20	72.41	608.24	1,216.48	3,533.97	7,067.94
220	3441.050	Drain trap 3441-YV-0001 / 5000 / 6000	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	586.18	1,758.54	137.85	413.55	1,811.01	5,433.02	3.0	7.3	659.90	21.9	85.79	257.36	1,979.70	300.59	901.77	215.60	646.81	1,261.88	3,785.64
221	3441.060	Pressure indicator 3441-PI-5000 to 5002	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	700.54	2,101.61	137.85	413.55	1,925.36	5,776.09	3.0	3.7	329.95	11.0	42.89	128.68	989.85	84.11	252.32	94.48	283.43	551.43	1,654.28
222	3441.070	Pressure safety valve 3441-PSV-5000	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	626.56	626.56	137.85	137.85	1,851.39	1,851.39	0.0	7.3	659.89	0.0	85.79	0.00	0.00	291.83	0.00	213.84	0.00	1,251.35	0.00
223	3441.080	Pipe NPS 1/2 Sch.STD, Piping Specification GB11	m	6	19	0.8	81.38	14.5	12.21	234.47	1,563.12	13.65	262.21	11.87	227.97	119.11	2,287.77	7.0	12.8	1,159.57	89.8	150.74	1,055.21	8,117.02	6.28	43.97	273.78	1,916.47	1,590.38	11,132.68
224	3441.090	Elbow 45 degrees FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	2	0	1.7	184.31	0.0	27.65	0.00	0.00	10.65	0.00	26.88	0.00	249.49	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	0.92	0.00	4.09	0.00	23.81	0.00
225	3441.100	Elbow 90 degrees FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	5	11	1.7	184.31	18.7	27.65	304.12	2,027.45	10.65	117.12	26.88	295.69	249.49	2,744.37	10.0	0.4	37.99	4.2	4.94	49.38	379.86	0.81	8.14	9.09	90.91	52.83	528.29
226	3441.110	Tee FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	1	1	2.5	265.84	2.5	39.88	39.88	265.84	15.22	15.22	38.77	38.77	359.70	359.70	2.0	0.8	74.17	1.6	9.64	19.28	148.34	1.03	2.05	17.64	35.28	102.48	204.96
227	3441.120	Flexible Hose Flexitube FNPT NPS 1/2	ea	2	1	1.7	187.86	1.7	28.18	28.18	187.86	75.95	75.95	27.40	27.40	319.38	319.38	0.0	2.6	231.52	0.0	30.10	0.00	0.00	23.35	0.00	59.11	0.00	344.08	0.00
228	3441.130	Ball Valve NPS 1/2, Valve Specification VBA07	ea	3	0	2.4	260.87	0.0	39.13	0.00	0.00	197.99	0.00	38.05	0.00	536.04	0.00	1.0	2.2	198.25	2.2	25.77	25.77	198.25	91.26	91.26	64.96	64.96	380.25	380.25
229	3441.140	Pipe identification NPS 1/2	Linear meter	6	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.6	50.76	1.3	6.60	14.96	115.07	12.07	27.35	14.36	32.55	83.78	189.93
230	3441.150	Pipe NPS 3/4 Sch.STD, Piping Specification GB11	m	94	109	0.9	93.01	93.6	13.95	1,518.46	10,123.07	19.49	2,121.57	13.56	1,476.38	140.02	15,239.48	105.1	1.2	111.60	129.8	14.51	1,524.88	11,729.82	7.76	815.34	27.79	2,920.82	161.65	16,990.86
231	3441.160	Elbow 90 degrees FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	54	53	2.3	251.66	123.3	37.75	2,000.69	13,337.92	14.63	775.44	36.70	1,945.25	340.74	18,059.30	58.0	0.4	37.55	24.1	4.88	283.13	2,177.95	1.16	67.02	9.06	525.35	52.65	3,053.45
232	3441.170	Elbow 90 degrees SW Sch.STD NPS 3/4, Piping Specification CB11	ea	2	0	6.4	687.63	0.0	103.14	0.00	0.00	40.93	0.00	100.29	0.00	931.99	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	1.12	0.00	11.94	0.00	69.46	0.00
233	3441.180	Tee FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	1	1	3.4	368.63	3.4	55.29	55.29	368.63	21.22	21.22	53.76	53.76	498.91	498.91	1.0	0.9	83.18	0.9	10.81	10.81	83.18	1.48	1.48	19.86	19.86	115.33	115.33
234	3441.190	Tee Reducing FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	1	1	3.4	368.63	3.4	55.29	55.29	368.63	22.20	22.20	53.76	53.76	499.88	499.88	1.0	0.9	83.18	0.9	10.81	10.81	83.18	2.45	2.45	20.04	20.04	116.49	116.49
235	3441.200	Union FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	1	1	2.3	251.66	2.3	37.75	37.75	251.66	19.50	19.50	36.70	36.70	345.61	345.61	7.0	0.4	37.63	2.9	4.89	34.24	263.40	4.74	33.19	9.80	68.59	57.06	399.42
236	3441.210	Concentric Reducer FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	2	3	2.3	251.66	7.0	37.75	113.25	754.98	14.63	43.89	36.70	110.11	340.74	1,022.22	3.0	0.5	43.90	1.5	5.71	17.12	131.71	1.08	3.23	10.54	31.61	61.23	183.68
237	3441.220	Excentric Reducer FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	1	0	2.3	251.66	0.0	37.75	0.00	0.00	14.63	0.00	36.70	0.00	340.74	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	1.84	0.00	12.09	0.00	70.34	0.00
238	3441.230	Y Strainer FNPT NPS 3/4	ea	1	0	3.0	322.55	0.0	48.38	0.00	0.00	302.79	0.00	47.04	0.00	720.76	0.00	1.0	3.3	296.68	3.3	38.57	38.57	296.68	122.57	122.57	94.40	94.40	552.22	552.22
239	3441.240	Weld NPS 3/4, Piping Specification GB11	ea	4	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	479.0	0.6	57.24	303.3	7.44	3,564.48	27,419.04	91.40	43,782.73	31.80	15,231.59	187.89	89,997.84
240	3441.250	Quick connect FNPT NPS 3/4, Hansen Series 5500	ea	48	48	2.8	301.28	133.7	45.19	2,169.23	14,461.52	87.65	4,207.23	43.94	2,109.12	478.06	22,947.10	48.0	3.3	300.06	159.3	39.01	1,872.35	14,402.68	30.64	1,470.84	76.69	3,680.96	446.39	21,426.83
241	3441.260	Ball Valve NPS 3/4, Valve Specification VBA05	ea	61	48	2.4	262.29	116.4	39.34	1,888.50	12,590.03	194.98	9,359.23	38.25	1,836.17	534.87	25,673.94	47.0	2.2	200.08	104.0	26.01	1,222.46	9,403.55	34.68	1,629.88	54.00	2,538.11	314.77	14,794.01
242	3441.270	Ball Valve NPS 3/4, Valve Specification VBA06	ea	52	49	2.4	262.29	118.8	39.34	1,927.85	12,852.33	37.08	1,816.94	38.25	1,874.43	376.97	18,471.54	54.0	2.2	200.12	119.5	26.02	1,404.85	10,806.52	10.93	590.26	49.23	2,658.52	286.30	15,460.16
243	3441.280	Pipe identification NPS 3/4	Linear meter	94	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.5	0.6	50.58	19.9	6.58	233.75	1,798.08	12.06	428.86	14.32	508.91	83.54	2,969.60
244	3441.290	Pipe NPS 1 Sch.STD, Piping Specification GB11	m	154	205	1.0	104.63	198.2	15.70	3,215.56	21,437.08	23.87	4,890.92	15.26	3,126.45	159.46	32,670.02	172.3	1.2	111.65	212.8	14.51	2,500.61	19,235.46	11.81	2,034.51	28.62	4,930.22	166.59	28,700.80
245	3441.300	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification CB11	ea	4	0	6.4	687.63	0.0	103.14	0.00	0.00	40.93	0.00	100.29	0.00	931.99	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	1.23	0.00	11.98	0.00	69.60	0.00
246	3441.310	Tee FNPT Sch.STD NPS 1, Piping Specification GB11	ea	34	2	3.0	326.09	6.0	48.91	97.83	652.19	20.14	40.27	47.56	95.12	442.70	885.40	34.0	0.8	75.23	28.3	9.78	332.51	2,557.79	2.60	88.45	18.20	618.93	105.81	3,597.68
247	3441.320	Concentric Reducer FNPT Sch.STD NPS 1 x 3/4, Piping Specification GB11	ea	69	35	2.1	223.30	72.3	33.50	1,172.34	7,815.60	13.69	479.04	32.57	1,139.85	303.05	10,606.84	0.0	0.6	49.91	0.0	6.49	0.00	0.00	1.84	0.00	12.09	0.00	70.34	0.00
248	3441.330	Excentric Reducer FNPT Sch.STD NPS 1 x 1/2, Piping Specification GB11	ea	3	1	2.1	223.30	2.1	33.50	33.50	223.30	13.69	13.69	32.57	32.57	303.05	303.05	1.0	0.6	49.91	0.6	6.49	6.49	49.91	1.28	1.28	11.98	11.98	69.66	69.66
249	3441.340	Victaulic Coupling NPS 1, Style 77	ea	179	4	0.3	37.22	1.4	5.58	22.33	148.87	27.67	110.67	5.43	21.71	75.89	303.58	8.0	0.4	37.09	3.3	4.82	38.57	296.68	30.64	245.15	14.88	119.08	87.44	699.48
250	3441.350	Victaulic Coupling NPS 1, Style 07	ea	97	1	0.3	37.22	0.3	5.58	5.58	37.22	33.16	33.16	5.43	5.43	81.39	81.39	284.0	0.4	37.52	117.9	4.88	1,385.38	10,656.80	29.91	8,493.95	14.84	4,214.56	87.15	24,750.70
251	3441.360	Victaulic Elbow 90 degrees NPS 1, Style 10	ea	86	0	3.0	322.55	0.0	48.38	0.00	0.00	65.56	0.00	47.04	0.00	483.53	0.00	82.0	0.4	37.62	34.1	4.89	401.00	3,084.60	44.80	3,673.30	17.86	1,464.46	105.16	8,623.36
252	3441.370	Victaulic Elbow 45 degrees NPS 1, Style 11	ea	17	0	3.0	322.55	0.0	48.38	0.00	0.00	65.56	0.00	47.04	0.00	483.53	0.00	20.0	0.2	18.99	4.2	2.47	49.38	379.86	44.80	895.93	13.48	269.64	79.74	1,594.81
253	3441.380	Victaulic tee NPS 1, Style 20	ea	2	0	4.4	471.42	0.0	70.71	0.00	0.00	117.44	0.00	68.75	0.00	728.33	0.00	2.0	0.8	74.17	1.6	9.64	19.28	148.34	85.42	170.84	34.63	69.26	203.86	407.72
254	3441.390	Weld NPS 1, Piping Specification GB11	ea	8	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,011.0	3.6	327.41	7,283.1	42.56	85,595.88	658,429.81	9.66	19,424.43	77.40	155,659.88	457.04	919,109.99
255	3441.400	Ball Valve NPS 1, Valve Specification VBA06	ea	3	3	3.0	322.55	8.9	48.38	145.15	967.65	42.09	126.26	47.04	141.12	460.06	1,380.17	3.0	2.2	197.78	6.6	25.71	77.14	593.35	20.08	60.23	50.52	151.57	294.10	882.29
256	3441.410	Pipe identification NPS 1	Linear meter	154	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.2	0.6	50.44	32.5	6.56	381.72	2,936.27	12.06	702.32	14.28	831.46	83.34	4,851.76
257	3441.420	Flange Threaded 150RF Sch.STD NPS 1 1/2 c/w Hardware, Piping Specification GB11	ea	2	0	8.8	952.29	0.0	142.84	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	8.58	0.00	13.46	0.00	78.44	0.00
258	3441.430	Pipe NPS 2 Sch.STD, Piping Specification GB11	m	1038	992	1.3	139.51	1280.1	20.93	20,767.17	138,447.83	47.14	46,782.49	20.35	20,191.69	227.93	226,189.18	988.0	2.9	263.66	2,881.4	34.28	33,864.31	260,494.72	34.60	34,189.07	68.93	68,103.23	401.47	396,651.34
259	3441.440	Tee FNPT NPS 2, Piping Specification GB11	ea	26	26	4.4	471.42	113.3	70.71	1,838.53	12,256.85	33.50	871.10	68.75	1,787.58	644.39	16,754.05	26.0	0.8	74.86	21.5	9.73	253.04	1,946.43	6.73	175.01	18.95	492.67	110.27	2,867.15
260	3441.450	Tee Reducing FNPT NPS 2 x 2 x 1, Piping Specification GB11	ea	2	1	4.4	471.42	4.4	70.71	70.71	471.42	37.70	37.70	68.75	68.75	648.58	648.58	0.0	0.9	83.18	0.0	10.81	0.00	0.00	3.07	0.00	20.16	0.00	117.22	0.00
261	3441.460	Union FNPT NPS 2, Piping Specification GB11	ea	1	1	3.0	322.55	3.0	48.38	48.38	322.55	38.03	38.03	47.04	47.04	456.01	456.01	1.0	0.4	33.27	0.4	4.33	4.33	33.27	16.16	16.16	11.07	11.07	64.82	64.82
262	3441.470	Concentric Reducer FNPT NPS 2 x 3/4, Piping Specification GB11	ea	26	26	0.5	59.07	14.2	8.86	230.39	1,535.95	7.00	181.91	8.62	224.01	83.55	2,172.26	26.0	0.5	41.86	12.0	5.44	141.48	1,088.28	3.47	90.21	10.54	273.93	61.30	1,593.90
263	3441.480	Flexible Hose Flexitube FNPT NPS 2	ea	2	2	5.4	584.84	10.8	87.73	175.45	1,169.68	195.92	391.83	85.30	170.59	953.78	1,907.56	0.0	5.7	511.55	0.0	66.50	0.00	0.00	58.37	0.00	131.97	0.00	768.39	0.00
264	3441.490	Flange SW 150RF NPS 2 c/w hardware, Piping Specification GB11	ea	4	4	3.0	322.55	11.9	48.38	193.53	1,290.19	28.90	115.60	47.04	188.17	446.87	1,787.49	4.0	26.6	2,404.61	106.4	312.60	1,250.40	9,618.44	28.45	113.80	570.84	2,283.38	3,316.50	13,266.02
265	3441.500	Flange Slip-On 150RF NPS 2 c/w Hardware, Piping Specification GB11	ea	3	0	3.0	322.55	0.0	48.38	0.00	0.00	28.90	0.00	47.04	0.00	446.87	0.00	2.0	0.5	41.59	0.9	5.41	10.81	83.18	8.21	16.42	11.43	22.86	66.64	133.27
266	3441.510	Hansen Quick connect B20H51 Brass FNPT NPS 2	ea	13	13	7.3	786.88	94.6	118.03	1,534.41	10,229.40	184.99	2,404.82	114.76	1,491.89	1,204.66	15,660.52	15.0	5.0	449.82	74.6	58.48	877.15	6,747.31	627.05	9,405.79	231.96	3,479.36	1,367.31	20,509.61
267	3441.520	Victaulic coupling NPS 2, Style 77	ea	155	161	0.4	47.85	71.2	7.18	1,155.59	7,703.95	39.99	6,438.77	6.98	1,123.57	102.00	16,421.88	167.0	0.4	37.54	69.3	4.88	814.97	6,269.03	34.55	5,769.31	15.78	2,634.83	92.74	15,488.14
268	3441.530	Victaulic coupling NPS 2, Style 07	ea	359	436	0.4	47.85	192.9	7.18	3,129.43	20,862.88	47.68	20,787.21	6.98	3,042.71	109.68	47,822.23	420.0	0.4	37.51	174.3	4.88	2,048.25	15,755.76	41.62	17,481.51	17.20	7,222.32	101.21	42,507.84
269	3441.540	Victaulic Concentric Reducer NPS 2 x 3/4, Style 50	ea	1	1	3.0	322.55	3.0	48.38	48.38	322.55	72.45	72.45	47.04	47.04	490.43	490.43	6.0	0.5	41.36	2.7	5.38	32.26	248.15	60.94	365.62	21.99	131.93	129.66	777.96
270	3441.550	Victaulic cap NPS 2, Style 60	ea	5	5	0.2	24.81	1.1	3.72	18.61	124.06	29.06	145.31	3.62	18.09	61.21	306.07	5.0	0.4	36.32	2.0	4.72	23.61	181.61	38.61	193.03	16.31	81.55	95.96	479.80
271	3441.560	Victaulic Elbow 90 degrees NPS 2, Style 10	ea	92	96	3.0	322.55	286.3	48.38	4,644.70	30,964.68	65.56	6,293.60	47.04	4,515.99	483.53	46,418.97	94.0	0.4	37.56	39.1	4.88	459.03	3,531.00	44.80	4,210.86	17.85	1,677.59	105.09	9,878.48
272	3441.570	Victaulic Elbow 90 degrees NPS 2, Style 100	ea	23	19	3.0	322.55	56.7	48.38	919.26	6,128.43	85.00	1,614.95	47.04	893.79	502.97	9,556.43	23.0	0.4	37.31	9.5	4.85	111.56	858.14	62.72	1,442.56	21.40	492.10	126.28	2,904.36
273	3441.580	Victaulic Elbow 45 degrees NPS 2, Style 11	ea	29	30	3.0	322.55	89.5	48.38	1,451.47	9,676.46	65.56	1,966.75	47.04	1,411.25	483.53	14,505.93	28.0	0.2	18.86	5.8	2.45	68.67	528.20	44.80	1,254.30	13.45	376.65	79.57	2,227.82
274	3441.590	Victaulic tee NPS 2, Style 20	ea	26	27	4.4	471.42	117.7	70.71	1,909.24	12,728.27	117.44	3,170.94	68.75	1,856.33	728.33	19,664.78	27.0	0.8	75.17	22.5	9.77	263.85	2,029.60	85.42	2,306.27	34.86	941.29	205.22	5,541.01
275	3441.600	Victaulic Tee Reducing NPS 2 x 2 x 1, Style 25	ea	36	36	4.4	471.42	156.9	70.71	2,545.65	16,971.02	137.05	4,933.76	68.75	2,475.11	747.93	26,925.55	37.0	0.8	74.90	30.7	9.74	360.27	2,771.30	103.48	3,828.92	38.44	1,422.16	226.56	8,382.65
276	3441.610	Victaulic Expansion Joint NPS 2, Style 155	ea	14	14	3.1	340.27	44.0	51.04	714.57	4,763.80	2,258.36	31,617.10	49.63	694.77	2,699.30	37,790.23	0.0	0.6	49.91	0.0	6.49	0.00	0.00	2,497.36	0.00	514.50	0.00	3,068.26	0.00
277	3441.620	Ball Valve NPS 2, Valve Specification VBA05	ea	13	13	5.4	584.84	70.3	87.73	1,140.44	7,602.93	449.35	5,841.61	85.30	1,108.84	1,207.22	15,693.82	13.0	3.3	300.73	43.2	39.09	508.23	3,909.47	102.21	1,328.72	91.25	1,186.29	533.29	6,932.71
278	3441.630	Ball Valve NPS 2, Valve Specification VBA07	ea	15	15	3.0	326.09	45.2	48.91	733.71	4,891.40	247.49	3,712.28	47.56	713.38	670.05	10,050.76	15.0	3.3	300.28	49.8	39.04	585.55	4,504.22	269.54	4,043.12	124.84	1,872.53	733.70	11,005.43
279	3441.640	Check valve NPS 2, Valve Specification VCH06	ea	1	1	3.0	326.09	3.0	48.91	48.91	326.09	534.24	534.24	47.56	47.56	956.80	956.80	1.0	3.3	296.68	3.3	38.57	38.57	296.68	187.99	187.99	107.57	107.57	630.81	630.81
280	3441.650	Pipe identification NPS 2	Linear meter	1038	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	348.0	0.6	49.96	192.3	6.49	2,260.55	17,388.87	96.88	33,718.30	31.25	10,875.00	184.58	64,242.72
B&M-0080	Added	2" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter		6	2.3	244.14	14.5	36.62	234.47	1,563.12	56.82	363.81	35.61	227.97	373.20	2,389.37	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0081	Added	1" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	33.41	33.41	8.62	8.62	109.96	109.96	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0082	Added	3/4" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	31.00	31.00	8.62	8.62	107.55	107.55	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0083	Added	1/2" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea		2	0.5	59.07	1.1	8.86	17.72	118.15	29.98	59.96	8.62	17.23	106.53	213.06	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0084	Added	1.5" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	67.74	67.74	8.62	8.62	144.29	144.29	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0085	Added	1" coupling, MI, galvanized, Class 150, A197, B16 - THD	ea		1	2.1	223.30	2.1	33.50	33.50	223.30	13.41	13.41	32.57	32.57	302.78	302.78	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0086	Added	1" 45 elbow, MI, galvanized, Class 150, A197, B16 - THD	ea		34	2.1	223.30	70.2	33.50	1,138.85	7,592.30	14.52	493.68	32.57	1,107.29	303.89	10,332.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0087	Added	1" 90 elbow, MI, galvanized, Class 150, A197, B16 - THD	ea		80	2.1	223.30	165.2	33.50	2,679.64	17,864.24	13.86	1,108.74	32.57	2,605.38	303.22	24,257.99	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0088	Added	2" Elbow 90 SW class 3000 SS ASTM A182 F304L	ea		1	14.4	1,556.03	14.4	233.40	233.40	1,556.03	104.53	104.53	226.94	226.94	2,120.90	2,120.90	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0089	Added	1"x1/2" reducer, MI, galvanized, Class 150, A197, B16 - THD	ea		2	2.1	223.30	4.1	33.50	66.99	446.61	13.69	27.37	32.57	65.13	303.05	606.10	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0090	Added	1"x3/4" reducing tee, MI, galvanized, Class 150, A197, B16 - THD	ea		34	3.0	326.09	102.5	48.91	1,663.08	11,087.17	21.44	729.08	47.56	1,616.99	444.01	15,096.32	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0091	Added	2" flange, THD, SS, B16.5 RF, ASTM A105N - 150#	ea		4	3.0	322.55	11.9	48.38	193.53	1,290.19	38.49	153.98	47.04	188.17	456.47	1,825.87	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0092	Added	1/2" union, MI, galvanized, Class 150, A197, B16 - THD	ea		1	1.7	184.31	1.7	27.65	27.65	184.31	14.81	14.81	26.88	26.88	253.65	253.65	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0093	Added	1" adapter nipple, Galv. DI, GRVxTHD - VICTAULIC 40	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	10.63	10.63	8.62	8.62	87.18	87.18	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0094	Added	3/4" adapter nipple, Galv. DI, GRVxTHD - VICTAULIC 40	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	12.51	12.51	8.62	8.62	89.06	89.06	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0095	Added	2" 45 elbow, LR, Galv. Di, ASTM A536 GR 65 Max Rating 1000# - Victaulic 110	ea		2	3.0	322.55	6.0	48.38	96.76	645.10	82.96	165.93	47.04	94.08	500.94	1,001.87	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0096	Added	2"x1" conc reducer, Galv. DI, ASTM A536 GR 65 Max Rating 1000# - Victaulic 50	ea		1	3.0	322.55	3.0	48.38	48.38	322.55	47.69	47.69	47.04	47.04	465.66	465.66	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0097	Added	3/4" flexible coupling, Galv. DI, ASTM A536 - Victaulic 77	ea		1	0.3	37.22	0.3	5.58	5.58	37.22	26.42	26.42	5.43	5.43	74.65	74.65	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0098	Added	1/2" ball valve - THD VBA06	ea		2	1.7	187.86	3.5	28.18	56.36	375.72	31.42	62.83	27.40	54.80	274.85	549.70	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0099	Added	1/2" low level purge trap	ea		1	2.4	262.29	2.4	39.34	39.34	262.29	1,450.18	1,450.18	38.25	38.25	1,790.07	1,790.07	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0100	Added	2" KAESER Filter (Supplied with Equipment) 3441-FR-5000	ea		1	8.7	945.20	8.7	141.78	141.78	945.20	49.66	49.66	137.85	137.85	1,274.49	1,274.49	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0101	Added	2" KAESER Filter (Supplied with Equipment) 3441-FR-5001	ea		1	8.7	945.20	8.7	141.78	141.78	945.20	49.66	49.66	137.85	137.85	1,274.49	1,274.49	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		AHS (High Pressure Compressed Air)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
281	3442.010	Compressor 3442-COM-5000 / 5001		2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	184,628.94	369,257.88	2,205.61	4,411.22	204,226.19	408,452.38	2.0	185.3	16,753.23	370.6	2,177.92	4,355.84	33,506.46	341.67	683.33	4,006.04	8,012.09	23,278.86	46,557.72
282	3442.020	Control Panel 3442-CP-5000	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	113,829.51	113,829.51	1,654.21	1,654.21	128,527.45	128,527.45	0.0	15.9	1,440.41	0.0	187.25	0.00	0.00	294.75	0.00	397.86	0.00	2,320.28	0.00
283	3442.030	Air tank 3442-TK-5000 / 5001		0	2	63.4	6,852.68	126.7	1,027.90	2,055.80	13,705.37	109,667.44	219,334.88	999.42	1,998.84	118,547.44	237,094.89	2.0	102.2	9,238.58	204.4	1,201.01	2,402.03	18,477.15	178.20	356.40	2,207.08	4,414.15	12,824.86	25,649.73
284	3442.040	Pressure Damper 3442-PD-5000 / 5001	ea	2	2	63.4	6,852.68	126.7	1,027.90	2,055.80	13,705.37	21,787.21	43,574.43	999.42	1,998.84	30,667.22	61,334.44	2.0	109.3	9,881.84	218.6	1,284.64	2,569.28	19,763.67	242.98	485.96	2,371.30	4,742.59	13,780.75	27,561.50
285	3442.050	Oil-Water Separator 3442-OWS-5000	ea	1	1	63.4	6,852.68	63.4	1,027.90	1,027.90	6,852.68	3,348.40	3,348.40	999.42	999.42	12,228.41	12,228.41	1.0	56.6	5,114.20	56.6	664.85	664.85	5,114.20	73.13	73.13	1,216.63	1,216.63	7,068.81	7,068.81
286	3442.060	Pressure Safety Valve 3442-PSV-5000 / 5001	ea	2	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
287	3442.070	Y-strainer 3442-STR-1000 / 2000/ 3000 / 4000 / 5000 / 5001		6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	440.56	2,643.37	172.31	1,033.88	1,971.60	11,829.58	6.0	4.8	431.61	28.7	56.11	336.66	2,589.68	136.18	817.05	128.85	773.10	752.75	4,516.49
288	3442.080	Y-strainer 3442-STR-5002 / 5003		2	2	26.2	2,835.59	52.4	425.34	850.68	5,671.19	552.82	1,105.65	413.55	827.10	4,227.31	8,454.61	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
289	3442.090	Y-strainer 3442-STR-5004		1	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	552.82	552.82	413.55	413.55	4,227.31	4,227.31	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
290	3442.100	Solenoid Valve 3442-YV-5000 / 5001	ea	2	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	1,665.90	3,331.81	412.93	825.87	2,451.68	4,903.35
291	3442.110	Pressure Regulator 3442-PCV-5000 / 5001	ea	2	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
292	3442.120	Pressure indicator 3442-PI-1000 / 2000 / 3000 / 4000 / 5000 / 5001 / 5002 / 5003 / 5004 / 6000	ea	10	10	8.7	945.20	87.4	141.78	1,417.80	9,451.98	700.54	7,005.37	137.85	1,378.51	1,925.36	19,253.65	10.0	4.7	428.93	47.5	55.76	557.61	4,289.33	110.43	1,104.31	123.04	1,230.38	718.16	7,181.64
293	3442.130	Pressure Transmitter 3442-PT-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	338.11	676.23	137.85	275.70	1,562.94	3,125.88	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	1,823.93	3,647.85	522.29	1,044.58	3,091.90	6,183.81
294	3442.140	Pressure Expansion Valve 3442-PEV-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	338.11	676.23	137.85	275.70	1,562.94	3,125.88	2.0	3.7	329.95	7.3	42.89	85.79	659.89	35.02	70.04	84.60	169.19	492.45	984.91

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

CIMFP Exhibit P-01820

Bidder 2 — FIXED PRICE TARGET COST OF LABOUR — LABOUR COMPONENT 0.15

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS
B&M-0102	Added	Instument Panel for Govenor Air	ea		1	139.8	15,123.16	139.8
B&M-0103	Added	Instrumentation Panel and Reducing Brake Air Pressure Station	ea		1	139.8	15,123.16	139.8
295	3442.150	Pipe NPS 1/2 Sch.40S, Piping Specification SB11	m	1	6	1.0	104.63	6.2
296	3442.160	Olet FNPT NPS 1/2 Sch.40S, Piping Specification SB11	ea	1	0	2.2	236.30	0.0
297	3442.170	Ball Valve NPS 1/2, Valve Specification VBA12	ea	2	2	3.7	400.53	7.4
298	3442.180	Pipe identification NPS 1/2	Linear meter	1	0	0.0	-	0.0
299	3442.190	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	6	26	1.1	116.26	27.5
300	3442.200	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	m	21	0	1.1	116.26	0.0
301	3442.210	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	20	17	5.6	602.56	94.7
302	3442.220	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	6	0	5.6	602.56	0.0
303	3442.230	Tee SW Class 3000 NPS 3/4, Piping Specification SB11	ea	6	5	7.2	779.79	36.1
304	3442.240	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	4	5.6	602.56	22.3
305	3442.250	Weld NPS 3/4, Piping Specification SB11	ea	74	0	0.0	-	0.0
306	3442.260	Ball Valve NPS 3/4, Valve Specification VBA12	ea	8	8	5.5	595.47	44.0
307	3442.270	Needle Valve NPS 3/4, Valve Specification VNE04	ea	1	2	1.1	119.31	2.2
308	3442.280	Pipe identification NPS 3/4	Linear meter	27	0	0.0	-	0.0
309	3442.290	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	1	237	1.4	151.14	331.0
310	3442.300	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	189	0	1.4	151.14	0.0
311	3442.310	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	57	63	5.9	638.01	371.6
312	3442.320	Elbow 90 degrees FNPT Sch.40S NPS 1, Piping Specification SB11	ea	4	0	5.9	638.01	0.0
313	3442.330	Tee SW Class 3000 NPS 1, Piping Specification SB11	ea	13	12	7.9	850.68	94.4
314	3442.340	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	8	5.9	638.01	47.2
315	3442.350	Union SW / FNPT Class 3000 NPS 1, Piping Specification SB11	ea	4	0	5.9	638.01	0.0
316	3442.360	Concentric Reducer SW Class 3000 NPS 1 x 3/4, Piping Specification SB11	ea	1	2	8.5	921.57	17.0
317	3442.370	Flexible Connector Penflex 800SS MNPT NPS 1	ea	2	1	3.2	343.82	3.2
318	3442.380	Flange SW 150RF NPS 1 c/w Hardware , Piping Specification SB11	ea	4	4	7.2	783.33	29.0
319	3442.390	Weld NPS 1, Piping Specification SB11	ea	171	0	0.0	-	0.0
320	3442.400	Ball Valve NPS 1, Valve Specification VBA12	ea	12	18	7.3	793.97	132.1
321	3442.410	Pipe identification NPS 1	Linear meter	190	0	0.0	-	0.0
322	3442.420	Pipe NPS 2 Sch40, Piping Specification SB11	m	151	160	2.3	244.14	361.3
323	3442.430	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1
324	3442.440	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	22	26	8.5	921.57	221.5
325	3442.450	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	7	14	8.5	921.57	119.3
326	3442.460	Union SW/ FNPT Class 3000 NPS 2, Piping Specification SB11	ea	4	0	8.5	921.57	0.0
327	3442.470	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1
328	3442.480	Tee Reducing SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	3	3	11.1	1,205.13	33.4
329	3442.490	Tee Reducing SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	5	5	11.1	1,205.13	55.7
330	3442.500	Half Coupling SW Class 3000 NPS 2, Piping Specification SB11	ea	2	0	8.5	921.57	0.0
331	3442.510	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	4.6	496.23	4.6
332	3442.520	Flexible Connector Penflex 800SS MNPT NPS 2	ea	2	2	4.4	471.42	8.7
333	3442.530	Expansion Joint U Type Connectall NPS 2	ea	3	3	4.4	471.42	13.1
334	3442.540	Concentric Reducer Sch.10s NPS 2 x 1, Piping Specification SB11	ea	1	1	8.5	921.57	8.5
335	3442.550	Weld NPS 2, Piping Specification SB11	ea	110	0	0.0	-	0.0
336	3442.560	Ball Valve NPS 2, Valve Specification VBA12	ea	2	2	14.7	1,587.93	29.4
337	3442.570	Pipe identification NPS 2	Linear meter	151	0	0.0	-	0.0
338	3442.580	Flange SW 150RF NPS 6 c/w Hardware, Piping Specification SB11	ea	2	0	19.4	2,101.88	0.0
339	3442.590	Blind Flange 150RF NPS 6 c/w Hardware, Piping Specification SB11	ea	2	2	19.4	2,101.88	38.9
B&M-0104	Added	2" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea		2	0.5	59.07	1.1
B&M-0105	Added	1.5" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea		2	0.5	59.07	1.1
B&M-0106	Added	1/2" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea		2	0.5	59.07	1.1
B&M-0107	Added	2" coupling, 304SS, Vic-Press - 597	ea		15	8.5	921.57	127.8
B&M-0108	Added	1" coupling, 304SS, Vic-Press - 597	ea		16	5.9	638.01	94.4
B&M-0109	Added	1/2" 90 elbow, 304SS, Vic-Press - 590	ea		2	4.3	460.78	8.5
B&M-0110	Added	1"x3/4" reducer, 304SS, Vic-Press - 582	ea		1	5.9	638.01	5.9
B&M-0111	Added	1"x3/4" reducing tee, 304SS, Vic-Press - 593	ea		1	7.9	850.68	7.9
B&M-0112	Added	2"x1/2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea		1	11.1	1,205.13	11.1
B&M-0113	Added	3/4" male adapter, 304SS, Vic-Press - 596	ea		2	5.6	602.56	11.1
B&M-0114	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea		2	4.3	460.78	8.5
B&M-0115	Added	3" blind flange, SS, B16.5 RF, ASTM A182 F304L - 150# (Tapped)	ea		2	12.2	1,315.01	24.3
B&M-0116	Added	1/2" tube, smls SS, Rb 80 or less, thickness 3.00: to ASTM A269 Grade 316L	Linear meter		6	0.7	71.15	4.2
B&M-0117	Added	1/2" 90 union elbow, SS, A182 Gr 316 - Swagelok or equal	ea		4	1.1	119.31	4.4
B&M-0118	Added	1/2" thread adapter, SS, A182 Gr 316 - Swagelok or equal	ea		2	3.7	400.53	7.4
B&M-0119	Added	1/2" ball valve, SS - THD - Swagelok 60T Series or equal VBA14	ea		1	1.1	119.31	1.1
B&M-0120	Added	1" Expansion joint U-type Connectall - PE (Supplied with Equipment)	ea		2	3.2	343.82	6.4
	Added	0	0		0	0.0	-	0.0
	Added	0	0		0	0.0	-	0.0
	Added	0	0		0	0.0	-	0.0
	Added	0	0		0	0.0	-	0.0
	Added	0	0		0	0.0	-	0.0
340	3443.020	WFS (Fire Protection Water)	LS	1	1	0.0	-	0.0
340b	Added	Piping EA	0		0	0.0	-	0.0
		WCD (Clear Water Drainage)						0.0
341	3444.001	Drainage pump 3444-P-5000 to 5002	ea	3	3	229.4	24,811.44	688.2
342	3444.002	Submersible pump 3444-P-0001	ea	1	1	0.0	-	0.0
343	3444.003	Oil skimmer 3444-OS-0001	ea	1	1	0.0	-	0.0
344	3444.004	Air vent 3444-AV-0001 to 0003	ea	3	3	8.7	945.20	26.2
345	3444.005	Air vent 3444-AV-5000 to 0002	ea	3	3	24.0	2,599.29	72.1
346	3444.006	Air vent 3444-AV-5003	ea	1	1	28.4	3,071.89	28.4
347	3444.007	Pressure Indicator 3444-PI-0001 to 0003	ea	3	3	8.7	945.20	26.2
348	3444.008	Level Switch 3444-LSLL-0001 / 3444-LSHH-0001	ea	2	2	45.9	4,962.29	91.8
349	3444.009	Level Transmitter 3444-LT-0001	ea	1	1	45.9	4,962.29	45.9
350	3444.010	Oil sheen detector 3444-LSH-0001	ea	1	1	45.9	4,962.29	45.9
351	3444.011	Current transmitter 3444-IT-5000 to 5002	ea	3	3	45.9	4,962.29	137.6
352	3444.012	Control Panel 3444-CP-5000	ea	1	1	104.9	11,342.37	104.9
353	3444.013	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	9	6	1.1	116.26	6.9
354	3444.014	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	6	5.6	602.56	33.4
355	3444.015	Weld NPS 3/4, Piping Specification SB11	ea	18	0	0.0	-	0.0
356	3444.016	Pipe identification NPS 3/4	Linear meter	9	0	0.0	-	0.0
357	3444.017	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	11	38	1.4	151.14	53.7
358	3444.018	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	15	15	5.9	638.01	88.5
359	3444.019	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	7	0	3.9	425.34	0.0
360	3444.020	Ball valve NPS 1, Valve Specification VBA11	ea	10	7	7.3	793.97	51.4
361	3444.021	Weld NPS 1, Piping Specification SB11	ea	64	0	0.0	-	0.0
362	3444.022	Pipe identification NPS 1	Linear meter	11	0	0.0	-	0.0
363	3444.023	Pipe NPS 1-1/2 Sch.DWV, Piping Specification PA01	m	246	335	1.3	139.51	432.6
364	3444.024	"P" Drain Trap SW NPS 1-1/2, Piping Specification PA01	ea	17	14	1.7	184.31	23.9
365	3444.025	Elbow 90 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	38	55	1.7	184.31	93.7
366	3444.026	Elbow 45 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	32	73	1.7	184.31	124.4
367	3444.027	Elbow 22.5 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	8	0	2.5	269.38	0.0
368	3444.028	Tee wye SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	10	16	5.3	574.21	84.9
369	3444.029	Coupling Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	3	0	2.5	269.38	0.0
370	3444.030	Pipe insulation NPS 1-1/2	Linear meter	120	0	1.5	147.36	0.0
371	3444.031	Pipe identification NPS 1-1/2	Linear meter	246	0	0.0	-	0.0
372	3444.032	Pipe NPS 2 Sch.40, Piping Specification PA02	m	6	9	1.5	162.76	13.8
373	3444.033	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	6	6	1.8	191.40	10.6
374	3444.034	Pipe identification NPS 2	Linear meter	6	0	0.0	-	0.0
375	3444.035	Pipe NPS 3 Sch.STD, Piping Specification CB11	m	10	13	2.8	302.27	35.8
376	3444.036	Elbow 90 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	2	3	12.7	1,375.26	38.1
377	3444.037	Elbow 45 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	2	0	12.7	1,375.26	0.0
378	3444.038	Flange Welding Neck 150RF Sch.STD NPS 3 c/w hardware, Piping Specification CB11	ea	2	4	8.3	893.21	33.0
379	3444.039	Olet BW Sch.STD NPS 3, Piping Specification CB11	ea	1	1	8.1	874.31	8.1
380	3444.040	Victaulic Coupling NPS 3, Style 07	ea	1	0	0.5	53.17	0.0
381	3444.041	Weld NPS 3, Piping Specification CB11	ea	10	0	0.0	-	0.0
382	3444.042	Ball valve NPS 3, Valve Specification VBA01	ea	1	1	6.4	694.72	6.4
383	3444.043	Pipe painting NPS 3	Linear meter	10	0	0.9	89.04	0.0
384	3444.044	Pipe identification NPS 3	Linear meter	10	0	0.0	-	0.0
385	3444.045	Pipe NPS 3 Sch.DWV, Piping Specification PA01	m	95	101	1.5	162.76	151.4
386	3444.046	Elbow 90 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	9	12	2.5	269.38	29.9
387	3444.047	Elbow 45 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	14	16	2.5	269.38	39.9
388	3444.048	Elbow 22.5 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	1	1	2.5	269.38	2.5
389	3444.049	Tee wye SW Sch.DWV NPS 3, Piping Specification PA01	ea	7	7	3.6	389.89	25.2
390	3444.050	Coupling Sch.DWV NPS 3, Piping Specification PA01	ea	9	9	2.5	269.38	22.4

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
391	3444.051	"P" Drain Trap SW Sch.DWV NPS 3, Piping Specification PA01	ea	5	5	2.5	269.38	12.5	40.41	202.04	1,346.91	107.52	537.60	39.29	196.44	456.60	2,282.98	23.0	0.2	22.24	5.7	2.89	66.50	511.55	76.81	1,766.70	20.69	475.91	122.64	2,820.67
392	3444.052	Flexible coupling NPS 3, Fernco Series 1056	ea	1	1	0.4	47.85	0.4	7.18	7.18	47.85	11.32	11.32	6.98	6.98	73.33	73.33	1.0	0.2	16.64	0.2	2.16	2.16	16.64	9.83	9.83	5.90	5.90	34.53	34.53
393	3444.053	Pipe identification NPS 3	Linear meter	95	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
394	3444.054	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	2	6	3.5	383.66	22.7	57.55	368.45	2,456.33	67.23	430.41	55.95	358.24	564.38	3,613.43	2.0	13.6	1,228.99	27.2	159.77	319.54	2,457.98	30.08	60.15	294.89	589.77	1,713.72	3,427.44
395	3444.055	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	2	2	15.9	1,715.53	31.7	257.33	514.66	3,431.07	105.83	211.65	250.20	500.40	2,328.89	4,657.78	6.0	1.4	129.16	8.6	16.79	100.74	774.96	56.89	341.32	41.81	250.84	244.64	1,467.86
396	3444.056	Flange Welding Neck 150RF Sch.STD NPS 4 c/w hardware, Piping Specification CB11	ea	2	4	11.4	1,229.94	45.5	184.49	737.98	4,919.75	94.91	379.62	179.38	717.51	1,688.71	6,754.85	2.0	30.1	2,722.08	60.2	353.87	707.74	5,444.16	46.62	93.24	649.11	1,298.23	3,771.68	7,543.36
397	3444.057	Flange Slip-on 150RF NPS 4 c/w hardware, Piping Specification CB11	ea	2	0	11.4	1,229.94	0.0	184.49	0.00	0.00	94.91	0.00	179.38	0.00	1,688.71	0.00	0.0	2.0	181.61	0.0	23.61	0.00	0.00	20.84	0.00	46.87	0.00	272.92	0.00
398	3444.058	Olet BW Sch.STD NPS 4, Piping Specification CB11	ea	1	1	9.4	1,016.09	9.4	152.41	152.41	1,016.09	113.72	113.72	148.19	148.19	1,430.41	1,430.41	1.0	1.8	164.98	1.8	21.45	21.45	164.98	46.59	46.59	48.15	48.15	281.17	281.17
399	3444.059	Weld NPS 4, Piping Specification CB11	ea	6	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.0	4.7	429.13	394.0	55.79	4,630.32	35,617.86	28.29	2,347.91	106.51	8,840.06	619.71	51,436.15
400	3444.060	Ball valve NPS 4, Valve Specification VBA01	ea	1	1	11.0	1,187.40	11.0	178.11	178.11	1,187.40	2,524.38	2,524.38	173.18	173.18	4,063.07	4,063.07	1.0	6.2	561.47	6.2	72.99	72.99	561.47	1,555.05	1,555.05	445.03	445.03	2,634.55	2,634.55
401	3444.061	Pipe identification NPS 4	Linear meter	2	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.9	0.6	50.48	22.3	6.56	261.69	2,012.97	12.06	481.06	14.29	569.94	83.40	3,325.65
402	3444.062	Pipe NPS 4 Sch.DWV, Piping Specification PA01	m	112	113	1.7	186.01	194.0	27.90	3,147.51	20,983.39	52.18	5,885.77	27.13	3,060.29	293.22	33,076.96	115.7	0.5	47.34	60.6	6.15	712.07	5,477.43	28.98	3,352.73	16.96	1,962.28	99.44	11,504.50
403	3444.063	Elbow 90 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	16	16	5.3	574.21	84.9	86.13	1,378.10	9,187.32	54.59	873.44	83.74	1,339.91	798.67	12,778.77	16.0	0.3	28.85	5.1	3.75	60.01	461.65	17.43	278.81	10.29	164.62	60.32	965.09
404	3444.064	Elbow 45 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	2	2	5.3	574.21	10.6	86.13	172.26	1,148.42	51.72	103.43	83.74	167.49	795.80	1,591.60	2.0	0.2	16.64	0.4	2.16	4.33	33.27	16.99	33.98	7.33	14.66	43.12	86.24
405	3444.065	Elbow 22.5 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	6	6	5.3	574.21	31.9	86.13	516.79	3,445.25	57.46	344.78	83.74	502.47	801.55	4,809.28	6.0	0.2	13.86	0.9	1.80	10.81	83.18	24.81	148.85	8.25	49.51	48.72	292.35
406	3444.066	Concentric reducer Sch.DWV NPS 4, Piping Specification PA01	ea	2	0	11.6	1,254.75	0.0	188.21	0.00	0.00	134.88	0.00	183.00	0.00	1,760.84	0.00	1.0	0.2	16.64	0.2	2.16	2.16	16.64	12.42	12.42	6.42	6.42	37.64	37.64
407	3444.067	Tee wye SW Sch.DWV NPS 4, Piping Specification PA01	ea	1	1	7.9	850.68	7.9	127.60	127.60	850.68	82.04	82.04	124.07	124.07	1,184.39	1,184.39	1.0	0.6	49.91	0.6	6.49	6.49	49.91	25.16	25.16	16.80	16.80	98.35	98.35
408	3444.068	Coupling Sch.DWV NPS 4, Piping Specification PA01	ea	3	5	5.3	574.21	26.5	86.13	430.66	2,871.04	41.66	208.31	83.74	418.72	785.75	3,928.73	16.0	0.3	28.85	5.1	3.75	60.01	461.65	17.00	272.06	10.20	163.26	59.81	956.99
409	3444.069	Flexible coupling NPS 4, Fernco Series 1056	ea	2	0	0.5	57.42	0.0	8.61	0.00	0.00	13.58	0.00	8.37	0.00	87.99	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	10.51	0.00	9.92	0.00	58.02	0.00
410	3444.070	Pipe identification NPS 4	Linear meter	112	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
411	3444.071	Pipe NPS 6 Sch.STD, Piping Specification CB11	m	1	6	4.6	499.92	29.6	74.99	480.10	3,200.68	109.89	703.60	72.91	466.80	757.71	4,851.17	7.0	10.8	978.16	75.7	127.16	890.13	6,847.14	50.39	352.76	240.03	1,680.19	1,395.75	9,770.22
412	3444.072	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	3	5	14.0	1,513.50	70.0	227.02	1,135.12	7,567.49	129.41	647.06	220.73	1,103.67	2,090.67	10,453.34	5.0	43.6	3,939.70	217.9	512.16	2,560.81	19,698.50	79.22	396.11	941.84	4,709.18	5,472.92	27,364.60
413	3444.073	Flange Slip-on 150RF NPS 6 c/w hardware, Piping Specification CB11	ea	1	1	14.0	1,513.50	14.0	227.02	227.02	1,513.50	111.69	111.69	220.73	220.73	2,072.94	2,072.94	2.0	2.6	239.14	5.3	31.09	62.18	478.28	256.48	512.96	107.84	215.68	634.55	1,269.10
414	3444.074	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
415	3444.075	Cap NFPT Sch.STD NPS 6 , Piping Specification CB11	m	1	0	9.5	1,025.07	0.0	153.76	0.00	0.00	64.03	0.00	149.50	0.00	1,392.36	0.00	0.0	3.1	280.05	0.0	36.41	0.00	0.00	8.58	0.00	67.54	0.00	392.58	0.00
416	3444.076	Weld NPS 6, Piping Specification CB11	ea	3	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.0	0.00	0.0	0.00	0.00	0.00	466.32	3,730.52	93.88	751.04	560.20	4,481.56
417	3444.077	Butterfly valve NPS 6, Valve Specification VBU01	ea	1	1	16.1	1,736.80	16.1	260.52	260.52	1,736.80	507.82	507.82	253.30	253.30	2,758.44	2,758.44	1.0	7.5	676.53	7.5	87.95	87.95	676.53	501.92	501.92	260.04	260.04	1,526.43	1,526.43
418	3444.078	Check valve NPS 6, Valve Specification VCH02	ea	1	1	16.1	1,736.80	16.1	260.52	260.52	1,736.80	3,838.83	3,838.83	253.30	253.30	6,089.45	6,089.45	1.0	7.5	676.53	7.5	87.95	87.95	676.53	6,570.62	6,570.62	1,481.83	1,481.83	8,816.92	8,816.92
419	3444.079	Pipe identification NPS 6	Linear meter	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.5	48.56	1.3	6.31	14.96	115.07	12.06	28.59	13.84	32.80	80.77	191.42
420	3444.080	Pipe NPS 10 Sch.STD, Piping Specification CB11	m	5	26	7.1	767.31	181.7	115.10	2,947.60	19,650.66	238.20	6,100.15	111.91	2,865.92	1,232.51	31,564.33	26.0	3.0	270.92	77.9	35.22	915.72	7,043.99	105.76	2,749.71	84.96	2,209.03	496.86	12,918.44
421	3444.081	Flange Welding Neck 150RF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	12	18	22.9	2,481.14	412.9	372.17	6,699.09	44,660.59	246.14	4,430.60	361.86	6,513.45	3,461.32	62,303.72	21.0	11.2	1,015.79	236.0	132.05	2,773.11	21,331.62	173.99	3,653.69	273.75	5,748.82	1,595.58	33,507.24
422	3444.082	Flange Welding Neck 150FF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	3	3	22.9	2,481.14	68.8	372.17	1,116.51	7,443.43	246.14	738.43	361.86	1,085.57	3,461.32	10,383.95	0.0	2.9	263.40	0.0	34.24	0.00	0.00	91.95	0.00	80.42	0.00	470.01	0.00
423	3444.083	Olet BW Sch.STD NPS 10, Piping Specification CB11	ea	3	3	22.3	2,410.25	66.9	361.54	1,084.61	7,230.76	579.11	1,737.33	351.52	1,054.56	3,702.42	11,107.27	3.0	0.8	71.63	2.4	9.31	27.93	214.88	436.46	1,309.39	104.71	314.12	622.11	1,866.32
424	3444.084	Victaulic Coupling NPS 10, Style 77	ea	3	3	2.7	292.42	8.1	43.86	131.59	877.26	338.08	1,014.23	42.65	127.94	717.01	2,151.02	3.0	0.8	71.63	2.4	9.31	27.93	214.88	297.43	892.30	76.71	230.14	455.08	1,365.25
425	3444.085	Weld NPS 10, Piping Specification CB11	ea	15	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.0	4.6	411.97	164.1	53.56	1,928.04	14,831.08	472.64	17,014.92	191.69	6,900.98	1,129.86	40,675.02
426	3444.086	Butterfly valve NPS 10, Valve Specification VBU01	ea	3	3	26.6	2,874.58	79.7	431.19	1,293.56	8,623.75	1,534.30	4,602.89	419.24	1,257.72	5,259.30	15,777.91	9.0	10.6	955.04	95.1	124.15	1,117.39	8,595.32	1,110.31	9,992.82	447.98	4,031.84	2,637.49	23,737.37
427	3444.087	Check valve NPS 10, Valve Specification VCH02	ea	3	3	26.6	2,874.58	79.7	431.19	1,293.56	8,623.75	5,164.08	15,492.24	419.24	1,257.72	8,889.09	26,667.26	3.0	9.9	896.50	29.8	116.55	349.64	2,689.50	14,583.13	43,749.40	3,146.65	9,439.95	18,742.83	56,228.48
428	3444.088	Pipe identification NPS 10	Linear meter	5	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.5	49.49	4.7	6.43	55.69	428.37	12.06	104.42	14.06	121.69	82.05	710.17
429	3444.089	Olet BW Sch.STD NPS 12, Piping Specification CB11	ea	3	3	31.0	3,355.45	93.1	503.32	1,509.95	10,066.36	893.22	2,679.65	489.37	1,468.11	5,241.36	15,724.07	3.0	1.0	87.80	2.9	11.41	34.24	263.40	724.58	2,173.73	166.51	499.53	990.30	2,970.90
430	3444.090	Flange Welding Neck 150RF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	3	3	27.2	2,941.93	81.6	441.29	1,323.87	8,825.78	330.71	992.14	429.06	1,287.18	4,142.99	12,428.97	3.0	4.3	390.49	13.0	50.76	152.29	1,171.46	118.24	354.71	115.57	346.72	675.06	2,025.18
431	3444.091	Weld NPS 12, Piping Specification CB11	ea	2	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.00	0.0	0.00	0.00	0.00	1,521.66	9,129.96	306.35	1,838.09	1,828.01	10,968.05
432	3444.092	Pipe identification NPS 12	Linear meter	3	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
433	3444.093	Pipe NPS 24 Sch.STD, Piping Specification CB11	m	43	38	12.0	1,302.10	462.5	195.32	7,502.98	50,019.86	699.74	26,880.44	189.90	7,295.06	2,387.07	91,698.35	42.0	24.6	2,227.16	1,034.7	289.53	12,160.27	93,540.53	328.30	13,788.69	589.51	24,759.41	3,434.50	144,248.90
434	3444.094	Elbow 90 degrees BW Sch.STD NPS 24, Piping Specification SB11	ea	2	2	90.0	9,729.63	179.9	1,459.44	2,918.89	19,459.26	1,494.88	2,989.77	1,419.00	2,838.00	14,102.96	28,205.92	2.0	1.9	173.30	3.8	22.53	45.06	346.59	626.09	1,252.19	166.78	333.57	988.70	1,977.40
435	3444.095	Elbow 45 degrees BW Sch.STD NPS 24, Piping Specification SB11	ea	2	2	90.0	9,729.63	179.9	1,459.44	2,918.89	19,459.26	1,128.89	2,257.78	1,419.00	2,838.00	13,736.96	27,473.93	2.0	0.9	82.49	1.8	10.72	21.45	164.98	104.35	208.70	40.39	80.78	237.95	475.90
436	3444.096	Tee BW Sch.STD NPS 24, Piping Specification SB11	ea	1	1	132.4	14,316.20	132.4	2,147.43	2,147.43	14,316.20	2,307.08	2,307.08	2,087.92	2,087.92	20,858.63	20,858.63	1.0	3.8	346.59	3.8	45.06	45.06	346.59	986.90	986.90	280.14	280.14	1,658.68	1,658.68
437	3444.097	Victaulic Coupling NPS 24, Style 77	ea	1	2	4.5	485.34	9.0	72.80	145.60	970.69	1,176.15	2,352.31	70.78	141.57	1,805.08	3,610.17	2.0	1.9	173.30	3.8	22.53	45.06	346.59	1,060.51	2,121.01	254.23	508.47	1,510.56	3,021.13
438	3444.098	Victaulic Coupling NPS 24, Style W77	ea	1	0	4.5	485.34	0.0	72.80	0.00	0.00	1,176.15	0.00	70.78	0.00	1,805.08	0.00	0.0	2.2	198.25	0.0	25.77	0.00	0.00	1,060.50	0.00	260.11	0.00	1,544.63	0.00
439	3444.099	Weld NPS 24, Piping Specification CB11	ea	10	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.0	13.6	1,226.91	257.9	159.50	3,030.47	23,311.31	740.66	14,072.45	437.10	8,304.94	2,564.17	48,719.17
440	3444.100	Pipe identification NPS 24	Linear meter	43	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.1	0.6	50.28	7.9	6.54	92.27	709.80	12.06	170.30	14.25	201.11	83.13	1,173.49
B&M-0121	Added	6" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	5.5	592.92	35.1	88.94	569.42	3,796.15	101.83	651.93	86.47	553.64	870.16	5,571.15	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0122	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.9	209.27	12.4	31.39	200.97	1,339.82	34.79	222.73	30.52	195.40	305.97	1,958.92	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0123	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.2	127.89	7.6	19.18	122.82	818.78	18.50	118.43	18.65	119.41	184.22	1,179.44	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0124	Added	10" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea		3	34.5	3,732.35	103.5	559.85	1,679.56	11,197.05	627.03	1,881.10	544.34	1,633.01	5,463.57	16,390.72	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0125	Added	6" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea		1	20.6	2,229.48	20.6	334.42	334.42	2,229.48	188.97	188.97	325.16	325.16	3,078.03	3,078.03	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0126	Added	24" cap, CS, STD, ASTM A234 Gr WPB, smls - BW	ea		2	41.4	4,473.15	82.7	670.97	1,341.94	8,946.30	527.49	1,054.98	652.38	1,304.76	6,323.99	12,647.98	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0127	Added	24"x1" WOL, CS, STD, ASTM A234 Gr WPB	ea		1	2.6	283.56	2.6	42.53	42.53	283.56	30.66	30.66	41.36	41.36	398.11	398.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0128	Added	10"x2" SOL, FS, 3000#	ea		3	5.2	567.12	15.7	85.07	255.20	1,701.36	47.68	143.05	82.71	248.13	782.58	2,347.74	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0129	Added	10"x1" SOL, FS, 3000#	ea		6	2.6	283.56	15.7	42.53	255.20	1,701.36	20.29	121.72	41.36	248.13	387.73	2,326.41	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0130	Added	4" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter		6	3.4	372.03	22.0	55.80	357.28	2,381.90	118.53	758.91	54.26	347.38	600.63	3,845.48	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0131	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea		6	0.5	59.07	3.3	8.86	53.17	354.45	15.44	92.66	8.62	51.69	91.99	551.97	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0132	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea		3	0.5	59.07	1.6	8.86	26.58	177.22	25.99	77.96	8.62	25.85	102.54	307.61	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0133	Added	2" union, class 3000, SS ASTM A182 F304L - SW	ea		3	14.4	1,556.03	43.2	233.40	700.21	4,668.09	154.46	463.37	226.94	680.81	2,170.83	6,512.49	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0134	Added	4" flange, WN, SS, B16.5 RF, Sch 10S, ASTM A182 F304L - 150#	ea		1	15.8	1,708.44	15.8	256.27	256.27	1,708.44	172.30	172.30	249.17	249.17	2,386.18	2,386.18	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0135	Added	1" weld adapter, 304SS, Vic-Press - 561	ea		6	5.9	638.01	35.4	95.70	574.21	3,828.05	153.82	922.93	93.05	558.30	980.58	5,883.49	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0136	Added	1" male adapter, 304SS, Vic-Press - 596	ea		3	5.9	638.01	17.7	95.70	287.10	1,914.03	150.83	452.49	93.05	279.15	977.59	2,932.77	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0137	Added	1" union, 304SS, Vic-Press - 584	ea		6	5.9	638.01	35.4	95.70	574.21	3,828.05	580.55	3,483.32	93.05	558.30	1,407.31	8,443.87	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0138	Added	2" pipe, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - PE	Linear meter		34	1.3	139.51	43.3	20.93	701.81	4,678.73	33.24	1,114.86	20.35	682.36	214.03	7,177.76	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0139	Added	2" 45 elbow, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		16	1.8	191.40	28.3	28.71	459.37	3,062.44	17.96	287.32	27.91	446.64	265.99	4,255.76	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0140	Added	2" 90 elbow, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		17	1.8	191.40	30.1	28.71	488.08	3,253.84	18.68	317.48	27.91	474.55	266.70	4,533.95	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0141	Added	4" Adapter Hub x MIPT, PVC DWV	ea		5	5.3	574.21	26.5	86.13	430.66	2,871.04	64.65	323.23	83.74	418.72	808.73	4,043.64	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0142	Added	4"x1.5" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	5.3	574.21	5.3	86.13	86.13	574.21	56.90	56.90	83.74	83.74	800.99	800.99	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0143	Added	2"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		3	2.5	269.38	7.5	40.41	121.22	808.14	42.88	128.65	39.29	117.86	391.96	1,175.88	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0144	Added	3" Clean-Out Watts Model CO-203NH-R-1	ea		1	2.5	269.38	2.5	40.41	40.41	269.38	84.08	84.08	39.29	39.29	433.15	433.15	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0145	Added	2" Clean-Out Watts Model CO-203NH-R-1	ea		1	1.8	191.40	1.8	28.71	28.71	191.40	74.70	74.70	27.91	27.91	322.72	322.72	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0146	Added	1.5" Clean-Out Watts Model CO-203NH-R-1	ea		3	1.7	184.31	5.1	27.65	82.94	552.94	67.14	201.42	26.88	80.64	305.98	917.95	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0147	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		3	1.8	191.40	5.3	28.71	86.13	574.21	24.42	73.26	27.91	83.74	272.45	817.35	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0148	Added	4" 45 elbow, SS, SCH 10S, ASTM A403 WP304L - VICTAULIC 41155	ea		1	4.7	510.41	4.7	76.56	76.56	510.41	210.13	210.13	74.44	74.44	871.53	871.53	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0149	Added	4" 90 elbow, LR, Sch 10S, ASTM A403 WP304L - VICTAULIC 41055	ea		1	4.7	510.41	4.7	76.56	76.56	510.41	216.51	216.51	74.44	74.44	877.91	877.91	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0150	Added	4" flexible coupling, SS ASTM A-890 GROOVED - VICTAULIC 77DX	ea		2	0.5	58.48	1.1	8.77	17.55	116.97	983.88	1,967.77	8.53	17.06	1,059.67	2,119.34	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0151	Added	4" rigid coupling, Galv. DI, ASTM A536 - Victaulic 89	ea		2	0.5	58.48	1.1	8.77	17.55	116.97	145.16	290.31	8.53	17.06	220.94	441.89	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0152	Added	6" quick connect, camlock type A, SS316, FNPT c/w dust cap type DC, SS316 /w brass chain & hooks	ea		1	16.1	1,736.80	16.1	260.52	260.52	1,736.80	450.36	450.36	253.30	253.30	2,700.98	2,700.98	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0153	Added	2" ball valve, SS, full port, 3pc - SW - Velan VTP-2000 or equal VBA11	ea		3	14.7	1,587.93	44.0	238.19	714.57	4,763.80	406.63	1,219.88	231.59	694.77	2,464.34	7,393.01	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WDS (Dewatering)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
441	3445.010	Dewatering pump 3445-P-5000 to 5002	ea	3	3	229.4	24,811.44	688.2	3,721.72	11,165.15	74,434.32	208,544.30	625,632.91	3,618.58	10,855.75	240,696.04	722,088.12	3.0	189.5	17,130.08	568.4	2,226.91	6,680.73	51,390.24	178,108.27	534,324.80	39,883.61	119,650.83	237,348.87	712,046.60
442	3445.020	Submerisble pump 3445-P-0001	ea	1	1	124.5	13,469.07	124.5	2,020.36	2,020.36	13,469.07	40,418.20	40,418.20	1,964.37	1,964.37	57,872.00	57,872.00	1.0	71.7	6,483.91	71.7	842.91	842.91	6,483.91	37,164.70	37,164.70	9,006.03	9,006.03	53,497.55	53,497.55
443	3445.030	Air vent 3445-AV-0001 / 1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 / 5000 to 5002	ea	12	12	8.7	945.20	104.9	141.78	1,701.36	11,342.37	5,575.02	66,900.20	137.85	1,654.21	6,799.84	81,598.14	12.0	7.3	659.90	87.6	85.79	1,029.44	7,918.77	3,330.12	39,961.39	825.52	9,906.29	4,901.32	58,815.89
444	3445.040	Air vent 3445-AV-0002 to 0004	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	10,979.98	32,939.95	137.85	413.55	12,204.81	36,614.44	3.0	7.3	659.90	21.9	85.79	257.36	1,979.70	6,560.13	19,680.40	1,475.81	4,427.42	8,781.63	26,344.88
445	3445.050	Pressure indicator 3445-PI-0001 to 0004 / 1000 / 2000 / 3000 / 4000	ea	8	8	24.0	2,599.29	192.3	389.89	3,119.15	20,794.35	787.45	6,299.60	379.09	3,032.72	4,155.73	33,245.82	8.0	3.7	329.95	29.2	42.89	343.15	2,639.59	84.95	679.56	94.64	757.16	552.43	4,419.46
446	3445.060	Differential pressure indicator 3445-PDI-0001	ea	1	1	24.0	2,599.29	24.0	389.89	389.89	2,599.29	3,092.60	3,092.60	379.09	379.09	6,460.88	6,460.88	1.0	14.6	1,319.80	14.6	171.57	171.57	1,319.80	2,997.04	2,997.04	913.57	913.57	5,401.98	5,401.98
447	3445.070	Pressure switch 3445-PSLH-0001 / 0002	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	927.46	1,854.93	137.85	275.70	2,152.29	4,304.59	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	890.15	1,780.30	334.30	668.59	1,970.13	3,940.27
448	3445.080	Level switch 3445-LSLL-0001 / 3445-LSHH-0001	ea	2	4	45.9	4,962.29	183.5	744.34	2,977.37	19,849.15	983.67	3,934.69	723.72	2,894.87	7,414.02	29,656.08	2.0	16.6	1,497.25	33.1	194.64	389.28	2,994.49	695.38	1,390.76	491.87	983.75	2,879.14	5,758.29
449	3445.090	Level tarnsmitter 3445-LT-0001	ea	1	2	45.9	4,962.29	91.8	744.34	1,488.69	9,924.58	18,342.14	36,684.29	723.72	1,447.43	24,772.49	49,544.98	1.0	24.6	2,227.85	24.6	289.62	289.62	2,227.85	5,652.55	5,652.55	1,661.60	1,661.60	9,831.62	9,831.62
450	3445.100	Current transmitter 3445-IT-5000 to 5002	ea	3	3	45.9	4,962.29	137.6	744.34	2,233.03	14,886.86	379.15	1,137.46	723.72	2,171.15	6,809.50	20,428.50	3.0	6.4	576.26	19.1	74.91	224.74	1,728.77	128.19	384.57	161.24	483.71	940.60	2,821.79
451	3445.110	Control Panel 3445-CP-5000	ea	1	1	104.9	11,342.37	104.9	1,701.36	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	64,323.65	64,323.65	13,344.56	13,344.56	79,565.31	79,565.31
452	3445.120	Monorail hoist 3445-HO-0001	ea	1	1	139.8	15,123.16	139.8	2,268.47	2,268.47	15,123.16	8,790.13	8,790.13	2,205.61	2,205.61	28,387.38	28,387.38	1.0	191.6	17,322.32	191.6	2,251.90	2,251.90	17,322.32	9,600.59	9,600.59	6,003.85	6,003.85	35,178.66	35,178.66
453	3445.130	Pipe NPS 1/2 Sch.10S, Piping Specification SB11	m	9	6	1.0	104.63	6.2	15.70	100.49	669.91	18.88	120.87	15.26	97.70	154.47	988.96	14.0	0.7	61.30	9.5	7.97	111.56	858.14	162.04	2,268.62	47.03	658.41	278.34	3,896.73
454	3445.140	Elbow 90 degrees SW Class 3000 NPS 1/2, Piping Specification CB11	ea	1	0	6.4	687.63	0.0	103.14	0.00	0.00	40.93	0.00	100.29	0.00	931.99	0.00	5.0	0.5	49.63	2.7	6.45	32.26	248.15	46.04	230.20	20.93	104.66	123.05	615.27
455	3445.150	Ball valve NPS 1/2, Valve Specification VBA11	ea	1	2	3.7	400.53	7.4	60.08	120.16	801.06	107.23	214.46	58.41	116.83	626.25	1,252.50	2.0	3.2	289.06	6.4	37.58	75.15	578.11	91.26	182.52	86.31	172.61	504.20	1,008.40
456	3445.160	Ball valve NPS 1/2, Valve Specification VBA14	ea	1	0	1.1	119.31	0.0	17.90	0.00	0.00	293.55	0.00	17.40	0.00	448.15	0.00	11.0	3.2	287.98	35.0	37.44	411.81	3,167.79	107.60	1,183.63	89.34	982.77	522.36	5,746.00
457	3445.170	Pipe identification NPS 1/2	Linear meter	9	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.6	52.00	2.2	6.76	25.77	198.25	12.06	45.99	14.65	55.86	85.48	325.87
458	3445.180	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	9	6	1.1	116.26	6.9	17.44	111.65	744.34	22.98	147.10	16.96	108.56	173.63	1,111.65	9.7	1.8	160.09	17.2	20.81	201.67	1,551.32	7.62	73.87	39.16	379.45	227.68	2,206.31
459	3445.190	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	6	5.6	602.56	33.4	90.38	542.31	3,615.38	117.55	705.28	87.88	527.28	898.37	5,390.24	3.0	0.6	54.99	1.8	7.15	21.45	164.98	5.37	16.11	14.01	42.02	81.52	244.56
460	3445.200	Weld NPS 3/4, Piping Specification SB11	ea	18	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.0	1.1	98.99	29.6	12.87	347.47	2,672.86	138.75	3,746.21	50.95	1,375.65	301.56	8,142.19
461	3445.210	Pipe identification NPS 3/4	Linear meter	9	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.6	50.04	1.8	6.50	21.45	164.98	12.07	39.78	14.19	46.79	82.80	273.00
462	3445.220	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	11	51	1.4	151.14	71.6	22.67	1,161.18	7,741.17	36.44	1,866.23	22.04	1,129.00	232.29	11,897.57	35.0	1.9	168.74	65.3	21.94	767.75	5,905.80	14.43	505.22	42.56	1,489.66	247.67	8,668.44
463	3445.230	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	6	0	3.9	425.34	0.0	63.80	0.00	0.00	43.11	0.00	62.03	0.00	594.28	0.00	6.0	0.4	38.59	2.6	5.02	30.10	231.52	4.71	28.24	10.02	60.09	58.32	349.95
464	3445.240	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	17	22	5.9	638.01	129.8	95.70	2,105.43	14,036.19	125.39	2,758.66	93.05	2,047.08	952.15	20,947.36	23.0	0.6	53.83	13.7	7.00	160.94	1,238.00	8.08	185.79	14.28	328.36	83.18	1,913.09
465	3445.250	Lateral SW Class 3000 NPS 2, Piping Specification SB11	ea	2	0	11.1	1,205.13	0.0	180.77	0.00	0.00	268.91	0.00	175.76	0.00	1,830.56	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
466	3445.260	Concentric Reducer SW Class 3000 NPS 1 x 1/2, Piping Specification SB11	ea	2	0	8.5	921.57	0.0	138.24	0.00	0.00	448.22	0.00	134.40	0.00	1,642.43	0.00	29.0	0.6	54.07	17.3	7.03	203.83	1,567.96	221.52	6,424.17	57.30	1,661.84	339.92	9,857.81
467	3445.270	Weld NPS 1, Piping Specification SB11	ea	50	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	119.0	0.4	39.78	52.4	5.17	615.47	4,734.36	180.29	21,454.20	45.48	5,411.76	270.72	32,215.78
468	3445.280	Ball valve NPS 1, Valve Specification VBA11	ea	14	16	7.3	793.97	117.5	119.09	1,905.52	12,703.46	202.60	3,241.53	115.79	1,852.71	1,231.45	19,703.21	17.0	3.2	287.22	54.0	37.34	634.75	4,882.68	127.76	2,171.96	93.22	1,584.76	545.54	9,274.15
469	3445.290	Pipe identification NPS 1	Linear meter	11	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.7	0.6	50.59	16.6	6.58	195.18	1,501.40	12.06	358.00	14.32	424.92	83.56	2,479.50

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

						Bidder 2 FIXED PRICE TARGET COST OF LABOUR											
						LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
470	3445.300	Pipe NPS 1 Sch.40, Piping Specification PA02	m	28	15	1.1	116.26	16.4	17.44	265.84	1,772.25	11.29	172.12	16.96	258.47	161.95	2,468.68
471	3445.310	Elbow 90 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	23	10	1.2	134.69	12.5	20.20	202.04	1,346.91	9.52	95.19	19.64	196.44	184.06	1,840.57
472	3445.320	Pipe identification NPS 2	ls	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
473	3445.330	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	3	13	2.3	244.14	28.9	36.62	468.94	3,126.24	56.82	727.62	35.61	455.94	373.20	4,778.74
474	3445.340	Pipe NPS 2 Sch.40S, Piping Specification SB11	m	10	0	2.3	244.14	0.0	36.62	0.00	0.00	56.83	0.00	35.61	0.00	373.21	0.00
475	3445.350	Elbow 90 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	3	0	8.5	921.57	0.0	138.24	0.00	0.00	171.71	0.00	134.40	0.00	1,365.92	0.00
476	3445.360	Elbow 90 degrees BW Sch.40S NPS 2, Piping Specification SB11	ea	8	11	8.5	921.57	93.7	138.24	1,520.59	10,137.24	171.71	1,888.86	134.40	1,478.45	1,365.92	15,025.14
477	3445.370	Elbow 45 degrees BW Sch.40S NPS 2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	172.91	691.65	134.40	537.62	1,367.12	5,468.47
478	3445.380	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	3	0	7.6	827.05	0.0	124.06	0.00	0.00	98.20	0.00	120.62	0.00	1,169.92	0.00
479	3445.390	Flange Welding Neck 150RF Sch.10S NPS 2 c/w hardware, Piping Specification SB11	ea	4	4	8.8	952.29	35.2	142.84	571.37	3,809.15	492.03	1,968.12	138.88	555.54	1,726.04	6,904.18
480	3445.400	Reducing tee BW Sch.10S NPS 2 x 2 x 1, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	266.81	1,067.25	175.76	703.04	1,828.47	7,313.87
481	3445.410	Concentric Reducer BW Sch.10S NPS 2 x 1, Piping Specification SB11	ea	1	1	8.5	921.57	8.5	138.24	138.24	921.57	183.09	183.09	134.40	134.40	1,377.29	1,377.29
482	3445.420	Weld NPS 2, Piping Specification SB11	ea	34	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
483	3445.430	Ball valve NPS 2, Valve Specification VBA11	ea	8	8	14.7	1,587.93	117.5	238.19	1,905.52	12,703.46	406.63	3,253.02	231.59	1,852.71	2,464.34	19,714.71
484	3445.440	Pipe identification NPS 2	Linear meter	13	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
485	3445.450	Pipe NPS 2 Sch.40, Piping Specification PA02	m	6	9	1.5	162.76	13.8	24.41	223.30	1,488.69	18.21	166.56	23.74	217.11	229.13	2,095.67
486	3445.460	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	6	6	1.8	191.40	10.6	28.71	172.26	1,148.42	14.22	85.34	27.91	167.49	262.25	1,573.50
487	3445.470	Pipe identification NPS 2	Linear meter	6	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
488	3445.480	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33
489	3445.490	Elbow 45 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	20.6	2,229.48	20.6	334.42	334.42	2,229.48	143.19	143.19	325.16	325.16	3,032.25	3,032.25
490	3445.500	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	1	1	14.0	1,513.50	14.0	227.02	227.02	1,513.50	129.41	129.41	220.73	220.73	2,090.67	2,090.67
491	3445.510	Weld NPS 6, Piping Specification CB11	ea	2	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
492	3445.520	Ball valve NPS 6, Valve Specification VBA01	ea	1	1	16.1	1,736.80	16.1	260.52	260.52	1,736.80	4,727.96	4,727.96	253.30	253.30	6,978.58	6,978.58
493	3445.530	Pipe painting NPS 6	Linear meter	1	0	0.9	89.04	0.0	13.36	0.00	0.00	3.54	0.00	0.00	0.00	105.93	0.00
494	3445.540	Pipe identification NPS 6	Linear meter	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
495	3445.550	Pipe NPS 8 Sch.STD, Piping Specification CB11	m	9	13	5.7	616.17	73.0	92.43	1,183.51	7,890.04	164.30	2,103.78	89.86	1,150.71	962.76	12,328.04
496	3445.560	Elbow 90 degrees BW Sch.STD NPS 8, Piping Specification CB11	ea	4	4	26.6	2,878.13	106.4	431.72	1,726.88	11,512.51	225.19	900.76	419.76	1,679.02	3,954.79	15,819.17
497	3445.570	Elbow 45 degrees BW Sch.STD NPS 8, Piping Specification CB11	ea	4	4	26.6	2,878.13	106.4	431.72	1,726.88	11,512.51	199.55	798.20	419.76	1,679.02	3,929.15	15,716.61
498	3445.580	Flange Welding Neck 150RF Sch.STD NPS 8 c/w hardware, Piping Specification CB11	ea	4	4	17.4	1,882.12	69.6	282.32	1,129.27	7,528.50	176.78	707.11	274.50	1,097.98	2,615.72	10,462.86
499	3445.590	Concentric Reducer BW Sch.STD NPS 8 x 6, Piping Specification CSB11	ea	4	0	34.1	3,686.27	0.0	552.94	0.00	0.00	1,792.89	0.00	537.62	0.00	6,569.71	0.00
500	3445.600	Weld NPS 8, Piping Specification CB11	ea	20	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
501	3445.610	Butterfly valve NPS 8, Valve Specification VBu01	ea	4	4	19.5	2,105.43	77.9	315.81	1,263.26	8,421.71	996.89	3,987.55	307.06	1,228.25	3,725.19	14,900.77
502	3445.620	Pipe painting NPS 8	Linear meter	9	0	1.0	90.45	0.0	13.57	0.00	0.00	4.71	0.00	0.00	0.00	108.74	0.00
503	3445.630	Pipe identification NPS 8	Linear meter	9	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
504	3445.640	Pipe NPS 12 Sch.STD, Piping Specification CB11	m	5	26	8.3	895.20	212.0	134.28	3,438.87	22,925.77	287.32	7,358.16	130.56	3,343.57	1,447.35	37,066.36
505	3445.650	Flange Welding Neck 150RF Sch.STD NPS 12 c/w hardware, Piping Specification CB11	ea	9	12	27.2	2,941.93	326.4	441.29	5,295.47	35,303.13	330.71	3,968.56	429.06	5,148.73	4,142.99	49,715.89
506	3445.660	Flange Welding Neck 150FF Sch.STD NPS 12 c/w hardware, Piping Specification CB11	ea	3	3	27.2	2,941.93	81.6	441.29	1,323.87	8,825.78	370.04	1,110.13	429.06	1,287.18	4,182.32	12,546.96
507	3445.670	Weld NPS 12, Piping Specification CB11	ea	12	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
508	3445.680	Victaulic Coupling NPS 12, Style 77	ea	3	3	18.5	1,995.55	55.4	299.33	898.00	5,986.65	527.92	1,583.77	291.04	873.11	3,113.84	9,341.52
509	3445.690	Butterfly valve NPS 12, Valve Specification VBU01	ea	3	3	31.6	3,413.35	94.7	512.00	1,536.01	10,240.04	1,903.03	5,709.10	497.81	1,493.44	6,326.19	18,978.58
510	3445.700	Check valve NPS 12, Valve Specification VCH02	ea	3	3	31.6	3,413.35	94.7	512.00	1,536.01	10,240.04	8,197.34	24,592.01	497.81	1,493.44	12,620.50	37,861.49
511	3445.710	Pipe painting NPS 12	Linear meter	5	0	1.4	135.68	0.0	20.35	0.00	0.00	7.07	0.00	0.00	0.00	163.10	0.00
512	3445.720	Pipe identification NPS 12	Linear meter	5	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
513	3445.730	Pipe NPS 16 Sch.STD, Piping Specification CB11	m	9	13	9.5	1,023.08	121.1	153.46	1,965.07	13,100.44	506.05	6,479.92	149.21	1,910.61	1,831.80	23,456.04
514	3445.740	Elbow 90 degrees Long RadiusSch.STD NPS 16, Piping Specification SB11	ea	3	3	59.1	6,387.17	177.2	958.08	2,874.23	19,161.52	730.52	2,191.56	931.53	2,794.58	9,007.30	27,021.89
515	3445.750	Flange Welding Neck 150RF Sch.STD NPS 16 c/w hardware, Piping Specification CB11	ea	3	3	37.5	4,054.90	112.5	608.23	1,824.70	12,164.69	570.37	1,711.10	591.38	1,774.14	5,824.88	17,474.64
516	3445.760	Victaulic Coupling NPS 16, Style 231	ea	3	3	26.0	2,814.33	78.1	422.15	1,266.45	8,442.98	6,682.12	20,046.36	410.45	1,231.35	10,329.05	30,987.14
517	3445.770	Weld NPS 16, Piping Specification CB11	ea	12	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
518	3445.780	Pipe painting NPS 16	Linear meter	9	0	1.9	180.91	0.0	27.14	0.00	0.00	9.43	0.00	0.00	0.00	217.47	0.00
519	3445.790	Pipe identification NPS 16	Linear meter	9	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
520	3445.800	Pipe NPS 20 Sch.STD, Piping Specification CB11	m	1	6	10.7	1,162.59	68.8	174.39	1,116.51	7,443.43	555.78	3,558.37	169.56	1,085.57	2,062.32	13,203.89
521	3445.810	Flange Welding Neck 150RF Sch.STD NPS 20 c/w hardware, Piping Specification CB11	ea	2	7	49.8	5,391.17	348.9	808.68	5,660.73	37,738.20	790.66	5,534.59	786.27	5,503.86	7,776.77	54,437.38
522	3445.820	Weld NPS 20, Piping Specification CB11	ea	2	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
523	3445.830	Check valve NPS 20, Valve Specification VCH01	ea	1	1	54.6	5,908.67	54.6	886.30	886.30	5,908.67	16,570.52	16,570.52	861.74	861.74	24,227.22	24,227.22
524	3445.840	Pipe painting NPS 20	Linear meter	1	0	2.0	189.95	0.0	28.49	0.00	0.00	11.79	0.00	0.00	0.00	230.23	0.00
525	3445.850	Pipe identification NPS 20	Linear meter	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
526	3445.860	Pipe NPS 24 Sch.STD, Piping Specification CB11	m	3	6	12.0	1,302.10	77.1	195.32	1,250.50	8,336.64	699.74	4,480.07	189.90	1,215.84	2,387.07	15,283.06
527	3445.870	Tee Sch.STD NPS 24, Piping Specification CB11	ea	1	1	132.4	14,316.20	132.4	2,147.43	2,147.43	14,316.20	2,307.08	2,307.08	2,087.92	2,087.92	20,858.63	20,858.63
528	3445.880	Reducing tee Sch.STD NPS 24 x 16, Piping Specification CB11	ea	3	3	132.4	14,316.20	397.1	2,147.43	6,442.29	42,948.60	3,658.15	10,974.44	2,087.92	6,263.77	22,209.70	66,629.09
529	3445.890	Cap BW Sch.STD NPS 24, Piping Specification CB11	ea	1	0	57.1	6,174.50	0.0	926.18	0.00	0.00	451.99	0.00	900.51	0.00	8,453.18	0.00
530	3445.900	Concentric Reducer BW Sch.STD NPS 24 x 20, Piping Specification CB11	ea	1	1	90.0	9,729.63	90.0	1,459.44	1,459.44	9,729.63	1,075.27	1,075.27	1,419.00	1,419.00	13,683.34	13,683.34
531	3445.910	Eccentric Reducer BW Sch.STD NPS 24 x 20, Piping Specification CB11	ea	1	2	90.0	9,729.63	179.9	1,459.44	2,918.89	19,459.26	1,229.68	2,459.36	1,419.00	2,838.00	13,837.76	27,675.51
532	3445.920	Weld NPS 24, Piping Specification CB11	ea	10	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
533	3445.930	Pipe painting NPS 24	Linear meter	3	0	2.0	189.95	0.0	28.49	0.00	0.00	14.14	0.00	0.00	0.00	232.59	0.00
534	3445.940	Pipe identification NPS 24	Linear meter	3	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0154	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.9	209.27	12.4	31.39	200.97	1,339.82	34.79	222.73	30.52	195.40	305.97	1,958.92
B&M-0155	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.2	127.89	7.6	19.16	122.82	818.78	18.50	118.43	18.65	119.41	184.22	1,179.44
B&M-0156	Added	12" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea		3	42.5	4,597.21	127.5	689.58	2,068.74	13,791.62	457.02	1,371.05	670.47	2,011.41	6,414.28	19,242.83
B&M-0157	Added	12" flange, SO, CS, B16.5 RF, STD bore, ASTM A105N - 150#	ea		3	27.2	2,941.93	81.6	441.29	1,323.87	8,825.78	370.04	1,110.13	429.06	1,287.18	4,182.32	12,546.96
B&M-0158	Added	12"x2" SOL, FS, 3000#	ea		3	5.2	567.12	15.7	85.07	255.20	1,701.36	47.68	143.05	82.71	248.13	782.58	2,347.74
B&M-0159	Added	12"x1" SOL, FS, 3000#	ea		6	2.6	283.56	15.7	42.53	255.20	1,701.36	20.29	121.72	41.36	248.13	387.73	2,326.41
B&M-0160	Added	2" male adapter, 304SS, Vic-Press - 596	ea		9	8.5	921.57	76.7	138.24	1,244.12	8,294.11	207.92	1,871.31	134.40	1,209.64	1,402.13	12,619.18
B&M-0161	Added	1" male adapter, 304SS, Vic-Press - 596	ea		36	5.9	638.01	212.4	95.70	3,445.25	22,968.30	150.83	5,429.87	93.05	3,349.77	977.59	35,193.20
B&M-0162	Added	1/2" 90 elbow, 304SS, Vic-Press - 590	ea		4	4.3	460.78	17.0	69.12	276.47	1,843.14	106.51	426.02	67.20	268.81	703.61	2,814.44
B&M-0163	Added	1"x1/2" reducer, 304SS, Vic-Press - 582	ea		1	5.9	638.01	5.9	95.70	95.70	638.01	175.07	175.07	93.05	93.05	1,001.83	1,001.83
B&M-0164	Added	2" union, 304SS, Vic-Press - 584	ea		3	8.5	921.57	25.6	138.24	414.71	2,764.70	1,191.56	3,574.67	134.40	403.21	2,385.77	7,157.30
B&M-0165	Added	1" union, 304SS, Vic-Press - 584	ea		19	5.9	638.01	112.1	95.70	1,818.32	12,122.16	580.55	11,030.50	93.05	1,767.94	1,407.31	26,738.92
B&M-0166	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		3	1.8	191.40	5.3	28.71	86.13	574.21	24.42	73.26	27.91	83.74	272.45	817.35
B&M-0167	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		5	1.2	134.69	6.2	20.20	101.02	673.45	13.25	66.27	19.64	98.22	187.79	938.96
B&M-0168	Added	8" QUICK COUPLING RITE 8in MALE ADAPTOR x FEMALE TREAD PART A No 800A-A ALUM.	ea		4	12.8	1,385.90	51.3	207.88	831.54	5,543.58	503.74	2,014.96	202.12	808.49	2,299.65	9,198.58
B&M-0169	Added	20" flexible coupling, Galv. DI, ASTM A536 - Victaulic 77	ea		2	33.0	3,565.76	65.9	534.86	1,069.73	7,131.52	1,289.71	2,579.43	520.04	1,040.08	5,910.38	11,820.76
B&M-0170	Added	20" 90 elbow, SR, Galv. DI, ASTM A536 GR 65 Max Rating 250# - Victaulic W10	ea		1	32.4	3,505.50	32.4	525.83	525.83	3,505.50	2,583.81	2,583.81	511.25	511.25	7,126.39	7,126.39
B&M-0171	Added	20" BUTTERFLY VALVE LUG BRAY SERIES 31 c/w GEAR OPERATOR VBU01	ea		2	57.8	6,256.03	115.7	938.40	1,876.81	12,512.05	3,201.52	6,403.04	912.40	1,824.80	11,308.35	22,616.70
B&M-0172	Added	20" SS INLET STRAINER, OPENINGS 12mm (SEE DETAIL PD13)	ea		1	54.6	5,908.67	54.6	886.30	886.30	5,908.67	5,337.87	5,337.87	861.74	861.74	12,994.57	12,994.57
B&M-0173	Added	1" Y-strainer	ea		1	3.0	322.55	3.0	48.38	48.38	322.55	302.79	302.79	47.04	47.04	720.76	720.76
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		OLS (Lubricating/Hydraulic Oil)						0.0	$0.00				$0.00		$0.00		
535	3446.010	Oil storage tank 3446-TK-6000 / 6001	ea	2	2	159.5	17,249.86	319.0	2,587.48	5,174.96	34,499.71	77,799.38	155,598.77	2,515.78	5,031.55	100,152.50	200,304.99
536	3446.020	Level transmitter 3446-LT-6000 / 6001	ea	2	2	52.4	5,671.19	104.9	850.68	1,701.36	11,342.37	25,375.71	50,751.42	827.10	1,654.21	32,724.68	65,449.36
537	3446.030	Mobile pumping-filtering unit 3446-OMP-5000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	85,763.59	85,763.59	1,102.81	1,102.81	95,562.21	95,562.21
538	3446.040	Pipe NPS 1/2 Sch.XS, Piping Specification CB11	m	1	6	0.9	93.01	5.5	13.95	89.32	595.47	10.78	68.99	13.56	86.85	131.30	840.64
539	3446.050	Olet SW Class 3000 NPS 1/2, Piping Specification CB11	ea	2	2	1.5	165.41	3.1	24.81	49.62	330.82	17.64	35.28	24.12	48.25	231.99	463.97
540	3446.060	Weld NPS 1/2, Piping Specification CB11	ea	6	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
541	3446.070	Ball valve NPS 1/2, Valve Specification VBA02	ea	2	2	8.4	910.93	16.8	136.64	273.28	1,821.87	134.05	268.10	132.85	265.71	1,314.48	2,628.95
542	3446.080	Pipe painting NPS 1/2	Linear meter	1	0	0.5	47.49	0.0	7.12	0.00	0.00	0.29	0.00	0.00	0.00	54.91	0.00
543	3446.090	Pipe identification NPS 1/2	Linear meter	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
544	3446.100	Pipe NPS 2 Sch.STD, Piping Specification CB11	m	975	1,261	1.7	186.01	2169.3	27.90	35,192.54	234,616.96	26.26	33,126.18	27.13	34,217.31	267.31	337,153.00
545	3446.110	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification CB11	ea	193	219	7.3	793.97	1607.7	119.09	26,081.78	173,878.56	64.49	14,122.32	115.79	25,359.02	1,093.34	239,441.69
546	3446.120	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification CB11	ea	10	35	7.3	793.97	256.9	119.09	4,168.32	27,788.81	68.21	2,387.20	115.79	4,052.81	1,097.06	38,397.15
547	3446.130	Elbow 45 degrees BW Sch.STD NPS 2, Piping Specification CB11	ea	23	0	12.7	1,375.26	0.0	206.29	0.00	0.00	81.86	0.00	200.57	0.00	1,863.98	0.00
548	3446.140	Tee SW Class 3000 NPS 2, Piping Specification CB11	ea	21	29	10.9	1,176.77	315.5	176.52	5,118.95	34,126.36	92.79	2,690.83	171.62	4,977.10	1,617.70	46,913.25

		Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
			LABOUR COMPONENT						NON LABOUR COMPONENT					
			0.13											
No	Subcode	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
470	3445.300	63.0	3.2	285.70	199.1	37.14	2,339.85	17,998.85	4.32	271.87	68.01	4,284.73	395.16	24,895.30
471	3445.310	40.0	0.3	29.29	13.0	3.81	152.29	1,171.46	2.23	89.28	7.33	293.29	42.66	1,706.32
472	3445.320	9.1	0.6	50.91	5.1	6.62	60.01	461.65	12.06	109.39	14.39	130.52	83.99	761.58
473	3445.330	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.99	0.00	17.45	0.00	101.63	0.00
474	3445.340	10.0	4.1	369.60	40.9	48.05	480.48	3,695.98	30.44	304.36	92.99	929.89	541.07	5,410.70
475	3445.350	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.35	0.00	17.31	0.00	100.85	0.00
476	3445.360	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.35	0.00	17.31	0.00	100.85	0.00
477	3445.370	4.0	0.3	28.77	1.3	3.74	14.96	115.07	5.29	21.18	7.83	31.31	45.63	182.51
478	3445.380	3.0	0.4	38.36	1.3	4.99	14.96	115.07	8.67	26.01	10.76	32.28	62.77	188.31
479	3445.390	8.0	2.7	243.30	21.5	31.63	253.04	1,946.43	12.23	97.82	59.64	477.14	346.80	2,774.43
480	3445.400	6.0	1.2	107.21	7.1	13.94	83.62	643.26	23.14	138.85	29.86	179.14	174.15	1,044.88
481	3445.410	1.0	0.6	49.91	0.6	6.49	6.49	49.91	9.64	9.64	13.67	13.67	79.71	79.71
482	3445.420	103.0	1.5	139.51	158.9	18.14	1,868.02	14,369.41	230.37	23,727.75	79.08	8,145.07	467.09	48,110.25
483	3445.430	8.0	4.8	430.98	38.1	56.03	448.22	3,447.83	310.28	2,482.23	163.75	1,310.03	961.04	7,688.31
484	3445.440	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
485	3445.450	16.0	6.3	568.14	100.6	73.86	1,181.73	9,090.23	10.12	161.94	135.56	2,168.94	787.68	12,602.85
486	3445.460	9.0	0.3	29.27	2.9	3.80	34.24	263.40	9.47	85.24	8.78	79.06	51.33	461.94
487	3445.470	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
488	3445.480	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
489	3445.490	1.0	1.3	115.07	1.3	14.96	14.96	115.07	19.37	19.37	30.95	30.95	180.34	180.34
490	3445.500	1.0	68.4	6,187.23	68.4	804.34	804.34	6,187.23	293.15	293.15	1,513.11	1,513.11	8,797.83	8,797.83
491	3445.510	3.0	0.0	0.00	0.0	0.00	0.00	0.00	719.93	2,159.78	144.94	434.82	864.87	2,594.60
492	3445.520	1.0	7.5	676.53	7.5	87.95	87.95	676.53	2,867.35	2,867.35	736.27	736.27	4,368.10	4,368.10
493	3445.530	6.0	0.0	0.00	0.0	0.00	0.00	0.00	37.48	224.82	7.54	45.26	45.02	270.07
494	3445.540	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
495	3445.550	13.0	18.9	1,709.36	245.8	222.22	2,888.81	22,221.64	98.22	1,276.82	421.50	5,479.46	2,451.29	31,866.73
496	3445.560	4.0	0.6	57.88	2.6	7.52	30.10	231.52	51.49	205.98	23.97	95.88	140.87	563.48
497	3445.570	4.0	0.3	28.77	1.3	3.74	14.96	115.07	40.46	161.84	14.91	59.63	87.87	351.50
498	3445.580	8.0	21.7	1,965.31	173.9	255.49	2,043.92	15,722.49	342.97	2,743.74	530.92	4,247.40	3,094.69	24,757.55
499	3445.590	0.0	0.4	33.27	0.0	4.33	0.00	0.00	23.53	0.00	12.56	0.00	73.69	0.00
500	3445.600	24.0	3.8	346.47	92.0	45.04	1,080.99	8,315.27	310.88	7,461.05	144.01	3,456.32	846.40	20,313.62
501	3445.610	4.0	7.9	717.78	31.8	93.31	373.24	2,871.11	775.70	3,102.79	324.86	1,299.43	1,911.64	7,646.57
502	3445.620	11.2	0.0	0.00	0.0	0.00	0.00	0.00	130.44	1,461.56	26.26	294.25	156.71	1,755.81
503	3445.630	3.8	0.6	52.00	2.2	6.76	25.77	198.25	12.06	45.99	14.65	55.86	85.48	325.87
504	3445.640	26.0	3.3	301.42	86.7	39.18	1,018.81	7,836.99	129.52	3,367.62	96.91	2,519.79	567.05	14,743.21
505	3445.650	15.0	5.9	530.14	88.0	68.92	1,033.77	7,952.04	171.37	2,570.51	159.09	2,386.37	929.51	13,942.68
506	3445.660	3.0	39.4	3,563.36	118.3	463.24	1,389.71	10,690.07	883.78	2,651.35	1,015.36	3,046.09	5,925.74	17,777.22
507	3445.670	30.0	6.6	592.80	196.7	77.06	2,311.92	17,783.97	345.30	10,358.88	208.50	6,254.92	1,223.66	36,709.68
508	3445.680	5.0	1.2	112.29	6.2	14.60	72.99	561.47	539.88	2,699.42	135.08	675.41	801.86	4,009.29
509	3445.690	5.0	15.1	1,366.10	75.6	177.59	887.97	6,830.50	2,473.11	12,365.55	818.95	4,094.77	4,835.76	24,178.78
510	3445.700	3.0	11.9	1,072.57	35.6	139.43	418.30	3,217.70	20,259.42	60,778.25	4,330.81	12,992.43	25,802.23	77,406.68
511	3445.710	25.6	0.0	0.00	0.0	0.00	0.00	0.00	154.60	3,958.28	31.13	796.90	185.73	4,755.19
512	3445.720	8.7	0.5	49.49	4.7	6.43	55.69	428.37	12.06	104.42	14.06	121.69	82.05	710.17
513	3445.730	13.0	2.6	237.28	34.1	30.85	401.00	3,084.60	174.53	2,268.84	90.90	1,181.71	533.55	6,936.15
514	3445.740	6.0	1.2	104.44	6.9	13.58	81.46	626.62	211.81	1,270.84	67.19	403.13	397.01	2,382.05
515	3445.750	6.0	3.0	266.64	17.7	34.66	207.98	1,599.84	137.28	823.67	90.30	541.81	528.88	3,173.30
516	3445.760	4.0	1.4	123.73	5.5	16.08	64.34	494.92	5,134.99	20,539.94	1,062.88	4,251.53	6,337.68	25,350.73
517	3445.770	21.0	19.1	1,728.30	401.5	224.68	4,718.27	36,294.39	278.32	5,844.74	461.25	9,686.25	2,692.55	56,543.65
518	3445.780	12.6	0.0	0.00	0.0	0.00	0.00	0.00	280.21	3,529.80	56.41	710.64	336.63	4,240.44
519	3445.790	4.3	0.5	49.65	2.4	6.45	27.93	214.88	12.06	52.20	14.10	61.00	82.27	356.02
520	3445.800	4.0	12.5	1,134.37	50.2	147.47	589.87	4,537.49	354.37	1,417.46	337.93	1,351.74	1,974.14	7,896.56
521	3445.810	11.0	3.3	298.44	36.3	38.80	426.77	3,282.85	261.83	2,880.12	122.85	1,351.37	721.92	7,941.11
522	3445.820	11.0	12.7	1,147.39	139.6	149.16	1,640.76	12,621.24	559.09	6,150.00	381.60	4,197.61	2,237.24	24,609.61
523	3445.830	1.0	20.1	1,814.72	20.1	235.91	235.91	1,814.72	14,592.25	14,592.25	3,364.27	3,364.27	20,007.16	20,007.16
524	3445.840	2.2	0.0	0.00	0.0	0.00	0.00	0.00	259.70	576.26	52.29	116.02	311.98	692.28
525	3445.850	1.3	0.6	49.68	0.7	6.46	8.65	66.54	12.06	16.16	14.10	18.89	82.30	110.23
526	3445.860	5.5	3.0	267.59	16.2	34.79	190.86	1,468.13	292.83	1,606.57	121.84	668.47	717.05	3,934.03
527	3445.870	1.0	3.8	346.59	3.8	45.06	45.06	346.59	977.13	977.13	278.18	278.18	1,646.95	1,646.95
528	3445.880	3.0	3.8	346.58	11.5	45.06	135.17	1,039.75	1,020.04	3,060.13	286.81	860.43	1,698.49	5,095.48
529	3445.890	1.0	2.0	181.61	2.0	23.61	23.61	181.61	171.64	171.64	77.24	77.24	454.11	454.11
530	3445.900	1.0	1.5	131.71	1.5	17.12	17.12	131.71	311.41	311.41	93.64	93.64	553.89	553.89
531	3445.910	2.0	1.6	140.03	3.1	18.20	36.41	280.05	370.26	740.51	107.45	214.89	635.93	1,271.86
532	3445.920	10.0	0.0	0.00	0.0	0.00	0.00	0.00	1,079.89	10,798.89	217.41	2,174.10	1,297.30	12,973.00
533	3445.930	5.5	0.0	0.00	0.0	0.00	0.00	0.00	432.88	2,374.97	87.15	478.14	520.03	2,853.11
534	3445.940	1.9	0.6	53.08	1.1	6.90	12.80	98.44	12.07	22.38	14.90	27.64	86.95	161.26
B&M-0154	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0155	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0156	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0157	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0158	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0159	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0160	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0161	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0162	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0163	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0164	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0165	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0166	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0167	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0168	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0169	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0170	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0171	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0172	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0173	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
					0.0	$0.00				$0.00		$0.00	$0.00	
535	3446.010	2.0	305.9	27,658.18	611.9	3,595.56	7,191.13	55,316.36	61,687.27	123,374.55	18,919.32	37,838.64	111,860.34	223,720.67
536	3446.020	2.0	36.5	3,299.49	73.0	428.93	857.87	6,598.98	24,495.37	48,990.73	5,706.98	11,413.96	33,930.77	67,861.54
537	3446.030	1.0	0.0	0.00	0.0	0.00	0.00	0.00	74,351.42	74,351.42	14,968.86	14,968.86	89,320.28	89,320.28
538	3446.040	0.0	0.4	33.27	0.0	4.33	0.00	0.00	106.17	0.00	29.20	0.00	172.96	0.00
539	3446.050	2.0	0.5	41.59	0.9	5.41	10.81	83.18	4.90	9.81	10.76	21.53	62.66	125.32
540	3446.060	6.0	0.0	0.00	0.0	0.00	0.00	0.00	176.71	1,060.26	35.58	213.46	212.29	1,273.71
541	3446.070	2.0	2.2	198.25	4.4	25.77	51.55	396.50	63.88	127.75	59.45	118.89	347.35	694.69
542	3446.080	0.0	0.0	0.00	0.0	0.00	0.00	0.00	105.06	0.00	21.15	0.00	126.21	0.00
543	3446.090	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
544	3446.100	1,296.0	2.6	234.03	3,354.9	30.42	39,429.82	303,306.28	11.65	15,100.88	57.35	74,321.64	333.46	432,158.62
545	3446.110	219.0	0.4	37.51	90.9	4.88	1,068.01	8,215.46	14.48	3,170.23	11.73	2,569.01	68.60	15,022.71
546	3446.120	38.0	0.2	19.55	8.2	2.54	96.60	743.07	16.08	610.95	7.83	297.62	46.01	1,748.24
547	3446.130	0.0	0.2	16.64	0.0	2.16	0.00	0.00	16.31	0.00	7.20	0.00	42.31	0.00
548	3446.140	29.0	0.8	75.10	24.1	9.76	283.13	2,177.95	19.98	579.54	21.67	628.53	126.52	3,669.15

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
549	3446.150	Expansion joint SS316L Plain ends x 12in long	ea	8	14	4.4	471.42	61.0	70.71	989.98	6,599.84	383.87	5,374.19	68.75	962.54	994.75	13,926.55	14.0	5.0	450.16	69.7	58.52	819.30	6,302.30	61.29	857.99	118.13	1,653.87	688.10	9,633.46
550	3446.160	Union SW Class 3000 NPS 2, Piping Specification CB11	ea	16	0	7.3	793.97	0.0	119.09	0.00	0.00	64.49	0.00	115.79	0.00	1,093.34	0.00	38.0	0.4	37.32	15.7	4.85	184.37	1,418.22	13.90	528.17	11.57	439.64	67.64	2,570.40
551	3446.170	Flange Welding Neck 150RF Sch.STD NPS 2 c/w hardware, Piping Specification CB11	ea	6	6	5.2	563.57	31.3	84.54	507.22	3,381.44	42.30	253.78	82.19	493.16	772.60	4,635.60	36.0	12.3	1,110.84	442.3	144.41	5,198.75	39,990.37	18.45	664.21	264.78	9,532.05	1,538.48	55,385.38
552	3446.180	Flange Slip-On 150RF NPS 2 c/w hardware, Piping Specification CB11	ea	3	2	5.2	563.57	10.4	84.54	169.07	1,127.15	57.18	114.37	82.19	164.39	787.49	1,574.97	2.0	0.5	41.59	0.9	5.41	10.81	83.18	6.13	12.26	11.01	22.02	64.13	128.27
553	3446.190	Weld NPS 2, Piping Specification CB11	ea	735	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	859.0	0.6	54.52	518.1	7.09	6,088.70	46,836.12	126.40	108,574.03	37.80	32,472.67	225.81	193,971.51
554	3446.200	Quick connect NPS 2, DRY LINK STYLE 260 HOUSING STD SS 316 SEAL VITON	ea	23	35	4.4	471.42	152.6	70.71	2,474.94	16,499.61	383.87	13,435.46	68.75	2,406.36	994.75	34,816.37	24.0	0.4	37.84	10.0	4.92	118.05	908.05	87.84	2,108.25	26.58	637.84	157.17	3,772.19
555	3446.210	Ball valve NPS 2, Valve Specification VBA02	ea	32	46	8.4	910.93	387.4	136.64	6,285.45	41,902.98	373.93	17,200.66	132.85	6,111.27	1,554.36	71,500.35	46.0	3.3	300.17	152.7	39.02	1,795.03	13,807.96	282.90	13,013.48	127.50	5,865.02	749.60	34,481.49
556	3446.220	Check valve NPS 2, Valve Specification VCH04	ea	13	18	8.4	910.93	151.6	136.64	2,459.52	16,396.82	553.48	9,962.59	132.85	2,391.37	1,733.91	31,210.30	18.0	3.3	300.61	59.9	39.08	703.42	5,410.89	187.99	3,383.87	108.49	1,952.89	636.17	11,451.07
557	3446.230	Pipe painting NPS 2	Linear meter	975	0	0.8	79.15	0.0	11.87	0.00	0.00	1.18	0.00	0.00	0.00	92.20	0.00	1,284.3	0.0	0.00	0.0	0.00	0.00	0.00	48.32	62,056.88	9.73	12,493.65	58.05	74,550.53
558	3446.240	Pipe identification NPS 2	Linear meter	975	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	435.7	0.6	50.47	243.3	6.56	2,856.90	21,991.52	12.06	5,256.83	14.29	6,226.66	83.38	36,333.90
B&M-0174	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.9	209.27	12.4	31.39	200.97	1,339.82	34.55	221.22	30.52	195.40	305.73	1,957.42	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0175	Added	2" coupling, class 3000, FS ASTM A105 - SW	ea		109	7.3	793.97	800.2	119.09	12,981.34	86,542.30	54.70	5,962.69	115.79	12,621.61	1,083.56	118,107.95	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0176	Added	2" SW flange, CS, FF, Class 150, ASTM A105N, 150#	ea		28	5.2	563.57	145.9	84.54	2,367.01	15,780.08	43.98	1,231.35	82.19	2,301.42	774.28	21,679.85	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0177	Added	2" SW flange, CS, RF, Class 150, ASTM A105N, 150#	ea		2	5.2	563.57	10.4	84.54	169.07	1,127.15	43.98	87.95	82.19	164.39	774.28	1,548.56	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ODS (Oily Water Drainage)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
559	3447.010	Oil Skimmer 3447-OS-6000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	94.9	8,578.68	94.9	1,115.23	1,115.23	8,578.68	18,637.84	18,637.84	5,768.39	5,768.39	34,100.14	34,100.14
560	3447.020	Oil sheen detector 3447-LSH-5000	ea	1	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	18.3	1,649.74	18.3	214.47	214.47	1,649.74	26,235.86	26,235.86	5,669.67	5,669.67	33,769.74	33,769.74
561	3447.030	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	37	38	3.5	383.66	136.3	57.55	2,210.70	14,737.99	67.23	2,582.45	55.95	2,149.44	564.38	21,680.59	40.0	5.4	491.63	217.5	63.91	2,556.48	19,665.23	51.16	2,046.27	125.84	5,033.59	732.54	29,301.56
562	3447.040	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	8	8	15.9	1,715.53	126.9	257.33	2,058.64	13,724.27	105.83	846.62	250.20	2,001.59	2,328.89	18,631.12	8.0	1.8	158.74	14.1	20.64	165.08	1,269.88	10.67	85.33	39.45	315.61	229.49	1,835.91
563	3447.050	Elbow 45 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	4	4	15.9	1,715.53	63.4	257.33	1,029.32	6,862.14	99.55	398.20	250.20	1,000.80	2,322.61	9,290.45	4.0	0.9	78.33	3.5	10.18	40.73	313.32	7.60	30.41	19.94	79.75	116.05	464.21
564	3447.060	Weld NPS 4, Piping Specification CB11	ea	28	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.0	1.7	149.47	54.6	19.43	641.24	4,932.59	210.30	6,939.82	77.06	2,542.96	456.26	15,056.61
565	3447.070	Pipe painting NPS 4	Linear meter	37	0	1.0	90.45	0.0	13.57	0.00	0.00	2.14	0.00	0.00	0.00	106.16	0.00	39.8	0.0	0.00	0.0	0.00	0.00	0.00	51.53	2,050.52	10.37	412.82	61.91	2,463.33
566	3447.080	Pipe identification NPS 4	Linear meter	37	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.5	0.6	50.12	7.5	6.52	87.95	676.53	12.06	162.84	14.21	191.77	82.91	1,119.09
567	3447.090	Pipe NPS 6 Sch.STD, Piping Specification CB11	m	36	38	4.6	499.92	177.6	74.99	2,880.61	19,204.05	109.89	4,221.58	72.91	2,800.78	757.71	29,107.02	36.9	3.2	293.01	119.5	38.09	1,404.85	10,806.52	50.32	1,855.83	78.99	2,913.32	460.41	16,980.52
568	3447.100	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	4	4	20.6	2,229.48	82.5	334.42	1,337.69	8,917.94	155.18	620.73	325.16	1,300.62	3,044.25	12,176.98	8.0	3.8	340.35	30.1	44.25	353.96	2,722.77	19.66	157.25	83.94	671.56	488.19	3,905.54
569	3447.110	Weld NPS 6, Piping Specification CB11	ea	10	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.0	6.6	599.01	86.1	77.87	1,012.32	7,787.07	199.84	2,597.94	179.72	2,336.31	1,056.43	13,733.63
570	3447.120	Pipe painting NPS 6	Linear meter	36	0	0.9	89.04	0.0	13.36	0.00	0.00	3.21	0.00	0.00	0.00	105.61	0.00	36.9	0.0	0.00	0.0	0.00	0.00	0.00	69.54	2,565.42	14.00	516.49	83.54	3,081.91
571	3447.130	Pipe identification NPS 6	Linear meter	36	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.5	0.6	50.26	6.9	6.53	81.46	626.62	12.06	150.41	14.24	177.55	83.10	1,036.04
B&M-0178	Added	1/2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	11.87	11.87	8.62	8.62	88.42	88.42	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0179	Added	1/2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	11.87	11.87	8.62	8.62	88.42	88.42	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0180	Added	1/2" Ball Valve Carbon Socket Weld, Full Port VBA02	ea		1	3.7	400.53	3.7	60.08	60.08	400.53	107.23	107.23	58.41	58.41	626.25	626.25	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0181	Added	1/2" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea		1	1.9	205.58	1.9	30.84	30.84	205.58	82.62	82.62	29.98	29.98	349.02	349.02	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0182	Added	1/2"x16" SOL, SS, 3000#	ea		1	2.2	236.30	2.2	35.44	35.44	236.30	24.92	24.92	34.46	34.46	331.13	331.13	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0183	Added	Pipe Insulation - All Sizes	ea		1	243.5	24,868.99	243.5	3,730.35	3,730.35	24,868.99	6,968.39	6,968.39	0.00	0.00	35,567.73	35,567.73	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WCS (Raw/Cooling Water)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
572	3448.001	Self cleaning strainer 3448-STM-1000 / 2000 / 3000 / 4000	ea	4	4	87.4	9,451.98	349.6	1,417.80	5,671.19	37,807.91	71,616.27	286,465.09	1,378.51	5,514.03	83,864.55	335,458.21	4.0	83.1	7,510.50	332.3	976.37	3,905.46	30,042.00	70,020.13	280,080.53	15,861.94	63,447.75	94,368.94	377,475.74
573	3448.002	Strainer 3448-STR-1000 2000 / 3000 / 4000	ea	4	4	87.4	9,451.98	349.6	1,417.80	5,671.19	37,807.91	25,651.03	102,604.14	1,378.51	5,514.03	37,899.31	151,597.26	4.0	4.8	433.23	19.2	56.32	225.28	1,732.92	0.00	0.00	101.82	407.27	591.37	2,365.47
574	3448.003	Air vent 3448-AV-1001 / 2001 / 3001 / 4001 / 6000 to 6003	ea	8	8	8.7	945.20	69.9	141.78	1,134.24	7,561.58	5,575.02	44,600.14	137.85	1,102.81	6,799.84	54,398.76	16.0	10.9	989.85	175.2	128.68	2,058.88	15,837.54	3,360.17	53,762.80	909.12	14,545.89	5,387.82	86,205.11
575	3448.004	Pressure indicator 3448-PI-1000 to 1002 / 2000 to 2002 / 3000 to 3002 / 4000 to 4002	ea	12	12	8.7	945.20	104.9	141.78	1,701.36	11,342.37	700.54	8,406.44	137.85	1,654.21	1,925.36	23,104.37	12.0	3.7	329.95	43.8	42.89	514.72	3,959.39	84.10	1,009.25	94.48	1,133.70	551.42	6,617.07
576	3448.005	Differential pressure indicator 3448-PDI-1000 / 2000 / 3000 / 4000	ea	4	4	8.7	945.20	35.0	141.78	567.12	3,780.79	3,005.68	12,022.74	137.85	551.40	4,230.51	16,922.05	4.0	14.6	1,319.80	58.4	171.57	686.29	5,279.18	2,967.37	11,869.47	907.58	3,630.32	5,366.31	21,465.26
577	3448.006	Differential pressure switch 3448-PDS-1000 / 2000 / 3000 / 4000	ea	4	4	8.7	945.20	35.0	141.78	567.12	3,780.79	1,647.76	6,591.04	137.85	551.40	2,872.59	11,490.35	4.0	7.3	659.90	29.2	85.79	343.15	2,639.59	1,263.06	5,052.23	409.37	1,637.48	2,418.11	9,672.44
578	3448.007	temperature transmitter 3448-TT-1001 / 1003 / 2001 / 2003 / 3001 / 3003 / 4001 / 4003	ea	8	16	8.7	945.20	139.8	141.78	2,268.47	15,123.16	2,301.88	36,830.13	137.85	2,205.61	3,526.71	56,427.38	8.0	29.2	2,639.59	233.6	343.15	2,745.18	21,116.74	5,077.91	40,623.27	1,642.66	13,141.25	9,703.31	77,626.44
579	3448.008	Control Panel 3448-CP-1001 / 2001 / 3001 / 4001	ea	4	4	104.9	11,342.37	419.5	1,701.36	6,805.42	45,369.49	24,795.71	99,182.83	1,654.21	6,616.84	39,493.64	157,974.58	4.0	18.6	1,678.86	74.3	218.25	873.01	6,715.43	7,457.52	29,830.09	1,895.95	7,583.79	11,250.58	45,002.32
580	3448.009	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	8	13	1.1	116.26	13.8	17.44	223.30	1,488.69	27.69	354.53	16.96	217.11	178.34	2,283.63	8.0	1.8	160.86	14.2	20.91	167.25	1,286.52	7.62	60.97	39.34	314.62	228.73	1,829.36
581	3448.010	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	5	6	5.6	602.56	33.4	90.38	542.31	3,615.36	117.55	705.28	87.88	527.28	898.37	5,390.24	6.0	0.6	54.99	3.7	7.15	42.89	329.95	5.37	32.20	14.00	84.01	81.51	489.05
582	3448.011	Olet SW Class 3000 NPS 3/4, Piping Specification SB11	ea	1	0	2.8	307.19	0.0	46.08	0.00	0.00	36.90	0.00	44.80	0.00	434.97	0.00	9.0	0.6	51.29	5.1	6.67	60.01	461.65	10.09	90.84	14.09	126.78	82.14	739.29
583	3448.012	Weld NPS 3/4, Piping Specification SB11	ea	14	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.0	0.4	36.13	6.4	4.70	75.15	578.11	188.11	3,009.69	46.22	739.55	275.16	4,402.51
584	3448.013	Ball valve NPS 3/4, Valve Specification VBA11	ea	1	1	5.5	595.47	5.5	89.32	89.32	595.47	136.15	136.15	86.85	86.85	907.79	907.79	1.0	3.1	280.05	3.1	36.41	36.41	280.05	100.39	100.39	86.02	86.02	502.87	502.87
585	3448.014	Pipe identification NPS 3/4	Linear meter	8	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.5	49.16	1.5	6.39	17.12	131.71	12.07	32.32	13.98	37.46	81.60	218.62
586	3448.015	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	7	19	1.4	151.14	26.8	22.67	435.44	2,902.94	36.45	700.02	22.04	423.37	232.30	4,461.77	11.0	1.9	168.00	20.4	21.84	240.24	1,847.99	13.37	147.10	42.17	463.92	245.39	2,699.25
587	3448.016	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	2	0	1.4	151.14	0.0	22.67	0.00	0.00	39.80	0.00	22.04	0.00	235.65	0.00	0.0	7.7	693.16	0.0	90.11	0.00	0.00	3,553.66	0.00	878.35	0.00	5,215.28	0.00
588	3448.017	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	12	12	5.9	638.01	70.8	95.70	1,148.42	7,656.10	125.39	1,504.72	93.05	1,116.59	952.15	11,425.83	12.0	0.6	53.61	7.1	6.97	83.62	643.26	8.11	97.36	14.23	170.77	82.92	995.01
589	3448.018	Olet SW Class 3000NPS 1, Piping Specification SB11	ea	20	16	3.9	425.34	62.9	63.80	1,020.81	6,805.42	43.11	689.68	62.03	992.53	594.28	9,508.45	20.0	0.6	53.65	11.9	6.97	139.49	1,073.03	17.64	352.73	16.16	323.20	94.42	1,888.46
590	3448.019	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	6	8	5.9	638.01	47.2	95.70	765.61	5,104.07	580.55	4,644.42	93.05	744.39	1,407.31	11,258.49	20.0	0.5	43.74	9.7	5.69	113.72	874.78	16.23	324.52	13.55	270.92	79.20	1,583.94
591	3448.020	Victaulic coupling NPS 1, Style 77	ea	4	0	0.3	37.22	0.0	5.58	0.00	0.00	27.67	0.00	5.43	0.00	75.89	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	23.70	0.00	16.49	0.00	96.59	0.00
592	3448.021	Weld NPS 1, Piping Specification SB11	ea	76	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	132.0	0.5	45.25	66.1	5.88	776.41	5,972.36	224.70	29,660.67	55.77	7,361.60	331.60	43,771.04
593	3448.022	Ball valve NPS 1, Valve Specification VBA11	ea	12	12	7.3	793.97	88.1	119.09	1,429.14	9,527.59	202.60	2,431.14	115.79	1,389.54	1,231.45	14,777.41	12.0	3.2	287.32	38.1	37.35	448.22	3,447.83	127.76	1,533.14	93.25	1,118.95	545.68	6,548.14
594	3448.023	Pipe insulation NPS 1	Linear meter	9	0	1.4	145.28	0.0	21.79	0.00	0.00	41.04	0.00	8.55	0.00	216.67	0.00	68.3	3.3	300.68	227.1	39.09	2,668.76	20,528.93	184.63	12,605.49	90.44	6,174.87	614.83	41,978.05
595	3448.024	Pipe identification NPS 1	Linear meter	9	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.1	0.6	50.76	13.0	6.60	152.29	1,171.46	12.06	278.44	14.36	331.37	83.78	1,933.57
596	3448.025	Pipe NPS 1 Sch.40, Piping Specification PA02	m	68	26	1.1	116.26	27.5	17.44	446.61	2,977.37	11.29	289.17	16.96	434.23	161.95	4,147.38	57.0	3.5	317.50	200.2	41.27	2,352.65	18,097.29	4.32	246.06	75.49	4,302.67	438.57	24,998.67
597	3448.026	Elbow 90 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	20	16	1.2	134.69	19.9	20.20	323.26	2,155.05	9.52	152.31	19.64	314.30	184.06	2,944.91	20.0	0.3	29.67	6.6	3.86	77.14	593.35	0.99	19.86	7.17	143.44	41.69	833.78
598	3448.027	Elbow 45 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	4	0	1.2	134.69	0.0	20.20	0.00	0.00	9.52	0.00	19.64	0.00	184.06	0.00	12.0	0.3	24.72	3.3	3.21	38.57	296.68	1.04	12.50	6.02	72.23	35.00	419.99
599	3448.028	Pipe identification NPS 1	Linear meter	68	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.4	0.6	50.78	12.0	6.60	141.48	1,088.28	12.06	258.55	14.36	307.81	83.81	1,796.12
600	3448.029	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	7	6	1.8	197.64	11.7	29.65	189.81	1,265.38	44.87	287.29	28.82	184.55	300.98	1,927.03	12.0	2.0	178.77	23.7	23.24	278.81	2,144.67	16.96	203.43	45.43	544.98	264.39	3,171.89
601	3448.030	Pipe NPS 1-1/2 Sch.40S, Piping Specification SB11	m	1	0	1.8	197.64	0.0	29.65	0.00	0.00	44.87	0.00	28.82	0.00	300.98	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	11.47	0.00	17.95	0.00	104.62	0.00
602	3448.031	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	16	12	8.2	886.12	98.3	132.92	1,595.02	10,633.47	155.49	1,865.85	129.24	1,550.82	1,303.76	15,645.17	16.0	0.6	53.63	9.5	6.97	111.56	858.14	19.98	319.64	16.63	266.04	97.21	1,555.37
603	3448.032	Union SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	4	0	8.5	921.57	0.0	138.24	0.00	0.00	1,191.56	0.00	134.40	0.00	2,385.77	0.00	4.0	0.6	53.72	2.4	6.98	27.93	214.88	40.35	161.41	20.75	83.00	121.80	487.22
604	3448.033	Weld NPS 1-1/2, Piping Specification SB11	ea	48	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.0	0.6	57.39	30.5	7.46	358.11	2,754.66	238.91	11,467.67	61.40	2,947.16	365.16	17,527.60
605	3448.034	Ball valve NPS 1-1/2, Valve Specification VBA11	ea	4	4	11.0	1,187.40	43.9	178.11	712.44	4,749.62	295.09	1,180.35	173.18	692.70	1,833.78	7,335.11	4.0	3.2	288.71	12.8	37.53	150.13	1,154.83	209.90	839.58	110.11	440.44	646.24	2,584.98
606	3448.035	Pipe identification NPS 1-1/2	Linear meter	8	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.1	0.6	52.14	2.4	6.78	27.93	214.88	12.06	49.72	14.68	60.51	85.66	353.05
607	3448.036	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	58	64	2.3	244.14	144.5	36.62	2,344.68	15,631.21	56.83	3,638.69	35.61	2,279.71	373.21	23,894.28	67.0	2.1	190.59	141.3	24.78	1,660.05	12,769.58	23.79	1,594.05	49.58	3,321.96	288.74	19,345.64
608	3448.037	Pipe NPS 2 Sch.40S, Piping Specification SB11	m	1	0	2.3	244.14	0.0	36.62	0.00	0.00	56.83	0.00	35.61	0.00	373.21	0.00	4.0	0.6	53.72	2.4	6.98	27.93	214.88	17.51	70.04	16.15	64.60	94.36	377.45
609	3448.038	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	46	46	8.5	921.57	392.0	138.24	6,358.82	42,392.12	171.71	7,898.86	134.40	6,182.61	1,365.92	62,832.40	37.0	0.6	53.95	22.1	7.01	259.52	1,996.33	31.56	1,167.65	19.03	704.24	111.56	4,127.75
610	3448.039	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	8	8	8.5	921.57	68.2	138.24	1,105.88	7,372.54	172.91	1,383.29	134.40	1,075.24	1,367.12	10,936.95	7.0	0.3	25.94	2.0	3.37	23.61	181.61	34.72	243.07	13.09	91.62	77.13	539.92
611	3448.040	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	12	13	8.5	921.57	110.8	138.24	1,797.06	11,980.38	1,191.56	15,490.26	134.40	1,747.26	2,385.77	31,014.95	9.0	0.6	53.14	5.3	6.91	62.18	478.28	56.37	507.29	23.84	214.53	140.25	1,262.28
612	3448.041	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	268.91	1,075.63	175.76	703.04	1,830.56	7,322.25	4.0	1.2	107.09	4.7	13.92	55.69	428.37	47.03	188.10	34.63	138.54	202.68	810.70
613	3448.042	Concentric Reducer SW Class 300 0NPS 2 x 1, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	183.09	732.34	134.40	537.62	1,377.29	5,509.17	4.0	0.7	62.04	2.7	8.06	32.26	248.15	21.58	86.32	18.93	75.70	110.61	442.44
614	3448.043	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	8	4	7.6	827.05	30.6	124.06	496.23	3,308.19	98.20	392.79	120.62	482.48	1,169.92	4,679.69	13.0	0.6	52.04	7.5	6.77	87.95	676.53	32.30	419.93	18.73	243.54	109.84	1,427.95
615	3448.044	Victaulic coupling NPS 2, Style 77	ea	4	0	0.4	47.85	0.0	7.18	0.00	0.00	39.99	0.00	6.98	0.00	102.00	0.00	4.0	0.6	53.72	2.4	6.98	27.93	214.88	41.95	167.80	21.07	84.28	123.73	494.90
616	3448.045	Weld NPS 2, Piping Specification SB11	ea	218	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	242.0	0.9	80.79	216.3	10.50	2,541.52	19,550.18	259.61	62,826.33	71.15	17,217.37	422.05	102,135.40
617	3448.046	Ball valve NPS 2, Valve Specification VBA11	ea	21	21	14.7	1,587.93	308.3	238.19	5,001.99	33,346.57	406.63	8,539.17	231.59	4,863.37	2,464.34	51,751.10	25.0	21.7	1,957.90	541.4	254.53	6,363.18	48,947.52	269.98	6,749.50	514.49	12,862.24	2,996.90	74,922.43
618	3448.047	Pipe insulation NPS 2	Linear meter	51	0	1.5	149.19	0.0	22.38	0.00	0.00	45.86	0.00	8.55	0.00	225.98	0.00	67.4	3.6	323.26	240.9	42.02	2,830.78	21,775.24	210.87	14,204.24	99.73	6,717.58	675.88	45,527.85
619	3448.048	Pipe identification NPS 2	Linear meter	51	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.8	0.6	50.71	12.8	6.59	150.13	1,154.83	12.06	274.71	14.35	326.70	83.72	1,906.37
620	3448.049	Pipe NPS 4 Sch.10S, Piping Specification SB11	m	55	51	3.4	372.03	176.2	55.80	2,858.28	19,055.18	118.53	6,071.28	54.26	2,779.07	600.63	30,763.81	64.0	2.0	178.38	126.3	23.19	1,484.15	11,416.50	49.92	3,195.01	51.97	3,326.29	303.47	19,421.94
621	3448.050	Elbow 45 degrees BW Sch.10S NPS 4, Piping Specification SB11	ea	4	4	24.4	2,644.19	97.8	396.63	1,586.51	10,576.76	156.78	627.11	385.64	1,542.55	3,583.23	14,332.94	4.0	0.5	41.25	1.8	5.36	21.45	164.98	13.95	55.80	12.50	50.01	73.06	292.23
622	3448.051	Flange Welding Neck 150RF Sch.10S NPS 4 c/w hardware, Piping Specification SB11	ea	16	0	15.8	1,708.44	0.0	256.27	0.00	0.00	172.30	0.00	249.17	0.00	2,386.18	0.00	16.0	2.3	209.34	37.1	27.21	435.42	3,349.39	31.71	507.35	55.58	889.30	323.84	5,181.46
623	3448.052	Olet BW Sch.10S NPS 4, Piping Specification SB11	ea	8	8	14.6	1,583.21	117.1	237.48	1,899.85	12,665.65	371.38	2,971.04	230.90	1,847.20	2,422.97	19,383.73	8.0	0.9	84.57	7.5	10.99	87.95	676.53	654.52	5,236.14	151.64	1,213.15	901.72	7,213.77
624	3448.053	Victaulic Elbow 90 degrees NPS 4, Style 410SS	ea	12	12	4.7	510.41	56.6	76.56	918.73	6,124.88	188.59	2,263.12	74.44	893.27	850.00	10,200.01	12.0	0.9	83.87	11.1	10.90	130.84	1,006.48	217.49	2,609.91	63.50	761.98	375.77	4,509.21
625	3448.054	Victaulic Elbow 45 degrees NPS 4, Style 410SS	ea	4	4	4.7	510.41	18.9	76.56	306.24	2,041.63	210.13	840.51	74.44	297.76	871.53	3,486.14	4.0	0.5	41.25	1.8	5.36	21.45	164.98	199.05	796.18	49.77	199.07	295.42	1,181.67
626	3448.055	Victaulic Coupling NPS 4, Style 77DX	ea	8	36	0.5	58.48	19.5	8.77	315.81	2,105.43	983.88	35,419.78	8.53	307.06	1,059.67	38,148.09	0.0	2.0	181.61	0.0	23.61	0.00	0.00	81.88	0.00	59.16	0.00	346.26	0.00
627	3448.056	Victaulic Coupling NPS 4, Style 77	ea	12	0	0.5	58.48	0.0	8.77	0.00	0.00	983.88	0.00	8.53	0.00	1,059.67	0.00	37.0	0.9	83.82	34.3	10.90	403.16	3,101.24	914.90	33,851.45	203.89	7,544.01	1,213.51	44,899.87
628	3448.057	Victaulic Coupling NPS 4, Style 89	ea	16	0	0.5	58.48	0.0	8.77	0.00	0.00	145.16	0.00	8.53	0.00	220.94	0.00	0.0	2.0	181.61	0.0	23.61	0.00	0.00	192.51	0.00	81.43	0.00	479.16	0.00
629	3448.058	Weld NPS 4, Piping Specification SB11	ea	48	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	107.0	7.9	710.78	841.2	92.40	9,886.92	76,053.24	181.96	19,469.81	203.26	21,748.60	1,188.40	127,158.58
630	3448.059	Pipe insulation NPS 4	Linear meter	55	0	2.8	279.06	0.0	41.86	0.00	0.00	55.55	0.00	8.55	0.00	385.02	0.00	63.4	6.2	560.67	393.2	72.89	4,620.95	35,545.76	346.41	21,961.85	169.07	10,719.10	1,149.04	72,847.66
631	3448.060	Pipe identification NPS 2	Linear meter	55	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
632	3448.061	Pipe NPS 6 Sch.10S, Piping Specification SB11	m	48	32	4.5	488.29	144.5	73.24	2,344.68	15,631.21	191.59	6,133.28	71.21	2,279.71	824.34	26,388.88	101.0	6.5	588.19	657.1	76.47	7,722.97	59,407.45	33.01	3,333.76	144.88	14,632.79	842.54	85,096.97
633	3448.062	Olet BW Sch.10S NPS 6, Piping Specification SB11	ea	7	4	22.7	2,457.51	90.9	368.63	1,474.51	9,830.06	992.51	3,970.06	358.41	1,433.65	4,177.07	16,708.27	7.0	1.9	174.48	13.5	22.68	158.78	1,221.37	454.70	3,182.90	132.55	927.84	784.41	5,490.90
634	3448.063	Flange Welding Neck 150RF Sch.10S NPS 6 c/w hardware, Piping Specification SB11	ea	8	0	19.4	2,101.88	0.0	315.28	0.00	0.00	246.46	0.00	306.55	0.00	2,970.18	0.00	168.0	3.6	323.17	600.6	42.01	7,058.12	54,293.24	5.50	923.51	77.06	12,945.64	447.74	75,220.52
635	3448.064	Victaulic Elbow 90 degrees NPS 6, Style 410SS	ea	12	8	8.4	903.85	66.9	135.58	1,084.61	7,230.76	473.95	3,791.58	131.82	1,054.56	1,645.19	13,161.51	12.0	1.4	125.12	16.6	16.27	195.18	1,501.40	574.22	6,890.65	145.01	1,740.11	860.61	10,327.35
636	3448.065	Victaulic Coupling NPS 6, Style 89	ea	32	32	1.4	148.87	44.0	22.33	714.57	4,763.80	140.80	4,505.50	21.71	694.77	333.71	10,678.64	48.0	1.4	125.78	66.8	16.35	784.88	6,037.51	129.40	6,211.22	55.61	2,669.37	327.15	15,702.97
637	3448.066	Weld NPS 6, Piping Specification SB11	ea	29	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.0	10.1	910.56	936.7	118.37	11,008.64	84,681.81	269.20	25,035.95	267.71	24,897.05	1,565.84	145,623.44
638	3448.067	Pipe insulation NPS 6	Linear meter	48	0	3.0	298.73	0.0	44.81	0.00	0.00	64.58	0.00	8.55	0.00	416.67	0.00	101.2	7.5	680.03	761.2	88.40	8,945.97	68,815.16	491.78	49,764.70	219.49	22,210.79	1,479.70	149,736.61
639	3448.068	Pipe identification NPS 6	Linear meter	48	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.2	0.6	50.66	19.2	6.59	225.28	1,732.92	12.06	412.69	14.33	490.35	83.64	2,861.24
640	3448.069	Pipe NPS 10 Sch.10S, Piping Specification SB11	m	62	64	6.8	732.43	433.6	109.87	7,034.04	46,893.62	494.45	31,657.11	106.82	6,839.12	1,443.57	92,423.89	68.3	2.8	253.23	191.2	32.92	2,247.58	17,289.05	207.72	14,181.96	101.33	6,918.38	595.19	40,636.96
641	3448.070	Elbow 90 degrees Long Radius Sch.10S NPS 10, Piping Specification SB11	ea	4	4	48.4	5,238.76	193.8	785.81	3,143.25	20,955.03	544.85	2,179.41	764.04	3,056.15	7,333.46	29,333.84	4.0	2.5	222.85	9.9	28.97	115.88	891.41	212.19	848.76	95.09	380.38	559.11	2,236.43
642	3448.071	Eccentric Reducer Sch.10S NPS 10 x 6, Piping Specification SB11	ea	4	4	48.4	5,238.76	193.8	785.81	3,143.25	20,955.03	849.83	3,399.31	764.04	3,056.15	7,638.44	30,553.75	4.0	1.1	103.28	4.6	13.43	53.71	413.13	182.98	731.92	61.11	244.44	360.80	1,443.20
643	3448.072	Victaulic coupling NPS 10, Style 89	ea	12	12	2.7	292.42	32.4	43.86	526.36	3,509.05	357.05	4,284.58	42.65	511.77	735.98	8,831.76	20.0	2.5	224.38	49.6	29.17	583.39	4,487.58	498.77	9,975.34	153.15	3,062.94	905.46	18,109.24
644	3448.073	Victaulic Elbow 90 degrees NPS 10, Style 410SS	ea	4	4	15.7	1,694.27	62.7	254.14	1,016.56	6,777.07	1,553.24	6,212.97	247.10	988.39	3,748.75	14,994.99	4.0	2.5	222.85	9.9	28.97	115.88	891.41	1,970.21	7,880.84	449.03	1,796.11	2,671.06	10,684.25
645	3448.074	Weld NPS 10, Piping Specification SB11	ea	25	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.0	22.2	2,009.45	1,244.7	261.23	14,628.80	112,529.23	113.30	6,344.93	494.66	27,701.02	2,878.64	161,203.99
646	3448.075	Pipe insulation NPS 10	Linear meter	62	0	3.5	355.21	0.0	53.28	0.00	0.00	88.41	0.00	8.55	0.00	505.45	0.00	68.3	9.0	816.61	616.7	106.16	7,248.08	55,754.44	717.29	48,973.41	289.09	19,737.54	1,929.15	131,713.47
647	3448.076	Pipe identification NPS 10	Linear meter	62	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.1	0.6	50.76	13.0	6.60	152.29	1,171.46	12.06	278.44	14.36	331.37	83.78	1,933.57
648	3448.077	Pipe NPS 12 Sch.STD, Piping Specification CB11	m	13	13	8.3	895.20	106.0	134.28	1,719.43	11,462.88	287.32	3,679.08	130.56	1,671.78	1,447.35	18,533.18	20.0	2.5	222.72	49.3	28.95	579.06	4,454.31	191.88	3,837.64	90.97	1,819.46	534.52	10,690.46
649	3448.078	Elbow 45 degrees Sch.STD NPS 12, Piping Specification CB11	ea	2	2	42.5	4,597.21	85.0	689.58	1,379.16	9,194.41	357.89	715.78	670.47	1,340.94	6,315.15	12,630.30	3.0	0.7	60.54	2.0	7.87	23.61	181.61	122.19	366.58	38.83	116.48	229.42	688.27

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
650	3448.079	Tee BW Sch.STD NPS 12, Piping Specification CB11	ea	3	3	61.7	6,670.73	185.0	1,000.61	3,001.83	20,012.20	603.99	1,811.97	972.88	2,918.64	9,248.22	27,744.65	3.0	1.9	176.07	5.8	22.89	68.67	528.20	196.16	588.49	80.87	242.62	475.99	1,427.97
651	3448.080	Cap BW Sch.STD NPS 12, Piping Specification CB11	ea	2	2	28.5	3,087.25	57.1	463.09	926.18	6,174.50	225.99	451.99	450.26	900.51	4,226.59	8,453.18	2.0	1.0	90.81	2.0	11.80	23.61	181.61	50.27	100.53	31.47	62.93	184.34	368.68
652	3448.081	Weld NPS 12, Piping Specification CB11	ea	15	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.0	5.7	519.65	103.5	67.55	1,215.97	9,353.63	411.87	7,413.72	204.49	3,680.74	1,203.56	21,664.06
653	3448.082	Pipe insulation NPS 12	Linear meter	13	0	4.1	410.45	0.0	61.57	0.00	0.00	98.43	0.00	8.55	0.00	578.99	0.00	19.8	10.9	982.58	215.3	127.74	2,530.71	19,466.98	891.69	17,666.16	353.60	7,005.60	2,355.61	46,669.45
654	3448.083	Pipe identification NPS 12	Linear meter	13	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.5	49.26	3.7	6.40	42.89	329.95	12.06	80.80	14.01	93.81	81.74	547.45
655	3448.084	Pipe painting NPS 12	Linear meter	13	0	1.4	135.68	0.0	20.35	0.00	0.00	7.07	0.00	0.00	0.00	163.10	0.00	24.5	0.0	0.00	0.0	0.00	0.00	0.00	180.37	4,417.89	36.31	889.44	216.68	5,307.33
656	3448.085	Pipe NPS 14 Sch.10S, Piping Specification SB11	m	89	90	9.7	1,046.33	867.2	156.95	14,068.09	93,787.24	1,086.85	97,418.81	152.60	13,678.24	2,442.73	218,952.37	136.0	10.6	961.46	1,446.4	124.99	16,998.57	130,758.22	406.53	55,288.30	307.80	41,861.07	1,800.78	244,906.15
657	3448.086	Elbow 90 degrees Long Radius Sch.10S NPS 14, Piping Specification SB11	ea	20	24	77.2	8,347.28	1852.3	1,252.09	30,050.20	200,334.65	1,174.33	28,183.99	1,217.39	29,217.47	11,991.10	287,786.30	24.0	1.6	147.82	39.2	19.22	461.19	3,547.64	512.35	12,296.40	137.89	3,309.33	817.27	19,614.55
658	3448.087	Elbow 45 degrees Sch.10S NPS 14, Piping Specification SB11	ea	4	4	77.2	8,347.28	308.7	1,252.09	5,008.37	33,389.11	1,017.16	4,068.63	1,217.39	4,869.58	11,833.92	47,335.68	4.0	0.8	74.17	3.3	9.64	38.57	296.68	307.41	1,229.62	79.32	317.29	470.54	1,882.17
659	3448.088	Flange Welding Neck 150FF Sch.10S NPS 14 c/w hardware, Piping Specification SB11	ea	20	19	47.8	5,171.41	908.5	775.71	14,738.53	98,256.84	883.06	16,778.16	754.22	14,330.10	7,584.40	144,103.63	72.0	6.0	541.67	431.4	70.42	5,070.07	39,000.52	460.87	33,182.65	220.09	15,846.22	1,293.05	93,099.46
660	3448.089	Flange Welding Neck 150RF Sch.10S NPS 14 c/w hardware, Piping Specification SB11	ea	52	53	47.8	5,171.41	2534.2	775.71	41,112.73	274,084.87	883.06	46,802.23	754.22	39,973.44	7,584.40	401,973.28	0.0	6.4	578.11	0.0	75.15	0.00	0.00	9.64	0.00	137.80	0.00	800.71	0.00
661	3448.090	Flange Slip-On 150RF NPS 14 c/w hardware, Piping Specification SB11	ea	8	8	47.8	5,171.41	382.5	775.71	6,205.70	41,371.30	690.01	5,520.07	754.22	6,033.73	7,391.35	59,130.79	8.0	14.0	1,266.25	112.1	164.61	1,316.90	10,129.99	373.06	2,984.50	372.69	2,981.55	2,176.62	17,412.94
662	3448.091	Tee BW Sch.10S NPS 14, Piping Specification SB11	ea	12	12	115.0	12,441.16	1380.4	1,866.17	22,394.10	149,293.97	1,700.68	20,408.16	1,814.46	21,773.53	17,822.48	213,869.76	12.0	3.3	295.64	39.2	38.43	461.19	3,547.64	774.20	9,290.39	225.35	2,704.14	1,333.61	16,003.37
663	3448.092	Eccentric Reducer BW Sch.10S NPS 14 x 6, Piping Specification SB11	ea	8	8	77.2	8,347.28	617.4	1,252.09	10,016.73	66,778.22	1,236.65	9,893.22	1,217.39	9,739.16	12,053.42	96,427.32	8.0	1.0	90.81	8.0	11.80	94.44	726.44	694.32	5,554.59	161.13	1,289.01	958.06	7,664.47
664	3448.093	Victaulic coupling NPS 14, Style W77	ea	20	16	3.9	421.09	62.3	63.16	1,010.61	6,737.37	520.15	8,322.39	61.41	982.60	1,065.81	17,052.97	28.0	1.6	147.89	45.8	19.23	538.33	4,140.99	424.75	11,893.01	120.27	3,367.56	712.14	19,939.89
665	3448.094	Victaulic coupling NPS 14, Style 89	ea	20	12	3.9	421.09	46.7	63.16	757.95	5,053.03	482.19	5,786.31	61.41	736.95	1,027.85	12,334.24	16.0	1.6	147.47	26.1	19.17	306.74	2,359.56	641.64	10,266.17	163.84	2,621.37	972.11	15,553.84
666	3448.095	Victaulic Elbow 90 degrees NPS 14, Style W100SS	ea	12	8	18.0	1,943.86	143.8	291.58	2,332.64	15,550.91	3,124.56	24,996.51	283.50	2,268.00	5,643.51	45,148.06	8.0	1.6	148.51	13.1	19.31	154.45	1,188.10	4,202.43	33,619.46	880.96	7,047.68	5,251.21	42,009.69
667	3448.096	Victaulic Eccentric Reducer NPS 14 x 10, Style W51SS	ea	4	4	18.0	1,943.86	71.9	291.58	1,166.32	7,775.46	2,348.31	9,393.24	283.50	1,134.00	4,867.25	19,469.01	4.0	1.0	90.81	4.0	11.80	47.22	363.23	2,978.44	11,913.78	620.98	2,483.91	3,702.04	14,808.14
668	3448.097	Weld NPS 14, Piping Specification SB11	ea	193	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	246.0	14.7	1,330.39	3,620.1	172.95	42,545.90	327,276.12	500.09	123,023.18	413.09	101,619.71	2,416.52	594,464.90
669	3448.098	Butterfly Valve NPS 14, Valve Specification VBU01	ea	28	16	39.7	4,288.83	634.5	643.33	10,293.20	68,621.35	2,127.15	34,034.37	625.50	10,007.96	7,684.81	122,956.89	28.0	13.7	1,237.31	383.2	160.85	4,503.80	34,644.65	1,633.53	45,738.84	619.66	17,350.42	3,651.35	102,237.71
670	3448.099	Check Valve FF NPS 14, Valve Specification VCH01	ea	4	4	39.7	4,288.83	158.6	643.33	2,573.30	17,155.34	9,849.23	39,396.94	625.50	2,501.99	15,406.89	61,627.57	4.0	13.7	1,237.31	54.7	160.85	643.40	4,949.24	7,756.98	31,027.94	1,852.47	7,409.87	11,007.61	44,030.45
671	3448.100	Pipe insulation NPS 14	Linear meter	89	0	4.3	433.38	0.0	65.01	0.00	0.00	107.00	0.00	8.55	0.00	613.94	0.00	136.6	12.4	1,117.24	1,687.5	145.24	19,832.77	152,559.80	725.87	99,118.09	344.08	46,983.86	2,332.42	318,494.52
672	3448.101	Pipe identification NPS 14	Linear meter	89	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.2	0.6	50.39	25.7	6.55	302.42	2,326.27	12.06	556.89	14.27	658.82	83.28	3,844.39
673	3448.102	Pipe NPS 16 Sch.10S , Piping Specification SB11	m	114	115	10.7	1,162.59	1238.8	174.39	20,097.27	133,981.77	1,201.99	138,521.91	169.56	19,540.34	2,708.53	312,141.29	131.0	2.7	240.15	348.0	31.22	4,089.83	31,460.22	556.71	72,929.17	168.52	22,076.14	996.61	130,555.37
674	3448.103	Flange Welding Neck 150RF Sch.10S NPS 16 c/w hardware, Piping Specification SB11	ea	7	7	55.2	5,965.38	386.1	894.81	6,263.65	41,757.65	1,137.44	7,962.07	870.01	6,090.07	8,867.63	62,073.44	1,038.0	1.0	88.42	1,015.2	11.49	11,930.84	91,775.73	12.48	12,956.57	23.29	24,177.14	135.68	140,840.28
675	3448.104	Blind Flange 150RF NPS 16 c/w hardware, Piping Specification SB11	ea	1	1	55.2	5,965.38	55.2	894.81	894.81	5,965.38	1,243.66	1,243.66	870.01	870.01	8,973.85	8,973.85	1.0	1.8	164.98	1.8	21.45	21.45	164.98	647.57	647.57	169.15	169.15	1,003.14	1,003.14
676	3448.105	Reducing Tee BW Sch.10S NPS 16 x 16 x 14, Piping Specification SB11	ea	4	3	131.8	14,255.94	395.4	2,138.39	6,415.17	42,767.83	1,826.37	5,479.11	2,079.13	6,237.40	20,299.84	60,899.52	4.0	3.7	338.27	15.0	43.97	175.90	1,353.07	1,069.68	4,278.70	294.85	1,179.41	1,746.77	6,987.08
677	3448.106	Eccentric Reducer BW Sch.10S NPS 16 x 12, Piping Specification SB11	ea	1	2	88.8	9,609.12	177.7	1,441.37	2,882.73	19,218.23	1,094.24	2,188.48	1,401.43	2,802.85	13,546.15	27,092.29	1.0	1.1	98.44	1.1	12.80	12.80	98.44	757.71	757.71	175.68	175.68	1,044.63	1,044.63
678	3448.107	Victaulic Reducing Tee NPS 16 x 16 x 14, Style W77	ea	20	4	25.2	2,728.44	100.9	409.27	1,637.06	10,913.75	4,446.94	17,787.75	397.92	1,591.70	7,982.57	31,930.27	4.0	3.7	338.27	15.0	43.97	175.90	1,353.07	6,293.99	25,175.95	1,346.64	5,386.55	8,022.87	32,091.47
679	3448.108	Victaulic coupling NPS 16, Style W77	ea	20	12	4.7	505.30	56.1	75.80	909.54	6,063.63	662.72	7,952.65	73.70	884.34	1,317.51	15,810.16	29.0	1.9	168.94	54.2	21.96	636.91	4,899.32	545.65	15,823.76	149.56	4,337.14	886.11	25,697.13
680	3448.109	Weld NPS 16, Piping Specification SB11	ea	36	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.0	21.4	1,933.82	1,946.5	251.40	22,877.12	175,977.87	212.27	19,316.90	496.84	45,212.77	2,894.34	263,384.66
681	3448.110	Butterfly Valve NPS 16, Valve Specification VBU01	ea	3	3	45.7	4,944.57	137.2	741.68	2,225.05	14,833.70	2,797.93	8,393.78	721.13	2,163.40	9,205.31	27,615.93	3.0	15.6	1,413.14	46.9	183.71	551.13	4,239.43	2,327.09	6,981.28	800.61	2,401.84	4,724.56	14,173.68
682	3448.111	Pipe insulation NPS 16	Linear meter	114	0	4.8	484.29	0.0	72.64	0.00	0.00	407.32	0.00	8.55	0.00	972.81	0.00	131.7	10.0	907.95	1,322.4	118.03	15,542.00	119,553.82	809.44	106,582.13	323.82	42,638.96	2,159.25	284,316.91
683	3448.112	Pipe identification NPS 16	Linear meter	114	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.5	0.6	50.39	24.8	6.55	291.60	2,243.09	12.06	537.00	14.27	635.28	83.28	3,706.96
B&M-0184	Added	3" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear		13	2.9	313.90	37.2	47.09	602.92	4,019.45	101.30	1,297.12	45.78	586.21	508.06	6,505.70	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0185	Added	12" pipe, SS, Sch 40S, ASTM A312 TP304L, smls - BE	Linear		6	11.2	1,209.10	71.6	181.36	1,161.18	7,741.17	1,194.74	7,649.23	176.34	1,129.00	2,761.54	17,680.57	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0186	Added	6" pipe, SS, Sch 40S, ASTM A312 TP304L, smls - BE	Linear		6	6.1	662.68	39.2	99.40	636.41	4,242.76	380.45	2,435.79	96.65	618.78	1,239.17	7,933.74	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0187	Added	6" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear		6	4.6	499.92	29.6	74.99	480.10	3,200.68	109.89	703.60	72.91	466.80	757.71	4,851.17	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0188	Added	2" nipple x 4" long, brass, Sch 40, Smls - TOExPOE	ea		4	0.5	59.07	2.2	8.86	35.44	236.30	5.98	23.91	8.62	34.46	82.53	330.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0189	Added	2" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - PExTHD	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	41.67	41.67	8.62	8.62	118.22	118.22	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0190	Added	6" 90 elbow, SR, Sch 10S SS ASTM A403 WP 304 - BE	ea		4	30.8	3,335.37	123.4	500.30	2,001.22	13,341.47	318.90	1,275.58	486.44	1,945.76	4,641.01	18,564.03	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0191	Added	3" flange, WN, SS, B16.5 RF, Sch 10S, ASTM A182 F304L - 150#	ea		8	12.2	1,315.01	97.3	197.25	1,578.01	10,520.05	212.74	1,701.89	191.78	1,534.28	1,916.78	15,334.23	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0192	Added	16"x6" WOL, SS, ASTM A182-F304L	ea		6	22.7	2,457.51	136.3	368.63	2,211.76	14,745.08	992.51	5,955.09	358.41	2,150.47	4,177.07	25,062.40	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0193	Added	16"x2" SOL, SS, 3000#	ea		4	7.6	827.05	30.6	124.06	496.23	3,308.19	98.20	392.79	120.62	482.48	1,169.92	4,679.69	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0194	Added	16"x1" SOL, SS, 3000#	ea		4	3.9	425.34	15.7	63.80	255.20	1,701.36	43.11	172.42	62.03	248.13	594.28	2,377.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0195	Added	12"x2" SOL, FS, 3000#	ea		1	5.2	567.12	5.2	85.07	85.07	567.12	47.68	47.68	82.71	82.71	782.58	782.58	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0196	Added	12"x1.25" SOL, FS, 3000#	ea		1	3.3	354.45	3.3	53.17	53.17	354.45	29.86	29.86	51.69	51.69	489.17	489.17	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0197	Added	12"x3/4" SOL, FS, 3000#	ea		1	2.0	212.67	2.0	31.90	31.90	212.67	18.72	18.72	31.02	31.02	294.30	294.30	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0198	Added	14"x1/2" TOL, SS, 3000#	ea		4	2.2	236.30	8.7	35.44	141.78	945.20	24.93	99.71	34.46	137.85	331.13	1,324.54	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0199	Added	4"x1/2" TOL, SS, 3000#	ea		4	2.2	236.30	8.7	35.44	141.78	945.20	24.93	99.71	34.46	137.85	331.13	1,324.54	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0200	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		8	1.2	134.69	10.0	20.20	161.63	1,077.53	13.25	106.03	19.64	157.15	187.79	1,502.33	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0201	Added	1" weld adapter, 304SS, Vic-Press - 561	ea		16	5.9	638.01	94.4	95.70	1,531.22	10,208.13	153.82	2,461.16	93.05	1,488.79	980.58	15,689.30	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0202	Added	1" male adapter, 304SS, Vic-Press - 596	ea		8	5.9	638.01	47.2	95.70	765.61	5,104.07	150.83	1,206.64	93.05	744.39	977.59	7,820.71	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0203	Added	2"x1" reducing tee w/ threaded branch, 304SS, Vic-Press - S88	ea		12	11.1	1,205.13	133.7	180.77	2,169.23	14,461.52	266.81	3,201.75	175.76	2,109.12	1,828.47	21,941.62	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0204	Added	4"x3" conc reducer, Sch 10S, ASTM A403 WP304L - VICTAULIC 450SS	ea		8	4.7	510.41	37.8	76.56	612.49	4,083.25	163.74	1,309.95	74.44	595.52	825.15	6,601.21	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0205	Added	2" rigid coupling, Galv. DI, ASTM A536 - Victaulic 07	ea		4	0.3	37.22	1.4	5.58	22.33	148.87	47.12	188.47	5.43	21.71	95.35	381.38	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0206	Added	3" flexible coupling, A890 SS - VICTAULIC 77DX	ea		8	0.4	47.85	3.5	7.18	57.42	382.81	508.01	4,064.06	6.98	55.83	570.01	4,560.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0207	Added	6" flexible coupling, GALVANIZED, DUCTILE IRON, ASTM A-536 - VICTAULIC W77	ea		3	1.4	148.87	4.1	22.33	66.99	446.61	159.93	479.78	21.71	65.13	352.84	1,058.51	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0208	Added	14" flexible coupling, SS A351 CF8M - VICTAULIC 77S	ea		12	3.9	421.09	46.7	63.16	757.95	5,053.03	6,518.21	78,218.51	61.41	736.95	7,063.87	84,766.44	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0209	Added	3/4" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea		1	2.8	301.28	2.8	45.19	45.19	301.28	87.65	87.65	43.94	43.94	478.06	478.06	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0210	Added	2" Ball valve, full port, 600#, 2pc, forged brass body to ASTM B283 (C37700), brass ball/stem, [illegible]	ea		4	7.7	829.41	30.7	124.41	497.65	3,317.64	103.08	412.31	120.96	483.86	1,177.86	4,711.45	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0211	Added	14" BUTTERFLY VALVE LUG BODY SERIES 31 C/W GEAR OPERATOR - VBU01 (Supplied with Equipment)	ea		12	39.7	4,288.83	475.9	643.33	7,719.90	51,466.01	225.35	2,704.25	625.50	7,505.97	5,783.01	69,396.14	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0212	Added	6" pipe spools (Andritz Supplied)	Linear		30	4.5	488.29	137.6	73.24	2,233.03	14,886.86	25.66	782.22	71.21	2,171.15	658.40	20,073.26	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0213	Added	4" pipe spools (Andritz Supplied)	Linear		30	3.4	372.03	104.9	55.80	1,701.36	11,342.37	19.55	595.98	54.26	1,654.21	501.64	15,293.92	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0214	Added	6" valves/specials (Andritz Supplied)	ea		24	16.1	1,736.80	385.4	260.52	6,252.48	41,683.22	91.26	2,190.22	253.30	6,079.22	2,341.88	56,205.14	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0215	Added	4" valves/specials (Andritz Supplied)	ea		24	11.0	1,187.40	263.5	178.11	4,274.66	28,497.71	62.39	1,497.40	173.18	4,156.20	1,601.08	38,425.96	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0216	Added	Pipe Insulation - All Sizes	ea		1	5416.1	553,171.91	5416.1	82,975.79	82,975.79	553,171.91	165,271.49	165,271.49	0.00	0.00	801,419.18	801,419.18	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WSS (Service Water)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
684	3449.001	Service water pump 3449-P-6000 to 6002	ea	3	3	139.8	15,123.16	419.5	2,268.47	6,805.42	45,369.49	34,709.64	104,128.92	2,205.61	6,616.84	54,306.89	162,920.66	3.0	171.4	15,496.51	514.2	2,014.55	6,043.64	46,489.53	31,251.41	93,754.23	9,933.62	29,800.86	58,696.08	176,088.25
685	3449.002	Y-strainer 3449-STR-5000 / 5001 / 8000 to 8004	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	748.34	5,238.37	275.70	1,929.91	3,198.00	22,385.97	7.0	4.8	431.35	33.4	56.08	392.53	3,019.45	107.21	750.44	122.96	860.70	717.59	5,023.12
686	3449.003	Y-strainer 3449-STR-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	2,855.63	22,845.07	275.70	2,205.61	5,305.29	42,442.31	8.0	6.3	565.11	50.0	73.46	587.71	4,520.85	94.59	756.75	151.85	1,214.82	885.02	7,080.13
687	3449.004	Pump suction diffuser 3449-PSD-6000 to 6002	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	6,797.12	20,391.36	137.85	413.55	8,021.95	24,065.84	3.0	4.9	439.93	14.6	57.19	171.57	1,319.80	0.00	0.00	103.39	310.18	600.52	1,801.56
688	3449.005	Air vent 3449-AV-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 / 5000 / 5001 / 5002 / 8000 to 8004	ea	16	16	8.7	945.20	139.8	141.78	2,268.47	15,123.16	5,575.02	89,200.27	137.85	2,205.61	6,799.84	108,797.52	16.0	3.6	329.95	58.4	42.89	686.29	5,279.18	84.16	1,346.64	94.49	1,511.80	551.49	8,823.92
689	3449.006	Air vent 3449-AV-6000 / 8005	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	5,575.02	11,150.03	137.85	275.70	6,799.84	13,599.69	2.0	11.0	989.85	21.9	128.68	257.36	1,979.70	3,330.12	6,660.23	903.07	1,806.14	5,351.71	10,703.43
690	3449.007	Pressure indicator 3449-PI-6000 to 6005	ea	6	6	8.7	945.20	52.4	141.78	850.68	5,671.19	700.54	4,203.22	137.85	827.10	1,925.36	11,552.19	6.0	3.7	329.95	21.9	42.89	257.36	1,979.70	84.10	504.63	94.48	566.86	551.42	3,308.55
691	3449.008	Pressure transmitter 3449-PT-6000 / 6001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	3,620.64	7,241.27	137.85	275.70	4,845.46	9,690.93	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	7,963.56	15,927.12	1,758.36	3,516.71	10,467.61	20,935.21
691.1	691.100	**HVAC Temperature transmitter (supply by HVAC and installed by Piping)**	ea	30	30	8.7	945.20	262.2	141.78	4,253.39	28,355.93	1,530.45	45,913.35	137.85	4,135.52	2,755.27	82,658.20	1.0	109.5	9,898.47	109.5	1,286.80	1,286.80	9,898.47	0.00	0.00	2,326.29	2,326.29	13,511.56	13,511.56
691.2	691.200	**HVAC Pressure transmitter (supply by HVAC and installed by Piping)**	ea	30	30	8.7	945.20	262.2	141.78	4,253.39	28,355.93	652.72	19,581.75	137.85	4,135.52	1,877.55	56,326.59	1.0	120.4	10,888.32	120.4	1,415.48	1,415.48	10,888.32	0.00	0.00	2,558.92	2,558.92	14,862.72	14,862.72
692	3449.009	Variable frequency drive 3449-VFD-6000 to 6002	ea	3	3	52.4	5,671.19	157.3	850.68	2,552.03	17,013.56	297.99	893.97	827.10	2,481.31	7,646.96	22,940.87	0.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
693	3449.010	Control panel 3449-CP-6000 to 6003	ea	4	4	104.9	11,342.37	419.5	1,701.36	6,805.42	45,369.49	11,995.98	47,983.92	1,654.21	6,616.84	26,693.92	106,775.66	4.0	18.6	1,678.86	74.3	218.25	873.01	6,715.43	20,859.52	83,438.09	4,594.12	18,376.46	27,350.75	109,402.99
694	3449.011	Pipe NPS 1/2 Sch.10S , Piping Specification SB11	m	2	0	1.0	104.63	0.0	15.70	0.00	0.00	23.57	0.00	15.26	0.00	159.16	0.00	5.8	1.7	150.17	9.7	19.52	113.72	874.78	6.24	36.33	36.55	212.90	212.47	1,237.73
695	3449.012	Pipe NPS 1/2 Sch.40S, Piping Specification SB11	m	1	0	1.0	104.63	0.0	15.70	0.00	0.00	23.57	0.00	15.26	0.00	159.16	0.00	1.0	48.4	4,372.51	48.4	568.43	568.43	4,372.51	556.87	556.87	1,139.72	1,139.72	6,637.52	6,637.52
696	3449.013	Pipe NPS 1/2 Sch.80S, Piping Specification SB11	m	1	0	1.0	104.63	0.0	15.70	0.00	0.00	23.57	0.00	15.26	0.00	159.16	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	3.72	0.00	12.47	0.00	72.59	0.00
697	3449.014	Elbow 90 degrees SW Class 3000 NPS 1/2, Piping Specification SB11	ea	2	0	5.6	602.56	0.0	90.38	0.00	0.00	117.55	0.00	87.88	0.00	898.37	0.00	14.0	0.6	54.17	8.4	7.04	98.58	758.33	4.26	59.66	13.59	190.23	79.06	1,106.80
698	3449.015	Olet FNPT Sch.40S NPS 1/2, Piping Specification SB11	ea	26	16	2.2	236.30	35.0	35.44	567.12	3,780.79	24.93	398.84	34.46	551.40	331.13	5,298.15	31.0	0.6	53.75	18.4	6.99	216.63	1,666.38	10.68	331.04	14.78	458.27	86.20	2,672.33
699	3449.016	Olet SW Class 3000 NPS 1/2, Piping Specification SB11	ea	6	0	2.2	236.30	0.0	35.44	0.00	0.00	24.93	0.00	34.46	0.00	331.13	0.00	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.54	10.54	13.84	13.84	80.78	80.78
700	3449.017	Union PE/NPT Sch.40S NPS 1/2, Piping Specification SB11	ea	5	15	4.3	460.78	63.9	69.12	1,036.76	6,911.76	422.21	6,333.21	67.20	1,008.03	1,019.32	15,289.77	24.0	0.6	53.61	14.2	6.97	167.25	1,286.52	9.76	234.35	14.56	349.54	84.90	2,037.66
701	3449.018	Weld NPS 1/2, Piping Specification SB11	ea	84	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	149.0	0.8	75.40	124.3	9.80	1,460.54	11,234.91	195.52	29,132.96	57.07	8,503.35	337.80	50,331.75
702	3449.019	Ball Valve NPS 1/2, Valve Specification VBA11	ea	16	15	3.7	400.53	55.6	60.08	901.19	6,007.91	107.23	1,608.44	58.41	876.21	626.25	9,393.76	20.0	3.2	287.04	63.5	37.32	746.31	5,740.84	104.76	2,095.30	88.55	1,771.01	517.67	10,353.46
703	3449.020	Pipe insulation NPS 1/2	Linear meter	4	0	1.4	142.39	0.0	21.36	0.00	0.00	38.46	0.00	8.55	0.00	210.77	0.00	113.4	3.3	300.88	377.4	39.11	4,434.96	34,115.07	165.85	18,805.17	86.70	9,830.10	592.54	67,185.29
704	3449.021	Pipe identification NPS 1/2	Linear meter	4	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.3	0.6	50.35	21.4	6.55	250.87	1,929.79	12.06	462.42	14.26	546.63	83.22	3,189.71
705	3449.022	Pipe NPS 1/2 Sch.40 , Piping Specification PA02	m	18	46	1.1	116.26	49.2	17.44	797.51	5,316.74	8.79	402.18	16.96	775.41	159.45	7,291.84	108.0	4.4	397.31	474.6	51.65	5,578.30	42,910.01	3.26	352.47	94.03	10,155.44	546.26	58,996.22
706	3449.023	Pipe NPS 1/2 Sch.80, Piping Specification PA02	m	1	0	1.1	116.26	0.0	17.44	0.00	0.00	8.79	0.00	16.96	0.00	159.45	0.00	9.0	1.0	87.98	8.8	11.44	102.91	791.60	4.30	38.72	21.54	193.82	125.26	1,127.05
707	3449.024	Elbow 90 degrees Sch.40 NPS 2, Piping Specification PA02	ea	13	30	1.2	134.69	37.4	20.20	606.11	4,040.72	8.30	248.95	19.64	589.31	182.84	5,485.09	62.0	0.3	29.27	20.1	3.81	235.91	1,814.72	0.57	35.48	6.99	433.63	40.64	2,519.74
708	3449.025	Elbow 45 degrees Sch.40 NPS 2, Piping Specification PA02	ea	8	0	1.8	191.40	0.0	28.71	0.00	0.00	18.68	0.00	27.91	0.00	266.70	0.00	9.0	0.2	16.48	1.6	2.14	19.28	148.34	0.80	7.21	4.04	36.32	23.46	211.15
709	3449.026	Union Sch.40 NPS 1/2, Piping Specification PA02	ea	5	15	1.2	134.69	18.7	20.20	303.05	2,020.36	11.39	170.80	19.64	294.66	185.92	2,788.87	11.0	0.3	30.00	3.7	3.90	42.89	329.95	4.93	54.20	8.04	88.45	46.86	515.49
710	3449.027	Tee Sch.40 NPS 1/2, Piping Specification PA02	ea	2	0	2.4	255.20	0.0	38.28	0.00	0.00	23.46	0.00	37.22	0.00	354.17	0.00	2.0	0.6	57.54	1.3	7.48	14.96	115.07	0.62	1.25	13.65	27.29	79.29	158.57
711	3449.028	Pipe identification NPS 1/2	Linear meter	19	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
712	3449.029	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	70	205	1.1	116.26	220.2	17.44	3,572.85	23,818.98	22.98	4,707.19	16.96	3,473.84	173.63	35,572.86	206.0	1.8	166.41	379.2	21.63	4,456.58	34,281.42	7.99	1,645.02	40.72	8,387.82	236.75	48,770.84
713	3449.030	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	m	3	0	1.1	116.26	0.0	17.44	0.00	0.00	27.68	0.00	16.96	0.00	178.33	0.00	2.0	0.4	33.27	0.7	4.33	8.65	66.54	13.14	26.29	10.47	20.93	61.20	122.41
714	3449.031	Olet SW Class 3000 NPS 3/4, Piping Specification SB11	ea	36	1	2.8	307.19	2.8	46.08	46.08	307.19	36.90	36.90	44.80	44.80	434.97	434.97	34.0	0.5	44.65	16.8	5.80	197.35	1,518.04	9.76	331.73	12.46	423.54	72.67	2,470.66
715	3449.032	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	109	58	5.6	602.56	323.1	90.38	5,242.30	34,948.68	117.55	6,817.68	87.88	5,097.03	898.37	52,105.69	111.0	0.6	53.95	66.3	7.01	778.57	5,989.00	5.37	595.75	13.76	1,527.45	80.10	8,890.77
716	3449.033	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	29	30	5.6	602.56	167.1	90.38	2,711.54	18,076.91	94.50	2,835.12	87.88	2,636.40	875.33	26,259.95	24.0	0.3	26.80	7.1	3.48	83.62	643.26	8.45	202.75	8.00	191.99	46.73	1,121.63
717	3449.034	Elbow 45 degrees BE Sch.10s NPS 3/4, Piping Specification SB11	ea	2	0	5.6	602.56	0.0	90.38	0.00	0.00	94.50	0.00	87.88	0.00	875.33	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.74	0.00	9.58	0.00	55.92	0.00
718	3449.035	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	21	0	5.6	602.56	0.0	90.38	0.00	0.00	482.63	0.00	87.88	0.00	1,263.46	0.00	55.0	0.6	53.99	32.9	7.02	386.04	2,969.55	88.82	4,885.02	30.57	1,681.37	180.40	9,921.98
719	3449.036	Reducing Tee SW Class 3000 NPS 3/4 x 3/4 x 1/2, Piping Specification SB11	ea	1	0	11.1	1,205.13	0.0	180.77	0.00	0.00	196.49	0.00	175.76	0.00	1,758.14	0.00	1.0	1.3	115.07	1.3	14.96	14.96	115.07	7.11	7.11	28.47	28.47	165.61	165.61
720	3449.037	Quick connect NPS 3/4, Hansen Series HK	ea	39	36	2.8	301.28	100.3	45.19	1,626.92	10,846.14	87.65	3,155.42	43.94	1,581.84	478.06	17,210.33	0.0	2.6	231.52	0.0	30.10	0.00	0.00	11.67	0.00	56.76	0.00	330.05	0.00
721	3449.038	Weld NPS 3/4, Piping Specification SB11	ea	506	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	665.0	0.6	54.11	398.0	7.03	4,677.54	35,981.07	165.90	110,321.96	45.86	30,495.32	272.90	181,475.89
722	3449.039	Victaulic coupling NPS 3/4, Style 77	ea	9	0	0.3	37.22	0.0	5.58	0.00	0.00	27.67	0.00	5.43	0.00	75.89	0.00	9.0	0.6	53.14	5.3	6.91	62.18	478.28	282.98	2,546.85	69.46	625.15	412.50	3,712.46
723	3449.040	Ball Valve NPS 3/4, Valve Specification VBA11	ea	51	66	5.5	595.47	363.4	89.32	5,895.20	39,301.32	136.15	8,985.64	86.85	5,731.83	907.79	59,913.99	72.0	3.2	285.05	227.0	37.06	2,668.04	20,523.39	99.78	7,183.89	87.08	6,269.61	508.96	36,644.92
724	3449.041	Pipe insulation NPS 3/4	Linear meter	74	0	1.4	142.38	0.0	21.36	0.00	0.00	38.18	0.00	8.55	0.00	210.47	0.00	206.4	3.3	301.39	687.9	39.18	8,085.04	62,192.61	171.04	35,294.36	87.83	18,124.29	599.45	123,696.31
725	3449.042	Pipe identification NPS 3/4	Linear meter	74	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.8	0.6	50.54	21.7	6.57	255.20	1,963.06	12.06	468.63	14.31	555.70	83.47	3,242.58
726	3449.043	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	28	45	1.4	151.14	62.6	22.67	1,016.03	6,773.52	36.45	1,633.37	22.04	987.87	232.30	10,410.80	22.0	2.2	200.20	48.7	26.03	572.57	4,404.40	285.90	6,289.87	104.61	2,301.41	616.74	13,568.26
727	3449.044	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	6	0	1.4	151.14	0.0	22.67	0.00	0.00	39.80	0.00	22.04	0.00	235.65	0.00	14.0	0.6	54.17	8.4	7.04	98.58	758.33	13.15	184.04	15.38	215.26	89.73	1,256.21
728	3449.045	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	6	10	5.9	638.01	59.0	95.70	957.01	6,380.08	580.55	5,805.53	93.05	930.49	1,407.31	14,073.12	25.0	0.6	54.12	15.0	7.04	175.90	1,353.07	110.99	2,774.72	35.06	876.62	207.21	5,180.31
729	3449.046	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	41	26	3.9	425.34	102.3	63.80	1,658.82	11,058.81	43.11	1,120.73	62.03	1,612.85	594.28	15,451.22	39.0	0.5	48.66	21.0	6.33	246.73	1,897.90	13.35	520.61	14.12	550.84	82.46	3,216.08

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
730	3449.047	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	6	9	5.9	638.01	53.1	95.70	861.31	5,742.08	125.39	1,128.54	93.05	837.44	952.15	8,569.37	4.0	0.6	53.72	2.4	6.98	27.93	214.88	8.11	32.45	14.26	57.04	83.08	332.30
731	3449.048	Weld NPS 1 Piping Specification SB11	ea	127	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	153.0	0.7	63.84	108.0	8.30	1,269.68	9,766.76	220.51	33,737.73	59.34	9,078.65	351.98	53,852.82
732	3449.049	Victaulic coupling NPS 1, Style 77	ea	1	0	0.3	37.22	0.0	5.58	0.00	0.00	27.67	0.00	5.43	0.00	75.89	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	23.70	0.00	20.39	0.00	119.28	0.00
733	3449.050	Ball Valve NPS 1, Valve Specification VBA11	ea	8	21	7.3	793.97	154.2	119.09	2,500.99	16,673.29	202.60	4,254.50	115.79	2,431.69	1,231.45	25,860.47	20.0	3.1	278.79	61.7	36.24	724.86	5,575.87	158.73	3,174.53	97.48	1,949.53	571.24	11,424.80
734	3449.051	Pipe insulation NPS 1	Linear meter	34	0	1.4	145.28	0.0	21.79	0.00	0.00	41.47	0.00	8.55	0.00	217.10	0.00	31.4	3.3	298.12	103.5	38.76	1,216.69	9,359.19	183.05	5,746.62	89.67	2,815.11	609.58	19,137.61
735	3449.052	Pipe identification NPS 1	Linear meter	34	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.6	0.6	49.77	5.8	6.47	68.67	528.20	12.06	128.03	14.13	149.92	82.43	874.82
736	3449.053	Pipe NPS 1-1/4 Sch.10S, Piping Specification SB11	m	3	0	1.8	197.64	0.0	29.65	0.00	0.00	44.87	0.00	28.82	0.00	300.98	0.00	5.0	6.7	603.89	33.4	78.51	392.53	3,019.45	3,656.33	18,281.67	878.04	4,390.18	5,216.77	26,083.84
737	3449.054	Pipe NPS 1-1/4 Sch.40S, Piping Specification SB11	m	3	0	1.8	197.64	0.0	29.65	0.00	0.00	44.87	0.00	28.82	0.00	300.98	0.00	18.0	0.5	49.52	9.9	6.44	115.84	891.41	13.15	236.63	14.29	257.14	83.39	1,501.06
738	3449.055	Coupling Stainless Steel Compression MNPT 1.25inx1.25in	ea	4	0	8.5	921.57	0.0	138.24	0.00	0.00	171.71	0.00	134.40	0.00	1,365.92	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	32.24	0.00	22.13	0.00	129.56	0.00
739	3449.056	Victaulic coupling NPS 1-1/4, Style 77	ea	8	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	34.54	0.00	22.60	0.00	132.33	0.00
740	3449.057	Victaulic coupling NPS 1-1/4, Style 77DX	ea	2	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	34.54	0.00	22.60	0.00	132.33	0.00
741	3449.058	Pipe insulation NPS 1-1/4	Linear meter	6	0	1.4	146.29	0.0	21.94	0.00	0.00	44.16	0.00	8.55	0.00	220.95	0.00	4.6	3.7	330.21	16.7	42.93	196.26	1,509.73	207.59	949.11	100.30	458.56	681.03	3,113.67
742	3449.059	Pipe identification NPS 1-1/4	Linear meter	6	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.6	53.82	0.9	7.00	10.81	83.18	12.06	18.64	15.08	23.31	87.96	135.95
743	3449.060	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	131	198	1.8	197.64	362.7	29.65	5,884.03	39,226.88	44.87	8,906.06	28.82	5,720.98	300.98	59,737.96	173.0	2.1	191.11	365.7	24.84	4,297.99	33,061.45	28.06	4,854.41	50.56	8,747.24	294.57	50,961.09
744	3449.061	Pipe NPS 1-1/2 Sch.40S, Piping Specification SB11	m	1	0	1.8	197.64	0.0	29.65	0.00	0.00	44.87	0.00	28.82	0.00	300.98	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	11.47	0.00	17.95	0.00	104.62	0.00
745	3449.062	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	90	100	8.2	886.12	819.3	132.92	13,291.84	88,612.28	155.49	15,548.78	129.24	12,923.51	1,303.76	130,376.42	91.0	0.6	53.84	54.2	7.00	636.91	4,899.32	19.98	1,817.97	16.68	1,517.43	97.49	8,871.64
746	3449.063	Elbow 45 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	21	2	8.2	886.12	16.4	132.92	265.84	1,772.25	157.28	314.57	129.24	258.47	1,305.56	2,611.12	17.0	0.3	27.16	5.1	3.53	60.01	461.65	19.08	324.41	10.22	173.82	59.99	1,019.89
747	3449.064	Union SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	6	13	8.2	886.12	106.5	132.92	1,727.94	11,519.60	993.39	12,914.04	129.24	1,680.06	2,141.66	27,841.63	77.0	0.6	54.00	46.0	7.02	540.49	4,157.64	78.99	6,082.51	28.59	2,201.66	168.60	12,982.30
748	3449.065	Tee SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	30	22	11.1	1,205.13	245.1	180.77	3,976.92	26,512.79	236.59	5,204.95	175.76	3,866.71	1,798.24	39,561.37	24.0	1.2	107.90	28.7	14.03	336.66	2,589.68	26.19	628.55	30.63	735.15	178.75	4,290.04
749	3449.066	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 1/2, Piping Specification SB11	ea	1	37	11.1	1,205.13	412.3	180.77	6,688.45	44,589.70	196.49	7,270.09	175.76	6,503.11	1,758.14	65,051.36	1.0	1.3	115.07	1.3	14.96	14.96	115.07	63.08	63.08	39.75	39.75	232.86	232.86
750	3449.067	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 3/4, Piping Specification SB11	ea	30	2	11.1	1,205.13	22.3	180.77	361.54	2,410.25	197.99	395.97	175.76	351.52	1,759.64	3,519.28	11.0	1.2	108.01	13.1	14.04	154.45	1,188.10	59.52	654.67	37.37	411.02	218.93	2,408.24
751	3449.068	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 1, Piping Specification SB11	ea	2	5	11.1	1,205.13	55.7	180.77	903.85	6,025.64	199.18	995.91	175.76	878.80	1,760.84	8,804.19	14.0	1.2	107.24	16.6	13.94	195.18	1,501.40	63.08	883.07	37.90	530.64	222.16	3,110.28
752	3449.069	Concentric Reducer SW Class 3000 NPS 1-1/2 x 1, Piping Specification SB11	ea	8	8	8.2	886.12	65.5	132.92	1,063.35	7,088.99	151.00	1,207.99	129.24	1,033.88	1,299.28	10,394.20	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
753	3449.070	Concentric Reducer SW Class 3000 NPS 1-1/2 x 1-1/4, Piping Specification SB11	ea	2	24	8.2	886.12	196.6	132.92	3,190.04	21,266.95	175.54	4,212.90	129.24	3,101.64	1,323.81	31,771.53	5.0	0.6	52.68	2.9	6.85	34.24	263.40	10.25	51.25	14.44	72.22	84.22	421.11
754	3449.071	Eccentric Reducer SW Class 3000 NPS 1-1/2 x 1-1/4, Piping Specification SB11	ea	2	0	18.3	1,977.83	0.0	296.67	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	1.0	0.7	66.54	0.7	8.65	8.65	66.54	10.39	10.39	17.72	17.72	103.30	103.30
755	3449.072	Concentric Reducer SW Class 3000 NPS 2 x 1-1/2, Piping Specification SB11	ea	2	4	8.5	921.57	34.1	138.24	552.94	3,686.27	177.40	709.60	134.40	537.62	1,371.61	5,486.43	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
756	3449.073	Olet SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	8	0	7.6	827.05	0.0	124.06	0.00	0.00	98.20	0.00	120.62	0.00	1,169.92	0.00	9.0	0.4	36.66	3.7	4.77	42.89	329.95	31.51	283.57	14.96	134.64	87.89	791.05
757	3449.074	Weld NPS 1-1/2 Piping Specification SB11	ea	532	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	543.0	0.6	51.38	308.6	6.68	3,626.65	27,897.32	244.71	132,879.21	61.19	33,225.39	363.96	197,628.57
758	3449.075	Victaulic coupling NPS 1-1/2, Style 77	ea	18	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
759	3449.076	Victaulic coupling NPS 1-1/2, Style 77DX	ea	8	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
760	3449.077	Victaulic coupling NPS 1-1/2, Style 489	ea	3	0	0.5	58.48	0.0	8.77	0.00	0.00	145.16	0.00	8.53	0.00	220.94	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	192.51	0.00	50.50	0.00	299.40	0.00
761	3449.078	Victaulic concentric reducer NPS 1-1/2 x 1-1/4, Style 50	ea	11	0	3.0	322.55	0.0	48.38	0.00	0.00	383.55	0.00	47.04	0.00	801.53	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	54.32	0.00	22.66	0.00	133.37	0.00
762	3449.079	Victaulic Tee NPS 1-1/2, Style 420SS	ea	2	0	4.7	506.86	0.0	76.03	0.00	0.00	307.84	0.00	73.92	0.00	964.66	0.00	0.0	0.9	83.18	0.0	10.81	0.00	0.00	260.14	0.00	71.92	0.00	426.05	0.00
763	3449.080	Ball Valve NPS 1-1/2, Valve Specification VBA11	ea	23	21	11.0	1,187.40	230.6	178.11	3,740.32	24,935.50	295.09	6,196.86	173.18	3,636.68	1,833.78	38,509.35	29.0	3.2	287.31	92.2	37.35	1,083.15	8,331.90	236.58	6,860.83	115.15	3,339.38	676.39	19,615.26
764	3449.081	Pipe insulation NPS 1-1/2	Linear meter	132	0	1.5	147.36	0.0	22.10	0.00	0.00	43.18	0.00	8.55	0.00	221.20	0.00	172.8	3.3	302.21	577.7	39.29	6,789.77	52,228.98	202.04	34,917.34	94.22	16,283.10	637.76	110,219.19
765	3449.082	Pipe identification NPS 1-1/2	Linear meter	132	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.4	0.6	50.54	32.7	6.57	383.88	2,952.91	12.06	704.80	14.31	835.87	83.49	4,877.46
766	3449.083	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	276	480	2.3	244.14	1084.0	36.62	17,585.11	117,234.05	56.83	27,290.16	35.61	17,097.80	373.21	179,207.12	480.0	7.0	631.92	3,355.1	82.15	39,431.80	303,321.54	35.47	17,026.46	155.65	74,712.89	905.19	434,492.69
767	3449.084	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	29	39	8.5	921.57	332.3	138.24	5,391.17	35,941.14	171.71	6,696.86	134.40	5,241.77	1,365.92	53,270.94	45.0	0.6	53.88	26.8	7.00	315.21	2,424.71	55.11	2,479.98	23.76	1,069.13	139.76	6,289.03
768	3449.085	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	5	6	8.5	921.57	51.1	138.24	829.41	5,529.41	172.91	1,037.47	134.40	806.43	1,367.12	8,202.71	5.0	0.3	26.34	1.5	3.42	17.12	131.71	34.72	173.62	13.18	65.91	77.67	388.36
769	3449.086	Elbow 90 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	3	0	8.5	921.57	0.0	138.24	0.00	0.00	171.71	0.00	134.40	0.00	1,365.92	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.35	0.00	17.31	0.00	100.85	0.00
770	3449.087	Elbow 45 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	1	0	8.5	921.57	0.0	138.24	0.00	0.00	172.91	0.00	134.40	0.00	1,367.12	0.00	1.0	0.4	33.27	0.4	4.33	4.33	33.27	3.61	3.61	8.54	8.54	49.75	49.75
771	3449.088	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	1	0	7.6	827.05	0.0	124.06	0.00	0.00	98.20	0.00	120.62	0.00	1,169.92	0.00	2.0	0.5	41.59	0.9	5.41	10.81	83.18	23.81	47.63	14.57	29.14	85.38	170.76
772	3449.089	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	2	8	8.5	921.57	68.2	138.24	1,105.88	7,372.54	1,191.56	9,532.47	134.40	1,075.24	2,385.77	19,086.13	28.0	0.6	53.62	16.6	6.97	195.18	1,501.40	17.36	486.20	16.10	450.73	94.05	2,633.51
773	3449.090	Eccentric Reducer SW Class 3000 NPS 2 x 3/4, Piping Specification SB11	ea	1	0	18.3	1,977.83	0.0	296.67	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.00	0.00	17.25	0.00	100.44	0.00
774	3449.091	Reducing Tee SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	9	19	11.1	1,205.13	211.7	180.77	3,434.61	22,897.41	238.38	4,529.30	175.76	3,339.43	1,800.04	34,200.76	9.0	1.2	108.13	10.8	14.06	126.52	973.21	95.68	861.08	44.68	402.08	262.54	2,362.89
775	3449.092	Reducing Tee SW Class 3000 NPS 2 x 2 x 1-1/2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	283.87	1,135.48	175.76	703.04	1,845.53	7,382.10	4.0	1.2	107.09	4.7	13.92	55.69	428.37	95.68	382.71	44.43	177.73	261.12	1,044.50
776	3449.093	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	3	3	4.6	496.23	13.8	74.43	223.30	1,488.69	176.90	530.69	72.37	217.11	819.93	2,459.79	6.0	0.7	60.54	4.0	7.87	47.22	363.23	6.48	38.86	15.53	93.18	90.41	542.49
777	3449.094	Weld NPS 2 Piping Specification SB11	ea	165	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	414.0	2.4	219.13	1,003.5	28.49	11,793.51	90,719.32	103.52	42,858.52	71.92	29,776.37	423.06	175,147.72
778	3449.095	Victaulic elbow 90 degrees NPS 2, Style 410SS	ea	13	5	3.0	322.55	14.9	48.38	241.91	1,612.74	133.26	666.30	47.04	235.21	551.23	2,756.17	3.0	7.2	648.81	21.5	84.35	253.04	1,946.43	61.90	185.70	164.94	494.82	960.00	2,879.99
779	3449.096	Victaulic elbow 45 degrees NPS 2, Style 411SS	ea	2	0	3.8	408.33	0.0	61.25	0.00	0.00	168.10	0.00	59.55	0.00	697.23	0.00	2.0	0.3	24.96	0.6	3.24	6.49	49.91	98.65	197.30	25.73	51.46	152.58	305.16
780	3449.097	Victaulic coupling NPS 2, Style 89	ea	40	38	0.4	47.85	16.8	7.18	272.75	1,818.32	63.37	2,408.05	6.98	265.19	125.38	4,764.31	39.0	0.6	53.71	23.2	6.98	272.32	2,094.77	56.76	2,213.82	24.05	938.00	141.51	5,518.91
781	3449.098	Victaulic coupling NPS 2, Style 77DX	ea	24	35	0.3	37.22	12.0	5.58	195.39	1,302.60	457.39	16,008.65	5.43	189.98	505.62	17,696.62	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
782	3449.099	Victaulic coupling NPS 2, Style 77	ea	7	0	0.4	47.85	0.0	7.18	0.00	0.00	39.99	0.00	6.98	0.00	102.00	0.00	61.0	0.6	53.82	36.3	7.00	426.77	3,282.85	424.83	25,914.57	98.18	5,988.79	583.82	35,612.98
783	3449.100	Victaulic coupling NPS 2, Style 07	ea	3	0	0.3	37.22	0.0	5.58	0.00	0.00	47.12	0.00	5.43	0.00	95.35	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
784	3449.101	Victaulic tee NPS 2, Style 420SS	ea	3	3	4.4	471.42	13.1	70.71	212.14	1,414.25	305.98	917.94	68.75	206.26	916.86	2,750.59	3.0	1.2	109.98	3.7	14.30	42.89	329.95	262.32	786.97	78.66	235.98	465.26	1,395.79
785	3449.102	Victaulic concentric reducer NPS 2 x 3/4, Style 50	ea	6	6	3.0	322.55	17.9	48.38	290.29	1,935.29	383.55	2,301.32	47.04	282.25	801.53	4,809.16	7.0	0.7	65.95	5.1	8.57	60.01	461.65	327.59	2,293.14	81.45	570.16	483.57	3,384.96
786	3449.103	Pipe insulation NPS 2	Linear meter	276	0	1.5	149.21	0.0	22.38	0.00	0.00	45.02	0.00	8.55	0.00	225.16	0.00	479.1	3.6	324.90	1,722.0	42.24	20,237.74	155,674.92	211.94	101,549.72	100.23	48,025.33	679.31	325,487.71
787	3449.104	Pipe identification NPS 2	Linear meter	276	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	162.0	0.6	50.51	90.5	6.57	1,063.68	8,182.18	12.06	1,954.06	14.30	2,316.34	83.45	13,516.27
788	3449.105	Pipe NPS 2-1/2 Sch.10S , Piping Specification SB11	m	192	192	2.6	279.02	495.5	41.85	8,038.91	53,592.71	79.30	15,231.67	40.69	7,816.14	440.87	84,679.42	235.0	1.9	168.41	437.8	21.89	5,145.04	39,577.24	69.53	16,338.74	53.58	12,590.65	313.41	73,651.67
789	3449.106	Elbow 90 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	74	74	18.3	1,977.83	1353.3	296.67	21,953.87	146,359.13	116.05	8,587.48	288.45	21,345.50	2,679.00	198,245.98	74.0	0.5	47.72	39.1	6.20	459.03	3,531.00	9.60	710.67	13.15	972.92	76.67	5,673.62
790	3449.107	Elbow 45 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	5	5	18.3	1,977.83	91.4	296.67	1,483.37	9,889.13	110.90	554.52	288.45	1,442.26	2,673.86	13,369.29	5.0	0.3	23.01	1.3	2.99	14.96	115.07	5.78	28.89	6.57	32.86	38.36	191.78
791	3449.108	Tee BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	16	16	27.4	2,963.19	438.4	444.48	7,111.67	47,411.11	179.54	2,872.70	432.16	6,914.59	4,019.38	64,310.08	16.0	1.1	95.92	17.0	12.47	199.51	1,534.67	30.00	480.06	28.58	457.33	166.97	2,671.56
792	3449.109	Reducing Tee BW Sch.10S NPS 2-1/2 x 2-1/2 x 2, Piping Specification SB11	ea	1	1	27.4	2,963.19	27.4	444.48	444.48	2,963.19	592.65	592.65	432.16	432.16	4,432.49	4,432.49	0.0	1.6	148.34	0.0	19.28	0.00	0.00	21.57	0.00	39.20	0.00	228.40	0.00
793	3449.110	Union SW Class 3000 NPS 2-1/2, Piping Specification SB11	ea	2	0	10.2	1,105.88	0.0	165.88	0.00	0.00	1,429.87	0.00	161.29	0.00	2,862.92	0.00	16.0	0.5	47.40	8.4	6.16	98.58	758.33	134.73	2,155.60	38.26	612.21	226.55	3,624.72
794	3449.111	Concentric Reducer BW Sch.10S NPS 2-1/2 x 1-1/2, Piping Specification SB11	ea	2	0	8.5	921.57	0.0	138.24	0.00	0.00	448.22	0.00	134.40	0.00	1,642.43	0.00	1.0	0.7	66.54	0.7	8.65	8.65	66.54	40.63	40.63	23.83	23.83	139.65	139.65
795	3449.112	Concentric Reducer BW Sch.10S NPS 4 x 2-1/2, Piping Specification SB11	ea	1	0	17.0	1,843.14	0.0	276.47	0.00	0.00	896.44	0.00	268.81	0.00	3,284.86	0.00	1.0	0.6	49.91	0.6	6.49	6.49	49.91	17.79	17.79	15.32	15.32	89.50	89.50
796	3449.113	Flange Welding Neck 150RF Sch.10S NPS 2-1/2 c/w hardware, Piping Specification SB11	ea	40	40	10.9	1,180.32	436.5	177.05	7,081.89	47,212.82	130.45	5,217.97	172.14	6,885.64	1,659.95	66,398.13	40.0	9.0	810.45	358.6	105.36	4,214.36	32,418.17	47.11	1,884.27	199.95	7,998.09	1,162.87	46,514.89
797	3449.114	Flange Slip-On 150RF NPS 2-1/2 c/w hardware, Piping Specification SB11	ea	8	8	10.9	1,180.32	87.3	177.05	1,416.38	9,442.52	105.30	842.38	172.14	1,377.13	1,634.80	13,078.41	14.0	22.7	2,049.21	317.3	266.40	3,729.56	28,688.92	88.20	1,234.76	499.35	6,990.91	2,903.15	40,644.16
798	3449.115	Olet BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	11	0	9.2	992.46	0.0	148.87	0.00	0.00	117.84	0.00	144.74	0.00	1,403.91	0.00	11.0	1.0	91.50	11.1	11.89	130.84	1,006.48	23.53	258.81	26.24	288.64	153.16	1,684.77
799	3449.116	Weld NPS 2-1/2 Piping Specification SB11	ea	316	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	492.0	2.8	250.58	1,363.7	32.58	16,027.16	123,285.86	138.03	67,911.86	86.29	42,457.05	507.48	249,681.93
800	3449.117	Victaulic Elbow 90 degrees NPS 2-1/2, Style 410SS	ea	31	30	3.1	340.27	94.4	51.04	1,531.22	10,208.13	196.52	5,895.59	49.63	1,488.79	637.46	19,123.73	31.0	0.5	47.90	16.4	6.23	193.02	1,484.76	168.30	5,217.37	45.14	1,399.33	267.56	8,294.48
801	3449.118	Victaulic Elbow 45 degrees NPS 2-1/2, Style 411SS	ea	12	0	3.8	408.33	0.0	61.25	0.00	0.00	168.10	0.00	59.55	0.00	697.23	0.00	14.0	0.4	37.73	5.8	4.90	68.67	528.20	150.62	2,108.63	39.19	548.66	232.44	3,254.15
802	3449.119	Victaulic coupling NPS 2-1/2, Style 77DX	ea	95	118	0.3	37.22	40.6	5.58	658.74	4,391.62	479.24	56,549.77	5.43	640.49	527.46	62,240.63	0.0	0.7	66.54	0.0	8.65	0.00	0.00	34.54	0.00	22.60	0.00	132.33	0.00
803	3449.120	Victaulic coupling NPS 2-1/2, Style 77	ea	2	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00	118.0	0.5	47.82	62.4	6.22	733.51	5,642.41	445.20	52,533.75	100.87	11,902.44	600.10	70,812.11
804	3449.121	Victaulic coupling NPS 2-1/2, Style 07	ea	13	6	0.4	47.85	2.7	7.18	43.07	287.10	63.36	380.15	6.98	41.87	125.36	752.19	6.0	0.5	46.68	3.1	6.07	36.41	280.05	56.51	339.09	22.34	134.07	131.60	789.61
805	3449.122	Victaulic concentric reducer NPS 2-1/2 x 2, Style 52	ea	8	8	3.1	340.27	25.2	51.04	408.33	2,722.17	161.52	1,292.15	49.63	397.01	602.46	4,819.66	8.0	0.5	45.40	4.0	5.90	47.22	363.23	112.39	899.11	33.30	266.37	196.99	1,575.93
806	3449.123	Victaulic concentric reducer NPS 2-1/2 x 2, Style 50	ea	24	24	3.1	340.27	75.5	51.04	1,224.98	8,166.51	138.37	3,320.87	49.63	1,191.03	579.31	13,903.38	38.0	0.5	46.00	19.3	5.98	227.26	1,748.18	132.37	5,030.22	37.46	1,423.57	221.82	8,429.23
807	3449.124	Ball Valve NPS 2-1/2, Valve Specification VBA01	ea	24	24	5.7	616.74	136.9	92.51	2,220.27	14,801.80	2,080.71	49,937.11	89.95	2,158.74	2,879.91	69,117.91	44.0	4.4	401.19	195.3	52.15	2,294.79	17,652.26	840.24	36,970.70	263.45	11,591.70	1,557.03	68,509.46
808	3449.125	Pipe insulation NPS 2-1/2	Linear meter	192	0	1.5	150.59	0.0	22.59	0.00	0.00	51.25	0.00	8.55	0.00	232.98	0.00	235.0	4.1	369.54	960.6	48.04	11,289.61	86,843.12	234.16	55,027.71	112.61	26,464.44	764.36	179,624.88
809	3449.126	Pipe identification NPS 2-1/2	Linear meter	192	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.4	0.6	50.47	44.4	6.56	521.21	4,009.30	12.06	958.38	14.29	1,135.19	83.38	6,624.08
810	3449.127	Pipe NPS 3 Sch.STD, Piping Specification CB11	m	69	51	2.8	302.27	143.2	45.34	2,322.35	15,482.34	50.23	2,572.70	44.08	2,258.00	441.93	22,635.38	48.0	2.6	239.20	127.0	31.10	1,492.62	11,481.67	20.85	1,000.77	60.41	2,899.84	351.56	16,874.89
811	3449.128	Elbow 90 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	11	7	12.7	1,375.26	89.0	206.29	1,444.03	9,626.84	81.86	573.00	200.57	1,404.01	1,863.98	13,047.88	6.0	1.3	121.07	8.0	15.74	94.44	726.44	6.13	36.78	29.69	178.12	172.63	1,035.78
812	3449.129	Elbow 45 degrees BW Sch.STD NPS3, Piping Specification CB11	ea	1	0	12.7	1,375.26	0.0	206.29	0.00	0.00	81.86	0.00	200.57	0.00	1,863.98	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	16.31	0.00	18.92	0.00	110.42	0.00
813	3449.130	Flange Welding Neck 150RF Sch.STD NPS 3 c/w hardware, Piping Specification CB11	ea	4	2	8.3	893.21	16.5	133.98	267.96	1,786.42	67.72	135.44	130.27	260.54	1,225.18	2,450.36	2.0	69.9	6,318.25	139.8	821.37	1,642.74	12,636.49	76.59	153.18	1,500.30	3,000.60	8,716.51	17,433.01
814	3449.131	Weld NPS 3 Piping Specification CB11	ea	38	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.0	5.1	457.45	167.0	59.47	1,962.46	15,095.87	85.13	2,809.26	123.42	4,072.98	725.47	23,940.58
815	3449.132	Victaulic coupling NPS 3, Style 77	ea	2	2	0.5	53.17	1.0	7.98	15.95	106.33	55.01	110.01	7.75	15.51	123.90	247.81	2.0	1.4	124.08	2.7	16.13	32.26	248.15	48.12	96.25	38.85	77.70	227.18	454.35
816	3449.133	Victaulic coupling NPS 3, Style 07	ea	5	5	0.5	53.17	2.5	7.98	39.88	265.84	67.55	337.76	7.75	38.77	136.45	682.24	6.0	1.3	121.07	8.0	15.74	94.44	726.44	59.69	358.14	40.47	242.83	236.97	1,421.84
817	3449.134	Victaulic expansion joint JT NPS 3, Style 155	ea	1	1	6.4	694.72	6.4	104.21	104.21	694.72	3,865.53	3,865.53	101.32	101.32	4,765.78	4,765.78	1.0	1.3	115.07	1.3	14.96	14.96	115.07	4,262.15	4,262.15	885.12	885.12	5,277.30	5,277.30
818	3449.135	Victaulic Elbow 90 degrees NPS 3, Style 100	ea	2	2	3.5	382.81	7.1	57.42	114.84	765.61	124.86	249.73	55.83	111.66	620.92	1,241.84	2.0	1.4	124.08	2.7	16.13	32.26	248.15	66.16	132.33	42.49	84.97	248.85	497.71
819	3449.136	Victaulic Elbow 90 degrees NPS 3, Style 100	ea	2	0	3.5	382.81	0.0	57.42	0.00	0.00	124.86	0.00	55.83	0.00	620.92	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	78.05	0.00	46.67	0.00	273.55	0.00
820	3449.137	Ball Valve NPS 3, Valve Specification VBA01	ea	2	1	6.4	694.72	6.4	104.21	104.21	694.72	2,323.25	2,323.25	101.32	101.32	3,223.50	3,223.50	1.0	5.1	461.65	5.1	60.01	60.01	461.65	1,158.99	1,158.99	341.83	341.83	2,022.48	2,022.48
821	3449.138	Pipe insulation NPS 3	Linear meter	69	0	1.5	155.68	0.0	23.35	0.00	0.00	52.36	0.00	8.55	0.00	239.94	0.00	47.5	5.2	471.31	247.9	61.27	2,913.32	22,410.19	286.90	13,641.95	141.26	6,716.86	960.74	45,682.32
822	3449.139	Pipe identification NPS 3	Linear meter	69	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.1	0.6	50.28	8.9	6.54	105.07	808.24	12.06	193.92	14.25	229.00	83.13	1,336.23
823	3449.140	Pipe painting NPS 3	Linear meter	69	0	0.9	89.04	0.0	13.36	0.00	0.00	1.77	0.00	0.00	0.00	104.16	0.00	96.0	0.0	0.00	0.0	0.00	0.00	0.00	47.07	4,516.96	9.48	909.38	56.55	5,426.34
824	3449.141	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	445	435	3.5	383.66	1544.4	57.55	25,054.59	167,030.61	67.23	29,267.81	55.95	24,360.30	564.38	245,713.31	434.0	3.0	274.26	1,316.6	35.65	15,473.87	119,029.78	28.85	12,520.96	70.26	30,494.54	409.03	177,519.14
825	3449.142	Elbow 90 degrees Sch.STD NPS 4, Piping Specification CB11	ea	7	7	15.9	1,715.53	111.0	257.33	1,801.31	12,008.74	105.83	740.79	250.20	1,751.39	2,328.89	16,302.23	7.0	1.8	160.22	12.4	20.83	145.80	1,121.55	10.67	74.66	39.80	278.61	231.52	1,620.62
826	3449.143	Flange Welding Neck 150RF Sch.STD NPS 4 c/w hardware, Piping Specification CB11	ea	9	9	11.4	1,229.94	102.3	184.49	1,660.42	11,069.45	94.91	854.15	179.38	1,614.40	1,688.71	15,198.42	9.0	57.1	5,161.81	513.9	671.03	6,039.31	46,456.26	74.20	667.79	1,228.04	11,052.35	7,135.08	64,215.71
827	3449.144	TeeBW Sch. STD NPS 4, Piping Specification CB11	ea	2	2	23.7	2,559.12	47.3	383.87	767.74	5,118.25	161.00	322.00	373.23	746.46	3,477.22	6,954.44	2.0	3.6	321.63	7.1	41.81	83.62	643.26	18.39	36.78	79.29	158.58	461.12	922.25
828	3449.145	Reducing Tee BW Sch.STD NPS 4 x 4 x 2-1/2, Piping Specification CB11	ea	1	2	23.7	2,559.12	47.3	383.87	767.74	5,118.25	163.55	327.11	373.23	746.46	3,479.78	6,959.55	1.0	3.5	313.32	3.5	40.73	40.73	313.32	19.98	19.98	77.66	77.66	451.70	451.70
829	3449.146	Reducing lateral BW Sch.STD NPS 4 x 2, Piping Specification CB11	ea	1	1	23.7	2,559.12	23.7	383.87	383.87	2,559.12	2,241.67	2,241.67	373.23	373.23	5,557.89	5,557.89	0.0	4.0	363.23	0.0	47.22	0.00	0.00	16.31	0.00	88.65	0.00	515.41	0.00
830	3449.147	Concentric reducer BW Sch.STD NPS 4 x 3, Piping Specification CB11	ea	1	0	15.9	1,715.53	0.0	257.33	0.00	0.00	101.76	0.00	250.20	0.00	2,324.83	0.00	0.0	1.3	115.07	0.0	14.96	0.00	0.00	8.95	0.00	28.83	0.00	167.82	0.00
831	3449.148	Eccentric reducer BW Sch.STD NPS 4 x 2, Piping Specification CB11	ea	1	1	15.9	1,715.53	15.9	257.33	257.33	1,715.53	101.76	101.76	250.20	250.20	2,324.83	2,324.83	1.0	1.1	98.44	1.1	12.80	12.80	98.44	8.95	8.95	24.92	24.92	145.11	145.11
832	3449.149	Eccentric reducer BW Sch.STD NPS 6 x 4, Piping Specification CB11	ea	3	5	20.6	2,229.48	103.1	334.42	1,672.11	11,147.42	137.76	688.80	325.16	1,625.78	3,026.82	15,134.11	5.0	1.6	145.29	8.0	18.89	94.44	726.44	15.20	76.02	37.21	186.03	216.58	1,082.92
833	3449.150	Cap BW Sch.STD NPS 4, Piping Specification CB11	ea	6	6	7.9	854.22	47.4	128.13	768.80	5,125.33	53.36	320.16	124.58	747.50	1,160.30	6,961.79	6.0	1.8	159.43	10.6	20.73	124.36	956.58	4.54	27.22	38.38	230.29	223.07	1,338.45
834	3449.151	Olet BW Sch.STD NPS 4, Piping Specification CB11	ea	1	0	14.2	1,535.95	0.0	230.39	0.00	0.00	288.98	0.00	224.01	0.00	2,279.33	0.00	1.0	1.8	164.98	1.8	21.45	21.45	164.98	34.33	34.33	45.69	45.69	266.45	266.45
835	3449.152	Weld NPS 4 Piping Specification CB11	ea	117	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	265.0	6.7	608.60	1,783.9	79.12	20,966.21	161,278.50	74.22	19,667.40	156.91	41,580.03	918.84	243,492.13
836	3449.153	Victaulic coupling NPS 4, Style 07	ea	9	13	0.5	58.48	7.0	8.77	114.04	760.29	88.54	1,151.00	8.53	110.88	164.33	2,136.23	8.0	1.8	158.74	14.1	20.64	165.08	1,269.88	78.77	630.16	53.16	425.31	311.30	2,490.43
837	3449.154	Victaulic coupling NPS 4, Style 77	ea	20	22	0.7	79.75	16.2	11.96	263.18	1,754.52	92.16	2,027.48	11.63	255.89	195.50	4,301.06	67.0	1.8	159.55	118.3	20.74	1,389.71	10,690.07	81.07	5,431.90	53.82	3,605.90	315.19	21,117.58
838	3449.155	Victaulic coupling NPS 4, Style 177	ea	2	0	0.5	58.48	0.0	8.77	0.00	0.00	983.88	0.00	8.53	0.00	1,059.67	0.00	2.0	1.7	156.66	3.5	20.37	40.73	313.32	81.07	162.14	53.14	106.29	311.24	622.48
839	3449.156	Victaulic transition coupling NPS 4, Style 997	ea	1	0	0.5	58.48	0.0	8.77	0.00	0.00	983.88	0.00	8.53	0.00	1,059.67	0.00	0.0	2.0	181.61	0.0	23.61	0.00	0.00	260.14	0.00	95.06	0.00	560.42	0.00
840	3449.157	Victaulic reducing tee NPS 4 x 4 x 2, Style 25	ea	1	1	7.2	779.79	7.2	116.97	116.97	779.79	199.19	199.19	113.73	113.73	1,209.68	1,209.68	1.0	3.5	313.32	3.5	40.73	40.73	313.32	95.98	95.98	92.95	92.95	542.98	542.98
841	3449.158	Victaulic reducing tee NPS 4 x 4 x 2-1/2, Style 25	ea	1	0	7.2	779.79	0.0	116.97	0.00	0.00	239.81	0.00	113.73	0.00	1,250.29	0.00	1.0	3.5	313.32	3.5	40.73	40.73	313.32	119.38	119.38	97.67	97.67	571.11	571.11
842	3449.159	Victaulic reducing tee NPS 4 x 4 x 3, Style 25	ea	1	1	7.2	779.79	7.2	116.97	116.97	779.79	239.81	239.81	113.73	113.73	1,250.29	1,250.29	1.0	3.5	313.32	3.5	40.73	40.73	313.32	125.27	125.27	98.85	98.85	578.17	578.17
843	3449.160	Victaulic eccentric reducer NPS 4 x 2, Style 51	ea	1	1	4.7	510.41	4.7	76.56	76.56	510.41	906.28	906.28	74.44	74.44	1,567.69	1,567.69	1.0	1.1	98.44	1.1	12.80	12.80	98.44	84.69	84.69	40.18	40.18	236.11	236.11
844	3449.161	Victaulic elbow 90 degrees NPS 4, Style 100	ea	2	2	4.9	524.58	9.7	78.69	157.38	1,049.17	197.07	394.14	76.51	153.01	876.85	1,753.70	2.0	1.7	156.66	3.5	20.37	40.73	313.32	102.25	204.49	57.40	114.81	336.68	673.35
845	3449.162	Butterfly valve NPS 4, Valve Specification VBU01	ea	3	3	11.0	1,187.40	32.9	178.11	534.33	3,562.21	323.82	971.45	173.18	519.53	1,862.51	5,587.52	3.0	6.3	566.55	18.8	73.65	220.95	1,699.65	410.66	1,231.99	215.82	647.47	1,266.69	3,800.07
846	3449.163	Pipe insulation NPS 4	Linear meter	445	0	2.8	279.04	0.0	41.86	0.00	0.00	55.65	0.00	8.55	0.00	385.10	0.00	434.0	6.2	564.16	2,708.5	73.34	31,832.82	244,867.88	348.57	151,292.75	170.13	73,842.08	1,156.21	501,835.53
847	3449.164	Pipe identification NPS 4	Linear meter	445	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	146.7	0.6	50.48	81.9	6.56	962.94	7,407.22	12.06	1,770.09	14.29	2,097.16	83.40	12,237.41
848	3449.165	Pipe painting NPS 4	Linear meter	445	0	1.0	90.45	0.0	13.57	0.00	0.00	2.36	0.00	0.00	0.00	106.38	0.00	432.6	0.0	0.00	0.0	0.00	0.00	0.00	51.53	22,292.93	10.38	4,488.14	61.91	26,781.07
849	3449.166	Pipe NPS 6 Sch.STD , Piping Specification CB11	m	360	352	4.6	499.92	1627.7	74.99	26,405.57	176,037.16	109.89	38,697.77	72.91	25,673.84	757.71	266,814.35	364.0	3.9	356.92	1,437.1	46.40	16,889.35	129,918.09	50.92	18,536.52	94.13	34,264.55	548.38	199,608.51
850	3449.167	Elbow 90 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	12	12	20.6	2,229.48	247.4	334.42	4,013.07	26,753.82	155.18	1,862.20	325.16	3,901.87	3,044.25	36,530.95	12.0	2.6	239.26	31.8	31.10	373.24	2,871.11	25.75	308.96	61.41	736.96	357.52	4,290.28
851	3449.168	Elbow 45 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	2	2	20.6	2,229.48	41.2	334.42	668.85	4,458.97	143.19	286.38	325.16	650.31	3,032.25	6,064.50	2.0	1.4	124.08	2.7	16.13	32.26	248.15	19.37	38.74	33.06	66.12	192.64	385.27
852	3449.169	Tee BW Sch.STD NPS 6, Piping Specification CB11	ea	4	1	30.8	3,335.37	30.8	500.30	500.30	3,335.37	233.24	233.24	486.44	486.44	4,555.35	4,555.35	1.0	5.3	478.28	5.3	62.18	62.18	478.28	44.14	44.14	121.30	121.30	705.89	705.89
853	3449.170	Eccentric reducer BW Sch.STD NPS 6 x 4, Piping Specification CB11	ea	2	0	20.6	2,229.48	0.0	334.42	0.00	0.00	137.76	0.00	325.16	0.00	3,026.82	0.00	0.0	1.8	164.98	0.0	21.45	0.00	0.00	15.20	0.00	41.83	0.00	243.45	0.00

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
					EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
854	3449.171	Eccentric reducer BW Sch.STD NPS 8 x 6, Piping Specification CB11	ea	1	1	26.6	2,878.13	26.6	431.72	431.72	2,878.13	185.95	185.95	419.76	419.76	3,915.55	3,915.55	1.0	0.4	33.27	0.4	4.33	4.33	33.27	23.30	23.30	12.50	12.50	73.40	73.40
855	3449.172	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	29	26	14.0	1,513.50	363.8	227.02	5,902.64	39,350.94	129.41	3,364.71	220.73	5,739.07	2,090.67	54,357.37	26.0	28.8	2,602.16	748.4	338.28	8,795.30	67,656.17	56.17	1,460.44	622.85	16,194.22	3,619.47	94,106.14
856	3449.173	Reducing lateral BW Sch.STD NPS 6 x 1-1/2, Piping Specification CB11	ea	1	0	8.1	874.31	0.0	131.15	0.00	0.00	92.05	0.00	127.51	0.00	1,225.01	0.00	0.0	6.0	544.84	0.0	70.83	0.00	0.00	24.53	0.00	132.98	0.00	773.18	0.00
857	3449.174	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
858	3449.175	Weld NPS 6 Piping Specification CB11	ea	126	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	289.0	9.0	812.37	2,596.9	105.61	30,520.79	234,775.33	91.57	26,462.77	208.14	60,153.73	1,217.69	351,912.62
859	3449.176	Victaulic elbow 90 degrees NPS 6, Style 100	ea	8	8	8.7	942.83	69.7	141.43	1,131.40	7,542.68	471.20	3,769.57	137.51	1,100.05	1,692.96	13,543.70	8.0	2.6	239.15	21.2	31.09	248.71	1,913.16	254.98	2,039.83	107.54	860.29	632.75	5,061.99
860	3449.177	Victaulic elbow 45 degrees NPS 6, Style 110	ea	1	1	8.4	903.85	8.4	135.58	135.58	903.85	469.15	469.15	131.82	131.82	1,640.39	1,640.39	1.0	1.3	115.07	1.3	14.96	14.96	115.07	171.55	171.55	61.59	61.59	363.17	363.17
861	3449.178	Victaulic elbow 45 degrees NPS 6, Style 11	ea	2	2	8.4	903.85	16.7	135.58	271.15	1,807.69	226.13	452.26	131.82	263.64	1,397.37	2,794.75	0.0	1.5	131.71	0.0	17.12	0.00	0.00	171.55	0.00	65.50	0.00	385.88	0.00
862	3449.179	Victaulic coupling NPS 6, Style 07	ea	15	11	1.1	122.28	12.4	18.34	201.77	1,345.13	153.51	1,688.64	17.83	196.18	311.97	3,431.72	11.0	2.7	239.96	29.2	31.20	343.15	2,639.59	420.22	4,622.41	141.00	1,550.95	832.37	9,156.10
863	3449.180	Victaulic coupling NPS 6, Style 77	ea	35	35	1.1	122.28	39.6	18.34	642.00	4,279.97	158.53	5,548.49	17.83	624.21	316.99	11,094.66	83.0	2.6	239.32	219.7	31.11	2,582.25	19,863.48	140.19	11,635.79	84.47	7,010.79	495.09	41,092.32
864	3449.181	Victaulic reducing tee NPS 6 x 6 x 4, Style 25	ea	1	1	13.0	1,403.62	13.0	210.54	210.54	1,403.62	483.64	483.64	204.71	204.71	2,302.51	2,302.51	2.0	5.3	478.29	10.6	62.18	124.36	956.58	253.74	507.49	163.49	326.97	957.70	1,915.39
865	3449.182	Victaulic reducing tee NPS 6 x 6 x 2, Style 25	ea	4	2	13.0	1,403.62	26.0	210.54	421.09	2,807.24	468.28	936.57	204.71	409.42	2,287.15	4,574.31	3.0	5.3	478.29	15.9	62.18	186.53	1,434.86	254.63	763.90	163.67	491.00	958.77	2,876.30
866	3449.183	Victaulic eccentric reducer NPS 6 x 4, Style 51	ea	3	3	8.4	903.85	25.1	135.58	406.73	2,711.54	1,599.56	4,798.67	131.82	395.46	2,770.80	8,312.40	3.0	1.6	148.34	4.9	19.28	57.85	445.01	128.77	386.31	60.79	182.36	357.18	1,071.53
867	3449.184	Butterfly valve NPS 6, Valve Specification VBU01	ea	10	10	16.1	1,736.80	160.6	260.52	2,605.20	17,368.01	507.82	5,078.15	253.30	2,533.01	2,758.44	27,584.37	13.0	7.5	681.44	98.0	88.59	1,151.63	8,858.71	659.87	8,578.32	293.00	3,808.97	1,722.89	22,397.63
868	3449.185	Pipe insulation NPS 6	Linear meter	360	0	3.0	298.75	0.0	44.81	0.00	0.00	64.36	0.00	8.55	0.00	416.48	0.00	364.2	7.5	680.90	2,743.3	88.52	32,241.21	248,009.34	382.52	139,327.70	197.65	71,989.80	1,349.58	491,568.05
869	3449.186	Pipe identification NPS 6	Linear meter	360	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	123.1	0.6	50.51	68.8	6.57	808.49	6,219.12	12.06	1,485.43	14.30	1,760.65	83.44	10,273.69
870	3449.187	Pipe painting NPS 6	Linear meter	360	0	1.0	90.45	0.0	13.57	0.00	0.00	2.36	0.00	0.00	0.00	106.38	0.00	364.2	0.0	0.00	0.0	0.00	0.00	0.00	69.54	25,327.38	14.00	5,099.06	83.54	30,426.45
871	3449.188	Pipe NPS 8 Sch.STD, Piping Specification CB11	m	9	13	5.7	616.17	73.0	92.43	1,183.51	7,890.04	164.30	2,103.78	89.86	1,150.71	962.76	12,328.04	9.3	0.7	65.62	6.8	8.53	79.30	609.99	78.84	732.91	31.29	290.90	184.28	1,713.10
872	3449.189	Eccentric reducer BW Sch.STD NPS 8 x 4, Piping Specification CB11	ea	1	1	26.6	2,878.13	26.6	431.72	431.72	2,878.13	189.70	189.70	419.76	419.76	3,919.30	3,919.30	1.0	0.4	33.27	0.4	4.33	4.33	33.27	26.98	26.98	13.25	13.25	77.82	77.82
873	3449.190	Weld NPS 8 Piping Specification CB11	ea	2	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.0	14.6	1,319.80	189.8	171.57	2,230.46	17,157.35	65.22	847.80	321.75	4,182.75	1,878.34	24,418.36
874	3449.191	Victaulic reducing tee NPS 8 x 8 x 6, Style 25	ea	3	3	18.1	1,960.10	54.4	294.02	882.05	5,880.31	895.97	2,687.91	285.87	857.60	3,435.96	10,307.87	2.0	1.3	115.76	2.6	15.05	30.10	231.52	507.60	1,015.21	129.40	258.80	767.81	1,535.62
875	3449.192	Victaulic coupling NPS 8, Style 89	ea	6	0	2.7	292.42	0.0	43.86	0.00	0.00	357.05	0.00	42.65	0.00	735.98	0.00	6.0	0.6	57.77	3.8	7.51	45.06	346.59	214.19	1,285.12	56.70	340.18	336.16	2,016.95
876	3449.193	Pipe insulation NPS 8	Linear meter	9	0	3.2	322.51	0.0	48.38	0.00	0.00	75.22	0.00	8.55	0.00	454.65	0.00	9.4	7.9	714.97	74.7	92.95	878.23	6,755.64	580.35	5,483.65	243.51	2,300.89	1,631.78	15,418.41
877	3449.194	Pipe identification NPS 8	Linear meter	9	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.6	51.65	1.8	6.71	21.45	164.98	12.06	38.53	14.57	46.53	85.00	271.49
878	3449.195	Pipe painting NPS 8	Linear meter	9	0	1.0	90.45	0.0	13.57	0.00	0.00	4.71	0.00	0.00	0.00	108.74	0.00	9.3	0.0	0.00	0.0	0.00	0.00	0.00	130.44	1,212.83	26.26	244.17	156.71	1,457.00
B&M-0217	Added	2.5" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter		6	2.4	255.77	15.1	38.37	245.63	1,637.55	43.12	276.08	37.30	238.83	374.56	2,398.09	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0218	Added	1" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter		6	1.1	116.26	6.9	17.44	111.65	744.34	14.12	90.39	16.96	108.56	164.77	1,054.94	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0219	Added	3/4" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter		6	0.9	93.01	5.5	13.95	89.32	595.47	11.39	72.92	13.56	86.85	131.91	844.56	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0220	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.2	127.89	7.6	19.18	122.82	818.78	18.50	118.43	18.65	119.41	184.22	1,179.44	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0221	Added	3/4" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.0	104.63	6.2	15.70	100.49	669.91	11.39	72.91	15.26	97.70	146.98	941.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0222	Added	3" cap, CS, STD, ASTM A234 Gr WPB, smls - BW	ea		1	6.4	691.18	6.4	103.68	103.68	691.18	43.50	43.50	100.80	100.80	939.15	939.15	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0223	Added	8"x4" WOL, CS, STD	ea		1	9.4	1,016.09	9.4	152.41	152.41	1,016.09	113.72	113.72	148.19	148.19	1,430.41	1,430.41	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0224	Added	6"x2.5" WOL, CS, STD	ea		5	7.2	779.79	36.1	116.97	584.84	3,898.94	77.82	389.09	113.73	568.63	1,088.30	5,441.50	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0225	Added	4"x2.5" WOL, CS, STD	ea		5	7.2	779.79	36.1	116.97	584.84	3,898.94	77.82	389.09	113.73	568.63	1,088.30	5,441.50	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0226	Added	8"x1" SOL, CS, 3000#	ea		4	2.6	283.56	10.5	42.53	170.14	1,134.24	20.29	81.14	41.36	165.42	387.73	1,550.94	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0227	Added	6"x2.5" SOL, CS, 3000#	ea		1	7.2	779.79	7.2	116.97	116.97	779.79	91.03	91.03	113.73	113.73	1,101.52	1,101.52	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0228	Added	6"x1.5" SOL, CS, 3000#	ea		1	3.9	425.34	3.9	63.80	63.80	425.34	33.58	33.58	62.03	62.03	584.75	584.75	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0229	Added	6"x1" SOL, CS, 3000#	ea		7	2.6	283.56	18.4	42.53	297.74	1,984.92	20.29	142.00	41.36	289.49	387.73	2,714.14	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0230	Added	6"x3/4" SOL, CS, 3000#	ea		4	2.0	212.67	7.9	31.90	127.60	850.68	18.70	74.81	31.02	124.07	294.29	1,177.15	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0231	Added	4"x2" SOL, CS, 3000#	ea		1	5.2	567.12	5.2	85.07	85.07	567.12	47.68	47.68	82.71	82.71	782.58	782.58	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0232	Added	4"x1.5" SOL, CS, 3000#	ea		6	3.9	425.34	23.6	63.80	382.81	2,552.03	33.58	201.49	62.03	372.20	584.75	3,508.53	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0233	Added	4"x1" SOL, CS, 3000#	ea		2	2.6	283.56	5.2	42.53	85.07	567.12	20.29	40.57	41.36	82.71	387.73	775.47	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0234	Added	4"x3/4" SOL, CS, 3000#	ea		13	2.0	212.67	25.6	31.90	414.71	2,764.70	18.70	243.12	31.02	403.21	294.29	3,825.74	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0235	Added	3"x1.5" SOL, CS, 3000#	ea		2	3.9	425.34	7.9	63.80	127.60	850.68	33.58	67.16	62.03	124.07	584.75	1,169.51	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0236	Added	3"x3/4" SOL, CS, 3000#	ea		5	2.0	212.67	9.8	31.90	159.50	1,063.35	18.70	93.51	31.02	155.08	294.29	1,471.44	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0237	Added	1"x2" TOL, CS, 3000#	ea		3	5.2	567.12	15.7	85.07	255.20	1,701.36	36.52	109.56	82.71	248.13	771.42	2,314.25	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0238	Added	2.5"x3/4" TOL, SS, 3000#	ea		4	2.8	307.19	11.4	46.08	184.31	1,228.76	32.79	131.16	44.80	179.21	430.86	1,723.43	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0239	Added	1.25" weld adapter, 304SS, Vic-Press - 561	ea		29	7.2	779.79	209.1	116.97	3,392.08	22,613.85	203.77	5,909.20	113.73	3,298.08	1,214.25	35,213.21	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0240	Added	1" weld adapter, 304SS, Vic-Press - 561	ea		8	5.9	638.01	47.2	95.70	765.61	5,104.07	153.82	1,230.58	93.05	744.39	980.58	7,844.65	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0241	Added	1/2" weld adapter, 304SS, Vic-Press - 561	ea		30	4.3	460.78	127.8	69.12	2,073.53	13,823.52	110.99	3,329.82	67.20	2,016.07	708.10	21,242.93	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0242	Added	1.5" male adapter, 304SS, Vic-Press - 596	ea		6	8.2	886.12	49.2	132.92	797.51	5,316.74	176.73	1,060.41	129.24	775.41	1,325.01	7,950.07	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0243	Added	1.25" male adapter, 304SS, Vic-Press - 596	ea		14	7.2	779.79	100.9	116.97	1,637.55	10,917.03	171.15	2,396.06	113.73	1,592.18	1,181.63	16,542.83	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0244	Added	1" male adapter, 304SS, Vic-Press - 596	ea		4	5.9	638.01	23.6	95.70	382.81	2,552.03	150.83	603.32	93.05	372.20	977.59	3,910.36	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0245	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea		15	4.3	460.78	63.9	69.12	1,036.76	6,911.76	133.14	1,997.08	67.20	1,008.03	730.24	10,953.63	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0246	Added	2" coupling, 304SS, Vic-Press - 597	ea		46	8.5	921.57	392.0	138.24	6,358.82	42,392.12	119.05	5,476.13	134.40	6,182.61	1,313.25	60,409.67	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0247	Added	1.5" coupling, 304SS, Vic-Press - 597	ea		4	8.2	886.12	32.8	132.92	531.67	3,544.49	107.91	431.63	129.24	516.94	1,256.18	5,024.73	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0248	Added	1" coupling, 304SS, Vic-Press - 597	ea		1	5.9	638.01	5.9	95.70	95.70	638.01	86.19	86.19	93.05	93.05	912.95	912.95	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0249	Added	3/4" coupling, 304SS, Vic-Press - 597	ea		11	5.6	602.56	61.3	90.38	994.23	6,628.20	80.14	881.54	87.88	966.68	860.97	9,470.65	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0250	Added	3/4" tee, 304SS, Vic-Press - 592	ea		1	7.2	779.79	7.2	116.97	116.97	779.79	187.61	187.61	113.73	113.73	1,198.09	1,198.09	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0251	Added	1.5" cap, 304SS, Vic-Press - 540	ea		2	4.6	496.23	9.2	74.43	148.87	992.46	147.27	294.54	72.37	144.74	790.31	1,580.61	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0252	Added	3/4" cap, 304SS, Vic-Press - 540	ea		2	3.3	354.45	6.6	53.17	106.33	708.90	107.80	215.60	51.69	103.39	567.11	1,134.22	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0253	Added	2"x3/4" reducer, 304SS, Vic-Press - 582	ea		1	8.5	921.57	8.5	138.24	138.24	921.57	234.26	234.26	134.40	134.40	1,428.46	1,428.46	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0254	Added	2"x1/2" reducing tee, 304SS, Vic-Press - 593	ea		2	11.1	1,205.13	22.3	180.77	361.54	2,410.25	232.40	464.80	175.76	351.52	1,794.05	3,588.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0255	Added	1"x3/4" reducing tee, 304SS, Vic-Press - 593	ea		1	7.9	850.68	7.9	127.60	127.60	850.68	168.89	168.89	124.07	124.07	1,271.23	1,271.23	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0256	Added	1.25" union, 304SS, Vic-Press - 584	ea		19	7.2	779.79	137.0	116.97	2,222.40	14,815.97	987.80	18,768.21	113.73	2,160.81	1,998.28	37,967.39	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0257	Added	2" flange adapter, 304SS, Vic-Press - 595	ea		4	8.8	952.29	35.2	142.84	571.37	3,809.15	492.03	1,968.12	138.88	555.54	1,726.04	6,904.18	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0258	Added	4"x2.5" conc reducer, SS, Sch 10S, ASTM A403 WP 304L - BE	ea		1	24.4	2,644.19	24.4	396.63	396.63	2,644.19	154.44	154.44	385.64	385.64	3,580.89	3,580.89	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0259	Added	1/2" tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L	Linear meter		24	0.7	71.15	16.0	10.67	260.31	1,735.38	22.58	550.83	10.38	253.09	114.78	2,799.62	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0260	Added	1/2" 90 elbow, Swagelok to ASTM A182 Grade 316 - COMP	ea		6	1.1	119.31	6.6	17.90	107.38	715.85	48.36	290.13	17.40	104.40	202.96	1,217.76	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0261	Added	1/2" union tee - SWAGELOK SS-810-3 or equal	ea		12	1.6	169.92	18.9	25.49	305.86	2,039.07	66.38	796.61	24.78	297.39	286.58	3,438.94	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0262	Added	1/2" female adapter - SWAGELOK SS-8-TA-7-8 or equal	ea		12	1.1	119.31	13.2	17.90	214.75	1,431.69	34.48	413.76	17.40	208.80	189.08	2,269.01	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0263	Added	1/2" male adapter - SWAGELOK SS-8-TA-1-8 or equal	ea		12	1.1	119.31	13.2	17.90	214.75	1,431.69	23.51	282.07	17.40	208.80	178.11	2,137.32	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0264	Added	1" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		12	1.1	116.26	13.1	17.44	212.67	1,417.80	11.29	137.70	16.96	206.78	161.95	1,974.94	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0265	Added	1" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		8	1.2	134.69	10.0	20.20	161.63	1,077.53	9.52	76.15	19.64	157.15	184.06	1,472.46	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0266	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		4	1.2	134.69	5.0	20.20	80.81	538.76	13.25	53.02	19.64	78.57	187.79	751.17	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0267	Added	1" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea		2	3.7	400.53	7.4	60.08	120.16	801.06	128.78	257.55	58.41	116.83	647.80	1,295.59	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0268	Added	2" rubber exp joint, GARLOCK EZ-FLOW style 206, 150#, FF FLG, 6" F/F c/w chlorobutyl tube &	ea		1	4.4	471.42	4.4	70.71	70.71	471.42	383.87	383.87	68.75	68.75	994.75	994.75	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0269	Added	8" Zero-Flex Rigid Coupling, Galvanized, Ductile Iron - Victaulic 07	ea		6	1.7	186.09	10.3	27.91	167.48	1,116.51	221.93	1,331.60	27.14	162.84	463.07	2,778.43	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0270	Added	3/4" flexible coupling, A890 SS - VICTAULIC 77DX	ea		6	0.3	37.22	2.1	5.58	33.50	223.30	299.61	1,797.68	5.43	32.57	347.84	2,087.05	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0271	Added	2.5" 45 elbow, LR, SS, SCH 10S, ASTM A351 CF8M 316 - VICTAULIC 110	ea		12	3.1	340.27	37.8	51.04	612.49	4,083.25	187.39	2,248.64	49.63	595.52	628.32	7,539.90	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0272	Added	2" 45 elbow, LR, SS, SCH 10S, ASTM A351 CF8M 316 - VICTAULIC 110	ea		2	3.0	322.55	6.0	48.38	96.76	645.10	121.70	243.40	47.04	94.08	539.67	1,079.34	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0273	Added	6"x2.5" reducing tee, Galv. DI, ASTM A536 GR 65 Max Rating 1000# - VICTAULIC 25	ea		2	13.0	1,403.62	26.0	210.54	421.09	2,807.24	467.03	934.05	204.71	409.42	2,285.90	4,571.79	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0274	Added	6" WAFER SWING CHECK VALVE RITE 210 150# FF CS VCH01	ea		3	16.1	1,736.80	48.2	260.52	781.56	5,210.40	1,065.14	3,195.42	253.30	759.90	3,315.76	9,947.28	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0275	Added	3/4" Ball Valve Carbon Socket Weld, Full Port VBA02	ea		3	2.9	319.00	8.8	47.85	143.55	957.01	149.63	448.89	46.52	139.57	563.01	1,689.03	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0276	Added	2" ball valve, SS, full port, 3pc - SW - Velan VTP-2000 or equal VBA11	ea		4	14.7	1,587.93	58.7	238.19	952.76	6,351.73	406.63	1,626.51	231.59	926.36	2,464.34	9,857.35	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0277	Added	1/2" ball valve, SS - THD - Swagelok 60T Series or equal VBA14	ea		6	1.1	119.31	6.6	17.90	107.38	715.85	293.55	1,761.29	17.40	104.40	448.15	2,688.92	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0278	Added	2" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea		8	14.7	1,587.93	117.5	238.19	1,905.52	12,703.46	2,061.65	16,493.18	231.59	1,852.71	4,119.36	32,954.87	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0279	Added	1.25" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea		5	9.1	988.91	45.7	148.34	741.68	4,944.57	339.24	1,696.21	144.23	721.13	1,620.72	8,103.59	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0280	Added	1" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea		2	7.3	793.97	14.7	119.09	238.19	1,587.93	257.18	514.36	115.79	231.59	1,286.03	2,572.07	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0281	Added	1.25" control valve - THD 3351-FCV-VCL-0001/002,3351-FCV-VCR-0001/002,3351-FCV-VER-0001,3351-FCV-VPS-0001/002 (Cost included with Controls)	ea		7	5.4	584.84	37.9	87.73	614.08	4,093.89	30.73	215.11	85.30	597.07	788.59	5,520.15	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0282	Added	2" FLOW CONTROL VALVE BELIMO 3351-FCV-VMR-0005 3351-FCV-VMR-0001-0008 (Supplied with Equipment) (Cost included with Controls)	ea		8	5.4	584.84	43.3	87.73	701.81	4,678.73	30.73	245.84	85.30	682.36	788.59	6,308.74	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0283	Added	Pipe Insulation - All Sizes	ea		1	7209.9	736,376.71	7209.9	110,456.51	110,456.51	736,376.71	176,040.61	176,040.61	0.00	0.00	1,022,873.83	1,022,873.83	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ABR (Brake Air)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
879	344A.01	Air tank 344A-TK-5000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	40,796.33	40,796.33	1,102.81	1,102.81	50,594.95	50,594.95	1.0	102.2	9,238.57	102.2	1,201.01	1,201.01	9,238.57	176.44	176.44	2,206.72	2,206.72	12,822.75	12,822.75
880	344A.02	Y-strainer 344A-STR-1000 / 2000 / 3000 / 4000 / 5000	ea	5	5	8.7	945.20	43.7	141.78	708.90	4,725.99	306.16	1,530.82	137.85	689.25	1,530.99	7,654.96	4.0	4.8	433.23	19.2	56.32	225.28	1,732.92	136.18	544.70	129.23	516.93	754.96	3,019.83
881	344A.03	Y-strainer 344A-STR-5001	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	338.11	338.11	137.85	137.85	1,562.94	1,562.94	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
882	344A.04	Y-strainer 344A-STR-5002	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	338.11	338.11	137.85	137.85	1,562.94	1,562.94	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
883	344A.05	Orifice Plate 344A-FO-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	626.56	1,253.13	137.85	275.70	1,851.39	3,702.78	2.0	3.7	329.95	7.3	42.89	85.79	659.89	30.35	60.70	83.65	167.30	486.84	973.68
884	344A.06	Pressure Safety Valve 344A-PSV-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	626.56	1,253.13	137.85	275.70	1,851.39	3,702.78	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	30.35	60.70	161.20	322.39	937.24	1,874.47
885	344A.07	Pressure Indicator 344A-PI-5000 / 5001 / 6000	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	700.54	2,101.61	137.85	413.55	1,925.36	5,776.09	3.0	3.7	329.95	11.0	42.89	128.68	989.85	280.60	841.81	134.03	402.10	787.48	2,362.44
886	344A.08	Pressure transmitter 344A-PT-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	110.11	220.23	137.85	275.70	1,334.94	2,669.88	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	1,886.41	3,772.83	534.87	1,069.73	3,166.97	6,333.94
887	344A.09	Oil-Water Separator 344A-OWS-5000	ea	1	1	69.9	7,561.58	69.9	1,134.24	1,134.24	7,561.58	3,573.72	3,573.72	1,102.81	1,102.81	13,372.34	13,372.34	2.0	28.3	2,557.10	56.6	332.42	664.85	5,114.20	36.57	73.13	608.32	1,216.63	3,534.41	7,068.81
888	344A.10	Drain trap 344A-YV-5000	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	1,203.46	1,203.46	137.85	137.85	2,428.29	2,428.29	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	59.53	119.07	167.07	334.15	972.30	1,944.59
889	344A.11	Solenoid Valve 344A-YV-5001	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	626.56	626.56	137.85	137.85	1,851.39	1,851.39	1.0	6.4	575.32	6.4	74.79	74.79	575.32	58.66	58.66	147.01	147.01	855.78	855.78
890	344A.12	Ball Valve NPS 1/8, Valve Specification VBA14	ea	2	0	1.1	119.31	0.0	17.90	0.00	0.00	293.55	0.00	17.40	0.00	448.15	0.00	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	59.53	119.07	167.07	334.15	972.30	1,944.59
891	344A.13	Pipe NPS 1/2 Sch.10S , Piping Specification SB11	mm	150	0	1.0	104.63	0.0	15.70	0.00	0.00	23.57	0.00	15.26	0.00	159.16	0.00	1.0	1.6	148.34	1.6	19.28	19.28	148.34	177.36	177.36	70.58	70.58	415.57	415.57
892	344A.14	Ball Valve NPS 1/2, Valve Specification VBA11	ea	2	0	3.7	400.53	0.0	60.08	0.00	0.00	107.23	0.00	58.41	0.00	626.25	0.00	1.0	3.1	280.05	3.1	36.41	36.41	280.05	100.39	100.39	86.02	86.02	502.87	502.87
893	344A.15	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	13	6	1.1	116.26	6.9	17.44	111.65	744.34	22.99	147.22	16.96	108.56	173.65	1,111.77	3.0	2.2	197.78	6.6	25.71	77.14	593.35	39.36	118.08	54.41	163.22	317.26	951.78
894	344A.16	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	mm	150	0	1.1	116.26	0.0	17.44	0.00	0.00	27.68	0.00	16.96	0.00	178.33	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	4.23	0.00	12.57	0.00	73.20	0.00

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
895	344A.17	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	2	5.6	602.56	11.1	90.38	180.77	1,205.13	117.55	235.09	87.88	175.76	898.37	1,796.75	9.0	0.6	53.14	5.3	6.91	62.18	478.28	5.37	48.30	13.57	122.13	78.99	710.89
896	344A.18	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	0	5.6	602.56	0.0	90.38	0.00	0.00	94.50	0.00	87.88	0.00	875.33	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.74	0.00	9.58	0.00	55.92	0.00
897	344A.19	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	1	0	5.6	602.56	0.0	90.38	0.00	0.00	482.63	0.00	87.88	0.00	1,263.46	0.00	9.0	0.6	53.14	5.3	6.91	62.18	478.28	11.90	107.06	14.88	133.95	86.83	781.46
898	344A.20	Tee SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	0	7.2	779.79	0.0	116.97	0.00	0.00	187.61	0.00	113.73	0.00	1,198.09	0.00	6.0	1.2	107.21	7.1	13.94	83.62	643.26	7.11	42.64	26.62	159.75	154.88	929.28
899	344A.21	Concentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	0	8.5	921.57	0.0	138.24	0.00	0.00	448.22	0.00	134.40	0.00	1,642.43	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
900	344A.22	Excentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	0	18.3	1,977.83	0.0	296.67	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	9.64	0.00	17.58	0.00	102.41	0.00
901	344A.23	Weld NPS 3/4, Piping Specification SB11	ea	34	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.0	0.4	33.37	15.9	4.34	186.53	1,434.86	120.56	5,184.23	31.98	1,375.33	190.25	8,180.95
902	344A.24	Ball Valve NPS 3/4, Valve Specification VBA02	ea	2	0	2.9	319.00	0.0	47.85	0.00	0.00	149.63	0.00	46.52	0.00	563.01	0.00	0.0	3.7	329.95	0.0	42.89	0.00	0.00	310.28	0.00	140.01	0.00	823.13	0.00
903	344A.25	Ball Valve NPS 3/4, Valve Specification VBA11	ea	1	1	5.5	595.47	5.5	89.32	89.32	595.47	136.15	136.15	86.85	86.85	907.79	907.79	3.0	3.2	286.05	9.5	37.19	111.56	858.14	100.38	301.15	87.43	262.30	511.05	1,533.15
904	344A.26	Pipe identification NPS 3/4	Linear meter	13	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.2	16.41	0.2	2.13	2.16	16.64	4.02	4.07	4.66	4.73	27.23	27.60
905	344A.27	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	163	179	1.4	151.14	250.5	22.67	4,064.11	27,094.09	36.44	6,531.80	22.04	3,951.49	232.29	41,641.50	5.0	1.9	171.63	9.5	22.31	111.56	858.14	15.19	75.96	43.39	216.97	252.53	1,262.63
906	344A.28	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	40	39	5.9	638.01	230.1	95.70	3,732.35	24,882.33	125.39	4,890.35	93.05	3,628.92	952.15	37,133.95	40.0	0.6	54.03	23.9	7.02	280.97	2,161.31	8.11	324.51	14.33	573.28	83.50	3,340.07
907	344A.29	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	0	5.9	638.01	0.0	95.70	0.00	0.00	580.55	0.00	93.05	0.00	1,407.31	0.00	23.0	0.6	53.83	13.7	7.00	160.94	1,238.00	13.43	308.85	15.35	353.13	89.61	2,060.92
908	344A.30	Weld NPS 1, Piping Specification SB11	ea	111	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	148.0	0.8	75.35	123.4	9.80	1,449.72	11,151.71	107.94	15,975.04	39.17	5,797.79	232.26	34,374.27
909	344A.31	Ball Valve NPS 1, Valve Specification VBA11	ea	4	4	7.3	793.97	29.4	119.09	476.38	3,175.86	202.60	810.38	115.79	463.18	1,231.45	4,925.80	4.0	3.2	288.71	12.8	37.53	150.13	1,154.83	127.76	511.05	93.57	374.28	547.57	2,190.29
910	344A.32	Ball Valve NPS 1, Valve Specification VBA14	ea	2	4	7.3	793.97	29.4	119.09	476.38	3,175.86	329.00	1,315.99	115.79	463.18	1,357.85	5,431.42	4.0	3.2	288.71	12.8	37.53	150.13	1,154.83	91.26	365.04	86.22	344.89	503.72	2,014.88
911	344A.33	Check Valve NPS 1, Valve Specification VCH14	ea	2	0	14.7	1,587.93	0.0	238.19	0.00	0.00	1,669.22	0.00	231.59	0.00	3,726.93	0.00	0.0	3.7	329.95	0.0	42.89	0.00	0.00	912.59	0.00	261.26	0.00	1,546.69	0.00
912	344A.34	Pipe identification NPS 1	Linear meter	163	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.2	16.41	0.2	2.13	2.16	16.64	4.02	4.07	4.66	4.73	27.23	27.60
913	344A.35	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	178	186	2.3	244.14	419.1	36.62	6,799.57	45,330.50	56.82	10,550.45	35.61	6,611.15	373.20	69,291.67	182.1	3.2	291.06	586.1	37.84	6,888.71	52,990.08	23.85	4,342.59	73.21	13,327.71	425.96	77,549.10
914	344A.36	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	14	15	8.5	921.57	127.8	138.24	2,073.53	13,823.52	171.71	2,575.71	134.40	2,016.07	1,365.92	20,488.82	11.0	0.6	53.94	6.6	7.01	77.14	593.35	34.85	383.34	19.69	216.63	115.50	1,270.46
915	344A.37	Union SW/ FNPT Class 3000 NPS 2, Piping Specification SB11	ea	1	1	8.5	921.57	8.5	138.24	138.24	921.57	1,191.56	1,191.56	134.40	134.40	2,385.77	2,385.77	4.0	0.6	53.72	2.4	6.98	27.93	214.88	25.26	101.03	17.71	70.83	103.67	414.68
916	344A.38	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	2	2	11.1	1,205.13	22.3	180.77	361.54	2,410.25	268.91	537.82	175.76	351.52	1,830.56	3,661.13	2.0	1.2	107.44	2.4	13.97	27.93	214.88	44.57	89.14	34.22	68.44	200.20	400.39
917	344A.39	Tee Reducing SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1	180.77	180.77	1,205.13	238.38	238.38	175.76	175.76	1,800.04	1,800.04	1.0	1.3	115.07	1.3	14.96	14.96	115.07	95.67	95.67	46.31	46.31	272.01	272.01
918	344A.40	Tee Reducing SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	5	5	11.1	1,205.13	55.7	180.77	903.85	6,025.64	266.81	1,334.06	175.76	878.80	1,828.47	9,142.34	5.0	1.2	108.97	6.0	14.17	70.83	544.84	95.68	478.39	44.87	224.35	263.68	1,318.41
919	344A.41	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	4.6	496.23	4.6	74.43	74.43	496.23	176.90	176.90	72.37	72.37	819.93	819.93	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.62	10.62	13.87	13.87	80.89	80.89
920	344A.42	Excentric Reducer SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	4	0	18.3	1,977.83	0.0	296.67	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	9.64	0.00	17.58	0.00	102.41	0.00
921	344A.43	Slip-on Flange SW 150RF NPS 2 c/w hardware, Piping Specification SB11	ea	6	2	8.8	952.29	17.6	142.84	285.69	1,904.57	492.03	984.06	138.88	277.77	1,726.04	3,452.09	12.0	3.0	272.18	36.1	35.38	424.61	3,266.21	5.11	61.33	65.00	779.96	377.68	4,532.10
922	344A.44	Weld Neck Flange 150RF Sch.10S NPS 2 c/w hardware, Piping Specification SB11	ea	4	0	8.8	952.29	0.0	142.84	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	31.05	0.00	21.90	0.00	128.14	0.00
923	344A.45	Victaulic coupling NPS 2, Style 77	ea	3	2	0.3	37.22	0.7	5.58	11.17	74.43	39.43	78.87	5.43	10.86	87.66	175.32	27.0	0.6	53.76	16.1	6.99	188.69	1,451.49	397.41	10,730.14	92.64	2,501.38	550.80	14,871.70
924	344A.46	Victaulic Expansion joint NPS 2, Style 155	ea	4	4	3.1	340.27	12.6	51.04	204.16	1,361.08	2,258.36	9,033.46	49.63	198.51	2,699.30	10,797.21	4.0	0.6	53.72	2.4	6.98	27.93	214.88	2,508.49	10,033.97	517.65	2,070.58	3,086.84	12,347.37
925	344A.47	Weld NPS 2, Piping Specification SB11	ea	73	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	131.0	1.5	135.13	195.8	17.57	2,301.28	17,702.19	139.46	18,269.67	59.55	7,801.45	351.71	46,074.60
926	344A.48	Ball Valve NPS 2, Valve Specification VBA11	ea	3	3	14.7	1,587.93	44.0	238.19	714.57	4,763.80	406.63	1,219.88	231.59	694.77	2,464.34	7,393.01	7.0	3.4	308.76	23.9	40.14	280.97	2,161.31	132.98	930.84	99.34	695.35	581.21	4,068.47
927	344A.49	Pipe identification NPS 2	Linear meter	178	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.5	0.6	50.42	34.3	6.55	403.16	3,101.24	12.06	742.10	14.28	878.23	83.31	5,124.73
B&M-0284	Added	1/2" weld adapter, 304SS, Vic-Press - 561	ea		1	4.3	460.78	4.3	69.12	69.12	460.78	110.99	110.99	67.20	67.20	708.10	708.10	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0285	Added	1.5" male adapter, 304SS, Vic-Press - 596	ea		1	8.2	886.12	8.2	132.92	132.92	886.12	176.73	176.73	129.24	129.24	1,325.01	1,325.01	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0286	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea		2	4.3	460.78	8.5	69.12	138.24	921.57	133.14	266.28	67.20	134.40	730.24	1,460.48	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0287	Added	2" coupling, 304SS, Vic-Press - 597	ea		21	8.5	921.57	178.9	138.24	2,902.94	19,352.92	119.05	2,499.97	134.40	2,822.49	1,313.25	27,578.33	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0288	Added	1" coupling, 304SS, Vic-Press - 597	ea		12	5.9	638.01	70.8	95.70	1,148.42	7,656.10	86.19	1,034.30	93.05	1,116.59	912.95	10,955.41	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0289	Added	1"x2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea		1	11.1	1,205.13	11.1	180.77	180.77	1,205.13	333.84	333.84	175.76	175.76	1,895.50	1,895.50	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0290	Added	1" flange adapter, 304SS, Vic-Press - 595	ea		4	7.2	783.33	29.0	117.50	470.00	3,133.33	352.68	1,410.72	114.24	456.98	1,357.76	5,471.02	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0291	Added	3/4" tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L	Linear meter		13	0.7	71.15	8.4	10.67	136.66	911.08	39.07	500.34	10.38	132.87	131.27	1,680.95	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0292	Added	3/4" 90 elbow, Swagelok to ASTM A182 Grade 316 - COMP	ea		5	1.5	162.69	7.5	24.40	122.02	813.46	82.38	411.90	23.73	118.64	293.20	1,466.02	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0293	Added	3/4" tee, Swagelok to ASTM A182 Grade 316 - COMP	ea		2	2.2	235.00	4.3	35.25	70.50	470.00	100.33	200.65	34.27	68.55	404.85	809.70	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0294	Added	3/4" union, Swagelok to ASTM A182 Grade 316 - COMP	ea		4	1.5	162.69	6.0	24.40	97.62	650.77	80.37	321.47	23.73	94.91	291.19	1,164.77	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0295	Added	3/4" male adapter, Swagelok to ASTM A182 Grade 316 - COMPxTHD	ea		5	1.5	162.69	7.5	24.40	122.02	813.46	25.79	128.93	23.73	118.64	236.61	1,183.04	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0296	Added	3/4" Flexible Connector Penflex 800 SS MNPT	ea		1	5.5	595.47	5.5	89.32	89.32	595.47	199.35	199.35	86.85	86.85	970.99	970.99	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0297	Added	2" flexible coupling, SS ASTM A-890 GROOVED - VICTAULIC 77DX	ea		6	0.3	37.22	2.1	5.58	33.50	223.30	457.39	2,744.34	5.43	32.57	505.62	3,033.71	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WTS (Shaft Seal Water)						0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
928	344B.01	Sand filter 344B-FR-6000 to 6003	ea	4	4	209.7	22,684.74	839.0	3,402.71	13,610.85	90,738.98	141,446.16	565,784.63	3,308.42	13,233.67	170,842.03	683,368.12	4.0	122.5	11,074.09	490.0	1,439.63	5,758.52	44,296.34	220,142.26	880,569.04	46,922.89	187,691.55	279,578.86	1,118,315.45
929	344B.02	Y-strainer 344B-STR-6000 / 6001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	23,425.36	46,850.73	137.85	275.70	24,650.19	49,300.39	2.0	4.7	429.07	9.5	55.78	111.56	858.14	0.00	0.00	100.84	201.68	585.69	1,171.38
930	344B.03	Lubrication water pump 344B-P-5000 / 5001	ea	2	2	139.8	15,123.16	279.7	2,268.47	4,536.95	30,246.33	7,370.16	14,740.32	2,205.61	4,411.22	26,967.41	53,934.81	2.0	91.3	8,257.05	182.7	1,073.42	2,146.83	16,514.09	5,920.52	11,841.04	3,132.49	6,264.97	18,383.47	36,766.94
931	344B.04	Sight flow indicator 344B-FG-6000	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	18,799.89	18,799.89	275.70	275.70	21,249.55	21,249.55	1.0	9.4	851.21	9.4	110.66	110.66	851.21	245.14	245.14	249.39	249.39	1,456.40	1,456.40
932	344B.05	Air vent 344B-AV-5000 / 6000 TO 6004	ea	6	6	8.7	945.20	52.4	141.78	850.68	5,671.19	1,608.04	9,648.27	137.85	827.10	2,832.87	16,997.24	6.0	7.3	659.90	43.8	85.79	514.72	3,959.39	30.35	182.10	161.20	967.17	937.23	5,623.39
933	344B.06	Pressure indicator 344B-PI-6000 to 6006 / 5000 to 5006 / 5010 to 5013	ea	18	18	8.7	945.20	157.3	141.78	2,552.03	17,013.56	569.12	10,244.25	137.85	2,481.31	1,793.95	32,291.15	18.0	3.6	329.95	65.7	42.89	772.08	5,939.07	542.81	9,770.60	186.82	3,362.84	1,102.48	19,844.58
934	344B.07	Pressure transmitter 344B-PT-5000 / 5001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	3,620.64	7,241.27	137.85	275.70	4,845.46	9,690.93	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	7,963.56	15,927.12	1,758.36	3,516.71	10,467.61	20,935.21
935	344B.08	Differential pressure switch 344B-PDSH-6000 to 6004	ea	5	5	8.7	945.20	43.7	141.78	708.90	4,725.99	3,789.78	18,948.88	137.85	689.25	5,014.60	25,073.02	5.0	7.3	659.90	36.5	85.79	428.93	3,299.48	1,263.06	6,315.28	409.37	2,046.86	2,418.11	12,090.56
936	344B.09	Differential pressure indicator 344B-PDI-6000	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	18,750.22	18,750.22	137.85	137.85	19,975.05	19,975.05	1.0	14.6	1,319.80	14.6	171.57	171.57	1,319.80	2,967.37	2,967.37	907.59	907.59	5,366.33	5,366.33
937	344B.10	Flow switch 344B-FSL-5000 to 5005	ea	6	6	8.7	945.20	52.4	141.78	850.68	5,671.19	810.61	4,863.69	137.85	827.10	2,035.44	12,212.66	6.0	3.7	329.95	21.9	42.89	257.36	1,979.70	623.36	3,740.14	203.04	1,218.24	1,199.24	7,195.45
938	344B.11	Variable frequency drive 344B-VFD-5000 / 5001	ea	2	2	52.4	5,671.19	104.9	850.68	1,701.36	11,342.37	297.99	595.98	827.10	1,654.21	7,646.96	15,293.92	0.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
939	344B.12	Control Panel 344B-CP-5000 to 5002	ea	3	3	104.9	11,342.37	314.6	1,701.36	5,104.07	34,027.12	84,748.50	254,245.50	1,654.21	4,962.63	99,446.44	298,339.31	3.0	18.6	1,678.86	55.7	218.25	654.75	5,036.57	24,784.70	74,354.09	5,384.35	16,153.06	32,066.16	96,198.48
940	344B.13	Tube NPS 1/2 thickness 1.65, Piping Specification SB13	m	12	0	0.7	71.15	0.0	10.67	0.00	0.00	22.58	0.00	10.38	0.00	114.78	0.00	0.0	253.3	22,898.19	0.0	2,976.76	0.00	0.00	889.58	0.00	5,560.51	0.00	32,325.04	0.00
941	344B.14	Elbow 90 degrees Swagelok NPS 1/2, Piping Specification SB13	ea	18	0	1.1	119.31	0.0	17.90	0.00	0.00	48.36	0.00	17.40	0.00	202.96	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	39.49	0.00	23.58	0.00	138.26	0.00
942	344B.15	Needle valve NPS 1/2, Valve Specification VNE02	ea	6	0	1.1	119.31	0.0	17.90	0.00	0.00	228.91	0.00	17.40	0.00	383.51	0.00	6.0	3.2	288.82	19.2	37.55	225.28	1,732.92	279.59	1,677.54	124.17	744.99	730.12	4,380.74
943	344B.16	Pipe insulation NPS 1/2	Linear meter	4	0	1.4	142.39	0.0	21.36	0.00	0.00	38.46	0.00	8.55	0.00	210.77	0.00	120.4	3.3	300.90	400.7	39.12	4,709.62	36,227.85	165.87	19,970.09	86.70	10,438.91	592.60	71,346.46
944	344B.17	Pipe identification NPS 1/2	Linear meter	4	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.7	0.6	50.68	22.8	6.59	268.17	2,062.87	12.06	491.00	14.34	583.66	83.68	3,405.70
945	344B.18	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	1	6	1.1	116.26	6.9	17.44	111.65	744.34	22.99	147.22	16.96	108.56	173.65	1,111.77	0.0	0.6	49.91	0.0	6.49	0.00	0.00	3.74	0.00	12.48	0.00	72.61	0.00
946	344B.19	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	2	5.6	602.56	11.1	90.38	180.77	1,205.13	117.55	235.09	87.88	175.76	898.37	1,796.75	60.0	0.6	53.88	35.8	7.00	420.28	3,232.94	6.20	371.89	13.91	834.67	81.00	4,859.78
947	344B.20	Weld NPS 3/4 Piping Specification SB11	ea	8	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	1.4	123.78	19.2	16.09	225.28	1,732.92	145.86	2,041.97	58.45	818.36	344.18	4,818.53
948	344B.21	Ball Valve NPS 3/4, Valve Specification VBA11	ea	2	2	5.5	595.47	11.0	89.32	178.64	1,190.95	136.15	272.29	86.85	173.69	907.79	1,815.58	6.0	3.2	288.82	19.2	37.55	225.28	1,732.92	88.22	529.30	85.64	513.81	500.22	3,001.32
949	344B.22	Pipe insulation NPS 3/4	Linear meter	4	0	1.4	142.37	0.0	21.36	0.00	0.00	43.11	0.00	8.55	0.00	215.39	0.00	1.0	3.3	302.30	3.3	39.30	39.29	302.22	171.37	171.33	88.07	88.05	601.04	600.89
950	344B.23	Pipe identification NPS 3/4	Linear meter	4	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.2	16.41	0.2	2.13	2.16	16.64	4.02	4.07	4.66	4.73	27.23	27.60
951	344B.24	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	2	6	1.4	151.14	8.9	22.67	145.15	967.65	39.80	254.82	22.04	141.12	235.65	1,508.73	11.0	0.6	55.45	6.8	7.21	79.30	609.99	0.43	4.77	13.12	144.32	76.22	838.38
952	344B.25	Weld NPS 1 Piping Specification SB11	ea	4	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.0	0.3	26.28	6.4	3.42	75.15	578.11	256.46	5,642.13	57.81	1,271.77	343.96	7,567.16
953	344B.26	Ball Valve NPS 1, Valve Specification VBA11	ea	2	1	7.3	793.97	7.3	119.09	119.09	793.97	202.60	202.60	115.79	115.79	1,231.45	1,231.45	2.0	3.2	289.06	6.4	37.58	75.15	578.11	127.76	255.53	93.66	187.31	548.05	1,096.10
954	344B.27	Pipe insulation NPS 1	Linear meter	2	0	1.4	145.13	0.0	21.77	0.00	0.00	41.31	0.00	8.55	0.00	216.77	0.00	11.6	3.5	312.76	40.1	40.66	470.93	3,622.51	192.06	2,224.50	94.07	1,089.61	639.55	7,407.55
955	344B.28	Pipe identification NPS 1	Linear meter	2	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.6	50.63	2.2	6.58	25.77	198.25	12.06	47.23	14.33	56.09	83.60	327.34
956	344B.29	Pipe NPS 1 Sch.40, Piping Specification PA02	m	12	6	1.1	116.26	6.9	17.44	111.65	744.34	11.29	72.29	16.96	108.56	161.95	1,036.84	11.0	3.3	293.90	35.8	38.21	420.28	3,232.94	5.07	55.80	70.09	771.03	407.28	4,480.05
957	344B.30	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification PA02	ea	4	0	1.2	134.69	0.0	20.20	0.00	0.00	9.52	0.00	19.64	0.00	184.06	0.00	6.0	0.3	30.27	2.0	3.93	23.61	181.61	2.86	17.14	7.69	46.13	44.75	268.49
958	344B.31	Elbow 45 degrees SW Class 3000 NPS 1, Piping Specification PA02	ea	2	0	1.2	134.69	0.0	20.20	0.00	0.00	9.52	0.00	19.64	0.00	184.06	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	2.53	0.00	4.42	0.00	25.76	0.00
959	344B.32	Pipe identification NPS 1	Linear meter	12	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
960	344B.33	Flange Welding Neck 150RF Sch.10S NPS 1-1/4 c/w hardware, Piping Specification SB11	m	4	4	7.4	798.69	29.5	119.80	479.22	3,194.77	449.25	1,796.98	116.48	465.94	1,484.23	5,936.90	8.0	10.4	940.29	83.2	122.24	977.90	7,522.28	17.08	136.65	224.42	1,795.36	1,304.02	10,432.19
961	344B.34	Eccentric reducer SW Class 3000 NPS 2 x 1-1/4, Piping Specification SB11	m	4	0	18.3	1,977.83	0.0	296.67	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	4.0	0.7	62.04	2.7	8.06	32.26	248.15	7.99	31.95	16.19	64.75	94.28	377.11
962	344B.35	Weld NPS 1-1/4 Piping Specification SB11	ea	12	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.0	0.00	0.0	0.00	0.00	0.00	257.01	1,028.03	51.74	206.97	308.75	1,234.99
963	344B.36	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	106	96	1.8	197.64	175.5	29.65	2,847.11	18,980.75	44.88	4,310.29	28.82	2,768.22	300.99	28,906.37	15.0	3.3	298.06	49.5	38.75	581.22	4,470.95	16.50	247.50	73.37	1,100.58	426.68	6,400.25
964	344B.37	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	30	28	8.2	886.12	229.4	132.92	3,721.72	24,811.44	155.49	4,353.66	129.24	3,618.58	1,303.76	36,505.40	3.0	0.6	54.99	1.8	7.15	21.45	164.98	19.98	59.93	16.95	50.84	99.07	297.20
965	344B.38	Reducing tee SW Class 3000 NPS 1-1/2 x 1-1/2 x 1/2, Piping Specification SB11	ea	6	0	11.1	1,205.13	0.0	180.77	0.00	0.00	196.49	0.00	175.76	0.00	1,758.14	0.00	9.0	1.2	108.13	10.8	14.06	126.52	973.21	63.08	567.68	38.11	343.01	223.38	2,010.41
966	344B.39	Flange Slip-On 150RF NPS 1-1/2 c/w hardware, Piping Specification SB11	m	8	4	8.0	860.13	31.8	129.02	516.08	3,440.52	452.47	1,809.90	125.44	501.78	1,567.07	6,268.27	20.0	3.2	287.04	63.5	37.32	746.31	5,740.84	1.97	39.30	67.85	1,357.10	394.18	7,883.55
967	344B.40	Cap SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	1	0	4.6	496.23	0.0	74.43	0.00	0.00	176.90	0.00	72.37	0.00	819.93	0.00	2.0	0.6	57.54	1.3	7.48	14.96	115.07	8.20	16.40	15.18	30.35	88.39	176.78
968	344B.41	Weld NPS 1-1/2 Piping Specification SB11	ea	110	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.0	0.5	40.78	15.3	5.30	180.23	1,386.35	250.14	8,504.63	59.81	2,033.53	356.02	12,104.74
969	344B.42	Victaulic coupling NPS 1-1/2, Style 07	ea	8	0	0.3	37.22	0.0	5.58	0.00	0.00	47.12	0.00	5.43	0.00	95.35	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
970	344B.43	Victaulic elbow 90 degrees NPS 1-1/2, Style 41055	ea	1	0	3.0	322.55	0.0	48.38	0.00	0.00	133.26	0.00	47.04	0.00	551.23	0.00	6.0	0.6	54.99	3.7	7.15	42.89	329.95	103.11	618.65	33.68	202.10	198.93	1,193.60
971	344B.44	Victaulic tee degrees NPS 1-1/2, Style 42055	ea	2	0	4.7	506.86	0.0	76.03	0.00	0.00	307.84	0.00	73.92	0.00	964.66	0.00	0.0	0.9	83.18	0.0	10.81	0.00	0.00	260.14	0.00	71.92	0.00	426.05	0.00
972	344B.45	Ball Valve NPS 1-1/2, Valve Specification VBA11	ea	4	4	11.0	1,187.40	43.9	178.11	712.44	4,749.62	295.09	1,180.35	173.18	692.70	1,833.78	7,335.11	0.0	3.7	329.95	0.0	42.89	0.00	0.00	209.89	0.00	119.79	0.00	702.52	0.00
973	344B.46	Pipe insulation NPS 1-1/2	Linear meter	106	0	1.5	147.35	0.0	22.10	0.00	0.00	42.77	0.00	8.55	0.00	220.78	0.00	14.6	3.4	309.57	50.1	40.24	588.79	4,529.18	206.93	3,027.52	96.51	1,411.99	653.26	9,557.48
974	344B.47	Pipe identification NPS 1-1/2	Linear meter	106	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.6	50.17	2.7	6.52	32.26	248.15	12.06	59.66	14.22	70.33	82.98	410.40
975	344B.48	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	230	205	2.3	244.14	462.5	36.62	7,502.98	50,019.86	56.82	11,641.87	35.61	7,295.06	373.20	76,459.77	322.7	3.2	287.21	1,025.2	37.34	12,048.71	92,682.39	19.41	6,263.34	71.41	23,042.70	415.37	134,037.14
976	344B.49	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	10	10	8.5	921.57	85.2	138.24	1,382.35	9,215.68	171.71	1,717.14	134.40	1,344.04	1,365.92	13,659.22	25.0	0.6	54.12	15.0	7.04	175.90	1,353.07	20.22	505.44	16.79	419.74	98.17	2,454.15
977	344B.50	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1	138.24	552.94	3,686.27	172.91	691.65	134.40	537.62	1,367.12	5,468.47	6.0	0.3	27.50	1.8	3.57	21.45	164.98	26.97	161.83	11.89	71.35	69.93	419.60
978	344B.51	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	1	11.1	1,205.13	11.1	180.77	180.77	1,205.13	268.91	268.91	175.76	175.76	1,830.56	1,830.56	1.0	1.3	115.07	1.3	14.96	14.96	115.07	44.57	44.57	36.01	36.01	210.61	210.61
979	344B.52	Reducing tee SW Class 3000 NPS 2 x 2 x 1-1/2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6	180.77	723.08	4,820.51	283.87	1,135.48	175.76	703.04	1,845.53	7,382.10	7.0	1.1	99.02	7.7	12.87	90.11	693.16	700.69	4,904.80	164.34	1,150.36	976.92	6,838.44
980	344B.53	Reducing tee SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	1	5	11.1	1,205.13	55.7	180.77	903.85	6,025.64	266.81	1,334.06	175.76	878.80	1,828.47	9,142.34	1.0	1.3	115.07	1.3	14.96	14.96	115.07	95.67	95.67	46.31	46.31	272.01	272.01
981	344B.54	Reducing tee SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	2	2	11.1	1,205.13	22.3	180.77	361.54	2,410.25	238.38	476.77	175.76	351.52	1,800.04	3,600.08	2.0	1.2	107.44	2.4	13.97	27.93	214.88	95.67	191.35	44.51	89.02	261.59	523.19
982	344B.55	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	3	2	4.6	496.23	9.2	74.43	148.87	992.46	176.90	353.79	72.37	144.74	819.93	1,639.86	6.0	0.6	54.99	3.7	7.15	42.89	329.95	15.15	90.91	15.97	95.85	93.27	559.61
983	344B.56	Weld NPS 2 Piping Specification SB11	ea	109	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	166.0	2.2	199.46	366.2	25.93	4,304.29	33,109.96	150.96	25,059.49	76.96	12,776.03	453.31	75,249.78
984	344B.57	Victaulic coupling NPS 2, Style 07	ea	2	4	0.3	37.22	1.4	5.58	22.33	148.87	47.12	188.47	5.43	21.71	95.35	381.38	4.0	0.6	53.72	2.4	6.98	27.93	214.88	41.95	167.80	21.07	84.28	123.73	494.90
985	344B.58	Victaulic coupling NPS 2, Style 77	ea	6	6	0.3	37.22	2.1	5.58	33.50	223.30	39.43	236.60	5.43	32.57	87.66	525.97	6.0	0.6	54.99	3.7	7.15	42.89	329.95	54.71	328.24	23.94	143.63	140.79	844.72
986	344B.59	Victaulic coupling NPS 2, Style 89	ea	2	0	0.3	37.22	0.0	5.58	0.00	0.00	62.81	0.00	5.43	0.00	111.04	0.00	18.0	0.6	54.07	10.8	7.03	126.52	973.21	56.76	1,021.76	24.13	434.42	141.99	2,555.91
987	344B.60	Victaulic tee degrees NPS 2, Style 42055	ea	2	2	4.7	506.86	9.4	76.03	152.06	1,013.72	307.84	615.69	73.92	147.84	964.66	1,929.32	2.0	1.2	107.44	2.4	13.97	27.93	214.88	262.32	524.65	78.07	156.13	461.80	923.59
988	344B.61	Victaulic concentric reducer NPS 2 x 1-1/2, Style 50	ea	2	2	3.1	340.27	6.3	51.04	102.08	680.54	125.85	251.70	49.63	99.25	566.79	1,133.57	2.0	0.6	57.54	1.3	7.48	14.96	115.07	100.72	201.45	33.80	67.60	199.54	399.08
989	344B.62	Victaulic expansion joint JT NPS 2, Style 155	ea	1	1	3.1	340.27	3.1	51.04	51.04	340.27	2,258.36	2,258.36	49.63	49.63	2,699.30	2,699.30	0.0	0.6	49.91	0.0	6.49	0.00	0.00	2,497.36	0.00	514.50	0.00	3,068.26	0.00

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
990	3448.63	Ball Valve NPS2, Valve Specification VBA11	ea	4	5	14.7	1,587.93	73.4	238.19	1,190.95	7,939.66	406.63	2,033.14	231.59	1,157.95	2,464.34	12,321.69	5.0	4.8	432.26	23.9	56.19	280.97	2,161.31	310.28	1,551.40	164.05	820.27	962.79	4,813.96
991	3448.64	Check Valve NPS2, Valve Specification VCH12	ea	2	2	14.7	1,587.93	29.4	238.19	476.38	3,175.86	1,669.22	3,338.45	231.59	463.18	3,726.93	7,453.87	2.0	4.7	429.07	9.5	55.78	111.56	858.14	1,249.71	2,499.43	352.44	704.87	2,087.00	4,174.00
992	3448.65	Pipe insulation NPS 2	Linear meter	230	0	1.5	149.21	0.0	22.38	0.00	0.00	45.01	0.00	8.55	0.00	225.15	0.00	202.4	3.6	324.38	726.2	42.17	8,534.52	65,650.14	211.60	42,824.73	100.07	20,252.90	678.21	137,262.28
993	3448.66	Pipe identification NPS 2	Linear meter	230	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.4	0.6	50.39	38.1	6.55	448.22	3,447.83	12.06	825.38	14.27	976.46	83.28	5,697.89
994	3448.67	Pipe NPS 2-1/2 Sch.10S, Piping Specification SB11	m	6	6	2.6	279.02	16.5	41.85	267.96	1,786.42	79.30	507.72	40.69	260.54	440.87	2,822.65	9.0	2.5	225.51	22.5	29.32	263.85	2,029.60	3,192.02	28,728.18	695.63	6,260.71	4,142.48	37,282.34
995	3448.68	Elbow 90 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	4	4	18.3	1,977.83	73.1	296.67	1,186.70	7,911.30	116.05	464.20	288.45	1,153.81	2,679.00	10,716.01	4.0	0.5	49.56	2.2	6.44	25.77	198.25	9.60	38.42	13.58	54.33	79.19	316.77
996	3448.69	Tee BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	1	1	27.4	2,963.19	27.4	444.48	444.48	2,963.19	179.55	179.55	432.16	432.16	4,019.39	4,019.39	1.0	1.1	98.44	1.1	12.80	12.80	98.44	17.83	17.83	26.72	26.72	155.78	155.78
997	3448.70	Reducing tee BW Sch.10S NPS 2-1/2 x 2-1/2 x 1, Piping Specification SB11	ea	1	1	27.4	2,963.19	27.4	444.48	444.48	2,963.19	660.44	660.44	432.16	432.16	4,500.27	4,500.27	3.0	1.0	93.35	3.1	12.14	36.41	280.05	25.10	75.29	26.99	80.98	157.58	472.73
998	3448.71	Eccentric reducer BW Sch.10S NPS 2-1/2 x 2, Piping Specification SB11	m	2	2	18.3	1,977.83	36.6	296.67	593.35	3,955.65	117.04	234.07	288.45	576.91	2,679.99	5,359.98	0.0	0.6	49.91	0.0	6.49	0.00	0.00	8.00	0.00	13.35	0.00	77.75	0.00
999	3448.72	Flange Welding Neck 150RF Sch.10S NPS 2-1/2 c/w hardware, Piping Specification SB11	m	3	3	10.9	1,180.32	32.7	177.05	531.14	3,540.95	130.45	391.36	172.14	516.42	1,659.96	4,979.87	3.0	7.8	703.80	23.4	91.49	274.48	2,111.40	42.25	126.76	173.91	521.73	1,011.46	3,034.37
1000	3448.73	Weld NPS 2-1/2 Piping Specification SB11	ea	21	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	0.5	41.29	6.4	5.37	75.15	578.11	277.53	3,885.39	65.50	916.98	389.69	5,455.64
1001	3448.74	Butterfly valve NPS 2-1/2, Valve Specification VBU01	ea	1	1	5.7	616.74	5.7	92.51	92.51	616.74	219.14	219.14	89.95	89.95	1,018.34	1,018.34	1.0	4.2	379.86	4.2	49.38	49.38	379.86	173.40	173.40	124.18	124.18	726.82	726.82
1002	3448.75	Pipe insulation NPS 2-1/2	Linear meter	6	0	1.5	150.59	0.0	22.59	0.00	0.00	51.45	0.00	8.55	0.00	233.17	0.00	7.0	4.1	369.01	28.6	47.97	336.30	2,586.91	233.81	1,639.13	112.45	788.34	763.25	5,350.67
1003	3448.76	Pipe identification NPS 2-1/2	Linear meter	6	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.5	48.56	1.3	6.31	14.96	115.07	12.06	28.59	13.84	32.80	80.77	191.42
1004	3448.77	Flange Welding Neck 150RF Sch.10S NPS 4 c/w hardware, Piping Specification SB11	m	3	3	15.8	1,708.44	47.4	256.27	768.80	5,125.33	172.30	516.90	249.17	747.50	2,386.18	7,158.53	3.0	30.1	2,716.76	90.2	353.18	1,059.54	8,150.29	80.94	242.81	654.77	1,964.32	3,805.65	11,416.96
1005	3448.78	Elbow 90 degrees BW Sch.10S NPS 4, Piping Specification SB11	ea	2	2	24.4	2,644.19	48.9	396.63	793.26	5,288.38	166.91	333.82	385.64	771.27	3,593.37	7,186.73	2.0	0.9	82.49	1.8	10.72	21.45	164.98	23.23	46.46	24.06	48.13	140.51	281.02
1006	3448.79	Weld NPS 2 Piping Specification SB11	ea	7	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.0	3.5	318.94	116.4	41.46	1,368.26	10,525.09	5.65	186.45	74.97	2,474.11	441.03	14,553.91
1007	3448.80	Victaulic coupling NPS 4, Style 07	ea	1	1	0.5	58.48	0.5	8.77	8.77	58.48	88.54	88.54	8.53	8.53	164.33	164.33	1.0	0.9	83.18	0.9	10.81	10.81	83.18	79.39	79.39	35.53	35.53	208.92	208.92
1008	3448.81	Butterfly valve NPS 4, Valve Specification VBU01	ea	1	1	11.0	1,187.40	11.0	178.11	178.11	1,187.40	323.82	323.82	173.18	173.18	1,862.51	1,862.51	1.0	6.2	561.47	6.2	72.99	72.99	561.47	410.67	410.67	214.63	214.63	1,259.76	1,259.76
1009	3448.82	Pipe insulation NPS 4	Linear meter	3	0	2.8	278.95	0.0	41.84	0.00	0.00	57.70	0.00	8.55	0.00	387.04	0.00	1.8	6.8	617.06	12.5	80.22	146.70	1,128.49	381.23	697.20	186.08	340.30	1,264.59	2,312.70
1010	3448.83	Pipe identification NPS 4	Linear meter	3	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.6	53.82	0.4	7.00	4.33	33.27	12.07	7.46	15.07	9.32	87.94	54.37
B&M-0298	Added	4" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter		6	3.4	372.03	22.0	55.80	357.28	2,381.90	118.55	759.03	54.26	347.38	600.65	3,845.60	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0299	Added	1" weld adapter, 304SS, Vic-Press - 561	ea		2	5.9	638.01	11.8	95.70	191.40	1,276.02	153.82	307.64	93.05	186.10	980.58	1,961.16	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0300	Added	1" male adapter, 304SS, Vic-Press - 596	ea		1	5.9	638.01	5.9	95.70	95.70	638.01	150.83	150.83	93.05	93.05	977.59	977.59	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0301	Added	2" coupling, 304SS, Vic-Press - 597	ea		17	8.5	921.57	144.9	138.24	2,350.00	15,666.65	119.05	2,023.79	134.40	2,284.88	1,313.25	22,325.31	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0302	Added	1.5" coupling, 304SS, Vic-Press - 597	ea		4	8.2	886.12	32.8	132.92	531.67	3,544.49	107.91	431.63	129.24	516.94	1,256.18	5,024.73	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0303	Added	2"x1.25" reducer, 304SS, Vic-Press - 582	ea		4	8.5	921.57	34.1	138.24	552.94	3,686.27	177.40	709.60	134.40	537.62	1,371.61	5,486.43	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0304	Added	1"x2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea		5	11.1	1,205.13	55.7	180.77	903.85	6,025.64	333.84	1,669.22	175.76	878.80	1,895.50	9,477.50	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0305	Added	1" union, 304SS, Vic-Press - 584	ea		1	5.9	638.01	5.9	95.70	95.70	638.01	580.55	580.55	93.05	93.05	1,407.31	1,407.31	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0306	Added	1" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		2	1.2	134.69	2.5	20.20	40.41	269.38	9.52	19.04	19.64	39.29	184.06	368.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0307	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	1.2	134.69	1.2	20.20	20.20	134.69	13.25	13.25	19.64	19.64	187.79	187.79	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0308	Added	1/2" female adapter - SWAGELOK SS-8-TA-7-8 or equal	ea		6	1.1	119.31	6.6	17.90	107.38	715.85	25.66	153.96	17.40	104.40	180.26	1,081.59	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0309	Added	2" 90 elbow, LR, Sch 10S, ASTM A403 WP304L - VICTAULIC 410SS	ea		5	3.1	340.27	15.7	51.04	255.20	1,701.36	134.19	670.96	49.63	248.13	575.13	2,875.65	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0310	Added	2" cap, Sch 10S, ASTM A403 WP304L - VICTAULIC 60SS	ea		1	1.6	177.22	1.6	26.58	26.58	177.22	84.40	84.40	25.85	25.85	314.06	314.06	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0311	Added	2" rigid coupling, Galv. DI, ASTM A536 - Victaulic 89	ea		19	0.3	37.22	6.5	5.58	106.07	707.13	62.81	1,193.41	5.43	103.13	111.04	2,109.73	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0312	Added	Pipe insulation - All Sizes	ea		1	659.6	67,367.56	659.6	10,105.13	10,105.13	67,367.56	19,454.16	19,454.16	0.00	0.00	96,926.86	96,926.86	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WLS (Piezometer and Water Level)							$0.00				$0.00		$0.00							$0.00				$0.00		$0.00	$0.00	
1011	344C.01	Level tranmitter 344C-LT-6000 / 9000 / 9001	ea	3	3	52.4	5,671.19	157.3	850.68	2,552.03	17,013.56	5,038.11	15,114.33	827.10	2,481.31	12,387.08	37,161.23	3.0	21.1	1,904.37	63.2	247.57	742.70	5,713.11	5,463.62	16,390.86	1,547.52	4,642.56	9,163.08	27,489.24
1012	344C.02	Pressure transmitter 344C-PT-1000 / 2000/ 3000 / 4000	ea	4	4	8.7	945.20	35.0	141.78	567.12	3,780.79	1,867.96	7,471.86	137.85	551.40	3,092.79	12,371.17	4.0	7.3	659.90	29.2	85.79	343.15	2,639.59	1,843.97	7,375.88	526.33	2,105.30	3,115.98	12,463.92
1013	344C.03	Pressure indicator 344C-PI-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001	ea	8	8	8.7	945.20	69.9	141.78	1,134.24	7,561.58	700.54	5,604.29	137.85	1,102.81	1,925.36	15,402.92	8.0	3.7	329.95	29.2	42.89	343.15	2,639.59	548.24	4,385.91	187.92	1,503.33	1,109.00	8,871.98
1014	344C.04	Intrumentation cabinet 344C-IC-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 (Detail PD14 and PD15)	ea	8	8	104.9	11,342.37	839.0	1,701.36	13,610.85	90,738.98	6,295.98	50,367.83	1,654.21	13,233.67	20,993.92	167,951.32	8.0	111.3	10,066.56	890.8	1,308.65	10,469.23	80,532.50	14,559.03	116,472.24	5,296.90	42,375.19	31,231.14	249,849.15
B&M-0313	Added	tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L (1/2")	Linear meter		73	0.7	71.15	48.1	10.67	780.92	5,206.15	22.58	1,652.50	10.38	759.28	114.78	8,398.85	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0314	Added	UNION 90' ELBOW SWAGELOK SS-810-9 (1/2")	ea		16	1.1	119.31	17.7	17.90	286.34	1,908.92	48.36	773.69	17.40	278.40	202.96	3,247.35	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0315	Added	UNION TEE SWAGELOK SS -81 0-3 (1/2")	ea		60	1.6	169.92	94.3	25.49	1,529.31	10,195.37	66.38	3,983.07	24.78	1,486.93	286.58	17,194.68	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0316	Added	UNION CROSS SWAGELOK SS-810-4 (1/2")	ea		36	2.2	235.00	78.2	35.25	1,269.00	8,459.99	93.36	3,360.99	34.27	1,233.83	397.88	14,323.82	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0317	Added	CAP SWAGELOK SS-810-C (1/2")	ea		8	0.6	65.08	4.8	9.76	78.09	520.61	18.36	146.86	9.49	75.93	102.69	821.50	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0318	Added	FEMALE ADAPTER (1 / 2" - 1 / 4") SWAGELOK SS-8-TA-7-4	ea		8	1.1	119.31	8.8	17.90	143.17	954.46	25.66	205.28	17.40	139.20	180.26	1,442.11	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0319	Added	FEMALE ADAPTER (1 /2" - 1 /2") SWAGELOK SS- 8 -TA- 7- 8	ea		12	1.1	119.31	13.2	17.90	214.75	1,431.69	34.48	413.76	17.40	208.80	189.08	2,269.01	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0320	Added	QUICK CONNECT (1/ 2")	ea		12	1.1	119.31	13.2	17.90	214.75	1,431.69	138.42	1,661.01	17.40	208.80	293.02	3,516.26	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0321	Added	SHOCK ABSORBER (1/4")	ea		8	1.1	119.31	8.8	17.90	143.17	954.46	42.18	337.43	17.40	139.20	196.78	1,574.26	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0322	Added	HILLOCK HEX NIPPLE (1/ 4")	ea		12	1.1	119.31	13.2	17.90	214.75	1,431.69	27.81	333.78	17.40	208.80	182.42	2,189.03	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0323	Added	purge valve - SWAGELOK SS-4P58 or equal	ea		20	1.1	119.31	22.1	17.90	357.92	2,386.15	72.34	1,446.87	17.40	348.00	226.95	4,538.95	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0324	Added	NEEDLE VALVE SWAGELOK SS-18-KS (1/2")	ea		160	1.1	119.31	176.5	17.90	2,863.38	19,089.21	228.91	36,625.75	17.40	2,784.03	383.51	61,362.38	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0325	Added	SS DIAPHRAGM SEAL WINTERS D40 WITH SILICON FILL (1 /2")	ea		20	1.1	119.31	22.1	17.90	357.92	2,386.15	1,528.85	30,577.06	17.40	348.00	1,683.46	33,669.14	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Mechanical Shop Equipment						0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
1015	3440.001	Welding machine 3440-W-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	23,936.47	23,936.47	5,136.70	5,136.70	30,600.56	30,600.56
1016	3440.002	Welding fume extractor 3440-WFE-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	8,976.81	8,976.81	2,124.94	2,124.94	12,629.14	12,629.14
1017	3440.003	Victaulic pipe prep machine 3440-PPT-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	17,860.23	17,860.23	3,913.39	3,913.39	23,301.02	23,301.02
1018	3440.004	Milling Machine 3440-VM-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	48.6	4,393.31	48.6	571.13	571.13	4,393.31	23,229.97	23,229.97	5,709.29	5,709.29	33,903.70	33,903.70
1019	3440.005	Radial drilling machine 3440-RAD-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	67.3	6,083.25	67.3	790.82	790.82	6,083.25	30,350.72	30,350.72	7,540.03	7,540.03	44,764.82	44,764.82
1020	3440.006	Hydraulic press 3440-HYDP-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	16,284.33	16,284.33	4,151.96	4,151.96	24,636.25	24,636.25
1021	3440.007	Belt grinding machine 3440-BS-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	29.9	2,703.36	29.9	351.44	351.44	2,703.36	5,014.87	5,014.87	1,644.95	1,644.95	9,714.62	9,714.62
1022	3440.008	Iron worker 3440-IW-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	37,354.73	37,354.73	8,393.96	8,393.96	49,948.65	49,948.65
1023	3440.009	Engine lathe 3440-L-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	30,292.35	30,292.35	6,972.13	6,972.13	41,464.45	41,464.45
1024	3440.010	Band saw 3440-BANDS-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	37.4	3,378.51	37.4	439.21	439.21	3,378.51	7,470.95	7,470.95	2,298.10	2,298.10	13,586.76	13,586.76
1025	3440.011	Drilling machine 3440-DP-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	22.4	2,028.21	22.4	263.67	263.67	2,028.21	17,475.01	17,475.01	3,994.82	3,994.82	23,761.71	23,761.71
1026	3440.012	Bench grinder 3440-BGNR-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	2,171.24	2,171.24	754.79	754.79	4,453.43	4,453.43
1027	3440.013	Threading machnie 3440-PTHDR-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	23,813.64	23,813.64	5,111.97	5,111.97	30,453.01	30,453.01
1028	3440.014	Jib crane 3440-JIBC-6000 / 6001	ea	2	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	48.6	4,393.32	97.2	571.13	1,142.26	8,786.63	5,019.54	10,039.08	2,043.06	4,086.12	12,027.05	24,054.09
1029	3440.015	Floor handling crane 3440-CGM-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	67.3	6,083.25	67.3	790.82	790.82	6,083.25	20,428.37	20,428.37	5,542.40	5,542.40	32,844.85	32,844.85
1030	3440.016	Plasma cutter 3440-PLAC-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	11.2	1,013.42	11.2	131.74	131.74	1,013.42	3,475.37	3,475.37	937.85	937.85	5,558.38	5,558.38
1031	3440.017	Small cutting 3440-WT-6000	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	11.2	1,013.42	11.2	131.74	131.74	1,013.42	1,094.86	1,094.86	458.60	458.60	2,698.62	2,698.62
1032	3440.018	Working table 3440-WT-6001 / 6002	ea	2	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	22.4	2,027.52	44.9	263.58	527.16	4,055.04	2,796.94	5,593.87	1,039.59	2,079.19	6,127.63	12,255.25
1033	3440.019	Work cart 3440-WT-6003	ea	1	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	7.5	676.53	7.5	87.95	87.95	676.53	5,241.34	5,241.34	1,214.22	1,214.22	7,220.03	7,220.03
		Instrumentation						0	$0.00				$0.00		$0.00						0	$0.00				$0.00		$0.00	$0.00	
1034	3440.020	Detail AT1	ea	52	64	10.2	1,103.92	653.2	165.59	10,597.63	70,650.88	557.07	35,652.74	161.00	10,303.96	1,987.58	127,205.21	52.0	3.7	336.29	193.4	43.72	2,273.35	17,487.30	517.89	26,930.43	183.30	9,531.56	1,081.20	56,222.64
1035	3440.021	Detail AT2	ea	13	0	10.2	1,103.92	0.0	165.59	0.00	0.00	557.07	0.00	161.00	0.00	1,987.58	0.00	13.0	4.2	380.71	54.7	49.49	643.40	4,949.24	597.59	7,768.68	209.78	2,727.18	1,237.58	16,088.49
1036	3440.022	Detail AT3	ea	5	0	7.8	846.00	0.0	126.90	0.00	0.00	529.44	0.00	123.38	0.00	1,625.73	0.00	5.0	3.7	329.95	18.3	42.89	214.47	1,649.74	482.81	2,414.05	174.74	873.72	1,030.39	5,151.97
1037	3440.023	Detail AT4	ea	25	34	14.4	1,561.84	491.0	234.28	7,965.41	53,102.72	898.18	30,538.15	227.78	7,744.68	2,922.09	99,350.95	25.0	16.4	1,478.17	408.8	192.16	4,804.06	36,954.28	1,302.89	32,572.30	609.70	15,242.45	3,582.92	89,573.08
1038	3440.024	Detail AT5	ea	9	0	14.4	1,561.84	0.0	234.28	0.00	0.00	898.18	0.00	227.78	0.00	2,922.09	0.00	9.0	14.6	1,319.80	131.4	171.57	1,544.16	11,878.17	1,189.00	10,700.96	549.55	4,945.92	3,229.91	29,069.21
1039	3440.025	Detail AT6	ea	38	48	4.4	472.60	209.7	70.89	3,402.71	22,684.74	37.26	1,788.41	68.93	3,308.42	649.67	31,184.28	38.0	0.9	82.49	34.7	10.72	407.49	3,134.52	0.00	0.00	19.39	736.66	112.60	4,278.67
1040	3440.026	Detail AT7	ea	3	2	52.5	5,676.36	105.0	851.45	1,702.91	11,352.72	4,426.77	8,853.54	827.86	1,655.72	11,782.45	23,564.89	3.0	65.7	5,939.08	197.1	772.08	2,316.24	17,817.24	6,949.94	20,849.82	2,794.97	8,384.92	16,456.08	49,368.23
1041	3440.027	Detail AT8	ea	0	0	51.9	5,611.28	0.0	841.69	0.00	0.00	4,364.93	0.00	818.37	0.00	11,636.27	0.00	1.0	220.8	19,961.91	220.8	2,595.05	2,595.05	19,961.91	1,532.71	1,532.71	4,999.92	4,999.92	29,089.59	29,089.59
1042	3440.028	Detail AT9	ea	9	5	59.5	6,440.44	297.7	966.07	4,830.33	32,202.18	3,943.15	19,715.73	939.29	4,696.47	12,288.94	61,444.70	9.0	48.7	4,399.32	438.0	571.91	5,147.20	39,593.87	3,395.91	30,563.23	1,717.59	15,458.31	10,084.74	90,762.62
1043	3440.029	Detail AT10	ea	1	0	34.5	3,726.44	0.0	558.97	0.00	0.00	2,834.09	0.00	543.48	0.00	7,662.98	0.00	1.0	146.0	13,197.95	146.0	1,715.73	1,715.73	13,197.95	7,067.75	7,067.75	4,524.63	4,524.63	26,506.06	26,506.06
1043.1	Added	Detail AT11 (No Spec, No Drawings)	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1043.2	Added	Detail AT12 (No Spec, No Drawings)	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Piping support						0	$0.00				$0.00		$0.00	$0.00	$0.00				0	$0.00				$0.00		$0.00	$0.00	$0.00
1044	3440.030	S-C50-06	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	1,024.47	3,073.40	275.70	827.10	3,474.12	10,422.37	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	432.09	0.00	556.15	0.00	3,244.10	0.00
1045	3440.031	S-C50-07	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	1,134.29	3,402.88	275.70	827.10	3,583.95	10,751.85	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	561.27	0.00	582.16	0.00	3,399.28	0.00
1046	3440.032	S-C50-12	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	1,938.48	3,876.95	275.70	551.40	4,388.13	8,776.27	2.0	32.3	2,920.33	64.6	379.64	759.29	5,840.66	2,281.21	4,562.41	1,145.59	2,291.18	6,726.77	13,453.54
1047	3440.033	S-C51-06	ea	3	3	4.4	472.60	13.1	70.89	212.67	1,417.80	840.24	2,520.72	68.93	206.78	1,452.65	4,357.96	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	427.08	0.00	555.15	0.00	3,238.08	0.00
1048	3440.034	S-C51-07	ea	3	3	4.4	472.60	13.1	70.89	212.67	1,417.80	918.07	2,754.22	68.93	206.78	1,530.49	4,591.46	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	552.41	0.00	580.39	0.00	3,388.65	0.00
1049	3440.035	S-C52-03	ea	1	1	2.2	236.30	2.2	35.44	35.44	236.30	20.29	20.29	34.46	34.46	326.49	326.49	1.0	9.7	874.78	9.7	113.72	113.72	874.78	44.92	44.92	214.63	214.63	1,248.05	1,248.05
1050	3440.036	S-C53-01	ea	6	6	15.3	1,654.10	91.8	248.11	1,488.69	9,924.58	91.94	551.65	241.24	1,447.43	2,235.39	13,412.35	8.0	5.2	465.98	41.2	60.58	484.62	3,727.87	31.67	253.32	115.89	927.11	674.12	5,392.93
1051	3440.037	S-C53-02	ea	5	5	15.3	1,654.10	76.5	248.11	1,240.57	8,270.48	94.19	470.95	241.24	1,206.19	2,237.64	11,188.19	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	40.13	80.27	213.51	427.01	1,241.36	2,482.72
1052	3440.038	S-C53-03	ea	4	4	15.3	1,654.10	61.2	248.11	992.46	6,616.38	107.31	429.25	241.24	964.96	2,250.76	9,003.05	4.0	9.7	874.43	38.7	113.68	454.70	3,497.73	60.02	240.07	217.59	870.34	1,265.71	5,062.85
1053	3440.039	S-C53-13	ea	1	1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	91.78	91.78	241.24	241.24	2,235.23	2,235.23	0.0	5.1	461.65	0.0	60.01	0.00	0.00	9.50	0.00	110.41	0.00	641.57	0.00
1054	3440.040	S-D51-02	ea	4	4	19.7	2,126.69	78.7	319.00	1,276.02	8,506.78	301.09	1,204.35	310.16	1,240.66	3,056.95	12,227.80	5.0	24.5	2,210.66	122.3	287.39	1,436.93	11,053.29	294.93	1,474.67	578.92	2,894.58	3,371.89	16,859.47
1055	3440.041	S-D55-02	ea	38	35	21.8	2,362.99	764.7	354.45	12,405.72	82,704.80	470.64	16,472.26	344.63	12,061.94	3,532.71	123,644.72	38.0	25.2	2,281.44	959.0	296.59	11,270.32	86,694.78	706.41	26,843.71	678.39	25,778.89	3,962.83	150,587.69
1056	3440.042	S-D57-02	ea	7	6	24.0	2,599.29	144.2	389.89	2,339.36	15,595.76	551.89	3,311.37	379.09	2,274.54	3,920.17	23,521.03	7.0	25.7	2,326.08	180.1	302.39	2,116.73	16,282.57	811.90	5,683.27	710.12	4,970.83	4,150.49	29,053.40
1057	3440.043	S-D59-01	ea	3	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	304.01	304.01	310.16	310.16	3,059.87	3,059.87	3.0	32.3	2,920.09	96.9	379.61	1,138.84	8,760.28	38.29	114.88	693.97	2,081.92	4,031.97	12,095.91
1058	3440.044	S-D60-01	ea	1	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	387.49	1,162.47	379.09	1,137.27	3,755.77	11,267.30	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	131.08	131.08	712.55	712.55	4,142.83	4,142.83
1059	3440.045	S-E50-04	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	340.92	1,022.77	241.24	723.72	2,484.37	7,453.12	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	695.91	2,087.73	447.67	1,343.02	2,622.42	7,867.27
1060	3440.046	S-E50-06	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	355.53	1,066.58	241.24	723.72	2,498.97	7,496.92	3.0	19.3	1,743.09	57.8	226.60	679.81	5,229.27	758.50	2,275.51	562.36	1,687.08	3,290.56	9,871.67
1061	3440.047	S-E50-07	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	414.98	1,244.95	241.24	723.72	2,558.43	7,675.30	3.0	19.3	1,743.09	57.8	226.60	679.81	5,229.27	939.66	2,818.99	598.83	1,796.48	3,508.18	10,524.54
1062	3440.048	S-E50-08	ea	16	16	15.3	1,654.10	244.7	248.11	3,969.83	26,465.53	448.31	7,172.91	241.24	3,859.82	2,591.76	41,468.09	12.0	25.7	2,327.55	309.0	302.58	3,630.98	27,930.59	1,079.21	12,950.55	764.28	9,171.37	4,473.62	53,683.48
1063	3440.049	S-E50-13	ea	1	1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	535.94	535.94	241.24	241.24	2,679.39	2,679.39	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	1,300.51	1,300.51	947.98	947.98	5,547.68	5,547.68
1064	3440.050	S-E51-04	ea	1	1	10.9	1,181.50	10.9	177.22	177.22	1,181.50	262.61	262.61	172.31	172.31	1,793.64	1,793.64	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	564.83	564.83	419.98	419.98	2,457.37	2,457.37
1065	3440.051	S-E51-06	ea	6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	274.79	1,648.71	172.31	1,033.88	1,805.82	10,834.92	6.0	19.3	1,746.10	115.9	226.99	1,361.96	10,476.58	627.42	3,764.54	536.67	3,220.05	3,137.19	18,823.12
1066	3440.052	S-E51-07	ea	6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	332.70	1,996.22	172.31	1,033.88	1,863.74	11,182.43	6.0	19.3	1,746.10	115.9	226.99	1,361.96	10,476.58	808.58	4,851.48	573.15	3,438.88	3,354.82	20,128.89
1067	3440.053	S-E51-08	ea	8	8	10.9	1,181.50	87.4	177.22	1,417.80	9,451.98	367.10	2,936.76	172.31	1,378.51	1,898.13	15,185.04	12.0	25.7	2,327.55	309.0	302.58	3,630.98	27,930.59	948.13	11,377.57	737.89	8,854.71	4,316.15	51,793.85
1068	3440.054	S-E51-11	ea	1	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	455.06	910.12	172.31	344.63	1,986.09	3,972.19	2.0	29.6	2,672.86	59.1	347.47	694.94	5,345.72	895.81	1,791.63	808.51	1,617.03	4,724.66	9,449.32
1069	3440.055	S-E51-13	ea	1	1	10.9	1,181.50	10.9	177.22	177.22	1,181.50	455.06	455.06	172.31	172.31	1,986.09	1,986.09	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	1,169.42	1,169.42	921.60	921.60	5,390.22	5,390.22

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1070	3440.056	S-E52-04	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	372.12	1,116.37	241.24	723.72	2,515.57	7,546.72
1071	3440.057	S-E52-10	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	548.71	1,646.14	241.24	723.72	2,692.16	8,076.48
1072	3440.058	S-E53-08	ea	4	4	10.9	1,181.50	43.7	177.22	708.90	4,725.99	403.58	1,614.34	172.31	689.25	1,934.62	7,738.48
1073	3440.059	S-E54-08	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	486.83	3,894.66	275.70	2,205.61	2,936.49	23,491.91
1074	3440.060	S-E55-01	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	226.60	226.60	275.70	275.70	2,676.26	2,676.26
1075	3440.061	S-E56-01	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	195.65	586.96	275.70	827.10	2,645.31	7,935.93
1076	3440.062	S-E57-05	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	126.38	126.38	137.85	137.85	1,351.21	1,351.21
1077	3440.063	S-H50-01	ea	2	2	10.9	1,181.50	21.8	177.22	354.45	2,362.99	113.53	227.06	172.31	344.63	1,644.57	3,289.13
1078	3440.064	S-H51-10	ea	9	9	19.7	2,126.69	177.0	319.00	2,871.04	19,140.25	181.68	1,635.15	310.16	2,791.48	2,937.55	26,437.92
1079	3440.065	S-H51-11	ea	6	6	19.7	2,126.69	118.0	319.00	1,914.03	12,760.17	174.01	1,044.06	310.16	1,860.99	2,929.87	17,579.24
1080	3440.066	S-H51-12	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	166.90	166.90	310.16	310.16	2,922.76	2,922.76
1081	3440.067	S-H51-13	ea	2	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	178.37	535.10	310.16	930.49	2,934.23	8,802.69
1082	3440.068	S-H51-14	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	172.68	172.68	310.16	310.16	2,928.54	2,928.54
1083	3440.069	S-H51-20	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	180.88	180.88	310.16	310.16	2,936.74	2,936.74
1084	3440.070	S-H52-20	ea	4	4	17.5	1,890.40	69.9	283.56	1,134.24	7,561.58	194.97	779.87	275.70	1,102.81	2,644.62	10,578.49
1085	3440.071	S-H52-21	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	207.85	415.71	275.70	551.40	2,657.51	5,315.02
1086	3440.072	S-H52-22	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	205.48	410.97	275.70	551.40	2,655.14	5,310.28
1087	3440.073	S-H53	ea	1	1	26.2	2,835.59	26.2	425.34	425.34	2,835.59	450.68	450.68	413.55	413.55	4,125.16	4,125.16
1088	3440.074	S-J50-01	ea	28	28	4.4	472.60	122.4	70.89	1,984.92	13,232.77	238.14	6,668.06	68.93	1,929.91	850.56	23,815.65
1089	3440.075	S-J50-02	ea	4	4	4.4	472.60	17.5	70.89	283.56	1,890.40	235.75	942.99	68.93	275.70	848.16	3,392.65
1090	3440.076	S-J50-03	ea	1	1	4.4	472.60	4.4	70.89	70.89	472.60	235.75	235.75	68.93	68.93	848.16	848.16
1091	3440.077	S-J50-04	ea	12	10	4.4	472.60	43.7	70.89	708.90	4,725.99	235.75	2,357.49	68.93	689.25	848.16	8,481.63
1092	3440.078	S-J50-05	ea	6	6	4.4	472.60	26.2	70.89	425.34	2,835.59	238.14	1,428.87	68.93	413.55	850.56	5,103.35
1093	3440.079	S-J50-06	ea	3	8	4.4	472.60	35.0	70.89	567.12	3,780.79	238.14	1,905.16	68.93	551.40	850.56	6,804.47
1094	3440.080	S-J50-08	ea	1	1	4.4	472.60	4.4	70.89	70.89	472.60	235.53	235.53	68.93	68.93	847.94	847.94
1095	3440.081	S-J50-09	ea	10	10	4.4	472.60	43.7	70.89	708.90	4,725.99	237.74	2,377.35	68.93	689.25	850.15	8,501.49
1096	3440.082	S-J50-10	ea	2	2	4.4	472.60	8.7	70.89	141.78	945.20	237.74	475.47	68.93	137.85	850.15	1,700.30
1097	3440.083	S-J50-11	ea	6	6	4.4	472.60	26.2	70.89	425.34	2,835.59	237.74	1,426.41	68.93	413.55	850.15	5,100.89
1098	3440.084	S-J50-12	ea	4	4	4.4	472.60	17.5	70.89	283.56	1,890.40	236.13	944.53	68.93	275.70	848.55	3,394.19
1099	3440.085	S-J50-20	ea	2	2	6.6	708.90	13.1	106.33	212.67	1,417.80	255.65	511.30	103.39	206.78	1,174.27	2,348.55
1100	3440.086	S-J51-10	ea	74	75	17.5	1,890.40	1310.9	283.56	21,266.95	141,779.65	175.16	13,137.32	275.70	20,677.61	2,624.82	196,861.53
1101	3440.087	S-J51-11	ea	146	146	17.5	1,890.40	2551.9	283.56	41,399.66	275,997.72	173.22	25,289.39	275.70	40,252.42	2,622.87	382,939.19
1102	3440.088	S-J51-12	ea	82	82	17.5	1,890.40	1433.3	283.56	23,251.86	155,012.42	173.30	14,210.76	275.70	22,607.52	2,622.96	215,082.56
1103	3440.089	S-J51-13	ea	11	11	17.5	1,890.40	192.3	283.56	3,119.15	20,794.35	178.28	1,961.09	275.70	3,032.72	2,627.94	28,907.30
1104	3440.090	S-J51-14	ea	8	10	17.5	1,890.40	174.8	283.56	2,835.59	18,903.95	179.46	1,794.60	275.70	2,757.01	2,629.12	26,291.16
1105	3440.091	S-J51-15	ea	29	29	17.5	1,890.40	506.9	283.56	8,223.22	54,821.46	174.57	5,062.48	275.70	7,995.34	2,624.22	76,102.51
1106	3440.092	S-J51-17	ea	13	13	17.5	1,890.40	227.2	283.56	3,686.27	24,575.14	182.01	2,366.07	275.70	3,584.12	2,631.66	34,211.60
1107	3440.093	S-J51-18	ea	52	52	17.5	1,890.40	908.9	283.56	14,745.08	98,300.56	175.31	9,116.29	275.70	14,336.48	2,624.97	136,498.41
1108	3440.094	S-J51-19	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	174.05	1,392.37	275.70	2,205.61	2,623.70	20,989.62
1109	3440.095	S-J51-20	ea	24	24	17.5	1,890.40	419.5	283.56	6,805.42	45,369.49	184.70	4,432.79	275.70	6,616.84	2,634.36	63,224.53
1110	3440.096	S-J51-200	ea	4	4	17.5	1,890.40	69.9	283.56	1,134.24	7,561.58	197.46	789.85	275.70	1,102.81	2,647.12	10,588.48
1111	3440.097	S-J51-201	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	193.97	581.92	275.70	827.10	2,643.63	7,930.89
1112	3440.098	S-J51-203	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	182.96	365.92	275.70	551.40	2,632.62	5,265.23
1113	3440.099	S-J51-205	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	183.18	1,282.29	275.70	1,929.91	2,632.84	18,429.89
1114	3440.100	S-J51-21	ea	18	18	17.5	1,890.40	314.6	283.56	5,104.07	34,027.12	183.77	3,307.83	275.70	4,962.63	2,633.42	47,401.64
1115	3440.101	S-J51-22	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	185.28	1,296.98	275.70	1,929.91	2,634.94	18,444.57
1116	3440.102	S-J51-23	ea	70	70	17.5	1,890.40	1223.5	283.56	19,849.15	132,327.67	186.23	13,035.86	275.70	19,299.10	2,635.88	184,511.79
1117	3440.103	S-J51-24	ea	2	53	17.5	1,890.40	926.4	283.56	15,028.64	100,190.95	186.23	9,870.01	275.70	14,612.18	2,635.88	139,701.78
1118	3440.104	S-J51-25	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	184.64	369.27	275.70	551.40	2,634.29	5,268.59
1119	3440.105	S-J51-26	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	181.40	544.19	275.70	827.10	2,631.05	7,893.16
1120	3440.106	S-J51-27	ea	9	9	17.5	1,890.40	157.3	283.56	2,552.03	17,013.56	186.23	1,676.04	275.70	2,481.31	2,635.88	23,722.94
1121	3440.107	S-J51-28	ea	2	12	17.5	1,890.40	209.7	283.56	3,402.71	22,684.74	190.78	2,289.40	275.70	3,308.42	2,640.44	31,685.27
1122	3440.108	S-J51-29	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	190.37	190.37	275.70	275.70	2,640.03	2,640.03
1123	3440.109	S-J51-31	ea	6	6	17.5	1,890.40	104.9	283.56	1,701.36	11,342.37	198.56	1,191.33	275.70	1,654.21	2,648.21	15,889.27
1124	3440.110	S-J51-32	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	198.56	198.56	275.70	275.70	2,648.21	2,648.21
1125	3440.111	S-J51-33	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	195.25	390.51	275.70	551.40	2,644.91	5,289.82
1126	3440.112	S-J51-34	ea	9	9	17.5	1,890.40	157.3	283.56	2,552.03	17,013.56	200.11	1,800.96	275.70	2,481.31	2,649.76	23,847.87
1127	3440.113	S-J51-35	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	192.43	1,347.04	275.70	1,929.91	2,642.09	18,494.63
1128	3440.114	S-J51-40	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	207.49	622.48	275.70	827.10	2,657.15	7,971.45
1129	3440.115	S-J51-41	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	225.63	451.27	275.70	551.40	2,675.29	5,350.58
1130	3440.116	S-J51-50	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	239.49	239.49	275.70	275.70	2,689.15	2,689.15
1131	3440.117	S-J52-20	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	313.09	313.09	482.48	482.48	4,599.99	4,599.99
1132	3440.118	S-J52-21	ea	3	3	30.6	3,308.19	91.8	496.23	1,488.69	9,924.58	312.16	936.49	482.48	1,447.43	4,599.06	13,797.18
1133	3440.119	S-J52-30	ea	4	4	30.6	3,308.19	122.4	496.23	1,984.92	13,232.77	322.07	1,288.28	482.48	1,929.91	4,608.97	18,435.87
1134	3440.120	S-J52-31	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	322.07	5,153.11	482.48	7,719.64	4,608.97	73,743.48
1135	3440.121	S-J52-32	ea	8	8	30.6	3,308.19	244.7	496.23	3,969.83	26,465.53	374.28	2,994.22	482.48	3,859.82	4,661.18	37,289.40
1136	3440.122	S-J52-33	ea	8	8	30.6	3,308.19	244.7	496.23	3,969.83	26,465.53	308.77	2,470.18	482.48	3,859.82	4,595.67	36,765.36
1137	3440.123	S-J52-34	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	305.44	4,887.12	482.48	7,719.64	4,592.34	73,477.49
1138	3440.124	S-J52-40	ea	4	4	30.6	3,308.19	122.4	496.23	1,984.92	13,232.77	352.98	1,411.94	482.48	1,929.91	4,639.88	18,559.53
1139	3440.125	S-J52-60	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	358.43	358.43	482.48	482.48	4,645.33	4,645.33
1140	3440.126	S-J52-70	ea	3	3	30.6	3,308.19	91.8	496.23	1,488.69	9,924.58	418.66	1,255.99	482.48	1,447.43	4,705.56	14,116.68
1141	3440.127	S-J53-01	ea	3	3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	153.59	460.76	241.24	723.72	2,297.03	6,891.10
1142	3440.128	S-J54-80	ea	2	2	32.8	3,544.49	65.5	531.67	1,063.35	7,088.98	619.41	1,238.82	516.94	1,033.88	5,212.52	10,425.03
1143	3440.129	S-J54-90	ea	6	6	32.8	3,544.49	196.6	531.67	3,190.04	21,266.95	638.42	3,830.52	516.94	3,101.64	5,231.52	31,389.15
1144	3440.130	S-J55-01	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	77.86	77.86	137.85	137.85	1,302.69	1,302.69
1145	3440.131	S-J56-40	ea	4	4	15.3	1,654.10	61.2	248.11	992.46	6,616.38	217.75	871.00	241.24	964.96	2,361.20	9,444.79
1146	3440.132	S-J57-30	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	417.80	417.80	310.16	310.16	3,173.67	3,173.67
1147	3440.133	S-J57-40	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	488.73	488.73	310.16	310.16	3,244.60	3,244.60
1148	3440.134	S-J58-05	ea	2	2	15.3	1,654.10	30.6	248.11	496.23	3,308.19	288.83	577.66	241.24	482.48	2,432.28	4,864.56
1149	3440.135	S-J59-04	ea	2	2	15.3	1,654.10	30.6	248.11	496.23	3,308.19	193.38	386.75	241.24	482.48	2,336.83	4,673.65
1150	3440.136	S-J59-05	ea	6	6	15.3	1,654.10	91.8	248.11	1,488.69	9,924.58	202.13	1,212.78	241.24	1,447.43	2,345.58	14,073.48
1151	3440.137	S-J60-10	ea	2	2	19.7	2,126.69	39.3	319.00	638.01	4,253.39	382.94	765.88	310.16	620.33	3,138.80	6,277.61
1152	3440.138	S-J60-11	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	456.39	456.39	310.16	310.16	3,212.25	3,212.25
1153	3440.139	S-J60-21	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	460.33	1,380.98	310.16	930.49	3,216.19	9,648.57
1154	3440.140	S-J60-22	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	463.73	1,391.18	310.16	930.49	3,219.59	9,658.77
1155	3440.141	S-J60-40	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	483.82	1,451.45	310.16	930.49	3,239.68	9,719.04
1156	3440.142	S-J61-01	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	309.67	309.67	275.70	275.70	2,759.32	2,759.32
1157	3440.143	S-J62-20	ea	6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	162.54	975.21	172.31	1,033.88	1,693.57	10,161.42
1158	3440.144	S-J63-20	ea	3	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	318.06	954.17	379.09	1,137.27	3,686.33	11,059.00
1159	3440.145	S-J63-30	ea	3	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	322.63	967.88	379.09	1,137.27	3,690.90	11,072.71
1160	3440.146	S-J63-40	ea	2	2	24.0	2,599.29	48.1	389.89	779.79	5,198.59	328.36	656.72	379.09	758.18	3,696.64	7,393.28
1161	3440.147	S-J63-50	ea	6	6	24.0	2,599.29	144.2	389.89	2,339.36	15,595.76	335.08	2,010.47	379.09	2,274.54	3,703.36	22,220.14
1162	3440.148	S-J63-60	ea	2	2	24.0	2,599.29	48.1	389.89	779.79	5,198.59	350.03	700.05	379.09	758.18	3,718.30	7,436.61
1163	3440.149	S-J64-10	ea	3	3	4.4	472.60	13.1	70.89	212.67	1,417.80	192.48	577.44	68.93	206.78	804.89	2,414.68
1164	3440.150	S-J64-20	ea	8	8	4.4	472.60	35.0	70.89	567.12	3,780.79	202.15	1,617.22	68.93	551.40	814.57	6,516.53
1165	3440.151	S-K50-10	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,179.96	1,179.96	482.48	482.48	5,466.86	5,466.86
1166	3440.152	S-L50-20	ea	8	12	13.1	1,417.80	157.3	212.67	2,552.03	17,013.56	419.99	5,039.83	206.78	2,481.31	2,257.23	27,086.74
1167	3440.153	S-L50-21	ea	1	1	13.1	1,417.80	13.1	212.67	212.67	1,417.80	399.59	399.59	206.78	206.78	2,236.83	2,236.83
1168	3440.154	S-L50-30	ea	16	32	13.1	1,417.80	419.5	212.67	6,805.42	45,369.49	691.55	22,129.68	206.78	6,616.84	2,528.79	80,921.43
1169	3440.155	S-L50-40	ea	8	0	13.1	1,417.80	0.0	212.67	0.00	0.00	453.36	0.00	206.78	0.00	2,290.60	0.00
1170	3440.156	S-L51-01	ea	16	16	11.5	1,240.57	183.5	186.09	2,977.37	19,849.15	812.95	13,007.23	180.93	2,894.87	2,420.54	38,728.62
1171	3440.157	S-L52-20	ea	4	4	19.7	2,126.69	78.7	319.00	1,276.02	8,506.78	1,238.44	4,953.75	310.16	1,240.66	3,994.30	15,977.20
1172	3440.158	S-L52-21	ea	5	5	15.3	1,654.10	76.5	248.11	1,240.57	8,270.48	912.54	4,562.69	241.24	1,206.19	3,055.99	15,279.94
1173	3440.159	S-L52-40	ea	9	9	19.7	2,126.69	177.0	319.00	2,871.04	19,140.25	1,215.32	10,937.87	310.16	2,791.48	3,971.18	35,740.64
1174	3440.160	S-L52-41	ea	9	9	19.7	2,126.69	177.0	319.00	2,871.04	19,140.25	1,282.59	11,543.28	310.16	2,791.48	4,038.45	36,346.05
1175	3440.161	S-L53-01	ea	3	3	39.3	4,253.39	118.0	638.01	1,914.03	12,760.17	1,776.24	5,328.71	620.33	1,860.99	7,287.96	21,863.89
1176	3440.162	S-L53-02	ea	1	1	39.3	4,253.39	39.3	638.01	638.01	4,253.39	1,740.02	1,740.02	620.33	620.33	7,251.75	7,251.75
1177	3440.163	S-L54-50	ea	6	6	20.2	2,185.77	121.3	327.87	1,967.19	13,114.62	1,417.95	8,507.72	318.78	1,912.68	4,250.37	25,502.21
1178	3440.164	S-L54-51	ea	1	0	19.7	2,126.69	0.0	319.00	0.00	0.00	1,325.20	0.00	310.16	0.00	4,081.06	0.00
1179	3440.165	S-L54-61	ea	2	2	22.4	2,422.07	44.8	363.31	726.62	4,844.14	1,434.78	2,869.56	353.24	706.49	4,573.40	9,146.80
1180	3440.166	S-L54-62	ea	1	1	21.8	2,362.99	21.8	354.45	354.45	2,362.99	1,385.30	1,385.30	344.63	344.63	4,447.37	4,447.37
1181	3440.167	S-L54-70	ea	3	3	31.1	3,367.27	93.4	505.09	1,515.27	10,101.80	1,675.16	5,025.48	491.09	1,473.28	6,038.61	18,115.83
1182	3440.168	S-L54-71	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.38	1,588.87	3,177.74	482.48	964.96	5,875.77	11,751.54
1183	3440.169	S-L54-80	ea	6	6	33.9	3,662.64	203.2	549.40	3,296.38	21,975.85	1,743.42	10,460.52	534.17	3,205.03	6,489.63	38,937.77
1184	3440.170	S-L54-90	ea	2	2	32.2	3,485.42	64.5	522.81	1,045.62	6,970.83	1,701.39	3,402.79	508.32	1,016.65	6,217.95	12,435.89
1185	3440.171	S-L55-01	ea	15	15	14.2	1,535.95	213.0	230.39	3,455.88	23,039.19	727.19	10,907.78	224.01	3,360.11	2,717.53	40,762.97
1186	3440.172	S-L56	ea	4	4	48.1	5,198.59	192.3	779.79	3,119.15	20,794.35	3,953.64	15,814.55	758.18	3,032.72	10,690.19	42,760.76
1187	3440.173	S-L57	ea	4	4	131.1	14,177.96	524.4	2,126.69	8,506.78	56,711.86	9,546.38	38,185.51	2,067.76	8,271.04	27,918.80	111,675.20
1188	3440.174	S-L59-10	ea	5	5	13.7	1,476.87	68.3	221.53	1,107.65	7,384.36	524.84	2,624.18	215.39	1,076.96	2,438.63	12,193.15
1189	3440.175	S-L59-20	ea	2	2	14.2	1,535.95	28.4	230.39	460.78	3,071.89	524.30	1,048.60	224.01	448.01	2,514.65	5,029.30
1190	3440.176	S-L59-30	ea	6	6	14.7	1,595.02	88.5	239.25	1,435.52	9,570.13	3,040.83	18,244.99	232.62	1,395.74	5,107.73	30,646.38
1191	3440.177	S-L60	ea	4	4	41.0	4,430.61	163.9	664.59	2,658.37	17,722.46	3,022.85	12,091.40	646.18	2,584.70	8,764.23	35,056.93
1192	3440.178	S-L61	ea	4	4	54.1	5,848.41	216.3	877.26	3,509.05	23,393.64	3,843.36	15,373.45	852.95	3,411.81	11,421.99	45,687.95
1193	3440.179	S-L62	ea	4	4	56.8	6,143.78	227.2	921.57	3,686.27	24,575.14	6,124.27	24,497.08	896.03	3,584.12	14,085.65	56,342.61
1194	3440.180	S-L64-10	ea	2	2	21.8	2,362.99	43.7	354.45	708.90	4,725.99	1,196.80	2,393.59	344.63	689.25	4,258.87	8,517.73

	Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
		LABOUR COMPONENT						NON LABOUR COMPONENT					
		0.13											
No	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1070	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	842.23	2,526.69	477.13	1,431.39	2,798.20	8,394.59
1071	3.0	25.7	2,326.28	77.2	302.42	907.25	6,978.83	1,601.70	4,805.09	869.17	2,607.51	5,099.56	15,298.68
1072	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	1,123.03	4,492.12	772.80	3,091.21	4,524.53	18,098.11
1073	8.0	25.8	2,328.19	206.0	302.66	2,421.31	18,625.48	1,079.21	8,633.69	764.43	6,115.46	4,474.49	35,795.95
1074	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	91.81	0.00	371.34	0.00	2,159.73	0.00
1075	0.0	5.1	461.65	0.0	60.01	0.00	0.00	61.64	0.00	120.90	0.00	704.20	0.00
1076	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	92.79	92.79	324.94	324.94	1,890.29	1,890.29
1077	2.0	4.5	404.12	8.9	52.54	105.07	808.24	104.03	208.05	115.92	231.83	676.60	1,353.20
1078	6.0	2.2	200.79	13.3	26.10	156.61	1,204.73	140.65	843.93	75.51	453.04	443.05	2,658.31
1079	6.0	9.6	871.55	57.8	113.30	679.81	5,229.27	91.68	550.10	223.28	1,339.70	1,299.81	7,798.87
1080	1.0	7.3	659.89	7.3	85.79	85.79	659.89	68.67	68.67	168.91	168.91	983.26	983.26
1081	38.0	3.5	317.36	133.4	41.26	1,567.77	12,059.78	71.31	2,709.65	88.94	3,379.75	518.87	19,716.96
1082	1.0	7.3	659.89	7.3	85.79	85.79	659.89	93.53	93.53	173.92	173.92	1,013.12	1,013.12
1083	1.0	4.4	396.50	4.4	51.55	51.55	396.50	148.75	148.75	123.13	123.13	719.93	719.93
1084	6.0	7.3	662.67	44.0	86.15	516.88	3,976.03	128.50	771.03	181.61	1,089.66	1,058.93	6,353.60
1085	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	172.15	344.29	170.36	340.72	994.99	1,989.97
1086	0.0	5.1	461.65	0.0	60.01	0.00	0.00	54.00	0.00	119.37	0.00	695.04	0.00
1087	2.0	5.4	486.61	10.8	63.26	126.52	973.21	504.81	1,009.62	215.99	431.98	1,270.66	2,541.33
1088	23.0	6.4	574.55	146.2	74.69	1,717.90	13,214.59	389.80	8,965.46	213.50	4,910.61	1,252.55	28,808.56
1089	0.0	2.6	231.52	0.0	30.10	0.00	0.00	109.47	0.00	76.46	0.00	447.55	0.00
1090	0.0	2.6	231.52	0.0	30.10	0.00	0.00	109.47	0.00	76.46	0.00	447.55	0.00
1091	3.0	3.2	286.05	9.5	37.19	111.56	858.14	385.46	1,156.37	144.83	434.48	853.52	2,560.55
1092	6.0	6.4	574.64	38.1	74.70	448.22	3,447.83	389.80	2,338.81	213.53	1,281.16	1,252.67	7,516.02
1093	9.0	4.9	439.93	43.8	57.19	514.72	3,959.39	284.61	2,561.53	160.69	1,446.22	942.43	8,481.86
1094	0.0	2.6	231.52	0.0	30.10	0.00	0.00	109.47	0.00	76.46	0.00	447.55	0.00
1095	0.0	5.1	461.65	0.0	60.01	0.00	0.00	110.24	0.00	130.69	0.00	762.60	0.00
1096	0.0	5.1	461.65	0.0	60.01	0.00	0.00	110.24	0.00	130.69	0.00	762.60	0.00
1097	12.0	6.4	574.64	76.3	74.70	896.43	6,895.65	321.28	3,855.32	199.73	2,396.75	1,170.35	14,044.16
1098	0.0	2.6	231.52	0.0	30.10	0.00	0.00	109.66	0.00	76.50	0.00	447.77	0.00
1099	1.0	4.4	396.50	4.4	51.55	51.55	396.50	263.08	263.08	146.15	146.15	857.28	857.28
1100	59.0	5.2	474.22	309.5	61.65	3,637.29	27,979.12	84.02	4,956.98	128.36	7,573.47	748.25	44,146.86
1101	149.0	2.7	242.93	400.4	31.58	4,705.47	36,195.95	77.89	11,604.90	72.77	10,842.95	425.16	63,349.27
1102	93.0	2.8	249.94	257.1	32.49	3,021.82	23,244.76	76.97	7,158.09	74.24	6,903.97	433.64	40,328.64
1103	8.0	7.3	664.06	58.8	86.33	690.62	5,312.45	102.36	818.89	176.67	1,413.36	1,029.41	8,235.32
1104	3.0	9.7	874.32	29.0	113.66	340.98	2,622.96	107.89	323.66	227.20	681.60	1,323.07	3,969.20
1105	27.0	2.2	200.40	59.9	26.05	703.42	5,410.89	82.85	2,236.84	63.78	1,721.98	373.08	10,073.13
1106	13.0	9.7	873.07	125.5	113.50	1,475.49	11,349.96	120.23	1,562.98	229.39	2,982.07	1,336.19	17,370.51
1107	0.0	5.1	461.65	0.0	60.01	0.00	0.00	29.53	0.00	114.43	0.00	665.63	0.00
1108	0.0	2.6	231.52	0.0	30.10	0.00	0.00	27.04	0.00	59.85	0.00	348.50	0.00
1109	24.0	4.4	400.07	106.2	52.01	1,248.23	9,601.78	117.83	2,827.82	117.74	2,825.87	687.65	16,503.71
1110	4.0	9.7	874.43	38.7	113.68	454.70	3,497.73	161.10	644.40	237.94	951.75	1,387.15	5,548.59
1111	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	148.95	446.84	186.38	559.13	1,087.28	3,261.83
1112	0.0	2.6	231.52	0.0	30.10	0.00	0.00	39.68	0.00	62.41	0.00	363.70	0.00
1113	6.0	2.2	200.79	13.3	26.10	156.61	1,204.73	114.14	684.86	70.17	421.01	411.20	2,467.22
1114	18.0	4.4	400.50	79.7	52.06	937.17	7,208.97	115.62	2,081.10	117.40	2,113.19	685.58	12,340.43
1115	12.0	4.4	400.08	53.1	52.01	624.12	4,800.90	125.75	1,509.03	119.34	1,432.09	697.18	8,366.13
1116	73.0	4.5	407.47	329.0	52.97	3,866.89	29,745.31	126.49	9,233.66	121.23	8,849.56	708.16	51,695.42
1117	55.0	4.6	413.03	251.3	53.69	2,953.16	22,716.58	75.34	4,143.95	112.24	6,173.01	654.30	35,986.69
1118	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	120.04	240.07	159.87	319.73	932.38	1,864.77
1119	0.0	2.6	231.52	0.0	30.10	0.00	0.00	36.60	0.00	61.78	0.00	359.99	0.00
1120	10.0	4.4	400.93	44.4	52.12	521.21	4,009.30	127.33	1,273.33	119.86	1,198.60	700.24	7,002.44
1121	12.0	4.4	400.08	53.1	52.01	624.12	4,800.90	88.65	1,063.75	111.87	1,342.44	652.60	7,831.20
1122	1.0	4.4	396.50	4.4	51.55	51.55	396.50	128.50	128.50	119.06	119.06	695.60	695.60
1123	14.0	5.5	499.68	77.4	64.96	909.41	6,995.46	146.91	2,056.80	147.01	2,058.12	858.56	12,019.79
1124	1.0	4.4	396.50	4.4	51.55	51.55	396.50	148.58	148.58	123.10	123.10	719.72	719.72
1125	2.0	4.5	404.12	8.9	52.54	105.07	808.24	136.23	272.47	122.40	244.80	715.29	1,430.58
1126	0.0	11.5	1,039.75	0.0	135.17	0.00	0.00	175.10	0.00	279.61	0.00	1,629.63	0.00
1127	0.0	11.5	1,039.75	0.0	135.17	0.00	0.00	175.10	0.00	279.61	0.00	1,629.63	0.00
1128	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	171.58	514.75	128.92	386.76	754.28	2,262.85
1129	2.0	4.5	404.12	8.9	52.54	105.07	808.24	204.55	409.09	136.15	272.30	797.35	1,594.71
1130	2.0	4.5	404.12	8.9	52.54	105.07	808.24	236.76	473.52	142.64	285.27	836.05	1,672.10
1131	1.0	6.4	578.11	6.4	75.15	75.15	578.11	328.27	328.27	201.95	201.95	1,183.48	1,183.48
1132	3.0	3.2	286.05	9.5	37.19	111.56	858.14	325.86	977.59	132.83	398.49	781.93	2,345.78
1133	4.0	14.5	1,307.32	57.8	169.95	679.81	5,229.27	337.84	1,351.35	375.25	1,501.02	2,190.36	8,761.45
1134	16.0	9.6	872.27	154.4	113.39	1,814.32	13,956.28	337.84	5,405.42	273.01	4,368.18	1,596.51	25,544.19
1135	0.0	11.5	1,039.75	0.0	135.17	0.00	0.00	175.10	0.00	279.61	0.00	1,629.63	0.00
1136	8.0	9.6	872.35	77.2	113.41	907.25	6,978.83	291.44	2,331.55	263.69	2,109.53	1,540.89	12,327.16
1137	16.0	9.6	872.27	154.4	113.39	1,814.32	13,956.28	278.00	4,447.93	260.96	4,175.41	1,524.62	24,393.94
1138	4.0	4.4	399.96	17.7	51.99	207.98	1,599.84	400.93	1,603.71	174.71	698.85	1,027.59	4,110.38
1139	1.0	4.4	396.50	4.4	51.55	51.55	396.50	465.42	465.42	186.88	186.88	1,100.34	1,100.34
1140	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	599.06	1,797.17	214.98	644.95	1,267.82	3,803.47
1141	6.0	2.2	200.79	13.3	26.10	156.61	1,204.73	116.35	698.11	70.61	423.67	413.86	2,483.13
1142	0.0	2.6	231.52	0.0	30.10	0.00	0.00	59.39	0.00	66.36	0.00	387.37	0.00
1143	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	1,357.40	8,144.41	367.60	2,205.61	2,178.52	13,071.13
1144	0.0	2.6	231.52	0.0	30.10	0.00	0.00	44.43	0.00	63.35	0.00	369.40	0.00
1145	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	333.79	1,001.36	161.57	484.72	949.14	2,847.43
1146	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	564.29	564.29	419.88	419.88	2,456.73	2,456.73
1147	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	771.95	1,543.91	463.63	927.26	2,717.56	5,435.11
1148	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	489.17	978.34	406.69	813.39	2,377.84	4,755.68
1149	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	172.32	344.64	342.91	685.82	1,997.21	3,994.41
1150	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	194.15	194.15	345.34	345.34	2,012.06	2,012.06
1151	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	352.94	705.88	276.48	552.96	1,617.14	3,234.27
1152	1.0	7.3	659.89	7.3	85.79	85.79	659.89	589.49	589.49	273.76	273.76	1,608.93	1,608.93
1153	0.0	5.1	461.65	0.0	60.01	0.00	0.00	183.44	0.00	145.43	0.00	850.53	0.00
1154	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	610.85	1,832.56	279.37	838.11	1,642.18	4,926.53
1155	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	990.48	2,971.43	355.80	1,067.39	2,098.22	6,294.67
1156	1.0	4.4	396.50	4.4	51.55	51.55	396.50	521.94	521.94	198.26	198.26	1,168.24	1,168.24
1157	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	145.07	870.44	123.53	741.18	722.12	4,332.73
1158	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	345.01	1,035.03	377.03	1,131.08	2,200.87	6,602.62
1159	0.0	5.1	461.65	0.0	60.01	0.00	0.00	440.63	0.00	197.21	0.00	1,159.51	0.00
1160	0.0	5.1	461.65	0.0	60.01	0.00	0.00	18.75	0.00	112.26	0.00	652.67	0.00
1161	0.0	5.1	461.65	0.0	60.01	0.00	0.00	202.75	0.00	149.31	0.00	873.73	0.00
1162	3.0	5.7	517.11	17.2	67.22	201.67	1,551.32	435.96	1,307.87	209.30	627.90	1,229.59	3,688.76
1163	0.0	5.1	461.65	0.0	60.01	0.00	0.00	126.61	0.00	133.99	0.00	782.26	0.00
1164	8.0	4.4	400.13	35.4	52.02	416.14	3,201.06	74.03	592.22	108.94	871.52	635.12	5,080.94
1165	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	3,075.09	3,075.09	1,305.26	1,305.26	7,679.54	7,679.54
1166	15.0	4.4	400.38	66.4	52.05	780.73	6,005.63	252.05	3,780.73	144.84	2,172.57	849.31	12,739.67
1167	1.0	4.4	396.50	4.4	51.55	51.55	396.50	221.58	221.58	137.79	137.79	807.42	807.42
1168	25.0	4.4	400.54	110.8	52.07	1,301.76	10,013.54	254.54	6,363.51	145.38	3,634.46	852.53	21,313.27
1169	0.0	5.1	461.65	0.0	60.01	0.00	0.00	130.66	0.00	134.80	0.00	787.13	0.00
1170	0.0	11.5	1,039.75	0.0	135.17	0.00	0.00	291.83	0.00	303.11	0.00	1,769.86	0.00
1171	4.0	4.4	399.96	17.7	51.99	207.98	1,599.84	1,355.60	5,422.40	366.91	1,467.66	2,174.47	8,697.88
1172	5.0	4.4	399.27	22.1	51.90	259.52	1,996.33	805.68	4,028.39	256.04	1,280.19	1,512.89	7,564.44
1173	9.0	4.4	399.57	39.8	51.94	467.50	3,596.17	1,176.49	10,588.39	330.76	2,976.87	1,958.77	17,628.93
1174	9.0	4.4	399.57	39.8	51.94	467.50	3,596.17	1,270.50	11,434.54	349.69	3,147.22	2,071.71	18,645.43
1175	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	1,342.65	5,370.59	817.02	3,268.07	4,788.36	19,153.45
1176	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	291.83	0.00	411.60	0.00	2,400.02	0.00
1177	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	466.93	0.00	446.86	0.00	2,610.37	0.00
1178	1.0	4.4	396.50	4.4	51.55	51.55	396.50	1,124.14	1,124.14	319.50	319.50	1,891.69	1,891.69
1179	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,146.91	2,293.81	325.88	651.76	1,929.44	3,858.88
1180	1.0	4.4	396.50	4.4	51.55	51.55	396.50	1,163.04	1,163.04	327.33	327.33	1,938.42	1,938.42
1181	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	1,406.72	4,220.17	377.58	1,132.75	2,238.09	6,714.27
1182	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,295.21	2,590.41	355.73	711.47	2,107.59	4,215.19
1183	8.0	4.4	400.13	35.4	52.02	416.14	3,201.06	1,408.37	11,266.99	377.58	3,020.62	2,238.10	17,904.81
1184	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,342.84	2,685.68	365.32	730.65	2,164.82	4,329.63
1185	15.0	4.4	400.38	66.4	52.05	780.73	6,005.63	664.58	9,968.68	227.89	3,418.37	1,344.89	20,173.41
1186	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	3,983.06	15,932.24	1,348.60	5,394.41	7,960.36	31,841.43
1187	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	9,322.09	37,288.35	2,423.48	9,693.94	14,374.27	57,497.07
1188	5.0	7.3	663.22	36.7	86.22	431.10	3,316.12	390.74	1,953.70	234.53	1,172.67	1,374.72	6,873.58
1189	2.0	4.5	404.12	8.9	52.54	105.07	808.24	383.50	767.00	172.18	344.35	1,012.33	2,024.66
1190	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	389.26	2,335.58	172.69	1,036.14	1,015.47	6,092.84
1191	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	3,227.82	12,911.28	1,059.88	4,239.51	6,259.22	25,036.86
1192	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	4,008.65	16,034.59	1,217.07	4,868.29	7,197.24	28,788.96
1193	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	6,824.44	27,297.78	1,783.97	7,135.87	10,579.93	42,319.73
1194	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	1,010.85	2,021.71	511.73	1,023.46	3,004.56	6,009.11

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1195	3440.181	S-L65-01	ea	5	5	24.0	2,599.29	120.2	389.89	1,949.47	12,996.47	1,220.55	6,102.74	379.09	1,895.45	4,588.82	22,944.12	5.0	14.5	1,309.82	72.4	170.28	851.38	6,549.08	1,005.26	5,026.30	510.21	2,551.06	2,995.56	14,977.82
1196	3440.182	S-L65-02	ea	1	1	24.0	2,599.29	24.0	389.89	389.89	2,599.29	1,142.95	1,142.95	379.09	379.09	4,511.23	4,511.23	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	466.93	0.00	446.86	0.00	2,610.37	0.00
1197	3440.183	S-L66-01	ea	2	2	13.7	1,476.87	27.3	221.53	443.06	2,953.74	841.79	1,683.59	215.39	430.78	2,755.59	5,511.18	2.0	4.5	404.12	8.9	52.54	105.07	808.24	724.50	1,448.99	240.84	481.68	1,421.99	2,843.98
1198	3440.184	S-L67-10	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	958.04	958.04	224.01	224.01	2,948.39	2,948.39	0.0	11.5	1,039.75	0.0	135.17	0.00	0.00	291.83	0.00	303.11	0.00	1,769.86	0.00
1199	3440.185	S-L67-20	ea	2	2	14.2	1,535.95	28.4	230.39	460.78	3,071.89	785.19	1,570.38	224.01	448.01	2,775.54	5,551.07	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	529.81	1,059.63	242.36	484.72	1,424.65	2,849.31
1200	3440.186	S-L67-21	ea	3	3	14.2	1,535.95	42.6	230.39	691.18	4,607.84	814.73	2,444.18	224.01	672.02	2,805.07	8,415.22	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	568.30	1,704.91	270.80	812.41	1,591.05	4,773.16
1201	3440.187	S-L67-22	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	929.29	929.29	224.01	224.01	2,919.63	2,919.63	1.0	6.4	578.11	6.4	75.15	75.15	578.11	728.91	728.91	282.61	282.61	1,664.78	1,664.78
1202	3440.188	S-L71-20	ea	24	24	18.6	2,008.55	445.7	301.28	7,230.76	48,205.08	999.85	23,996.30	292.93	7,030.39	3,602.61	86,462.53	37.0	6.4	574.73	235.2	74.72	2,764.46	21,265.07	1,095.14	40,520.14	355.55	13,155.34	2,100.14	77,705.01
1203	3440.189	S-L71-21	ea	13	13	18.6	2,008.55	241.4	301.28	3,916.66	26,111.09	1,077.87	14,012.25	292.93	3,808.13	3,680.63	47,848.13	0.0	11.5	1,039.75	0.0	135.17	0.00	0.00	291.83	0.00	303.11	0.00	1,769.86	0.00
1204	3440.190	S-L72-20	ea	2	2	19.7	2,126.69	39.3	319.00	638.01	4,253.39	1,419.54	2,839.09	310.16	620.33	4,175.41	8,350.81	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	1,142.14	2,284.28	435.36	870.73	2,565.22	5,130.45
1205	3440.191	S-L72-30	ea	8	8	19.7	2,126.69	157.3	319.00	2,552.03	17,013.56	1,337.41	10,699.31	310.16	2,481.31	4,093.28	32,746.22	8.0	9.6	872.35	77.2	113.41	907.25	6,978.83	1,240.78	9,926.21	454.82	3,638.53	2,681.35	21,450.82
1206	3440.192	S-L72-40	ea	4	4	19.7	2,126.69	78.7	319.00	1,276.02	8,506.78	1,468.87	5,875.48	310.16	1,240.66	4,224.73	16,898.93	5.0	9.6	871.17	48.2	113.25	566.26	4,355.87	1,416.27	7,081.35	489.87	2,449.35	2,890.57	14,452.83
1207	3440.193	S-L72-41	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	1,527.47	1,527.47	310.16	310.16	4,283.33	4,283.33	1.0	9.7	874.78	9.7	113.72	113.72	874.78	1,498.06	1,498.06	507.18	507.18	2,993.75	2,993.75
1208	3440.194	S-L73-20	ea	8	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	1,174.15	1,174.15	224.01	224.01	3,164.49	3,164.49	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	291.83	0.00	411.60	0.00	2,400.02	0.00
1209	3440.195	S-L75-20	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	402.69	402.69	224.01	224.01	2,393.04	2,393.04	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	466.93	0.00	446.86	0.00	2,610.37	0.00
1210	3440.196	S-L76-30	ea	4	4	14.7	1,595.02	59.0	239.25	957.01	6,380.08	807.70	3,230.80	232.62	930.49	2,874.60	11,498.39	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	466.93	0.00	446.86	0.00	2,610.37	0.00
1211	3440.197	S-L77-40	ea	1	1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	811.14	811.14	241.24	241.24	2,954.59	2,954.59	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	466.93	0.00	446.86	0.00	2,610.37	0.00
1212	3440.198	S-L78-20	ea	1	1	14.7	1,595.02	14.7	239.25	239.25	1,595.02	1,330.30	1,330.30	232.62	232.62	3,397.20	3,397.20	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	466.93	0.00	446.86	0.00	2,610.37	0.00
1213	3440.199	S-L79	ea	1	1	22.9	2,481.14	22.9	372.17	372.17	2,481.14	1,258.50	1,258.50	361.86	361.86	4,473.67	4,473.67	1.0	6.4	578.11	6.4	75.15	75.15	578.11	1,312.14	1,312.14	400.03	400.03	2,365.44	2,365.44
1214	3440.200	S-M50-01	ea	9	9	22.4	2,422.07	201.6	363.31	3,269.79	21,798.62	1,789.52	16,105.65	353.24	3,179.18	4,928.14	44,353.24	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	466.93	0.00	563.17	0.00	3,285.96	0.00
1215	3440.201	S-M50-02	ea	9	9	22.4	2,422.07	201.6	363.31	3,269.79	21,798.62	1,898.48	17,086.28	353.24	3,179.18	5,037.10	45,333.88	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	466.93	0.00	563.17	0.00	3,285.96	0.00
1216	3440.202	S-M51-01	ea	2	1	59.0	6,380.08	59.0	957.01	957.01	6,380.08	4,025.68	4,025.68	930.49	930.49	12,293.26	12,293.26	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	2,444.34	2,444.34	1,178.26	1,178.26	6,921.80	6,921.80
1217	3440.203	S-M52-01	ea	3	3	28.9	3,130.97	86.8	469.65	1,408.94	9,392.90	2,875.58	8,626.75	456.63	1,369.89	6,932.83	20,798.48	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	466.93	0.00	563.17	0.00	3,285.96	0.00
1218	3440.204	S-M52-02	ea	3	3	28.9	3,130.97	86.8	469.65	1,408.94	9,392.90	2,666.94	8,000.82	456.63	1,369.89	6,724.18	20,172.55	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	1,080.23	0.00	686.64	0.00	4,022.72	0.00
1219	3440.205	S-M53-08	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	420.92	3,367.35	275.70	2,205.61	2,870.57	22,964.60	4.0	9.7	874.43	38.7	113.68	454.70	3,497.73	298.55	1,194.22	265.61	1,062.44	1,552.27	6,209.09
1220	3440.206	S-M53-09	ea	16	12	17.5	1,890.40	209.7	283.56	3,402.71	22,684.74	461.32	5,535.83	275.70	3,308.42	2,910.98	34,931.70	12.0	12.9	1,163.02	154.4	151.19	1,814.32	13,956.28	369.94	4,439.32	347.81	4,173.69	2,031.97	24,383.61
1221	3440.207	S-M54-01	ea	5	5	21.8	2,362.99	109.2	354.45	1,772.25	11,814.97	452.01	2,260.05	344.63	1,723.13	3,514.08	17,570.40	0.0	16.6	1,501.40	0.0	195.18	0.00	0.00	1,209.34	0.00	596.31	0.00	3,502.23	0.00
1222	3440.208	S-M54-02	ea	4	4	21.8	2,362.99	87.4	354.45	1,417.80	9,451.98	621.82	2,487.27	344.63	1,378.51	3,683.89	14,735.55	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	820.93	3,283.70	711.98	2,847.92	4,161.60	16,646.41
1223	3440.209	S-M55-02	ea	3	3	6.6	708.90	19.7	106.33	319.00	2,126.69	261.51	784.53	103.39	310.16	1,180.13	3,540.40	1.0	3.1	280.05	3.1	36.41	36.41	280.05	101.96	101.96	86.35	86.35	504.76	504.76
1224	3440.210	S-M55-03	ea	10	10	6.6	708.90	65.5	106.33	1,063.35	7,088.98	261.59	2,615.86	103.39	1,033.88	1,180.21	11,802.07	0.0	2.6	231.52	0.0	30.10	0.00	0.00	432.09	0.00	141.41	0.00	835.12	0.00
1225	3440.211	S-M55-05	ea	6	6	6.6	708.90	39.3	106.33	638.01	4,253.39	262.47	1,574.81	103.39	620.33	1,181.09	7,086.53	0.0	5.1	461.65	0.0	60.01	0.00	0.00	561.21	0.00	221.48	0.00	1,304.35	0.00
1226	3440.212	S-M55-06	ea	40	40	6.6	708.90	262.2	106.33	4,253.39	28,355.93	265.16	10,606.47	103.39	4,135.52	1,183.78	47,351.31	40.0	4.7	426.47	188.7	55.44	2,217.66	17,058.91	111.27	4,450.72	122.63	4,905.13	715.81	28,632.42
1227	3440.213	S-M55-07	ea	5	2	6.6	708.90	13.1	106.33	212.67	1,417.80	272.23	544.45	103.39	206.78	1,190.85	2,381.69	1.0	9.7	874.78	9.7	113.72	113.72	874.78	135.08	135.08	232.77	232.77	1,356.35	1,356.35
1228	3440.214	S-M55-08	ea	10	12	6.6	708.90	78.7	106.33	1,276.02	8,506.78	305.13	3,661.53	103.39	1,240.66	1,223.75	14,684.98	13.0	9.7	873.07	125.5	113.50	1,475.49	11,349.96	198.04	2,574.53	245.06	3,185.72	1,429.67	18,585.71
1229	3440.215	S-M55-09	ea	7	7	6.6	708.90	45.9	106.33	744.34	4,962.29	322.62	2,258.35	103.39	723.72	1,241.24	8,688.70	7.0	14.5	1,308.11	101.3	170.05	1,190.38	9,156.77	260.74	1,825.18	359.92	2,519.44	2,098.82	14,691.76
1230	3440.216	S-M56-01	ea	20	20	6.6	708.90	131.1	106.33	2,126.69	14,177.96	313.11	6,262.22	103.39	2,067.76	1,231.73	24,634.64	8.0	7.3	664.06	58.8	86.33	690.62	5,312.45	198.15	1,585.23	195.96	1,567.66	1,144.49	9,155.96
1231	3440.217	S-M56-04	ea	2	2	6.6	708.90	13.1	106.33	212.67	1,417.80	357.67	715.34	103.39	206.78	1,276.29	2,552.58	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	301.07	602.15	368.83	737.66	2,151.88	4,303.75
1232	3440.218	S-M57-05	ea	4	4	6.6	708.90	26.2	106.33	425.34	2,835.59	264.33	1,057.32	103.39	413.55	1,182.95	4,731.80	1.0	4.4	396.50	4.4	51.55	51.55	396.50	111.64	111.64	115.66	115.66	675.35	675.35
1233	3440.219	S-M58-01	ea	4	4	7.6	827.05	30.6	124.06	496.23	3,308.19	262.08	1,048.33	120.62	482.48	1,333.81	5,335.23	0.0	2.6	231.52	0.0	30.10	0.00	0.00	193.00	0.00	93.27	0.00	547.88	0.00
1234	3440.220	S-M58-02	ea	3	3	7.6	827.05	22.9	124.06	372.17	2,481.14	262.10	786.29	120.62	361.86	1,333.82	4,001.46	0.0	2.6	231.52	0.0	30.10	0.00	0.00	14.19	0.00	57.27	0.00	333.08	0.00
1235	3440.221	S-M58-05	ea	2	2	7.6	827.05	15.3	124.06	248.11	1,654.10	410.56	821.12	120.62	241.24	1,482.29	2,964.57	0.0	5.1	461.65	0.0	60.01	0.00	0.00	15.35	0.00	111.59	0.00	648.60	0.00
1236	3440.222	S-M58-06	ea	9	9	7.6	827.05	68.8	124.06	1,116.51	7,443.43	484.81	4,363.26	120.62	1,085.57	1,556.53	14,008.78	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	403.05	2,418.31	175.47	1,052.80	1,032.04	6,192.23
1237	3440.223	S-M58-07	ea	46	46	7.6	827.05	351.8	124.06	5,706.63	38,044.21	567.78	26,117.87	120.62	5,548.49	1,639.50	75,417.20	33.0	9.7	872.85	318.6	113.47	3,744.52	28,803.99	532.45	17,570.80	312.33	10,306.82	1,831.10	60,426.14
1238	3440.224	S-M58-08	ea	42	42	7.6	827.05	321.2	124.06	5,210.40	34,736.01	291.55	12,244.90	120.62	5,066.02	1,363.27	57,257.33	42.0	9.7	872.80	405.5	113.46	4,765.49	36,657.62	183.38	7,702.06	242.04	10,165.69	1,411.69	59,290.86
1239	3440.225	S-M59-01	ea	3	3	6.6	708.90	19.7	106.33	319.00	2,126.69	230.19	690.56	103.39	310.16	1,148.81	3,446.42	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	348.52	1,045.55	377.73	1,133.19	2,205.08	6,615.25
1240	3440.226	S-M60-01	ea	1	1	39.3	4,253.39	39.3	638.01	638.01	4,253.39	815.86	815.86	620.33	620.33	6,327.58	6,327.58	0.0	22.1	1,996.33	0.0	259.52	0.00	0.00	13.17	0.00	471.83	0.00	2,740.85	0.00
1241	3440.227	S-M61-20	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,127.95	1,127.95	482.48	482.48	5,414.85	5,414.85	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	2,325.41	2,325.41	774.42	774.42	4,572.40	4,572.40
1242	3440.228	S-M61-21	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.39	921.69	1,843.39	482.48	964.96	5,208.59	10,417.19	1.0	9.7	874.78	9.7	113.72	113.72	874.78	1,202.02	1,202.02	447.58	447.58	2,638.10	2,638.10
1243	3440.229	S-M61-30	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.39	1,220.51	2,441.03	482.48	964.96	5,507.41	11,014.82	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	2,199.86	4,399.71	648.31	1,296.62	3,835.89	7,671.77
1244	3440.230	S-M61-31	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	807.87	12,925.89	482.48	7,719.64	5,094.77	81,516.26	16.0	11.8	1,064.10	188.3	138.33	2,213.33	17,025.64	1,275.10	20,401.57	506.79	8,108.64	2,984.32	47,749.18
1245	3440.231	S-M61-40	ea	16	16	32.8	3,544.49	524.4	531.67	8,506.78	56,711.86	1,277.31	20,437.04	516.94	8,271.04	5,870.42	93,926.72	16.0	14.5	1,309.49	231.8	170.23	2,723.73	20,951.76	2,211.45	35,383.14	752.97	12,047.51	4,444.13	71,106.14
1246	3440.232	S-M61-41	ea	4	4	32.8	3,544.49	131.1	531.67	2,126.69	14,177.96	1,277.31	5,109.26	516.94	2,067.76	5,870.42	23,481.68	5.0	9.6	871.17	48.2	113.25	566.26	4,355.87	2,211.45	11,057.23	649.96	3,249.80	3,845.83	19,229.17
1247	3440.233	S-M61-42	ea	5	5	32.8	3,544.49	163.9	531.67	2,658.37	17,722.46	864.00	4,320.00	516.94	2,584.70	5,457.10	27,285.52	5.0	9.6	871.17	48.2	113.25	566.26	4,355.87	1,431.04	7,155.22	492.84	2,464.22	2,908.31	14,541.57
1248	3440.234	S-M62-30	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,220.44	1,220.44	482.48	482.48	5,507.34	5,507.34	1.0	9.7	874.78	9.7	113.72	113.72	874.78	2,337.01	2,337.01	676.09	676.09	4,001.59	4,001.59
1249	3440.235	S-M62-31	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	807.87	807.87	482.48	482.48	5,094.77	5,094.77	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	1,274.92	2,549.85	462.10	924.20	2,724.75	5,449.49
1250	3440.236	S-M62-32	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,260.12	1,260.12	482.48	482.48	5,547.02	5,547.02	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	2,187.52	2,187.52	746.66	746.66	4,406.74	4,406.74
1251	3440.237	S-M62-40	ea	2	2	32.8	3,544.49	65.5	531.67	1,063.35	7,088.98	1,277.31	2,554.63	516.94	1,033.88	5,870.42	11,740.84	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	2,211.45	2,211.45	751.48	751.48	4,435.49	4,435.49
1252	3440.238	S-M62-41	ea	3	3	32.8	3,544.49	98.3	531.67	1,595.02	10,633.47	865.90	2,597.70	516.94	1,550.82	5,459.00	16,377.01	1.0	9.7	874.78	9.7	113.72	113.72	874.78	1,246.94	1,246.94	456.61	456.61	2,692.05	2,692.05
1253	3440.239	S-M63-05	ea	10	10	7.6	827.05	76.5	124.06	1,240.57	8,270.48	264.90	2,649.01	120.62	1,206.19	1,336.63	13,366.26	0.0	5.1	461.65	0.0	60.01	0.00	0.00	13.42	0.00	111.20	0.00	646.29	0.00
1254	3440.240	S-M66-01	ea	16	16	14.2	1,535.95	227.2	230.39	3,686.27	24,575.14	283.68	4,538.81	224.01	3,584.12	2,274.02	36,384.34	12.0	9.7	873.05	115.9	113.50	1,361.96	10,476.58	843.00	10,115.97	374.90	4,498.75	2,204.44	26,453.25
1255	3440.241	S-M66-02	ea	12	12	14.2	1,535.95	170.4	230.39	2,764.70	18,431.35	317.72	3,812.63	224.01	2,688.09	2,308.06	27,696.78	12.0	9.7	873.05	115.9	113.50	1,361.96	10,476.58	887.17	10,645.99	383.79	4,605.48	2,257.50	27,090.01
1256	3440.242	S-M67-20	ea	2	2	38.2	4,135.24	76.5	620.29	1,240.57	8,270.48	1,440.11	2,880.22	603.10	1,206.19	6,798.73	13,597.46	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	2,306.44	4,612.89	669.77	1,339.54	3,963.94	7,927.87
1257	3440.243	S-M67-40	ea	3	3	50.3	5,434.89	150.8	815.23	2,445.70	16,304.66	1,532.86	4,598.57	792.64	2,377.93	8,575.62	25,726.85	3.0	9.7	874.32	29.0	113.66	340.98	2,622.96	2,954.85	8,864.56	800.36	2,401.09	4,743.20	14,229.60
1258	3310.020	Mechanical Shaft Plaftorm/Staging	LS	0	7	174.8	18,903.95	1223.5	2,835.59	19,849.15	132,327.67	3,843.30	26,903.09	2,757.01	19,299.10	28,339.86	198,379.02	1.0	1173.4	106,078.60	1,173.4	13,790.22	13,790.22	106,078.60	43,599.98	43,599.98	33,707.83	33,707.83	197,176.62	197,176.62
1258a	Added	House Keeping pads for MECH Equipment	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	3527.4	318,895.68	3,527.38	41,456.44	41,456.44	318,895.68	6,111.00	6,111.00	76,175.49	76,175.49	442,638.61	442,638.61
1258b	Added	Pipe Supports With no Pay Item	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,144.0	4.4	401.65	9,525.28	52.21	111,948.26	861,140.48	63.61	136,385.14	107.20	229,838.53	624.68	1,339,312.42
B&M-0326	Added	S-A51	ea		3	2.2	236.30	6.6	35.44	106.33	708.90	17.38	52.15	34.46	103.39	323.59	970.77	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0327	Added	S-C52-02	ea		1	2.2	236.30	2.2	35.44	35.44	236.30	24.83	24.83	34.46	34.46	331.04	331.04	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0328	Added	S-E52-05	ea		1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	383.65	383.65	241.24	241.24	2,527.10	2,527.10	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0329	Added	S-E52-07	ea		3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	470.56	1,411.67	241.24	723.72	2,614.00	7,842.01	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0330	Added	S-E52-08	ea		3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	557.46	1,672.39	241.24	723.72	2,700.91	8,102.74	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0331	Added	S-H54-01	ea		7	19.7	2,126.69	137.6	319.00	2,233.03	14,886.83	422.14	2,954.95	310.16	2,171.15	3,178.00	22,245.99	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0332	Added	S-H54-02	ea		3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	422.14	1,266.41	310.16	930.49	3,178.00	9,534.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0333	Added	S-H54-03	ea		3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	422.14	1,266.41	310.16	930.49	3,178.00	9,534.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0334	Added	S-H55-01	ea		3	10.9	1,181.50	32.8	177.22	531.67	3,544.49	376.20	1,128.59	172.31	516.94	1,907.23	5,721.69	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0335	Added	S-I51-202	ea		2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	193.97	387.95	275.70	551.40	2,643.63	5,287.26	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0336	Added	S-I65-01	ea		1	10.9	1,181.50	10.9	177.22	177.22	1,181.50	263.88	263.88	172.31	172.31	1,794.92	1,794.92	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0337	Added	S-L54-30	ea		6	20.2	2,185.77	121.3	327.87	1,967.19	13,114.62	1,396.95	8,381.68	318.78	1,912.68	4,229.36	25,376.17	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0338	Added	S-L58-10	ea		45	6.6	708.90	295.0	106.33	4,785.08	31,900.42	240.37	10,816.55	103.39	4,652.46	1,158.99	52,154.50	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0339	Added	S-L73	ea		8	14.2	1,535.95	113.6	230.39	1,843.14	12,287.57	1,167.02	9,336.16	224.01	1,792.06	3,157.37	25,258.93	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0340	Added	S-M53-07	ea		8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	420.92	3,367.35	275.70	2,205.61	2,870.57	22,964.60	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0341	Added	S-M56-03	ea		2	6.6	708.90	13.1	106.33	212.67	1,417.80	385.20	770.39	103.39	206.78	1,303.82	2,607.63	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0342	Added	S-M57-06	ea		6	6.6	708.90	39.3	106.33	638.01	4,253.39	385.20	2,311.17	103.39	620.33	1,303.82	7,822.90	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0343	Added	S-M65	ea		3	13.1	1,417.80	39.3	212.67	638.01	4,253.39	1,107.75	3,323.24	206.78	620.33	2,944.99	8,834.97	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0344	Added	S-M68	ea		4	13.1	1,417.80	52.4	212.67	850.68	5,671.19	404.12	1,616.48	206.78	827.10	2,241.36	8,965.44	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST03		SUB-TOTAL PIPING/MECHANICAL - SUPPLY AND INSTALLATION	$ -					135042.4		$2,176,131.41	$14,507,542.73		$15,526,856.34		$1,874,040.95		$34,084,571.43				168451.9		$1,979,776.14	$15,229,047.24		$15,993,907.17		$5,656,509.42		$38,859,239.98
		0	0.00																											
		HVAC SYSTEMS	0																											
		HVAC SYSTEMS - SUPPLY AND INSTALLATION	0																											
1259	3351.010	EDD (Dewatering gallery supply and Exhaust)	LS	0	1	3027.8	320,919.06	3027.8	48,137.86	48,137.86	320,919.06	296,518.43	296,518.43	87,653.45	87,653.45	753,228.79	753,228.79	1.0	3693.6	333,924.99	3,693.6	43,410.25	43,410.25	333,924.99	203,124.55	203,124.55	111,424.10	111,424.10	691,883.89	691,883.89
1260	3351.020	EGR (Exhaust for Trans., Storage and Garbage rooms)	LS	0	1	94.2	10,212.90	94.2	1,531.94	1,531.94	10,212.90	2,846.90	2,846.90	13,120.43	13,120.43	27,712.16	27,712.16	1.0	1083.6	97,961.57	1,083.6	12,735.00	12,735.00	97,961.57	54,605.09	54,605.09	31,559.36	31,559.36	196,861.02	196,861.02
1261	3351.030	EKH (Kitchen range exhaust)	LS	0	1	27.7	3,174.22	27.7	476.13	476.13	3,174.22	1,166.11	1,166.11	3,961.52	3,961.52	8,777.97	8,777.97	1.0	203.3	18,378.71	203.3	2,389.23	2,389.23	18,378.71	13,832.27	13,832.27	6,670.56	6,670.56	41,270.78	41,270.78
1262	3351.040	END (Exhaust North RCC Dom)	LS	0	1	141.2	15,016.37	141.2	2,252.45	2,252.45	15,016.37	6,482.62	6,482.62	13,093.70	13,093.70	36,845.14	36,845.14	1.0	317.2	28,672.29	317.2	3,727.40	3,727.40	28,672.29	12,378.04	12,378.04	8,507.94	8,507.94	53,285.66	53,285.66
1263	3351.050	EOR (Exhaust oil Storage Room)	LS	0	1	66.9	7,282.23	66.9	1,092.33	1,092.33	7,282.23	847.88	847.88	11,859.51	11,859.51	21,081.95	21,081.95	1.0	92.2	8,331.90	92.2	1,083.15	1,083.15	8,331.90	8,808.65	8,808.65	3,514.79	3,514.79	21,738.49	21,738.49
1264	3351.060	ESB (South service bay vent and exhaust)	LS	0	1	424.9	45,975.56	424.9	6,896.33	6,896.33	45,975.56	19,436.59	19,436.59	22,883.46	22,883.46	95,191.95	95,191.95	1.0	211.9	19,153.68	211.9	2,489.98	2,489.98	19,153.68	32,757.46	32,757.46	10,662.83	10,662.83	65,063.95	65,063.95
1265	3351.070	ESP (Exhaust for Waste Water treatment Room)	LS	0	1	242.6	27,460.18	242.6	4,119.03	4,119.03	27,460.18	29,514.84	29,514.84	35,287.66	35,287.66	96,381.70	96,381.70	1.0	133.6	12,076.41	133.6	1,569.93	1,569.93	12,076.41	15,141.71	15,141.71	5,597.55	5,597.55	34,385.60	34,385.60
1266	3351.080	ESR (Ventilate and exhaust Oil/water Interceptor Room)	LS	0	1	258.8	29,360.51	258.8	4,404.08	4,404.08	29,360.51	26,307.63	26,307.63	41,768.59	41,768.59	101,840.80	101,840.80	1.0	705.8	63,811.85	705.8	8,295.54	8,295.54	63,811.85	39,313.93	39,313.93	21,466.64	21,466.64	132,887.96	132,887.96
1267	3351.090	ESW (Exhaust Storage, Washrooms and Janitor rooms)	LS	0	1	566.0	64,465.94	566.0	9,669.89	9,669.89	64,465.94	58,414.23	58,414.23	52,729.11	52,729.11	185,279.17	185,279.17	1.0	984.0	88,954.53	984.0	11,564.09	11,564.09	88,954.53	57,515.11	57,515.11	30,317.43	30,317.43	188,351.15	188,351.15
1268	3351.100	EWT (Exhaust and Ventilate the Wastewater Treatment Room)	LS	0	1	405.0	43,881.25	405.0	6,582.19	6,582.19	43,881.25	16,612.24	16,612.24	21,392.33	21,392.33	88,468.01	88,468.01	1.0	153.7	13,891.13	153.7	1,805.85	1,805.85	13,891.13	13,467.95	13,467.95	5,614.81	5,614.81	34,779.74	34,779.74
1269	3351.110	PSC (Pressurize 4 Stairwells)	LS	0	1	1442.1	159,761.37	1442.1	23,964.21	23,964.21	159,761.37	169,092.24	169,092.24	140,502.08	140,502.08	493,319.89	493,319.89	1.0	3914.6	353,903.54	3,914.6	46,007.46	46,007.46	353,903.54	248,256.96	248,256.96	124,627.68	124,627.68	772,795.64	772,795.64
1270	3351.120	VCC (Control Room, Communication Room and assoc. space)	LS	0	1	2960.5	316,522.16	2960.5	47,478.32	47,478.32	316,522.16	114,980.96	114,980.96	362,922.09	362,922.09	841,903.54	841,903.54	1.0	5320.8	481,032.33	5,320.8	62,534.20	62,534.20	481,032.33	404,624.46	404,624.46	182,951.16	182,951.16	1,131,142.15	1,131,142.15
1271	3351.130	VCR (Ventilation and Cooling for Compressor Room)	LS	0	1	287.1	32,405.65	287.1	4,860.85	4,860.85	32,405.65	8,313.14	8,313.14	178,923.90	178,923.90	224,503.55	224,503.55	1.0	313.9	28,375.62	313.9	3,688.83	3,688.83	28,375.62	82,255.67	82,255.67	22,506.39	22,506.39	136,826.51	136,826.51
1272	3351.140	VDA (Ventilate Dewatering, Drainage and Draft tube galleries)	LS	0	1	67.8	7,649.77	67.8	1,147.47	1,147.47	7,649.77	5,365.40	5,365.40	19,963.27	19,963.27	34,125.92	34,125.92	1.0	1013.0	91,577.48	1,013.0	11,905.07	11,905.07	91,577.48	38,298.76	38,298.76	27,065.11	27,065.11	168,846.42	168,846.42
1273	3351.150	VDT (Ventilate Draft Tube Gallery)	LS	0	1	148.6	17,058.13	148.6	2,558.72	2,558.72	17,058.13	18,083.59	18,083.59	25,999.38	25,999.38	63,699.82	63,699.82	1.0	292.3	26,429.19	292.3	3,435.79	3,435.79	26,429.19	188,527.90	188,527.90	43,444.29	43,444.29	261,837.17	261,837.17
1274	3351.160	VEG (Diesel Emergency Generator)	LS	0	1	1218.3	127,765.53	1218.3	19,164.83	19,164.83	127,765.53	101,847.49	101,847.49	34,568.39	34,568.39	283,346.24	283,346.24	1.0	1692.4	152,997.90	1,692.4	19,889.73	19,889.73	152,997.90	101,633.12	101,633.12	52,805.68	52,805.68	327,326.43	327,326.43
1275	3351.170	VEL (Ventilate and Exhaust Elevator Machine Room)	LS	0	1	159.4	17,137.35	159.4	2,570.60	2,570.60	17,137.35	4,691.03	4,691.03	21,106.49	21,106.49	45,505.47	45,505.47	1.0	153.5	13,874.50	153.5	1,803.69	1,803.69	13,874.50	15,488.57	15,488.57	6,017.71	6,017.71	37,184.46	37,184.46
1276	3351.180	VER (Ventilate Electrical Battery and Charger Rooms)	LS	0	1	3054.0	323,971.80	3054.0	48,595.77	48,595.77	323,971.80	146,800.76	146,800.76	344,381.53	344,381.53	863,749.87	863,749.87	1.0	5009.5	452,888.24	5,009.5	58,875.47	58,875.47	452,888.24	369,826.56	369,826.56	170,198.18	170,198.18	1,051,788.45	1,051,788.45
1277	3351.190	VFP (Ventilate the Fire Pump Room)	LS	0	1	78.8	8,979.41	78.8	1,346.91	1,346.91	8,979.41	6,988.32	6,988.32	13,843.96	13,843.96	31,158.60	31,158.60	1.0	86.3	7,803.72	86.3	1,014.48	1,014.48	7,803.72	12,156.81	12,156.81	4,093.61	4,093.61	25,068.62	25,068.62
1278	3351.200	VIG (Ventilation for Lower Inspection galleries)	LS	0	1	171.0	19,353.14	171.0	2,902.97	2,902.97	19,353.14	1,258.44	1,258.44	72,085.58	72,085.58	95,600.13	95,600.13	1.0	357.1	32,285.09	357.1	4,197.06	4,197.06	32,285.09	8,811.76	8,811.76	8,566.77	8,566.77	53,860.68	53,860.68
1279	3351.210	VIL (Ventilate and Exhaust Intake Gate Hoist Building)	LS	0	1	1372.9	154,660.52	1372.9	23,199.08	23,199.08	154,660.52	30,959.61	30,959.61	221,122.00	221,122.00	429,941.20	429,941.20	1.0	4744.0	428,883.76	4,744.0	55,754.89	55,754.89	428,883.76	1,799,842.07	1,799,842.07	452,658.07	452,658.07	2,737,138.78	2,737,138.78
1280	3351.220	VMR (Machine Hall Main Supply and Exhaust)	LS	0	1	8806.8	988,253.27	8806.8	148,237.99	148,237.99	988,253.27	1,218,861.07	1,218,861.07	3,386,009.35	3,386,009.35	5,741,361.68	5,741,361.68	1.0	16522.7	1,493,745.55	16,522.7	194,186.92	194,186.92	1,493,745.55	4,112,783.74	4,112,783.74	1,142,937.11	1,142,937.11	6,943,653.33	6,943,653.33
1281	3351.230	VMS (Warehouse and Workshop spaces)	LS	0	1	1163.0	132,192.16	1163.0	19,828.82	19,828.82	132,192.16	123,796.81	123,796.81	191,712.06	191,712.06	467,529.86	467,529.86	1.0	2038.5	184,293.14	2,038.5	23,958.11	23,958.11	184,293.14	116,486.01	116,486.01	62,428.30	62,428.30	387,165.56	387,165.56
1282	3351.240	VND (Ventilate North RCC Dam)	LS	0	1	182.9	20,028.84	182.9	3,004.33	3,004.33	20,028.84	12,752.68	12,752.68	23,835.04	23,835.04	59,620.88	59,620.88	1.0	1059.3	95,768.38	1,059.3	12,449.89	12,449.89	95,768.38	65,522.70	65,522.70	33,386.42	33,386.42	207,127.39	207,127.39
1283	3351.250	VOF (Offices and admin spaces on Mezz. 1 & 2)	LS	0	1	8386.9	889,462.07	8386.9	133,419.31	133,419.31	889,462.07	455,297.95	455,297.95	399,088.57	399,088.57	1,877,267.91	1,877,267.91	1.0	12423.6	1,123,162.94	12,423.6	146,011.18	146,011.18	1,123,162.94	863,230.63	863,230.63	410,873.79	410,873.79	2,543,278.54	2,543,278.54
1284	3351.260	VCD (Ventilate Centre Transition Dam)	LS	0	1	428.9	47,643.44	428.9	7,146.52	7,146.52	47,643.44	25,714.65	25,714.65	41,537.97	41,537.97	122,042.58	122,042.58	1.0	919.9	83,163.78	919.9	10,811.29	10,811.29	83,163.78	44,994.59	44,994.59	26,580.31	26,580.31	165,549.97	165,549.97
1285	3351.270	VSD (Ventilate South Dam)	LS	0	1	360.4	39,870.82	360.4	5,980.62	5,980.62	39,870.82	19,260.28	19,260.28	36,271.77	36,271.77	101,383.49	101,383.49	1.0	773.7	69,949.19	773.7	9,093.39	9,093.39	69,949.19	49,360.39	49,360.39	24,642.63	24,642.63	153,045.60	153,045.60
1286	3351.280	EMCS (Energy Monitoring and Control System)	LS	0	1	0.0	-	0.0	-	0.00	0.00	1,032,698.64	1,032,698.64	0.00	0.00	1,032,698.64	1,032,698.64	1.0	17630.3	1,593,882.29	17,630.3	207,204.70	207,204.70	1,593,882.29	1,293,721.85	1,293,721.85	467,394.78	467,394.78	3,562,203.61	3,562,203.61
1286.1	3351.290	EBR (Exhaust Battery Room)	LS	0	1	1157.2	130,138.15	1157.2	19,520.72	19,520.72	130,138.15	118,317.60	118,317.60	113,629.70	113,629.70	381,606.17	381,606.17	1.0	1295.3	117,098.61	1,295.3	15,222.82	15,222.82	117,098.61	94,185.83	94,185.83	43,591.98	43,591.98	270,099.24	270,099.24
1286.2	3351.300	EWH (Exhaust Welding Hood)	LS	0	1	93.9	10,334.33	93.9	1,550.15	1,550.15	10,334.33	4,095.48	4,095.48	21,157.49	21,157.49	37,137.45	37,137.45	1.0	398.6	36,030.98	398.6	4,684.03	4,684.03	36,030.98	88,951.82	88,951.82	25,740.32	25,740.32	155,407.15	155,407.15
1286.3	3351.310	ESC (Smoke Exhaust)	LS	0	1	2062.8	219,674.47	2062.8	32,951.17	32,951.17	219,674.47	110,997.43	110,997.43	143,219.17	143,219.17	506,842.25	506,842.25	1.0	292.3	26,429.19	292.3	3,435.79	3,435.79	26,429.19	35,016.34	35,016.34	12,379.51	12,379.51	77,260.83	77,260.83

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1286.4	3351.320	VSA (Spiral Case Access)	LS	0	1	120.1	13,651.52	120.1	2,047.73	2,047.73	13,651.52	7,948.77	7,948.77	39,009.67	39,009.67	62,657.68	62,657.68	1.0	71.4	6,450.64	71.4	838.58	838.58	6,450.64	44,333.44	44,333.44	10,065.77	10,065.77	61,688.43	61,688.43
1286.5	Added	House Keeping Pads for HVAC Equipment	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	5888.7	532,372.68	5,888.70	69,208.45	69,208.45	532,372.68	26,422.64	26,422.64	130,434.97	130,434.97	758,438.74	758,438.74
		0	0					0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
ST04		SUB-TOTAL HVAC SYSTEM - SUPPLY, INSTALLATION	$ -					38978.5		$636,639.31	$4,244,262.09		$4,196,269.82		$6,134,639.22		$15,211,810.45				89790.2		$1,055,282.25	$8,117,555.80		$10,555,677.35		$3,720,726.54		$23,449,241.94
		0	0																											
		ELECTRICAL - SUPPLY AND INSTALLATION	0																											
		ELECTRICAL - DESIGN AND ENGINEERING	0																											
1287	3343.020	Fire Detection System - Electrical Engineering	LS	0	1	0.0	-	0.0	-	0.00	0.00	28,500.00	28,500.00	0.00	0.00	28,500.00	28,500.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	72,141.33	72,141.33	217.98	217.98	72,359.30	72,359.30
1288	3000.270	Cable Tray Structural Support Design and Engineering	LS	0	1	0.0	-	0.0	-	0.00	0.00	85,500.00	85,500.00	0.00	0.00	85,500.00	85,500.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	72,958.46	72,958.46	220.44	220.44	73,178.90	73,178.90
1289	3310.030	Electrical Shaft Platform/Staging Structural Design and Engineering	LS	0	1	0.0	-	0.0	-	0.00	0.00	855.00	855.00	0.00	0.00	855.00	855.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	109,437.69	109,437.69	330.66	330.66	109,768.35	109,768.35
ST05		SUB-TOTAL ELECTRICAL - DESIGN AND ENGINEERING	$ -					0.0		$0.00	$0.00		$114,855.00		$0.00		$114,855.00				0.0		$0.00	$0.00		$254,537.48		$769.08		$255,306.56
		0	0																											
		ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	0																											
1290	3340.010	Spillway Feeder Transformer, 1250 kVA, dry type, 600 V primary, 25/14.4 kV solidly grounded secondary, 60 Hz, NEMA 2 enclosure, air natural cooled (ANN)	ea	1	1	254.4	27,022.53	254.4	4,053.38	4,053.38	27,022.53	122,955.66	122,955.66	5,445.10	5,445.10	159,476.68	159,476.68	1.0	193.3	17,474.81	193.3	2,271.73	2,271.73	17,474.81	87,619.63	87,619.63	21,746.93	21,746.93	129,113.10	129,113.10
1291	3340.020	Spillway Feeder Transformer, 1250 kVA, dry type, 600 V primary, 25/14.4 kV solidly grounded secondary, 60 Hz, NEMA 2 enclosure, air natural cooled (ANN) - Alternate Design Option	ea	1	1	128.8	13,682.29	128.8	2,052.34	2,052.34	13,682.29	89,007.00	89,007.00	2,757.01	2,757.01	107,498.65	107,498.65	1.0	188.0	16,999.30	188.0	2,209.91	2,209.91	16,999.30	75.32	75.32	4,010.24	4,010.24	23,294.77	23,294.77
1292	3340.030	Spillway Feeder Switchgear, 600 V, 3 phase, 3 wire, 1600 A, 42 kA IC, NEMA 1A enclosure	ea	1	1	1307.6	138,900.93	1307.6	20,835.14	20,835.14	138,900.93	499,803.90	499,803.90	27,988.87	27,988.87	687,528.84	687,528.84	1.0	164.0	14,828.29	164.0	1,927.68	1,927.68	14,828.29	257,961.49	257,961.49	55,419.17	55,419.17	330,136.62	330,136.62
1293	3435.010	Station Service Transformer, 2500 kVA, dry type, 15 kV primary, 600/347 V solidly grounded secondary, 60 Hz, NEMA Type 2 enclosure, air natural cooled (ANN), off-load tap changer ± 2 x 2.5%.	ea	4	4	368.3	39,122.81	1473.2	5,868.42	23,473.68	156,491.23	162,444.23	649,776.92	7,883.34	31,533.36	215,318.80	861,275.19	4.0	259.0	23,411.13	1,035.8	3,043.45	12,173.79	93,644.50	133,889.20	535,556.78	32,457.31	129,829.22	192,801.07	771,204.29
1294	3433.010	Station Service Switchgear, 600 V, 3 phase, 3 wire, 3200 A, 42 kA IC, NEMA 1A enclosure	ea	4	4	257.6	27,364.59	1030.4	4,104.69	16,418.75	109,458.34	561,577.26	2,246,309.02	5,514.03	22,056.12	598,560.56	2,394,242.24	4.0	263.7	23,840.20	1,054.8	3,099.23	12,396.90	95,360.80	459,882.49	1,839,529.98	98,189.00	392,756.02	585,010.92	2,340,043.70
1295	3433.020	Unit Motor Control Centre, 600 V, 3 phase, 3 wire, 800 A, 42 kA IC, NEMA 2 enclosure	ea	4	4	305.9	32,495.45	1223.6	4,874.32	19,497.27	129,981.78	455,762.16	1,823,048.65	6,547.91	26,191.64	499,679.84	1,998,719.34	4.0	592.0	53,521.05	2,368.0	6,957.74	27,830.95	214,084.21	356,547.74	1,426,190.94	84,360.49	337,441.96	501,387.01	2,005,548.06
1296	3290.010	Intake MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 3R enclosure	ea	2	2	128.8	13,682.29	257.6	2,052.34	4,104.69	27,364.59	554,032.38	1,108,064.76	2,757.01	5,514.03	572,524.03	1,145,048.06	2.0	447.3	40,440.93	894.7	5,257.32	10,514.64	80,881.86	453,509.25	907,018.50	100,807.32	201,614.64	600,014.82	1,200,029.64
1297	3340.040	Essential Service MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 2 enclosure	ea	1	1	386.4	41,046.88	386.4	6,157.03	6,157.03	41,046.88	944,517.29	944,517.29	8,271.04	8,271.04	999,992.25	999,992.25	1.0	982.4	88,818.66	982.4	11,546.43	11,546.43	88,818.66	831,432.45	831,432.45	188,262.48	188,262.48	1,120,060.02	1,120,060.02
1298	3340.050	Common Station Service MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 2 enclosure	ea	4	4	177.1	18,813.15	708.4	2,821.97	11,287.89	75,252.61	478,349.76	1,913,399.06	3,790.90	15,163.58	503,775.79	2,015,103.14	4.0	644.1	58,226.64	2,576.2	7,569.46	30,277.85	232,906.54	379,524.13	1,518,096.53	90,092.11	360,368.45	535,412.34	2,141,649.37
1299	3000.001	Panelboard, 400 A, 600 V, 3 phase, 3 wire, 60 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, complete with breakers as indicated	ea	4	5	16.9	1,795.80	84.5	269.37	1,346.85	8,979.00	20,630.99	103,154.95	361.86	1,809.29	23,058.02	115,290.10	4.0	59.3	5,362.36	237.3	697.11	2,788.43	21,449.45	25,289.52	101,158.06	6,351.66	25,406.66	37,700.65	150,802.60
1300	3000.002	Panelboard, 400 A, 600 V, 3 phase, 3 wire, 72 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, complete with breakers as indicated	ea	1	1	19.3	2,052.34	19.3	307.85	307.85	2,052.34	26,921.89	26,921.89	413.55	413.55	29,695.64	29,695.64	1.0	59.3	5,362.36	59.3	697.11	697.11	5,362.36	26,097.95	26,097.95	6,514.42	6,514.42	38,671.84	38,671.84
1301	3000.003	Panelboard, 225 A, 600 V, 3 phase, 3 wire, 42 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	5	5	9.7	1,026.17	48.3	153.93	769.63	5,130.86	21,068.74	105,343.69	206.78	1,033.88	22,455.61	112,278.06	5.0	37.8	3,418.44	189.1	444.40	2,221.98	17,092.18	18,319.20	91,596.02	4,491.51	22,457.56	26,673.55	133,367.75
1302	3000.004	Panelboard, 225 A, 600 V, 3 phase, 3 wire, 60 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	6	6	12.9	1,368.23	77.3	205.23	1,231.41	8,209.38	5,172.33	31,033.98	275.70	1,654.21	7,021.49	42,128.97	2.0	56.7	5,125.30	113.4	666.29	1,332.58	10,250.60	13,817.79	27,635.58	3,986.40	7,972.80	23,595.78	47,191.55
1303	3000.005	Panelboard, 100 A, 600/347 V, 3 phase, 4 wire, 30 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	11	9	9.7	1,026.17	86.9	153.93	1,385.33	9,235.55	9,759.94	87,839.44	206.78	1,860.99	11,146.81	100,321.30	11.0	25.2	2,280.53	277.5	296.47	3,261.16	25,085.82	11,381.54	125,196.91	2,827.36	31,100.91	16,785.89	184,644.79
1304	3000.006	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 72 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	1	1	9.7	1,026.17	9.7	153.93	153.93	1,026.17	2,349.94	2,349.94	206.78	206.78	3,736.81	3,736.81	1.0	56.7	5,125.30	56.7	666.29	666.29	5,125.30	2,267.33	2,267.33	1,661.00	1,661.00	9,719.92	9,719.92
1305	3000.007	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 66 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	4	4	9.7	1,026.17	38.6	153.93	615.70	4,104.69	1,827.82	7,311.27	206.78	827.10	3,214.69	12,858.76	4.0	56.7	5,125.30	226.8	666.29	2,665.16	20,501.20	1,731.97	6,927.89	1,553.21	6,212.85	9,076.77	36,307.10
1306	3000.008	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 42 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	9	3	9.7	1,026.17	29.0	153.93	461.78	3,078.52	2,397.82	7,193.45	206.78	620.33	3,784.69	11,354.07	2.0	41.0	3,702.92	81.9	481.38	962.76	7,405.83	4,285.65	8,571.30	1,733.05	3,466.10	10,202.99	20,405.99
1307	3000.009	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 30 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	2	2	6.4	684.11	12.9	102.62	205.23	1,368.23	3,042.16	6,084.33	137.85	275.70	3,966.75	7,933.49	0.0	50.4	4,552.75	0.0	591.86	0.00	0.00	1,429.99	0.00	1,357.86	0.00	7,932.45	0.00
1308	3000.010	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	3	4	6.4	684.11	25.8	102.62	410.47	2,736.46	1,006.41	4,025.64	137.85	551.40	1,930.99	7,723.97	1.0	56.7	5,125.30	56.7	666.29	666.29	5,125.30	944.33	944.33	1,394.64	1,394.64	8,130.56	8,130.56
B&M-0345	Added	Panelboard, 100A, 120/240V, 1 phase, 3 wire, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers	ea		5	6.4	684.11	32.2	102.62	513.09	3,420.57	1,148.62	5,743.12	137.85	689.25	2,073.21	10,366.04	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1309	3000.011	Panelboard, 100 A, 208/120 V, 3 phase, 4 wire, 30 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers and installed in a NEMA 4X Enclosure with Anti-condensation heater and thermostat	ea	1	1	6.4	684.11	6.4	102.62	102.62	684.11	2,928.16	2,928.16	137.85	137.85	3,852.75	3,852.75	7.0	25.2	2,280.53	176.6	296.47	2,075.28	15,963.71	1,755.14	12,285.99	889.31	6,225.19	5,221.45	36,550.18
1310	3000.012	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 60 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	2	2	11.3	1,197.20	22.5	179.58	359.16	2,394.40	11,276.01	22,552.03	241.24	482.48	12,894.03	25,788.07	2.0	25.2	2,280.53	50.5	296.47	592.94	4,561.06	10,938.35	21,876.71	2,738.14	5,476.27	16,253.49	32,506.98
1311	3000.013	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 40 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	2	2	11.3	1,197.20	22.5	179.58	359.16	2,394.40	8,961.81	17,923.63	241.24	482.48	10,579.83	21,159.67	2.0	25.2	2,280.53	50.5	296.47	592.94	4,561.06	10,108.84	20,217.69	2,571.13	5,142.25	15,256.97	30,513.94
1312	3000.014	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	4	4	6.4	684.11	25.8	102.62	410.47	2,736.46	5,208.16	20,832.66	137.85	551.40	6,132.75	24,530.99	4.0	25.2	2,280.53	100.9	296.47	1,185.87	9,122.11	5,071.91	20,287.64	1,557.06	6,228.25	9,205.97	36,823.87
1313	3000.015	600 Volt, 3-Pole, 100A Electrically Held contactor complete with 120V Coil, Undervoltage Relay (with 125Vdc rated alarm contacts), 347/120V, 100VA control Power transformer and fusing mounted in a NEMA 12 Enclosure	ea	11	11	12.9	1,368.23	141.7	205.23	2,257.58	15,050.52	5,015.58	55,171.38	275.70	3,032.72	6,864.74	75,512.19	4.0	21.4	1,932.56	85.5	251.23	1,004.93	7,730.23	4,229.97	16,919.87	1,305.78	5,223.13	7,719.54	30,878.16
1314	3000.016	1065 mm x 760 mm x 250 mm deep NEMA 4X stainless steel enclosure with hinged door to house parking area panelboard, complete with 150 W anticondensation heater and thermostat.	ea	1	1	25.8	2,736.46	25.8	410.47	410.47	2,736.46	2,340.42	2,340.42	551.40	551.40	6,038.75	6,038.75	1.0	26.7	2,410.84	26.7	313.41	313.41	2,410.84	3,424.27	3,424.27	1,255.97	1,255.97	7,404.49	7,404.49
1315	3000.017	Dry-type Isolation Transformer, 45 kVA, three phase, 600 V delta primary, 600/347 V wye secondary, NEMA 2 enclosure.	ea	4	4	16.1	1,710.29	64.4	256.54	1,026.17	6,841.15	4,900.76	19,603.05	344.63	1,378.51	7,212.22	28,848.87	4.0	40.0	3,614.19	159.9	469.84	1,879.38	14,456.75	4,965.47	19,861.87	1,849.06	7,396.25	10,898.56	43,594.25
1316	3000.018	Dry-type Isolation Transformer, 45 kVA, three phase, 600 V delta primary, 600/347 V wye secondary, NEMA 3R enclosure.	ea	2	2	19.3	2,052.34	38.6	307.85	615.70	4,104.69	5,284.69	10,569.39	413.55	827.10	8,058.44	16,116.88	1.0	40.0	3,614.20	40.0	469.85	469.85	3,614.20	5,333.18	5,333.18	1,923.09	1,923.09	11,340.32	11,340.32
1317	3000.019	Dry-type Distribution Transformer, 30 kVA, three phase, 600 V delta primary, 208/120 V wye secondary, NEMA 2 enclosure.	ea	13	13	12.9	1,368.23	167.4	205.23	2,668.05	17,786.98	4,218.15	54,835.95	275.70	3,584.12	6,067.31	78,875.09	12.0	52.0	4,703.85	624.4	611.50	7,338.01	56,446.23	4,530.43	54,365.11	2,017.57	24,210.79	11,863.35	142,360.14
1318	3000.020	Dry-type Distribution Transformer, 30 kVA, three phase, 600 V delta primary, 208/120 V wye secondary, NEMA 3R enclosure.	ea	2	2	12.9	1,368.23	25.8	205.23	410.47	2,736.46	4,642.23	9,284.46	275.70	551.40	6,491.39	12,982.79	4.0	38.4	3,468.63	153.5	450.92	1,803.69	13,874.50	3,723.51	14,894.02	1,564.82	6,259.26	9,207.87	36,831.47
1319	3340.060	Battery Charger, 125 Vdc, 37.5 kW (Station Control and Protection), 600 V, 3 phase input.	ea	4	4	103.2	10,961.96	412.8	1,644.29	6,577.18	43,847.84	71,651.76	286,607.04	2,208.86	8,835.45	86,466.88	345,867.51	4.0	56.7	5,125.30	226.8	666.29	2,665.16	20,501.20	54,600.43	218,401.73	12,196.99	48,787.98	72,589.02	290,356.06
1320	3340.070	125 Vdc Battery Bank (Station Control and Protection), 60 cell, lead acid batteries, 2320 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	2	2	966.0	102,617.20	1932.0	15,392.58	30,785.16	205,234.39	130,067.00	260,133.99	20,677.61	41,355.22	268,754.38	537,508.77	2.0	335.2	30,301.24	670.3	3,939.16	7,878.32	60,602.48	234,118.47	468,236.95	54,255.32	108,510.64	322,614.20	645,228.39
1321	3340.080	125 Vdc Distribution Switchboard (Station Control and Protection), 400 A, 14 kA IC	ea	2	2	64.4	6,841.15	128.8	1,026.17	2,052.34	13,682.29	65,966.85	131,933.70	1,378.51	2,757.01	75,212.67	150,425.35	2.0	97.8	8,837.92	195.5	1,148.93	2,297.86	17,675.83	63,284.33	126,568.67	14,817.81	29,635.62	88,088.99	176,177.98
1322	3340.090	Battery Charger, 125 Vdc, 55 kW (Field Flashing and Emerg. Ltg), 600 V, 3 phase input.	ea	2	2	467.7	49,678.94	935.3	7,451.84	14,903.68	99,357.88	93,674.96	187,349.93	10,010.43	20,020.85	160,816.17	321,632.34	2.0	56.7	5,125.30	113.4	666.29	1,332.58	10,250.60	63,424.43	126,848.85	13,973.49	27,946.99	83,189.51	166,379.02
1323	3340.100	125 Vdc Battery Bank (Field Flashing and Emerg. Ltg), 60 cell, lead acid batteries, 2350 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	1	1	966.0	102,617.20	966.0	15,392.58	15,392.58	102,617.20	139,957.34	139,957.34	20,677.61	20,677.61	278,644.73	278,644.73	1.0	335.2	30,301.25	335.2	3,939.16	3,939.16	30,301.25	234,118.47	234,118.47	54,255.32	54,255.32	322,614.21	322,614.21
1324	3340.110	125 Vdc Distribution Switchboard (Field Flashing and Emerg. Ltg), 400 A, 14kA IC	ea	1	1	64.4	6,841.15	64.4	1,026.17	1,026.17	6,841.15	70,008.29	70,008.29	1,378.51	1,378.51	79,254.11	79,254.11	1.0	97.8	8,837.92	97.8	1,148.93	1,148.93	8,837.92	70,076.77	70,076.77	16,185.30	16,185.30	96,248.92	96,248.92
1325	3340.120	Battery Charger, 48 Vdc, 10 kW (Telecommunications), 600 V, 3 phase input.	ea	4	4	38.6	4,104.69	154.6	615.70	2,462.81	16,418.75	38,501.67	154,006.68	827.10	3,308.42	44,049.16	176,196.66	4.0	52.5	4,742.67	209.8	616.55	2,466.19	18,970.67	28,826.96	115,307.85	6,918.21	27,672.84	41,104.39	164,417.55
1326	3340.130	48 Vdc Battery Bank (Telecommunications), 24 cell, lead acid batteries, 1800 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	2	2	347.8	36,942.19	695.5	5,541.33	11,082.66	73,884.38	59,629.46	119,258.93	7,443.94	14,887.88	109,556.92	219,113.85	2.0	335.2	30,301.24	670.3	3,939.16	7,878.32	60,602.48	83,757.34	167,514.68	23,983.75	47,967.49	141,981.49	283,962.98
1327	3340.140	48 Vdc Distribution Switchboard (Telecommunications), 400 A, 14 kA IC	ea	2	2	48.3	5,130.86	96.6	769.63	1,539.26	10,261.72	29,907.61	59,815.21	1,033.88	2,067.76	36,841.98	73,683.95	2.0	97.8	8,837.92	195.5	1,148.93	2,297.86	17,675.83	37,964.36	75,928.72	9,720.24	19,440.49	57,671.45	115,342.90
1328	3340.150	Uninterruptible Power Supply (UPS), 10 kVA, 125 Vdc input and 600 Vac single phase bypass input, 120 Vac, 60 Hz output.	ea	2	2	38.6	4,104.69	77.3	615.70	1,231.41	8,209.38	108,236.61	216,473.22	827.10	1,654.21	113,784.10	227,568.21	2.0	57.9	5,233.44	115.8	680.35	1,360.69	10,466.88	58,167.26	116,334.52	12,940.50	25,881.00	77,021.55	154,043.10
1328a	Added	UPS, 90 kVA, 125 Vdc input and 600 Vac 3 Ph bypass input, 120 Vac Output	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	322.4	29,149.19	322.43	3,789.39	3,789.39	29,149.19	130,629.65	130,629.65	33,149.61	33,149.61	196,717.84	196,717.84
1329	3340.160	Uninterruptible Power Supply (UPS) Distribution Switchboard, 225 A, 120 Vac, single phase, 60 Hz	ea	2	2	48.3	5,130.86	96.6	769.63	1,539.26	10,261.72	41,003.23	82,006.45	1,033.88	2,067.76	47,937.60	95,875.19	2.0	57.9	5,233.44	115.8	680.35	1,360.69	10,466.88	24,266.70	48,533.39	6,115.45	12,230.90	36,295.93	72,591.86
1329a	Added	UPS Panelboard 100A 120 Vac for operation on 120 Vac 2 W system NEMA 12	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	25.2	2,280.53	126.13	296.47	1,482.34	11,402.65	1,121.76	5,608.81	761.80	3,808.98	4,460.56	22,302.79
		Heavy Duty Safety Switch, 600 V, three phase, unfused, visible blade, NEMA 12 enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1330	3000.021	30 Amp	ea	156	156	4.0	427.57	627.9	64.14	10,005.18	66,701.18	358.22	55,882.41	86.16	13,440.45	936.08	146,029.21	153.0	7.5	677.82	1,147.1	88.12	13,481.85	103,706.57	286.71	43,866.51	217.02	33,204.04	1,269.67	194,258.98
1331	3000.022	60 Amp	ea	5	6	5.6	598.60	33.8	89.79	538.74	3,591.60	399.14	2,394.82	120.62	723.72	1,208.15	7,248.88	4.0	8.2	737.53	32.6	95.88	383.52	2,950.12	314.43	1,257.73	236.64	946.55	1,384.48	5,537.92
1332	3000.023	100 Amp	ea	14	15	8.1	855.14	120.8	128.27	1,924.07	12,827.15	560.26	8,403.92	172.31	2,584.70	1,715.99	25,739.84	14.0	8.8	795.56	123.2	103.42	1,447.92	11,137.86	438.64	6,140.93	275.28	3,853.89	1,612.90	22,580.60
1333	3000.024	200 Amp	ea	10	10	10.5	1,111.69	104.7	166.75	1,667.53	11,116.86	835.39	8,353.85	224.01	2,240.07	2,337.83	23,378.32	10.0	10.2	920.25	101.8	119.63	1,196.33	9,202.53	709.46	7,094.60	359.11	3,591.05	2,108.45	21,084.51
1334	3000.025	400 Amp	ea	4	4	15.3	1,624.77	61.2	243.72	974.86	6,499.09	1,994.39	7,977.58	327.40	1,309.58	4,190.28	16,761.11	4.0	26.4	2,385.20	105.5	310.08	1,240.30	9,540.80	1,786.79	7,147.17	920.28	3,681.13	5,402.35	21,609.41
		Heavy Duty Safety Switch, 600 V, three phase, unfused, visible blade, NEMA 4X enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1335	3000.026	30 Amp	ea	62	62	4.0	427.57	249.6	64.14	3,976.42	26,509.44	723.02	44,827.27	86.16	5,341.72	1,300.88	80,654.85	65.0	8.4	761.44	547.5	98.99	6,434.19	49,493.74	633.82	41,198.07	306.55	19,925.99	1,800.80	117,051.99
1336	3000.027	60 Amp	ea	0	5	5.6	598.60	28.2	89.79	448.95	2,993.00	758.24	3,791.18	120.62	603.10	1,567.25	7,836.23	1.0	8.4	762.49	8.4	99.12	99.12	762.49	668.19	668.19	313.72	313.72	1,843.53	1,843.53
1337	3000.028	100 Amp	ea	2	2	8.1	855.14	16.1	128.27	256.54	1,710.29	1,711.66	3,423.32	172.31	344.63	2,867.39	5,734.78	1.0	9.5	856.76	9.5	111.38	111.38	856.76	1,545.39	1,545.39	512.47	512.47	3,026.00	3,026.00
1338	3000.029	200 Amp	ea	2	2	14.5	1,539.26	29.0	230.89	461.78	3,078.52	2,490.93	4,981.85	310.16	620.33	4,571.24	9,142.47	2.0	11.3	1,024.51	22.7	133.19	266.37	2,049.01	2,263.65	4,527.30	696.51	1,393.02	4,117.85	8,235.70
1339	3000.030	400 Amp	ea	2	3	20.9	2,223.37	62.8	333.51	1,000.52	6,670.12	3,072.97	9,218.91	448.01	1,344.04	6,077.86	18,233.59	2.0	26.4	2,388.67	52.8	310.53	621.06	4,777.33	2,771.56	5,543.12	1,119.36	2,238.72	6,590.11	13,180.21
1340	3000.031	Combination magnetic motor starter and visible blade disconnect, NEMA size 1, with electronic overload, NEMA 12 enclosure.	ea	3	3	8.4	889.35	25.1	133.40	400.21	2,668.05	1,837.26	5,511.79	179.21	537.62	3,039.22	9,117.67	3.0	13.9	1,259.26	41.8	163.70	491.11	3,777.78	1,778.27	5,334.82	653.96	1,961.87	3,855.19	11,565.58
1341	3000.032	Combination magnetic motor starter and visible blade disconnect, NEMA size 1, with electronic overload, NEMA 4X enclosure.	ea	12	12	21.7	2,308.89	260.8	346.33	4,156.00	27,706.64	2,704.12	32,449.43	465.25	5,582.96	5,824.59	69,895.02	12.0	16.8	1,520.47	201.8	197.66	2,371.93	18,245.63	2,472.85	29,674.18	855.18	10,262.16	5,046.16	60,553.90
1342	3000.033	Splitter box, 400 Amp, 600 V, three phase, three wire, NEMA 4X enclosure.	ea	2	2	9.7	1,026.17	19.3	153.93	307.85	2,052.34	3,437.50	6,874.99	206.78	413.55	4,824.37	9,648.74	2.0	14.7	1,330.89	29.4	173.02	346.03	2,661.77	2,972.16	5,944.33	911.15	1,822.30	5,387.22	10,774.43
		Industrial type electric Blower Unit Heater, 600 V, three phase, complete with built-in thermostat and controls, heating capacity as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1343	3000.034	2.0 kW	ea	0	9	4.8	513.09	43.5	76.96	692.67	4,617.77	895.14	8,056.30	103.39	930.49	1,588.58	14,297.23	9.0	8.2	744.77	74.1	96.82	871.38	6,702.96	1,990.56	17,915.08	575.78	5,182.06	3,407.94	30,671.49
1344	3000.035	2.5 kW	ea	13	5	4.0	427.57	20.1	64.14	320.68	2,137.86	1,076.36	5,381.82	86.16	430.78	1,654.23	8,271.14	4.0	8.4	762.49	33.7	99.12	396.49	3,049.95	2,365.15	9,460.60	655.36	2,621.45	3,882.12	15,528.49
1345	3000.036	3.0 kW	ea	0	10	4.8	513.09	48.3	76.96	769.63	5,130.86	1,082.57	10,825.72	103.39	1,033.88	1,776.01	17,760.09	14.0	9.2	829.43	128.4	107.83	1,509.56	11,611.98	1,048.40	14,677.54	406.00	5,683.94	2,391.64	33,483.02
1346	3000.037	5.0 kW	ea	21	19	5.6	598.60	107.1	89.79	1,706.01	11,373.41	725.66	13,787.46	120.62	2,291.77	1,534.67	29,158.64	7.0	8.6	781.10	60.5	101.54	710.80	5,467.73	734.38	5,140.68	331.42	2,319.94	1,948.45	13,639.15
1347	3000.038	7.5 kW	ea	0	11	6.4	684.11	70.8	102.62	1,128.79	7,525.26	1,550.63	17,056.98	137.85	1,516.36	2,475.22	27,227.39	11.0	10.3	930.86	113.3	121.01	1,331.14	10,239.50	1,135.31	12,488.40	447.33	4,920.67	2,634.52	28,979.70

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1348	3000.039	10 kW	ea	37	26	12.9	1,368.23	334.9	205.23	5,336.09	35,573.96	1,342.42	34,902.92	275.70	7,168.24	3,191.59	82,981.21	27.0	11.3	1,017.73	304.0	132.30	3,572.22	27,478.65	1,032.05	27,865.43	446.96	12,067.92	2,629.05	70,984.23
1349	3000.040	15 kW	ea	13	12	16.1	1,710.29	193.2	256.54	3,078.52	20,523.44	1,683.98	20,207.74	344.63	4,135.52	3,995.44	47,945.22	13.0	12.3	1,111.63	159.9	144.51	1,878.66	14,451.21	1,276.03	16,588.34	518.15	6,735.91	3,050.32	39,654.12
1350	3000.041	Explosion-proof electric Blower Unit Heater, 3.5 kW, 600 V, three phase, complete with built-in thermostat and controls.	ea	8	8	9.7	1,026.17	77.3	153.93	1,231.41	8,209.38	4,782.70	38,261.58	206.78	1,654.21	6,169.57	49,356.57	8.0	16.8	1,520.64	134.6	197.68	1,581.47	12,165.13	4,139.50	33,116.00	1,190.76	9,526.10	7,048.59	56,388.69
1351	3000.042	Architectural sloped top baseboard electric heater, 2.5 kW, 208 V, single phase, with low-voltage relay.	ea	8	8	3.2	342.06	25.8	51.31	410.47	2,736.46	330.30	2,642.36	68.93	551.40	792.59	6,340.69	9.0	1.7	149.88	14.9	19.48	175.36	1,348.91	236.45	2,128.05	82.83	745.45	488.64	4,397.77
1352	3000.043	Convector heater, commercial type with sloped top, 5 kW, 600 V, three phase, with low-voltage relay.	ea	34	34	9.7	1,026.17	328.4	153.93	5,233.48	34,889.85	751.95	25,566.43	206.78	7,030.39	2,138.83	72,720.14	34.0	5.8	523.10	196.7	68.00	2,312.10	17,785.36	626.45	21,299.20	249.06	8,467.91	1,466.60	49,864.57
1353	3000.044	Forced-air heater, commercial type, 2.5 kW, 208 V, single phase, with low-voltage relay.	ea	11	11	6.4	684.11	70.8	102.62	1,128.79	7,525.26	383.31	4,216.40	137.85	1,516.36	1,307.89	14,386.80	11.0	3.1	284.33	34.6	36.96	406.59	3,127.59	302.02	3,322.24	127.63	1,403.90	750.94	8,260.31
1354	3000.045	Forced-air heater, commercial type, 5.0 kW, 600 V, three phase, with low-voltage relay.	ea	4	4	9.7	1,026.17	38.6	153.93	615.70	4,104.69	998.75	3,995.01	206.78	827.10	2,385.63	9,542.50	4.0	5.2	474.13	21.0	61.64	246.55	1,896.52	839.90	3,359.59	280.52	1,122.08	1,656.18	6,624.74
1355	3000.046	Electric infrared radiant heater, industrial type, NEMA 4X construction, 10 kW, 600 V, three phase, without controls.	ea	28	28	12.9	1,368.23	360.6	205.23	5,746.56	38,310.42	997.65	27,934.19	275.70	7,719.64	2,846.81	79,710.82	28.0	14.4	1,299.20	402.4	168.90	4,729.08	36,377.57	2,345.79	65,682.24	777.60	21,772.79	4,591.49	128,561.68
		Power outlet - interlocked receptacle and unfused switch, 600 V, three phase, three wire, NEMA 12 enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1356	3000.047	30 Amp	ea	4	4	4.8	513.09	19.3	76.96	307.85	2,052.34	1,236.53	4,946.11	103.39	413.55	1,929.97	7,719.86	1.0	9.5	853.98	9.5	111.02	111.02	853.98	1,167.34	1,167.34	435.71	435.71	2,568.04	2,568.04
1357	3000.048	60 Amp	ea	38	38	6.4	684.11	244.7	102.62	3,899.45	25,996.36	1,319.62	50,145.75	137.85	5,238.33	2,244.21	85,279.88	34.0	10.0	904.06	340.0	117.53	3,995.93	30,737.93	1,243.34	42,273.58	462.78	15,734.63	2,727.71	92,742.07
		Power outlet - interlocked receptacle and unfused switch, 600 V, three phase, three wire, NEMA 4X enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1358	3000.049	30 Amp	ea	4	8	4.8	513.09	38.6	76.96	615.70	4,104.69	2,133.71	17,069.67	103.39	827.10	2,827.15	22,617.16	8.0	10.0	904.07	80.0	117.53	940.23	7,232.54	2,069.81	16,558.51	629.18	5,033.42	3,720.59	29,764.70
1359	3000.050	60 Amp	ea	13	18	4.8	513.09	86.9	76.96	1,385.33	9,235.55	2,158.79	38,858.20	103.39	1,860.99	2,852.23	51,340.06	18.0	10.0	903.59	179.9	117.47	2,114.39	16,264.54	2,095.50	37,718.92	634.23	11,416.20	3,750.78	67,514.05
1360	3000.051	100 Amp	ea	4	4	6.4	684.11	25.8	102.62	410.47	2,736.46	4,461.46	17,845.86	137.85	551.40	5,386.05	21,544.19	4.0	11.0	997.82	44.2	129.72	518.87	3,991.27	4,389.31	17,557.24	1,118.18	4,472.73	6,635.03	26,540.10
1361	3000.052	200 Amp	ea	1	1	9.7	1,026.17	9.7	153.93	153.93	1,026.17	4,610.56	4,610.56	206.78	206.78	5,997.43	5,997.43	1.0	12.6	1,140.96	12.6	148.32	148.32	1,140.96	7,641.51	7,641.51	1,806.58	1,806.58	10,737.37	10,737.37
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, straight lengths, widths as follows:	0.00					0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
1362	3000.053	150 mm	m	200	200	4.1	434.41	817.9	65.16	13,032.38	86,882.56	94.01	18,801.84	87.54	17,507.05	681.12	136,223.83	136.0	2.7	246.72	371.1	32.07	4,361.97	33,553.59	87.37	11,882.89	75.57	10,277.92	441.74	60,076.37
1362a	Added	4" Channel Tray	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,572.0	1.2	104.29	5,273.96	13.56	61,983.62	476,797.06	42.67	195,068.75	33.10	151,326.69	193.61	885,176.12
1363	3000.054	300 mm	m	1700	1,755	3.8	407.05	6724.8	61.06	107,155.44	714,369.62	89.97	157,898.43	82.02	143,947.20	640.10	1,123,370.69	1,324.0	3.7	334.92	4,904.9	43.54	57,645.80	443,429.25	105.55	139,744.50	99.96	132,346.58	583.96	773,166.13
1364	3000.055	450 mm	m	300	350	4.0	429.28	1414.4	64.39	22,537.30	150,248.68	98.40	34,440.67	86.50	30,275.47	678.58	237,502.13	949.0	3.5	315.83	3,315.3	41.06	38,963.94	299,722.60	108.00	102,490.72	95.97	91,073.25	560.85	532,250.51
1365	3000.056	600 mm	m	4100	4,100	4.4	466.91	18020.7	70.04	287,148.57	1,914,323.81	121.62	498,639.11	94.08	385,740.86	752.65	3,085,852.35	3,714.0	3.4	307.36	12,626.7	39.96	148,397.89	1,141,522.25	107.07	397,657.62	93.79	348,333.25	548.17	2,035,911.02
1366	3000.057	750 mm	m	2000	4,150	4.7	502.82	19643.6	75.42	313,006.10	2,086,720.70	119.61	496,380.27	101.32	420,479.25	799.18	3,316,588.32	1,967.0	3.4	305.86	6,654.7	39.76	78,210.47	601,618.98	107.50	211,450.75	93.52	183,959.80	546.64	1,075,240.00
		Horizontal 90 degree turn, 600mm radius, Cable Tray Section, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1367	3000.058	300 mm	ea	32	32	8.9	940.66	283.4	141.10	4,515.16	30,101.04	259.67	8,309.52	189.54	6,065.43	1,530.97	48,991.15	47.0	18.7	1,694.31	880.8	220.26	10,352.26	79,632.77	544.62	25,597.16	507.84	23,868.25	2,967.03	139,450.44
1368	3000.059	450 mm	ea	22	26	9.3	983.41	240.7	147.51	3,835.32	25,568.78	269.75	7,013.59	198.16	5,152.17	1,598.84	41,569.86	21.0	19.2	1,733.06	402.6	225.30	4,731.25	36,394.20	552.15	11,595.14	518.46	10,887.57	3,028.96	63,608.16
1369	3000.060	600 mm	ea	87	87	9.7	1,026.17	840.4	153.93	13,391.54	89,276.96	280.72	24,422.93	206.78	17,989.52	1,667.60	145,080.96	87.0	20.3	1,836.18	1,767.0	238.70	20,767.24	159,747.98	561.49	48,849.48	544.57	47,377.78	3,180.95	276,742.48
1370	3000.061	750 mm	ea	47	49	10.5	1,111.69	512.8	166.75	8,170.89	54,472.63	311.44	15,260.63	224.01	10,976.37	1,813.89	88,880.52	36.0	21.4	1,931.79	769.3	251.13	9,040.77	69,544.37	587.17	21,138.11	572.21	20,599.59	3,342.30	120,322.84
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1371	3000.062	150 mm	ea	3	3	8.9	940.66	26.6	141.10	423.30	2,821.97	259.67	779.02	189.54	568.63	1,530.97	4,592.92	3.0	17.7	1,598.91	53.1	207.86	623.58	4,796.74	567.33	1,701.98	489.98	1,469.94	2,864.08	8,592.23
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 45 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1372	3000.063	300 mm	ea	32	32	8.1	855.14	257.6	128.27	4,104.69	27,364.59	232.96	7,454.58	172.31	5,514.03	1,388.68	44,437.89	17.0	17.8	1,608.56	302.5	209.11	3,554.92	27,345.57	525.30	8,930.12	483.79	8,224.47	2,826.77	48,055.08
1373	3000.064	600 mm	ea	30	30	8.9	940.66	265.7	141.10	4,232.96	28,219.73	247.27	7,418.08	189.54	5,686.34	1,518.57	45,557.11	59.0	18.9	1,712.46	1,117.6	222.62	13,134.56	101,035.09	533.47	31,474.86	509.85	30,081.43	2,978.41	175,725.94
1374	3000.065	750 mm	ea	8	8	9.7	1,026.17	77.3	153.93	1,231.41	8,209.38	264.31	2,114.46	206.78	1,654.21	1,651.18	13,209.45	14.0	18.9	1,712.63	265.2	222.64	3,116.98	23,976.75	545.15	7,632.04	512.24	7,171.42	2,992.66	41,897.19
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 45 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1375	3000.066	150 mm	ea	4	4	8.1	855.14	32.2	128.27	513.09	3,420.57	241.06	964.24	172.31	689.25	1,396.79	5,587.16	4.0	17.2	1,552.70	68.7	201.85	807.40	6,210.80	533.47	2,133.89	472.31	1,889.24	2,760.33	11,041.33
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical inside 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1376	3000.067	300 mm	ea	1	1	8.9	940.66	8.9	141.10	141.10	940.66	246.13	246.13	189.54	189.54	1,517.43	1,517.43	1.0	15.1	1,365.55	15.1	177.52	177.52	1,365.55	386.39	386.39	398.72	398.72	2,328.17	2,328.17
1377	3000.068	600 mm	ea	6	6	9.7	1,026.17	58.0	153.93	923.55	6,157.03	259.41	1,556.43	206.78	1,240.66	1,646.28	9,877.68	6.0	16.7	1,507.88	100.1	196.02	1,176.14	9,047.26	394.56	2,367.36	433.81	2,602.84	2,532.27	15,193.60
1378	3000.069	750 mm	ea	4	4	10.5	1,111.69	41.9	166.75	667.01	4,446.75	269.15	1,076.59	224.01	896.03	1,771.59	7,086.38	8.0	17.7	1,603.65	141.9	208.47	1,667.79	12,829.19	398.06	3,184.49	457.02	3,656.16	2,667.21	21,337.64
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical inside 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1379	3000.070	150 mm	ea	2	2	8.9	940.66	17.7	141.10	282.20	1,881.32	293.90	587.79	189.54	379.09	1,565.20	3,130.39	2.0	14.1	1,271.28	28.1	165.27	330.53	2,542.55	435.42	870.83	386.42	772.85	2,258.38	4,516.76
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical exterior 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1380	3000.071	300 mm	ea	22	22	8.9	940.66	194.8	141.10	3,104.17	20,694.47	246.13	5,414.84	189.54	4,169.99	1,517.43	33,383.47	15.0	15.1	1,366.10	226.7	177.59	2,663.89	20,491.49	386.39	5,795.82	398.84	5,982.65	2,328.92	34,933.86
1381	3000.072	450 mm	ea	9	9	9.3	983.41	83.3	147.51	1,327.61	8,850.73	252.65	2,273.88	198.16	1,783.44	1,581.74	14,235.67	10.0	15.6	1,413.93	156.4	183.81	1,838.11	14,139.29	389.89	3,898.90	410.79	4,107.88	2,398.42	23,984.17
1382	3000.073	600 mm	ea	7	7	9.7	1,026.17	67.6	153.93	1,077.48	7,183.20	259.41	1,815.84	206.78	1,447.43	1,646.28	11,523.95	7.0	16.7	1,507.94	116.8	196.03	1,372.23	10,555.59	394.56	2,761.92	433.82	3,036.76	2,532.36	17,726.50
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical exterior 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1383	3000.074	150 mm	ea	1	1	8.9	940.66	8.9	141.10	141.10	940.66	293.90	293.90	189.54	189.54	1,565.20	1,565.20	1.0	14.1	1,271.27	14.1	165.27	165.27	1,271.27	435.42	435.42	386.43	386.43	2,258.39	2,258.39
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, riser sections, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1384	3000.075	150mm	ea	2	2	4.4	470.33	8.9	70.55	141.10	940.66	171.69	343.37	94.77	189.54	807.34	1,614.67	2.0	9.7	874.78	19.4	113.72	227.44	1,749.55	315.03	630.06	269.01	538.01	1,572.53	3,145.06
1385	3000.076	300mm	ea	70	70	4.8	513.09	338.1	76.96	5,387.40	35,916.02	182.66	12,785.90	103.39	7,237.16	876.09	61,326.48	94.0	9.7	874.38	909.1	113.67	10,684.95	82,191.96	312.85	29,407.51	268.48	25,236.81	1,569.37	147,521.24
1386	3000.077	450mm	ea	56	56	5.2	555.84	293.0	83.38	4,669.08	31,127.22	193.51	10,836.66	112.00	6,272.21	944.74	52,905.16	54.0	9.7	874.34	522.3	113.66	6,137.90	47,214.59	312.85	16,893.68	268.47	14,497.24	1,569.32	84,743.41
1387	3000.078	600mm	ea	252	252	5.6	598.60	1420.0	89.79	22,627.09	150,847.28	203.95	51,394.39	120.62	30,396.09	1,012.96	255,264.85	254.0	9.7	874.36	2,456.6	113.67	28,871.38	222,087.55	312.85	79,462.85	268.47	68,191.76	1,569.34	398,613.55
1388	3000.079	750mm	ea	30	30	6.0	641.36	181.1	96.20	2,886.11	19,240.72	198.01	5,940.30	129.24	3,877.05	1,064.81	31,944.18	46.0	9.7	874.36	444.9	113.67	5,228.67	40,220.50	312.85	14,390.91	268.47	12,349.67	1,569.34	72,189.75
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 300mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1389	3000.080	300 mm	ea	12	12	12.5	1,325.47	149.7	198.82	2,385.85	15,905.67	391.29	4,695.50	267.09	3,205.03	2,182.67	26,192.05	12.0	31.8	2,870.53	381.0	373.17	4,478.03	34,446.40	917.92	11,015.07	859.42	10,313.03	5,021.04	60,252.54
1390	3000.081	600 mm	ea	5	5	12.9	1,368.23	64.4	205.23	1,026.17	6,841.15	428.39	2,141.95	275.70	1,378.51	2,277.56	11,387.78	1.0	31.7	2,869.72	31.7	373.06	373.06	2,869.72	975.89	975.89	870.90	870.90	5,089.58	5,089.58
1391	3000.082	750 mm	ea	12	12	13.7	1,453.74	164.2	218.06	2,616.74	17,444.92	489.14	5,869.64	292.93	3,515.19	2,453.87	29,446.49	1.0	32.5	2,936.27	32.5	381.72	381.72	2,936.27	1,927.27	1,927.27	1,078.08	1,078.08	6,323.34	6,323.34
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 450mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1392	3000.083	300mm	ea	6	6	12.5	1,325.47	74.9	198.82	1,192.92	7,952.83	405.99	2,435.92	267.09	1,602.51	2,197.37	13,184.19	4.0	32.8	2,966.08	131.2	385.59	1,542.36	11,864.30	974.73	3,898.90	893.31	3,573.23	5,219.70	20,878.78
1393	3000.084	450mm	ea	1	1	12.9	1,368.23	12.9	205.23	205.23	1,368.23	409.09	409.09	275.70	275.70	2,258.26	2,258.26	4.0	32.8	2,966.08	131.2	385.59	1,542.36	11,864.30	974.73	3,898.90	893.31	3,573.23	5,219.70	20,878.78
1394	3000.085	600mm	ea	6	6	13.7	1,453.74	82.1	218.06	1,308.37	8,722.46	434.56	2,607.39	292.93	1,757.60	2,399.30	14,395.82	1.0	32.8	2,965.38	32.8	385.50	385.50	2,965.38	980.56	980.56	894.32	894.32	5,225.76	5,225.76
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 600mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1395	3000.086	300mm	ea	20	20	12.5	1,325.47	249.6	198.82	3,976.42	26,509.44	422.15	8,443.03	267.09	5,341.72	2,213.53	44,270.61	15.0	33.9	3,060.39	507.8	397.85	5,967.76	45,905.88	975.89	14,638.39	915.71	13,735.65	5,349.85	80,247.68
1396	3000.087	450mm	ea	11	11	12.9	1,368.23	141.7	205.23	2,257.58	15,050.52	432.10	4,753.05	275.70	3,032.72	2,281.26	25,093.87	10.0	33.9	3,060.21	338.5	397.83	3,978.27	30,602.08	982.90	9,828.96	917.08	9,170.75	5,358.01	53,580.06
1397	3000.088	600mm	ea	42	42	13.7	1,453.74	574.8	218.06	9,158.58	61,057.23	442.41	18,581.13	292.93	12,303.18	2,407.15	101,100.13	62.0	33.9	3,060.30	2,098.7	397.84	24,666.03	189,738.69	987.57	61,229.08	918.04	56,918.39	5,363.74	332,552.18
1398	3000.089	750mm	ea	1	1	14.5	1,539.26	14.5	230.89	230.89	1,539.26	455.46	455.46	310.16	310.16	2,535.77	2,535.77	2.0	33.9	3,060.35	67.7	397.84	795.69	6,120.69	994.57	1,989.14	919.46	1,838.93	5,372.22	10,744.45
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 750mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1399	3000.090	300mm	ea	10	10	12.5	1,325.47	124.8	198.82	1,988.21	13,254.72	426.83	4,268.26	267.09	2,670.86	2,218.20	22,182.05	32.0	34.9	3,155.96	1,117.1	410.27	13,128.79	100,990.72	980.56	31,377.98	939.11	30,051.50	5,485.91	175,548.99
1400	3000.091	450mm	ea	5	5	12.9	1,368.23	64.4	205.23	1,026.17	6,841.15	437.80	2,188.98	275.70	1,378.51	2,286.96	11,434.80	5.0	34.9	3,155.87	174.5	410.26	2,051.31	15,779.33	988.73	4,943.67	940.73	4,703.66	5,495.59	27,477.97
1401	3000.092	600mm	ea	28	28	13.7	1,453.74	383.2	218.06	6,105.72	40,704.82	448.11	12,547.02	292.93	8,202.12	2,412.85	67,559.69	59.0	34.9	3,155.97	2,059.6	410.28	24,206.28	186,202.13	993.40	58,610.74	941.70	55,560.09	5,501.34	324,579.24
1402	3000.093	750mm	ea	25	25	14.5	1,539.26	362.3	230.89	5,772.22	38,481.45	461.73	11,543.15	310.16	7,754.10	2,542.04	63,550.92	13.0	34.9	3,156.16	453.8	410.30	5,333.92	41,030.13	1,000.41	13,005.28	943.15	12,260.98	5,510.02	71,630.31
		Teck 90 1000 V Power Cable, Class B stranded copper conductors insulated with XLPE type RW90, complete with bare grounding conductor to CSA C22.2 No.131, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket, number of conductors and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1403	3000.094	1C #4/0 AWG	m	100	280	0.3	30.27	79.8	4.54	1,271.43	8,476.18	32.54	9,112.45	6.10	1,707.97	73.46	20,568.03	235.0	0.4	38.96	101.3	5.07	1,190.38	9,156.77	34.94	8,211.74	16.19	3,805.21	95.17	22,364.10
1404	3000.095	1C #500 kcmil	m	500	275	0.4	43.27	112.0	6.49	1,784.90	11,899.32	56.49	15,535.66	8.72	2,397.74	114.97	31,617.62	315.0	0.5	47.96	167.1	6.23	1,963.90	15,106.95	61.72	19,440.64	23.70	7,464.26	139.61	43,975.75
1405	3000.096	1C #750 kcmil	m	600	460	0.4	47.72	206.6	7.16	3,292.47	21,949.82	86.63	39,848.48	9.62	4,422.94	151.12	69,513.71	440.0	0.7	62.26	303.0	8.09	3,561.23	27,394.08	95.89	42,192.31	33.94	14,932.40	200.18	88,080.02
1406	3000.097	2C #12 AWG	m	16000	12,325	0.2	16.86	1955.9	2.53	31,166.13	207,774.17	4.51	55,534.81	3.40	41,867.00	27.29	336,342.10	14,265.0	0.2	22.42	3,537.0	2.91	41,569.26	319,763.53	4.04	57,634.55	6.08	86,752.46	35.45	505,719.79
1407	3000.098	2C #10 AWG	m	3000	1,975	0.1	15.22	283.0	2.28	4,509.38	30,062.56	5.25	10,377.92	3.07	6,057.68	25.83	51,007.55	1,840.0	0.3	29.07	591.7	3.78	6,954.49	53,496.10	5.22	9,607.68	7.88	14,506.65	45.96	84,564.93
1408	3000.099	2C #8 AWG	m	1700	1,670	0.2	22.40	352.2	3.36	5,612.39	37,415.94	7.03	11,740.31	4.51	7,539.40	37.31	62,308.04	1,615.0	0.4	32.16	574.4	4.18	6,751.02	51,930.92	7.12	11,493.76	8.99	14,518.52	52.44	84,694.22
1409	3000.100	2C #6 AWG	m	1000	605	0.2	26.34	150.0	3.95	2,390.21	15,934.74	10.34	6,253.70	5.31	3,210.89	45.93	27,789.54	605.0	0.4	33.69	225.5	4.38	2,649.66	20,381.98	11.19	6,770.43	10.17	6,153.13	59.43	35,955.20
1410	3000.101	2C #4 AWG	m	300	0	0.3	27.54	0.0	4.13	0.00	0.00	16.03	0.00	5.55	0.00	53.25	0.00	1.0	0.4	33.27	0.4	4.33	4.33	33.27	20.59	20.59	11.97	11.97	70.15	70.15
1411	3000.102	2C #1 AWG	m	700	810	0.3	33.69	256.9	5.05	4,093.66	27,291.04	22.59	18,297.74	6.79	5,499.21	68.13	55,181.65	650.0	0.4	38.81	279.0	5.05	3,279.36	25,225.85	21.57	14,020.96	13.46	8,751.22	78.89	51,277.39
1412	3000.103	2C #1/0 AWG	m	50	30	0.3	34.21	9.7	5.13	153.93	1,026.17	29.97	899.06	6.89	206.78	76.20	2,285.93	30.0	0.4	36.55	12.1	4.75	142.56	1,096.59	31.71	951.18	14.97	449.21	87.98	2,639.54
1413	3000.104	2C #2/0 AWG	m	900	750	0.3	35.92	253.6	5.39	4,040.55	26,937.01	30.24	22,680.76	7.24	5,427.87	78.78	59,086.20	751.0	0.4	37.93	315.1	4.93	3,703.07	28,485.13	30.33	22,776.80	15.02	11,279.97	88.21	66,244.97
1414	3000.105	2C #4/0 AWG	m	200	135	0.4	42.76	54.3	6.41	865.83	5,772.22	43.75	5,905.58	8.62	1,163.12	101.53	13,706.75	136.0	0.5	43.25	65.1	5.62	764.69	5,882.24	47.89	6,512.58	19.81	2,693.57	116.57	15,853.08
1415	3000.106	3C #12 AWG	m	16000	14,820	0.2	20.52	2863.2	3.08	45,623.81	304,157.37	5.22	77,327.01	4.14	61,288.44	32.96	488,396.43	31,117.0	0.2	20.09	6,914.1	2.61	81,259.68	625,074.47	4.13	128,427.36	5.55	172,757.44	32.38	1,007,518.95
1416	3000.107	3C #10 AWG	m	600	7,405	0.2	17.96	1251.8	2.69	19,946.86	132,979.06	6.10	45,193.48	3.62	26,795.60	30.37	224,915.00	7,140.0	0.3	27.01	2,133.1	3.51	25,070.09	192,846.86	5.63	40,163.96	7.48	53,407.88	43.63	311,488.79
1417	3000.108	3C #8 AWG	m	4500	2,915	0.2	22.40	614.8	3.36	9,796.48	65,309.86	8.19	23,882.38	4.51	13,160.09	38.47	112,148.81	2,430.0	0.3	29.20	784.8	3.80	9,224.06	70,954.28	8.35	20,299.38	8.54	20,762.09	49.89	121,239.80
1418	3000.109	3C #6 AWG	m	1500	1,465	0.2	22.92	316.1	3.44	5,036.20	33,574.64	12.05	17,652.04	4.62	6,765.37	43.02	63,028.24	1,340.0	0.3	28.71	425.5	3.73	5,001.04	38,469.55	12.36	16,558.49	9.23	12,374.57	54.03	72,403.65
1419	3000.110	3C #4 AWG	m	1100	655	0.2	26.34	162.4	3.95	2,587.75	17,251.66	16.28	10,660.84	5.31	3,476.25	51.87	33,976.51	640.0	0.4	34.24	242.4	4.45	2,848.62	21,912.49	18.10	11,582.44	11.69	7,481.59	68.48	43,825.15
1420	3000.111	3C #2 AWG	m	4000	3,930	0.3	30.79	1138.9	4.62	18,147.85	120,985.67	22.57	88,710.01	6.20	24,378.91	64.18	252,222.44	3,840.0	0.5	43.80	1,860.3	5.69	21,863.18	168,178.32	24.59	94,423.52	15.24	58,534.27	89.32	342,999.29
1421	3000.112	3C #1 AWG	m	300	260	0.3	33.69	82.5	5.05	1,314.01	8,760.09	26.06	6,774.40	6.79	1,765.18	71.59	18,613.68	260.0	0.4	35.63	102.5	4.63	1,204.44	9,264.91	32.93	8,560.81	15.00	3,900.90	88.20	22,931.05
1421a	Added	3C #1/0 AWG	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	245.0	0.4	38.61	104.64	5.02	1,229.85	9,460.39	37.17	9,107.77	16.56	4,056.96	97.37	23,854.97
1422	3000.113	3C #2/0 AWG	m	2400	2,110	0.3	35.92	713.4	5.39	11,367.42	75,782.80	37.43	78,986.60	7.24	15,270.42	85.97	181,407.24	2,095.0	0.5	48.34	1,120.3	6.28	13,166.64	101,281.86	39.18	82,089.64	19.25	40,329.49	113.06	236,867.63
1423	3000.114	3C #4/0 AWG	m	2400	2,305	0.4	42.07	912.9	6.31	14,546.76	96,978.38	53.86	124,156.96	8.48	19,541.38	110.73	255,223.48	2,205.0	0.5	49.08	1,197.1	6.38	14,069.02	108,223.26	59.89	132,052.66	23.59	52,019.68	138.94	306,364.62
1424	3000.115	3C #250 kcmil	m	25	20	0.5	48.23	9.1	7.23	144.69	964.60	81.83	1,636.62	9.72	194.37	147.01	2,940.28	21.0	0.5	48.26	11.2	6.27	131.74	1,013.42	82.54	1,733.40	27.96	587.15	165.03	3,465.71
1425	3000.116	3C #500 kcmil	m	4600	3,910	0.6	62.77	2310.3	9.42	36,813.15	245,421.00	121.40	474,655.84	12.65	49,452.92	206.23	806,342.91	3,630.0	0.9	83.88	3,367.9	10.90	39,582.29	304,479.13	156.25	567,174.66	51.17	185,743.97	302.20	1,096,980.04

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1425a	Added	3C #500 kcmil Tray Cable	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	700.0	1.0	87.62	678.42	11.39	7,873.30	61,333.07	148.11	103,675.57	50.41	35,286.75	297.53	208,268.69
1426	3000.117	4C #12 AWG	m	1600	1,585	0.2	19.16	285.8	2.87	4,554.15	30,361.01	6.38	10,118.35	3.86	6,117.82	32.27	51,151.33	1,430.0	0.4	32.99	521.9	4.29	6,133.21	47,178.54	6.22	8,898.31	9.01	12,879.12	52.51	75,089.17
1427	3000.118	4C #10 AWG	m	900	1,005	0.2	19.67	186.1	2.95	2,965.00	19,766.64	7.55	7,587.41	3.96	3,983.03	34.13	34,302.07	890.0	0.3	25.63	252.4	3.33	2,965.77	22,813.62	7.06	6,279.35	7.44	6,625.74	43.47	38,684.48
1428	3000.119	4C #8 AWG	m	200	80	0.2	21.89	16.5	3.28	262.70	1,751.33	9.34	747.30	4.41	352.90	38.93	3,114.23	171.0	0.3	29.94	56.6	3.89	665.57	5,119.76	9.59	1,640.69	8.97	1,533.53	52.40	8,959.55
1429	3000.120	4C #6 AWG	m	50	245	0.2	26.34	60.7	3.95	967.94	6,452.91	16.20	3,968.09	5.31	1,300.28	51.79	12,689.22	245.0	0.6	51.92	140.7	6.75	1,653.74	12,721.06	19.24	4,712.66	16.08	3,938.43	93.98	23,025.89
1430	3000.121	4C #4 AWG	m	50	30	0.3	27.54	7.8	4.13	123.91	826.07	22.50	674.89	5.55	166.45	59.71	1,791.32	30.0	0.4	35.58	11.8	4.63	138.77	1,067.49	26.21	786.45	13.64	409.20	80.06	2,401.91
1430a	Added	4C #3 AWG	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.4	33.65	4.09	4.37	48.12	370.16	29.26	321.89	13.80	151.80	81.09	891.97
1431	3000.122	4C #2 AWG	m	700	625	0.3	30.79	181.1	4.62	2,886.11	19,240.72	30.48	19,052.58	6.20	3,877.05	72.09	45,056.46	620.0	0.4	39.89	273.6	5.19	3,215.20	24,732.31	29.06	18,016.32	15.23	9,439.60	89.36	55,403.43
1432	3000.123	4C #2/0 AWG	m	1900	1,875	0.3	36.43	643.0	5.46	10,245.69	68,304.57	46.91	87,957.86	7.34	13,763.54	96.14	180,271.65	1,876.0	0.6	50.75	1,053.0	6.60	12,376.18	95,201.37	48.45	90,890.43	21.68	40,672.31	127.47	239,140.29
1433	3000.124	4C #4/0 AWG	m	100	80	0.4	44.81	33.7	6.72	537.71	3,584.76	72.11	5,768.72	9.03	722.34	132.67	10,613.54	80.0	0.6	55.90	49.5	7.27	581.40	4,472.34	88.29	7,063.03	30.91	2,473.04	182.37	14,589.81
		Teck 90 1000 V Power Cable Terminations (includes Glands and Termination kit) per Cable Type and Size	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1434	3000.125	1C #4/0 AWG	ea	8	24	2.1	222.34	50.2	33.35	800.41	5,336.09	39.58	949.91	44.80	1,075.24	340.07	8,161.65	20.0	3.2	289.88	64.1	37.68	753.70	5,797.68	119.18	2,383.70	92.12	1,842.44	538.88	10,777.52
1435	3000.126	1C #250 kcmil	ea	12	12	2.7	285.62	32.3	42.84	514.11	3,427.41	93.90	1,126.80	57.55	690.63	479.91	5,758.96	12.0	4.5	408.62	54.2	53.12	637.45	4,903.48	38.66	463.95	103.82	1,245.79	604.22	7,250.67
1436	3000.127	1C #500 kcmil	ea	52	36	5.6	598.60	202.9	89.79	3,232.44	21,549.61	77.10	2,775.53	120.62	4,342.30	886.11	31,899.89	32.0	4.7	422.01	149.4	54.86	1,755.56	13,504.34	80.50	2,576.08	115.39	3,692.35	672.76	21,528.33
1437	3000.128	1C #750 kcmil	ea	56	40	7.2	769.63	289.8	115.44	4,617.77	30,785.16	116.01	4,640.32	155.08	6,203.28	1,156.16	46,246.54	38.0	5.3	483.25	203.1	62.82	2,387.25	18,363.46	105.33	4,002.72	134.78	5,121.52	786.18	29,874.95
1438	3000.129	2C #12 AWG	ea	378	554	1.8	189.37	987.6	28.40	15,736.35	104,908.98	44.76	24,797.94	38.16	21,139.41	300.69	166,582.68	644.0	2.6	232.88	1,658.9	30.27	19,496.66	149,974.28	20.95	13,494.16	58.95	37,962.89	343.06	220,927.99
1439	3000.130	2C #10 AWG	ea	54	68	1.8	188.13	120.4	28.22	1,918.94	12,792.94	44.52	3,027.20	37.91	2,577.81	298.78	20,316.89	54.0	2.6	232.91	139.1	30.28	1,635.00	12,576.89	19.79	1,068.46	58.72	3,170.87	341.69	18,451.22
1440	3000.131	2C #8 AWG	ea	44	38	1.8	188.13	67.3	28.22	1,072.35	7,149.00	44.52	1,691.67	37.91	1,440.54	298.78	11,353.56	36.0	2.6	234.79	93.5	30.52	1,098.83	8,452.51	16.87	607.25	58.58	2,108.72	340.76	12,267.31
1441	3000.132	2C #6 AWG	ea	22	8	2.6	273.65	20.6	41.05	328.38	2,189.17	55.00	440.01	55.14	441.12	424.83	3,398.67	12.0	3.0	272.65	36.2	35.44	425.33	3,271.77	26.21	314.48	69.35	832.23	403.65	4,843.81
1442	3000.133	2C #4 AWG	ea	4	0	3.1	324.95	0.0	48.74	0.00	0.00	61.39	0.00	65.48	0.00	500.57	0.00	1.0	3.8	339.66	3.8	44.16	44.16	339.66	26.21	26.21	85.10	85.10	495.12	495.12
1443	3000.134	2C #1 AWG	ea	10	14	2.9	307.85	40.6	46.18	646.49	4,309.92	67.93	950.97	62.03	868.46	483.99	6,775.84	14.0	3.1	278.85	43.2	36.25	507.51	3,903.93	35.41	495.77	72.66	1,017.29	423.18	5,924.49
1444	3000.135	2C #1/0 AWG	ea	6	6	3.8	401.92	22.7	60.29	361.73	2,411.50	74.76	448.53	80.99	485.92	617.95	3,707.69	6.0	4.4	401.81	26.7	52.23	313.41	2,410.84	49.58	297.46	104.41	626.46	608.03	3,648.17
1445	3000.136	2C #2/0 AWG	ea	16	18	4.3	453.23	76.8	67.98	1,223.71	8,158.07	125.70	2,262.58	91.33	1,643.87	738.23	13,288.23	12.0	4.6	416.83	55.3	54.19	650.25	5,001.92	49.58	594.92	107.94	1,295.31	628.53	7,542.40
1446	3000.137	2C #4/0 AWG	ea	22	18	5.0	530.19	89.8	79.53	1,431.51	9,543.40	126.17	2,271.02	106.83	1,923.02	842.72	15,168.95	18.0	5.1	456.80	91.0	59.38	1,068.91	8,222.39	49.58	892.38	117.34	2,112.04	683.10	12,295.72
1447	3000.138	3C #12 AWG	ea	956	884	2.3	239.44	1992.5	35.92	31,749.76	211,665.07	59.64	52,723.98	48.25	42,651.02	383.25	338,789.84	966.0	2.8	254.00	2,714.1	33.02	31,897.89	245,368.36	20.95	20,241.25	63.91	61,740.26	371.89	359,247.76
1448	3000.139	3C #10 AWG	ea	134	252	2.3	239.44	568.0	35.92	9,050.84	60,338.91	59.64	15,029.91	48.25	12,158.44	383.25	96,578.10	244.0	3.1	284.10	766.8	36.93	9,011.75	69,321.17	27.37	6,679.26	72.28	17,636.21	420.69	102,648.39
1449	3000.140	3C #8 AWG	ea	204	104	2.3	239.44	234.4	35.92	3,735.27	24,901.77	63.92	6,647.42	48.25	5,017.77	387.52	40,302.23	96.0	3.4	304.99	323.9	39.65	3,806.34	29,279.50	27.37	2,627.91	77.19	7,410.18	449.21	43,123.92
1450	3000.141	3C #6 AWG	ea	44	84	3.1	324.95	257.0	48.74	4,094.43	27,296.17	70.13	5,890.55	65.48	5,500.24	509.30	42,781.40	72.0	3.6	322.04	256.5	41.86	3,014.25	23,186.55	27.37	1,970.93	81.19	5,845.98	472.47	34,017.71
1451	3000.142	3C #4 AWG	ea	40	22	3.7	393.37	81.5	59.00	1,298.11	8,654.05	78.14	1,718.99	79.26	1,743.81	609.77	13,414.96	22.0	4.1	373.30	90.8	48.53	1,067.65	8,212.69	32.24	709.32	94.22	2,072.91	548.30	12,062.57
1452	3000.143	3C #2 AWG	ea	162	168	3.5	376.26	595.1	56.44	9,481.83	63,212.19	84.29	14,161.21	75.82	12,737.41	592.81	99,592.64	128.0	5.0	451.07	638.6	58.64	7,505.80	57,736.91	50.74	6,495.24	116.22	14,876.69	676.68	86,614.63
1453	3000.144	3C #1 AWG	ea	2	10	3.9	410.47	38.6	61.57	615.70	4,104.69	86.78	867.76	82.71	827.10	641.53	6,415.26	8.0	5.2	473.61	41.9	61.57	492.55	3,788.86	50.74	405.95	121.52	972.17	707.44	5,659.53
1453a	Added	3C #1/0 AWG	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	6.1	555.53	86.03	72.22	1,011.06	7,777.36	47.37	663.19	140.09	1,961.31	815.21	11,412.91
1454	3000.145	3C #2/0 AWG	ea	62	48	5.2	547.29	247.3	82.09	3,940.50	26,270.00	111.27	5,340.81	110.28	5,293.47	850.93	40,844.78	42.0	5.9	537.64	249.8	69.89	2,935.49	22,580.71	76.64	3,218.69	141.78	5,954.80	825.95	34,689.70
1455	3000.146	3C #4/0 AWG	ea	60	50	6.1	649.91	305.9	97.49	4,874.32	32,495.45	118.72	5,935.83	130.96	6,547.91	997.07	49,853.51	46.0	6.6	592.66	301.6	77.05	3,544.11	27,262.37	76.64	3,525.24	154.71	7,116.79	901.05	41,448.50
1456	3000.147	3C #250 kcmil	ea	4	4	8.1	855.14	32.2	128.27	513.09	3,420.57	133.62	534.46	172.31	689.25	1,289.34	5,157.38	4.0	7.3	656.09	29.0	85.29	341.17	2,624.35	92.49	369.95	172.81	691.24	1,006.68	4,026.71
1457	3000.148	3C #500 kcmil	ea	132	126	16.1	1,710.29	2028.6	256.54	32,324.42	215,496.11	202.66	25,535.49	344.63	43,422.99	2,514.12	316,779.01	118.0	10.1	912.62	1,191.2	118.64	13,999.64	107,689.52	151.42	17,867.80	244.96	28,905.86	1,427.65	168,462.82
1457a	Added	3C #500 kcmil - Tray Cable	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	7.5	680.87	60.25	88.51	708.10	5,446.93	16.17	129.34	163.27	1,306.14	948.81	7,590.51
1458	3000.149	4C #12 AWG	ea	84	70	2.7	290.75	191.6	43.61	3,052.86	20,352.41	74.77	5,233.72	58.59	4,101.06	467.71	32,740.05	64.0	3.1	282.21	199.8	36.69	2,347.96	18,061.25	22.12	1,415.74	70.78	4,529.68	411.79	26,354.64
1459	3000.150	4C #10 AWG	ea	66	72	2.7	290.75	197.1	43.61	3,140.09	20,933.91	79.04	5,691.05	58.59	4,218.23	471.99	33,983.28	66.0	3.5	314.45	229.6	40.88	2,697.96	20,753.51	28.54	1,883.73	79.65	5,256.62	463.51	30,591.81
1460	3000.151	4C #8 AWG	ea	6	4	2.7	290.75	10.9	43.61	174.45	1,162.99	79.04	316.17	58.59	234.35	471.99	1,887.96	8.0	3.8	340.87	30.2	44.31	354.50	2,726.93	28.54	228.33	85.86	686.85	499.58	3,996.61
1461	3000.152	4C #6 AWG	ea	18	26	3.5	376.26	92.1	56.44	1,467.43	9,782.84	88.29	2,295.65	75.82	1,971.27	596.81	15,517.18	26.0	4.3	384.71	110.6	50.01	1,300.32	10,002.44	33.41	868.64	97.14	2,525.60	565.27	14,696.99
1462	3000.153	4C #4 AWG	ea	4	4	4.2	444.67	16.7	66.70	266.80	1,778.70	93.26	373.04	89.60	358.41	694.24	2,776.96	4.0	4.9	445.71	19.7	57.94	231.77	1,782.83	51.91	207.65	115.20	460.81	670.76	2,683.05
1462a	Added	4C #3 AWG	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	5.3	483.49	21.39	62.85	251.41	1,933.94	51.91	207.65	124.08	496.30	722.33	2,889.30
1463	3000.154	4C #2 AWG	ea	38	32	4.2	444.67	134.0	66.70	2,134.44	14,229.58	100.66	3,221.10	89.60	2,867.30	701.64	22,452.42	32.0	5.7	517.45	183.2	67.27	2,152.60	16,558.45	51.91	1,661.16	132.06	4,225.91	768.69	24,598.12
1464	3000.155	4C #2/0 AWG	ea	34	36	6.3	667.01	226.0	100.05	3,601.86	24,012.42	131.36	4,728.90	134.40	4,838.56	1,032.83	37,181.75	36.0	7.4	670.45	267.0	87.16	3,137.70	24,136.18	91.78	3,303.93	176.04	6,337.52	1,025.43	36,915.34
1465	3000.156	4C #4/0 AWG	ea	2	2	5.2	547.29	10.3	82.09	164.19	1,094.58	122.67	245.33	110.28	220.56	862.33	1,724.67	2.0	8.0	720.90	16.0	93.72	187.43	1,441.79	93.66	187.31	188.28	376.56	1,096.55	2,193.09
1466	3000.157	AC-90 cable, 2C #12 AWG, 600 V. XLPE insulation, copper conductors, interlocking aluminum armour	m	500	500	0.3	28.05	132.0	4.21	2,103.65	14,024.35	3.71	1,856.03	5.65	2,825.94	41.62	20,809.97	2,692.0	0.2	22.04	656.4	2.87	7,714.50	59,342.30	2.17	5,854.15	5.62	15,124.91	32.70	88,035.86
1467	3000.158	3/C # 1 AWG, 25 kV Shielded, Armoured Power Cable, Type HVTECK, 100% insulation.	m	250	230	0.4	37.63	81.5	5.64	1,298.11	8,654.05	118.43	27,238.94	7.58	1,743.81	169.28	38,934.91	231.0	0.7	58.91	150.5	7.66	1,769.08	13,608.31	80.50	18,595.43	30.05	6,941.89	177.12	40,914.71
1468	3000.159	3/C # 1 AWG, 25 kV Shielded, Armoured Power Cable, Type HVTECK, 100% insulation terminations including glands, and termination kits	ea	2	2	20.5	2,180.62	41.1	327.09	654.18	4,361.23	1,241.24	2,482.48	439.40	878.80	4,188.35	8,376.69	2.0	43.1	3,900.47	86.3	507.06	1,014.12	7,800.93	4,341.50	8,682.99	1,790.72	3,581.44	10,539.74	21,079.49
1469	3000.160	Mineral Insulated Power Cable, 2-hour fire rated, 1/C # 250 kcmil solid copper conductor, 600 V magnesium oxide insulation, seamless copper sheath.	m	750	735	1.0	111.17	769.2	16.68	12,256.34	81,708.94	119.40	87,761.17	22.40	16,464.55	269.65	198,191.00	736.0	1.1	99.79	812.4	12.97	9,547.74	73,444.15	172.10	126,668.49	58.10	42,762.09	342.97	252,422.46
1470	3000.161	Mineral Insulated Power Cable, 2-hour fire rated, 1/C # 250 kcmil Termination including glands and termination kit	ea	6	12	6.0	641.36	72.5	96.20	1,154.44	7,696.29	1,787.97	21,455.61	129.24	1,550.82	2,654.76	31,857.17	12.0	8.2	745.50	99.0	96.92	1,162.99	8,946.05	236.61	2,839.38	222.84	2,674.11	1,301.88	15,622.52
1470a	Added	Free Issue Connectors to CH0030 Contractor	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	581.0	0.1	6.53	41.97	0.85	493.27	3,794.42	17.08	9,922.35	4.97	2,889.37	29.43	17,099.41
		Teck 90 600 V Control Cable, Class B stranded copper conductors insulated with XLPE type RW90, overall shield with tinned copper drain wire, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket (grey in colour), to CSA C22.2 No.131 and CSA 22.2 No. 239, number of conductors and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1471	3000.162	4C # 14 AWG	m	8800	8,515	0.2	17.10	1370.9	2.57	21,844.64	145,630.91	4.78	40,664.43	3.45	29,344.98	27.89	237,484.95	12,076.0	0.2	22.22	2,967.6	2.89	34,877.17	268,285.95	6.84	82,615.99	6.60	79,683.88	38.54	465,462.99
1472	3000.163	4C # 12 AWG	m	1800	1,610	0.2	19.16	290.3	2.87	4,625.98	30,839.89	5.83	9,378.60	3.86	6,214.31	31.71	51,058.78	1,605.0	0.3	29.51	523.8	3.84	6,156.28	47,355.99	8.66	13,905.43	8.68	13,928.88	50.68	81,346.58
1473	3000.164	4C # 8 AWG	m	2100	1,915	0.2	25.65	462.5	3.85	7,369.20	49,127.98	11.07	21,206.01	5.17	9,899.41	45.75	87,602.60	1,915.0	0.4	37.53	794.9	4.88	9,342.64	71,866.49	15.70	30,062.46	11.98	22,942.04	70.09	134,213.63
1474	3000.165	5C # 16 AWG	m	200	0	0.2	17.10	0.0	2.57	0.00	0.00	5.15	0.00	3.45	0.00	28.27	0.00	181.0	0.2	17.36	34.8	2.26	408.39	3,141.44	7.96	1,440.47	5.68	1,028.28	33.25	6,018.58
1475	3000.166	8C # 14 AWG	m	9800	10,990	0.2	17.79	1840.2	2.67	29,321.84	195,478.92	7.06	77,585.97	3.58	39,389.47	31.10	341,776.19	11,825.0	0.3	28.89	3,779.1	3.76	44,414.82	341,652.46	11.15	131,888.12	9.04	106,845.85	52.84	624,801.25
1476	3000.167	12C # 14 AWG	m	4200	5,115	0.2	20.69	996.5	3.10	15,877.83	105,852.20	9.23	47,219.45	4.17	21,329.47	37.20	190,278.95	4,800.0	0.4	33.11	1,757.8	4.30	20,659.46	158,918.96	14.03	67,348.65	10.61	50,907.32	62.05	297,834.39
1477	3000.168	20C # 14 AWG	m	3500	4,160	0.2	25.31	991.2	3.80	15,794.84	105,298.93	13.67	56,870.53	5.10	21,217.99	47.88	199,182.29	4,140.0	0.4	37.85	1,733.4	4.92	20,372.37	156,710.51	18.11	74,956.80	12.54	51,920.01	73.42	303,959.68
1478	3000.169	30C # 14 AWG	m	700	495	0.2	26.34	122.7	3.95	1,955.63	13,037.51	18.76	9,286.84	5.31	2,627.09	54.36	26,907.08	495.0	0.6	57.79	316.4	7.51	3,718.57	28,604.35	29.82	14,759.52	19.58	9,693.91	114.70	56,776.35
1479	3000.170	40C # 14 AWG	m	400	470	0.3	27.54	121.8	4.13	1,941.26	12,941.74	25.05	11,773.41	5.55	2,607.79	62.26	29,264.20	470.0	0.7	59.65	310.1	7.76	3,644.85	28,037.34	37.95	17,838.68	21.66	10,180.57	127.02	59,701.44
		Teck 90 600 V Control Cable Terminations for the , number of conductors and conductor sizes as follows: (includes Cable Glands, and termination kits)	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1480	3000.171	4C # 14 AWG	ea	208	204	2.9	307.85	591.2	46.18	9,420.26	62,801.72	53.21	10,854.64	62.03	12,654.70	469.27	95,731.32	348.0	3.3	300.99	1,158.6	39.13	13,616.66	104,743.56	22.12	7,698.11	75.19	26,166.10	437.43	152,224.44
1481	3000.172	4C # 12 AWG	ea	112	116	3.1	324.95	354.8	48.74	5,654.21	37,694.72	65.85	7,638.67	65.48	7,595.58	505.03	58,583.17	58.0	3.8	339.15	217.6	44.09	2,557.20	19,670.79	22.12	1,283.02	84.16	4,881.22	489.52	28,392.24
1482	3000.173	4C # 8 AWG	ea	106	106	3.6	386.52	385.7	57.98	6,145.74	40,971.63	63.20	6,698.72	77.89	8,255.88	585.58	62,071.97	54.0	4.4	395.88	236.5	51.46	2,779.06	21,377.37	28.54	1,541.23	98.78	5,334.28	574.67	31,031.94
1483	3000.174	5C # 16 AWG	ea	8	0	3.2	342.06	0.0	51.31	0.00	0.00	61.16	0.00	68.93	0.00	523.46	0.00	8.0	3.4	306.04	27.1	39.78	318.28	2,448.28	23.29	186.31	76.61	612.90	445.72	3,565.76
1484	3000.175	8C # 14 AWG	ea	276	338	5.1	538.74	1714.2	80.81	27,314.13	182,094.22	118.32	39,991.59	108.56	36,692.42	846.43	286,092.36	236.0	5.1	460.15	1,201.2	59.82	14,117.32	108,594.80	33.21	7,837.72	114.83	27,099.31	668.00	157,649.15
1485	3000.176	12C # 14 AWG	ea	98	154	6.9	735.42	1066.1	110.31	16,988.28	113,255.18	134.12	20,655.18	148.19	22,821.19	1,128.05	173,719.83	104.0	6.6	595.33	684.8	77.39	8,048.81	61,913.95	37.88	3,939.52	147.54	15,343.82	858.14	89,246.11
1486	3000.177	20C # 14 AWG	ea	106	142	11.3	1,197.20	1600.3	179.58	25,500.37	170,002.49	213.25	30,281.27	241.24	34,255.91	1,831.27	260,040.04	79.0	10.2	924.27	807.7	120.15	9,492.23	73,017.15	52.09	4,114.83	227.70	17,988.52	1,324.21	104,612.74
1487	3000.178	30C # 14 AWG	ea	26	18	16.1	1,710.29	289.8	256.54	4,617.77	30,785.16	317.94	5,722.91	344.63	6,203.28	2,629.40	47,329.13	9.0	14.5	1,310.55	130.5	170.37	1,533.35	11,794.99	82.26	740.36	324.56	2,921.05	1,887.75	16,989.74
1488	3000.179	40C # 14 AWG	ea	20	28	21.7	2,308.89	608.6	346.33	9,697.33	64,648.83	418.40	11,715.09	465.25	13,026.90	3,538.86	99,088.15	14.0	19.5	1,765.90	273.5	229.57	3,213.94	24,722.61	93.94	1,315.10	433.92	6,074.94	2,523.33	35,326.59
		Armoured Control and Instrumentation Cable (ACIC) 600 V, twisted pairs/triads of stranded tinned copper conductors with PVC insulation, individual and overall shield with tinned copper drain wire, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket (grey in colour), to CSA C22.2 No.131 and CSA 22.2 No. 239, number of pairs/triads and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1489	3000.180	2P # 16 AWG	m	13000	17,271	0.2	17.10	2780.6	2.57	44,307.54	295,383.60	5.37	92,718.03	3.45	59,520.51	28.48	491,929.67	19,545.0	0.2	19.51	4,216.9	2.54	49,560.58	381,235.24	8.40	164,269.20	6.28	122,667.51	36.72	717,732.53
1490	3000.181	4P # 16 AWG	m	1400	915	0.2	17.10	147.3	2.57	2,347.37	15,649.12	7.24	6,622.79	3.45	3,153.34	30.35	27,772.62	915.0	0.2	21.03	212.8	2.73	2,501.51	19,242.40	12.26	11,214.14	7.41	6,779.94	43.43	39,737.99
1491	3000.182	2T # 16 AWG	m	800	880	0.2	17.10	141.7	2.57	2,257.58	15,050.52	6.12	5,386.32	3.45	3,032.72	29.24	25,727.14	880.0	0.2	21.03	204.7	2.73	2,405.45	18,503.49	10.27	9,037.03	7.01	6,167.99	41.04	36,113.97
1492	3000.183	4T # 16 AWG	m	200	0	0.2	17.10	0.0	2.57	0.00	0.00	8.95	0.00	3.45	0.00	32.06	0.00	140.0	0.3	25.19	39.0	3.27	458.49	3,526.86	16.42	2,298.78	9.23	1,291.67	54.11	7,575.80
1493	3000.184	3P # 22 AWG	m	300	0	0.2	17.10	0.0	2.57	0.00	0.00	5.38	0.00	3.45	0.00	28.49	0.00	1.0	0.3	24.96	0.3	3.24	3.24	24.96	7.23	7.23	7.32	7.32	42.75	42.75
1493a	Added	4P # 20 AWG	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.0	0.2	16.65	27.63	2.17	324.76	2,498.18	10.82	1,622.41	6.09	913.74	35.73	5,359.10
1494	3000.185	4P # 18 AWG	m	700	0	0.2	17.10	0.0	2.57	0.00	0.00	6.37	0.00	3.45	0.00	29.49	0.00	1.0	0.3	24.96	0.3	3.24	3.24	24.96	7.23	7.23	7.32	7.32	42.75	42.75
1495	3000.186	6P # 18 AWG	m	100	0	0.2	20.52	0.0	3.08	0.00	0.00	8.22	0.00	4.14	0.00	35.95	0.00	1.0	0.3	22.18	0.3	2.88	2.88	22.18	9.16	9.16	7.06	7.06	41.29	41.29
1495a	Added	18P # 16 AWG	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	830.0	0.2	16.67	153.07	2.17	1,799.00	13,838.44	19.65	16,311.96	7.88	6,536.26	46.37	38,485.66
1495b	Added	12P #14 AWG	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,625.0	0.5	44.91	1,303.93	5.84	15,324.83	117,883.28	33.25	87,289.32	17.25	45,277.89	101.25	265,775.32
		Armoured Control and Instrumentation Cable (ACIC) 600 V Terminations including Glands and Terminations kits, number of pairs/triads and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1496	3000.187	2P # 16 AWG	ea	358	358	2.7	290.75	979.8	43.61	15,613.21	104,088.04	51.97	18,604.32	58.59	20,973.99	444.91	159,279.56	724.0	4.7	428.86	3,434.5	55.75	40,364.64	310,497.24	30.56	22,124.62	106.94	77,425.69	622.12	450,412.20
1497	3000.188	4P # 16 AWG	ea	50	34	4.7	495.98	158.7	74.40	2,529.51	16,863.43	93.94	3,194.02	99.94	3,398.02	764.26	25,984.98	17.0	8.9	800.98	150.6	104.13	1,770.16	13,616.64	49.06	834.06	198.12	3,368.02	1,152.29	19,588.88
1498	3000.189	2T # 16 AWG	ea	32	32	3.7	393.37	118.5	59.00	1,888.16	12,587.71	70.82	2,266.15	79.26	2,536.45	602.45	19,278.47	16.0	6.5	583.13	103.2	75.81	1,212.91	9,330.06	34.92	558.69	144.07	2,305.18	837.93	13,406.84
1499	3000.190	4T # 16 AWG	ea	8	0	6.6	701.22	0.0	105.18	0.00	0.00	131.64	0.00	141.30	0.00	1,079.34	0.00	8.0	9.4	851.39	75.3	110.68	885.44	6,811.08	57.39	459.11	211.64	1,693.14	1,231.10	9,848.77
1500	3000.191	3P # 22 AWG	ea	16	0	3.7	393.37	0.0	59.00	0.00	0.00	70.82	0.00	79.26	0.00	602.45	0.00	1.0	7.1	641.88	7.1	83.44	83.44	641.88	39.63	39.63	158.83	158.83	923.78	923.78
1500a	Added	4P # 20 AWG	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	4.5	404.71	62.67	52.61	736.58	5,665.98	27.96	391.41	100.74	1,410.39	586.03	8,204.35
1501	3000.192	4P # 18 AWG	ea	38	0	4.7	495.98	0.0	74.40	0.00	0.00	89.67	0.00	99.94	0.00	759.99	0.00	1.0	8.8	792.99	8.8	103.09	103.09	792.99	46.40	46.40	195.69	195.69	1,138.17	1,138.17
1502	3000.193	6P # 18 AWG	ea	6	0	6.6	701.22	0.0	105.18	0.00	0.00	131.64	0.00	141.30	0.00	1,079.34	0.00	1.0	12.1	1,096.59	12.1	142.56	142.56	1,096.59	59.36	59.36	269.67	269.67	1,568.17	1,568.17
1502a	Added	8P # 18 AWG	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.0	13.8	1,250.15	636.10	162.52	7,475.88	57,506.78	75.22	3,460.10	308.95	14,211.55	1,796.83	82,654.31
1502b	Added	12P # 14 AWG	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.0	21.3	1,922.68	850.69	249.95	9,997.94	76,907.22	117.75	4,709.96	475.56	19,022.57	2,765.94	110,637.69
1503	3000.194	Armoured CAT6 ethernet cable, 4 twisted pairs of 23 AWG copper conductors with polyolefin insulation, overall shielded, PVC inner jacket, interlocking aluminum armour, and low temperature (-40°C) PVC outer jacket (yellow or blue in colour as applicable to indicate data or telephone cable).	m	15000	8,435	0.2	20.52	1629.6	3.08	25,967.28	173,115.21	8.75	73,820.99	4.14	34,883.13	36.49	307,786.61	8,410.0	0.2	16.67	1,551.0	2.17	18,228.96	140,222.76	66.82	561,986.69	17.37	146,096.83	103.04	866,535.25
1504	3000.195	Armoured CAT6 ethernet cable, 4 twisted pairs of 23 AWG terminations	ea	822	506	2.5	265.09	1262.7	39.76	20,120.67	134,137.78	227.89	115,311.30	53.42	27,029.09	586.16	296,598.83	506.0	3.1	283.16	1,584.8	36.81	18,626.17	143,278.25	27.83	14,083.55	70.09	35,466.18	417.89	211,454.16
1505	3000.196	Low voltage control cable, CSA type LVT, 300 V, 4C 18 AWG copper conductors with PVC insulation, overall shield, unarmoured, PVC outer jacket (grey in colour), to CSA C22.2 No.35.	m	300	0	0.0	2.80	0.0	0.42	0.00	0.00	0.97	0.00	0.57	0.00	4.76	0.00	36.0	0.6	50.02	19.9	6.50	234.11	1,800.85	0.89	32.18	11.94	429.71	69.36	2,496.85
1505a	Added	2C # 22 OS Shielded LVT PVC Outer Jacket 300 V	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	176.0	0.0	3.95	7.68	0.51	90.29	694.56	0.24	41.91	0.98	171.66	5.67	998.42
1505b	Added	4C # 22 OS Shielded LVT PVC Outer Jacket 300 V	m		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.0	0.1	5.13	1.70	0.67	20.00	153.88	0.45	13.59	1.30	38.90	7.55	226.37
1506	3000.197	Low voltage control cable, CSA type LVT, 300 V, 4C 18 AWG terminations	0.00	0	0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	0.7	60.70	9.4	7.89	110.48	849.83	0.00	0.00	14.27	199.72	82.86	1,160.03

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR												Bidder 3 FIXED PRICE TARGET COST OF LABOUR											
					LABOUR COMPONENT						NON LABOUR COMPONENT						LABOUR COMPONENT						NON LABOUR COMPONENT					
					0.15												0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1506a	Added	2C # 22 OS Shielded LVT PVC Outer Jacket 300 V Terminations	ea		0	0.0		-		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.0	0.3	26.50	19.38	3.45	227.80	1,752.34	0.00	0.00	6.24	411.81	36.24	2,391.97
1506b	Added	4C # 22 OS Shielded LVT PVC Outer Jacket 300 V	ea		0	0.0		-		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.0	0.6	53.14	7.05	6.91	82.90	637.72	0.00	0.00	12.49	149.87	72.54	870.50
1507	3000.198	Fibre Optical OM3 multi-mode cable, 50/125 µm core/cladding, 12 x 900 µm tight buffered cables, interlocking steel armour, FT-4 PVC outer jacket (orange in colour).	m	4000	3,600	0.2	25.65	869.4	3.85	13,853.32	92,355.48	15.54	55,952.76	5.17	18,609.85	50.21	180,771.41	3,020.0	0.2	17.61	588.2	2.29	6,913.22	53,178.82	11.00	33,221.23	6.35	19,186.04	37.25	112,499.12
1507a	Added	Armored 12C 9M FO FT-4 PVC outer jacket Orange in colour	m		0	0.0		-		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,570.0	0.2	19.47	553.61	2.53	6,505.45	50,049.92	8.07	20,739.43	6.20	15,937.79	36.28	93,233.33
1508	3000.199	Fibre Optical OM3 multi-mode cable Terminations	ea	36	54	2.0	213.78	108.7	32.07	1,731.67	11,544.43	1,725.52	93,178.10	43.08	2,326.23	2,014.45	108,780.43	42.0	13.6	1,228.50	570.7	159.70	6,707.59	51,596.81	978.84	41,111.10	293.98	12,346.96	2,661.01	111,762.46
1508a	Added	Armored 12C 9M FO FT-4 PVC outer jacket Orange in colour - Terminations	ea		0	0.0		-		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.0	13.6	1,228.51	516.38	159.71	6,068.37	46,683.02	11.61	441.37	291.09	11,060.20	1,690.90	64,254.07
1509	3290.020	Intake MCC Copper Busway assembly (between 3290-MCC-82-A001/B001), low impedance compact type, totally enclosed, sprinkler-proof, 1200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each		1	1	346.2	36,771.16	346.2	5,515.67	5,515.67	36,771.16	60,980.49	60,980.49	7,409.48	7,409.48	110,676.80	110,676.80	1.0	731.7	66,146.45	731.7	8,599.04	8,599.04	66,146.45	61,392.51	61,392.51	27,905.28	27,905.28	164,043.28	164,043.28
1510	3000.200	Copper Busway assembly (between 3433-SWG-82-A002 and 3340-SWG-82-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each		1	1	471.7	50,111.40	471.7	7,516.71	7,516.71	50,111.40	13,831.83	13,831.83	10,097.57	10,097.57	81,557.51	81,557.51	1.0	216.5	19,576.51	216.5	2,544.95	2,544.95	19,576.51	10,757.00	10,757.00	6,766.42	6,766.42	39,644.88	39,644.88
1511	3000.201	Copper Busway assembly (between 3433-SWG-82-B001 and 3340-SWG-82-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each		1	1	471.7	50,111.40	471.7	7,516.71	7,516.71	50,111.40	35,956.95	35,956.95	10,097.57	10,097.57	103,682.43	103,682.43	1.0	426.6	38,567.99	426.6	5,013.84	5,013.84	38,567.99	34,100.80	34,100.80	15,929.42	15,929.42	93,612.05	93,612.05
1512	3000.202	Copper Busway assembly (between 3340-SWG-82-0001 and 3340-T-81-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1800 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each		1	1	471.7	50,111.40	471.7	7,516.71	7,516.71	50,111.40	10,375.35	10,375.35	10,097.57	10,097.57	78,101.03	78,101.03	1.0	130.4	11,792.20	130.4	1,532.99	1,532.99	11,792.20	7,112.92	7,112.92	4,203.35	4,203.35	24,641.46	24,641.46
1513	3433.030	Copper Busway assembly (between 3433-SWG-82-A001/A002), low impedance compact type, totally enclosed, sprinkler-proof, 3200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each		1	1	730.9	77,647.01	730.9	11,647.05	11,647.05	77,647.01	69,739.17	69,739.17	15,646.06	15,646.06	174,679.29	174,679.29	1.0	701.9	63,454.18	701.9	8,249.04	8,249.04	63,454.18	67,820.09	67,820.09	28,566.60	28,566.60	168,089.91	168,089.91
1514	3433.040	Copper Busway assembly (between 3433-SWG-82-B001/B002), low impedance compact type, totally enclosed, sprinkler-proof, 3200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each		1	1	730.9	77,647.01	730.9	11,647.05	11,647.05	77,647.01	72,851.37	72,851.37	15,646.06	15,646.06	177,791.49	177,791.49	1.0	716.9	64,810.02	716.9	8,425.30	8,425.30	64,810.02	71,067.13	71,067.13	29,538.96	29,538.96	173,841.41	173,841.41
1515	3000.203	Fluorescent Light fixture, type F1, Suspended or Ceiling Mounted, fibreglass reinforced polyester housing, enclosed and gasketted polycarbonate lens, suitable for damp or wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	288	285	3.8	401.37	1076.6	60.21	17,158.76	114,391.71	390.67	111,397.98	80.88	23,050.20	933.33	265,998.64	285.0	11.1	999.26	3,150.1	129.80	37,022.74	284,790.32	284.34	81,097.31	292.09	83,244.82	1,705.60	486,095.19
1516	3000.204	Fluorescent Light fixture, type F2, Wall Mounted, fibreglass reinforced polyester housing, enclosed and gasketted polycarbonate lens, suitable for damp or wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	94	79	5.2	556.05	413.5	83.41	6,589.19	43,927.90	419.66	33,153.31	112.05	8,851.58	1,171.16	92,521.98	84.0	12.8	1,155.15	1,073.3	150.17	12,614.25	97,032.72	302.51	25,410.52	332.38	27,919.92	1,940.21	162,977.41
1517	3000.205	Fluorescent Light fixture, type F3, Suspended or Ceiling Mounted, polyester enamel steel housing, one-piece prismatic wrap-around lens, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	48	39	5.5	581.65	213.5	87.25	3,402.63	22,684.21	494.47	19,284.34	117.20	4,570.92	1,280.57	49,942.10	44.0	10.7	966.09	470.2	125.59	5,526.03	42,507.96	320.16	14,086.88	291.50	12,826.04	1,703.34	74,946.91
1518	3000.206	Fluorescent Light fixture, type F4, Wall Mounted, polyester enamel steel housing, one-piece prismatic wrap-around lens, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	91	120	4.5	482.94	545.5	72.44	8,693.84	57,952.25	450.13	54,015.96	97.31	11,677.52	1,102.82	132,338.57	102.0	12.8	1,155.07	1,303.2	150.16	15,316.18	117,816.74	343.50	35,037.31	340.61	34,742.59	1,989.34	202,912.82
1519	3000.207	Fluorescent Light fixture, type F5, Suspended or Ceiling Mounted, industrial striplight with reflector and wireguard, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	218	231	3.9	415.24	903.0	62.29	14,388.09	95,920.61	367.20	84,823.39	83.67	19,328.23	928.40	214,460.33	227.0	15.5	1,403.09	3,523.0	182.40	41,405.08	318,500.98	420.03	95,346.95	414.31	94,044.13	2,419.83	549,300.73
1520	3000.208	Fluorescent Light fixture, type F10, Wall Mounted, industrial striplight with reflector and wireguard, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	33	33	10.1	1,067.93	331.8	160.19	5,286.24	35,241.58	462.30	15,255.91	215.19	7,101.26	1,905.41	62,884.99	33.0	10.9	984.18	359.2	127.94	4,222.11	32,477.80	297.64	9,821.96	291.22	9,610.17	1,700.97	56,132.04
1521	3000.209	Fluorescent Light fixture, type F6, fibreglass reinforced polyester housing, suitable for vapor, dust and wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	30	30	10.7	1,131.96	319.7	169.79	5,093.83	33,958.86	1,568.80	47,063.90	228.09	6,842.79	3,098.65	92,959.39	30.0	15.5	1,403.02	465.6	182.39	5,471.79	42,090.68	1,298.94	38,968.22	591.24	17,737.23	3,475.60	104,267.92
1522	3000.210	Fluorescent Light fixture, type F7, 1220 mm x 610 mm steel housing with 100 mm deep parabolic louver, recessed in T-bar ceiling, 3 x 32 W lamps, premium electronic ballast, 347 V.	ea	34	7	38.9	4,135.67	272.5	620.35	4,342.45	28,949.66	736.29	5,154.02	833.35	5,833.43	6,325.65	44,279.56	34.0	9.5	856.19	322.0	111.30	3,784.35	29,110.38	270.81	9,207.54	255.74	8,695.08	1,494.04	50,797.36
1523	3000.211	Fluorescent Light fixture, type F8, 1220 mm x 610 mm steel housing with 100 mm deep parabolic louver, recessed in T-bar ceiling, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	16	16	13.2	1,398.64	210.7	209.80	3,356.74	22,378.29	343.60	5,497.58	281.83	4,509.28	2,233.87	35,741.89	16.0	9.3	841.34	148.9	109.37	1,749.98	13,461.37	238.02	3,808.31	245.65	3,930.34	1,434.37	22,950.00
1524	3000.212	Fluorescent Light fixture, type F9, 1220 mm x 610 mm steel housing with pattern 19 lens, recessed in T-bar ceiling, 3 x 32 W lamps, premium electronic ballast, 347 V.	ea	22	16	13.2	1,398.64	210.7	209.80	3,356.74	22,378.29	411.70	6,587.23	281.83	4,509.28	2,301.97	36,831.54	16.0	9.5	856.07	151.5	111.29	1,780.62	13,697.05	239.30	3,828.86	249.37	3,989.86	1,456.02	23,296.39
1525	3000.213	Fluorescent Light fixture, type F11, decorative type with acrylic diffuser, wall-mounted, 2 x 13 W quad tube 4-pin lamps, electronic ballast, 120 V.	ea	2	2	41.4	4,397.37	82.8	659.61	1,319.21	8,794.74	1,202.43	2,404.87	886.08	1,772.16	7,145.49	14,290.98	2.0	11.1	1,003.02	22.2	130.39	260.79	2,006.04	376.97	753.95	311.62	623.24	1,822.01	3,644.01
1526	3000.214	Fluorescent Light fixture, type F12, wall-mounted bedlight with pull-chain switch, 1220 mm x 168 mm x 130 mm steel housing with K12 prismatic lens, 3 x 32 W lamps, premium electronic ballast, 120 V.	ea	2	2	82.8	8,794.74	165.6	1,319.21	2,638.42	17,589.49	1,857.54	3,715.09	1,772.16	3,544.32	13,743.66	27,487.32	2.0	11.1	1,003.02	22.2	130.39	260.79	2,006.04	381.02	762.05	312.43	624.86	1,826.87	3,653.74
1527	3000.215	Metal Halide Light fixture, type H2, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 175 W metal halide lamp, HPF ballast, 347 V.	ea	141	108	18.2	1,931.27	1963.5	289.69	31,286.68	208,577.50	1,057.55	114,215.92	389.16	42,028.87	3,667.68	396,108.92	142.0	16.8	1,523.04	2,392.1	198.00	28,115.34	216,371.84	409.03	58,082.87	440.29	62,520.65	2,570.36	364,990.70
1528	3000.216	LED Low Bay Light fixture, type L1, cast aluminum housing, suspended from open ceiling, 220 W LED array and driver, 347 V.	ea	122	117	6.9	729.82	803.8	109.47	12,808.37	85,389.12	2,196.75	257,253.28	147.06	17,206.11	3,185.10	372,656.88	132.0	14.1	1,271.45	1,856.4	165.29	21,818.13	167,831.74	1,829.88	241,544.54	667.21	88,072.07	3,933.84	519,266.47
1529	3000.217	LED Low Bay Light fixture, type L2, cast aluminum housing, suspended from ceiling, 143 W LED array and driver, 347 V., Medium Optic	ea	136	136	6.6	699.54	895.6	104.93	14,270.66	95,137.75	1,605.46	218,342.39	140.96	19,170.49	2,550.89	346,921.29	137.0	14.1	1,271.53	1,926.9	165.30	22,645.89	174,199.19	1,628.46	223,098.90	626.68	85,854.94	3,691.96	505,798.92
1530	3000.218	LED Low Bay Light fixture, type L3, cast aluminum housing, suspended from ceiling, 110 W LED array and driver, 347 V., Medium Optic	ea	24	24	14.8	1,569.67	354.6	235.45	5,650.82	37,672.12	1,946.06	46,705.45	316.29	7,591.02	4,067.48	97,619.41	24.0	14.1	1,271.45	337.5	165.29	3,966.92	30,514.76	1,628.46	39,083.02	626.68	15,039.83	3,691.85	88,604.51
1531	3000.219	LED Low Bay Light fixture, type L4, cast aluminum housing, suspended from ceiling, 110 W LED array and driver, 347 V., Aisle Optic	ea	1	1	243.5	25,871.14	243.5	3,880.67	3,880.67	25,871.14	11,458.57	11,458.57	5,213.10	5,213.10	46,423.49	46,423.49	1.0	14.0	1,265.73	14.0	164.54	164.54	1,265.73	1,516.61	1,516.61	602.80	602.80	3,549.69	3,549.69
1532	3000.220	LED Low Bay Light fixture, type L5, cast aluminum housing, suspended from ceiling, 143 W LED array and driver, 347 V., Wide Optic	ea	17	17	18.9	2,004.74	320.8	300.71	5,112.08	34,080.52	2,116.36	35,978.14	403.96	6,867.31	4,825.77	82,038.04	17.0	14.1	1,271.60	239.1	165.31	2,810.24	21,617.20	1,628.46	27,683.80	626.70	10,653.83	3,692.06	62,765.08
1533	3000.221	LED Light fixture, type L6, 610 mm x 610 mm housing recessed in T-bar ceiling, opalescent lens, 60 W LED array and driver, 347 V.	ea	64	62	5.8	614.72	358.8	92.21	5,716.94	38,112.93	642.15	39,813.56	123.87	7,679.85	1,472.96	91,323.27	65.0	10.0	906.85	651.9	117.86	7,661.15	58,931.94	290.59	18,888.28	271.58	17,652.57	1,586.68	103,133.95
1534	3000.222	LED Light fixture, type L7, mounting yoke for surface mounting and adjustable aiming, 44 W LED array and driver, 347 V, 40 degree beam angle	ea	57	57	6.0	638.64	342.7	95.80	5,460.40	36,402.66	642.98	36,649.74	128.69	7,335.22	1,506.11	85,847.99	57.0	13.4	1,209.33	762.5	157.21	8,961.11	68,931.61	521.94	29,750.50	389.29	22,189.49	2,277.77	129,832.71
1535	3000.223	LED Light fixture, type L8, mounting yoke for surface mounting and adjustable aiming, 44 W LED array and driver, 347 V, 20 degree beam angle	ea	20	20	11.2	1,187.33	223.5	178.10	3,561.98	23,746.52	1,017.40	20,348.02	239.25	4,784.98	2,622.07	52,441.49	20.0	15.3	1,379.27	305.1	179.31	3,586.10	27,585.40	547.50	10,949.97	434.37	8,687.49	2,540.45	50,808.95
1536	3000.224	LED Light fixture, type L9, square housing recessed in ceiling, 150 mm aperature with clear reflector, 30 W LED array and driver, 1500 lumen, 347 V.	ea	48	48	6.5	694.25	313.7	104.14	4,998.62	33,324.12	642.75	30,852.24	139.89	6,714.89	1,581.04	75,889.87	48.0	9.0	810.37	430.3	105.35	5,056.73	38,897.96	575.34	27,616.54	306.28	14,701.52	1,797.35	86,272.79
1537	3000.225	LED Light fixture, type L10, wet location housing recessed in ceiling, fresnel lens, 19 W LED array and driver, 900 lumen, 120 V.	ea	2	2	82.8	8,794.74	165.6	1,319.21	2,638.42	17,589.49	1,706.69	3,413.37	1,772.16	3,544.32	13,592.80	27,185.61	2.0	9.0	811.70	18.0	105.52	211.04	1,623.40	301.76	603.51	251.51	503.03	1,470.49	2,940.98
1538	3000.226	High Pressure Sodium Light fixture, type W2, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 250 W high pressure sodium lamp, HPF ballast, 347 V.	ea	9	9	26.1	2,775.54	235.2	416.33	3,746.98	24,979.86	741.68	6,675.08	559.28	5,033.50	4,492.82	40,435.42	0.0	15.1	1,365.55	0.0	177.52	0.00	0.00	416.79	0.00	404.83	0.00	2,364.69	0.00
1539	3000.227	High Pressure Sodium Light fixture, type W4, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 150 W high pressure sodium lamp, HPF ballast, 347 V.	ea	14	34	7.9	839.27	268.6	125.89	4,280.30	28,535.32	391.26	13,302.68	169.12	5,749.94	1,525.54	51,868.23	5.0	14.3	1,292.35	71.5	168.01	840.03	6,461.74	348.91	1,744.54	373.96	1,869.81	2,183.22	10,916.12
1540	3000.228	High Pressure Sodium Light fixture, type W5, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 100 W high pressure sodium lamp, HPF ballast, 347 V.	ea	29	56	4.5	482.95	254.6	72.44	4,056.82	27,045.44	338.83	18,974.49	97.32	5,449.72	991.54	55,526.46	0.0	14.1	1,271.27	0.0	165.27	0.00	0.00	323.40	0.00	363.87	0.00	2,123.80	0.00
1541	3000.229	High Pressure Sodium Light fixture, type W6, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 70 W high pressure sodium lamp, HPF ballast, 347 V.	ea	1	6	14.9	1,579.81	89.2	236.97	1,421.83	9,478.86	641.37	3,848.20	318.34	1,910.01	2,776.48	16,658.90	0.0	14.1	1,271.27	0.0	165.27	0.00	0.00	300.05	0.00	359.18	0.00	2,095.76	0.00
1542	3000.230	High Pressure Sodium Light fixture, type P3, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, mounting yoke for pole-mounting, 400 W high pressure sodium lamp, HPF ballast, 347 V, complete with 7620 mm aluminum pole.	ea	7	4	92.5	9,820.92	369.8	1,473.14	5,892.55	39,283.66	5,194.87	20,779.48	1,978.94	7,915.75	18,467.86	73,871.44	4.0	18.5	1,672.97	74.0	217.49	869.94	6,691.86	1,358.41	5,433.65	666.66	2,666.63	3,915.52	15,662.08
1543	3000.231	Exit Sign, fixture type X, LED with "Running-Man" pictogram, universal mounting, with charging system and self-powered Ni-Cad battery for minimum 90 minutes of operation, 347 V input.	ea	82	116	3.4	365.84	399.5	54.88	6,365.70	42,438.02	438.19	50,830.39	73.72	8,551.36	932.63	108,185.47	125.0	13.1	1,187.88	1,642.4	154.42	19,303.10	148,485.35	316.04	39,504.54	342.80	42,849.53	2,001.14	250,142.52
1544	3000.232	Light Switch, single pole, 15 Amp, 347 Volt	ea	84	84	0.4	42.76	33.8	6.41	538.74	3,591.60	28.18	2,367.46	8.62	723.72	85.97	7,221.52	70.0	5.6	504.59	390.7	65.60	4,591.75	35,321.18	43.47	3,042.62	127.34	8,913.55	740.99	51,869.11
1545	3000.233	Light Switch, three-way, 15 Amp, 347 Volt	ea	12	12	0.8	85.51	9.7	12.83	153.93	1,026.17	32.43	389.14	17.23	206.78	148.00	1,776.01	6.0	9.9	894.19	59.4	116.24	697.47	5,395.14	140.65	843.91	238.46	1,430.78	1,369.55	8,217.30
1546	3000.234	Light Switch, maintained contact pushbutton ON-OFF, 15 Amp, 347 Volt	ea	8	8	1.6	171.03	12.9	25.65	205.23	1,368.23	639.42	5,115.33	34.46	275.70	870.56	6,964.49	26.0	9.5	861.93	247.9	112.05	2,911.32	22,410.19	114.99	2,989.79	225.72	5,868.65	1,314.69	34,181.96
1547	3000.235	Dimming Light Switch, for use with electronic fluorescent dimming ballasts, 15 Amp, 347 Volt	ea	7	7	0.8	85.51	5.6	12.83	89.79	598.60	281.52	1,970.63	17.23	120.62	397.09	2,779.64	7.0	3.3	294.50	22.8	38.28	267.99	2,061.48	16.82	117.73	72.60	508.19	422.20	2,955.39
1548	3000.236	Lighting Control Panel, complete with control transformer, 12-pole mechanically held lighting contactor, ON/OFF pushbuttons and indicating lights, NEMA 12 enclosure.	ea	6	6	6.4	684.11	38.6	102.62	615.70	4,104.69	7,076.67	42,460.02	137.85	827.10	8,001.25	48,007.52	12.0	19.3	1,748.38	232.2	227.37	2,728.41	20,987.80	5,349.11	64,189.32	1,487.95	17,855.40	8,819.41	105,760.93
1549	3000.237	Aluminum Light poles including luminaire and mounting brackets	ea	4	4	6.4	684.11	25.6	102.62	410.47	2,736.46	1,316.09	5,264.36	137.85	551.40	2,240.67	8,962.69	0.0	18.5	1,672.97	0.0	217.49	0.00	0.00	1,358.41	0.00	666.66	0.00	3,915.52	0.00
1550	3000.238	Lighting Relay Panel, complete with control transformer, 24-pole electronic relay scanner, (Qty. 24) output control relays, NEMA 12 enclosure.	ea	7	7	6.4	684.11	45.1	102.62	718.32	4,788.80	22,592.34	158,146.41	137.85	964.96	23,516.93	164,618.49	4.0	21.9	1,977.62	87.5	257.09	1,028.36	7,910.46	4,551.37	18,205.48	1,381.08	5,524.31	8,167.15	32,668.61
1551	3000.239	Lighting Contactor, 600 Volts, three-pole, 100 Amp, complete with control relay and undervoltage relay timer, NEMA 12 enclosure.	ea	5	5	12.9	1,368.23	64.6	205.23	1,026.17	6,841.15	9,218.53	46,092.66	275.70	1,378.51	11,067.70	55,338.48	4.0	20.7	1,870.87	82.8	243.21	972.85	7,483.46	4,011.48	16,045.91	1,247.29	4,989.18	7,372.85	29,491.40
1552	3000.240	Occupancy Sensor, for use with electronic lighting control system.	ea	4	4	3.2	342.06	12.9	51.31	205.23	1,368.23	24.83	99.33	68.93	275.70	487.12	1,948.49	4.0	4.1	374.31	16.6	48.66	194.64	1,497.25	74.88	299.50	103.05	412.19	600.90	2,403.58
1553	3000.241	Power Connection Junction Box for lighting and receptacle distribution, complete with terminal mounting rail, terminal blocks rated 600 Volts, conductor size range from 8 AWG to 14 AWG, jumpers, barriers, end blocks, etc. as required.	ea	80	80	4.0	427.57	322.0	64.14	5,130.86	34,205.79	442.04	35,363.58	86.16	6,892.54	1,019.91	81,592.71	225.0	6.5	587.85	1,463.0	76.42	17,194.65	132,266.56	167.08	37,592.17	171.79	38,652.86	1,003.14	225,706.24
1554	3000.242	Convenience Receptacle, 20 A, 120 V, duplex, CSA type 5-20R, complete with surface mounted type FD cast outlet box and sheet steel cover.	ea	303	303	4.3	455.78	1300.0	68.37	20,715.07	138,100.47	114.28	34,628.34	91.84	27,827.58	730.27	221,271.46	287.0	6.9	623.50	1,979.3	81.05	23,262.82	178,943.25	57.02	16,364.19	158.01	45,348.83	919.58	263,918.89
1555	3000.243	GFI Receptacle, 20 A, 120 V, duplex, CSA type 5-20R, complete with surface mounted type FD cast outlet box and single-lift weatherproof cover.	ea	144	144	8.3	885.71	1200.6	132.86	19,131.44	127,542.95	260.86	37,564.07	178.47	25,700.21	1,457.91	209,938.68	146.0	9.5	861.47	1,391.2	111.99	16,350.66	125,774.33	97.74	14,269.48	222.13	32,431.64	1,293.33	188,826.11
1556	3000.244	Grounding conductor, Bare Soft Drawn Copper, size 2/0 AWG	m	2340	2,420	0.1	11.29	257.1	1.69	4,097.50	27,316.70	9.26	22,398.24	2.27	5,504.38	59,316.82	1,002.0	0.5	47.55	527.0	6.18	6,193.41	47,641.58	9.10	9,119.31	13.01	13,032.44	75.84	75,986.73
1557	3000.245	Grounding conductor, Bare Soft Drawn Copper, size 4/0 AWG	m	3985	2,985	0.1	14.25	400.5	2.14	6,382.02	42,546.80	14.49	43,261.81	2.87	8,573.28	33.76	100,763.92	3,089.0	0.2	22.23	759.6	2.89	8,927.05	68,669.59	14.04	43,371.23	8.05	24,870.12	47.21	145,837.98

COMMERCIAL BID TABULATION
BIDDER MATERIAL TAKE OFF

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR													
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1558	3000.246	Grounding conductor, Bare Soft Drawn Copper, size 500 kcmil	m	1600	1,600	0.2	22.40	337.5	3.36	5,377.14	35,847.61	33.66	53,856.84	4.51	7,223.38	63.94	102,304.97	1,128.0	0.5	44.10	550.3	5.73	6,467.35	49,748.82	32.15	36,259.67	16.84	18,991.72	98.82	111,467.55
1559	3000.247	Detail 36 - Ground Connection to small equipment ground bar (panelboard, control cabinet, etc.)	ea	71	71	0.8	85.51	57.2	12.83	910.73	6,071.52	21.81	1,548.84	17.23	1,223.43	137.39	9,754.52	78.0	4.8	432.40	373.1	56.21	4,384.49	33,726.88	75.54	5,892.39	116.83	9,112.61	680.98	53,116.37
1560	3000.248	Detail 37 - Bonding to outside of equipment enclosure (swtich, power outlet, etc.)	ea	279	279	0.4	42.76	112.3	6.41	1,789.39	11,929.25	17.01	4,746.36	8.62	2,403.77	74.80	20,868.77	1,768.0	0.7	64.65	1,264.3	8.40	14,859.49	114,303.74	11.09	19,611.56	17.43	30,811.37	101.58	179,586.16
1561	3000.249	Detail 41 - System grounding for small distribution transformer	ea	19	19	0.4	42.76	7.6	6.41	121.86	812.39	9.37	178.11	8.62	163.70	67.16	1,276.05	20.0	4.1	366.62	81.1	47.66	953.21	7,332.35	73.21	1,464.12	100.90	2,017.97	588.38	11,767.65
1562	3000.250	Detail 43 - Ground Connection to large equipment ground bar (switchgear MCC, etc. - similar to Detail 36)	ea	48	48	1.3	142.52	64.4	21.38	1,026.17	6,841.15	482.79	23,173.99	28.72	1,378.51	675.41	32,419.81	50.0	5.7	517.83	286.4	67.32	3,365.87	25,891.29	120.07	6,003.58	145.87	7,293.52	851.09	42,554.26
1563	3000.251	Detail 45 - Connection for power transformer grounding (similar to Detail 46)	ea	10	10	1.0	102.62	9.7	15.39	153.93	1,026.17	69.01	690.10	20.68	206.78	207.70	2,076.97	13.0	2.7	243.25	35.0	31.62	411.09	3,162.24	113.24	1,472.10	79.97	1,039.55	468.08	6,084.98
1564	3000.252	Detail 46 - 1/C bonding to metal surface (i.e. cable tray, etc.)	ea	77	77	1.0	111.50	80.8	16.73	1,287.85	8,585.64	44.68	3,440.23	22.47	1,730.03	195.37	15,043.75	105.0	0.3	30.37	35.3	3.95	414.52	3,188.56	39.69	4,167.39	15.13	1,588.37	89.13	9,358.85
1565	3000.253	Detail 47 - 2/C bonding to metal surface (i.e. cable tray, etc.)	ea	222	222	1.0	102.62	214.5	15.39	3,417.15	22,781.02	39.37	8,740.08	20.68	4,590.43	178.06	39,528.68	197.0	0.3	30.37	66.2	3.95	777.67	5,982.06	57.20	11,268.29	18.65	3,674.47	110.16	21,702.48
1566	3000.254	Detail 48 - Compression type cable splice connector	ea	439	439	0.8	85.51	353.4	12.83	5,631.12	37,540.79	21.31	9,356.46	17.23	7,564.56	136.89	60,092.93	468.0	0.3	27.75	143.7	3.61	1,688.34	12,987.23	15.45	7,232.11	9.63	4,508.20	56.44	26,415.88
1567	3000.255	Detail 54 - Connection to small motor disconnect switch (similar to Detail 37)	ea	77	77	1.6	171.03	124.0	25.65	1,975.38	13,169.21	33.79	2,601.92	34.46	2,653.63	264.94	20,400.14	84.0	2.9	261.39	242.9	33.98	2,854.39	21,956.85	65.16	5,473.30	74.55	6,262.10	435.08	36,546.64
1568	3000.256	Detail 55 - Connection to large motor disconnect switch and motor frame	ea	25	25	2.4	256.54	60.4	38.48	962.04	6,413.57	52.88	1,322.03	51.69	1,292.35	399.60	9,990.00	15.0	5.0	451.85	75.0	58.74	881.12	6,777.81	117.88	1,768.22	129.93	1,948.88	758.40	11,376.02
1569a	Added	Grounding of Misc Mechanical Equipment & Fixed Steel Objects	ea		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	507.0	4.7	422.51	2,369.45	54.93	27,847.53	214,211.75	165.63	83,974.00	132.64	67,249.04	775.70	393,282.31
1569	3000.257	Fire Detection System	LS	0	1	5031.3	534,464.57	5031.3	80,169.68	80,169.68	534,464.57	316,715.61	316,715.61	107,695.90	107,695.90	1,039,045.75	1,039,045.75	1.0	8940.4	808,265.47	8,940.4	105,074.51	105,074.51	808,265.47	296,761.15	296,761.15	200,797.73	200,797.73	1,410,898.86	1,410,898.86
1570	3000.258	Shielded twisted pair cable, interlocking armour and overall PVC jacket, CSA type FAS 105, stranded copper conductors, 16 AWG, one (1) pair	m	5000	5,000	0.2	17.10	805.0	2.57	12,827.15	85,514.33	4.23	21,142.11	3.45	17,231.34	27.34	136,714.94	11,407.0	0.2	13.69	1,727.8	1.78	20,306.76	156,205.88	3.37	38,445.02	3.90	44,450.65	22.74	259,408.32
1571	3000.259	Shielded twisted pair cable, interlocking armour and overall PVC jacket, CSA type FAS 105, stranded copper conductors, 14 AWG, one (1) pair	m	5000	5,000	0.1	12.83	603.8	1.92	9,620.36	64,135.75	4.35	21,756.08	2.58	12,923.51	21.69	108,435.70	5,054.0	0.2	18.67	1,043.8	2.43	12,267.68	94,366.79	3.37	17,031.89	5.07	25,606.54	29.54	149,272.90
1572	3000.260	Telecom System	LS	0	1	2727.3	289,722.55	2727.3	43,458.38	43,458.38	289,722.55	312,224.31	312,224.31	58,379.79	58,379.79	703,785.04	703,785.04	1.0	1133.1	102,440.84	1,133.1	13,317.31	13,317.31	102,440.84	234,810.30	234,810.30	71,348.47	71,348.47	421,916.92	421,916.92
1573	3000.261	Plant Security and Access Control System	LS	0	1	1125.4	119,549.03	1125.4	17,932.36	17,932.36	119,549.03	47,490.24	47,490.24	24,089.42	24,089.42	209,061.05	209,061.05	1.0	17.5	1,579.04	17.5	205.28	205.28	1,579.04	378.16	378.16	447.24	447.24	2,609.71	2,609.71
1574	3000.262	Water Tight seal around cables running thru Roof metal Sleeves	LS	0	1	161.0	17,102.87	161.0	2,565.43	2,565.43	17,102.87	12,641.62	12,641.62	3,446.27	3,446.27	35,756.19	35,756.19	1.0	75.6	6,830.50	75.6	887.97	887.97	6,830.50	2,626.50	2,626.50	2,134.05	2,134.05	12,479.02	12,479.02
1575	3310.040	Electrical Shaft Platforms/Staging	LS	0	1	128.8	13,682.29	128.8	2,052.34	2,052.34	13,682.29	3,843.30	3,843.30	2,757.01	2,757.01	22,334.95	22,334.95	1.0	1105.8	99,974.53	1,105.8	12,996.69	12,996.69	99,974.53	38,743.86	38,743.86	31,295.63	31,295.63	183,010.71	183,010.71
1575a	Added	House Keeping Pads For Electrical Equipment	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	6423.4	580,710.19	6,423.37	75,492.32	75,492.32	580,710.19	24,864.24	24,864.24	141,481.25	141,481.25	822,548.01	822,548.01
1575b	Added	Removal of Temp Construction Power to OH Crane, Elevator & Elec Panels	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	209.9	18,972.07	209.85	2,466.37	2,466.37	18,972.07	1,751.00	1,751.00	4,811.24	4,811.24	28,000.69	28,000.69
1575c	Added	Removal of Temp Construction Power to Spillway E House	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	251.8	22,766.48	251.83	2,959.64	2,959.64	22,766.48	0.00	0.00	5,350.46	5,350.46	31,076.58	31,076.58
1575d	Added	Removal of Temp 125 V DC System in Spillway E House	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	209.9	18,972.07	209.85	2,466.37	2,466.37	18,972.07	0.00	0.00	4,458.72	4,458.72	25,897.16	25,897.16
1575e	Added	Trenching from Pit # 3 to Control Building	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.00	0.00	0.00	0.00	153,722.86	153,722.86	464.47	464.47	154,187.33	154,187.33
1575f	Added	Design & Supply of ATS & Load Management System	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.00	0.00	0.00	0.00	870,029.66	870,029.66	2,628.77	2,628.77	872,658.43	872,658.43
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST06		SUB-TOTAL ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	$ -					149633.3		$2,384,309.67	$15,895,397.79		$19,064,364.64		$3,202,960.96		$40,547,033.06				204104.0		$2,398,785.40	$18,452,195.35		$18,674,166.51		$7,835,114.57		$47,360,261.83
		0	$ -																											
		ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	0																											
1576	3460.010	Generator Step Up Transformer Unit 1 - Installation, Assembly	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1577	3460.020	Generator Step Up Transformer Unit 2 - Installation, Assembly	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1578	3460.030	Generator Step Up Transformer Unit 3 - Installation, Assembly	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1579	3460.040	Generator Step Up Transformer Unit 4 - Installation, Assembly	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1580	3436.010	Installation, Assembly of Unit 1 IPB	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1581	3436.020	Installation, Assembly of Unit 2 IPB	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1582	3436.030	Installation, Assembly of Unit 3 IPB	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1583	3436.040	Installation, Assembly of Unit 4 IPB	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1584	3438.010	Unit 1 Generator Circuit Breaker - Installation, Assembly	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1585	3438.020	Unit 2 Generator Circuit Breaker - Installation, Assembly	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1586	3438.030	Unit 3 Generator Circuit Breaker - Installation, Assembly	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1587	3438.040	Unit 4 Generator Circuit Breaker - Installation, Assembly	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
B&M-0346	Added	Spare Generator Step Up Transformer as per technical spec.sect.48 01 10 paragraph 3.2.7	LS		1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	671.5	60,710.61	671.53	7,892.38	7,892.38	60,710.61	115,799.67	115,799.67	14,617.77	14,617.77	199,020.43	199,020.43
1587a	Added	Generator Circuit Breaker House Keeping pads	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	1228.1	111,027.83	1,228.10	14,433.62	14,433.62	111,027.83	5,267.02	5,267.02	27,153.56	27,153.56	157,882.03	157,882.03
ST07		SUB-TOTAL ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	$ -					25116.0		$400,207.07	$2,668,047.12		$915,313.12		$537,617.92		$4,521,185.23				50089.5		$588,690.01	$4,528,384.72		$641,464.81		$1,078,562.58		$6,837,102.12
		0	$ -																											
		ARCHITECTURAL		0																										
		POWERHOUSE ARCHITECTURAL - SUPPLY & INSTALL	0																											
1588	3320.010	Concrete Unit Masonry wall Type B2a Height = full height	m2	1600	1,600	5.6	552.48	8960.0	82.87	132,595.20	883,968.00	64.35	102,964.80	6.27	10,032.00	705.98	1,129,560.00	1,788.0	9.4	845.47	16,721.2	109.91	196,520.28	1,511,694.49	50.00	89,399.80	208.76	373,268.95	1,214.14	2,170,883.52
1589	3320.020	Concrete Unit Masonry wall Type B2b height = 2.8m	m2	440	440	5.6	552.48	2464.0	82.87	36,463.68	243,091.20	64.35	28,315.32	6.27	2,758.80	705.98	310,629.00	425.0	10.8	976.08	4,588.6	126.89	53,928.50	414,834.58	69.40	29,496.49	243.37	103,430.64	1,415.74	601,690.21
1590	3320.030	Concrete Unit Masonry wall Type B2c height = 4.5m	m2	75	75	5.6	552.48	420.0	82.87	6,215.40	41,436.00	64.35	4,826.48	6.27	470.25	705.98	52,948.13	68.0	11.5	1,039.00	781.5	135.07	9,184.77	70,652.06	73.95	5,028.53	259.07	17,616.64	1,507.09	102,482.00
1591	3320.040	Concrete Unit Masonry wall Type B2d height = 5.2m	m2	200	185	5.6	552.48	1036.0	82.87	15,331.32	102,208.80	64.35	11,905.31	6.27	1,159.95	705.98	130,605.38	326.0	6.0	541.00	1,950.8	70.33	22,927.41	176,364.66	39.18	12,771.38	135.03	44,019.51	785.53	256,082.96
1592	3320.050	Concrete Unit Masonry wall Type B2e height = 3.0m	m2	40	36	5.6	552.48	201.6	82.87	2,983.39	19,889.28	64.35	2,316.71	6.27	225.72	705.98	25,415.10	37.0	10.2	918.09	375.7	119.35	4,416.04	33,969.50	133.02	4,921.78	242.55	8,974.22	1,413.01	52,281.53
1593	3320.060	Concrete Unit Masonry wall Type B2f height = 5.0m	m2	150	150	5.6	552.48	840.0	82.87	12,430.80	82,872.00	64.35	9,652.95	6.27	940.50	705.98	105,896.25	134.0	11.7	1,054.31	1,562.7	137.06	18,366.11	141,277.78	75.02	10,052.44	262.88	35,226.18	1,529.27	204,922.51
1594	3320.070	Concrete Unit Masonry wall Type B3a Height =3.0m	m2	35	35	5.6	552.48	196.0	82.87	2,900.52	19,336.80	64.35	2,252.36	6.27	219.45	705.98	24,709.13	14.0	25.9	2,338.36	362.1	303.99	4,255.81	32,737.03	164.68	2,305.48	582.70	8,157.84	3,389.73	47,456.16
1595	3320.080	Concrete Unit Masonry wall Type B4a height = 2.8m	m2	60	60	5.6	552.48	336.0	82.87	4,972.32	33,148.80	83.94	5,036.29	8.11	486.32	727.40	43,643.74	63.0	9.9	898.99	626.5	116.87	7,362.70	56,636.15	64.17	4,042.81	224.19	14,124.26	1,304.22	82,165.92
1596	3320.090	Concrete Unit Masonry wall Type B4b height = full height	m2	65	55	5.6	552.48	308.0	82.87	4,557.96	30,386.40	83.94	4,616.60	8.11	445.80	727.40	40,006.76	55.0	10.3	930.06	565.8	120.91	6,649.91	51,153.18	17.08	939.27	222.02	12,210.85	1,290.06	70,953.22
1597	3320.100	Partition Wall W1a height = 6.5m	m2	1005	1,000	5.4	529.20	5400.0	79.38	79,380.00	529,200.00	55.96	55,962.60	6.61	6,612.00	671.15	671,154.60	933.0	10.7	968.03	9,990.2	125.84	117,412.84	903,175.71	60.24	56,202.19	239.63	223,574.53	1,393.75	1,300,365.27
1598	3320.110	Partition Wall W1b height = 4.5m	m2	2265	2,265	5.4	529.20	12231.0	79.38	179,795.70	1,198,638.00	55.96	126,755.29	6.61	14,976.18	671.15	1,520,165.17	3,478.0	6.6	593.36	22,827.1	77.14	268,281.79	2,063,706.06	41.02	142,663.26	147.71	513,723.10	859.22	2,988,374.20
1599	3320.120	Partition WallW1c height = 4.5m	m2	30	30	5.4	529.20	162.0	79.38	2,381.40	15,876.00	55.96	1,678.88	6.61	198.36	671.15	20,134.64	16.0	18.6	1,683.54	298.0	218.86	3,501.76	26,936.60	107.75	1,723.96	417.35	6,677.57	2,427.49	38,839.88
1600	3320.130	Partition Wall W2a height = 3.2m	m2	15	15	5.4	529.20	81.0	79.38	1,190.70	7,938.00	55.96	839.44	6.61	99.18	671.15	10,067.32	0.0	147.8	13,362.93	0.0	1,737.18	0.00	0.00	3,007.06	0.00	3,745.89	0.00	21,853.05	0.00
1601	3320.140	Partition Wall W2b height = 4.5m	m2	1060	1,060	5.4	529.20	5724.0	79.38	84,142.80	560,952.00	55.96	59,320.36	6.61	7,008.72	671.15	711,423.88	990.0	10.7	967.05	10,589.8	125.72	124,459.43	957,380.22	67.71	67,032.04	240.90	238,493.71	1,401.38	1,387,365.40
1602	3320.150	Partition Wall W2c height = 5.45m	m2	45	45	5.4	529.20	243.0	79.38	3,572.10	23,814.00	55.96	2,518.32	6.61	297.54	671.15	30,201.96	42.0	10.7	967.70	449.6	125.80	5,283.63	40,643.33	88.09	3,699.86	245.16	10,296.66	1,426.75	59,923.48
1603	3320.160	Partition Wall W3a height = 4.5m	m2	225	210	5.4	529.20	1134.0	79.38	16,669.80	111,132.00	55.96	11,752.15	6.61	1,388.52	671.15	140,942.47	265.0	8.0	719.17	2,108.0	93.49	24,775.24	190,578.80	61.32	16,250.04	181.36	48,060.38	1,055.34	279,664.47
1604	3320.170	Partition Wall W4a height = 4.5m	m2	70	70	5.4	529.20	378.0	79.38	5,556.60	37,044.00	55.96	3,917.38	6.61	462.84	671.15	46,980.82	50.0	13.9	1,260.41	697.1	163.85	8,192.63	63,020.25	146.62	7,331.11	325.73	16,286.63	1,896.61	94,830.62
1605	3320.180	Partition Wall W5a height = 4.5m	m2	15	18	5.4	529.20	97.2	79.38	1,428.84	9,525.60	55.96	1,007.33	6.61	119.02	671.15	12,080.78	22.0	8.2	742.07	180.6	96.47	2,122.32	16,325.54	62.78	1,381.05	187.04	4,114.78	1,088.35	23,943.69
1606	3320.190	Partition Wall W6a height = 3.2m	m2	70	70	5.4	529.20	378.0	79.38	5,556.60	37,044.00	48.96	3,427.41	5.95	416.56	663.49	46,444.57	69.0	10.1	916.97	699.9	119.21	8,225.25	63,271.18	57.54	3,969.92	227.09	15,668.90	1,320.80	91,135.25
1607	3320.200	Shaft Wall W7a height = 3.2m	m2	230	150	5.4	529.20	810.0	79.38	11,907.00	79,380.00	76.95	11,542.50	8.60	1,289.34	694.13	104,118.84	128.0	11.7	1,057.18	1,496.8	137.43	17,591.51	135,319.28	54.62	6,991.60	259.45	33,209.61	1,508.69	193,112.00
1608	3320.210	Shaft Wall W8a = 1.520 mm	m2	230	230	5.4	529.20	1242.0	79.38	18,257.40	121,716.00	76.95	17,698.50	8.60	1,976.99	694.13	159,648.89	337.0	6.9	621.20	2,315.6	80.76	27,214.94	209,345.69	17.01	5,730.85	149.42	50,353.08	868.38	292,644.56
1609	3320.220	Shaft Wall W9a	m2	960	1,000	5.4	529.20	5400.0	79.38	79,380.00	529,200.00	69.95	69,950.40	7.93	7,934.40	686.46	686,464.80	1,171.0	8.6	773.97	10,025.0	100.62	117,821.23	906,317.15	53.22	62,316.97	192.61	225,543.88	1,120.41	1,311,999.24
1610	3320.230	Shaft Wall W9b	m2	10	10	5.4	529.20	54.0	79.38	793.80	5,292.00	69.95	699.50	7.93	79.34	686.46	6,864.65	0.0	98.5	8,908.62	0.0	1,158.12	0.00	0.00	745.96	0.00	2,243.83	0.00	13,056.53	0.00
1611	3320.240	Shaft Partition Wall W10a height = 4.5m	m2	150	143	5.4	529.20	772.2	79.38	11,351.34	75,675.60	125.91	18,005.56	13.20	1,887.77	747.69	106,920.27	57.0	24.9	2,248.18	1,417.5	292.26	16,659.03	128,146.36	312.83	17,831.07	591.34	33,706.14	3,444.61	196,342.60
1612	3320.250	Shaft Partition Wall W10b height = full height	m2	70	70	5.4	529.20	378.0	79.38	5,556.60	37,044.00	69.95	4,896.53	7.93	555.41	686.46	48,052.54	66.0	10.6	958.05	699.4	124.55	8,220.03	63,230.97	43.27	2,855.85	233.87	15,435.16	1,359.73	89,742.01
1613	3320.260	Partition Wall W11	m2	10	10	5.4	529.20	54.0	79.38	793.80	5,292.00	41.97	419.75	5.30	53.01	655.86	6,558.56	0.0	98.5	8,908.62	0.0	1,158.12	0.00	0.00	447.58	0.00	2,183.77	0.00	12,698.09	0.00
1614	3320.270	Plenum Partition Wall W12a	m2	45	45	5.4	529.20	243.0	79.38	3,572.10	23,814.00	153.90	6,925.50	15.83	712.56	778.31	35,024.16	33.0	13.6	1,228.00	443.3	159.64	5,268.13	40,524.11	188.05	6,205.75	326.46	10,773.14	1,902.16	62,771.14
1615	3320.280	Partition Wall W13a height = 3.0m	m2	55	57	5.4	529.20	307.8	79.38	4,524.66	30,164.40	125.91	7,177.04	13.20	752.47	747.69	42,618.57	61.0	9.4	845.64	570.6	109.93	6,705.96	51,584.34	327.64	19,985.76	264.70	16,146.72	1,547.91	94,422.79
1616	3320.290	Closure C1a height = 4.5m	m2	150	150	5.4	529.20	810.0	79.38	11,907.00	79,380.00	19.59	2,937.78	3.19	478.80	631.36	94,703.58	150.0	9.9	890.86	1,478.1	115.81	17,371.81	133,629.33	12.27	1,840.50	211.84	31,775.39	1,230.78	184,617.04
1617	3320.300	Closure C2a height = 4.5m	m2	105	105	5.4	529.20	567.0	79.38	8,334.90	55,566.00	27.98	2,937.44	3.98	417.75	640.53	67,256.09	105.0	9.9	890.86	1,034.7	115.81	12,160.27	93,540.53	17.71	1,859.29	212.93	22,357.72	1,237.31	129,917.80
1618	3320.310	Closure C3a height = 4.5m	m2	10	10	5.4	529.20	54.0	79.38	793.80	5,292.00	76.95	769.50	8.60	85.96	694.13	6,941.26	10.0	9.9	890.86	98.5	115.81	1,158.12	8,908.62	67.53	675.28	222.96	2,229.61	1,297.16	12,971.63
1619	3320.320	Closure C4a height = 4.5m	m2	505	480	5.4	529.20	2592.0	79.38	38,102.40	254,016.00	34.98	16,788.10	4.64	2,227.10	648.20	311,133.60	480.0	9.9	890.86	4,729.9	115.81	55,589.80	427,613.88	11.30	5,422.54	211.64	101,587.25	1,229.61	590,213.47
1620	3320.330	Closure C4b height = 3m	m2	70	55	5.4	529.20	297.0	79.38	4,365.90	29,106.00	34.98	1,923.64	4.64	255.19	648.20	35,650.73	55.0	9.9	890.86	542.0	115.81	6,369.67	48,997.43	21.15	1,163.25	213.62	11,749.31	1,241.45	68,279.66
1621	3320.340	Closure C5a height = 4.5m	m2	20	20	5.4	529.20	108.0	79.38	1,587.60	10,584.00	27.98	559.51	3.98	79.57	640.53	12,810.68	20.0	9.9	890.86	197.1	115.81	2,316.24	17,817.24	57.11	1,142.18	220.86	4,417.27	1,284.65	25,692.93
1622	3320.350	Closure C6a height = 4.5m	m2	80	80	5.4	529.20	432.0	79.38	6,350.40	42,336.00	125.91	10,073.04	13.20	1,056.10	747.69	59,815.54	80.0	9.9	890.86	788.3	115.81	9,264.97	71,268.98	87.10	6,967.80	226.90	18,152.07	1,320.67	105,653.81
1623	3320.360	Closure C7a height = 4.5m	m2	130	130	5.4	529.20	702.0	79.38	10,319.40	68,796.00	27.98	3,636.83	3.98	517.22	640.53	83,269.45	130.0	9.9	890.86	1,281.0	115.81	15,055.57	115,812.09	21.83	2,837.97	213.76	27,788.91	1,242.27	161,494.54
1624	3320.370	Closure C7b height = 4.5m	m2	2	2	5.4	529.20	10.8	79.38	158.76	1,058.40	27.98	55.95	3.98	7.96	640.53	1,281.07	2.0	9.9	890.73	19.7	115.79	231.59	1,781.45	50.01	100.02	219.40	438.80	1,275.93	2,551.86
1625	3320.380	Closure C8a height = 4.5m	m2	5	5	5.4	529.20	27.0	79.38	396.90	2,646.00	27.98	139.88	3.98	19.89	640.53	3,202.67	5.0	9.9	890.86	49.3	115.81	579.06	4,454.31	41.09	205.44	217.64	1,088.19	1,265.40	6,327.00
1626	3320.390	Closure C9a height = 4.5m	m2	5	8	5.4	529.20	43.2	79.38	635.04	4,233.60	34.98	279.80	4.64	37.12	648.20	5,185.56	8.0	9.9	890.90	78.8	115.82	926.53	7,127.17	75.64	605.16	224.60	1,796.83	1,306.96	10,455.69
1627	3320.400	Closure C9b height = 4.5m	m2	35	20	5.4	529.20	108.0	79.38	1,587.60	10,584.00	34.98	699.50	4.64	92.80	648.20	12,963.90	20.0	9.9	890.86	197.1	115.81	2,316.24	17,817.24	46.91	938.13	218.81	4,376.19	1,272.39	25,447.80
1628	3320.410	Closure C10a height = 4.5m	m2	25	32	5.4	529.20	172.8	79.38	2,540.16	16,934.40	27.98	895.22	3.98	127.32	640.53	20,497.09	32.0	9.9	890.85	315.3	115.81	3,705.95	28,507.31	32.26	1,032.34	215.86	6,907.46	1,254.78	40,153.07
1629	3320.420	Door type DT-1A	ea	14	16	10.0	980.00	160.0	147.00	2,352.00	15,680.00	1,943.14	31,090.26	184.32	2,949.04	3,254.46	52,071.31	14.0	20.9	1,885.42	292.0	245.10	3,431.47	26,395.92	1,839.60	25,754.41	813.46	11,388.45	4,783.59	66,970.25
1630	3320.430	Door type DT-1B	ea	11	11	10.0	980.00	110.0	147.00	1,617.00	10,780.00	1,943.14	21,374.56	184.32	2,027.47	3,254.46	35,799.02	11.0	18.2	1,649.75	200.7	214.47	2,359.14	18,147.20	2,015.60	22,171.59	793.51	8,728.58	4,673.32	51,406.50
1631	3320.440	Door type DT-1C	ea	102	102	10.0	980.00	1020.0	147.00	14,994.00	99,960.00	1,943.14	198,200.42	184.32	18,800.15	3,254.46	331,954.57	102.0	18.2	1,649.74	1,861.3	214.47	21,875.62	168,273.98	1,737.93	177,268.91	737.60	75,235.66	4,339.75	442,654.18
1632	3320.450	Door type DT-2A	ea	22	22	10.0	980.00	220.0	147.00	3,234.00	21,560.00	3,886.28	85,498.22	367.29	8,080.27	5,380.57	118,372.50	22.0	18.2	1,649.75	401.5	214.47	4,718.27	36,294.39	3,305.89	72,729.69	1,053.28	23,172.07	6,223.38	136,914.42
1633	3320.460	Door type DT-2B	ea	7	7	10.0	980.00	70.0	147.00	1,029.00	6,860.00	3,886.28	27,203.98	367.29	2,571.00	5,380.57	37,663.98	7.0	18.2	1,649.74	127.7	214.47	1,501.27	11,548.21	5,800.52	40,603.65	1,555.51	10,888.57	9,220.24	64,541.69
B&M-0347	Added	Door type DT-3	ea		1	10.0	980.00	10.0	147.00	147.00	980.00	3,886.28	3,886.28	367.29	367.29	5,380.57	5,380.57	1.0	18.3	1,649.74	18.25	214.47	214.47	1,649.74	4,144.25	4,144.25	1,222.06	1,222.06	7,230.52	7,230.52
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1634	3320.470	Coiling counter doors (roller shutters)	ea	7	7	28.0	2,744.00	196.0	411.60	2,881.20	19,208.00	4,171.27	29,198.90	463.48	3,244.35	7,790.35	54,532.45	7.0	51.1	4,619.29	357.7	600.51	4,203.55	32,335.00	1,751.00	12,257.02	1,438.12	10,066.86	8,408.92	58,862.43
1635	3320.480	Interior Windows	ea	7	7	20.0	1,960.00	140.0	294.00	2,058.00	13,720.00	2,590.86	18,135.99	287.87	2,015.11	5,132.73	35,929.10	7.0	36.5	3,299.49	255.5	428.93	3,002.53	23,096.42	484.44	3,391.11	872.96	6,110.71	5,085.82	35,600.77
1636	3320.490	Plastic laminated window sills	Linear meter	7	19	3.3	321.44	62.7	48.22	916.10	6,107.36	63.74	1,211.01	7.08	134.51	440.47	8,368.98	19.0	6.0	541.11	113.7	70.34	1,336.54	10,281.10	116.73	2,217.94	150.67	2,862.73	878.86	16,698.31
1637	3320.500	Cement board circulation floors in mechanical space on elevation 29.50 and 38.97	m2	325	325	1.7	167.23	552.5	25.08	8,152.46	54,349.75	41.97	13,641.81	5.30	1,722.83	239.59	77,866.85	325.0	3.1	281.51	1,012.0	36.60	11,893.90	91,491.52	19.20	6,241.47	70.03	22,758.42	407.34	132,385.31
1638	3320.510	Ceramic Floor finish tiles and baseboards in washrooms	m2	165	165	2.4	232.85	396.0	34.93	5,763.04	38,420.25	69.95	11,541.82	7.93	1,309.18	345.66	57,034.28	165.0	4.3	391.98	715.4	50.96	8,408.00	64,676.93	89.34	14,740.59	110.11	18,167.68	642.38	105,993.20
1639	3320.520	Vinyl Composite tiles flooring	m2	2305	1,100	1.7	170.40	1870.0	25.56	28,116.00	187,440.00	27.98	30,773.16	3.98	4,376.46	227.91	250,705.62	1,100.0	3.2	286.86	3,490.3	37.29	41,020.66	315,543.51	27.15	29,867.07	72.88	80,170.38	424.18	466,601.61
1640	3320.530	Vinyl base	Linear meter	800	800	1.2	115.37	960.0	17.31	13,844.40	92,296.00	16.79	13,433.76	2.93	2,343.84	152.40	121,918.00	800.0	2.1	194.21	1,718.5	25.25	20,197.55	155,365.76	4.77	3,818.03	46.60	37,281.91	270.83	216,663.25
1641	3320.540	Epoxy paint floor in warehouse	m2	1050	1,000	2.4	230.73	2400.0	34.61	34,609.50	230,730.00	41.97	41,974.80	5.30	5,301.00	312.62	312,615.30	1,000.0	4.3	388.42	4,296.4	50.49	50,494.14	388,416.48	7.41	7,409.25	92.78	92,775.25	539.10	539,095.13
1642	3320.550	Cementitious Fireproofing on steel structural members	m2	1150	1,150	2.5	243.43	2875.0	36.51	41,991.68	279,944.50	69.95	80,442.96	7.77	8,941.02	357.67	411,320.16	1,150.0	4.5	409.80	5,212.8	53.27	61,264.52	471,265.57	74.60	85,785.89	111.33	128,025.27	648.99	746,341.25
1643	3320.560	Cementitious Fireproofing on metal lath	m2	1395	1,395	1.6	158.41	2232.0	23.76	33,147.29	220,981.95	69.95	97,580.81	7.77	10,845.85	259.90	362,555.90	1,395.0	2.9	266.67	4,114.9	34.67	48,361.19	372,009.16	74.60	104,062.02	77.69	108,378.00	453.63	632,810.37
1644	3320.570	Plenum roof type PC1	m2	20	20	8.1	793.80	162.0	119.07	2,381.40	15,876.00	209.86	4,197.25	23.31	466.26	1,146.05	22,920.91	20.0	14.8	1,336.29	295.6	173.72	3,474.36	26,725.86	104.21	2,084.29	335.03	6,700.59	1,949.25	38,985.10
1645	3320.580	Mineral Acoustical Panels ceiling systems in offices, lobbies, communication room, lunch room and sleeping room	m2	1100	1,100	1.6	160.54	1760.0	24.08	26,489.10	176,594.00	41.97	46,172.28	4.66	5,128.86	231.26	254,384.24	1,100.0	3.0	270.25	3,288.3	35.13	38,646.02	297,277.10	28.05	30,852.76	69.16	76,075.94	402.59	442,851.82
1646	3320.590	Ceramic and Mineral fibre composite acoustical panels in washrooms ceiling tiles	m2	230	124	1.7	167.23	210.8	25.08	3,110.48	20,736.52	41.97	5,204.88	4.66	578.16	238.95	29,630.04	124.0	3.1	281.51	386.1	36.60	4,537.87	34,906.67	13.14	1,629.87	68.80	8,531.70	400.05	49,606.11
1647	3320.600	Gypsum board ceiling in battery rooms	m2	170	155	1.7	167.23	263.5	25.08	3,888.10	25,920.65	41.97	6,506.09	4.66	722.70	238.95	37,037.54	155.0	3.1	281.51	482.6	36.60	5,672.38	43,633.68	86.93	13,474.03	83.66	12,967.23	488.69	75,747.31
1648	3320.610	Kitchen upper and lower cabinets	Linear meter	9	9	39.4	3,857.28	354.6	578.59	5,207.33	34,715.52	1,699.60	15,296.43	188.84	1,699.57	6,324.32	56,918.85	9.0	71.8	6,493.46	646.4	844.15	7,597.35	58,441.17	802.54	7,222.89	1,687.63	15,188.69	9,827.79	88,450.10
1649	3320.620	Glazed ceramic wall finish tiles and baseboards in washrooms	m2	370	370	4.1	400.08	1517.0	60.01	22,204.44	148,029.60	55.96	20,706.16	6.21	2,298.81	522.27	193,239.01	370.0	7.4	673.49	2,756.4	87.55	32,394.94	249,191.88	61.06	22,592.43	170.57	63,112.20	992.68	367,291.46
1650	3320.630	Urethane in Storage Rooms	m2	1445	2,429	0.6	57.15	1457.4	8.57	20,822.60	138,817.35	41.97	101,956.79	4.66	11,325.46	112.36	272,922.20	2,429.0	1.1	96.21	2,585.0	12.51	30,381.12	233,700.91	7.46	18,126.21	24.11	58,572.43	140.30	340,780.67
1651	3320.640	Painting on masonry walls	m2	4190	4,190	0.6	57.15	2514.0	8.57	35,918.78	239,458.50	7.00	29,328.32	0.78	3,248.09	73.50	307,953.69	4,190.0	1.1	96.21	4,459.2	12.51	52,407.40	403,133.88	2.53	10,604.09	23.12	96,877.28	134.37	563,022.65

					Bidder 2 FIXED PRICE TARGET COST OF LABOUR													Bidder 3 FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1652	3320.650	Painting on gypsum wall and ceilings	m2	8220	8,220	0.6	57.15	4932.0	8.57	70,465.95	469,773.00	7.00	57,536.71	0.78	6,372.14	73.50	604,147.81	8,220.0	1.1	96.21	8,748.0	12.51	102,813.24	790,871.05	3.63	29,806.19	23.34	191,867.09	135.69	1,115,357.57
1653	3320.660	Washroom accessories	LS	0	1	337.0	33,026.00	337.0	4,953.90	4,953.90	33,026.00	17,319.87	17,319.87	1,924.43	1,924.43	57,224.21	57,224.21	1.0	615.0	55,596.40	615.0	7,227.53	7,227.53	55,596.40	27,105.53	27,105.53	18,523.01	18,523.01	108,452.47	108,452.47
1654	3320.670	Lockers in Lockers Rooms	LS	0	1	0.0	-	0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1655	3320.680	Signage	LS	0	1	587.0	57,526.00	587.0	8,628.90	8,628.90	57,526.00	19,010.40	19,010.40	2,112.27	2,112.27	87,277.57	87,277.57	1.0	1071.2	96,840.03	1,071.2	12,589.20	12,589.20	96,840.03	68,989.52	68,989.52	36,648.20	36,648.20	215,066.96	215,066.96
1656	3320.690	Appliances and furniture	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0348	Added	Paint Doors & Frames	ea		185	6.0	588.00	1110.0	88.20	16,317.00	108,780.00	15.55	2,876.68	1.73	320.57	693.48	128,294.24	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0349	Added	Paint "Egress Path" on floors	m2		982	0.5	52.92	491.0	7.94	7,795.12	51,967.44	7.00	6,873.61	0.78	761.25	68.63	67,397.41	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0350	Added	Conc Housekeeping Pads	m2		760	4.5	440.49	3420.0	66.07	50,215.86	334,772.40	442.53	336,319.15	49.17	37,367.83	998.26	758,675.24	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST08		SUB-TOTAL ARCHITECTURAL - SUPPLY & INSTALL						88165.1		$1,294,593.31	$8,630,622.07		$1,992,570.77		$218,317.51		$12,136,103.67				152680.6		$1,794,417.32	$13,803,210.12		$1,450,869.85		$3,536,055.01		$20,584,552.30
		POWERHOUSE DIESEL GENERATOR SYSTEM																												
		DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLALTION																												
1657	3437.010	Emergency Diesel Generator Set	LS	0	1	306.0	32,800.44	306.0	4,920.07	4,920.07	32,800.44	175,458.51	175,458.51	4,135.52	4,135.52	217,314.54	217,314.54	1.0	291.8	26,379.29	291.8	3,429.31	3,429.31	26,379.29	238,400.84	238,400.84	54,195.75	54,195.75	322,405.19	322,405.19
1658	3437.020	Diesel Fuel System	LS	0	1	1206.0	129,272.23	1206.0	19,390.84	19,390.84	129,272.23	223,399.76	223,399.76	16,298.81	16,298.81	388,361.64	388,361.64	1.0	1166.3	105,442.26	1,166.3	13,707.49	13,707.49	105,442.26	349,986.00	349,986.00	95,006.42	95,006.42	564,142.17	564,142.17
ST09		SUB-TOTAL DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLATION						1512.0		$24,310.90	$162,072.67		$398,858.26		$20,434.34		$605,676.17				1458.1		$17,136.80	$131,821.55		$588,386.85		$149,202.17		$886,547.37
		COMMISSIONING																												
		PIPING/MECHANICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1659	3352.153	WPS (Domestic Water)	LS	0	1	548.6	59,332.73	548.6	8,899.91	8,899.91	59,332.73	22,419.45	22,419.45	14,543.25	14,543.25	105,195.33	105,195.33	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1660	3353.580	SDS (Wastewater)	LS	0	1	234.0	25,307.80	234.0	3,796.17	3,796.17	25,307.80	4,024.72	4,024.72	6,203.28	6,203.28	39,331.97	39,331.97	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1661	3441.660	ASS (Low Pressure Compressed Air)	LS	0	1	247.0	26,713.79	247.0	4,007.07	4,007.07	26,713.79	4,148.88	4,148.88	6,547.91	6,547.91	41,417.65	41,417.65	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1662	3442.600	AHS (High Pressure Compressed Air)	LS	0	1	317.2	34,306.13	317.2	5,145.92	5,145.92	34,306.13	4,819.36	4,819.36	8,408.90	8,408.90	52,680.30	52,680.30	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1663	3443.030	WFS (Fire Protection Water)	LS	0	1	0.0	-	0.0	-	0.00	0.00	100,320.00	100,320.00	0.00	0.00	100,320.00	100,320.00	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	107,861.79	107,861.79	9,689.37	9,689.37	162,572.66	162,572.66
1664	3444.101	WCD (Clear Water Drainage)	LS	0	1	291.2	31,494.15	291.2	4,724.12	4,724.12	31,494.15	4,571.03	4,571.03	7,719.64	7,719.64	48,508.95	48,508.95	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1665	3445.950	WDS (Dewatering)	LS	0	1	330.2	35,712.11	330.2	5,356.82	5,356.82	35,712.11	4,943.52	4,943.52	8,753.52	8,753.52	54,765.97	54,765.97	1.0	755.5	68,299.43	755.5	8,878.93	8,878.93	68,299.43	0.00	0.00	16,051.36	16,051.36	93,229.72	93,229.72
1666	3446.250	OLS (Lubricating/Hydraulic Oil)	LS	0	1	226.2	24,464.20	226.2	3,669.63	3,669.63	24,464.20	3,950.22	3,950.22	5,996.51	5,996.51	38,080.56	38,080.56	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1667	3447.140	ODS (Oily Water Drainage)	LS	0	1	208.0	22,495.82	208.0	3,374.37	3,374.37	22,495.82	3,776.39	3,776.39	5,514.03	5,514.03	35,160.62	35,160.62	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1668	3448.113	WCS (Raw/Cooling Water)	LS	0	1	358.8	38,805.29	358.8	5,820.79	5,820.79	38,805.29	22,134.28	22,134.28	9,511.70	9,511.70	76,272.06	76,272.06	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1669	3449.196	WSS (Service Water)	LS	0	1	377.0	40,773.67	377.0	6,116.05	6,116.05	40,773.67	20,780.50	20,780.50	9,994.18	9,994.18	77,664.41	77,664.41	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1670	344A.50	ABR (Brake Air)	LS	0	1	273.0	29,525.76	273.0	4,428.86	4,428.86	29,525.76	4,397.21	4,397.21	7,237.16	7,237.16	45,589.00	45,589.00	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1671	3448.84	WTS (Shaft Seal Water)	LS	0	1	400.4	43,304.45	400.4	6,495.67	6,495.67	43,304.45	5,614.00	5,614.00	10,614.51	10,614.51	66,028.63	66,028.63	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1672	344C.05	WLS (Piezometer and Water Level)	LS	0	1	234.0	25,307.80	234.0	3,796.17	3,796.17	25,307.80	4,024.72	4,024.72	6,203.28	6,203.28	39,331.97	39,331.97	1.0	839.4	75,888.26	839.4	9,865.47	9,865.47	75,888.26	0.00	0.00	17,834.85	17,834.85	103,588.59	103,588.59
1673	3440.244	Mechanical Shop Equipment	LS	0	1	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	188.9	17,075.55	188.9	2,219.82	2,219.82	17,075.55	0.00	0.00	4,013.01	4,013.01	23,308.38	23,308.38
ST10		SUB-TOTAL PIPING/MECHANICAL - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						4045.6		$65,631.56	$437,543.70		$209,924.27		$107,247.88		$820,347.42				8834.9		$103,834.93	$798,730.20		$107,861.79		$188,039.28		$1,198,466.19
		HVAC SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1674	3351.290	EDD (Dewatering gallery supply and Exhaust)	LS	0	1	40.0	4,592.00	40.0	688.80	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	5,280.80	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1675	3351.300	EGR (Exhaust for Trans., Storage and Garbage rooms)	LS	0	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1676	3351.310	EKH (Kitchen range exhaust)	LS	0	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1677	3351.320	END (Exhaust North RCC Dom)	LS	0	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1678	3351.330	EOR (Exhaust oil Storage Room)	LS	0	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1679	3351.340	ESB (South service bay vent and exhaust)	LS	0	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1680	3351.350	ESP (Exhaust for Waste Water treatment Room)	LS	0	1	120.0	13,776.00	120.0	2,066.40	2,066.40	13,776.00	0.00	0.00	0.00	0.00	15,842.40	15,842.40	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1681	3351.360	ESR (Ventilate and exhaust Oil/water Interceptor Room)	LS	0	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1682	3351.370	ESW (Exhaust Storage, Washrooms and Janitor rooms)	LS	0	1	24.0	2,755.20	24.0	413.28	413.28	2,755.20	0.00	0.00	0.00	0.00	3,168.48	3,168.48	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1683	3351.380	EWT (Exhaust and Ventilate the Wastewater Treatment Room)	LS	0	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1684	3351.390	PSC (Pressurize 4 Stairwells)	LS	0	1	40.0	4,592.00	40.0	688.80	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	5,280.80	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1685	3351.400	VCC (Control Room, Communication Room and assoc. space)	LS	0	1	42.0	4,821.60	42.0	723.24	723.24	4,821.60	0.00	0.00	0.00	0.00	5,544.84	5,544.84	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1686	3351.410	VCR (Ventilation and Cooling for Compressor Room)	LS	0	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1687	3351.420	VDA (Ventilate Dewatering, Drainage and Draft tube galleries)	LS	0	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1688	3351.430	VDT (Ventilate Draft Tube Gallery)	LS	0	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1689	3351.440	VEG (Diesel Emergency Generator)	LS	0	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1690	3351.450	VEL (Ventilate and Exhaust Elevator Machine Room)	LS	0	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1691	3351.460	VER (Ventilate Electrical Battery and Charger Rooms)	LS	0	1	40.0	4,592.00	40.0	688.80	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	5,280.80	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1692	3351.470	VFP (Ventilate the Fire Pump Room)	LS	0	1	6.0	688.80	6.0	103.32	103.32	688.80	0.00	0.00	0.00	0.00	792.12	792.12	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1693	3351.480	VIG (Ventilation for Lower inspection galleries)	LS	0	1	8.0	918.40	8.0	137.76	137.76	918.40	0.00	0.00	0.00	0.00	1,056.16	1,056.16	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1694	3351.490	VIL (Ventilate and Exhaust Intake Gate Hoist Building)	LS	0	1	48.0	5,510.40	48.0	826.56	826.56	5,510.40	0.00	0.00	0.00	0.00	6,336.96	6,336.96	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1695	3351.500	VMR (Machine Hall Main Supply and Exhaust)	LS	0	1	270.0	30,996.00	270.0	4,649.40	4,649.40	30,996.00	0.00	0.00	0.00	0.00	35,645.40	35,645.40	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1696	3351.510	VMS (Warehouse and Workshop spaces)	LS	0	1	42.0	4,821.60	42.0	723.24	723.24	4,821.60	0.00	0.00	0.00	0.00	5,544.84	5,544.84	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1697	3351.520	VND (Ventilate North RCC Dam)	LS	0	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1698	3351.530	VOF (Offices and admin spaces on Mezz. 1 & 2)	LS	0	1	120.0	13,776.00	120.0	2,066.40	2,066.40	13,776.00	0.00	0.00	0.00	0.00	15,842.40	15,842.40	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1699	3351.540	VCD (Ventilate Centre Transition Dam)	LS	0	1	12.0	1,377.60	12.0	206.64	206.64	1,377.60	0.00	0.00	0.00	0.00	1,584.24	1,584.24	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1700	3351.550	VSD (Ventilate South Dam)	LS	0	1	10.0	1,148.00	10.0	172.20	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	1,320.20	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701	3351.560	EMCS (Energy Monitoring and Control System)	LS	0	1	0.0	-	0.0	-	0.00	0.00	94,485.48	94,485.48	0.00	0.00	94,485.48	94,485.48	1.0	293.8	26,560.90	293.8	3,452.92	3,452.92	26,560.90	76,234.30	76,234.30	6,472.55	6,472.55	112,720.66	112,720.66
1701.1	3351.670	EBR (Exhaust Battery Room)	LS	0	1	40.0	4,592.00	40.0	688.80	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	5,280.80	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.2	3351.580	EWH (Exhaust Welding Hood)	LS	0	1	5.0	574.00	5.0	86.10	86.10	574.00	0.00	0.00	0.00	0.00	660.10	660.10	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.3	3351.590	ESC (Smoke Exhaust)	LS	0	1	26.0	2,984.80	26.0	447.72	447.72	2,984.80	0.00	0.00	0.00	0.00	3,432.52	3,432.52	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.4	3351.600	VSA (Spiral Case Access)	LS	0	1	5.0	574.00	5.0	86.10	86.10	574.00	0.00	0.00	0.00	0.00	660.10	660.10	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
								0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0		$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
ST11		SUB-TOTAL HVAC SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						1000.0		$17,220.00	$114,800.00		$94,485.48		$0.00		$226,505.48				1594.9		$18,744.43	$144,187.92		$76,234.30		$34,116.46		$273,283.11
		ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1702	3433.050	Station Service Switchgear, MCC and Connected Equipment	LS	0	1	5924.5	629,353.60	5924.5	94,403.04	94,403.04	629,353.60	35,882.89	35,882.89	99,597.17	99,597.17	859,236.70	859,236.70	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	297,670.52	297,670.52	10,262.87	10,262.87	352,954.89	352,954.89
1702a	Added	ATS & Load Management System Commissioning	LS		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	314.8	28,458.80	314.79	3,699.64	3,699.64	28,458.80	72,958.46	72,958.46	6,908.68	6,908.68	112,025.58	112,025.58
1703	3340.170	Common Station Service MCC, Essential MCC and Connected Equipment	LS	0	1	1537.5	163,327.06	1537.5	24,499.06	24,499.06	163,327.06	9,312.17	9,312.17	25,847.02	25,847.02	222,985.30	222,985.30	1.0	3777.4	341,497.19	3,777.4	44,394.63	44,394.63	341,497.19	198,447.02	198,447.02	80,856.47	80,856.47	665,195.31	665,195.31
1704	3000.263	Intake Distribution Equipment and Building Systems	LS	0	1	492.0	52,264.66	492.0	7,839.70	7,839.70	52,264.66	2,979.89	2,979.89	8,271.04	8,271.04	71,355.30	71,355.30	1.0	1888.7	170,748.60	1,888.7	22,197.32	22,197.32	170,748.60	99,223.51	99,223.51	40,428.23	40,428.23	332,597.66	332,597.66
1705	3435.020	Station Service Transformers	LS	0	1	492.0	52,264.66	492.0	7,839.70	7,839.70	52,264.66	2,979.89	2,979.89	8,271.04	8,271.04	71,355.30	71,355.30	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1706	3460.050	GSU Ancillary Systems	LS	0	1	328.0	34,843.11	328.0	5,226.47	5,226.47	34,843.11	1,986.60	1,986.60	5,514.03	5,514.03	47,570.20	47,570.20	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1707	3000.264	Powerhouse Gallery Electrical Distribution	LS	0	1	861.0	91,463.15	861.0	13,719.47	13,719.47	91,463.15	5,214.81	5,214.81	14,474.33	14,474.33	124,871.77	124,871.77	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	211,871.37	211,871.37	10,003.63	10,003.63	266,896.50	266,896.50
1708	3000.265	Turbine Floor Electrical Distribution	LS	0	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	198,447.02	198,447.02	9,963.07	9,963.07	253,431.58	253,431.58
1709	3000.266	Generator Floor Electrical Distribution	LS	0	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	49,611.75	49,611.75	9,513.36	9,513.36	104,146.61	104,146.61
1710	3000.267	North Dam, North Transition Dam, Centre Transition Dam and South Transition Dam Electrical Distribution and Systems	LS	0	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1711	3000.268	Turbine Floor Lighting System	LS	0	1	287.0	30,487.72	287.0	4,573.16	4,573.16	30,487.72	1,738.27	1,738.27	4,824.78	4,824.78	41,623.92	41,623.92	1.0	314.8	28,458.80	314.8	3,699.64	3,699.64	28,458.80	0.00	0.00	6,688.24	6,688.24	38,846.68	38,846.68
1712	3000.269	Generator Floor Lighting System	LS	0	1	287.0	30,487.72	287.0	4,573.16	4,573.16	30,487.72	1,738.27	1,738.27	4,824.78	4,824.78	41,623.92	41,623.92	1.0	314.8	28,458.80	314.8	3,699.64	3,699.64	28,458.80	0.00	0.00	6,688.24	6,688.24	38,846.68	38,846.68
1713	3443.040	Fire Detection System - ELECTRICAL	LS	0	1	1025.0	108,884.71	1025.0	16,332.71	16,332.71	108,884.71	57,508.11	57,508.11	17,231.34	17,231.34	199,956.87	199,956.87	1.0	1322.1	119,524.71	1,322.1	15,538.21	15,538.21	119,524.71	30,733.61	30,733.61	28,182.93	28,182.93	193,979.46	193,979.46
1714	3460.060	Generator Step Up Transformer Unit 1	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1715	3460.070	Generator Step Up Transformer Unit 2	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1716	3460.080	Generator Step Up Transformer Unit 3	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1717	3460.090	Generator Step Up Transformer Unit 4	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1718	3436.050	Unit 1 Isolated Phase Bus	LS	0	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1719	3436.060	Unit 2 Isolated Phase Bus	LS	0	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1720	3436.070	Unit 3 Isolated Phase Bus	LS	0	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1721	3436.080	Unit 4 Isolated Phase Bus	LS	0	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1722	3438.050	Unit 1 Generator Circuit Breaker	LS	0	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1723	3438.060	Unit 2 Generator Circuit Breaker	LS	0	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1724	3438.070	Unit 3 Generator Circuit Breaker	LS	0	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1725	3438.080	Unit 4 Generator Circuit Breaker	LS	0	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
B&M-0351	Added	Testing of Spare Generator Transformer as per sect.48 01 10 item # 3.2.4	LS		1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0	-	0.0	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST12		SUB-TOTAL ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						15211.0		$242,377.36	$1,615,849.05		$276,808.39		$255,713.14		$2,390,747.94				16054.0		$188,678.19	$1,451,370.67		$1,158,963.26		$344,595.24		$3,143,607.36
		POWERHOUSE DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1726	3437.030	POWERHOUSE DIESEL GENERATOR SYSTEM	LS	0	1	429.0	45,984.93	429.0	6,897.74	6,897.74	45,984.93	4,097.35	4,097.35	11,372.69	11,372.69	68,352.71	68,352.71	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	25,593.83	25,593.83	20,887.32	20,887.32	136,522.58	136,522.58
ST13		SUB-TOTAL DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						429.0		$6,897.74	$45,984.93		$4,097.35		$11,372.69		$68,352.71				881.4		$10,358.75	$79,682.68		$25,593.83		$20,887.32		$136,522.58
ST14		TOTAL CONTRACT PRICE (pre-normalization)						690,011		$10,936,969.28	$72,913,128.52		$137,057,938.68		$16,974,113.30		$237,882,149.77				707,042		$8,309,691.40	$63,920,703.06		$89,633,216.29		$27,430,276.93		$189,293,887.68
ST16		TOTAL ESTIMATED CONTRACT PRICE						690,011.11		10,936,969.28	72,913,128.52		137,057,938.68		16,974,113.30		237,882,149.77				707,041.65		8,309,691.40	63,920,703.06		89,633,216.29				189,293,887.68
ST17		Score / 10									83,850,098						7.4							72,230,394						10.0

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
									0.15													0.13								
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
		GENERAL																												
1	0000.01	Mobilization	LS	1	1	16349.8	2,114,581.1	16349.8	317,187.1	317,187.18	2,114,581.18	6,575,590.01	6,575,590.01	1,664,992.37	1,664,992.37	10,672,350.74	10,672,350.74	1.0	8157.0	737,435.95	8,156.95	95,866.67	95,866.67	737,435.95	143,108.02	143,108.02	940,697.35	940,697.35	1,917,108.00	1,917,108.00
2	0000.02	Site Installation	LS	1	1	0.0		0.0		0.00	0.00	16,825,940.72	16,825,940.72	500,232.00	500,232.00	17,326,172.72	17,326,172.72	1.0	0.0	0.00	0.00	0.00	0.00	0.00	465,787.59	465,787.59	3,625,777.29	3,625,777.29	4,091,564.88	4,091,564.88
3	0000.03	Demobilization	LS	1	1	1006.0	137,763.4	1006.0	20,664.5	20,664.51	137,763.42	89,663.30	89,663.30	93,926.45	93,926.45	342,017.69	342,017.69	1.0	4945.3	447,080.86	4,945.27	58,120.51	58,120.51	447,080.86	86,294.74	86,294.74	298,523.63	298,523.63	890,019.74	890,019.74
PM	Added	Project Management / Staff Labour			1	0.0		0.0		0.00	0.00	65,020,863.62	65,020,863.62	285,000.00	285,000.00	65,305,863.62	65,305,863.62	1.0	0.0	0.00	0.00	0.00	0.00	0.00	34,202,483.60	34,202,483.60	0.00	0.00	34,202,483.60	34,202,483.60
3b	Added	Project Management / Staff Labour			0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4		Estimate of Travel Allowances - Trades Labour	Est	1	1							$5,479,302.56	$5,479,302.56			5,479,302.56	5,479,302.56	1.0							$4,975,871.23	$4,975,871.23			4,975,871.23	4,975,871.23
4a		Performance Bond	$/$1000	0	1								$0.00			0.00	0.00	1.0								$0.00			0.00	
4b		Payment Bond	$/$1000	0	1								$0.00			0.00	0.00	1.0								$0.00			0.00	
4c		Letter of Credit	$/$1000	0	1								$0.00			0.00	0.00	1.0								$0.00			0.00	
4d		Assignment Rights in Accordance with **Article 30.1 (d)**	LS	0	1								$0.00			0.00	0.00	1.0								$0.00			0.00	
B&M-0002	Added	General Foreman	LS		1	26026.0	3,163,941.2	26026.0	474,591.1	474,591.19	3,163,941.27	0.00	0.00	0.00	0.00	3,638,532.46	3,638,532.46	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0003	Added	Foreman	LS		1	47380.7	5,592,182.4	47380.7	838,827.3	838,827.36	5,592,182.40	0.00	0.00	0.00	0.00	6,431,009.77	6,431,009.77	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0004	Added	Labourers	LS		1	43710.3	4,511,812.4	43710.3	676,771.8	676,771.87	4,511,812.47	0.00	0.00	0.00	0.00	5,188,584.34	5,188,584.34	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0005	Added	Operators	LS		1	30697.3	3,263,247.0	30697.3	489,487.0	489,487.06	3,263,247.04	0.00	0.00	0.00	0.00	3,752,734.10	3,752,734.10	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0006	Added	Teamsters	LS		1	13013.0	1,332,691.7	13013.0	199,903.7	199,903.77	1,332,691.77	0.00	0.00	0.00	0.00	1,532,595.53	1,532,595.53	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0007	Added	Carpenters	LS		1	45465.0	3,763,390.2	45465.0	564,508.5	564,508.53	3,763,390.21	0.00	0.00	2,067,617.87	2,067,617.87	6,395,516.62	6,395,516.62	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0008	Added	Painters	LS		1	2400.0	180,000.0	2400.0	27,000.0	27,000.00	180,000.00	157,320.00	157,320.00	0.00	0.00	364,320.00	364,320.00	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0009	Added	Sheetmetal General Foreman	LS		1	4830.0	531,396.6	4830.0	79,709.4	79,709.49	531,396.60	0.00	0.00	0.00	0.00	611,106.09	611,106.09	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST01		**SUB-TOTAL INDIRECT COSTS (GENERAL)**						230878.1		$3,688,650.95	$24,591,006.36		$94,148,680.22		$4,611,768.69		$127,040,106.22				13102.2		$153,987.19	$1,184,516.81		$39,873,545.18		$4,864,998.26		$46,077,047.44
		PIPING/MECHANICAL SYSTEMS																												
		PIPING/MECHANICAL - DESIGN AND ENGINEERING																												
5	3343.010	WFS (Fire Protection Water)	LS	0	1	0.0		0.0		0.00	0.00	114,000.00	114,000.00	0.00	0.00	114,000.00	114,000.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	122,570.22	122,570.22	370.34	370.34	122,940.55	122,940.55
6	3310.010	Mechnical Shaft Plaftorm/Staging Design and Engineering	LS	0	1	0.0		0.0		0.00	0.00	855.00	855.00	0.00	0.00	855.00	855.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	109,437.69	109,437.69	330.66	330.66	109,768.35	109,768.35
ST02		**SUB-TOTAL PIPING/MECHANICAL - DESIGN AND ENGINEERING**						0.0		$0.00	$0.00		$114,855.00		$0.00		$114,855.00				0.0		$0.00	$0.00		$232,007.91		$701.00		$232,708.91
		PIPING/MECHANICAL - SUPPLY AND INSTALLATION						0.0																						
		WPS (Domestic Water)																												
7	3352.001	Water treatment plant: Sand & Antracite Filter 3352-FR-6000	ea	1	1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	26,906.34	26,906.34	2,205.61	2,205.61	46,503.59	46,503.59	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	206,799.93	206,799.93	44,072.85	44,072.85	262,598.51	262,598.51
8	3352.002	Water treatment plant: Anionic Exchanger 3352-FR-6001	ea	1	1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	37,351.02	37,351.02	2,205.61	2,205.61	56,948.27	56,948.27	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	317.47	317.47	2,502.62	2,502.62	14,545.81	14,545.81
9	3352.003	Water treatment plant: Anionic control Panel 3352-CP-6001	ea	1	1	104.9	11,342.3	104.9	1,701.3	1,701.36	11,342.37	5,818.32	5,818.32	1,654.21	1,654.21	20,516.26	20,516.26	1.0	15.9	1,440.41	15.9	187.25	187.25	1,440.41	300.30	300.30	398.97	398.97	2,326.93	2,326.93
10	3352.004	Water treatment plant: Activated Carbon Filter 3352-FR-6002	ea	1	1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	30,387.90	30,387.90	2,205.61	2,205.61	49,985.15	49,985.15	1.0	114.8	10,376.75	114.8	1,348.98	1,348.98	10,376.75	317.47	317.47	2,502.62	2,502.62	14,545.81	14,545.81
11	3352.005	Water treatment plant: Cartridge Filter 3352-FR-6003	ea	1	1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	6,016.98	6,016.98	2,205.61	2,205.61	25,614.23	25,614.23	1.0	103.1	9,321.75	103.1	1,211.83	1,211.83	9,321.75	190.59	190.59	2,229.12	2,229.12	12,953.29	12,953.29
12	3352.006	Water treatment plant: UV Sterilizer 3352-UV-6000	ea	1	1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	21,684.00	21,684.00	2,205.61	2,205.61	41,281.25	41,281.25	1.0	103.1	9,321.75	103.1	1,211.83	1,211.83	9,321.75	190.59	190.59	2,229.12	2,229.12	12,953.29	12,953.29
13	3352.007	Water treatment plant: Injection of Sodium Hypochlorite 3352-P-6002 / 6003	ea	2	2	69.9	7,561.5	139.8	1,134.2	2,268.47	15,123.16	10,842.00	21,684.00	1,102.81	2,205.61	20,640.62	41,281.25	2.0	35.9	3,241.96	71.7	421.45	842.91	6,483.91	0.00	0.00	761.91	1,523.82	4,425.32	8,850.63
14	3352.008	Water treatment plant: Tank 3352-HTK-6000 / 6001	ea	2	2	52.4	5,671.1	104.9	850.6	1,701.36	11,342.37	2,038.77	4,077.54	827.10	1,654.21	9,387.74	18,775.48	2.0	78.4	7,085.59	156.8	921.13	1,842.25	14,171.17	123.63	247.26	1,690.11	3,380.22	9,820.45	19,640.91
15	3352.009	Water treatment plant: Static Mixer 3352-SM-6000	ea	1	1	69.9	7,561.5	69.9	1,134.2	1,134.24	7,561.58	2,138.10	2,138.10	1,102.81	1,102.81	11,936.72	11,936.72	1.0	35.9	3,249.58	35.9	422.45	422.45	3,249.58	0.00	0.00	763.71	763.71	4,435.73	4,435.73
16	3352.010	Water treatment plant: Flow Meter 3352-FQI-6000	ea	1	1	69.9	7,561.5	69.9	1,134.2	1,134.24	7,561.58	3,878.88	3,878.88	1,102.81	1,102.81	13,677.50	13,677.50	1.0	12.8	1,153.43	12.8	149.95	149.95	1,153.43	360.36	360.36	343.63	343.63	2,007.36	2,007.36
17	3352.011	Water treatment plant: Control Panel 3352-CP-6004	ea	1	1	104.9	11,342.3	104.9	1,701.3	1,701.36	11,342.37	7,559.10	7,559.10	1,654.21	1,654.21	22,257.04	22,257.04	1.0	15.9	1,440.41	15.9	187.25	187.25	1,440.41	300.30	300.30	398.97	398.97	2,326.93	2,326.93
18	3352.012	Water treatment plant: Treated Water Tank 3352-TK-6000	ea	1	1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	14,720.88	14,720.88	2,205.61	2,205.61	34,318.13	34,318.13	1.0	213.0	19,252.11	213.0	2,502.77	2,502.77	19,252.11	658.26	658.26	4,657.05	4,657.05	27,070.19	27,070.19
19	3352.013	Water treatment plant: Distribution Pump 3352-P-6000 / 6001	ea	2	2	139.8	15,123.1	279.7	2,268.4	4,536.95	30,246.33	10,179.12	20,358.24	2,205.61	4,411.22	29,776.37	59,552.73	2.0	90.1	8,141.29	180.1	1,058.37	2,116.73	16,282.57	8,649.80	17,299.61	3,654.75	7,309.49	21,504.20	43,008.40
20	3352.014	Water treatment plant: Hydropneumatic Tank 3352-TK-6001	ea	1	1	52.4	5,671.1	52.4	850.6	850.68	5,671.19	6,182.67	6,182.67	827.10	827.10	13,531.64	13,531.64	1.0	96.7	8,743.64	96.7	1,136.67	1,136.67	8,743.64	6,555.70	6,555.70	3,374.71	3,374.71	19,810.72	19,810.72
21	3352.015	Main water heater 3352-WHTR-7002	ea	1	1	52.4	5,671.1	52.4	850.6	850.68	5,671.19	33,325.21	33,325.21	827.10	827.10	40,674.18	40,674.18	1.0	48.2	4,355.87	48.2	566.26	566.26	4,355.87	43,589.65	43,589.65	9,799.41	9,799.41	58,311.19	58,311.19
22	3352.016	Control room water heater 3352-WHTR-7000	ea	1	1	35.0	3,780.7	35.0	567.1	567.12	3,780.79	1,127.53	1,127.53	551.40	551.40	6,026.84	6,026.84	1.0	48.2	4,355.87	48.2	566.26	566.26	4,355.87	1,326.09	1,326.09	1,290.66	1,290.66	7,538.89	7,538.89
23	3352.017	Eyewash water heater 3352-WHTR-6000 / 7001 / 7003	ea	3	3	35.0	3,780.7	104.9	567.1	1,701.36	11,342.37	22,086.66	66,259.98	551.40	1,654.21	26,985.97	80,957.92	3.0	25.5	2,304.10	76.5	299.53	898.60	6,912.29	30,224.65	90,673.94	6,626.50	19,879.49	39,454.77	118,364.32
24	3352.018	Emergency shower and eyewash 3352-ESY-6000	ea	1	1	52.4	5,671.1	52.4	850.6	850.68	5,671.19	8,779.59	8,779.59	827.10	827.10	16,128.56	16,128.56	1.0	48.1	4,350.33	48.1	565.54	565.54	4,350.33	2,359.83	2,359.83	1,497.49	1,497.49	8,773.19	8,773.19
25	3352.019	Emergency shower and eyewash 3352-ESY-7000 to 7004	ea	4	5	52.4	5,671.1	262.2	850.6	4,253.39	28,355.93	19,449.99	97,249.95	827.10	4,135.52	26,798.96	133,994.79	5.0	48.1	4,347.29	240.4	565.15	2,825.74	21,736.43	12,563.59	62,817.96	3,551.05	17,755.25	21,027.08	105,135.38
26	3352.020	Water closet 3352-WC-6000 / 6001 / 7000 to 7004 / 8000 to 8003	ea	11	11	17.5	1,890.4	192.3	283.5	3,119.15	20,794.35	714.93	7,864.23	275.70	3,032.72	3,164.59	34,810.45	11.0	28.9	2,609.60	317.5	339.25	3,731.71	28,705.56	553.92	6,093.09	724.81	7,972.92	4,227.57	46,503.30
27	3352.021	Urinal 3352-UR-7000 / 7001	ea	2	2	26.2	2,835.5	52.4	425.3	850.68	5,671.19	1,585.39	3,170.79	413.55	827.10	5,259.88	10,519.76	2.0	28.8	2,606.32	57.7	338.82	677.64	5,212.64	1,077.47	2,154.94	829.44	1,658.88	4,852.05	9,704.10
28	3352.022	Lavatory 3352-LAV-6001 / 7000 to 7004 / 8000 to 8003	ea	10	10	17.5	1,890.4	174.8	283.5	2,835.59	18,903.95	543.93	5,439.30	275.70	2,757.01	2,993.59	29,935.86	10.0	9.6	869.37	96.2	113.02	1,130.19	8,693.74	220.54	2,205.45	248.72	2,487.17	1,451.65	14,516.54
29	3352.023	Lavatory 3352-LAV-6000 / 6002	ea	2	2	17.5	1,890.4	35.0	283.5	567.12	3,780.79	1,096.60	2,193.20	275.70	551.40	3,546.26	7,092.52	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	126.43	252.87	230.88	461.76	1,345.04	2,690.07
30	3352.024	Kitchen sink 3352-SK-7000	ea	1	1	26.2	2,835.5	26.2	425.3	425.34	2,835.59	1,242.03	1,242.03	413.55	413.55	4,916.51	4,916.51	1.0	9.7	874.78	9.7	113.72	113.72	874.78	259.70	259.70	257.86	257.86	1,506.06	1,506.06
31	3352.025	Mop sink 3352-MS-6000 / 7000 / 8000	ea	3	3	26.2	2,835.5	78.7	425.3	1,276.02	8,506.78	7,618.27	22,854.82	413.55	1,240.66	11,292.76	33,878.28	3.0	19.2	1,737.55	57.7	225.88	677.64	5,212.64	5,695.54	17,086.61	1,555.00	4,665.01	9,213.97	27,641.91
32	3352.026	Service sink 3352-SS-8000	ea	1	1	26.2	2,835.5	26.2	425.3	425.34	2,835.59	7,536.19	7,536.19	413.55	413.55	11,210.68	11,210.68	1.0	9.7	874.78	9.7	113.72	113.72	874.78	5,683.45	5,683.45	1,349.81	1,349.81	8,021.77	8,021.77
33	3352.027	Multi station sink 3352-SKM-6000	ea	1	1	52.4	5,671.1	52.4	850.6	850.68	5,671.19	11,720.79	11,720.79	827.10	827.10	19,069.76	19,069.76	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	6,045.33	6,045.33	1,523.34	1,523.34	9,041.22	9,041.22
34	3352.028	Shower fitting 3352-SH-7000 / 7001	ea	2	2	52.4	5,671.1	104.9	850.6	1,701.36	11,342.37	769.95	1,539.90	827.10	1,654.21	8,118.92	16,237.84	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	370.32	740.64	279.97	559.95	1,638.02	3,276.03
35	3352.029	Air vent 3352-AV-8000 / 8001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	5,575.02	11,150.03	137.85	275.70	6,799.84	13,599.69	2.0	11.0	989.85	21.9	128.68	257.36	1,979.70	260.46	520.92	285.07	570.14	1,664.06	3,328.12
36	3352.030	Pressure safety valve 3352-PSV-6000 / 6001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	124.90	249.81	137.85	275.70	1,349.73	2,699.47	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	104.77	209.54	176.18	352.36	1,026.64	2,053.27
37	3352.031	Pressure indicator 3352-PI-6000 to 6010	ea	11	11	8.7	945.2	96.1	141.7	1,559.58	10,397.17	700.54	7,705.90	137.85	1,516.36	1,925.36	21,179.01	11.0	3.7	329.95	40.2	42.89	471.83	3,629.44	84.95	934.41	94.64	1,041.09	552.43	6,076.76
38	3352.032	Pressure switch 3352-PSL-6000, 3352-PSLL-6000, 3352-PSH-6000, 3352-PSHH-6000	ea	4	4	8.7	945.2	35.0	141.7	567.12	3,780.79	464.62	1,858.50	137.85	551.40	1,689.45	6,757.81	4.0	7.3	659.90	29.2	85.79	343.15	2,639.59	419.73	1,678.91	239.59	958.35	1,405.00	5,619.99
39	3352.033	Pressure control valve 3352-PCV-6000	ea	1	1	8.7	945.2	8.7	141.7	141.78	945.20	1,479.22	1,479.22	137.85	137.85	2,704.05	2,704.05	1.0	6.4	575.32	6.4	74.79	74.79	575.32	1,704.41	1,704.41	478.35	478.35	2,832.88	2,832.88
40	3352.034	Temperature indicator 3352-TE-7000 / 3352-TI-7000, 3352-TE-6000 / 3352-TI-6000	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	294.76	589.53	137.85	275.70	1,519.59	3,039.19	2.0	3.7	329.95	7.3	42.89	85.79	659.89	246.41	492.83	127.15	254.30	746.40	1,492.81
41	3352.035	Control Panel 3352-CP-6005	ea	1	1	104.9	11,342.3	104.9	1,701.3	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	55,387.27	55,387.27	11,545.45	11,545.45	68,829.82	68,829.82
B&M-0010	Added	Drinking Fountain 3352-DF-7000	ea		1	26.2	2,835.5	26.2	425.3	425.34	2,835.59	2,611.39	2,611.39	413.55	413.55	6,285.88	6,285.88	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	3352.036	Pipe NPS 1/2 Type K , Piping Specification NB11	m	214	417	1.3	139.5	538.0	20.9	8,727.96	58,186.37	17.24	7,191.72	20.35	8,486.09	198.03	82,592.14	417.1	0.8	73.88	340.9	9.60	4,005.94	30,814.94	13.57	5,658.83	20.10	8,381.23	117.15	48,860.94
43	3352.037	Pipe NPS 1/2 Sch.10S, Piping Specification SB11	m	1	49	1.0	104.6	47.4	15.7	769.06	5,127.04	23.57	1,154.97	15.26	747.74	159.16	7,798.80	49.0	3.9	351.85	190.7	45.74	2,241.27	17,240.52	10.73	525.84	84.85	4,157.64	493.17	24,165.27
44	3352.038	Elbow 45 degrees NPS 1/2 Type K , Piping Specification NB11	ea	1	0	1.8	198.4	0.0	29.7	0.00	0.00	74.68	0.00	28.95	0.00	331.89	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	1.00	0.00	4.11	0.00	23.92	0.00
45	3352.039	Elbow 90 degrees NPS 1/2 Type K, Piping Specification NB11	ea	144	392	0.8	85.0	308.3	12.7	5,001.99	33,346.57	8.15	3,193.63	12.41	4,863.37	118.38	46,405.57	392.0	0.2	22.16	96.1	2.88	1,129.52	8,688.59	0.51	200.98	5.31	2,082.42	30.87	12,101.50
46	3352.040	Tee NPS 1/2 Type K, Piping Specification NB11	ea	13	57	1.0	113.4	59.8	17.0	969.77	6,465.15	11.04	629.54	16.54	942.90	158.02	9,007.37	57.0	0.5	44.29	27.9	5.76	328.19	2,524.52	1.04	59.01	10.62	605.18	61.70	3,516.90
47	3352.041	Coupling SW/FNPT NPS 1/2, Piping Specification NB11	ea	2	53	0.5	56.7	27.8	8.5	450.86	3,005.73	8.06	427.43	8.27	438.37	81.55	4,322.39	53.0	0.2	22.10	13.0	2.87	152.29	1,171.46	1.65	87.71	5.53	292.97	32.16	1,704.43
48	3352.042	Weld NPS 1/2, Piping Specification NB11	ea	364	925	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	925.0	1.3	118.00	1,207.3	15.34	14,189.05	109,146.57	0.00	0.00	27.73	25,651.04	161.07	148,986.66
49	3352.043	Ball Valve NPS 1/2, Valve Specification VBA08	ea	60	63	3.3	354.4	206.5	53.1	3,349.54	22,330.29	26.17	1,648.42	51.69	3,256.72	485.48	30,584.99	63.0	1.3	118.10	82.3	15.35	967.26	7,440.49	9.11	573.84	29.59	1,864.14	172.15	10,845.73
50	3352.044	Pipe insulation NPS 1/2	Linear meter	215	255	1.4	142.3	358.5	21.3	5,442.11	36,280.76	37.48	9,551.23	8.55	2,178.66	209.77	53,452.76	254.8	3.3	302.12	851.6	39.28	10,008.03	76,984.86	166.54	42,436.44	87.06	22,182.85	594.99	151,612.18
51	3352.045	Pipe identification NPS 1/2	Linear meter	215	86	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.1	0.6	50.57	48.2	6.57	566.26	4,355.87	12.06	1,039.19	14.31	1,232.90	83.52	7,194.22
52	3352.046	Pipe NPS 3/4 Type K, Piping Specification NB11	m	230	250	1.5	162.7	376.2	24.4	6,103.61	40,690.76	27.12	6,778.80	23.74	5,934.47	238.03	59,507.64	250.0	0.8	68.30	188.9	8.88	2,219.82	17,075.55	14.04	3,510.06	18.88	4,719.68	110.10	27,525.11
53	3352.047	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	1	0	1.1	116.2	0.0	17.4	0.00	0.00	27.68	0.00	16.96	0.00	178.33	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	3.74	0.00	12.48	0.00	72.61	0.00
54	3352.048	Elbow 45 degrees NPS 3/4 Type K, Piping Specification NB11	ea	4	2	1.8	198.4	3.7	29.7	59.55	396.98	74.68	149.36	28.95	57.90	331.89	663.79	2.0	0.1	8.32	0.2	1.08	2.16	16.64	1.49	2.98	2.25	4.51	13.14	26.29
55	3352.049	Elbow 90 degrees NPS 3/4 Type K, Piping Specification NB11	ea	71	116	1.0	113.4	121.7	17.0	1,973.57	13,157.15	11.91	1,381.15	16.54	1,918.88	158.89	18,430.76	116.0	0.2	22.18	28.5	2.88	334.50	2,573.05	1.17	135.62	5.45	632.01	31.68	3,675.17
56	3352.050	Tee NPS 3/4 Type K, Piping Specification NB11	ea	3	3	1.4	155.9	4.3	23.3	70.18	467.87	17.13	51.39	22.75	68.24	219.23	657.68	3.0	0.6	49.91	1.7	6.49	19.46	149.73	1.70	5.11	12.08	36.25	70.18	210.55
57	3352.051	Tee Reducing NPS 3/4 x 1/2 Type K, Piping Specification NB11	ea	3	20	1.4	155.9	28.8	23.3	467.87	3,119.15	15.72	314.43	22.75	454.91	217.82	4,356.36	20.0	0.5	44.57	9.9	5.79	115.88	891.41	1.71	34.19	10.82	216.38	62.89	1,257.86
58	3352.052	Union NPS 3/4 Type K, Piping Specification NB11	ea	2	53	1.8	198.4	97.3	29.7	1,578.01	10,520.05	187.74	9,950.16	28.95	1,534.28	444.95	23,582.50	53.0	0.3	27.39	16.1	3.56	188.69	1,451.49	5.67	300.72	7.58	401.66	44.20	2,342.56
59	3352.053	Concentric Reducer NPS 3/4 x 1/2 Type K, Piping Specification NB11	ea	16	20	1.0	113.4	21.0	17.0	340.27	2,268.47	19.51	390.10	16.54	330.84	166.48	3,329.69	20.0	0.3	24.75	5.5	3.22	64.34	494.92	1.08	21.69	6.03	120.68	35.08	701.63
60	3352.054	Concentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	0	8.5	921.5	0.0	138.2	0.00	0.00	448.22	0.00	134.40	0.00	1,642.43	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
61	3352.055	Cap NPS 3/4 Type K, Piping Specification NB11	ea	3	4	0.7	70.8	2.6	10.6	42.53	283.56	156.26	625.02	10.34	41.36	248.12	992.47	4.0	0.2	20.80	0.9	2.70	10.81	83.18	0.79	3.14	5.05	20.18	29.33	117.32
62	3352.056	Flange Slip-On 150RF NPS 3/4 c/w hardware , Piping Specification SB11	ea	1	8	8.8	952.2	70.4	142.8	1,142.74	7,618.29	492.03	3,936.24	138.88	1,111.08	1,726.04	13,808.35	8.0	0.5	45.40	4.0	5.90	47.22	363.23	24.94	199.52	15.69	125.52	91.94	735.49
63	3352.057	Flange SW 150RF NPS 3/4 c/w hardware, Piping Specification SB11	ea	3	4	8.8	952.2	35.2	142.8	571.37	3,809.15	492.03	1,968.12	138.88	555.54	1,726.04	6,904.18	4.0	1.3	119.57	5.3	15.54	62.16	478.28	0.68	2.72	28.24	112.95	164.03	656.13
64	3352.058	Weld NPS 3/4, Piping Specification NB11	ea	246	402	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	402.0	1.3	117.99	524.6	15.34	6,166.01	47,430.86	0.00	0.00	27.73	11,146.96	161.05	64,743.83
65	3352.059	Quick connect FNPT NPS 3/4, Hansen Series HK	ea	1	0	2.8	301.2	0.0	45.1	0.00	0.00	87.65	0.00	43.94	0.00	478.06	0.00	0.0	2.6	231.52	0.0	30.10	0.00	0.00	29.18	0.00	60.29	0.00	351.09	0.00
66	3352.060	Ball Valve NPS 3/4, Valve Specification VBA08	ea	3	3	4.3	460.7	12.8	69.1	207.35	1,382.35	35.13	105.38	67.20	201.61	632.23	1,896.70	3.0	3.0	274.96	9.1	35.74	107.23	824.87	33.95	101.84	71.45	214.36	416.10	1,248.30
67	3352.061	Ball Valve NPS 3/4, Valve Specification VBA14	ea	1	0	7.3	793.9	0.0	119.0	0.00	0.00	329.00	0.00	115.79	0.00	1,357.85	0.00	0.0	2.6	231.52	0.0	30.10	0.00	0.00	91.26	0.00	72.78	0.00	425.66	0.00
68	3352.062	Ball Valve NPS 3/4, Valve Specification VBA11	ea	1	0	5.5	595.4	0.0	89.3	0.00	0.00	136.15	0.00	86.85	0.00	907.79	0.00	0.0	2.6	231.52	0.0	30.10	0.00	0.00	100.39	0.00	74.63	0.00	436.64	0.00
69	3352.063	Pipe insulation NPS 3/4	Linear meter	231	250	1.4	142.3	351.2	21.3	5,331.52	35,543.45	37.62	9,391.15	8.55	2,134.35	209.91	52,400.48	249.6	3.3	302.35	834.9	39.31	9,811.95	75,476.53	171.58	42,832.97	88.11	21,995.52	601.35	150,116.96
70	3352.064	Pipe identification NPS 3/4	Linear meter	231	84	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.4	0.6	50.43	47.1	6.56	553.29	4,256.06	12.06	1,018.06	14.28	1,205.19	83.34	7,032.60
71	3352.065	Pipe NPS 1 Type K, Piping Specification NB11	m	44	95	1.5	162.7	143.2	24.4	2,322.35	15,482.34	32.44	3,085.67	23.74	2,258.00	243.35	23,148.35	95.1	0.9	80.28	84.5	10.44	992.79	7,636.82	18.38	1,748.47	22.57	2,146.78	131.67	12,524.87
72	3352.066	Pipe NPS 1 Sch.10s , Piping Specification SB11	m	23	0	1.4	151.1	0.0	22.6	0.00	0.00	39.80	0.00	22.04	0.00	235.65	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	4.61	0.00	12.65	0.00	73.66	0.00
73	3352.067	Elbow 90 degrees NPS 1 Type K, Piping Specification NB11	ea	7	52	1.1	120.5	57.9	18.0	940.00	6,266.66	18.46	959.69	17.58	913.95	174.62	9,080.30	52.0	0.2	22.21	12.8	2.89	150.13	1,154.83	2.52	130.94	5.73	297.76	33.34	1,733.66
74	3352.068	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	36	0	5.9	638.0	0.0	95.7	0.00	0.00	125.39	0.00	93.05	0.00	952.15	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	9.64	0.00	17.58	0.00	102.41	0.00
75	3352.069	Tee SW Class 3000 NPS 1, Piping Specification SB11	ea	6	0	7.9	850.6	0.0	127.6	0.00	0.00	199.11	0.00	124.07	0.00	1,301.46	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
76	3352.070	Tee Reducing NPS 1 x 1/2 Type K, Piping Specification NB11	ea	5	9	1.6	170.1	14.2	25.5	229.68	1,531.22	27.23	245.03	24.81	223.32	247.69	2,229.25	9.0	0.5	44.06	4.4	5.73	51.55	396.50	5.15	46.33	11.39	102.52	66.32	596.89
77	3352.071	Tee Reducing NPS 1 x 3/4 Type K, Piping Specification NB11	ea	2	2	1.6	170.1	3.1	25.5	51.04	340.27	27.23	54.45	24.81	49.63	247.69	495.39	2.0	0.5	41.59	0.9	5.41	10.81	83.18	5.15	10.30	10.81	21.62	62.95	125.91
78	3352.072	Tee Reducing SW Class 3000 NPS 1 x 1/2, Piping Specification SB11	ea	1	0	11.1	1,205.1	0.0	180.7	0.00	0.00	196.49	0.00	175.76	0.00	1,758.14	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
79	3352.073	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	0	5.9	638.0	0.0	95.7	0.00	0.00	580.55	0.00	93.05	0.00	1,407.31	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	18.64	0.00	19.39	0.00	113.22	0.00
80	3352.074	Concentric Reducer NPS 1 x 1/2 Type K, Piping Specification NB11	ea	2	0	1.6	170.1	0.0	25.5	0.00	0.00	42.31	0.00	24.81	0.00	262.78	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	5.73	0.00	8.97	0.00	52.29	0.00
81	3352.075	Concentric Reducer NPS 1 x 3/4 Type K, Piping Specification NB11	ea	2	8	1.6	170.1	12.6	25.5	204.16	1,361.06	42.31	338.46	24.81	198.51	262.78	2,102.21	8.0	0.3	24.78	2.2	3.22	25.77	198.25	2.17	17.39	6.26	50.09	36.44	291.51
82	3352.076	Concentric Reducer SW Class 3000 NPS 1 x 3/4, Piping Specification SB11	ea	4	0	8.5	921.5	0.0	138.2	0.00	0.00	448.22	0.00	134.40	0.00	1,642.43	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
83	3352.077	Cap NPS 1 Type K, Piping Specification NB11	ea	1	5	0.7	77.9	3.6	11.7	58.46	389.89	6.54	32.70	11.37	56.86	107.59	537.94	5.0	0.2	22.18	1.2	2.88	14.42	110.90	1.87	9.36	5.59	27.94	32.52	162.61
84	3352.078	Cap SW Class 3000 NPS 1, Piping Specification SB11	ea	1	0	4.6	496.2	0.0	74.4	0.00	0.00	176.90	0.00	72.37	0.00	819.93	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.68	0.00	17.38	0.00	101.25	0.00
85	3352.079	Flange Slip-on 150RF NPS 1 c/w hardware, Piping Specification SB11	ea	2	3	8.8	952.2	26.4	142.8	428.53	2,856.89	492.03	1,476.09	138.88	416.65	1,726.04	5,178.13	3.0	1.3	115.53	3.8	15.02	45.06	346.59	0.81	2.42	27.32	81.95	158.67	476.01
86	3352.080	Flange SW 150RF NPS 1 c/w hardware, Piping Specification SB11	ea	12	19	8.8	952.2	167.3	142.8	2,714.02	18,093.45	492.03	9,348.56	138.88	2,638.81	1,726.04	32,794.83	19.0	0.7	62.53	13.1	8.13	154.45	1,188.10	21.97	417.52	19.12	363.27	111.76	2,123.35
87	3352.081	Weld NPS 1, Piping Specification NB11	ea	178	220	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	220.0	1.3	118.03	287.2	15.34	3,375.78	25,967.53	0.00	0.00	27.74	6,102.75	161.12	35,446.06
88	3352.082	Ball Valve NPS 1, Valve Specification VBA11	ea	4	0	7.3	793.9	0.0	119.0	0.00	0.00	202.60	0.00	115.79	0.00	1,231.45	0.00	0.0	2.6	231.52	0.0	30.10	0.00	0.00	127.75	0.00	80.13	0.00	469.50	0.00
89	3352.083	Pipe insulation NPS 1	Linear meter	67	90	1.4	145.3	129.1	21.8	1,960.02	13,066.81	40.56	3,647.11	8.55	768.78	216.23	19,442.73	89.9	3.3	302.18	300.5	39.28	3,532.22	27,170.89	185.55	16,683.74	90.89	8,172.68	617.90	55,559.53
90	3352.084	Pipe identification NPS 1	Linear meter	67	30	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.4	0.6	50.49	17.0	6.56	199.51	1,534.67	12.06	366.70	14.29	434.49	83.41	2,535.37
91	3352.085	Pipe Type K NPS 1-1/4, Piping Specification NB11	m	1	99	1.7	186.0	169.9	27.9	2,756.20	18,374.64	40.78	4,027.78	27.13	2,679.82	281.82	27,838.43	98.8	0.8	70.68	77.3	9.19	907.59	6,981.47	23.28	2,299.27	21.30	2,103.71	124.44	12,292.04
92	3352.086	Concentric Reducer Type K 1-1/4 x 1/2, Piping Specification NB11	ea	2	0	1.6	170.1	0.0	25.5	0.00	0.00	42.31	0.00	24.81	0.00	262.78	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	5.73	0.00	8.97	0.00	52.29	0.00
93	3352.087	Weld NPS 1-1/4, Piping Specification NB11	ea	4	199	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	199.0	2.0	177.00	389.6	23.01	4,576.96	35,222.74	0.00	0.00	41.60	8,277.87	241.61	48,079.56
94	3352.088	Pipe insulation NPS 1-1/4	Linear meter	3	4	1.4	146.1	5.7	21.9	86.84	578.94	41.93	166.14	8.55	33.88	218.50	865.81	4.0	3.4	304.74	13.4	39.62	156.98	1,207.50	191.62	759.29	92.57	366.79	628.55	2,490.56
95	3352.089	Pipe identification NPS 1-1/4	Linear meter	3	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.6	49.68	0.7	6.46	8.65	66.54	12.06	16.16	14.10	18.89	82.30	110.23
96	3352.090	Pipe NPS 1-1/2 Type K, Piping Specification NB11	m	160	135	1.7	186.0	232.8	27.9	3,777.01	25,180.07	50.10	6,782.31	27.13	3,672.34	291.15	39,411.73	135.4	0.8	73.57	110.2	9.56	1,294.70	9,959.24	30.31	4,102.75	23.39	3,166.55	136.84	18,523.24
97	3352.091	Elbow 90 degrees NPS 1-1/2 Type K, Piping Specification NB11	ea	11	77	1.6	170.1	121.1	25.5	1,965.07	13,100.44	55.16	4,247.55	24.81	1,910.61	275.63	21,223.67	77.0	0.2	22.07	18.8	2.87	220.95	1,699.65	4.09	315.27	6.01	462.92	35.05	2,698.80
98	3352.092	Tee NPS 1-1 /2 Type K, Piping Specification NB11	ea	2	8	2.2	241.0	17.8	36.1	289.23	1,928.20	65.47	523.73	35.15	281.22	377.80	3,022.38	8.0	0.5	43.32	3.8	5.63	45.06	346.59	6.68	53.41	11.53	92.21	67.16	537.26
99	3352.093	Tee Reducing NPS 1-1/2 x 1-1/2 x 1/2 Type K, Piping Specification NB11	ea	15	21	2.2	241.0	46.8	36.1	759.23	5,061.53	70.29	1,476.15	35.15	738.19	382.62	8,035.11	21.0	0.5	44.02	10.2	5.72	120.17	924.35	8.44	177.28	12.04	252.94	70.23	1,474.74
100	3352.094	Tee Reducing NPS 1-1/2 x K 1-1/2 x 3/4 Type K, Piping Specification NB11	ea	10	9	2.2	241.0	20.1	36.1	325.38	2,169.23	60.41	543.69	35.15	316.37	372.74	3,354.67	9.0	0.5	44.06	4.4	5.73	51.55	396.50	8.44	75.97	12.05	108.48	70.28	632.50
101	3352.095	Tee Reducing NPS 1-1/2 x 1-1/2 x 1 Type K, Piping Specification NB11	ea	2	5	2.2	241.0	11.1	36.1	180.77	1,205.13	60.41	302.05	35.15	175.76	372.74	1,863.71	5.0	0.5	42.98	2.4	5.59	27.93	214.88	8.44	42.21	11.80	59.00	68.80	344.02
102	3352.096	Concentric Reducer NPS 1-1/2 x 1-1/2 x 1/2 Type K, Piping Specification NB11	ea	1	1	1.6	170.1	1.6	25.5	25.52	170.14	42.31	42.31	24.81	24.81	262.78	262.78	1.0	0.2	16.64	0.2	2.16	2.16	16.64	5.73	5.73	5.05	5.05	29.59	29.59
103	3352.097	Concentric Reducer NPS 1-1/2 x 1-1/2 x 3/4 Type K, Piping Specification NB11	ea	1	3	1.6	170.1	4.7	25.5	76.56	510.41	42.31	126.92	24.81	74.44	262.78	788.33	3.0	0.3	24.96	0.8	3.24	9.73	74.87	5.73	17.19	7.02	21.06	40.95	122.86

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
104	3352.098	Concentric Reducer NPS 1-1/2 x 1-1/2 x 1 Type K, Piping Specification NB11	ea	1	2	1.6	170.1	3.1	25.5	51.04	340.27	47.41	94.81	24.81	49.63	267.88	535.75	2.0	0.2	16.64	0.4	2.16	4.33	33.28	5.73	11.46	5.05	10.11	29.59	59.18
105	3352.099	Cap NPS 1-1/2 Type K, Piping Specification NB11	ea	3	4	0.9	99.2	3.7	14.8	59.55	396.98	21.86	87.45	14.47	57.90	150.47	601.88	4.0	0.2	20.80	0.9	2.70	10.81	83.18	3.30	13.20	5.55	22.20	32.35	129.40
106	3352.100	Weld NPS 1-1/2, Piping Specification NB11	ea	141	133	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	133.0	2.0	177.00	260.4	23.01	3,060.39	23,541.45	0.00	0.00	41.60	5,532.57	241.61	32,134.41
107	3352.101	Pipe insulation NPS 1-1/2	Linear meter	160	135	1.5	147.3	196.2	22.1	2,977.90	19,852.68	42.73	5,756.29	8.55	1,151.87	220.74	29,738.75	134.7	3.3	302.53	450.8	39.33	5,298.41	40,757.01	210.39	28,344.47	95.96	12,927.35	648.20	87,327.24
108	3352.102	Pipe identification NPS 1-1/2	Linear meter	160	46	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.5	0.6	50.35	25.4	6.55	298.09	2,293.00	12.06	549.43	14.26	649.49	83.22	3,790.01
109	3352.103	Pipe NPS 2 Type K, Piping Specification NB11	m	91	132	2.1	232.5	283.2	34.8	4,593.66	30,624.40	74.59	9,823.65	33.91	4,466.36	375.89	49,508.08	131.7	10.9	982.28	1,431.0	127.70	16,818.53	129,373.32	64.69	8,520.66	243.87	32,120.06	1,418.54	186,832.58
110	3352.104	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	25	0	2.3	244.1	0.0	36.6	0.00	0.00	56.83	0.00	35.61	0.00	373.21	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.99	0.00	17.45	0.00	101.63	0.00
111	3352.105	Elbow 45 degrees NPS 2 Type K, Piping Specification NB11	ea	1	5	1.8	198.4	9.2	29.7	148.87	992.46	74.68	373.40	28.95	144.74	331.89	1,659.47	5.0	0.1	9.98	0.6	1.30	6.49	49.91	5.49	27.46	3.45	17.26	20.22	101.12
112	3352.106	Elbow 90 degrees NPS 2 Type K, Piping Specification NB11	ea	17	71	1.8	198.4	130.3	29.7	2,113.93	14,092.90	74.68	5,302.27	28.95	2,055.35	331.89	23,564.45	71.0	0.2	22.00	17.3	2.86	203.09	1,562.25	10.81	767.63	7.35	521.70	43.02	3,054.68
113	3352.107	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	18	0	8.5	921.5	0.0	138.2	0.00	0.00	171.71	0.00	134.40	0.00	1,365.92	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	9.64	0.00	17.58	0.00	102.41	0.00
114	3352.108	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	0	11.1	1,205.1	0.0	180.7	0.00	0.00	268.91	0.00	175.76	0.00	1,830.56	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
115	3352.109	Tee Reducing NPS 2 x 3/4 Type K, Piping Specification NB11	ea	8	6	2.6	276.4	15.3	41.4	248.82	1,658.82	90.86	545.14	40.32	241.93	449.12	2,694.72	6.0	0.5	43.90	2.9	5.71	34.24	263.40	13.69	82.12	13.07	78.44	76.37	458.21
116	3352.110	Tee Reducing NPS 2 x 1 1/2 Type K, Piping Specification NB11	ea	1	25	2.6	276.4	63.9	41.4	1,036.76	6,911.76	73.82	1,845.54	40.32	1,008.03	432.08	10,802.09	25.0	2.3	209.84	58.0	27.28	681.97	5,245.91	25.32	632.88	54.41	1,360.30	316.84	7,921.06
117	3352.111	Tee Reducing SW Class 3000 NPS 2 x 3/4, Piping Specification SB11	ea	4	0	11.1	1,205.1	0.0	180.7	0.00	0.00	238.38	0.00	175.76	0.00	1,800.04	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
118	3352.112	Tee Reducing SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	4	0	11.1	1,205.1	0.0	180.7	0.00	0.00	266.81	0.00	175.76	0.00	1,828.47	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
119	3352.113	Concentric Reducer NPS 2 x 3/4 Type K, Piping Specification NB11	ea	1	0	1.8	198.4	0.0	29.7	0.00	0.00	47.85	0.00	28.95	0.00	305.06	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	5.73	0.00	8.97	0.00	52.29	0.00
120	3352.114	Concentric Reducer NPS 2 x 1 1/2 Type K, Piping Specification NB11	ea	1	4	1.8	198.4	7.3	29.7	119.09	793.97	47.85	191.39	28.95	115.79	305.06	1,220.25	4.0	1.3	119.57	5.3	15.54	62.18	478.28	13.42	53.66	30.80	123.21	179.33	717.33
121	3352.115	Concentric Reducer SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	1	0	8.5	921.5	0.0	138.2	0.00	0.00	183.09	0.00	134.40	0.00	1,377.29	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
122	3352.116	Coupling NPS 2, Robar model 1506	ea	1	0	3.9	421.0	0.0	63.1	0.00	0.00	520.15	0.00	61.41	0.00	1,065.81	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	70.04	0.00	21.92	0.00	129.56	0.00
123	3352.117	Union NPS 2 Type K, Piping Specification NB11	ea	3	54	1.8	198.4	99.1	29.7	1,607.79	10,718.54	187.74	10,137.90	28.95	1,563.23	444.95	24,027.45	54.0	1.6	140.84	84.1	18.31	988.71	7,605.47	101.39	5,475.16	53.51	2,889.69	314.06	16,959.04
124	3352.118	Flange Slip-On SS 150RF NPS 2 c/w hardware, Piping Specification SB11	ea	8	18	8.8	952.2	158.5	142.8	2,371.17	17,141.16	492.03	8,856.53	138.88	2,499.92	1,726.04	31,068.79	18.0	1.1	99.89	19.9	12.99	233.75	1,798.08	47.59	856.56	33.06	595.03	193.52	3,483.41
125	3352.119	Weld NPS 2, Piping Specification NB11	ea	169	229	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.0	2.6	236.00	597.8	30.68	7,025.86	54,045.09	0.00	0.00	55.46	12,701.38	322.15	73,772.33
126	3352.120	Ball Valve NPS 2, Valve Specification VBA08	ea	2	14	7.7	829.4	107.4	124.4	1,741.76	11,611.75	103.08	1,443.07	120.96	1,693.50	1,177.86	16,490.09	14.0	3.5	313.42	48.5	40.74	570.42	4,387.87	107.00	1,497.96	95.20	1,332.80	556.36	7,789.05
127	3352.121	Ball Valve NPS 2, Valve Specification VBA11	ea	10	1	14.7	1,587.9	14.7	238.1	238.19	1,587.93	406.63	406.63	231.59	231.59	2,464.34	2,464.34	1.0	2.0	181.61	2.0	23.61	23.61	181.61	58.40	58.40	54.44	54.44	318.07	318.07
128	3352.122	Check valve NPS 2, Valve Specification VCH12	ea	1	3	14.7	1,587.9	44.0	238.1	714.57	4,763.80	1,669.22	5,007.67	231.59	694.77	3,726.93	11,180.80	3.0	1.9	176.07	5.8	22.89	68.67	528.20	191.64	574.92	79.96	239.88	470.56	1,411.67
129	3352.123	Globe valve NPS 2, Valve Specification VGL05	ea	1	0	14.7	1,587.9	0.0	238.1	0.00	0.00	2,061.65	0.00	231.59	0.00	4,119.36	0.00	0.0	3.8	346.59	0.0	45.06	0.00	0.00	1,536.80	0.00	390.85	0.00	2,319.29	0.00
130	3352.124	Globe valve NPS 2, Valve Specification VGL06	ea	1	0	14.7	1,587.9	0.0	238.1	0.00	0.00	2,061.65	0.00	231.59	0.00	4,119.36	0.00	0.0	3.8	346.59	0.0	45.06	0.00	0.00	1,536.80	0.00	390.85	0.00	2,319.29	0.00
131	3352.125	Pipe insulation NPS 2	Linear meter	116	123	1.5	149.2	180.6	22.3	2,742.29	18,281.93	45.55	5,581.78	8.55	1,047.63	225.69	27,653.64	122.5	3.6	326.25	442.2	42.41	5,196.77	39,975.13	212.09	25,987.42	100.50	12,314.29	681.25	83,473.61
132	3352.126	Pipe identification NPS 2	Linear meter	116	41	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.4	0.6	50.57	23.2	6.57	272.32	2,094.77	12.06	499.70	14.31	592.90	83.52	3,459.69
133	3352.127	Pipe NPS 2-1/2 Type K, Piping Specification NB11	m	19	214	2.1	232.5	460.1	34.8	7,463.85	49,758.99	98.95	21,176.22	33.91	7,257.01	400.26	85,656.07	214.0	6.0	538.33	1,274.3	69.98	14,976.27	115,202.11	67.83	14,515.16	140.17	29,996.47	816.31	174,690.02
134	3352.128	Pipe NPS 2-1/2 Sch.10S, Piping Specification SB11	m	1	0	2.6	279.0	0.0	41.8	0.00	0.00	79.30	0.00	40.69	0.00	440.87	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	11.92	0.00	10.23	0.00	59.74	0.00
135	3352.129	Elbow 45 degrees NPS 2-1/2 Type K, Piping Specification NB11	ea	2	2	2.2	241.0	4.5	36.1	72.31	482.05	192.47	384.95	35.15	70.30	504.80	1,009.61	2.0	1.3	115.76	2.6	15.05	30.10	231.52	26.91	53.81	32.62	65.23	190.33	380.66
136	3352.130	Elbow 90 degrees NPS 2-1/2 Type K, Piping Specification NB11	ea	7	26	2.2	241.0	57.9	36.1	940.00	6,266.66	192.47	5,004.30	35.15	913.95	504.80	13,124.91	26.0	2.5	229.56	66.0	29.84	775.90	5,968.43	23.37	607.62	58.65	1,525.00	341.42	8,876.94
137	3352.131	Tee NPS 2-1/2 Type K, Piping Specification NB11	ea	1	8	3.1	340.2	25.2	51.0	408.33	2,722.17	240.03	1,920.26	49.63	397.01	680.97	5,447.77	8.0	3.4	303.09	26.8	39.40	315.21	2,424.71	36.16	289.24	78.51	628.07	457.15	3,657.24
138	3352.132	Concentric Reducer Type K 2-1/2 x 1 1/2, Piping Specification NB11	ea	1	1	2.2	241.0	2.2	36.1	36.15	241.03	194.67	194.67	35.15	35.15	507.00	507.00	1.0	2.4	214.88	2.4	27.93	27.93	214.88	18.49	18.49	54.21	54.21	315.52	315.52
139	3352.133	Concentric Reducer Type K 2-1/2 x 2, Piping Specification NB11	ea	2	4	2.2	241.0	8.9	36.1	144.62	964.10	195.88	783.51	35.15	140.61	508.21	2,032.83	4.0	2.4	214.54	9.5	27.89	111.56	858.14	18.48	73.94	54.14	216.55	315.05	1,260.19
140	3352.134	Victaulic Coupling NPS 2-1/2, Style 07	ea	24	0	0.5	53.1	0.0	7.9	0.00	0.00	67.55	0.00	7.75	0.00	136.45	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	59.69	0.00	27.67	0.00	162.54	0.00
141	3352.135	Victaulic Coupling NPS 2-1/2, Style 77	ea	7	0	0.3	37.2	0.0	5.5	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	34.54	0.00	22.60	0.00	132.33	0.00
142	3352.136	Victaulic Coupling NPS 2-1/2 Copper x 2-1/2 SS, Style 667	ea	4	0	0.5	53.1	0.0	7.9	0.00	0.00	67.55	0.00	7.75	0.00	136.45	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	52.03	0.00	26.11	0.00	153.33	0.00
143	3352.137	Victaulic Tee Reducing NPS 2-1/2 x 3/4, Style 25	ea	1	0	6.5	701.8	0.0	105.2	0.00	0.00	215.83	0.00	102.35	0.00	1,125.26	0.00	0.0	3.1	280.05	0.0	36.41	0.00	0.00	103.48	0.00	86.65	0.00	506.59	0.00
144	3352.138	Victaulic Tee Reducing NPS 2-1/2 x 1, Style 25	ea	1	0	6.5	701.8	0.0	105.2	0.00	0.00	215.83	0.00	102.35	0.00	1,125.26	0.00	0.0	3.1	280.05	0.0	36.41	0.00	0.00	103.48	0.00	86.65	0.00	506.59	0.00
145	3352.139	Weld NPS 2-1/2, Piping Specification NB11	ea	33	140	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140.0	4.0	358.35	554.9	46.59	6,521.96	50,168.89	0.00	0.00	84.22	11,790.41	489.15	68,481.26
146	3352.140	Ball Valve NPS 2-1/2, Valve Specification VBA08	ea	1	2	13.0	1,403.6	26.0	210.5	421.09	2,807.24	227.66	455.33	204.71	409.42	2,046.53	4,093.06	2.0	4.2	379.17	8.4	49.29	98.58	758.33	167.92	335.83	122.91	245.83	719.29	1,438.57
147	3352.141	Pipe insulation NPS 2-1/2	Linear meter	20	214	1.5	150.5	318.4	22.5	4,833.20	32,221.31	50.67	10,842.51	8.55	1,829.45	232.40	49,726.47	214.0	5.1	460.34	1,089.5	59.84	12,804.93	98,499.47	260.66	55,774.47	134.04	28,679.88	914.89	195,758.75
148	3352.142	Pipe identification NPS 2-1/2	Linear meter	20	72	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.3	0.6	50.41	40.3	6.55	473.99	3,646.07	12.06	872.62	14.28	1,032.57	83.30	6,025.24
149	3352.143	Pipe NPS 3 Type K, Piping Specification NB11	m	1	4	2.4	255.7	8.7	38.3	140.36	935.75	134.43	491.81	37.30	136.47	465.87	1,704.39	3.7	6.2	561.61	22.7	73.01	267.11	2,054.68	70.86	259.26	146.26	535.09	851.74	3,116.13
150	3352.144	Pipe NPS 3 Sch.10S, Piping Specification SB11	m	1	0	3.4	372.0	0.0	55.8	0.00	0.00	118.53	0.00	54.26	0.00	600.63	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	18.79	0.00	11.60	0.00	67.99	0.00
151	3352.145	Tee Reducing NPS 3 x 2 Type K, Piping Specification NB11	ea	1	1	3.8	408.3	3.8	61.2	61.25	408.33	288.04	288.04	59.55	59.55	817.17	817.17	1.0	6.8	609.99	6.8	79.30	79.30	609.99	50.28	50.28	153.47	153.47	893.04	893.04
152	3352.146	Concentric Reducer NPS 3 x 2 Type K, Piping Specification NB11	ea	1	1	2.6	283.5	2.6	42.5	42.53	283.56	216.84	216.84	41.36	41.36	584.29	584.29	1.0	2.9	263.40	2.9	34.24	34.24	263.40	5.73	5.73	63.06	63.06	366.43	366.43
153	3352.147	Eccentric Reducer SW NPS 3 x 2 Sch.10S, Piping Specification SB11	ea	1	0	18.3	1,977.8	0.0	296.6	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	8.00	0.00	13.35	0.00	77.75	0.00
154	3352.148	Coupling SW/MNPT NPS 3, Piping Specification NB11	ea	1	127	3.1	340.2	399.6	51.0	6,482.17	43,214.44	48.39	6,145.34	49.63	6,302.54	489.33	62,144.48	127.0	0.2	22.08	31.0	2.87	364.59	2,804.57	2.80	355.66	5.75	730.72	33.51	4,255.54
155	3352.149	Cap NPS 3 Type K, Piping Specification NB11	ea	1	1	1.4	155.9	1.4	23.3	23.39	155.96	98.50	98.50	22.75	22.75	300.60	300.60	1.0	3.3	296.68	3.3	38.57	38.57	296.68	26.74	26.74	75.12	75.12	437.11	437.11
156	3352.150	Weld NPS 3, Piping Specification NB11	ea	11	4	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	5.4	490.77	21.7	63.80	255.20	1,963.06	0.00	0.00	115.34	461.34	669.90	2,679.60
157	3352.151	Pipe insulation NPS 3	Linear meter	1	1	1.5	155.7	1.5	23.3	23.36	155.73	52.61	52.60	8.55	8.55	240.30	240.24	1.0	5.2	467.32	5.2	60.75	60.74	467.20	284.27	284.20	140.05	140.01	952.39	952.15
158	3352.152	Pipe identification NPS 3	Linear meter	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.2	16.41	0.2	2.13	2.16	16.64	4.02	4.07	4.66	4.73	27.23	27.60
B&M-0011	Added	2.5" coupling, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		40	2.2	241.0	89.1	36.1	1,446.15	9,641.02	79.77	3,190.93	35.15	1,406.08	392.10	15,684.17	40.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0012	Added	2" coupling, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		10	1.8	198.4	18.4	29.7	297.74	1,984.92	21.22	212.17	28.95	289.49	278.43	2,784.31	10.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0013	Added	1.25" 90 elbow, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		40	1.4	148.8	55.1	22.3	893.21	5,954.75	32.15	1,286.19	21.71	868.46	225.07	9,002.61	40.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0014	Added	3" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	3.7	404.0	3.7	60.6	60.61	404.07	298.92	298.92	58.93	58.93	822.53	822.53	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0015	Added	2" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		7	2.6	276.4	17.9	41.4	290.30	1,935.29	79.75	558.28	40.32	282.25	438.02	3,066.11	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0016	Added	1.25" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		3	1.8	198.4	5.5	29.7	89.32	595.47	37.61	112.82	28.95	86.85	294.82	884.46	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0017	Added	1" tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		4	1.6	170.1	6.3	25.5	102.08	680.54	25.03	100.11	24.81	99.25	245.50	981.99	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0018	Added	2.5"x1" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	2.2	241.0	2.2	36.1	36.15	241.03	185.92	185.92	35.15	35.15	498.25	498.25	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0019	Added	1.5"x1.25" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	1.6	170.1	1.6	25.5	25.52	170.14	42.16	42.16	24.81	24.81	262.63	262.63	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0020	Added	2.5"x2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		4	3.1	340.2	12.6	51.0	204.16	1,361.08	278.84	1,115.38	49.63	198.51	719.78	2,879.13	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0021	Added	2.5"x1.5" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	3.1	340.2	3.1	51.0	51.04	340.27	313.94	313.94	49.63	49.63	754.87	754.87	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0022	Added	2.5"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		2	3.1	340.2	6.3	51.0	102.08	680.54	335.41	670.82	49.63	99.25	776.35	1,552.70	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0023	Added	2.5"x1" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		3	3.1	340.2	9.4	51.0	153.12	1,020.81	335.41	1,006.23	49.63	148.88	776.35	2,329.04	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0024	Added	2.5"x3/4" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		2	3.1	340.2	6.3	51.0	102.08	680.54	335.41	670.82	49.63	99.25	776.35	1,552.70	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0025	Added	2.5"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	3.1	340.2	3.1	51.0	51.04	340.27	335.41	335.41	49.63	49.63	776.35	776.35	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0026	Added	2"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		2	2.6	276.4	5.1	41.4	82.94	552.94	73.82	147.64	40.32	80.64	432.08	864.17	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0027	Added	2"x1" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	2.6	276.4	2.6	41.4	41.47	276.47	93.40	93.40	40.32	40.32	451.66	451.66	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0028	Added	2"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		6	2.6	276.4	15.3	41.4	248.82	1,658.82	107.09	642.53	40.32	241.93	465.35	2,792.10	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0029	Added	1.5"x1.25" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		3	2.2	241.0	6.7	36.1	108.46	723.08	62.08	186.23	35.15	105.46	374.41	1,123.22	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0030	Added	1"x3/4" reducer, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	1.1	120.5	1.1	18.0	18.08	120.51	21.89	21.89	17.58	17.58	178.05	178.05	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0031	Added	1"x1/2" reducing tee, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		21	2.2	241.0	46.8	36.1	759.39	5,061.53	31.05	652.06	35.15	738.19	343.38	7,211.01	21.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0032	Added	2.5" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	1.2	134.6	1.2	20.2	20.20	134.69	42.51	42.51	19.64	19.64	217.05	217.05	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0033	Added	2" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	1.0	113.4	1.0	17.0	17.01	113.42	12.37	12.37	16.54	16.54	159.35	159.35	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0034	Added	1/2" cap, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		56	0.5	56.7	29.4	8.5	476.38	3,175.86	32.14	1,799.77	8.27	463.18	105.63	5,915.20	56.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0035	Added	1.25" FNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		9	0.7	77.9	6.5	11.7	105.27	701.81	53.83	484.43	11.37	102.35	154.87	1,393.86	9.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0036	Added	1" FNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		1	0.7	77.9	0.7	11.7	11.70	77.98	19.27	19.27	11.37	11.37	120.31	120.31	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0037	Added	2" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		2	1.0	113.4	2.1	17.0	34.03	226.85	88.09	176.19	16.54	33.08	235.07	470.15	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0038	Added	1" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		6	0.7	77.9	4.3	11.7	70.18	467.87	18.00	108.01	11.37	68.24	119.05	714.30	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0039	Added	3/4" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		4	0.7	70.8	2.6	10.6	42.53	283.56	11.34	45.35	10.34	41.36	103.20	412.80	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0040	Added	1/2" MNPT thread adapter, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		56	0.5	56.7	29.4	8.5	476.38	3,175.86	7.19	402.56	8.27	463.18	80.68	4,517.98	56.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0041	Added	1.25" union, EPDM packing, compression ends, ANSI B16.22 and B16.18 - Viega Propress or equal	ea		5	1.4	148.8	6.9	22.3	111.65	744.34	116.43	582.14	21.71	108.56	309.34	1,546.69	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0042	Added	1/2" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		6	1.1	116.2	6.6	17.4	106.35	708.90	8.79	53.62	16.96	103.39	159.45	972.24	6.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0043	Added	2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		6	1.8	191.4	10.6	28.7	172.39	1,149.43	14.22	85.34	27.91	167.49	262.25	1,573.50	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0044	Added	1/2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		4	1.2	134.6	5.0	20.2	80.81	538.76	8.30	33.19	19.64	78.57	182.84	731.34	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0045	Added	2"x1" reducer, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		2	1.8	191.4	3.5	28.7	57.42	382.81	15.95	31.89	27.91	55.83	263.97	527.95	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0046	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		3	1.8	191.4	5.3	28.7	86.13	574.21	24.42	73.26	27.91	83.74	272.45	817.35	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0047	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea		2	0.5	59.0	1.1	8.8	17.72	118.15	15.44	30.89	8.62	17.23	91.99	183.99	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0048	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea		1	0.5	59.0	0.5	8.8	8.86	59.07	41.67	41.67	8.62	8.62	118.22	118.22	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0049	Added	2" UNION SS Socket Weld FNPT ASTM A182	ea		1	14.4	1,556.0	14.4	233.4	233.40	1,556.03	154.46	154.46	226.94	226.94	2,170.83	2,170.83	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0050	Added	2" swing check valve, class 150 (300CWP or WOG), bronze body to ASTM B62 (C83600), brass disc/seat - SI - Crane model 1342, Kitz model C150YR or equal VCH09	ea		3	7.7	829.4	23.0	124.4	373.19	2,488.23	241.09	723.26	120.96	362.89	1,315.87	3,947.62	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
B&M-0051	Added	1.25" swing check valve, class 150 (300CWP or WOG), bronze body to ASTM B62 (C83600), brass disc/seat - SI - Crane model 1342, Kitz model C150YR or equal VCH09	ea		4	5.8	630.9	23.3	94.6	378.55	2,523.68	168.32	673.27	92.02	368.06	985.89	3,943.56	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0052	Added	1/2" ball check valve, PVC body/ball, PTFE seat - SOC - Hayward model TC, Chemline model BT or equal VCH10	ea		1	1.3	141.7	1.3	21.2	21.27	141.78	174.85	174.85	20.68	20.68	358.57	358.57	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0053	Added	1.5" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SI - Crane model LF9202 or equal VBA08	ea		2	6.5	701.8	13.0	105.2	210.54	1,403.62	79.97	159.94	102.35	204.71	989.40	1,978.81	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0054	Added	1.25" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SI - Crane model LF9202 or equal VBA08	ea		12	5.8	630.9	70.0	94.6	1,135.65	7,571.03	61.88	742.55	92.02	1,104.18	879.45	10,553.42	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0055	Added	1" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, PTFE seats/packing, live loaded stem seals, lever operator - SI - Crane model LF9202 or equal VBA08	ea		4	5.2	567.1	21.0	85.0	340.27	2,268.47	47.04	188.14	82.71	330.84	781.93	3,127.73	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0056	Added	1/2" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal VBA09	ea		2	1.3	141.7	2.6	21.2	42.53	283.56	491.52	983.03	20.68	41.36	675.24	1,350.48	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0057	Added	2" COMBINATION AUTOMATIC AIR VENT/VACUUM OR AUTOMATIC AIR VENT ONLY 3352-AV-8XXX	ea		1	14.7	1,587.9	14.7	238.1	238.19	1,587.93	11,560.27	11,560.27	231.59	231.59	13,617.98	13,617.98	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0058	Added	Pipe Insulation - All Sizes	ea		1	2703.0	276,069.46	2703.0	41,410.42	41,410.42	276,069.46	79,539.45	79,539.45	0.00	0.00	397,019.34	397,019.34	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		SDS (Wastewater)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
159	3353.010	Septic pumping station 3353-SPS-5000	ea	1	1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	21,798.00	21,798.00	2,205.61	2,205.61	41,395.25	41,395.25	1.0	104.6	9,453.46	104.6	1,228.95	1,228.95	9,453.46	19,640.91	19,640.91	6,175.93	6,175.93	36,499.25	36,499.25
160	3353.020	Pump 3353-P-5000 / 5001	ea	2	2	139.8	15,123.1	279.7	2,268.4	4,536.95	30,246.33	9,093.84	18,187.68	2,205.61	4,411.22	28,691.09	57,382.17	2.0	71.7	6,483.22	143.4	842.82	1,685.64	12,966.43	8,192.49	16,384.98	3,173.02	6,346.03	18,691.54	37,383.07
161	3353.030	Level switch 3353-LSL-5000 / 5001 / 3353-LSH-5000 / 5001 / 3353-LSHH-5000	ea	5	5	52.4	5,671.1	262.2	850.6	4,253.39	28,355.93	1,020.92	5,104.60	827.10	4,135.52	8,369.89	41,849.44	5.0	25.3	2,289.13	126.6	297.59	1,487.93	11,445.63	664.42	3,322.11	671.74	3,358.72	3,922.88	19,614.39
162	3353.040	Control Panel 3353-CP-5000	ea	1	1	104.9	11,342.3	104.9	1,701.3	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	59,957.89	59,957.89	12,465.62	12,465.62	74,320.62	74,320.62
163	3353.050	Pipe NPS 1-1/2 Sch.DWV, Piping Specification PA01	m	7	77	1.3	139.5	99.3	20.9	1,611.35	10,742.36	35.32	2,719.35	20.35	1,566.70	216.10	16,639.76	77.0	5.8	527.28	449.1	68.55	5,278.05	40,600.36	7.36	566.50	125.40	9,655.73	728.58	56,100.63
164	3353.060	Elbow 45 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	6	25	1.7	184.3	42.6	27.6	691.18	4,607.84	14.71	367.80	26.88	672.02	253.55	6,338.84	25.0	0.2	14.83	4.1	1.93	48.21	370.85	2.16	53.93	3.92	98.00	22.84	570.99
165	3353.070	Elbow 90 degrees Sch DWV NPS 1 1/2, Piping Specification PA01	ea	7	35	1.7	184.3	59.6	27.6	967.65	6,450.97	16.15	565.20	26.88	940.83	254.99	8,924.65	35.0	0.3	29.05	11.3	3.78	132.16	1,016.65	2.54	88.80	7.34	256.79	42.70	1,494.40
166	3353.080	"P" Drain Trap SW NPS 1-1/2, Piping Specification PA01	ea	13	15	1.7	184.3	25.6	27.6	414.71	2,764.70	28.36	425.37	26.88	403.21	267.20	4,007.99	15.0	0.3	29.67	4.9	3.86	57.85	445.01	9.29	139.37	8.84	132.64	51.66	774.87
167	3353.090	Tee wye SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	1	2	2.4	255.2	4.7	38.2	76.56	510.41	23.46	46.93	37.22	74.44	354.17	708.34	2.0	0.7	66.54	1.5	8.65	17.30	133.08	4.39	8.78	16.52	33.04	96.10	192.19
168	3353.100	Pipe identification NPS 1-1/2	Linear meter	7	28	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.6	0.6	50.81	15.5	6.60	182.39	1,402.98	12.06	333.13	14.37	396.79	83.84	2,315.29
169	3353.110	Pipe NPS 2 Sch.DWV, Piping Specification PA01	m	36	232	1.3	139.5	298.9	20.9	4,848.86	32,325.76	33.24	7,702.69	20.35	4,714.50	214.03	49,591.81	231.7	10.9	988.79	2,534.2	128.54	29,784.26	229,109.73	16.98	3,934.95	235.80	54,636.37	1,370.11	317,465.31
170	3353.120	Pipe NPS 2 Sch.40, Piping Specification PA02	m	81	74	1.5	162.7	111.4	24.4	1,806.67	12,044.46	18.21	1,347.59	23.74	1,756.60	229.13	16,955.33	74.0	1.2	106.34	87.0	13.82	1,022.95	7,868.87	9.94	735.89	26.99	1,997.46	157.10	11,625.17
171	3353.130	Elbow 45 degrees Sch.DWV NPS 2, Piping Specification PA01	ea	30	32	1.8	191.4	56.6	28.7	918.73	6,124.88	17.96	574.63	27.91	893.27	265.99	8,511.52	32.0	0.2	14.77	5.2	1.92	61.45	472.68	3.31	105.91	4.14	132.42	24.14	772.46
172	3353.140	Elbow 45 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	15	47	1.8	191.4	83.2	28.7	1,349.39	8,995.92	19.82	931.76	27.91	1,311.99	267.85	12,589.06	47.0	0.3	25.28	13.1	3.29	154.45	1,188.10	6.99	328.50	7.35	345.36	42.90	2,016.41
173	3353.150	Elbow 90 degrees SW Sch.DWV NPS 2, Piping Specification PA01	ea	4	56	1.8	191.4	99.1	28.7	1,607.78	10,718.54	18.68	1,045.83	27.91	1,563.23	266.70	14,935.38	56.0	0.3	29.34	18.2	3.81	213.63	1,643.29	3.80	212.78	7.66	429.01	44.62	2,498.71
174	3353.160	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA01	ea	4	0	1.8	191.4	0.0	28.7	0.00	0.00	18.68	0.00	27.91	0.00	266.70	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.17	0.00	9.48	0.00	55.25	0.00
175	3353.170	Sanitary Tee SW Sch.DWV NPS 2, Piping Specification PA01	ea	5	13	2.5	269.3	32.4	40.4	525.29	3,501.96	35.36	459.62	39.29	510.74	384.43	4,997.61	13.0	0.6	58.33	8.4	7.58	98.58	758.33	6.67	86.71	15.05	195.68	87.64	1,139.30
176	3353.180	Sanitary Tee Reducing SW Sch.DWV NPS 2 2 x 2 x 1 1/2, Piping Specification PA01	ea	11	23	2.5	269.3	57.3	40.4	929.37	6,195.77	35.36	813.18	39.29	903.61	384.43	8,841.93	23.0	0.7	58.83	15.0	7.65	175.90	1,353.07	5.75	132.21	14.98	344.62	87.21	2,005.80
177	3353.190	Drain Trap SW Sch.DWV NPS 2, Piping Specification PA01	ea	1	2	1.8	191.4	3.5	28.7	57.42	382.81	33.04	66.08	27.91	55.83	281.07	562.13	2.0	0.4	33.27	0.7	4.33	8.65	66.54	17.51	35.02	11.33	22.67	66.44	132.88
178	3353.200	Tee Reducing SW Sch.DWV NPS 2 2 x 2 x 1 1/2, Piping Specification PA01	ea	1	0	2.5	269.3	0.0	40.4	0.00	0.00	35.36	0.00	39.29	0.00	384.43	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.17	0.00	17.29	0.00	100.65	0.00
179	3353.210	Tee Wye SW Sch.DWV NPS 2, Piping Specification PA01	ea	1	10	2.5	269.3	24.9	40.4	404.07	2,693.81	28.52	285.18	39.29	392.87	377.59	3,775.94	10.0	0.7	66.54	7.4	8.65	86.50	665.40	8.17	81.71	17.29	172.88	100.65	1,006.50
180	3353.220	Tee Wye Reducer SW Sch.DWV NPS 2 2 x 2 x 1 1/2 Sch DWV, Piping Specification PA01	ea	1	20	2.5	269.3	49.8	40.4	808.14	5,387.63	35.36	707.12	39.29	785.75	384.43	7,688.64	20.0	0.7	66.54	14.8	8.65	173.00	1,330.80	8.17	163.43	17.29	345.76	100.65	2,013.00
181	3353.230	Concentric Reducer Sch.DWV NPS 2 x 1 1/2, Piping Specification PA01	ea	5	14	1.8	191.4	24.8	28.7	401.95	2,679.64	15.03	210.38	27.91	390.81	263.05	3,682.77	14.0	0.4	32.98	5.1	4.29	60.01	461.65	3.65	51.14	8.48	118.79	49.40	691.59
182	3353.240	Coupling SW Sch.DWV NPS 2 , Piping Specification PA01	ea	1	0	2.5	269.3	0.0	40.4	0.00	0.00	24.21	0.00	39.29	0.00	373.29	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.17	0.00	9.48	0.00	55.25	0.00
183	3353.250	Union SW Sch.DWV NPS 2, Piping Specification SB11	ea	2	5	8.5	921.5	42.6	138.2	691.18	4,607.84	1,191.56	5,957.79	134.40	672.02	2,385.77	11,928.83	5.0	0.3	29.67	1.6	3.86	19.28	148.34	4.89	24.46	7.96	39.78	46.37	231.86
184	3353.260	Ball Valve NPS 2, Valve Specification VBA09	ea	2	3	2.1	226.8	6.3	34.0	102.08	680.54	980.01	2,940.03	33.08	99.25	1,273.97	3,821.91	3.0	2.3	208.87	6.9	27.15	81.46	626.62	62.15	186.44	61.60	184.81	359.78	1,079.33
185	3353.270	Ball Valve NPS 2, Valve Specification VBA10	ea	1	0	2.1	226.8	0.0	34.0	0.00	0.00	980.01	0.00	33.08	0.00	1,273.97	0.00	0.0	2.9	263.40	0.0	34.24	0.00	0.00	78.73	0.00	77.76	0.00	454.12	0.00
186	3353.280	Check Valve NPS 2, Valve Specification VCH10	ea	2	4	2.1	226.8	8.4	34.0	136.11	907.39	366.93	1,467.70	33.08	132.34	660.88	2,643.54	4.0	2.4	214.54	9.5	27.89	111.56	858.14	150.53	602.12	80.72	322.90	473.68	1,894.72
187	3353.290	Pipe identification NPS 2	Linear meter	117	76	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.1	0.6	50.49	42.5	6.56	499.76	3,844.32	12.06	918.61	14.29	1,088.41	83.41	6,351.10
188	3353.300	Pipe NPS 3 Sch.DWV, Piping Specification PA01	m	83	140	1.5	162.7	211.1	24.4	3,423.98	22,826.52	39.18	5,494.24	23.74	3,329.10	250.09	35,073.84	140.2	8.5	768.41	1,192.0	99.89	14,009.35	107,764.22	20.00	2,804.82	184.61	25,890.87	1,072.91	150,469.27
189	3353.310	Elbow 45 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	43	48	2.5	269.3	119.6	40.4	1,939.55	12,930.30	31.39	1,506.78	39.29	1,885.80	380.47	18,262.43	48.0	0.1	10.66	5.7	1.39	66.50	511.55	8.62	413.60	4.24	203.49	24.90	1,195.14
190	3353.320	Elbow 60 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	1	0	2.5	269.3	0.0	40.4	0.00	0.00	35.70	0.00	39.29	0.00	384.78	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	11.64	0.00	6.26	0.00	36.70	0.00
191	3353.330	Elbow 90 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	13	66	2.5	269.3	164.4	40.4	2,666.88	17,779.17	35.70	2,356.23	39.29	2,592.97	384.78	25,395.25	66.0	0.2	21.98	16.1	2.86	188.62	1,450.90	10.16	670.61	7.21	475.99	42.21	2,786.12
192	3353.340	Elbow 90 degrees SW Sch.40 NPS 3, Piping Specification PA01	ea	1	0	2.5	269.3	0.0	40.4	0.00	0.00	35.70	0.00	39.29	0.00	384.78	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	11.64	0.00	10.17	0.00	59.40	0.00
193	3353.350	Sanitary Tee SW Sch.DWV NPS 3, Piping Specification PA01	ea	4	4	3.6	389.8	14.4	58.4	233.94	1,559.58	46.34	185.37	56.86	227.45	551.58	2,206.33	4.0	0.5	41.25	1.8	5.36	21.45	164.98	24.50	98.01	14.63	58.51	85.74	342.94
194	3353.360	Sanitary Tee Reducing SW Sch.DWV NPS 3 x 3 x 2, Piping Specification PA01	ea	1	3	3.6	389.8	10.8	58.4	175.45	1,169.68	46.34	139.03	56.86	170.59	551.58	1,654.75	3.0	0.5	43.90	1.5	5.71	17.12	131.71	12.22	36.67	12.78	38.34	74.61	223.83
195	3353.370	Drain Trap SW Sch.DWV NPS3, Piping Specification PA01	ea	15	2	2.5	269.3	5.0	40.4	80.81	538.76	107.52	215.04	39.29	78.57	456.60	913.19	2.0	0.3	24.96	0.6	3.24	6.49	49.91	7.83	15.67	7.44	14.88	43.47	86.95
196	3353.380	Tee Wye PVC SW Sch.DWV NPS 3, Piping Specification PA01	ea	9	14	3.6	389.8	50.5	58.4	818.78	5,458.52	46.34	648.79	56.86	796.09	551.58	7,722.17	14.0	0.5	44.06	6.8	5.73	80.18	616.78	15.85	221.88	13.54	189.63	79.18	1,108.47
197	3353.390	Tee Wye Reducer SW Sch.DWV NPS 3 x 3 x 2, Piping Specification PA01	ea	5	5	3.6	389.8	18.0	58.4	292.42	1,949.47	52.09	260.44	56.86	284.32	557.33	2,786.65	5.0	0.5	41.25	2.3	5.36	26.81	206.23	13.08	65.39	12.33	61.64	72.01	360.05
198	3353.400	Concentric Reducer SW Sch.DWV NPS 3 x 2, Piping Specification PA01	ea	1	3	2.5	269.3	7.5	40.4	121.22	808.14	34.26	102.79	39.29	117.86	383.34	1,150.02	3.0	0.2	16.64	0.6	2.16	6.49	49.91	8.52	25.55	5.62	16.87	32.94	98.82
199	3353.410	Concentric Reducer Male/Female SW Sch.DWV NPS 3 x 2, Piping Specification PA01	ea	1	0	2.5	269.3	0.0	40.4	0.00	0.00	34.26	0.00	39.29	0.00	383.34	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	11.64	0.00	6.26	0.00	36.70	0.00
200	3353.420	Coupling Sch.DWV NPS 3, Piping Specification PA01	ea	13	24	2.5	269.3	59.8	40.4	969.77	6,465.15	24.21	581.02	39.29	942.90	373.29	8,958.85	24.0	0.2	21.31	5.7	2.77	66.50	511.55	9.01	216.21	6.82	163.75	39.92	958.02
201	3353.430	Pipe identification NPS 3	Linear meter	83	44	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.9	0.6	50.38	24.5	6.55	287.46	2,211.22	12.06	529.54	14.27	626.28	83.26	3,654.49
202	3353.440	Pipe NPS 4 Sch.DWV, Piping Specification PA01	m	130	126	1.7	186.0	216.7	27.9	3,515.68	23,437.86	52.18	6,574.25	27.13	3,418.26	293.22	36,946.07	126.0	6.9	625.59	871.9	81.33	10,247.19	78,824.54	28.98	3,651.52	152.86	19,260.07	888.76	111,983.31
203	3353.450	Elbow 45 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	28	32	5.3	574.2	169.9	86.1	2,756.20	18,374.64	51.72	1,654.96	83.74	2,679.82	795.80	25,465.62	32.0	0.2	14.43	5.1	1.88	60.01	461.65	16.99	543.63	6.81	217.94	40.10	1,283.23
204	3353.460	Elbow 90 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	1	14	5.3	574.2	74.3	86.1	1,205.84	8,038.91	54.59	764.26	83.74	1,172.42	798.67	11,181.43	14.0	0.3	27.73	4.3	3.60	50.46	388.17	17.10	239.37	9.96	139.40	58.39	817.41
205	3353.470	Sanitary Tee Reducing SW Sch.DWV 4 x 4 x 2, Piping Specification PA01	ea	1	2	7.9	850.6	15.7	127.6	255.20	1,701.36	82.04	164.09	124.07	248.13	1,184.39	2,368.78	2.0	0.6	57.54	1.3	7.48	14.96	115.07	28.10	56.21	19.18	38.36	112.30	224.59
206	3353.480	Tee Wye SW Sch.DWV NPS 4, Piping Specification PA01	ea	8	9	7.9	850.6	70.8	127.6	1,148.42	7,656.10	82.04	738.40	124.07	1,116.59	1,184.39	10,659.51	9.0	0.6	56.84	5.7	7.39	66.50	511.55	25.15	226.36	18.42	165.78	107.80	970.19
207	3353.490	Tee Wye Reducer SW Sch.DWV NPS 4 x 4 x 2, Piping Specification PA01	ea	4	6	7.9	850.6	47.2	127.6	765.61	5,104.07	81.76	490.55	124.07	744.39	1,184.10	7,104.62	6.0	0.6	57.88	3.8	7.52	45.15	347.28	23.10	138.57	18.25	109.51	106.75	640.51
208	3353.500	Tee Wye Reducer SW Sch.DWV NPS 4 x 4 x 3, Piping Specification PA01	ea	14	16	7.9	850.6	125.8	127.6	2,041.63	13,610.85	79.17	1,266.75	124.07	1,985.05	1,181.52	18,904.28	16.0	0.6	57.73	10.2	7.51	120.08	923.70	22.83	365.36	18.16	290.63	106.24	1,699.77
209	3353.510	Coupling SW Sch.DWV NPS 4, Piping Specification PA01	ea	5	14	5.3	574.2	74.3	86.1	1,205.84	8,038.91	41.66	583.28	83.74	1,172.42	785.75	11,000.44	14.0	0.3	28.32	4.4	3.68	51.55	396.50	10.25	143.45	8.72	122.06	50.97	713.56
210	3353.520	Flexible Coupling NPS 4 x 4, Fernco series 1056	ea	1	0	0.5	57.4	0.0	8.6	0.00	0.00	13.58	0.00	8.37	0.00	87.99	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	10.51	0.00	9.92	0.00	58.02	0.00
211	3353.530	Cap SW Sch.DWV NPS 4, Piping Specification PA01	ea	2	0	5.3	574.2	0.0	86.1	0.00	0.00	51.72	0.00	83.74	0.00	795.80	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	5.84	0.00	9.00	0.00	52.43	0.00
212	3353.540	Pipe identification NPS 4	Linear meter	130	43	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.8	0.6	50.54	23.9	6.57	280.97	2,161.31	12.06	515.87	14.31	611.80	83.49	3,569.95
213	3353.550	Pipe NPS 6 Sch.DWV, Piping Specification PA01	m	4	18	2.6	279.0	47.2	41.8	765.61	5,104.07	99.47	1,819.50	40.69	744.39	461.04	8,433.57	18.3	4.4	398.81	80.7	51.84	948.38	7,295.21	50.50	923.69	103.89	1,900.44	605.04	11,067.72
214	3353.560	Concentric Reducer SW Sch.DWV NPS 6 x 4, Piping Specification PA01	ea	2	5	11.6	1,254.7	58.0	188.2	941.06	6,273.75	134.88	674.39	183.00	914.98	1,760.84	8,804.18	5.0	0.3	23.01	1.3	2.99	14.96	115.07	60.76	303.79	17.64	88.20	104.40	522.02
215	3353.570	Pipe identification NPS 6	Linear meter	4	2	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.5	47.77	1.1	6.21	12.80	98.44	12.07	24.86	13.66	28.14	79.70	164.25
B&M-0059	Added	6"x3" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	11.6	1,254.7	11.6	188.2	188.21	1,254.75	173.66	173.66	183.00	183.00	1,799.62	1,799.62	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0060	Added	4"x2" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		2	5.3	574.2	10.6	86.1	172.26	1,148.42	35.14	70.28	83.74	167.49	779.22	1,558.45	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0061	Added	3"x1.5" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	2.5	269.3	2.5	40.4	40.41	269.38	32.83	32.83	39.29	39.29	381.90	381.90	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0062	Added	4"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	7.9	850.6	7.9	127.6	127.60	850.68	86.35	86.35	124.07	124.07	1,188.70	1,188.70	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0063	Added	3"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		2	3.6	389.8	7.2	58.4	116.97	779.79	49.21	98.43	56.86	113.73	554.46	1,108.91	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0064	Added	4" cleanout, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	5.3	574.2	5.3	86.1	86.13	574.21	60.34	60.34	83.74	83.74	804.42	804.42	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0065	Added	3" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		3	1.5	162.7	4.6	24.4	74.43	496.23	46.24	140.99	23.74	72.37	257.16	784.02	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0066	Added	2" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		64	1.5	162.7	96.4	24.4	1,563.12	10,420.80	18.21	1,165.93	23.74	1,519.80	229.13	14,669.66	64.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0067	Added	3/4" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		6	1.1	116.2	6.6	17.4	106.33	708.90	9.69	59.08	16.96	103.39	160.34	977.70	6.1	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0068	Added	2" coupling, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		10	1.8	191.4	17.7	28.7	287.10	1,914.03	15.08	150.85	27.91	279.15	263.11	2,631.12	10.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0069	Added	3" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	2.5	269.3	2.5	40.4	40.41	269.38	25.07	25.07	39.29	39.29	374.15	374.15	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0070	Added	2" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		7	1.8	191.4	12.4	28.7	200.97	1,339.82	14.22	99.56	27.91	195.40	262.25	1,835.75	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0071	Added	3/4" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		4	1.2	134.6	5.0	20.2	80.81	538.76	8.59	34.34	19.64	78.57	183.12	732.49	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0072	Added	2" wye, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	2.5	269.3	2.5	40.4	40.41	269.38	49.49	49.49	39.29	39.29	398.57	398.57	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0073	Added	3"x2" reducer, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	2.5	269.3	2.5	40.4	40.41	269.38	30.31	30.31	39.29	39.29	379.39	379.39	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0074	Added	2"x3/4" reducing wye, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	2.5	269.3	2.5	40.4	40.41	269.38	55.81	55.81	39.29	39.29	404.89	404.89	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0075	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		2	1.8	191.4	3.5	28.7	57.42	382.81	24.42	48.84	27.91	55.83	272.45	544.90	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0076	Added	3" transition coupling - HDPE to PVC	ea		1	2.5	269.3	2.5	40.4	40.41	269.38	139.12	139.12	39.29	39.29	488.20	488.20	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0077	Added	3/4" ball check valve, PVC body/ball, PTFE seat - SOC - Hayward model TC, Chemline model BT or equal	ea		1	1.3	141.7	1.3	21.2	21.27	141.78	174.85	174.85	20.68	20.68	358.57	358.57	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0078	Added	3" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal	ea		1	3.5	382.8	3.5	57.4	57.42	382.81	1,303.11	1,303.11	55.83	55.83	1,799.16	1,799.16	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0079	Added	3/4" ball valve, full port, true union, PVC body/ball/stem, PTFE seats, Viton seals/O-ring, lever operator - SOC - Chemline model 21, Hayward model TB, or equal	ea		1	1.3	141.7	1.3	21.2	21.27	141.78	578.45	578.45	20.68	20.68	762.17	762.17	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
									0.15													0.13								
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ASS (Low Pressure Compressed Air)						0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
216	3441.010	Low pressure compressor 3441-COM-5000 / 5001	ea	2	2	139.8	15,123.1	279.7	2,268.4	4,536.95	30,246.33	64,230.34	128,460.67	2,205.61	4,411.22	83,827.59	167,655.17	2.0	214.4	19,384.50	428.8	2,519.99	5,039.97	38,769.00	661,123.23	1,322,246.46	137,656.80	275,313.60	820,684.52	1,641,369.03
217	3441.020	Air filter 3441-FR-5000 / 5001	ea	2	4	8.7	945.2	35.0	141.7	567.12	3,780.79	2,417.25	9,669.02	137.85	551.40	3,642.08	14,568.33	4.0	17.9	1,620.98	71.7	210.73	842.91	6,483.91	0.00	0.00	380.95	1,523.82	2,212.66	8,850.63
218	3441.030	Air tank 3441-TK-5000	ea	1	1	69.9	7,561.5	69.9	1,134.2	1,134.24	7,561.58	45,073.45	45,073.45	1,102.81	1,102.81	54,872.07	54,872.07	1.0	102.2	9,238.57	102.2	1,201.01	1,201.01	9,238.57	176.44	176.44	2,206.72	2,206.72	12,822.75	12,822.75
219	3441.040	Oil-water separator 3441-OWS-5000	ea	1	2	69.9	7,561.5	139.8	1,134.2	2,268.47	15,123.16	3,573.72	7,147.44	1,102.81	2,205.61	13,372.34	26,744.69	2.0	28.3	2,557.10	56.6	332.42	664.85	5,114.20	36.20	72.41	608.24	1,216.48	3,533.97	7,067.94
220	3441.050	Drain trap 3441-YV-0001 / 5000 / 6000	ea	3	3	8.7	945.2	26.2	141.7	425.34	2,835.59	586.18	1,758.54	137.85	413.55	1,811.01	5,433.02	3.0	7.3	659.90	21.9	85.79	257.36	1,979.70	300.59	901.77	215.60	646.81	1,261.88	3,785.64
221	3441.060	Pressure indicator 3441-PI-5000 to 5002	ea	3	3	8.7	945.2	26.2	141.7	425.34	2,835.59	700.54	2,101.61	137.85	413.55	1,925.36	5,776.09	3.0	3.7	329.95	11.0	42.89	128.68	989.85	84.11	252.32	94.48	283.43	551.43	1,654.28
222	3441.070	Pressure safety valve 3441-PSV-5000	ea	1	1	8.7	945.2	8.7	141.7	141.78	945.20	626.56	626.56	137.85	137.85	1,851.39	1,851.39	1.0	7.3	659.89	7.3	85.79	85.79	659.89	291.83	291.83	213.84	213.84	1,251.35	1,251.35
223	3441.080	Pipe NPS 1/2 Sch.STD, Piping Specification GB11	m	6	19	0.8	81.3	14.5	12.2	234.47	1,563.12	13.65	262.21	11.87	227.97	119.11	2,287.77	19.2	12.8	1,159.57	246.3	150.74	2,895.40	22,272.31	6.28	120.66	273.76	5,258.61	1,590.38	30,546.99
224	3441.090	Elbow 45 degrees FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	2	0	1.7	184.3	0.0	27.6	0.00	0.00	10.65	0.00	26.88	0.00	249.49	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	0.92	0.00	4.09	0.00	23.81	0.00
225	3441.100	Elbow 90 degrees FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	5	11	1.7	184.3	18.7	27.6	304.12	2,027.45	10.65	117.12	26.88	295.69	249.49	2,744.37	11.0	0.4	37.99	4.6	4.94	54.32	417.85	0.81	8.95	9.09	100.00	52.83	581.12
226	3441.110	Tee FNPT Sch.STD NPS 1/2, Piping Specification GB11	ea	1	2	2.5	265.8	4.9	39.8	79.75	531.67	15.22	30.44	38.77	77.54	359.70	719.40	2.0	0.8	74.17	1.6	9.64	19.28	148.34	1.03	2.05	17.64	35.28	102.48	204.96
227	3441.120	Flexible Hose Flexitube FNPT NPS 1/2	ea	2	1	1.7	187.8	1.7	28.1	28.18	187.86	75.95	75.95	27.40	27.40	319.38	319.38	1.0	2.6	231.52	2.6	30.10	30.10	231.52	23.35	23.35	59.11	59.11	344.08	344.08
228	3441.130	Ball Valve NPS 1/2, Valve Specification VBA07	ea	3	1	2.4	260.8	2.4	39.1	39.13	260.87	197.99	197.99	38.05	38.05	536.04	536.04	1.0	2.2	198.25	2.2	25.77	25.77	198.25	91.26	91.26	64.96	64.96	380.25	380.25
229	3441.140	Pipe identification NPS 1/2	Linear meter	6	2	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.6	50.76	1.3	6.60	14.96	115.07	12.07	27.35	14.36	32.55	83.78	189.93
230	3441.150	Pipe NPS 3/4 Sch.STD, Piping Specification GB11	m	94	109	0.9	93.0	93.6	13.9	1,518.46	10,123.07	19.49	2,121.57	13.56	1,476.38	140.02	15,239.48	108.8	1.2	111.60	134.4	14.51	1,579.01	12,146.24	7.76	844.28	27.79	3,024.52	161.65	17,594.05
231	3441.160	Elbow 90 degrees FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	54	58	2.3	251.6	135.0	37.7	2,189.43	14,596.21	14.63	848.60	36.70	2,128.76	340.74	19,763.00	58.0	0.4	37.55	24.1	4.88	283.13	2,177.95	1.16	67.02	9.06	525.35	52.65	3,053.45
232	3441.170	Elbow 90 degrees SW Sch.STD NPS 3/4, Piping Specification CB11	ea	2	0	6.4	687.6	0.0	103.1	0.00	0.00	40.93	0.00	100.29	0.00	931.99	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	1.12	0.00	11.94	0.00	69.46	0.00
233	3441.180	Tee FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	1	1	3.4	368.6	3.4	55.2	55.29	368.63	21.22	21.22	53.76	53.76	498.91	498.91	1.0	0.9	83.18	0.9	10.81	10.81	83.18	1.48	1.48	19.86	19.86	115.33	115.33
234	3441.190	Tee Reducing FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	1	1	3.4	368.6	3.4	55.2	55.29	368.63	22.20	22.20	53.76	53.76	499.88	499.88	1.0	0.9	83.18	0.9	10.81	10.81	83.18	2.45	2.45	20.04	20.04	116.49	116.49
235	3441.200	Union FNPT Sch.STD NPS 3/4, Piping Specification GB11	ea	1	7	2.3	251.6	16.3	37.7	264.24	1,761.61	19.50	136.50	36.70	256.92	345.61	2,419.28	7.0	0.4	37.63	2.9	4.89	34.24	263.40	4.74	33.19	9.80	68.59	57.06	399.42
236	3441.210	Concentric Reducer FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	2	3	2.3	251.6	7.0	37.7	113.25	754.98	14.63	43.89	36.70	110.11	340.74	1,022.22	3.0	0.5	43.90	1.5	5.71	17.12	131.71	1.08	3.23	10.54	31.61	61.23	183.68
237	3441.220	Excentric Reducer FNPT Sch.STD NPS 3/4 x 1/2, Piping Specification GB11	ea	1	0	2.3	251.6	0.0	37.7	0.00	0.00	14.63	0.00	36.70	0.00	340.74	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	1.84	0.00	12.09	0.00	70.34	0.00
238	3441.230	Y Strainer FNPT NPS 3/4	ea	1	1	3.0	322.5	3.0	48.3	48.38	322.55	302.79	302.79	47.04	47.04	720.76	720.76	1.0	3.3	296.68	3.3	38.57	38.57	296.68	122.57	122.57	94.40	94.40	552.22	552.22
239	3441.240	Weld NPS 3/4, Piping Specification GB11	ea	4	479	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	479.0	0.6	57.24	303.3	7.44	3,564.48	27,419.04	91.40	43,782.73	31.80	15,231.59	187.89	89,997.84
240	3441.250	Quick connect FNPT NPS 3/4, Hansen Series 5500	ea	48	48	2.8	301.2	133.7	45.1	2,169.23	14,461.52	87.65	4,207.23	43.94	2,109.12	478.06	22,947.10	48.0	3.3	300.06	159.3	39.01	1,872.35	14,402.68	30.64	1,470.84	76.69	3,680.96	446.39	21,426.83
241	3441.260	Ball Valve NPS 3/4, Valve Specification VBA05	ea	61	48	2.4	262.2	116.4	39.3	1,888.50	12,590.03	194.98	9,359.23	38.25	1,836.17	534.87	25,673.94	48.0	2.2	200.08	106.2	26.01	1,248.47	9,603.63	34.68	1,664.56	54.00	2,592.12	314.77	15,108.77
242	3441.270	Ball Valve NPS 3/4, Valve Specification VBA06	ea	52	54	2.4	262.2	131.0	39.3	2,124.57	14,163.79	37.08	2,002.34	38.25	2,065.69	376.97	20,356.39	54.0	2.2	200.12	119.5	26.02	1,404.85	10,806.52	10.93	590.26	49.23	2,658.52	286.30	15,460.16
243	3441.280	Pipe identification NPS 3/4	Linear meter	94	36	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.5	0.6	50.58	19.9	6.58	233.75	1,798.08	12.06	428.86	14.32	508.91	83.54	2,969.60
244	3441.290	Pipe NPS 1 Sch.STD, Piping Specification GB11	m	154	205	1.0	104.6	198.2	15.7	3,215.56	21,437.08	23.87	4,890.92	15.26	3,126.45	159.46	32,670.02	204.9	1.2	111.65	253.0	14.51	2,973.75	22,875.00	11.81	2,419.46	28.62	5,863.06	166.59	34,131.28
245	3441.300	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification CB11	ea	4	0	6.4	687.6	0.0	103.1	0.00	0.00	40.93	0.00	100.29	0.00	931.99	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	1.23	0.00	11.98	0.00	69.60	0.00
246	3441.310	Tee FNPT Sch.STD NPS 1, Piping Specification GB11	ea	34	34	3.0	326.0	102.5	48.9	1,663.08	11,087.17	20.14	684.64	47.56	1,616.99	442.70	15,051.87	34.0	0.8	75.23	28.3	9.78	332.51	2,557.79	2.60	88.45	18.20	618.93	105.81	3,597.68
247	3441.320	Concentric Reducer FNPT Sch.STD NPS 1 x 3/4, Piping Specification GB11	ea	69	35	2.1	223.3	72.3	33.5	1,172.34	7,815.60	13.69	479.04	32.57	1,139.85	303.05	10,606.84	35.0	0.6	49.91	19.3	6.49	227.09	1,746.85	1.84	64.55	12.09	423.28	70.34	2,461.77
248	3441.330	Excentric Reducer FNPT Sch.STD NPS 1 x 1/2, Piping Specification GB11	ea	3	1	2.1	223.3	2.1	33.5	33.50	223.30	13.69	13.69	32.57	32.57	303.05	303.05	1.0	0.6	49.91	0.6	6.49	6.49	49.91	1.28	1.28	11.98	11.98	69.66	69.66
249	3441.340	Victaulic Coupling NPS 1, Style 77	ea	179	8	0.3	37.2	2.8	5.5	44.66	297.74	27.67	221.34	5.43	43.42	75.89	607.16	8.0	0.4	37.09	3.3	4.82	38.57	296.68	30.64	245.15	14.88	119.08	87.44	699.48
250	3441.350	Victaulic Coupling NPS 1, Style 07	ea	97	284	0.3	37.2	97.7	5.5	1,585.45	10,569.67	33.16	9,417.82	5.43	1,541.52	81.39	23,114.46	284.0	0.4	37.52	117.9	4.88	1,385.38	10,656.80	29.91	8,493.95	14.84	4,214.56	87.15	24,750.70
251	3441.360	Victaulic Elbow 90 degrees NPS 1, Style 10	ea	86	82	3.0	322.5	244.6	48.3	3,967.35	26,448.99	65.56	5,375.78	47.04	3,857.41	483.53	39,649.53	82.0	0.4	37.62	34.1	4.89	401.00	3,084.60	44.80	3,673.30	17.86	1,464.46	105.16	8,623.36
252	3441.370	Victaulic Elbow 45 degrees NPS 1, Style 11	ea	17	20	3.0	322.5	59.6	48.3	967.65	6,450.97	65.56	1,311.17	47.04	940.83	483.53	9,670.62	20.0	0.2	18.99	4.2	2.47	49.38	379.86	44.80	895.93	13.48	269.64	79.74	1,594.81
253	3441.380	Victaulic tee NPS 1, Style 20	ea	2	2	4.4	471.4	8.7	70.7	141.43	942.83	117.44	234.88	68.75	137.51	728.33	1,456.65	2.0	0.8	74.17	1.6	9.64	19.28	148.34	85.42	170.84	34.63	69.26	203.86	407.72
254	3441.390	Weld NPS 1, Piping Specification GB11	ea	8	2,011	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,011.0	3.6	327.41	7,283.1	42.56	85,595.88	658,429.81	9.66	19,424.43	77.40	155,659.88	457.04	919,109.99
255	3441.400	Ball Valve NPS 1, Valve Specification VBA06	ea	3	3	3.0	322.5	8.9	48.3	145.15	967.65	42.09	126.26	47.04	141.12	460.06	1,380.17	3.0	2.2	197.78	6.6	25.71	77.14	593.35	20.08	60.23	50.52	151.57	294.10	882.29
256	3441.410	Pipe identification NPS 1	Linear meter	154	58	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.2	0.6	50.44	32.5	6.56	381.72	2,936.27	12.06	702.32	14.28	831.46	83.34	4,851.76
257	3441.420	Flange Threaded 150RF Sch.STD NPS 1 1/2 c/w Hardware, Piping Specification GB11	ea	2	0	8.8	952.2	0.0	142.8	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	8.58	0.00	13.46	0.00	78.44	0.00
258	3441.430	Pipe NPS 2 Sch.STD, Piping Specification GB11	m	1038	992	1.3	139.5	1280.1	20.9	20,767.17	138,447.83	47.14	46,782.49	20.35	20,191.69	227.93	226,189.18	992.4	2.9	263.66	2,894.2	34.28	34,014.37	261,649.03	34.60	34,340.57	68.93	68,405.01	401.47	398,408.99
259	3441.440	Tee FNPT NPS 2, Piping Specification GB11	ea	26	26	4.4	471.4	113.3	70.7	1,838.53	12,256.85	33.50	871.10	68.75	1,787.58	644.39	16,754.05	26.0	0.8	74.86	21.5	9.73	253.04	1,946.43	6.73	175.01	18.95	492.67	110.27	2,867.15
260	3441.450	Tee Reducing FNPT NPS 2 x 2 x 1, Piping Specification GB11	ea	2	1	4.4	471.4	4.4	70.7	70.71	471.42	37.70	37.70	68.75	68.75	648.58	648.58	1.0	0.9	83.18	0.9	10.81	10.81	83.18	3.07	3.07	20.16	20.16	117.22	117.22
261	3441.460	Union FNPT NPS 2, Piping Specification GB11	ea	1	1	3.0	322.5	3.0	48.3	48.38	322.55	38.03	38.03	47.04	47.04	456.01	456.01	1.0	0.4	33.27	0.4	4.33	4.33	33.27	16.16	16.16	11.07	11.07	64.82	64.82
262	3441.470	Concentric Reducer FNPT NPS 2 x 3/4, Piping Specification GB11	ea	26	26	0.5	59.0	14.2	8.8	230.39	1,535.95	7.00	181.91	8.62	224.01	83.55	2,172.26	26.0	0.5	41.86	12.0	5.44	141.48	1,088.28	3.47	90.21	10.54	273.93	61.30	1,593.90
263	3441.480	Flexible Hose Flexitube FNPT NPS 2	ea	2	2	5.4	584.8	10.8	87.7	175.45	1,169.68	195.92	391.83	85.30	170.59	953.78	1,907.56	2.0	5.7	511.55	11.3	66.50	133.00	1,023.10	58.37	116.73	131.97	263.93	768.39	1,536.77
264	3441.490	Flange SW 150RF NPS 2 c/w hardware, Piping Specification GB11	ea	4	4	3.0	322.5	11.9	48.3	193.53	1,290.19	28.90	115.60	47.04	188.17	446.87	1,787.49	4.0	26.6	2,404.61	106.4	312.60	1,250.40	9,618.44	28.45	113.80	570.84	2,283.38	3,316.50	13,266.02
265	3441.500	Flange Slip-On 150RF NPS 2 c/w Hardware, Piping Specification GB11	ea	3	2	3.0	322.5	6.0	48.3	96.76	645.10	28.90	57.80	47.04	94.08	446.87	893.74	2.0	0.5	41.59	0.9	5.41	10.81	83.19	8.21	16.42	11.43	22.86	66.64	133.27
266	3441.510	Hansen Quick connect B20H51 Brass FNPT NPS 2	ea	13	15	7.3	786.8	109.1	118.0	1,770.47	11,803.16	184.99	2,774.79	114.76	1,721.41	1,204.66	18,069.83	15.0	5.0	449.82	74.6	58.48	877.15	6,747.31	627.05	9,405.79	231.96	3,479.36	1,367.31	20,509.61
267	3441.520	Victaulic coupling NPS 2, Style 77	ea	155	167	0.4	47.8	73.9	7.1	1,198.66	7,991.06	39.99	6,678.72	6.98	1,165.44	102.00	17,033.88	167.0	0.4	37.54	69.3	4.88	814.97	6,269.03	34.55	5,769.31	15.78	2,634.83	92.74	15,488.14
268	3441.530	Victaulic coupling NPS 2, Style 07	ea	359	436	0.4	47.8	192.9	7.1	3,129.43	20,862.88	47.68	20,787.21	6.98	3,042.71	109.68	47,822.23	436.0	0.4	37.51	180.9	4.88	2,126.28	16,355.98	41.62	18,147.48	17.20	7,497.45	101.21	44,127.18
269	3441.540	Victaulic Concentric Reducer NPS 2 x 3/4, Style 50	ea	1	6	3.0	322.5	17.9	48.3	290.29	1,935.29	72.45	434.72	47.04	282.25	490.43	2,942.55	6.0	0.5	41.36	2.7	5.38	32.26	248.15	60.94	365.62	21.99	131.93	129.66	777.96
270	3441.550	Victaulic cap NPS 2, Style 60	ea	5	5	0.2	24.8	1.1	3.7	18.61	124.06	29.06	145.31	3.62	18.09	61.21	306.07	5.0	0.4	36.32	2.0	4.72	23.61	181.61	38.61	193.03	16.31	81.55	95.96	479.80
271	3441.560	Victaulic Elbow 90 degrees NPS 2, Style 10	ea	92	96	3.0	322.5	286.3	48.3	4,644.70	30,964.68	65.56	6,293.60	47.04	4,515.99	483.53	46,418.97	96.0	0.4	37.56	39.9	4.88	468.80	3,606.13	44.80	4,300.45	17.85	1,713.28	105.09	10,088.66
272	3441.570	Victaulic Elbow 90 degrees NPS 2, Style 100	ea	23	23	3.0	322.5	68.6	48.3	1,112.79	7,418.62	85.00	1,954.94	47.04	1,081.96	502.97	11,568.31	23.0	0.4	37.31	9.5	4.85	111.56	858.14	62.72	1,442.56	21.40	492.10	126.28	2,904.36
273	3441.580	Victaulic Elbow 45 degrees NPS 2, Style 11	ea	29	30	3.0	322.5	89.5	48.3	1,451.47	9,676.46	65.56	1,966.75	47.04	1,411.25	483.53	14,505.93	30.0	0.2	18.86	6.3	2.45	73.57	565.93	44.80	1,343.89	13.45	403.56	79.57	2,386.95
274	3441.590	Victaulic tee NPS 2, Style 20	ea	26	27	4.4	471.4	117.7	70.7	1,909.24	12,728.27	117.44	3,170.94	68.75	1,856.33	728.33	19,664.78	27.0	0.8	75.17	22.5	9.77	263.85	2,029.60	85.42	2,306.27	34.86	941.29	205.22	5,541.01
275	3441.600	Victaulic Tee Reducing NPS 2 x 2 x 1, Style 25	ea	36	37	4.4	471.4	161.3	70.7	2,616.37	17,442.44	137.05	5,070.81	68.75	2,543.86	747.93	27,673.48	37.0	0.8	74.90	30.7	9.74	360.27	2,771.30	103.48	3,828.92	38.44	1,422.16	226.56	8,382.65
276	3441.610	Victaulic Expansion Joint NPS 2, Style 155	ea	14	14	3.1	340.2	44.0	51.0	714.57	4,763.80	2,258.36	31,617.10	49.63	694.77	2,699.30	37,790.23	14.0	0.6	49.91	7.7	6.49	90.84	698.74	2,497.36	34,963.07	514.50	7,203.04	3,068.26	42,955.69
277	3441.620	Ball Valve NPS 2, Valve Specification VBA05	ea	13	13	5.4	584.8	70.3	87.7	1,140.44	7,602.93	449.35	5,841.61	85.30	1,108.84	1,207.22	15,693.82	13.0	3.3	300.73	43.2	39.09	508.23	3,909.47	102.21	1,328.72	91.25	1,186.29	533.29	6,932.71
278	3441.630	Ball Valve NPS 2, Valve Specification VBA07	ea	15	15	3.0	326.0	45.2	48.9	733.71	4,891.40	247.49	3,712.28	47.56	713.38	670.05	10,050.76	15.0	3.3	300.28	49.8	39.04	585.55	4,504.22	269.54	4,043.12	124.84	1,872.53	733.70	11,005.43
279	3441.640	Check valve NPS 2, Valve Specification VCH06	ea	1	1	3.0	326.0	3.0	48.9	48.91	326.09	534.24	534.24	47.56	47.56	956.80	956.80	1.0	3.3	296.68	3.3	38.57	38.57	296.68	187.99	187.99	107.57	107.57	630.81	630.81
280	3441.650	Pipe identification NPS 2	Linear meter	1038	348	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	348.0	0.6	49.96	192.3	6.49	2,260.55	17,388.87	96.88	33,718.30	31.25	10,875.00	184.58	64,242.72
B&M-0080	Added	2" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter		6	2.3	244.1	14.5	36.6	234.47	1,563.12	56.82	363.81	35.61	227.97	373.20	2,389.37	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0081	Added	1" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea		1	0.5	59.0	0.5	8.8	8.86	59.07	33.41	33.41	8.62	8.62	109.96	109.96	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0082	Added	3/4" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea		1	0.5	59.0	0.5	8.8	8.86	59.07	31.00	31.00	8.62	8.62	107.55	107.55	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0083	Added	1/2" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - THDxTHD	ea		2	0.5	59.0	1.1	8.8	17.72	118.15	29.98	59.96	8.62	17.23	106.53	213.06	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0084	Added	1.5" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea		1	0.5	59.0	0.5	8.8	8.86	59.07	67.74	67.74	8.62	8.62	144.29	144.29	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0085	Added	1" coupling, MI, galvanized, Class 150, A197, B16 - THD	ea		1	2.1	223.3	2.1	33.5	33.50	223.30	13.41	13.41	32.57	32.57	302.78	302.78	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0086	Added	1" 45 elbow, MI, galvanized, Class 150, A197, B16 - THD	ea		34	2.1	223.3	70.2	33.5	1,138.85	7,592.30	14.52	493.68	32.57	1,107.29	303.89	10,332.11	34.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0087	Added	1" 90 elbow, MI, galvanized, Class 150, A197, B16 - THD	ea		80	2.1	223.3	165.2	33.5	2,679.64	17,864.24	13.86	1,108.74	32.57	2,605.38	303.22	24,257.99	80.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0088	Added	2" Elbow 90 SW class 3000 SS ASTM A182 F304L	ea		1	14.4	1,556.0	14.4	233.4	233.40	1,556.09	104.53	104.53	226.94	226.94	2,120.90	2,120.90	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0089	Added	1"x1/2" reducer, MI, galvanized, Class 150, A197, B16 - THD	ea		2	2.1	223.3	4.1	33.5	66.99	446.61	13.69	27.37	32.57	65.13	303.05	606.10	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0090	Added	1"x3/4" reducing tee, MI, galvanized, Class 150, A197, B16 - THD	ea		34	3.0	326.0	102.5	48.9	1,663.08	11,087.17	21.44	729.08	47.56	1,616.99	444.01	15,096.32	34.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0091	Added	2" flange, THD, SS, B16.5 RF, ASTM A105N - 150#	ea		4	3.0	322.5	11.9	48.3	193.53	1,290.19	38.49	153.98	47.04	188.17	456.47	1,825.87	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0092	Added	1/2" union, MI, galvanized, Class 150, A197, B16 - THD	ea		1	1.7	184.3	1.7	27.6	27.65	184.31	14.81	14.81	26.88	26.88	253.65	253.65	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0093	Added	1" adapter nipple, Galv. DI, GRVxTHD - VICTAULIC 40	ea		1	0.5	59.0	0.5	8.8	8.86	59.07	10.63	10.63	8.62	8.62	87.18	87.18	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0094	Added	3/4" adapter nipple, Galv. DI, GRVxTHD - VICTAULIC 40	ea		1	0.5	59.0	0.5	8.8	8.86	59.07	12.51	12.51	8.62	8.62	89.06	89.06	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0095	Added	2" 45 elbow, LR, Galv. DI, ASTM A536 GR 65 Max Rating 1000# - Victaulic 110	ea		2	3.0	322.5	6.0	48.3	96.76	645.10	82.96	165.93	47.04	94.08	500.94	1,001.87	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0096	Added	2"x1" conc reducer, Galv. DI, ASTM A536 GR 65 Max Rating 1000# - Victaulic 50	ea		1	3.0	322.5	3.0	48.3	48.38	322.55	47.69	47.69	47.04	47.04	465.66	465.66	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0097	Added	3/4" flexible coupling, Galv. DI, ASTM A536 - Victaulic 77	ea		1	0.3	37.2	0.3	5.5	5.58	37.22	26.42	26.42	5.43	5.43	74.65	74.65	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0098	Added	1/2" ball valve - THD VBA06	ea		2	1.7	187.8	3.5	28.1	56.36	375.72	31.42	62.83	27.40	54.80	274.85	549.70	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0099	Added	1/2" low level purge trap	ea		1	2.4	262.2	2.4	39.3	39.34	262.29	1,450.18	1,450.18	38.25	38.25	1,790.07	1,790.07	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0100	Added	2" KAESER Filter (Supplied with Equipment) 3441-FR-5000	ea		1	8.7	945.2	8.7	141.7	141.78	945.20	49.66	49.66	137.85	137.85	1,274.49	1,274.49	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0101	Added	2" KAESER Filter (Supplied with Equipment) 3441-FR-5001	ea		1	8.7	945.2	8.7	141.7	141.78	945.20	49.66	49.66	137.85	137.85	1,274.49	1,274.49	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		AHS (High Pressure Compressed Air)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
281	3442.010	Compressor 3442-COM-5000 / 5001		2	2	139.8	15,123.1	279.7	2,268.4	4,536.95	30,246.33	184,628.94	369,257.88	2,205.61	4,411.22	204,226.19	408,452.38	2.0	185.3	16,753.23	370.6	2,177.92	4,355.84	33,506.46	341.67	683.33	4,006.04	8,012.09	23,278.86	46,557.72
282	3442.020	Control Panel 3442-CP-5000	ea	1	1	104.9	11,342.3	104.9	1,701.3	1,701.36	11,342.37	113,829.51	113,829.51	1,654.21	1,654.21	128,527.45	128,527.45	1.0	15.9	1,440.41	15.9	187.25	187.25	1,440.41	294.75	294.75	397.86	397.86	2,320.28	2,320.28
283	3442.030	Air tank 3442-TK-5000 / 5001		0	2	63.4	6,852.6	126.7	1,027.9	2,055.80	13,705.37	109,667.44	219,334.88	999.42	1,998.84	118,547.44	237,094.89	2.0	102.2	9,238.58	204.4	1,201.01	2,402.03	18,477.15	178.20	356.40	2,207.08	4,414.15	12,824.86	25,649.73
284	3442.040	Pressure Damper 3442-PD-5000 / 5001	ea	2	2	63.4	6,852.6	126.7	1,027.9	2,055.80	13,705.37	21,787.21	43,574.43	999.42	1,998.84	30,667.22	61,334.44	2.0	109.3	9,881.84	218.6	1,284.64	2,569.28	19,763.67	242.98	485.96	2,371.30	4,742.59	13,780.75	27,561.50
285	3442.050	Oil-Water Separator 3442-OWS-5000	ea	1	1	63.4	6,852.6	63.4	1,027.9	1,027.90	6,852.68	3,348.40	3,348.40	999.42	999.42	12,228.41	12,228.41	1.0	56.6	5,114.20	56.6	664.85	664.85	5,114.20	73.13	73.13	1,216.63	1,216.63	7,068.81	7,068.81
286	3442.060	Pressure Safety Valve 3442-PSV-5000 / 5001	ea	2	2	10.9	1,181.5	21.8	177.2	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
287	3442.070	Y-strainer 3442-STR-1000 / 2000/ 3000 / 4000 / 5000 / 5001		6	6	10.9	1,181.5	65.5	177.2	1,063.35	7,088.98	440.56	2,643.37	172.31	1,033.88	1,971.60	11,829.58	6.0	4.8	431.61	28.7	56.11	336.66	2,589.68	136.18	817.05	128.85	773.10	752.75	4,516.49
288	3442.080	Y-strainer 3442-STR-5002 / 5003		2	2	26.2	2,835.5	52.4	425.3	850.68	5,671.19	552.82	1,105.65	413.55	827.10	4,227.31	8,454.61	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
289	3442.090	Y-strainer 3442-STR-5004		1	1	26.2	2,835.5	26.2	425.3	425.34	2,835.59	552.82	552.82	413.55	413.55	4,227.31	4,227.31	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
290	3442.100	Solenoid Valve 3442-YV-5000 / 5001	ea	2	2	10.9	1,181.5	21.8	177.2	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	1,665.90	3,331.81	412.93	825.87	2,451.68	4,903.35
291	3442.110	Pressure Regulator 3442-PCV-5000 / 5001	ea	2	2	10.9	1,181.5	21.8	177.2	354.45	2,362.99	638.98	1,277.96	172.31	344.63	2,170.01	4,340.03	2.0	3.7	329.95	7.3	42.89	85.79	659.89	120.24	240.47	101.74	203.49	594.82	1,189.64
292	3442.120	Pressure Indicator 3442-PI-1000 / 2000 / 3000 / 4000 / 5000 / 5001 / 5002 / 5003 / 5004 / 6000	ea	10	10	8.7	945.2	87.4	141.7	1,417.80	9,451.98	700.54	7,005.37	137.85	1,378.51	1,925.36	19,253.65	10.0	4.7	428.93	47.5	55.76	557.61	4,289.33	110.43	1,104.31	123.04	1,230.38	718.16	7,181.64
293	3442.130	Pressure Transmitter 3442-PT-5000 / 5001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	338.11	676.23	137.85	275.70	1,562.94	3,125.88	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	1,823.93	3,647.85	522.29	1,044.58	3,091.90	6,183.81
294	3442.140	Pressure Expansion Valve 3442-PEV-5000 / 5001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	338.11	676.23	137.85	275.70	1,562.94	3,125.88	2.0	3.7	329.95	7.3	42.89	85.79	659.89	35.02	70.04	84.60	169.19	492.45	984.91
B&M-0102	Added	Instument Panel for Govenor Air	ea		1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	31,889.44	31,889.44	2,205.61	2,205.61	51,486.69	51,486.69	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0103	Added	Instrumentation Panel and Reducing Brake Air Pressure Station	ea		1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	166,907.79	166,907.79	2,205.61	2,205.61	186,505.04	186,505.04	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
295	3442.150	Pipe NPS 1/2 Sch.40S, Piping Specification SB11	m	1	6	1.0	104.6	6.2	15.7	100.49	669.91	23.57	150.91	15.26	97.70	159.16	1,019.01	6.4	44.0	3,976.03	281.6	516.88	3,309.32	25,456.29	154.84	991.32	965.60	6,182.17	5,613.35	35,939.10
296	3442.160	Olet FNPT NPS 1/2 Sch.40S, Piping Specification SB11	ea	1	1	2.2	236.3	2.2	35.4	35.44	236.30	24.93	24.93	34.46	34.46	331.13	331.13	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.54	10.54	13.84	13.84	80.78	80.78
297	3442.170	Ball Valve NPS 1/2, Valve Specification VBA12	ea	2	2	3.7	400.5	7.4	60.0	120.16	801.06	117.28	234.57	58.41	116.83	636.31	1,272.61	2.0	3.7	329.95	7.3	42.89	85.79	659.90	109.52	219.04	99.59	199.17	581.95	1,163.90
298	3442.180	Pipe identification NPS 1/2	Linear meter	1	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
299	3442.190	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	6	30	1.1	116.2	31.8	17.4	516.10	3,440.69	27.68	819.12	16.96	501.80	178.33	5,277.71	29.6	1.8	160.53	52.6	20.87	617.83	4,750.99	9.91	293.14	39.72	1,175.57	231.03	6,837.33
300	3442.200	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	m	21	0	1.1	116.2	0.0	17.4	0.00	0.00	27.68	0.00	16.96	0.00	178.33	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	4.23	0.00	12.57	0.00	73.20	0.00
301	3442.210	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	20	22	5.6	602.5	122.6	90.3	1,988.46	13,256.40	117.55	2,586.01	87.88	1,933.36	898.37	19,764.23	22.0	0.6	54.00	13.1	7.02	154.45	1,188.10	5.37	118.08	13.77	302.99	80.16	1,763.62
302	3442.220	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	6	0	5.6	602.5	0.0	90.3	0.00	0.00	94.50	0.00	87.88	0.00	875.33	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.74	0.00	9.58	0.00	55.92	0.00
303	3442.230	Tee SW Class 3000 NPS 3/4, Piping Specification SB11	ea	6	7	7.2	779.7	50.5	116.9	818.78	5,458.52	187.61	1,313.24	113.73	796.09	1,198.09	8,386.62	7.0	1.2	108.33	8.4	14.08	98.58	758.33	7.11	49.74	26.89	188.23	156.41	1,094.89
304	3442.240	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	5	5.6	602.5	27.9	90.3	451.92	3,012.82	482.63	2,413.16	87.88	439.40	1,263.46	6,317.30	5.0	0.6	52.68	2.9	6.85	34.24	263.40	14.67	73.36	15.33	76.67	89.53	447.67
305	3442.250	Weld NPS 3/4, Piping Specification SB11	ea	74	108	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	108.0	0.5	47.97	57.3	6.24	673.50	5,180.75	16.06	1,734.66	14.35	1,549.96	84.62	9,138.87
306	3442.260	Ball Valve NPS 3/4, Valve Specification VBA12	ea	8	8	5.5	595.4	44.0	89.3	714.57	4,763.80	135.93	1,087.45	86.85	694.77	907.57	7,260.58	8.0	3.2	286.63	25.4	37.26	298.09	2,293.00	38.78	310.28	75.17	601.35	437.84	3,502.72
307	3442.270	Needle Valve NPS 3/4, Valve Specification VNE04	ea	1	2	1.1	119.3	2.2	17.9	35.79	238.62	6.27	12.54	17.40	34.80	160.87	321.75	2.0	3.2	289.06	6.4	37.58	75.15	578.11	0.00	0.00	67.93	135.85	394.56	789.12
308	3442.280	Pipe identification NPS 3/4	Linear meter	27	10	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.6	51.18	5.7	6.65	66.50	511.55	12.06	120.57	14.46	144.50	84.36	843.13

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
309	3442.290	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	1	237	1.4	151.1	331.0	22.6	5,370.44	35,802.91	39.80	9,428.20	22.04	5,221.61	235.65	55,823.15	236.9	0.6	49.91	130.3	6.49	1,537.01	11,823.19	4.56	1,081.23	12.64	2,994.82	73.60	17,436.26
310	3442.300	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	189	196	1.4	151.1	273.9	22.6	4,443.43	29,622.87	39.80	7,800.77	22.04	4,320.30	235.65	46,187.37	196.0	4.2	376.33	815.9	48.92	9,588.83	73,760.23	18.05	3,537.40	92.08	18,046.91	535.37	104,933.37
311	3442.310	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	57	63	5.9	638.0	371.6	95.7	6,029.18	40,194.53	125.39	7,899.79	93.05	5,862.10	952.15	59,985.61	63.0	0.6	53.88	37.5	7.00	441.30	3,394.59	8.11	511.11	14.30	900.68	83.30	5,247.67
312	3442.320	Elbow 90 degrees FNPT Sch.40S NPS 1, Piping Specification SB11	ea	4	0	5.9	638.0	0.0	95.7	0.00	0.00	125.39	0.00	93.05	0.00	952.15	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.70	0.00	17.39	0.00	101.28	0.00
313	3442.330	Tee SW Class 3000 NPS 1, Piping Specification SB11	ea	13	12	7.9	850.6	94.4	127.6	1,531.22	10,208.13	199.11	2,389.34	124.07	1,488.79	1,301.46	15,617.48	12.0	1.2	107.21	14.2	13.94	167.25	1,286.52	10.49	125.83	27.31	327.69	158.94	1,907.29
314	3442.340	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	8	5.9	638.0	47.2	95.7	765.61	5,104.07	580.55	4,644.42	93.05	744.39	1,407.31	11,258.49	8.0	0.6	52.68	4.7	6.85	54.79	421.44	22.61	180.89	16.93	135.45	99.07	792.57
315	3442.350	Union SW / FNPT Class 3000 NPS 1, Piping Specification SB11	ea	4	0	5.9	638.0	0.0	95.7	0.00	0.00	580.55	0.00	93.05	0.00	1,407.31	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	18.64	0.00	19.39	0.00	113.22	0.00
316	3442.360	Concentric Reducer SW Class 3000 NPS 1 x 3/4, Piping Specification SB11	ea	1	2	8.5	921.5	17.0	138.2	276.47	1,843.14	448.22	896.44	134.40	268.81	1,642.43	3,284.86	2.0	0.7	66.54	1.5	8.65	17.30	133.08	21.57	43.14	19.98	39.97	116.75	233.49
317	3442.370	Flexible Connector Penflex 80055 MNPT NPS 1	ea	2	1	3.2	343.8	3.2	51.5	51.57	343.82	204.80	204.80	50.14	50.14	650.33	650.33	1.0	0.7	66.54	0.7	8.65	8.65	66.54	61.51	61.51	28.02	28.02	164.71	164.71
318	3442.380	Flange SW 150RF NPS 1 c/w Hardware , Piping Specification SB11	ea	4	6	7.2	783.3	43.5	117.5	705.00	4,700.00	352.68	2,116.07	114.24	685.46	1,367.76	8,206.53	6.0	16.5	1,490.32	98.9	193.74	1,162.45	8,941.89	34.62	207.73	357.22	2,143.30	2,075.89	12,455.36
319	3442.390	Weld NPS 1, Piping Specification SB11	ea	171	242	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	242.0	0.7	65.92	176.5	8.57	2,073.84	15,952.61	1.03	248.60	15.50	3,749.84	91.01	22,024.89
320	3442.400	Ball Valve NPS 1, Valve Specification VBA12	ea	12	18	7.3	793.9	132.1	119.0	2,143.71	14,291.39	206.90	3,724.28	115.79	2,084.30	1,235.76	22,243.68	18.0	3.2	287.82	57.3	37.42	673.50	5,180.75	186.57	3,358.32	105.20	1,893.67	617.01	11,106.24
321	3442.410	Pipe identification NPS 1	Linear meter	190	66	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.2	0.6	50.38	36.9	6.55	433.26	3,332.76	12.06	798.04	14.27	943.91	83.26	5,507.96
322	3442.420	Pipe NPS 2 Sch40, Piping Specification SB11	m	151	160	2.3	244.1	361.3	36.6	5,861.70	39,078.02	71.27	11,407.31	35.61	5,699.27	387.64	62,046.30	160.1	2.5	224.79	398.0	29.22	4,677.47	35,980.57	31.31	5,011.49	59.10	9,460.27	344.43	55,129.81
323	3442.430	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	8.5	921.5	34.1	138.2	552.94	3,686.27	172.91	691.65	134.40	537.62	1,367.12	5,468.47	4.0	0.3	28.77	1.3	3.74	14.96	115.07	37.45	149.78	14.30	57.20	84.25	337.01
324	3442.440	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	22	26	8.5	921.5	221.5	138.2	3,594.11	23,960.76	171.71	4,464.57	134.40	3,494.52	1,365.92	35,513.96	26.0	0.6	54.00	15.5	7.02	182.54	1,404.12	31.16	810.13	18.96	493.09	111.15	2,889.87
325	3442.450	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	7	14	8.5	921.5	119.3	138.2	1,935.29	12,901.95	1,191.56	16,681.82	134.40	1,881.66	2,385.77	33,400.72	14.0	0.6	54.48	8.4	7.08	99.16	762.78	56.71	794.01	24.22	339.11	142.50	1,995.06
326	3442.460	Union SW/ FNPT Class 3000 NPS 2, Piping Specification SB11	ea	4	4	8.5	921.5	34.1	138.2	552.94	3,686.27	1,191.56	4,766.23	134.40	537.62	2,385.77	9,543.06	4.0	0.6	53.72	2.4	6.98	27.93	214.88	57.40	229.59	24.18	96.73	142.28	569.13
327	3442.470	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	11.1	1,205.1	11.1	180.7	180.77	1,205.13	268.91	268.91	175.76	175.76	1,830.56	1,830.56	1.0	1.3	115.07	1.3	14.96	14.96	115.07	44.57	44.57	36.01	36.01	210.61	210.61
328	3442.480	Tee Reducing SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	3	3	11.1	1,205.1	33.4	180.7	542.31	3,615.38	238.38	715.15	175.76	527.28	1,800.04	5,400.12	3.0	1.2	107.44	3.6	13.97	41.90	322.32	95.67	287.02	44.51	133.53	261.59	784.78
329	3442.490	Tee Reducing SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	5	5	11.1	1,205.1	55.7	180.7	903.85	6,025.64	266.81	1,334.06	175.76	878.80	1,828.47	9,142.34	5.0	1.2	108.97	6.0	14.17	70.83	544.84	95.68	478.39	44.87	224.35	263.68	1,318.41
330	3442.500	Half Coupling SW Class 3000 NPS 2, Piping Specification SB11	ea	2	29	8.5	921.5	247.1	138.2	4,008.82	26,725.46	171.71	4,979.71	134.40	3,897.73	1,365.92	39,611.73	29.0	0.6	54.07	17.3	7.03	203.83	1,567.96	10.56	306.34	14.83	430.16	86.49	2,508.30
331	3442.510	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	4.6	496.2	4.6	74.4	74.43	496.23	176.90	176.90	72.37	72.37	819.93	819.93	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.62	10.62	13.87	13.87	80.89	80.89
332	3442.520	Flexible Connector Penflex 80055 MNPT NPS 2	ea	2	2	4.4	471.4	8.7	70.7	141.43	942.83	369.51	739.01	68.75	137.51	980.39	1,960.78	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	204.89	409.78	196.34	392.68	1,146.92	2,293.84
333	3442.530	Expansion Joint U Type Connectall NPS 2	ea	3	3	4.4	471.4	13.1	70.7	212.14	1,414.25	451.38	1,354.14	68.75	206.26	1,062.26	3,186.79	3.0	7.3	659.90	21.9	85.79	257.36	1,979.70	2,419.18	7,257.55	642.13	1,926.38	3,807.00	11,420.99
334	3442.540	Concentric Reducer Sch.10s NPS 2 x 1, Piping Specification SB11	ea	1	1	8.5	921.5	8.5	138.2	138.24	921.57	183.09	183.09	134.40	134.40	1,377.29	1,377.29	1.0	0.7	66.54	0.7	8.65	8.65	66.54	35.78	35.78	22.83	22.83	133.80	133.80
335	3442.550	Weld NPS 2, Piping Specification SB11	ea	110	135	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	135.0	2.1	191.61	286.1	24.91	3,362.80	25,867.72	1.00	135.60	45.03	6,079.70	262.56	35,445.83
336	3442.560	Ball Valve NPS 2, Valve Specification VBA12	ea	2	2	14.7	1,587.9	29.4	238.1	476.38	3,175.86	392.26	784.53	231.59	463.18	2,449.97	4,899.95	2.0	4.7	429.07	9.5	55.78	111.56	858.14	310.28	620.56	163.30	326.61	958.43	1,916.86
337	3442.570	Pipe identification NPS 2	Linear meter	151	57	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.4	1.1	102.52	65.1	13.33	765.59	5,889.17	16.35	939.13	27.38	1,573.11	159.58	9,167.01
338	3442.580	Flange SW 150RF NPS 6 c/w Hardware, Piping Specification SB11	ea	2	18	19.4	2,101.8	349.8	315.2	5,675.08	37,833.90	246.46	4,436.35	306.55	5,517.82	2,970.18	53,463.15	18.0	3.3	302.45	60.2	39.32	707.74	5,444.16	3.94	71.01	71.88	1,293.76	417.59	7,516.67
339	3442.590	Blind Flange 150RF NPS 6 c/w Hardware, Piping Specification SB11	ea	2	6	19.4	2,101.8	116.6	315.2	1,891.69	12,611.30	246.46	1,478.78	306.55	1,839.27	2,970.18	17,821.05	6.0	6.1	549.91	36.5	71.49	428.93	3,299.48	72.43	434.60	143.82	862.93	837.66	5,025.94
B&M-0104	Added	2" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea		2	0.5	59.0	1.1	8.8	17.72	118.15	84.98	169.96	8.62	17.23	161.53	323.06	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0105	Added	1.5" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea		2	0.5	59.0	1.1	8.8	17.72	118.15	67.74	135.48	8.62	17.23	144.29	288.59	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0106	Added	1/2" nipple x 4" long, Sch 80, ASTM A312 TP304L Smls - THDxTHD	ea		2	0.5	59.0	1.1	8.8	17.72	118.15	39.01	78.03	8.62	17.23	115.57	231.13	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0107	Added	2" coupling, 304SS, Vic-Press - 597	ea		15	8.5	921.5	127.8	138.2	2,073.53	13,823.52	119.05	1,785.69	134.40	2,016.07	1,313.25	19,698.80	15.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0108	Added	1" coupling, 304SS, Vic-Press - 597	ea		16	5.9	638.0	94.4	95.7	1,531.22	10,208.13	86.19	1,379.07	93.05	1,488.79	912.95	14,607.21	16.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0109	Added	1/2" 90 elbow, 304SS, Vic-Press - 590	ea		2	4.3	460.7	8.5	69.1	138.24	921.57	106.51	213.01	67.20	134.40	703.61	1,407.22	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0110	Added	1"x3/4" reducer, 304SS, Vic-Press - 582	ea		1	5.9	638.0	5.9	95.7	95.70	638.01	146.64	146.64	93.05	93.05	973.40	973.40	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0111	Added	1"x3/4" reducing tee, 304SS, Vic-Press - 593	ea		1	7.9	850.6	7.9	127.6	127.60	850.68	168.89	168.89	124.07	124.07	1,271.23	1,271.23	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0112	Added	2"x1/2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea		1	11.1	1,205.1	11.1	180.7	180.77	1,205.13	313.20	313.20	175.76	175.76	1,874.85	1,874.85	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0113	Added	3/4" male adapter, 304SS, Vic-Press - 596	ea		2	5.6	602.5	11.1	90.3	180.77	1,205.13	143.28	286.56	87.88	175.76	924.11	1,848.22	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0114	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea		2	4.3	460.7	8.5	69.1	138.24	921.57	133.14	266.28	67.20	134.40	730.24	1,460.48	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0115	Added	3" blind flange, SS, B16.5 RF, ASTM A182 F304L - 150# (Tapped)	ea		2	12.2	1,315.0	24.3	197.2	394.50	2,630.01	109.19	218.39	191.78	383.57	1,813.24	3,626.47	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0116	Added	1/2" tube, smls SS, Rb 80 or less, thickness 3.00: to ASTM A269 Grade 316L	Linear meter		6	0.7	71.1	4.2	10.6	68.33	455.54	44.49	284.86	10.38	66.44	136.69	875.16	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0117	Added	1/2" 90 union elbow, SS, A182 Gr 316 - Swagelok or equal	ea		4	1.1	119.3	4.4	17.9	71.68	477.23	48.36	193.42	17.40	69.60	202.96	811.84	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0118	Added	1/2" thread adapter, SS, A182 Gr 316 - Swagelok or equal	ea		2	3.7	400.5	7.4	60.0	120.16	801.06	49.26	98.51	58.41	116.83	568.28	1,136.55	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0119	Added	1/2" ball valve, SS - THD - Swagelok 60T Series or equal VBA14	ea		1	1.1	119.3	1.1	17.9	17.90	119.31	293.55	293.55	17.40	17.40	448.15	448.15	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0120	Added	1" Expansion joint U-type Connectall - PE (Supplied with Equipment)	ea		2	3.2	343.8	6.4	51.5	103.14	687.63	18.07	36.13	50.14	100.29	463.60	927.19	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
340	3443.020	WFS (Fire Protection Water)	LS	1	1	0.0		0.0		0.00	0.00	6,042,000.00	6,042,000.00	0.00	0.00	6,042,000.00	6,042,000.00	1.0	26448.3	2,391,081.99	26,448.3	310,840.66	310,840.66	2,391,081.99	5,244,850.35	5,244,850.35	590,230.91	590,230.91	8,537,003.91	8,537,003.91
340b	Added	Piping EA	0		11	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.00	0.00	0.00	0.00	0.00	1.03	11.30	0.00	0.04	1.03	11.33
		WCD (Clear Water Drainage)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
341	3444.001	Drainage pump 3444-P-5000 to 5002	ea	3	3	229.4	24,811.4	688.2	3,721.7	11,165.15	74,434.32	159,914.18	479,742.55	3,618.58	10,855.75	192,065.92	576,197.76	3.0	143.0	12,928.55	429.0	1,680.71	5,042.13	38,785.64	145,527.04	436,581.13	32,336.75	97,010.24	192,473.05	577,419.14
342	3444.002	Submersible pump 3444-P-0001	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	124.1	11,218.27	124.1	1,458.38	1,458.38	11,218.27	51,712.21	51,712.21	13,047.47	13,047.47	77,436.33	77,436.33
343	3444.003	Oil skimmer 3444-OS-0001	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	62.0	5,609.14	62.0	729.19	729.19	5,609.14	18,382.40	18,382.40	5,019.09	5,019.09	29,739.82	29,739.82
344	3444.004	Air vent 3444-AV-0001 to 0003	ea	3	3	8.7	945.2	26.2	141.7	425.34	2,835.59	10,979.98	32,939.95	137.85	413.55	12,204.81	36,614.44	3.0	3.7	329.95	11.0	42.89	128.68	989.85	6,530.07	19,590.22	1,392.21	4,176.64	8,295.13	24,885.40
345	3444.005	Air vent 3444-AV-5000 to 0002	ea	3	3	24.0	2,599.2	72.1	389.8	1,169.68	7,797.88	5,661.93	16,985.79	379.09	1,137.27	9,030.21	27,090.62	3.0	3.7	329.95	11.0	42.89	128.68	989.85	3,300.06	9,900.17	741.93	2,225.79	4,414.83	13,244.50
346	3444.006	Air vent 3444-AV-5003	ea	1	2	28.4	3,071.8	56.8	460.7	921.57	6,143.78	11,105.41	22,210.82	448.01	896.03	15,086.10	30,172.20	2.0	3.7	329.95	7.3	42.89	85.79	659.89	8,137.50	16,274.99	1,715.83	3,431.66	10,226.16	20,452.33
347	3444.007	Pressure Indicator 3444-PI-0001 to 0003	ea	3	3	8.7	945.2	26.2	141.7	425.34	2,835.59	700.54	2,101.61	137.85	413.55	1,925.36	5,776.09	3.0	3.7	329.95	11.0	42.89	128.68	989.85	84.95	254.84	94.64	283.93	552.43	1,657.30
348	3444.008	Level Switch 3444-LSLL-0001 / 3444-LSHH-0001	ea	2	2	45.9	4,962.2	91.8	744.3	1,488.69	9,924.58	983.67	1,967.34	723.72	1,447.43	7,414.02	14,828.04	2.0	16.6	1,497.25	33.1	194.64	389.28	2,994.49	1,096.12	2,192.24	572.55	1,145.10	3,360.56	6,721.12
349	3444.009	Level Transmitter 3444-LT-0001	ea	1	1	45.9	4,962.2	45.9	744.3	744.34	4,962.29	18,342.14	18,342.14	723.72	723.72	24,772.49	24,772.49	1.0	24.6	2,227.85	24.6	289.62	289.62	2,227.85	5,652.55	5,652.55	1,661.60	1,661.60	9,831.62	9,831.62
350	3444.010	Oil sheen detector 3444-LSH-0001	ea	1	1	45.9	4,962.2	45.9	744.3	744.34	4,962.29	29,774.20	29,774.20	723.72	723.72	36,204.55	36,204.55	1.0	28.3	2,557.79	28.3	332.51	332.51	2,557.79	26,779.21	26,779.21	5,992.46	5,992.46	35,661.97	35,661.97
351	3444.011	Current transmitter 3444-IT-5000 to 5002	ea	3	3	45.9	4,962.2	137.6	744.3	2,233.03	14,886.86	379.15	1,137.46	723.72	2,171.15	6,809.50	20,428.50	3.0	6.4	576.26	19.1	74.91	224.74	1,728.77	128.19	384.57	161.24	483.71	940.60	2,821.79
352	3444.012	Control Panel 3444-CP-5000	ea	1	1	104.9	11,342.3	104.9	1,701.3	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	60,135.84	60,135.84	12,501.45	12,501.45	74,534.39	74,534.39
353	3444.013	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	9	10	1.1	116.2	10.4	17.4	169.11	1,127.43	22.98	222.81	16.96	164.43	173.63	1,683.78	9.7	1.8	159.97	17.2	20.80	201.67	1,551.32	7.62	73.92	39.13	379.47	227.52	2,206.37
354	3444.014	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	9	5.6	602.5	50.1	90.3	813.46	5,423.07	117.55	1,057.92	87.88	790.92	898.37	8,085.37	9.0	0.6	53.14	5.3	6.91	62.18	478.28	5.37	48.30	13.57	122.13	78.99	710.89
355	3444.015	Weld NPS 3/4, Piping Specification SB11	ea	18	27	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.0	1.1	98.99	29.6	12.87	347.47	2,672.86	137.39	3,709.45	50.68	1,368.25	299.93	8,098.03
356	3444.016	Pipe identification NPS 3/4	Linear meter	9	3	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.6	50.04	1.8	6.50	21.45	164.98	12.07	39.78	14.19	46.79	82.80	273.00
357	3444.017	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	11	38	1.4	151.1	53.7	22.6	870.88	5,805.88	36.45	1,400.03	22.04	846.75	232.30	8,923.54	38.4	1.8	164.97	70.1	21.45	823.87	6,337.44	346.43	13,307.84	108.52	4,168.61	641.36	24,637.76
358	3444.018	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	15	15	5.9	638.0	88.5	95.7	1,435.52	9,570.13	125.39	1,880.90	93.05	1,395.74	952.15	14,282.29	15.0	0.6	56.54	9.4	7.35	110.26	848.14	203.25	3,048.80	54.21	813.13	321.36	4,820.33
359	3444.019	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	7	10	3.9	425.3	39.3	63.8	638.01	4,253.39	43.11	431.05	62.03	620.33	594.28	5,942.78	10.0	0.4	37.99	4.2	4.94	49.38	379.86	6.29	62.90	10.19	101.93	59.41	594.07
360	3444.020	Ball valve NPS 1, Valve Specification VBA11	ea	10	10	7.3	793.9	73.4	119.0	1,190.95	7,939.66	202.60	2,025.95	115.79	1,157.95	1,231.45	12,314.51	10.0	3.7	329.95	36.5	42.89	428.93	3,299.48	182.52	1,825.18	114.29	1,142.88	669.65	6,696.47
361	3444.021	Weld NPS 1, Piping Specification SB11	ea	64	70	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.0	0.5	42.18	32.7	5.48	383.88	2,952.91	170.65	11,945.30	44.13	3,088.78	262.44	18,370.87
362	3444.022	Pipe identification NPS 1	Linear meter	11	6	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.6	51.65	3.7	6.71	42.89	329.95	12.06	77.07	14.57	93.06	84.99	542.97
363	3444.023	Pipe NPS 1-1/2 Sch.DWV, Piping Specification PA01	m	246	452	1.3	139.5	583.1	20.9	9,458.86	63,059.05	35.32	15,962.93	20.35	9,196.74	216.10	97,677.58	452.0	3.6	326.41	1,631.9	42.43	19,179.82	147,537.10	7.36	3,324.70	78.19	35,342.74	454.39	205,384.36
364	3444.024	"P" Drain Trap SW NPS 1-1/2, Piping Specification PA01	ea	17	30	1.7	184.3	51.1	27.6	829.41	5,529.41	28.36	850.74	26.88	806.43	267.20	8,015.98	30.0	0.3	29.16	9.7	3.79	113.72	874.78	9.29	278.72	8.72	261.70	50.96	1,528.93
365	3444.025	Elbow 90 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	38	56	1.7	184.3	95.4	27.6	1,548.23	10,321.56	16.15	904.31	26.88	1,505.33	254.99	14,279.44	56.0	0.3	29.16	18.1	3.79	212.30	1,633.11	2.54	142.09	7.36	412.41	42.86	2,399.91
366	3444.026	Elbow 45 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	32	73	1.7	184.3	124.4	27.6	2,018.23	13,454.89	14.71	1,073.98	26.88	1,962.31	253.55	18,509.41	73.0	0.2	14.70	11.9	1.91	139.49	1,073.03	2.16	157.47	3.89	283.88	22.66	1,653.88
367	3444.027	Elbow 22.5 degrees SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	8	0	2.5	269.3	0.0	40.4	0.00	0.00	24.21	0.00	39.29	0.00	373.29	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	9.81	0.00	5.88	0.00	34.49	0.00
368	3444.028	Tee wye SW Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	10	19	5.3	574.2	100.9	86.1	1,636.49	10,909.94	40.23	764.30	83.74	1,591.14	784.31	14,901.88	19.0	0.7	59.03	12.4	7.67	145.80	1,121.55	4.39	83.37	14.76	280.37	85.85	1,631.09
369	3444.029	Coupling Sch.DWV NPS 1-1/2, Piping Specification PA01	ea	3	70	2.5	269.3	174.4	40.4	2,828.50	18,856.69	24.21	1,694.65	39.29	2,750.12	373.29	26,129.97	70.0	0.3	29.23	22.6	3.80	266.01	2,046.24	1.72	120.74	7.22	505.20	41.97	2,938.19
370	3444.030	Pipe insulation NPS 1-1/2	Linear meter	120	0	1.5	147.3	0.0	22.1	0.00	0.00	42.73	0.00	8.55	0.00	220.74	0.00	0.0	3.3	302.22	0.0	39.29	0.00	0.00	201.83	0.00	94.19	0.00	637.53	0.00
371	3444.031	Pipe identification NPS 1-1/2	Linear meter	246	153	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	152.7	0.6	50.45	85.2	6.56	1,001.51	7,703.89	12.06	1,842.20	14.29	2,181.41	83.36	12,729.00
372	3444.032	Pipe NPS 2 Sch.40, Piping Specification PA02	m	6	16	1.5	162.7	24.1	24.4	390.63	2,604.21	18.21	291.37	23.74	379.81	229.13	3,666.02	16.0	6.3	568.14	100.6	73.86	1,181.73	9,090.23	10.11	161.80	135.56	2,168.92	787.67	12,602.69
373	3444.033	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	6	11	1.8	191.4	19.5	28.7	315.81	2,105.43	14.22	156.45	27.91	307.06	262.25	2,884.75	11.0	0.3	30.00	3.7	3.90	42.89	329.95	8.47	93.14	8.75	96.29	51.12	562.28
374	3444.034	Pipe identification NPS 2	Linear meter	6	5	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.6	51.28	3.1	6.67	36.41	280.05	12.06	65.88	14.48	79.08	84.49	461.42
375	3444.035	Pipe NPS 3 Sch.STD, Piping Specification CB11	m	10	13	2.8	302.2	36.3	45.3	589.43	3,929.56	50.23	652.98	44.08	573.10	441.93	5,745.08	13.0	3.6	327.39	47.1	42.56	553.29	4,256.06	19.81	257.47	80.93	1,052.07	470.68	6,118.89
376	3444.036	Elbow 90 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	2	3	12.7	1,375.2	38.1	206.2	618.87	4,125.79	81.86	245.57	200.57	601.72	1,863.98	5,591.95	3.0	1.3	121.08	4.0	15.74	47.22	363.23	6.13	18.39	29.69	89.06	172.63	517.89
377	3444.037	Elbow 45 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	2	0	12.7	1,375.2	0.0	206.2	0.00	0.00	81.86	0.00	200.57	0.00	1,863.98	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	16.31	0.00	18.92	0.00	110.42	0.00
378	3444.038	Flange Welding Neck 150RF Sch.STD NPS 3 c/w hardware, Piping Specification CB11	ea	2	4	8.3	893.2	33.0	133.9	535.93	3,572.85	67.72	270.87	130.27	521.08	1,225.18	4,900.72	4.0	18.5	1,674.35	74.1	217.67	870.66	6,697.40	28.90	115.59	399.32	1,597.27	2,320.23	9,280.92
379	3444.039	Olet BW Sch.STD NPS 3, Piping Specification CB11	ea	1	1	8.1	874.3	8.1	131.1	131.15	874.31	92.05	92.05	127.51	127.51	1,225.01	1,225.01	1.0	1.3	115.07	1.3	14.96	14.96	115.07	35.56	35.56	34.20	34.20	199.79	199.79
380	3444.040	Victaulic Coupling NPS 3, Style 07	ea	1	0	0.5	53.1	0.0	7.9	0.00	0.00	67.55	0.00	7.75	0.00	136.45	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	48.13	0.00	25.33	0.00	148.65	0.00
381	3444.041	Weld NPS 3, Piping Specification CB11	ea	10	119	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	119.0	3.8	342.85	451.3	44.57	5,303.82	40,798.61	20.85	2,481.05	84.74	10,084.41	493.01	58,667.90
382	3444.042	Ball valve NPS 3, Valve Specification VBA01	ea	1	1	6.4	694.7	6.4	104.2	104.21	694.72	2,323.25	2,323.25	101.32	101.32	3,223.50	3,223.50	1.0	5.1	461.65	5.1	60.01	60.01	461.65	1,158.99	1,158.99	341.83	341.83	2,022.48	2,022.48
383	3444.043	Pipe painting NPS 3	Linear meter	10	89	0.9	89.0	83.7	13.3	1,190.28	7,935.20	1.77	157.57	0.00	0.00	104.16	9,283.05	89.1	0.0	0.00	0.0	0.00	0.00	0.00	255.42	22,763.51	51.42	4,582.89	306.85	27,346.40
384	3444.044	Pipe identification NPS 3	Linear meter	10	38	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.0	0.6	50.32	21.2	6.54	248.71	1,913.16	12.06	458.68	14.25	541.97	83.18	3,162.52
385	3444.045	Pipe NPS 3 Sch.DWV, Piping Specification PA01	m	95	101	1.5	162.7	151.4	24.4	2,456.33	16,375.55	39.18	3,941.52	23.74	2,388.26	250.09	25,161.67	100.6	1.9	170.42	189.7	22.15	2,229.01	17,146.20	20.00	2,012.09	44.08	4,434.69	256.65	25,821.98
386	3444.046	Elbow 90 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	9	12	2.5	269.3	29.9	40.4	484.89	3,232.58	35.70	428.41	39.29	471.45	384.78	4,617.32	12.0	0.2	21.19	2.8	2.75	33.06	254.30	10.16	121.93	7.03	84.33	41.13	493.61
387	3444.047	Elbow 45 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	14	16	2.5	269.3	39.9	40.4	646.52	4,310.10	31.39	502.26	39.29	628.60	380.47	6,087.46	16.0	0.1	10.60	1.9	1.38	22.04	169.53	8.62	137.87	4.22	67.60	24.81	397.03
388	3444.048	Elbow 22.5 degrees SW Sch.DWV NPS 3, Piping Specification PA01	ea	1	1	2.5	269.3	2.5	40.4	40.41	269.38	35.70	35.70	39.29	39.29	384.78	384.78	1.0	0.2	16.64	0.2	2.16	2.16	16.64	19.82	19.82	7.89	7.89	46.52	46.52
389	3444.049	Tee wye SW Sch.DWV NPS 3, Piping Specification PA01	ea	7	7	3.6	389.8	25.2	58.4	409.33	2,729.26	49.21	344.50	56.86	398.04	554.46	3,881.19	7.0	0.5	42.38	3.3	5.51	38.57	296.68	15.85	110.94	13.15	92.07	76.89	538.26
390	3444.050	Coupling Sch.DWV NPS 3, Piping Specification PA01	ea	9	15	2.5	269.3	37.4	40.4	606.11	4,040.72	24.21	363.14	39.29	589.31	373.29	5,599.28	15.0	0.2	22.00	3.7	2.86	42.89	329.95	9.01	135.13	6.98	104.75	40.85	612.72
391	3444.051	"P" Drain Trap SW Sch.DWV NPS 3, Piping Specification PA01	ea	5	23	2.5	269.3	57.3	40.4	929.37	6,195.77	107.52	2,472.97	39.29	903.61	456.60	10,501.72	23.0	0.2	22.24	5.7	2.89	66.50	511.55	76.81	1,766.70	20.69	475.91	122.64	2,820.67
392	3444.052	Flexible coupling NPS 3, Fernco Series 1056	ea	1	1	0.4	47.8	0.4	7.1	7.18	47.85	11.32	11.32	6.98	6.98	73.33	73.33	1.0	0.2	16.64	0.2	2.16	2.16	16.64	9.83	9.83	5.90	5.90	34.53	34.53
393	3444.053	Pipe identification NPS 3	Linear meter	95	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
394	3444.054	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	2	6	3.5	383.6	22.7	57.5	368.45	2,456.33	67.23	430.41	55.95	358.24	564.38	3,613.43	6.4	13.6	1,228.99	87.0	159.77	1,022.91	7,868.53	30.08	192.56	294.89	1,887.99	1,713.72	10,972.00
395	3444.055	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	2	6	15.9	1,715.5	95.2	257.3	1,543.98	10,293.20	105.83	634.96	250.20	1,501.19	2,328.89	13,973.34	6.0	1.4	129.16	8.6	16.79	100.74	774.96	56.89	341.32	41.81	250.84	244.64	1,467.86
396	3444.056	Flange Welding Neck 150RF Sch.STD NPS 4 c/w hardware, Piping Specification CB11	ea	2	4	11.4	1,229.9	45.5	184.4	737.96	4,919.75	94.91	379.62	179.38	717.51	1,688.71	6,754.85	4.0	30.1	2,722.08	120.4	353.87	1,415.48	10,888.32	46.62	186.47	649.11	2,596.46	3,771.68	15,086.73
397	3444.057	Flange Slip-on 150RF NPS 4 c/w hardware, Piping Specification CB11	ea	2	0	11.4	1,229.9	0.0	184.4	0.00	0.00	94.91	0.00	179.38	0.00	1,688.71	0.00	0.0	2.0	181.61	0.0	23.61	0.00	0.00	20.84	0.00	46.87	0.00	272.92	0.00
398	3444.058	Olet BW Sch.STD NPS 4, Piping Specification CB11	ea	1	1	9.4	1,016.0	9.4	152.4	152.41	1,016.09	113.72	113.72	148.19	148.19	1,430.41	1,430.41	1.0	1.8	164.98	1.8	21.45	21.45	164.98	46.59	46.59	48.15	48.15	281.17	281.17
399	3444.059	Weld NPS 4, Piping Specification CB11	ea	6	83	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.0	4.7	429.13	394.0	55.79	4,630.32	35,617.86	28.29	2,347.91	106.51	8,840.06	619.71	51,436.15
400	3444.060	Ball valve NPS 4, Valve Specification VBA01	ea	1	1	11.0	1,187.4	11.0	178.1	178.11	1,187.40	2,524.38	2,524.38	173.18	173.18	4,063.07	4,063.07	1.0	6.2	561.47	6.2	72.99	72.99	561.47	1,555.05	1,555.05	445.03	445.03	2,634.55	2,634.55
401	3444.061	Pipe identification NPS 4	Linear meter	2	40	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.9	0.6	50.48	22.3	6.56	261.69	2,012.97	12.06	481.06	14.29	569.94	83.40	3,325.65
402	3444.062	Pipe NPS 4 Sch.DWV, Piping Specification PA01	m	112	116	1.7	186.0	199.0	27.9	3,228.19	21,521.24	52.18	6,036.64	27.13	3,138.73	293.22	33,924.80	115.7	0.5	47.34	60.6	6.15	712.07	5,477.43	28.98	3,352.73	16.96	1,962.28	99.44	11,504.50
403	3444.063	Elbow 90 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	16	16	5.3	574.2	84.9	86.1	1,378.10	9,187.32	54.59	873.44	83.74	1,339.91	798.67	12,778.77	16.0	0.3	28.85	5.1	3.75	60.01	461.65	17.43	278.81	10.29	164.62	60.32	965.09
404	3444.064	Elbow 45 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	2	2	5.3	574.2	10.6	86.1	172.26	1,148.42	51.72	103.43	83.74	167.49	795.80	1,591.60	2.0	0.2	16.64	0.4	2.16	4.33	33.27	16.99	33.98	7.33	14.66	43.12	86.24
405	3444.065	Elbow 22.5 degrees SW Sch.DWV NPS 4, Piping Specification PA01	ea	6	6	5.3	574.2	31.9	86.1	516.79	3,445.25	57.46	344.78	83.74	502.47	801.55	4,809.28	6.0	0.2	13.86	0.9	1.80	10.81	83.18	24.81	148.85	8.25	49.51	48.72	292.35
406	3444.066	Concentric reducer Sch.DWV NPS 4, Piping Specification PA01	ea	2	1	11.6	1,254.7	11.6	188.2	188.21	1,254.75	134.88	134.88	183.00	183.00	1,760.84	1,760.84	1.0	0.2	16.64	0.2	2.16	2.16	16.64	12.42	12.42	6.42	6.42	37.64	37.64
407	3444.067	Tee wye SW Sch.DWV NPS 4, Piping Specification PA01	ea	1	1	7.9	850.6	7.9	127.6	127.60	850.68	82.04	82.04	124.07	124.07	1,184.39	1,184.39	1.0	0.6	49.91	0.6	6.49	6.49	49.91	25.16	25.16	16.80	16.80	98.35	98.35
408	3444.068	Coupling Sch.DWV NPS 4, Piping Specification PA01	ea	3	16	5.3	574.2	84.9	86.1	1,378.10	9,187.32	41.66	666.60	83.74	1,339.91	785.75	12,571.93	16.0	0.3	28.85	5.1	3.75	60.01	461.65	17.00	272.06	10.20	163.26	59.81	956.99
409	3444.069	Flexible coupling NPS 4, Fernco Series 1056	ea	2	0	0.5	57.4	0.0	8.6	0.00	0.00	13.58	0.00	8.37	0.00	87.99	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	10.51	0.00	9.92	0.00	58.02	0.00
410	3444.070	Pipe identification NPS 4	Linear meter	112	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
411	3444.071	Pipe NPS 6 Sch.STD, Piping Specification CB11	m	1	7	4.6	499.9	32.4	74.9	524.91	3,499.41	109.89	769.26	72.91	510.36	757.71	5,303.95	7.0	10.8	978.16	75.7	127.16	890.13	6,847.14	50.39	352.76	240.03	1,680.19	1,395.75	9,770.22
412	3444.072	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	3	5	14.0	1,513.5	70.0	227.0	1,135.12	7,567.49	129.41	647.06	220.73	1,103.67	2,090.67	10,453.34	5.0	43.6	3,939.70	217.9	512.16	2,560.81	19,698.50	79.22	396.11	941.84	4,709.18	5,472.92	27,364.60
413	3444.073	Flange Slip-on 150RF NPS 6 c/w hardware, Piping Specification CB11	ea	1	2	14.0	1,513.5	28.0	227.0	454.05	3,027.00	111.69	223.37	220.73	441.47	2,072.94	4,145.89	2.0	2.6	239.14	5.3	31.09	62.18	478.28	256.48	512.96	107.84	215.68	634.55	1,269.10
414	3444.074	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.9	14.2	230.3	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
415	3444.075	Cap NFPT Sch.STD NPS 6 , Piping Specification CB11	m	1	0	9.5	1,025.0	0.0	153.7	0.00	0.00	64.03	0.00	149.50	0.00	1,392.36	0.00	0.0	3.1	280.05	0.0	36.41	0.00	0.00	8.58	0.00	67.54	0.00	392.58	0.00
416	3444.076	Weld NPS 6, Piping Specification CB11	ea	3	8	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.0	0.00	0.0	0.00	0.00	0.00	466.32	3,730.52	93.88	751.04	560.20	4,481.56
417	3444.077	Butterfly valve NPS 6, Valve Specification VBU01	ea	1	1	16.1	1,736.8	16.1	260.5	260.52	1,736.80	507.82	507.82	253.30	253.30	2,758.44	2,758.44	1.0	7.5	676.53	7.5	87.95	87.95	676.53	501.92	501.92	260.04	260.04	1,526.43	1,526.43
418	3444.078	Check valve NPS 6, Valve Specification VCH02	ea	1	1	16.1	1,736.8	16.1	260.5	260.52	1,736.80	3,838.83	3,838.83	253.30	253.30	6,089.45	6,089.45	1.0	7.5	676.53	7.5	87.95	87.95	676.53	6,570.62	6,570.62	1,481.83	1,481.83	8,816.92	8,816.92
419	3444.079	Pipe identification NPS 6	Linear meter	1	2	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.5	48.56	1.3	6.31	14.96	115.07	12.06	28.59	13.84	32.80	80.77	191.42
420	3444.080	Pipe NPS 10 Sch.STD, Piping Specification CB11	m	5	26	7.1	767.3	184.5	115.1	2,992.51	19,950.10	238.20	6,193.11	111.91	2,909.59	1,232.51	32,045.31	26.0	3.0	270.92	77.9	35.22	915.72	7,043.99	105.76	2,749.71	84.96	2,209.03	496.86	12,918.44
421	3444.081	Flange Welding Neck 150RF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	12	21	22.9	2,481.1	481.8	372.1	7,815.60	52,104.02	246.14	5,169.03	361.86	7,599.02	3,461.32	72,687.68	21.0	11.2	1,015.79	236.0	132.05	2,773.11	21,331.62	173.99	3,653.69	273.75	5,748.82	1,595.58	33,507.24
422	3444.082	Flange Welding Neck 150FF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	3	3	22.9	2,481.1	68.8	372.1	1,116.51	7,443.43	246.14	738.43	361.86	1,085.57	3,461.32	10,383.95	3.0	2.9	263.40	8.7	34.24	102.73	790.20	91.95	275.85	80.42	241.25	470.01	1,410.03
423	3444.083	Olet BW Sch.STD NPS 10, Piping Specification CB11	ea	3	3	22.3	2,410.2	66.9	361.5	1,084.61	7,230.76	579.11	1,737.33	351.52	1,054.56	3,702.42	11,107.27	3.0	0.8	71.63	2.4	9.31	27.93	214.88	436.46	1,309.39	104.71	314.12	622.11	1,866.32
424	3444.084	Victaulic Coupling NPS 10, Style 77	ea	3	3	2.7	292.4	8.1	43.8	131.59	877.26	338.08	1,014.23	42.65	127.94	717.01	2,151.02	3.0	0.8	71.63	2.4	9.31	27.93	214.88	297.43	892.30	76.71	230.14	455.08	1,365.25
425	3444.085	Weld NPS 10, Piping Specification CB11	ea	15	36	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.0	4.6	411.97	164.1	53.56	1,928.04	14,831.08	472.64	17,014.92	191.69	6,900.98	1,129.86	40,675.02
426	3444.086	Butterfly valve NPS 10, Valve Specification VBU01	ea	3	9	26.6	2,874.5	239.2	431.1	3,880.69	25,871.24	1,534.30	13,808.67	419.24	3,773.15	5,259.30	47,333.74	9.0	10.6	955.04	95.1	124.15	1,117.39	8,595.32	1,110.31	9,992.82	447.98	4,031.84	2,637.49	23,737.37
427	3444.087	Check valve NPS 10, Valve Specification VCH02	ea	3	3	26.6	2,874.5	79.7	431.1	1,293.56	8,623.75	5,164.08	15,492.24	419.24	1,257.72	8,889.09	26,667.26	3.0	9.9	896.50	29.8	116.55	349.64	2,689.50	14,583.13	43,749.40	3,146.65	9,439.95	18,742.83	56,228.48
428	3444.088	Pipe identification NPS 10	Linear meter	5	9	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.5	49.49	4.7	6.43	55.69	428.37	12.06	104.42	14.06	121.69	82.05	710.17
429	3444.089	Olet BW Sch.STD NPS 12, Piping Specification CB11	ea	3	3	31.0	3,355.4	93.1	503.3	1,509.95	10,066.36	893.22	2,679.65	489.37	1,468.11	5,241.36	15,724.07	3.0	1.0	87.80	2.9	11.41	34.24	263.40	724.58	2,173.73	166.51	499.53	990.30	2,970.90
430	3444.090	Flange Welding Neck 150RF Sch.STD NPS 10 c/w hardware, Piping Specification CB11	ea	3	3	27.2	2,941.9	81.6	441.2	1,323.87	8,825.78	330.71	992.14	429.06	1,287.18	4,142.99	12,428.97	3.0	4.3	390.49	13.0	50.76	152.29	1,171.46	118.24	354.71	115.57	346.72	675.06	2,025.18
431	3444.091	Weld NPS 12, Piping Specification CB11	ea	2	6	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.00	0.0	0.00	0.00	0.00	1,521.66	9,129.96	306.35	1,838.09	1,828.01	10,968.05
432	3444.092	Pipe identification NPS 12	Linear meter	3	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
433	3444.093	Pipe NPS 24 Sch.STD, Piping Specification CB11	m	43	42	12.0	1,302.1	505.7	195.3	8,203.26	54,688.38	699.74	29,389.29	189.90	7,975.93	2,387.07	100,256.86	42.0	24.6	2,227.16	1,034.7	289.53	12,160.27	93,540.53	328.30	13,788.69	589.51	24,759.41	3,434.50	144,248.90
434	3444.094	Elbow 90 degrees BW Sch.STD NPS 24, Piping Specification SB11	ea	2	2	90.0	9,729.6	179.9	1,459.4	2,918.89	19,459.26	1,494.88	2,989.77	1,419.00	2,838.00	14,102.96	28,205.92	2.0	1.9	173.30	3.8	22.53	45.06	346.59	626.09	1,252.19	166.78	333.57	988.70	1,977.40
435	3444.095	Elbow 45 degrees BW Sch.STD NPS 24, Piping Specification SB11	ea	2	2	90.0	9,729.6	179.9	1,459.4	2,918.89	19,459.26	1,128.89	2,257.78	1,419.00	2,838.00	13,736.96	27,473.93	2.0	0.9	82.49	1.8	10.72	21.45	164.98	104.35	208.70	40.39	80.78	237.95	475.90
436	3444.096	Tee BW Sch.STD NPS 24, Piping Specification SB11	ea	1	1	132.4	14,316.2	132.4	2,147.4	2,147.43	14,316.20	2,307.08	2,307.08	2,087.92	2,087.92	20,858.63	20,858.63	1.0	3.8	346.59	3.8	45.06	45.06	346.59	986.90	986.90	280.14	280.14	1,658.68	1,658.68
437	3444.097	Victaulic Coupling NPS 24, Style 77	ea	1	2	4.5	485.3	9.0	72.8	145.60	970.69	1,176.15	2,352.31	70.78	141.57	1,805.08	3,610.17	2.0	1.9	173.30	3.8	22.53	45.06	346.59	1,060.51	2,121.01	254.23	508.47	1,510.56	3,021.13
438	3444.098	Victaulic Coupling NPS 24, Style W77	ea	1	0	4.5	485.3	0.0	72.8	0.00	0.00	1,176.15	0.00	70.78	0.00	1,805.08	0.00	0.0	2.2	198.25	0.0	25.77	0.00	0.00	1,060.50	0.00	260.11	0.00	1,544.63	0.00
439	3444.099	Weld NPS 24, Piping Specification CB11	ea	10	19	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.0	13.6	1,226.91	257.9	159.50	3,030.47	23,311.31	740.66	14,072.45	437.10	8,304.94	2,564.17	48,719.17
440	3444.100	Pipe identification NPS 24	Linear meter	43	14	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.1	0.6	50.28	7.9	6.54	92.27	709.80	12.06	170.30	14.25	201.11	83.13	1,173.49
B&M-0121	Added	6" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	5.5	592.9	35.1	88.9	569.42	3,796.15	101.83	651.93	86.47	553.64	870.16	5,571.15	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0122	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.9	209.2	12.4	31.3	200.97	1,339.82	34.79	222.73	30.52	195.40	305.97	1,958.92	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0123	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.2	127.8	7.6	19.1	122.82	818.78	18.50	118.43	18.65	119.41	184.22	1,179.44	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0124	Added	10" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea		3	34.5	3,732.3	103.5	559.8	1,679.56	11,197.05	627.03	1,881.10	544.34	1,633.01	5,463.57	16,390.72	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0125	Added	6" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea		1	20.6	2,229.4	20.6	334.4	334.42	2,229.48	188.97	188.97	325.16	325.16	3,078.03	3,078.03	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0126	Added	24" cap, CS, STD, ASTM A234 Gr WPB, smls - BW	ea		2	41.4	4,473.1	82.7	670.9	1,341.94	8,946.30	527.49	1,054.98	652.38	1,304.75	6,323.99	12,647.98	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0127	Added	24"x1" WOL, CS, STD, ASTM A234 Gr WPB	ea		1	2.6	283.5	2.6	42.5	42.53	283.56	30.66	30.66	41.36	41.36	398.11	398.11	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0128	Added	10"x2" SOL, FS, 3000#	ea		3	5.2	567.1	15.7	85.0	255.20	1,701.36	47.68	143.05	82.71	248.13	782.58	2,347.74	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0129	Added	10"x1" SOL, FS, 3000#	ea		6	2.6	283.5	15.7	42.5	255.20	1,701.36	20.29	121.72	41.36	248.13	387.73	2,326.41	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0130	Added	4" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter		6	3.4	372.0	22.0	55.8	357.28	2,381.90	118.53	758.91	54.26	347.38	600.63	3,845.48	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0131	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea		6	0.5	59.0	3.3	8.8	53.17	354.45	15.44	92.66	8.62	51.69	91.99	551.97	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0132	Added	2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea		3	0.5	59.0	1.6	8.8	26.58	177.32	25.99	77.96	8.62	25.85	102.54	307.61	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0133	Added	2" union, class 3000, SS ASTM A182 F304L - SW	ea		3	14.4	1,556.0	43.2	233.4	700.21	4,668.09	154.46	463.37	226.94	680.81	2,170.83	6,512.49	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0134	Added	4" flange, WN, SS, B16.5 RF, Sch 10S, ASTM A182 F304L - 150#	ea		1	15.8	1,708.4	15.8	256.2	256.27	1,708.44	172.30	172.30	249.17	249.17	2,386.18	2,386.18	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0135	Added	1" weld adapter, 304SS, Vic-Press - 561	ea		6	5.9	638.0	35.4	95.7	574.21	3,828.05	153.82	922.93	93.05	558.30	980.58	5,883.49	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0136	Added	1" male adapter, 304SS, Vic-Press - 596	ea		3	5.9	638.0	17.7	95.7	287.10	1,914.03	150.83	452.49	93.05	279.15	977.59	2,932.77	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0137	Added	1" union, 304SS, Vic-Press - 584	ea		6	5.9	638.0	35.4	95.7	574.21	3,828.05	580.55	3,483.32	93.05	558.30	1,407.31	8,443.87	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0138	Added	2" pipe, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - PE	Linear meter		34	1.3	139.5	43.3	20.9	701.81	4,678.75	33.24	1,114.86	20.35	682.36	214.03	7,177.76	33.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0139	Added	2" 45 elbow, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		16	1.8	191.4	28.3	28.7	459.37	3,062.44	17.96	287.32	27.91	446.64	265.99	4,255.76	16.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0140	Added	2" 90 elbow, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		17	1.8	191.4	30.1	28.7	488.08	3,253.84	18.68	317.48	27.91	474.55	266.70	4,533.95	17.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0141	Added	4" Adapter Hub x MIPT, PVC DWV	ea		5	5.3	574.2	26.5	86.1	430.66	2,871.04	64.65	323.23	83.74	418.72	808.73	4,043.64	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0142	Added	4"x1.5" reducer, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		1	5.3	574.2	5.3	86.1	86.13	574.21	56.90	56.90	83.74	83.74	800.99	800.99	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0143	Added	2"x1.5" reducing wye, PVC, Sch DWV, system XFR 15-50, CSA/CAN B181.2-M - SOC	ea		3	2.5	269.3	7.5	40.4	121.22	808.14	42.88	128.65	39.29	117.86	391.96	1,175.88	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0144	Added	3" Clean-Out Watts Model CO-203NH-R-1	ea		1	2.5	269.3	2.5	40.4	40.41	269.38	84.08	84.08	39.29	39.29	433.15	433.15	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0145	Added	2" Clean-Out Watts Model CO-203NH-R-1	ea		1	1.8	191.4	1.8	28.7	28.71	191.40	74.70	74.70	27.91	27.91	322.72	322.72	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0146	Added	1.5" Clean-Out Watts Model CO-203NH-R-1	ea		3	1.7	184.3	5.1	27.6	82.94	552.94	67.14	201.42	26.88	80.64	305.98	917.95	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0147	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		3	1.8	191.4	5.3	28.7	86.13	574.21	24.42	73.26	27.91	83.74	272.45	817.35	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0148	Added	4" 45 elbow, SS, SCH 10S, ASTM A403 WP304L - VICTAULIC 4115S	ea		1	4.7	510.4	4.7	76.5	76.56	510.41	210.13	210.13	74.44	74.44	871.53	871.53	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0149	Added	4" 90 elbow, LR, Sch 10S, ASTM A403 WP304L - VICTAULIC 4105S	ea		1	4.7	510.4	4.7	76.5	76.56	510.41	216.51	216.51	74.44	74.44	877.91	877.91	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0150	Added	4" flexible coupling, SS ASTM A-890 GROOVED - VICTAULIC 77DX	ea		2	0.5	58.4	1.1	8.7	17.55	116.97	983.88	1,967.77	8.53	17.06	1,059.67	2,119.34	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0151	Added	4" rigid coupling, Galv. DI, ASTM A536 - Victaulic 89	ea		2	0.5	58.4	1.1	8.7	17.55	116.97	145.16	290.31	8.53	17.06	220.94	441.89	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0152	Added	6" quick connect, camlock type A, SS316, FNPT c/w dust cap type DC, SS316 /w brass chain & hooks	ea		1	16.1	1,736.8	16.1	260.5	260.52	1,736.80	450.36	450.36	253.30	253.30	2,700.98	2,700.98	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0153	Added	2" ball valve, SS, full port, 3pc - SW - Velan VTP-2000 or equal VBA11	ea		3	14.7	1,587.9	44.0	238.1	714.57	4,763.80	406.63	1,219.88	231.59	694.77	2,464.34	7,393.01	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WDS (Dewatering)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
441	3445.010	Dewatering pump 3445-P-5000 to 5002	ea	3	3	229.4	24,811.4	688.2	3,721.7	11,165.15	74,434.32	208,544.30	625,632.91	3,618.58	10,855.75	240,696.04	722,088.12	3.0	189.5	17,130.08	568.4	2,226.91	6,680.73	51,390.24	178,108.27	534,324.80	39,883.61	119,650.83	237,348.87	712,046.60
442	3445.020	Submerisble pump 3445-P-0001	ea	1	1	124.5	13,469.0	124.5	2,020.3	2,020.36	13,469.07	40,418.20	40,418.20	1,964.37	1,964.37	57,872.00	57,872.00	1.0	71.7	6,483.91	71.7	842.91	842.91	6,483.91	37,164.70	37,164.70	9,006.03	9,006.03	53,497.55	53,497.55
443	3445.030	Air vent 3445-AV-0001 / 1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 / 5000 to 500	ea	12	12	8.7	945.2	104.9	141.7	1,701.36	11,342.37	5,575.02	66,900.20	137.85	1,654.21	6,799.84	81,598.14	12.0	7.3	659.90	87.6	85.79	1,029.44	7,918.77	3,330.12	39,961.39	825.52	9,906.29	4,901.32	58,815.89
444	3445.040	Air vent 3445-AV-0002 to 0004	ea	3	3	8.7	945.2	26.2	141.7	425.34	2,835.59	10,979.98	32,939.95	137.85	413.55	12,204.81	36,614.44	3.0	7.3	659.90	21.9	85.79	257.36	1,979.70	6,560.13	19,680.40	1,475.81	4,427.42	8,781.63	26,344.88
445	3445.050	Pressure indicator 3445-PI-0001 to 0004 / 1000 / 2000 / 3000 / 4000	ea	8	8	24.0	2,599.2	192.3	389.8	3,119.15	20,794.35	787.45	6,299.60	379.09	3,032.72	4,155.73	33,245.82	8.0	3.7	329.95	29.2	42.89	343.15	2,639.59	84.95	679.56	94.64	757.16	552.43	4,419.46
446	3445.060	Differential pressure indicator 3445-PDI-0001	ea	1	1	24.0	2,599.2	24.0	389.8	389.89	2,599.29	3,092.60	3,092.60	379.09	379.09	6,460.88	6,460.88	1.0	14.6	1,319.80	14.6	171.57	171.57	1,319.80	2,997.04	2,997.04	913.57	913.57	5,401.98	5,401.98
447	3445.070	Pressure switch 3445-PSLH-0001 / 0002	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	927.46	1,854.93	137.85	275.70	2,152.29	4,304.59	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	890.15	1,780.30	334.30	668.59	1,970.13	3,940.27
448	3445.080	Level switch 3445-LSLL-0001 / 3445-LSHH-0001	ea	2	4	45.9	4,962.2	183.5	744.3	2,977.37	19,849.15	983.67	3,934.69	723.72	2,894.87	7,414.02	29,656.08	4.0	16.6	1,497.25	66.2	194.64	778.57	5,988.98	695.38	2,781.53	491.87	1,967.50	2,879.14	11,516.57
449	3445.090	Level tarnsmitter 3445-LT-0001	ea	1	2	45.9	4,962.2	91.8	744.3	1,488.69	9,924.58	18,342.14	36,684.29	723.72	1,447.43	24,772.49	49,544.98	2.0	24.6	2,227.85	49.3	289.62	579.24	4,455.70	5,652.55	11,305.11	1,661.60	3,323.19	9,831.62	19,663.24
450	3445.100	Current transmitter 3445-IT-5000 to 5002	ea	3	3	45.9	4,962.2	137.6	744.3	2,233.03	14,886.86	379.15	1,137.46	723.72	2,171.15	6,809.50	20,428.50	3.0	6.4	576.26	19.1	74.91	224.74	1,728.77	128.19	384.57	161.24	483.71	940.60	2,821.79
451	3445.110	Control Panel 3445-CP-5000	ea	1	1	104.9	11,342.3	104.9	1,701.3	1,701.36	11,342.37	29,095.98	29,095.98	1,654.21	1,654.21	43,793.92	43,793.92	1.0	18.6	1,678.85	18.6	218.25	218.25	1,678.85	64,323.65	64,323.65	13,344.56	13,344.56	79,565.31	79,565.31
452	3445.120	Monorail hoist 3445-HO-0001	ea	1	1	139.8	15,123.1	139.8	2,268.4	2,268.47	15,123.16	8,790.13	8,790.13	2,205.61	2,205.61	28,387.38	28,387.38	1.0	191.6	17,322.32	191.6	2,251.90	2,251.90	17,322.32	9,600.59	9,600.59	6,003.85	6,003.85	35,178.66	35,178.66
453	3445.130	Pipe NPS 1/2 Sch.10S, Piping Specification SB11	m	9	14	1.0	104.6	13.5	15.7	219.73	1,464.87	18.88	264.30	15.26	213.64	154.47	2,162.53	14.0	0.7	61.30	9.5	7.97	111.56	858.14	162.04	2,268.62	47.03	658.41	278.34	3,896.73
454	3445.140	Elbow 90 degrees SW Class 3000 NPS 1/2, Piping Specification CB11	ea	1	5	6.4	687.6	31.8	103.1	515.72	3,438.16	40.93	204.64	100.29	501.43	931.99	4,659.96	5.0	0.5	49.63	2.7	6.45	32.26	248.15	46.04	230.20	20.93	104.66	123.05	615.27
455	3445.150	Ball valve NPS 1/2, Valve Specification VBA11	ea	1	2	3.7	400.5	7.4	60.0	120.16	801.06	107.23	214.46	58.41	116.83	626.25	1,252.50	2.0	3.2	289.06	6.4	37.58	75.15	578.11	91.26	182.52	86.31	172.61	504.20	1,008.40
456	3445.160	Ball valve NPS 1/2, Valve Specification VBA14	ea	1	11	1.1	119.3	12.1	17.9	196.86	1,312.38	293.55	3,229.04	17.40	191.40	448.15	4,929.68	11.0	3.2	287.98	35.0	37.44	411.81	3,167.79	107.60	1,183.63	89.34	982.77	522.36	5,746.00
457	3445.170	Pipe identification NPS 1/2	Linear meter	9	4	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.6	52.00	2.2	6.76	25.77	198.25	12.06	45.99	14.65	55.86	85.48	325.87
458	3445.180	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	9	10	1.1	116.2	10.4	17.4	168.99	1,126.58	22.98	222.64	16.96	164.30	173.63	1,682.51	9.7	1.8	160.09	17.2	20.81	201.67	1,551.32	7.62	73.87	39.16	379.45	227.68	2,206.31
459	3445.190	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	6	5.6	602.5	33.4	90.3	542.31	3,615.38	117.55	705.28	87.88	527.28	898.37	5,390.24	6.0	0.6	54.99	3.6	7.15	42.89	329.96	5.37	32.22	14.01	84.05	81.52	489.12
460	3445.200	Weld NPS 3/4, Piping Specification SB11	ea	18	27	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.0	1.1	98.99	29.6	12.87	347.47	2,672.86	138.75	3,746.21	50.95	1,375.65	301.56	8,142.19
461	3445.210	Pipe identification NPS 3/4	Linear meter	9	3	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.6	50.04	1.8	6.50	21.45	164.98	12.07	39.78	14.19	46.79	82.80	273.00
462	3445.220	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	11	51	1.4	151.1	71.6	22.6	1,161.18	7,741.17	36.44	1,866.23	22.04	1,129.00	232.29	11,897.57	51.2	1.9	168.74	95.6	21.94	1,123.54	8,642.63	14.43	739.35	42.56	2,179.99	247.67	12,685.52
463	3445.230	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	6	6	3.9	425.3	23.6	63.8	382.81	2,552.03	43.11	258.63	62.03	372.20	594.28	3,565.67	6.0	0.4	38.59	2.6	5.02	30.10	231.52	4.71	28.24	10.02	60.09	58.32	349.95
464	3445.240	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	17	23	5.9	638.0	135.7	95.7	2,201.13	14,674.19	125.39	2,884.05	93.05	2,140.13	952.15	21,899.51	23.0	0.6	53.83	13.7	7.00	160.94	1,238.00	8.08	185.79	14.28	328.36	83.18	1,913.09
465	3445.250	Lateral SW Class 3000 NPS 2, Piping Specification SB11	ea	2	0	11.1	1,205.1	0.0	180.7	0.00	0.00	268.91	0.00	175.76	0.00	1,830.56	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	9.64	0.00	32.90	0.00	191.37	0.00
466	3445.260	Concentric Reducer SW Class 3000 NPS 1 x 1/2, Piping Specification SB11	ea	2	29	8.5	921.5	247.1	138.2	4,008.82	26,725.46	448.22	12,998.42	134.40	3,897.73	1,642.43	47,630.43	29.0	0.6	54.07	17.3	7.03	203.83	1,567.96	221.52	6,424.17	57.30	1,661.84	339.92	9,857.81
467	3445.270	Weld NPS 1, Piping Specification SB11	ea	50	119	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	119.0	0.4	39.78	52.4	5.17	615.47	4,734.36	180.29	21,454.20	45.48	5,411.76	270.72	32,215.78
468	3445.280	Ball valve NPS 1, Valve Specification VBA11	ea	14	17	7.3	793.9	124.8	119.0	2,024.61	13,497.42	202.60	3,444.12	115.79	1,968.51	1,231.45	20,934.67	17.0	3.2	287.22	54.0	37.34	634.75	4,882.68	127.76	2,171.96	93.22	1,584.76	545.54	9,274.15
469	3445.290	Pipe identification NPS 1	Linear meter	11	30	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.7	0.6	50.59	16.6	6.58	195.18	1,501.40	12.06	358.00	14.32	424.92	83.56	2,479.50
470	3445.300	Pipe NPS 1 Sch.40, Piping Specification PA02	m	28	63	1.1	116.2	67.7	17.4	1,098.65	7,324.34	11.29	711.35	16.96	1,068.21	161.95	10,202.55	63.0	3.2	285.70	199.1	37.14	2,339.85	17,998.85	4.32	271.87	68.01	4,284.73	395.16	24,895.30
471	3445.310	Elbow 90 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	23	40	1.2	134.6	49.8	20.2	808.14	5,387.63	9.52	380.77	19.64	785.75	184.06	7,362.29	40.0	0.3	29.29	13.0	3.81	152.29	1,171.46	2.23	89.28	7.33	293.29	42.66	1,706.32
472	3445.320	Pipe identification NPS 2	LS	1	9	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.6	50.91	5.1	6.62	60.01	461.65	12.06	109.39	14.39	130.52	83.99	761.58
473	3445.330	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	3	13	2.3	244.1	28.9	36.6	468.94	3,126.24	56.82	727.62	35.61	455.94	373.20	4,778.74	12.8	0.7	66.54	9.5	8.65	110.76	852.04	8.99	115.10	17.45	223.47	101.63	1,301.36
474	3445.340	Pipe NPS 2 Sch.40S, Piping Specification SB11	m	10	10	2.3	244.1	22.6	36.6	366.22	2,441.45	56.83	568.33	35.61	356.07	373.21	3,732.06	10.0	4.1	369.60	40.9	48.05	480.48	3,695.98	30.44	304.36	92.99	929.89	541.07	5,410.70
475	3445.350	Elbow 90 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	3	0	8.5	921.5	0.0	138.2	0.00	0.00	171.71	0.00	134.40	0.00	1,365.92	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.35	0.00	17.31	0.00	100.85	0.00
476	3445.360	Elbow 90 degrees BW Sch.40S NPS 2, Piping Specification SB11	ea	8	11	8.5	921.5	93.7	138.2	1,520.59	10,137.24	171.71	1,888.86	134.40	1,478.45	1,365.92	15,025.14	11.0	0.7	66.54	8.1	8.65	95.15	731.94	8.35	91.81	17.31	190.43	100.85	1,109.33
477	3445.370	Elbow 45 degrees BW Sch.40S NPS 2, Piping Specification SB11	ea	4	4	8.5	921.5	34.1	138.2	552.94	3,686.27	172.91	691.65	134.40	537.62	1,367.12	5,468.47	4.0	0.3	28.77	1.3	3.74	14.96	115.07	5.29	21.18	7.83	31.31	45.63	182.51
478	3445.380	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	3	3	7.6	827.0	22.9	124.0	372.17	2,481.14	98.20	294.59	120.62	361.86	1,169.92	3,509.77	3.0	0.4	38.36	1.3	4.99	14.96	115.07	8.67	26.01	10.76	32.28	62.77	188.31
479	3445.390	Flange Welding Neck 150RF Sch.10S NPS 2 c/w hardware, Piping Specification SB11	ea	4	8	8.8	952.2	70.4	142.8	1,142.74	7,618.29	492.03	3,936.24	138.88	1,111.08	1,726.04	13,808.35	8.0	2.7	243.30	21.5	31.63	253.04	1,946.43	12.23	97.82	59.64	477.14	346.80	2,774.43
480	3445.400	Reducing tee BW Sch.10S NPS 2 x 2 x 1, Piping Specification SB11	ea	4	6	11.1	1,205.1	66.9	180.7	1,084.61	7,230.76	266.81	1,600.88	175.76	1,054.56	1,828.47	10,970.81	6.0	1.2	107.21	7.1	13.94	83.62	643.26	23.14	138.85	29.86	179.14	174.15	1,044.88
481	3445.410	Concentric Reducer BW Sch.10S NPS 2 x 1, Piping Specification SB11	ea	1	1	8.5	921.5	8.5	138.2	138.24	921.57	183.09	183.09	134.40	134.40	1,377.29	1,377.29	1.0	0.6	49.91	0.6	6.49	6.49	49.91	9.64	9.64	13.67	13.67	79.71	79.71
482	3445.420	Weld NPS 2, Piping Specification SB11	ea	34	103	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	103.0	1.5	139.51	158.9	18.14	1,868.02	14,369.41	230.37	23,727.75	79.08	8,145.07	467.09	48,110.25
483	3445.430	Ball valve NPS 2, Valve Specification VBA11	ea	8	8	14.7	1,587.9	117.5	238.1	1,905.52	12,703.46	406.63	3,253.02	231.59	1,852.71	2,464.34	19,714.71	8.0	4.8	430.98	38.1	56.03	448.22	3,447.83	310.28	2,482.23	163.75	1,310.03	961.04	7,688.31
484	3445.440	Pipe identification NPS 2	Linear meter	13	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
485	3445.450	Pipe NPS 2 Sch.40, Piping Specification PA02	m	6	16	1.5	162.7	24.1	24.4	390.63	2,604.21	18.21	291.37	23.74	379.81	229.13	3,666.02	16.0	6.3	568.14	100.6	73.86	1,181.73	9,090.23	10.12	161.94	135.56	2,168.94	787.68	12,602.85
486	3445.460	Elbow 90 degrees SW Sch.40 NPS 2, Piping Specification PA02	ea	6	9	1.8	191.4	15.9	28.7	258.39	1,722.62	14.22	128.00	27.91	251.23	262.25	2,360.25	9.0	0.3	29.27	2.9	3.80	34.24	263.40	9.47	85.24	8.78	79.06	51.33	461.94
487	3445.470	Pipe identification NPS 2	Linear meter	6	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
488	3445.480	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.9	14.2	230.3	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
489	3445.490	Elbow 45 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	20.6	2,229.4	20.6	334.4	334.42	2,229.48	143.19	143.19	325.16	325.16	3,032.25	3,032.25	1.0	1.3	115.07	1.3	14.96	14.96	115.07	19.37	19.37	30.95	30.95	180.34	180.34
490	3445.500	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	1	1	14.0	1,513.5	14.0	227.0	227.02	1,513.50	129.41	129.41	220.73	220.73	2,090.67	2,090.67	1.0	68.4	6,187.23	68.4	804.34	804.34	6,187.23	293.15	293.15	1,513.11	1,513.11	8,797.83	8,797.83
491	3445.510	Weld NPS 6, Piping Specification CB11	ea	2	3	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.00	0.0	0.00	0.00	0.00	719.93	2,159.78	144.94	434.82	864.87	2,594.60
492	3445.520	Ball valve NPS 6, Valve Specification VBA01	ea	1	1	16.1	1,736.8	16.1	260.5	260.52	1,736.80	4,727.96	4,727.96	253.30	253.30	6,978.58	6,978.58	1.0	7.5	676.53	7.5	87.95	87.95	676.53	2,867.35	2,867.35	736.27	736.27	4,368.10	4,368.10
493	3445.530	Pipe painting NPS 6	Linear meter	1	6	0.9	89.0	5.6	13.3	80.12	534.10	3.54	21.21	0.00	0.00	105.93	635.43	6.0	0.0	0.00	0.0	0.00	0.00	0.00	37.48	224.82	7.54	45.26	45.02	270.07

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x J
494	3445.540	Pipe identification NPS 6	Linear meter	1	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
495	3445.550	Pipe NPS 8 Sch.STD, Piping Specification CB11	m	9	13	5.7	616.1	74.1	92.4	1,201.54	8,010.27	164.30	2,135.84	89.86	1,168.24	962.76	12,515.89	13.0	18.9	1,709.36	245.8	222.22	2,888.81	22,221.64	98.22	1,276.82	421.50	5,479.46	2,451.29	31,866.73
496	3445.560	Elbow 90 degrees BW Sch.STD NPS 8, Piping Specification CB11	ea	4	4	26.6	2,878.1	106.4	431.7	1,726.88	11,512.51	225.19	900.76	419.76	1,679.02	3,954.79	15,819.17	4.0	0.6	57.88	2.6	7.52	30.10	231.52	51.49	205.98	23.97	95.88	140.87	563.48
497	3445.570	Elbow 45 degrees BW Sch.STD NPS 8, Piping Specification CB11	ea	4	4	26.6	2,878.1	106.4	431.7	1,726.88	11,512.51	199.55	798.20	419.76	1,679.02	3,929.15	15,716.61	4.0	0.3	28.77	1.3	3.74	14.96	115.07	40.46	161.84	14.91	59.63	87.87	351.50
498	3445.580	Flange Welding Neck 150RF Sch.STD NPS 8 c/w hardware, Piping Specification CB11	ea	4	8	17.4	1,882.1	139.2	282.3	2,258.55	15,057.00	176.78	1,414.21	274.50	2,195.96	2,615.72	20,925.73	8.0	21.7	1,965.31	173.9	255.49	2,043.92	15,722.49	342.97	2,743.74	530.92	4,247.40	3,094.69	24,757.55
499	3445.590	Concentric Reducer BW Sch.STD NPS 8 x 6, Piping Specification CSB11	ea	4	0	34.1	3,686.2	0.0	552.9	0.00	0.00	1,792.89	0.00	537.62	0.00	6,569.71	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	23.53	0.00	12.56	0.00	73.69	0.00
500	3445.600	Weld NPS 8, Piping Specification CB11	ea	20	24	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.0	3.8	346.47	92.0	45.04	1,080.99	8,315.27	310.88	7,461.05	144.01	3,456.32	846.40	20,313.62
501	3445.610	Butterfly valve NPS 8, Valve Specification VBu01	ea	4	4	19.5	2,105.4	77.9	315.8	1,263.26	8,421.71	996.89	3,987.55	307.06	1,228.25	3,725.19	14,900.77	4.0	7.9	717.78	31.8	93.31	373.24	2,871.11	775.70	3,102.79	324.86	1,299.43	1,911.64	7,646.57
502	3445.620	Pipe painting NPS 8	Linear meter	9	11	1.0	90.4	10.7	13.5	152.02	1,013.48	4.71	52.83	0.00	0.00	108.74	1,218.32	11.2	0.0	0.00	0.0	0.00	0.00	0.00	130.44	1,461.56	26.26	294.25	156.71	1,755.81
503	3445.630	Pipe identification NPS 8	Linear meter	9	4	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.6	52.00	2.2	6.76	25.77	198.25	12.06	45.99	14.65	55.86	85.48	325.87
504	3445.640	Pipe NPS 12 Sch.STD, Piping Specification CB11	m	5	26	8.3	895.2	215.2	134.2	3,491.27	23,275.11	287.32	7,470.28	130.56	3,394.52	1,447.35	37,631.19	26.0	3.3	301.42	86.7	39.18	1,018.81	7,836.99	129.52	3,367.62	96.91	2,519.79	567.05	14,743.21
505	3445.650	Flange Welding Neck 150RF Sch.STD NPS 12 c/w hardware, Piping Specification CB11	ea	9	15	27.2	2,941.9	408.0	441.2	6,619.34	44,128.92	330.71	4,960.70	429.06	6,435.91	4,142.99	62,144.86	15.0	5.9	530.14	88.0	68.92	1,033.77	7,952.04	171.37	2,570.51	159.09	2,386.37	929.51	13,942.68
506	3445.660	Flange Welding Neck 150FF Sch.STD NPS 12 c/w hardware, Piping Specification CB11	ea	3	3	27.2	2,941.9	81.6	441.2	1,323.87	8,825.76	370.04	1,110.13	429.06	1,287.18	4,182.32	12,546.96	3.0	39.4	3,563.36	118.3	463.24	1,389.71	10,690.07	883.78	2,651.35	1,015.36	3,046.09	5,925.74	17,777.22
507	3445.670	Weld NPS 12, Piping Specification CB11	ea	12	30	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.0	6.6	592.80	196.7	77.06	2,311.92	17,783.97	345.30	10,358.88	208.50	6,254.92	1,223.66	36,709.68
508	3445.680	Victaulic Coupling NPS 12, Style 77	ea	3	5	18.5	1,995.5	92.3	299.3	1,496.66	9,977.74	527.92	2,639.61	291.04	1,455.19	3,113.84	15,569.20	5.0	1.2	112.29	6.2	14.60	72.99	561.47	539.88	2,699.42	135.08	675.41	801.86	4,009.29
509	3445.690	Butterfly valve NPS 12, Valve Specification VBU01	ea	3	5	31.6	3,413.3	157.8	512.0	2,560.01	17,066.73	1,903.03	9,515.16	497.81	2,489.07	6,326.19	31,630.96	5.0	15.1	1,366.10	75.6	177.59	887.97	6,830.50	2,473.11	12,365.55	818.95	4,094.77	4,835.76	24,178.78
510	3445.700	Check valve NPS 12, Valve Specification VCH02	ea	3	3	31.6	3,413.3	94.7	512.0	1,536.01	10,240.04	8,197.34	24,592.01	497.81	1,493.44	12,620.50	37,861.49	3.0	11.9	1,072.57	35.6	139.43	418.30	3,217.70	20,259.42	60,778.25	4,330.81	12,992.43	25,802.23	77,406.68
511	3445.710	Pipe painting NPS 12	Linear meter	5	26	1.4	135.6	36.7	20.3	521.07	3,473.83	7.07	181.07	0.00	0.00	163.10	4,175.97	25.6	0.0	0.00	0.0	0.00	0.00	0.00	154.60	3,958.28	31.13	796.90	185.73	4,755.19
512	3445.720	Pipe identification NPS 12	Linear meter	5	9	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.5	49.49	4.7	6.43	55.69	428.37	12.06	104.42	14.06	121.69	82.05	710.17
513	3445.730	Pipe NPS 16 Sch.STD, Piping Specification CB11	m	9	13	9.5	1,023.0	123.0	153.4	1,995.01	13,300.07	506.05	6,578.66	149.21	1,939.73	1,831.80	23,813.46	13.0	2.6	237.28	34.1	30.85	401.00	3,084.60	174.53	2,268.84	90.90	1,181.71	533.55	6,936.15
514	3445.740	Elbow 90 degrees Long RadiusSch.STD NPS 16, Piping Specification SB11	ea	3	6	59.1	6,387.1	354.3	958.0	5,748.46	38,323.04	730.52	4,383.12	931.53	5,589.16	9,007.30	54,043.77	6.0	1.2	104.44	6.9	13.58	81.46	626.62	211.81	1,270.84	67.19	403.13	397.01	2,382.05
515	3445.750	Flange Welding Neck 150RF Sch.STD NPS 16 c/w hardware, Piping Specification CB11	ea	3	6	37.5	4,054.9	225.0	608.2	3,649.41	24,329.39	570.37	3,422.20	591.38	3,548.28	5,824.88	34,949.28	6.0	3.0	266.64	17.7	34.66	207.96	1,599.84	137.28	823.67	90.30	541.81	528.88	3,173.30
516	3445.760	Victaulic Coupling NPS 16, Style 231	ea	3	4	26.0	2,814.3	104.1	422.1	1,688.60	11,257.30	6,682.12	26,728.48	410.45	1,641.80	10,329.05	41,316.19	4.0	1.4	123.73	5.5	16.08	64.34	494.92	5,134.99	20,539.94	1,062.88	4,251.53	6,337.68	25,350.73
517	3445.770	Weld NPS 16, Piping Specification CB11	ea	12	21	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.0	19.1	1,728.30	401.5	224.68	4,718.27	36,294.39	278.32	5,844.74	461.25	9,686.25	2,692.55	56,543.65
518	3445.780	Pipe painting NPS 16	Linear meter	9	13	1.9	180.9	24.0	27.1	341.82	2,279.83	9.43	118.78	0.00	0.00	217.47	2,739.44	12.6	0.0	0.00	0.0	0.00	0.00	0.00	280.21	3,529.80	56.41	710.64	336.63	4,240.44
519	3445.790	Pipe identification NPS 16	Linear meter	9	4	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.3	0.5	49.65	2.4	6.45	27.93	214.88	12.06	52.20	14.10	61.00	82.27	356.02
520	3445.800	Pipe NPS 20 Sch.STD, Piping Specification CB11	m	1	6	10.7	1,162.5	68.8	174.3	1,116.51	7,443.43	555.78	3,558.37	169.56	1,085.57	2,062.32	13,203.89	6.4	12.5	1,134.37	80.3	147.47	944.16	7,262.75	354.37	2,268.80	337.93	2,163.61	1,974.14	12,639.32
521	3445.810	Flange Welding Neck 150RF Sch.STD NPS 20 c/w hardware, Piping Specification CB11	ea	2	11	49.8	5,391.1	548.3	808.6	8,895.43	59,302.88	790.66	8,697.21	786.27	8,648.93	7,776.77	85,544.46	11.0	3.3	298.44	36.3	38.80	426.77	3,282.85	261.83	2,880.12	122.85	1,351.37	721.92	7,941.11
522	3445.820	Weld NPS 20, Piping Specification CB11	ea	2	11	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	12.7	1,147.39	139.6	149.16	1,640.76	12,621.24	559.09	6,150.00	381.60	4,197.61	2,237.24	24,609.61
523	3445.830	Check valve NPS 20, Valve Specification VCH01	ea	1	1	54.6	5,908.6	54.6	886.3	886.30	5,908.67	16,570.52	16,570.52	861.74	861.74	24,227.22	24,227.22	1.0	20.1	1,814.72	20.1	235.91	235.91	1,814.72	14,592.25	14,592.25	3,364.27	3,364.27	20,007.16	20,007.16
524	3445.840	Pipe painting NPS 20	Linear meter	1	2	2.0	189.9	4.4	28.4	63.22	421.49	11.79	26.15	0.00	0.00	230.23	510.87	2.2	0.0	0.00	0.0	0.00	0.00	0.00	259.70	576.26	52.29	116.02	311.98	692.28
525	3445.850	Pipe identification NPS 20	Linear meter	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.6	49.68	0.7	6.46	8.65	66.54	12.06	16.16	14.10	18.89	82.30	110.23
526	3445.860	Pipe NPS 24 Sch.STD, Piping Specification CB11	m	3	6	12.0	1,302.1	77.1	195.3	1,250.50	8,336.64	699.74	4,480.07	189.90	1,215.84	2,387.07	15,283.06	6.4	3.0	267.59	19.0	34.79	222.72	1,713.25	292.83	1,874.80	121.84	780.08	717.05	4,590.86
527	3445.870	Tee Sch.STD NPS 24, Piping Specification CB11	ea	1	1	132.4	14,316.2	132.4	2,147.4	2,147.43	14,316.20	2,307.08	2,307.08	2,087.92	2,087.92	20,858.63	20,858.63	1.0	3.8	346.59	3.8	45.06	45.06	346.59	977.13	977.13	278.18	278.18	1,646.95	1,646.95
528	3445.880	Reducing tee Sch.STD NPS 24 x 16, Piping Specification CB11	ea	3	3	132.4	14,316.2	397.1	2,147.4	6,442.29	42,948.60	3,658.15	10,974.44	2,087.92	6,263.77	22,209.70	66,629.09	3.0	3.8	346.58	11.5	45.06	135.17	1,039.75	1,020.04	3,060.13	286.81	860.43	1,698.49	5,095.48
529	3445.890	Cap BW Sch.STD NPS 24, Piping Specification CB11	ea	1	1	57.1	6,174.5	57.1	926.1	926.18	6,174.50	451.99	451.99	900.51	900.51	8,453.18	8,453.18	1.0	2.0	181.61	2.0	23.61	23.61	181.61	171.64	171.64	77.24	77.24	454.11	454.11
530	3445.900	Concentric Reducer BW Sch.STD NPS 24 x 20, Piping Specification CB11	ea	1	1	90.0	9,729.6	90.0	1,459.4	1,459.44	9,729.63	1,075.27	1,075.27	1,419.00	1,419.00	13,683.34	13,683.34	1.0	1.5	131.71	1.5	17.12	17.12	131.71	311.41	311.41	93.64	93.64	553.89	553.89
531	3445.910	Eccentric Reducer BW Sch.STD NPS 24 x 20, Piping Specification CB11	ea	1	2	90.0	9,729.6	179.9	1,459.4	2,918.89	19,459.26	1,229.68	2,459.36	1,419.00	2,838.00	13,837.76	27,675.51	2.0	1.6	140.03	3.1	18.20	36.41	280.05	370.26	740.51	107.45	214.89	635.93	1,271.86
532	3445.920	Weld NPS 24, Piping Specification CB11	ea	10	10	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00	0.0	0.00	0.00	0.00	1,079.89	10,798.89	217.41	2,174.10	1,297.30	12,973.00
533	3445.930	Pipe painting NPS 24	Linear meter	3	5	2.0	189.9	11.0	28.4	156.32	1,042.15	14.14	77.60	0.00	0.00	232.59	1,276.07	5.5	0.0	0.00	0.0	0.00	0.00	0.00	432.88	2,374.97	87.15	478.14	520.03	2,853.11
534	3445.940	Pipe identification NPS 24	Linear meter	3	2	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.6	53.08	1.1	6.90	12.80	98.44	12.07	22.38	14.90	27.64	86.95	161.26
B&M-0154	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.9	209.2	12.4	31.3	200.97	1,339.82	34.79	222.73	30.52	195.40	305.97	1,958.92	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0155	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.2	127.8	7.6	19.1	122.82	818.78	18.50	118.43	18.65	119.41	184.22	1,179.44	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0156	Added	12" 90 elbow, LR, CS, STD, ASTM A234 WPB, smls - BE	ea		3	42.5	4,597.2	127.5	689.5	2,068.74	13,791.62	457.02	1,371.05	670.47	2,011.41	6,414.28	19,242.83	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0157	Added	12" flange, SO, CS, B16.5 RF, STD bore, ASTM A105N - 150#	ea		3	27.2	2,941.9	81.6	441.2	1,323.87	8,825.78	370.04	1,110.13	429.06	1,287.18	4,182.32	12,546.96	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0158	Added	12"x2" SOL, FS, 3000#	ea		3	5.2	567.1	15.7	85.0	255.20	1,701.36	47.68	143.05	82.71	248.13	782.58	2,347.74	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0159	Added	12"x1" SOL, FS, 3000#	ea		6	2.6	283.5	15.7	42.5	255.20	1,701.36	20.29	121.72	41.36	248.13	387.73	2,326.41	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0160	Added	2" male adapter, 304SS, Vic-Press - 596	ea		9	8.5	921.5	76.7	138.2	1,244.12	8,294.11	207.92	1,871.31	134.40	1,209.64	1,402.13	12,619.18	9.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0161	Added	1" male adapter, 304SS, Vic-Press - 596	ea		36	5.9	638.0	212.4	95.7	3,445.25	22,966.30	150.83	5,429.87	93.05	3,349.77	977.59	35,193.20	36.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0162	Added	1/2" 90 elbow, 304SS, Vic-Press - 590	ea		4	4.3	460.7	17.0	69.1	276.47	1,843.14	106.51	426.02	67.20	268.81	703.61	2,814.44	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0163	Added	1"x1/2" reducer, 304SS, Vic-Press - 582	ea		1	5.9	638.0	5.9	95.7	95.70	638.01	175.07	175.07	93.05	93.05	1,001.83	1,001.83	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0164	Added	2" union, 304SS, Vic-Press - 584	ea		3	8.5	921.5	25.6	138.2	414.71	2,764.70	1,191.56	3,574.67	134.40	403.21	2,385.77	7,157.30	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0165	Added	1" union, 304SS, Vic-Press - 584	ea		19	5.9	638.0	112.1	96.7	1,818.32	12,122.16	580.55	11,030.50	93.05	1,767.94	1,407.31	26,738.92	19.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0166	Added	2" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		3	1.8	191.4	5.3	28.7	86.13	574.21	24.42	73.26	27.91	83.74	272.45	817.35	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0167	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		5	1.2	134.6	6.2	20.2	101.02	673.45	13.25	66.27	19.64	98.22	187.79	938.96	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0168	Added	8" QUICK COUPLING RITE 8in MALE ADAPTOR x FEMALE TREAD PART A No 800A-A ALUM.	ea		4	12.8	1,385.9	51.3	207.8	831.54	5,543.58	503.74	2,014.96	202.12	808.49	2,299.65	9,198.58	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0169	Added	20" flexible coupling, Galv. DI, ASTM A536 - Victaulic 77	ea		2	33.0	3,565.7	65.9	534.8	1,069.73	7,131.52	1,289.71	2,579.43	520.04	1,040.08	5,910.38	11,820.76	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0170	Added	20" 90 elbow, SR, Galv. DI, ASTM A536 GR 65 Max Rating 250# - Victaulic W10	ea		1	32.4	3,505.5	32.4	525.8	525.83	3,505.50	2,583.81	2,583.81	511.25	511.25	7,126.39	7,126.39	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0171	Added	20" BUTTERFLY VALVE LUG BRAY SERIES 31 c/w GEAR OPERATOR VBU01	ea		2	57.8	6,256.0	115.7	938.4	1,876.81	12,512.09	3,201.52	6,403.04	912.40	1,824.80	11,308.35	22,616.70	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0172	Added	20" SS INLET STRAINER, OPENINGS 12mm (SEE DETAIL PD13)	ea		1	54.6	5,908.6	54.6	886.3	886.30	5,908.67	5,337.87	5,337.87	861.74	861.74	12,994.57	12,994.57	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0173	Added	1" Y-strainer	ea		1	3.0	322.5	3.0	48.3	48.38	322.55	302.79	302.79	47.04	47.04	720.76	720.76	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		OLS (Lubricating/Hydraulic Oil)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
535	3446.010	Oil storage tank 3446-TK-6000 / 6001	ea	2	2	159.5	17,249.8	319.0	2,587.4	5,174.96	34,499.71	77,799.38	155,598.77	2,515.78	5,031.55	100,152.50	200,304.99	2.0	305.9	27,658.18	611.9	3,595.56	7,191.13	55,316.36	61,687.27	123,374.55	18,919.32	37,838.64	111,860.34	223,720.67
536	3446.020	Level transmitter 3446-LT-6000 / 6001	ea	2	2	52.4	5,671.1	104.9	850.6	1,701.36	11,342.37	25,375.71	50,751.42	827.10	1,654.21	32,724.68	65,449.36	2.0	36.5	3,299.49	73.0	428.93	857.87	6,598.98	24,495.37	48,990.73	5,706.98	11,413.96	33,930.77	67,861.54
537	3446.030	Mobile pumping-filtering unit 3446-OMP-5000	ea	1	1	69.9	7,561.5	69.9	1,134.2	1,134.24	7,561.58	85,763.59	85,763.59	1,102.81	1,102.81	95,562.21	95,562.21	1.0	0.0	0.00	0.0	0.00	0.00	0.00	74,351.42	74,351.42	14,968.86	14,968.86	89,320.28	89,320.28
538	3446.040	Pipe NPS 1/2 Sch.XS, Piping Specification CB11	m	1	6	0.9	93.0	5.5	13.9	89.32	595.47	10.78	68.99	13.56	86.85	131.30	840.64	6.4	0.4	33.27	2.4	4.33	27.69	213.01	106.17	679.74	29.20	186.92	172.96	1,107.36
539	3446.050	Olet SW Class 3000 NPS 1/2, Piping Specification CB11	ea	2	2	1.5	165.4	3.1	24.8	49.62	330.82	17.64	35.28	24.12	48.25	231.99	463.97	2.0	0.5	41.59	0.9	5.41	10.81	83.18	4.90	9.81	10.76	21.53	62.66	125.32
540	3446.060	Weld NPS 1/2, Piping Specification CB11	ea	6	6	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.00	0.0	0.00	0.00	0.00	176.71	1,060.26	35.58	213.46	212.29	1,273.71
541	3446.070	Ball valve NPS 1/2, Valve Specification VBA02	ea	2	2	8.4	910.9	16.8	136.6	273.28	1,821.87	134.05	268.10	132.85	265.71	1,314.48	2,628.95	2.0	2.2	198.25	4.4	25.77	51.55	396.50	63.88	127.75	59.45	118.89	347.35	694.69
542	3446.080	Pipe painting NPS 1/2	Linear meter	1	0	0.5	47.4	0.0	7.1	0.00	0.00	0.29	0.00	0.00	0.00	54.91	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	105.06	0.00	21.15	0.00	126.21	0.00
543	3446.090	Pipe identification NPS 1/2	Linear meter	1	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
544	3446.100	Pipe NPS 2 Sch.STD, Piping Specification CB11	m	975	1,296	1.7	186.0	2229.0	27.9	36,161.30	241,075.31	26.26	34,038.05	27.13	35,159.22	267.31	346,433.87	1,296.0	2.6	234.03	3,354.9	30.42	39,429.82	303,306.28	11.65	15,100.88	57.35	74,321.64	333.46	432,158.62
545	3446.110	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification CB11	ea	193	219	7.3	793.9	1607.7	119.0	26,081.78	173,878.56	64.49	14,122.32	115.79	25,359.02	1,093.34	239,441.69	219.0	0.4	37.51	90.9	4.88	1,068.01	8,215.46	14.48	3,170.23	11.73	2,569.01	68.60	15,022.71
546	3446.120	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification CB11	ea	10	38	7.3	793.9	279.0	119.0	4,525.61	30,170.71	68.21	2,591.82	115.79	4,400.20	1,097.06	41,688.33	38.0	0.2	19.55	8.2	2.54	96.60	743.07	16.08	610.95	7.83	297.62	46.01	1,748.24
547	3446.130	Elbow 45 degrees BW Sch.STD NPS 2, Piping Specification CB11	ea	23	0	12.7	1,375.2	0.0	206.2	0.00	0.00	81.86	0.00	200.57	0.00	1,863.98	0.00	0.0	0.2	16.64	0.0	2.16	0.00	0.00	16.31	0.00	7.20	0.00	42.31	0.00
548	3446.140	Tee SW Class 3000 NPS 2, Piping Specification CB11	ea	21	29	10.9	1,176.7	315.5	176.5	5,118.95	34,126.36	92.79	2,690.83	171.62	4,977.10	1,617.70	46,913.25	29.0	0.8	75.10	24.1	9.76	283.13	2,177.95	19.98	579.54	21.67	628.53	126.52	3,669.15
549	3446.150	Expansion joint SS316L Plain ends x 12in long	ea	8	14	4.4	471.4	61.0	70.7	989.98	6,599.84	383.87	5,374.19	68.75	962.54	994.75	13,926.55	14.0	5.0	450.16	69.7	58.52	819.30	6,302.30	61.29	857.99	118.13	1,653.87	688.10	9,633.46
550	3446.160	Union SW Class 3000 NPS 2, Piping Specification CB11	ea	16	38	7.3	793.9	279.0	119.0	4,525.61	30,170.71	64.49	2,450.45	115.79	4,400.20	1,093.34	41,546.96	38.0	0.4	37.32	15.7	4.85	184.37	1,418.22	13.90	528.17	11.57	439.64	67.64	2,570.40
551	3446.170	Flange Welding Neck 150RF Sch.STD NPS 2 c/w hardware, Piping Specification CB11	ea	6	36	5.2	563.5	187.6	84.5	3,043.30	20,288.67	42.30	1,522.66	82.19	2,958.97	772.60	27,813.59	36.0	12.3	1,110.84	442.3	144.41	5,198.75	39,990.37	18.45	664.21	264.78	9,532.05	1,538.48	55,385.38
552	3446.180	Flange Slip-On 150RF NPS 2 c/w hardware, Piping Specification CB11	ea	3	2	5.2	563.5	10.4	84.5	169.07	1,127.15	57.18	114.37	82.19	164.39	787.49	1,574.97	2.0	0.5	41.59	0.9	5.41	10.81	83.18	6.13	12.26	11.01	22.02	64.13	128.27
553	3446.190	Weld NPS 2, Piping Specification CB11	ea	785	859	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	859.0	0.6	54.52	518.1	7.09	6,088.70	46,836.12	126.40	108,574.03	37.80	32,472.67	225.81	193,971.51
554	3446.200	Quick connect NPS 2, DRY LINK STYLE 260 HOUSING STD SS 316 SEAL VITON	ea	23	35	4.4	471.4	152.6	70.7	2,474.94	16,499.61	383.87	13,435.46	68.75	2,406.36	994.75	34,816.37	35.0	0.4	37.84	14.6	4.92	172.15	1,324.24	87.84	3,074.54	26.58	930.19	157.17	5,501.12
555	3446.210	Ball valve NPS 2, Valve Specification VBA02	ea	32	46	8.4	910.9	387.4	136.6	6,285.45	41,902.98	373.93	17,200.66	132.85	6,111.27	1,554.36	71,500.35	46.0	3.3	300.17	152.7	39.02	1,795.03	13,807.96	282.90	13,013.48	127.50	5,865.02	749.60	34,481.49
556	3446.220	Check valve NPS 2, Valve Specification VCH04	ea	13	18	8.4	910.9	151.6	136.6	2,459.52	16,396.82	553.48	9,962.59	132.85	2,391.37	1,733.91	31,210.30	18.0	3.3	300.61	59.9	39.08	703.42	5,410.89	187.99	3,383.87	108.49	1,952.89	636.17	11,451.07
557	3446.230	Pipe painting NPS 2	Linear meter	975	1,284	0.8	79.1	1072.6	11.8	15,247.56	101,650.38	1.18	1,513.84	0.00	0.00	92.20	118,411.77	1,284.3	0.0	0.00	0.0	0.00	0.00	0.00	48.32	62,056.88	9.73	12,493.65	58.05	74,550.53
558	3446.240	Pipe identification NPS 2	Linear meter	975	436	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	435.7	0.6	50.47	243.3	6.56	2,858.90	21,991.52	12.06	5,256.83	14.29	6,226.66	83.38	36,333.90
B&M-0174	Added	2" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.9	209.2	12.4	31.3	200.97	1,339.82	34.55	221.22	30.52	195.40	305.73	1,957.42	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0175	Added	2" coupling, class 3000, FS ASTM A105 - SW	ea		109	7.3	793.9	800.2	119.0	12,981.34	86,542.30	54.70	5,962.69	115.79	12,621.61	1,083.56	118,107.95	109.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0176	Added	2" SW flange, CS, FF, Class 150, ASTM A105N, 150#	ea		28	5.2	563.5	145.9	84.5	2,367.01	15,780.08	43.98	1,231.35	82.19	2,301.42	774.28	21,679.85	28.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0177	Added	2" SW flange, CS, RF, Class 150, ASTM A105N, 150#	ea		2	5.2	563.5	10.4	84.5	169.07	1,127.15	43.98	87.95	82.19	164.39	774.28	1,548.56	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ODS (Oily Water Drainage)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
559	3447.010	Oil Skimmer 3447-OS-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	94.9	8,578.68	94.9	1,115.23	1,115.23	8,578.68	18,637.84	18,637.84	5,768.39	5,768.39	34,100.14	34,100.14
560	3447.020	Oil sheen detector 3447-LSH-5000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	18.3	1,649.74	18.3	214.47	214.47	1,649.74	26,235.86	26,235.86	5,669.67	5,669.67	33,769.74	33,769.74
561	3447.030	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	37	40	3.5	383.6	141.9	57.5	2,301.93	15,346.23	67.23	2,689.03	55.95	2,238.14	564.38	22,575.34	40.0	5.4	491.63	217.5	63.91	2,556.48	19,665.23	51.16	2,046.27	125.84	5,033.59	732.54	29,301.56

CH0031 - Supply and Install Electrical and Mechanical Auxiliaries

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

Black & McDonald Limited
FIXED PRICE TARGET COST OF LABOUR

LABOUR COMPONENT — 0.15

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS
562	3447.040	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	8	8	15.9	1,715.53	126.9
563	3447.050	Elbow 45 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	4	4	15.9	1,715.53	63.4
564	3447.060	Weld NPS 4, Piping Specification CB11	ea	28	33	0.0		0.0
565	3447.070	Pipe painting NPS 4	Linear meter	37	40	1.0	90.45	38.0
566	3447.080	Pipe identification NPS 4	Linear meter	37	13	0.0		0.0
567	3447.090	Pipe NPS 6 Sch.STD, Piping Specification CB11	m	36	38	4.6	499.92	177.6
568	3447.100	Elbow 90 degrees BW Sch.STD NPS 4, Piping Specification CB11	ea	4	8	20.6	2,229.48	164.9
569	3447.110	Weld NPS 6, Piping Specification CB11	ea	10	13	0.0		0.0
570	3447.120	Pipe painting NPS 6	Linear meter	36	37	0.9	89.04	34.7
571	3447.130	Pipe identification NPS 6	Linear meter	36	12	0.0		0.0
B&M-0178	Added	1/2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PE	ea		1	0.5	59.07	0.5
B&M-0179	Added	1/2" nipple x 4" long, Sch 40S, ASTM A312 TP304L Smls - PExTHD	ea		1	0.5	59.07	0.5
B&M-0180	Added	1/2" Ball Valve Carbon Socket Weld, Full Port VBA02	ea		1	3.7	400.53	3.7
B&M-0181	Added	1/2" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea		1	1.9	205.56	1.9
B&M-0182	Added	1/2"x16" SOL, SS, 3000#	ea		1	2.2	236.38	2.2
B&M-0183	Added	Pipe insulation - All Sizes	ea		1	243.5	24,368.99	243.5
	Added	0	0		0	0.0		0.0
		WCS (Raw/Cooling Water)						0.0
572	3448.001	Self cleaning strainer 3448-STM-1000 / 2000 / 3000 / 4000	ea	4	4	87.4	9,451.98	349.6
573	3448.002	Strainer 3448-STR-1000 2000 / 3000 / 4000	ea	4	4	87.4	9,451.98	349.6
574	3448.003	Air vent 3448-AV-1001 / 2001 / 3001 / 4001 / 6000 to 6003	ea	8	16	8.7	945.20	139.8
575	3448.004	Pressure indicator 3448-PI-1000 to 1002 / 2000 to 2002 / 3000 to 3002 / 4000 to 4002	ea	12	12	8.7	945.20	104.9
576	3448.005	Differential pressure indicator 3448-PDI-1000 / 2000 / 3000 / 4000	ea	4	4	8.7	945.20	35.0
577	3448.006	Differential pressure switch 3448-PDS-1000 / 2000 / 3000 / 4000	ea	4	4	8.7	945.20	35.0
578	3448.007	temperature transmitter 3448-TT-1001 / 1003 / 2001 / 2003 / 3001 / 3003 / 4001 / 4003	ea	8	16	8.7	945.20	139.8
579	3448.008	Control Panel 3448-CP-1001 / 2001 / 3001 / 4001	ea	4	4	104.9	11,342.37	419.5
580	3448.009	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	8	13	1.1	116.26	13.8
581	3448.010	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	5	6	5.6	602.56	33.4
582	3448.011	Olet SW Class 3000 NPS 3/4, Piping Specification SB11	ea	1	9	2.8	307.19	25.6
583	3448.012	Weld NPS 3/4, Piping Specification SB11	ea	14	16	0.0		0.0
584	3448.013	Ball valve NPS 3/4, Valve Specification VBA11	ea	1	1	5.5	595.47	5.5
585	3448.014	Pipe identification NPS 3/4	Linear meter	8	3	0.0		0.0
586	3448.015	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	7	19	1.4	151.14	26.8
587	3448.016	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	2	0	1.4	151.14	0.0
588	3448.017	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	12	12	5.9	638.01	70.8
589	3448.018	Olet SW Class 3000NPS 1, Piping Specification SB11	ea	20	20	3.9	425.34	78.7
590	3448.019	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	6	20	5.9	638.01	118.0
591	3448.020	Victaulic coupling NPS 1, Style 77	ea	4	0	0.3	37.22	0.0
592	3448.021	Weld NPS 1, Piping Specification SB11	ea	76	132	0.0		0.0
593	3448.022	Ball valve NPS 1, Valve Specification VBA11	ea	12	12	7.3	793.97	88.1
594	3448.023	Pipe insulation NPS 1	Linear meter	9	68	1.4	145.28	98.0
595	3448.024	Pipe identification NPS 1	Linear meter	9	23	0.0		0.0
596	3448.025	Pipe NPS 1 Sch.40, Piping Specification PA02	m	68	57	1.1	116.26	61.3
597	3448.026	Elbow 90 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	20	20	1.2	134.69	24.9
598	3448.027	Elbow 45 degrees SW Sch.40 NPS 1, Piping Specification PA02	ea	4	12	1.2	134.69	14.9
599	3448.028	Pipe identification NPS 1	Linear meter	68	21	0.0		0.0
600	3448.029	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	7	12	1.8	197.64	21.9
601	3448.030	Pipe NPS 1-1/2 Sch.40S, Piping Specification SB11	m	1	0	1.8	197.64	0.0
602	3448.031	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	16	16	8.2	886.12	131.1
603	3448.032	Union SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	4	4	8.5	921.57	34.1
604	3448.033	Weld NPS 1-1/2, Piping Specification SB11	ea	48	48	0.0		0.0
605	3448.034	Ball valve NPS 1-1/2, Valve Specification VBA11	ea	4	4	11.0	1,187.40	43.9
606	3448.035	Pipe identification NPS 1-1/2	Linear meter	8	4	0.0		0.0
607	3448.036	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	58	67	2.3	244.14	151.2
608	3448.037	Pipe NPS 2 Sch.40S, Piping Specification SB11	m	1	4	2.3	244.14	9.0
609	3448.038	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	46	46	8.5	921.57	392.0
610	3448.039	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	8	8	8.5	921.57	68.2
611	3448.040	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	12	13	8.5	921.57	110.8
612	3448.041	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	4	11.1	1,205.13	44.6
613	3448.042	Concentric Reducer SW Class 300 0NPS 2 x 1, Piping Specification SB11	ea	4	4	8.5	921.57	34.1
614	3448.043	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	8	13	7.6	827.05	99.4
615	3448.044	Victaulic coupling NPS 2, Style 77	ea	4	4	0.4	47.85	1.8
616	3448.045	Weld NPS 2, Piping Specification SB11	ea	218	242	0.0		0.0
617	3448.046	Ball valve NPS 2, Valve Specification VBA11	ea	21	25	14.7	1,587.93	367.1
618	3448.047	Pipe insulation NPS 2	Linear meter	51	67	1.5	149.15	99.3
619	3448.048	Pipe identification NPS 2	Linear meter	51	23	0.0		0.0
620	3448.049	Pipe NPS 4 Sch.10S, Piping Specification SB11	m	55	64	3.4	372.03	220.2
621	3448.050	Elbow 45 degrees BW Sch.10S NPS 4, Piping Specification SB11	ea	4	4	24.4	2,644.19	97.8
622	3448.051	Flange Welding Neck 150RF Sch.10S NPS 4 c/w hardware, Piping Specification SB11	ea	16	16	15.8	1,708.44	252.7
623	3448.052	Olet BW Sch.10S NPS 4, Piping Specification SB11	ea	8	8	14.6	1,583.21	117.1
624	3448.053	Victaulic Elbow 90 degrees NPS 4, Style 410SS	ea	12	12	4.7	510.41	56.6
625	3448.054	Victaulic Elbow 45 degrees NPS 4, Style 410SS	ea	4	4	4.7	510.41	18.9
626	3448.055	Victaulic Coupling NPS 4, Style 77DX	ea	8	36	0.5	58.48	19.5
627	3448.056	Victaulic Coupling NPS 4, Style 77	ea	12	37	0.5	58.48	20.0
628	3448.057	Victaulic Coupling NPS 4, Style 89	ea	16	0	0.5	58.48	0.0
629	3448.058	Weld NPS 4, Piping Specification SB11	ea	48	107	0.0		0.0
630	3448.059	Pipe insulation NPS 4	Linear meter	55	63	2.8	279.06	174.8
631	3448.060	Pipe identification NPS 2	Linear meter	55	0	0.0		0.0
632	3448.061	Pipe NPS 6 Sch.10S, Piping Specification SB11	m	48	101	4.5	488.29	456.0
633	3448.062	Olet BW Sch.10S NPS 6, Piping Specification SB11	ea	7	7	22.7	2,457.51	159.1
634	3448.063	Flange Welding Neck 150RF Sch.10S NPS 6 c/w hardware, Piping Specification SB11	ea	8	168	19.4	2,101.88	3265.0
635	3448.064	Victaulic Elbow 90 degrees NPS 6, Style 410SS	ea	12	12	8.4	903.85	100.3
636	3448.065	Victaulic Coupling NPS 6, Style 89	ea	32	48	1.4	148.87	66.1
637	3448.066	Weld NPS 6, Piping Specification SB11	ea	29	93	0.0		0.0
638	3448.067	Pipe insulation NPS 6	Linear meter	48	101	3.0	298.71	298.7
639	3448.068	Pipe identification NPS 6	Linear meter	48	34	0.0		0.0
640	3448.069	Pipe NPS 10 Sch.10S, Piping Specification SB11	m	62	68	6.8	732.43	462.4
641	3448.070	Elbow 90 degrees Long Radius Sch.10S NPS 10, Piping Specification SB11	ea	4	4	48.4	5,238.76	193.8
642	3448.071	Eccentric Reducer Sch.10S NPS 10 x 6, Piping Specification SB11	ea	4	4	48.4	5,238.76	193.8
643	3448.072	Victaulic coupling NPS 10, Style 89	ea	12	20	2.7	292.42	54.1
644	3448.073	Victaulic Elbow 90 degrees NPS 10, Style 410SS	ea	4	4	15.7	1,694.22	62.7
645	3448.074	Weld NPS 10, Piping Specification SB11	ea	25	56	0.0		0.0
646	3448.075	Pipe insulation NPS 10	Linear meter	62	68	3.5	355.21	239.6
647	3448.076	Pipe identification NPS 10	Linear meter	62	23	0.0		0.0
648	3448.077	Pipe NPS 12 Sch.STD, Piping Specification CB11	m	13	20	8.3	895.20	165.5
649	3448.078	Elbow 45 degrees Sch.STD NPS 12, Piping Specification CB11	ea	2	3	42.5	4,597.21	127.5
650	3448.079	Tee BW Sch.STD NPS 12, Piping Specification CB11	ea	3	3	61.7	6,670.73	185.0
651	3448.080	Cap BW Sch.STD NPS 12, Piping Specification CB11	ea	2	2	28.5	3,087.25	57.1
652	3448.081	Weld NPS 12, Piping Specification CB11	ea	15	18	0.0		0.0
653	3448.082	Pipe insulation NPS 12	Linear meter	13	20	4.1	410.45	80.3
654	3448.083	Pipe identification NPS 12	Linear meter	13	7	0.0		0.0
655	3448.084	Pipe painting NPS 12	Linear meter	13	24	1.4	135.68	35.1
656	3448.085	Pipe NPS 14 Sch.10S, Piping Specification SB11	m	89	136	9.7	1,046.33	1315.7
657	3448.086	Elbow 90 degrees Long Radius Sch.10S NPS 14, Piping Specification SB11	ea	20	24	77.2	8,347.28	1852.3
658	3448.087	Elbow 45 degrees Sch.10S NPS 14, Piping Specification SB11	ea	4	4	77.2	8,347.28	308.7
659	3448.088	Flange Welding Neck 150FF Sch.10S NPS 14 c/w hardware, Piping Specification SB11	ea	20	72	47.8	5,171.41	3442.7
660	3448.089	Flange Welding Neck 150RF Sch.10S NPS 14 c/w hardware, Piping Specification SB11	ea	52	53	47.8	5,171.41	2534.2
661	3448.090	Flange Slip-On 150RF NPS 14 c/w hardware, Piping Specification SB11	ea	8	8	47.8	5,171.41	382.5
662	3448.091	Tee BW Sch.10S NPS 14, Piping Specification SB11	ea	12	12	115.0	12,441.16	1380.4
663	3448.092	Eccentric Reducer BW Sch.10S NPS 14 x 6, Piping Specification SB11	ea	8	8	77.2	8,347.28	617.4
664	3448.093	Victaulic coupling NPS 14, Style W77	ea	20	28	3.9	421.09	109.0
665	3448.094	Victaulic coupling NPS 14, Style 89	ea	20	16	3.9	421.09	62.3
666	3448.095	Victaulic Elbow 90 degrees NPS 14, Style W100SS	ea	12	8	18.0	1,943.86	143.8
667	3448.096	Victaulic Eccentric Reducer NPS 14 x 10, Style W51SS	ea	4	4	18.0	1,943.86	71.9
668	3448.097	Weld NPS 14, Piping Specification SB11	ea	193	246	0.0		0.0
669	3448.098	Butterfly Valve NPS 14, Valve Specification VBU01	ea	28	28	39.7	4,288.83	1110.3
670	3448.099	Check Valve FF NPS 14, Valve Specification VCH01	ea	4	4	39.7	4,288.83	158.6
671	3448.100	Pipe insulation NPS 14	Linear meter	89	137	4.3	433.33	584.7
672	3448.101	Pipe identification NPS 14	Linear meter	89	46	0.0		0.0
673	3448.102	Pipe NPS 16 Sch.10S , Piping Specification SB11	m	114	131	10.7	1,162.59	1408.2
674	3448.103	Flange Welding Neck 150RF Sch.10S NPS 16 c/w hardware, Piping Specification SB11	ea	7	1,038	55.2	5,965.38	57252.8
675	3448.104	Blind Flange 150RF NPS 16 c/w hardware, Piping Specification SB11	ea	1	1	55.2	5,965.38	55.2
676	3448.105	Reducing Tee BW Sch.10S NPS 16 x 16 x 14, Piping Specification SB11	ea	4	4	131.8	14,255.94	527.3
677	3448.106	Eccentric Reducer BW Sch.10S NPS 16 x 12, Piping Specification SB11	ea	1	2	88.8	9,609.12	177.7
678	3448.107	Victaulic Reducing Tee NPS 16 x 16 x 14, Style W77	ea	26	4	25.2	2,728.44	100.9
679	3448.108	Victaulic coupling NPS 16, Style W77	ea	20	29	4.7	505.30	135.5
680	3448.109	Weld NPS 16, Piping Specification SB11	ea	36	91	0.0		0.0

Cahill-Ganotec Joint Venture
FIXED PRICE TARGET COST OF LABOUR

CH0031 - Supply and Install Electrical and Mechanical Auxilliaries

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

Black & McDonald Limited
FIXED PRICE TARGET COST OF LABOUR

LABOUR COMPONENT 0.15 | NON LABOUR COMPONENT

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
681	3448.110	Butterfly Valve NPS 16, Valve Specification VBU01	ea	3	3	45.7	4,944.57	137.2	741.68	2,225.05	14,833.70	2,797.93	8,393.78	721.13	2,163.40	9,205.31	27,615.93
682	3448.111	Pipe insulation NPS 16	Linear meter	114	132	4.8	484.20	630.1	72.64	9,565.31	63,768.75	407.32	53,633.72	8.55	1,125.81	972.81	128,093.59
683	3448.112	Pipe identification NPS 16	Linear meter	114	45	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0184	Added	3" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter		13	2.9	313.96	37.2	47.09	602.92	4,019.45	101.30	1,297.12	45.78	586.21	508.06	6,505.70
B&M-0185	Added	12" pipe, SS, Sch 40S, ASTM A312 TP304L, smls - BE	Linear meter		6	11.2	1,209.10	71.6	181.36	1,161.18	7,741.17	1,194.74	7,649.23	176.34	1,129.00	2,761.54	17,680.57
B&M-0186	Added	6" pipe, SS, Sch 40S, ASTM A312 TP304L, smls - BE	Linear meter		6	6.1	662.66	39.2	99.40	636.41	4,242.76	380.45	2,435.79	96.65	618.78	1,239.17	7,933.74
B&M-0187	Added	6" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter		6	4.6	499.92	29.6	74.99	480.10	3,200.68	109.89	703.60	72.91	466.80	757.71	4,851.17
B&M-0188	Added	2" nipple x 4" long, brass, Sch 40, Smls - TOExPOE	ea		4	0.5	59.07	2.2	8.86	35.44	236.30	5.98	23.91	8.62	34.46	82.53	330.11
B&M-0189	Added	2" nipple x 4" long, CS, SMLS, galvanized, Sch 80, A106 GrB - PExTHD	ea		1	0.5	59.07	0.5	8.86	8.86	59.07	41.67	41.67	8.62	8.62	118.22	118.22
B&M-0190	Added	6" 90 elbow, SR, Sch 10S SS ASTM A403 WP 304 - BE	ea		4	30.8	3,335.37	123.4	500.31	2,001.22	13,341.47	318.90	1,275.58	486.44	1,945.76	4,641.01	18,564.03
B&M-0191	Added	3" flange, WN, SS, B16.5 RF, Sch 10S, ASTM A182 F304L - 150#	ea		8	12.2	1,315.01	97.3	197.25	1,578.01	10,520.05	212.74	1,701.89	191.78	1,534.28	1,916.78	15,334.23
B&M-0192	Added	16"x6" WOL, SS, ASTM A182-F304L	ea		6	22.7	2,457.51	136.3	368.63	2,211.76	14,745.08	992.51	5,955.09	358.41	2,150.47	4,177.07	25,062.40
B&M-0193	Added	16"x2" SOL, SS, 3000#	ea		4	7.6	827.05	30.6	124.06	496.23	3,308.19	98.20	392.79	120.62	482.48	1,169.92	4,679.69
B&M-0194	Added	16"x1" SOL, SS, 3000#	ea		4	3.9	425.34	15.7	63.80	255.20	1,701.36	43.11	172.42	62.03	248.13	594.28	2,377.11
B&M-0195	Added	12"x2" SOL, FS, 3000#	ea		1	5.2	567.12	5.2	85.07	85.07	567.12	47.68	47.68	82.71	82.71	782.58	782.58
B&M-0196	Added	12"x1.25" SOL, FS, 3000#	ea		1	3.3	354.45	3.3	53.17	53.17	354.45	29.86	29.86	51.69	51.69	489.17	489.17
B&M-0197	Added	12"x3/4" SOL, FS, 3000#	ea		1	2.0	212.67	2.0	31.90	31.90	212.67	18.72	18.72	31.02	31.02	294.30	294.30
B&M-0198	Added	14"x1/2" TOL, SS, 3000#	ea		4	2.2	236.30	8.7	35.44	141.78	945.20	24.93	99.71	34.46	137.85	331.13	1,324.54
B&M-0199	Added	4"x1/2" TOL, SS, 3000#	ea		4	2.2	236.30	8.7	35.44	141.78	945.20	24.93	99.71	34.46	137.85	331.13	1,324.54
B&M-0200	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		8	1.2	134.69	10.0	20.20	161.63	1,077.53	13.25	106.03	19.64	157.15	187.79	1,502.33
B&M-0201	Added	1" weld adapter, 304SS, Vic-Press - 561	ea		16	5.9	638.01	94.4	95.70	1,531.22	10,208.13	153.82	2,461.16	93.05	1,488.79	980.58	15,689.30
B&M-0202	Added	1" male adapter, 304SS, Vic-Press - 596	ea		8	5.9	638.01	47.2	95.70	765.61	5,104.07	150.83	1,206.64	93.05	744.39	977.59	7,820.71
B&M-0203	Added	2"x1" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea		12	11.1	1,205.13	133.7	180.77	2,169.23	14,461.52	266.81	3,201.75	175.76	2,109.12	1,828.47	21,941.62
B&M-0204	Added	4"x3" conc reducer, Sch 10S, ASTM A403 WP304L - VICTAULIC 4505S	ea		8	4.7	510.41	37.8	76.56	612.49	4,083.25	163.74	1,309.95	74.44	595.52	825.15	6,601.21
B&M-0205	Added	2" rigid coupling, Galv. DI, ASTM A536 - Victaulic 07	ea		4	0.3	37.22	1.4	5.58	22.33	148.87	47.12	188.47	5.43	21.71	95.35	381.38
B&M-0206	Added	3" flexible coupling, A890 SS - VICTAULIC 77DX	ea		8	0.4	47.85	3.5	7.18	57.42	382.81	508.01	4,064.06	6.98	55.83	570.01	4,560.11
B&M-0207	Added	6" flexible coupling, GALVANIZED, DUCTILE IRON, ASTM A-536 - VICTAULIC W77	ea		3	1.4	148.87	4.1	22.33	66.99	446.61	159.93	479.78	21.71	65.13	352.84	1,058.51
B&M-0208	Added	14" flexible coupling, SS A351 CF8M - VICTAULIC 77S	ea		12	3.9	421.09	45.7	63.16	757.95	5,053.03	6,518.21	78,218.51	61.41	736.95	7,063.87	84,766.44
B&M-0209	Added	3/4" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea		1	2.8	301.28	2.8	45.19	45.19	301.28	87.65	87.65	43.94	43.94	478.06	478.06
B&M-0210	Added	2" ball valve, full port, 600#, 2pc, forge brass body to ASTM B283 (C37700), brass ball/stem, RTFE seats/packing, live loaded stem seals, lever operator [illegible]	ea		4	7.7	829.41	30.7	124.41	497.65	3,317.64	103.08	412.31	120.96	483.86	1,177.86	4,711.45
B&M-0211	Added	14" BUTTERFLY VALVE LUG BRAY SERIES 31 C/W GEAR OPERATOR - VBU01 (Supplied with Equipment)	ea		12	39.7	4,288.83	475.9	643.33	7,719.90	51,466.01	225.35	2,704.25	625.50	7,505.97	5,783.01	69,396.14
B&M-0212	Added	6" pipe spools (Andritz Supplied)	Linear meter		30	4.5	488.29	137.6	73.24	2,233.07	14,886.86	25.66	782.22	71.21	2,171.15	658.40	20,073.26
B&M-0213	Added	4" pipe spools (Andritz Supplied)	Linear meter		30	3.4	372.02	104.9	55.80	1,701.36	11,342.37	19.55	595.98	54.26	1,654.21	501.64	15,293.93
B&M-0214	Added	6" valves/specials (Andritz Supplied)	ea		24	16.1	1,736.80	385.4	260.52	6,252.48	41,683.22	91.26	2,190.22	253.30	6,079.22	2,341.88	56,205.14
B&M-0215	Added	4" valves/specials (Andritz Supplied)	ea		24	11.0	1,187.40	263.5	178.11	4,274.66	28,497.71	62.39	1,497.40	173.18	4,156.20	1,601.08	38,425.96
B&M-0216	Added	Pipe insulation - All Sizes	ea		1	5416.1	553,171.91	5416.1	82,975.79	82,975.79	553,171.91	165,271.49	165,271.49	0.00	0.00	801,419.18	801,419.18
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WSS (Service Water)						0.0	$0.00				$0.00		$0.00		
684	3449.001	Service water pump 3449-P-6000 to 6002	ea	3	3	139.8	15,123.16	419.5	2,268.47	6,805.42	45,369.49	34,709.64	104,128.92	2,205.61	6,616.84	54,306.89	162,920.66
685	3449.002	Y-strainer 3449-STR-5000 / 5001 / 8000 to 8004	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	748.34	5,238.37	275.70	1,929.91	3,198.00	22,385.97
686	3449.003	Y-strainer 3449-STR-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	2,855.63	22,845.07	275.70	2,205.61	5,305.29	42,442.31
687	3449.004	Pump suction diffuser 3449-PSD-6000 to 6002	ea	3	3	8.7	945.20	26.2	141.78	425.34	2,835.59	6,797.12	20,391.36	137.85	413.55	8,021.95	24,065.84
688	3449.005	Air vent 3449-AV-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 / 5000 / 5001 / 5002 8000 to 8004	ea	16	16	8.7	945.20	139.8	141.78	2,268.47	15,123.16	5,575.02	89,200.27	137.85	2,205.61	6,799.84	108,797.52
689	3449.006	Air vent 3449-AV-6000 / 8005	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	5,575.02	11,150.03	137.85	275.70	6,799.84	13,599.69
690	3449.007	Pressure indicator 3449-PI-6000 to 6005	ea	6	6	8.7	945.20	52.4	141.78	850.68	5,671.19	700.54	4,203.22	137.85	827.10	1,925.36	11,552.19
691	3449.008	Pressure transmitter 3449-PT-6000 / 6001	ea	2	2	8.7	945.20	17.5	141.78	283.56	1,890.40	3,620.64	7,241.27	137.85	275.70	4,845.46	9,690.93
691.1	691.100	**HVAC Temperature transmitter (supply by HVAC and installed by Piping)**	ea	30	30	8.7	945.20	262.2	141.78	4,253.39	28,355.93	1,530.45	45,913.35	137.85	4,135.52	2,755.27	82,658.20
691.2	691.200	**HVAC Pressure transmitter (supply by HVAC and installed by Piping)**	ea	30	30	8.7	945.20	262.2	141.78	4,253.39	28,355.93	652.72	19,581.75	137.85	4,135.52	1,877.55	56,326.59
692	3449.009	Variable frequency drive 3449-VFD-6000 to 6002	ea	3	3	52.4	5,671.19	157.3	850.68	2,552.03	17,013.56	297.99	893.97	827.10	2,481.31	7,646.96	22,940.87
693	3449.010	Control panel 3449-CP-6000 to 6003	ea	4	4	104.9	11,342.37	419.5	1,701.36	6,805.42	45,369.49	11,995.98	47,983.92	1,654.21	6,616.84	26,693.92	106,775.66
694	3449.011	Pipe NPS 1/2 Sch.10S , Piping Specification SB11	m	2	6	1.0	104.63	5.6	15.70	91.43	609.53	23.57	137.31	15.26	88.90	159.16	927.16
695	3449.012	Pipe NPS 1/2 Sch.40S, Piping Specification SB11	m	1	1	1.0	104.63	1.0	15.70	15.70	104.63	23.57	23.57	15.26	15.26	159.16	159.16
696	3449.013	Pipe NPS 1/2 Sch.80S, Piping Specification SB11	m	1	0	1.0	104.63	0.0	15.70	0.00	0.00	23.57	0.00	15.26	0.00	159.16	0.00
697	3449.014	Elbow 90 degrees SW Class 3000 NPS 1/2, Piping Specification SB11	ea	2	14	5.6	602.56	78.0	90.38	1,265.38	8,435.89	117.55	1,645.65	87.88	1,230.32	898.37	12,577.24
698	3449.015	Olet FNPT Sch.40S NPS 1/2, Piping Specification SB11	ea	26	31	2.2	236.30	67.7	35.44	1,098.79	7,325.28	24.93	772.75	34.46	1,068.34	331.13	10,265.16
699	3449.016	Olet SW Class 3000 NPS 1/2, Piping Specification SB11	ea	6	1	2.2	236.30	2.2	35.44	35.44	236.30	24.93	24.93	34.46	34.46	331.13	331.13
700	3449.017	Union PE/NPT Sch.40S NPS 1/2, Piping Specification SB11	ea	5	24	4.3	460.78	102.3	69.12	1,658.82	11,058.81	422.21	10,133.14	67.20	1,612.85	1,019.32	24,463.63
701	3449.018	Weld NPS 1/2, Piping Specification SB11	ea	84	149	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702	3449.019	Ball Valve NPS 1/2, Valve Specification VBA11	ea	16	20	3.7	400.53	74.1	60.08	1,201.58	8,010.55	107.23	2,144.59	58.41	1,168.29	626.25	12,525.01
703	3449.020	Pipe insulation NPS 1/2	Linear meter	4	113	1.4	142.38	159.5	21.36	2,421.82	16,145.44	38.46	4,361.23	8.55	969.45	210.77	23,897.94
704	3449.021	Pipe identification NPS 1/2	Linear meter	4	38	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
705	3449.022	Pipe NPS 1/2 Sch.40 , Piping Specification PA02	m	18	108	1.1	116.26	116.1	17.44	1,883.40	12,556.01	8.79	949.78	16.96	1,831.21	159.45	17,220.40
706	3449.023	Pipe NPS 1/2 Sch.80, Piping Specification PA02	m	1	9	1.1	116.26	9.7	17.44	156.91	1,046.07	8.79	79.13	16.96	152.56	159.45	1,434.67
707	3449.024	Elbow 90 degrees Sch.40 NPS 2, Piping Specification PA02	ea	13	62	1.2	134.69	77.2	20.20	1,252.62	8,350.82	8.30	514.49	19.64	1,217.91	182.84	11,335.84
708	3449.025	Elbow 45 degrees Sch.40 NPS 2, Piping Specification PA02	ea	8	9	1.8	191.40	15.9	28.71	258.39	1,722.62	18.68	168.08	27.91	251.23	266.70	2,400.33
709	3449.026	Union Sch.40 NPS 1/2, Piping Specification PA02	ea	5	15	1.2	134.69	18.7	20.20	303.05	2,020.36	11.39	170.80	19.64	294.66	185.92	2,788.87
710	3449.027	Tee Sch.40 NPS 1/2, Piping Specification PA02	ea	2	2	2.4	255.20	4.7	38.28	76.56	510.41	23.46	46.93	37.22	74.44	354.17	708.34
711	3449.028	Pipe identification NPS 1/2	Linear meter	19	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
712	3449.029	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	70	206	1.1	116.26	221.4	17.44	3,592.41	23,949.42	22.98	4,732.97	16.96	3,492.86	173.63	35,767.66
713	3449.030	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	m	3	2	1.1	116.26	2.1	17.44	34.88	232.52	27.68	55.36	16.96	33.91	178.33	356.66
714	3449.031	Olet SW Class 3000 NPS 3/4, Piping Specification SB11	ea	36	34	2.8	307.19	96.6	46.08	1,566.67	10,444.43	36.90	1,254.50	44.80	1,523.25	434.97	14,788.85
715	3449.032	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	109	111	5.6	602.56	618.4	90.38	10,032.68	66,884.55	117.55	13,047.62	87.88	9,754.66	898.37	99,719.52
716	3449.033	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	29	30	5.6	602.56	167.1	90.38	2,711.54	18,076.91	94.50	2,835.12	87.88	2,636.40	875.33	26,259.95
717	3449.034	Elbow 45 degrees BE Sch.10s NPS 3/4, Piping Specification SB11	ea	2	0	5.6	602.56	0.0	90.38	0.00	0.00	94.50	0.00	87.88	0.00	875.33	0.00
718	3449.035	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	21	55	5.6	602.56	306.4	90.38	4,971.15	33,140.99	482.63	26,544.71	87.88	4,833.39	1,263.46	69,490.25
719	3449.036	Reducing Tee SW Class 3000 NPS 3/4 x 3/4 x 1/2, Piping Specification SB11	ea	1	1	11.1	1,205.13	11.1	180.77	180.77	1,205.13	196.49	196.49	175.76	175.76	1,758.14	1,758.14
720	3449.037	Quick connect NPS 3/4, Hansen Series HK	ea	39	36	2.8	301.28	100.3	45.19	1,626.92	10,846.14	87.65	3,155.42	43.94	1,581.84	478.06	17,210.33
721	3449.038	Weld NPS 3/4, Piping Specification SB11	ea	506	665	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
722	3449.039	Victaulic coupling NPS 3/4, Style 77	ea	9	9	0.3	37.22	3.1	5.58	50.24	334.95	27.67	249.00	5.43	48.85	75.89	683.05
723	3449.040	Ball Valve NPS 3/4, Valve Specification VBA11	ea	51	72	5.5	595.47	396.4	89.32	6,431.12	42,874.17	136.15	9,802.52	86.85	6,252.91	907.79	65,360.72
724	3449.041	Pipe insulation NPS 3/4	Linear meter	74	206	1.4	142.35	290.3	21.35	4,407.13	29,380.86	38.18	7,878.16	8.55	1,764.29	210.47	43,430.45
725	3449.042	Pipe identification NPS 3/4	Linear meter	74	39	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
726	3449.043	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	28	45	1.4	151.14	62.6	22.67	1,016.03	6,773.52	36.45	1,633.37	22.04	987.87	232.30	10,410.80
727	3449.044	Pipe NPS 1 Sch.40S, Piping Specification SB11	m	6	14	1.4	151.14	19.6	22.67	317.39	2,115.92	39.80	557.20	22.04	308.59	235.65	3,299.10
728	3449.045	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	6	25	5.9	638.01	147.5	95.70	2,392.53	15,950.21	580.55	14,513.82	93.05	2,326.23	1,407.31	35,182.79
729	3449.046	Olet SW Class 3000 NPS 1, Piping Specification SB11	ea	41	39	3.9	425.34	153.4	63.80	2,488.23	16,588.22	43.11	1,681.10	62.03	2,419.28	594.28	23,176.83
730	3449.047	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	6	9	5.9	638.01	53.1	95.70	861.31	5,742.08	125.39	1,128.54	93.05	837.44	952.15	8,569.37
731	3449.048	Weld NPS 1 Piping Specification SB11	ea	127	153	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
732	3449.049	Victaulic coupling NPS 1, Style 77	ea	1	0	0.3	37.22	0.0	5.58	0.00	0.00	27.67	0.00	5.43	0.00	75.89	0.00
733	3449.050	Ball Valve NPS 1, Valve Specification VBA11	ea	8	21	7.3	793.97	154.2	119.09	2,500.99	16,673.29	202.60	4,254.50	115.79	2,431.69	1,231.45	25,860.47
734	3449.051	Pipe insulation NPS 1	Linear meter	34	31	1.4	145.26	45.1	21.79	684.16	4,561.05	41.47	1,302.03	8.55	268.42	217.10	6,815.67
735	3449.052	Pipe identification NPS 1	Linear meter	34	11	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
736	3449.053	Pipe NPS 1-1/4 Sch.10S, Piping Specification SB11	m	3	5	1.8	197.64	9.1	29.65	148.23	988.20	44.87	224.36	28.82	144.12	300.98	1,504.92
737	3449.054	Pipe NPS 1-1/4 Sch.40S, Piping Specification SB11	m	3	18	1.8	197.64	32.9	29.65	533.63	3,557.53	44.87	807.70	28.82	518.84	300.98	5,417.71
738	3449.055	Coupling Stainless Steel Compression MNPT 1.25inx1.25in	ea	4	0	8.5	921.57	0.0	138.24	0.00	0.00	171.71	0.00	134.40	0.00	1,365.92	0.00
739	3449.056	Victaulic coupling NPS 1-1/4, Style 77	ea	8	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00
740	3449.057	Victaulic coupling NPS 1-1/4, Style 77DX	ea	2	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00
741	3449.058	Pipe insulation NPS 1-1/4	Linear meter	6	5	1.4	146.29	6.6	21.94	100.33	668.86	44.16	201.92	8.55	39.09	220.95	1,010.19
742	3449.059	Pipe identification NPS 1-1/4	Linear meter	6	2	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
743	3449.060	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	131	198	1.8	197.64	362.7	29.65	5,884.03	39,226.88	44.87	8,906.06	28.82	5,720.98	300.98	59,737.96
744	3449.061	Pipe NPS 1-1/2 Sch.40S, Piping Specification SB11	m	1	0	1.8	197.64	0.0	29.65	0.00	0.00	44.87	0.00	28.82	0.00	300.98	0.00
745	3449.062	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	90	100	8.2	886.12	819.3	132.92	13,291.84	88,612.28	155.49	15,548.78	129.24	12,923.51	1,303.76	130,376.42
746	3449.063	Elbow 45 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	21	17	8.2	886.12	139.3	132.92	2,259.61	15,064.09	157.28	2,673.82	129.24	2,197.00	1,305.56	22,194.51
747	3449.064	Union SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	6	77	8.2	886.12	630.9	132.92	10,234.72	68,231.46	993.39	76,490.86	129.24	9,951.10	2,141.66	164,908.14
748	3449.065	Tee SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	30	24	11.1	1,205.13	267.4	180.77	4,338.46	28,923.05	236.59	5,678.12	175.76	4,218.23	1,798.24	43,157.86
749	3449.066	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 1/2, Piping Specification SB11	ea	1	37	11.1	1,205.13	412.3	180.77	6,688.45	44,589.70	196.49	7,270.09	175.76	6,503.11	1,758.14	65,051.36
750	3449.067	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 3/4, Piping Specification SB11	ea	30	11	11.1	1,205.13	122.6	180.77	1,988.46	13,256.40	197.99	2,177.84	175.76	1,933.36	1,759.64	19,356.05
751	3449.068	Reducing Tee SW Class 3000 NPS 1-1/2 x1-1/2 x 1, Piping Specification SB11	ea	2	14	11.1	1,205.13	156.0	180.77	2,530.77	16,871.78	199.18	2,788.55	175.76	2,460.64	1,760.84	24,651.73
752	3449.069	Concentric Reducer SW Class 3000 NPS 1-1/2 x 1, Piping Specification SB11	ea	8	8	8.2	886.12	65.5	132.92	1,063.35	7,088.98	151.00	1,207.99	129.24	1,033.88	1,299.28	10,394.20
753	3449.070	Concentric Reducer SW Class 3000 NPS 1-1/2 x 1-1/4, Piping Specification SB11	ea	2	24	8.2	886.12	196.6	132.92	3,190.04	21,266.95	175.54	4,212.90	129.24	3,101.64	1,323.81	31,771.53
754	3449.071	Eccentric Reducer SW Class 3000 NPS 1-1/2 x 1-1/4, Piping Specification SB11	ea	2	1	18.3	1,977.83	18.3	296.67	296.67	1,977.83	117.04	117.04	288.45	288.45	2,679.99	2,679.99
755	3449.072	Concentric Reducer SW Class 3000 NPS 2 x 1-1/2, Piping Specification SB11	ea	2	4	8.5	921.57	34.1	138.24	552.94	3,686.27	177.40	709.60	134.40	537.62	1,371.61	5,486.43
756	3449.073	Olet SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	8	9	7.6	827.05	68.8	124.06	1,116.51	7,443.43	98.20	883.78	120.62	1,085.57	1,169.92	10,529.30
757	3449.074	Weld NPS 1-1/2 Piping Specification SB11	ea	532	543	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
758	3449.075	Victaulic coupling NPS 1-1/2, Style 77	ea	18	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00
759	3449.076	Victaulic coupling NPS 1-1/2, Style 77DX	ea	8	0	0.3	37.22	0.0	5.58	0.00	0.00	479.24	0.00	5.43	0.00	527.46	0.00
760	3449.077	Victaulic coupling NPS 1-1/2, Style 489	ea	3	0	0.5	58.48	0.0	8.77	0.00	0.00	145.16	0.00	8.53	0.00	220.94	0.00
761	3449.078	Victaulic concentric reducer NPS 1-1/2 x 1-1/4, Style 50	ea	11	0	3.0	322.56	0.0	48.38	0.00	0.00	383.55	0.00	47.04	0.00	801.53	0.00
762	3449.079	Victaulic Tee NPS 1-1/2, Style 42055	ea	2	0	4.7	506.87	0.0	76.03	0.00	0.00	307.84	0.00	73.92	0.00	964.66	0.00
763	3449.080	Ball Valve NPS 1-1/2, Valve Specification VBA11	ea	23	29	11.0	1,187.40	318.4	178.11	5,165.21	34,434.73	295.09	8,557.56	173.18	5,022.08	1,833.78	53,179.58
764	3449.081	Pipe insulation NPS 1-1/2	Linear meter	132	173	1.5	147.38	251.6	22.11	3,820.13	25,467.53	43.18	7,463.01	8.55	1,477.63	221.20	38,228.30

Cahill-Ganotec Joint Venture
FIXED PRICE TARGET COST OF LABOUR

LABOUR COMPONENT 0.13 | NON LABOUR COMPONENT

No	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
681	3.0	15.6	1,413.14	46.9	183.71	551.13	4,239.43	2,327.09	6,981.28	800.61	2,401.84	4,724.56	14,173.68
682	131.7	10.0	907.95	1,322.4	118.03	15,542.00	119,553.82	809.44	106,582.13	323.82	42,638.96	2,159.25	284,316.91
683	44.5	0.6	50.39	24.8	6.55	291.60	2,243.09	12.06	537.00	14.27	635.28	83.28	3,706.96
B&M-0184	12.8	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0185	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0186	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0187	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0188	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0189	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0190	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0191	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0192	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0193	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0194	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0195	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0196	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0197	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0198	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0199	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0200	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0201	16.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0202	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0203	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0204	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0205	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0206	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0207	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0208	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0209	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0210	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0211	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0212	30.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0213	30.5	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0214	24.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0215	24.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0216	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				0.0	$0.00				$0.00		$0.00	$0.00	
684	3.0	171.4	15,496.51	514.2	2,014.55	6,043.64	46,489.53	31,251.41	93,754.23	9,933.62	29,800.86	58,696.08	176,088.25
685	7.0	4.8	431.35	33.4	56.08	392.53	3,019.45	107.21	750.44	122.96	860.70	717.59	5,023.12
686	8.0	6.3	565.11	50.0	73.46	587.71	4,520.85	94.59	756.75	151.85	1,214.82	885.02	7,080.13
687	3.0	4.9	439.93	14.6	57.19	171.57	1,319.80	0.00	0.00	103.39	310.18	600.52	1,801.56
688	16.0	3.6	329.95	58.4	42.89	686.29	5,279.18	84.16	1,346.64	94.49	1,511.80	551.49	8,823.92
689	2.0	11.0	989.85	21.9	128.68	257.36	1,979.70	3,330.12	6,660.23	903.07	1,806.14	5,351.71	10,703.43
690	6.0	3.7	329.95	21.9	42.89	257.36	1,979.70	84.10	504.63	94.48	566.86	551.42	3,308.55
691	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	7,963.56	15,927.12	1,758.36	3,516.71	10,467.61	20,935.21
691.1	30.0	109.5	9,898.47	3,284.7	1,286.80	38,604.03	296,954.10	0.00	0.00	2,326.29	69,788.68	13,511.56	405,346.81
691.2	30.0	120.4	10,888.32	3,613.2	1,415.48	42,464.45	326,649.60	0.00	0.00	2,558.92	76,767.48	14,862.72	445,881.53
692	3.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
693	4.0	18.6	1,678.86	74.3	218.25	873.01	6,715.43	20,859.52	83,438.09	4,594.12	18,376.46	27,350.75	109,402.99
694	5.8	1.7	150.17	9.7	19.52	113.72	874.78	6.24	36.33	36.55	212.90	212.47	1,237.73
695	1.0	48.4	4,372.51	48.4	568.43	568.43	4,372.51	556.87	556.87	1,139.72	1,139.72	6,637.52	6,637.52
696	0.0	0.6	49.91	0.0	6.49	0.00	0.00	3.72	0.00	12.47	0.00	72.59	0.00
697	14.0	0.6	54.17	8.4	7.04	98.58	758.33	4.26	59.66	13.59	190.23	79.06	1,106.80
698	31.0	0.6	53.75	18.4	6.99	216.63	1,666.38	10.68	331.04	14.78	458.27	86.20	2,672.33
699	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.54	10.54	13.84	13.84	80.78	80.78
700	24.0	0.6	53.61	14.2	6.97	167.25	1,286.52	9.76	234.35	14.56	349.54	84.90	2,037.66
701	149.0	0.8	75.40	124.3	9.80	1,460.54	11,234.91	195.52	29,132.96	57.07	8,503.35	337.80	50,331.75
702	20.0	3.2	287.04	63.5	37.32	746.31	5,740.84	104.76	2,095.30	88.55	1,771.01	517.67	10,353.46
703	113.4	3.3	300.88	377.4	39.11	4,434.96	34,115.07	165.85	18,805.17	86.70	9,830.10	592.54	67,185.29
704	38.3	0.6	50.35	21.4	6.55	250.87	1,929.79	12.06	462.42	14.26	546.63	83.22	3,189.71
705	108.0	4.4	397.31	474.6	51.65	5,578.30	42,910.01	3.26	352.47	94.03	10,155.44	546.26	58,996.22
706	9.0	1.0	87.98	8.8	11.44	102.91	791.60	4.30	38.72	21.54	193.82	125.26	1,127.05
707	62.0	0.3	29.27	20.1	3.81	235.91	1,814.72	0.57	35.48	6.99	433.63	40.64	2,519.74
708	9.0	0.2	16.48	1.6	2.14	19.28	148.34	0.80	7.21	4.04	36.32	23.46	211.15
709	15.0	0.3	30.00	5.0	3.90	58.49	449.93	4.93	73.91	8.04	120.61	46.86	702.94
710	2.0	0.6	57.54	1.3	7.48	14.96	115.07	0.62	1.25	13.65	27.29	79.29	158.57
711	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
712	206.0	1.8	166.41	379.2	21.63	4,456.58	34,281.42	7.99	1,645.02	40.72	8,387.82	236.75	48,770.84
713	2.0	0.4	33.27	0.7	4.33	8.65	66.54	13.14	26.29	10.47	20.93	61.20	122.41
714	34.0	0.5	44.65	16.8	5.80	197.35	1,518.04	9.76	331.73	12.46	423.54	72.67	2,470.66
715	111.0	0.6	53.95	66.3	7.01	778.57	5,989.00	5.37	595.75	13.76	1,527.45	80.10	8,890.77
716	30.0	0.3	26.80	8.9	3.48	104.53	804.08	8.45	253.44	8.00	239.99	46.73	1,402.04
717	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.74	0.00	9.58	0.00	55.92	0.00
718	55.0	0.6	53.99	32.9	7.02	386.04	2,969.55	88.82	4,885.02	30.57	1,681.37	180.40	9,921.98
719	1.0	1.3	115.07	1.3	14.96	14.96	115.07	7.11	7.11	28.47	28.47	165.61	165.61
720	36.0	2.6	231.52	92.2	30.10	1,083.51	8,334.72	11.67	420.24	56.76	2,043.21	330.05	11,881.68
721	665.0	0.6	54.11	398.0	7.03	4,677.54	35,981.07	165.90	110,321.96	45.86	30,495.32	272.90	181,475.89
722	9.0	0.6	53.14	5.3	6.91	62.18	478.28	282.98	2,546.85	69.46	625.15	412.50	3,712.46
723	72.0	3.2	285.05	227.0	37.06	2,668.04	20,523.39	99.78	7,183.89	87.08	6,269.61	508.96	36,644.92
724	206.4	3.3	301.39	687.9	39.18	8,085.04	62,192.61	171.04	35,294.36	87.83	18,124.29	599.45	123,696.31
725	38.8	0.6	50.54	21.7	6.57	255.20	1,963.06	12.06	468.63	14.31	555.70	83.47	3,242.58
726	44.8	2.2	200.20	99.2	26.03	1,166.41	8,972.38	285.90	12,813.35	104.61	4,688.30	616.74	27,640.43
727	14.0	0.6	54.17	8.4	7.04	98.58	758.33	13.15	184.04	15.38	215.26	89.73	1,256.21
728	25.0	0.6	54.12	15.0	7.04	175.90	1,353.07	110.99	2,774.72	35.06	876.62	207.21	5,180.31
729	39.0	0.5	48.66	21.0	6.33	246.73	1,897.90	13.35	520.61	14.12	550.84	82.46	3,216.08
730	9.0	0.6	53.72	5.4	6.98	62.85	483.48	8.11	73.02	14.26	128.33	83.08	747.68
731	153.0	0.7	63.84	108.0	8.30	1,269.68	9,766.76	220.51	33,737.73	59.34	9,078.65	351.98	53,852.82
732	0.0	0.7	66.54	0.0	8.65	0.00	0.00	23.70	0.00	20.39	0.00	119.28	0.00
733	21.0	3.1	278.79	64.8	36.24	761.11	5,854.66	158.73	3,333.26	97.48	2,047.01	571.24	11,996.04
734	31.4	3.3	298.12	103.5	38.76	1,216.69	9,359.19	183.05	5,746.62	89.67	2,815.11	609.58	19,137.61
735	10.6	0.6	49.77	5.8	6.47	68.67	528.20	12.06	128.03	14.13	149.92	82.43	874.82
736	5.0	6.7	603.89	33.4	78.51	392.53	3,019.45	3,656.33	18,281.67	878.04	4,390.18	5,216.77	26,083.84
737	18.0	0.5	49.52	9.9	6.44	115.88	891.41	13.15	236.63	14.29	257.14	83.39	1,501.06
738	0.0	0.7	66.54	0.0	8.65	0.00	0.00	32.24	0.00	22.13	0.00	129.56	0.00
739	0.0	0.7	66.54	0.0	8.65	0.00	0.00	34.54	0.00	22.60	0.00	132.33	0.00
740	0.0	0.7	66.54	0.0	8.65	0.00	0.00	34.54	0.00	22.60	0.00	132.33	0.00
741	4.6	3.7	330.21	16.7	42.93	196.26	1,509.73	207.59	949.11	100.30	458.56	681.03	3,113.67
742	1.5	0.6	53.82	0.9	7.00	10.81	83.18	12.06	18.64	15.08	23.31	87.96	135.95
743	198.5	2.1	191.11	419.6	24.84	4,930.90	37,930.01	28.06	5,569.26	50.56	10,035.34	294.57	58,465.51
744	0.0	0.7	66.54	0.0	8.65	0.00	0.00	11.47	0.00	17.95	0.00	104.62	0.00
745	100.0	0.6	53.84	59.5	7.00	699.90	5,383.87	19.98	1,997.77	16.68	1,667.51	97.49	9,749.05
746	17.0	0.3	27.16	5.1	3.53	60.01	461.65	19.08	324.41	10.22	173.82	59.99	1,019.89
747	77.0	0.6	54.00	46.0	7.02	540.49	4,157.64	78.99	6,082.51	28.59	2,201.66	168.60	12,982.30
748	24.0	1.2	107.90	28.7	14.03	336.66	2,589.69	26.19	628.55	30.63	735.15	178.75	4,290.04
749	37.0	1.3	115.07	47.0	14.96	553.49	4,257.59	63.08	2,334.06	39.75	1,470.67	232.86	8,615.81
750	11.0	1.2	108.01	13.1	14.04	154.45	1,188.10	59.52	654.67	37.37	411.02	218.93	2,408.24
751	14.0	1.2	107.24	16.6	13.94	195.18	1,501.40	63.08	883.07	37.90	530.64	222.16	3,110.28
752	8.0	0.7	66.54	5.9	8.65	69.20	532.32	21.57	172.58	19.98	159.88	116.75	933.98
753	24.0	0.6	52.68	14.0	6.85	164.36	1,264.32	10.25	245.98	14.44	346.67	84.22	2,021.33
754	1.0	0.7	66.54	0.7	8.65	8.65	66.54	10.39	10.39	17.72	17.72	103.30	103.30
755	4.0	0.7	66.54	3.0	8.65	34.60	266.16	21.57	86.29	19.98	79.94	116.75	466.99
756	9.0	0.4	36.66	3.7	4.77	42.89	329.95	31.51	283.57	14.96	134.64	87.89	791.05
757	543.0	0.6	51.38	308.6	6.68	3,626.65	27,897.32	244.71	132,879.21	61.19	33,225.39	363.96	197,628.57
758	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
759	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
760	0.0	0.6	49.91	0.0	6.49	0.00	0.00	192.51	0.00	50.50	0.00	299.40	0.00
761	0.0	0.6	49.91	0.0	6.49	0.00	0.00	54.32	0.00	22.66	0.00	133.37	0.00
762	0.0	0.9	83.18	0.0	10.81	0.00	0.00	260.14	0.00	71.92	0.00	426.05	0.00
763	29.0	3.2	287.31	92.2	37.35	1,083.15	8,331.90	236.58	6,860.83	115.15	3,339.38	676.39	19,615.26
764	172.8	3.3	302.21	577.7	39.29	6,789.77	52,228.98	202.04	34,917.34	94.22	16,283.10	637.76	110,219.19

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
765	3449.082	Pipe identification NPS 1-1/2	Linear meter	132	58	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.4	0.6	50.54	32.7	6.57	383.88	2,952.91	12.06	704.80	14.31	835.87	83.49	4,877.46
766	3449.083	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	276	480	2.3	244.1	1084.0	36.6	17,585.11	117,234.05	56.83	27,290.16	35.61	17,097.80	373.21	179,207.12	480.2	7.0	631.92	3,356.4	82.15	39,446.83	303,437.14	35.47	17,032.95	155.65	74,741.36	905.19	434,658.27
767	3449.084	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	29	45	8.5	921.5	383.4	138.2	6,220.58	41,470.55	171.71	7,727.14	134.40	6,048.20	1,365.92	61,466.47	45.0	0.6	53.88	26.8	7.00	315.21	2,424.71	55.11	2,479.98	23.76	1,069.13	139.76	6,289.03
768	3449.085	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	5	6	8.5	921.5	51.1	138.2	829.41	5,529.41	172.91	1,037.47	134.40	806.43	1,367.12	8,202.71	6.0	0.3	26.34	1.8	3.42	20.55	158.05	34.72	208.34	13.18	79.09	77.67	466.03
769	3449.086	Elbow 90 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	3	0	8.5	921.5	0.0	138.2	0.00	0.00	171.71	0.00	134.40	0.00	1,365.92	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.35	0.00	17.31	0.00	100.85	0.00
770	3449.087	Elbow 45 degrees BW Sch.10S NPS 2, Piping Specification SB11	ea	1	1	8.5	921.5	8.5	138.2	138.24	921.57	172.91	172.91	134.40	134.40	1,367.12	1,367.12	1.0	0.4	33.27	0.4	4.33	4.33	33.27	3.61	3.61	8.54	8.54	49.75	49.75
771	3449.088	Olet SW Class 3000 NPS 2, Piping Specification SB11	ea	1	2	7.6	827.0	15.3	124.0	248.11	1,654.10	98.20	196.40	120.62	241.24	1,169.92	2,339.85	2.0	0.5	41.59	0.9	5.41	10.81	83.18	23.81	47.63	14.57	29.14	85.38	170.76
772	3449.089	Union SW Class 3000 NPS 2, Piping Specification SB11	ea	2	28	8.5	921.5	238.6	138.2	3,870.58	25,803.90	1,191.56	33,363.63	134.40	3,763.33	2,385.77	66,801.44	28.0	0.6	53.62	16.6	6.97	195.18	1,501.40	17.36	486.20	16.10	450.73	94.05	2,633.51
773	3449.090	Eccentric Reducer SW Class 3000 NPS 2 x 3/4, Piping Specification SB11	ea	1	0	18.3	1,977.8	0.0	296.6	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	8.00	0.00	17.25	0.00	100.44	0.00
774	3449.091	Reducing Tee SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	9	19	11.1	1,205.1	211.7	180.7	3,434.61	22,897.41	238.38	4,529.30	175.76	3,339.43	1,800.04	34,200.76	19.0	1.2	108.13	22.7	14.06	267.09	2,054.55	95.68	1,817.85	44.68	848.83	262.54	4,988.32
775	3449.092	Reducing Tee SW Class 3000 NPS 2 x 2 x 1-1/2, Piping Specification SB11	ea	4	4	11.1	1,205.1	44.6	180.7	723.08	4,820.51	283.87	1,135.48	175.76	703.04	1,845.53	7,382.10	4.0	1.2	107.09	4.7	13.92	55.69	428.37	95.68	382.71	44.43	177.73	261.12	1,044.50
776	3449.093	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	3	6	4.6	496.2	27.5	74.4	446.61	2,977.37	176.90	1,061.38	72.37	434.23	819.93	4,919.58	6.0	0.7	60.54	4.0	7.87	47.22	363.23	6.48	38.86	15.53	93.18	90.41	542.49
777	3449.094	Weld NPS 2 Piping Specification SB11	ea	165	414	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	414.0	2.4	219.13	1,003.5	28.49	11,793.51	90,719.32	103.52	42,858.52	71.92	29,776.37	423.06	175,147.72
778	3449.095	Victaulic elbow 90 degrees NPS 2, Style 410SS	ea	13	5	3.0	322.5	14.9	48.3	241.91	1,612.74	133.26	666.30	47.04	235.21	551.23	2,756.17	5.0	7.2	648.81	35.9	84.35	421.73	3,244.05	61.90	309.50	164.94	824.70	960.00	4,799.98
779	3449.096	Victaulic elbow 45 degrees NPS 2, Style 411SS	ea	2	2	3.8	408.3	7.6	61.2	122.50	816.65	168.10	336.20	59.55	119.10	697.23	1,394.46	2.0	0.3	24.96	0.6	3.24	6.49	49.91	98.65	197.30	25.73	51.46	152.58	305.16
780	3449.097	Victaulic coupling NPS 2, Style 89	ea	40	39	0.4	47.8	17.3	7.1	279.93	1,866.17	63.37	2,471.42	6.98	272.17	125.38	4,889.69	39.0	0.6	53.71	23.2	6.98	272.32	2,094.77	56.76	2,213.82	24.05	938.00	141.51	5,518.91
781	3449.098	Victaulic coupling NPS 2, Style 77DX	ea	24	35	0.3	37.2	12.0	5.5	195.39	1,302.60	457.39	16,008.65	5.43	189.98	505.62	17,696.62	35.0	0.6	49.91	19.3	6.49	227.09	1,746.85	34.54	1,208.95	18.69	654.12	109.63	3,837.01
782	3449.099	Victaulic coupling NPS 2, Style 77	ea	7	61	0.4	47.8	27.0	7.1	437.83	2,918.89	39.99	2,439.53	6.98	425.70	102.00	6,221.96	61.0	0.6	53.82	36.3	7.00	426.77	3,282.85	424.83	25,914.57	98.18	5,988.79	583.82	35,612.98
783	3449.100	Victaulic coupling NPS 2, Style 07	ea	3	0	0.3	37.2	0.0	5.5	0.00	0.00	47.12	0.00	5.43	0.00	95.35	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
784	3449.101	Victaulic tee NPS 2, Style 420SS	ea	3	3	4.4	471.4	13.1	70.7	212.14	1,414.25	305.98	917.94	68.75	206.26	916.86	2,750.59	3.0	1.2	109.98	3.7	14.30	42.89	329.95	262.32	786.97	78.66	235.98	465.26	1,395.79
785	3449.102	Victaulic concentric reducer NPS 2 x 3/4, Style 50	ea	6	7	3.0	322.5	20.9	48.3	338.68	2,257.84	383.55	2,684.87	47.04	329.29	801.53	5,610.68	7.0	0.7	65.95	5.1	8.57	60.01	461.65	327.59	2,293.14	81.45	570.16	483.57	3,384.96
786	3449.103	Pipe insulation NPS 2	Linear meter	276	479	1.5	149.2	706.4	22.3	10,723.87	71,492.47	45.02	21,570.53	8.55	4,096.71	225.16	107,883.57	479.1	3.6	324.90	1,722.0	42.24	20,237.74	155,674.92	211.94	101,549.72	100.23	48,025.33	679.31	325,487.71
787	3449.104	Pipe identification NPS 2	Linear meter	276	162	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	162.0	0.6	50.51	90.5	6.57	1,063.68	8,182.18	12.06	1,954.06	14.30	2,316.34	83.45	13,516.27
788	3449.105	Pipe NPS 2-1/2 Sch.10S , Piping Specification SB11	m	192	235	2.6	279.0	606.3	41.8	9,835.54	65,570.25	79.30	18,635.82	40.69	9,562.98	440.87	103,604.60	235.0	1.9	168.41	437.8	21.89	5,145.04	39,577.24	69.53	16,338.74	53.58	12,590.65	313.41	73,651.67
789	3449.106	Elbow 90 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	74	74	18.3	1,977.8	1353.3	296.6	21,953.87	146,359.13	116.05	8,587.48	288.45	21,345.50	2,679.00	198,245.98	74.0	0.5	47.72	39.1	6.20	459.03	3,531.00	9.60	710.67	13.15	972.92	76.67	5,673.62
790	3449.107	Elbow 45 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	5	5	18.3	1,977.8	91.4	296.6	1,483.37	9,889.13	110.90	554.52	288.45	1,442.26	2,673.86	13,369.29	5.0	0.3	23.01	1.3	2.99	14.96	115.07	5.78	28.89	6.57	32.86	38.36	191.78
791	3449.108	Tee BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	16	16	27.4	2,963.1	438.4	444.4	7,111.67	47,411.11	179.54	2,872.70	432.16	6,914.59	4,019.38	64,310.08	16.0	1.1	95.92	17.0	12.47	199.51	1,534.67	30.00	480.06	28.58	457.33	166.97	2,671.56
792	3449.109	Reducing Tee BW Sch.10S NPS 2-1/2 x 2-1/2 x 2, Piping Specification SB11	ea	1	1	27.4	2,963.1	27.4	444.4	444.48	2,963.19	592.65	592.65	432.16	432.16	4,432.49	4,432.49	1.0	1.6	148.34	1.6	19.28	19.28	148.34	21.57	21.57	39.20	39.20	228.40	228.40
793	3449.110	Union SW Class 3000 NPS 2-1/2, Piping Specification SB11	ea	2	16	10.2	1,105.8	163.6	165.8	2,654.12	17,694.10	1,429.87	22,877.92	161.29	2,580.57	2,862.92	45,806.70	16.0	0.5	47.40	8.4	6.16	98.58	758.33	134.73	2,155.60	38.26	612.21	226.55	3,624.72
794	3449.111	Concentric Reducer BW Sch.10S NPS 2-1/2 x 1-1/2, Piping Specification SB11	ea	2	1	8.5	921.5	8.5	138.2	138.24	921.57	448.22	448.22	134.40	134.40	1,642.43	1,642.43	1.0	0.7	66.54	0.7	8.65	8.65	66.54	40.63	40.63	23.83	23.83	139.65	139.65
795	3449.112	Concentric Reducer BW Sch.10S NPS 4 x 2-1/2, Piping Specification SB11	ea	1	1	17.0	1,843.1	17.0	276.4	276.47	1,843.14	896.44	896.44	268.81	268.81	3,284.86	3,284.86	1.0	0.6	49.91	0.6	6.49	6.49	49.91	17.79	17.79	15.32	15.32	89.50	89.50
796	3449.113	Flange Welding Neck 150RF Sch.10S NPS 2-1/2 c/w hardware, Piping Specification SB11	ea	40	40	10.9	1,180.3	436.5	177.0	7,081.89	47,212.62	130.45	5,217.97	172.14	6,885.64	1,659.95	66,398.13	40.0	9.0	810.45	358.6	105.36	4,214.36	32,418.17	47.11	1,884.27	199.95	7,998.09	1,162.87	46,514.89
797	3449.114	Flange Slip-On 150RF NPS 2-1/2 c/w hardware, Piping Specification SB11	ea	8	14	10.9	1,180.3	152.8	177.0	2,478.66	16,524.42	105.30	1,474.17	172.14	2,409.98	1,634.80	22,887.23	14.0	22.7	2,049.21	317.3	266.40	3,729.56	28,688.92	88.20	1,234.76	499.35	6,990.91	2,903.15	40,644.16
798	3449.115	Olet BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	11	11	9.2	992.4	100.9	148.8	1,637.55	10,917.03	117.84	1,296.21	144.74	1,592.18	1,403.91	15,442.98	11.0	1.0	91.50	11.1	11.89	130.84	1,006.48	23.53	258.81	26.24	288.64	153.16	1,684.77
799	3449.116	Weld NPS 2-1/2 Piping Specification SB11	ea	316	492	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	492.0	2.8	250.58	1,363.7	32.58	16,027.16	123,285.86	138.03	67,911.86	86.29	42,457.05	507.48	249,681.93
800	3449.117	Victaulic Elbow 90 degrees NPS 2-1/2, Style 410SS	ea	31	31	3.1	340.2	97.5	51.0	1,582.26	10,548.41	196.52	6,092.11	49.63	1,538.41	637.46	19,761.19	31.0	0.5	47.90	16.4	6.23	193.02	1,484.76	168.30	5,217.37	45.14	1,399.33	267.56	8,294.48
801	3449.118	Victaulic Elbow 45 degrees NPS 2-1/2, Style 411SS	ea	12	14	3.8	408.3	52.9	61.2	857.48	5,716.56	168.10	2,353.43	59.55	833.72	697.23	9,761.19	14.0	0.4	37.73	5.8	4.90	68.67	528.20	150.62	2,108.63	39.19	548.66	232.44	3,254.15
802	3449.119	Victaulic coupling NPS 2-1/2, Style 77DX	ea	95	118	0.3	37.2	40.6	5.5	658.74	4,391.62	479.24	56,549.77	5.43	640.49	527.46	62,240.63	118.0	0.7	66.54	87.3	8.65	1,020.72	7,851.72	34.54	4,075.89	22.60	2,666.75	132.33	15,615.09
803	3449.120	Victaulic coupling NPS 2-1/2, Style 77	ea	2	118	0.3	37.2	40.6	5.5	658.74	4,391.62	479.24	56,549.77	5.43	640.49	527.46	62,240.63	118.0	0.5	47.82	62.4	6.22	733.51	5,642.41	445.20	52,533.75	100.87	11,902.44	600.10	70,812.11
804	3449.121	Victaulic coupling NPS 2-1/2, Style 07	ea	13	6	0.4	47.8	2.7	7.1	43.07	287.10	63.36	380.15	6.98	41.87	125.36	752.19	6.0	0.5	46.68	3.1	6.07	36.41	280.05	56.51	339.09	22.34	134.07	131.60	789.61
805	3449.122	Victaulic concentric reducer NPS 2-1/2 x 2, Style 52	ea	8	8	3.1	340.2	25.2	51.0	408.33	2,722.17	161.52	1,292.15	49.63	397.01	602.46	4,819.66	8.0	0.5	45.40	4.0	5.90	47.22	363.23	112.39	899.11	33.30	266.37	196.99	1,575.93
806	3449.123	Victaulic concentric reducer NPS 2-1/2 x 2, Style 50	ea	24	38	3.1	340.2	119.6	51.0	1,939.55	12,930.30	138.37	5,258.04	49.63	1,885.80	579.31	22,013.68	38.0	0.5	46.00	19.3	5.98	227.26	1,748.18	132.37	5,030.22	37.46	1,423.57	221.82	8,429.23
807	3449.124	Ball Valve NPS 2-1/2, Valve Specification VBA01	ea	24	44	5.7	616.7	250.9	92.5	4,070.49	27,136.62	2,080.71	91,551.36	89.95	3,957.70	2,879.91	126,716.17	44.0	4.4	401.19	195.3	52.15	2,294.79	17,652.26	840.24	36,970.70	263.45	11,591.70	1,557.03	68,509.46
808	3449.125	Pipe insulation NPS 2-1/2	Linear meter	192	235	1.5	150.5	349.7	22.5	5,308.23	35,388.20	51.25	12,044.86	8.55	2,009.26	232.98	54,750.56	235.0	4.1	369.54	960.6	48.04	11,289.61	86,843.12	234.16	55,027.71	112.61	26,464.44	764.36	179,624.88
809	3449.126	Pipe identification NPS 2-1/2	Linear meter	192	79	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.4	0.6	50.47	44.4	6.56	521.21	4,009.30	12.06	958.38	14.29	1,135.19	83.38	6,624.08
810	3449.127	Pipe NPS 3 Sch.STD, Piping Specification CB11	m	69	51	2.8	302.2	143.2	45.3	2,322.35	15,482.34	50.23	2,572.70	44.08	2,258.00	441.93	22,635.38	51.2	2.6	239.20	135.5	31.10	1,592.73	12,251.78	20.85	1,067.89	60.41	3,094.34	351.56	18,006.74
811	3449.128	Elbow 90 degrees BW Sch.STD NPS 3, Piping Specification CB11	ea	11	7	12.7	1,375.2	89.0	206.2	1,444.03	9,626.84	81.86	573.00	200.57	1,404.01	1,863.98	13,047.88	7.0	1.3	121.07	9.4	15.74	110.18	847.51	6.13	42.91	29.69	207.81	172.63	1,208.41
812	3449.129	Elbow 45 degrees BW Sch.STD NPS3, Piping Specification CB11	ea	1	0	12.7	1,375.2	0.0	206.2	0.00	0.00	81.86	0.00	200.57	0.00	1,863.98	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	16.31	0.00	18.92	0.00	110.42	0.00
813	3449.130	Flange Welding Neck 150RF Sch.STD NPS 3 c/w hardware, Piping Specification CB11	ea	4	2	8.3	893.2	16.5	133.9	267.96	1,786.42	67.72	135.44	130.27	260.54	1,225.18	2,450.36	2.0	69.9	6,318.25	139.8	821.37	1,642.74	12,636.49	76.59	153.18	1,500.30	3,000.60	8,716.51	17,433.01
814	3449.131	Weld NPS 3 Piping Specification CB11	ea	38	33	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.0	5.1	457.45	167.0	59.47	1,962.46	15,095.87	85.13	2,809.26	123.42	4,072.98	725.47	23,940.58
815	3449.132	Victaulic coupling NPS 3, Style 77	ea	2	2	0.5	53.1	1.0	7.9	15.95	106.33	55.01	110.01	7.75	15.51	123.90	247.81	2.0	1.4	124.08	2.7	16.13	32.26	248.15	48.12	96.25	38.85	77.70	227.18	454.35
816	3449.133	Victaulic coupling NPS 3, Style 07	ea	5	6	0.5	53.1	2.9	7.9	47.85	319.00	67.55	405.31	7.75	46.52	136.45	818.69	6.0	1.3	121.07	8.0	15.74	94.44	726.44	59.69	358.14	40.47	242.83	236.97	1,421.84
817	3449.134	Victaulic expansion joint JT NPS 3, Style 155	ea	1	1	6.4	694.7	6.4	104.2	104.21	694.72	3,865.53	3,865.53	101.32	101.32	4,765.78	4,765.78	1.0	1.3	115.07	1.3	14.96	14.96	115.07	4,262.15	4,262.15	885.12	885.12	5,277.30	5,277.30
818	3449.135	Victaulic Elbow 90 degrees NPS 3, Style 100	ea	2	2	3.5	382.8	7.1	57.4	114.84	765.61	124.86	249.73	55.83	111.66	620.92	1,241.84	2.0	1.4	124.08	2.7	16.13	32.26	248.15	66.16	132.33	42.49	84.97	248.85	497.71
819	3449.136	Victaulic Elbow 90 degrees NPS 3, Style 100	ea	2	0	3.5	382.8	0.0	57.4	0.00	0.00	124.86	0.00	55.83	0.00	620.92	0.00	0.0	1.5	131.71	0.0	17.12	0.00	0.00	78.05	0.00	46.67	0.00	273.55	0.00
820	3449.137	Ball Valve NPS 3, Valve Specification VBA01	ea	2	1	6.4	694.7	6.4	104.2	104.21	694.72	2,323.25	2,323.25	101.32	101.32	3,223.50	3,223.50	1.0	5.1	461.65	5.1	60.01	60.01	461.65	1,158.99	1,158.99	341.83	341.83	2,022.48	2,022.48
821	3449.138	Pipe insulation NPS 3	Linear meter	69	48	1.5	155.6	73.1	23.3	1,110.34	7,402.27	52.36	2,489.67	8.55	406.54	239.94	11,408.83	47.5	5.2	471.31	247.9	61.27	2,913.32	22,410.19	286.90	13,641.95	141.26	6,716.86	960.74	45,682.32
822	3449.139	Pipe identification NPS 3	Linear meter	69	16	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.1	0.6	50.28	8.9	6.54	105.07	808.24	12.06	193.92	14.25	229.00	83.13	1,336.23
823	3449.140	Pipe painting NPS 3	Linear meter	69	96	0.9	89.0	90.2	13.3	1,281.68	8,544.53	1.77	169.67	0.00	0.00	104.16	9,995.88	96.0	0.0	0.00	0.0	0.00	0.00	0.00	47.07	4,516.96	9.48	909.38	56.55	5,426.34
824	3449.141	Pipe NPS 4 Sch.STD, Piping Specification CB11	m	445	435	3.5	383.6	1544.4	57.5	25,054.59	167,030.61	67.23	29,267.81	55.95	24,360.30	564.38	245,713.31	435.4	3.0	274.26	1,320.8	35.65	15,522.57	119,404.38	28.85	12,560.36	70.26	30,590.51	409.03	178,077.82
825	3449.142	Elbow 90 degrees Sch.STD NPS 4, Piping Specification CB11	ea	7	7	15.9	1,715.5	111.0	257.3	1,801.31	12,008.74	105.83	740.79	250.20	1,751.39	2,328.89	16,302.23	7.0	1.8	160.22	12.4	20.83	145.80	1,121.55	10.67	74.66	39.80	278.61	231.52	1,620.62
826	3449.143	Flange Welding Neck 150RF Sch.STD NPS 4 c/w hardware, Piping Specification CB11	ea	9	9	11.4	1,229.9	102.3	184.4	1,660.42	11,069.45	94.91	854.15	179.38	1,614.40	1,688.71	15,198.42	9.0	57.1	5,161.81	513.9	671.03	6,039.31	46,456.26	74.20	667.79	1,228.04	11,052.35	7,135.08	64,215.71
827	3449.144	TeeBW Sch. STD NPS 4, Piping Specification CB11	ea	2	2	23.7	2,559.1	47.3	383.8	767.74	5,118.25	161.00	322.00	373.23	746.46	3,477.22	6,954.44	2.0	3.6	321.63	7.1	41.81	83.62	643.26	18.39	36.78	79.29	158.58	461.12	922.25
828	3449.145	Reducing Tee BW Sch.STD NPS 4 x 4 x 2-1/2, Piping Specification CB11	ea	1	2	23.7	2,559.1	47.3	383.8	767.74	5,118.25	163.55	327.11	373.23	746.46	3,479.78	6,959.55	2.0	3.5	313.32	6.9	40.73	81.46	626.64	19.98	39.97	77.66	155.33	451.70	903.40
829	3449.146	Reducing lateral BW Sch.STD NPS 4 x 2, Piping Specification CB11	ea	1	1	23.7	2,559.1	23.7	383.8	383.87	2,559.12	2,241.67	2,241.67	373.23	373.23	5,557.89	5,557.89	1.0	4.0	363.23	4.0	47.22	47.22	363.23	16.31	16.31	88.65	88.65	515.41	515.41
830	3449.147	Concentric reducer BW Sch.STD NPS 4 x 3, Piping Specification CB11	ea	1	0	15.9	1,715.5	0.0	257.3	0.00	0.00	101.76	0.00	250.20	0.00	2,324.83	0.00	0.0	1.3	115.07	0.0	14.96	0.00	0.00	8.95	0.00	28.83	0.00	167.82	0.00
831	3449.148	Eccentric reducer BW Sch.STD NPS 4 x 2, Piping Specification CB11	ea	1	1	15.9	1,715.5	15.9	257.3	257.33	1,715.53	101.76	101.76	250.20	250.20	2,324.83	2,324.83	1.0	1.1	98.44	1.1	12.80	12.80	98.44	8.95	8.95	24.92	24.92	145.11	145.11
832	3449.149	Eccentric reducer BW Sch.STD NPS 6 x 4, Piping Specification CB11	ea	3	5	20.6	2,229.4	103.1	334.4	1,672.11	11,147.42	137.76	688.80	325.16	1,625.78	3,026.82	15,134.11	5.0	1.6	145.29	8.0	18.89	94.44	726.44	15.20	76.02	37.21	186.03	216.58	1,082.92
833	3449.150	Cap BW Sch.STD NPS 4, Piping Specification CB11	ea	6	6	7.9	854.2	47.4	128.1	768.80	5,125.33	53.36	320.16	124.58	747.50	1,160.30	6,961.79	6.0	1.8	159.43	10.6	20.73	124.36	956.58	4.54	27.22	38.38	230.29	223.07	1,338.45
834	3449.151	Olet BW Sch.STD NPS 4, Piping Specification CB11	ea	1	1	14.2	1,535.9	14.2	230.3	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33	1.0	1.8	164.98	1.8	21.45	21.45	164.98	34.33	34.33	45.69	45.69	266.45	266.45
835	3449.152	Weld NPS 4 Piping Specification CB11	ea	117	265	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	265.0	6.7	608.60	1,783.9	79.12	20,966.21	161,278.50	74.22	19,667.40	156.91	41,580.03	918.84	243,492.13
836	3449.153	Victaulic coupling NPS 4, Style 07	ea	9	13	0.5	58.4	7.0	8.7	114.04	760.29	88.54	1,151.00	8.53	110.88	164.33	2,136.23	13.0	1.8	158.74	22.8	20.64	268.26	2,063.56	78.77	1,024.01	53.16	691.12	311.30	4,046.96
837	3449.154	Victaulic coupling NPS 4, Style 77	ea	20	67	0.7	79.7	49.4	11.9	801.50	5,343.32	92.16	6,174.59	11.63	779.29	195.50	13,098.69	67.0	1.8	159.55	118.3	20.74	1,389.71	10,690.07	81.07	5,431.90	53.82	3,605.90	315.19	21,117.58
838	3449.155	Victaulic coupling NPS 4, Style 177	ea	2	2	0.5	58.4	1.1	8.7	17.55	116.97	983.88	1,967.77	8.53	17.06	1,059.67	2,119.34	2.0	1.7	156.66	3.5	20.37	40.73	313.32	81.07	162.14	53.14	106.29	311.24	622.48
839	3449.156	Victaulic transition coupling NPS 4, Style 997	ea	1	0	0.5	58.4	0.0	8.7	0.00	0.00	983.88	0.00	8.53	0.00	1,059.67	0.00	0.0	2.0	181.61	0.0	23.61	0.00	0.00	260.14	0.00	95.06	0.00	560.42	0.00
840	3449.157	Victaulic reducing tee NPS 4 x 4 x 2, Style 25	ea	1	1	7.2	779.7	7.2	116.9	116.97	779.79	199.19	199.19	113.73	113.73	1,209.68	1,209.68	1.0	3.5	313.32	3.5	40.73	40.73	313.32	95.98	95.98	92.95	92.95	542.98	542.98
841	3449.158	Victaulic reducing tee NPS 4 x 4 x 2-1/2, Style 25	ea	1	1	7.2	779.7	7.2	116.9	116.97	779.79	239.81	239.81	113.73	113.73	1,250.29	1,250.29	1.0	3.5	313.32	3.5	40.73	40.73	313.32	119.38	119.38	97.67	97.67	571.11	571.11
842	3449.159	Victaulic reducing tee NPS 4 x 4 x 3, Style 25	ea	1	1	7.2	779.7	7.2	116.9	116.97	779.79	239.81	239.81	113.73	113.73	1,250.29	1,250.29	1.0	3.5	313.32	3.5	40.73	40.73	313.32	125.27	125.27	98.85	98.85	578.17	578.17
843	3449.160	Victaulic eccentric reducer NPS 4 x 2, Style 51	ea	1	1	4.7	510.4	4.7	76.5	76.56	510.41	906.28	906.28	74.44	74.44	1,567.69	1,567.69	1.0	1.1	98.44	1.1	12.80	12.80	98.44	84.69	84.69	40.18	40.18	236.11	236.11
844	3449.161	Victaulic elbow 90 degrees NPS 4, Style 100	ea	2	2	4.9	524.5	9.7	78.6	157.38	1,049.17	197.07	394.14	76.51	153.01	876.85	1,753.70	2.0	1.7	156.66	3.5	20.37	40.73	313.32	102.25	204.49	57.40	114.81	336.68	673.35
845	3449.162	Butterfly valve NPS 4, Valve Specification VBU01	ea	3	3	11.0	1,187.4	32.9	178.1	534.33	3,562.21	323.82	971.45	173.18	519.53	1,862.51	5,587.52	3.0	6.3	566.55	18.8	73.65	220.95	1,699.65	410.66	1,231.99	215.82	647.47	1,266.69	3,800.07
846	3449.163	Pipe insulation NPS 4	Linear meter	445	434	2.8	279.0	1196.6	41.8	18,166.82	121,112.13	55.65	24,156.22	8.55	3,711.01	385.10	167,146.17	434.0	6.2	564.16	2,708.5	73.34	31,832.82	244,867.88	348.57	151,292.75	170.13	73,842.08	1,156.21	501,835.53
847	3449.164	Pipe identification NPS 4	Linear meter	445	147	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	146.7	0.6	50.48	81.9	6.56	962.94	7,407.22	12.06	1,770.09	14.29	2,097.16	83.40	12,237.41
848	3449.165	Pipe painting NPS 4	Linear meter	445	433	1.0	90.4	412.9	13.5	5,869.35	39,128.98	2.36	1,019.78	0.00	0.00	106.38	46,018.10	432.6	0.0	0.00	0.0	0.00	0.00	0.00	51.53	22,292.93	10.38	4,488.14	61.91	26,781.07
849	3449.166	Pipe NPS 6 Sch.STD , Piping Specification CB11	m	360	364	4.6	499.9	1682.5	74.9	27,295.36	181,969.06	109.89	40,001.77	72.91	26,538.97	757.71	275,805.18	364.0	3.9	356.92	1,437.1	46.40	16,889.35	129,918.09	50.92	18,536.52	94.13	34,264.55	548.38	199,608.51
850	3449.167	Elbow 90 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	12	12	20.6	2,229.4	247.4	334.4	4,013.07	26,753.82	155.18	1,862.20	325.16	3,901.87	3,044.25	36,530.95	12.0	2.6	239.26	31.6	31.10	373.24	2,871.11	25.75	308.96	61.41	736.96	357.52	4,290.28
851	3449.168	Elbow 45 degrees BW Sch.STD NPS 6, Piping Specification CB11	ea	2	2	20.6	2,229.4	41.2	334.4	668.85	4,458.97	143.19	286.38	325.16	650.31	3,032.25	6,064.50	2.0	1.4	124.08	2.7	16.13	32.26	248.15	19.37	38.74	33.06	66.12	192.64	385.27
852	3449.169	Tee BW Sch.STD NPS 6, Piping Specification CB11	ea	4	1	30.8	3,335.3	30.8	500.3	500.30	3,335.37	233.24	233.24	486.44	486.44	4,555.35	4,555.35	1.0	5.3	478.28	5.3	62.18	62.18	478.28	44.14	44.14	121.30	121.30	705.89	705.89
853	3449.170	Eccentric reducer BW Sch.STD NPS 6 x 4, Piping Specification CB11	ea	2	0	20.6	2,229.4	0.0	334.4	0.00	0.00	137.76	0.00	325.16	0.00	3,026.82	0.00	0.0	1.8	164.98	0.0	21.45	0.00	0.00	15.20	0.00	41.83	0.00	243.45	0.00
854	3449.171	Eccentric reducer BW Sch.STD NPS 8 x 6, Piping Specification CB11	ea	1	1	26.6	2,878.1	26.6	431.7	431.72	2,878.13	185.95	185.95	419.76	419.76	3,915.55	3,915.55	1.0	0.4	33.27	0.4	4.33	4.33	33.27	23.30	23.30	12.50	12.50	73.40	73.40
855	3449.172	Flange Welding Neck 150RF Sch.STD NPS 6 c/w hardware, Piping Specification CB11	ea	29	26	14.0	1,513.5	363.8	227.0	5,902.64	39,350.94	129.41	3,364.71	220.73	5,739.07	2,090.67	54,357.37	26.0	28.8	2,602.16	748.4	338.28	8,795.30	67,656.17	56.17	1,460.44	622.85	16,194.22	3,619.47	94,106.14
856	3449.173	Reducing lateral BW Sch.STD NPS 6 x 1-1/2, Piping Specification CB11	ea	1	0	8.1	874.3	0.0	131.1	0.00	0.00	92.05	0.00	127.51	0.00	1,225.01	0.00	0.0	6.0	544.84	0.0	70.83	0.00	0.00	24.53	0.00	132.98	0.00	773.18	0.00
857	3449.174	Olet BW Sch.STD NPS 6, Piping Specification CB11	ea	1	1	14.2	1,535.9	14.2	230.3	230.39	1,535.95	288.98	288.98	224.01	224.01	2,279.33	2,279.33	1.0	2.7	248.15	2.7	32.26	32.26	248.15	169.19	169.19	92.38	92.38	541.99	541.99
858	3449.175	Weld NPS 6 Piping Specification CB11	ea	126	289	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	289.0	9.0	812.37	2,596.9	105.61	30,520.79	234,775.33	91.57	26,462.77	208.14	60,153.73	1,217.69	351,912.62
859	3449.176	Victaulic elbow 90 degrees NPS 6, Style 100	ea	8	8	8.7	942.8	69.7	141.4	1,131.40	7,542.68	471.20	3,769.57	137.51	1,100.05	1,692.96	13,543.70	8.0	2.6	239.15	21.2	31.09	248.71	1,913.16	254.98	2,039.83	107.54	860.29	632.75	5,061.99
860	3449.177	Victaulic elbow 45 degrees NPS 6, Style 110	ea	1	1	8.4	903.8	8.4	135.5	135.58	903.85	469.15	469.15	131.82	131.82	1,640.39	1,640.39	1.0	1.3	115.07	1.3	14.96	14.96	115.07	171.55	171.55	61.59	61.59	363.17	363.17
861	3449.178	Victaulic elbow 45 degrees NPS 6, Style 11	ea	2	2	8.4	903.8	16.7	135.5	271.15	1,807.69	226.13	452.26	131.82	263.64	1,397.37	2,794.75	2.0	1.5	131.71	2.9	17.12	34.24	263.42	171.55	343.10	65.50	131.00	385.88	771.77
862	3449.179	Victaulic coupling NPS 6, Style 07	ea	15	11	1.1	122.2	12.4	18.3	201.77	1,345.13	153.51	1,688.64	17.83	196.18	311.97	3,431.72	11.0	2.7	239.96	29.2	31.20	343.15	2,639.59	420.22	4,622.41	141.00	1,550.95	832.37	9,156.10
863	3449.180	Victaulic coupling NPS 6, Style 77	ea	35	83	1.1	122.2	93.8	18.3	1,522.45	10,149.65	158.53	13,157.84	17.83	1,480.26	316.99	26,310.20	83.0	2.6	239.32	219.7	31.11	2,582.25	19,863.48	140.19	11,635.79	84.47	7,010.79	495.09	41,092.32
864	3449.181	Victaulic reducing tee NPS 6 x 6 x 4, Style 25	ea	1	2	13.0	1,403.6	26.0	210.5	421.09	2,807.24	483.64	967.28	204.71	409.42	2,302.51	4,605.02	2.0	5.3	478.29	10.6	62.18	124.36	956.58	253.74	507.49	163.49	326.97	957.70	1,915.39
865	3449.182	Victaulic reducing tee NPS 6 x 6 x 2, Style 25	ea	4	3	13.0	1,403.6	38.9	210.5	631.63	4,210.86	468.28	1,404.85	204.71	614.13	2,287.15	6,861.46	3.0	5.3	478.29	15.9	62.18	186.53	1,434.86	254.63	763.90	163.67	491.00	958.77	2,876.30
866	3449.183	Victaulic eccentric reducer NPS 6 x 4, Style 51	ea	3	3	8.4	903.8	25.1	135.5	406.73	2,711.54	1,599.56	4,798.67	131.82	395.46	2,770.80	8,312.40	3.0	1.6	148.34	4.9	19.28	57.85	445.01	128.77	386.31	60.79	182.36	357.18	1,071.53
867	3449.184	Butterfly valve NPS 6, Valve Specification VBU01	ea	10	13	16.1	1,736.8	208.8	260.5	3,386.76	22,578.41	507.82	6,601.60	253.30	3,292.91	2,758.44	35,859.68	13.0	7.5	681.44	98.0	88.59	1,151.63	8,858.71	659.87	8,578.32	293.00	3,808.97	1,722.89	22,397.63
868	3449.185	Pipe insulation NPS 6	Linear meter	360	364	3.0	298.7	1075.2	44.8	16,322.52	108,816.78	64.36	23,443.90	8.55	3,114.23	416.48	151,697.43	364.2	7.5	680.90	2,743.3	88.52	32,241.21	248,009.34	382.52	139,327.70	197.65	71,989.80	1,349.58	491,568.05
869	3449.186	Pipe identification NPS 6	Linear meter	360	123	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	123.1	0.6	50.51	68.8	6.57	808.49	6,219.12	12.06	1,485.43	14.30	1,760.65	83.44	10,273.69
870	3449.187	Pipe painting NPS 6	Linear meter	360	364	1.0	90.4	347.6	13.5	4,941.54	32,943.58	2.36	858.58	0.00	0.00	106.38	38,743.69	364.2	0.0	0.00	0.0	0.00	0.00	0.00	69.54	25,327.38	14.00	5,099.06	83.54	30,426.45
871	3449.188	Pipe NPS 8 Sch.STD, Piping Specification CB11	m	9	13	5.7	616.1	73.0	92.4	1,183.51	7,890.04	164.30	2,103.78	89.86	1,150.71	962.76	12,328.04	12.8	0.7	65.62	9.3	8.53	109.23	840.20	78.84	1,009.51	31.29	400.68	184.28	2,359.62
872	3449.189	Eccentric reducer BW Sch.STD NPS 8 x 4, Piping Specification CB11	ea	1	1	26.6	2,878.1	26.6	431.7	431.72	2,878.13	189.70	189.70	419.76	419.76	3,919.30	3,919.30	1.0	0.4	33.27	0.4	4.33	4.33	33.27	26.98	26.98	13.25	13.25	77.82	77.82
873	3449.190	Weld NPS 8 Piping Specification CB11	ea	2	13	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.0	14.6	1,319.80	189.8	171.57	2,230.46	17,157.35	65.22	847.80	321.75	4,182.75	1,878.34	24,418.36
874	3449.191	Victaulic reducing tee NPS 8 x 8 x 6, Style 25	ea	3	3	18.1	1,960.1	54.4	294.0	882.05	5,880.31	895.97	2,687.91	285.87	857.60	3,435.96	10,307.87	3.0	1.3	115.76	3.8	15.05	45.15	347.29	507.60	1,522.81	129.40	388.20	767.81	2,303.44
875	3449.192	Victaulic coupling NPS 8, Style 89	ea	6	6	2.7	292.4	16.2	43.8	263.18	1,754.52	357.05	2,142.29	42.65	255.89	735.98	4,415.88	6.0	0.6	57.77	3.8	7.51	45.06	346.59	214.19	1,285.12	56.70	340.18	336.16	2,016.95
876	3449.193	Pipe insulation NPS 8	Linear meter	9	9	3.2	322.5	30.1	48.3	457.10	3,047.33	75.22	710.71	8.55	80.79	454.65	4,295.93	9.4	7.9	714.97	74.7	92.95	878.23	6,755.64	580.35	5,483.65	243.51	2,300.89	1,631.78	15,418.41
877	3449.194	Pipe identification NPS 8	Linear meter	9	3	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.6	51.65	1.8	6.71	21.45	164.98	12.06	38.53	14.57	46.53	85.00	271.49
878	3449.195	Pipe painting NPS 8	Linear meter	9	9	1.0	90.4	8.9	13.5	126.15	841.00	4.71	43.84	0.00	0.00	108.74	1,010.98	9.3	0.0	0.00	0.0	0.00	0.00	0.00	130.44	1,212.83	26.26	244.17	156.71	1,457.00
B&M-0217	Added	2.5" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter		6	2.4	255.7	15.1	38.3	245.63	1,637.55	43.12	276.08	37.30	238.83	374.56	2,398.09	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0218	Added	1" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter		6	1.1	116.2	6.9	17.4	111.65	744.34	14.12	90.39	16.96	108.56	164.77	1,054.94	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0219	Added	3/4" pipe, CS, STD, ASTM A106 Gr B smls - BE	Linear meter		6	0.9	93.0	5.5	13.9	89.32	595.47	11.39	72.92	13.56	86.85	131.91	844.56	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0220	Added	1" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.2	127.8	7.6	19.1	122.82	818.78	18.50	118.43	18.65	119.41	184.22	1,179.44	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0221	Added	3/4" pipe, CS, XS ASTM A106 Gr B, smls - PE	Linear meter		6	1.0	104.6	6.2	15.7	100.49	669.91	11.39	72.91	15.26	97.70	146.98	941.00	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0222	Added	3" cap, CS, STD, ASTM A234 Gr WPB, smls - BW	ea		1	6.4	691.1	6.4	103.6	103.68	691.18	43.50	43.50	100.80	100.80	939.15	939.15	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0223	Added	8"x4" WOL, CS, STD	ea		1	9.4	1,016.0	9.4	152.4	152.41	1,016.09	113.72	113.72	148.19	148.19	1,430.41	1,430.41	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0224	Added	6"x2.5" WOL, CS, STD	ea		5	7.2	779.7	36.1	116.9	584.84	3,898.94	77.82	389.09	113.73	568.63	1,088.30	5,441.50	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0225	Added	4"x2.5" WOL, CS, STD	ea		5	7.2	779.7	36.1	116.9	584.84	3,898.94	77.82	389.09	113.73	568.63	1,088.30	5,441.50	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0226	Added	8"x1" SOL, CS, 3000#	ea		4	2.6	283.5	10.5	42.5	170.14	1,134.24	20.29	81.14	41.36	165.42	387.73	1,550.94	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0227	Added	6"x2.5" SOL, CS, 3000#	ea		1	7.2	779.7	7.2	116.9	116.97	779.79	91.03	91.03	113.73	113.73	1,101.52	1,101.52	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0228	Added	6"x1.5" SOL, CS, 3000#	ea		1	3.9	425.3	3.9	63.8	63.80	425.34	33.58	33.58	62.03	62.03	584.75	584.75	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
B&M-0229	Added	6"x1" SOL, CS, 3000#	ea		7	2.6	283.5	18.4	42.5	297.74	1,984.92	20.29	142.00	41.36	289.49	387.73	2,714.14	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0230	Added	6"x3/4" SOL, CS, 3000#	ea		4	2.0	212.6	7.9	31.9	127.60	850.68	18.70	74.81	31.02	124.07	294.29	1,177.15	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0231	Added	4"x2" SOL, CS, 3000#	ea		1	5.2	567.1	5.2	85.0	85.07	567.12	47.68	47.68	82.71	82.71	782.58	782.58	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0232	Added	4"x1.5" SOL, CS, 3000#	ea		6	3.9	425.3	23.6	63.8	382.81	2,552.03	33.58	201.49	62.03	372.20	584.75	3,508.53	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0233	Added	4"x1" SOL, CS, 3000#	ea		2	2.6	283.5	5.2	42.5	85.07	567.12	20.29	40.57	41.36	82.71	387.73	775.47	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0234	Added	4"x3/4" SOL, CS, 3000#	ea		13	2.0	212.6	25.6	31.9	414.71	2,764.70	18.70	243.12	31.02	403.21	294.29	3,825.74	13.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0235	Added	3"x1.5" SOL, CS, 3000#	ea		2	3.9	425.3	7.9	63.8	127.60	850.68	33.58	67.16	62.03	124.07	584.75	1,169.51	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0236	Added	3"x3/4" SOL, CS, 3000#	ea		5	2.0	212.6	9.8	31.9	159.50	1,063.35	18.70	93.51	31.02	155.08	294.29	1,471.44	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0237	Added	1"x2" TOL, CS, 3000#	ea		3	5.2	567.1	15.7	85.0	255.20	1,701.36	36.52	109.56	82.71	248.13	771.42	2,314.25	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0238	Added	2.5"x3/4" TOL, SS, 3000#	ea		4	2.8	307.1	11.4	46.0	184.31	1,228.76	32.79	131.16	44.80	179.21	430.86	1,723.43	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0239	Added	1.25" weld adapter, 304SS, Vic-Press - 561	ea		29	7.2	779.7	209.1	116.9	3,392.08	22,613.85	203.77	5,909.20	113.73	3,298.08	1,214.25	35,213.21	29.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0240	Added	1" weld adapter, 304SS, Vic-Press - 561	ea		8	5.9	638.0	47.2	95.7	765.61	5,104.07	153.82	1,230.58	93.05	744.39	980.58	7,844.65	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0241	Added	1/2" weld adapter, 304SS, Vic-Press - 561	ea		30	4.3	460.7	127.8	69.1	2,073.53	13,823.52	110.99	3,329.82	67.20	2,016.07	708.10	21,242.93	30.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0242	Added	1.5" male adapter, 304SS, Vic-Press - 596	ea		6	8.2	886.1	49.2	132.9	797.51	5,316.74	176.73	1,060.41	129.24	775.41	1,325.01	7,950.07	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0243	Added	1.25" male adapter, 304SS, Vic-Press - 596	ea		14	7.2	779.7	100.9	116.9	1,637.55	10,917.03	171.15	2,396.06	113.73	1,592.18	1,181.63	16,542.83	14.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0244	Added	1" male adapter, 304SS, Vic-Press - 596	ea		4	5.9	638.0	23.6	95.7	382.81	2,552.03	150.83	603.32	93.05	372.20	977.59	3,910.36	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0245	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea		15	4.3	460.7	63.9	69.1	1,036.76	6,911.76	133.14	1,997.08	67.20	1,008.03	730.24	10,953.63	15.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0246	Added	2" coupling, 304SS, Vic-Press - 597	ea		46	8.5	921.5	392.0	138.2	6,358.82	42,392.12	119.05	5,476.13	134.40	6,182.61	1,313.25	60,409.67	46.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0247	Added	1.5" coupling, 304SS, Vic-Press - 597	ea		4	8.2	886.1	32.8	132.9	531.67	3,544.49	107.91	431.63	129.24	516.94	1,256.18	5,024.73	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0248	Added	1" coupling, 304SS, Vic-Press - 597	ea		1	5.9	638.0	5.9	95.7	95.70	638.01	86.19	86.19	93.05	93.05	912.95	912.95	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0249	Added	3/4" coupling, 304SS, Vic-Press - 597	ea		11	5.6	602.5	61.3	90.3	994.23	6,628.20	80.14	881.54	87.88	966.68	860.97	9,470.65	11.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0250	Added	3/4" tee, 304SS, Vic-Press - 592	ea		1	7.2	779.7	7.2	116.9	116.97	779.79	187.61	187.61	113.73	113.73	1,198.09	1,198.09	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0251	Added	1.5" cap, 304SS, Vic-Press - 540	ea		2	4.6	496.2	9.2	74.4	148.87	992.46	147.27	294.54	72.37	144.74	790.31	1,580.61	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0252	Added	3/4" cap, 304SS, Vic-Press - 540	ea		2	3.3	354.4	6.6	53.1	106.33	708.90	107.80	215.60	51.69	103.39	567.11	1,134.22	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0253	Added	2"x3/4" reducer, 304SS, Vic-Press - 582	ea		1	8.5	921.5	8.5	138.2	138.24	921.57	234.26	234.26	134.40	134.40	1,428.46	1,428.46	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0254	Added	2"x1/2" reducing tee, 304SS, Vic-Press - 593	ea		2	11.1	1,205.1	22.3	180.7	361.54	2,410.25	232.40	464.80	175.76	351.52	1,794.05	3,588.11	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0255	Added	1"x3/4" reducing tee, 304SS, Vic-Press - 593	ea		1	7.9	850.6	7.9	127.6	127.60	850.68	168.89	168.89	124.07	124.07	1,271.23	1,271.23	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0256	Added	1.25" union, 304SS, Vic-Press - 584	ea		19	7.2	779.7	137.0	116.9	2,222.40	14,815.97	987.80	18,768.21	113.73	2,160.81	1,998.28	37,967.39	19.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0257	Added	2" flange adapter, 304SS, Vic-Press - 595	ea		4	8.8	952.2	35.2	142.8	571.37	3,809.15	492.03	1,968.12	138.88	555.54	1,726.04	6,904.18	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0258	Added	4"x2.5" conc reducer, SS, Sch 10S, ASTM A403 WP 304L - BE	ea		1	24.4	2,644.1	24.4	396.6	396.63	2,644.19	154.44	154.44	385.64	385.64	3,580.89	3,580.89	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0259	Added	1/2" tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L	Linear meter		24	0.7	71.1	16.0	10.6	260.31	1,735.38	22.58	550.83	10.38	253.09	114.78	2,799.62	24.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0260	Added	1/2" 90 elbow, Swagelok to ASTM A182 Grade 316 - COMP	ea		6	1.1	119.3	6.6	17.9	107.38	715.85	48.39	290.13	17.40	104.40	202.96	1,217.76	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0261	Added	1/2" union tee - SWAGELOK SS-810-3 or equal	ea		12	1.6	169.9	18.9	25.4	305.86	2,039.07	66.38	796.61	24.78	297.39	286.58	3,438.94	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0262	Added	1/2" female adapter - SWAGELOK SS-8-TA-7-8 or equal	ea		12	1.1	119.3	13.2	17.9	214.75	1,431.69	34.48	413.76	17.40	208.80	189.08	2,269.01	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0263	Added	1/2" male adapter - SWAGELOK SS-8-TA-1-8 or equal	ea		12	1.1	119.3	13.2	17.9	214.75	1,431.69	23.51	282.07	17.40	208.80	178.11	2,137.32	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0264	Added	1" pipe, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - PE	Linear meter		12	1.1	116.2	13.1	17.4	212.67	1,417.80	11.29	137.70	16.96	206.78	161.95	1,974.94	12.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0265	Added	1" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		8	1.2	134.6	10.0	20.2	161.63	1,077.53	9.52	76.15	19.64	157.15	184.06	1,472.46	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0266	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		4	1.2	134.6	5.0	20.2	80.81	538.76	13.25	53.02	19.64	78.57	187.79	751.17	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0267	Added	1" QUICK CONNECTOR, FNPT - Hansen Series 5500	ea		2	3.7	400.5	7.4	60.0	120.16	801.06	128.78	257.55	58.41	116.83	647.80	1,295.59	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0268	Added	2" rubber exp joint, GARLOCK EZ-FLOW style 206, 150#, FF FLG, 6" F/F c/w chlorobutyl tube & retaining rings	ea		1	4.4	471.4	4.4	70.7	70.71	471.42	383.87	383.87	68.75	68.75	994.75	994.75	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0269	Added	6" Zero-Flex Rigid Coupling, Galvanized, Ductile Iron - Victaulic 07	ea		6	1.7	186.0	10.3	27.9	167.48	1,116.51	221.93	1,331.60	27.14	162.84	463.07	2,778.43	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0270	Added	3/4" flexible coupling, A890 SS - VICTAULIC 77DX	ea		6	0.3	37.2	2.1	5.5	33.50	223.30	299.61	1,797.68	5.43	32.57	347.84	2,087.05	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0271	Added	2.5" 45 elbow, LR, SS, SCH 10S, ASTM A351 CF8M 316 - VICTAULIC 110	ea		12	3.1	340.2	37.8	51.0	612.49	4,083.25	187.39	2,248.64	49.63	595.52	628.32	7,539.90	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0272	Added	2" 45 elbow, LR, SS, SCH 10S, ASTM A351 CF8M 316 - VICTAULIC 110	ea		2	3.0	322.5	6.0	48.3	96.76	645.10	121.70	243.40	47.04	94.08	539.67	1,079.34	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0273	Added	6"x2.5" reducing tee, Galv. DI, ASTM A536 GR 65 Max Rating 1000# - VICTAULIC 25	ea		2	13.0	1,403.6	26.0	210.5	421.09	2,807.24	467.03	934.05	204.71	409.42	2,285.90	4,571.79	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0274	Added	6" WAFER SWING CHECK VALVE RITE 210 150# FF CS VCH01	ea		3	16.1	1,736.8	48.2	260.5	781.56	5,210.40	1,065.14	3,195.42	253.30	759.90	3,315.76	9,947.28	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0275	Added	3/4" Ball Valve Carbon Socket Weld, Full Port VBA02	ea		3	2.9	319.0	8.8	47.8	143.55	957.01	149.63	448.89	46.52	139.57	563.01	1,689.03	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0276	Added	2" ball valve, SS, full port, 3pc - SW - Velan VTP-2000 or equal VBA11	ea		4	14.7	1,587.9	58.7	238.1	952.76	6,351.73	406.63	1,626.51	231.59	926.36	2,464.34	9,857.35	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0277	Added	1/2" ball valve, SS - THD - Swagelok 60T Series or equal VBA14	ea		6	1.1	119.3	6.6	17.9	107.38	715.85	293.55	1,761.29	17.40	104.40	448.15	2,688.92	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0278	Added	2" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea		8	14.7	1,587.9	117.5	238.1	1,905.52	12,703.46	2,061.65	16,493.18	231.59	1,852.71	4,119.36	32,954.87	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0279	Added	1.25" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea		5	9.1	988.9	45.7	148.3	741.68	4,944.57	339.24	1,696.21	144.23	721.13	1,620.72	8,103.59	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0280	Added	1" Globe Valve SS SW #3449-VGL06-1000 VGL06	ea		2	7.3	793.9	14.7	119.0	238.19	1,587.93	257.18	514.36	115.79	231.59	1,286.03	2,572.07	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0281	Added	1.25" control valve - THD 3351-FCV-VCL-0001/002,3351-FCV-VCR-0001/002,3351-FCV-VER-0001,3351-FCV-VOS-0001/002 (Cost included with Controls)	ea		7	5.4	584.8	37.9	87.7	614.08	4,093.89	30.73	215.11	85.30	597.07	788.59	5,520.15	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0282	Added	2" FLOW CONTROL VALVE BELIMO 3351-FCV-VMR-0005 3351-FCV-VMR-0001-0008 (Supplied with Equipment) (Cost included with Controls)	ea		8	5.4	584.8	43.3	87.7	701.81	4,679.73	30.73	245.84	85.30	682.36	788.59	6,308.74	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0283	Added	Pipe Insulation - All Sizes	ea		1	7209.9	736,376.7	7209.9	110,456.5	110,456.51	736,376.71	176,040.61	176,040.61	0.00	0.00	1,022,873.83	1,022,873.83	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ABR (Brake Air)						0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
879	344A.01	Air tank 344A-TK-5000	ea	1	1	69.9	7,561.5	69.9	1,134.2	1,134.24	7,561.58	40,796.33	40,796.33	1,102.81	1,102.81	50,594.95	50,594.95	1.0	102.2	9,238.57	102.2	1,201.01	1,201.01	9,238.57	176.44	176.44	2,206.72	2,206.72	12,822.75	12,822.75
880	344A.02	Y-strainer 344A-STR-1000 / 2000 / 3000 / 4000 / 5000	ea	5	5	8.7	945.2	43.7	141.7	708.90	4,725.99	306.16	1,530.82	137.85	689.25	1,530.99	7,654.96	5.0	4.8	433.23	24.0	56.32	281.60	2,166.15	136.18	680.88	129.23	646.16	754.96	3,774.79
881	344A.03	Y-strainer 344A-STR-5001	ea	1	1	8.7	945.2	8.7	141.7	141.78	945.20	338.11	338.11	137.85	137.85	1,562.94	1,562.94	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
882	344A.04	Y-strainer 344A-STR-5002	ea	1	1	8.7	945.2	8.7	141.7	141.78	945.20	338.11	338.11	137.85	137.85	1,562.94	1,562.94	1.0	3.7	329.95	3.7	42.89	42.89	329.95	120.24	120.24	101.76	101.76	594.84	594.84
883	344A.05	Orifice Plate 344A-FO-5000 / 5001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	626.56	1,253.13	137.85	275.70	1,851.39	3,702.78	2.0	3.7	329.95	7.3	42.89	85.79	659.89	30.35	60.70	83.65	167.30	486.84	973.68
884	344A.06	Pressure Safety Valve 344A-PSV-5000 / 5001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	626.56	1,253.13	137.85	275.70	1,851.39	3,702.78	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	30.35	60.70	161.20	322.39	937.24	1,874.47
885	344A.07	Pressure indicator 344A-PI-5000 / 5001 / 6000	ea	3	3	8.7	945.2	26.2	141.7	425.34	2,835.59	700.54	2,101.61	137.85	413.55	1,925.36	5,776.09	3.0	3.7	329.95	11.0	42.89	128.68	989.85	280.60	841.81	134.03	402.10	787.48	2,362.44
886	344A.08	Pressure transmitter 344A-PT-5000 / 5001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	110.11	220.23	137.85	275.70	1,334.94	2,669.88	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	1,886.41	3,772.83	534.87	1,069.73	3,166.97	6,333.94
887	344A.09	Oil-Water Separator 344A-OWS-5000	ea	1	2	69.9	7,561.5	139.8	1,134.2	2,268.47	15,123.16	3,573.72	7,147.44	1,102.81	2,205.61	13,372.34	26,744.69	2.0	28.3	2,557.10	56.6	332.42	664.85	5,114.20	36.57	73.13	608.32	1,216.63	3,534.41	7,068.81
888	344A.10	Drain trap 344A-YV-5000	ea	1	2	8.7	945.2	17.5	141.7	283.56	1,890.40	1,203.46	2,406.92	137.85	275.70	2,428.29	4,856.58	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	59.53	119.07	167.07	334.15	972.30	1,944.59
889	344A.11	Solenoid Valve 344A-YV-5001	ea	1	1	8.7	945.2	8.7	141.7	141.78	945.20	626.56	626.56	137.85	137.85	1,851.39	1,851.39	1.0	6.4	575.32	6.4	74.79	74.79	575.32	58.66	58.66	147.01	147.01	855.78	855.78
890	344A.12	Ball Valve NPS 1/8, Valve Specification VBA14	ea	2	2	1.1	119.3	2.2	17.9	35.79	238.62	293.55	587.10	17.40	34.80	448.15	896.31	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	59.53	119.07	167.07	334.15	972.30	1,944.59
891	344A.13	Pipe NPS 1/2 Sch.10S , Piping Specification SB11	mm	150	1	1.0	104.6	1.0	15.7	15.70	104.63	23.57	23.57	15.26	15.26	159.16	159.16	1.0	1.6	148.34	1.6	19.28	19.28	148.34	177.36	177.36	70.58	70.58	415.57	415.57
892	344A.14	Ball Valve NPS 1/2, Valve Specification VBA11	ea	2	1	3.7	400.5	3.7	60.0	60.08	400.53	107.23	107.23	58.41	58.41	626.25	626.25	1.0	3.1	280.05	3.1	36.41	36.41	280.05	100.39	100.39	86.02	86.02	502.87	502.87
893	344A.15	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	13	6	1.1	116.2	6.9	17.4	111.65	744.34	22.99	147.22	16.96	108.56	173.65	1,111.77	6.4	2.2	197.78	14.0	25.71	164.62	1,266.30	39.36	251.99	54.41	348.33	317.26	2,031.23
894	344A.16	Pipe NPS 3/4 Sch.40S, Piping Specification SB11	mm	150	0	1.1	116.2	0.0	17.4	0.00	0.00	27.68	0.00	16.96	0.00	178.33	0.00	0.0	0.6	49.91	0.0	6.49	0.00	0.00	4.23	0.00	12.57	0.00	73.20	0.00
895	344A.17	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	9	9	5.6	602.5	50.1	90.3	813.46	5,423.07	117.55	1,057.92	87.88	790.92	898.37	8,085.37	9.0	0.6	53.14	5.3	6.91	62.18	478.28	5.37	48.30	13.57	122.13	78.99	710.89
896	344A.18	Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	0	5.6	602.5	0.0	90.3	0.00	0.00	94.50	0.00	87.88	0.00	875.33	0.00	0.0	0.4	33.27	0.0	4.33	0.00	0.00	8.74	0.00	9.58	0.00	55.92	0.00
897	344A.19	Union SW Class 3000 NPS 3/4, Piping Specification SB11	ea	1	9	5.6	602.5	50.1	90.3	813.46	5,423.07	482.63	4,343.68	87.88	790.92	1,263.46	11,371.13	9.0	0.6	53.14	5.3	6.91	62.18	478.28	11.90	107.06	14.88	133.95	86.83	781.46
898	344A.20	Tee SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	6	7.2	779.7	43.3	116.9	701.81	4,678.73	187.61	1,125.64	113.73	682.36	1,198.09	7,188.54	6.0	1.2	107.21	7.1	13.94	83.62	643.26	7.11	42.64	26.62	159.75	154.88	929.28
899	344A.21	Concentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	0	8.5	921.5	0.0	138.2	0.00	0.00	448.22	0.00	134.40	0.00	1,642.43	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	21.57	0.00	19.98	0.00	116.75	0.00
900	344A.22	Excentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11	ea	1	0	18.3	1,977.8	0.0	296.6	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	9.64	0.00	17.58	0.00	102.41	0.00
901	344A.23	Weld NPS 3/4, Piping Specification SB11	ea	34	43	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.0	0.4	33.37	15.9	4.34	186.53	1,434.86	120.56	5,184.23	31.98	1,375.33	190.25	8,180.95
902	344A.24	Ball Valve NPS 3/4, Valve Specification VBA02	ea	2	0	2.9	319.0	0.0	47.8	0.00	0.00	149.63	0.00	46.52	0.00	563.01	0.00	0.0	3.7	329.95	0.0	42.89	0.00	0.00	310.28	0.00	140.01	0.00	823.13	0.00
903	344A.25	Ball Valve NPS 3/4, Valve Specification VBA11	ea	1	3	5.5	595.4	16.5	89.3	267.96	1,786.42	136.15	408.44	86.85	260.54	907.79	2,723.36	3.0	3.2	286.05	9.5	37.19	111.56	858.14	100.38	301.15	87.43	262.30	511.05	1,533.15
904	344A.26	Pipe identification NPS 3/4	Linear meter	13	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.2	16.41	0.2	2.13	2.16	16.64	4.02	4.07	4.66	4.73	27.23	27.60
905	344A.27	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	163	179	1.4	151.1	250.5	22.6	4,064.11	27,094.09	36.44	6,531.80	22.04	3,951.49	232.29	41,641.50	179.3	1.9	171.63	340.3	22.31	3,999.77	30,767.46	15.19	2,723.39	43.39	7,779.26	252.53	45,269.88
906	344A.28	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11	ea	40	40	5.9	638.0	236.0	95.7	3,828.05	25,520.34	125.39	5,015.74	93.05	3,721.97	952.15	38,086.10	40.0	0.6	54.03	23.9	7.02	280.97	2,161.31	8.11	324.51	14.33	573.28	83.50	3,340.07
907	344A.29	Union SW Class 3000 NPS 1, Piping Specification SB11	ea	4	23	5.9	638.0	135.7	95.7	2,201.13	14,674.19	580.55	13,352.71	93.05	2,140.13	1,407.31	32,368.17	23.0	0.6	53.83	13.7	7.00	160.94	1,238.00	13.43	308.85	15.35	353.13	89.61	2,060.92
908	344A.30	Weld NPS 1, Piping Specification SB11	ea	111	148	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	148.0	0.8	75.35	123.4	9.80	1,449.72	11,151.71	107.94	15,975.04	39.17	5,797.79	232.26	34,374.27
909	344A.31	Ball Valve NPS 1, Valve Specification VBA11	ea	4	4	7.3	793.9	29.4	119.0	476.38	3,175.86	202.60	810.38	115.79	463.18	1,231.45	4,925.80	4.0	3.2	288.71	12.8	37.53	150.13	1,154.83	127.76	511.05	93.57	374.28	547.57	2,190.29
910	344A.32	Ball Valve NPS 1, Valve Specification VBA14	ea	2	4	7.3	793.9	29.4	119.0	476.38	3,175.86	329.00	1,315.99	115.79	463.16	1,357.85	5,431.42	4.0	3.2	288.71	12.8	37.53	150.13	1,154.83	91.26	365.04	86.22	344.89	503.72	2,014.88
911	344A.33	Check Valve NPS 1, Valve Specification VCH14	ea	2	0	14.7	1,587.9	0.0	238.1	0.00	0.00	1,669.22	0.00	231.59	0.00	3,726.93	0.00	0.0	3.7	329.95	0.0	42.89	0.00	0.00	912.59	0.00	261.26	0.00	1,546.69	0.00
912	344A.34	Pipe identification NPS 1	Linear meter	163	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.2	16.41	0.2	2.13	2.16	16.64	4.02	4.07	4.66	4.73	27.23	27.60
913	344A.35	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	178	186	2.3	244.1	419.1	36.6	6,799.57	45,330.50	56.82	10,550.45	35.61	6,611.15	373.20	69,291.67	185.7	3.2	291.06	597.8	37.84	7,025.42	54,041.73	23.85	4,428.78	73.21	13,592.22	425.96	79,088.15
914	344A.36	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	14	15	8.5	921.5	127.8	138.2	2,073.53	13,823.52	171.71	2,575.71	134.40	2,016.07	1,365.92	20,488.82	15.0	0.6	53.94	8.9	7.01	105.18	809.11	34.85	522.74	19.69	295.41	115.50	1,732.45
915	344A.37	Union SW/ FNPT Class 3000 NPS 2, Piping Specification SB11	ea	1	4	8.5	921.5	34.1	138.2	552.94	3,686.27	1,191.56	4,766.23	134.40	537.62	2,385.77	9,543.06	4.0	0.6	53.72	2.4	6.98	27.93	214.88	25.26	101.03	17.71	70.83	103.67	414.68
916	344A.38	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	2	2	11.1	1,205.1	22.3	180.7	361.54	2,410.25	268.91	537.82	175.76	351.52	1,830.56	3,661.13	2.0	1.2	107.44	2.4	13.97	27.93	214.88	44.57	89.14	34.22	68.44	200.20	400.39
917	344A.39	Tee Reducing SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	1	1	11.1	1,205.1	11.1	180.7	180.77	1,205.13	238.38	238.38	175.76	175.76	1,800.04	1,800.04	1.0	1.3	115.07	1.3	14.96	14.96	115.07	95.67	95.67	46.31	46.31	272.01	272.01
918	344A.40	Tee Reducing SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	5	5	11.1	1,205.1	55.7	180.7	903.85	6,025.64	266.81	1,334.06	175.76	878.80	1,828.47	9,142.34	5.0	1.2	108.97	6.0	14.17	70.83	544.84	95.68	478.39	44.87	224.35	263.68	1,318.41
919	344A.41	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	1	1	4.6	496.2	4.6	74.4	74.43	496.23	176.90	176.90	72.37	72.37	819.93	819.93	1.0	0.6	49.91	0.6	6.49	6.49	49.91	10.62	10.62	13.87	13.87	80.89	80.89
920	344A.42	Excentric Reducer SW Class 3000 NPS 2 x 1, Piping Specification SB11	ea	4	0	18.3	1,977.8	0.0	296.6	0.00	0.00	117.04	0.00	288.45	0.00	2,679.99	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	9.64	0.00	17.58	0.00	102.41	0.00
921	344A.43	Slip-on Flange SW 150RF NPS 2 c/w hardware, Piping Specification SB11	ea	6	12	8.8	952.2	105.7	142.8	1,714.12	11,427.44	492.03	5,904.36	138.88	1,666.62	1,726.04	20,712.53	12.0	3.0	272.18	36.1	35.38	424.61	3,266.21	5.11	61.33	65.00	779.96	377.68	4,532.10
922	344A.44	Weld Neck Flange 150RF Sch.10S NPS 2 c/w hardware, Piping Specification SB11	ea	4	0	8.8	952.2	0.0	142.8	0.00	0.00	492.03	0.00	138.88	0.00	1,726.04	0.00	0.0	0.7	66.54	0.0	8.65	0.00	0.00	31.05	0.00	21.90	0.00	128.14	0.00
923	344A.45	Victaulic coupling NPS 2, Style 77	ea	8	27	0.3	37.2	9.3	5.5	150.73	1,004.86	39.43	1,064.71	5.43	146.55	87.66	2,366.85	27.0	0.6	53.76	16.1	6.99	188.69	1,451.49	397.41	10,730.14	92.64	2,501.38	550.80	14,871.70
924	344A.46	Victaulic Expansion Joint NPS 2, Style 155	ea	4	4	3.1	340.2	12.6	51.0	204.16	1,361.08	2,258.36	9,033.46	49.63	198.51	2,699.30	10,797.21	4.0	0.6	53.72	2.4	6.98	27.93	214.88	2,508.49	10,033.97	517.65	2,070.58	3,086.84	12,347.37
925	344A.47	Weld NPS 2, Piping Specification SB11	ea	73	131	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	131.0	1.5	135.13	195.8	17.57	2,301.28	17,702.19	139.46	18,269.67	59.55	7,801.45	351.71	46,074.60
926	344A.48	Ball Valve NPS 2, Valve Specification VBA11	ea	3	7	14.7	1,587.9	102.8	238.1	1,667.33	11,115.52	406.63	2,846.39	231.59	1,621.12	2,464.34	17,250.37	7.0	3.4	308.76	23.9	40.14	280.97	2,161.31	132.98	930.84	99.34	695.35	581.21	4,068.47
927	344A.49	Pipe identification NPS 2	Linear meter	178	62	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.5	0.6	50.42	34.3	6.55	403.16	3,101.24	12.06	742.10	14.28	878.23	83.31	5,124.73
B&M-0284	Added	1/2" weld adapter, 304SS, Vic-Press - 561	ea		1	4.3	460.7	4.3	69.1	69.12	460.78	110.99	110.99	67.20	67.20	708.10	708.10	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0285	Added	1.5" male adapter, 304SS, Vic-Press - 596	ea		1	8.2	886.1	8.2	132.9	132.92	886.12	176.73	176.73	129.24	129.24	1,325.01	1,325.01	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0286	Added	1/2" male adapter, 304SS, Vic-Press - 596	ea		2	4.3	460.7	8.5	69.1	138.24	921.57	133.14	266.28	67.20	134.40	730.24	1,460.48	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0287	Added	2" coupling, 304SS, Vic-Press - 597	ea		21	8.5	921.5	178.9	138.2	2,902.94	19,352.92	119.05	2,499.97	134.40	2,822.49	1,313.25	27,578.33	21.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0288	Added	1" coupling, 304SS, Vic-Press - 597	ea		12	5.9	638.0	70.8	95.7	1,148.42	7,656.10	86.19	1,034.30	93.05	1,116.59	912.95	10,955.41	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0289	Added	1"x2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea		1	11.1	1,205.1	11.1	180.7	180.77	1,205.13	333.84	333.84	175.76	175.76	1,895.50	1,895.50	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0290	Added	1" flange adapter, 304SS, Vic-Press - 595	ea		4	7.2	783.3	29.0	117.5	470.00	3,133.33	352.68	1,410.72	114.24	456.98	1,367.76	5,471.02	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
B&M-0291	Added	3/4" tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L	Linear meter		13	0.7	71.1	8.4	10.6	136.66	911.08	39.07	500.34	10.38	132.87	131.27	1,680.95
B&M-0292	Added	3/4" 90 elbow, Swagelok to ASTM A182 Grade 316 - COMP	ea		5	1.5	162.6	7.5	24.4	122.02	813.46	82.38	411.90	23.73	118.64	293.20	1,466.02
B&M-0293	Added	3/4" tee, Swagelok to ASTM A182 Grade 316 - COMP	ea		2	2.2	235.0	4.3	35.2	70.50	470.00	100.33	200.65	34.27	68.55	404.85	809.70
B&M-0294	Added	3/4" union, Swagelok to ASTM A182 Grade 316 - COMP	ea		4	1.5	162.6	6.0	24.4	97.62	650.77	80.37	321.47	23.73	94.91	291.19	1,164.77
B&M-0295	Added	3/4" male adapter, Swagelok to ASTM A182 Grade 316 - COMPxTHD	ea		5	1.5	162.6	7.5	24.4	122.02	813.46	25.79	128.93	23.73	118.64	236.61	1,183.04
B&M-0296	Added	3/4" Flexible Connector Penflex 800 SS MNPT	ea		1	5.5	595.4	5.5	89.3	89.32	595.47	199.35	199.35	86.85	86.85	970.99	970.99
B&M-0297	Added	2" flexible coupling, SS ASTM A-890 GROOVED - VICTAULIC 77DX	ea		6	0.3	37.2	2.1	5.5	33.50	223.30	457.39	2,744.34	5.43	32.57	505.62	3,033.71
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WTS (Shaft Seal Water)						0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
928	344B.01	Sand filter 344B-FR-6000 to 6003	ea	4	4	209.7	22,684.7	839.0	3,402.7	13,610.85	90,738.98	141,446.16	565,784.63	3,308.42	13,233.67	170,842.03	683,368.12
929	344B.02	Y-strainer 344B-STR-6000 / 6001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	23,425.36	46,850.73	137.85	275.70	24,650.19	49,300.39
930	344B.03	Lubrication water pump 344B-P-5000 / 5001	ea	2	2	139.8	15,123.1	279.7	2,268.4	4,536.95	30,246.33	7,370.16	14,740.32	2,205.61	4,411.22	26,967.41	53,934.81
931	344B.04	Sight flow indicator 344B-FG-6000	ea	1	1	17.5	1,890.4	17.5	283.5	283.56	1,890.40	18,799.89	18,799.89	275.70	275.70	21,249.55	21,249.55
932	344B.05	Air vent 344B-AV-5000 / 6000 TO 6004	ea	6	6	8.7	945.2	52.4	141.7	850.68	5,671.19	1,608.04	9,648.27	137.85	827.10	2,832.87	16,997.24
933	344B.06	Pressure indicator 344B-PI-6000 to 6006 / 5000 to 5006 / 5010 to 5013	ea	18	18	8.7	945.2	157.3	141.7	2,552.03	17,013.56	569.12	10,244.25	137.85	2,481.31	1,793.95	32,291.15
934	344B.07	Pressure transmitter 344B-PT-5000 / 5001	ea	2	2	8.7	945.2	17.5	141.7	283.56	1,890.40	3,620.64	7,241.27	137.85	275.70	4,845.46	9,690.93
935	344B.08	Differential pressure switch 344B-PDSH-6000 to 6004	ea	5	5	8.7	945.2	43.7	141.7	708.90	4,725.99	3,789.78	18,948.88	137.85	689.25	5,014.60	25,073.02
936	344B.09	Differential pressure indicator 344B-PDI-6000	ea	1	1	8.7	945.2	8.7	141.7	141.78	945.20	18,750.22	18,750.22	137.85	137.85	19,975.05	19,975.05
937	344B.10	Flow switch 344B-FSL-5000 to 5005	ea	6	6	8.7	945.2	52.4	141.7	850.68	5,671.19	810.61	4,863.69	137.85	827.10	2,035.44	12,212.66
938	344B.11	Variable frequency drive 344B-VFD-5000 / 5001	ea	2	2	52.4	5,671.1	104.9	850.6	1,701.36	11,342.37	297.99	595.98	827.10	1,654.21	7,646.96	15,293.92
939	344B.12	Control Panel 344B-CP-5000 to 5002	ea	3	3	104.9	11,342.3	314.6	1,701.3	5,104.07	34,027.12	84,748.50	254,245.50	1,654.21	4,962.63	99,446.44	298,339.31
940	344B.13	Tube NPS 1/2 thickness 1.65, Piping Specification SB13	m	12	0	0.7	71.1	0.0	10.6	0.00	0.00	22.58	0.00	10.38	0.00	114.78	0.00
941	344B.14	Elbow 90 degrees Swagelok NPS 1/2, Piping Specification SB13	ea	18	0	1.1	119.3	0.0	17.9	0.00	0.00	48.36	0.00	17.40	0.00	202.96	0.00
942	344B.15	Needle valve NPS 1/2, Valve Specification VNE02	ea	6	6	1.1	119.3	6.6	17.9	107.38	715.85	228.91	1,373.47	17.40	104.40	383.51	2,301.09
943	344B.16	Pipe insulation NPS 1/2	Linear meter	4	120	1.4	142.3	169.4	21.3	2,571.55	17,143.68	38.46	4,630.88	8.55	1,029.39	210.77	25,375.50
944	344B.17	Pipe identification NPS 1/2	Linear meter	4	41	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
945	344B.18	Pipe NPS 3/4 Sch.10S, Piping Specification SB11	m	1	6	1.1	116.2	6.9	17.4	111.65	744.34	22.99	147.22	16.96	108.56	173.65	1,111.77
946	344B.19	Elbow 90 degrees SW Class 3000 NPS 3/4, Piping Specification SB11	ea	2	60	5.6	602.5	334.3	90.3	5,423.07	36,153.81	117.55	7,052.77	87.88	5,272.79	898.37	53,902.44
947	344B.20	Weld NPS 3/4 Piping Specification SB11	ea	8	14	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
948	344B.21	Ball Valve NPS 3/4, Valve Specification VBA11	ea	2	6	5.5	595.4	33.0	89.3	535.93	3,572.85	136.15	816.88	86.85	521.08	907.79	5,446.73
949	344B.22	Pipe insulation NPS 3/4	Linear meter	4	1	1.4	142.3	1.4	21.3	21.35	142.34	43.11	43.10	8.55	8.55	215.39	215.34
950	344B.23	Pipe identification NPS 3/4	Linear meter	4	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
951	344B.24	Pipe NPS 1 Sch.10S, Piping Specification SB11	m	2	11	1.4	151.1	15.4	22.6	249.38	1,662.51	39.80	437.80	22.04	242.47	235.65	2,592.15
952	344B.25	Weld NPS 1 Piping Specification SB11	ea	4	22	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
953	344B.26	Ball Valve NPS 1, Valve Specification VBA11	ea	2	2	7.3	793.9	14.7	119.0	238.19	1,587.93	202.60	405.19	115.79	231.59	1,231.45	2,462.90
954	344B.27	Pipe insulation NPS 1	Linear meter	2	12	1.4	145.1	16.6	21.7	252.15	1,681.00	41.31	478.51	8.55	99.03	216.77	2,510.69
955	344B.28	Pipe identification NPS 1	Linear meter	2	4	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
956	344B.29	Pipe NPS 1 Sch.40, Piping Specification PA02	m	12	11	1.1	116.2	11.8	17.4	191.83	1,278.85	11.29	124.20	16.96	186.51	161.95	1,781.40
957	344B.30	Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification PA02	ea	4	6	1.2	134.6	7.5	20.2	121.22	808.14	9.52	57.11	19.64	117.86	184.06	1,104.34
958	344B.31	Elbow 45 degrees SW Class 3000 NPS 1, Piping Specification PA02	ea	2	0	1.2	134.6	0.0	20.2	0.00	0.00	9.52	0.00	19.64	0.00	184.06	0.00
959	344B.32	Pipe identification NPS 1	Linear meter	12	0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
960	344B.33	Flange Welding Neck 150RF Sch.10S NPS 1-1/4 c/w hardware, Piping Specification SB11	m	4	8	7.4	798.6	59.1	119.8	958.43	6,389.54	449.25	3,593.97	116.48	931.87	1,484.23	11,873.81
961	344B.34	Eccentric reducer SW Class 3000 NPS 2 x 1-1/4, Piping Specification SB11	m	4	4	18.3	1,977.8	73.1	296.6	1,186.70	7,911.30	117.04	468.14	288.45	1,153.81	2,679.99	10,719.95
962	344B.35	Weld NPS 1-1/4 Piping Specification SB11	ea	12	4	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
963	344B.36	Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11	m	106	96	1.8	197.6	175.5	29.6	2,847.11	18,980.75	44.88	4,310.29	28.82	2,768.22	300.99	28,906.37
964	344B.37	Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	30	28	8.2	886.1	229.4	132.9	3,721.72	24,811.44	155.49	4,353.66	129.24	3,618.58	1,303.76	36,505.40
965	344B.38	Reducing tee SW Class 3000 NPS 1-1/2 x 1-1/2 x 1/2, Piping Specification SB11	ea	6	9	11.1	1,205.1	100.3	180.7	1,626.92	10,846.14	196.49	1,768.40	175.76	1,581.84	1,758.14	15,823.30
966	344B.39	Flange Slip-On 150RF NPS 1-1/2 c/w hardware, Piping Specification SB11	m	8	20	8.0	860.1	159.1	129.0	2,580.39	17,202.60	452.47	9,049.49	125.44	2,508.88	1,567.07	31,341.36
967	344B.40	Cap SW Class 3000 NPS 1-1/2, Piping Specification SB11	ea	1	2	4.6	496.2	9.2	74.4	148.87	992.46	176.90	353.79	72.37	144.74	819.93	1,639.86
968	344B.41	Weld NPS 1-1/2 Piping Specification SB11	ea	110	34	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
969	344B.42	Victaulic coupling NPS 1-1/2, Style 07	ea	8	0	0.3	37.2	0.0	5.5	0.00	0.00	47.12	0.00	5.43	0.00	95.35	0.00
970	344B.43	Victaulic elbow 90 degrees NPS 1-1/2, Style 410SS	ea	1	6	3.0	322.5	17.9	48.3	290.29	1,935.29	133.26	799.56	47.04	282.25	551.23	3,307.40
971	344B.44	Victaulic tee degrees NPS 1-1/2, Style 420SS	ea	2	0	4.7	506.8	0.0	76.0	0.00	0.00	307.84	0.00	73.92	0.00	964.66	0.00
972	344B.45	Ball Valve NPS 1-1/2, Valve Specification VBA11	ea	4	4	11.0	1,187.4	43.9	178.1	712.44	4,749.62	295.09	1,180.35	173.18	692.70	1,833.78	7,335.11
973	344B.46	Pipe insulation NPS 1-1/2	Linear meter	106	15	1.5	147.3	21.3	22.1	323.37	2,155.81	42.77	625.79	8.55	125.09	220.78	3,230.05
974	344B.47	Pipe identification NPS 1-1/2	Linear meter	106	5	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
975	344B.48	Pipe NPS 2 Sch.10S, Piping Specification SB11	m	230	323	2.3	244.1	728.5	36.6	11,817.69	78,784.57	56.82	18,336.71	35.61	11,490.20	373.20	120,429.17
976	344B.49	Elbow 90 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	10	25	8.5	921.5	213.0	138.2	3,455.88	23,039.19	171.71	4,292.86	134.40	3,360.11	1,365.92	34,148.04
977	344B.50	Elbow 45 degrees SW Class 3000 NPS 2, Piping Specification SB11	ea	4	6	8.5	921.5	51.1	138.2	829.41	5,529.41	172.91	1,037.47	134.40	806.43	1,367.12	8,202.71
978	344B.51	Tee SW Class 3000 NPS 2, Piping Specification SB11	ea	4	1	11.1	1,205.1	11.1	180.7	180.77	1,205.13	268.91	268.91	175.76	175.76	1,830.56	1,830.56
979	344B.52	Reducing tee SW Class 3000 NPS 2 x 2 x 1-1/2, Piping Specification SB11	ea	4	7	11.1	1,205.1	78.0	180.7	1,265.38	8,435.89	283.87	1,987.09	175.76	1,230.32	1,845.53	12,918.68
980	344B.53	Reducing tee SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11	ea	1	5	11.1	1,205.1	55.7	180.7	903.85	6,025.64	266.81	1,334.06	175.76	878.80	1,828.47	9,142.34
981	344B.54	Reducing tee SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11	ea	2	2	11.1	1,205.1	22.3	180.7	361.54	2,410.25	238.38	476.77	175.76	351.52	1,800.04	3,600.08
982	344B.55	Cap SW Class 3000 NPS 2, Piping Specification SB11	ea	3	6	4.6	496.2	27.5	74.4	446.61	2,977.37	176.90	1,061.38	72.37	434.23	819.93	4,919.58
983	344B.56	Weld NPS 2 Piping Specification SB11	ea	109	166	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
984	344B.57	Victaulic coupling NPS 2, Style 07	ea	2	4	0.3	37.2	1.4	5.5	22.33	148.87	47.12	188.47	5.43	21.71	95.35	381.38
985	344B.58	Victaulic coupling NPS 2, Style 77	ea	6	6	0.3	37.2	2.1	5.5	33.50	223.30	39.43	236.60	5.43	32.57	87.66	525.97
986	344B.59	Victaulic coupling NPS 2, Style 89	ea	2	18	0.3	37.2	6.2	5.5	100.49	669.91	62.81	1,130.60	5.43	97.70	111.04	1,998.70
987	344B.60	Victaulic tee degrees NPS 2, Style 420SS	ea	2	2	4.7	506.8	9.4	76.0	152.06	1,013.72	307.84	615.69	73.92	147.84	964.66	1,929.32
988	344B.61	Victaulic concentric reducer NPS 2 x 1-1/2, Style 50	ea	2	2	3.1	340.2	6.3	51.0	102.08	680.54	125.85	251.70	49.63	99.25	566.79	1,133.57
989	344B.62	Victaulic expansion joint JT NPS 2, Style 155	ea	1	1	3.1	340.2	3.1	51.0	51.04	340.27	2,258.36	2,258.36	49.63	49.63	2,699.30	2,699.30
990	344B.63	Ball Valve NPS2, Valve Specification VBA11	ea	4	5	14.7	1,587.9	73.4	238.1	1,190.95	7,939.66	406.63	2,033.14	231.59	1,157.95	2,464.34	12,321.69
991	344B.64	Check Valve NPS2, Valve Specification VCH12	ea	2	2	14.7	1,587.9	29.4	238.1	476.38	3,175.86	1,669.22	3,338.45	231.59	463.18	3,726.93	7,453.87
992	344B.65	Pipe insulation NPS 2	Linear meter	230	202	1.5	149.2	298.4	22.3	4,529.82	30,198.77	45.01	9,108.91	8.55	1,730.42	225.15	45,567.91
993	344B.66	Pipe identification NPS 2	Linear meter	230	68	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
994	344B.67	Pipe NPS 2-1/2 Sch.10S, Piping Specification SB11	m	6	9	2.6	279.0	23.2	41.8	376.68	2,511.20	79.30	713.71	40.69	366.24	440.87	3,967.84
995	344B.68	Elbow 90 degrees BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	4	4	18.3	1,977.8	73.1	296.6	1,186.70	7,911.30	116.05	464.20	288.45	1,153.81	2,679.00	10,716.01
996	344B.69	Tee BW Sch.10S NPS 2-1/2, Piping Specification SB11	ea	1	1	27.4	2,963.1	27.4	444.4	444.48	2,963.19	179.55	179.55	432.16	432.16	4,019.39	4,019.39
997	344B.70	Reducing tee BW Sch.10S NPS 2-1/2 x 2-1/2 x 1, Piping Specification SB11	ea	1	3	27.4	2,963.1	82.2	444.4	1,333.44	8,889.58	660.44	1,981.31	432.16	1,296.49	4,500.27	13,500.82
998	344B.71	Eccentric reducer BW Sch.10S NPS 2-1/2 x 2, Piping Specification SB11	m	2	2	18.3	1,977.8	36.6	296.6	593.35	3,955.65	117.04	234.07	288.45	576.91	2,679.99	5,359.98
999	344B.72	Flange Welding Neck 150RF Sch.10S NPS 2-1/2 c/w hardware, Piping Specification SB11	m	3	3	10.9	1,180.3	32.7	177.0	531.14	3,540.95	130.45	391.36	172.14	516.42	1,659.96	4,979.87
1000	344B.73	Weld NPS 2-1/2 Piping Specification SB11	ea	21	14	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1001	344B.74	Butterfly valve NPS 2-1/2, Valve Specification VBU01	ea	1	1	5.7	616.7	5.7	92.5	92.51	616.74	219.14	219.14	89.95	89.95	1,018.34	1,018.34
1002	344B.75	Pipe insulation NPS 2-1/2	Linear meter	6	7	1.5	150.5	10.4	22.5	158.35	1,055.68	51.45	360.67	8.55	59.94	233.17	1,634.65
1003	344B.76	Pipe identification NPS 2-1/2	Linear meter	6	2	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1004	344B.77	Flange Welding Neck 150RF Sch.10S NPS 4 c/w hardware, Piping Specification SB11	m	3	3	15.8	1,708.4	47.4	256.2	768.80	5,125.33	172.30	516.90	249.17	747.50	2,386.18	7,158.53
1005	344B.78	Elbow 90 degrees BW Sch.10S NPS 4, Piping Specification SB11	ea	2	2	24.4	2,644.1	48.9	396.6	793.26	5,288.38	166.91	333.82	385.64	771.27	3,593.37	7,186.73
1006	344B.79	Weld NPS 2 Piping Specification SB11	ea	7	33	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1007	344B.80	Victaulic coupling NPS 4, Style 07	ea	1	1	0.5	58.4	0.5	8.7	8.77	58.48	88.54	88.54	8.53	8.53	164.33	164.33
1008	344B.81	Butterfly valve NPS 4, Valve Specification VBU01	ea	1	1	11.0	1,187.4	11.0	178.1	178.11	1,187.40	323.82	323.82	173.18	173.18	1,862.51	1,862.51
1009	344B.82	Pipe insulation NPS 4	Linear meter	3	2	2.8	278.9	5.0	41.8	76.52	510.14	57.70	105.51	8.55	15.64	387.04	707.81
1010	344B.83	Pipe identification NPS 4	Linear meter	3	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0298	Added	4" pipe, SS, Sch 10S, ASTM A312 TP304L, smls - BE	Linear meter		6	3.4	372.0	22.0	55.8	357.28	2,381.90	118.55	759.03	54.26	347.38	600.68	3,845.60
B&M-0299	Added	1" weld adapter, 304SS, Vic-Press - 561	ea		2	5.9	638.0	11.8	95.7	191.40	1,276.02	153.82	307.64	93.05	186.10	980.58	1,961.16
B&M-0300	Added	1" male adapter, 304SS, Vic-Press - 596	ea		1	5.9	638.0	5.9	95.7	95.70	638.01	150.83	150.83	93.05	93.05	977.59	977.59
B&M-0301	Added	2" coupling, 304SS, Vic-Press - 597	ea		17	8.5	921.5	144.9	138.2	2,350.00	15,666.65	119.05	2,023.79	134.40	2,284.88	1,313.25	22,325.31
B&M-0302	Added	1.5" coupling, 304SS, Vic-Press - 597	ea		4	8.2	886.1	32.8	132.9	531.67	3,344.49	107.91	431.63	129.24	516.94	1,256.18	5,024.73
B&M-0303	Added	2"x1.25" reducer, 304SS, Vic-Press - 582	ea		4	8.5	921.5	34.1	138.2	552.94	3,686.27	177.40	709.60	134.40	537.62	1,371.61	5,486.43
B&M-0304	Added	1"x2" reducing tee w/ threaded branch, 304SS, Vic-Press - 588	ea		5	11.1	1,205.1	55.7	180.7	903.85	6,025.64	333.84	1,669.22	175.76	878.80	1,895.50	9,477.50
B&M-0305	Added	1" union, 304SS, Vic-Press - 584	ea		1	5.9	638.0	5.9	95.7	95.70	638.01	580.55	580.55	93.05	93.05	1,407.31	1,407.31
B&M-0306	Added	1" 90 elbow, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		2	1.2	134.6	2.5	20.2	40.41	269.38	9.52	19.04	19.64	39.29	184.06	368.11
B&M-0307	Added	1" union, PVC, Sch 80, CSA/CAN 137.3/ASTM D-2466/D-2464 - SOC	ea		1	1.2	134.6	1.2	20.2	20.20	134.69	13.25	13.25	19.64	19.64	187.79	187.79
B&M-0308	Added	1/2" female adapter - SWAGELOK SS-8-TA-7-8 or equal	ea		6	1.1	119.3	6.6	17.9	107.38	715.85	25.66	153.96	17.40	104.40	180.26	1,081.59
B&M-0309	Added	2" 90 elbow, LR, Sch 10S, ASTM A403 WP304L - VICTAULIC 410SS	ea		5	3.1	340.2	15.7	51.0	255.20	1,701.36	134.19	670.96	49.63	248.13	575.13	2,875.65
B&M-0310	Added	2" cap, Sch 10S, ASTM A403 WP304L - VICTAULIC 60SS	ea		1	1.6	177.2	1.6	26.5	26.59	177.23	84.40	84.40	25.85	25.85	314.06	314.06
B&M-0311	Added	2" rigid coupling, Galv. DI, ASTM A536 - Victaulic 89	ea		19	0.3	37.2	6.5	5.5	106.07	707.13	62.81	1,193.41	5.43	103.13	111.04	2,109.73
B&M-0312	Added	Pipe Insulation - All Sizes	ea		1	659.6	67,367.5	659.6	10,105.1	10,105.13	67,367.56	19,454.16	19,454.16	0.00	0.00	96,926.86	96,926.86
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WLS (Piezometer and Water Level)							$0.00				$0.00		$0.00		
1011	344C.01	Level tranmitter 344C-LT-6000 / 9000 / 9001	ea	3	3	52.4	5,671.1	157.3	850.6	2,552.03	17,013.56	5,038.11	15,114.33	827.10	2,481.31	12,387.08	37,161.23
1012	344C.02	Pressure transmitter 344C-PT-1000 / 2000/ 3000 / 4000	ea	4	4	8.7	945.2	35.0	141.7	567.12	3,780.79	1,867.96	7,471.86	137.85	551.40	3,092.79	12,371.17

		Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
			LABOUR COMPONENT							NON LABOUR COMPONENT				
			0.13											
No	Subcode	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
B&M-0291	Added	12.8	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0292	Added	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0293	Added	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0294	Added	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0295	Added	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0296	Added	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0297	Added	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
					0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
928	344B.01	4.0	122.5	11,074.09	490.0	1,439.63	5,758.52	44,296.34	220,142.26	880,569.04	46,922.89	187,691.55	279,578.86	1,118,315.45
929	344B.02	2.0	4.7	429.07	9.5	55.78	111.56	858.14	0.00	0.00	100.84	201.68	585.69	1,171.38
930	344B.03	2.0	91.3	8,257.05	182.7	1,073.42	2,146.83	16,514.09	5,920.52	11,841.04	3,132.49	6,264.97	18,383.47	36,766.94
931	344B.04	1.0	9.4	851.21	9.4	110.66	110.66	851.21	245.14	245.14	249.39	249.39	1,456.40	1,456.40
932	344B.05	6.0	7.3	659.90	43.8	85.79	514.72	3,959.39	30.35	182.10	161.20	967.17	937.23	5,623.39
933	344B.06	18.0	3.6	329.95	65.7	42.89	772.08	5,939.07	542.81	9,770.60	186.82	3,362.84	1,102.48	19,844.58
934	344B.07	2.0	7.3	659.90	14.6	85.79	171.57	1,319.80	7,963.56	15,927.12	1,758.36	3,516.71	10,467.61	20,935.21
935	344B.08	5.0	7.3	659.90	36.5	85.79	428.93	3,299.48	1,263.06	6,315.28	409.37	2,046.86	2,418.11	12,090.56
936	344B.09	1.0	14.6	1,319.80	14.6	171.57	171.57	1,319.80	2,967.37	2,967.37	907.59	907.59	5,366.33	5,366.33
937	344B.10	6.0	3.7	329.95	21.9	42.89	257.36	1,979.70	623.36	3,740.14	203.04	1,218.24	1,199.24	7,195.45
938	344B.11	2.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
939	344B.12	3.0	18.6	1,678.86	55.7	218.25	654.75	5,036.57	24,784.70	74,354.09	5,384.35	16,153.06	32,066.16	96,198.48
940	344B.13	0.0	253.3	22,898.19	0.0	2,976.76	0.00	0.00	889.58	0.00	5,560.51	0.00	32,325.04	0.00
941	344B.14	0.0	0.7	66.54	0.0	8.65	0.00	0.00	39.49	0.00	23.58	0.00	138.26	0.00
942	344B.15	6.0	3.2	288.82	19.2	37.55	225.28	1,732.92	279.59	1,677.54	124.17	744.99	730.12	4,380.74
943	344B.16	120.4	3.3	300.90	400.7	39.12	4,709.62	36,227.85	165.87	19,970.09	86.70	10,438.91	592.60	71,346.46
944	344B.17	40.7	0.6	50.68	22.8	6.59	268.17	2,062.87	12.06	491.00	14.34	583.66	83.68	3,405.70
945	344B.18	6.4	0.6	49.91	3.5	6.49	41.54	319.55	3.74	23.92	12.48	79.89	72.61	464.90
946	344B.19	60.0	0.6	53.88	35.8	7.00	420.28	3,232.94	6.20	371.89	13.91	834.67	81.00	4,859.78
947	344B.20	14.0	1.4	123.78	19.2	16.09	225.28	1,732.92	145.86	2,041.97	58.45	818.36	344.18	4,818.53
948	344B.21	6.0	3.2	288.82	19.2	37.55	225.28	1,732.92	88.22	529.30	85.64	513.81	500.22	3,001.32
949	344B.22	1.0	3.3	302.30	3.3	39.30	39.29	302.22	171.37	171.33	88.07	88.05	601.04	600.89
950	344B.23	1.0	0.2	16.41	0.2	2.13	2.16	16.64	4.02	4.07	4.66	4.73	27.23	27.60
951	344B.24	11.0	0.6	55.45	6.8	7.21	79.30	609.99	0.43	4.77	13.12	144.32	76.22	838.38
952	344B.25	22.0	0.3	26.28	6.4	3.42	75.15	578.11	256.46	5,642.13	57.81	1,271.77	343.96	7,567.16
953	344B.26	2.0	3.2	289.06	6.4	37.58	75.15	578.11	127.76	255.53	93.66	187.31	548.05	1,096.10
954	344B.27	11.6	3.5	312.76	40.1	40.66	470.93	3,622.51	192.06	2,224.50	94.07	1,089.61	639.55	7,407.55
955	344B.28	3.9	0.6	50.63	2.2	6.58	25.77	198.25	12.06	47.23	14.33	56.09	83.60	327.34
956	344B.29	11.0	3.3	293.90	35.8	38.21	420.28	3,232.94	5.07	55.80	70.09	771.03	407.28	4,480.05
957	344B.30	6.0	0.3	30.27	2.0	3.93	23.61	181.61	2.86	17.14	7.69	46.13	44.75	268.49
958	344B.31	0.0	0.2	16.64	0.0	2.16	0.00	0.00	2.53	0.00	4.42	0.00	25.76	0.00
959	344B.32	0.0	0.0	0.00	0.0	0.00	0.00	0.00	11.67	0.00	2.35	0.00	14.02	0.00
960	344B.33	8.0	10.4	940.29	83.2	122.24	977.90	7,522.28	17.08	136.65	224.42	1,795.36	1,304.02	10,432.19
961	344B.34	4.0	0.7	62.04	2.7	8.06	32.26	248.15	7.99	31.95	16.19	64.75	94.28	377.11
962	344B.35	4.0	0.0	0.00	0.0	0.00	0.00	0.00	257.01	1,028.03	51.74	206.97	308.75	1,234.99
963	344B.36	96.0	3.3	298.06	316.6	38.75	3,721.25	28,624.98	16.50	1,584.59	73.37	7,046.37	426.68	40,977.19
964	344B.37	28.0	0.6	54.99	17.0	7.15	200.18	1,539.81	19.98	559.36	16.95	474.48	99.07	2,773.83
965	344B.38	9.0	1.2	108.13	10.8	14.06	126.52	973.21	63.08	567.68	38.11	343.01	223.38	2,010.41
966	344B.39	20.0	3.2	287.04	63.5	37.32	746.31	5,740.84	1.97	39.30	67.85	1,357.10	394.18	7,883.55
967	344B.40	2.0	0.6	57.54	1.3	7.48	14.96	115.07	8.20	16.40	15.18	30.35	88.39	176.78
968	344B.41	34.0	0.5	40.78	15.3	5.30	180.23	1,386.35	250.14	8,504.63	59.81	2,033.53	356.02	12,104.74
969	344B.42	0.0	0.6	49.91	0.0	6.49	0.00	0.00	34.54	0.00	18.69	0.00	109.63	0.00
970	344B.43	6.0	0.6	54.99	3.7	7.15	42.89	329.95	103.11	618.65	33.68	202.10	198.93	1,193.60
971	344B.44	0.0	0.9	83.18	0.0	10.81	0.00	0.00	260.14	0.00	71.92	0.00	426.05	0.00
972	344B.45	4.0	3.7	329.95	14.6	42.89	171.57	1,319.80	209.89	839.55	119.79	479.17	702.52	2,810.09
973	344B.46	14.6	3.4	309.57	50.1	40.24	586.79	4,529.18	206.93	3,027.52	96.51	1,411.99	653.26	9,557.48
974	344B.47	4.9	0.6	50.17	2.7	6.52	32.26	248.15	12.06	59.66	14.22	70.33	82.98	410.40
975	344B.48	322.7	3.2	287.21	1,025.2	37.34	12,048.71	92,682.39	19.41	6,263.34	71.41	23,042.70	415.37	134,037.14
976	344B.49	25.0	0.6	54.12	15.0	7.04	175.90	1,353.07	20.22	505.44	16.79	419.74	98.17	2,454.15
977	344B.50	6.0	0.3	27.50	1.8	3.57	21.45	164.98	26.97	161.83	11.89	71.35	69.93	419.60
978	344B.51	1.0	1.3	115.07	1.3	14.96	14.96	115.07	44.57	44.57	36.01	36.01	210.61	210.61
979	344B.52	7.0	1.1	99.02	7.7	12.87	90.11	693.16	700.69	4,904.80	164.34	1,150.36	976.92	6,838.44
980	344B.53	5.0	1.3	115.07	6.4	14.96	74.80	575.35	95.67	478.37	46.31	231.54	272.01	1,360.06
981	344B.54	2.0	1.2	107.44	2.4	13.97	27.93	214.88	95.67	191.35	44.51	89.02	261.59	523.19
982	344B.55	6.0	0.6	54.99	3.7	7.15	42.89	329.95	15.15	90.91	15.97	95.85	93.27	559.61
983	344B.56	166.0	2.2	199.46	366.2	25.93	4,304.29	33,109.96	150.96	25,059.49	76.96	12,776.03	453.31	75,249.78
984	344B.57	4.0	0.6	53.72	2.4	6.98	27.93	214.88	41.95	167.80	21.07	84.28	123.73	494.90
985	344B.58	6.0	0.6	54.99	3.7	7.15	42.89	329.95	54.71	328.24	23.94	143.63	140.79	844.72
986	344B.59	18.0	0.6	54.07	10.8	7.03	126.52	973.21	56.76	1,021.76	24.13	434.42	141.99	2,555.91
987	344B.60	2.0	1.2	107.44	2.4	13.97	27.93	214.88	262.32	524.65	78.07	156.13	461.80	923.59
988	344B.61	2.0	0.6	57.54	1.3	7.48	14.96	115.07	100.72	201.45	33.80	67.60	199.54	399.08
989	344B.62	1.0	0.6	49.91	0.6	6.49	6.49	49.91	2,497.36	2,497.36	514.50	514.50	3,068.26	3,068.26
990	344B.63	5.0	4.8	432.26	23.9	56.19	280.97	2,161.31	310.28	1,551.40	164.05	820.27	962.79	4,813.96
991	344B.64	2.0	4.7	429.07	9.5	55.78	111.56	858.14	1,249.71	2,499.43	352.44	704.87	2,087.00	4,174.00
992	344B.65	202.4	3.6	324.38	726.2	42.17	8,534.52	65,650.14	211.60	42,824.73	100.07	20,252.90	678.21	137,262.28
993	344B.66	68.4	0.6	50.39	38.1	6.55	446.22	3,447.83	12.06	825.38	14.27	976.46	83.28	5,697.89
994	344B.67	9.0	2.5	225.51	22.5	29.32	263.85	2,029.60	3,192.02	28,728.18	695.63	6,260.71	4,142.48	37,282.34
995	344B.68	4.0	0.5	49.56	2.2	6.44	25.77	198.25	9.60	38.42	13.58	54.33	79.19	316.77
996	344B.69	1.0	1.1	98.44	1.1	12.80	12.80	98.44	17.83	17.83	26.72	26.72	155.78	155.78
997	344B.70	3.0	1.0	93.35	3.1	12.14	36.41	280.05	25.10	75.29	26.99	80.98	157.58	472.73
998	344B.71	2.0	0.6	49.91	1.1	6.49	12.98	99.82	8.00	15.99	13.35	26.71	77.75	155.50
999	344B.72	3.0	7.8	703.80	23.4	91.49	274.48	2,111.40	42.25	126.76	173.91	521.73	1,011.46	3,034.37
1000	344B.73	14.0	0.5	41.29	6.4	5.37	75.15	578.11	277.53	3,885.39	65.50	916.98	389.69	5,455.64
1001	344B.74	1.0	4.2	379.86	4.2	49.38	49.38	379.86	173.40	173.40	124.18	124.18	726.82	726.82
1002	344B.75	7.0	4.1	369.01	28.6	47.97	336.30	2,586.91	233.81	1,639.13	112.45	788.34	763.25	5,350.67
1003	344B.76	2.4	0.5	48.56	1.3	6.31	14.96	115.07	12.06	28.59	13.84	32.80	80.77	191.42
1004	344B.77	3.0	30.1	2,716.76	90.2	353.18	1,059.54	8,150.29	80.94	242.81	654.77	1,964.32	3,805.65	11,416.96
1005	344B.78	2.0	0.9	82.49	1.8	10.72	21.45	164.98	23.23	46.46	24.06	48.13	140.51	281.02
1006	344B.79	33.0	3.5	318.94	116.4	41.46	1,368.26	10,525.09	5.65	186.45	74.97	2,474.11	441.03	14,553.91
1007	344B.80	1.0	0.9	83.18	0.9	10.81	10.81	83.18	79.39	79.39	35.53	35.53	208.92	208.92
1008	344B.81	1.0	6.2	561.47	6.2	72.99	72.99	561.47	410.67	410.67	214.63	214.63	1,259.76	1,259.76
1009	344B.82	1.8	6.8	617.06	12.5	80.22	146.70	1,128.49	381.23	697.20	186.08	340.30	1,264.59	2,312.70
1010	344B.83	0.6	0.6	53.82	0.4	7.00	4.33	33.27	12.07	7.46	15.07	9.32	87.94	54.37
B&M-0298	Added	6.4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0299	Added	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0300	Added	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0301	Added	17.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0302	Added	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0303	Added	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0304	Added	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0305	Added	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0306	Added	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0307	Added	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0308	Added	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0309	Added	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0310	Added	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0311	Added	19.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0312	Added	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
						$0.00				$0.00		$0.00	$0.00	
1011	344C.01	3.0	21.1	1,904.37	63.2	247.57	742.70	5,713.11	5,463.62	16,390.86	1,547.52	4,642.56	9,163.08	27,489.24
1012	344C.02	4.0	7.3	659.90	29.2	85.79	343.15	2,639.59	1,843.97	7,375.88	526.33	2,105.30	3,115.98	12,463.92

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1013	344C.03	Pressure indicator 344C-PI-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001	ea	8	8	8.7	945.2	69.9	141.7	1,134.24	7,561.58	700.54	5,604.29	137.85	1,102.81	1,925.36	15,402.92	8.0	3.7	329.95	29.2	42.89	343.15	2,639.59	548.24	4,385.91	187.92	1,503.33	1,109.00	8,871.98
1014	344C.04	Intrumentation cabinet 344C-IC-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 (Detail PD14 and PD15)	ea	8	8	104.9	11,342.37	839.0	1,701.36	13,610.85	90,738.98	6,295.98	50,367.83	1,654.21	13,233.67	20,993.92	167,951.32	8.0	111.3	10,066.56	890.8	1,308.65	10,469.23	80,532.50	14,559.03	116,472.24	5,296.90	42,375.19	31,231.14	249,849.15
B&M-0313	Added	tube, smls SS, Rb 80 or less, thickness 1.65: to ASTM A269 Grade 316L (1/2")	Linear meter		73	0.7	71.1	48.1	10.6	780.92	5,206.15	22.58	1,652.50	10.38	759.28	114.78	8,398.85	73.2	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0314	Added	UNION 90' ELBOW SWAGELOK SS-810-9 (1/2")	ea		16	1.1	119.3	17.7	17.9	286.34	1,908.92	48.36	773.69	17.40	278.40	202.96	3,247.35	16.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0315	Added	UNION TEE SWAGELOK SS -81 0- 3 (1/2")	ea		60	1.6	169.9	94.3	25.4	1,529.31	10,195.37	66.38	3,983.07	24.78	1,486.93	286.58	17,194.68	60.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0316	Added	UNION CROSS SWAGELOK SS-810-4 (1/2")	ea		36	2.2	235.0	78.2	35.2	1,269.00	8,459.99	93.36	3,360.99	34.27	1,233.83	397.88	14,323.82	36.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0317	Added	CAP SWAGELOK SS-810-C (1/2")	ea		8	0.6	65.0	4.6	9.7	78.09	520.61	18.36	146.86	9.49	75.93	102.69	821.50	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0318	Added	FEMALE ADAPTER (1 / 2" - 1 / 4") SWAGELOK SS-8-TA-7-4	ea		8	1.1	119.3	8.8	17.9	143.17	954.46	25.66	205.28	17.40	139.20	180.26	1,442.11	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0319	Added	FEMALE ADAPTER (1 /2" - 1 /2") SWAGELOK SS- 8- TA- 7- 8	ea		12	1.1	119.3	13.2	17.9	214.75	1,431.69	34.48	413.76	17.40	208.80	189.08	2,269.01	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0320	Added	QUICK CONNECT (1/ 2")	ea		12	1.1	119.3	13.2	17.9	214.75	1,431.69	138.42	1,661.01	17.40	208.80	293.02	3,516.26	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0321	Added	SHOCK ABSORBER (1/4")	ea		8	1.1	119.3	8.8	17.9	143.17	954.46	42.18	337.43	17.40	139.20	196.78	1,574.26	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0322	Added	HILLOCK HEX NIPPLE (1/ 4")	ea		12	1.1	119.3	13.2	17.9	214.75	1,431.69	27.81	333.78	17.40	208.80	182.42	2,189.03	12.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0323	Added	purge valve - SWAGELOK SS-4PS8 or equal	ea		20	1.1	119.3	22.1	17.9	357.92	2,386.15	72.34	1,446.87	17.40	348.00	226.95	4,538.95	20.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0324	Added	NEEDLE VALVE SWAGELOK SS-18-K5 (1/2")	ea		160	1.1	119.3	176.5	17.9	2,863.38	19,089.21	228.91	36,625.75	17.40	2,784.03	383.51	61,362.38	160.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0325	Added	SS DIAPHRAGM SEAL WINTERS D40 WITH SILICON FILL (1 /2")	ea		20	1.1	119.3	22.1	17.9	357.92	2,386.15	1,528.85	30,577.06	17.40	348.00	1,683.46	33,669.14	20.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Mechanical Shop Equipment						0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
1015	3440.001	Welding machine 3440-W-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	23,936.47	23,936.47	5,136.70	5,136.70	30,600.56	30,600.56
1016	3440.002	Welding fume extractor 3440-WFE-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	8,976.81	8,976.81	2,124.94	2,124.94	12,629.14	12,629.14
1017	3440.003	Victaulic pipe prep machine 3440-PPT-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	17,860.23	17,860.23	3,913.39	3,913.39	23,301.02	23,301.02
1018	3440.004	Milling Machine 3440-VM-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	48.6	4,393.31	48.6	571.13	571.13	4,393.31	23,229.97	23,229.97	5,709.29	5,709.29	33,903.70	33,903.70
1019	3440.005	Radial drilling machine 3440-RAD-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	67.3	6,083.25	67.3	790.82	790.82	6,083.25	30,350.72	30,350.72	7,540.03	7,540.03	44,764.82	44,764.82
1020	3440.006	Hydraulic press 3440-HYDP-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	16,284.33	16,284.33	4,151.96	4,151.96	24,636.25	24,636.25
1021	3440.007	Belt grinding machine 3440-BS-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	29.9	2,703.36	29.9	351.44	351.44	2,703.36	5,014.87	5,014.87	1,644.95	1,644.95	9,714.62	9,714.62
1022	3440.008	Iron worker 3440-IW-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	37,354.73	37,354.73	8,393.96	8,393.96	49,948.65	49,948.65
1023	3440.009	Engine lathe 3440-L-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	41.1	3,716.78	41.1	483.18	483.18	3,716.78	30,292.35	30,292.35	6,972.13	6,972.13	41,464.45	41,464.45
1024	3440.010	Band saw 3440-BANDS-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	37.4	3,378.51	37.4	439.21	439.21	3,378.51	7,470.95	7,470.95	2,298.10	2,298.10	13,586.76	13,586.76
1025	3440.011	Drilling machine 3440-DP-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	22.4	2,028.21	22.4	263.67	263.67	2,028.21	17,475.01	17,475.01	3,994.82	3,994.82	23,761.71	23,761.71
1026	3440.012	Bench grinder 3440-BGNR-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	2,171.24	2,171.24	754.79	754.79	4,453.43	4,453.43
1027	3440.013	Threading machnie 3440-PTHDR-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	15.0	1,351.68	15.0	175.72	175.72	1,351.68	23,813.64	23,813.64	5,111.97	5,111.97	30,453.01	30,453.01
1028	3440.014	Jib crane 3440-JIBC-6000 / 6001	ea	2	2	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	48.6	4,393.32	97.2	571.13	1,142.26	8,786.63	5,019.54	10,039.08	2,043.06	4,086.12	12,027.05	24,054.09
1029	3440.015	Floor handling crane 3440-CGM-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	67.3	6,083.25	67.3	790.82	790.82	6,083.25	20,428.37	20,428.37	5,542.40	5,542.40	32,844.85	32,844.85
1030	3440.016	Plasma cutter 3440-PLAC-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	11.2	1,013.42	11.2	131.74	131.74	1,013.42	3,475.37	3,475.37	937.85	937.85	5,558.38	5,558.38
1031	3440.017	Small cutting 3440-WT-6000	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	11.2	1,013.42	11.2	131.74	131.74	1,013.42	1,094.86	1,094.86	458.60	458.60	2,698.62	2,698.62
1032	3440.018	Working table 3440-WT-6001 / 6002	ea	2	2	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	22.4	2,027.52	44.9	263.58	527.16	4,055.04	2,796.94	5,593.87	1,039.59	2,079.19	6,127.63	12,255.25
1033	3440.019	Work cart 3440-WT-6003	ea	1	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	7.5	676.53	7.5	87.95	87.95	676.53	5,241.34	5,241.34	1,214.22	1,214.22	7,220.03	7,220.03
		Instrumentation						0	$0.00				$0.00		$0.00						0	$0.00				$0.00		$0.00	$0.00	
1034	3440.020	Detail AT1	ea	52	64	10.2	1,103.9	653.2	165.5	10,597.63	70,650.88	557.07	35,652.74	161.00	10,303.96	1,987.58	127,205.21	64.0	3.7	336.29	238.1	43.72	2,797.97	21,522.83	517.89	33,145.14	183.30	11,731.15	1,081.20	69,197.09
1035	3440.021	Detail AT2	ea	13	13	10.2	1,103.9	132.7	165.5	2,152.64	14,350.96	557.07	7,241.96	161.00	2,092.99	1,987.58	25,838.56	13.0	4.2	380.71	54.7	49.49	643.40	4,949.24	597.59	7,768.68	209.78	2,727.18	1,237.58	16,088.49
1036	3440.022	Detail AT3	ea	5	5	7.8	846.0	39.1	126.9	634.50	4,230.00	529.44	2,647.21	123.38	616.92	1,625.73	8,128.63	5.0	3.7	329.95	18.3	42.89	214.47	1,649.74	482.81	2,414.05	174.74	873.72	1,030.39	5,151.97
1037	3440.023	Detail AT4	ea	25	34	14.4	1,561.8	491.0	234.2	7,965.41	53,102.72	898.18	30,538.15	227.78	7,744.68	2,922.09	99,350.95	34.0	16.4	1,478.17	555.9	192.16	6,533.52	50,257.82	1,302.89	44,298.33	609.70	20,729.73	3,582.92	121,819.39
1038	3440.024	Detail AT5	ea	9	9	14.4	1,561.8	130.0	234.2	2,108.49	14,056.60	898.18	8,083.63	227.78	2,050.06	2,922.09	26,298.78	9.0	14.6	1,319.80	131.4	171.57	1,544.16	11,878.17	1,189.00	10,700.96	549.55	4,945.92	3,229.91	29,069.21
1039	3440.025	Detail AT6	ea	38	48	4.4	472.6	209.7	70.8	3,402.71	22,684.74	37.26	1,788.41	68.93	3,308.42	649.67	31,184.28	48.0	0.9	82.49	43.8	10.72	514.72	3,959.39	0.00	0.00	19.39	930.52	112.60	5,404.63
1040	3440.026	Detail AT7	ea	3	3	52.5	5,676.3	157.5	851.4	2,554.36	17,029.06	4,426.77	13,280.31	827.86	2,483.58	11,782.45	35,347.34	3.0	65.7	5,939.08	197.1	772.08	2,316.24	17,817.24	6,949.94	20,849.82	2,794.97	8,384.92	16,456.08	49,368.23
1041	3440.027	Detail AT8	ea	0	1	51.9	5,611.2	51.9	841.6	841.69	5,611.26	4,364.93	4,364.93	818.37	818.37	11,636.27	11,636.27	1.0	220.8	19,961.91	220.8	2,595.05	2,595.05	19,961.91	1,532.71	1,532.71	4,999.92	4,999.92	29,089.59	29,089.59
1042	3440.028	Detail AT9	ea	9	9	59.5	6,440.4	535.9	966.0	8,694.59	57,963.92	3,943.15	35,488.32	939.29	8,453.65	12,288.94	110,600.47	9.0	48.7	4,399.32	438.0	571.91	5,147.20	39,593.87	3,395.91	30,563.23	1,717.59	15,458.31	10,084.74	90,762.62
1043	3440.029	Detail AT10	ea	1	1	34.5	3,726.4	34.5	558.9	558.97	3,726.44	2,834.09	2,834.09	543.48	543.48	7,662.98	7,662.98	1.0	146.0	13,197.95	146.0	1,715.73	1,715.73	13,197.95	7,067.75	7,067.75	4,524.63	4,524.63	26,506.06	26,506.06
1043.1	Added	Detail AT11 (No Spec, No Drawings)	ea		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1043.2	Added	Detail AT12 (No Spec, No Drawings)	ea		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Piping support						0	$0.00				$0.00		$0.00	$0.00	$0.00				0	$0.00				$0.00		$0.00	$0.00	$0.00
1044	3440.030	S-C50-06	ea	3	3	17.5	1,890.4	52.4	283.5	850.68	5,671.19	1,024.47	3,073.40	275.70	827.10	3,474.12	10,422.37	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	432.09	1,296.27	556.15	1,668.46	3,244.10	9,732.29
1045	3440.031	S-C50-07	ea	3	3	17.5	1,890.4	52.4	283.5	850.68	5,671.19	1,134.29	3,402.88	275.70	827.10	3,583.95	10,751.85	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	561.27	1,683.80	582.16	1,746.49	3,399.28	10,197.84
1046	3440.032	S-C50-12	ea	2	2	17.5	1,890.4	35.0	283.5	567.12	3,780.79	1,938.48	3,876.95	275.70	551.40	4,388.13	8,776.27	2.0	32.3	2,920.33	64.6	379.64	759.29	5,840.66	2,281.21	4,562.41	1,145.59	2,291.18	6,726.77	13,453.54
1047	3440.033	S-C51-06	ea	3	3	4.4	472.6	13.1	70.8	212.67	1,417.80	840.24	2,520.72	68.93	206.78	1,452.65	4,357.96	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	427.08	1,281.24	555.15	1,665.45	3,238.08	9,714.25
1048	3440.034	S-C51-07	ea	3	3	4.4	472.6	13.1	70.8	212.67	1,417.80	918.07	2,754.22	68.93	206.78	1,530.49	4,591.46	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	552.41	1,657.22	580.39	1,741.16	3,388.65	10,165.94
1049	3440.035	S-C52-03	ea	1	1	2.2	236.3	2.2	35.4	35.44	236.30	20.29	20.29	34.46	34.46	326.49	326.49	1.0	9.7	874.78	9.7	113.72	113.72	874.78	44.92	44.92	214.63	214.63	1,248.05	1,248.05
1050	3440.036	S-C53-01	ea	6	8	15.3	1,654.1	122.4	248.1	1,984.92	13,232.77	91.94	735.54	241.24	1,929.91	2,235.39	17,883.13	8.0	5.2	465.98	41.2	60.58	484.62	3,727.87	31.67	253.32	115.89	927.11	674.12	5,392.93
1051	3440.037	S-C53-02	ea	5	5	15.3	1,654.1	76.5	248.1	1,240.57	8,270.48	94.19	470.95	241.24	1,206.19	2,237.64	11,188.19	5.0	9.7	874.09	48.4	113.63	568.16	4,370.45	40.13	200.66	213.51	1,067.53	1,241.36	6,206.80
1052	3440.038	S-C53-03	ea	4	4	15.3	1,654.1	61.2	248.1	992.46	6,616.38	107.31	429.25	241.24	964.96	2,250.76	9,003.05	4.0	9.7	874.43	38.7	113.68	454.70	3,497.73	60.02	240.07	217.59	870.34	1,265.71	5,062.85
1053	3440.039	S-C53-13	ea	1	1	15.3	1,654.1	15.3	248.1	248.11	1,654.10	91.78	91.78	241.24	241.24	2,235.23	2,235.23	1.0	5.1	461.65	5.1	60.01	60.01	461.65	9.50	9.50	110.41	110.41	641.57	641.57
1054	3440.040	S-D51-02	ea	4	5	19.7	2,126.6	98.3	319.0	1,595.02	10,633.47	301.09	1,505.44	310.16	1,550.82	3,056.95	15,284.76	5.0	24.5	2,210.66	122.3	287.39	1,436.93	11,053.29	294.93	1,474.67	578.92	2,894.58	3,371.89	16,859.47
1055	3440.041	S-D55-02	ea	38	38	21.8	2,362.9	830.2	354.4	13,469.07	89,793.78	470.64	17,884.17	344.63	13,095.82	3,532.71	134,242.84	38.0	25.2	2,281.44	959.0	296.59	11,270.32	86,694.78	706.41	26,843.71	678.39	25,778.89	3,962.83	150,587.69
1056	3440.042	S-D57-02	ea	7	7	24.0	2,599.2	168.2	389.8	2,729.26	18,195.06	551.89	3,863.26	379.09	2,653.63	3,920.17	27,441.20	7.0	25.7	2,326.08	180.1	302.39	2,116.73	16,282.57	811.90	5,683.27	710.12	4,970.83	4,150.49	29,053.40
1057	3440.043	S-D59-01	ea	3	3	19.7	2,126.6	59.0	319.0	957.01	6,380.08	304.01	912.02	310.16	930.49	3,059.87	9,179.61	3.0	32.3	2,920.09	96.9	379.61	1,138.84	8,760.28	38.29	114.88	693.97	2,081.92	4,031.97	12,095.91
1058	3440.044	S-D60-01	ea	1	3	24.0	2,599.2	72.1	389.8	1,169.68	7,797.88	387.49	1,162.47	379.09	1,137.27	3,755.77	11,267.30	3.0	32.3	2,919.64	96.9	379.55	1,138.66	8,758.92	131.08	393.24	712.55	2,137.66	4,142.83	12,428.48
1059	3440.045	S-E50-04	ea	3	3	15.3	1,654.1	45.9	248.1	744.34	4,962.29	340.92	1,022.77	241.24	723.72	2,484.37	7,453.12	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	695.91	2,087.73	447.67	1,343.02	2,622.42	7,867.27
1060	3440.046	S-E50-06	ea	3	3	15.3	1,654.1	45.9	248.1	744.34	4,962.29	355.53	1,066.58	241.24	723.72	2,498.97	7,496.92	3.0	19.3	1,743.09	57.8	226.60	679.81	5,229.27	758.50	2,275.51	562.36	1,687.08	3,290.56	9,871.67
1061	3440.047	S-E50-07	ea	3	3	15.3	1,654.1	45.9	248.1	744.34	4,962.29	414.98	1,244.95	241.24	723.72	2,558.43	7,675.30	3.0	19.3	1,743.09	57.8	226.60	679.81	5,229.27	939.66	2,818.99	598.83	1,796.48	3,508.18	10,524.54
1062	3440.048	S-E50-08	ea	16	16	15.3	1,654.1	244.7	248.1	3,969.83	26,465.53	448.31	7,172.91	241.24	3,859.82	2,591.76	41,468.09	16.0	25.7	2,327.55	411.9	302.58	4,841.30	37,240.79	1,079.21	17,267.40	764.28	12,228.49	4,473.62	71,577.98
1063	3440.049	S-E50-13	ea	1	1	15.3	1,654.1	15.3	248.1	248.11	1,654.10	535.94	535.94	241.24	241.24	2,679.39	2,679.39	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	1,300.51	1,300.51	947.98	947.98	5,547.68	5,547.68
1064	3440.050	S-E51-04	ea	1	1	10.9	1,181.5	10.9	177.2	177.22	1,181.50	262.61	262.61	172.31	172.31	1,793.64	1,793.64	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	564.83	564.83	419.98	419.98	2,457.37	2,457.37
1065	3440.051	S-E51-06	ea	6	6	10.9	1,181.5	65.5	177.2	1,063.35	7,088.98	274.79	1,648.71	172.31	1,033.88	1,805.82	10,834.92	6.0	19.3	1,746.10	115.9	226.99	1,361.96	10,476.58	627.42	3,764.54	536.67	3,220.05	3,137.19	18,823.12
1066	3440.052	S-E51-07	ea	6	6	10.9	1,181.5	65.5	177.2	1,063.35	7,088.98	332.70	1,996.22	172.31	1,033.88	1,863.74	11,182.43	6.0	19.3	1,746.10	115.9	226.99	1,361.96	10,476.58	808.58	4,851.48	573.15	3,438.88	3,354.82	20,128.89
1067	3440.053	S-E51-08	ea	8	12	10.9	1,181.5	131.1	177.2	2,126.69	14,177.96	367.10	4,405.14	172.31	2,067.76	1,898.13	22,777.56	12.0	25.7	2,327.55	309.0	302.58	3,630.98	27,930.59	948.13	11,377.57	737.89	8,854.71	4,316.15	51,793.85
1068	3440.054	S-E51-11	ea	1	2	10.9	1,181.5	21.8	177.2	354.45	2,362.99	455.06	910.12	172.31	344.63	1,986.09	3,972.19	2.0	29.6	2,672.86	59.1	347.47	694.94	5,345.72	895.81	1,791.63	808.51	1,617.03	4,724.66	9,449.32
1069	3440.055	S-E51-13	ea	1	1	10.9	1,181.5	10.9	177.2	177.22	1,181.50	455.06	455.06	172.31	172.31	1,986.09	1,986.09	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	1,169.42	1,169.42	921.60	921.60	5,390.22	5,390.22
1070	3440.056	S-E52-04	ea	3	3	15.3	1,654.1	45.9	248.1	744.34	4,962.29	372.12	1,116.37	241.24	723.72	2,515.57	7,546.72	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	842.23	2,526.69	477.13	1,431.39	2,798.20	8,394.59
1071	3440.057	S-E52-10	ea	3	3	15.3	1,654.1	45.9	248.1	744.34	4,962.29	548.71	1,646.14	241.24	723.72	2,692.16	8,076.48	3.0	25.7	2,326.28	77.2	302.42	907.25	6,978.83	1,601.70	4,805.09	869.17	2,607.51	5,099.56	15,298.68
1072	3440.058	S-E53-08	ea	4	4	10.9	1,181.5	43.7	177.2	708.90	4,725.99	403.58	1,614.34	172.31	689.25	1,934.62	7,738.48	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	1,123.03	4,492.12	772.80	3,091.21	4,524.53	18,098.11
1073	3440.059	S-E54-08	ea	8	8	17.5	1,890.4	139.8	283.5	2,268.47	15,123.16	486.83	3,894.66	275.70	2,205.61	2,936.49	23,491.91	8.0	25.8	2,328.19	206.0	302.66	2,421.31	18,625.48	1,079.21	8,633.69	764.43	6,115.46	4,474.49	35,795.95
1074	3440.060	S-E55-01	ea	1	1	17.5	1,890.4	17.5	283.5	283.56	1,890.40	226.60	226.60	275.70	275.70	2,676.26	2,676.26	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	91.81	91.81	371.34	371.34	2,159.73	2,159.73
1075	3440.061	S-E56-01	ea	3	3	17.5	1,890.4	52.4	283.5	850.68	5,671.19	195.65	586.96	275.70	827.10	2,645.31	7,935.93	3.0	5.1	461.65	15.3	60.01	180.04	1,384.95	61.64	184.91	120.90	362.70	704.20	2,112.60
1076	3440.062	S-E57-05	ea	1	1	8.7	945.2	8.7	141.7	141.78	945.20	126.38	126.38	137.85	137.85	1,351.21	1,351.21	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	92.79	92.79	324.94	324.94	1,890.29	1,890.29
1077	3440.063	S-H50-01	ea	2	2	10.9	1,181.5	21.8	177.2	354.45	2,362.99	113.53	227.06	172.31	344.63	1,644.57	3,289.13	2.0	4.5	404.12	8.9	52.54	105.07	808.24	104.03	208.05	115.92	231.83	676.60	1,353.20
1078	3440.064	S-H51-10	ea	9	9	19.7	2,126.6	177.0	319.0	2,871.04	19,140.25	181.68	1,635.15	310.16	2,791.48	2,937.55	26,437.92	9.0	2.2	200.79	20.0	26.10	234.92	1,807.10	140.65	1,265.89	75.51	679.56	443.05	3,987.47
1079	3440.065	S-H51-11	ea	6	6	19.7	2,126.6	118.0	319.0	1,914.03	12,760.17	174.01	1,044.06	310.16	1,860.99	2,929.87	17,579.24	6.0	9.6	871.55	57.8	113.30	679.81	5,229.27	91.68	550.10	223.28	1,339.70	1,299.81	7,798.87
1080	3440.066	S-H51-12	ea	1	1	19.7	2,126.6	19.7	319.0	319.00	2,126.69	166.90	166.90	310.16	310.16	2,922.76	2,922.76	1.0	7.3	659.89	7.3	85.79	85.79	659.89	68.67	68.67	168.91	168.91	983.26	983.26
1081	3440.067	S-H51-13	ea	2	38	19.7	2,126.6	747.2	319.0	12,122.16	80,814.40	178.37	6,777.99	310.16	11,786.24	2,934.23	111,500.79	38.0	3.5	317.36	133.4	41.26	1,567.77	12,059.78	71.31	2,709.65	88.94	3,379.75	518.87	19,716.96
1082	3440.068	S-H51-14	ea	1	1	19.7	2,126.6	19.7	319.0	319.00	2,126.69	172.68	172.68	310.16	310.16	2,928.54	2,928.54	1.0	7.3	659.89	7.3	85.79	85.79	659.89	93.53	93.53	173.92	173.92	1,013.12	1,013.12
1083	3440.069	S-H51-20	ea	1	1	19.7	2,126.6	19.7	319.0	319.00	2,126.69	180.88	180.88	310.16	310.16	2,936.74	2,936.74	1.0	4.4	396.50	4.4	51.55	51.55	396.50	148.75	148.75	123.13	123.13	719.93	719.93
1084	3440.070	S-H52-20	ea	4	6	17.5	1,890.4	104.9	283.5	1,701.36	11,342.37	194.97	1,169.80	275.70	1,654.21	2,644.62	15,867.74	6.0	7.3	662.67	44.0	86.15	516.88	3,976.03	128.50	771.03	181.61	1,089.66	1,058.93	6,353.60
1085	3440.071	S-H52-21	ea	2	2	17.5	1,890.4	35.0	283.5	567.12	3,780.79	207.85	415.71	275.70	551.40	2,657.51	5,315.02	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	172.15	344.29	170.36	340.72	994.99	1,989.97
1086	3440.072	S-H52-22	ea	2	2	17.5	1,890.4	35.0	283.5	567.12	3,780.79	205.48	410.97	275.70	551.40	2,655.14	5,310.28	2.0	5.1	461.65	10.2	60.01	120.03	923.30	54.00	108.00	119.37	238.74	695.04	1,390.07
1087	3440.073	S-H53	ea	1	2	26.2	2,835.5	52.4	425.3	850.68	5,671.19	450.68	901.36	413.55	827.10	4,125.16	8,250.32	2.0	5.4	486.61	10.8	63.26	126.52	973.21	504.81	1,009.62	215.99	431.98	1,270.66	2,541.33
1088	3440.074	S-J50-01	ea	28	28	4.4	472.6	122.4	70.8	1,984.92	13,232.77	238.14	6,668.06	68.93	1,929.91	850.56	23,815.65	28.0	6.4	574.55	177.9	74.69	2,091.35	16,087.33	389.80	10,914.48	213.50	5,978.13	1,252.55	35,071.29
1089	3440.075	S-J50-02	ea	4	4	4.4	472.6	17.5	70.8	283.56	1,890.40	235.75	942.99	68.93	275.70	848.16	3,392.65	4.0	2.6	231.52	10.2	30.10	120.39	926.08	109.47	437.89	76.46	305.84	447.55	1,790.20
1090	3440.076	S-J50-03	ea	1	1	4.4	472.6	4.4	70.8	70.89	472.60	235.75	235.75	68.93	68.93	848.16	848.16	1.0	2.6	231.52	2.6	30.10	30.10	231.52	109.47	109.47	76.46	76.46	447.55	447.55
1091	3440.077	S-J50-04	ea	12	10	4.4	472.6	43.7	70.8	708.90	4,725.99	235.75	2,357.49	68.93	689.25	848.16	8,481.63	10.0	3.2	286.05	31.6	37.19	371.86	2,860.47	385.46	3,854.58	144.83	1,448.27	853.52	8,535.18
1092	3440.078	S-J50-05	ea	6	6	4.4	472.6	26.2	70.8	425.34	2,835.59	238.14	1,428.87	68.93	413.55	850.56	5,103.35	6.0	6.4	574.64	38.1	74.70	448.22	3,447.83	389.80	2,338.81	213.53	1,281.16	1,252.67	7,516.02
1093	3440.079	S-J50-06	ea	3	9	4.4	472.6	39.3	70.8	638.01	4,253.39	238.14	2,143.30	68.93	620.33	850.56	7,655.03	9.0	4.9	439.93	43.8	57.19	514.72	3,959.39	284.61	2,561.53	160.69	1,446.22	942.43	8,481.86
1094	3440.080	S-J50-08	ea	1	1	4.4	472.6	4.4	70.8	70.89	472.60	235.53	235.53	68.93	68.93	847.94	847.94	1.0	2.6	231.52	2.6	30.10	30.10	231.52	109.47	109.47	76.46	76.46	447.55	447.55
1095	3440.081	S-J50-09	ea	10	10	4.4	472.6	43.7	70.8	708.90	4,725.99	237.74	2,377.35	68.93	689.25	850.15	8,501.49	10.0	5.1	461.65	51.1	60.01	600.15	4,616.50	110.24	1,102.43	130.69	1,306.95	762.60	7,626.03
1096	3440.082	S-J50-10	ea	2	2	4.4	472.6	8.7	70.8	141.78	945.20	237.74	475.47	68.93	137.85	850.15	1,700.30	2.0	5.1	461.65	10.2	60.01	120.03	923.30	110.24	220.49	130.69	261.39	762.60	1,525.21
1097	3440.083	S-J50-11	ea	6	12	4.4	472.6	52.4	70.8	850.68	5,671.19	237.74	2,852.82	68.93	827.10	850.15	10,201.79	12.0	6.4	574.64	76.3	74.70	896.43	6,895.65	321.28	3,855.32	199.73	2,396.75	1,170.35	14,044.16
1098	3440.084	S-J50-12	ea	4	4	4.4	472.6	17.5	70.8	283.56	1,890.40	236.13	944.53	68.93	275.70	848.55	3,394.19	4.0	2.6	231.52	10.2	30.10	120.39	926.08	109.66	438.64	76.50	305.98	447.77	1,791.09
1099	3440.085	S-J50-20	ea	2	2	6.6	708.9	13.1	106.3	212.67	1,417.80	255.65	511.30	103.39	206.78	1,174.27	2,348.55	2.0	4.4	396.50	8.8	51.55	103.09	793.00	263.08	526.16	146.15	292.30	857.28	1,714.56
1100	3440.086	S-J51-10	ea	74	75	17.5	1,890.4	1310.9	283.5	21,266.95	141,779.65	175.16	13,137.32	275.70	20,677.61	2,624.82	196,861.53	75.0	5.2	474.22	393.4	61.65	4,623.67	35,566.68	84.02	6,301.25	128.36	9,627.30	748.25	56,118.89
1101	3440.087	S-J51-11	ea	146	149	17.5	1,890.4	2604.4	283.5	42,250.34	281,668.90	173.22	25,809.04	275.70	41,079.52	2,622.87	390,807.80	149.0	2.7	242.93	400.4	31.58	4,705.47	36,195.95	77.89	11,604.90	72.77	10,842.95	425.16	63,349.27
1102	3440.088	S-J51-12	ea	82	93	17.5	1,890.4	1625.5	283.5	26,371.01	175,806.77	173.30	16,117.08	275.70	25,640.24	2,622.96	243,935.10	93.0	2.8	249.94	257.1	32.49	3,021.82	23,244.76	76.97	7,158.09	74.24	6,903.97	433.64	40,328.64
1103	3440.089	S-J51-13	ea	11	11	17.5	1,890.4	192.3	283.5	3,119.15	20,794.35	178.28	1,961.09	275.70	3,032.72	2,627.94	28,907.30	11.0	7.3	664.06	80.8	86.33	949.60	7,304.62	102.36	1,125.97	176.67	1,943.37	1,029.41	11,323.56
1104	3440.090	S-J51-14	ea	8	10	17.5	1,890.4	174.8	283.5	2,835.59	18,903.95	179.46	1,794.60	275.70	2,757.01	2,629.12	26,291.16	10.0	9.7	874.32	96.7	113.66	1,136.62	8,743.20	107.89	1,078.85	227.20	2,271.98	1,323.07	13,230.65
1105	3440.091	S-J51-15	ea	29	29	17.5	1,890.4	506.9	283.5	8,223.22	54,821.46	174.57	5,062.48	275.70	7,995.34	2,624.22	76,102.51	29.0	2.2	200.40	64.3	26.05	755.52	5,811.70	82.85	2,402.53	63.78	1,849.54	373.08	10,819.28
1106	3440.092	S-J51-17	ea	13	13	17.5	1,890.4	227.2	283.5	3,686.27	24,575.14	182.01	2,366.07	275.70	3,584.12	2,631.66	34,211.60	13.0	9.7	873.07	125.5	113.50	1,475.49	11,349.96	120.23	1,562.98	229.39	2,982.07	1,336.19	17,370.51
1107	3440.093	S-J51-18	ea	52	52	17.5	1,890.4	908.9	283.5	14,745.08	98,300.56	175.31	9,116.29	275.70	14,336.48	2,624.97	136,498.41	52.0	5.1	461.65	265.7	60.01	3,120.75	24,005.80	29.53	1,535.75	114.43	5,950.56	665.63	34,612.86
1108	3440.094	S-J51-19	ea	8	8	17.5	1,890.4	139.8	283.5	2,268.47	15,123.16	174.05	1,392.37	275.70	2,205.61	2,623.70	20,989.62	8.0	2.6	231.52	20.5	30.10	240.78	1,852.16	27.04	216.28	59.85	478.79	348.50	2,788.02
1109	3440.095	S-J51-20	ea	24	24	17.5	1,890.4	419.5	283.5	6,805.42	45,369.49	184.70	4,432.79	275.70	6,616.84	2,634.36	63,224.53	24.0	4.4	400.07	106.2	52.01	1,248.23	9,601.78	117.83	2,827.82	117.74	2,825.87	687.65	16,503.71
1110	3440.096	S-J51-200	ea	4	4	17.5	1,890.4	69.9	283.5	1,134.24	7,561.58	197.46	789.85	275.70	1,102.81	2,647.12	10,588.48	4.0	9.7	874.43	38.7	113.68	454.70	3,497.73	161.10	644.40	237.94	951.75	1,387.15	5,548.59
1111	3440.097	S-J51-201	ea	3	3	17.5	1,890.4	52.4	283.5	850.68	5,671.19	193.97	581.92	275.70	827.10	2,643.63	7,930.89	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	148.95	446.84	186.38	559.13	1,087.28	3,261.83
1112	3440.098	S-J51-203	ea	2	2	17.5	1,890.4	35.0	283.5	567.12	3,780.79	182.96	365.92	275.70	551.40	2,632.62	5,265.23	2.0	2.6	231.52	5.1	30.10	60.20	463.04	39.68	79.36	62.41	124.81	363.70	727.40
1113	3440.099	S-J51-205	ea	7	7	17.5	1,890.4	122.4	283.5	1,984.92	13,232.77	183.18	1,282.29	275.70	1,929.91	2,632.84	18,429.89	7.0	2.2	200.79	15.6	26.10	182.72	1,405.52	114.14	799.01	70.17	491.18	411.20	2,878.42
1114	3440.100	S-J51-21	ea	18	18	17.5	1,890.4	314.6	283.5	5,104.07	34,027.12	183.77	3,307.83	275.70	4,962.63	2,633.42	47,401.64	18.0	4.4	400.50	79.7	52.06	937.17	7,208.97	115.62	2,081.10	117.40	2,113.19	685.58	12,340.43
1115	3440.101	S-J51-22	ea	7	12	17.5	1,890.4	209.7	283.5	3,402.71	22,684.74	185.28	2,223.40	275.70	3,308.42	2,634.94	31,619.27	12.0	4.4	400.08	53.1	52.01	624.12	4,800.90	125.75	1,509.03	119.34	1,432.09	697.18	8,366.13
1116	3440.102	S-J51-23	ea	70	73	17.5	1,890.4	1276.0	283.5	20,699.83	137,998.86	186.23	13,594.54	275.70	20,126.21	2,635.88	192,419.44	73.0	4.5	407.47	329.0	52.97	3,866.89	29,745.31	126.49	9,233.66	121.23	8,849.56	708.16	51,695.42
1117	3440.103	S-J51-24	ea	2	55	17.5	1,890.4	961.3	283.5	15,595.76	103,971.74	186.23	10,242.46	275.70	15,163.58	2,635.88	144,973.55	55.0	4.6	413.03	251.3	53.69	2,953.16	22,716.58	75.34	4,143.95	112.24	6,173.01	654.30	35,986.69
1118	3440.104	S-J51-25	ea	2	2	17.5	1,890.4	35.0	283.5	567.12	3,780.79	184.64	369.27	275.70	551.40	2,634.29	5,268.59	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	120.04	240.07	159.87	319.73	932.38	1,864.77

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
					EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1119	3440.105	S-J51-26	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	181.40	544.19	275.70	827.10	2,631.05	7,893.16	3.0	2.6	231.52	7.7	30.10	90.29	694.56	36.60	109.79	61.78	185.33	359.99	1,079.97
1120	3440.106	S-J51-27	ea	9	10	17.5	1,890.40	174.8	283.56	2,835.59	18,903.95	186.23	1,862.27	275.70	2,757.01	2,635.88	26,358.83	10.0	4.4	400.93	44.4	52.12	521.21	4,009.30	127.33	1,273.33	119.86	1,198.60	700.24	7,002.44
1121	3440.107	S-J51-28	ea	2	12	17.5	1,890.40	209.7	283.56	3,402.71	22,684.74	190.78	2,289.40	275.70	3,308.42	2,640.44	31,685.27	12.0	4.4	400.08	53.1	52.01	624.12	4,800.90	88.65	1,063.75	111.87	1,342.44	652.60	7,831.20
1122	3440.108	S-J51-29	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	190.37	190.37	275.70	275.70	2,640.03	2,640.03	1.0	4.4	396.50	4.4	51.55	51.55	396.50	128.50	128.50	119.06	119.06	695.60	695.60
1123	3440.109	S-J51-31	ea	6	14	17.5	1,890.40	244.7	283.56	3,969.83	26,465.53	198.56	2,779.77	275.70	3,859.82	2,648.21	37,074.96	14.0	5.5	499.68	77.4	64.96	909.41	6,995.46	146.91	2,056.80	147.01	2,058.12	858.56	12,019.79
1124	3440.110	S-J51-32	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	198.56	198.56	275.70	275.70	2,648.21	2,648.21	1.0	4.4	396.50	4.4	51.55	51.55	396.50	148.58	148.58	123.10	123.10	719.72	719.72
1125	3440.111	S-J51-33	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	195.25	390.51	275.70	551.40	2,644.91	5,289.82	2.0	4.5	404.12	8.9	52.54	105.07	808.24	136.23	272.47	122.40	244.80	715.29	1,430.58
1126	3440.112	S-J51-34	ea	9	9	17.5	1,890.40	157.3	283.56	2,552.03	17,013.56	200.11	1,800.96	275.70	2,481.31	2,649.76	23,847.87	9.0	11.5	1,039.75	103.5	135.17	1,216.51	9,357.75	175.10	1,575.90	279.61	2,516.51	1,629.63	14,666.67
1127	3440.113	S-J51-35	ea	7	7	17.5	1,890.40	122.4	283.56	1,984.92	13,232.77	192.43	1,347.04	275.70	1,929.91	2,642.09	18,494.63	7.0	11.5	1,039.75	80.5	135.17	946.17	7,278.25	175.10	1,225.70	279.61	1,957.28	1,629.63	11,407.41
1128	3440.114	S-J51-40	ea	3	3	17.5	1,890.40	52.4	283.56	850.68	5,671.19	207.49	622.48	275.70	827.10	2,657.15	7,971.45	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	171.58	514.75	128.92	386.76	754.28	2,262.85
1129	3440.115	S-J51-41	ea	2	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	225.63	451.27	275.70	551.40	2,675.29	5,350.58	2.0	4.5	404.12	8.9	52.54	105.07	808.24	204.55	409.09	136.15	272.30	797.35	1,594.71
1130	3440.116	S-J51-50	ea	1	2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	239.49	478.98	275.70	551.40	2,689.15	5,378.29	2.0	4.5	404.12	8.9	52.54	105.07	808.24	236.76	473.52	142.64	285.27	836.05	1,672.10
1131	3440.117	S-J52-20	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	313.09	313.09	482.48	482.48	4,599.99	4,599.99	1.0	6.4	578.11	6.4	75.15	75.15	578.11	328.27	328.27	201.95	201.95	1,183.48	1,183.48
1132	3440.118	S-J52-21	ea	3	3	30.6	3,308.19	91.8	496.23	1,488.69	9,924.58	312.16	936.49	482.48	1,447.43	4,599.06	13,797.18	3.0	3.2	286.05	9.5	37.19	111.56	858.14	325.86	977.59	132.83	398.49	781.93	2,345.78
1133	3440.119	S-J52-30	ea	4	4	30.6	3,308.19	122.4	496.23	1,984.92	13,232.77	322.07	1,288.28	482.48	1,929.91	4,608.97	18,435.87	4.0	14.5	1,307.32	57.8	169.95	679.81	5,229.27	337.84	1,351.35	375.25	1,501.02	2,190.36	8,761.45
1134	3440.120	S-J52-31	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	322.07	5,153.11	482.48	7,719.64	4,608.97	73,743.48	16.0	9.6	872.27	154.4	113.39	1,814.32	13,956.28	337.84	5,405.42	273.01	4,368.18	1,596.51	25,544.19
1135	3440.121	S-J52-32	ea	8	8	30.6	3,308.19	244.7	496.23	3,969.83	26,465.53	374.28	2,994.22	482.48	3,859.82	4,661.18	37,289.40	8.0	11.5	1,039.75	92.0	135.17	1,081.34	8,318.00	175.10	1,400.80	279.61	2,236.89	1,629.63	13,037.04
1136	3440.122	S-J52-33	ea	8	8	30.6	3,308.19	244.7	496.23	3,969.83	26,465.53	308.77	2,470.18	482.48	3,859.82	4,595.67	36,765.36	8.0	9.6	872.35	77.2	113.41	907.25	6,978.83	291.44	2,331.55	263.69	2,109.53	1,540.89	12,327.16
1137	3440.123	S-J52-34	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	305.44	4,887.12	482.48	7,719.64	4,592.34	73,477.49	16.0	9.6	872.27	154.4	113.39	1,814.32	13,956.28	278.00	4,447.93	260.96	4,175.41	1,524.62	24,393.94
1138	3440.124	S-J52-40	ea	4	4	30.6	3,308.19	122.4	496.23	1,984.92	13,232.77	352.98	1,411.94	482.48	1,929.91	4,639.88	18,559.53	4.0	4.4	399.96	17.7	51.99	207.98	1,599.84	400.93	1,603.71	174.71	698.85	1,027.59	4,110.38
1139	3440.125	S-J52-60	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	358.43	358.43	482.48	482.48	4,645.33	4,645.33	1.0	4.4	396.50	4.4	51.55	51.55	396.50	465.42	465.42	186.88	186.88	1,100.34	1,100.34
1140	3440.126	S-J52-70	ea	3	3	30.6	3,308.19	91.8	496.23	1,488.69	9,924.58	418.66	1,255.99	482.48	1,447.43	4,705.56	14,116.68	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	599.06	1,797.17	214.98	644.95	1,267.82	3,803.47
1141	3440.127	S-J53-01	ea	3	6	15.3	1,654.10	91.8	248.11	1,488.69	9,924.58	153.59	921.51	241.24	1,447.43	2,297.03	13,782.21	6.0	2.2	200.79	13.3	26.10	156.61	1,204.73	116.35	698.11	70.61	423.67	413.86	2,483.13
1142	3440.128	S-J54-80	ea	2	2	32.8	3,544.49	65.5	531.67	1,063.35	7,088.98	619.41	1,238.82	516.94	1,033.88	5,212.52	10,425.03	2.0	2.6	231.52	5.1	30.10	60.20	463.04	59.39	118.79	66.36	132.73	387.37	774.75
1143	3440.129	S-J54-90	ea	6	6	32.8	3,544.49	196.6	531.67	3,190.04	21,266.95	638.42	3,830.52	516.94	3,101.64	5,231.52	31,389.15	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	1,357.40	8,144.41	367.60	2,205.61	2,178.52	13,071.13
1144	3440.130	S-J55-01	ea	1	1	8.7	945.20	8.7	141.78	141.78	945.20	77.86	77.86	137.85	137.85	1,302.69	1,302.69	1.0	2.6	231.52	2.6	30.10	30.10	231.52	44.43	44.43	63.35	63.35	369.40	369.40
1145	3440.131	S-J56-40	ea	4	4	15.3	1,654.10	61.2	248.11	992.46	6,616.38	217.75	871.00	241.24	964.96	2,361.20	9,444.79	4.0	4.4	401.58	17.8	52.20	208.82	1,606.31	333.79	1,335.15	161.57	646.30	949.14	3,796.58
1146	3440.132	S-J57-30	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	417.80	417.80	310.16	310.16	3,173.67	3,173.67	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	564.29	564.29	419.88	419.88	2,456.73	2,456.73
1147	3440.133	S-J57-40	ea	1	2	19.7	2,126.69	39.3	319.00	638.01	4,253.39	488.73	977.47	310.16	620.33	3,244.60	6,489.19	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	771.95	1,543.91	463.63	927.26	2,717.56	5,435.11
1148	3440.134	S-J58-05	ea	2	2	15.3	1,654.10	30.6	248.11	496.23	3,308.19	288.83	577.66	241.24	482.48	2,432.28	4,864.56	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	489.17	978.34	406.69	813.39	2,377.84	4,755.68
1149	3440.135	S-J59-04	ea	2	2	15.3	1,654.10	30.6	248.11	496.23	3,308.19	193.38	386.75	241.24	482.48	2,336.83	4,673.65	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	172.32	344.64	342.91	685.82	1,997.21	3,994.41
1150	3440.136	S-J59-05	ea	6	6	15.3	1,654.10	91.8	248.11	1,488.69	9,924.58	202.13	1,212.78	241.24	1,447.43	2,345.58	14,073.48	6.0	14.4	1,303.15	86.5	169.41	1,016.46	7,818.90	194.15	1,164.91	345.34	2,072.07	2,012.06	12,072.33
1151	3440.137	S-J60-10	ea	2	2	19.7	2,126.69	39.3	319.00	638.01	4,253.39	382.94	765.88	310.16	620.33	3,138.80	6,277.61	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	352.94	705.88	276.48	552.96	1,617.14	3,234.27
1152	3440.138	S-J60-11	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	456.39	456.39	310.16	310.16	3,212.25	3,212.25	1.0	7.3	659.89	7.3	85.79	85.79	659.89	589.49	589.49	273.76	273.76	1,608.93	1,608.93
1153	3440.139	S-J60-21	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	460.33	1,380.98	310.16	930.49	3,216.19	9,648.57	3.0	5.1	461.65	15.3	60.01	180.04	1,384.95	183.44	550.31	145.43	436.28	850.53	2,551.58
1154	3440.140	S-J60-22	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	463.73	1,391.18	310.16	930.49	3,219.59	9,658.77	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	610.85	1,832.56	279.37	838.11	1,642.18	4,926.53
1155	3440.141	S-J60-40	ea	3	3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	483.82	1,451.45	310.16	930.49	3,239.68	9,719.04	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	990.48	2,971.43	355.80	1,067.39	2,098.22	6,294.67
1156	3440.142	S-J61-01	ea	1	1	17.5	1,890.40	17.5	283.56	283.56	1,890.40	309.67	309.67	275.70	275.70	2,759.32	2,759.32	1.0	4.4	396.50	4.4	51.55	51.55	396.50	521.94	521.94	198.26	198.26	1,168.24	1,168.24
1157	3440.143	S-J62-20	ea	6	6	10.9	1,181.50	65.5	177.22	1,063.35	7,088.98	162.54	975.21	172.31	1,033.88	1,693.57	10,161.42	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	145.07	870.44	123.53	741.18	722.12	4,332.73
1158	3440.144	S-J63-20	ea	3	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	318.06	954.17	379.09	1,137.27	3,686.33	11,059.00	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	345.01	1,035.03	377.03	1,131.08	2,200.87	6,602.62
1159	3440.145	S-J63-30	ea	3	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	322.63	967.88	379.09	1,137.27	3,690.90	11,072.71	3.0	5.1	461.65	15.3	60.01	180.04	1,384.95	440.63	1,321.90	197.21	591.63	1,159.51	3,478.52
1160	3440.146	S-J63-40	ea	2	2	24.0	2,599.29	48.1	389.89	779.79	5,198.59	328.36	656.72	379.09	758.18	3,696.64	7,393.28	2.0	5.1	461.65	10.2	60.01	120.03	923.30	18.75	37.49	112.26	224.53	652.67	1,305.35
1161	3440.147	S-J63-50	ea	6	6	24.0	2,599.29	144.2	389.89	2,339.36	15,595.76	335.08	2,010.47	379.09	2,274.54	3,703.36	22,220.14	6.0	5.1	461.65	30.7	60.01	360.09	2,769.90	202.75	1,216.53	149.31	895.88	873.73	5,242.40
1162	3440.148	S-J63-60	ea	2	3	24.0	2,599.29	72.1	389.89	1,169.68	7,797.88	350.03	1,050.08	379.09	1,137.27	3,718.30	11,154.91	3.0	5.7	517.11	17.2	67.22	201.67	1,551.32	435.96	1,307.87	209.30	627.90	1,229.59	3,688.76
1163	3440.149	S-J64-10	ea	3	3	4.4	472.60	13.1	70.89	212.67	1,417.80	192.48	577.44	68.93	206.78	804.89	2,414.68	3.0	5.1	461.65	15.3	60.01	180.04	1,384.95	126.61	379.83	133.99	401.96	782.26	2,346.78
1164	3440.150	S-J64-20	ea	8	8	4.4	472.60	35.0	70.89	567.12	3,780.79	202.15	1,617.22	68.93	551.40	814.57	6,516.53	8.0	4.4	400.13	35.4	52.02	416.14	3,201.06	74.03	592.22	108.94	871.52	635.12	5,080.94
1165	3440.151	S-K50-10	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,179.96	1,179.96	482.48	482.48	5,466.86	5,466.86	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	3,075.09	3,075.09	1,305.26	1,305.26	7,679.54	7,679.54
1166	3440.152	S-L50-20	ea	8	15	13.1	1,417.80	196.6	212.67	3,190.04	21,266.95	419.99	6,299.79	206.78	3,101.64	2,257.23	33,858.42	15.0	4.4	400.38	66.4	52.05	780.73	6,005.63	252.05	3,780.73	144.84	2,172.57	849.31	12,739.67
1167	3440.153	S-L50-21	ea	1	1	13.1	1,417.80	13.1	212.67	212.67	1,417.80	399.59	399.59	206.78	206.78	2,236.83	2,236.83	1.0	4.4	396.50	4.4	51.55	51.55	396.50	221.58	221.58	137.79	137.79	807.42	807.42
1168	3440.154	S-L50-30	ea	16	32	13.1	1,417.80	419.5	212.67	6,805.42	45,369.49	691.55	22,129.68	206.78	6,616.84	2,528.79	80,921.43	32.0	4.4	400.54	141.8	52.07	1,666.25	12,817.33	254.54	8,145.29	145.38	4,652.11	852.53	27,280.99
1169	3440.155	S-L50-40	ea	8	0	13.1	1,417.80	0.0	212.67	0.00	0.00	453.36	0.00	206.78	0.00	2,290.60	0.00	0.0	5.1	461.65	0.0	60.01	0.00	0.00	130.66	0.00	134.80	0.00	787.13	0.00
1170	3440.156	S-L51-01	ea	16	16	11.5	1,240.57	183.5	186.09	2,977.37	19,849.15	812.95	13,007.23	180.93	2,894.87	2,420.54	38,728.62	16.0	11.5	1,039.75	184.0	135.17	2,162.68	16,636.00	291.83	4,669.34	303.11	4,849.76	1,769.86	28,317.79
1171	3440.157	S-L52-20	ea	4	4	19.7	2,126.69	78.7	319.00	1,276.02	8,506.78	1,238.44	4,953.75	310.16	1,240.66	3,994.30	15,977.20	4.0	4.4	399.96	17.7	51.99	207.98	1,599.84	1,355.60	5,422.40	366.91	1,467.66	2,174.47	8,697.88
1172	3440.158	S-L52-21	ea	5	5	15.3	1,654.10	76.5	248.11	1,240.57	8,270.48	912.54	4,562.69	241.24	1,206.19	3,055.99	15,279.94	5.0	4.4	399.27	22.1	51.90	259.52	1,996.33	805.68	4,028.39	256.04	1,280.19	1,512.89	7,564.44
1173	3440.159	S-L52-40	ea	9	9	19.7	2,126.69	177.0	319.00	2,871.04	19,140.25	1,215.32	10,937.87	310.16	2,791.48	3,971.18	35,740.64	9.0	4.4	399.57	39.8	51.94	467.50	3,596.17	1,176.49	10,588.39	330.76	2,976.87	1,958.77	17,628.93
1174	3440.160	S-L52-41	ea	9	9	19.7	2,126.69	177.0	319.00	2,871.04	19,140.25	1,282.59	11,543.28	310.16	2,791.48	4,038.45	36,346.05	9.0	4.4	399.57	39.8	51.94	467.50	3,596.17	1,270.50	11,434.54	349.69	3,147.22	2,071.71	18,645.43
1175	3440.161	S-L53-01	ea	3	4	39.3	4,253.39	157.3	638.01	2,552.03	17,013.56	1,776.24	7,104.95	620.33	2,481.31	7,287.96	29,151.85	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	1,342.65	5,370.59	817.02	3,268.07	4,788.36	19,153.45
1176	3440.162	S-L53-02	ea	1	1	39.3	4,253.39	39.3	638.01	638.01	4,253.39	1,740.02	1,740.02	620.33	620.33	7,251.75	7,251.75	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	291.83	291.83	411.60	411.60	2,400.02	2,400.02
1177	3440.163	S-L54-50	ea	6	6	20.2	2,185.77	121.3	327.87	1,967.19	13,114.62	1,417.95	8,507.72	318.78	1,912.68	4,250.37	25,502.21	6.0	16.6	1,501.40	99.7	195.18	1,171.09	9,008.40	466.93	2,801.60	446.86	2,681.14	2,610.37	15,662.23
1178	3440.164	S-L54-51	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	1,325.20	1,325.20	310.16	310.16	4,081.06	4,081.06	1.0	4.4	396.50	4.4	51.55	51.55	396.50	1,124.14	1,124.14	319.50	319.50	1,891.69	1,891.69
1179	3440.165	S-L54-61	ea	2	2	22.4	2,422.07	44.8	363.31	726.62	4,844.14	1,434.78	2,869.56	353.24	706.49	4,573.40	9,146.80	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,146.91	2,293.81	325.88	651.76	1,929.44	3,858.88
1180	3440.166	S-L54-62	ea	1	1	21.8	2,362.99	21.8	354.45	354.45	2,362.99	1,385.30	1,385.30	344.63	344.63	4,447.37	4,447.37	1.0	4.4	396.50	4.4	51.55	51.55	396.50	1,163.04	1,163.04	327.33	327.33	1,938.42	1,938.42
1181	3440.167	S-L54-70	ea	3	3	31.1	3,367.27	93.4	505.09	1,515.27	10,101.80	1,675.16	5,025.48	491.09	1,473.28	6,038.61	18,115.83	3.0	4.4	401.58	13.3	52.20	156.61	1,204.73	1,406.72	4,220.17	377.58	1,132.75	2,238.09	6,714.27
1182	3440.168	S-L54-71	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.38	1,588.87	3,177.74	482.48	964.96	5,875.77	11,751.54	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,295.21	2,590.41	355.73	711.47	2,107.59	4,215.19
1183	3440.169	S-L54-80	ea	6	8	33.9	3,662.64	270.9	549.40	4,395.17	29,301.13	1,743.42	13,947.36	534.17	4,273.37	6,489.63	51,917.03	8.0	4.4	400.13	35.4	52.02	416.14	3,201.06	1,408.37	11,266.99	377.58	3,020.62	2,238.10	17,904.81
1184	3440.170	S-L54-90	ea	2	2	32.2	3,485.42	64.5	522.81	1,045.62	6,970.83	1,701.39	3,402.79	508.32	1,016.65	6,217.95	12,435.89	2.0	4.5	404.12	8.9	52.54	105.07	808.24	1,342.84	2,685.68	365.32	730.65	2,164.82	4,329.63
1185	3440.171	S-L55-01	ea	15	15	14.2	1,535.95	213.0	230.39	3,455.88	23,039.19	727.19	10,907.78	224.01	3,360.11	2,717.53	40,762.97	15.0	4.4	400.38	66.4	52.05	780.73	6,005.63	664.58	9,968.68	227.89	3,418.37	1,344.89	20,173.41
1186	3440.172	S-L56	ea	4	4	48.1	5,198.59	192.3	779.79	3,119.15	20,794.35	3,953.64	15,814.55	758.18	3,032.72	10,690.19	42,760.76	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	3,983.06	15,932.24	1,348.60	5,394.41	7,960.36	31,841.43
1187	3440.173	S-L57	ea	4	4	131.1	14,177.96	524.4	2,126.69	8,506.78	56,711.86	9,546.38	38,185.51	2,067.76	8,271.04	27,918.80	111,675.20	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	9,322.09	37,288.35	2,423.48	9,693.94	14,374.27	57,497.07
1188	3440.174	S-L59-10	ea	5	5	13.7	1,476.87	68.3	221.53	1,107.65	7,384.36	524.84	2,624.18	215.39	1,076.96	2,438.63	12,193.15	5.0	7.3	663.22	36.7	86.22	431.10	3,316.12	390.74	1,953.70	234.53	1,172.67	1,374.72	6,873.58
1189	3440.175	S-L59-20	ea	2	2	14.2	1,535.95	28.4	230.39	460.78	3,071.89	524.30	1,048.60	224.01	448.01	2,514.65	5,029.30	2.0	4.5	404.12	8.9	52.54	105.07	808.24	383.50	767.00	172.18	344.35	1,012.33	2,024.66
1190	3440.176	S-L59-30	ea	6	6	14.7	1,595.02	88.5	239.25	1,435.52	9,570.13	3,040.83	18,244.99	232.62	1,395.74	5,107.73	30,646.38	6.0	4.4	401.35	26.6	52.17	313.05	2,408.07	389.26	2,335.58	172.69	1,036.14	1,015.47	6,092.84
1191	3440.177	S-L60	ea	4	4	41.0	4,430.61	163.9	664.59	2,658.37	17,722.46	3,022.85	12,091.40	646.18	2,584.70	8,764.23	35,056.93	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	3,227.82	12,911.28	1,059.88	4,239.51	6,259.22	25,036.86
1192	3440.178	S-L61	ea	4	4	54.1	5,848.41	216.3	877.26	3,509.05	23,393.64	3,843.36	15,373.45	852.95	3,411.81	11,421.99	45,687.95	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	4,008.65	16,034.59	1,217.07	4,868.29	7,197.24	28,788.96
1193	3440.179	S-L62	ea	4	4	56.8	6,143.78	227.2	921.57	3,686.27	24,575.14	6,124.27	24,497.08	896.03	3,584.12	14,085.65	56,342.61	4.0	19.3	1,744.71	77.2	226.81	907.25	6,978.83	6,824.44	27,297.78	1,783.97	7,135.87	10,579.93	42,319.73
1194	3440.180	S-L64-10	ea	2	2	21.8	2,362.99	43.7	354.45	708.90	4,725.99	1,196.80	2,393.59	344.63	689.25	4,258.87	8,517.73	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	1,010.85	2,021.71	511.73	1,023.46	3,004.56	6,009.11
1195	3440.181	S-L65-01	ea	5	5	24.0	2,599.29	120.2	389.89	1,949.47	12,996.47	1,220.55	6,102.74	379.09	1,895.45	4,588.82	22,944.12	5.0	14.5	1,309.82	72.4	170.28	851.38	6,549.08	1,005.26	5,026.30	510.21	2,551.06	2,995.56	14,977.82
1196	3440.182	S-L65-02	ea	1	1	24.0	2,599.29	24.0	389.89	389.89	2,599.29	1,142.95	1,142.95	379.09	379.09	4,511.23	4,511.23	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	466.93	466.93	446.86	446.86	2,610.37	2,610.37
1197	3440.183	S-L66-01	ea	2	2	13.7	1,476.87	27.3	221.53	443.06	2,953.74	841.79	1,683.59	215.39	430.78	2,755.59	5,511.18	2.0	4.5	404.12	8.9	52.54	105.07	808.24	724.50	1,448.99	240.84	481.68	1,421.99	2,843.98
1198	3440.184	S-L67-10	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	958.04	958.04	224.01	224.01	2,948.39	2,948.39	1.0	11.5	1,039.75	11.5	135.17	135.17	1,039.75	291.83	291.83	303.11	303.11	1,769.86	1,769.86
1199	3440.185	S-L67-20	ea	2	2	14.2	1,535.95	28.4	230.39	460.78	3,071.89	785.19	1,570.38	224.01	448.01	2,775.54	5,551.07	2.0	6.4	577.42	12.8	75.06	150.13	1,154.83	529.81	1,059.63	242.36	484.72	1,424.65	2,849.31
1200	3440.186	S-L67-21	ea	3	3	14.2	1,535.95	42.6	230.39	691.18	4,607.84	814.73	2,444.18	224.01	672.02	2,805.07	8,415.22	3.0	7.4	665.44	22.1	86.51	259.52	1,996.33	568.30	1,704.91	270.80	812.41	1,591.05	4,773.16
1201	3440.187	S-L67-22	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	929.29	929.29	224.01	224.01	2,919.63	2,919.63	1.0	6.4	578.11	6.4	75.15	75.15	578.11	728.91	728.91	282.61	282.61	1,664.78	1,664.78
1202	3440.188	S-L71-20	ea	24	37	18.6	2,008.55	687.1	301.28	11,147.42	74,316.17	999.85	36,994.30	292.93	10,838.52	3,602.61	133,296.40	37.0	6.4	574.73	235.2	74.72	2,764.46	21,265.07	1,095.14	40,520.14	355.55	13,155.34	2,100.14	77,705.01
1203	3440.189	S-L71-21	ea	13	13	18.6	2,008.55	241.4	301.28	3,916.66	26,111.09	1,077.87	14,012.25	292.93	3,808.13	3,680.63	47,848.13	13.0	11.5	1,039.75	149.5	135.17	1,757.18	13,516.75	291.83	3,793.84	303.11	3,940.43	1,769.86	23,008.20
1204	3440.190	S-L72-20	ea	2	2	19.7	2,126.69	39.3	319.00	638.01	4,253.39	1,419.54	2,839.09	310.16	620.33	4,175.41	8,350.81	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	1,142.14	2,284.28	435.36	870.73	2,565.22	5,130.45
1205	3440.191	S-L72-30	ea	8	8	19.7	2,126.69	157.3	319.00	2,552.03	17,013.56	1,337.41	10,699.31	310.16	2,481.31	4,093.28	32,746.22	8.0	9.6	872.35	77.2	113.41	907.25	6,978.83	1,240.78	9,926.21	454.82	3,638.53	2,681.35	21,450.82
1206	3440.192	S-L72-40	ea	4	5	19.7	2,126.69	98.3	319.00	1,595.02	10,633.47	1,468.87	7,344.35	310.16	1,550.82	4,224.73	21,123.67	5.0	9.6	871.17	48.2	113.25	566.26	4,355.87	1,416.27	7,081.35	489.87	2,449.35	2,890.57	14,452.83
1207	3440.193	S-L72-41	ea	1	1	19.7	2,126.69	19.7	319.00	319.00	2,126.69	1,527.47	1,527.47	310.16	310.16	4,283.33	4,283.33	1.0	9.7	874.78	9.7	113.72	113.72	874.78	1,498.06	1,498.06	507.18	507.18	2,993.75	2,993.75
1208	3440.194	S-L73-20	ea	8	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	1,174.15	1,174.15	224.01	224.01	3,164.49	3,164.49	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	291.83	291.83	411.60	411.60	2,400.02	2,400.02
1209	3440.195	S-L75-20	ea	1	1	14.2	1,535.95	14.2	230.39	230.39	1,535.95	402.69	402.69	224.01	224.01	2,393.04	2,393.04	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	466.93	466.93	446.86	446.86	2,610.37	2,610.37
1210	3440.196	S-L76-30	ea	4	4	14.7	1,595.02	59.0	239.25	957.01	6,380.08	807.70	3,230.80	232.62	930.49	2,874.60	11,498.39	4.0	16.6	1,501.40	66.4	195.18	780.73	6,005.60	466.93	1,867.74	446.86	1,787.42	2,610.37	10,441.49
1211	3440.197	S-L77-40	ea	1	1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	811.14	811.14	241.24	241.24	2,954.59	2,954.59	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	466.93	466.93	446.86	446.86	2,610.37	2,610.37
1212	3440.198	S-L78-20	ea	1	1	14.7	1,595.02	14.7	239.25	239.25	1,595.02	1,330.30	1,330.30	232.62	232.62	3,397.20	3,397.20	1.0	16.6	1,501.40	16.6	195.18	195.18	1,501.40	466.93	466.93	446.86	446.86	2,610.37	2,610.37
1213	3440.199	S-L79	ea	1	1	22.9	2,481.14	22.9	372.17	372.17	2,481.14	1,258.50	1,258.50	361.86	361.86	4,473.67	4,473.67	1.0	6.4	578.11	6.4	75.15	75.15	578.11	1,312.14	1,312.14	400.03	400.03	2,365.44	2,365.44
1214	3440.200	S-M50-01	ea	9	9	22.4	2,422.07	201.6	363.31	3,269.79	21,798.62	1,789.52	16,105.65	353.24	3,179.18	4,928.14	44,353.24	9.0	22.1	1,996.33	198.7	259.52	2,335.71	17,966.97	466.93	4,202.41	563.17	5,068.52	3,285.96	29,573.61
1215	3440.201	S-M50-02	ea	9	9	22.4	2,422.07	201.6	363.31	3,269.79	21,798.62	1,898.48	17,086.28	353.24	3,179.18	5,037.10	45,333.88	9.0	22.1	1,996.33	198.7	259.52	2,335.71	17,966.97	466.93	4,202.41	563.17	5,068.52	3,285.96	29,573.61
1216	3440.202	S-M51-01	ea	2	1	59.0	6,380.08	59.0	957.01	957.01	6,380.08	4,025.68	4,025.68	930.49	930.49	12,293.26	12,293.26	1.0	32.3	2,919.64	32.3	379.55	379.55	2,919.64	2,444.34	2,444.34	1,178.26	1,178.26	6,921.80	6,921.80
1217	3440.203	S-M52-01	ea	3	3	28.9	3,130.97	86.8	469.65	1,408.94	9,392.90	2,875.58	8,626.75	456.63	1,369.89	6,932.83	20,798.48	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	466.93	1,400.80	563.17	1,689.51	3,285.96	9,857.87
1218	3440.204	S-M52-02	ea	3	3	28.9	3,130.97	86.8	469.65	1,408.94	9,392.90	2,666.94	8,000.82	456.63	1,369.89	6,724.18	20,172.55	3.0	22.1	1,996.33	66.2	259.52	778.57	5,988.99	1,080.23	3,240.69	686.64	2,059.92	4,022.72	12,068.16
1219	3440.205	S-M53-08	ea	8	8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	420.92	3,367.35	275.70	2,205.61	2,870.57	22,964.60	8.0	9.7	874.43	77.4	113.68	909.41	6,995.46	298.55	2,388.44	265.61	2,124.88	1,552.27	12,418.19
1220	3440.206	S-M53-09	ea	16	12	17.5	1,890.40	209.7	283.56	3,402.71	22,684.74	461.32	5,535.83	275.70	3,308.42	2,910.98	34,931.70	12.0	12.9	1,163.02	154.4	151.19	1,814.32	13,956.28	369.94	4,439.32	347.81	4,173.69	2,031.97	24,383.61
1221	3440.207	S-M54-01	ea	5	5	21.8	2,362.99	109.2	354.45	1,772.25	11,814.97	452.01	2,260.05	344.63	1,723.13	3,514.08	17,570.40	5.0	16.6	1,501.40	83.1	195.18	975.91	7,507.00	1,209.34	6,046.68	596.31	2,981.55	3,502.23	17,511.14
1222	3440.208	S-M54-02	ea	4	4	21.8	2,362.99	87.4	354.45	1,417.80	9,451.96	621.82	2,487.27	344.63	1,378.51	3,683.89	14,735.55	4.0	25.7	2,326.28	102.9	302.42	1,209.67	9,305.12	820.93	3,283.70	711.98	2,847.92	4,161.60	16,646.41
1223	3440.209	S-M55-02	ea	3	3	6.6	708.90	19.7	106.33	319.00	2,126.69	261.51	784.53	103.39	310.16	1,180.13	3,540.40	3.0	3.1	280.05	9.3	36.41	109.22	840.15	101.96	305.87	86.35	259.04	504.76	1,514.28
1224	3440.210	S-M55-03	ea	10	10	6.6	708.90	65.5	106.33	1,063.35	7,088.98	261.59	2,615.86	103.39	1,033.88	1,180.21	11,802.07	10.0	2.6	231.52	25.6	30.10	300.98	2,315.20	432.09	4,320.89	141.41	1,414.11	835.12	8,351.18
1225	3440.211	S-M55-05	ea	6	6	6.6	708.90	39.3	106.33	638.01	4,253.39	262.47	1,574.81	103.39	620.33	1,181.09	7,086.53	6.0	5.1	461.65	30.7	60.01	360.09	2,769.90	561.21	3,367.25	221.48	1,328.87	1,304.35	7,826.11
1226	3440.212	S-M55-06	ea	40	40	6.6	708.90	262.2	106.33	4,253.39	28,355.93	265.16	10,606.47	103.39	4,135.52	1,183.78	47,351.31	40.0	4.7	426.47	188.7	55.44	2,217.66	17,058.91	111.27	4,450.72	122.63	4,905.13	715.81	28,632.42
1227	3440.213	S-M55-07	ea	3	2	6.6	708.90	13.1	106.33	212.67	1,417.80	272.23	544.45	103.39	206.78	1,190.85	2,381.69	2.0	9.7	874.78	19.4	113.72	227.44	1,749.56	135.08	270.17	232.77	465.53	1,356.35	2,712.70
1228	3440.214	S-M55-08	ea	10	13	6.6	708.90	85.2	106.33	1,382.35	9,215.68	305.13	3,966.66	103.39	1,344.04	1,223.75	15,908.73	13.0	9.7	873.07	125.5	113.50	1,475.49	11,349.96	198.04	2,574.53	245.06	3,185.72	1,429.67	18,585.71
1229	3440.215	S-M55-09	ea	7	7	6.6	708.90	45.9	106.33	744.34	4,962.29	322.62	2,258.35	103.39	723.72	1,241.24	8,688.70	7.0	14.5	1,308.11	101.3	170.05	1,190.38	9,156.77	260.74	1,825.18	359.92	2,519.44	2,098.82	14,691.76
1230	3440.216	S-M56-01	ea	20	20	6.6	708.90	131.1	106.33	2,126.69	14,177.96	313.11	6,262.22	103.39	2,067.76	1,231.73	24,634.64	20.0	7.3	664.06	146.9	86.33	1,726.55	13,281.13	198.15	3,963.07	195.96	3,919.15	1,144.49	22,889.90
1231	3440.217	S-M56-04	ea	2	2	6.6	708.90	13.1	106.33	212.67	1,417.80	357.67	715.34	103.39	206.78	1,276.29	2,552.58	2.0	14.5	1,311.48	29.0	170.49	340.98	2,622.96	301.07	602.15	368.83	737.66	2,151.88	4,303.75
1232	3440.218	S-M57-05	ea	4	4	6.6	708.90	26.2	106.33	425.34	2,835.59	264.33	1,057.32	103.39	413.55	1,182.95	4,731.80	4.0	4.4	396.50	17.6	51.55	206.18	1,586.00	111.64	446.58	115.66	462.64	675.35	2,701.39
1233	3440.219	S-M58-01	ea	4	4	7.6	827.05	30.6	124.06	496.23	3,308.19	262.08	1,048.33	120.62	482.48	1,333.81	5,335.23	4.0	2.6	231.52	10.2	30.10	120.39	926.08	193.00	771.98	93.27	373.08	547.88	2,191.53
1234	3440.220	S-M58-02	ea	3	3	7.6	827.05	22.9	124.06	372.17	2,481.14	262.10	786.29	120.62	361.86	1,333.82	4,001.46	3.0	2.6	231.52	7.7	30.10	90.29	694.56	14.19	42.58	57.27	171.81	333.08	999.25
1235	3440.221	S-M58-05	ea	2	2	7.6	827.05	15.3	124.06	248.11	1,654.10	410.56	821.12	120.62	241.24	1,482.29	2,964.57	2.0	5.1	461.65	10.2	60.01	120.03	923.30	15.35	30.70	111.59	223.17	648.60	1,297.20
1236	3440.222	S-M58-06	ea	9	9	7.6	827.05	68.8	124.06	1,116.51	7,443.43	484.81	4,363.26	120.62	1,085.57	1,556.53	14,008.78	9.0	4.4	401.35	40.0	52.17	469.57	3,612.11	403.05	3,627.47	175.47	1,579.19	1,032.04	9,288.34
1237	3440.223	S-M58-07	ea	46	46	7.6	827.05	351.8	124.06	5,706.63	38,044.21	567.78	26,117.87	120.62	5,548.49	1,639.50	75,417.20	46.0	9.7	872.85	444.1	113.47	5,219.63	40,151.02	532.45	24,492.63	312.33	14,367.09	1,831.10	84,230.37
1238	3440.224	S-M58-08	ea	42	42	7.6	827.05	321.2	124.06	5,210.40	34,736.01	291.55	12,244.90	120.62	5,066.02	1,363.27	57,257.33	42.0	9.7	872.80	405.5	113.46	4,765.49	36,657.62	183.38	7,702.06	242.04	10,165.69	1,411.69	59,290.86
1239	3440.225	S-M59-01	ea	3	3	6.6	708.90	19.7	106.33	319.00	2,126.69	230.19	690.56	103.39	310.16	1,148.81	3,446.42	3.0	14.5	1,308.71	43.4	170.13	510.40	3,926.12	348.52	1,045.55	377.73	1,133.19	2,205.08	6,615.25
1240	3440.226	S-M60-01	ea	1	1	39.3	4,253.39	39.3	638.01	638.01	4,253.39	815.86	815.86	620.33	620.33	6,327.58	6,327.58	1.0	22.1	1,996.33	22.1	259.52	259.52	1,996.33	13.17	13.17	471.83	471.83	2,740.85	2,740.85
1241	3440.227	S-M61-20	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,127.95	1,127.95	482.48	482.48	5,414.85	5,414.85	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	2,325.41	2,325.41	774.42	774.42	4,572.40	4,572.40
1242	3440.228	S-M61-21	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.38	921.69	1,843.39	482.48	964.96	5,208.59	10,417.19	2.0	9.7	874.78	19.4	113.72	227.44	1,749.56	1,202.02	2,404.03	447.58	895.16	2,638.10	5,276.20
1243	3440.229	S-M61-30	ea	2	2	30.6	3,308.19	61.2	496.23	992.46	6,616.38	1,220.51	2,441.03	482.48	964.96	5,507.41	11,014.82	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	2,199.86	4,399.71	648.31	1,296.62	3,835.89	7,671.77
1244	3440.230	S-M61-31	ea	16	16	30.6	3,308.19	489.4	496.23	7,939.66	52,931.07	807.87	12,925.89	482.48	7,719.64	5,094.77	81,516.26	16.0	11.8	1,064.10	188.3	138.33	2,213.33	17,025.64	1,275.10	20,401.57	506.79	8,108.64	2,984.32	47,749.18
1245	3440.231	S-M61-40	ea	16	16	32.8	3,544.49	524.4	531.67	8,506.78	56,711.86	1,277.31	20,437.04	516.94	8,271.04	5,870.42	93,926.72	16.0	14.5	1,309.49	231.8	170.23	2,723.73	20,951.76	2,211.45	35,383.14	752.97	12,047.51	4,444.13	71,106.14
1246	3440.232	S-M61-41	ea	4	5	32.8	3,544.49	163.9	531.67	2,658.37	17,722.46	1,277.31	6,386.57	516.94	2,584.70	5,870.42	29,352.10	5.0	9.6	871.17	48.2	113.25	566.26	4,355.87	2,211.45	11,057.23	649.96	3,249.80	3,845.83	19,229.17
1247	3440.233	S-M61-42	ea	5	5	32.8	3,544.49	163.9	531.67	2,658.37	17,722.46	864.00	4,320.00	516.94	2,584.70	5,457.10	27,285.52	5.0	9.6	871.17	48.2	113.25	566.26	4,355.87	1,431.04	7,155.22	492.84	2,464.22	2,908.31	14,541.57

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1248	3440.234	S-M62-30	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,220.44	1,220.44	482.48	482.48	5,507.34	5,507.34	1.0	9.7	874.78	9.7	113.72	113.72	874.78	2,337.01	2,337.01	676.09	676.09	4,001.59	4,001.59
1249	3440.235	S-M62-31	ea	1	2	30.6	3,308.19	61.2	496.23	992.46	6,616.38	807.87	1,615.74	482.48	964.96	5,094.77	10,189.53	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	1,274.92	2,549.85	462.10	924.20	2,724.75	5,449.49
1250	3440.236	S-M62-32	ea	1	1	30.6	3,308.19	30.6	496.23	496.23	3,308.19	1,260.12	1,260.12	482.48	482.48	5,547.02	5,547.02	1.0	14.4	1,303.15	14.4	169.41	169.41	1,303.15	2,187.52	2,187.52	746.66	746.66	4,406.74	4,406.74
1251	3440.237	S-M62-40	ea	2	2	32.8	3,544.49	65.5	531.67	1,063.35	7,088.98	1,277.31	2,554.63	516.94	1,033.88	5,870.42	11,740.84	2.0	14.4	1,303.15	28.8	169.41	338.82	2,606.30	2,211.45	4,422.89	751.48	1,502.97	4,435.49	8,870.98
1252	3440.238	S-M62-41	ea	3	3	32.8	3,544.49	98.3	531.67	1,595.02	10,633.47	865.90	2,597.70	516.94	1,550.82	5,459.00	16,377.01	3.0	9.7	874.78	29.0	113.72	341.16	2,624.34	1,246.94	3,740.81	456.61	1,369.84	2,692.05	8,076.16
1253	3440.239	S-M63-05	ea	10	10	7.6	827.05	76.5	124.06	1,240.57	8,270.48	264.90	2,649.01	120.62	1,206.19	1,336.63	13,366.26	10.0	5.1	461.65	51.1	60.01	600.15	4,616.50	13.42	134.24	111.20	1,112.00	646.29	6,462.89
1254	3440.240	S-M66-01	ea	16	16	14.2	1,535.95	227.2	230.39	3,686.27	24,575.14	283.68	4,538.81	224.01	3,584.12	2,274.02	36,384.34	16.0	9.7	873.05	154.5	113.50	1,815.94	13,968.77	843.00	13,487.95	374.90	5,998.33	2,204.44	35,271.00
1255	3440.241	S-M66-02	ea	12	12	14.2	1,535.95	170.4	230.39	2,764.70	18,431.35	317.72	3,812.63	224.01	2,688.09	2,308.06	27,696.78	12.0	9.7	873.05	115.9	113.50	1,361.96	10,476.58	887.17	10,645.99	383.79	4,605.48	2,257.50	27,090.01
1256	3440.242	S-M67-20	ea	2	2	38.2	4,135.24	76.5	620.29	1,240.57	8,270.48	1,440.11	2,880.22	603.10	1,206.19	6,798.73	13,597.46	2.0	9.7	874.09	19.3	113.63	227.26	1,748.18	2,306.44	4,612.89	669.77	1,339.54	3,963.94	7,927.87
1257	3440.243	S-M67-40	ea	3	3	50.3	5,434.89	150.8	815.23	2,445.70	16,304.66	1,532.86	4,598.57	792.64	2,377.93	8,575.62	25,726.85	3.0	9.7	874.32	29.0	113.66	340.98	2,622.96	2,954.85	8,864.56	800.36	2,401.09	4,743.20	14,229.60
1258	3310.020	Mechanical Shaft Plaftorm/Staging	LS	0	7	174.8	18,903.95	1223.5	2,835.59	19,849.15	132,327.67	3,843.30	26,903.09	2,757.01	19,299.10	28,339.86	198,379.02	7.0	1173.4	106,078.60	8,213.5	13,790.22	96,531.53	742,550.20	43,599.98	305,199.84	33,707.83	235,954.78	197,176.62	1,380,236.34
1258a	Added	House Keeping pads for MECH Equipment	ea		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	3527.4	318,895.68	3,527.38	41,456.44	41,456.44	318,895.68	6,111.00	6,111.00	76,175.49	76,175.49	442,638.61	442,638.61
1258b	Added	Pipe Supports With no Pay Item	ea		2,144	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,144.0	4.4	401.65	9,525.28	52.21	111,948.26	861,140.48	63.61	136,385.14	107.20	229,838.53	624.68	1,339,312.42
B&M-0326	Added	S-A51	ea		3	2.2	236.30	6.6	35.44	106.33	708.90	17.38	52.15	34.46	103.39	323.59	970.77	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0327	Added	S-C52-02	ea		1	2.2	236.30	2.2	35.44	35.44	236.30	24.83	24.83	34.46	34.46	331.04	331.04	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0328	Added	S-E52-05	ea		1	15.3	1,654.10	15.3	248.11	248.11	1,654.10	383.65	383.65	241.24	241.24	2,527.10	2,527.10	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0329	Added	S-E52-07	ea		3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	470.56	1,411.67	241.24	723.72	2,614.00	7,842.01	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0330	Added	S-E52-08	ea		3	15.3	1,654.10	45.9	248.11	744.34	4,962.29	557.46	1,672.39	241.24	723.72	2,700.91	8,102.74	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0331	Added	S-H54-01	ea		7	19.7	2,126.69	137.6	319.00	2,233.03	14,886.86	422.14	2,954.95	310.16	2,171.15	3,178.00	22,245.99	7.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0332	Added	S-H54-02	ea		3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	422.14	1,266.41	310.16	930.49	3,178.00	9,534.00	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0333	Added	S-H54-03	ea		3	19.7	2,126.69	59.0	319.00	957.01	6,380.08	422.14	1,266.41	310.16	930.49	3,178.00	9,534.00	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0334	Added	S-H55-01	ea		3	10.9	1,181.50	32.8	177.22	531.67	3,544.49	376.20	1,128.59	172.31	516.94	1,907.23	5,721.69	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0335	Added	S-J51-202	ea		2	17.5	1,890.40	35.0	283.56	567.12	3,780.79	193.97	387.95	275.70	551.40	2,643.63	5,287.26	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0336	Added	S-J65-01	ea		1	10.9	1,181.50	10.9	177.22	177.22	1,181.50	263.88	263.88	172.31	172.31	1,794.92	1,794.92	1.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0337	Added	S-L54-30	ea		6	20.2	2,185.77	121.3	327.87	1,967.19	13,114.62	1,396.95	8,381.68	318.78	1,912.68	4,229.36	25,376.17	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0338	Added	S-L58-10	ea		45	6.6	708.90	295.0	106.33	4,785.06	31,900.42	240.37	10,816.55	103.39	4,652.46	1,158.99	52,154.50	45.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0339	Added	S-L73	ea		8	14.2	1,535.95	113.6	230.39	1,843.14	12,287.57	1,167.02	9,336.16	224.01	1,792.06	3,157.37	25,258.93	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0340	Added	S-M53-07	ea		8	17.5	1,890.40	139.8	283.56	2,268.47	15,123.16	420.92	3,367.35	275.70	2,205.61	2,870.57	22,964.60	8.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0341	Added	S-M56-03	ea		2	6.6	708.90	13.1	106.33	212.67	1,417.80	385.20	770.39	103.39	206.78	1,303.82	2,607.63	2.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0342	Added	S-M57-06	ea		6	6.6	708.90	39.3	106.33	638.01	4,253.39	385.20	2,311.17	103.39	620.33	1,303.82	7,822.90	6.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0343	Added	S-M65	ea		3	13.1	1,417.80	39.3	212.67	638.01	4,253.39	1,107.75	3,323.24	206.78	620.33	2,944.99	8,834.97	3.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0344	Added	S-M68	ea		4	13.1	1,417.80	52.4	212.67	850.68	5,671.19	404.12	1,616.48	206.78	827.10	2,241.36	8,965.44	4.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST03		SUB-TOTAL PIPING/MECHANICAL - SUPPLY AND INSTALLATION	$ -					226524.1		$3,646,983.56	$24,313,223.72		$17,990,380.14		$3,184,496.91		$49,135,084.32				190246.0		$2,235,916.81	$17,199,360.10		$16,584,405.35		$6,238,443.62		$42,258,125.88
		0	0.00																											
		HVAC SYSTEMS	0																											
		HVAC SYSTEMS - SUPPLY AND INSTALLATION	0																											
1259	3351.010	EDD (Dewatering gallery supply and Exhaust)	LS	0	1	3027.8	320,919.06	3027.8	48,137.86	48,137.86	320,919.06	296,518.43	296,518.43	87,653.45	87,653.45	753,228.79	753,228.79	1.0	3693.6	333,924.99	3,693.6	43,410.25	43,410.25	333,924.99	203,124.55	203,124.55	111,424.10	111,424.10	691,883.89	691,883.89
1260	3351.020	EGR (Exhaust for Trans., Storage and Garbage rooms)	LS	0	1	94.2	10,212.90	94.2	1,531.94	1,531.94	10,212.90	2,846.90	2,846.90	13,120.43	13,120.43	27,712.16	27,712.16	1.0	1083.6	97,961.57	1,083.6	12,735.00	12,735.00	97,961.57	54,605.09	54,605.09	31,559.36	31,559.36	196,861.02	196,861.02
1261	3351.030	EKH (Kitchen range exhaust)	LS	0	1	27.7	3,174.22	27.7	476.13	476.13	3,174.22	1,166.11	1,166.11	3,961.52	3,961.52	8,777.97	8,777.97	1.0	203.3	18,378.71	203.3	2,389.23	2,389.23	18,378.71	13,832.27	13,832.27	6,670.56	6,670.56	41,270.78	41,270.78
1262	3351.040	END (Exhaust North RCC Dom)	LS	0	1	141.2	15,016.37	141.2	2,252.45	2,252.45	15,016.37	6,482.62	6,482.62	13,093.70	13,093.70	36,845.14	36,845.14	1.0	317.2	28,672.29	317.2	3,727.40	3,727.40	28,672.29	12,378.04	12,378.04	8,507.94	8,507.94	53,285.66	53,285.66
1263	3351.050	EOR (Exhaust oil Storage Room)	LS	0	1	66.9	7,282.23	66.9	1,092.33	1,092.33	7,282.23	847.88	847.88	11,859.51	11,859.51	21,081.95	21,081.95	1.0	92.2	8,331.90	92.2	1,083.15	1,083.15	8,331.90	8,808.65	8,808.65	3,514.79	3,514.79	21,738.49	21,738.49
1264	3351.060	ESB (South service bay vent and exhaust)	LS	0	1	424.9	45,975.56	424.9	6,896.33	6,896.33	45,975.56	19,436.59	19,436.59	22,883.46	22,883.46	95,191.95	95,191.95	1.0	211.9	19,153.68	211.9	2,489.98	2,489.98	19,153.68	32,757.46	32,757.46	10,662.83	10,662.83	65,063.95	65,063.95
1265	3351.070	ESP (Exhaust for Waste Water treatment Room)	LS	0	1	242.6	27,460.18	242.6	4,119.03	4,119.03	27,460.18	29,514.84	29,514.84	35,287.66	35,287.66	96,381.70	96,381.70	1.0	133.6	12,076.41	133.6	1,569.93	1,569.93	12,076.41	15,141.71	15,141.71	5,597.55	5,597.55	34,385.60	34,385.60
1266	3351.080	ESR (Ventilate and exhaust Oil/water Interceptor Room)	LS	0	1	258.8	29,360.51	258.8	4,404.08	4,404.08	29,360.51	26,307.63	26,307.63	41,768.59	41,768.59	101,840.80	101,840.80	1.0	705.8	63,811.85	705.8	8,295.54	8,295.54	63,811.85	39,313.93	39,313.93	21,466.64	21,466.64	132,887.96	132,887.96
1267	3351.090	ESW (Exhaust Storage, Washrooms and Janitor rooms)	LS	0	1	566.0	64,465.94	566.0	9,669.89	9,669.89	64,465.94	58,414.23	58,414.23	52,729.11	52,729.11	185,279.17	185,279.17	1.0	984.0	88,954.53	984.0	11,564.09	11,564.09	88,954.53	57,515.11	57,515.11	30,317.43	30,317.43	188,351.15	188,351.15
1268	3351.100	EWT (Exhaust and Ventilate the Wastewater Treatment Room)	LS	0	1	405.0	43,881.25	405.0	6,582.19	6,582.19	43,881.25	16,612.24	16,612.24	21,392.33	21,392.33	88,468.01	88,468.01	1.0	153.7	13,891.13	153.7	1,805.85	1,805.85	13,891.13	13,467.95	13,467.95	5,614.81	5,614.81	34,779.74	34,779.74
1269	3351.110	PSC (Pressurize 4 Stairwells)	LS	0	1	1442.1	159,761.37	1442.1	23,964.21	23,964.21	159,761.37	169,092.24	169,092.24	140,502.08	140,502.08	493,319.89	493,319.89	1.0	3914.6	353,903.54	3,914.6	46,007.46	46,007.46	353,903.54	248,256.96	248,256.96	124,627.68	124,627.68	772,795.64	772,795.64
1270	3351.120	VCC (Control Room, Communication Room and assoc. space)	LS	0	1	2960.5	316,522.16	2960.5	47,478.32	47,478.32	316,522.16	114,980.96	114,980.96	362,922.09	362,922.09	841,903.54	841,903.54	1.0	5320.8	481,032.33	5,320.8	62,534.20	62,534.20	481,032.33	404,624.46	404,624.46	182,951.16	182,951.16	1,131,142.15	1,131,142.15
1271	3351.130	VCR (Ventilation and Cooling for Compressor Room)	LS	0	1	287.1	32,405.65	287.1	4,860.85	4,860.85	32,405.65	8,313.14	8,313.14	178,923.90	178,923.90	224,503.55	224,503.55	1.0	313.9	28,375.62	313.9	3,688.83	3,688.83	28,375.62	82,255.67	82,255.67	22,506.39	22,506.39	136,826.51	136,826.51
1272	3351.140	VDA (Ventilate Dewatering, Drainage and Draft tube galleries)	LS	0	1	67.8	7,649.77	67.8	1,147.47	1,147.47	7,649.77	5,365.40	5,365.40	19,963.27	19,963.27	34,125.92	34,125.92	1.0	1013.0	91,577.48	1,013.0	11,905.07	11,905.07	91,577.48	38,298.76	38,298.76	27,065.11	27,065.11	168,846.42	168,846.42
1273	3351.150	VDT (Ventilate Draft Tube Gallery)	LS	0	1	148.6	17,058.13	148.6	2,558.72	2,558.72	17,058.13	18,083.59	18,083.59	25,999.38	25,999.38	63,699.82	63,699.82	1.0	292.3	26,429.19	292.3	3,435.79	3,435.79	26,429.19	188,527.90	188,527.90	43,444.29	43,444.29	261,837.17	261,837.17
1274	3351.160	VEG (Diesel Emergency Generator)	LS	0	1	1218.3	127,765.53	1218.3	19,164.83	19,164.83	127,765.53	101,847.49	101,847.49	34,568.39	34,568.39	283,346.24	283,346.24	1.0	1692.4	152,997.90	1,692.4	19,889.73	19,889.73	152,997.90	101,633.12	101,633.12	52,805.68	52,805.68	327,326.43	327,326.43
1275	3351.170	VEL (Ventilate and Exhaust Elevator Machine Room)	LS	0	1	159.4	17,137.35	159.4	2,570.60	2,570.60	17,137.35	4,691.03	4,691.03	21,106.49	21,106.49	45,505.47	45,505.47	1.0	153.5	13,874.50	153.5	1,803.69	1,803.69	13,874.50	15,488.57	15,488.57	6,017.71	6,017.71	37,184.46	37,184.46
1276	3351.180	VER (Ventilate Electrical Battery and Charger Rooms)	LS	0	1	3054.0	323,971.80	3054.0	48,595.77	48,595.77	323,971.80	146,800.76	146,800.76	344,381.53	344,381.53	863,749.87	863,749.87	1.0	5009.5	452,888.24	5,009.5	58,875.47	58,875.47	452,888.24	369,826.56	369,826.56	170,198.18	170,198.18	1,051,788.45	1,051,788.45
1277	3351.190	VFP (Ventilate the Fire Pump Room)	LS	0	1	78.8	8,979.41	78.8	1,346.91	1,346.91	8,979.41	6,988.32	6,988.32	13,843.96	13,843.96	31,158.60	31,158.60	1.0	86.3	7,803.72	86.3	1,014.48	1,014.48	7,803.72	12,156.81	12,156.81	4,093.61	4,093.61	25,068.62	25,068.62
1278	3351.200	VIG (Ventilation for Lower inspection galleries)	LS	0	1	171.0	19,353.14	171.0	2,902.97	2,902.97	19,353.14	1,258.44	1,258.44	72,085.58	72,085.58	95,600.13	95,600.13	1.0	357.1	32,285.09	357.1	4,197.06	4,197.06	32,285.09	8,811.76	8,811.76	8,566.77	8,566.77	53,860.68	53,860.68
1279	3351.210	VIL (Ventilate and Exhaust Intake Gate Hoist Building)	LS	0	1	1372.9	154,660.52	1372.9	23,199.08	23,199.08	154,660.52	30,959.61	30,959.61	221,122.00	221,122.00	429,941.20	429,941.20	1.0	4744.0	428,883.76	4,744.0	55,754.89	55,754.89	428,883.76	1,799,842.07	1,799,842.07	452,658.07	452,658.07	2,737,138.78	2,737,138.78
1280	3351.220	VMR (Machine Hall Main Supply and Exhaust)	LS	0	1	8806.8	988,253.27	8806.8	148,237.99	148,237.99	988,253.27	1,218,861.07	1,218,861.07	3,386,009.35	3,386,009.35	5,741,361.68	5,741,361.68	1.0	16522.7	1,493,745.55	16,522.7	194,186.92	194,186.92	1,493,745.55	4,112,783.74	4,112,783.74	1,142,937.11	1,142,937.11	6,943,653.33	6,943,653.33
1281	3351.230	VMS (Warehouse and Workshop spaces)	LS	0	1	1163.0	132,192.16	1163.0	19,828.82	19,828.82	132,192.16	123,796.81	123,796.81	191,712.06	191,712.06	467,529.86	467,529.86	1.0	2038.5	184,293.14	2,038.5	23,958.11	23,958.11	184,293.14	116,486.01	116,486.01	62,428.30	62,428.30	387,165.56	387,165.56
1282	3351.240	VND (Ventilate North RCC Dam)	LS	0	1	182.9	20,028.84	182.9	3,004.33	3,004.33	20,028.84	12,752.68	12,752.68	23,835.04	23,835.04	59,620.88	59,620.88	1.0	1059.3	95,768.38	1,059.3	12,449.89	12,449.89	95,768.38	65,522.70	65,522.70	33,386.42	33,386.42	207,127.39	207,127.39
1283	3351.250	VOF (Offices and admin spaces on Mezz. 1 & 2)	LS	0	1	8386.9	889,462.07	8386.9	133,419.31	133,419.31	889,462.07	455,297.95	455,297.95	399,088.57	399,088.57	1,877,267.91	1,877,267.91	1.0	12423.6	1,123,162.94	12,423.6	146,011.18	146,011.18	1,123,162.94	863,230.63	863,230.63	410,873.79	410,873.79	2,543,278.54	2,543,278.54
1284	3351.260	VCD (Ventilate Centre Transition Dam)	LS	0	1	428.9	47,643.44	428.9	7,146.52	7,146.52	47,643.44	25,714.65	25,714.65	41,537.97	41,537.97	122,042.58	122,042.58	1.0	919.9	83,163.78	919.9	10,811.29	10,811.29	83,163.78	44,994.59	44,994.59	26,580.31	26,580.31	165,549.97	165,549.97
1285	3351.270	VSD (Ventilate South Dam)	LS	0	1	360.4	39,870.82	360.4	5,980.62	5,980.62	39,870.82	19,260.28	19,260.28	36,271.77	36,271.77	101,383.49	101,383.49	1.0	773.7	69,949.19	773.7	9,093.39	9,093.39	69,949.19	49,360.39	49,360.39	24,642.63	24,642.63	153,045.60	153,045.60
1286	3351.280	EMCS (Energy Monitoring and Control System)	LS	0	1	0.0		0.0		0.00	0.00	1,032,698.64	1,032,698.64	0.00	0.00	1,032,698.64	1,032,698.64	1.0	17630.3	1,593,882.29	17,630.3	207,204.70	207,204.70	1,593,882.29	1,293,721.85	1,293,721.85	467,394.78	467,394.78	3,562,203.61	3,562,203.61
1286.1	3351.290	EBR (Exhaust Battery Room)	LS	0	1	1157.2	130,138.15	1157.2	19,520.72	19,520.72	130,138.15	118,317.60	118,317.60	113,629.70	113,629.70	381,606.17	381,606.17	1.0	1295.3	117,098.61	1,295.3	15,222.82	15,222.82	117,098.61	94,185.83	94,185.83	43,591.98	43,591.98	270,099.24	270,099.24
1286.2	3351.300	EWH (Exhaust Welding Hood)	LS	0	1	93.9	10,334.33	93.9	1,550.15	1,550.15	10,334.33	4,095.48	4,095.48	21,157.49	21,157.49	37,137.45	37,137.45	1.0	398.6	36,030.98	398.6	4,684.03	4,684.03	36,030.98	88,951.82	88,951.82	25,740.32	25,740.32	155,407.15	155,407.15
1286.3	3351.310	ESC (Smoke Exhaust)	LS	0	1	2062.8	219,674.47	2062.8	32,951.17	32,951.17	219,674.47	110,997.43	110,997.43	143,219.17	143,219.17	506,842.25	506,842.25	1.0	292.3	26,429.19	292.3	3,435.79	3,435.79	26,429.19	35,016.34	35,016.34	12,379.51	12,379.51	77,260.83	77,260.83
1286.4	3351.320	VSA (Spiral Case Access)	LS	0	1	120.1	13,651.52	120.1	2,047.73	2,047.73	13,651.52	7,948.77	7,948.77	39,009.67	39,009.67	62,657.68	62,657.68	1.0	71.4	6,450.64	71.4	838.58	838.58	6,450.64	44,333.44	44,333.44	10,065.77	10,065.77	61,688.43	61,688.43
1286.5	Added	House Keeping Pads for HVAC Equipment	LS		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	5888.7	532,372.68	5,888.70	69,208.45	69,208.45	532,372.68	26,422.64	26,422.64	130,434.97	130,434.97	758,438.74	758,438.74
		0	0					0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
ST04		SUB-TOTAL HVAC SYSTEM - SUPPLY, INSTALLATION	$ -					38978.5		$636,639.31	$4,244,262.09		$4,196,269.82		$6,134,639.22		$15,211,810.45				89790.2		$1,055,282.25	$8,117,555.80		$10,555,677.35		$3,720,726.54		$23,449,241.94
		0	0																											
		ELECTRICAL - SUPPLY AND INSTALLATION	0																											
		ELECTRICAL - DESIGN AND ENGINEERING	0																											
1287	3343.020	Fire Detection System - Electrical Engineering	LS	0	1	0.0		0.0		0.00	0.00	28,500.00	28,500.00	0.00	0.00	28,500.00	28,500.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	72,141.33	72,141.33	217.98	217.98	72,359.30	72,359.30
1288	3000.270	Cable Tray Structural Support Design and Engineering	LS	0	1	0.0		0.0		0.00	0.00	85,500.00	85,500.00	0.00	0.00	85,500.00	85,500.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	72,958.46	72,958.46	220.44	220.44	73,178.90	73,178.90
1289	3310.030	Electrical Shaft Platform/Staging Structural Design and Engineering	LS	0	1	0.0		0.0		0.00	0.00	855.00	855.00	0.00	0.00	855.00	855.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	109,437.69	109,437.69	330.66	330.66	109,768.35	109,768.35
ST05		SUB-TOTAL ELECTRICAL - DESIGN AND ENGINEERING	$ -					0.0		$0.00	$0.00		$114,855.00		$0.00		$114,855.00				0.0		$0.00	$0.00		$254,537.48		$769.08		$255,306.56
		0	0																											
		ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	0																											
1290	3340.010	Spillway Feeder Transformer, 1250 kVA, dry type, 600 V primary, 25/14.4 kV solidly grounded secondary, 60 Hz, NEMA 2 enclosure, air natural cooled (ANN)	ea	1	1	254.4	27,022.53	254.4	4,053.38	4,053.38	27,022.53	122,955.66	122,955.66	5,445.10	5,445.10	159,476.68	159,476.68	1.0	193.3	17,474.81	193.3	2,271.73	2,271.73	17,474.81	87,619.63	87,619.63	21,746.93	21,746.93	129,113.10	129,113.10
1291	3340.020	Spillway Feeder Transformer, 1250 kVA, dry type, 600 V primary, 25/14.4 kV solidly grounded secondary, 60 Hz, NEMA 2 enclosure, air natural cooled (ANN) - Alternate Design Option	ea	1	1	128.8	13,682.29	128.8	2,052.34	2,052.34	13,682.29	89,007.00	89,007.00	2,757.01	2,757.01	107,498.65	107,498.65	1.0	188.0	16,999.30	188.0	2,209.91	2,209.91	16,999.30	75.32	75.32	4,010.24	4,010.24	23,294.77	23,294.77
1292	3340.030	Spillway Feeder Switchgear, 600 V, 3 phase, 3 wire, 1600 A, 42 kA IC, NEMA 1A enclosure	ea	1	1	1307.6	138,900.93	1307.6	20,835.14	20,835.14	138,900.93	499,803.90	499,803.90	27,988.87	27,988.87	687,528.84	687,528.84	1.0	164.0	14,828.29	164.0	1,927.68	1,927.68	14,828.29	257,961.49	257,961.49	55,419.17	55,419.17	330,136.62	330,136.62
1293	3435.010	Station Service Transformer, 2500 kVA, dry type, 15 kV primary, 600/347 V solidly grounded secondary, 60 Hz, NEMA Type 2 enclosure, air natural cooled (ANN), off-load tap changer ± 2 x 2.5%.	ea	4	4	368.3	39,122.81	1473.2	5,868.42	23,473.68	156,491.23	162,444.23	649,776.92	7,883.34	31,533.36	215,318.80	861,275.19	4.0	259.0	23,411.13	1,035.8	3,043.45	12,173.79	93,644.50	133,889.20	535,556.78	32,457.31	129,829.22	192,801.07	771,204.29
1294	3433.010	Station Service Switchgear, 600 V, 3 phase, 3 wire, 3200 A, 42 kA IC, NEMA 1A enclosure	ea	4	4	257.6	27,364.59	1030.4	4,104.69	16,418.75	109,458.34	561,577.26	2,246,309.02	5,514.03	22,056.12	598,560.56	2,394,242.24	4.0	263.7	23,840.20	1,054.8	3,099.23	12,396.90	95,360.80	459,882.49	1,839,529.98	98,189.00	392,756.02	585,010.92	2,340,043.70
1295	3433.020	Unit Motor Control Centre, 600 V, 3 phase, 3 wire, 800 A, 42 kA IC, NEMA 2 enclosure	ea	4	4	305.9	32,495.45	1223.6	4,874.32	19,497.27	129,981.78	455,762.16	1,823,048.65	6,547.91	26,191.64	499,679.84	1,998,719.34	4.0	592.0	53,521.05	2,368.0	6,957.74	27,830.95	214,084.21	356,547.74	1,426,190.94	84,360.49	337,441.96	501,387.01	2,005,548.06
1296	3290.010	Intake MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 3R enclosure	ea	2	2	128.8	13,682.29	257.6	2,052.34	4,104.69	27,364.59	554,032.38	1,108,064.76	2,757.01	5,514.03	572,524.03	1,145,048.06	2.0	447.3	40,440.93	894.7	5,257.32	10,514.64	80,881.86	453,509.25	907,018.50	100,807.32	201,614.64	600,014.82	1,200,029.64
1297	3340.040	Essential Service MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 2 enclosure	ea	1	1	386.4	41,046.88	386.4	6,157.03	6,157.03	41,046.88	944,517.29	944,517.29	8,271.04	8,271.04	999,992.25	999,992.25	1.0	982.4	88,818.66	982.4	11,546.43	11,546.43	88,818.66	831,432.45	831,432.45	188,262.48	188,262.48	1,120,060.02	1,120,060.02
1298	3340.050	Common Station Service MCC, 600 V, 3 phase, 3 wire, 1200 A, 42 kA IC, NEMA 2 enclosure	ea	4	4	177.1	18,813.15	708.4	2,821.97	11,287.89	75,252.61	478,349.76	1,913,399.06	3,790.90	15,163.58	503,775.79	2,015,103.14	4.0	644.1	58,226.64	2,576.2	7,569.46	30,277.85	232,906.54	379,524.13	1,518,096.53	90,092.11	360,368.45	535,412.34	2,141,649.37
1299	3000.001	Panelboard, 400 A, 600 V, 3 phase, 3 wire, 60 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, complete with breakers as indicated	ea	4	5	16.9	1,795.80	84.5	269.37	1,346.85	8,979.00	20,630.99	103,154.95	361.86	1,809.29	23,058.02	115,290.10	5.0	59.3	5,362.36	296.6	697.11	3,485.54	26,811.81	25,289.52	126,447.58	6,351.66	31,758.32	37,700.65	188,503.25
1300	3000.002	Panelboard, 400 A, 600 V, 3 phase, 3 wire, 72 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, complete with breakers as indicated	ea	1	1	19.3	2,052.34	19.3	307.85	307.85	2,052.34	26,921.89	26,921.89	413.55	413.55	29,695.64	29,695.64	1.0	59.3	5,362.36	59.3	697.11	697.11	5,362.36	26,097.95	26,097.95	6,514.42	6,514.42	38,671.84	38,671.84
1301	3000.003	Panelboard, 225 A, 600 V, 3 phase, 3 wire, 42 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	5	5	9.7	1,026.17	48.3	153.93	769.63	5,130.86	21,068.74	105,343.69	206.78	1,033.88	22,455.61	112,278.06	5.0	37.8	3,418.44	189.1	444.40	2,221.98	17,092.18	18,319.20	91,596.02	4,491.51	22,457.56	26,673.55	133,367.75
1302	3000.004	Panelboard, 225 A, 600 V, 3 phase, 3 wire, 60 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	6	6	12.9	1,368.23	77.3	205.23	1,231.41	8,209.38	5,172.33	31,033.98	275.70	1,654.21	7,021.49	42,128.97	6.0	56.7	5,125.30	340.1	666.29	3,997.73	30,751.80	13,817.79	82,906.74	3,986.40	23,918.39	23,595.78	141,574.66
1303	3000.005	Panelboard, 100 A, 600/347 V, 3 phase, 4 wire, 30 circuit, 35 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	11	11	9.7	1,026.17	106.3	153.93	1,693.18	11,287.89	9,759.94	107,359.31	206.78	2,274.54	11,146.81	122,614.92	11.0	25.2	2,280.53	277.5	296.47	3,261.16	25,085.82	11,381.54	125,196.91	2,827.36	31,100.91	16,785.89	184,644.79
1304	3000.006	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 72 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	1	1	9.7	1,026.17	9.7	153.93	153.93	1,026.17	2,349.94	2,349.94	206.78	206.78	3,736.81	3,736.81	1.0	56.7	5,125.30	56.7	666.29	666.29	5,125.30	2,267.33	2,267.33	1,661.00	1,661.00	9,719.92	9,719.92
1305	3000.007	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 66 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	4	4	9.7	1,026.17	38.6	153.93	615.70	4,104.69	1,827.82	7,311.27	206.78	827.10	3,214.69	12,858.76	4.0	56.7	5,125.30	226.8	666.29	2,665.16	20,501.20	1,731.97	6,927.89	1,553.21	6,212.85	9,076.77	36,307.10
1306	3000.008	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 42 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	9	3	9.7	1,026.17	29.0	153.93	461.78	3,078.52	2,397.82	7,193.45	206.78	620.33	3,784.69	11,354.07	3.0	41.0	3,702.92	122.9	481.38	1,444.14	11,108.75	4,285.65	12,856.95	1,733.05	5,199.15	10,202.99	30,608.98
1307	3000.009	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 30 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	2	2	6.4	684.11	12.9	102.62	205.23	1,368.23	3,042.16	6,084.33	137.85	275.70	3,966.75	7,933.49	2.0	50.4	4,552.75	100.7	591.86	1,183.72	9,105.50	1,429.99	2,859.97	1,357.86	2,715.71	7,932.45	15,864.90
1308	3000.010	Panelboard, 225 A, 208/120 V, 3 phase, 4 wire, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers.	ea	3	4	6.4	684.11	25.8	102.62	410.47	2,736.46	1,006.41	4,025.64	137.85	551.40	1,930.99	7,723.97	4.0	56.7	5,125.30	226.8	666.29	2,665.16	20,501.20	944.33	3,777.31	1,394.64	5,578.56	8,130.56	32,522.22
B&M-0345	Added	Panelboard, 100A, 120/240V, 1 phase, 3 wire, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers	ea		5	6.4	684.11	32.2	102.62	513.09	3,420.57	1,148.62	5,743.12	137.85	689.25	2,073.21	10,366.04	5.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1309	3000.011	Panelboard, 100 A, 208/120 V, 3 phase, 4 wire, 30 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with breakers and installed in a NEMA 4X Enclosure with Anti-condensation heater and thermostat	ea	1	7	6.4	684.11	45.1	102.62	718.32	4,788.80	2,928.16	20,497.15	137.85	964.96	3,852.75	26,969.23	7.0	25.2	2,280.53	176.6	296.47	2,075.28	15,963.71	1,755.14	12,285.99	889.31	6,225.19	5,221.45	36,550.18

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1310	3000.012	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 60 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	2	2	11.3	1,197.20	22.5	179.58	359.16	2,394.40	11,276.01	22,552.03	241.24	482.48	12,894.03	25,788.07	2.0	25.2	2,280.53	50.5	296.47	592.94	4,561.06	10,938.35	21,876.71	2,738.14	5,476.27	16,253.49	32,506.98
1311	3000.013	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 40 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	2	2	11.3	1,197.20	22.5	179.58	359.16	2,394.40	8,961.81	17,923.63	241.24	482.48	10,579.83	21,159.67	2.0	25.2	2,280.53	50.5	296.47	592.94	4,561.06	10,108.84	20,217.69	2,571.13	5,142.25	15,256.97	30,513.94
1312	3000.014	Panelboard, 100 A, rated 250 Vdc for operation on 125 Vdc 2 wire system, 24 circuit, 10 kA IC, NEMA 12 enclosure, surface mounting trim, provided with two-pole bolt-on distribution breakers.	ea	4	4	6.4	684.11	25.8	102.62	410.47	2,736.46	5,208.16	20,832.66	137.85	551.40	6,132.75	24,530.99	4.0	25.2	2,280.53	100.9	296.47	1,185.87	9,122.11	5,071.91	20,287.64	1,557.06	6,228.25	9,205.97	36,823.87
1313	3000.015	600 Volt, 3-Pole, 100A Electrically Held contactor complete with 120V Coil, Undervoltage Relay (with 125Vdc rated alarm contacts), 347/120V, 100VA control Power transformer and fusing mounted in a NEMA 12 Enclosure	ea	11	11	12.9	1,368.23	141.7	205.23	2,257.56	15,050.52	5,015.58	55,171.38	275.70	3,032.72	6,864.74	75,512.19	11.0	21.4	1,932.56	235.2	251.23	2,763.56	21,258.13	4,229.97	46,529.65	1,305.78	14,363.60	7,719.54	84,914.93
1314	3000.016	1065 mm x 760 mm x 250 mm deep NEMA 4X stainless steel enclosure with hinged door to house parking area panelboard, complete with 150 W anticondensation heater and thermostat.	ea	1	1	25.8	2,736.46	25.8	410.47	410.47	2,736.46	2,340.42	2,340.42	551.40	551.40	6,038.75	6,038.75	1.0	26.7	2,410.84	26.7	313.41	313.41	2,410.84	3,424.27	3,424.27	1,255.97	1,255.97	7,404.49	7,404.49
1315	3000.017	Dry-type Isolation Transformer, 45 kVA, three phase, 600 V delta primary, 600/347 V wye secondary, NEMA 2 enclosure.	ea	4	4	16.1	1,710.29	64.4	256.54	1,026.17	6,841.15	4,900.76	19,603.05	344.63	1,378.51	7,212.22	28,848.87	4.0	40.0	3,614.19	159.9	469.84	1,879.38	14,456.75	4,965.47	19,861.87	1,849.06	7,396.25	10,898.56	43,594.25
1316	3000.018	Dry-type Isolation Transformer, 45 kVA, three phase, 600 V delta primary, 600/347 V wye secondary, NEMA 3R enclosure.	ea	2	2	19.3	2,052.34	38.6	307.85	615.70	4,104.69	5,284.69	10,569.39	413.55	827.10	8,058.44	16,116.88	2.0	40.0	3,614.20	80.0	469.85	939.69	7,228.40	5,333.18	10,666.36	1,923.09	3,846.18	11,340.32	22,680.64
1317	3000.019	Dry-type Distribution Transformer, 30 kVA, three phase, 600 V delta primary, 208/120 V wye secondary, NEMA 2 enclosure.	ea	13	13	12.9	1,368.23	167.4	205.23	2,668.05	17,786.98	4,218.15	54,835.95	275.70	3,584.12	6,067.31	78,875.09	13.0	52.0	4,703.85	676.4	611.50	7,949.51	61,150.08	4,530.43	58,895.53	2,017.57	26,228.36	11,863.35	154,223.49
1318	3000.020	Dry-type Distribution Transformer, 30 kVA, three phase, 600 V delta primary, 208/120 V wye secondary, NEMA 3R enclosure.	ea	2	4	12.9	1,368.23	51.5	205.23	820.94	5,472.92	4,642.23	18,568.92	275.70	1,102.81	6,491.39	25,965.58	4.0	38.4	3,468.63	153.5	450.92	1,803.69	13,874.50	3,723.51	14,894.02	1,564.82	6,259.26	9,207.87	36,831.47
1319	3340.060	Battery Charger, 125 Vdc, 37.5 kW (Station Control and Protection), 600 V, 3 phase input.	ea	4	4	103.2	10,961.96	412.8	1,644.29	6,577.18	43,847.84	71,651.76	286,607.04	2,208.86	8,835.45	86,466.88	345,867.51	4.0	56.7	5,125.30	226.8	666.29	2,665.16	20,501.20	54,600.43	218,401.73	12,196.99	48,787.98	72,589.02	290,356.06
1320	3340.070	125 Vdc Battery Bank (Station Control and Protection), 60 cell, lead acid batteries, 2320 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	2	2	966.0	102,617.20	1932.0	15,392.58	30,785.16	205,234.39	130,067.00	260,133.99	20,677.61	41,355.22	268,754.38	537,508.77	2.0	335.2	30,301.24	670.3	3,939.16	7,878.32	60,602.48	234,118.47	468,236.95	54,255.32	108,510.64	322,614.20	645,228.39
1321	3340.080	125 Vdc Distribution Switchboard (Station Control and Protection), 400 A, 14 kA IC	ea	2	2	64.4	6,841.15	128.8	1,026.17	2,052.34	13,682.29	65,966.85	131,933.70	1,378.51	2,757.01	75,212.67	150,425.35	2.0	97.8	8,837.92	195.5	1,148.93	2,297.86	17,675.83	63,284.33	126,568.67	14,817.81	29,635.62	88,088.99	176,177.98
1322	3340.090	Battery Charger, 125 Vdc, 55 kW (Field Flashing and Emerg. Ltg), 600 V, 3 phase input.	ea	2	2	467.7	49,678.94	935.3	7,451.84	14,903.68	99,357.88	93,674.96	187,349.93	10,010.43	20,020.85	160,816.17	321,632.34	2.0	56.7	5,125.30	113.4	666.29	1,332.58	10,250.60	63,424.43	126,848.85	13,973.49	27,946.99	83,189.51	166,379.02
1323	3340.100	125 Vdc Battery Bank (Field Flashing and Emerg. Ltg), 60 cell, lead acid batteries, 2350 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	1	1	966.0	102,617.20	966.0	15,392.58	15,392.58	102,617.20	139,957.34	139,957.34	20,677.61	20,677.61	278,644.73	278,644.73	1.0	335.2	30,301.25	335.2	3,939.16	3,939.16	30,301.25	234,118.47	234,118.47	54,255.32	54,255.32	322,614.21	322,614.21
1324	3340.110	125 Vdc Distribution Switchboard (Field Flashing and Emerg. Ltg), 400 A, 14kA IC	ea	1	1	64.4	6,841.15	64.4	1,026.17	1,026.17	6,841.15	70,008.29	70,008.29	1,378.51	1,378.51	79,254.11	79,254.11	1.0	97.8	8,837.92	97.8	1,148.93	1,148.93	8,837.92	70,076.77	70,076.77	16,185.30	16,185.30	96,248.92	96,248.92
1325	3340.120	Battery Charger, 48 Vdc, 10 kW (Telecommunications), 600 V, 3 phase input.	ea	4	4	38.6	4,104.69	154.6	615.70	2,462.81	16,418.75	38,501.67	154,006.68	827.10	3,308.42	44,049.16	176,196.66	4.0	52.5	4,742.67	209.8	616.55	2,466.19	18,970.67	28,826.96	115,307.85	6,918.21	27,672.84	41,104.39	164,417.55
1326	3340.130	48 Vdc Battery Bank (Telecommunications), 24 cell, lead acid batteries, 1800 Ah, complete with 400 A, 2-pole, fusible disconnect switch.	ea	2	2	347.8	36,942.19	695.5	5,541.33	11,082.66	73,884.38	59,629.46	119,258.93	7,443.94	14,887.88	109,556.92	219,113.85	2.0	335.2	30,301.24	670.3	3,939.16	7,878.32	60,602.48	83,757.34	167,514.68	23,983.75	47,967.49	141,981.49	283,962.98
1327	3340.140	48 Vdc Distribution Switchboard (Telecommunications), 400 A, 14 kA IC	ea	2	2	48.3	5,130.86	96.6	769.63	1,539.26	10,261.72	29,907.61	59,815.21	1,033.88	2,067.76	36,841.98	73,683.95	2.0	97.8	8,837.92	195.5	1,148.93	2,297.86	17,675.83	37,964.36	75,928.72	9,720.24	19,440.49	57,671.45	115,342.90
1328	3340.150	Uninterruptible Power Supply (UPS), 10 kVA, 125 Vdc input and 600 Vac single phase bypass input, 120 Vac, 60 Hz output.	ea	2	2	38.6	4,104.69	77.3	615.70	1,231.41	8,209.38	108,236.61	216,473.22	827.10	1,654.21	113,784.10	227,568.21	2.0	57.9	5,233.44	115.8	680.35	1,360.69	10,466.88	58,167.26	116,334.52	12,940.50	25,881.00	77,021.55	154,043.10
1328a	Added	UPS, 90 kVA, 125 Vdc input and 600 Vac 3 Ph bypass input, 120 Vac Output	ea		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	322.4	29,149.19	322.43	3,789.39	3,789.39	29,149.19	130,629.65	130,629.65	33,149.61	33,149.61	196,717.84	196,717.84
1329	3340.160	Uninterruptible Power Supply (UPS) Distribution Switchboard, 225 A, 120 Vac, single phase, 60 Hz	ea	2	2	48.3	5,130.86	96.6	769.63	1,539.26	10,261.72	41,003.23	82,006.45	1,033.88	2,067.76	47,937.60	95,875.19	2.0	57.9	5,233.44	115.8	680.35	1,360.69	10,466.88	24,266.70	48,533.39	6,115.45	12,230.90	36,295.93	72,591.86
1329a	Added	UPS Panelboard 100A 120 Vac for operation on 120 Vac 2 W system NEMA 12	ea		5	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	25.2	2,280.53	126.13	296.47	1,482.34	11,402.66	1,121.76	5,608.81	761.80	3,808.98	4,460.56	22,302.79
		Heavy Duty Safety Switch, 600 V, three phase, unfused, visible blade, NEMA 12 enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1330	3000.021	30 Amp	ea	156	156	4.0	427.57	627.9	64.14	10,005.18	66,701.18	358.22	55,882.41	86.16	13,440.45	936.08	146,029.21	156.0	7.5	677.82	1,169.6	88.12	13,746.20	105,740.03	286.71	44,726.64	217.02	33,855.10	1,269.67	198,067.98
1331	3000.022	60 Amp	ea	5	6	5.6	598.60	33.8	89.79	538.74	3,591.60	399.14	2,394.82	120.62	723.72	1,208.15	7,248.88	6.0	8.2	737.53	48.9	95.88	575.27	4,425.18	314.43	1,886.60	236.64	1,419.82	1,384.48	8,306.87
1332	3000.023	100 Amp	ea	14	15	8.1	855.14	120.8	128.27	1,924.07	12,827.15	560.26	8,403.92	172.31	2,584.70	1,715.99	25,739.84	15.0	8.8	795.56	132.0	103.42	1,551.34	11,933.42	438.64	6,579.57	275.28	4,129.17	1,612.90	24,193.50
1333	3000.024	200 Amp	ea	10	10	10.5	1,111.69	104.7	166.75	1,667.53	11,116.86	835.39	8,353.85	224.01	2,240.07	2,337.83	23,378.32	10.0	10.2	920.25	101.8	119.63	1,196.33	9,202.53	709.46	7,094.60	359.11	3,591.05	2,108.45	21,084.51
1334	3000.025	400 Amp	ea	4	4	15.3	1,624.77	61.2	243.72	974.86	6,499.09	1,994.39	7,977.58	327.40	1,309.58	4,190.28	16,761.11	4.0	26.4	2,385.20	105.5	310.08	1,240.30	9,540.80	1,786.79	7,147.17	920.28	3,681.13	5,402.35	21,609.41
		Heavy Duty Safety Switch, 600 V, three phase, unfused, visible blade, NEMA 4X enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1335	3000.026	30 Amp	ea	62	65	4.0	427.57	261.6	64.14	4,168.82	27,792.16	723.02	46,996.34	86.16	5,600.19	1,300.88	84,557.50	65.0	8.4	761.44	547.5	98.99	6,434.19	49,493.74	633.82	41,198.07	306.55	19,925.99	1,800.80	117,051.99
1336	3000.027	60 Amp	ea	0	5	5.6	598.60	28.2	89.79	448.95	2,993.00	758.24	3,791.18	120.62	603.10	1,567.25	7,836.23	5.0	8.4	762.49	42.2	99.12	495.62	3,812.45	668.19	3,340.97	313.72	1,568.61	1,843.53	9,217.65
1337	3000.028	100 Amp	ea	2	2	8.1	855.14	16.1	128.27	256.54	1,710.29	1,711.66	3,423.32	172.31	344.63	2,867.39	5,734.78	2.0	9.5	856.76	19.0	111.38	222.76	1,713.52	1,545.39	3,090.78	512.47	1,024.94	3,026.00	6,052.00
1338	3000.029	200 Amp	ea	2	2	14.5	1,539.26	29.0	230.89	461.78	3,078.52	2,490.93	4,981.85	310.16	620.33	4,571.24	9,142.47	2.0	11.3	1,024.51	22.7	133.19	266.37	2,049.01	2,263.65	4,527.30	696.51	1,393.02	4,117.85	8,235.70
1339	3000.030	400 Amp	ea	2	3	20.9	2,223.37	62.8	333.51	1,000.52	6,670.12	3,072.97	9,218.91	448.01	1,344.04	6,077.86	18,233.59	3.0	26.4	2,388.67	79.3	310.53	931.58	7,166.00	2,771.56	8,314.67	1,119.36	3,358.07	6,590.11	19,770.32
1340	3000.031	Combination magnetic motor starter and visible blade disconnect, NEMA size 1, with electronic overload, NEMA 12 enclosure.	ea	3	3	8.4	889.35	25.1	133.40	400.21	2,668.05	1,837.26	5,511.79	179.21	537.62	3,039.22	9,117.67	3.0	13.9	1,259.26	41.8	163.70	491.11	3,777.78	1,778.27	5,334.82	653.96	1,961.87	3,855.19	11,565.58
1341	3000.032	Combination magnetic motor starter and visible blade disconnect, NEMA size 1, with electronic overload, NEMA 4X enclosure.	ea	12	12	21.7	2,308.89	260.8	346.33	4,156.00	27,706.64	2,704.12	32,449.43	465.25	5,582.96	5,824.59	69,895.02	12.0	16.8	1,520.47	201.8	197.66	2,371.93	18,245.63	2,472.85	29,674.18	855.18	10,262.16	5,046.16	60,553.90
1342	3000.033	Splitter box, 400 Amp, 600 V, three phase, three wire, NEMA 4X enclosure.	ea	2	2	9.7	1,026.17	19.3	153.93	307.85	2,052.34	3,437.50	6,874.99	206.78	413.55	4,824.37	9,648.74	2.0	14.7	1,330.89	29.4	173.02	346.03	2,661.77	2,972.16	5,944.33	911.15	1,822.30	5,387.22	10,774.43
		Industrial type electric Blower Unit Heater, 600 V, three phase, complete with built-in thermostat and controls, heating capacity as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1343	3000.034	2.0 kW	ea	0	9	4.8	513.09	43.5	76.96	692.67	4,617.77	895.14	8,056.30	103.39	930.49	1,588.58	14,297.23	9.0	8.2	744.77	74.1	96.82	871.36	6,702.96	1,990.56	17,915.08	575.78	5,182.06	3,407.94	30,671.49
1344	3000.035	2.5 kW	ea	13	5	4.0	427.57	20.1	64.14	320.68	2,137.86	1,076.36	5,381.82	86.16	430.78	1,654.23	8,271.14	5.0	8.4	762.49	42.2	99.12	495.62	3,812.44	2,365.15	11,825.75	655.36	3,276.81	3,882.12	19,410.62
1345	3000.036	3.0 kW	ea	0	14	4.8	513.09	67.6	76.96	1,077.48	7,183.20	1,082.57	15,156.00	103.39	1,447.43	1,776.01	24,864.12	14.0	9.2	829.43	128.4	107.83	1,509.56	11,611.98	1,048.40	14,677.54	406.00	5,683.94	2,391.64	33,483.02
1346	3000.037	5.0 kW	ea	21	19	5.6	598.60	107.1	89.79	1,706.01	11,373.41	725.66	13,787.46	120.62	2,291.77	1,534.67	29,158.64	19.0	8.6	781.10	164.2	101.54	1,929.33	14,840.98	734.38	13,953.27	331.42	6,296.98	1,948.45	37,020.55
1347	3000.038	7.5 kW	ea	0	11	6.4	684.11	70.8	102.62	1,128.79	7,525.26	1,550.63	17,056.98	137.85	1,516.36	2,475.22	27,227.39	11.0	10.3	930.86	113.3	121.01	1,331.14	10,239.50	1,135.31	12,488.40	447.33	4,920.67	2,634.52	28,979.70
1348	3000.039	10 kW	ea	37	27	12.9	1,368.23	347.8	205.23	5,541.33	36,942.19	1,342.42	36,245.34	275.70	7,443.94	3,191.59	86,172.80	27.0	11.3	1,017.73	304.0	132.30	3,572.22	27,478.65	1,032.05	27,865.43	446.96	12,067.92	2,629.05	70,984.23
1349	3000.040	15 kW	ea	13	13	16.1	1,710.29	209.3	256.54	3,335.06	22,233.73	1,683.98	21,891.72	344.63	4,480.15	3,995.44	51,940.66	13.0	12.3	1,111.63	159.9	144.51	1,878.66	14,451.21	1,276.03	16,588.34	518.15	6,735.91	3,050.32	39,654.12
1350	3000.041	Explosion-proof electric Blower Unit Heater, 3.5 kW, 600 V, three phase, complete with built-in thermostat and controls.	ea	8	8	9.7	1,026.17	77.3	153.93	1,231.41	8,209.36	4,782.70	38,261.58	206.78	1,654.21	6,169.57	49,356.57	8.0	16.8	1,520.64	134.6	197.68	1,581.47	12,165.13	4,139.50	33,116.00	1,190.76	9,526.10	7,048.59	56,388.69
1351	3000.042	Architectural sloped top baseboard electric heater, 2.5 kW, 208 V, single phase, with low-voltage relay.	ea	8	9	3.2	342.06	29.0	51.31	461.78	3,078.52	330.30	2,972.66	68.93	620.33	792.59	7,133.28	9.0	1.7	149.88	14.9	19.48	175.36	1,348.91	236.45	2,128.05	82.83	745.45	488.64	4,397.77
1352	3000.043	Convector heater, commercial type with sloped top, 5 kW, 600 V, three phase, with low-voltage relay.	ea	34	34	9.7	1,026.17	328.4	153.93	5,233.48	34,889.85	751.95	25,566.43	206.78	7,030.39	2,138.83	72,720.14	34.0	5.8	523.10	196.7	68.00	2,312.10	17,785.36	626.45	21,299.20	249.06	8,467.91	1,466.60	49,864.57
1353	3000.044	Forced-air heater, commercial type, 2.5 kW, 208 V, single phase, with low-voltage relay.	ea	11	11	6.4	684.11	70.8	102.62	1,128.79	7,525.26	383.31	4,216.40	137.85	1,516.36	1,307.89	14,386.80	11.0	3.1	284.33	34.6	36.96	406.59	3,127.59	302.02	3,322.24	127.63	1,403.90	750.94	8,260.31
1354	3000.045	Forced-air heater, commercial type, 5.0 kW, 600 V, three phase, with low-voltage relay.	ea	4	4	9.7	1,026.17	38.6	153.93	615.70	4,104.69	998.75	3,995.01	206.78	827.10	2,385.63	9,542.50	4.0	5.2	474.13	21.0	61.64	246.55	1,896.52	839.90	3,359.59	280.52	1,122.08	1,656.18	6,624.74
1355	3000.046	Electric infrared radiant heater, industrial type, NEMA 4X construction, 10 kW, 600 V, three phase, without controls.	ea	28	28	12.9	1,368.23	360.6	205.23	5,746.56	38,310.42	997.65	27,934.19	275.70	7,719.64	2,846.81	79,710.82	28.0	14.4	1,299.20	402.4	168.90	4,729.08	36,377.57	2,345.79	65,682.24	777.60	21,772.79	4,591.49	128,561.68
		Power outlet - interlocked receptacle and unfused switch, 600 V, three phase, three wire, NEMA 12 enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1356	3000.047	30 Amp	ea	4	4	4.8	513.09	19.3	76.96	307.85	2,052.34	1,236.53	4,946.11	103.39	413.55	1,929.97	7,719.86	4.0	9.5	853.98	37.8	111.02	444.07	3,415.92	1,167.34	4,669.34	435.71	1,742.83	2,568.04	10,272.16
1357	3000.048	60 Amp	ea	38	38	6.4	684.11	244.7	102.62	3,899.45	25,996.36	1,319.62	50,145.75	137.85	5,238.33	2,244.21	85,279.88	38.0	10.0	904.06	380.0	117.53	4,466.04	34,354.16	1,243.34	47,246.94	462.78	17,585.76	2,727.71	103,652.90
		Power outlet - interlocked receptacle and unfused switch, 600 V, three phase, three wire, NEMA 4X enclosure, size as follows:	0					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1358	3000.049	30 Amp	ea	4	8	4.8	513.09	38.6	76.96	615.70	4,104.69	2,133.71	17,069.67	103.39	827.10	2,827.15	22,617.16	8.0	10.0	904.07	80.0	117.53	940.23	7,232.54	2,069.81	16,558.51	629.18	5,033.42	3,720.59	29,764.70
1359	3000.050	60 Amp	ea	13	18	4.8	513.09	86.9	76.96	1,385.33	9,235.55	2,158.79	38,858.20	103.39	1,860.99	2,852.23	51,340.06	18.0	10.0	903.59	179.9	117.47	2,114.39	16,264.54	2,095.50	37,718.92	634.23	11,416.20	3,750.78	67,514.05
1360	3000.051	100 Amp	ea	4	4	6.4	684.11	25.8	102.62	410.47	2,736.46	4,461.46	17,845.86	137.85	551.40	5,386.05	21,544.19	4.0	11.0	997.82	44.2	129.72	518.87	3,991.27	4,389.31	17,557.24	1,118.18	4,472.73	6,635.03	26,540.10
1361	3000.052	200 Amp	ea	1	1	9.7	1,026.17	9.7	153.93	153.93	1,026.17	4,610.56	4,610.56	206.78	206.78	5,997.43	5,997.43	1.0	12.6	1,140.96	12.6	148.32	148.32	1,140.96	7,641.51	7,641.51	1,806.58	1,806.58	10,737.37	10,737.37
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, straight lengths, widths as follows:	0.00					0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
1362	3000.053	150 mm	m	200	200	4.1	434.41	817.9	65.16	13,032.38	86,882.56	94.01	18,801.84	87.54	17,507.05	681.12	136,223.83	200.0	2.7	246.72	545.8	32.07	6,414.66	49,343.51	87.37	17,474.84	75.57	15,114.59	441.74	88,347.60
1362a	Added	4" Channel Tray	m		4,572	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,572.0	1.2	104.29	5,273.96	13.56	61,983.62	476,797.08	42.67	195,068.75	33.10	151,326.69	193.61	885,176.12
1363	3000.054	300 mm	m	1700	1,755	3.8	407.05	6724.8	61.06	107,155.44	714,369.62	89.97	157,898.43	82.02	143,947.20	640.10	1,123,370.69	1,755.0	3.7	334.92	6,501.5	43.54	76,411.17	587,778.20	105.55	185,235.34	99.96	175,429.19	583.96	1,024,853.90
1364	3000.055	450 mm	m	300	949	4.0	429.28	3835.0	64.39	61,108.28	407,388.56	98.40	93,383.43	86.50	82,089.78	678.58	643,970.05	949.0	3.5	315.83	3,315.3	41.06	38,963.94	299,722.60	108.00	102,490.72	95.97	91,073.25	560.85	532,250.51
1365	3000.056	600 mm	m	4100	4,100	4.4	466.91	18020.7	70.04	287,148.57	1,914,323.81	121.62	498,639.11	94.08	385,740.86	752.65	3,085,852.35	4,100.0	3.4	307.36	13,939.0	39.96	163,821.04	1,260,161.88	107.07	438,986.61	93.79	384,535.90	548.17	2,247,505.43
1366	3000.057	750 mm	m	2000	4,150	4.7	502.82	19643.6	75.42	313,008.10	2,086,720.70	119.61	496,380.27	101.32	420,479.25	799.18	3,316,588.32	4,150.0	3.4	305.86	14,040.1	39.76	165,009.37	1,269,302.88	107.50	446,121.30	93.52	388,120.58	546.64	2,268,554.13
		Horizontal 90 degree turn, 600mm radius, Cable Tray Section, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1367	3000.058	300 mm	ea	32	47	8.9	940.66	416.2	141.10	6,631.64	44,210.91	259.67	12,204.60	189.54	8,908.60	1,530.97	71,955.75	47.0	18.7	1,694.31	880.8	220.26	10,352.26	79,632.77	544.62	25,597.16	507.84	23,868.25	2,967.03	139,450.44
1368	3000.059	450 mm	ea	22	26	9.3	983.41	240.7	147.51	3,835.32	25,568.79	269.75	7,013.59	198.16	5,152.17	1,598.84	41,569.86	26.0	19.2	1,733.06	498.4	225.30	5,857.73	45,059.49	552.15	14,355.89	518.46	13,479.85	3,028.96	78,752.96
1369	3000.060	600 mm	ea	87	87	9.7	1,026.17	840.4	153.93	13,391.54	89,276.96	280.72	24,422.93	206.78	17,989.52	1,667.60	145,080.96	87.0	20.3	1,836.18	1,767.0	238.70	20,767.24	159,747.98	561.49	48,849.48	544.57	47,377.78	3,180.95	276,742.48
1370	3000.061	750 mm	ea	47	49	10.5	1,111.69	512.8	166.75	8,170.89	54,472.63	311.44	15,260.63	224.01	10,976.37	1,813.89	88,880.52	49.0	21.4	1,931.79	1,047.0	251.13	12,305.49	94,657.61	587.17	28,771.32	572.21	28,038.34	3,342.30	163,772.76
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1371	3000.062	150 mm	ea	3	3	8.9	940.66	26.6	141.10	423.30	2,821.97	259.67	779.02	189.54	568.63	1,530.97	4,592.92	3.0	17.7	1,598.91	53.1	207.86	623.58	4,796.74	567.33	1,701.98	489.98	1,469.94	2,864.08	8,592.23
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 45 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1372	3000.063	300 mm	ea	32	32	8.1	855.14	257.6	128.27	4,104.69	27,364.59	232.96	7,454.58	172.31	5,514.03	1,388.68	44,437.89	32.0	17.8	1,608.56	569.4	209.11	6,691.62	51,474.01	525.30	16,809.63	483.79	15,481.36	2,826.77	90,456.63
1373	3000.064	600 mm	ea	30	59	8.9	940.66	522.4	141.10	8,324.82	55,498.80	247.27	14,588.89	189.54	11,183.14	1,518.57	89,595.65	59.0	18.9	1,712.46	1,117.6	222.62	13,134.56	101,035.09	533.47	31,474.86	509.85	30,081.43	2,978.41	175,725.94
1374	3000.065	750 mm	ea	8	14	9.7	1,026.17	135.2	153.93	2,154.96	14,366.41	264.31	3,700.30	206.78	2,894.87	1,651.18	23,116.54	14.0	18.9	1,712.63	265.2	222.64	3,116.98	23,976.75	545.15	7,632.04	512.24	7,171.42	2,992.66	41,897.19
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, horizontal 45 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1375	3000.066	150 mm	ea	4	4	8.1	855.14	32.2	128.27	513.09	3,420.57	241.06	964.24	172.31	689.25	1,396.79	5,587.16	4.0	17.2	1,552.70	68.7	201.85	807.40	6,210.80	533.47	2,133.89	472.31	1,889.24	2,760.33	11,041.33
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical inside 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1376	3000.067	300 mm	ea	1	1	8.9	940.66	8.9	141.10	141.10	940.66	246.13	246.13	189.54	189.54	1,517.43	1,517.43	1.0	15.1	1,365.55	15.1	177.52	177.52	1,365.55	386.39	386.39	398.72	398.72	2,328.17	2,328.17
1377	3000.068	600 mm	ea	6	6	9.7	1,026.17	58.0	153.93	923.55	6,157.03	259.41	1,556.43	206.78	1,240.66	1,646.28	9,877.68	6.0	16.7	1,507.88	100.1	196.02	1,176.14	9,047.26	394.56	2,367.36	433.81	2,602.84	2,532.27	15,193.60
1378	3000.069	750 mm	ea	4	8	10.5	1,111.69	83.7	166.75	1,334.02	8,893.49	269.15	2,153.18	224.01	1,792.06	1,771.59	14,172.75	8.0	17.7	1,603.65	141.9	208.47	1,667.79	12,829.19	398.06	3,184.49	457.02	3,656.16	2,667.21	21,337.64
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical inside 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1379	3000.070	150 mm	ea	2	2	8.9	940.66	17.7	141.10	282.20	1,881.32	293.90	587.79	189.54	379.09	1,565.20	3,130.39	2.0	14.1	1,271.28	28.1	165.27	330.53	2,542.55	435.42	870.83	386.42	772.85	2,258.38	4,516.76
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical exterior 90 degree turns, 600mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1380	3000.071	300 mm	ea	22	22	8.9	940.6	194.8	141.1	3,104.17	20,694.47	246.13	5,414.84	189.54	4,169.99	1,517.43	33,383.47	22.0	15.1	1,366.10	332.4	177.59	3,907.04	30,054.19	386.39	8,500.54	398.84	8,774.56	2,328.92	51,236.32
1381	3000.072	450 mm	ea	9	10	9.3	983.4	92.6	147.5	1,475.12	9,834.15	252.65	2,526.53	198.16	1,981.60	1,581.74	15,817.41	10.0	15.6	1,413.93	156.4	183.81	1,838.11	14,139.29	389.89	3,898.90	410.79	4,107.88	2,398.42	23,984.17
1382	3000.073	600 mm	ea	7	7	9.7	1,026.1	67.6	153.9	1,077.48	7,183.20	259.41	1,815.84	206.78	1,447.43	1,646.28	11,523.95	7.0	16.7	1,507.94	116.8	196.03	1,372.23	10,555.59	394.56	2,761.92	433.82	3,036.76	2,532.36	17,726.50
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, vertical exterior 90 degree turns, 900mm radius, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1383	3000.074	150 mm	ea	1	1	8.9	940.6	8.9	141.1	141.10	940.66	293.90	293.90	189.54	189.54	1,565.20	1,565.20	1.0	14.1	1,271.27	14.1	165.27	165.27	1,271.27	435.42	435.42	386.43	386.43	2,258.39	2,258.39
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, riser sections, widths as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1384	3000.075	150mm	ea	2	2	4.4	470.3	8.9	70.5	141.10	940.66	171.69	343.37	94.77	189.54	807.34	1,614.67	2.0	9.7	874.78	19.4	113.72	227.44	1,749.55	315.03	630.06	269.01	538.01	1,572.53	3,145.06
1385	3000.076	300mm	ea	70	94	4.8	513.0	454.0	76.9	7,234.51	48,230.06	182.66	17,169.63	103.39	9,718.48	876.09	82,352.71	94.0	9.7	874.38	909.1	113.67	10,684.95	82,191.96	312.85	29,407.51	268.48	25,236.81	1,569.37	147,521.24
1386	3000.077	450mm	ea	56	56	5.2	555.8	293.0	83.3	4,669.08	31,127.22	193.51	10,836.66	112.00	6,272.21	944.74	52,905.16	56.0	9.7	874.34	541.6	113.66	6,365.23	48,963.28	312.85	17,519.37	268.47	15,034.18	1,569.32	87,882.05
1387	3000.078	600mm	ea	252	254	5.6	598.6	1431.9	89.7	22,806.67	152,044.46	203.95	51,802.28	120.62	30,637.33	1,012.96	257,290.76	254.0	9.7	874.36	2,456.6	113.67	28,871.38	222,087.55	312.85	79,462.85	268.47	68,191.76	1,569.34	398,613.55
1388	3000.079	750mm	ea	30	46	6.0	641.3	277.7	96.2	4,425.37	29,502.44	198.01	9,108.45	129.24	5,944.81	1,064.81	48,981.08	46.0	9.7	874.36	444.9	113.67	5,228.67	40,220.50	312.85	14,390.91	268.47	12,349.67	1,569.34	72,189.75
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 300mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1389	3000.080	300 mm	ea	12	12	12.5	1,325.4	149.7	198.8	2,385.85	15,905.67	391.29	4,695.50	267.09	3,205.03	2,182.67	26,192.05	12.0	31.8	2,870.53	381.0	373.17	4,478.03	34,446.40	917.92	11,015.07	859.42	10,313.03	5,021.04	60,252.54
1390	3000.081	600 mm	ea	5	5	12.9	1,368.2	64.4	205.2	1,026.17	6,841.15	428.39	2,141.95	275.70	1,378.51	2,277.56	11,387.78	5.0	31.7	2,869.72	158.7	373.06	1,865.32	14,348.60	975.89	4,879.46	870.90	4,354.51	5,089.58	25,447.89
1391	3000.082	750 mm	ea	12	12	13.7	1,453.7	164.2	218.0	2,616.74	17,444.92	489.14	5,869.64	292.93	3,515.19	2,453.87	29,446.49	12.0	32.5	2,936.27	389.8	381.72	4,580.58	35,235.24	1,927.27	23,127.25	1,078.08	12,936.97	6,323.34	75,880.04
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 450mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1392	3000.083	300mm	ea	6	6	12.5	1,325.4	74.9	198.8	1,192.92	7,952.83	405.99	2,435.92	267.09	1,602.51	2,197.37	13,184.19	6.0	32.8	2,966.08	196.8	385.59	2,313.54	17,796.45	974.73	5,848.35	893.31	5,359.84	5,219.70	31,318.18
1393	3000.084	450mm	ea	1	4	12.9	1,368.2	51.5	205.2	820.94	5,472.92	409.09	1,636.36	275.70	1,102.81	2,258.26	9,033.02	4.0	32.8	2,966.08	131.2	385.59	1,542.36	11,864.30	974.73	3,898.90	893.31	3,573.23	5,219.70	20,878.78
1394	3000.085	600mm	ea	6	6	13.7	1,453.7	82.1	218.0	1,308.37	8,722.46	434.56	2,607.39	292.93	1,757.60	2,399.30	14,395.82	6.0	32.8	2,965.38	196.8	385.50	2,313.00	17,792.28	980.56	5,883.37	894.32	5,365.91	5,225.76	31,354.56
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 600mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1395	3000.086	300mm	ea	20	20	12.5	1,325.4	249.6	198.8	3,976.42	26,509.44	422.15	8,443.03	267.09	5,341.72	2,213.53	44,270.61	20.0	33.9	3,060.39	677.0	397.85	7,957.02	61,207.84	975.89	19,517.85	915.71	18,314.20	5,349.85	106,996.91
1396	3000.087	450mm	ea	11	11	12.9	1,368.2	141.7	205.2	2,257.58	15,050.52	432.10	4,753.05	275.70	3,032.72	2,281.26	25,093.87	11.0	33.9	3,060.21	372.4	397.83	4,376.10	33,662.29	982.90	10,811.86	917.08	10,087.83	5,358.01	58,938.07
1397	3000.088	600mm	ea	42	62	13.7	1,453.7	848.5	218.0	13,519.82	90,132.10	442.41	27,429.29	292.93	18,161.84	2,407.15	149,243.05	62.0	33.9	3,060.30	2,098.7	397.84	24,666.03	189,738.69	987.57	61,229.08	918.04	56,918.39	5,363.74	332,552.18
1398	3000.089	750mm	ea	1	2	14.5	1,539.2	29.0	230.8	461.78	3,078.52	455.46	910.91	310.16	620.33	2,535.77	5,071.53	2.0	33.9	3,060.35	67.7	397.84	795.69	6,120.69	994.57	1,989.14	919.46	1,838.93	5,372.22	10,744.45
		Cable Tray, Ladder type, Hot Dipped Galvanized Steel, CSA Load Class D, 100 mm cable depth, T-section, 600mm radius, 750mm main, tap off as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1399	3000.090	300mm	ea	10	32	12.5	1,325.4	399.3	198.8	6,362.27	42,415.11	426.83	13,658.42	267.09	8,546.75	2,218.20	70,982.54	32.0	34.9	3,155.96	1,117.1	410.27	13,128.79	100,990.72	980.56	31,377.98	939.11	30,051.50	5,485.91	175,548.99
1400	3000.091	450mm	ea	5	5	12.9	1,368.2	64.4	205.2	1,026.17	6,841.15	437.80	2,188.98	275.70	1,378.51	2,286.96	11,434.80	5.0	34.9	3,155.87	174.5	410.26	2,051.31	15,779.33	988.73	4,943.67	940.73	4,703.66	5,495.59	27,477.97
1401	3000.092	600mm	ea	28	59	13.7	1,453.7	807.4	218.0	12,865.63	85,770.87	448.11	26,438.37	292.93	17,283.04	2,412.85	142,357.91	59.0	34.9	3,155.97	2,059.6	410.28	24,206.28	186,202.13	993.40	58,610.74	941.70	55,560.09	5,501.34	324,579.24
1402	3000.093	750mm	ea	25	25	14.5	1,539.2	362.3	230.8	5,772.22	38,481.45	461.73	11,543.15	310.16	7,754.10	2,542.04	63,550.92	25.0	34.9	3,156.16	872.8	410.30	10,257.53	78,904.10	1,000.41	25,010.16	943.15	23,578.81	5,510.02	137,750.59
		Teck 90 1000 V Power Cable, Class B stranded copper conductors insulated with XLPE type RW90, complete with bare grounding conductor to CSA C22.2 No.131, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket, number of conductors and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1403	3000.094	1C #4/0 AWG	m	100	280	0.3	30.2	79.8	4.5	1,271.43	8,476.18	32.54	9,112.45	6.10	1,707.97	73.46	20,568.03	280.0	0.4	38.96	120.7	5.07	1,418.33	10,910.19	34.94	9,784.20	16.19	4,533.87	95.17	26,646.58
1404	3000.095	1C #500 kcmil	m	500	315	0.4	43.2	128.3	6.4	2,044.52	13,630.13	56.49	17,795.39	8.72	2,746.50	114.97	36,216.54	315.0	0.5	47.96	167.1	6.23	1,963.90	15,106.95	61.72	19,440.64	23.70	7,464.26	139.61	43,975.75
1405	3000.096	1C #750 kcmil	m	600	460	0.4	47.7	206.6	7.1	3,292.47	21,949.82	86.63	39,848.48	9.62	4,422.94	151.12	69,513.71	460.0	0.7	62.26	316.8	8.09	3,723.10	28,639.27	95.89	44,110.14	33.94	15,611.15	200.18	92,083.66
1406	3000.097	2C #12 AWG	m	16000	14,265	0.2	16.8	2263.8	2.5	36,071.79	240,478.56	4.51	64,276.20	3.40	48,457.01	27.29	389,283.58	14,265.0	0.2	22.42	3,537.0	2.91	41,569.26	319,763.53	4.04	57,634.55	6.08	86,752.46	35.45	505,719.79
1407	3000.098	2C #10 AWG	m	3000	1,975	0.1	15.2	283.0	2.2	4,509.38	30,062.56	5.25	10,377.92	3.07	6,057.68	25.83	51,007.55	1,975.0	0.3	29.07	635.1	3.78	7,464.74	57,421.09	5.22	10,312.60	7.88	15,571.00	45.96	90,769.42
1408	3000.099	2C #8 AWG	m	1700	1,670	0.2	22.4	352.2	3.3	5,612.39	37,415.94	7.03	11,740.31	4.51	7,539.40	37.31	62,308.04	1,670.0	0.4	32.16	594.0	4.18	6,980.93	53,699.47	7.12	11,885.19	8.99	15,012.96	52.44	87,578.55
1409	3000.100	2C #6 AWG	m	1000	605	0.2	26.3	150.0	3.9	2,390.21	15,934.74	10.34	6,253.70	5.31	3,210.89	45.93	27,789.54	605.0	0.4	33.69	225.5	4.38	2,649.65	20,381.98	11.19	6,770.43	10.17	6,153.13	59.43	35,955.20
1410	3000.101	2C #4 AWG	m	300	1	0.3	27.5	0.3	4.1	4.13	27.54	16.03	16.03	5.55	5.55	53.25	53.25	1.0	0.4	33.27	0.4	4.33	4.33	33.27	20.59	20.59	11.97	11.97	70.15	70.15
1411	3000.102	2C #1 AWG	m	700	810	0.3	33.6	256.9	5.0	4,093.66	27,291.04	22.59	18,297.74	6.79	5,499.21	68.13	55,181.65	810.0	0.4	38.81	347.7	5.05	4,086.59	31,435.29	21.57	17,472.27	13.46	10,905.37	78.89	63,899.52
1412	3000.103	2C #1/0 AWG	m	50	30	0.3	34.2	9.7	5.1	153.95	1,026.17	29.97	899.06	6.89	206.78	76.20	2,285.93	30.0	0.4	36.55	12.1	4.75	142.56	1,096.59	31.71	951.18	14.97	449.21	87.98	2,639.54
1413	3000.104	2C #2/0 AWG	m	900	751	0.3	35.9	253.9	5.3	4,045.94	26,972.93	30.24	22,711.00	7.24	5,435.11	78.78	59,164.98	751.0	0.4	37.93	315.1	4.93	3,703.07	28,485.13	30.33	22,776.80	15.02	11,279.97	88.21	66,244.97
1414	3000.105	2C #4/0 AWG	m	200	136	0.4	42.7	54.7	6.4	872.25	5,814.97	43.75	5,949.33	8.62	1,171.73	101.53	13,808.28	136.0	0.5	43.25	65.1	5.62	764.69	5,882.24	47.89	6,512.58	19.81	2,693.57	116.57	15,853.08
1415	3000.106	3C #12 AWG	m	16000	31,117	0.2	20.5	6011.8	3.0	95,794.18	638,627.86	5.22	162,360.64	4.14	128,685.05	32.96	1,025,467.73	31,117.0	0.2	20.09	6,914.1	2.61	81,259.68	625,074.47	4.13	128,427.36	5.55	172,757.44	32.38	1,007,518.95
1416	3000.107	3C #10 AWG	m	600	7,405	0.2	17.9	1251.8	2.6	19,946.86	132,979.06	6.10	45,193.48	3.62	26,795.60	30.37	224,915.00	7,405.0	0.3	27.01	2,212.3	3.51	26,000.56	200,004.34	5.63	41,654.64	7.48	55,390.11	43.63	323,049.65
1417	3000.108	3C #8 AWG	m	4500	2,915	0.2	22.4	614.8	3.3	9,796.48	65,309.86	8.19	23,882.38	4.51	13,160.09	38.47	112,148.81	2,915.0	0.3	29.20	941.5	3.80	11,065.07	85,115.94	8.35	24,350.90	8.54	24,905.96	49.89	145,437.87
1418	3000.109	3C #6 AWG	m	1500	1,465	0.2	22.9	316.1	3.4	5,036.20	33,574.64	12.05	17,652.04	4.62	6,765.37	43.02	63,028.24	1,465.0	0.3	28.71	465.2	3.73	5,467.59	42,058.13	12.36	18,103.12	9.23	13,528.92	54.03	79,157.72
1419	3000.110	3C #4 AWG	m	1100	655	0.2	26.3	162.4	3.9	2,587.75	17,251.66	16.28	10,660.84	5.31	3,476.25	51.87	33,976.51	655.0	0.4	34.24	248.1	4.45	2,915.39	22,426.06	18.10	11,853.91	11.69	7,656.94	68.48	44,852.30
1420	3000.111	3C #2 AWG	m	4000	3,930	0.3	30.7	1138.9	4.6	18,147.85	120,985.67	22.57	88,710.01	6.20	24,378.91	64.18	252,222.44	3,930.0	0.5	43.80	1,903.9	5.69	22,375.60	172,120.00	24.59	96,636.57	15.24	59,906.17	89.32	351,038.34
1421	3000.112	3C #1 AWG	m	300	260	0.3	33.6	82.5	5.0	1,314.01	8,760.09	26.06	6,774.40	6.79	1,765.18	71.59	18,613.68	260.0	0.4	35.63	102.5	4.63	1,204.44	9,264.91	32.93	8,560.81	15.00	3,900.90	88.20	22,931.05
1421a	Added	3C #1/0 AWG	m		245	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	245.0	0.4	38.61	104.64	5.02	1,229.85	9,460.39	37.17	9,107.77	16.56	4,056.96	97.37	23,854.97
1422	3000.113	3C #2/0 AWG	m	2400	2,110	0.3	35.9	713.4	5.3	11,367.42	75,782.80	37.43	78,986.60	7.24	15,270.42	85.97	181,407.24	2,110.0	0.5	48.34	1,128.3	6.28	13,260.91	102,007.03	39.18	82,677.39	19.25	40,618.24	113.06	238,563.58
1423	3000.114	3C #4/0 AWG	m	2400	2,305	0.4	42.0	912.9	6.3	14,546.76	96,978.38	53.86	124,156.96	8.48	19,541.38	110.73	255,223.48	2,305.0	0.5	49.08	1,251.4	6.38	14,707.07	113,131.34	59.89	138,041.44	23.59	54,378.84	138.94	320,258.70
1424	3000.115	3C #250 kcmil	m	25	21	0.5	48.2	9.5	7.2	151.92	1,012.83	81.83	1,718.45	9.72	204.09	147.01	3,087.29	21.0	0.5	48.26	11.2	6.27	131.74	1,013.42	82.54	1,733.40	27.96	587.15	165.03	3,465.71
1425	3000.116	3C #500 kcmil	m	4600	3,910	0.6	62.7	2310.3	9.4	36,813.15	245,421.00	121.40	474,655.84	12.65	49,452.92	206.23	806,342.91	3,910.0	0.9	83.88	3,627.7	10.90	42,635.47	327,965.12	156.25	610,923.67	51.17	200,071.33	302.20	1,181,595.58
1425a	Added	3C #500 kcmil Tray Cable	m		700	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	700.0	1.0	87.62	678.42	11.39	7,973.30	61,333.07	148.11	103,675.57	50.41	35,286.75	297.53	208,268.69
1426	3000.117	4C #12 AWG	m	1600	1,585	0.2	19.1	285.8	2.8	4,554.15	30,361.01	6.38	10,118.35	3.86	6,117.82	32.27	51,151.33	1,585.0	0.4	32.99	578.4	4.29	6,798.00	52,292.30	6.22	9,862.81	9.01	14,275.11	52.51	83,228.21
1427	3000.118	4C #10 AWG	m	900	1,005	0.2	19.6	186.1	2.9	2,965.00	19,766.64	7.55	7,587.41	3.96	3,983.03	34.13	34,302.07	1,005.0	0.3	25.63	285.0	3.33	3,348.99	25,761.45	7.06	7,090.73	7.44	7,481.87	43.47	43,683.04
1428	3000.119	4C #8 AWG	m	200	171	0.2	21.8	35.2	3.2	561.52	3,743.48	9.34	1,597.36	4.41	754.32	38.93	6,656.67	171.0	0.3	29.94	56.6	3.89	665.57	5,119.76	9.59	1,640.69	8.97	1,533.53	52.40	8,959.55
1429	3000.120	4C #6 AWG	m	50	245	0.2	26.3	60.7	3.9	967.94	6,452.91	16.20	3,968.09	5.31	1,300.28	51.79	12,689.22	245.0	0.6	51.92	140.7	6.75	1,653.74	12,721.06	19.24	4,712.66	16.08	3,938.43	93.98	23,025.89
1430	3000.121	4C #4 AWG	m	50	30	0.3	27.5	7.8	4.1	123.91	826.07	22.50	674.89	5.55	166.45	59.71	1,791.32	30.0	0.4	35.58	11.8	4.63	138.77	1,067.49	26.21	786.45	13.64	409.20	80.06	2,401.91
1430a	Added	4C #3 AWG	m		11	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.4	33.65	4.09	4.37	48.12	370.16	29.26	321.89	13.80	151.80	81.09	891.97
1431	3000.122	4C #2 AWG	m	700	625	0.3	30.7	181.1	4.6	2,886.11	19,240.72	30.48	19,052.58	6.20	3,877.05	72.09	45,056.46	625.0	0.4	39.89	275.8	5.19	3,241.13	24,931.76	29.06	18,161.61	15.23	9,515.73	89.36	55,850.23
1432	3000.123	4C #2/0 AWG	m	1900	1,876	0.3	36.4	643.3	5.4	10,251.15	68,341.00	46.91	88,004.77	7.34	13,770.88	96.14	180,367.79	1,876.0	0.6	50.75	1,053.0	6.60	12,376.16	95,201.37	48.45	90,890.43	21.68	40,672.31	127.47	239,140.29
1433	3000.124	4C #4/0 AWG	m	100	80	0.4	44.8	33.7	6.7	537.71	3,584.76	72.11	5,768.72	9.03	722.34	132.67	10,613.54	80.0	0.6	55.90	49.5	7.27	581.40	4,472.34	88.29	7,063.03	30.91	2,473.04	182.37	14,589.81
		Teck 90 1000 V Power Cable Terminations (includes Glands and Termination kit) per Cable Type and Size	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1434	3000.125	1C #4/0 AWG	ea	8	24	2.1	222.3	50.2	33.3	800.41	5,336.09	39.58	949.91	44.80	1,075.24	340.07	8,161.65	24.0	3.2	289.88	77.0	37.68	904.44	6,957.22	119.18	2,860.44	92.12	2,210.93	538.88	12,933.02
1435	3000.126	1C #250 kcmil	ea	12	12	2.7	285.6	32.3	42.8	514.11	3,427.41	93.90	1,126.80	57.55	690.63	479.91	5,758.96	12.0	4.5	408.62	54.2	53.12	637.45	4,903.48	38.66	463.95	103.82	1,245.79	604.22	7,250.67
1436	3000.127	1C #500 kcmil	ea	52	36	5.6	598.6	202.9	89.7	3,232.44	21,549.61	77.10	2,775.53	120.62	4,342.30	886.11	31,899.89	36.0	4.7	422.01	168.0	54.86	1,975.01	15,192.36	80.50	2,898.09	115.39	4,153.90	672.76	24,219.37
1437	3000.128	1C #750 kcmil	ea	56	40	7.2	769.6	289.8	115.4	4,617.77	30,785.16	116.01	4,640.32	155.08	6,203.28	1,156.16	46,246.54	40.0	5.3	483.25	213.8	62.82	2,512.89	19,329.96	105.33	4,213.39	134.78	5,391.07	786.18	31,447.32
1438	3000.129	2C #12 AWG	ea	378	644	1.8	189.3	1148.0	28.4	18,292.79	121,951.96	44.76	28,826.49	38.16	24,573.61	300.69	193,644.85	644.0	2.6	232.88	1,658.9	30.27	19,496.66	149,974.28	20.95	13,494.16	58.95	37,962.89	343.06	220,927.99
1439	3000.130	2C #10 AWG	ea	54	68	1.8	188.1	120.4	28.2	1,918.94	12,792.94	44.52	3,027.20	37.91	2,577.81	298.78	20,316.89	68.0	2.6	232.91	175.2	30.28	2,058.88	15,837.57	19.79	1,345.47	58.72	3,992.95	341.69	23,234.86
1440	3000.131	2C #8 AWG	ea	44	38	1.8	188.1	67.3	28.2	1,072.35	7,149.00	44.52	1,691.67	37.91	1,440.54	298.78	11,353.56	38.0	2.6	234.79	98.7	30.52	1,159.87	8,922.09	16.87	640.98	58.58	2,225.87	340.76	12,948.82
1441	3000.132	2C #6 AWG	ea	22	12	2.6	273.6	30.9	41.0	492.56	3,283.75	55.00	660.01	55.14	661.68	424.83	5,098.01	12.0	3.0	272.65	36.2	35.44	425.33	3,271.77	26.21	314.48	69.35	832.23	403.65	4,843.81
1442	3000.133	2C #4 AWG	ea	4	1	3.1	324.9	3.1	48.7	48.74	324.95	61.39	61.39	65.48	65.48	500.57	500.57	1.0	3.8	339.66	3.8	44.16	44.16	339.66	26.21	26.21	85.10	85.10	495.12	495.12
1443	3000.134	2C #1 AWG	ea	10	14	2.9	307.8	40.6	46.1	646.49	4,309.92	67.93	950.97	62.03	868.46	483.99	6,775.84	14.0	3.1	278.85	43.2	36.25	507.51	3,903.93	35.41	495.77	72.66	1,017.29	423.18	5,924.49
1444	3000.135	2C #1/0 AWG	ea	6	6	3.8	401.9	22.7	60.2	361.73	2,411.50	74.76	448.53	80.99	485.92	617.95	3,707.69	6.0	4.4	401.81	26.7	52.23	313.41	2,410.84	49.58	297.46	104.41	626.46	608.03	3,648.17
1445	3000.136	2C #2/0 AWG	ea	16	18	4.3	453.2	76.8	67.9	1,223.71	8,158.07	125.70	2,262.58	91.33	1,643.87	738.23	13,288.23	18.0	4.6	416.83	83.0	54.19	975.37	7,502.88	49.58	892.38	107.94	1,942.97	628.53	11,313.60
1446	3000.137	2C #4/0 AWG	ea	22	18	5.0	530.1	89.8	79.5	1,431.51	9,543.40	126.17	2,271.02	106.83	1,923.02	842.72	15,168.95	18.0	5.1	456.80	91.0	59.38	1,068.91	8,222.39	49.58	892.38	117.34	2,112.04	683.10	12,295.72
1447	3000.138	3C #12 AWG	ea	956	966	2.3	239.4	2177.4	35.9	34,694.87	231,299.16	59.64	57,614.67	48.25	46,607.34	383.25	370,216.04	966.0	2.8	254.00	2,714.1	33.02	31,897.89	245,368.36	20.95	20,241.25	63.91	61,740.26	371.89	359,247.76
1448	3000.139	3C #10 AWG	ea	134	252	2.3	239.4	568.0	35.9	9,050.84	60,338.91	59.64	15,029.91	48.25	12,158.44	383.25	96,578.10	252.0	3.1	284.10	791.9	36.93	9,307.22	71,594.00	27.37	6,898.25	72.28	18,214.44	420.69	106,013.91
1449	3000.140	3C #8 AWG	ea	204	104	2.3	239.4	234.4	35.9	3,735.27	24,901.77	63.92	6,647.42	48.25	5,017.77	387.52	40,302.23	104.0	3.4	304.99	350.9	39.65	4,123.53	31,719.46	27.37	2,846.90	77.19	8,027.69	449.21	46,717.58
1450	3000.141	3C #6 AWG	ea	44	84	3.1	324.9	257.0	48.7	4,094.43	27,296.17	70.13	5,890.55	65.48	5,500.24	509.30	42,781.40	84.0	3.6	322.04	299.2	41.86	3,516.63	27,050.98	27.37	2,299.42	81.19	6,820.31	472.47	39,687.33
1451	3000.142	3C #4 AWG	ea	40	22	3.7	393.3	81.5	59.0	1,298.11	8,654.05	78.14	1,718.99	79.26	1,743.81	609.77	13,414.96	22.0	4.1	373.30	90.8	48.53	1,067.65	8,212.69	32.24	709.32	94.22	2,072.91	548.30	12,062.57
1452	3000.143	3C #2 AWG	ea	162	168	3.5	376.2	595.1	56.4	9,481.83	63,212.19	84.29	14,161.21	75.82	12,737.41	592.81	99,592.64	168.0	5.0	451.07	838.2	58.64	9,851.36	75,779.69	50.74	8,525.00	116.22	19,525.65	676.68	113,681.71
1453	3000.144	3C #1 AWG	ea	2	10	3.9	410.4	38.6	61.5	615.70	4,104.69	86.78	867.76	82.71	827.10	641.53	6,415.26	10.0	5.2	473.61	52.4	61.57	615.69	4,736.08	50.74	507.44	121.52	1,215.21	707.44	7,074.42
1453a	Added	3C #1/0 AWG	ea		14	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	6.1	555.53	86.03	72.22	1,011.06	7,777.36	47.37	663.19	140.09	1,961.31	815.21	11,412.91
1454	3000.145	3C #2/0 AWG	ea	62	48	5.2	547.2	247.3	82.0	3,940.50	26,270.00	111.27	5,340.81	110.28	5,293.47	850.93	40,844.78	48.0	5.9	537.64	285.5	69.89	3,354.85	25,806.53	76.64	3,678.51	141.76	6,805.49	825.95	39,645.37
1455	3000.146	3C #4/0 AWG	ea	60	50	6.1	649.9	305.9	97.4	4,874.32	32,495.45	118.72	5,935.83	130.96	6,547.91	997.07	49,853.51	50.0	6.6	592.66	327.8	77.05	3,852.29	29,633.01	76.64	3,831.78	154.71	7,735.64	901.05	45,052.72
1456	3000.147	3C #250 kcmil	ea	4	4	8.1	855.1	32.2	128.2	513.09	3,420.57	133.62	534.46	172.31	689.25	1,289.34	5,157.38	4.0	7.3	656.09	29.0	85.29	341.17	2,624.35	92.49	369.95	172.81	691.24	1,006.68	4,026.71
1457	3000.148	3C #500 kcmil	ea	132	126	16.1	1,710.2	2028.6	256.5	32,324.42	215,496.11	202.66	25,535.49	344.63	43,422.99	2,514.12	316,779.01	126.0	10.1	912.62	1,271.9	118.64	14,948.77	114,990.50	151.42	19,079.17	244.96	30,865.58	1,427.65	179,884.02
1457a	Added	3C #500 kcmil - Tray Cable	ea		8	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	7.5	680.87	60.25	88.51	708.10	5,446.96	16.17	129.34	163.27	1,306.14	948.81	7,590.51
1458	3000.149	4C #12 AWG	ea	84	70	2.7	290.7	191.6	43.6	3,052.86	20,352.41	74.77	5,233.72	58.59	4,101.06	467.71	32,740.05	70.0	3.1	282.21	218.5	36.69	2,568.08	19,754.49	22.12	1,548.47	70.78	4,954.34	411.79	28,825.39
1459	3000.150	4C #10 AWG	ea	66	72	2.7	290.7	197.1	43.6	3,140.09	20,933.91	79.04	5,691.05	58.59	4,218.23	471.99	33,983.28	72.0	3.5	314.45	250.4	40.88	2,943.23	22,640.19	28.54	2,054.98	79.65	5,734.49	463.51	33,372.89
1460	3000.151	4C #8 AWG	ea	6	8	2.7	290.7	21.9	43.6	348.90	2,325.99	79.04	632.34	58.59	468.69	471.99	3,775.92	8.0	3.8	340.87	30.2	44.31	354.50	2,726.93	28.54	228.33	85.86	686.85	499.58	3,996.61
1461	3000.152	4C #6 AWG	ea	18	26	3.5	376.2	92.1	56.4	1,467.43	9,782.84	88.29	2,295.65	75.82	1,971.27	596.81	15,517.18	26.0	4.3	384.71	110.6	50.01	1,300.32	10,002.44	33.41	868.64	97.14	2,525.60	565.27	14,696.99
1462	3000.153	4C #4 AWG	ea	4	4	4.2	444.6	16.7	66.7	266.80	1,778.70	93.26	373.04	89.60	358.41	694.24	2,776.96	4.0	4.9	445.71	19.7	57.94	231.77	1,782.83	51.91	207.65	115.20	460.81	670.76	2,683.05
1462a	Added	4C #3 AWG	ea		4	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	5.3	483.49	21.39	62.85	251.41	1,933.94	51.91	207.65	124.08	496.30	722.33	2,889.30
1463	3000.154	4C #2 AWG	ea	38	32	4.2	444.6	134.0	66.7	2,134.44	14,229.58	100.66	3,221.10	89.60	2,867.30	701.64	22,452.42	32.0	5.7	517.45	183.2	67.27	2,152.60	16,558.45	51.91	1,661.16	132.06	4,225.91	768.69	24,598.12
1464	3000.155	4C #2/0 AWG	ea	34	36	6.3	667.0	226.0	100.0	3,601.66	24,012.42	131.36	4,728.90	134.40	4,838.56	1,032.83	37,181.75	36.0	7.4	670.45	267.0	87.16	3,137.70	24,136.18	91.78	3,303.93	176.04	6,337.52	1,025.43	36,915.34
1465	3000.156	4C #4/0 AWG	ea	2	2	5.2	547.2	10.3	82.0	164.19	1,094.58	122.67	245.33	110.28	220.56	862.33	1,724.67	2.0	8.0	720.90	16.0	93.72	187.43	1,441.79	93.66	187.31	188.28	376.56	1,096.55	2,193.09
1466	3000.157	AC-90 cable, 2C #12 AWG, 600 V, XLPE insulation, copper conductors, interlocking aluminum armour	m	500	2,692	0.3	28.0	710.8	4.2	11,326.07	75,507.10	3.71	9,992.87	5.65	15,214.86	41.62	112,040.90	2,692.0	0.2	22.04	656.4	2.87	7,714.50	59,342.30	2.17	5,854.15	5.62	15,124.91	32.70	88,035.86
1467	3000.158	3/C # 1 AWG, 25 kV Shielded, Armoured Power Cable, Type HVTECK, 100% insulation.	m	250	231	0.4	37.6	81.8	5.6	1,303.75	8,691.68	118.43	27,357.37	7.58	1,751.39	169.28	39,104.19	231.0	0.7	58.91	150.5	7.66	1,769.08	13,608.31	80.50	18,595.43	30.05	6,941.89	177.12	40,914.71
1468	3000.159	3/C # 1 AWG, 25 kV Shielded, Armoured Power Cable, Type HVTECK, 100% insulation terminations including glands, and termination kits	ea	2	2	20.5	2,180.6	41.1	327.0	654.18	4,361.23	1,241.24	2,482.48	439.40	878.80	4,188.35	8,376.69	2.0	43.1	3,900.47	86.3	507.06	1,014.12	7,800.93	4,341.50	8,682.99	1,790.72	3,581.44	10,539.74	21,079.49
1469	3000.160	Mineral Insulated Power Cable, 2-hour fire rated, 1/C # 250 kcmil solid copper conductor, 600 V magnesium oxide insulation, seamless copper sheath.	m	750	736	1.0	111.1	770.2	16.6	12,273.02	81,820.11	119.40	87,880.57	22.40	16,486.95	269.65	198,460.65	736.0	1.1	99.79	812.4	12.97	9,547.74	73,444.15	172.10	126,668.49	58.10	42,762.09	342.97	252,422.46
1470	3000.161	Mineral Insulated Power Cable, 2-hour fire rated, 1/C # 250 kcmil Termination including glands and termination kit	ea	6	12	6.0	641.3	72.5	96.2	1,154.44	7,696.29	1,787.97	21,455.61	129.24	1,550.82	2,654.76	31,857.17	12.0	8.2	745.50	99.0	96.92	1,162.99	8,946.05	236.61	2,839.38	222.84	2,674.11	1,301.88	15,622.52
1470a	Added	Free Issue Connectors to CH0030 Contractor	ea		581	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	581.0	0.1	6.53	41.97	0.85	493.27	3,794.42	17.08	9,922.35	4.97	2,889.37	29.43	17,099.41
		Teck 90 600 V Control Cable, Class B stranded copper conductors insulated with XLPE type RW90, overall shield with tinned copper drain wire, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket (grey in colour), to CSA C22.2 No.131 and CSA 22.2 No. 239, number of conductors and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1471	3000.162	4C # 14 AWG	m	8800	12,076	0.2	17.1	1944.2	2.5	30,980.13	206,534.21	4.78	57,670.42	3.45	41,617.14	27.89	336,801.90	12,076.0	0.2	22.22	2,967.6	2.89	34,877.17	268,285.95	6.84	82,615.99	6.60	79,683.88	38.54	465,462.99
1472	3000.163	4C # 12 AWG	m	1800	1,610	0.2	19.1	290.3	2.8	4,625.98	30,839.89	5.83	9,378.60	3.86	6,214.31	31.71	51,058.79	1,610.0	0.3	29.51	525.5	3.84	6,175.46	47,503.52	8.66	13,948.75	8.68	13,972.27	50.68	81,599.99
1473	3000.164	4C # 8 AWG	m	2100	1,915	0.2	25.6	462.5	3.8	7,369.20	49,127.98	11.07	21,206.01	5.17	9,899.41	45.75	87,602.60	1,915.0	0.4	37.53	794.9	4.88	9,342.64	71,866.49	15.70	30,062.46	11.98	22,942.04	70.09	134,213.63
1474	3000.165	5C # 16 AWG	m	200	181	0.2	17.1	29.1	2.5	464.34	3,095.62	5.15	932.48	3.45	623.77	28.27	5,116.22	181.0	0.2	17.36	34.8	2.26	408.39	3,141.44	7.96	1,440.47	5.68	1,028.28	33.25	6,018.58
1475	3000.166	8C # 14 AWG	m	9800	11,825	0.2	17.7	1980.0	2.6	31,549.66	210,331.05	7.06	83,480.80	3.58	42,382.21	31.10	367,743.72	11,825.0	0.3	28.89	3,779.1	3.76	44,414.82	341,652.46	11.15	131,888.12	9.04	106,845.85	52.84	624,801.25
1476	3000.167	12C # 14 AWG	m	4200	5,115	0.2	20.6	996.5	3.1	15,877.83	105,852.20	9.23	47,219.45	4.17	21,329.47	37.20	190,278.95	5,115.0	0.4	33.11	1,879.2	4.30	22,015.24	169,348.02	14.03	71,768.40	10.61	54,248.11	62.05	317,379.77
1477	3000.168	20C # 14 AWG	m	3500	4,160	0.2	25.3	991.2	3.8	15,794.84	105,298.93	13.67	56,870.53	5.10	21,217.99	47.88	199,182.29	4,160.0	0.4	37.85	1,741.8	4.92	20,470.76	157,467.57	18.11	75,318.91	12.54	52,170.83	73.42	305,428.09
1478	3000.169	30C # 14 AWG	m	700	495	0.2	26.3	122.7	3.9	1,955.63	13,037.51	18.76	9,286.84	5.31	2,627.09	54.36	26,907.08	495.0	0.6	57.79	316.4	7.51	3,718.57	28,604.35	29.82	14,759.52	19.58	9,693.91	114.70	56,776.35
1479	3000.170	40C # 14 AWG	m	400	470	0.3	27.5	121.8	4.1	1,941.26	12,941.74	25.05	11,773.41	5.55	2,607.79	62.26	29,264.20	470.0	0.7	59.65	310.1	7.76	3,644.85	28,037.34	37.95	17,838.68	21.66	10,180.57	127.02	59,701.44
		Teck 90 600 V Control Cable Terminations for the , number of conductors and conductor sizes as follows: (Includes Cable Glands, and termination kits)	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1480	3000.171	4C # 14 AWG	ea	208	348	2.9	307.8	1008.5	46.1	16,069.85	107,132.95	53.21	18,516.73	62.03	21,587.43	469.27	163,306.37	348.0	3.3	300.99	1,158.6	39.13	13,616.66	104,743.56	22.12	7,698.11	75.19	26,166.10	437.43	152,224.44
1481	3000.172	4C # 12 AWG	ea	112	116	3.1	324.9	354.8	48.7	5,654.21	37,694.72	65.85	7,638.67	65.48	7,595.58	505.03	58,583.17	116.0	3.8	339.15	435.2	44.09	5,114.41	39,341.58	22.12	2,566.04	84.16	9,762.45	489.52	56,784.47
1482	3000.173	4C # 8 AWG	ea	106	106	3.6	386.5	385.7	57.9	6,145.74	40,971.63	63.20	6,698.72	77.89	8,255.88	585.58	62,071.97	106.0	4.4	395.88	464.2	51.46	5,455.19	41,962.99	28.54	3,025.38	98.78	10,470.99	574.67	60,914.55
1483	3000.174	5C # 16 AWG	ea	8	8	3.2	342.0	25.8	51.3	410.47	2,736.46	61.16	489.31	68.93	551.40	523.46	4,187.64	8.0	3.4	306.04	27.1	39.78	318.28	2,448.28	23.29	186.31	76.61	612.90	445.72	3,565.76
1484	3000.175	8C # 14 AWG	ea	276	338	5.1	538.7	1714.2	80.8	27,314.13	182,094.22	118.32	39,991.59	108.56	36,692.42	846.43	286,092.36	338.0	5.1	460.15	1,720.3	59.82	20,218.86	155,529.84	33.21	11,225.21	114.83	38,811.72	668.00	225,785.65
1485	3000.176	12C # 14 AWG	ea	98	154	6.9	735.4	1066.1	110.3	16,988.28	113,255.18	134.12	20,655.18	148.19	22,821.19	1,128.05	173,719.83	154.0	6.6	595.33	1,014.1	77.39	11,918.44	91,680.27	37.88	5,833.53	147.54	22,720.65	858.14	132,152.89
1486	3000.177	20C # 14 AWG	ea	106	142	11.3	1,197.2	1600.3	179.5	25,500.37	170,002.49	213.25	30,281.27	241.24	34,255.91	1,831.27	260,040.04	142.0	10.2	924.27	1,451.7	120.15	17,061.98	131,246.02	52.09	7,396.28	227.70	32,333.80	1,324.21	188,038.08
1487	3000.178	30C # 14 AWG	ea	26	18	16.1	1,710.2	289.8	256.5	4,617.77	30,785.16	317.94	5,722.91	344.63	6,203.28	2,629.40	47,329.13	18.0	14.5	1,310.55	260.9	170.37	3,066.70	23,589.98	82.26	1,480.72	324.56	5,842.09	1,887.75	33,979.49
1488	3000.179	40C # 14 AWG	ea	20	28	21.7	2,308.8	608.6	346.3	9,697.33	64,648.83	418.40	11,715.09	465.25	13,026.90	3,538.86	99,088.15	28.0	19.5	1,765.90	546.9	229.57	6,427.84	49,445.22	93.94	2,630.19	433.92	12,149.88	2,523.33	70,653.18
		Armoured Control and Instrumentation Cable (ACIC) 600 V, twisted pairs/triads of stranded tinned copper conductors with PVC insulation, individual and overall shield with tinned copper drain wire, interlocking aluminum armour, and low temperature (-40°C) flame retardant and sunlight resistant PVC outer jacket (grey in colour), to CSA C22.2 No.131 and CSA 22.2 No. 239, number of pairs/triads and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1489	3000.180	2P # 16 AWG	m	13000	19,545	0.2	17.1	3146.7	2.5	50,141.33	334,275.52	5.37	104,925.82	3.45	67,357.32	28.48	556,699.99	19,545.0	0.2	19.51	4,216.9	2.54	49,560.58	381,295.24	8.40	164,269.20	6.28	122,667.51	36.72	717,732.53
1490	3000.181	4P # 16 AWG	m	1400	915	0.2	17.1	147.3	2.5	2,347.37	15,649.12	7.24	6,622.79	3.45	3,153.34	30.35	27,772.62	915.0	0.2	21.03	212.8	2.73	2,501.51	19,242.40	12.26	11,214.14	7.41	6,779.94	43.43	39,737.99
1491	3000.182	2T # 16 AWG	m	800	880	0.2	17.1	141.7	2.5	2,257.58	15,050.52	6.12	5,386.32	3.45	3,032.72	29.24	25,727.14	880.0	0.2	21.03	204.7	2.73	2,405.45	18,503.49	10.27	9,037.03	7.01	6,167.99	41.04	36,113.97
1492	3000.183	4T # 16 AWG	m	200	140	0.2	17.1	22.5	2.5	359.16	2,394.40	8.95	1,252.72	3.45	482.48	32.06	4,488.76	140.0	0.3	25.19	39.0	3.27	458.49	3,526.66	16.42	2,298.78	9.23	1,291.67	54.11	7,575.80
1493	3000.184	3P # 22 AWG	m	300	1	0.2	17.1	0.2	2.5	2.57	17.10	5.38	5.38	3.45	3.45	28.49	28.49	1.0	0.3	24.96	0.3	3.24	3.24	24.96	7.23	7.23	7.32	7.32	42.75	42.75
1493a	Added	4P # 20 AWG	m		150	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.0	0.2	16.65	27.63	2.17	324.76	2,498.18	10.82	1,622.41	6.09	913.74	35.73	5,359.10
1494	3000.185	4P # 18 AWG	m	700	1	0.2	17.1	0.2	2.5	2.57	17.10	6.37	6.37	3.45	3.45	29.49	29.49	1.0	0.3	24.96	0.3	3.24	3.24	24.96	7.23	7.23	7.32	7.32	42.75	42.75
1495	3000.186	6P # 18 AWG	m	100	1	0.2	20.5	0.2	3.0	3.08	20.52	8.22	8.22	4.14	4.14	35.95	35.95	1.0	0.3	22.18	0.3	2.88	2.88	22.18	9.16	9.16	7.06	7.06	41.29	41.29
1495a	Added	18P # 16 AWG	m		830	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	830.0	0.2	16.67	153.07	2.17	1,799.00	13,838.44	19.65	16,311.96	7.88	6,536.26	46.37	38,485.66
1495b	Added	12P #14 AWG	m		2,625	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,625.0	0.5	44.91	1,303.93	5.84	15,324.83	117,883.28	33.25	87,289.32	17.25	45,277.89	101.25	265,775.32
		Armoured Control and Instrumentation Cable (ACIC) 600 V Terminations including Glands and Terminations kits, number of pairs/triads and conductor sizes as follows:	0.00					0.0	$0.00				$0.00		$0.00						0.0	$0.00				$0.00		$0.00	$0.00	
1496	3000.187	2P # 16 AWG	ea	358	724	2.7	290.7	1981.6	43.6	31,575.31	210,502.09	51.97	37,624.39	58.59	42,416.68	444.91	322,118.45	724.0	4.7	428.86	3,434.5	55.75	40,364.64	310,497.24	30.56	22,124.62	106.94	77,425.69	622.12	450,412.20
1497	3000.188	4P # 16 AWG	ea	50	34	4.7	495.9	158.7	74.4	2,529.51	16,863.43	93.94	3,194.02	99.94	3,398.02	764.26	25,984.98	34.0	8.9	800.98	301.2	104.13	3,540.33	27,233.28	49.06	1,668.12	198.12	6,736.04	1,152.29	39,177.77
1498	3000.189	2T # 16 AWG	ea	32	32	3.7	393.3	118.5	59.0	1,888.16	12,587.71	70.82	2,266.15	79.26	2,536.45	602.45	19,278.47	32.0	6.5	583.13	206.4	75.81	2,425.82	18,660.12	34.92	1,117.37	144.07	4,610.37	837.93	26,813.68
1499	3000.190	4T # 16 AWG	ea	8	8	6.6	701.2	52.8	105.1	841.46	5,609.74	131.64	1,053.13	141.30	1,130.38	1,079.34	8,634.71	8.0	9.4	851.39	75.3	110.68	885.44	6,811.08	57.39	459.11	211.64	1,693.14	1,231.10	9,848.77
1500	3000.191	3P # 22 AWG	ea	16	1	3.7	393.3	3.7	59.0	59.00	393.37	70.82	70.82	79.26	79.26	602.45	602.45	1.0	7.1	641.88	7.1	83.44	83.44	641.88	39.63	39.63	158.83	158.83	923.78	923.78
1500a	Added	4P # 20 AWG	ea		14	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	4.5	404.71	62.67	52.61	736.58	5,665.98	27.96	391.41	100.74	1,410.39	586.03	8,204.35
1501	3000.192	4P # 18 AWG	ea	38	1	4.7	495.9	4.7	74.4	74.40	495.98	89.67	89.67	99.94	99.94	759.99	759.99	1.0	8.8	792.99	8.8	103.09	103.09	792.99	46.40	46.40	195.69	195.69	1,138.17	1,138.17
1502	3000.193	6P # 18 AWG	ea	6	1	6.6	701.2	6.6	105.1	105.18	701.22	131.64	131.64	141.30	141.30	1,079.34	1,079.34	1.0	12.1	1,096.59	12.1	142.56	142.56	1,096.59	59.36	59.36	269.67	269.67	1,568.17	1,568.17
1502a	Added	8P # 18 AWG	ea		46	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.0	13.8	1,250.15	636.10	162.52	7,475.88	57,506.78	75.22	3,460.10	308.95	14,211.55	1,796.83	82,654.31
1502b	Added	12P # 14 AWG	ea		40	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.0	21.3	1,922.68	850.69	249.95	9,997.94	76,907.22	117.75	4,709.96	475.56	19,022.57	2,765.94	110,637.69
1503	3000.194	Armoured CAT6 ethernet cable, 4 twisted pairs of 23 AWG copper conductors with polyolefin insulation, overall shielded, PVC inner jacket, interlocking aluminum armour, and low temperature (-40°C) PVC outer jacket (yellow or blue in colour as applicable to indicate data or telephone cable).	m	15000	8,435	0.2	20.5	1629.6	3.0	25,967.28	173,115.21	8.75	73,820.99	4.14	34,883.13	36.49	307,786.61	8,435.0	0.2	16.67	1,555.7	2.17	18,283.15	140,639.59	66.82	563,657.28	17.37	146,531.13	103.04	869,111.15
1504	3000.195	Armoured CAT6 ethernet cable, 4 twisted pairs of 23 AWG terminations	ea	822	506	2.5	265.0	1262.7	39.7	20,120.67	134,137.78	227.89	115,311.30	53.42	27,029.09	586.16	296,598.83	506.0	3.1	283.16	1,584.8	36.81	18,626.17	143,278.25	27.83	14,083.55	70.09	35,466.18	417.89	211,454.16
1505	3000.196	Low voltage control cable, CSA type LVT, 300 V, 4C 18 AWG copper conductors with PVC insulation, overall shield, unarmoured, PVC outer jacket (grey in colour), to CSA C22.2 No.35.	m	300	36	0.0	2.8	1.0	0.4	15.15	100.98	0.97	34.83	0.57	20.35	4.76	171.30	36.0	0.6	50.02	19.9	6.50	234.11	1,800.85	0.89	32.18	11.94	429.71	69.36	2,496.85
1505a	Added	2C # 22 OS Shielded LVT PVC Outer Jacket 300 V	m		176	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	176.0	0.0	3.99	7.68	0.51	90.29	694.56	0.24	41.91	0.98	171.66	5.67	998.42
1505b	Added	4C # 22 OS Shielded LVT PVC Outer Jacket 300 V	m		30	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.0	0.1	5.13	1.70	0.67	20.00	153.88	0.45	13.59	1.30	38.90	7.55	226.37
1506	3000.197	Low voltage control cable, CSA type LVT, 300 V, 4C 18 AWG terminations	0.00	0	14	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.0	0.7	60.70	9.4	7.89	110.48	849.83	0.00	0.00	14.27	199.72	82.86	1,160.03
1506a	Added	2C # 22 OS Shielded LVT PVC Outer Jacket 300 V Terminations	ea		66	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.0	0.3	26.55	19.38	3.45	227.80	1,752.34	0.00	0.00	6.24	411.82	36.24	2,391.97
1506b	Added	4C # 22 OS Shielded LVT PVC Outer Jacket 300 V	ea		12	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.0	0.6	53.14	7.05	6.91	82.90	637.72	0.00	0.00	12.49	149.87	72.54	870.50
1507	3000.198	Fibre Optical OM3 multi-mode cable, 50/125 µm core/cladding, 12 x 900 µm tight buffered cables, interlocking steel armour, FT-4 PVC outer jacket (orange in colour).	m	4000	3,600	0.2	25.6	869.4	3.8	13,853.32	92,355.48	15.54	55,952.76	5.17	18,609.85	50.21	180,771.41	3,600.0	0.2	17.61	701.2	2.29	8,240.93	63,391.73	11.00	39,601.47	6.35	22,870.78	37.25	134,104.91
1507a	Added	Armored 12C SM FO FT-4 PVC outer jacket Orange in colour	m		2,570	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,570.0	0.2	19.47	553.61	2.53	6,506.45	50,049.65	8.07	20,739.43	6.20	15,937.79	36.28	93,233.33
1508	3000.199	Fibre Optical OM3 multi-mode cable Terminations	ea	36	54	2.0	213.7	108.7	32.0	1,731.67	11,544.43	1,725.52	93,178.10	43.08	2,326.23	2,014.45	108,780.43	54.0	13.6	1,228.50	733.8	159.70	8,624.04	66,338.76	978.84	52,857.13	293.98	15,874.67	2,661.01	143,694.59
1508a	Added	Armored 12C SM FO FT-4 PVC outer jacket Orange in colour - Terminations	ea		38	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.0	13.6	1,228.52	516.36	159.71	6,068.87	46,683.63	11.61	441.37	291.06	11,060.20	1,690.90	64,254.07
1509	3290.020	Intake MCC Copper Busway assembly (between 3290-MCC-82-A001/B001), low impedance compact type, totally enclosed, sprinkler-proof, 1200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	346.2	36,771.1	346.2	5,515.6	5,515.67	36,771.16	60,980.49	60,980.49	7,409.48	7,409.48	110,676.80	110,676.80	1.0	731.7	66,146.45	731.7	8,599.04	8,599.04	66,146.45	61,392.51	61,392.51	27,905.28	27,905.28	164,043.28	164,043.28
1510	3000.200	Copper Busway assembly (between 3433-SWG-82-A002 and 3340-SWG-82-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	471.7	50,111.4	471.7	7,516.7	7,516.71	50,111.40	13,831.83	13,831.83	10,097.57	10,097.57	81,557.51	81,557.51	1.0	216.5	19,576.51	216.5	2,544.95	2,544.95	19,576.51	10,757.00	10,757.00	6,766.42	6,766.42	39,644.88	39,644.88
1511	3000.201	Copper Busway assembly (between 3433-SWG-82-B001 and 3340-SWG-82-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	471.7	50,111.4	471.7	7,516.7	7,516.71	50,111.40	35,956.95	35,956.95	10,097.57	10,097.57	103,682.63	103,682.63	1.0	426.6	38,567.99	426.6	5,013.84	5,013.84	38,567.99	34,100.80	34,100.80	15,929.42	15,929.42	93,612.05	93,612.05
1512	3000.202	Copper Busway assembly (between 3340-SWG-82-0001 and 3340-T-81-0001), low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	471.7	50,111.4	471.7	7,516.7	7,516.71	50,111.40	10,375.35	10,375.35	10,097.57	10,097.57	78,101.03	78,101.03	1.0	130.4	11,792.20	130.4	1,532.99	1,532.99	11,792.20	7,112.92	7,112.92	4,203.35	4,203.35	24,641.46	24,641.46
1513	3433.030	Copper Busway assembly (between 3433-SWG-82-A001/A002), low impedance compact type, totally enclosed, sprinkler-proof, 3200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	730.9	77,647.0	730.9	11,647.0	11,647.05	77,647.01	69,739.17	69,739.17	15,646.06	15,646.06	174,679.29	174,679.29	1.0	701.9	63,454.18	701.9	8,249.04	8,249.04	63,454.18	67,820.09	67,820.09	28,566.60	28,566.60	168,089.91	168,089.91
1514	3433.040	Copper Busway assembly (between 3433-SWG-82-B001/B002), low impedance compact type, totally enclosed, sprinkler-proof, 3200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus	each	1	1	730.9	77,647.0	730.9	11,647.0	11,647.05	77,647.01	72,851.37	72,851.37	15,646.06	15,646.06	177,791.49	177,791.49	1.0	716.9	64,810.02	716.9	8,425.30	8,425.30	64,810.02	71,067.13	71,067.13	29,538.96	29,538.96	173,841.41	173,841.41
1515	3000.203	Fluorescent Light fixture, type F1 , Suspended or Ceiling Mounted, fibreglass reinforced polyester housing, enclosed and gasketted polycarbonate lens, suitable for damp or wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V	ea	288	285	3.8	401.3	1076.8	60.2	17,158.76	114,391.71	390.87	111,397.98	80.88	23,050.20	933.33	265,998.64	285.0	11.1	999.26	3,150.1	129.90	37,022.74	284,790.32	284.34	81,037.31	292.09	83,244.82	1,705.60	486,095.19
1516	3000.204	Fluorescent Light fixture, type F2, Wall Mounted, fibreglass reinforced polyester housing, enclosed and gasketted polycarbonate lens, suitable for damp or wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V	ea	94	84	5.2	556.0	439.7	83.4	7,006.22	46,708.15	419.66	35,251.63	112.05	9,411.80	1,171.16	98,377.80	84.0	12.8	1,155.15	1,073.3	150.17	12,614.25	97,032.72	302.51	25,410.52	332.38	27,919.92	1,940.21	162,977.41
1517	3000.205	Fluorescent Light fixture, type F3, Suspended or Ceiling Mounted, polyester enamel steel housing, one-piece prismatic wrap-around lens, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	48	44	5.5	581.6	240.9	87.2	3,838.87	25,592.44	494.47	21,756.69	117.20	5,156.94	1,280.57	56,344.93	44.0	10.7	966.09	470.2	125.59	5,526.03	42,507.96	320.16	14,086.88	291.50	12,826.04	1,703.34	74,946.91
1518	3000.206	Fluorescent Light fixture, type F4, Wall Mounted, polyester enamel steel housing, one-piece prismatic wrap-around lens, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	91	120	4.5	482.9	545.5	72.4	8,692.84	57,952.25	450.13	54,015.96	97.31	11,677.52	1,102.82	132,338.57	120.0	12.8	1,155.07	1,533.2	150.16	18,019.03	138,607.93	343.50	41,220.37	340.61	40,873.63	1,989.34	238,720.96
1519	3000.207	Fluorescent Light fixture, type F5, Suspended or Ceiling Mounted, industrial striplight with reflector and wireguard, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	218	231	3.9	415.2	903.0	62.2	14,368.09	95,920.61	367.20	84,823.39	83.67	19,328.23	928.40	214,460.33	231.0	15.5	1,403.09	3,585.1	182.40	42,134.68	324,112.93	420.03	97,027.07	414.31	95,705.36	2,419.83	558,980.04
1520	3000.208	Fluorescent Light fixture, type F10, Wall Mounted, industrial striplight with reflector and wireguard, for dry locations only, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	33	33	10.1	1,067.9	331.8	160.1	5,286.24	35,241.56	462.30	15,255.91	215.19	7,101.26	1,905.61	62,884.99	33.0	10.9	984.18	359.2	127.94	4,222.11	32,477.80	297.64	9,821.96	291.22	9,610.17	1,700.97	56,132.04
1521	3000.209	Fluorescent Light fixture, type F6, fibreglass reinforced polyester housing, suitable for vapor, dust and wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	30	30	10.7	1,131.9	319.7	169.7	5,093.83	33,958.86	1,568.80	47,063.90	228.09	6,842.79	3,098.65	92,959.39	30.0	15.5	1,403.02	465.6	182.39	5,471.79	42,090.68	1,298.94	38,968.22	591.24	17,737.23	3,475.60	104,267.92
1522	3000.210	Fluorescent Light fixture, type F7, 1220 mm x 610 mm steel housing with 100 mm deep parabolic louver, recessed in T-bar ceiling, 3 x 32 W lamps, premium electronic ballast, 347 V.	ea	34	34	38.9	4,135.6	1323.7	620.3	21,091.89	140,612.63	736.29	25,033.82	833.35	28,333.78	6,325.65	215,072.13	34.0	9.5	856.19	322.0	111.30	3,784.35	29,110.38	270.81	9,207.54	255.74	8,695.08	1,494.04	50,797.36
1523	3000.211	Fluorescent Light fixture, type F8, 1220 mm x 610 mm steel housing with 100 mm deep parabolic louver, recessed in T-bar ceiling, 2 x 32 W lamps, premium electronic ballast, 347 V.	ea	16	16	13.2	1,398.6	210.7	209.8	3,356.74	22,378.29	343.60	5,497.58	281.83	4,509.28	2,233.87	35,741.89	16.0	9.3	841.34	148.9	109.37	1,749.98	13,461.37	238.02	3,808.31	245.65	3,930.34	1,434.37	22,950.00
1524	3000.212	Fluorescent Light fixture, type F9, 1220 mm x 610 mm steel housing with pattern 19 lens, recessed in T-bar ceiling, 3 x 32 W lamps, premium electronic ballast, 347 V.	ea	22	16	13.2	1,398.6	210.7	209.8	3,356.74	22,378.29	411.70	6,587.23	281.83	4,509.28	2,301.97	36,831.54	16.0	9.5	856.07	151.5	111.29	1,780.62	13,697.05	239.30	3,828.86	249.37	3,989.86	1,456.02	23,296.39
1525	3000.213	Fluorescent Light fixture, type F11, decorative type with acrylic diffuser, wall-mounted, 2 x 13 W quad tube 4-pin lamps, electronic ballast, 120 V.	ea	2	2	41.4	4,397.3	82.8	659.6	1,319.21	8,794.74	1,202.43	2,404.87	886.08	1,772.16	7,145.49	14,290.98	2.0	11.1	1,003.02	22.2	130.39	260.79	2,006.04	376.97	753.95	311.62	623.24	1,822.01	3,644.01
1526	3000.214	Fluorescent Light fixture, type F12, wall-mounted bedlight with pull-chain switch, 1220 mm x 168 mm x 130 mm steel housing with K12 prismatic lens, 3 x 32 W lamps, premium electronic ballast, 120 V.	ea	2	2	82.8	8,794.7	165.6	1,319.2	2,638.42	17,589.49	1,857.54	3,715.09	1,772.16	3,544.32	13,743.66	27,487.32	2.0	11.1	1,003.02	22.2	130.39	260.79	2,006.04	381.02	762.05	312.43	624.86	1,826.87	3,653.74
1527	3000.215	Metal Halide Light fixture, type H2, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 175 W metal halide lamp, HPF ballast, 347 V.	ea	141	142	18.2	1,931.2	2581.6	289.6	41,136.12	274,240.79	1,057.55	150,172.78	389.16	55,260.18	3,667.68	520,809.88	142.0	16.8	1,523.04	2,392.2	198.00	28,115.34	216,271.84	409.03	58,082.87	440.29	62,520.65	2,570.36	364,990.70
1528	3000.216	LED Low Bay Light fixture, type L1, cast aluminum housing, suspended from open ceiling, 220 W LED array and driver, 347 V.	ea	122	132	6.9	729.8	906.9	109.4	14,450.47	96,336.44	2,198.75	290,234.47	147.06	19,412.02	3,185.10	420,433.40	132.0	14.1	1,271.45	1,856.4	165.29	21,818.13	167,831.74	1,829.88	241,544.54	667.21	88,072.07	3,933.84	519,266.47
1529	3000.217	LED Low Bay Light fixture, type L2, cast aluminum housing, suspended from ceiling, 143 W LED array and driver, 347 V, Medium Optic	ea	136	137	6.6	699.5	902.2	104.9	14,375.59	95,837.29	1,605.46	219,947.84	140.96	19,311.45	2,550.89	349,472.18	137.0	14.1	1,271.53	1,926.9	165.30	22,645.89	174,199.19	1,628.46	223,098.90	626.68	85,854.94	3,691.96	505,798.92

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1530	3000.218	LED Low Bay Light fixture, type L3, cast aluminum housing, suspended from ceiling, 110 W LED array and driver, 347 V, Medium Optic	ea	24	24	14.8	1,569.67	354.6	235.45	5,650.82	37,672.12	1,946.06	46,705.45	316.29	7,591.02	4,067.48	97,619.41	24.0	14.1	1,271.45	337.5	165.29	3,966.92	30,514.74	1,628.46	39,083.02	626.66	15,039.83	3,691.85	88,604.51
1531	3000.219	LED Low Bay Light fixture, type L4, cast aluminum housing, suspended from ceiling, 110 W LED array and driver, 347 V, Aisle Optic	ea	1	1	243.5	25,871.14	243.5	3,880.67	3,880.67	25,871.14	11,458.57	11,458.57	5,213.10	5,213.10	46,423.49	46,423.49	1.0	14.0	1,265.73	14.0	164.54	164.54	1,265.73	1,516.61	1,516.61	602.80	602.80	3,549.69	3,549.69
1532	3000.220	LED Low Bay Light fixture, type L5, cast aluminum housing, suspended from ceiling, 143 W LED array and driver, 347 V, Wide Optic	ea	17	17	18.9	2,004.74	320.8	300.71	5,112.08	34,080.52	2,116.36	35,978.14	403.96	6,867.31	4,825.77	82,038.04	17.0	14.1	1,271.60	239.1	165.31	2,810.24	21,617.20	1,628.46	27,683.80	626.70	10,653.83	3,692.06	62,765.06
1533	3000.221	LED Light fixture, type L6, 610 mm x 610 mm housing recessed in T-bar ceiling, opalescent lens, 60 W LED array and driver, 347 V.	ea	64	65	5.8	614.72	376.1	92.21	5,993.56	39,957.10	642.15	41,740.03	123.87	8,051.45	1,472.96	95,742.14	65.0	10.0	906.65	651.9	117.86	7,661.15	58,931.94	290.59	18,888.28	271.58	17,652.57	1,586.68	103,133.95
1534	3000.222	LED Light fixture, type L7, mounting yoke for surface mounting and adjustable aiming, 44 W LED array and driver, 347 V, 40 degree beam angle	ea	57	57	6.0	638.64	342.7	95.80	5,460.40	36,402.64	642.98	36,649.74	128.69	7,335.22	1,506.11	85,847.99	57.0	13.4	1,209.33	762.5	157.21	8,961.11	68,931.81	521.94	29,750.50	389.29	22,189.49	2,277.77	129,832.71
1535	3000.223	LED Light fixture, type L8, mounting yoke for surface mounting and adjustable aiming, 44 W LED array and driver, 347 V, 20 degree beam angle	ea	20	20	11.2	1,187.33	223.5	178.10	3,561.98	23,746.52	1,017.40	20,348.02	239.25	4,784.98	2,622.07	52,441.49	20.0	15.3	1,379.27	305.1	179.31	3,586.10	27,585.40	547.50	10,949.97	434.37	8,687.49	2,540.45	50,808.95
1536	3000.224	LED Light fixture, type L9, square housing recessed in ceiling, 150 mm aperature with clear reflector, 30 W LED array and driver, 1500 lumen, 347 V.	ea	48	48	6.5	694.25	313.7	104.14	4,998.62	33,324.12	642.75	30,852.24	139.89	6,714.89	1,581.04	75,889.87	48.0	9.0	810.37	430.3	105.35	5,056.73	38,897.94	575.34	27,616.54	306.28	14,701.52	1,797.35	86,272.73
1537	3000.225	LED Light fixture, type L10, wet location housing recessed in ceiling, fresnel lens, 19 W LED array and driver, 900 lumen, 120 V.	ea	2	2	82.8	8,794.74	165.6	1,319.21	2,638.42	17,589.49	1,706.69	3,413.37	1,772.16	3,544.32	13,592.80	27,185.61	2.0	9.0	811.70	18.0	105.52	211.04	1,623.40	301.76	603.51	251.51	503.03	1,470.49	2,940.98
1538	3000.226	High Pressure Sodium Light fixture, type W2, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 250 W high pressure sodium lamp, HPF ballast, 347 V.	ea	5	9	26.1	2,775.54	235.2	416.33	3,746.98	24,979.86	741.68	6,675.08	559.28	5,033.50	4,492.82	40,435.42	9.0	15.1	1,365.55	135.9	177.52	1,597.69	12,289.95	416.79	3,751.07	404.83	3,643.49	2,364.69	21,282.20
1539	3000.227	High Pressure Sodium Light fixture, type W4, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 150 W high pressure sodium lamp, HPF ballast, 347 V.	ea	14	34	7.9	839.27	268.6	125.89	4,280.30	28,535.32	391.26	13,302.68	169.12	5,749.94	1,525.54	51,868.23	34.0	14.3	1,292.35	486.0	168.01	5,712.18	43,939.83	348.91	11,862.85	373.96	12,714.74	2,183.22	74,229.59
1540	3000.228	High Pressure Sodium Light fixture, type W5, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 100 W high pressure sodium lamp, HPF ballast, 347 V.	ea	25	56	4.5	482.95	254.6	72.44	4,056.82	27,045.44	338.83	18,974.49	97.32	5,449.72	991.54	55,526.46	56.0	14.1	1,271.27	787.4	165.27	9,254.85	71,191.12	323.40	18,110.32	363.87	20,376.73	2,123.80	118,933.01
1541	3000.229	High Pressure Sodium Light fixture, type W6, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, wall-mounted, 70 W high pressure sodium lamp, HPF ballast, 347 V.	ea	1	6	14.9	1,579.81	89.2	236.97	1,421.83	9,478.86	641.37	3,848.20	318.34	1,910.01	2,776.48	16,658.90	6.0	14.1	1,271.27	84.4	165.27	991.59	7,627.62	300.05	1,800.31	359.18	2,155.06	2,095.76	12,574.59
1542	3000.230	High Pressure Sodium Light fixture, type P3, cast aluminum housing, gasketted refractor, suitable for damp or wet locations, mounting yoke for pole-mounting, 400 W high pressure sodium lamp, HPF ballast, 347 V, complete with 7620 mm aluminum pole.	ea	7	4	92.5	9,820.92	369.8	1,473.14	5,892.55	39,283.66	5,194.87	20,779.48	1,978.94	7,915.75	18,467.86	73,871.44	4.0	18.5	1,672.97	74.0	217.49	869.94	6,691.86	1,358.41	5,433.65	666.66	2,666.63	3,915.52	15,662.08
1543	3000.231	Exit Sign, fixture type X, LED with "Running-Man" pictogram, universal mounting, with charging system and self-powered Ni-Cad battery for minimum 90 minutes of operation, 347 V input.	ea	82	125	3.4	365.84	430.5	54.88	6,859.59	45,730.63	438.19	54,774.13	73.72	9,214.83	932.63	116,579.17	125.0	13.1	1,187.88	1,642.4	154.42	19,303.10	148,485.35	316.04	39,504.54	342.80	42,849.53	2,001.14	250,142.52
1544	3000.232	Light Switch, single pole, 15 Amp, 347 Volt	ea	84	84	0.4	42.76	33.8	6.41	538.74	3,591.60	28.18	2,367.46	8.62	723.72	85.97	7,221.52	84.0	5.6	504.59	468.8	65.60	5,510.10	42,385.42	43.47	3,651.15	127.34	10,696.26	740.99	62,242.93
1545	3000.233	Light Switch, three-way, 15 Amp, 347 Volt	ea	12	12	0.8	85.51	9.7	12.83	153.93	1,026.17	32.43	389.14	17.23	206.78	148.00	1,776.01	12.0	9.9	894.19	118.7	116.24	1,394.94	10,730.28	140.65	1,687.83	238.46	2,861.56	1,389.55	16,674.60
1546	3000.234	Light Switch, maintained contact pushbutton ON-OFF, 15 Amp, 347 Volt	ea	8	26	1.6	171.03	41.9	25.65	667.01	4,446.75	639.42	16,624.82	34.46	896.03	870.56	22,634.61	26.0	9.5	861.93	247.9	112.05	2,913.32	22,410.19	114.99	2,989.79	225.72	5,868.65	1,314.69	34,181.96
1547	3000.235	Dimming Light Switch, for use with electronic fluorescent dimming ballasts, 15 Amp, 347 Volt	ea	7	7	0.8	85.51	5.6	12.83	89.79	598.60	281.52	1,970.63	17.23	120.62	397.09	2,779.64	7.0	3.3	294.50	22.8	38.28	267.99	2,061.48	16.82	117.73	72.60	508.19	422.20	2,955.39
1548	3000.236	Lighting Control Panel, complete with control transformer, 12-pole mechanically held lighting contactor, ON/OFF pushbuttons and indicating lights, NEMA 12 enclosure.	ea	6	12	6.4	684.11	77.3	102.62	1,231.41	8,209.36	7,076.67	84,920.05	137.85	1,654.21	8,001.25	96,015.04	12.0	19.3	1,748.98	232.2	227.37	2,728.41	20,987.80	5,349.11	64,189.32	1,487.95	17,855.40	8,813.41	105,760.93
1549	3000.237	Aluminum Light poles including luminaire and mounting brackets	ea	4	4	6.4	684.11	25.8	102.62	410.47	2,736.46	1,316.09	5,264.36	137.85	551.40	2,240.67	8,962.69	4.0	18.5	1,672.97	74.0	217.49	869.94	6,691.86	1,358.41	5,433.65	666.66	2,666.63	3,915.52	15,662.08
1550	3000.238	Lighting Relay Panel, complete with control transformer, 24-pole electronic relay scanner, (Qty. 24) output control relays, NEMA 12 enclosure.	ea	7	7	6.4	684.11	45.1	102.62	718.32	4,788.80	22,592.34	158,146.41	137.85	964.96	23,516.93	164,618.49	7.0	21.9	1,977.62	153.1	257.09	1,799.63	13,843.31	4,551.37	31,859.59	1,381.08	9,667.54	8,167.15	57,170.07
1551	3000.239	Lighting Contactor, 600 Volts, three-pole, 100 Amp, complete with control relay and undervoltage relay timer, NEMA 12 enclosure.	ea	5	5	12.9	1,368.23	64.4	205.23	1,026.17	6,841.15	9,218.53	46,092.66	275.70	1,378.51	11,067.70	55,338.48	5.0	20.7	1,870.87	103.5	243.21	1,216.06	9,354.33	4,011.48	20,057.39	1,247.29	6,236.47	7,372.85	36,864.25
1552	3000.240	Occupancy Sensor, for use with electronic lighting control system.	ea	4	4	3.2	342.06	12.9	51.31	205.23	1,368.23	24.83	99.33	68.93	275.70	487.12	1,948.49	4.0	4.1	374.31	16.6	48.66	194.64	1,497.25	74.88	299.50	103.05	412.19	600.90	2,403.58
1553	3000.241	Power Connection Junction Box for lighting and receptacle distribution, complete with terminal mounting rail, terminal blocks rated 600 Volts, conductor size range from 8 AWG to 14 AWG, jumpers, barriers, end blocks, etc. as required.	ea	80	225	4.0	427.57	905.6	64.14	14,430.54	96,203.62	442.04	99,460.07	86.16	19,385.26	1,019.91	229,479.50	225.0	6.5	587.85	1,463.0	76.42	17,194.65	132,266.56	167.08	37,592.17	171.79	38,652.86	1,003.14	225,706.24
1554	3000.242	Convenience Receptacle, 20 A, 120 V, duplex, CSA type 5-20R, complete with surface mounted type FD cast outlet box and sheet steel cover.	ea	303	303	4.3	455.78	1300.0	68.37	20,715.07	138,100.47	114.28	34,628.34	91.84	27,827.58	730.27	221,271.46	303.0	6.9	623.50	2,089.7	81.05	24,559.49	188,919.16	57.02	17,276.48	158.01	47,876.99	919.58	278,632.14
1555	3000.243	GFI Receptacle, 20 A, 120 V, duplex, CSA type 5-20R, complete with surface mounted type FD cast outlet box and single-lift weatherproof cover.	ea	144	146	8.3	885.71	1217.3	132.86	19,397.16	129,314.38	260.86	38,085.79	178.47	26,057.16	1,457.91	212,854.49	146.0	9.5	861.47	1,391.2	111.99	16,350.66	125,774.33	97.74	14,269.48	222.13	32,431.64	1,293.33	188,826.11
1556	3000.244	Grounding conductor, Bare Soft Drawn Copper, size 2/0 AWG	m	2340	2,420	0.1	11.29	257.1	1.69	4,097.50	27,316.70	9.26	22,398.24	2.27	5,504.38	24.51	59,316.82	2,420.0	0.5	47.55	1,272.7	6.18	14,958.12	115,062.50	9.10	22,024.67	13.01	31,475.54	75.84	183,520.84
1557	3000.245	Grounding conductor, Bare Soft Drawn Copper, size 4/0 AWG	m	2985	3,089	0.1	14.25	414.5	2.14	6,604.38	44,029.17	14.49	44,769.09	2.87	8,871.98	33.76	104,274.62	3,089.0	0.2	22.23	759.6	2.89	8,927.05	68,669.59	14.04	43,371.23	8.05	24,870.12	47.21	145,837.98
1558	3000.246	Grounding conductor, Bare Soft Drawn Copper, size 500 kcmil	m	1600	1,600	0.2	22.40	337.5	3.36	5,377.14	35,847.61	33.66	53,856.84	4.51	7,223.38	63.94	102,304.97	1,600.0	0.5	44.10	780.5	5.73	9,173.54	70,565.70	32.15	51,432.15	16.84	26,938.61	98.82	158,110.00
1559	3000.247	Detail 36 - Ground Connection to small equipment ground bar (panelboard, control cabinet, etc.)	ea	71	78	0.8	85.51	62.8	12.83	1,000.52	6,670.12	21.81	1,701.55	17.23	1,344.04	137.39	10,716.23	78.0	4.8	432.40	373.1	56.21	4,384.49	33,726.86	75.54	5,892.39	116.83	9,112.61	680.98	53,116.37
1560	3000.248	Detail 37 - Bonding to outside of equipment enclosure (switch, power outlet, etc.)	ea	279	1,768	0.4	42.76	711.6	6.41	11,339.20	75,594.67	17.01	30,077.32	8.62	15,232.51	74.80	132,243.69	1,768.0	0.7	64.65	1,264.3	8.40	14,859.49	114,303.74	11.09	19,611.56	17.43	30,811.37	101.58	179,586.16
1561	3000.249	Detail 41 - System grounding for small distribution transformer	ea	19	20	0.4	42.76	8.1	6.41	128.27	855.14	9.37	187.48	8.62	172.31	67.16	1,343.21	20.0	4.1	366.62	81.1	47.66	953.21	7,332.35	73.21	1,464.12	100.90	2,017.97	588.38	11,767.65
1562	3000.250	Detail 43 - Ground Connection to large equipment ground bar (switchgear MCC, etc. - similar to Detail 36)	ea	46	50	1.3	142.52	67.1	21.38	1,068.93	7,126.19	482.79	24,139.57	28.72	1,435.95	675.41	33,770.64	50.0	5.7	517.83	286.4	67.32	3,365.87	25,891.29	120.07	6,003.58	145.87	7,293.52	851.09	42,554.26
1563	3000.251	Detail 45 - Connection for power transformer grounding (similar to Detail 46)	ea	10	13	1.0	102.62	12.6	15.39	200.10	1,334.02	69.01	897.13	20.68	268.81	207.70	2,700.06	13.0	2.7	243.25	35.0	31.62	411.09	3,162.24	113.24	1,472.10	79.97	1,039.55	468.08	6,084.98
1564	3000.252	Detail 46 - 1/C bonding to metal surface (i.e. cable tray, etc.)	ea	77	105	1.0	111.50	110.2	16.72	1,756.15	11,707.69	44.68	4,691.23	22.47	2,359.13	195.37	20,514.20	105.0	0.3	30.37	35.3	3.95	414.52	3,188.58	39.69	4,167.39	15.13	1,588.37	89.13	9,358.85
1565	3000.253	Detail 47 - 2/C bonding to metal surface (i.e. cable tray, etc.)	ea	222	222	1.0	102.62	214.5	15.39	3,417.15	22,781.02	39.37	8,740.08	20.68	4,590.43	178.06	39,528.68	222.0	0.3	30.37	74.6	3.95	876.36	6,741.20	57.20	12,698.27	18.65	4,140.77	110.16	24,456.61
1566	3000.254	Detail 48 - Compression type cable splice connector	ea	439	468	0.8	85.51	376.7	12.83	6,003.11	40,020.71	21.31	9,974.54	17.23	8,064.27	136.89	64,062.62	468.0	0.3	27.75	143.7	3.61	1,688.34	12,987.23	15.45	7,232.11	9.63	4,508.20	56.44	26,415.88
1567	3000.255	Detail 54 - Connection to small motor disconnect switch (similar to Detail 37)	ea	77	84	1.6	171.03	135.2	25.65	2,154.96	14,366.41	33.79	2,838.46	34.46	2,894.87	264.94	22,254.70	84.0	2.9	261.39	242.9	33.98	2,854.39	21,956.85	65.16	5,473.30	74.55	6,262.10	435.08	36,546.64
1568	3000.256	Detail 55 - Connection to large motor disconnect switch and motor frame	ea	25	25	2.4	256.54	60.4	38.48	962.04	6,413.57	52.88	1,322.03	51.69	1,292.35	399.60	9,990.00	25.0	5.0	451.85	125.0	58.74	1,468.53	11,296.35	117.88	2,947.04	129.93	3,248.13	758.40	18,960.04
1569a	Added	Grounding of Misc Mechanical Equipment & Fixed Steel Objects	ea		507	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	507.0	4.7	422.51	2,369.45	54.93	27,847.53	214,211.75	165.63	83,974.00	132.64	67,249.04	775.70	393,282.31
1569	3000.257	Fire Detection System	LS	0	1	5031.3	534,464.57	5031.3	80,169.68	80,169.68	534,464.57	316,715.61	316,715.61	107,695.90	107,695.90	1,039,045.75	1,039,045.75	1.0	8940.4	808,265.47	8,940.4	105,074.51	105,074.51	808,265.47	296,761.15	296,761.15	200,797.73	200,797.73	1,410,898.86	1,410,898.86
1570	3000.258	Shielded twisted pair cable, interlocking armour and overall PVC jacket, CSA type FAS 105, stranded copper conductors, 16 AWG, one (1) pair	m	5000	11,407	0.2	17.10	1836.5	2.57	29,263.86	195,092.39	4.23	48,233.62	3.45	39,311.59	27.34	311,901.46	11,407.0	0.2	13.69	1,727.8	1.78	20,306.76	156,205.88	3.37	38,445.02	3.90	44,450.65	22.74	259,408.32
1571	3000.259	Shielded twisted pair cable, interlocking armour and overall PVC jacket, CSA type FAS 105, stranded copper conductors, 14 AWG, one (1) pair	m	5000	5,054	0.1	12.83	610.3	1.92	9,724.26	64,828.41	4.35	21,991.05	2.58	13,063.08	21.69	109,606.81	5,054.0	0.2	18.67	1,043.8	2.43	12,267.68	94,366.79	3.37	17,031.89	5.07	25,606.54	29.54	149,272.90
1572	3000.260	Telecom System	LS	0	1	2727.3	289,722.55	2727.3	43,458.38	43,458.38	289,722.55	312,224.31	312,224.31	58,379.79	58,379.79	703,785.04	703,785.04	1.0	1133.1	102,440.84	1,133.1	13,317.31	13,317.31	102,440.84	234,810.30	234,810.30	71,348.47	71,348.47	421,916.92	421,916.92
1573	3000.261	Plant Security and Access Control System	LS	0	1	1125.4	119,549.03	1125.4	17,932.36	17,932.36	119,549.03	47,490.24	47,490.24	24,089.42	24,089.42	209,061.05	209,061.05	1.0	17.5	1,579.04	17.5	205.28	205.28	1,579.04	378.16	378.16	447.24	447.24	2,609.71	2,609.71
1574	3000.262	Water Tight seal around cables running thru Roof metal Sleeves	LS	0	1	161.0	17,102.87	161.0	2,565.43	2,565.43	17,102.87	12,641.62	12,641.62	3,446.27	3,446.27	35,756.19	35,756.19	1.0	75.6	6,830.50	75.6	887.97	887.97	6,830.50	2,626.50	2,626.50	2,134.05	2,134.05	12,479.02	12,479.02
1575	3310.040	Electrical Shaft Platforms/Staging	LS	0	1	128.8	13,682.29	128.8	2,052.34	2,052.34	13,682.29	3,843.30	3,843.30	2,757.01	2,757.01	22,334.95	22,334.95	1.0	1105.8	99,974.53	1,105.8	12,996.69	12,996.69	99,974.53	38,743.86	38,743.86	31,295.63	31,295.63	183,010.71	183,010.71
1575a	Added	House Keeping Pads For Electrical Equipment	LS		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	6423.4	580,710.19	6,423.37	75,492.32	75,492.32	580,710.19	24,864.24	24,864.24	141,481.25	141,481.25	822,548.01	822,548.01
1575b	Added	Removal of Temp Construction Power to OH Crane, Elevator & Elec Panels	LS		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	209.9	18,972.07	209.85	2,466.37	2,466.37	18,972.07	1,751.00	1,751.00	4,811.24	4,811.24	28,000.69	28,000.69
1575c	Added	Removal of Temp Construction Power to Spillway E House	LS		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	251.8	22,766.48	251.83	2,959.64	2,959.64	22,766.48	0.00	0.00	5,350.46	5,350.46	31,076.58	31,076.58
1575d	Added	Removal of Temp 125 V DC System in Spillway E House	LS		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	209.9	18,972.07	209.85	2,466.37	2,466.37	18,972.07	0.00	0.00	4,458.72	4,458.72	25,897.16	25,897.16
1575e	Added	Trenching from Pit # 3 to Control Building	LS		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.00	0.00	0.00	0.00	153,722.86	153,722.86	464.47	464.47	154,187.33	154,187.33
1575f	Added	Design & Supply of ATS & Load Management System	LS		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.00	0.00	0.00	0.00	870,029.66	870,029.66	2,628.77	2,628.77	872,658.43	872,658.43
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST06		SUB-TOTAL ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	$ -					165313.1		$2,634,155.76	$17,561,038.38		$19,693,207.20		$3,538,591.55		$43,426,992.89				225471.4		$2,649,914.05	$20,383,954.20		$19,445,106.12		$8,442,014.36		$50,920,988.79
		0	$ -																											
		ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	0																											
1576	3460.010	Generator Step Up Transformer Unit 1 - Installation, Assembly	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1577	3460.020	Generator Step Up Transformer Unit 2 - Installation, Assembly	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1578	3460.030	Generator Step Up Transformer Unit 3 - Installation, Assembly	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1579	3460.040	Generator Step Up Transformer Unit 4 - Installation, Assembly	LS	0	1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	797.5	72,093.85	797.5	9,372.20	9,372.20	72,093.85	115,799.67	115,799.67	17,293.00	17,293.00	214,558.72	214,558.72
1580	3436.010	Installation, Assembly of Unit 1 IPB	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1581	3436.020	Installation, Assembly of Unit 2 IPB	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1582	3436.030	Installation, Assembly of Unit 3 IPB	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1583	3436.040	Installation, Assembly of Unit 4 IPB	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	10620.5	960,151.52	10,620.5	124,819.70	124,819.70	960,151.52	14,299.86	14,299.86	228,528.68	228,528.68	1,327,799.75	1,327,799.75
1584	3438.010	Unit 1 Generator Circuit Breaker - Installation, Assembly	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1585	3438.020	Unit 2 Generator Circuit Breaker - Installation, Assembly	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1586	3438.030	Unit 3 Generator Circuit Breaker - Installation, Assembly	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
1587	3438.040	Unit 4 Generator Circuit Breaker - Installation, Assembly	LS	0	1	2415.0	256,542.99	2415.0	38,481.45	38,481.45	256,542.99	19,764.34	19,764.34	51,694.03	51,694.03	366,482.81	366,482.81	1.0	629.6	56,916.20	629.6	7,399.11	7,399.11	56,916.20	0.00	0.00	13,376.13	13,376.13	77,691.44	77,691.44
B&M-0346	Added	Spare Generator Step Up Transformer as per technical spec.sect 48 01 10 paragraph 3.2.7	LS		1	1159.2	123,140.64	1159.2	18,471.10	18,471.10	123,140.64	151,439.68	151,439.68	24,813.13	24,813.13	317,864.55	317,864.55	1.0	671.5	60,710.61	671.53	7,892.38	7,892.38	60,710.61	115,799.67	115,799.67	14,617.77	14,617.77	199,020.43	199,020.43
1587a	Added	Generator Circuit Breaker House Keeping pads	LS		1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	1228.1	111,027.83	1,228.10	14,433.62	14,433.62	111,027.83	5,267.02	5,267.02	27,153.56	27,153.56	157,882.03	157,882.03
ST07		SUB-TOTAL ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	$ -					25116.0		$400,207.07	$2,668,047.12		$915,313.12		$537,617.92		$4,521,185.23				50089.5		$588,690.01	$4,528,384.72		$641,464.81		$1,078,562.58		$6,837,102.12
		0	$ -																											
		ARCHITECTURAL	0																											
		POWERHOUSE ARCHITECTURAL - SUPPLY & INSTALL	0																											
1588	3320.010	Concrete Unit Masonry wall Type B2a Height = full height	m2	1600	1,788	5.6	552.48	10012.8	82.87	148,175.14	987,834.24	64.35	115,063.16	6.27	11,210.76	705.98	1,262,283.30	1,788.0	9.4	845.47	16,721.2	109.91	196,520.28	1,511,694.49	50.00	89,399.80	208.76	373,268.95	1,214.14	2,170,883.52
1589	3320.020	Concrete Unit Masonry wall Type B2b height = 2.8m	m2	440	440	5.6	552.48	2464.0	82.87	36,463.68	243,091.20	64.35	28,315.32	6.27	2,758.80	705.98	310,629.00	440.0	10.8	976.08	4,750.5	126.89	55,831.85	429,475.80	69.40	30,537.54	243.37	107,081.14	1,415.74	622,926.33
1590	3320.030	Concrete Unit Masonry wall Type B2c height = 4.5m	m2	75	75	5.6	552.48	420.0	82.87	6,215.40	41,436.00	64.35	4,826.48	6.27	470.25	705.98	52,948.13	75.0	11.5	1,039.00	861.9	135.07	10,130.26	77,925.07	73.95	5,546.17	259.07	19,430.12	1,507.09	113,031.62
1591	3320.040	Concrete Unit Masonry wall Type B2d height = 5.2m	m2	300	326	5.6	552.48	1825.6	82.87	27,016.27	180,108.48	64.35	20,979.08	6.27	2,044.02	705.98	230,147.85	326.0	6.0	541.00	1,950.8	70.33	22,927.41	176,364.66	39.18	12,771.38	135.03	44,019.51	785.53	256,082.96
1592	3320.050	Concrete Unit Masonry wall Type B2e height = 3.0m	m2	40	37	5.6	552.48	207.2	82.87	3,066.26	20,441.76	64.35	2,381.06	6.27	231.99	705.98	26,121.08	37.0	10.2	918.09	375.7	119.35	4,416.04	33,969.50	133.02	4,921.78	242.55	8,974.22	1,413.01	52,281.53
1593	3320.060	Concrete Unit Masonry wall Type B2f height = 5.0m	m2	150	150	5.6	552.48	840.0	82.87	12,430.80	82,872.00	64.35	9,652.95	6.27	940.50	705.98	105,896.25	150.0	11.7	1,054.31	1,749.3	137.06	20,559.08	158,146.77	75.02	11,252.73	262.88	39,432.29	1,529.27	229,390.87
1594	3320.070	Concrete Unit Masonry wall Type B3a Height =3.0m	m2	35	35	5.6	552.48	196.0	82.87	2,900.52	19,336.80	64.35	2,252.36	6.27	219.45	705.98	24,709.13	35.0	25.9	2,338.36	905.3	303.99	10,639.53	81,842.58	164.68	5,763.69	582.70	20,394.60	3,389.73	118,640.40
1595	3320.080	Concrete Unit Masonry wall Type B4a height = 2.8m	m2	60	63	5.6	552.48	352.8	82.87	5,220.94	34,806.24	83.94	5,288.11	8.11	510.64	727.40	45,825.92	63.0	9.9	898.99	626.5	116.87	7,362.70	56,636.15	64.17	4,042.81	224.19	14,124.26	1,304.22	82,165.92
1596	3320.090	Concrete Unit Masonry wall Type B4b height = full height	m2	65	55	5.6	552.48	308.0	82.87	4,557.96	30,386.40	83.94	4,616.60	8.11	445.80	727.40	40,006.76	55.0	10.3	930.06	565.8	120.91	6,649.91	51,153.18	17.08	939.27	222.02	12,210.85	1,290.06	70,953.22
1597	3320.100	Partition Wall W1a height = 6.5m	m2	1005	1,000	5.4	529.20	5400.0	79.38	79,380.00	529,200.00	55.96	55,962.60	6.61	6,612.00	671.15	671,154.60	1,000.0	10.7	968.03	10,707.7	125.84	125,844.42	968,033.99	60.24	60,238.15	239.63	239,629.72	1,393.75	1,393,746.27
1598	3320.110	Partition Wall W1b height = 4.5m	m2	2265	3,478	5.4	529.20	18781.2	79.38	276,083.64	1,840,557.60	55.96	194,637.92	6.61	22,996.54	671.15	2,334,275.70	3,478.0	6.6	593.36	22,827.1	77.14	268,281.79	2,063,706.06	41.02	142,663.26	147.71	513,723.10	859.22	2,988,374.20
1599	3320.120	Partition WallW1c height = 4.5m	m2	30	30	5.4	529.20	162.0	79.38	2,381.40	15,876.00	55.96	1,678.88	6.61	198.36	671.15	20,134.64	30.0	18.6	1,683.54	558.7	218.86	6,565.80	50,506.13	107.75	3,232.42	417.35	12,520.44	2,427.49	72,824.78
1600	3320.130	Partition Wall W2a height = 3.2m	m2	15	15	5.4	529.20	81.0	79.38	1,190.70	7,938.00	55.96	839.44	6.61	99.18	671.15	10,067.32	15.0	147.8	13,362.99	2,217.2	1,737.18	26,057.71	200,443.95	3,007.06	45,105.84	3,745.89	56,188.29	21,853.05	327,795.79

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR													Cahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR												
						LABOUR COMPONENT						NON LABOUR COMPONENT							LABOUR COMPONENT						NON LABOUR COMPONENT					
						0.15													0.13											
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	LCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	TOTAL EQUIP. COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
1601	3320.140	Partition Wall W2b height = 4.5m	m2	1060	1,060	5.4	529.2	5724.0	79.3	84,142.80	560,952.00	55.96	59,320.36	6.61	7,008.72	671.15	711,423.88	1,060.0	10.7	967.05	11,338.6	125.72	133,259.59	1,025,073.77	67.71	71,771.68	240.90	255,356.90	1,401.38	1,485,461.94
1602	3320.150	Partition Wall W2c height = 5.45m	m2	45	45	5.4	529.2	243.0	79.3	3,572.10	23,814.00	55.96	2,518.32	6.61	297.54	671.15	30,201.96	45.0	10.7	967.70	481.7	125.80	5,661.04	43,546.43	88.09	3,964.13	245.16	11,032.13	1,426.75	64,203.73
1603	3320.160	Partition Wall W3a height = 4.5m	m2	225	265	5.4	529.2	1431.0	79.3	21,035.70	140,238.00	55.96	14,830.09	6.61	1,752.18	671.15	177,855.97	265.0	8.0	719.17	2,108.0	93.49	24,775.24	190,578.80	61.32	16,250.04	181.36	48,060.38	1,055.34	279,664.47
1604	3320.170	Partition Wall W4a height = 4.5m	m2	70	70	5.4	529.2	378.0	79.3	5,556.60	37,044.00	55.96	3,917.38	6.61	462.84	671.15	46,980.82	70.0	13.9	1,260.41	975.9	163.85	11,469.69	88,228.35	146.62	10,263.56	325.73	22,801.28	1,896.61	132,762.87
1605	3320.180	Partition Wall W5a height = 4.5m	m2	15	22	5.4	529.2	118.8	79.3	1,746.36	11,642.40	55.96	1,231.18	6.61	145.46	671.15	14,765.40	22.0	8.2	742.07	180.6	96.47	2,122.32	16,325.54	62.78	1,381.05	187.04	4,114.78	1,088.35	23,943.69
1606	3320.190	Partition Wall W6a height = 3.2m	m2	70	70	5.4	529.2	378.0	79.3	5,556.60	37,044.00	48.96	3,427.41	5.95	416.56	663.49	46,444.57	70.0	10.1	916.97	710.0	119.21	8,344.46	64,188.15	57.54	4,027.46	227.09	15,895.98	1,320.80	92,456.05
1607	3320.200	Shaft Wall W7a height = 3.2m	m2	230	150	5.4	529.2	810.0	79.3	11,907.00	79,380.00	76.95	11,542.50	8.60	1,289.34	694.13	104,118.84	150.0	11.7	1,057.18	1,754.1	137.43	20,615.05	158,577.28	54.62	8,193.29	259.45	38,917.51	1,508.69	226,303.12
1608	3320.210	Shaft Wall W8a = 1.520 mm	m2	230	337	5.4	529.2	1819.8	79.3	26,751.06	178,340.40	76.95	25,932.15	8.60	2,896.72	694.13	233,920.33	337.0	6.9	621.20	2,315.6	80.76	27,214.94	209,345.69	17.01	5,730.85	149.42	50,353.08	868.38	292,644.56
1609	3320.220	Shaft Wall W9a	m2	960	1,171	5.4	529.2	6323.4	79.3	92,953.98	619,693.20	69.95	81,911.92	7.93	9,291.18	686.46	803,850.28	1,171.0	8.6	773.97	10,025.0	100.62	117,821.23	906,317.15	53.22	62,316.97	192.61	225,543.88	1,120.41	1,311,999.24
1610	3320.230	Shaft Wall W9b	m2	10	10	5.4	529.2	54.0	79.3	793.80	5,292.00	69.95	699.50	7.93	79.34	686.46	6,864.65	10.0	98.5	8,908.62	985.4	1,158.12	11,581.21	89,086.20	745.96	7,459.62	2,243.83	22,438.29	13,056.53	130,565.32
1611	3320.240	Shaft Partition Wall W10a height = 4.5m	m2	150	143	5.4	529.2	772.2	79.3	11,351.34	75,675.60	125.91	18,005.56	13.20	1,887.77	747.69	106,920.27	143.0	24.9	2,248.18	3,556.1	292.26	41,793.70	321,489.99	312.83	44,734.09	591.34	84,561.03	3,444.61	492,578.81
1612	3320.250	Shaft Partition Wall W10b height = full height	m2	70	70	5.4	529.2	378.0	79.3	5,556.60	37,044.00	69.95	4,896.53	7.93	555.41	686.46	48,052.54	70.0	10.6	958.05	741.8	124.55	8,718.21	67,063.15	43.27	3,028.93	233.87	16,370.63	1,359.73	95,180.92
1613	3320.260	Partition Wall W11	m2	10	10	5.4	529.2	54.0	79.3	793.80	5,292.00	41.97	419.75	5.30	53.01	655.86	6,558.56	10.0	98.5	8,908.62	985.4	1,158.12	11,581.21	89,086.20	447.58	4,475.80	2,183.77	21,837.69	12,698.09	126,980.90
1614	3320.270	Plenum Partition Wall W12a	m2	45	45	5.4	529.2	243.0	79.3	3,572.10	23,814.00	153.90	6,925.50	15.83	712.56	778.31	35,024.16	45.0	13.6	1,228.00	611.3	159.64	7,183.82	55,260.15	188.05	8,462.39	326.46	14,690.65	1,902.16	85,597.01
1615	3320.280	Partition Wall W13a height = 3.0m	m2	55	61	5.4	529.2	329.4	79.3	4,842.18	32,281.20	125.91	7,680.69	13.20	805.27	747.69	45,609.35	61.0	9.4	845.64	570.6	109.93	6,705.90	51,584.34	327.64	19,985.76	264.70	16,146.72	1,547.91	94,422.79
1616	3320.290	Closure C1a height = 4.5m	m2	150	150	5.4	529.2	810.0	79.3	11,907.00	79,380.00	19.59	2,937.78	3.19	478.80	631.36	94,703.58	150.0	9.9	890.86	1,478.1	115.81	17,371.81	133,629.33	12.27	1,840.50	211.84	31,775.39	1,230.78	184,617.04
1617	3320.300	Closure C2a height = 4.5m	m2	105	105	5.4	529.2	567.0	79.3	8,334.90	55,566.00	27.98	2,937.44	3.98	417.75	640.53	67,256.09	105.0	9.9	890.86	1,034.7	115.81	12,160.27	93,540.53	17.71	1,859.29	212.93	22,357.72	1,237.31	129,917.80
1618	3320.310	Closure C3a height = 4.5m	m2	10	10	5.4	529.2	54.0	79.3	793.80	5,292.00	76.95	769.50	8.60	85.96	694.13	6,941.26	10.0	9.9	890.86	98.5	115.81	1,158.12	8,908.62	67.53	675.28	222.96	2,229.61	1,297.16	12,971.63
1619	3320.320	Closure C4a height = 4.5m	m2	505	480	5.4	529.2	2592.0	79.3	38,102.40	254,016.00	34.98	16,788.10	4.64	2,227.10	648.20	311,133.60	480.0	9.9	890.86	4,729.9	115.81	55,589.80	427,613.86	11.30	5,422.54	211.64	101,587.25	1,229.61	590,213.47
1620	3320.330	Closure C4b height = 3m	m2	70	55	5.4	529.2	297.0	79.3	4,365.90	29,106.00	34.98	1,923.64	4.64	255.19	648.20	35,650.73	55.0	9.9	890.86	542.0	115.81	6,369.67	48,997.43	21.15	1,163.25	213.62	11,749.31	1,241.45	68,279.66
1621	3320.340	Closure C5a height = 4.5m	m2	20	20	5.4	529.2	108.0	79.3	1,587.60	10,584.00	27.98	559.51	3.98	79.57	640.53	12,810.68	20.0	9.9	890.86	197.1	115.81	2,316.24	17,817.24	57.11	1,142.18	220.86	4,417.27	1,284.65	25,692.93
1622	3320.350	Closure C6a height = 4.5m	m2	80	80	5.4	529.2	432.0	79.3	6,350.40	42,336.00	125.91	10,073.04	13.20	1,056.10	747.69	59,815.54	80.0	9.9	890.86	788.3	115.81	9,264.97	71,268.98	87.10	6,967.80	226.90	18,152.07	1,320.67	105,653.81
1623	3320.360	Closure C7a height = 4.5m	m2	130	130	5.4	529.2	702.0	79.3	10,319.40	68,796.00	27.98	3,636.83	3.98	517.22	640.53	83,269.45	130.0	9.9	890.86	1,281.0	115.81	15,055.57	115,812.09	21.83	2,837.97	213.76	27,788.91	1,242.27	161,494.54
1624	3320.370	Closure C7b height = 4.5m	m2	2	2	5.4	529.2	10.8	79.3	158.76	1,058.40	27.98	55.95	3.98	7.96	640.53	1,281.07	2.0	9.9	890.73	19.7	115.79	231.59	1,781.45	50.01	100.02	219.40	438.80	1,275.93	2,551.86
1625	3320.380	Closure C8a height = 4.5m	m2	5	5	5.4	529.2	27.0	79.3	396.90	2,646.00	27.98	139.88	3.98	19.89	640.53	3,202.67	5.0	9.9	890.86	49.3	115.81	579.06	4,454.31	41.09	205.44	217.64	1,088.19	1,265.40	6,327.00
1626	3320.390	Closure C9a height = 4.5m	m2	5	8	5.4	529.2	43.2	79.3	635.04	4,233.60	34.98	279.80	4.64	37.12	648.20	5,185.56	8.0	9.9	890.90	78.8	115.82	926.53	7,127.17	75.64	605.16	224.60	1,796.83	1,306.96	10,455.69
1627	3320.400	Closure C9b height = 4.5m	m2	35	20	5.4	529.2	108.0	79.3	1,587.60	10,584.00	34.98	699.50	4.64	92.80	648.20	12,963.90	20.0	9.9	890.86	197.1	115.81	2,316.24	17,817.24	46.91	938.13	218.81	4,376.19	1,272.39	25,447.80
1628	3320.410	Closure C10a height = 4.5m	m2	25	32	5.4	529.2	172.8	79.3	2,540.16	16,934.40	27.98	895.22	3.98	127.32	640.53	20,497.09	32.0	9.9	890.85	315.3	115.81	3,705.95	28,507.31	32.26	1,032.34	215.86	6,907.46	1,254.78	40,159.07
1629	3320.420	Door type DT-1A	ea	14	16	10.0	980.0	160.0	147.0	2,352.00	15,680.00	1,943.14	31,090.26	184.32	2,949.04	3,254.46	52,071.31	16.0	20.9	1,885.42	333.7	245.10	3,921.68	30,166.77	1,839.60	29,433.61	813.46	13,015.38	4,783.59	76,537.43
1630	3320.430	Door type DT-1B	ea	11	11	10.0	980.0	110.0	147.0	1,617.00	10,780.00	1,943.14	21,374.56	184.32	2,027.47	3,254.46	35,799.02	11.0	18.2	1,649.75	200.7	214.47	2,359.14	18,147.20	2,015.60	22,171.59	793.51	8,728.58	4,673.32	51,406.50
1631	3320.440	Door type DT-1C	ea	102	102	10.0	980.0	1020.0	147.0	14,994.00	99,960.00	1,943.14	198,200.42	184.32	18,800.15	3,254.46	331,954.57	102.0	18.2	1,649.74	1,861.3	214.47	21,875.62	168,273.98	1,737.93	177,268.91	737.60	75,235.66	4,339.75	442,654.18
1632	3320.450	Door type DT-2A	ea	22	22	10.0	980.0	220.0	147.0	3,234.00	21,560.00	3,886.28	85,498.22	367.29	8,080.27	5,380.57	118,372.50	22.0	18.2	1,649.75	401.5	214.47	4,718.27	36,294.89	3,305.89	72,729.69	1,053.28	23,172.07	6,223.38	136,914.42
1633	3320.460	Door type DT-2B	ea	7	7	10.0	980.0	70.0	147.0	1,029.00	6,860.00	3,886.28	27,203.98	367.29	2,571.00	5,380.57	37,663.98	7.0	18.2	1,649.74	127.7	214.47	1,501.27	11,548.21	5,800.52	40,603.65	1,555.51	10,888.57	9,220.24	64,541.69
B&M-0347	Added	Door type DT-3	ea		1	10.0	980.0	10.0	147.0	147.00	980.00	3,886.28	3,886.28	367.29	367.29	5,380.57	5,380.57	1.0	18.3	1,649.74	18.25	214.47	214.47	1,649.74	4,144.25	4,144.25	1,222.06	1,222.06	7,230.52	7,230.52
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1634	3320.470	Coiling counter doors (roller shutters)	ea	7	7	28.0	2,744.0	196.0	411.6	2,881.20	19,208.00	4,171.27	29,198.90	463.48	3,244.35	7,790.35	54,532.45	7.0	51.1	4,619.29	357.7	600.51	4,203.55	32,335.00	1,751.00	12,257.02	1,438.12	10,066.86	8,408.92	58,862.43
1635	3320.480	Interior Windows	ea	7	7	20.0	1,960.0	140.0	294.0	2,058.00	13,720.00	2,590.86	18,135.99	287.87	2,015.11	5,132.73	35,929.10	7.0	36.5	3,299.49	255.5	428.93	3,002.53	23,096.42	484.44	3,391.11	872.96	6,110.71	5,085.82	35,600.77
1636	3320.490	Plastic laminated window sills	Linear meter	7	19	3.3	321.4	62.7	48.2	916.10	6,107.36	63.74	1,211.01	7.08	134.51	440.47	8,368.98	19.0	6.0	541.11	113.7	70.34	1,336.54	10,281.10	116.73	2,217.94	150.67	2,862.73	878.86	16,698.31
1637	3320.500	Cement board circulation floors in mechanical space on elevation 29.50 and 38.97	m2	325	325	1.7	167.2	552.5	25.0	8,152.46	54,349.75	41.97	13,641.81	5.30	1,722.83	239.59	77,866.85	325.0	3.1	281.51	1,012.0	36.60	11,893.90	91,491.52	19.20	6,241.47	70.03	22,758.42	407.34	132,385.31
1638	3320.510	Ceramic Floor finish tiles and baseboards in washrooms	m2	165	165	2.4	232.8	396.0	34.9	5,763.04	38,420.25	69.95	11,541.82	7.93	1,309.18	345.66	57,034.28	165.0	4.3	391.98	715.4	50.96	8,408.00	64,676.93	89.34	14,740.59	110.11	18,167.68	642.38	105,993.20
1639	3320.520	Vinyl Composite tiles flooring	m2	2305	1,100	1.7	170.4	1870.0	25.5	28,116.00	187,440.00	27.98	30,773.16	3.98	4,376.46	227.91	250,705.62	1,100.0	3.2	286.86	3,490.3	37.29	41,020.66	315,543.51	27.15	29,867.07	72.88	80,170.38	424.18	466,601.61
1640	3320.530	Vinyl base	Linear meter	800	800	1.2	115.3	960.0	17.3	13,844.40	92,296.00	16.79	13,433.76	2.93	2,343.84	152.40	121,918.00	800.0	2.1	194.21	1,718.5	25.25	20,197.55	155,365.76	4.77	3,818.03	46.60	37,281.91	270.83	216,663.25
1641	3320.540	Epoxy paint floor in warehouse	m2	1050	1,000	2.4	230.7	2400.0	34.6	34,609.50	230,730.00	41.97	41,974.80	5.30	5,301.00	312.62	312,615.30	1,000.0	4.3	388.42	4,296.4	50.49	50,494.14	388,416.48	7.41	7,409.25	92.78	92,775.25	539.10	539,095.13
1642	3320.550	Cementitious Fireproofing on steel structural members	m2	1150	1,150	2.5	243.4	2875.0	36.5	41,991.68	279,944.50	69.95	80,442.96	7.77	8,941.02	357.67	411,320.16	1,150.0	4.5	409.80	5,212.8	53.27	61,264.52	471,265.57	74.60	85,785.89	111.33	128,025.27	648.99	746,341.25
1643	3320.560	Cementitious Fireproofing on metal lath	m2	1395	1,395	1.6	158.4	2232.0	23.7	33,147.29	220,981.95	69.95	97,580.81	7.77	10,845.85	259.90	362,555.90	1,395.0	2.9	266.67	4,114.9	34.67	48,361.19	372,009.16	74.60	104,062.02	77.69	108,378.00	453.63	632,810.37
1644	3320.570	Plenum roof type PC1	m2	20	20	8.1	793.8	162.0	119.0	2,381.40	15,876.00	209.86	4,197.25	23.31	466.26	1,146.05	22,920.91	20.0	14.8	1,336.29	295.6	173.72	3,474.36	26,725.86	104.21	2,084.29	335.03	6,700.59	1,949.25	38,985.10
1645	3320.580	Mineral Acoustical Panels ceiling systems in offices, lobbies, communication room, lunch room and sleeping room	m2	1100	1,100	1.6	160.5	1760.0	24.0	26,489.10	176,594.00	41.97	46,172.28	4.66	5,128.86	231.26	254,384.24	1,100.0	3.0	270.25	3,288.3	35.13	38,646.02	297,277.10	28.05	30,852.76	69.16	76,075.94	402.59	442,851.82
1646	3320.590	Ceramic and Mineral fibre composite acoustical panels in washrooms ceiling tiles	m2	230	124	1.7	167.2	210.8	25.0	3,110.48	20,736.52	41.97	5,204.88	4.66	578.16	238.95	29,630.04	124.0	3.1	281.51	386.1	36.60	4,537.87	34,906.67	13.14	1,629.87	68.80	8,531.70	400.05	49,606.11
1647	3320.600	Gypsum board ceiling in battery rooms	m2	170	155	1.7	167.2	263.5	25.0	3,888.10	25,920.65	41.97	6,506.09	4.66	722.70	238.95	37,037.54	155.0	3.1	281.51	482.6	36.60	5,672.38	43,633.68	86.93	13,474.03	83.66	12,967.23	488.69	75,747.31
1648	3320.610	Kitchen upper and lower cabinets	Linear meter	9	9	39.4	3,857.2	354.6	578.5	5,207.33	34,715.52	1,699.60	15,296.43	188.84	1,699.57	6,324.32	56,918.85	9.0	71.8	6,493.46	646.4	844.15	7,597.35	58,441.17	802.54	7,222.89	1,687.63	15,188.69	9,827.79	88,450.10
1649	3320.620	Glazed ceramic wall finish tiles and baseboards in washrooms	m2	370	370	4.1	400.0	1517.0	60.0	22,204.44	148,029.60	55.96	20,706.16	6.21	2,298.81	522.27	193,239.01	370.0	7.4	673.49	2,756.4	87.55	32,394.94	249,191.88	61.06	22,592.43	170.57	63,112.20	992.68	367,291.46
1650	3320.630	Urethane in Storage Rooms	m2	1445	2,429	0.6	57.1	1457.4	8.5	20,822.60	138,817.35	41.97	101,956.79	4.66	11,325.46	112.36	272,922.20	2,429.0	1.1	96.21	2,585.0	12.51	30,381.12	233,700.91	7.46	18,126.21	24.11	58,572.43	140.30	340,780.67
1651	3320.640	Painting on masonry walls	m2	4190	4,190	0.6	57.1	2514.0	8.5	35,918.76	239,458.50	7.00	29,328.32	0.78	3,248.09	73.50	307,953.69	4,190.0	1.1	96.21	4,459.2	12.51	52,407.40	403,133.88	2.53	10,604.09	23.12	96,877.28	134.37	563,022.65
1652	3320.650	Painting on gypsum wall and ceilings	m2	8220	8,220	0.6	57.1	4932.0	8.5	70,465.95	469,773.00	7.00	57,536.71	0.78	6,372.14	73.50	604,147.81	8,220.0	1.1	96.21	8,748.0	12.51	102,813.24	790,871.05	3.63	29,806.19	23.34	191,867.09	135.69	1,115,357.57
1653	3320.660	Washroom accessories	LS	0	1	337.0	33,026.0	337.0	4,953.9	4,953.90	33,026.00	17,319.87	17,319.87	1,924.43	1,924.43	57,224.21	57,224.21	1.0	615.0	55,596.40	615.0	7,227.53	7,227.53	55,596.40	27,105.53	27,105.53	18,523.01	18,523.01	108,452.47	108,452.47
1654	3320.670	Lockers in Lockers Rooms	LS	0	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1655	3320.680	Signage	LS	0	1	587.0	57,526.0	587.0	8,628.9	8,628.90	57,526.00	19,010.40	19,010.40	2,112.27	2,112.27	87,277.57	87,277.57	1.0	1071.2	96,840.03	1,071.2	12,589.20	12,589.20	96,840.03	68,989.52	68,989.52	36,648.20	36,648.20	215,066.96	215,066.96
1656	3320.690	Appliances and furniture	LS	0	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0348	Added	Paint Doors & Frames	ea		185	6.0	588.0	1110.0	88.2	16,317.00	108,780.00	15.55	2,876.68	1.73	320.57	693.48	128,294.24	185.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0349	Added	Paint "Egress Path" on floors	m2		982	0.5	52.9	491.0	7.9	7,796.12	51,967.44	7.00	6,873.61	0.78	761.25	68.63	67,397.41	982.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B&M-0350	Added	Conc Housekeeping Pads	m2		760	4.5	440.4	3420.0	66.0	50,215.88	334,772.40	442.53	336,319.15	49.17	37,367.83	998.26	758,675.24	760.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added	0	0		0	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST08		SUB-TOTAL ARCHITECTURAL - SUPPLY & INSTALL						98421.5		$1,445,546.21	$9,636,974.71		$2,105,942.33		$231,150.71		$13,419,613.95				162531.6		$1,910,194.71	$14,693,805.45		$1,561,880.24		$3,767,707.27		$21,933,587.67
		POWERHOUSE DIESEL GENERATOR SYSTEM																												
		DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLALTION																												
1657	3437.010	Emergency Diesel Generator Set	LS	0	1	306.0	32,800.4	306.0	4,920.0	4,920.07	32,800.44	175,458.51	175,458.51	4,135.52	4,135.52	217,314.54	217,314.54	1.0	291.8	26,379.29	291.8	3,429.31	3,429.31	26,379.29	238,400.84	238,400.84	54,195.75	54,195.75	322,405.19	322,405.19
1658	3437.020	Diesel Fuel System	LS	0	1	1206.0	129,272.2	1206.0	19,390.8	19,390.84	129,272.23	223,399.76	223,399.76	16,298.81	16,298.81	388,361.64	388,361.64	1.0	1166.3	105,442.26	1,166.3	13,707.49	13,707.49	105,442.26	349,986.00	349,986.00	95,006.42	95,006.42	564,142.17	564,142.17
ST09		SUB-TOTAL DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLATION						1512.0		$24,310.90	$162,072.67		$398,858.26		$20,434.34		$605,676.17				1458.1		$17,136.80	$131,823.55		$588,386.85		$149,202.17		$886,547.37
		COMMISSIONING																												
		PIPING/MECHANICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1659	3352.153	WPS (Domestic Water)	LS	0	1	548.6	59,332.7	548.6	8,899.9	8,899.91	59,332.73	22,419.45	22,419.45	14,543.25	14,543.25	105,195.33	105,195.33	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1660	3353.580	SDS (Wastewater)	LS	0	1	234.0	25,307.8	234.0	3,796.1	3,796.17	25,307.80	4,024.72	4,024.72	6,203.28	6,203.28	39,331.97	39,331.97	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1661	3441.660	ASS (Low Pressure Compressed Air)	LS	0	1	247.0	26,713.7	247.0	4,007.0	4,007.07	26,713.79	4,148.88	4,148.88	6,547.91	6,547.91	41,417.65	41,417.65	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1662	3442.600	AHS (High Pressure Compressed Air)	LS	0	1	317.2	34,306.1	317.2	5,145.9	5,145.92	34,306.13	4,819.36	4,819.36	8,408.90	8,408.90	52,680.30	52,680.30	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1663	3443.030	WFS (Fire Protection Water)	LS	0	1	0.0		0.0		0.00	0.00	100,320.00	100,320.00	0.00	0.00	100,320.00	100,320.00	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	107,861.79	107,861.79	9,689.37	9,689.37	162,572.66	162,572.66
1664	3444.101	WCD (Clear Water Drainage)	LS	0	1	291.2	31,494.1	291.2	4,724.1	4,724.12	31,494.15	4,571.03	4,571.03	7,719.64	7,719.64	48,508.95	48,508.95	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1665	3445.950	WDS (Dewatering)	LS	0	1	330.2	35,712.1	330.2	5,356.8	5,356.82	35,712.11	4,943.52	4,943.52	8,753.52	8,753.52	54,765.97	54,765.97	1.0	755.5	68,299.43	755.5	8,878.93	8,878.93	68,299.43	0.00	0.00	16,051.36	16,051.36	93,229.72	93,229.72
1666	3446.250	OLS (Lubricating/Hydraulic Oil)	LS	0	1	226.2	24,464.2	226.2	3,669.6	3,669.63	24,464.20	3,950.22	3,950.22	5,996.51	5,996.51	38,080.56	38,080.56	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1667	3447.140	ODS (Oily Water Drainage)	LS	0	1	208.0	22,495.8	208.0	3,374.3	3,374.37	22,495.82	3,776.39	3,776.39	5,514.03	5,514.03	35,160.62	35,160.62	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1668	3448.113	WCS (Raw/Cooling Water)	LS	0	1	358.8	38,805.2	358.8	5,820.7	5,820.79	38,805.29	22,134.28	22,134.28	9,511.70	9,511.70	76,272.06	76,272.06	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1669	3449.196	WSS (Service Water)	LS	0	1	377.0	40,773.6	377.0	6,116.0	6,116.05	40,773.67	20,780.50	20,780.50	9,994.18	9,994.18	77,664.41	77,664.41	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1670	344A.50	ABR (Brake Air)	LS	0	1	273.0	29,525.7	273.0	4,428.8	4,428.86	29,525.76	4,397.21	4,397.21	7,237.16	7,237.16	45,589.00	45,589.00	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1671	344B.84	WTS (Shaft Seal Water)	LS	0	1	400.4	43,304.4	400.4	6,495.6	6,495.67	43,304.45	5,614.00	5,614.00	10,614.51	10,614.51	66,028.63	66,028.63	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	0.00	0.00	18,726.60	18,726.60	108,768.03	108,768.03
1672	344C.05	WLS (Piezometer and Water Level)	LS	0	1	234.0	25,307.8	234.0	3,796.1	3,796.17	25,307.80	4,024.72	4,024.72	6,203.28	6,203.28	39,331.97	39,331.97	1.0	839.4	75,888.26	839.4	9,865.47	9,865.47	75,888.26	0.00	0.00	17,834.85	17,834.85	103,588.59	103,588.59
1673	3440.244	Mechanical Shop Equipment	LS	0	1	0.0		0.0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	188.9	17,075.55	188.9	2,219.82	2,219.82	17,075.55	0.00	0.00	4,013.01	4,013.01	23,308.38	23,308.38
ST10		SUB-TOTAL PIPING/MECHANICAL - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						4045.6		$65,631.56	$437,543.70		$209,924.27		$107,247.68		$820,347.42				8834.9		$103,634.93	$798,730.20		$107,861.79		$188,039.28		$1,198,466.19
		HVAC SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																												
1674	3351.290	EDD (Dewatering gallery supply and Exhaust)	LS	0	1	40.0	4,592.0	40.0	688.8	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1675	3351.300	EGR (Exhaust for Trans., Storage and Garbage rooms)	LS	0	1	10.0	1,148.0	10.0	172.2	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1676	3351.310	EKH (Kitchen range exhaust)	LS	0	1	6.0	688.8	6.0	103.3	103.32	688.80	0.00	0.00	0.00	0.00	792.12	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1677	3351.320	END (Exhaust North RCC Dom)	LS	0	1	6.0	688.8	6.0	103.3	103.32	688.80	0.00	0.00	0.00	0.00	792.12	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1678	3351.330	EOR (Exhaust oil Storage Room)	LS	0	1	6.0	688.8	6.0	103.3	103.32	688.80	0.00	0.00	0.00	0.00	792.12	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1679	3351.340	ESB (South service bay vent and exhaust)	LS	0	1	6.0	688.8	6.0	103.3	103.32	688.80	0.00	0.00	0.00	0.00	792.12	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1680	3351.350	ESP (Exhaust for Waste Water treatment Room)	LS	0	1	120.0	13,776.0	120.0	2,066.4	2,066.40	13,776.00	0.00	0.00	0.00	0.00	15,842.40	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1681	3351.360	ESR (Ventilate and exhaust Oil/water interceptor Room)	LS	0	1	10.0	1,148.0	10.0	172.2	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1682	3351.370	ESW (Exhaust Storage, Washrooms and Janitor rooms)	LS	0	1	24.0	2,755.2	24.0	413.2	413.28	2,755.20	0.00	0.00	0.00	0.00	3,168.48	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1683	3351.380	EWT (Exhaust and Ventilate the Wastewater Treatment Room)	LS	0	1	6.0	688.8	6.0	103.3	103.32	688.80	0.00	0.00	0.00	0.00	792.12	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1684	3351.390	PSC (Pressurize 4 Stairwells)	LS	0	1	40.0	4,592.0	40.0	688.8	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1685	3351.400	VCC (Control Room, Communication Room and assoc. space)	LS	0	1	42.0	4,821.6	42.0	723.2	723.24	4,821.60	0.00	0.00	0.00	0.00	5,544.84	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1686	3351.410	VCR (Ventilation and Cooling for Compressor Room)	LS	0	1	10.0	1,148.0	10.0	172.2	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1687	3351.420	VDA (Ventilate Dewatering, Drainage and Draft tube galleries)	LS	0	1	6.0	688.8	6.0	103.3	103.32	688.80	0.00	0.00	0.00	0.00	792.12	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1688	3351.430	VDT (Ventilate Draft Tube Gallery)	LS	0	1	10.0	1,148.0	10.0	172.2	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1689	3351.440	VEG (Diesel Emergency Generator)	LS	0	1	10.0	1,148.0	10.0	172.2	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1690	3351.450	VEL (Ventilate and Exhaust Elevator Machine Room)	LS	0	1	6.0	688.8	6.0	103.3	103.32	688.80	0.00	0.00	0.00	0.00	792.12	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1691	3351.460	VER (Ventilate Electrical Battery and Charger Rooms)	LS	0	1	40.0	4,592.0	40.0	688.8	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1692	3351.470	VFP (Ventilate the Fire Pump Room)	LS	0	1	6.0	688.8	6.0	103.3	103.32	688.80	0.00	0.00	0.00	0.00	792.12	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1693	3351.480	VIG (Ventilation for Lower Inspection galleries)	LS	0	1	8.0	918.4	8.0	137.7	137.76	918.40	0.00	0.00	0.00	0.00	1,056.16	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1694	3351.490	VIL (Ventilate and Exhaust Intake Gate Hoist Building)	LS	0	1	48.0	5,510.4	48.0	826.5	826.56	5,510.40	0.00	0.00	0.00	0.00	6,336.96	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1695	3351.500	VMR (Machine Hall Main Supply and Exhaust)	LS	0	1	270.0	30,996.0	270.0	4,649.4	4,649.40	30,996.00	0.00	0.00	0.00	0.00	35,645.40	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1696	3351.510	VMS (Warehouse and Workshop spaces)	LS	0	1	42.0	4,821.6	42.0	723.2	723.24	4,821.60	0.00	0.00	0.00	0.00	5,544.84	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1697	3351.520	VND (Ventilate North RCC Dam)	LS	0	1	10.0	1,148.0	10.0	172.2	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1698	3351.530	VOF (Offices and admin spaces on Mezz. 1 & 2)	LS	0	1	120.0	13,776.0	120.0	2,066.4	2,066.40	13,776.00	0.00	0.00	0.00	0.00	15,842.40	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1699	3351.540	VCD (Ventilate Centre Transition Dam)	LS	0	1	12.0	1,377.6	12.0	206.6	206.64	1,377.60	0.00	0.00	0.00	0.00	1,584.24	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1700	3351.550	VSD (Ventilate South Dam)	LS	0	1	10.0	1,148.0	10.0	172.2	172.20	1,148.00	0.00	0.00	0.00	0.00	1,320.20	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701	3351.560	EMCS (Energy Monitoring and Control System)	LS	0	1	0.0		0.0		0.00	0.00	94,485.48	94,485.48	0.00	0.00	94,485.48	94,485.48	1.0	293.8	26,560.90	293.8	3,452.92	3,452.92	26,560.90	76,234.30	76,234.30	6,472.55	6,472.55	112,720.66	112,720.66
1701.1	3351.670	EBR (Exhaust Battery Room)	LS	0	1	40.0	4,592.0	40.0	688.8	688.80	4,592.00	0.00	0.00	0.00	0.00	5,280.80	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.2	3351.580	EWH (Exhaust Welding Hood)	LS	0	1	5.0	574.0	5.0	86.1	86.10	574.00	0.00	0.00	0.00	0.00	660.10	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.3	3351.590	ESC (Smoke Exhaust)	LS	0	1	26.0	2,984.8	26.0	447.7	447.72	2,984.80	0.00	0.00	0.00	0.00	3,432.52	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
1701.4	3351.600	VSA (Spiral Case Access)	LS	0	1	5.0	574.0	5.0	86.1	86.10	574.00	0.00	0.00	0.00	0.00	660.10	[illegible]	1.0	42.0	3,794.42	42.0	493.27	493.27	3,794.42	0.00	0.00	891.74	891.74	5,179.43	5,179.43
								0.0	$0.00	$0.00	$0.00		$0.00		$0.00	$0.00	$0.00				0.0		$0.00	$0.00		$0.00		$0.00	$0.00	$0.00
ST11		SUB-TOTAL HVAC SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						1000.0		$17,220.00	$114,800.00		$94,485.48		$0.00		$226,505.48				1594.9		$18,744.43	$144,187.92		$76,234.30		$34,116.46		$273,283.11

COMMERCIAL BID TABULATION
MAXIMUM QUANTITY MATERIAL TAKE OFF

CIMFP Exhibit P-01820

					Black & McDonald Limited FIXED PRICE TARGET COST OF LABOUR												Dahill-Ganotec Joint Venture FIXED PRICE TARGET COST OF LABOUR											
					LABOUR COMPONENT					NON LABOUR COMPONENT							LABOUR COMPONENT					NON LABOUR COMPONENT					
					0.15												0.13										
No	Subcode	PRICE ITEM DESCRIPTION	UNIT OF MEASURE	SCP EST. QTY	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	EQUIP. TOTAL COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I	EST. QTY A	PLA LABOUR HOURS (per unit) B	LABOUR COST (per unit) C	TOTAL LABOUR HOURS	LABOUR OH&P (per unit) D = C x %	LABOUR OH&P (Ext.) E = A x D	COST OF LABOUR (Ext.) F = A x C	MAT. COST (per unit) G	MAT. TOTAL COST	EQUIP. COST (per unit) H	EQUIP. TOTAL COST	UNIT PRICE I = C + D + G + H	TOTAL PRICE J = A x I
		ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																											
1702	3433.050	Station Service Switchgear, MCC and Connected Equipment	LS	0	1	5924.5	629,353.60	5924.5	94,403.04	94,403.04	629,353.60	35,882.89	35,882.89	99,597.17	99,597.17	859,236.70	859,236.70	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	297,670.52	297,670.52	10,262.87	10,262.87	352,954.89	352,954.89
1702a	Added	ATS & Load Management System Commissioning	LS		1	0.0		0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	314.8	28,458.80	314.79	3,699.64	3,699.64	28,458.80	72,958.46	72,958.46	6,908.68	6,908.68	112,025.58	112,025.58
1703	3340.170	Common Station Service MCC, Essential MCC and Connected Equipment	LS	0	1	1537.5	163,327.06	1537.5	24,499.06	24,499.06	163,327.06	9,312.17	9,312.17	25,847.02	25,847.02	222,985.30	222,985.30	1.0	3777.4	341,497.19	3,777.4	44,394.63	44,394.63	341,497.19	198,447.02	198,447.02	80,856.47	80,856.47	665,195.31	665,195.31
1704	3000.263	Intake Distribution Equipment and Building Systems	LS	0	1	492.0	52,264.66	492.0	7,839.70	7,839.70	52,264.66	2,979.89	2,979.89	8,271.04	8,271.04	71,355.30	71,355.30	1.0	1868.7	170,748.60	1,868.7	22,197.32	22,197.32	170,748.60	99,223.51	99,223.51	40,428.23	40,428.23	332,597.66	332,597.66
1705	3435.020	Station Service Transformers	LS	0	1	492.0	52,264.66	492.0	7,839.70	7,839.70	52,264.66	2,979.89	2,979.89	8,271.04	8,271.04	71,355.30	71,355.30	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1706	3460.050	GSU Ancillary Systems	LS	0	1	328.0	34,843.11	328.0	5,226.47	5,226.47	34,843.11	1,986.60	1,986.60	5,514.03	5,514.03	47,570.20	47,570.20	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1707	3000.264	Powerhouse Gallery Electrical Distribution	LS	0	1	861.0	91,463.19	861.0	13,719.47	13,719.47	91,463.19	5,214.81	5,214.81	14,474.33	14,474.33	124,871.77	124,871.77	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	211,871.37	211,871.37	10,003.63	10,003.63	266,896.50	266,896.50
1708	3000.265	Turbine Floor Electrical Distribution	LS	0	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	198,447.02	198,447.02	9,363.07	9,363.07	253,431.58	253,431.58
1709	3000.266	Generator Floor Electrical Distribution	LS	0	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	49,611.75	49,611.75	9,513.36	9,513.36	104,146.61	104,146.61
1710	3000.267	North Dam, North Transition Dam, Centre Transition Dam and South Transition Dam Electrical Distribution and Systems	LS	0	1	574.0	60,975.44	574.0	9,146.32	9,146.32	60,975.44	3,476.54	3,476.54	9,649.55	9,649.55	83,247.85	83,247.85	1.0	440.7	39,842.03	440.7	5,179.46	5,179.46	39,842.03	0.00	0.00	9,363.47	9,363.47	54,384.96	54,384.96
1711	3000.268	Turbine Floor Lighting System	LS	0	1	287.0	30,487.72	287.0	4,573.16	4,573.16	30,487.72	1,738.27	1,738.27	4,824.78	4,824.78	41,623.92	41,623.92	1.0	314.8	28,458.80	314.8	3,699.64	3,699.64	28,458.80	0.00	0.00	6,688.24	6,688.24	38,846.68	38,846.68
1712	3000.269	Generator Floor Lighting System	LS	0	1	287.0	30,487.72	287.0	4,573.16	4,573.16	30,487.72	1,738.27	1,738.27	4,824.78	4,824.78	41,623.92	41,623.92	1.0	314.8	28,458.80	314.8	3,699.64	3,699.64	28,458.80	0.00	0.00	6,688.24	6,688.24	38,846.68	38,846.68
1713	3443.040	Fire Detection System - ELECTRICAL	LS	0	1	1025.0	108,884.71	1025.0	16,332.71	16,332.71	108,884.71	57,508.11	57,508.11	17,231.34	17,231.34	199,956.87	199,956.87	1.0	1322.1	119,524.71	1,322.1	15,536.21	15,536.21	119,524.71	30,733.61	30,733.61	28,182.93	28,182.93	193,979.46	193,979.46
1714	3460.060	Generator Step Up Transformer Unit 1	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1715	3460.070	Generator Step Up Transformer Unit 2	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1716	3460.080	Generator Step Up Transformer Unit 3	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1717	3460.090	Generator Step Up Transformer Unit 4	LS	0	1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1718	3436.050	Unit 1 Isolated Phase Bus	LS	0	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1719	3436.060	Unit 2 Isolated Phase Bus	LS	0	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1720	3436.070	Unit 3 Isolated Phase Bus	LS	0	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1721	3436.080	Unit 4 Isolated Phase Bus	LS	0	1	164.0	17,421.55	164.0	2,613.23	2,613.23	17,421.55	993.30	993.30	2,757.01	2,757.01	23,785.10	23,785.10	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1722	3438.050	Unit 1 Generator Circuit Breaker	LS	0	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1723	3438.060	Unit 2 Generator Circuit Breaker	LS	0	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1724	3438.070	Unit 3 Generator Circuit Breaker	LS	0	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
1725	3438.080	Unit 4 Generator Circuit Breaker	LS	0	1	246.0	26,132.33	246.0	3,919.85	3,919.85	26,132.33	1,489.95	1,489.95	4,135.52	4,135.52	35,677.65	35,677.65	1.0	419.7	37,944.13	419.7	4,932.74	4,932.74	37,944.13	0.00	0.00	8,917.43	8,917.43	51,794.29	51,794.29
B&M-0351	Added	Testing of Spare Generator Transformer as per sect.48 01 10 item # 3.2.4	LS		1	123.0	13,066.16	123.0	1,959.92	1,959.92	13,066.16	27,420.97	27,420.97	2,067.76	2,067.76	44,514.82	44,514.82	0.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Added		0	0	0	0.0		0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST12		SUB-TOTAL ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						15211.0		$242,377.36	$1,615,849.05		$276,808.39		$255,713.14		$2,390,747.94				16054.0		$188,678.19	$1,451,376.67		$1,158,963.26		$564,595.24		$3,149,607.36
		POWERHOUSE DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING																											
1726	3437.030	POWERHOUSE DIESEL GENERATOR SYSTEM	LS	0	1	429.0	45,984.93	429.0	6,897.74	6,897.74	45,984.93	4,097.35	4,097.35	11,372.69	11,372.69	68,352.72	68,352.72	1.0	881.4	79,682.68	881.4	10,358.75	10,358.75	79,682.68	25,593.83	25,593.83	20,887.32	20,887.32	136,522.58	136,522.58
ST13		SUB-TOTAL DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING						429.0		$6,897.74	$45,984.93		$4,097.35		$11,372.69		$68,352.72				881.4		$10,358.75	$79,682.68		$25,593.83		$20,887.32		$136,522.58
ST14		TOTAL CONTRACT PRICE (pre-normalization)						807,429		$12,808,620.41	$85,390,802.73		$140,263,676.59		$18,633,033.05		$257,096,132.78				760,054		$8,932,738.11	$68,713,370.10		$91,105,664.47		$28,850,763.17		$197,602,535.85
ST16		TOTAL ESTIMATED CONTRACT PRICE						807,428.95		12,808,620.41	85,390,802.73		140,263,676.59		18,633,033.05		257,096,132.78				760,054.23		8,932,738.11	68,713,370.10		91,105,664.47				197,602,535.85
ST17		Score / 10									98,199,423						7.0							77,646,108						10.0

8,308,648.18

51,272,416
248,874,952

Attachment 5

Technical Evaluation

TECHNICAL EVALUATION REPORT				CH0031	Package Title: Mechanical and Electrical Auxiliaries				
Item No.	Description	Weighting		Bidder:	Black and McDonald		Bidder:	Gahill Ganotec	
		Item Wgt	Overall Wgt	Bid No.:			Bid No.:		
1.0	General	5%		Score (out of 10)	Overall Score	Comments	Score (out of 10)	Overall Score	Comment
1.1	Contract Commitments - Does it appear Bidder has the capacity to complete this scope of work? Has the bidder undertaken this type and magnitude of work in the past 5 years?	25%	1.25%	8	1.00%	Bidder has provided high level description of the SOW for each discipline, then followed by discipline specific tasks with start dates for each area as the areas become available. Bidder has completed several multi-million dollar power generation projects including BOP type work, in addition it has completed many lower budget contracts involving power plant upgrades. Bidder has not yet fully demonstrated its capacity or experience to assemble and install electrical equipment (GSU, IPB, GCB) supplied by Company. Bidder is providing relevant pieces of information through out the clarification process. Bidder has experience in Labrador. Bidder's second submission of their Rev. C PEP is much more logical and detailed but conflicts in some areas with supporting information provided.	8	1.00%	Bidder has completed numerous large scale construction projects including power generation type projects. Bidder has completed a hydro electric project matching the exact SOW of this project and has experience in all disciplines in heavy industrial construction. Bidder has indicated the oil filling procedure of the GSU transformers will be subcontracted. This demonstrates the bidder acknowledges the specialty equipment and expertise required for this task. Bidder has extensive experience in labrador and at the LCP site. Bidder has provided a SOW aligning very closely to the SOW provided in the RFP.
1.2	Has Bidder fully explained how it plans to deliver the requirements of Exhibit 3 Coordination Procedures?	25%	1.25%	7	0.88%	Bidder is rather vague on Exhibit 3 requirements. "*BIDDER* confirm compliance, based on mutal agreement of methods and procedures, as applicable for this project scope. Bidders Rev C PEP is still light on details of Exhibit 3 requirements and auxulliary PCP is a plan template.	8	1.00%	Bidder has given an overview of its PC plans and has confirmed compliance with Exhibit 3. Project controls function shall be under the Project Engineer.
1.3	Has the bidder acknowledged that there are no exceptions to the technical specifications (TS)?	25%	1.25%	10	1.25%	All technical exceptions have been addressed to the satisfaction of the bid review team.	10	1.25%	All technical exceptions have been addressed to the satisfaction of the bid review team.
1.4	Has the bidder acknowledged that there are no exceptions to the Scope of Work (SOW)?	25%	1.25%	10	1.25%	"*BIDDER* confirm compliance."	10	1.25%	"We confirm compliance with the requirements outlined in MFA-SN-CD-3300-EN-SP-0002-01."
2.0	TDS (Appendix A1) - Detailed technical review	26%							
2.1	Piping	30%	7.80%	8.4	6.55%	Refer to Piping scoring matrix	9.8	7.64%	Refer to Piping scoring matrix
2.2	Electrical	35%	9.10%	8	7.28%	Refer to Electrical scoring matrix	8.5	7.74%	Refer to Electrical scoring matrix
2.3	HVAC	20%	5.20%	9.8	5.10%	Refer to HVAC scoring matrix	10	5.20%	Refer to HVAC scoring matrix
2.4	Architectural	15%	3.90%	7.5	2.93%	Refer to Architectural scoring matrix	8.5	3.32%	Refer to Architectural Scoring matrix
3.0	Execution Plan (Appendix A13)	47%							
3.1	Project Organization, Org Chart & Key Personnel								

TECHNICAL EVALUATION REPORT				CH0031		Package Title: Mechanical and Electrical Auxiliaries			
Item No.	Description	Weighting		Bidder:	Black and McDonald		Bidder:	Gahill Ganotec	
		Item Wgt	Overall Wgt	Bid No.:			Bid No.:		
3.1.1	Is the bidder executing this on a standalone basis or as a joint venture with another firm? If a JV, has the JV successfully delivered similar projects in the past 5 years?	0.5%	0.24%	8	0.19%	Standalone, however from clarifications it is clear that bidder intends to execute project using multiple office locations (St. John's and Dartmouth) which may complicate the communication process somewhat. They plan to supplement their project team with part time third party consultants. Bid materials produced by third party consultants are good quality.	8	0.19%	Bidder is proposing a joint venture. Bidder has indicated the companies in the Joint Venture have partnered together sucessfully on a number of projects over the years. Joint Venture partners have worked together within a partnership for Long Harbour (VALE). Both joint venture partners are working at the MF site as subcontractors to CH0007 and one is an existing contractor to LCP.
3.1.2	Mob/Demob Plan and Schedule provided? Does the mobilization plan appear realistic?	0.5%	0.24%	7	0.16%	Yes. Bidder has provided a list of activities associated with mobilization, followed by a brief demobilization description in the executive summary. The on-site mobilization activity is better defined in Rev. C PEP but conflicts with some support information. Demobilization is not detailed in bid. Small footprint trailer layout is included which is conducive to installation near to the powerhouse. No requirement for large onsite warehouse - bidder plans to use an existing warehouse in HVGB. Bidder has included A series documents in its bid schedule.	6	0.14%	Bidder has provided a list of pre-mobilization activities followed by a list of mobilization activities under the project execution summary. Demobilization is not detailed in the bid. The mobilization plan as presented is NOT realistic based on the Fall 2016 bid schedule submission. Bidder has included A series documents and has included indirect labour. Bidder has stated it will provide a demobilization plan after award. Small footprint trailer layout is included with proposal which is conducive to installation and set-up near to the powehouse.
3.1.3	Bidder has provided specific challenges related to the work and identified mitigation measures?	0.5%	0.24%	7	0.16%	Bidder's revised Project Execution Plan includes a section on risk which indicates their plans to hire a risk consultant and plan after bid award. The Project Exection Plan does not detail actual concerns just the bidder's intentions post award. They have included the 5 risks with mitigations in the Risk Questionaire. Nominated risk consultant lacks hydroelectric and northern climate experience, qualifications are otherwise very good.	6	0.14%	Bidder's execution plan includes a section on risk management which is logical and identify's the bidders plans for management of challenges throughout the work. Bidder has included Risks and Mitigations in its Risk Management Plan. Bidder's organization does not have a Risk manager, project risk support will be by the VP of Strategy and Development who has limited knowledge of technical, particularly construction execution risks.

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3.1.4	Bidder has provided specific locations where project management, design and material procurement will take place?	0.5%	0.24%	6	0.14%	Bidder has responded that activities will take place in St. John's and Dartmouth office but gives no clear detail, timelines, durations or splits. The lack of an established project office and an unknown division of tasks between St. John's and Darmouth are a concern.The initial set up of the St. John's project office will be likely be a timely and involved process.	7	0.16%	Bidder has indicated the design component subcontractors - all in St. John's. Initally, the Bidder will commence work at its St. John's office and move to Site during Mobilization. Project will be run from Site with support from home office in St. John's. Primary procurement activities will occur from bidders head office in St. John's with on-site procurement support. The project controls tools and systems for the project will be implemented under leadership by the Project Engineer, who is assisted by the Corporate Office team. The team is responsible for all procurement and construction planning and scheduling as well as all cost control, reporting and trending.
3.1.5	Organization chart - Does it make sense? Are all key functions and key personnel provided? Are reporting lines and decision making authority clear?	4%	1.88%	8	1.50%	Bidder has provided a Rev. 3 org. chart with clarifications. Locations of work are indicated and overall chart is well structured. Bidder has indicated locations of work and has indicated part time roles. Some part time consultants and non Bidder staff resumes. After several clarification cycles Bidder has added a Quality Assurance Project Lead to the organizational chart.	8	1.50%	Bidder has done an decent job in preparing their org. chart. Management structure is well defined. Functions reporting to the project engineer should report to construction manager. Work locations are defined and post award/mobilization org chart provided. No third party resources identified as part of bid.
3.1.6	Key Personnel - Assess for competency, duration of time with bidder, knowledge of the bidder's processes, suitability for the nominated role, previous experience of key personnel working together to deliver a project.	4%	1.88%	7	1.32%	Revised org. chart indicates work locations. Project Controls Lead is acceptable. vast network to draw from. Commissioning leads added during clarifications but minimal experience with PCS and not staff personnel. CA is an offsite position. Quality Assurance lead has been added to the org chart. Bidder has provided mobilization org charts c/w work locations. Bidder has been responsive to clarification items WRT organization.	7	1.32%	All submitted resumes are currently employed by bidder. Vast network to draw from. All management resumes have been submitted and mobilization org chart has been submitted c/w work locations. Bidder has been responsive to clarification items WRT orginization, modifications have been extensive between submissions.
3.2	**Project Administration and Communication**								

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3.2.1	Interface Management - Does the bidder have a clear plan and procedure for management of all interfaces under its control? Has the bidder identified the key interfaces with Company and Company's Other Contractors? Does the bidder have a database or other tool to assist with the management of interfaces? Interface register (A98)?	8.0%	3.76%	7	2.63%	The bidder has provided a preliminary Interface Register (A98) which is well structured and logical. It gives a good indication that the author is aware of the importance and number of interfaces however the register conflicts with other aspects of bid including items which have been previously clarified.	8	3.01%	Execution Plan discusses interfaces. Intend to use interface management plan. After request for Interface Register (A98), have provided a preliminary A98 which indicates a good understanding of the hard interfaces for the project. Pg. 20 of Execution Plan provides a listing of scopes provided by others indicating an understanding of interfaces to be managed. Bidder has an current presence at site which should aid with interface understanding and management.
3.2.2	Does the bidder intend on establishing a coordination or interface office in St. John's to assist with the interface with Company?	1.0%	0.47%	7	0.33%	Plan to set up St. John's office for initial project activites but has also stated some activites to take place in Dartmouth, NS office. Splitting of activities between offices and initial set up of St. John's office may not be ideal but the bidder has a current St. John's location and it is expected that there will be a St. John's component throughout the project.	8	0.38%	Bidder plans to utilize its existing St. John's office for duration of project for coordination and interface activities. Bidder's St. John's office is well established and should lead to an effective ramp up to full support effectiveness.
3.2.3	Project Communication and Coordination Plan	6.0%	2.82%	7	1.97%	Bidder has highlighted importance of communication - accountability and responsibility. Have provided a sample communications plan and have identified intent to provide a project specific plan. Interface register (preliminary also provided). Bidder's St. John's office is for project planning only - not for duration of project.	8	2.26%	Plan to form coordination teams. Have established St. John's office and experience and existing relationship with project. Have identified internal and external communication requirements. Bidder plans to maintain its St. John's office for duration of project.
3.3	Health & Safety Management Plan & Certs (A28 & A41)	0.5%	0.24%	7.64	0.18%	Sean Lee	7.58	0.18%	Sean Lee
3.4	Environmental Protection Plan C-SEPP (A35)	0.5%	0.24%	7.23	0.17%	Dave Haley	7.33	0.17%	Dave Haley
3.5	Quality Management Manual & Certs (Q01 & Q02)	0.5%	0.24%	6.3	0.15%	Paul Fraser	7.7	0.18%	Paul Fraser
3.6	Risk Management Plan (A04)	0.5%	0.24%	7.32	0.17%	Carlos Fernandez/Tony Scott	7.76	0.18%	Carlos Fernandez/Tony Scott
3.7	**Project Controls**								
3.7.1	Has the bidder presented an execution organization that includes project controls?	4.0%	1.88%	7	1.32%	Project Controls manager is qualified based on submitted resume. Resumes provided for planner/scheduler technicians indicate lesser experience. Two key project controls positions are part time consultants but qualifications are very good.	7	1.32%	Project Controls candidate is well qualified. Planner is qualified based on resume but the bid schedule is unaccaptable, unclear if poor schedule quality is due to planner incompetence or bidder proposal stategy. Revised organizational chart covers all areas of project controls.
3.7.2	Has the bidder presented all key project control procedures that will be used for work, including cost management, schedule management and MoC?	1.0%	0.47%	8	0.38%	"*BIDDER* confirm compliance, based on mutual agreement of methods and procedures, as applicable for this project scope." New PEP states that their Project Controls System will "incorporate the requirements" of our Exhibits. Bidder has provided a draft project Controls Plan. Cost, Schedule and Management are addressed.	8	0.38%	Full compliance with Exhibit 3 confirmed and a decent amount of detail contained within execution plan to confirm. Bidder plans to use Earned Value and has provided samples and commentary to justify.

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3.7.3	Bidder's proposed earned value management process that will be used for the work	0.5%	0.24%	8	0.19%	"*BIDDER* confirm compliance, based on mutual agreement of methods and procedures, as applicable for this project scope." During clarifications the bidder has provided an "Updating and Reporting Cycle" flow chart. Listing of information provided with clarifications is good.	8	0.19%	Compliance with Exhibit 3 and good amount of detail contained within execution plan to support.
3.7.4	Bidder's proposed methods for planning and schedule control that will be used for the work	0.5%	0.24%	8	0.19%	"*BIDDER* confirm compliance, based on mutual agreement of methods and procedures, as applicable for this project scope." The draft Projec Control Plan supplied during clarifications is a template from their Ontario buisness unit.	6	0.14%	Compliance with Exhibit 3 with the exception of BID schedule requirements which is a key deficiency. Based on Bid schedule it is likely that a post award schedule will also be deficient WRT Exhibit 3 requirements. Decent amount of detail contained within execution plan within other sections. Bidder has been informed that its schedule submission is not acceptable and that no further evaluation can proceed with respect to this critcal item.
3.7.5	Bidder's proposed cost control and scheduling software it proposes to use for the work	0.5%	0.24%	9	0.21%	JD Edwards, BMREQ & Primavera 6.	9	0.21%	JONAS & Primavera 6 (V8.3)
3.8	**Engineering (fire detection and suppression, cable tray support & shaft platforms)**								
3.8.1	Project Engineering Management Plan - Has the bidder presented the engineering management procedures and processes that will be used for the work?	2.0%	0.94%	7	0.66%	Bidder has provided a sample engineering management plan with plans to create a job specific plan after award. Field engineers will have input to procurement process and subsupplier/subcontractor documentation submissions.	7	0.66%	An engineering management plan would be prepared after contract award. A list of items to be included in the plan are listed and appear acceptable. Bidder's Rev. 3 organizational chart has added package engineering positions to the St. John's office to address concerns with engineering input to procurement and documentation.
3.8.2	Demonstrates a clear understanding of scope of work - i.e. preliminary list of engineering deliverables available (Master Document Register)	1.0%	0.47%	8	0.38%	The bidder has provided a preliminary SDR (A01) which indicates an understanding of documentation required. Rev. 3 PEP references a sample engineering plan - project plan to be developed post contract award.	7	0.33%	Bidder has confirmed compliance with design scope outlined in scope of work specification. There are items regarding technical details still open. Preliminary Supplier Document Register (A01) is sufficient with bid.
3.8.3	Where will engineering be undertaken? Does the location lead to more synergies with Nalcor's review process?	0.5%	0.24%	7	0.16%	Bidder has provided a prelim. Subcontract plan wich included eng. scopes. Bidder has named Can Ecosse Engineeing (Ontario) for cable tray scope. No indication oflocal firms being utilized but will set up local office for key upfront activites.	8	0.19%	Engineering will be subcontracted. Subcontractor has not been selected at this time but A16 identifies 3 qualified St. John's based options. Bidder's discipline engineers will review documents before submission to Company.
3.8.4	Does the bidder intend on self preforming all engineering scope? If no, is the intended subcontracted scope considered critical? If subcontracted, has the bidder worked with the particular subcontractor in the past?	0.5%	0.24%	8	0.19%	Bidder has named CanEcosse Engineeing (Ontario) for cable tray scope. Bidders revised Appendix A16 listed several optons for Engineering services - all engineering will be subcontracted.	8	0.19%	Appendix A16 identifies 3 qualified subcontractors located in St. John's who have worked with bidder in the past. All engineering services will be subcontracted.

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3.8.5	Has the bidder presented processes to verify the quality and ensure the effective management of subcontracted engineering scope?	1.0%	0.47%	7	0.33%	Rev. 3 PEP has a section on engineering management but it mostly generic. Bidder's revised PEP indicates that the Supply Chain team will be responsible for ensuring "complete and accurate shop drawings". Bidders' latest organizational chart indicates that site engineers will be responsible for support engineering activites togther with home office.	7	0.33%	Bidder's discipline engineers would review engineering documents prepared by engineering subcontractor. "We confirm that engineering documents shall not be issued for Engineer's acceptance until the internal reviewed cycle is complete". Organizational chart supports this statement.
3.8.6	Does the bidder have a plan for conducting formal design reviews at specific points (i.e. gates) during the design process? Is there a plan for inclusion of the Company in this process?	0.5%	0.24%	7	0.16%	Bidder has provided a preliminary Interface Register (A98) and has made necessary additions to organizational chart to improve engineering input to key activities. Engineering within home office and at site and included in schedule.	7	0.16%	"For larger scopes such as fire protection design, their shall be an iterative review process, and we shall include the Company in this process. Following contract commencment and once the fire protection contractor has been selected, we shall work collaboratively with the Company to set out the details of the process." Schedule does not yet contain sufficent detail in this area but established St. John's office will support this requirement.
3.8.7	Does the bidder have a method to seek the input of technical expertise other than those engaged in the design?	0.5%	0.24%	8	0.19%	Bidder plans to outsource all engineering activities but have also stated that the supply chain group is responsible for ensuring the technical correctness of deliverables. Engineering expertise at site and within procurement process procurement stage. Bidder can subcontract services and they have added engineering subs to their A16.	8	0.19%	The proposal indicates that technical Expertise is not available within their company however the bidder has identified (A16) three large engineering subcontractors who have vast networks of resources to provide technical expertise if required.
3.8.9	Details of system interfaces.	0.5%	0.24%	9	0.21%	Bidder has included a peliminary Interface Register (A98) with the Rev. 3 PEP which is extensive, detailed and well considered. The author clearly understands the scope however author is a consultant and relevent knowledge may not be fully transferred and utilized by bidder.	9	0.21%	Bidder acknowledges importance of interface management and will develop an interface management plan after award. Plan will be issued to Company for review. Have provided a commentart of key interfaces and have provided a preliminary Interface register (A98) which is logical and well considered.
3.8.10	Does the bidder have a plan for follow-on engineering to support construction execution?	0.5%	0.24%	9	0.21%	Bidder has identified several site field engineeing resources which should fullfill this function together with home office support. Recent additions to organizational chart support this plan in addition to identified third party engineering firms.	9	0.21%	"Included" and opdated org. charts support this inaddition to identified third party engineering firms.
3.8.11	Standards of design that will be used.	0.5%	0.24%	10	0.24%	Bidder's submission is compliant with technical requirements with respect to design standards.	10	0.24%	Bidder's submission is compliant with technical requirements with respect to design standards.
3.9	Procurement								

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3.9.1	Project Procurement Management Plan - including all procedures and tools for procurement, expediting, materials management, etc.	8.0%	3.76%	7	2.63%	A sample Project Management Plan has been submitted from a past project the Bidder has completed. While this a good document which outlines the steps used in a past project, it does not completely indicate the intention for the Project Management Plan for this project WRT to procurement.	8	3.01%	Bidder has indicated the use of its Purchasing Procedure, and will be reviewed against the contract documents to adopt Company requirements. "We will use our standard operating procedure SOP-008 for Purchasing, attached." "We confirm a Procurement Management Plan specific to this project shall be as a document under the appropriate SDRL code."
3.9.2	Does the bidder have a material procurement tool that includes all elements of procurement, expediting, materials management, and logistics?	1.0%	0.47%	7	0.33%	Bidder's revised Project Execution Plan has identified a home grown web based materials procurement and management application. The proposal does not detail how the tool will track all elements of procurement, expediting, materials management, and logistics. Further info required from bidder.	7	0.33%	Bidder has proposed to use the JONAS Procurement Program for purchase order development and purchase order tracking from award though receipt at jobsite. The proposal does not provide details on how the tool will track all elements of procurement, expediting, materials management, and logistics. Request bidder if it has a material procurement tool that includes all elements of procurement, expediting, materials management, and logistics?
3.9.3	Does the bidder have a plan for materials management for the various sites? Does it consider the unique location attributes of the Project?	0.5%	0.24%	7	0.16%	Bidder has only provided sample plans from recent Ontario projects which do not address the unique location atributes. They have identified they will use an offsite 6,000 sqft warehouse but the Rev. 3 PEP is unclear about the overall materials management plan for the project. The Project Execution Plan lists software tools that they "may use".	8	0.19%	Bidder has indicated the use of its Purchasing Procedure, and will be reviewed against the contract documents to adopt Company requirements. The bidder has proposed to use the JONAS Procurement System for purchase order development and purchase order tracking from award though receipt at jobsite.
3.9.4	Does the bidder demonstrate a plan or methodology for inspection or verification of manufactured material?	1.0%	0.47%	8	0.38%	"QA plan will include ITP which will detail hold / witness points applicable to specific component. Bidder's QA/QC function is a major concern, refer to quality review. Update: Bidder has included a Project Quality Plan, indicating "*BIDDER* or its subcontractor shall obtain all necessary quality documents including material certificate, quality check certificates or Factory Test Certificates etc. for all the procured material from their Original Equipment/Material Manufacturer and submit to Nalcor for their review when material is staged on site, and all these documents shall be submitted to Nalcor as part of the Turnover Packages"	6	0.28%	"The methodology for inspection and verification of manufactured materials and equipment is contained within our Standard work instruction SWI-QA-002 Quality Control Manual and SWI-QA-005 Material Control, attached."
3.9.5	Plan for the requirements of vendor service supervision of installation, testing and commissioning.	1.0%	0.47%	8	0.38%	Bidder has included details within Revised Project Execution Plan and supervision is included on organizational chart.	8	0.38%	Bidder has provided a general material identification and tracibility section in its quality section of the bid.

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3.9.7	Details of subcontract framework for major work components - is it suitable or does it add too much risk?	0.5%	0.24%	9	0.21%	Bidder has submitted a draft subcontract management plan which indicates an understanding of this component. Bidder has updated the A16 subcontractors List in the 24-Sep-2015 submission. Bidder has indicated it shall have a dedicated subcontract manager for its work.	9	0.21%	Bidder has submitted a Subcontract Strategy document specific to this project which is logical and appropriate.
3.9.8	List of subcontractors (including qualifications) provided. Has the bidder worked with these subcontractors in the past?	1.0%	0.47%	8	0.38%	Appendix A16 provided. Subcontract Plan lists many subcontract scopes and specifics are contained. Bidder has indicated subcontracts are to be awarded to vendors with demonstrated safety, quality and capability record that meets the requirements of the *BIDDER* Approved Suppliers List (ASL). Bidder has indicated where they have past work experience with the subcontractors listed in the A16 document.	9	0.42%	Appendix A16 provided. Bidder has provided a plan for the requirements of vendor service supervision of installation, testing and commissioning. Subcontract management strategy included with PEP. Bidder has indicated where they have past work experience with the subcontractors listed in the A16 document.
3.9.9	Do contractors and subcontractors have similar construction work experience.	1.0%	0.47%	7	0.33%	The proposed subcontractors are able to present past work portfolio with experience in this construction sector.	7	0.33%	The proposed subcontractors are able to present past work portfolio with experience in this construction sector.
3.9.10	Details of process for selecting suppliers (and sub-suppliers) - are they suitable?	1.0%	0.47%	8	0.38%	Bidder has submitted a Subcontractor Management Plan detailing the procedure and methodolgy for selecting subs including tendering, kick-off meetings with subcontractors, health and safety and environmental topics.	8	0.38%	Bidder indicated that Subcontractors shall be selecting using its standard work instruction procedure. The standard work instruction details procurement strategy, subcontractor pre-qualifications, subcontractor selection, subcontract formation and administration, subcontract performance and evaluation.
3.9.11	Description of after sales service.	0.5%	0.24%	8	0.19%	Following contract award, bidder will develop the general terms and conditions for subcontracts/supply of permanent plant items. Under these requirements, the Vendor's after sales service requirements will be established. Bidders objective is to name NALCOR in all warranties allowing direct access to each Vendor for support after bidder closes the project. NALCOR will be provided with PO data and contact information for the equipment supplied by the bidder - as well as maintenance requirements and frequency.	8	0.19%	After sales service of subcontractors supplied materials and equipment shall be administered through the bidders project office. For warranty work, it shall be coordinated through the bidders home office. Support requirements of equipment and systems provided by subcontractors shall be reviewed with the owner prior to system completion. In some cases service agreements, directly with the subcontractor, may need to be established to provide this support.
3.9.12	Demonstrates knowledge of local material and labour costs, union agreements and availability of qualified contractors. Does bidder include a draft Labour Relations Sterategy.	0.5%	0.24%	8	0.19%	___ confirm. Rev. 3 PEP discusses HR/labour relations. Bidder has identifed a labour relations manager and have referenced the Project Labour Agreement. Bidder has experience in Long Harbour (VALE) and in Labrador.	9	0.21%	Bidder confirms understanding of local material and labour costs, union agreements and availability of qualified contractors and subcontractors. Bidder has identifed a labour relations manager and has referenced the Project Labour Agreement. Bidder has experience at Long Harbor (VALE) and at Muskrat Falls site.

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3.9.13	Portions and value of the project to be given via external procurement.	0.5%	0.24%	10	0.24%	"none"	10	0.24%	"All procurement shall be completed in house. No external procurement is planned."
3.9.14	Details of Procurement contingency plans.	0.5%	0.24%	4	0.09%	Bidder has stated "This plan would be part of the procurement process, after award." However, bidder has submitted a sample procurement management plan and subcontactor management plan which partly demonstates the bidder's intentions post award with respect to procurement contingencies.	5	0.12%	"CO-*BIDDER* and *CO-BIDDER* each have long established relationships with local suppliers and manufacturers of the materials and equipment required for this construction project. Both companies also have procurement networks throughout Canada and the USA within other projects and divisions of the respective organizations. The information flow between our procurement team and suppliers allows for the identification of procurement issues, as represented in the Standard Operating Procedure-SOP-008 for Purchasing. These issues would be monitored in the PO log along with action items to achieve resolution"
3.10	**Construction**								
3.10.1	Construction Execution Plan presented by the bidder that reflects the work scope and considers the work location, complexity and weather conditions?	8.0%	3.76%	6	2.26%	Bidder has given some detail as to the construction sequence based on company provided interface dates. Each discipline is covered in a scope of work type excerpt with no commentary or reference drawings. Weather will not be a major factor as workscope is indoors with minor exceptions. Bidder has provided a draft cold weather execution plan	7	2.63%	Bidder has given a description of construction work activities based on company provided interface dates and has included some relevant commentary rather than just Scope of Work line items. Weather will not be a major factor as workscope is indoors with minor exceptions.
3.10.3	Does the bidder's construction execution plan consider all temporaries, site administration and access control, materials management, site indirects, etc. Includes preliminary site layouts for all construction temporaries and indirects?	2.0%	0.94%	7	0.66%	Bidder has provided temporary facilities and power equipment requirements and monthly power requirements. Site trailer layout provided (6 trailers with 4 sea-cans). Monthly power requirement has been provided but may be low. Have included plans for supplementary diesel gensets. Contractor has provided trailer and sea-can layouts with Rev. C PEP which align with site laydown area and indicate they are understanding the space constraints. Bidder has identified a 60,000 sq.ft. warehouse in HVGB.	7	0.66%	Bidder has provided temporary facilities and power equipment requirements and monthly power requirements. Proposed contractor laydown area is not exactly as designated. Bidders proposal has been updated in their response to Addendum #20 indicating a megadome storage requirement - bidder does not plan to use HVGB storage. Bidder's requirement for site trailers and infrastructure appears to be aligned with its organization chart. Have included plans for suplementary diesel gensets.
3.10.4	Has the bidder confirmed all services and construction supports that will be subcontracted to others?	1.0%	0.47%	8	0.38%	Bidder has provided a DRAFT Subcontracts Plan which indicates a good understanding of the scope of subcontracts, Appendix A16 is quite extensive	8	0.38%	Bidder has provided a good Appendix A16. Bidder has provided a good Subcontracts Strategy document specific to this project.
3.10.5	Listing of construction equipment that will be used for the work with mobilization schedule provided.	1.0%	0.47%	9	0.42%	Comprehensive list provided. No mobilization schedule has been provided.	9	0.42%	Comprehensive list provided with proposal. No mobilization schedule provided.

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3.10.6	Bidder's construction plan and schedule is considered to be realistic given the work location, weather and other constraints? Have the overall construction work force demands been flattened to ensure optimize the program?	1.0%	0.47%	8	0.38%	Refererence 5.1	6.5	0.31%	Reference 5.1
3.10.7	Construction equipment maintenance program provided.	1.0%	0.47%	10	0.47%	Not required for evaluation.	10	0.47%	Not required for evaluation.
3.10.8	Bidder's construction plan and schedule includes a cold weather protection strategy?	0.5%	0.24%	7	0.16%	Bidder has experience in Labrador and other cold weather regions of Canada. CPP is generic but rational. Bidder is willing to provide heat to their workspaces on a cost reimbursable basis.	7	0.16%	Bidder has vast experience in Labrador and at LCP site specifically. Has plans for on site warehousing and protection.
3.10.10	Bidder presents its plan for work face job planning in order to maximize productivity. Typical content to include construction work packs, pre-job planning methodology, etc.	1.0%	0.47%	9	0.42%	"*BIDDER* assemble managable work packs, with necessary detail to ensure scope is presented and requirements undersood. These work packs will relate to schedule activities, allowing daily work progress to be tracked. Productivity will be monitered based on progress, and restorative action taken when necessary." Rev. C of Project Execution Plan (Section 16.4) outlines the bidders intentions to use CWPs (Comprehensive Work Packages). Bidder has stated that field engineers will be responsible for work pack creation	9	0.42%	Bidder shall use work packs - bidder has confirmed that field engineers will be responsible for work pack creation.
3.11	**Completion and Commissioning**								
3.11.1	Completions Plan is reflective of the work, makes considerations for MC, Preservation & Commissioning, and which has a clearly defined hand-over process with key interface points identified.	8.0%	3.76%	7	2.63%	Rev. C Project Execution Plan includes a mechanical completion section references key items such as Static, Dynamic , punchlists etc. but is light on details with respect to procedures and methodology. No reference to Project Completion System integration and suggests "turn key" subcontracts with suppliers. Bidder has confirmed compliance with MC&C spec.	7	2.63%	Completions and commissioning section with bid is short but bidder has highlighted an intention to develop a MC&C plan and has highlighted the importance of interfaces. "We confirm compliance with MFA-SN-CD-3300-EN-TS-0002-01."
3.11.2	Completions Organization is defined with clear roles and responsibilities, structured on an org chart identifying completions organization during preparation and execution with all field and home office personnel requirements to implement the Completions plan accounted for.	3.0%	1.41%	7	0.99%	Rev. C Project Execution Plan includes a draft completions organizational chart with role descriptions. Revised Submission suggests using FE team to transition to MC&C role but roles will need to happen concurrently. Rev 3 PEP and org chart include 3 senior comissioning team members (35+ yrs experience each) which may not be conducive to successful PCS implementation.	7	0.99%	Mechanical completion and commissioning manager included on org. chart with 3 positions below, field eng., field tech, QC, submitted revised CV for MC&C manager is acceptable.
3.11.3	Bidder intends to deploy a PCS system complete with competent administration personnel, which has the ability to generate check records, monitor punchlist items and provide overall completions status. Sample forms provided.	3.0%	1.41%	8	1.13%	Bidder has confirmed compliance with PCS requirements, final personnel selection is pending.	8	1.13%	Bidder has confirmed compliance with PCS requirements, final personnel selection is pending.

TECHNICAL EVALUATION REPORT				CH0031	Package Title: Mechanical and Electrical Auxiliaries				
Item No.	Description	Weighting		Bidder:	Black and McDonald		Bidder:	Gahill Ganotec	
		Item Wgt	Overall Wgt	Bid No.:			Bid No.:		
3.11.4	Completions Schedule provided which is inclusive of MC, Commissioning and Hand-Over, identifies critical interfaces with Company's other contractors and which is aligned with Control Schedule	3.0%	1.41%	7	0.99%	Schedule includes commissioning activities broken down by powerhouse area and discipline which take place at the end of the installations - this indicates a level of thought has been applied to the completions but no breakdown on a system level with a mind towards Unit 1 start-up.	6	0.85%	Bidder has not included separate activites for Mechanical Completion and Commissioning. Mechanical Completion and Commissioning by sub-system within work areas and disciplines is included.
3.11.5	Bidder plans to use PTW system complete with hazard / risk identification of all activities and interfaces with other contractors. Doesthe bidders safety plan include adequate electrical safety measures such as Lock-Out / Tag-Out provisions and Livening Up Notices and is it Z462 compliant.	3.0%	1.41%	9	1.27%	"Yes, *BIDDER* plan to implement a hazard/risk identification process for all of our work activities, we will use our Pre-Job Hazard Assessment process. *BIDDER* will follow all of the required safe working practices and procedures relative to specific, identified electrical hazards in the workplace, and ensure they are communicated and implemented for the safety of the workers. In additional to *BIDDER* specific electrical procedures, we will adhere to the current CSA Z462-15 standards."	9	1.27%	"We have used Permit to Work systems on many construction sites where the work has progressed to the level where the startup/commissioning activities present hazardous situations for other work teams or contractors sharing the work space. We would develop and implement a PTW system for this project based on the risk assessment and management processes from our Standard Work Instructions; Lockout/Tag out; Confined Space; Risk Register; Subcontractor management... We are Z462 compliant."
3.11.6	Bidders plan for Completions encpompasses cradle to grave approach - identifies use of FATs, MC checks, static commissioning, dymanic commissioning and and on-site performance tests.	3.0%	1.41%	8	0.79%	Bidder has provided a draft Commissioning Plan and references key items such as Static, Dynamic , punchlists etc. but is light on details with respect to procedures and methodology. Project Completion System compliance confirmed and suggests "turn key" subcontracts with suppliers	8	1.13%	Bidder has discussion rearding FATS, MC Certs and checks, static checks and dynamic commissioning which aligns with expectations. Further discussion/verification during bid clarification meetings.
3.11.7	Completion reports - does bidder plan to have auditable work packages for Mechanical Completion, Preservation, Static Commissioning with procedures for Dynamic Commissioning.	3.5%	1.65%	10	1.65%	Bidder plans to prepare turnover dossiers which will be kept up to date and available for review by company using a spreadsheet. Compliance with project Completions System.	10	1.65%	Bidder shall conform to all requirements including Project Completions System.
4.1	Recommended Commissioning and Start-up spares (L02)	25%	0.50%	10	0.50%	Bidder has provided the requested Appendix A2.3 Operating Spares price Schedule but this listing should be considered as "for info" at this stage.	10	0.50%	Bidder has provided the requested Appendix A2.3 Operating Spares price schedule but this listing should be considered as "for info" at this stage.
4.2	Recommended 12 and 24 mth operating spares (L03)	25%	0.50%	10	0.50%	Bidder has provided the requested Appendix A2.3 Operating Spares price Schedule but this listing should be considered as "for info" at this stage.	10	0.50%	Bidder has provided the requested Appendix A2.3 Operating Spares price Schedule but this listing should be considered as "for info" at this stage.
4.3	Recommended critical (Insurance) spares (L04)	25%	0.50%	10	0.50%	Bidder has provided the requested Appendix A2.3 Operating Spares price Schedule but this listing should be considered as "for info" at this stage.	10	0.50%	Bidder has provided the requested Appendix A2.3 Operating Spares price Schedule but this listing should be considered as "for info" at this stage.
4.4	Special tools list (L05)	25%	0.50%	10	0.50%	Bidder has provided the requested Appendix A2.3 Operating Spares price Schedule but this listing should be considered as "for info" at this stage.	10	0.50%	Bidder has provided the requested Appendix A2.3 Operating Spares price Schedule but this listing should be considered as "for info" at this stage.
5.0	Schedule (Appendix A9)	10%							

TECHNICAL EVALUATION REPORT				CH0031		Package Title: Mechanical and Electrical Auxiliaries			
Item No.	Description	Weighting		Bidder:	Black and McDonald		Bidder:	Gahill Ganotec	
		Item Wgt	Overall Wgt	Bid No.:			Bid No.:		
5.1	Control Schedule (A02) - Does it encompass the entire scope? Is it developed and presented in a format consistent with the criteria set forth in the Coordination Procedures? Does it provide the critical path and float for key activities?	50%	5.00%	8	4.00%	Schedule provided is P6 and is 19 pages in length. Schedule acceptable on details and task items. A series of documents have been included with submission, except no S-Curve or Histogram. (Rec'd after request.) Except for 1, dates align with Exhibit 9 and critical path has been provided. 5 activities with negative lags and no negative float. 7 SF relationships in the schedule. Schedule includes indirect man-hours and some tracking milestones. 14 open ends and some coding in schedule. More detail required on procurement and commissioning activities if bidder successful . Schedule indicates a gradual mobilization and site ramp up of work. Early vs late curve is quite tight as would be expected, logic needs some work towards end of schedule.	6.5	3.25%	Schedule provided is P6 and is 26 pages in length. Schedule lite on engineering, procurement activates - placeholders only. S-Curve and Histogram included. Submitted schedule has a 'Must Finish By Date'. This should not be used, logic should dictate end date. Except for 2, dates align with Exhibit 9. No critical path has been provided. No activities with negative lags, negative float or SF relationships. Schedule includes indirect man-hours and no tracking milestones. 2 open ends and no coding in schedule. More detail required on procurement and commissioning activities if bidder successful . Although the make up of the early and late curves has improved from previous submissions, there is still a fair amount of missing logic and links between activates. Schedule indicates a more gradual mobilization and site ramp up of work. Some 'A' Series document requirements have not been included, no logic ties.
5.2	Project Execution Plan (A07) - Has a draft been presented and is it aligned with expectations as set forth in the Coordination Procedures.	50%	5.00%	7	3.50%	Bidder's Rev. C PEP is much more descriptive than the previous submissions. It is clear that the bidder has made efforts to fully understand the scope of work and detail their intent to provide the required deliverables, planning and overall efforts. Document is no longer generic and describes their plan to execute with the exception of Quality Assurance and mechanical completions which is lighter on details. Good alignment with Exhibit 3 requirements. Heating must be clarified.	6	3.00%	Much discussion regarding the plan for stages of work execution. Discussion is logical and mostly aligns with SOW and Exhibit 3 requirements. It is indicative that this bidder understands the scope and their plan for executing the work, good detail and commentary throughout including construction tasks at each of the work faces. Reporting and progressing of the work is a also discussed. Heating must be clarified. Bidder has declined to update schedule and applicable execution plan sections (8.5) to align with Exhibit 9 dates.
6.0	**Logistics & Transportation Strategy (Appendix A15)**	5%							
6.1	Logistics and Transportation (A11) - Does it encompass the entire scope? Strategy Proposed transportation modes, routes, and ports of entry?	30%	1.50%	7	1.05%	Bidder has provided the minimum amount of information with clarification and Rev. C PEP. Bidder has provided draft sheets for major equipment. Section in Rev. C PEP is a place holder hover a decent amount of detail has been included in bid schedule.	7	1.05%	Bidder has provided "Shipment" forms for major mechanical equipment and proposes on site warehousing in addition to exsiting warehouse facilities in Montreal and HVG. Bidder has vast amounts of experience in Labardor and LCP site and most fabricated pipe and HVAC shall come from Quebec. A level of detail within Bid schedule on shipping activities is minimal.
6.2	Proposed carriers or freight forwarders - are the reputable? Have they worked in this region? Have they transported these types of equipment previously? Do they appear to understand the logisticial constraints associated with the work sites.	20%	1.00%	8	0.80%	Bidder has identified 2 freight forwarders with experience in Labrador and some previous experience with LCP at MF site.	7	0.70%	Bidder has identified only one freight forwarder but has Labrador experience. Bidder has extensive experience in Labardor and LCP at MF site.

TECHNICAL EVALUATION REPORT				CH0031		Package Title: Mechanical and Electrical Auxiliaries			
Item No.	Description	Weighting		Bidder:	Black and McDonald		Bidder:	Gahill Ganotec	
		Item Wgt	Overall Wgt	Bid No.:			Bid No.:		
6.3	Rigging and lifting - has the bidder presented a viable and well constructed plan?	10%	0.50%	9	0.45%	Bidder has stated it will meet or exceed our rigging and lifting spec. Bidder has included listing of planned lifting equipment in Rev. C PEP.	9	0.45%	Bidder has stated it shall conform to our rigging and lifting spec. Bidder has included a listing of lifting equipment.
6.4	Proposed method for equipment preservation / storage - viable. Procedures and forms provided? Plans for indoor storage of critical equipment on-site while waiting for installation to occur.	20%	1.00%	8	0.80%	Bidder has identified Sea-Cans on site. Bidder's Rev. 3 PEP has identified a 60,000 sq.ft. warehouse in HVGB which would be utilized as a storage/marshalling point. Generic care and preservation flowchart and sample preservation forms have been provided.	7	0.70%	Bidder has identified the need for onsite warehousing including a "megadome" structure. Bidder plans to utilize just in time delivery. Procedures and forms have been provided with proposal. Bidder does not plan to use a warehouse in HVGB.
6.5	Timing of deliveries - are they aligned with the natural transportation constraints? Has the bidder given consideration into the delivery windows and constraints when developing its Control Schedule.	20%	1.00%	7	0.70%	Bidder has done a good job of including shipping within schedule. Shipping is included as 'procurement/delivery' or 'fab/delivery'. Bidder plans to use a warehouse in HVGB with Sea-Cans on site.	6	0.60%	Bid Schedule does not include any line items for shipping and procurement activites are essentially a placeholder. Bidder plans to use a 'mega dome' type warehouse on site with Sea-Cans.
7.0	**Substitutions (App A3), Proposed Subs (App. A16) & Exceptions (App A17)**	5%							
7.1	Proposed Subcontractors	25%	1.25%	9	1.13%	A good list has been provided. ISO registration is not indicated for all.	8	1.00%	Bidder has provided a mostly complete Appendix A16.
7.2	Proposed Manufacturers	25%	1.25%	8	1.00%	Bidder has clearly identified locations for fabrication. All except 2 are ISO registered.	8	1.00%	Bidder has clearly identified locations for fabrication. ISO compliance.
7.3	Proposed Material Sources	20%	1.00%	8	0.80%	Extensive list provided. ISO registration not indicated for all.	8	0.80%	Bidder has provided an extensive listing of material suppliers on the Appendix A16. ISO registration not listed for all.
7.4	Substitutions (App A3)	15%	0.75%	8	0.60%	Request for alternative equipment (value engineering) offerings provided.	6	0.45%	Request for alternative equipment (value engineering) offerings largely ignored. 2 items listed.
7.5	Exceptions (App A17)	15%	0.75%	10	0.75%	As per 1.3 above	10	0.75%	As per 1.3 above
	TOTAL SCORE				**78.4%**			**80.2%**	

PREPARED BY: David Wright , CH0031 Package Lead DATE: 15 MAY 2017

REVIEWED BY: Albert Mitchelmore / Jim Slade, CH0031 Package Engineers DATE: 16-MAY-2017

Attachment 6

Health and Safety Evaluation

Health and Safety Scoring Guide:										
0 - Question not answered or no relevant information provided in response 1 - Response does not meet key Criteria 2 - Response only meets a few of the key criteria 3 - Response meets a majority of the key criteria 4 - Response meets all key criteria 5 - Response meets and exceeds key criteria		Package Name: Package No.: CH0031 Project : Lower Churchill Project Review completed using documents provided as well as performance on current LCP sites.								
	Question Weight (%)	Black & Mac						Cahill / Ganotec		
		Answer	Score	Score Comments	Answer	Score	Score Comments	Answer	Score	Score Comments
Health and Safety										
2.0 HEALTH AND SAFETY MANAGEMENT PERFORMANCE - Please provide the following safety statistics, referencing the attached incident definitions and frequency calculation.	10				4	8	TRIFR 1.22	4	8	TRIFR 1.17
3.0 WORKER'S COMPENSATION - Indicate the jurisdiction where you are registered. List your overall Worker's Compensation Industry rating for the current year and past three (3) years. Attach a WCB clearance letter and experience rating statements for the past three years.	3				4	2.4	Clearance letter provided	4	2.4	WHSCC Clearance Provided
4.1 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a certificate of recognition or is your health and safety management system certified by an outside agency? (OHSAS 18001, CSA Z-1000 etc.) If yes, provide a copy of the certificate.	2				4	1.6	COR Provided	4	1.6	COR Provided
4.2 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety program have a policy statement that clearly outlines the Company's commitment to health and safety?	3				4	2.4	Policy Provided	4	2.4	Policy Provided
4.3 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Has your company received an occupational health and safety stop work order, charges or equivalent from any regulator in the last three (3) years? If yes, provide details.	3				3	1.8	Bidder answered no	3	1.8	Bidder answered no
4.4 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Please list the highest ranking safety professional in your organization: (attach résumé). Do you plan to have a safety representative(s) for this Work full time or part time (Y or N)? If "Yes", provide a résumé(s).	3				4	2.4	CV Provided	4	2.4	CV Provided
4.5 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety management system address the following key elements? Management leadership and commitment; hazard/risk identification, evaluation and control; risk assessments on all critical and non-routine jobs/job functions; a permit to work system; ongoing inspection. If yes to any of these, reference appropriate Health and Safety manual section(s).	8				4	6.4	Documents provided, Sec 1,2 and 9 of H&S Manual	4	6.4	Documents Provided. Sec 1, 2, & 17 of H&S Manual
4.6 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety management system include work practices and procedures, such as: Lockout and tag out; traffic control; excavation and trenching; confined space entry; hoisting and rigging; working near power lines; handling and transporting hazardous substances; unloading large/long materials (such as piles); vehicle recovery. If yes to any of these, reference appropriate Health and Safety manual section(s).	8				4	6.4	Documents provided, Sec 1 and 6 of H&S Manual	4	6.4	Documents Provided. Sec 5 of H&S Manual
4.7 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have written programs for the following? Duty to refuse work; fall protection; noise management; workplace violence; working alone; personal protective equipment (PPE); WHMIS (Workplace Hazardous Materials Information System); respiratory protection. If yes to any of these, reference appropriate Health and Safety manual section(s). In regards to respiratory protection, have your employees been: trained? fit tested? medically approved?.	8				4	6.4	Documents provided, Sec 1,4 and 6 of H&S Manual	4	6.4	Documents Provided. Sec 4, 8, & 5 of H&S Manual
4.8 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you conduct medical exams for the following? Pre-employment; replacement job capacity; pulmonary; respiratory. If yes to any of these, reference appropriate Health and Safety manual section(s).	2				0	0	Bidder answered no	0	0	Bidder answered at client request and did not provide any documentation
4.9 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a drug and alcohol program? If "Yes", does it include the following? Pre-employment testing; testing for cause; post incident testing; formalized arrangements with a collection and testing agency (if "Yes", provide testing agency information); does your drug and alcohol policy follow the guidelines as laid out in The Canadian Model for Providing A Safe Workplace – Alcohol and Drug Guidelines and Work Rule Version 2 – Effective October 1, 2010? If yes to any of these, reference appropriate Health and Safety manual section(s).	3				3	1.8	Documents provided, Sec 15 of H&S Manual. Bidder answered no to pre-access testing	2	1.2	Bidder stated they have a program but it does not meet the Canadian Model
4.10 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Equipment (Tools, Supplies, Machinery and Sanitary Facilities): Do you have a written list of equipment requiring pre-use inspections? Do you have a documented list of equipment requiring scheduled servicing in accordance with manufacturer's recommendations, legislated requirements, and industry standards? Is frequency of equipment inspections and maintenance identified? Are corrections of deficiencies documented? Do you have follow-up mechanism for corrective actions? If yes to any of these, reference appropriate Health and Safety manual section(s).	4				4	3.2	Documents provided, Sec 7 and 9 of H&S Manual	4	3.2	Documents Provided. Sec 13 of H&S Manual
4.11 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Orientation Program: Do you have a health and safety orientation program? Does the program include new, transferred and temporary workers? Does the program provide instruction on the following: employer health and safety responsibilities; employee health and safety responsibilities; obligation to refuse imminent danger work; progressive discipline policies and procedures; safe work practices and/or procedures; emergency response procedures; first-aid procedures; incident/near miss reporting; does you orientation program include a quiz? If yes to any of these, reference appropriate Health and Safety manual section(s).	5				4	4	Documents provided, Sec 8 of H&S Manual	4	4	Documents Provided. Sec 14 of H&S Manual
4.12 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Incident Investigation: Do you have a written procedure for incident reporting and investigation?; Do you utilize a root cause determination process such as "Tap-Root"? If yes to any of these, reference appropriate Health and Safety manual section(s).	5				4	4	Documents provided, Sec 10 of H&S Manual	4	4	Documents Provided. Sec 18 of H&S Manual
4.13 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have an emergency response plan related to activities and specific locations? If yes reference appropriate Health and Safety manual section(s).	4				4	3.2	Documents provided, Sec 11 of H&S Manual	4	3.2	Documents Provided. Sec 19 of H&S Manual
4.14 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a policy pertaining to prohibited items on (e.g. knives, firearms)? Are all employees made aware of the prohibited items policy and is it enforced? If yes to any of these, reference appropriate Health and Safety manual section(s).	1				0	0	Bidder answered no	0	0	Bidder answered no

	Question Weight (%)				Black & Mac			Cahill / Ganotec		
		Answer	Score	Score Comments	Answer	Score	Score Comments	Answer	Score	Score Comments
Health and Safety										
4.15 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you make reference to following legislative requirements where work is being performed?; violence policies and procedures; harassment policies and procedures. If yes to any of these, reference appropriate Health and Safety manual section(s).	1				4	0.8	Documents provided, Sec 6 of H&S Manual	4	0.8	Documents Provided. Sec 21 of H&S Manual
4.16 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a policy or specific rules with respect to the use of personnel protective equipment (PPE)? Do you have a formal process in place for determining PPE requirements? If yes to any of these, reference appropriate Health and Safety manual section(s).	3				4	2.4	Documents provided, Sec 6 of H&S Manual	4	2.4	Documents Provided. Sec 12 of H&S Manual
4.17 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Contractor Management: Do you pre-qualify subcontractors?; Do you include subcontractors in: orientations, health and safety meetings, inspections, audits. If yes to any of these, reference appropriate Health and Safety manual section(s).	5				4	4	Documents provided, Sec1 of H&S Manual	4	4	Documents Provided. Sec 1.6 of H&S Manual
4.18 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Communications: Do you inform employees and subcontractors on Health and Safety alerts, programs, practices, procedures, rules, revisions and related information ? Do you have a joint Health and Safety committee? Do you hold scheduled safety meetings, such as weekly general safety meetings for all crew and weekly departmental meetings for each department at all worksites? Are Health and Safety meeting minutes and attendance recorded? If yes to any of these, reference appropriate Health and Safety manual section(s).	5				4	4	Documents provided, Sec8 of H&S Manual	4	4	Documents Provided. Sec 3 of H&S Manual
4.19 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your Health and Safety program outline the requirements for supervisors and employees to conduct regular Health and Safety inspections of equipment and work conditions at all worksite(s)? If yes reference appropriate Health and Safety manual section(s).	3				4	2.4	Documents provided, Sec 1 & 9 of H&S Manual	4	2.4	Documents Provided. Sec 17 of H&S Manual
4.20 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your Health and Safety program require the prompt reporting of hazardous conditions at all worksite(s)? If yes reference appropriate Health and Safety manual section(s).	5				4	4	Documents provided, Sec 10 of H&S Manual	4	4	Documents Provided. Sec 1.6 of H&S Manual
4.21 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Health and Safety Training: Have your employees received the required Health and Safety training and retraining? Do you have a specific Health and Safety training program for supervisors? If yes to any of these, reference appropriate Health and Safety manual section(s).	3				4	2.4	Documents provided, Sec 1 & 8 of H&S Manual	4	2.4	Documents provided
4.22 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Training Records: Do you have Health and Safety training records for your employees? How do you verify competency of the training (job monitoring? written test? competency check? oral test? other?). Are all training records available upon request? If yes to any of these, reference appropriate Health and Safety manual section(s).	3				4	2.4	Documents provided, Sec 8 & 14 of H&S Manual	4	2.4	Records are available on site
Score	100		0.00			76.40			75.80	
	Percentage		0.00%			76.40%			75.80%	
PASS/FAIL			PASS			PASS			PASS	

Minimum Pass Score is 70%

Evaluated By	Sean Lee
Reviewed By	Grant Skinner 27 April 17.
Review Date	6-Feb-15

Attachment 7

Environmental Evaluation

Attachment 6 - Environmental Evaluation

RFP #: CH0031 | **RFP Name: Supply and Install Mechanical and Electrical Auxillary**

	Weight	Max Score	Bidder #1 LASC JV.			Bidder #2: Black & MacDonald			Bidder #3: Cahill-Ganotec Joint Venture			Scoring Instructions
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	(Pass Mark 60%)
MANAGEMENT INVOLEMENT, LEADERSHIP AND ADMINISTRATION												
1.1 Environmental Management System (ISO or Not)?	2.0	5.0	0.0	0.00		0.0	0.00		0.0	0.00		If ISO Score 5, If not ISO Score 3, If No System score 0
1.1a Adequacy of TOC (if provided)	2.0	5.0	0.0	0.00		0.0	0.00		0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
1.1b Adequacy of Environmental Policy (if provided)	2.0	5.0	5.0	3.00		4.0	2.40	guideline	5.0	3.00		Rank adequacy 1 -5; If not provided Score 0
1.3 Are environmental targets developed and reviewed on a regular basis?	3.0	5.0	5.0	3.00		5.0	3.00		5.0	3.00		Yes = 5; No = 0
1.3a Adequacy of Environmental targets	3.0	5.0	5.0	3.00		5.0	3.00	quarterly review	4.0	2.40		Rank adequacy 1 - 5; If not provided Score 0
1.4 Has a formal system, including the use of audits and inspections, been developed to define responsibilities for verifying that environmental performance objectives are met?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
1.4a Adequacy of audit and inspection information	1.5	5.0	4.0	1.20	annual	4.0	1.20	quarterly review	4.0	1.20		Rank adequacy 1 - 5; If not provided Score 0
2. ENVIRONMENTAL HAZARD IDENTIFICATION AND RISK MANAGEMENT												
2.1 Does the Bidder conduct formal risk assessments when planning and implementing operations and activities?	2.0	5.0	5.0	2.00		5.0	2.00		5.0	2.00		Yes = 5; No = 0
2.2 If "Yes", does that risk assessment include environmental risks?	1.5	5.0	5.0	1.50	comprehensive	5.0	1.50		4.0	1.20		Yes = 5; No = 0
2.2a adequacy of risk management system	1.5	5.0	5.0	1.50		5.0	1.50	comprehensive	4.0	1.20		Rank adequacy 1 -5; If not provided Score 0
2.3 Has a formal hazard observation program been implemented at the Bidder's worksites?	0.5	5.0	5.0	0.50		5.0	0.50		5.0	0.50		Yes = 5; No = 0
2.3a Adequacy of hazard observation program	0.5	5.0	4.0	0.40	general insp.	4.0	0.40		4.0	0.40		Rank adequacy 1 - 5; If not provided Score 0
3. ORGANIZATIONAL RULES AND WORK PROCEDURES												
oes the Bidder have documented environmental protection plans for bs/work activities?	1.5	5.0	0.0	0.00		5.0	1.50		5.0	1.50		Yes = 5; No = 0
3.1a adequacy of EPP	2.5	5.0	0.0	0.00		4.0	2.00		5.0	2.50		Rank adequacy 1 - 5; If not provided Score 0
3.2 Does the Bidder have environmental contingency plans?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
3.2a adequacy of contingency plans/Does the plan outline responsibilities, available resources and actions to be taken in the event of an environmental incident?	2.5	5.0	4.0	2.00	Plan provided	4.0	2.00		4.0	2.00		Rank adequacy 1 - 5; If not provided Score 0
4. EMPLOYEE KNOWLEDGE, TRAINING AND AWARENESS												
4.1 Does the Bidder have an environmental awareness program?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
4.1a Adequacy of Program?	2.0	5.0	4.0	1.60		4.0	1.60		4.0	1.60		Rank adequacy 1 - 5; If not provided Score 0
4.2 Does the Bidder provide environmental awareness training to supervisory staff?	2.0	5.0	5.0	2.00		5.0	2.00		0.0	0.00		Yes = 5; No = 0
4.3 What is frequency of environmental awareness training?	2.0	5.0	4.0	1.60	project specific	4.0	1.60	provided once	4.0	1.60	annually	Score 1-5. If monthly score 5; If bimonthly score 4; If quarterly score 3; If biannually score 2; If annually score 1
4.3a Adequacy of content environmental awareness training	3.0	5.0	4.0	1.60		3.0	1.20	few details	4.0	1.60	few details	Rank adequacy 1 - 5; If not provided Score 0
5. PERSONAL COMMUNICATIONS AND ENVIRONMENTAL MEETINGS												
5.1 Are personal communications conducted to impart environmental awareness with other workers and thereby reducing the likelihood of non compliances or environmental incidents?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
5.2 Is there a system for sharing best practices and procedures, incidents and other information across the Bidder's organization?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		Yes = 5; No = 0
5.3 Is there an environment committee in place?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		Yes = 5; No = 0
5.4 Are regular (minimum monthly) environmental meetings held at all facilities to maintain effective communication of environmental nation throughout the organization and with Bidder's contractors?	2.0	5.0	5.0	2.00		5.0	2.00		5.0	2.00		Yes = 5; No = 0
dequacy of content and frequency of environmental meetings?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Rank adequacy 1 - 5; If not provided Score 0
5.5 Are minutes and records of attendance of these meetings maintained?	0.5	5.0	5.0	0.50		5.0	0.50		5.0	0.50		Yes = 5; No = 0

Attachment 6 - Environmental Evaluation

RFP #: CH0031		RFP Name: Supply and Install Mechanical and Electrical Auxillary										
	Weight	Max Score	Bidder #1 LASCIV.			Bidder #2: Black & MacDonald			Bidder #3: Cahill-Ganotec Joint Venture			Scoring Instructions
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	(Pass Mark 60%)
5a Adequacy of meeting minutes	0.3	5.0	5.0	0.50		5.0	0.50		5.0	0.50		Rank adequacy 1 - 5; If not provided Score 0
5.6 Does the Bidder respond in writing to environmental concerns raised at environmental meetings?	1.0	1.0	5.0	1.00		5.0	1.00		5.0	1.00		Yes = 5; No = 0
6. ENVIRONMENTAL MONITORING AND REPORTING												
6.1 Has the Bidder developed specific procedures for environmental monitoring and reporting on incidents that occur at its worksites?	2.0	5.0	5.0	2.00		0.0	0.00		5.0	2.00		Yes = 5; No = 0
6.1a Adequacy of monitoring and incident procedure	1.5	5.0	5.0	1.50	weekly audit	0.0	0.00		4.0	1.20		Rank adequacy 1 - 5; If not provided Score 0
6.2 Does the Bidder use an EMS system to establish standards, reporting and follow up and corrective action?	1.5	5.0	5.0	1.50		5.0	1.50		0.0	0.00		Yes = 5; No = 0
6.2a Adequacy of this process	1.0	5.0	5.0	1.00		4.0	0.80		0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
6.3 Does the Bidder have dedicated environmental personnel?	2.0	5.0	5.0	2.00		0.0	0.00		0.0	0.00		Yes = 5; No = 0
6.3a Adequacy of personnel and responsibilities	0.5	5.0	5.0	0.50		0.0	0.00		0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
6.4 Are supervisors formally trained in accident/investigations?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		Yes = 5; No = 0
6.4a Adequacy of training program and frequency	0.5	5.0	5.0	0.50	very good	4.0	0.40		4.0	0.40		Rank adequacy 1 - 5; If not provided Score 0
7. ENVIRONMENTAL INCIDENT ANALYSIS												
7.1 Does the Bidder have in place a formal system for the collection, analysis, trending and evaluation of environmental incident data and statistical analysis?	1.5	5.0	5.0	1.50		0.0	0.00		5.0	1.50		Yes = 5; No = 0
7.2 Does the Bidder develop monthly environmental incident analysis reports, which are reviewed during management review meetings?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
7.3 Does senior management review and comment on serious and significant environmental incidents?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
7.4 Are all incident reports followed through from recommendations to completion and closure?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
8. LEADERSHIP TRAINING												
8.1 Does Bidder's management receive formal environmental management training which provides a thorough understanding of the philosophies and principles behind environmental management?	2.0	5.0	5.0	2.00		0.0	0.00		0.0	0.00		Yes = 5; No = 0
8.1a Adequacy of environmental management training	2.0	5.0	4.0	1.60	too provided	0.0	0.00		0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
8.2 Does the Bidder's management receive an orientation to the Bidder's Environmental Management System that includes an introduction to individual accountabilities and responsibilities?	2.0	5.0	5.0	2.00		5.0	2.00		0.0	0.00		Yes = 5; No = 0
8.2a Adequacy of orientation	2.0	5.0	2.0	1.20	limited info.	3.0	1.20	limited info.	0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
9. ENVIRONMENTAL AUDITS, INSPECTIONS AND PREVENTATIVE MAINTENANCE												
9.1 Is there a documented process for performing environmental audits?	2.5	5.0	5.0	2.50		5.0	2.50		5.0	2.50		Yes = 5; No = 0
9.2 Has a formal process been developed to ensure routine environmental monitoring?	2.0	5.0	5.0	2.00		5.0	2.00		5.0	2.00		Yes = 5; No = 0
9.3 Does the Bidder have planned preventative measures in place to prevent environmental incidents?	2.0	5.0	5.0	2.00		5.0	2.00		5.0	2.00		Yes = 5; No = 0
10. CRITICAL OPERATION AND TASK ANALYSIS												
10.1 Has a systematic approach been developed to identify and inventory all tasks based on mandatory rules, regulations and applicable codes, guidelines and standards?	2.0	5.0	5.0	2.00		0.0	0.00		0.0	0.00		Yes = 5; No = 0
10.2 Is there a formal process to assess the environmental requirements associated with the tasks and to mitigate the risk to ensure compliance with the requirements?	2.0	5.0	5.0	2.00		0.0	0.00		5.0	2.00		Yes = 5; No = 0
11. SYSTEM REVIEW AND EVALUATION												
11.1 Do the Bidder's senior management conduct regular reviews of the Environmental Management System, at least annually or at more frequent intervals, as the organization may deem necessary?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
11.1a Adequacy of reviews	1.5	5.0	4.0	1.20		5.0	1.50		5.0	1.50		Rank adequacy 1 - 5; If not provided Score 0
11.2 Do these reviews include environmental management policies and procedures and other inputs such as the results and recommendations from environmental audits, monitoring and surveys and analysis of incident investigations?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		Yes = 5; No = 0
12. STATISTICS												
12.1 Number and type of directives from clients or regulators	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		For 3 yr period. >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5

Attachment 6 - Environmental Evaluation

RFP #: CH0031 | **RFP Name: Supply and Install Mechanical and Electrical Auxillary**

	Weight	Max Score	Bidder #1 LASC JV.			Bidder #2: Black & MacDonald			Bidder #3: Cahill-Ganotec Joint Venture			Scoring Instructions
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	(Pass Mark 60%)
Oil spill incidents;	1.5	5.0	~~3.0~~	~~0.90~~	~~2.00~~	0.0	0.00	8.00	5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.3 Waste management incidents;	1.5	5.0	~~5.0~~	~~1.50~~		5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.4 Hazardous materials incidents;	1.5	5.0	~~4.0~~	~~1.20~~	~~1.00~~	5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.5 Water degradation incidents;	1.5	5.0	~~5.0~~	~~1.50~~		5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.6 Air degradation incidents; and	1.5	5.0	~~5.0~~	~~1.50~~		5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.7 Soil degradation incidents.	1.5	5.0	~~5.0~~	~~1.50~~		5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.8 Total Environmental Incidents	1.0	5.0	~~5.0~~	~~1.00~~		5.0	1.00		5.0	1.00		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
Total Weighed Scores	100.0			~~85.50~~			72.30			73.30		

Comments:
BIDDER #1 REMOVED AS PER DIRECTION FROM PHIL BURSEY.
THIS EVALUATION WAS PREVIOUSLY COMPLETED BY DAVE HALEY AND SENT TO DAVE WRIGHT ON 11-FEB-2015.

LYNDSAY HAYNES FOR DAVID HALEY - Lyndsay Haynes
Environment and Regulatory Compliance Manager:

17-APR-2017
Date:

Attachment 8

Quality Assurance Evaluation

RFP - Quality Assurance Evaluation Report

RFP #: CH0031 **RFP Name:** Balance Of Plant

Quality Questionnaire Questions	Weight	Max Score	Bidder 1			Bidder 2 Black & McDonald Limited			Bidder 3 Cahill/Ganotec - Joint Venture			Bidder 4 N/A			Bidder 5 N/A			Bidder 6 N/A		
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments
1i) Bidder's quality policy statement and list of current quality objectives.	0.2	5.0		0.00		4.0	0.16	Statement of commitment to the quality management system is OK to cover the quality policy but it relates to their Nuclear manual and no quality objectives clearly identified.**Scoring has been revised because of objective evidence provided by the bidder during the pre-award audit performed by LCP on 27-April-2016 (The bidder provided a draft copy of there Quality Management System Manual, the bidder is currently in process of getting there ISO certification for Eastern Canada, the new QMS has a quality policy and objectives).**	4.5	0.18	Quality policy and list of quality objectives provided as requested.	0.0	0.00		0.0	0.00		0.0	0.00	
1ii)Bidder's Master Documents List or the Table of Contents of your policy and procedures manual.	0.5	5.0		0.00		4.0	0.40	TOC for their N286 Nuclear manual provided and a list of management system documents provided.	4.5	0.45	TOC and quality manual provided, well defined.	0.0	0.00		0.0	0.00		0.0	0.00	
1iii) Bidder's current internal / External Audit Schedules.	1.0	5.0		0.00		1.0	0.20	Audit schedule provided but it is only for Nuclear work in Ontario for 2015 and doesn't include any other projects outside of Nuclear, no evidence of other audit to be performed internal or external.	4.5	0.90	Audit schedule provided for 2014, covers internal and external audits.	0.0	0.00		0.0	0.00		0.0	0.00	
1iv)Bidder's third party ISO 9000 registration, if available.	0.5	5.0		0.00		3.0	0.30	Contractor is not ISO certified.**Scoring has been revised because of objective evidence provided by the bidder during the pre-award audit performed by LCP on 27-April-2016 (The bidder provided a draft copy of there Quality Management System Manual, the bidder is currently in process of getting there ISO certification for Eastern Canada, the bidder is ISO certified in other provinces).**	4.5	0.45	ISO certification provided, expiry date is 07-Mar-2017.	0.0	0.00		0.0	0.00		0.0	0.00	
1v) Most Recent Management Review Minutes of Meeting.	1.0	5.0		0.00		1.0	0.20	Management review meeting minutes provided for 2013, which covers Nuclear only from what I can tell, the minutes indicate some minor quality issues from the performance and operations managers, no details on any other projects provided.	3.5	0.70	Management review meeting minutes provided, some concerns listed regarding documentation issues.	0.0	0.00		0.0	0.00		0.0	0.00	
1vi) If ISO 9001:2008 registration is held, a copy of last third party surveillance report.	0.3	5.0		0.00		3.0	0.18	Contractor is not ISO certified, so no third party audit report available.	4.0	0.24	Third party audit report provided, some areas of concern identified and require actions.	0.0	0.00		0.0	0.00		0.0	0.00	
2) Briefly describe any processes employed to plan the activities related to the requested products / services. If available, provide typical examples of Quality Plans and / or Inspection and Test Plans.	0.4	5.0		0.00		4.0	0.32	Bidder provided a very detailed quality plan and completed ITP but they are again related to Nuclear only.	4.0	0.32	Bidder indicates that if a quality plan/ITP is required they will develop, a sample quality plan and ITP template only have been provided.	0.0	0.00		0.0	0.00		0.0	0.00	
3) Describe how this work relates to the total annual productive capacity of Bidder's company and that of Bidder's main suppliers.	0.5	5.0		0.00		4.5	0.45	Bidder identified that the annual capacity in less than 10% and is mostly construction labour, main supplier's have confirmed no issues.	3.5	0.35	Bidder provided limited information on capacity, they only indicated that the work is well within their capacity.	0.0	0.00		0.0	0.00		0.0	0.00	
4) Briefly describe the processes used to control the design of the products / services to be supplied. Include references to the following processes: • Design Planning • Design Review • Design Verification • Design Validation • Design Changes	1.0	5.0		0.00		3.0	0.60	Bidder doesn't perform design work, design will be sub contracted.	3.0	0.60	Bidder doesn't perform design work, design will be sub contracted.	0.0	0.00		0.0	0.00		0.0	0.00	
5) Briefly describe the Bidder's Supplier / Sub-contractor selection process and any processes employed to monitor continued performance against contract requirements. In Bidder's response include a list of any services associated with the scope of work that would be sub-contracted out and where appropriate, the contract details for that Sub-Contractor.	1.0	5.0		0.00		3.0	0.60	Bidder has a process in place for an approved supplier list which is covered in the Nuclear manual, they indicated that have a procedure BM- PROC-028 Approved Supplier List but it was not provided as identified in the questionnaire.	4.0	0.80	Bidder provided a well defined procedure that covers all areas of sub contracted work.	0.0	0.00		0.0	0.00		0.0	0.00	

RFP - Quality Assurance Evaluation Report

RFP #: CH0031 **RFP Name:** Balance Of Plant

Quality Questionnaire Questions	Weight	Max Score	Bidder 1 – Alberici/LMC/Sunnycorner - Joint Venture			Bidder 2 – Black & McDonald Limited			Bidder 3 – Cahill/Ganotec - Joint Venture			Bidder 4 – N/A			Bidder 5 – N/A			Bidder 6 – N/A		
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments
6) What techniques does the Bidder employ to verify that the product / service have been delivered appropriately and in accordance with the contract requirements? What verification records are generated?	0.4	5.0		0.00		4.0	0.32	Bidder covers the following in their Nuclear manual, project planning execution & control, work planning, generate & control of ITP's. They also identified verification records, inspection reports, NCR's, cal records, pressure test reports etc.., they also provided procedure BM-PROC-14 Work Planning , procedure BM-PROC-015 Control of ITP's.	4.0	0.32	Bidder performs inspection/testing upon receipt, materials/components are not used until inspected, in-process and final inspections are performed, records are filed according to written procedure.	0.0	0.00		0.0	0.00		0.0	0.00	
7) Briefly describe the Bidder's records retention system and the normal records retained (or supplied to the client) as part of this product / service delivery. Bidder's response should make reference to records such as Material Test Reports, Non-destructive examination records, In process Inspections and Factory Acceptance tests.	0.2	5.0		0.00		4.0	0.16	Bidder provided a procedureBM-PROC-023 Project Turnover which indicates that records will be filed permanently ??, they also listed records to be filed MTR's, NDE records, inspection reports, ITP's etc..	3.5	0.14	Bidder didn't provide details to the question but did provided a detail procedure for the control of records, they did not list type of records as requested.	0.0	0.00		0.0	0.00		0.0	0.00	
8) What processes does the Bidder employ to ensure that Inspection is performed and Measuring and Test Equipment is fully calibrated and functioning appropriately?	0.5	5.0		0.00		4.5	0.45	Bidder provided a detailed procedure BM-PROC-019 for Control of Measuring and Test equipment.	3.5	0.35	Bidder has measuring, testing,calibration covered in section 7.5 of their QMS manual but no other information provided in response.	0.0	0.00		0.0	0.00		0.0	0.00	
9) When products / services do not meet requirements, what processes are employed to ensure timely resolution of the problem? If so, what records of the problem and solution are generated?	0.2	5.0		0.00		4.5	0.18	Bidder provided a detailed procedure BM-PROC-039 called Problem Identification & Resolution which identifies the control of non conformances.	3.5	0.14	Bidder provided procedure which included flows charts but no response to the question provided.	0.0	0.00		0.0	0.00		0.0	0.00	
10) Does the Bidder employ any continuous improvement processes or other methods to monitor evaluate and improve the quality of products / services provided? If so, briefly describe them. Include in your response details on the following: • Processes to monitor and measure effects of continuous improvement changes. • Processes for the evaluation and implementation of innovative and cost reduction ideas.	0.5	5.0		0.00		3.0	0.30	Bidder indicated that continuous improvement is covered BM-MAN-001 Nuclear manual, there is a section with little information and no information provided in the questionnaire.**Scoring has been revised because of objective evidence provided by the bidder during the pre-award audit performed by LCP on 27-April-2016 (The bidder provided a draft copy of there Quality Management System Manual, the bidder is currently in process of getting there ISO certification for Eastern Canada, the new QMS covers continuous improvement)**	4.0	0.40	Bidder identified continuous improvement initiatives per internal audits, analyses of data, customer feedback, lessoned learned, CAR's and NCR's, their quality manual also has a section on continuous improvement.	0.0	0.00		0.0	0.00		0.0	0.00	
11) Does the Bidder employ any processes to monitor internal / external audit activities to ensure conformance to procedures? If so, briefly describe them.	0.5	5.0		0.00		4.0	0.40	Bidder provided a detailed procedure BM-PROC-034 on their auditing process.	3.0	0.30	Bidder did not provided any details to the question, they did reference their quality manual which mentions audit process, no audit procedure provided.	0.0	0.00		0.0	0.00		0.0	0.00	
12) Briefly describe the Bidder's Training Policy and any controls used to ensure personnel are competent to perform their defined functions and responsibilities.	0.5	5.0		0.00		4.0	0.40	Bidder provided a detailed procedure BM-PROC-040 on training and qualifications.	4.0	0.40	Bidder has a training process covered in the quality management manual, trade workers are required to provide proof of competency prior to site access, staff will not pass probation period without education/training certificates.	0.0	0.00		0.0	0.00		0.0	0.00	

RFP - Quality Assurance Evaluation Report

RFP #: CH0031 **RFP Name:** Balance Of Plant

Quality Questionnaire Questions	Weight	Max Score	Bidder 1 – Alberici/LMC/Sunnycorner - Joint Venture			Bidder 2 – Black & McDonald Limited			Bidder 3 – Cahill/Ganotec - Joint Venture			Bidder 4 – N/A			Bidder 5 – N/A			Bidder 6 – N/A		
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments
13) Briefly describe any servicing and / or product support required / recommended as part of the delivery of this equipment / service.	0.5	5.0		0.00		4.5	0.45	Bidder works with client to ensure equipment is installed per spec, client training as required, commissioning completed and signed off by installers/manufactures/client, operation manuals and spare parts are turned over to client, warranty items are serviced in house or by manufacture technicians.	4.0	0.40	Bidder indicates that some systems in the powerhouse require servicing and annual certification (fire detection/protection systems), also indicate that some building require planned servicing (HVAC and energy control system, they also talk about electrical and mechanical equipment should be assessed for service requirements.	0.0	0.00		0.0	0.00		0.0	0.00	
14) Briefly describe any processes employed to monitor Customer Satisfaction and how these processes will be applied to the proposed scope of work.	0.2	5.0		0.00		4.5	0.18	Customer surveys are used to track customer satisfaction, lessons learned are reviewed, survey info may result in adjustments to schedule, procedures, processes, procedure BM-PROC-008 Communication & Stakefolder Relations provided.	4.0	0.16	Customer satisfaction process in place with survey for feedback on every project, negative feedback automatically generates a CAR.	0.0	0.00		0.0	0.00		0.0	0.00	
15) The Bidder shall confirm that it has reviewed and can comply with any Quality Assurance requirements outlined in the contract agreement and that the responses to this questionnaire are true and accurate.	0.1	5.0		0.00		4.5	0.09	Questionnaire signed off as requested by company representative.	4.5	0.09	Questionnaire signed off as requested by company representative.	0.0	0.00		0.0	0.00		0.0	0.00	
Total Weighed Score	10.0			0.00			6.34			7.69			0.00			0.00			0.00	
			**Proponent must achieve a minimum Total Weighted Score of 60 percent to be considered acceptable.																	
Recommended	Green		0%			63%			77%			0%			0%			0%		
Clarification / Pre Award Audit (Desk Top and/or Site) Recommended	Yellow																			
Not Recommended	Red																			
			**Proponent must achieve a minimum Total Weighted Score of 60 percent to be considered acceptable.																	

Comments: (Overall impression of the Bidder and how the evaluation as it relates to the recommendation)

Bidder 1: Bidder is recommended but prior to award the bidder/joint venture will be audited including subcontractors to verify their quality management system implementation based on their bid documents. Note: Proposed Quality Manager has the experience and qualifications to meet LCP requirements (CSA 178.2 Level 2 Certified Welding Inspector, Certified ISO Internal Auditor and large construction project experience).

Bidder 2: Bidder is not recommended based on documented evidence provided related to their proposed new quality management system. The new information provided appears to focus mainly on the bidders Nuclear manual requirements for projects based on Ontario's Nuclear industry. The new information including procedures provided is completely different from the first submittal on their proposed quality management system. LCP quality is very concerned whether the bidder actually has a quality management system that they are currently implementing on other projects similar to LCP SOW requirements based on the evidence provided, many of the answers provided had limited information with comments to refer to the Nuclear manual or procedures only, it is hard to determine if the bidder has a quality department/team in place and/or quality members are trained on the new quality management system proposed for implementation on the CH0031 SOW. Also the proposed Quality Manager is well experienced and has the qualifications to meet LCP requirements (CSA 178.2 Level 2 certified Welding Inspector, API Certified in many areas, CGSB Certification in RT/MT/PT) but appears to be currently working elsewhere and not employed by the bidder at this time which is concerning. LCP's intent is to approve bidders that currently have a quality management system in place based on ISO requirements, it is not the intent to approve bidders without a quality management system in place or to bidders that are trying to implement a new quality management system during the CH0031 SOW. In order for the bidder to meet LCP quality expectations the bidder would need to demonstrate their quality management system implementation to LCP based on a LCP detailed audit of a current or past project similar in nature to the CH0031 SOW prior to award. The audit shall be performed on a project that was completed by the bidder without joints ventures as proposed for the CH0031 SOW in the bid documents provided by the bidder, the project to be audited must have been completed with the intent of following ISO requirements in order to meet LCP expectations. The audit shall not be performed on a Nuclear project, the project needs to be similar to the CH0031 SOW. If the bidder is selected LCP will also audit the bidders proposed subcontractors as deemed necessary.
(Note: LCP's quality department performed a per-award audit on 27-Apr-2016, during the audit LCP was provided with objective evidence to support that the bidder has the capability to develop a Quality Management System to meet the project requirements.. The bidder also identified a new quality manager that currently works for the bidder and fully understands thier internal processes and procedures. Based on the new information provided during the pre-award audit the scoring has been revised to support that the bidder can be recommended as meeting the minimum requirements regarding their Quality management System and can be considered as passing the quality section of the bid proposal).

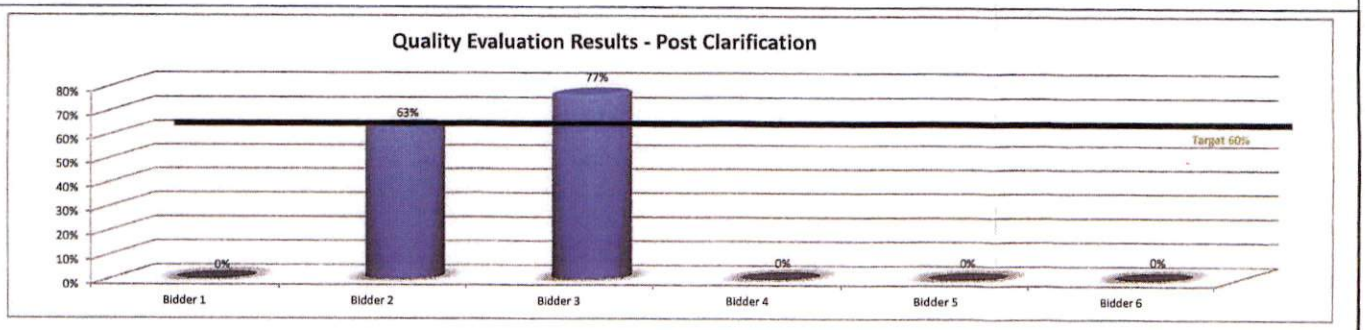
Bidder 3: Bidder is recommended but prior to award the bidder/joint venture will be audited including subcontractors to verify their quality management system implementation based on their bid documents. Note: Proposed Quality Manager has the experience and qualifications to meet LCP requirements (CSA 178.2 Level 2 Certified Welding Inspector and large construction project experience).

Bidder 4:

Bidder 5:

Bidder 6:

Scoring Guide:
0 - Question not answered or no relevant information provided in response
1 - Response does not meet key criteria
2 - Response only meets a few of the key criteria
3 - Response meets a majority of the key criteria
4 - Response meets all key criteria
5 - Response meets and exceeds key criteria



Quality Representative: Paul Fraser

Date: 03-Feb-2015 Revised 09-Mar-2015
Revised 05-May-2016 Revised 14-Apr-2017

Paul Fraser 14-APR-2017

Attachment 9

Benefits Evaluation

Provincial Benefits (including INNU Content) - Labour RFP Evaluations
(for use on Civil, Supply & Install, and Services RFPs)

RFP #: CH0031 **Title:** Supply and Install Mechanical and Electrical Aixiliaries (MF)

Section	Description / Expectation	Weighting Assigned	Black and Mac Score Given	Black and Mac Weighted Score	Black and Mac Comments	Cahill Score Given	Cahill Weighted Score	Cahill Comments
2.1	**Contracting and Procurement (7.5%)**							
2.1 a)	Describe Bidder's experience with implementing local benefits strategies and agreements, including Aboriginal agreements	2.5	3	1.5	limited-long harbour	5	2.5	LCP
2.1 b)	Describe Bidder's procurement policies and procedures that will ensure reasonable advance notice to NL supply community of all procurement opportunities	2.5	3	1.5	not detailed-endevour to use local	5	2.5	advance notice; local media
2.1 c)	Describe Bidder's familiarity with NL contractor/supply capabilities. If Bidder is not currently familiar with these capabilities, describe proposed steps to ensure familiarity	2.5	5	2.5	in NI since 1987	5	2.5	in NL since 1953
2.2	**Employment (5%)**							
2.2 a)	Describe Bidder's familiarity with Newfoundland & Labrador workforce	2.5	5	2.5	in NI since 1987	5	2.5	in NL since 1953
2.2 b)	Describe Bidder's human resource policies that will optimize Newfoundland and Labrador employment benefits	1.5	3	0.9	typically given priority	5	1.5	local recruitment strategy
2.2 c)	Describe Bidder's human resource policies that will optimize innu employment benefits for work in Labrador	1.0		0			0	
2.3	**Gender Equity and Diversity (5%)**							
2.3 a)	Does Bidder have gender equity and diversity plans? If so, describe Bidder's policies, including harassment and discrimination policies that support gender equity and diversity	1.5	5	1.5	Harassment and Discrimination	5	1.5	yes
2.3 b)	Does Bidder's human resource policies enable the voluntary identification of members of under represented groups? If so, describe these policies	1.5		0	NO	5	1.5	Yes
2.3 c)	Is the Bidder a woman-owned business?	1.0	0	0				
2.3 d)	List any intended subcontractors / suppliers that are woman-owned business	1.0	0	0				
2.4	**NL Benefits Reporting (5%)**							
2.4 a)	Indicate Bidder's previous experience at capturing employment and expenditure data as they relate to local benefits monitoring	2.5	5	2.5	Vale/Exxon	5	2.5	LCP
2.4 b)	Indicate who, within Bidders organization, will be responsible for benefits monitoring and reporting	2.5	5	2.5	Project Controls	5	2.5	Project Controls
	Scoring Grid / **Scoring Guidance for Section 2 (above)**							
	5 — Response meets and exceeds all key criteria							
	4 — Response meets all key criteria							
	3 — Response meets a majority of all key criteria							
	2 — Response meets only a few of the key criteria							
	1 — Response meets none of the key criteria							
3.0	**Provincial and Innu Content**							
3.0 a)	Is Bidder a registered Innu Company with IBDC? Yes = 5 No = 0	5.0		0			0	Not biddung as an Innu
3.0 b)	Use of registered Innu subcontractors? Yes = 5 No = 0	2.5		0			0	
3.0 c)	Is Bidder an NL Company Yes = 5 No = 0	5		0		5	5	
3.0 d)	Use of NL Subcontractors Yes = 5 No = 0	2.5		0			0	
3.0 e)	Bidder has experience working with aboriginal IBAs Yes = 5 No = 0	2.5		0			0	LCP
4.0 a)	**NL BENEFITS CONTENT - PERSON HOUR ESTIMATE by Residency (25.0)**	25	3	15		5	25	
	Score = 5 — If NL percentage of total hours is > 80%							
	Score = 4 — If NL percentage of total hours is 60 to 80 %							
	Score = 3 — If NL percentage of total hours is 40 to 60 %			55%			80%	
	Score = 2 — If NL percentage of total hours is 20 to 40 %							
	Score = 1 — If NL percentage of total hours is < 20%							
4.0 b)	**NL BENEFITS CONTENT - PERSON HOUR ESTIMATE by Location of Work (10.0)**	10	5	10		5	10	
	Score = 5 — If NL percentage of total hours is > 80%							
	Score = 4 — If NL percentage of total hours is 60 to 80 %							
	Score = 3 — If NL percentage of total hours is 40 to 60 %			96%			99%	
	Score = 2 — If NL percentage of total hours is 20 to 40 %							
	Score = 1 — If NL percentage of total hours is < 20%							
5.0	**NL BENEFITS CONTENT - EXPENDITURE ESTIMATE (25%)**	25	3	15		5	25	
	Score = 5 — If NL percentage of total expenditures is > 80%							
	Score = 4 — If NL percentage of total expenditures is 60 to 80 %							
	Score = 3 — If NL percentage of total expenditures is 40 to 60 %			50%			80%	
	Score = 2 — If NL percentage of total expenditures is 20 to 40 %							
	Score = 1 — If NL percentage of total expenditures is < 20%							
	Total	100		55.4			84.5	
	Sectional Weighting	2.5%		1.385			2.1125	
	Ranking							

Scored By: Marie Moran
Date: [signature]

Attachment 10

Risk Management Evaluation

Nalcor Energy
Lower Churchill Project

BID EVALUATION
DISCIPLINE SCORE SHEETS

RFP - Risk Management Questionnaire Evaluation

Package Number:	Package Name:
CH0031	Supply and Install Mechanical and Electrical auxiliaries (MF)

Scoring Guide

0 - Question not answered or no relevant information provided in response
1 - Response does not meet key Criteria
2 - Response only meets a few of the key criteria
3 - Response meets a majority of the key criteria
4 - Response meets all key criteria
5 - Response meets and exceeds key criteria

Item		Question Weight (%)	Bidder 2			Bidder 3		
			Answer	Score	Comments	Answer	Score	Comments
	Risk Management							
1	Risk Management system in place.	5	4	4		4	4	
2	Risk Management Plan - Risk Register sample.	3	2	1.2	Clarification provided.	4	2.4	Clarification provided.
3	Top 5 Risks - Identification.	4	4	3.2		4	3.2	
4	Scope represent a risk for timely delivery	4	4	3.2		4	3.2	
5	Loss Control Program.	3	3	1.8	Clarification provided.	3	1.8	Generic statement
6	Involvement of sub-suppliers and sub-contractors in Risk Management.	3	1	0.6	Clarification provided.	2	1.2	Clarification provided. No list of sub-suppliers - sub-contractors provided.
7	Records of Successful on-time delivery performance (last 05 years).	3	4	2.4		4	2.4	No historical records provided.
8	Root Causes of unsuccessful on-time delivery (last 05 years).	4	3	2.4	General statement provided.	4	3.2	
9	Discussion on Schedule Critical Path.	5	3	3	General statement provided.	4	4	
10	Production workload forecast for all major facilities.	4	4	3.2		4	3.2	
11	Examples of on-time and late mobilization & deployment of crews & equipment. Mobilization strategy and plan contemplated for CH0031.	7	4	5.6		4	5.6	
12	Mitigation of lower productivity due to adverse weather. Does it include additional float and where?	6	4	4.8		4	4.8	
13	Strategy and plan for timely and successful installation due to adverse weather.	5	4	4		4	4	
14	Statement concerning Strikes and Labour Agreements.	5	4	4	Clarification provided.	4	4	
15	Description of HSE Risk Management system.	7	3	4.2		4	5.6	
16	Description of QA/QC Management system.	4	4	3.2		4	3.2	
17	Processes and procedure to manage Change.	3	4	2.4		3	1.8	Generic statement
18	Skills critical to the success of the project and number of people.	5	4	4		4	4	
19	Familiarity with Canadian standards specified throughout the Agreement.	5	4	4		4	4	
20	Measure to be implemented if English is not the first language.	3	4	2.4		4	2.4	
21	Lessons learned to retain skilled labor to comply with contractor's cost & schedule.	4	4	3.2		4	3.2	
22	Description of responsibilities (company vs. sub-suppliers/sub-vendors) on logistics to assure timely delivery of critical equipment.	5	4	4		4	4	
23	Responsibility statement	3	4	2.4		4	2.4	
	Score - transfer to Technical Summary	100	73.20			77.60		
		Total Percentage	**73.20%**			**77.60%**		

Scored By: C. Fernandez: Deputy Project Control Manager — ACTING MFC PROJECT CONTROLS LEAD.

Date: 24 APR 2017

Attachment 11

Interim Bid Evaluation and Short List Recommendation

nalcor energy
LOWER CHURCHILL PROJECT

LOWER CHURCHILL PROJECT

INTERIM BID EVALUATION AND SHORT LIST RECOMMENDATION

CH0031–SUPPLY AND INSTALL MECHANICAL AND ELECTRICAL AUXILIARIES (MF)

	TITLE	NAME	SIGNATURE	DATE
PREPARED BY:	Contract Administrator	Philip Bursey		24-Jan 2016
REVIEWED BY:	Package Leader	David Wright		24 JUN 2016
REVIEWED BY:	Project Controls Manager	Tanya Power	Tanya Power	28-Jun-2016
REVIEWED BY:	Area Manager	Frank Gillespie	F Gillespie	28-JUN-2016
APPROVED BY:	Project Manager	Scott O'Brien		29-Jun-2016
APPROVED BY:	Supply Chain Manager	Pat Hussey		29 June 2016
APPROVED BY:	Commercial Manager	Lance Clarke	Lance Clarke	23-Jun-2016
REVIEWED BY:	Deputy Project General Manager	Jason Kean	Jason L. Kean	29-JUN-2016
APPROVED BY:	Project General Manager	Ron Power		29-JUN-2016
APPROVED BY:	Project Director	Paul Harrington		30 June 2016
APPROVED BY:	VP	Gilbert Bennett		22 Jun 2016

nalcor energy
LOWER CHURCHILL PROJECT

LOWER CHURCHILL PROJECT

INTERIM BID EVALUATION AND SHORT LIST RECOMMENDATION

CH0031–SUPPLY AND INSTALL MECHANICAL AND ELECTRICAL AUXILIARIES (MF)

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APPROVED BY:	Project Manager	Scott O'Brien		29-Jun-2016
APPROVED BY:	Supply Chain Manager	Pat Hussey		29 June 2016
APPROVED BY:	Commercial Manager	Lance Clarke		
REVIEWED BY:	Deputy Project General Manager	Jason Kean	Jason L. Kean	29-Jun-2016
APPROVED BY:	Project General Manager	Ron Power		29-Jun-2016
APPROVED BY:	Project Director	Paul Harrington	P. Harrington	30 June 2016
APPROVED BY:	VP	Gilbert Bennett		

nalcor energy LOWER CHURCHILL PROJECT	Interim Bid Evaluation and Short List Recommendation	Rev.	Date
	CH0031 – Supply and Install Mechanical and Electrical Auxiliaries (MF)	00	24-Jun-2016

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nalcor energy LOWER CHURCHILL PROJECT	Interim Bid Evaluation and Short List Recommendation	Rev.	Date
	CH0031 – Supply and Install Mechanical and Electrical Auxiliaries (MF)	00	24-Jun-2016

1.0 PURPOSE

In accordance with Section 7.0 – Short Listing of the Bid Evaluation Plan, the purpose of this document is to, to recommend a short list of Bidders for CH0031 – Supply and Install Mechanical and Electrical Auxiliaries (MF) based on best value proposals in order to expedite the evaluation process. The Interim Bid Evaluation is based on evaluating the following criteria in accordance with the approved Bid Evaluation Plan approved on 22-Jan-2015:

- Commercial
- Technical
- Quality
- Health and Safety
- Environmental
- Risk Management

2.0 RECOMMENDATION

The Overall Scoring Matrix is included in Attachment 1. Bidders are ranked as follows:

1. Cahill-Ganotec Joint Venture (CG) - Bidder 3 – 91.5%
2. Black & McDonald Limited (BM) - Bidder 2 – 60.5%
3. LASC Muskrat Falls Joint Venture (LASC) - Bidder 1 – 30.7%

Based on the above, and in accordance with the included evaluation, it is recommended that CH0031 – Supply and Install Mechanical and Electrical Auxiliaries (MF) list of active Bidders be short listed to include:

1. **Cahill-Ganotec Joint Venture (CG) - Bidder 3 – 91.5%**
2. **Black & McDonald Limited (BM) - Bidder 2 – 60.5%**

3.0 BIDDERS LIST

RFPs were issued to the following approved Bidders:

- **Black & McDonald Limited**
- **Cahill-Ganotec Joint Venture**
- Groupe Plombaction Inc. Joint Venture
- Aecon Industrial, a Division of Aecon Group Inc.
- Pennecon Energy Ltd.
- Andritz Hydro Canada Inc.
- **Alberici Constructors, Inc., Lorneville Mechanical Contractors Ltd. and Sunny Corners Enterprises Inc. Joint Venture (LASC)**

The following Bidders declined to submit an RFP:

- Groupe Plombaction Inc. Joint Venture
- Aecon Industrial, a Division of Aecon Group Inc.
- Pennecon Energy Ltd.
- Andritz Hydro Canada Inc.

4.0 SCOPE

The Scope of Work (SOW) for Package CH0031 includes design, supply, installation, registration and completions of mechanical piping systems, heating ventilation and cooling (HVAC) systems, auxiliary electrical systems, assembly and installation of major electrical equipment supplied by Company's Other Contractors, all connections, cabling, site testing, completions of all electrical and mechanical installation made by Contractor, removal and disposal of all temporary electrical and mechanical installations. Supply and installation of architectural interior works for the Muskrat Falls Powerhouse are also included.

CH0031 has a significant amount of mechanical and electrical equipment (both supplied by the nominated CH0031 Contractor and Company's other Suppliers) to be installed and commissioned by the CH0031 Contractor. There are a number of important interfaces with this equipment installed by the CH0031 Contractor and the Powerhouse Protection, Control and Monitoring System provided by the CH0030 Contractor.

The Spillway concrete works, gates, stop logs, towers, hoists, Spillway electrical building, as well as power supply and controls for the Spillway for the diversion phase will be by Company's Other Contractors but final connection to the Powerhouse power supply and controls is a component of the CH0031 Work.

The Intake concrete works, the Intake trash rack, Intake bulkhead gates, Intake gates and hoists and hoist Motor Control Centers (MCC) will be by Company's Other Contractors, but the power supply to the MCCs in the Intake and Intake building ancillary services as well as final connection to the Powerhouse power supply and controls is a component of the CH0031 Work.

The Work will also consist of supplying detailed documentation for design, quality control, and operation and maintenance for all work required by the Agreement, and the training of Company's personnel.

5.0 PROPOSAL EVALUATION TIMELINE

RFPs were issued on 10-Jun-2014 with a closing date of 16-Jan-2015. All proposals were received before the closing date and time and were opened on 22-Jan-2015 at LCP's office in St. John's, NL.

Bids were distributed to evaluation team members on 23-Jan-2015.

Proposal clarification began on the 10-Feb-2015 and has continued with all three Bidders up to the present date.

The first clarification meetings were held with bidders in May of 2015.

Bidder 1 - Deferred as a result of Commercial Steering Committee meeting 20-May-2015
Bidder 2 - 21-May-2015
Bidder 3 - Deferred as a result of Commercial Steering Committee meeting 20-May-2015

A steering committee meeting was convened on 20-May-2015 to provide an overview of evaluation findings to date (technical and commercial presentations see Attachment 8). At that meeting the steering committee advised that due to project schedule uncertainty bid validity should be extended to October 2015 and that Bid Clarification meetings should be suspended until further notice. It was also decided that due to concerns about the possible withdrawal of a Bidder, that we should delay consideration of short listing and that all Bidders should be carried to ensure we do not end up with non-competitive situation.

Following a senior management request to review the contract strategy for CH0031, due to the high submitted proposal pricing (which exceeded the package budget) from the Bidders, on 29-Oct-2015 the steering committee was presented with the attached (Attachment 8) quantitative analysis to review the contracting strategy. As a result of this quantitative analysis it was decided to maintain the original strategy.

On 10-Feb-2016 a meeting was held with S. O'Brien to ensure the technical evaluation plan for the package addressed the appropriate technical and execution risks. As a follow up to this meeting, further meetings were held with various project resources and technical and execution risks were reviewed. No adjustments to the technical evaluation plan were required as key elements of the CH0031 Risk Register have been addressed within the bid evaluation technical scoring.

As a result of time elapsed since submittal of the original proposal, changes to the site conditions (Exhibit 12), specification updates and a value engineering exercise, a bid verification, to revalidate commercial and technical proposals, was issued on 1-Nov-2015. All Bidders resubmitted proposals before the closing date and time and were opened on 12-Feb-2016 at LCP's office in St. John's. The proposals, as received, were based on the following compensation schemes:

- Bidder 1 Fully Reimbursable
- Bidder 2 Fixed Price with reimbursable labour
- Bidder 3 Full Reimbursable

A steering committee meeting was convened on 29-Feb-2016 to provide an overview of evaluation findings to date (technical and commercial presentations see Attachment 8).

Bid clarification meetings were conducted in March 2016, with Bidders to clarify the above referenced proposals.

Bidder 1 - 21-Mar-2016
Bidder 2 - 30-Mar-2016
Bidder 3 - 23-Mar-2016

A steering committee meeting was convened on 24-Mar-2016 to provide an overview of the main challenges associated with the evaluations.

Bidder 1 – Fully reimbursable proposal – Represents unacceptable cost risk to Company
Bidder 2 – Quality assurance issues with Bidder
Bidder 3 - Fully reimbursable proposal – Represents unacceptable cost risk to Company (During the clarification meeting, Bidder had committed to reconsider its proposal and revert)

It was decided that quality audits of each Bidder would be conducted and following the quality audit the QA evaluation would be validated against the audit findings. It was also decided that consideration of shortlisting would be deferred until Bidder 3 reworked its compensation model.

As a follow up to the Bid clarification meeting 23- Mar-2016 with Bidder 3, Bidder 3 agreed to Fixed Price with reimbursable labour compensation model. As a result proposals have the following compensation schemes:

- Bidder 1 Fully Reimbursable
- Bidder 2 Fixed Price with reimbursable labour
- Bidder 3 Fixed Price with reimbursable labour

A steering committee meeting was convened on 25-Apr-2016, to review the current status of the evaluation. See attached technical presentation and action items (Attachment 8).

A steering committee meeting was convened on 26-May-2016, to review package pricing model options. See attached action items (Attachment 8).

On 3-Jun-2016 a meeting was held to review options for the Management of Project Labour Agreement (PLA) labour risk through risk reward compensation model. See attached minutes (Attachment 8).

On 22-Jun-2016 a Steering Committee meeting was convened for the Evaluation Team to provide an interim evaluation presentation. See attached Evaluation Summary (Attachment 8). Due to the reasons noted below, the Steering Committee agreed with the Evaluation Team's recommendation to short list to two (2) Bidders.

- Large discrepancy in pricing (Pricing approximately 2x budget and greater than 2x low bid);
- Commercial model proposed does not adequately comply with models requested in the RFP;
- Article exceptions are extensive and not commercially reasonable to negotiate;

it was decided that shortlisting is warranted at this time and Bidders 1 would be dropped from further evaluation and Bidders 2 & 3 would continue to be evaluated.

Company intends to request a final pricing validation, from the remaining two Bidders, based on an updated Exhibit 9- Schedule that is expected to be approved near the end of June.

6.0 EVALUATION TEAM

Evaluation Team	Representative
Commercial	Philip Bursey – Michael Fisher
Commercial - Legal	Aidan Meade
Technical	David Wright (Lead) / Jim Slade / Gord Haines / Scott Penney / Antoine Gemayel / Martin Landry / Albert Mitchelmore

Quality	Paul Fraser – **David Green**
Risk Management	Carlos Fernandez
Benefits	Maria Moran
Health & Safety	Sean Lee
Environment	Clyde McLean
Cost Controller / Planner	Andrew Whitty

Commercial Steering Committee

Business Services Manager – Lance Clarke
Supply Chain Manager – Pat Hussey
Project Manager - Muskrat Falls Generation - Scott O'Brien

7.0 EVALUATION CRITERIA

The following weighted evaluation criteria was agreed by the Evaluation Team and used to assess Bidder's Proposals.

Criteria	Weighted Rating (%)
Commercial	60%
Technical	40%
Quality	Pass/Fail
Risk	Pass/Fail
Health & Safety	Pass/Fail
Environmental	Pass/Fail

For Health & Safety, Bidders had to obtain a score of 70% or greater to pass. For Environmental, Bidders had to obtain a score of 60% or greater to pass. For Risk, Bidders had to obtain a score of 60% or greater to pass. For Quality, Bidders had to obtain a score of 60% or greater to pass.

8.0 COMMERCIAL EVALUATION

The commercial portion of the evaluation is based on unconditioned proposals submitted on 12-Feb-2016.

See detailed commercial evaluation attached in Attachment 2.

Fixed Price means unit pricing, which is not subject to variation, for all aspects of the Work (materials, equipment consumables, project management, overhead and profit, etc.) which

collectively, based on the material takeoff quantities, will form a lump sum price for all aspects of the Work with the exception of unionized site labour.

Description	Bidder 1 – LASC Muskrat Falls Joint Venture	Bidder 2 – Black and McDonald Limited	Bidder 3 – Cahill – Ganotec Joint Venture
Commercial Model	Fully Reimbursable with no caps. Cost Risks: - Management Personnel - PLA Labour - Equipment - Indirect Materials and Consumables	Fixed Price with reimbursable labour (no caps) Believe appropriate commercial measures can be negotiated to mitigate PLA labour risk exposure	Fixed Price with reimbursable labour (no caps) Believe appropriate commercial measures can be negotiated to mitigate PLA labour risk exposure
Price	Approximately 2x low bid. Approximately 2x package budget.	Approximately 47% greater than low bid. Approximately 43% greater than budget.	Low Bid. Close to package budget.
Article Exceptions	Extensive and seek to materially alter or remove many of the key criteria including; - Change Criteria - Standard of a Prudent Contractor - Liabilities and Indemnities - For reference a commented copy of commercial exceptions is attached in Attachment 2	Negotiable	Significant but negotiable
Risk	Proposal attempts to defer all cost, execution and legal risk to Company	Proposal attempts to transfer additional risk to Company. Believe an acceptable risk regime can be negotiated.	Proposal attempts to transfer additional risk to Company. Believe an acceptable risk regime can be negotiated.
Attitude	Have not demonstrated a willingness to bend on the	Have demonstrated a willingness to	Have demonstrated a willingness to negotiate.

Description	Bidder 1 – LASC Muskrat Falls Joint Venture	Bidder 2 – Black and McDonald Limited	Bidder 3 – Cahill – Ganotec Joint Venture
	key items referenced above. Have not been providing as much information as expected in the clarification process.	negotiate. Have cooperated throughout the clarification process.	Have cooperated throughout the clarification process
General	Proposal does not conform closely to either requested pricing model in the RFP and has such extensive exceptions that it is not considered commercially reasonable to negotiate.	Mostly compliant - negotiable	Mostly compliant - negotiable

The recommendation to short list is based strictly on commercial criteria and the evaluation to date.

The Evaluation Team are confident that Bidders 2 and 3 are committed to seeing the RFP process though to its conclusion and will maintain the competitive environment necessary to ensure best value to Company.

Given the significant price difference and extensive exceptions the Evaluation Team does not consider it reasonable or practical to continue including Bidder 1 in the RFP Evaluation process.

Based on the above it is recommended that the Bidders be short listed to:

- **Cahill-Ganotec Joint Venture (CG)**
- **Black & McDonald Limited (BM)**

9.0 TECHNICAL EVALUATION

The Technical Evaluation is included in Attachment 3.

All Bidders are technically acceptable although further technical clarifications are ongoing.

10.0 HEALTH & SAFETY EVALUATION

The Health and Safety Evaluation is included in Attachment 4.

11.0 ENVIRONMENTAL EVALUATION

The Environmental Evaluation is included in Attachment 5.

12.0 QUALITY ASSURANCE EVALUATION

The Quality Evaluation is included in Attachment 6.

13.0 RISK MANAGEMENT EVALUATION (IF APPLICABLE)

The Risk Management Evaluation is included in Attachment 7.

14.0 ATTACHMENTS

Attachment 1 – Overall Scoring Matrix
Attachment 2 – Commercial Evaluation
Attachment 3 – Technical Evaluation
Attachment 4 – Health and Safety Evaluation
Attachment 5 – Environmental Evaluation
Attachment 6 – Quality Assurance Evaluation
Attachment 7 – Risk Management Evaluation
Attachment 8 – Presentations & Minutes

Attachment 1

Overall Scoring Matrix

OVERALL SCORING MATRIX

CH0031 - Supply & Install Mechanical and Electrical Auxiliaries (MF)

NOTE: Each subsection is rated on a scale 1 - 10, then multiplied by the weighted value (weighting) for the item to calculate the item value.

SUMMARY OF PROPOSAL RESULTS

		BIDDER 1		BIDDER 2		BIDDER 3	
Criteria:	item wgtg	Rating 0-10	Item Value	Rating 0-10	Item Value	Rating 0-10	Item Value
Points value of Section 1 Commercial	**60%**	0.0	**0.0**	5.3	**31.8**	10.0	**60.0**
Points value of Section 2 Technical	**40%**	7.7	**30.7**	7.2	**28.7**	7.9	**31.5**
OVERALL RATING			**30.7**		**60.5**		**91.5**
Quality (must be = or > than 60% to Pass)			Pass		Pass		Pass
Health & Safety (must be = or > than 70% to Pass)			Pass		Pass		Pass
Environmental (must be = or > than 60% to Pass)			Pass		Pass		Pass
Risk (must be = or > than 60% to Pass)			Pass		Pass		Pass
RANKING			3		2		1

Overall Comments:

Attachment 2

Commercial Evaluation

- CH0031 Bid Tab Summary
- LASC Exceptions

CH0031 -

SUMMARY BID TAB

		BIDDER 1		BIDDER 2		BIDDER 3	
No	PRICE ITEM DESCRIPTION	TOTAL LABOUR HOURS	TOTAL PRICE	TOTAL LABOUR HOURS	TOTAL PRICE	TOTAL LABOUR HOURS	TOTAL PRICE
ST01	SUB-TOTAL INDIRECT COSTS (GENERAL)	385,594	141,534,303	218,949	113,288,379	11,063	37,359,405
ST02	SUB-TOTAL PIPING/MECHANICAL - DESIGN AND ENGINEERING	9,541	-	0	114,855	0	176,744
ST03	SUB-TOTAL PIPING/MECHANICAL - SUPPLY AND INSTALLATION	124,074	32,995,549	135,042	34,411,723	145,880	31,149,463
ST04	SUB-TOTAL HVAC SYSTEM - SUPPLY, INSTALLATION	142,339	31,239,478	39,979	14,656,061	77,111	19,223,999
ST05	SUB-TOTAL ELECTRICAL - DESIGN AND ENGINEERING	88	90,881	0	114,855	0	211,521
ST06	SUB-TOTAL ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	354,479	71,053,967	154,481	40,528,128	186,905	39,201,490
ST07	SUB-TOTAL ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	40,302	4,950,488	25,116	4,556,293	42,763	5,247,433
ST08	SUB-TOTAL ARCHITECTURAL - SUPPLY & INSTALL	91,586	15,290,852	88,068	12,391,828	129,211	15,496,193
ST09	SUB-TOTAL DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLATION	1,153	685,357	1,512	609,107	1,145	746,608
ST10	SUB-TOTAL PIPING/MECHANICAL - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	0	14,000,000	4,046	823,343	6,487	781,603
ST11	SUB-TOTAL HVAC SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	0	-	0	94,485	1,171	185,670
ST12	SUB-TOTAL ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	0	-	15,211	2,424,550	11,787	2,384,626
ST13	SUB-TOTAL DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	0	-	429	68,615	647	95,648
ST14	**TOTAL CONTRACT PRICE (pre-normalization) As calculated**	**1,149,156**	**311,840,876**	**682,832**	**224,082,221**	**614,171**	**152,260,403**
ST17	**Score / 10**		**-**		**5.3**		**10.0**

	Proposal Price As Submitted		292,810,214.42		225,980,000.00		152,134,400.63
	Difference		19,030,661.31		-1,897,779.05		126,001.94

Exceptions

COMMERCIAL CLARIFICATIONS

1. LASC's Proposed Contract Model - LASC's proposal offer is based on an alternative compensation model as identified in Appendix A2.1 and is not based on Option 1 or Option 2 as identified on the Proposal Form Letter.

2. Technical Services: The LASC proposal and offer includes for a cost allowance to be fully cost reimbursable of all costs. This allowance covers engineering activities (services) associated with design and engineering tasks for any and all systems integration (plant) whether supplied solely by CH0031 or interfacing with others, procurement engineering functions, FAT testing specifications and testing oversight, design activities and associated document requirements as stipulated within the SDRL.

3. Commissioning: Following mechanical completion commissioning as described in contract document 505573-3344-40EF-0001 Rev00 (61 pages) has been priced by LASC as an allowance which is to be fully reimbursable of all costs. These costs include man-hour quantities for trade support labour and staffing costs for the "Commissioning Team". The trade support man-hour cost allowance is based on percentages of the estimated installation hours adjusted for the complexities of the equipment and systems. The scope of work by CH0031 touches all the plant systems including those installed by other contractors and under their responsibility and hence the Owners care and control. LASC intends to fully support the Owners RFO team in coordinating, planning and executing all aspects of the commissioning effort but will require the RFO's leadership to help lead and drive the process.

4. MTO's: The LASC proposal is based on material take-offs from the RFQ documents, including Addendum 15. Discrepancies within the documents do exist and required interpretation by LASC, accordingly if final quantities procured and installed exceed those provided in the LASC detail pricing sheet Appendix A2.1, then a change order will be required.

5. PLA Labour Air Travel [Exhibit 12 – 8.4]: Nalcor is responsible for all PLA Labour Air Transportation costs as pass through costs, regardless of travel origin.

6. Contractor Site Administration Office: As identified in our Executive Summary in order to enhance project execution efficiencies, LASC is proposing to locate our site offices adjacent to the work site. Please refer to Exhibit 12 and LCP Proposal Clarification #111.

7. Contractor Project Management Staffing: LASC's proposal is based on LASC being solely responsible for the complete control of the required project management staff, including staffing roles and numbers to adequately manage the work of CH0031.

8. Concurrent delay [sections 1.2 (m) (F) and 31.3] – These clauses eliminate schedule and cost relief for concurrent delays. LASC takes exception to this clause and, in light of the structure of our commercial proposal, requires further discussion with Nalcor with respect to what delays are subject to schedule and/or cost relief for LASC.

9. Performance Security [section 7.0 and Exhibit 2] – LASC's proposal does not include the provision of either letters of credit or parent guarantees. LASC has submitted bonding rates only, the costs of which are not included in the Fixed Price portion and shall be an extra cost should Nalcor elect to secure bonds from LASC.

10. Standard of a Prudent Contractor [section 1.2(lll) and used throughout agreement in multiple places] – In light of the structure of our commercial proposal, LASC does not consider this term to be applicable and its use should be deleted throughout the agreement.

11. Document priority [section 1.12] – Since the Exhibits are more specific and precise than the Articles of the agreement, conflicts between the Exhibits and any Articles of the agreement should be decided in favour of the Exhibits.

Comment [PB1]: We are looking for a CONTRACTOR the y seem to want to fill the role of a project manager … which we are doing ourselves

Comment [PB2]: What would this change order address? The cost of materials only?

Comment [PB3]: This is now 9.4 ensure they are looking at the Site Conditions provided with Addendum 15

Comment [PB4]: Technical

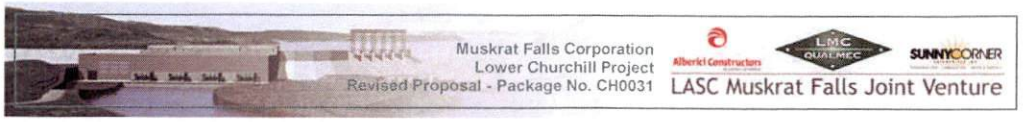
Comment [PB5]: Not acceptable in any event. We need influence on their team. In a reimbursable model what they are stating is completely off

Comment [PB6]: We will not accept alterations to these clauses

Comment [PB7]: Unacceptable

Comment [PB8]: Unacceptable

Comment [PB9]: Not acceptable. Must deal with specific concerns now.



12. Holdbacks [sections 12.16, 25.6 and 25.12, and Exhibit 2] – LASC excludes all holdbacks (both Mechanics' Lien and for Engineer acceptance of document deliverables) and includes a holdback release bond to be issued for the benefit of Nalcor in lieu of the Mechanics' Lien holdback.

13. Warranty [sections 7.4(f) and Article 17] – LASC has only included a one-year warranty from Substantial Completion. As LASC is not providing design, a "fit for purpose" and "fit for intended use" warranty is not applicable. Further discussion is required with respect to reimbursement of costs incurred for performance of warranty work by LASC.

14. Company instructions and information [sections 10.2 and 37.4] – LASC is strictly relying on the fullness and accuracy of any instructions and information provided by Nalcor and its representatives to perform its work. As such, the disclaimer of responsibility in the last sentence is not applicable.

15. Compensation and payment terms [Article 12]

    a. LASC's proposal is based on PLA labour being invoiced monthly in advance of the work being performed, with a reconciliation of actual labour cost being made on the subsequent invoice. For greater clarity, LASC proposes to estimate the cost of labour to be performed in the month and invoice for the estimated labour at the beginning of the month. It will execute the work during that month and at the end of the month it will prepare an invoice for the next month. Each subsequent invoice will include a reconciliation of estimated versus actual labour cost from the prior month. LASC's proposal is based on payment terms of net 30 days from the invoice date.

    b. LASC proposal is based on Price Items 9501, 9502, 9504 and 9505 shown in Appendix A2.1 being invoiced on a monthly basis pre-rata on the amount of PLA labour expended.

    c. In addition, the LASC proposal is based on a mobilization upfront payment payable 30 days after contract award in the amount of $15,000,000+HST, and an additional payment of $5,000,000+HST on the date of mobilization to site.

16. Project insurance [Article 20] – The Construction All Risk insurance needs to cover the cost of the entire project and not just the value of LASC's contract. LASC will take responsibility for the first $25,000 of deductibles for the insurance coverages provided by Nalcor and will provide property in transit coverage with a $25,000 deductible. The balance of any deductibles in excess of $25,000 for the insurance coverages provided by Nalcor will be the responsibility of Nalcor.

17. Indemnities [sections 5.8, 9.3, 13.10, and Article 21] – In light of the structure of our commercial proposal and the Nalcor-provided project insurance, these multiple indemnity provisions require further discussion as LASC is only prepared to provide an indemnity for bodily injury and property damage resulting from its negligent acts.

18. Consequential damages [section 21.14] – The current waiver is only for the benefit of Nalcor. LASC will require a mutual consequential damages waiver.

19. Transportation routes/site logistics and utilities [Article 22] – As currently drafted, the risk for these items lies solely with Contractor. Further discussion is required as site roads and utility connections are Nalcor's responsibility and problems with off-site roads should be subject to Force Majeure provisions.

20. Change order [Article 26] provisions – LASC takes exception and is prepared to discuss change order procedure and related mark-ups. LASC suggests using a change order directive procedure with reasonable markups.

Comment [PB10]: Have to look into the suitability of this. Not sure there has been much experience. Will likely require an LOC for this purpose.

Comment [PB11]: We will require a 3 year warranty

Comment [PB12]: Design is included so this will be required

Comment [PB13]: May agree to slight alteration but not removal

Comment [PB14]: Could be workable so long as we have the right to challenge the estimate. Also would mean there is no type of up-front payment for labour

Comment [PB15]: We normally link up fron payments to the delivery of something. Because of the importance of the schedule for this one I would be inclined to link it to an approved schedule and delivery of performance security.

Comment [PB16]: unacceptable

Comment [PB17]: deal killer

Comment [PB18]: acceptable

Comment [PB19]: believe this a adequately dealt with. Contractor is responsible to plan logistics nad materials delivery based on the nature of the worksite

Comment [PB20]: Unacceptable: These provisions remain materially intact or deal killer.

21. Force Majeure [section 22.7 and Article 31] – LASC suggests the definition of Force Majeure be more comprehensive (i.e. all events/conditions beyond the reasonable control of a party), including but not only limited to the items identified. Also, relief should be granted for (i) all strikes and other potential labour disputes or disruptions and not limited to just "national" issues, and (ii) weather conditions beyond what is agreed to be assumed throughout the course of the project. Consideration should also be given to explicit relief for First Nations issues.

22. Default/termination [Articles 32 and 33] – LASC needs further clarification of what Nalcor intends to constitute an "event of default" and requires a reasonable cure period for any such defaults by LASC. Further, in light of the fact LASC has multiple member companies, any default (such as insolvency) by one of the members shall not be considered a default unless the non-defaulting members fail to or are not capable of completing the remaining work on their own. Also, LASC requires the right to stop its work for non-payment by Nalcor after a reasonable notice and cure period, all of which will not be subject to further cure periods by any project lenders.

23. Termination for convenience [section 32.6(c)] – In the event of a termination for convenience, LASC expects to be paid its costs for work performed prior to termination, plus demobilization expenses and any cancellation charges, plus overhead and profit on those amounts.

24. Liquidated Damages [Article 36 and Exhibit 2] – In consideration of the Effective Date concept and the proposed compensation model, these provisions will require further discussion.

25. Project schedule - LASC's project schedule will incorporate float on individual tasks as is prudent and necessary, including for the weather conditions that are typical for this site location. LASC will own, control and manage this float as a tool in the execution of the CH-0031 contract to ensure that it meets its commitments on timely delivery. Abnormal weather conditions have not been considered in the development of our proposed schedule.

26. Throughout the agreement and exhibits, "at Contractor's sole expense", "at Contractor's cost", "Contractor shall be responsible for all risks and costs", "without compensation to Contractor" and other similar phrases appear in various clauses. In light of the structure of our commercial proposal, the use of these phrases requires further discussion with Nalcor.

27. The schedule analysis provided by LASC in this proposal assumes an Effective Date of 01-Jun-16 and a 93 day notice period for mobilization. An Effective Date with a protracted notice period for mobilization would impinge on our ability to meet the Final Completion milestone. This requires further discussion.

28. Being that the time period between Award and site mobilization is now undefined, all costs associated with additional handling and storage of material and/or equipment to accommodate a protracted mobilization will be a contract Change.

29. A protracted delay between Award and mobilization may require LASC to, at its sole discretion, maintain a minimum Post-Award project team (planned to be located in St. John's), and all such costs would be captured in the Reimbursable Portion of our proposed compensation model, but would not require a contract Change.

30. LASC is not guaranteeing 100% coverage of every position at all times during the project.

31. All costs associated with changes to the Project Labour Agreement will be a contract Change.

32. LASC takes exception to Article 30 – Assignment. This clause requires discussion in order to achieve mutual agreement.

33. LASC recommends that its proposed warehouse structure should be built in advance of its full mobilization, for greater efficiency. Therefore release on this work may need to be treated as an exception in terms of the Effective Date.

Comment [PB21]: No. they need to plan

Comment [PB22]: We will only execute an agreement with 1 party not a JV.. Inter JV workings are not particularly of interest to us. Not sure the concern.. The Articles seem pretty clear and include notice period.

Comment [PB23]: With the exception of 'Cancellation Charges [undefined]' ,based on my understanding this is all of these items are addressed.

Comment [PB24]: Technical

Comment [PB25]: We will not accept a scenario where the contractor is without risk.

Comment [PB26]: They need to explain this since we have not pinned the end date.

Comment [PB27]: No.. Contractor doesn't start mobilization until they receive notice.

Comment [PB28]: No.. see comment on 28

Comment [PB29]: They need to explain this comment

Comment [PB30]: Agreed they will result in adjusted labour costs which may increase or decrease the target cost.

Comment [PB31]: To provide their specific exceptions to the Article

Comment [PB32]: No

34. LASC's proposal has United States dollars included at an exchange rate of 1.39154 USDCAD. Upon award, the USD component will be adjusted at the prevailing exchange rate on the date of award.

35. LASC's proposal is based on full release to procure material and equipment on Award. Costs associated with delay in release to procure material and/or equipment will be a contract Change.

36. PLA labour hours expended in the execution of scope covered by LASC's Cash Allowances are not included in the Target Hours.

37. WARRANTY. Amec Foster Wheeler Americas Limited, a subcontractor to LASC, warrants that it shall perform the Services with the standard (the "Standard") of care, skill and diligence expected, at the time and place of performance, of recognized professional engineering firms performing services of a similar type and nature. No other warranty, express or implied, is made or intended by this Agreement, by furnishing oral or written reports of findings made, or by any other act of Amec Foster Wheeler Americas Limited . Amec Foster Wheeler Americas Limited shall re-perform, at no additional cost to LCP, any Services that do not meet the Standard, provided that Amec Foster Wheeler Americas Limited shall be notified of such failure to meet the Standard within one year after the date the last of the Services are performed, abandoned or terminated, whichever shall occur first. LASC and Amec Foster Wheeler Americas Limited liability, responsibility and obligations, and LCP's sole remedy, for Amec Foster Wheeler Americas Limited failure to meet the Standard or for any errors or omissions in the performance of the Services shall be limited to such re-performance. Notwithstanding any other provision of this Agreement, LASC and/or Amec Foster Wheeler Americas Limited shall not in any way be responsible or liable for any performance or process guarantees of any kind.

Comment [PB33]: To provide full details on the proposed currency adjustment mechanism and how it applied to rates and prices.

Comment [PB34]: No

Comment [PB35]: They have to roll them in

Comment [PB36]: The standard of a prudent contractor and warranties set out in the Articles will apply to the 'Work ' various warranties will not be set out for each of their subs.

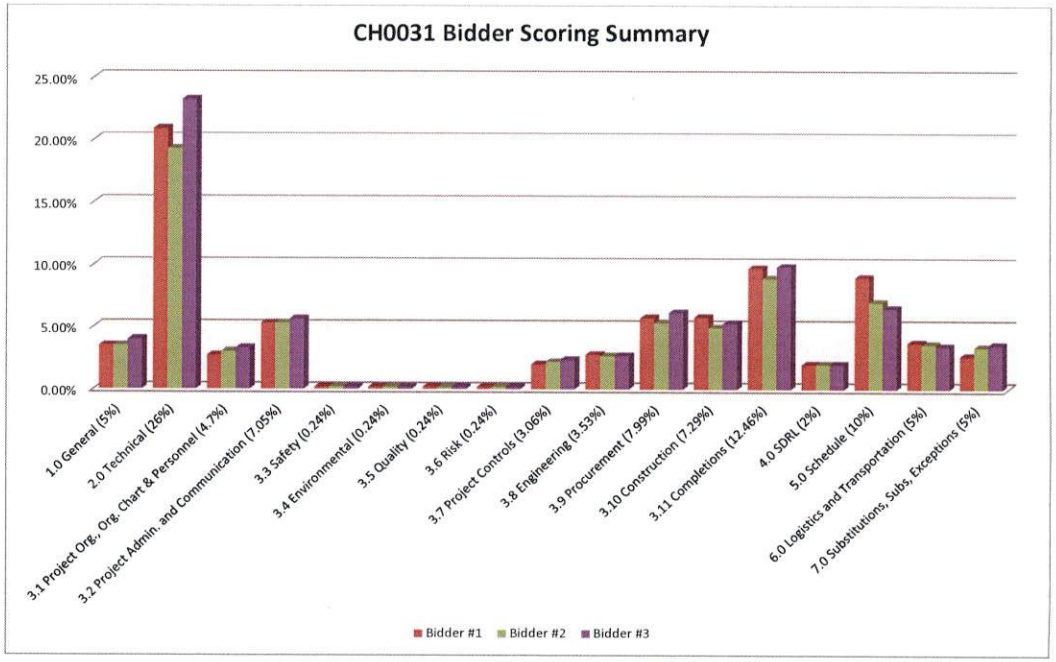
Attachment 3

Technical Evaluation

CH0031 Technical Scoring - % Breakdown	Weight	Bidder #1	Bidder #2	Bidder #3
1.0 General (5%)	5.00%	3.50%	3.50%	4.00%
2.0 Technical (26%)	26.00%	20.89%	19.28%	23.24%
3.1 Project Org., Org. Chart & Personnel (4.7%)	4.70%	2.73%	3.03%	3.29%
3.2 Project Admin. and Communication (7.05%)	7.05%	5.31%	5.31%	5.64%
3.3 Safety (0.24%)	0.24%	0.19%	0.18%	0.18%
3.4 Environmental (0.24%)	0.24%	0.20%	0.17%	0.17%
3.5 Quality (0.24%)	0.24%	0.19%	0.15%	0.18%
3.6 Risk (0.24%)	0.24%	0.18%	0.17%	0.18%
3.7 Project Controls (3.06%)	3.06%	2.02%	2.21%	2.37%
3.8 Engineering (3.53%)	3.53%	2.80%	2.68%	2.70%
3.9 Procurement (7.99%)	7.99%	5.73%	5.33%	6.16%
3.10 Construction (7.29%)	7.29%	5.78%	4.96%	5.29%
3.11 Completions (12.46%)	12.46%	9.75%	8.90%	9.85%
4.0 SDRL (2%)	2.00%	2.00%	2.00%	2.00%
5.0 Schedule (10%)	10.00%	9.00%	7.00%	6.50%
6.0 Logistics and Transportation (5%)	5.00%	3.75%	3.60%	3.45%
7.0 Substitutions, Subs, Exceptions (5%)	5.00%	2.68%	3.38%	3.58%
Total	**100.00%**	**76.69%**	**71.84%**	**78.78%**

CH0031 Technical Clarification Breakdown	Total	Closed	Open	% Closed
Bidder #1	355	321	34	90%
Bidder #2	364	314	50	86%
Bidder #3	362	346	16	96%

CH0031 Technical Bid Risk Focus	Percentage	Bidder #1	Bidder #2	Bidder #3
Execution (Risk Ranking 20)	46.30%	34.31%	32.57%	35.48%
Quality (Risk Ranking 25)	PASS/FAIL	PASS	PASS	PASS
Contractor Personnel (Risk Ranking 9)	9.70%	6.23%	6.53%	7.29%
Interfaces/Coordination (Risk Ranking 16)	7.05%	5.31%	5.31%	5.64%
Total	63.05%	45.84%	44.41%	48.41%
Key Risk Area Scoring - alternate analysis	100%	72.72%	70.44%	76.78%



Attachment 4

Health and Safety Evaluation

Health and Safety Scoring Guide:										
0 - Question not answered or no relevant information provided in response 1 - Response does not meet key Criteria 2 - Response only meets a few of the key criteria 3 - Response meets a majority of the key criteria 4 - Response meets all key criteria 5 - Response meets and exceeds key criteria		**Package Name:** **Package No.:** CH0031 **Project : Lower Churchill Project** **Review completed using documents provided as well as performance on current LCP sites.**								
	Question Weight (%)	LASC			Black & Mac			Cahill / Ganotec		
		Answer	Score	Score Comments	Answer	Score	Score Comments	Answer	Score	Score Comments
Health and Safety										
2.0 HEALTH AND SAFETY MANAGEMENT PERFORMANCE - Please provide the following safety statistics, referencing the attached incident definitions and frequency calculation.	10	4	8	Stats provided. TRIFR is 0.62	4	8	TRIFR 1.22	4	8	TRIFR 1.17
3.0 WORKER'S COMPENSATION - Indicate the jurisdiction where you are registered. List your overall Worker's Compensation industry rating for the current year and past three (3) years. Attach a WCB clearance letter and experience rating statements for the past three years.	3	4	2.4	WCB Information provided and are cleared to work	4	2.4	Clearance letter provided	4	2.4	WHSCC Clearance Provided
4.1 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a certificate of recognition or is your health and safety management system certified by an outside agency? (OHSAS 18001, CSA Z-1000 etc.) If yes, provide a copy of the certificate.	2	4	1.6	COR Provided	4	1.6	COR Provided	4	1.6	COR Provided
4.2 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety program have a policy statement that clearly outlines the Company's commitment to health and safety?	3	4	2.4	Policy Provided	4	2.4	Policy Provided	4	2.4	Policy Provided
4.3 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Has your company received an occupational health and safety stop work order, charges or equivalent from any regulator in the last three (3) years? If yes, provide details.	3	3	1.8	Bidder answered no	3	1.8	Bidder answered no	3	1.8	Bidder answered no
4.4 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Please list the highest ranking safety professional in your organization: (attach résumé). Do you plan to have a safety representative(s) for this Work full time or part time (Y or N)? If "Yes", provide a résumé(s).	3	4	2.4	CV Provided	4	2.4	CV Provided	4	2.4	CV Provided
4.5 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety management system address the following key elements? Management leadership and commitment; hazard/risk identification, evaluation and control; risk assessments on all critical and non-routine jobs/job functions; a permit to work system; ongoing inspection. If yes to any of these, reference appropriate Health and Safety manual section(s).	8	4	6.4	Yes documents provided in H&S Manual	4	6.4	Documents provided, Sec 1,2 and 9 of H&S Manual	4	6.4	Documents Provided. Sec 1, 2, & 17 of H&S Manual
4.6 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety management system include work practices and procedures, such as: Lockout and tag out; traffic control; excavation and trenching; confined space entry; hoisting and rigging; working near power lines; handling and transporting hazardous substances; unloading large/long materials (such as piles); vehicle recovery. If yes to any of these, reference appropriate Health and Safety manual section(s).	8	4	6.4	Yes documents provided in H&S Manual	4	6.4	Documents provided, Sec 1 and 8 of H&S Manual	4	6.4	Documents Provided. Sec 5 of H&S Manual
4.7 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have written programs for the following? Duty to refuse work; fall protection; noise management; workplace violence; working alone; personal protective equipment (PPE); WHMIS (Workplace Hazardous Materials Information System); respiratory protection. If yes to any of these, reference appropriate Health and Safety manual section(s). In regards to respiratory protection, have your employees been: trained? fit tested? medically approved?.	8	4	6.4	Yes documents provided in H&S Manual	4	6.4	Documents provided, Sec 1,4 and 8 of H&S Manual	4	6.4	Documents Provided. Sec 4, 8, & 5 of H&S Manual
4.8 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you conduct medical exams for the following? Pre-employment; replacement job capacity; pulmonary; respiratory. If yes to any of these, reference appropriate Health and Safety manual section(s).	2	4	1.6	Yes documents provided in H&S Manual	0	0	Bidder answered no	0	0	Bidder answered at client request and did not provide any documentation
4.9 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a drug and alcohol program? If "Yes", does it include the following? Pre-employment testing; testing for cause; post incident testing; formalized arrangements with a collection and testing agency (if "Yes", provide testing agency information); does your drug and alcohol policy follow the guidelines as laid out in The Canadian Model for Providing A Safe Workplace – Alcohol and Drug Guidelines and Work Rule Version 2 – Effective October 1, 2010? If yes to any of these, reference appropriate Health and Safety manual section(s).	3	4	2.4	Yes documents provided in H&S Manual	3	1.8	Documents provided, Sec 15 of H&S Manual. Bidder answered no to pre-access testing	2	1.2	Bidder stated they have a program but it does not meet the Canadian Model
4.10 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Equipment (Tools, Supplies, Machinery and Sanitary Facilities): Do you have a written list of equipment requiring pre-use inspections? Do you have a documented list of equipment requiring scheduled servicing in accordance with manufacturer's recommendations, legislated requirements, and industry standards? Is frequency of equipment inspections and maintenance identified? Are corrections of deficiencies documented? Do you have follow-up mechanism for corrective actions? If yes to any of these, reference appropriate Health and Safety manual section(s).	4	4	3.2	Yes documents provided in H&S Manual	4	3.2	Documents provided, Sec 7 and 9 of H&S Manual	4	3.2	Documents Provided. Sec 13 of H&S Manual
4.11 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Orientation Program: Do you have a health and safety orientation program? Does the program include new, transferred and temporary workers? Does the program provide instruction on the following: employer health and safety responsibilities; employee health and safety responsibilities; obligation to refuse imminent danger work; progressive discipline policies and procedures; safe work practices and/or procedures; emergency response procedures; first-aid procedures; incident/near miss reporting; does you orientation program include a quiz? If yes to any of these, reference appropriate Health and Safety manual section(s).	5	4	4	Yes documents provided in H&S Manual	4	4	Documents provided, Sec 8 of H&S Manual	4	4	Documents Provided. Sec 14 of H&S Manual
4.12 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Incident Investigation: Do you have a written procedure for incident reporting and investigation?; Do you utilize a root cause determination process such as "Tap-Root"? If yes to any of these, reference appropriate Health and Safety manual section(s).	5	4	4	Yes documents provided in H&S Manual	4	4	Documents provided, Sec 10 of H&S Manual	4	4	Documents Provided. Sec 18 of H&S Manual
4.13 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have an emergency response plan related to activities and specific locations? If yes reference appropriate Health and Safety manual section(s).	4	4	3.2	Yes documents provided in H&S Manual	4	3.2	Documents provided, Sec 11 of H&S Manual	4	3.2	Documents Provided. Sec 19 of H&S Manual
4.14 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a policy pertaining to prohibited items on (e.g. knives, firearms)? Are all employees made aware of the prohibited items policy and is it enforced? If yes to any of these, reference appropriate Health and Safety manual section(s).	1	4	0.8	Yes documents provided in H&S Manual	0	0	Bidder answered no	0	0	Bidder answered no

	Question Weight (%)	LASC			Black & Mac			Cahill / Ganotec		
		Answer	Score	Score Comments	Answer	Score	Score Comments	Answer	Score	Score Comments
Health and Safety										
4.15 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you make reference to following legislative requirements where work is being performed?; violence policies and procedures; harassment policies and procedures. If yes to any of these, reference appropriate Health and Safety manual section(s).	1	4	0.8	Yes documents provided in H&S Manual	4	0.8	Documents provided, Sec 5 of H&S Manual	4	0.8	Documents Provided. Sec 21 of H&S Manual
4.16 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a policy or specific rules with respect to the use of personnel protective equipment (PPE)? Do you have a formal process in place for determining PPE requirements? If yes to any of these, reference appropriate Health and Safety manual section(s).	3	4	2.4	Yes documents provided in H&S Manual	4	2.4	Documents provided, Sec 6 of H&S Manual	4	2.4	Documents Provided. Sec 12 of H&S Manual
4.17 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Contractor Management: Do you pre-qualify subcontractors?; Do you include subcontractors in: orientations, health and safety meetings, inspections, audits. If yes to any of these, reference appropriate Health and Safety manual section(s).	5	4	4	Yes documents provided in H&S Manual	4	4	Documents provided, Sec1 of H&S Manual	4	4	Documents Provided. Sec 1.6 of H&S Manual
4.18 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Communications: Do you inform employees and subcontractors on Health and Safety alerts, programs, practices, procedures, rules, revisions and related information ? Do you have a joint Health and Safety committee? Do you hold scheduled safety meetings, such as weekly general safety meetings for all crew and weekly departmental meetings for each department at all worksites? Are Health and Safety meeting minutes and attendance recorded? If yes to any of these, reference appropriate Health and Safety manual section(s).	5	4	4	Yes documents provided in H&S Manual	4	4	Documents provided, Sec8 of H&S Manual	4	4	Documents Provided. Sec 3 of H&S Manual
4.19 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your Health and Safety program outline the requirements for supervisors and employees to conduct regular Health and Safety inspections of equipment and work conditions at all worksite(s)? If yes reference appropriate Health and Safety manual section(s).	3	4	2.4	Yes documents provided in H&S Manual	4	2.4	Documents provided, Sec 1 & 9 of H&S Manual	4	2.4	Documents Provided. Sec 17 of H&S Manual
4.20 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your Health and Safety program require the prompt reporting of hazardous conditions at all worksite(s)? If yes reference appropriate Health and Safety manual section(s).	5	4	4	Yes documents provided in H&S Manual	4	4	Documents provided, Sec 10 of H&S Manual	4	4	Documents Provided. Sec 1.6 of H&S Manual
4.21 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Health and Safety Training: Have your employees received the required Health and Safety training and retraining? Do you have a specific Health and Safety training program for supervisors? If yes to any of these, reference appropriate Health and Safety manual section(s).	3	4	2.4	Yes documents provided in H&S Manual	4	2.4	Documents provided, Sec 1 & 8 of H&S Manual	4	2.4	Documents provided
4.22 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Training Records: Do you have Health and Safety training records for your employees? How do you verify competency of the training (job monitoring? written test? competency check? oral test? other?). Are all training records available upon request? If yes to any of these, reference appropriate Health and Safety manual section(s).	3	4	2.4	Yes documents provided in H&S Manual	4	2.4	Documents provided, Sec 8 & 14 of H&S Manual	4	2.4	Records are available on site
Score	100	79.40			76.40			75.80		
	Percentage	79.40%			76.40%			75.80%		
PASS/FAIL		PASS			PASS			PASS		

Minimum Pass Score is 70%

Evaluated By	Sean Lee
Reviewed By	
Review Date	6-Feb-15

Attachment 5

Environmental Evaluation

Attachment 6 - Environmental Evaluation

RFP #: CH0031 | **RFP Name: Supply and Install Mechanical and Electrical Auxillary**

	Weight	Max Score	LASC JV.			Black & MacDonald			Cahill			Scoring Instructions
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	(Pass Mark 60%)
MANAGEMENT INVOLEMENT, LEADERSHIP AND ADMINISTRATION												
1.1 Environmental Management System (ISO or Not)?	3.0	5.0	0.0	0.00		0.0	0.00		0.0	0.00		*If ISO Score 5, If not ISO Score 3, If No System score 0*
1.1a Adequacy of TOC (if provided)	3.0	5.0	0.0	0.00		0.0	0.00		0.0	0.00		*Rank adequacy 1 - 5; If not provided Score 0*
1.1b Adequacy of Environmental Policy (if provided)	3.0	5.0	5.0	3.00		4.0	2.40	guideline	5.0	3.00		*Rank adequacy 1 - 5; If not provided Score 0*
1.3 Are environmental targets developed and reviewed on a regular basis?	3.0	5.0	5.0	3.00		5.0	3.00		5.0	3.00		*Yes = 5; No = 0*
1.3a Adequacy of Environmental targets	3.0	5.0	5.0	3.00		5.0	3.00	quarterly review	4.0	2.40		*Rank adequacy 1 - 5; If not provided Score 0*
1.4 Has a formal system, including the use of audits and inspections, been developed to define responsibilities for verifying that environmental performance objectives are met?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		*Yes = 5; No = 0*
1.4a Adequacy of audit and inspection information	1.5	5.0	4.0	1.20	annual	4.0	1.20	quarterly review	4.0	1.20		*Rank adequacy 1 - 5; If not provided Score 0*
2. ENVIRONMENTAL HAZARD IDENTIFICATION AND RISK MANAGEMENT												
2.1 Does the Bidder conduct formal risk assessments when planning and implementing operations and activities?	2.0	5.0	5.0	2.00		5.0	2.00		5.0	2.00		*Yes = 5; No = 0*
2.2 If "Yes", does that risk assessment include environmental risks?	1.5	5.0	5.0	1.50	comprehensive	5.0	1.50		4.0	1.20		*Yes = 5; No = 0*
2.2a adequacy of risk management system	1.5	5.0	5.0	1.50		5.0	1.50	comprehensive	4.0	1.20		*Rank adequacy 1 - 5; If not provided Score 0*
2.3 Has a formal hazard observation program been implemented at the Bidder's worksites?	0.5	5.0	5.0	0.50		5.0	0.50		5.0	0.50		*Yes = 5; No = 0*
2.3a Adequacy of hazard observation program	0.5	5.0	4.0	0.40	general insp.	4.0	0.40		4.0	0.40		*Rank adequacy 1 - 5; If not provided Score 0*
3. ORGANIZATIONAL RULES AND WORK PROCEDURES												
3.1 Does the Bidder have documented environmental protection plans for l jobs/work activities?	1.5	5.0	0.0	0.00		5.0	1.50		5.0	1.50		*Yes = 5; No = 0*
1a adequacy of EPP	2.5	5.0	0.0	0.00		4.0	2.00		5.0	2.50		*Rank adequacy 1 - 5; If not provided Score 0*
3.2 Does the Bidder have environmental contingency plans?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		*Yes = 5; No = 0*
3.2a adequacy of contingency plans/Does the plan outline responsibilities, available resources and actions to be taken in the event of an environmental incident?	2.5	5.0	4.0	2.00	Plan provided	4.0	2.00		4.0	2.00		*Rank adequacy 1 - 5; If not provided Score 0*
4. EMPLOYEE KNOWLEDGE, TRAINING AND AWARENESS												
4.1 Does the Bidder have an environmental awareness program?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		*Yes = 5; No = 0*
4.1a Adequacy of Program?	2.0	5.0	4.0	1.60		4.0	1.60		4.0	1.60		*Rank adequacy 1 - 5; If not provided Score 0*
4.2 Does the Bidder provide environmental awareness training to supervisory staff?	2.0	5.0	5.0	2.00		5.0	2.00		0.0	0.00		*Yes = 5; No = 0*
4.3 What is frequency of environmental awareness training?	2.0	5.0	4.0	1.60	project specific	4.0	1.60	provided once	4.0	1.60	annually	*Score 1-5. If monthly score 5; if bimonthly score 4; if quarterly score 3; if biannually score 2; if annually score 1*
4.3a Adequacy of content environmental awareness training	2.0	5.0	4.0	1.60		3.0	1.20	few details	4.0	1.60	few details	*Rank adequacy 1 - 5; If not provided Score 0*
5. PERSONAL COMMUNICATIONS AND ENVIRONMENTAL MEETINGS												
5.1 Are personal communications conducted to impart environmental awareness with other workers and thereby reducing the likelihood of non compliances or environmental incidents?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		*Yes = 5; No = 0*
5.2 Is there a system for sharing best practices and procedures, incidents and other information across the Bidder's organization?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		*Yes = 5; No = 0*
5.3 Is there an environment committee in place?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		*Yes = 5; No = 0*
5.4 Are regular (minimum monthly) environmental meetings held at all facilities to maintain effective communication of environmental information throughout the organization and with Bidder's contractors?	2.0	5.0	5.0	2.00		5.0	2.00		5.0	2.00		*Yes = 5; No = 0*
4a Adequacy of content and frequency of environmental meetings?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		*Rank adequacy 1 - 5; If not provided Score 0*
5.5 Are minutes and records of attendance of these meetings maintained?	0.5	5.0	5.0	0.50		5.0	0.50		5.0	0.50		*Yes = 5; No = 0*

Attachment 6 - Environmental Evaluation

RFP #: CH0031 | **RFP Name: Supply and Install Mechanical and Electrical Auxillary**

	Weight	Max Score	LASC JV.			Black & MacDonald			Cahill			Scoring Instructions
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	(Pass Mark 60%)
5a Adequacy of meeting minutes	0.5	5.0	5.0	0.50		5.0	0.50		5.0	0.50		Rank adequacy 1 - 5; If not provided Score 0
5.6 Does the Bidder respond in writing to environmental concerns raised at environmental meetings?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		Yes = 5; No = 0
6. ENVIRONMENTAL MONITORING AND REPORTING												
6.1 Has the Bidder developed specific procedures for environmental monitoring and reporting on incidents that occur at its worksites?	2.0	5.0	5.0	2.00		0.0	0.00		5.0	2.00		Yes = 5; No = 0
6.1a Adequacy of monitoring and incident procedure	1.5	5.0	5.0	1.50	weekly audit	0.0	0.00		4.0	1.20		Rank adequacy 1 - 5; If not provided Score 0
6.2 Does the Bidder use an EMS system to establish standards, reporting and follow up and corrective action?	1.5	5.0	5.0	1.50		5.0	1.50		0.0	0.00		Yes = 5; No = 0
6.2a Adequacy of this process	1.0	5.0	5.0	1.00		4.0	0.80		0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
6.3 Does the Bidder have dedicated environmental personnel?	2.0	5.0	5.0	2.00		0.0	0.00		0.0	0.00		Yes = 5; No = 0
6.3a Adequacy of personnel and responsibilities	0.5	5.0	5.0	0.50		0.0	0.00		0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
6.4 Are supervisors formally trained in accident/investigations?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		Yes = 5; No = 0
6.4a Adequacy of training program and frequency	0.5	5.0	5.0	0.50	very good	4.0	0.40		4.0	0.40		Rank adequacy 1 - 5; If not provided Score 0
7. ENVIRONMENTAL INCIDENT ANALYSIS												
7.1 Does the Bidder have in place a formal system for the collection, analysis, trending and evaluation of environmental incident data and statistical analysis?	1.5	5.0	5.0	1.50		0.0	0.00		5.0	1.50		Yes = 5; No = 0
7.2 Does the Bidder develop monthly environmental incident analysis reports, which are reviewed during management review meetings?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
7.3 Does senior management review and comment on serious and significant environmental incidents?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
.4 Are all incident reports followed through from recommendations to ompletion and closure?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
8. LEADERSHIP TRAINING												
8.1 Does Bidder's management receive formal environmental management training which provides a thorough understanding of the philosophies and principles behind environmental management?	2.0	5.0	5.0	2.00		0.0	0.00		0.0	0.00		Yes = 5; No = 0
8.1a Adequacy of environmental management training	2.0	5.0	4.0	1.60	toc provided	0.0	0.00		0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
8.2 Does the Bidder's management receive an orientation to the Bidder's Environmental Management System that includes an introduction to individual accountabilities and responsibilities?	2.0	5.0	5.0	2.00		5.0	2.00		0.0	0.00		Yes = 5; No = 0
8.2a Adequacy of orientation	2.0	5.0	3.0	1.20	limited info.	3.0	1.20	limited info.	0.0	0.00		Rank adequacy 1 - 5; If not provided Score 0
9. ENVIRONMENTAL AUDITS, INSPECTIONS AND PREVENTATIVE MAINTENANCE												
9.1 Is there a documented process for performing environmental audits?	2.5	5.0	5.0	2.50		5.0	2.50		5.0	2.50		Yes = 5; No = 0
9.2 Has a formal process been developed to ensure routine environmental monitoring?	2.0	5.0	5.0	2.00		5.0	2.00		5.0	2.00		Yes = 5; No = 0
9.3 Does the Bidder have planned preventative measures in place to prevent environmental incidents?	2.0	5.0	5.0	2.00		5.0	2.00		5.0	2.00		Yes = 5; No = 0
10. CRITICAL OPERATION AND TASK ANALYSIS												
10.1 Has a systematic approach been developed to identify and inventory all tasks based on mandatory rules, regulations and applicable codes, guidelines and standards?	2.0	5.0	5.0	2.00		0.0	0.00		0.0	0.00		Yes = 5; No = 0
10.2 Is there a formal process to assess the environmental requirements associated with the tasks and to mitigate the risk to ensure compliance with the requirements?	2.0	5.0	5.0	2.00		0.0	0.00		5.0	2.00		Yes = 5; No = 0
11. SYSTEM REVIEW AND EVALUATION												
11.1 Do the Bidder's senior management conduct regular reviews of the Environmental Management System, at least annually or at more frequent intervals, as the organization may deem necessary?	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		Yes = 5; No = 0
11.1a Adequacy of reviews	1.5	5.0	4.0	1.20		5.0	1.50		5.0	1.50		Rank adequacy 1 - 5; If not provided Score 0
1.2 Do these reviews include environmental management policies and ocedures and other inputs such as the results and recommendations om environmental audits, monitoring and surveys and analysis of incident nvestigations?	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		Yes = 5; No = 0
12. STATISTICS												
12.1 Number and type of directives from clients or regulators	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5

Attachment 6 - Environmental Evaluation

RFP #: CH0031 | **RFP Name: Supply and Install Mechanical and Electrical Auxillary**

	Weight	Max Score	LASC JV.			Black & MacDonald			Cahill			Scoring Instructions
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	(Pass Mark 60%)
2.2 Oil spill incidents;	1.5	5.0	3.0	0.90	2.00	0.0	0.00	8.00	5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.3 Waste management incidents;	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.4 Hazardous materials incidents;	1.5	5.0	4.0	1.20	1.00	5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.5 Water degradation incidents;	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.6 Air degradation incidents; and	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.7 Soil degradation incidents.	1.5	5.0	5.0	1.50		5.0	1.50		5.0	1.50		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.8 Total Environmental Incidents	1.0	5.0	5.0	1.00		5.0	1.00		5.0	1.00		For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
Total Weighed Scores	100.0			85.50			72.30			73.30		

Comments:

Environment and Regulatory Compliance Manager:

Date:

Attachment 6

Quality Assurance Evaluation

RFP - Quality Assurance Evaluation Report

RFP #: CH0031 **RFP Name:** Balance Of Plant

Quality Questionnaire Questions	Weight	Max Score	Bidder 1			Bidder 2			Bidder 3			Bidder 4			Bidder 5			Bidder 6		
			Alberici/LMC/Sunnycorner - Joint Venture			Black & McDonald Limited			Cahill/Ganotec - Joint Venture			N/A			N/A			N/A		
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments
1ii) Bidder's quality policy statement and list of current quality objectives.	0.2	5.0	4.0	0.16	Quality policy provided but quality objectives only listed in TOC of manual.	4.0	0.16	Statement of commitment to the quality management system is OK to cover the quality policy but it relates to their Nuclear manual and no quality ojectives clearly identified.**Scoring has been revised because of objective evidence provided by the bidder during the pre-award audit performed by LCP on 27-April-2016 (The bidder provided a draft copy of there Quality Management System Manual, the bidder is currently in process of getting there ISO certification for Eastern Canada, the new QMS has a quality policy and objectives).**	4.5	0.18	Quality policy and list of quality objectives provided as requested.	0.0	0.00		0.0	0.00		0.0	0.00	
1iii)Bidder's Master Documents List or the Table of Contents of your policy and procedures manual.	0.5	5.0	4.0	0.40	TOC of their quality manual provided.	4.0	0.40	TOC for their N286 Nuclear manual provided and a list of management system documents provided.	4.5	0.45	TOC and quality manual provided, well defined.	0.0	0.00		0.0	0.00		0.0	0.00	
1iii) Bidder's current Internal / External Audit Schedules.	1.0	5.0	4.5	0.90	Copy of their internal and external audit schedule provided as requested, well defined.	1.0	0.20	Audit schedule provided but it is only for Nuclear work in Ontario for 2015 and doesn't include any other projects outside of Nuclear, no evidence of other audit to be performed internal or external.	4.5	0.90	Audit schedule provided for 2014, covers internal and external audits.	0.0	0.00		0.0	0.00		0.0	0.00	
1iv)Bidder's third party ISO 9000 registration, if available.	0.5	5.0	4.5	0.45	ISO certification provided for all 3 companies, expiry date is 05-July-2016 for the lead quality system (Alberici) to be used during construction phase.	3.0	0.30	Contractor is not ISO certified.**Scoring has been revised because of objective evidence provided by the bidder during the pre-award audit performed by LCP on 27-April-2016 (The bidder provided a draft copy of there Quality Management System Manual, the bidder is currently in process of getting there ISO certification for Eastern Canada, the bidder is ISO certified in other provinces).**	4.5	0.45	ISO certification provided, expiry date is 07-Mar-2017.	0.0	0.00		0.0	0.00		0.0	0.00	
1v) Most Recent Management Review Minutes of Meeting.	1.0	5.0	4.0	0.80	Management review meeting minutes provided, some minor concerns listed.	1.0	0.20	Management review meeting minutes provided for 2013, which covers Nuclear only from what I can tell, the minutes indicate some minor quality issues from the performance and operations managers, no details on any other projects provided.	3.5	0.70	Management review meeting minutes provided, some concerns listed regarding documentation issues.	0.0	0.00		0.0	0.00		0.0	0.00	
1vi) If ISO 9001:2008 registration is held, a copy of last third party surveillance report.	0.3	5.0	4.5	0.27	Third party audit report provided, audit results indicate fully compliance, no actions required.	3.0	0.18	Contractor is not ISO certified, so no third party audit report available.	4.0	0.24	Third party audit report provided, some areas of concern identified and require actions.	0.0	0.00		0.0	0.00		0.0	0.00	
2) Briefly describe any processes employed to plan the activities related to the requested products / services. If available, provide typical examples of Quality Plans and / or Inspection and Test Plans.	0.4	5.0	4.5	0.36	Bidder provided detailed quality plan and a detailed ITP as requested, bidder also performs a project Startup meeting with all project areas present, well defined information provided.	4.0	0.32	Bidder provided a very detailed quality plan and completed ITP but they are again related to Nuclear only.	4.0	0.32	Bidder indicates that if a quality plan/ITP is required they will develop, a sample quality plan and ITP template only have been provided.	0.0	0.00		0.0	0.00		0.0	0.00	
3) Describe how this work relates to the total annual productive capacity of Bidder's company and that of Bidder's main suppliers.	0.5	5.0	4.0	0.40	Bidder indicate that they have ample capacity and resources throughout Atlantic Canada, elsewhere in Canada and the USA if required.	4.5	0.45	Bidder identified that the annual capacity in less then 10% and is mostly construction labour, main supplier's have confirmed no issues.	3.5	0.35	Bidder provided limited information on capacity, they only indicated that the work is well within their capacity.	0.0	0.00		0.0	0.00		0.0	0.00	
4) Briefly describe the processes used to control the design of the products / services to be supplied. Include references to the following processes: • Design Planning • Design Review • Design Verification • Design Validation • Design Changes	1.0	5.0	3.0	0.60	Bidder doesn't perform design work, design will be sub contracted.	3.0	0.60	Bidder doesn't perform design work, design will be sub contracted.	3.0	0.60	Bidder doesn't perform design work, design will be sub contracted.	0.0	0.00		0.0	0.00		0.0	0.00	
5) Briefly describe the Bidder's Supplier / Sub-contractor selection process and any processes employed to monitor continued performance against contract requirements. In Bidder's response include a list of any services associated with the scope of work that would be sub-contracted out and where appropriate, the contract details for that Sub-Contractor.	1.0	5.0	3.5	0.70	Bidder provided well detailed response to support supplier and subcontractor selection, monitoring, which included identifying procedures that are used but no copies of the procedures have been provided fro reference.	3.0	0.60	Bidder has a process in place for an approved supplier list which is covered in the Nuclear manual, they indicated that have a procedure BM- PROC-028 Approved Supplier List but it was not provided as identified in the questionnaire.	4.0	0.80	Bidder provided a well defined procedure that covers all areas of sub contracted work.	0.0	0.00		0.0	0.00		0.0	0.00	

RFP - Quality Assurance Evaluation Report

RFP #: CH0031 **RFP Name:** Balance Of Plant

Quality Questionnaire Questions	Weight	Max Score	Bidder 1 – Alberici/LMC/Sunnycorner - Joint Venture			Bidder 2 – Black & McDonald Limited			Bidder 3 – Cahill/Ganotec - Joint Venture			Bidder 4 – N/A			Bidder 5 – N/A			Bidder 6 – N/A		
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments
6) What techniques does the Bidder employ to verify that the product / service have been delivered appropriately and in accordance with the contract requirements? What verification records are generated?	0.4	5.0	4.0	0.32	Bidders project management is responsible to ensure materials are received per procedure ACL7004 (Material receiving, inspection, handling and Storage), PM responsible for PO and delivery log per procedure ACL0407 to track deliveries, material inspected per PO requisition and BOL, receiving reports are completed.	4.0	0.32	Bidder covers the following in their Nuclear manual, project planning execution & control, work planning, generate & control of ITP's. They also identified verification records, inspection reports, NCR's, cal records, pressure test reports etc.., they also provided procedure BM-PROC-14 Work Planning , procedure BM-PROC-015 Control of ITP's.	4.0	0.32	Bidder performs inspection/testing upon receipt, materials/components are not used until inspected, in-process and final inspections are performed, records are filed according to written procedure.	0.0	0.00		0.0	0.00		0.0	0.00	
7) Briefly describe the Bidder's records retention system and the normal records retained (or supplied to the client) as part of this **product / service** delivery. Bidder's response should make reference to records such as Material Test Reports, Non-destructive examination records, in process inspections and Factory Acceptance tests.	0.2	5.0	4.0	0.16	Bidder has a document control master list, project records are maintained per procedure ACL7022, PM/QM ensure records are controlled, project records are kept for 12 years, did not listed any type of records as requested.	4.0	0.16	Bidder provided a procedureBM-PROC-023 Project Turnover which indicates that records will be filed permanently ??, they also listed records to be filed MTR's, NDE records, inspection reports, ITP's etc..	3.5	0.14	Bidder didn't provide details to the question but did provided a detail procedure for the control of records, they did not list type of records as requested.	0.0	0.00		0.0	0.00		0.0	0.00	
8) What processes does the Bidder employ to ensure that inspection is performed and Measuring and Test Equipment is fully calibrated and functioning appropriately?	0.5	5.0	3.5	0.35	Project manager/foreman ensure compliance of measuring/test equipment, controlled by procedure and documented evidence, QMS indicates required calibration, procedure controlled by procedure ACL7003.	4.5	0.45	Bidder provided a detailed procedure BM-PROC-019 for Control of Measuring and Test equipment.	3.5	0.35	Bidder has measuring, testing,calibration covered in section 7.5 of their QMS manual but no other information provided in response.	0.0	0.00		0.0	0.00		0.0	0.00	
9) When products / services do not meet requirements, what processes are employed to ensure timely resolution of the problem? If so, what records of the problem and solution are generated?	0.2	5.0	4.0	0.16	NCR process in place to cover all non conforming conditions, process well explained, NCR forms, NCR log, quality manager responsible for closure.	4.5	0.18	Bidder provided a detailed procedure BM-PROC-039 called Problem Identification & Resolution which identifies the control of non conformances.	3.5	0.14	Bidder provided procedure which included flows charts but no response to the question provided.	0.0	0.00		0.0	0.00		0.0	0.00	
10) Does the Bidder employ any continuous improvement processes or other methods to monitor evaluate and improve the quality of products / services provided? If so, briefly describe them. Include in your response details on the following: • Processes to monitor and measure effects of continuous improvement changes. • Processes for the evaluation and implementation of innovative and cost reduction ideas.	0.5	5.0	3.5	0.35	Bidder has a formal review of the QMS annually with senior management, recommendation for improvement are identified and unresolved issues are reviewed and finalized, quality objectives are established abd tracked, quality meetings held monthly.	3.0	0.30	Bidder indicated that continuous improvement is covered BM-MAN-001 Nuclear manual, there is a section with little information and no information provided in the questionnaire.**Scoring has been revised because of objective evidence provided by the bidder during the pre-award audit performed by LCP on 27-April-2016 (The bidder provided a draft copy of there Quality Management System Manual, the bidder is currently in process of getting there ISO certification for Eastern Canada, the new QMS covers continuous improvement).**	4.0	0.40	Bidder identified continuous improvement initiatives per internal audits, analyses of data, customer feedback, lessoned learned, CAR's and NCR's, their quality manual also has a section on continuous improvement.	0.0	0.00		0.0	0.00		0.0	0.00	
11) Does the Bidder employ any processes to monitor internal / external audit activities to ensure conformance to procedures? If so, briefly describe them.	0.5	5.0	3.5	0.35	Bidder indicates that an internal audit plan is developed by quality and planned audits will be performed, the QMS is audited annually, additional audits are scheduled for areas of concern, internal audit report are used as input to the Management Review Meeting, no audit procedure provided.	4.0	0.40	Bidder provided a detailed procedure BM-PROC-034 on their auditing process.	3.0	0.30	Bidder did not provided any details to the question, they did reference their quality manual which mentions audit process, no audit procedure provided.	0.0	0.00		0.0	0.00		0.0	0.00	
12) Briefly describe the Bidder's Training Policy and any controls used to ensure personnel are competent to perform their defined functions and responsibilities.	0.5	5.0	4.5	0.45	Well defined answer provided which included senior managers are responsible to ensure personnel are qualified and receive training in accordance with the QMS, quality manager ensures QA/QC is qualified and certified, training requirements are listed in the QMS manual, training is conducted under the direction of quality manager, employees shall receive training on all section of the QMS, unionized labour receive quality training prior to start of work, indoctrination is written or by video, subcontractors receive training related to their work, subcontractor performing QA/QC work will be trained on all sections of the QMS.	4.0	0.40	Bidder provided a detailed procedure BM-PROC-040 on training and qualifications.	4.0	0.40	Bidder has a training process covered in the quality management manual, trade workers are required to provide proof of competency prior to site access, staff will not pass probation period without education/training certificates.	0.0	0.00		0.0	0.00		0.0	0.00	

RFP - Quality Assurance Evaluation Report

RFP #: CH0031 **RFP Name:** Balance Of Plant

Quality Questionnaire Questions	Weight	Max Score	Bidder 1 – Alberici/LMC/Sunnycorner - Joint Venture			Bidder 2 – Black & McDonald Limited			Bidder 3 – Cahill/Ganotec - Joint Venture			Bidder 4 – N/A			Bidder 5 – N/A			Bidder 6 – N/A		
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments
13) Briefly describe any servicing and / or product support required / recommended as part of the delivery of this equipment / service.	0.5	5.0	4.0	0.40	Internally site operations personnel support and service by appropriate departments, externally subcontractor and supplier must comply with service performances specifications including warranties and guarantees.	4.5	0.45	Bidder works with client to ensure equipment is installed per spec, client training as required, commissioning completed and signed off by installers/manufactures/client, operation manuals and spare parts are turned over to client, warranty items are serviced in house or by manufacture technicians.	4.0	0.40	Bidder indicates that some systems in the powerhouse require servicing and annual certification (fire detection/protection systems), also indicate that some building require planned servicing (HVAC and energy control system, they also talk about electrical and mechanical equipment should be assessed for service requirements.	0.0	0.00		0.0	0.00		0.0	0.00	
14) Briefly describe any processes employed to monitor Customer Satisfaction and how these processes will be applied to the proposed scope of work.	0.2	5.0	4.5	0.18	Customer satisfaction survey is used to capture feedback,the quality manager evaluates, each director is responsible to get feedback, all feedback is reviewed in the management review committee, all survey are tracked in client satisfaction log,ongoing projects are reviewed monthly.	4.5	0.18	Customer surveys are used to track customer satisfaction, lessons learned are reviewed, survey info may result in adjustments to schedule, procedures, processes, procedure BM-PROC-008 Communication & Stakefolder Relations provided.	4.0	0.16	Customer satisfaction process in place with survey for feedback on every project, negative feedback automatically generates a CAR.	0.0	0.00		0.0	0.00		0.0	0.00	
15) The Bidder shall confirm that it has reviewed and can comply with any Quality Assurance requirements outlined in the contract agreement and that the responses to this questionnaire are true and accurate.	0.1	5.0	4.5	0.09	Questionnaire signed off as requested by company representative.	4.5	0.09	Questionnaire signed off as requested by company representative.	4.5	0.09	Questionnaire signed off as requested by company representative.	0.0	0.00		0.0	0.00		0.0	0.00	
Total Weighed Score	10.0				7.85			6.34			7.69			0.00			0.00			0.00

****Proponent must achieve a minimum Total Weighted Score of 60 percent to be considered acceptable.**

		Bidder 1	Bidder 2	Bidder 3	Bidder 4	Bidder 5	Bidder 6
Recommended	Green	79%	63%	77%	0%	0%	0%
Clarification / Pre Award Audit (Desk Top and/or Site) Recommended	Yellow						
Not Recommended	Red						

****Proponent must achieve a minimum Total Weighted Score of 60 percent to be considered acceptable.**

Comments: (Overall impression of the Bidder and how the evaluation as it relates to the recommendation)

Bidder 1: Bidder is recommended but prior to award the bidder/joint venture will be audited including subcontractors to verify their quality management system implementation based on their bid documents. Note: Proposed Quality Manager has the experience and qualifications to meet LCP requirements (CSA 178.2 Level 2 Certified Welding Inspector, Certified ISO Internal Auditor and large construction project experience).

Bidder 2: Bidder is not recommended based on documented evidence provided related to their proposed new quality management system. The new information provided appears to focus mainly on the bidders Nuclear manual requirements for projects based on Ontario's Nuclear industry. The new information including procedures provided is completely different from the first submittal on their proposed quality management system. LCP quality is very concerned whether the bidder actually has a quality management system that they are currently implementing on other projects similar to LCP SOW requirements based on the evidence provided, many of the answers provided had limited information with comments to refer to the Nuclear manual or procedures only, it is hard to determine if the bidder has a quality department/team in place and/or quality members are trained on the new quality management system proposed for implementation on the CH0031 SOW. Also the proposed Quality Manager is well experienced and has the qualifications to meet LCP requirements (CSA 178.2 Level 2 certified Welding Inspector, API Certified in many areas, CGSB Certification in RT/MT/PT) but appears to be currently working elsewhere and not employed by the bidder at this time which is concerning. LCP's intent is to approve bidders that currently have a quality management system in place based on ISO requirements, it is not the intent to approve bidders without a quality management system in place or to bidders that are trying to implement a new quality management system during the CH0031 SOW. In order for the bidder to meet LCP quality expectations the bidder would need to demonstrate their quality management system implementation to LCP based on a LCP detailed audit of a current or past project similar in nature to the CH0031 SOW prior to award. The audit shall be performed on a project that was completed by the bidder without joints ventures as proposed for the CH0031 SOW in the bid documents provided by the bidder, the project to be audited must have been completed with the intent of following ISO requirements in order to meet LCP expectations. The audit shall not be performed on a Nuclear project, the project needs to be similar to the CH0031 SOW. If the bidder is selected LCP will also audit the bidders proposed subcontractors as deemed necessary.
(Note: LCP's quality department performed a per-award audit on 27-Apr-2016, during the audit LCP was provided with objective evidence to support that the bidder has the capability to develop a Quality Management System to meet the project requirements.. The bidder also identified a new quality manager that currently works for the bidder and fully understands thier internal processes and procedures. Based on the new information provided during the pre-award audit the scoring has been revised to support that the bidder can be recommended as meeting the minimum requirements regarding their Quality management System and can be considered as passing the quality section of the bid proposal).

Bidder 3: Bidder is recommended but prior to award the bidder/joint venture will be audited including subcontractors to verify their quality management system implementation based on their bid documents. Note: Proposed Quality Manager has the experience and qualifications to meet LCP requirements (CSA 178.2 Level 2 Certified Welding Inspector and large construction project experience).

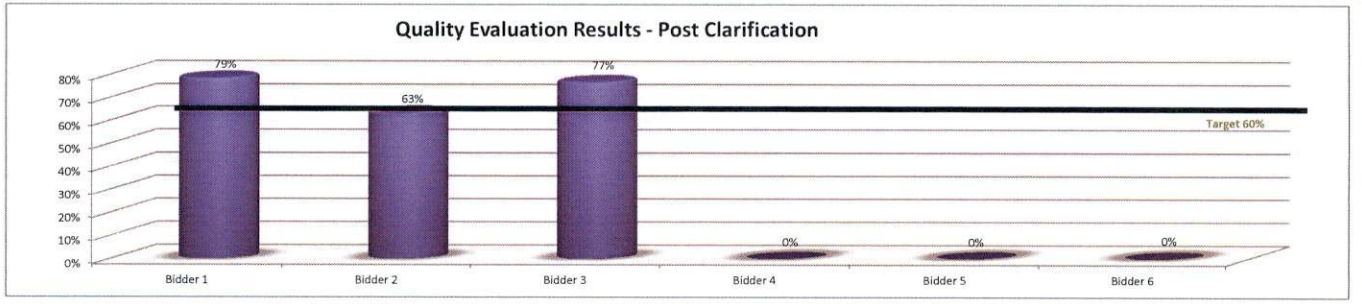
Bidder 4:

Bidder 5:

Bidder 6:

Scoring Guide:

0 - Question not answered or no relevant information provided in response
1 - Response does not meet key criteria
2 - Response only meets a few of the key criteria
3 - Response meets a majority of the key criteria
4 - Response meets all key criteria
5 - Response meets and exceeds key criteria



Quality Representative: Paul Fraser

Date: 03-Feb-2015 Revised 09-Mar-2015
Revised 05-May-2016

RFP - Quality Assurance Evaluation Report																								
RFP #: CH0031	**RFP Name**: Balance Of Plant																							
Quality Questionnaire Questions	Weight	Max Score	**Bidder 1**			**Bidder 2**			**Bidder 3**			**Bidder 4**			**Bidder 5**			**Bidder 6**		
			Alberici/LMC/Sunnycorner - Joint Venture			**Black & McDonald Limited**			**Cahill/Ganotec - Joint Venture**			**N/A**			**N/A**			**N/A**		
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments

Attachment 7

Risk Management Evaluation

Nalcor Energy
Lower Churchill Project

BID EVALUATION
DISCIPLINE SCORE SHEETS

RFP - Risk Management Questionnaire Evaluation

Package Number:	Package Name:
CH0031	Supply and Install Mechanical and Electrical auxiliaries (MF)

Scoring Guide:

0 - Question not answered or no relevant information provided in response
1 - Response does not meet key Criteria
2 - Response only meets a few of the key criteria
3 - Response meets a majority of the key criteria
4 - Response meets all key criteria
5 - Response meets and exceeds key criteria

		Question Weight (%)	Bidder 1			Bidder 2			Bidder 3		
			Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments
Item	**Risk Management**										
1	Risk Management system in place.	5	4	4		4	4		4	4	
2	Risk Management Plan - Risk Register sample.	3	4	2.4		2	1.2	Clarification provided.	4	2.4	Clarification provided.
3	Top 5 Risks - Identification.	4	4	3.2		4	3.2		4	3.2	
4	Scope represent a risk for timely delivery	4	4	3.2		4	3.2		4	3.2	
5	Loss Control Program.	3	1	0.6		3	1.8	Clarification provided.	3	1.8	Generic statement
6	Involvement of sub-suppliers and sub-contractors in Risk Management.	3	4	2.4	Clarification provided.	1	0.6	Clarification provided.	2	1.2	Clarification provided. No list of sub-suppliers - sub-contractors provided.
7	Records of Successful on-time delivery performance (last 05 years).	3	4	2.4	Clarification provided.	4	2.4		4	2.4	No historical records provided.
8	Root Causes of unsuccessful on-time delivery (last 05 years).	4	4	3.2	Bidder indicated no unsuccessful deliveries.	3	2.4	General statement provided.	4	3.2	
9	Discussion on Schedule Critical Path.	5	3	3	Clarification provided.	3	3	General statement provided.	4	4	
10	Production workload forecast for all major facilities.	4	4	3.2		4	3.2		4	3.2	
11	Examples of on-time and late mobilization & deployment of crews & equipment. Mobilization strategy and plan contemplated for CH0031.	7	4	5.6	Clarification provided.	4	5.6		4	5.6	
12	Mitigation of lower productivity due to adverse weather. Does it include additional float and where?	6	4	4.8		4	4.8		4	4.8	
13	Strategy and plan for timely and successful installation due to adverse weather.	5	4	4		4	4		4	4	
14	Statement concerning Strikes and Labour Agreements.	5	4	4	Clarification provided.	4	4	Clarification provided.	4	4	
15	Description of HSE Risk Management system.	7	3	4.2		3	4.2		4	5.6	
16	Description of QA/QC Management system.	4	3	2.4		4	3.2		4	3.2	
17	Processes and procedure to manage Change.	3	4	2.4		4	2.4		3	1.8	Generic statement
18	Skills critical to the success of the project and number of people.	5	4	4	Clarification provided.	4	4		4	4	
19	Familiarity with Canadian standards specified throughout the Agreement.	5	4	4		4	4		4	4	
20	Measure to be implemented if English is not the first language.	3	4	2.4		4	2.4		4	2.4	
21	Lessons learned to retain skilled labor to comply with contractor's cost & schedule.	4	4	3.2		4	3.2		4	3.2	
22	Description of responsibilities (company vs. sub-suppliers/sub-vendors) on logistics to assure timely delivery of critical equipment.	5	4	4		4	4		4	4	
23	Responsibility statement	3	4	2.4		4	2.4		4	2.4	
	Score - transfer to Technical Summary	100	75.00			73.20			77.60		
		Total Percentage	75.00%			73.20%			77.60%		

Scored By: C. Fernandez: Deputy Project Control Manager

Date:

Attachment 8

Presentations and Minutes

- CH0031 Detailed Commercial Update – Interim Review 19-May-2015
- CH0031 Detailed Technical Evaluation – Interim Review 19-May-2015
- Package CH0031 Strategy Review 22-Oct-2015
- CH0031 Detailed Commercial Update – Interim Review 29-Feb-2016
- CH0031 Detailed Technical Evaluation – Interim Review 29-Feb-2016
- Email: CH0031 Steering Committee – meeting summary 25-Apr-2016
- CH0031 Clarification Meeting Technical Summary 25-Apr-2016
- Email: CH0031 Steering Committee Actions 1-Jun-2016
- Minutes: Management of PLA Labour risk through risk reward compensation model 3-Jun-2016
- CH0031 – Steering Committee – Evaluation Summary 22-Jun-2016

Lower Churchill Project

CH0031 Detailed Commercial Update – Interim Review

May 19, 2015

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General

- 3 Bids expire 15-July-2015
- All Bidders have been issued multiple commercial clarifications.
- Have another addendum planned with ~ 400 revised drawings, some revised specifications and revised site conditions.

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Bidder 1

Highlights

- Proposal not commercially compliant.
  - Pricing model proposed is fixed price for permanent materials, everything else reimbursable with markup
  - Have proposed very broad non-specific exceptions to Articles
  - Do not offer LOC or PCG as security.
- No cap on labour
- Bid Clar Mtg 4-June

Risks

- No incentive to perform well
- Have not waivered from price model when challenged
- Unlikely to agree to acceptable terms

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Bidder 2

Highlights

- Original proposal was not compliant
- After much clarification now close to compliance
- Many 'technical' exceptions with commercial implications
- Not offering LOC as security
- Few exceptions to Articles
- 50% labour contingency
- Bid Clar Mtg 21-May

Risks

- Price increasing as they become more compliant
- Will have trouble getting correct security
- If pushed too hard in negotiations they may withdraw

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Bidder 3

Highlights

- Proposal compliant
- Have been very responsive throughout bid clarification
- Have many exceptions to Articles however seem willing to negotiate
- Will provide LOC if required
- Company pays all of labour above TCL to LMAX
- 50%Labour contingency
- Articles discussion 8-Apr
- Bid Clar Mtg 28-May

Risks

- Negotiating acceptable T&C
- Proposed exceptions very change oriented
- Will become difficult to negotiate if we lose Bidders

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Lower Churchill Project

CH0031 Detailed Technical Evaluation – Interim Review

May 19, 2015

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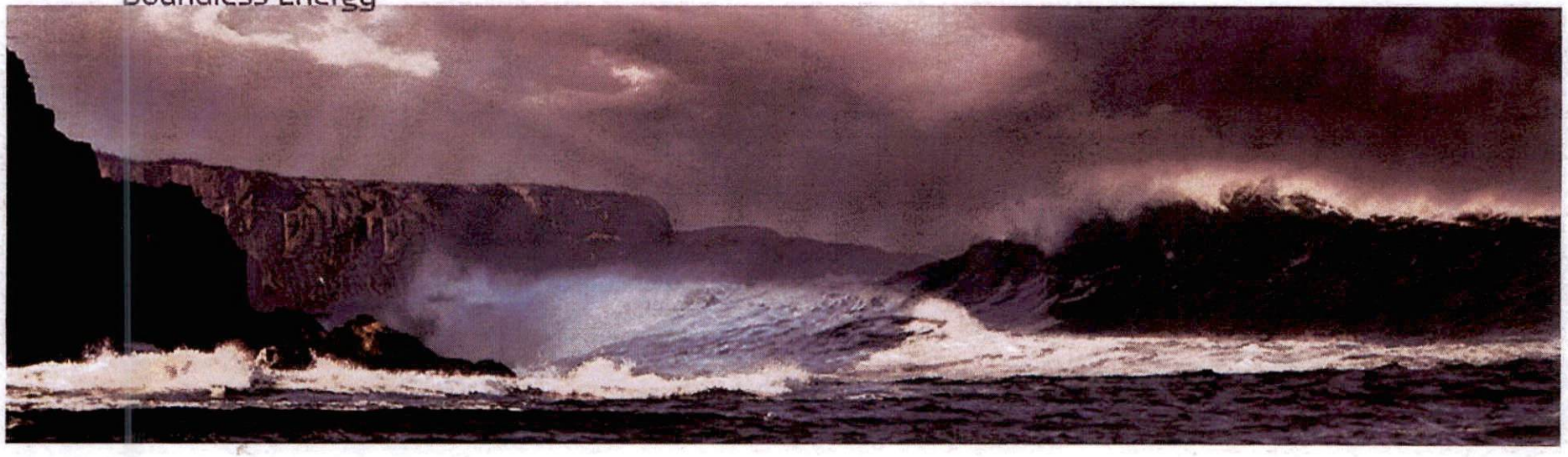

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Interim Results – Prior to Bid Clarification Meetings

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Interim Scores – Technical Team

Criteria	Bidder 1	Bidder 2	Bidder 3
Quality (P>60%)	Pass (79%)	Fail (56%)	Pass (77%)
Risk Management (P>60%)	Pass (75%)	Pass (73%)	Pass (77%)
Health and Safety (P>70%)	Pass (79%)	Pass (76%)	Pass (76%)
Environment (P>60%) .	Pass (86%)	Pass (72%)	Pass (73%)
Technical	56%	32%	71%

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Bidder 1

Highlights

- Compliant with all RFP milestones
- Extensive execution plan
- Experience in Labrador
- Serious bidder

Risks

- Manpower and infrastructure requirements
- Proposal is for reimbursable engineering and commissioning
- Reluctant to name preferred sub-suppliers
- Experience of key personnel
- Schedule logic

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Bidder 2

Highlights

- Compliant with all RFP milestones
- Bidder has experience with similar scopes of work in Ontario
- Labrador experience

Risks

- Quality management system is a major concern
- Bidder's technical submission is very light on details
- Minimal execution plan
- Key personnel
- Is this bidder willing to support their proposal?

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Bidder 3

Highlights

- Compliant with all RFP milestones
- Good level of detail in Execution Plan
- Vast experience in Labrador and existing presence at MF Site.
- Few technical exceptions
- Serious bidder with existing offices in St. John's

Risks

- Reluctant to name preferred sub-suppliers
- Experience of key personnel

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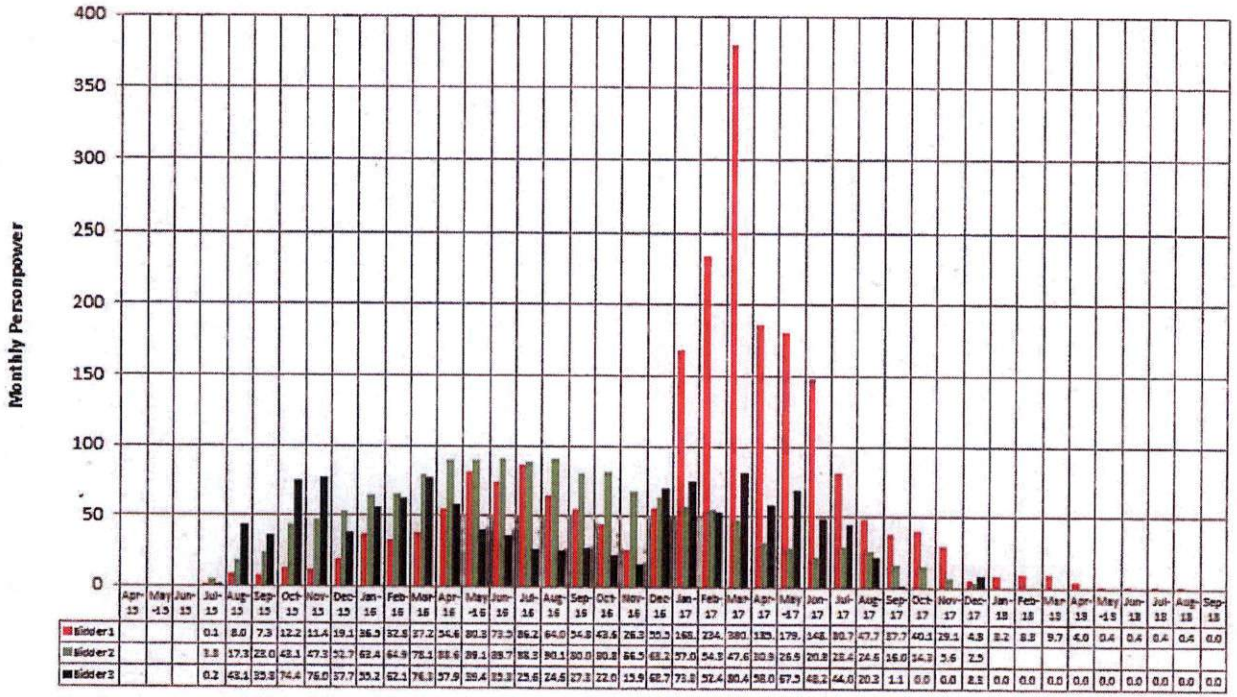
Key items to be resolved

- Revised pricing on changes (~400 updated drawings)
- Submitted schedules – logic and line items
- Site conditions – trailers, warehousing, power, washcars, heat etc.
- PCS – Project Completions System
- Laydown areas and SSB space allocation
- GSU assembly expertise and work area
- Need to ensure experienced personnel
- Value Engineering – pricing and implementation
- Value substitutions recommend by bidders

Monthly Personpower Estimates

Schedule Export - CH0031

Note: Bidder 1 & 2 figures are from Original Bid Submission.
Bidder 3 figures are from Company Clarification/ Question response.



	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18
Bidder 1				0.1	8.0	7.3	12.2	11.4	19.1	36.9	52.6	57.2	54.6	80.3	73.5	86.2	64.0	54.8	43.6	28.3	55.5	168.	234.	380.	185.	179.	148.	80.7	47.7	37.7	40.1	29.1	4.8	8.2	8.8	9.7	4.0	0.4	0.4	0.4	0.0
Bidder 2				1.8	17.3	23.0	48.1	47.3	52.7	62.4	64.9	78.1	88.6	89.1	89.7	88.3	80.1	80.0	80.8	86.5	68.2	57.0	54.3	47.6	30.9	26.9	20.8	28.4	24.5	16.0	14.3	5.6	2.5								
Bidder 3				0.2	48.1	35.8	74.4	76.0	37.7	55.2	62.1	76.3	57.9	59.4	55.3	25.6	24.6	27.3	22.0	15.9	62.7	73.8	52.4	80.4	58.0	67.5	48.2	44.0	20.2	1.1	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

- Bidder 1, Construction Acts only! Total hrs = 688,099
- Bidder 2, Fabrication & Construction Acts! Total hrs = 442,013
- Bidder 3, Construction Acts only! Total hrs = 373,175

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Bidder Technical Clarification Cycle

Bid closing 16Jan2015

	Bidder 1		Bidder 2		Bidder 3	
Clarification	Issued	Response	Issued	Response	Issued	Response
#1 ~ 270 items	10Feb2015	25Feb2015	10Feb2015	24Feb2015	10Feb2015	25Feb2015
#2 ~ 50 items	13Mar2015	14Apr2015	13Mar2015	17Apr2015	13Mar2015	6Apr2015
# 3	being prepared	-	Being prepared	-	being prepared	-

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Lower Churchill Project
Package CH0031 Strategy Review
22-Oct-2015

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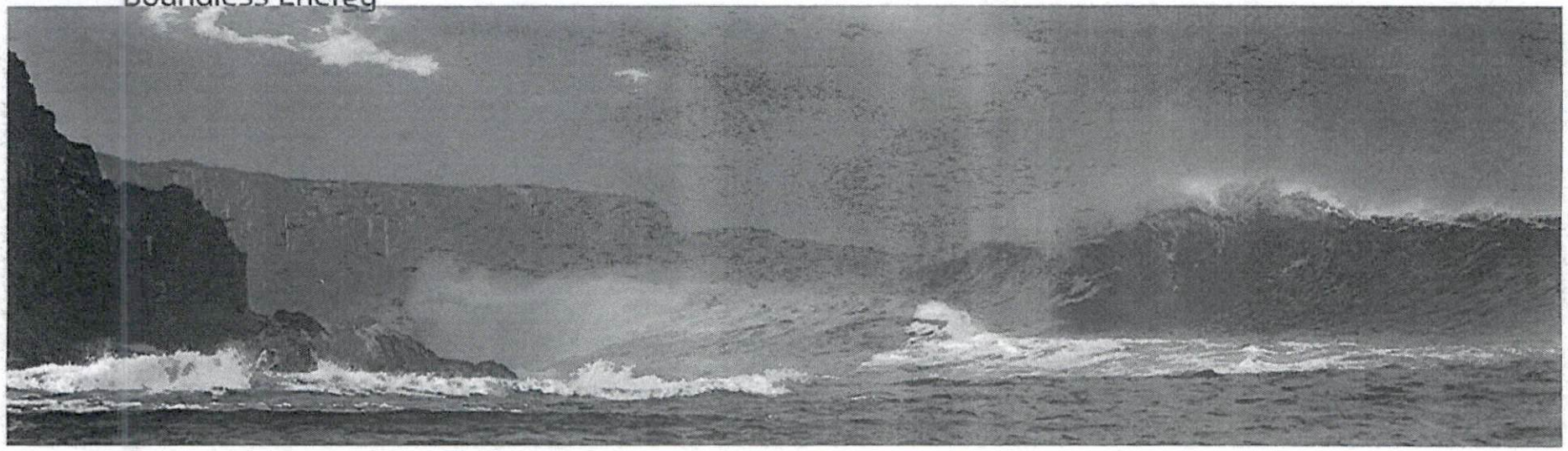

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LOWER CHURCHILL PROJECT

CH0031 Package Status

- Bids closed 16Jan2015.
- Bid validities are good until 31Oct2015.
- All three bidders remain committed to bid; commercial and technical clarifications are ongoing.
- All three bidders have advised they cannot provide updated pricing until a new Exhibit 9 (Milestone Schedule) is issued.

CH0031 Strategy Review

- Package CH0031 team has been asked to propose optional package execution strategies for management consideration.
- Three options are considered and discussed.
- Key benefits, risks and estimated cost impacts are summarized.

CH0031 Execution Options

- **Option #1** – Status quo
- **Option #2** – Complete package breakup
- **Option #3** – Change orders to existing contracts

Option #1 – Status Quo

- Maintain current execution strategy.
- CH0031 Contractor executes the entire scope of work and may use company approved subcontractors.
- A request for a further extension of bid validities past Oct. 2015 will be issued.
- Bids will be validated against the revised Exhibit 9 Milestone Schedule when it is available.

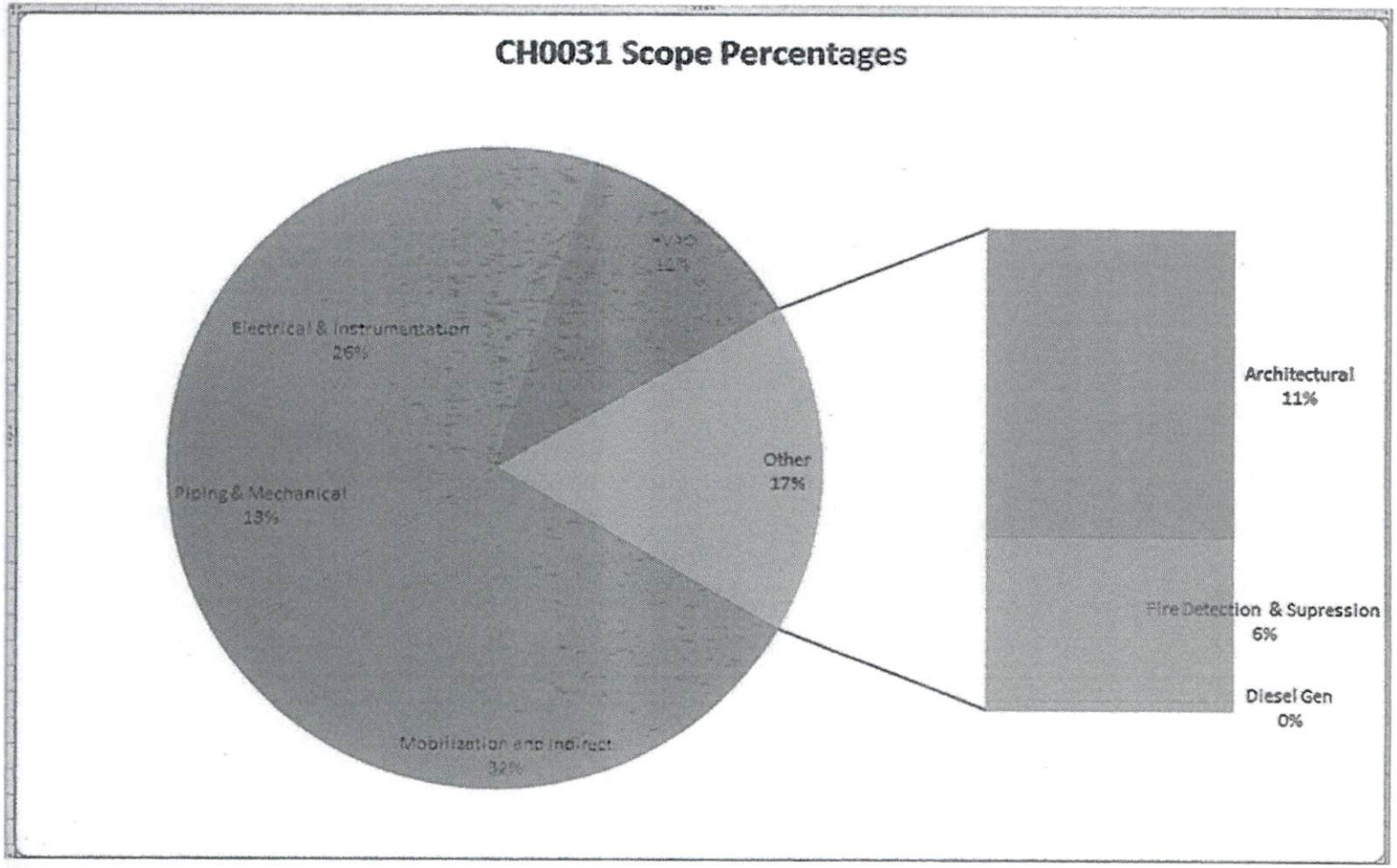
Option #1 – Benefits / Risks

Benefits	Risks
Significant progress already made in bid review process.	
Currently in a competitive bid situation with 3 bidders who are actively engaged.	
Single point of contact for interface management, coordination, project management, quality, safety and commercial items .	
Minimal congestion at site - no duplication of site services, construction equipment and tools, offices, storage and laydown areas.	
Minimal support staff required at site resulting in less accommodations and office space required.	
No change to MFL plan/budget.	

Option #2 – Complete Package Break-up

- Split up CH0031 (Piping, Electrical, HVAC, Architectural and Fire Detection/Suppression) and make each a new package.
- Each contractor will report directly to Company.
- Will require creation of new packages and support by Component 1 engineering to update engineering deliverables and verify scope divisions.
- Existing CH0031 RFP would be cancelled and rebid as 5+ new packages. RFP package documents will need to be updated by CH0031 package team with support from engineering. (Ballpark estimate 2500 eng hrs / 3-4 mths)
- 5+ new package RFPs will need to be created (3-4 mths). The task of executing the RFP process (9-12 mths) and the initial package management could be handled by the existing CH0031 package team but two additional CAs will be required.
- Additional site supervision will be necessary to manage

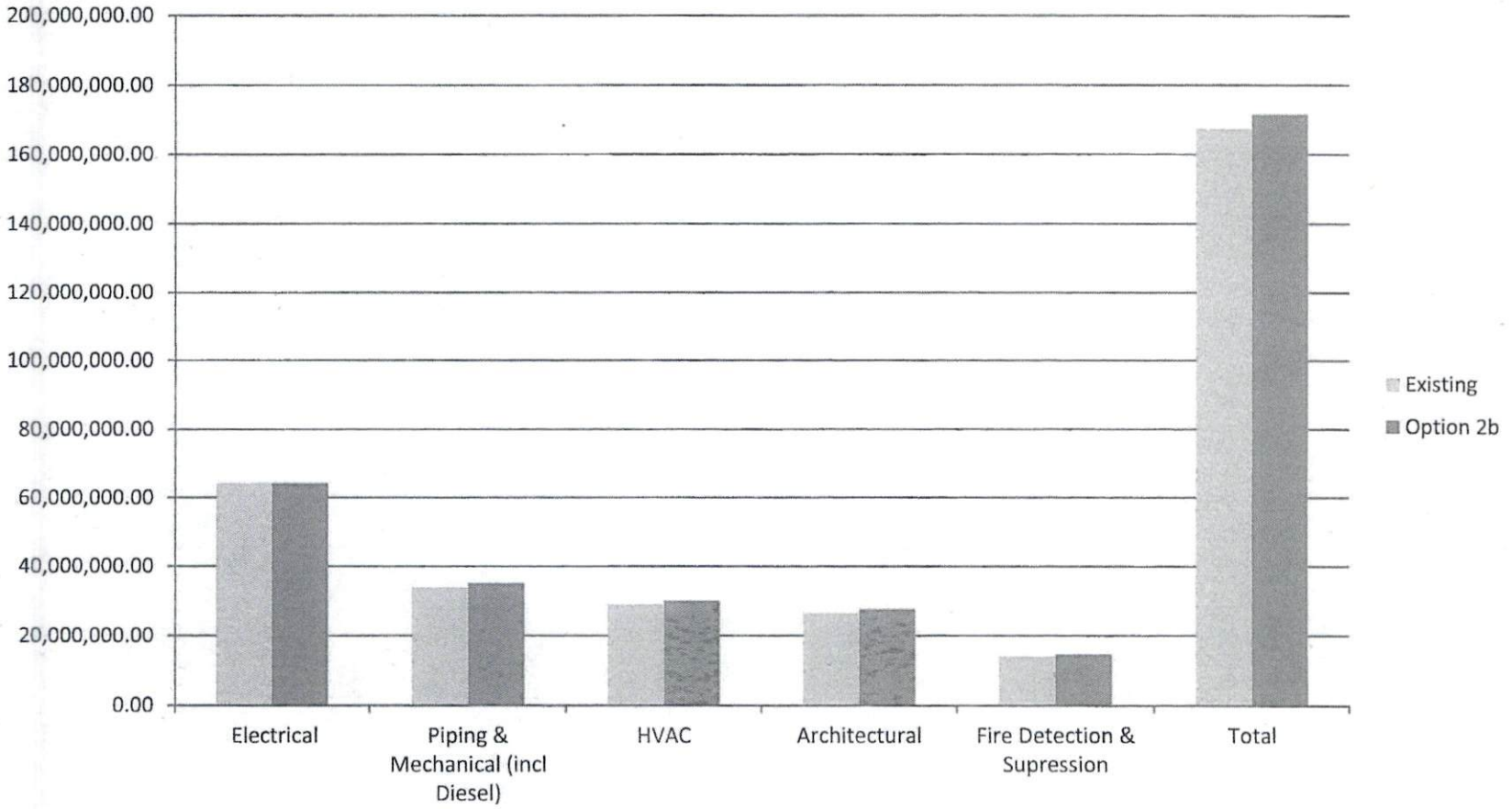
Option #2 – Complete Package Break-up



Option #2 – Benefits / Risks

Benefits	Risks
New packages will be competitively bid and there is the potential for a larger pool of bidders as scopes are single discipline and smaller.	The reduction in sub-scope markups will likely be outweighed by the duplication of mobilization and indirect costs.
	Interfaces and daily coordination of construction and commissioning efforts at the workfaces will be much more complex and difficult to manage by LCP.
	May lose 2 of our existing 3 bidders for main CH0031 scope if we rebid CH0031 package.
	Duplication of indirects – site infrastructure, admin, project management , QA etc., resulting in much additional congestion on site and additional supervision/management by LCP.
	Changes to Component 1 MFL plan/budget will be necessary to effectively manage
	Additions to supporting functions will be necessary to manage packages – Project Controls, QA, DCC, Contracts, etc.
	Bidders for new smaller packages may not meet our project QA, safety and environmental standards.

Option #2 Cost Summary



Option #2 – Cost Impact Breakdown

Item	Estimated Cost impact
Package Costs (5 packages)	+ $4,169,730
C1 Re-package/Engineering Costs	+ $338,000
Cost of additional CA(s) for 3 years	+ $1,762,500
Cost of support function personnel for 3 years (QA, DCC, Project Controls, etc.)	+ $1,489,500
Cost of additional site coordination	+ $ 1,750,000
Total	**+ $9,509,730**
Percentage increase from existing	**+ 5.7%**

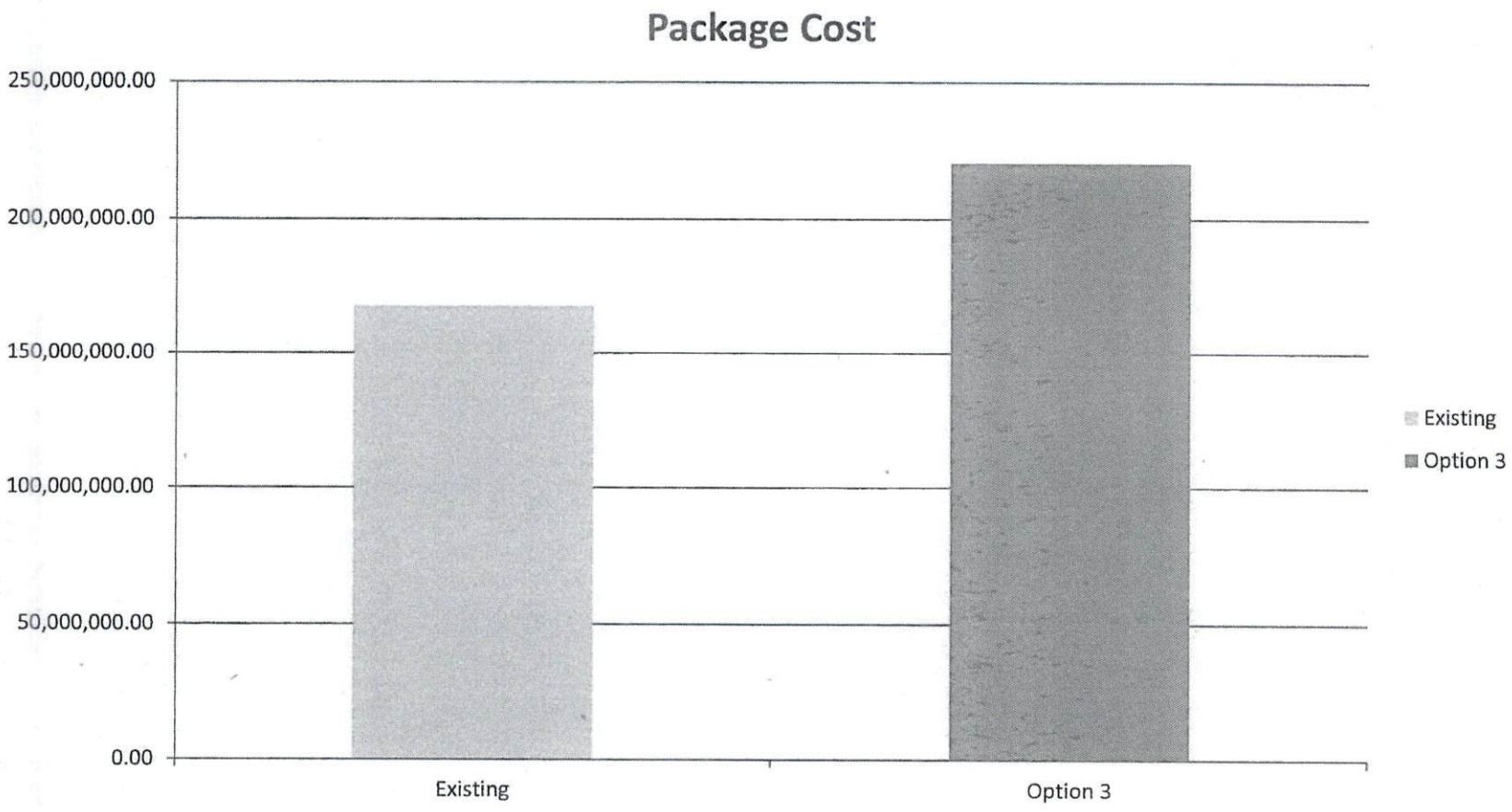
Option #3 – Change Orders to an Existing Contract

- CH0031 scope would be added to an existing contract at negotiated prices and possibly sub-divided.
- Existing contractors include Astaldi Canada & Andritz Hydro
- Existing CH0031 RFP would be cancelled.
- Any breakup of package CH0031 will require support from Component 1 engineering to update deliverables and verify scope divisions. The extent of the breakup and division will determine the resources required – i.e. if entire scope is given to Andritz, very few updates are required and this could be handled by the existing CH0031 package team.
- Support from existing Component 1 packages teams will be required.

Option #3 – Benefits / Risks

Benefits	Risks
Effort by CH0031 Package team to revise deliverables/scopes to suit this option would be minor assuming CH0031 scope remains whole.	Much higher cost due to reduced commercial negotiating power resulting from a non-competitive scenario.
No further CH0031 bid evaluation activities.	Existing contractors may have difficulties managing new scopes they are not familiar with.
No new contracts.	Existing contractors are having difficulties managing their current scope of work and this could make those situations worse.
	Existing Contractors may lack interest in cooperating with this approach and may engage the same bidders/subcontractors we are currently evaluating with similar markups and overall costs.

Option #3 Cost Summary



Option #3 - Cost Impact Breakdown

Item	Estimated Cost Impact
Package Cost	+ $52,703,000
C1 Re-package/Engineering Costs	+ $65,000
Cost of additional CA for 1 year (assume part time)	+ $150,000
Cost of support function personnel for 1 years (QA, DCC, Project Controls etc.)	+ $66,000
Total	**+ $52,984,000**
Percentage increase from existing	**+ 31.7%**

Summary of Options

	Option 1	Option 2	Option 3
Description	Status quo	Complete break-up	Change orders to existing contracts
Additional Cost vs Option 1	-	$9,509,730	$52,984,000
% Increase	-	5.7%	31.7%
Risk level vs Option 1	-	higher	higher

Recommendation

- The quantitative analysis of the three options presented indicates that the existing CH0031 package strategy (Option 1) is the lowest cost and lowest risk option.
- It is recommended that the existing CH0031 package strategy be maintained.

Discussion and Questions

Sharing our ideas in an open and supportive manner to achieve excellence.

Teamwork

Open Communication

Fostering an environment where information moves freely in a timely manner.

Honesty and Trust

Being sincere in everything we say and do.

Relentless commitment to protecting ourselves, our colleagues, and our community.

Safety

Respect and Dignity

Appreciating the individuality of others by our words and actions.

Leadership

Empowering individuals to help, guide and inspire others.

Holding ourselves responsible for our actions and performance.

Accountability

Lower Churchill Project

CH0031 Detailed Commercial Update – Interim Review

Feb 29, 2016

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General

- 3 Rebids opened February 15, 2016
- Addendum to be issued to address remaining technical clarifications and revised site conditions.
- Addendum to be issued to also address commercial clarifications and exceptions to agreement articles.

Bidder 1

Highlights

- Proposal not commercially compliant.
  - Pricing model proposed is fixed price for permanent materials, everything else reimbursable with markup
  - Have proposed very broad non-specific exceptions to Articles
  - Do not offer LOC or PCG as security.
- No cap on labour
- Bid Clar Mtg 4-June

Risks

- No incentive to perform well
- Have not waivered from price model when challenged
- Unlikely to agree to acceptable terms

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Bidder 2

Highlights

- Original proposal was not compliant
- After much clarification now close to compliance
- Many 'technical' exceptions with commercial implications
- Not offering LOC as security
- Few exceptions to Articles
- 50% labour contingency
- Bid Clar Mtg 21-May

Risks

- Price increasing as they become more compliant
- Will have trouble getting correct security
- If pushed too hard in negotiations they may withdraw

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Bidder 3

Highlights

- Proposal compliant
- Have been very responsive throughout bid clarification
- Have many exceptions to Articles however seem willing to negotiate
- Will provide LOC if required
- Company pays all of labour above TCL to LMAX
- 50%Labour contingency
- Articles discussion 8-Apr
- Bid Clar Mtg 28-May

Risks

- Negotiating acceptable T&C
- Proposed exceptions very change oriented
- Will become difficult to negotiate if we lose Bidders

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Lower Churchill Project

CH0031 Detailed Technical Evaluation – Interim Review

Feb 29, 2016

Boundless Energy

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Bid Review Scores

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Bidder Scores – Technical Team

Criteria	Bidder 1	Bidder 2	Bidder 3
Quality (P>60%)	Pass (79%)	Fail (56%)	Pass (77%)
Risk Management (P>60%)	Pass (75%)	Pass (73%)	Pass (77%)
Health and Safety (P>70%)	Pass (79%)	Pass (76%)	Pass (76%)
Environment (P>60%)	Pass (86%)	Pass (72%)	Pass (73%)
Technical	63%	58%	78%

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Bidder 1

Highlights

- Compliant with all RFP milestones
- Extensive execution plan
- Experience in Labrador and with MF project – current elec. and piping sub to Astaldi

Risks

- Manpower and infrastructure requirements
- Proposal is for reimbursable PM, engineering & commissioning
- 3 way JV will be problematic
- Experience of key personnel
- Schedule logic
- No existing St. John's office

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Bidder 2

Highlights

- Compliant with all RFP milestones
- Bidder has experience with similar scopes of work in Ontario
- Labrador experience
- Existing St. John's office

Risks

- Quality management system is a major concern
- Bidder's latest technical submission is better but responses have been difficult to obtain.
- Experience of key personnel
- Bidder meets minimum expectations in many areas

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Bidder 3

Highlights

- Compliant with all RFP milestones
- Good level of detail in Execution Plan
- Vast experience in Labrador and existing presence at MF Site.
- Few technical exceptions
- Existing project offices in St. John's

Risks

- Experience of key personnel
- Reluctant to name preferred sub-suppliers

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Key items to be resolved

- Submitted schedules – logic and line items
- "access" – do we need to define this term and/or how it is triggered
- Site conditions – heat, washcars, trailers, warehousing, power etc.
- PCS – Project Completions System compliance
- Laydown areas and SSB space allocation
- GSU assembly expertise and work area
- Organizational chart and personnel qualifications
- Value substitutions recommend by bidders
- Updated Completions specification compliance
- "access" – do we need to define this term and/or how it is triggered

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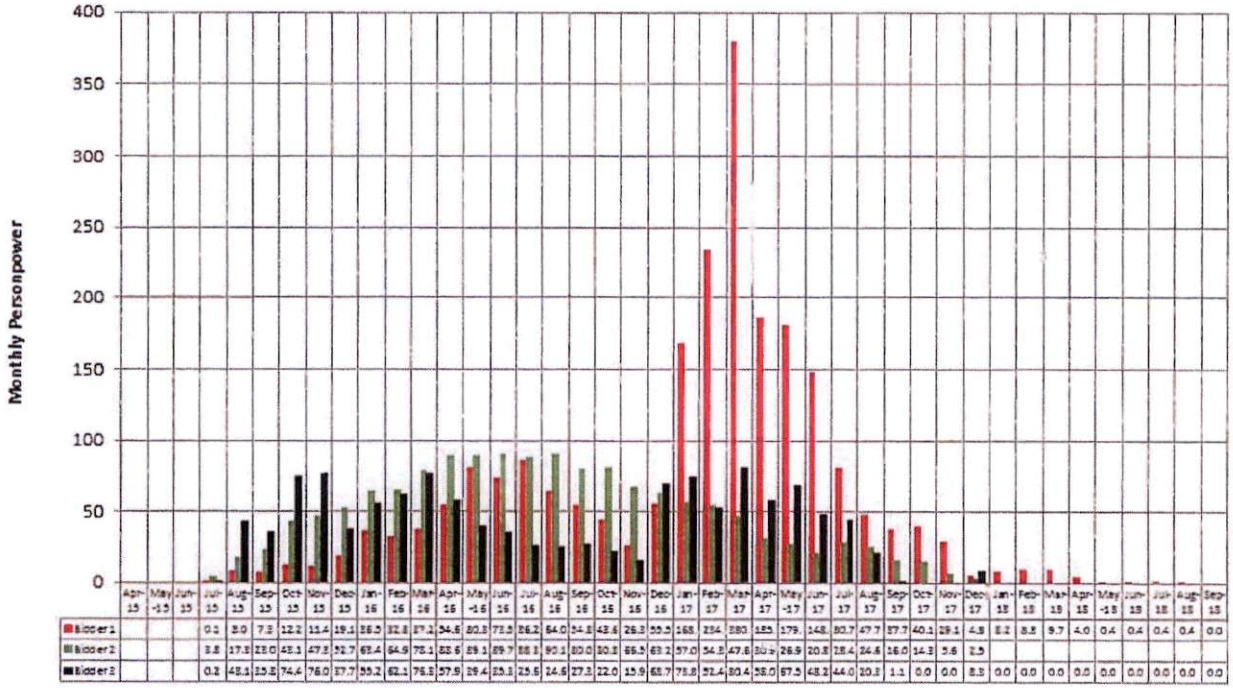
Monthly Personpower Estimates – Original Bids

Schedule Export - CH0031

Note: Bidder 1 & 2 figures are from Original Bid Submission.
Bidder 3 figures are from Company Clarification/ Question response.



- Bidder 1, Construction Acts only! Total hrs = 688,099
- Bidder 2, Fabrication & Construction Acts! Total hrs = 442,013
- Bidder 3, Construction Acts only! Total hrs = 373,175

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CH0031 Current Status

- Bids closed 16Jan2015.
- All three bidders remain committed to bid; commercial and technical clarifications are ongoing.
- Updated bids received 12Feb2016.
- Clarification meetings planned for March & April 2016.

Re: CH0031 Steering Committee - meeting summary 25Apr2016

Philip Bursey to: Pat Hussey 05/09/2016 01:41 PM
Cc: David Wright, Scott O'Brien, Michael Fisher
Bcc: Paul Kennedy

Pat,

See my notes below in Blue.

Actions

1. A re-estimate of total labour man-hours for CH0031 is required - Philip, Scott and Dave to engage Ed Bush - Scott is actioning this item. Scott has contacting Ed Bush, no other action has been taken to this point
2. Analyze bids - will require clarification with bidders to ensure bucket allocations align - Philip & Michael - Revised proposal from GJC due this week, B&M have indicated they do not intend to resubmit their proposal until we update the schedule
3. Assess delta - and utilize CH0009 bid evaluation approach to assess exposure - Philip & Michael Not at the stage of evaluation where this type of analysis is necessary
4. Understand new commercial proposal from Bidder #3 - Philip & Michael Proposal reviewed and understood, awaiting updated proposal from B3
5. Complete quality management system assessment - Paul Fraser & David Green Audits complete, all bidders are acceptable from a Quality perspective with a minor adjustment to the overall quality scores to be made.
6. Provide copy of Schedule of Prices to Ron Power - Philip (COMPLETE)
7. Schedule discussion session with Jason Kean - Philip Scott has taken over this action
8. Schedule a meeting regarding options 6 & 7 from above options analysis - Philip Meeting Scheduled for 19-May-2016
9. Review previous options analysis performed last year for future discussion and analysis - Dave A quantitative analysis was performed last year involving Options 1-3 above which indicated that Option 1 was the best option. A copy of the presentation from last year is attached. CH0031 Strategy Review updated with cost estimate 22Oct2015.pptx

Regards,

Philip Bursey
Contracts Lead
PROJECT DELIVERY TEAM
Lower Churchill Project
t. **709 737-1830**
e. PhilipBursey@lowerchurchillproject.ca
w. muskratfalls.nalcorenergy.com

Pat Hussey From: Pat Hussey/NLHydro To: David Wright/NL... 05/09/2016 08:34:03 AM

From: Pat Hussey/NLHydro
To: David Wright/NLHydro@nlhydro, Philip Bursey/NLHydro@nlhydro, Scott O'Brien/NLHydro@nlhydro
Date: 05/09/2016 08:34 AM
Subject: Re: CH0031 Steering Committee - meeting summary 25Apr2016

Philip / David
Can I get an update on the status of the actions from the meeting on the 25th April. I would like to know what progress has been made to move this along.

Sent from my iPad

On Apr 25, 2016, at 2:17 PM, "David Wright" <DavidWright@lowerchurchillproject.ca> wrote:

All,

Below are the key discussion points and actions from today's CH0031 Bid Review Steering Committee meeting:

CH0031 Bid - key area's of concern
1. Technical issues
2. Schedule - impacts to RFP process
- impacts to work
3. Commercial - reimbursable framework

CH0031 Options Analysis
1. Leave as is
2. Subdivide scope
3. Assign package to an existing on site contractor (settlement opportunity)
4. Fully reimbursable
5. Unit price - require bidders to comply
6. Self perform
7. Assess options to de-risk labour - lessons learned from existing project approaches CH0007, CH0007 & CH0009

Actions
1. A re-estimate of total labour man-hours for CH0031 is required - Philip, Scott and Dave to engage Ed Bush
2. Analyze bids - will require clarification with bidders to ensure bucket allocations align - Philip & Michael
3. Assess delta - and utilize CH0009 bid evaluation approach to assess exposure - Philip & Michael

4. Understand new commercial proposal from Bidder #3 - Philip & Michael
5. Complete quality management system assessment - Paul Fraser & David Green
6. Provide copy of Schedule of Prices to Ron Power - Philip (COMPLETE)
7. Schedule discussion session with Jason Kean - Philip
8. Schedule a meeting regarding options 6 & 7 from above options analysis - Philip
9. Review previous options analysis performed last year for future discussion and analysis - Dave

Also, as a point of clarification, I have looked back into my files - the labour hours for CH0031 as estimated by Paul Lemay and his group are as follows (approximately):

315,000 direct labour
185,000 indirect labour
500,000 total

Cheers,
Dave

David Wright, P. Eng.
Package Leader - Mechanical and Electrical Auxiliaries
PROJECT DELIVERY TEAM
Lower Churchill Project
t. **709 778-6687** c. **709 693-4956** f. **709 754-0787**
e. DavidWright@lowerchurchillproject.ca
w. muskratfalls.nalcorenergy.com

Lower Churchill Project

CH0031 Clarification Meeting Technical Summary

Apr 25, 2016

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Bidder #1 21Mar2016

Meeting Technical Summary

- Existing Schedule dates are unachievable – Unit 3 Essential Services MCC
- Bidder wants to "own the float" in the schedule
- Bidder wants exclusive rights to define PM team
- Have taken exception to heat (Exhibit 12)
- Bidder appears frustrated with bid process and commitment to bid may be in doubt

Key Areas of Technical Focus

- Schedule - decent level of detail but has some logic errors
- Organization – huge organization proposed (no resumes)
- Interface management – will not provide preliminary A98 Interface Register
- Current commercial model does not support technical clarifications

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Bidder #2 30Mar2016

Meeting Technical Summary

- Existing Schedule dates are unachievable – Unit 3 Essential Services MCC
- Bidder has stated they have applied for ISO 9001 – audit this summer
- Bidder has made vast improvements to bid in the last 12 mths
- Will do cost reimbursable heating (Exhibit 12)

Key Areas of Technical Focus Going Forward

- QMS – is it acceptable?
- Schedule – decent level of detail but has logic errors
- Organization – need to ensure we get the A team
- Need to ensure improvements to bid are real and will be transferred to execution team

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Bidder #3 23Mar2016

Meeting Technical Summary

- Existing schedule dates are unachievable – Unit 3 Essential Services MCC
- Have taken exception to Heat (Exhibit 12)
- Bidder appears to be overconfident in their technical bid

Key Areas of Technical Focus Going Forward

- Schedule – weakest of 3 bidders currently
- Organization – need ensure we get the A team
- Overall engineering support throughout execution
- Preliminary A01 SDR needs development

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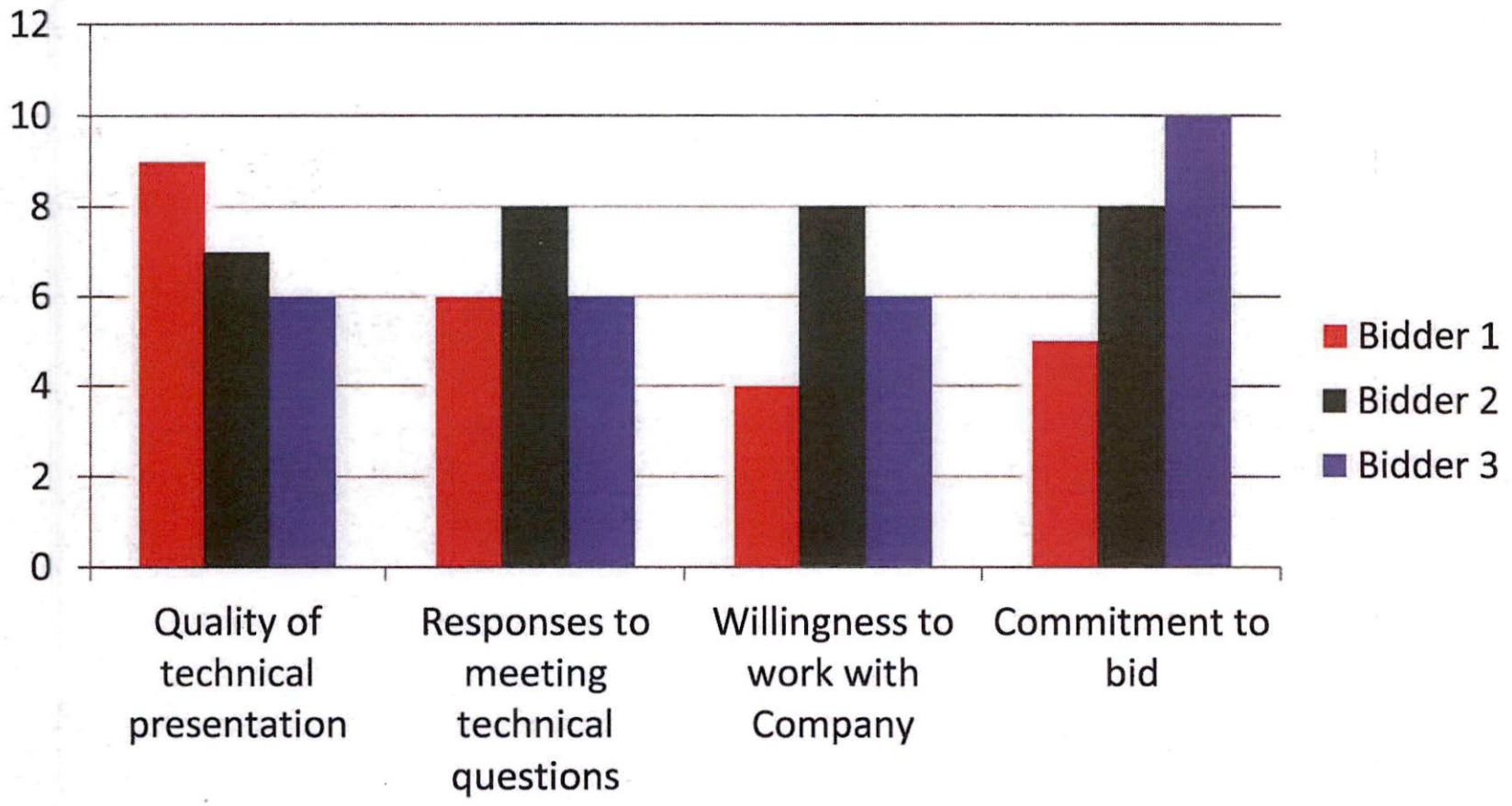
CH0031 Meeting Summary Snapshot



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CH0031 BID – Current Technical Scores

CH0031 Technical Scoring - % Breakdown	Weight	Bidder #1	Bidder #2	Bidder #3
1.0 General (5%)	5.00%	3.50%	3.50%	4.00%
2.0 Technical (26%)	26.00%	20.31%	18.58%	23.13%
3.1 Project Org., Org. Chart & Personnel (4.7%)	4.70%	2.07%	3.01%	3.29%
3.2 Project Admin. and Communication (7.05%)	7.05%	4.56%	5.26%	5.59%
3.3 Safety (0.24%)	0.24%	0.19%	0.18%	0.18%
3.4 Environmental (0.24%)	0.24%	0.20%	0.17%	0.17%
3.5 Quality (0.24%)	0.24%	0.19%	0.13%	0.18%
3.6 Risk (0.24%)	0.24%	0.18%	0.17%	0.18%
3.7 Project Controls (3.06%)	3.06%	1.76%	1.88%	2.37%
3.8 Engineering (3.53%)	3.53%	2.73%	2.63%	2.47%
3.9 Procurement (7.99%)	7.99%	4.86%	4.42%	6.02%
3.10 Construction (7.29%)	7.29%	5.36%	4.96%	5.01%
3.11 Completions (12.46%)	12.46%	8.58%	8.90%	9.56%
4.0 SDRL (2%)	2.00%	2.00%	2.00%	2.00%
5.0 Schedule (10%)	10.00%	8.50%	7.00%	6.50%
6.0 Logistics and Transportation (5%)	5.00%	3.45%	3.50%	3.85%
7.0 Substitutions, Subs, Exceptions (5%)	5.00%	2.45%	3.25%	3.53%
Total	**100.00%**	**70.87%**	**69.54%**	**78.03%**

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CH0031 Bid Path Forward

- Continue technical clarifications with tracking on spreadsheet.
- Focus on award mid Summer 2016 for first interfaces in October 2016. Bid evaluation schedule is becoming very tight and this timeline may be challenged.
- Do we wish to focus on two bidders?

CH0031 Bid Review Progress

CH0031 Mechanical & Electrical Auxiliaries (Balance of Plant)

Bid Review and Agreement Award Schedule (2016)

Today's Date: 25-Apr-2016 Monday
(vertical red line)

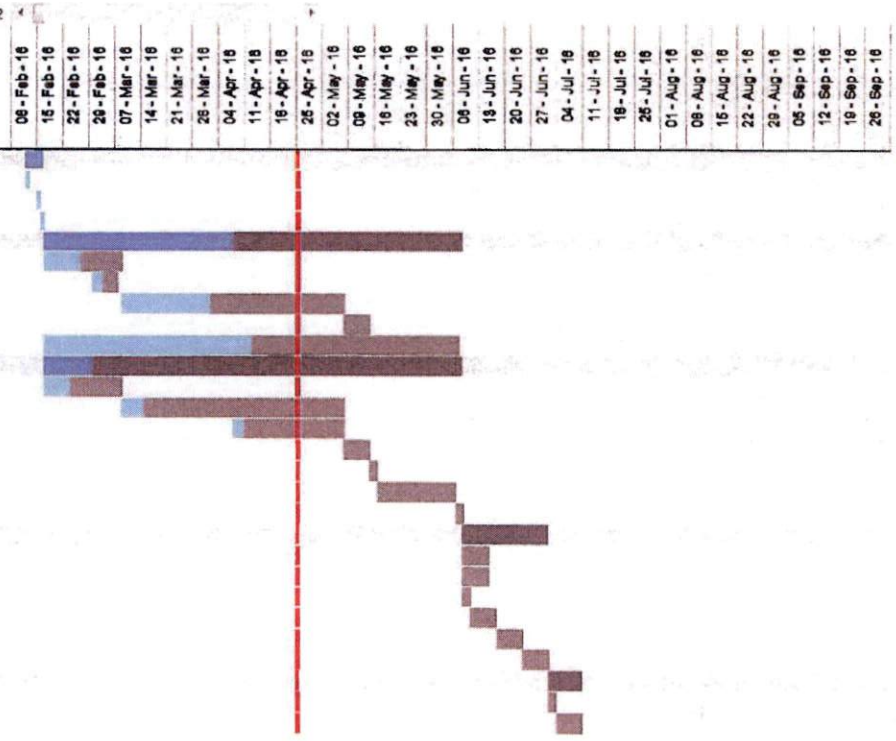
Mobilization Time:	90	days
Site Start of Work:	8-Oct-2016	Saturday

Rev 2 10-Feb-2016

Package Lead: David Wright
Start Date: 12-Feb-2016 Friday
Finish Date 10-Jul-2016 Sunday

First Day of Week (Mon=2): 2

WBS	Tasks	Task Lead	Start	End	Duration (Days)	% Complete	Working Days	Days Complete	Days Remaining
1	Preliminary Activities	[Philip Bursey]	2/12/16	2/16/16	5	100%	3	5	0
1.1	Rebid Closing		2/12/16	2/12/16	1	100%	1	1	0
1.2	Open Rebid Submissions		2/15/16	2/15/16	1	100%	1	1	0
1.3	Distribute rebids for review		2/16/16	2/16/16	1	100%	1	1	0
2	Technical Review & Evaluation	[David Wright]	2/17/16	6/8/16	113	45%	81	51	62
2.1	Bid review and Q&A		2/17/16	3/8/16	21	50%	15	10	11
2.2	Prepare for Clarification Meetings		3/1/16	3/7/16	7	50%	5	3	4
2.3	Participate in Clarification Meetings		3/9/16	5/7/16	60	40%	43	24	36
2.4	Finalize Evaluation and Scoring		5/8/16	5/14/16	7	0%	5	0	7
2.5	Ongoing updates to tech docs		2/17/16	6/8/16	112	50%	81	56	56
3	Commercial Review & Evaluation	[Mike Fisher]	2/17/16	6/8/16	113	12%	81	13	100
3.1	Validation of Proposals		2/17/16	3/8/16	21	35%	15	7	14
3.2	Participate in Clarification Meetings (Articles tbc)		3/9/16	5/7/16	60	10%	43	6	54
3.3	Legal Review & Response to Exceptions		4/8/16	5/7/16	30	10%	21	3	27
3.4	Finalize Evaluation and Scoring		5/8/16	5/14/16	7	5%	5	0	7
3.5	Report/Recommend Presentation		5/15/16	5/16/16	2	0%	1	0	2
3.6	Final Negotiations (x 3) & (x 1)		5/17/16	6/6/16	21	0%	15	0	21
3.7	Final Evaluation Report and Presentation (PPT)		6/7/16	6/8/16	2	0%	2	0	2
4	Approval	[Mike Fisher]	6/9/16	7/1/16	23	0%	17	0	23
4.1	LCP management approval of recommendation		6/9/16	6/15/16	7	0%	5	0	7
4.2	Corporate Financial Review (D&B, P&S, Refs, etc.)		6/9/16	6/15/16	7	0%	5	0	7
4.3	RFI Requisition from Eng w/ updated tech docs		6/9/16	6/10/16	2	0%	2	0	2
4.4	Confirm contract docs		6/11/16	6/17/16	7	0%	5	0	7
4.5	Final Contract Agreement Due Diligence		6/18/16	6/24/16	7	0%	5	0	7
4.6	Cold Eyes Review & final approval		6/25/16	7/1/16	7	0%	5	0	7
5	Award	[Mike Fisher]	7/2/16	7/10/16	9	0%	5	0	9
5.1	Forward final Agreement to Succ. Bidder		7/2/16	7/3/16	2	0%	0	0	2
5.2	Execute Agreement / Award Contract		7/4/16	7/10/16	7	0%	5	0	7



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Re: CH0031 Steering Committee Actions

Philip Bursey to: Pat Hussey, David Wright, Frank Gillespie, Jason Kean, Lance Clarke, Michael Fisher, Robert Woolgar, Ron Power, Scott O'Brien 06/01/2016 03:31 PM

All,

See below, dates assigned to the actions.

Philip Bursey
Contracts Lead
PROJECT DELIVERY TEAM
Lower Churchill Project
t. **709 737-1830**
e. PhilipBursey@lowerchurchillproject.ca
w. muskratfalls.nalcorenergy.com

Philip Bursey All, The following actions arose from steering co... 05/26/2016 04:38:36 PM

From: Philip Bursey/NLHydro
To: Pat Hussey/NLHydro@NLHydro, Michael Fisher/NLHydro@NLHYDRO, David Wright/NLHydro@NLHYDRO, Robert Woolgar/NLHydro@NLHYDRO, Jason Kean/NLHydro@NLHydro, Lance Clarke/NLHydro@NLHydro, Scott O'Brien/NLHydro@NLHYDRO, Frank Gillespie/NLHydro@NLHYDRO, Ron Power/NLHydro@NLHydro
Date: 05/26/2016 04:38 PM
Subject: CH0031 Steering Commitee Actions

All,

The following actions arose from steering committee meeting;
1. Prepare document outlining history and how we plan to manage commercial risk associated with package. Philip Bursey / David Wright (Due: 15-Jun-2016)
2. Schedule workshop session to review compensation model options (ie. incentive/disincentive for management of labour and schedule risk. (Potential attendees: P. Hussey, G. Cahill, K. McClintock, E. Bush, B. Hallock, Westney, others) Philip Bursey (Scheduled for: 3-Jun-2016)
3. Schedule steering committee meeting to discuss risk mitigation options from item 2. Philip Bursey (7-Jun-2016)
4. Organize update of labour estimate using Steve Goulding, Paul Lemay and others as necessary. - Scott O'Brien (Start Date: 1-Jun-2016 estimated completion 24-Jun-2016)
5. Organize risk review session to analyze risks associated CH0031 execution - David Wright (Planned date: 15-Jun-2016)

Philip Bursey
Contracts Lead
PROJECT DELIVERY TEAM
Lower Churchill Project
t. **709 737-1830**
e. PhilipBursey@lowerchurchillproject.ca
w. muskratfalls.nalcorenergy.com

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LOWER CHURCHILL PROJECT

Minutes of Meeting

Project:	Lower Churchill Project	**Package No.:**	CH0031
Purpose:	Management of PLA Labour risk through risk reward compensation model	**Package Title:**	Supply and Install Mechanical and Electrical Auxiliaries (MF)
Location:	Soldiers Pond Room	**Date / Time:**	3-Jun-2016 @ 9:00 AM

Attendees:	Philip Bursey Michael Fisher David Wright	Gerald Cahill Ken McClintock	
Distribution:	Lance Clarke Pat Hussey Scott O'Brien Ron Power	Jason Kean Gerald Cahill Ed Bush Ken McClintock	
Recorded by:	Philip Bursey	**Signature:**	

Item	Description	Action	Date
1	Discussed the purpose of the meeting: Purpose: To review compensation options, with respect to PLA labour, and discuss potential methods, within the fixed price target cost of labour compensation model, to encourage Contractor to achieve agreement labour targets and schedule (ie. incentive/disincentive for management of labour and schedule risk) .		
2	Ideal is a cap on labour however a major Issue is that none of the bidders are currently willing to provide a cap on labour.		
3	Liquidated damages don't tend to be useful. Suggested that a combination of incentive and disincentive be employed on both labour hours and schedule.		
4	Because the compensation scheme is not set up in accordance with the milestone schedule it will be necessary to incentivise both to encourage Contractor to achieve both at the same time.		
5	2nd best approach is an incentive/ disincentive scheme on PLA Labour and a separate incentive/disincentive scheme on key milestone dates.		

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LOWER CHURCHILL PROJECT

Minutes of Meeting

Item	Description	Action	Date
6	Rather than one large incentive program on the all PLA Labour it was suggested that incentives may be linked to commodity groupings. Ie: - PIPING/MECHANICAL - SUPPLY AND INSTALLATION - HVAC SYSTEMS - SUPPLY AND INSTALLATION - ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION - ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION - POWERHOUSE ARCHITECTURAL - SUPPLY & INSTALL - DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLALTION - PIPING/MECHANICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING - HVAC SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING - ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING - POWERHOUSE DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING For example the Contractor would agree to a target and a maximum labour cost for each of these categories. If they come in below the target for a given category they will be entitled to the Labour Overhead and Profit and if all the hours were used. If they achieve all of their labour targets the will be entitled to OH&P up to the LMAX. On the disincentive side Contractor will be subject to a declining OH&P until they reach LMAX at which point they will not be entitled to any OH&P (Ie. PLA Labour will be reimbursed at cost).		
7	On the schedule side we would tie bonuses to the milestones to which LDs are currently linked in addition to the LDs.		
8	Draft incentive/disincentive proposal for presentation to steering committee.	PB/MF/DW	17-Jun-2016
9	Have Ed Bush review minutes and provide additional input.	PB	10-Jun-2016

Contract/Supplier hereby agrees that Contract/Supplier has reviewed and agrees with the content and accuracy of these Minutes of Meeting.

Signature: _____

Name (please print): _____

Date: _____

Lower Churchill Project

CH0031 - Steering Committee - Evaluation Summary

Jun 22, 2016

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Overall Scoring

		Bidder 1		Bidder 2		Bidder 3	
Evaluation Criteria	**Weighting**	**Score/10**	**Total Score**	**Score/10**	**Total Score**	**Score/10**	**Total Score**
Commercial	60	0.0	0.0	5.3	31.8	10.0	60.0
Technical	40	7.7	30.7	7.2	28.7	7.9	31.5
Quality	Pass/Fail		Pass		Pass		Pass
Risk Management	Pass/Fail		Pass		Pass		Pass
Health & Safety	Pass/Fail		Pass		Pass		Pass
Environmental	Pass/Fail		Pass		Pass		Pass
Total Score			**30.7**		**60.5**		**91.5**

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Commercial Scoring

		BIDDER 1		BIDDER 2		BIDDER 3	
No	PRICE ITEM DESCRIPTION	TOTAL LABOUR HOURS	TOTAL PRICE	TOTAL LABOUR HOURS	TOTAL PRICE	TOTAL LABOUR HOURS	TOTAL PRICE
ST01	SUB-TOTAL INDIRECT COSTS (GENERAL)	385,594	141,534,303	218,949	113,288,379	11,063	37,359,405
ST02	SUB-TOTAL PIPING/MECHANICAL - DESIGN AND ENGINEERING	9,541	-	0	114,855	0	176,744
ST03	SUB-TOTAL PIPING/MECHANICAL - SUPPLY AND INSTALLATION	124,074	32,995,549	135,042	34,411,723	145,880	31,149,463
ST04	SUB-TOTAL HVAC SYSTEM - SUPPLY, INSTALLATION	142,339	31,239,478	39,979	14,656,061	77,111	19,223,999
ST05	SUB-TOTAL ELECTRICAL - DESIGN AND ENGINEERING	88	90,881	0	114,855	0	211,521
ST06	SUB-TOTAL ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION	354,479	71,053,967	154,481	40,528,128	186,905	39,201,490
ST07	SUB-TOTAL ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION	40,302	4,950,488	25,116	4,556,293	42,763	5,247,433
ST08	SUB-TOTAL ARCHITECTURAL - SUPPLY & INSTALL	91,586	15,290,852	88,068	12,391,828	129,211	15,496,193
ST09	SUB-TOTAL DIESEL GENERATOR SYSTEM - SUPPLY AND INSTALLATION	1,153	685,357	1,512	609,107	1,145	746,608
ST10	SUB-TOTAL PIPING/MECHANICAL - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	0	14,000,000	4,046	823,343	6,487	781,603
ST11	SUB-TOTAL HVAC SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	0	-	0	94,485	1,171	185,670
ST12	SUB-TOTAL ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	0	-	15,211	2,424,550	11,787	2,384,626
ST13	SUB-TOTAL DIESEL GENERATOR SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING	0	-	429	68,615	647	95,648
ST14	**TOTAL CONTRACT PRICE (pre-normalization) As calculated**	**1,149,156**	**311,840,876**	**682,832**	**224,082,221**	**614,171**	**152,260,403**
ST17	**Score / 10**		**-**		**5.3**		**10.0**
	Proposal Price As Submitted		292,810,214.42		225,980,000.00		152,134,400.63
	Difference		19,030,661.31		-1,897,779.05		126,001.94

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Commercial Notes

Description	Bidder 1	Bidder 2	Bidder3
Commercial Model	Fully Reimbursable - No Caps Cost Risks: -Management Personnel -PLA Labour -Equipment -Materials Direct & Indirect	Fixed Price - Reimbursable Labour (No Caps) Believe appropriate commercial measures can be negotiated to mitigate PLA labour risk exposure	Fixed Price - Reimbursable Labour (No Caps) Believe appropriate commercial measures can be negotiated to mitigate PLA labour risk exposure
Article Exceptions	Extensive - Impractical to negotiate	Negotiable	Significant but Negotiable
General Note	Proposal does not conform closely enough to either model requested in the RFP and has such extensive exceptions that is not considered commercially reasonable to negotiate.	Mostly Compliant - Negotiable	Mostly Compliant - Negotiable

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Technical Scores

CH0031 Technical Scoring - % Breakdown	Weight	Bidder #1	Bidder #2	Bidder #3
1.0 General (5%)	5.00%	3.50%	3.50%	4.00%
2.0 Technical (26%)	26.00%	20.89%	19.28%	23.24%
3.1 Project Org., Org. Chart & Personnel (4.7%)	4.70%	2.73%	3.03%	3.29%
3.2 Project Admin. and Communication (7.05%)	7.05%	5.31%	5.31%	5.64%
3.3 Safety (0.24%)	0.24%	0.19%	0.18%	0.18%
3.4 Environmental (0.24%)	0.24%	0.20%	0.17%	0.17%
3.5 Quality (0.24%)	0.24%	0.19%	0.15%	0.18%
3.6 Risk (0.24%)	0.24%	0.18%	0.17%	0.18%
3.7 Project Controls (3.06%)	3.06%	2.02%	2.21%	2.37%
3.8 Engineering (3.53%)	3.53%	2.80%	2.68%	2.70%
3.9 Procurement (7.99%)	7.99%	5.73%	5.33%	6.16%
3.10 Construction (7.29%)	7.29%	5.78%	4.96%	5.29%
3.11 Completions (12.46%)	12.46%	9.75%	8.90%	9.85%
4.0 SDRL (2%)	2.00%	2.00%	2.00%	2.00%
5.0 Schedule (10%)	10.00%	9.00%	7.00%	6.50%
6.0 Logistics and Transportation (5%)	5.00%	3.75%	3.60%	3.45%
7.0 Substitutions, Subs, Exceptions (5%)	5.00%	2.68%	3.38%	3.58%
Total	**100.00%**	**76.69%**	**71.84%**	**78.78%**

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Technical Clarification – Focus Items

- Contractor Team – Org. Charts and Qualifications
- Interface Management
- Schedule – Logic and Activities
- Site Infrastructure – on site warehousing and offices
- Site Conditions – Heat
- Documentation - compliance with SDRL

RFP History

	Bidder 1	Bidder 2	Bidder 3
RFP Issued	23-Oct-14	10-Jun-14	10-Jun-14
Proposals Received	16-Jan-15	16-Jan-15	16-Jan-15
Pricing Revalidation	10-Feb-16	10-Feb-16	10-Feb-16
Bid Clarification Meeting 1	Deferred	21-May-15	Deferred
Bid Clarification Meeting 2	21-Mar-16	30-Mar-16	23-Mar-16

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Evaluation Status

- Bidders will be required to submit a pricing update when updated schedule is available
- Commercial Clarification / negotiation will be required
- Agreement clarification/negotiation is required.

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Basis for shortlisting Bidder 1

- Pricing is approximately 2x Budget
- Pricing is greater than 2x low bid
- Commercial model proposed does not comply with models requested in RFP
- Article exceptions are extensive and not commercially reasonable to negotiate

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