



CONTRACT REVIEW AND APPROVAL
Lower Churchill Project

Revision: 0
Date: 7-Jun-17
Approval Required Date: 14-Jun-17

AGREEMENT #: CH0031
AGREEMENT TITLE: Supply and Install Mechanical and Electrical Auxiliaries (MF)

The following have reviewed the attached Agreement # CH0031 titled Supply and Install Mechanical and Electrical Auxiliaries (MF) and authorize issuance with the changes noted, if any.

| | TITLE | NAME | SIGNATURE | DATE |
|--------------|------------------------------|----------------------------------|------------------------|--------------|
| Prepared by: | Contract Administrator/Buyer | Philip Bursey | <i>[Signature]</i> | 2 Jun - 2017 |
| Reviewed by: | Package Engineer | Jim Slade | <i>[Signature]</i> | 08 JUN 2017 |
| Reviewed by: | Package Leader | David Wright | <i>[Signature]</i> | 08 JUN 2017 |
| Reviewed by: | Area Manager | Paul Adams | <i>[Signature]</i> FOR | 08 JUN 2017 |
| Reviewed by: | Project Manager | <i>[Signature]</i> Scott O'Brien | <i>[Signature]</i> | 8 Jun 2017 |
| Approved By: | Supply Chain Manager | Pat Hussey | <i>[Signature]</i> | 8 June 2017 |
| Reviewed by: | Deputy Project Director | Lance Clarke | <i>[Signature]</i> | 8 June 2017 |
| Approved By: | Project Director | Paul Harrington | <i>[Signature]</i> | 9 June 2017 |

| DUE DILIGENCE (> \$10MM) | | | | |
|--------------------------|--|----------------|--------------------|--------------|
| Reviewed by: | Assistant Corporate Secretary & Senior Legal Counsel | | NA | |
| Reviewed by: | External Legal | Denes Bajzak | <i>[Signature]</i> | 15 JUNE 2017 |
| Reviewed by: | Manager Risk & Insurance | Darren Marsh | See attached | |
| Reviewed by: | Taxation Officer | Samantha Gosse | See attached | |
| Reviewed by: | Project Controller | Gerald Cahill | See attached | |
| Reviewed by: | Corporate Treasurer | Scott Pelley | See attached | |

| COLD EYES (>\$100M) | | | | |
|---------------------|---|---------------|-----------------------|-------------|
| Reviewed by: | Manager, Investment Evaluation | Dave Jones | See Attached | |
| Reviewed by: | General Manager, Finance | Carla Russell | See attached | |
| Reviewed by: | General Counsel & Corporate Secretary | Peter Hickman | As per attached email | 15-Jun-2017 |
| Reviewed by: | General Manager, Commercial, Treasury, & Risk | Auburn Warren | See attached | |
| Reviewed by: | General Manager Finance, LCP | Jim Meaney | See attached | |

Comments: This review document includes:
Agreement Articles, Exhibit 1 - Scope of Work, Exhibit 2 - Compensation, Exhibit 3 - Coordination Procedures & Exhibit 14 - Performance Security

Exhibit 2 - Some final wording revisions related to neutral funding for labour and support for reimbursement of labour costs are being finalized with recommended Bidder. These revisions will not affect risk or price and are being finalized in conjunction with LCP Finance (G. Cahill, J. Skinner)



CONTRACT REVIEW AND APPROVAL
Lower Churchill Project

Revision: 0

Date: 7-Jun-17

Approval Required Date: 14-Jun-17

AGREEMENT #: CH0031

AGREEMENT TITLE: Supply and Install Mechanical and Electrical Auxiliaries (MF)

The following have reviewed the attached Agreement # CH0031 titled Supply and Install Mechanical and Electrical Auxiliaries (MF) and authorize issuance with the changes noted, if any.

| | TITLE | NAME | SIGNATURE | DATE |
|--------------|------------------------------|-----------------|-----------|--------------|
| Prepared by: | Contract Administrator/Buyer | Philip Bursey | | 7 Jun - 2017 |
| Reviewed by: | Package Engineer | Jim Slade | | |
| Reviewed by: | Package Leader | David Wright | | |
| Reviewed by: | Area Manager | Paul Adams | | |
| Reviewed by: | Project Manager | Scott O'Brien | | |
| Approved By: | Supply Chain Manager | Pat Hussey | | |
| Reviewed by: | Deputy Project Director | Lance Clarke | | |
| Approved By: | Project Director | Paul Harrington | | |

DUE DILIGENCE (> \$10MM)

| | | | | |
|--------------|--|----------------|--|----------------|
| Reviewed by: | Assistant Corporate Secretary & Senior Legal Counsel | | | |
| Reviewed by: | External Legal | Denes Bajzak | | |
| Reviewed by: | Manager Risk & Insurance | Darren Marsh | | June 13, 2017 |
| Reviewed by: | Taxation Officer | Samantha Gosse | | June 12, 2017 |
| Reviewed by: | Project Controller | Gerald Cahill | | June 12/17 |
| Reviewed by: | Corporate Treasurer | Scott Pelley | | June 12 / 2017 |

COLD EYES (>\$100M)

| | | | | |
|--------------|---|---------------|--|-------------|
| Reviewed by: | Manager, Investment Evaluation | Dave Jones | | June 13/17 |
| Reviewed by: | General Manager, Finance | Carla Russell | | June 15/17 |
| Reviewed by: | General Counsel & Corporate Secretary | Peter Hickman | | |
| Reviewed by: | General Manager, Commercial, Treasury, & Risk | Auburn Warren | | 6/14/2017 |
| Reviewed by: | VP General Manager Finance, LCP | Jim Meaney | | 12-Jun-2017 |

Comments: This review document includes:
 Agreement Articles, Exhibit 1 - Scope of Work, Exhibit 2 - Compensation, Exhibit 5 - Coordination Procedures & Exhibit 14 - Performance Security
 Exhibit 2 - Some final wording revisions related to neutral funding for labour and support for reimbursement of labour costs are being finalized with recommended Bidder. These revisions will not affect risk or price and are being finalized in conjunction with LCP Finance (G. Cahill, J. Skinner)



Re: CH0031 Due Diligence Review Exceptions - Approval 

Peter Hickman to: Scott Pelley

Andrew Sinnott, "Denes E. Bajzak PLC Inc.

Cc: (denes.bajzak@bajzaklaw.com)", James Meaney, Lance Clarke,
Michael Ladha, Philip Bursey

06/15/2017 11:50 AM

History: This message has been replied to.

Phil, the Contract Approval Form is not available for me to sign as it has already been forwarded back to you in the internal mail. Please accept this as my approval. When you receive the form, you can scan it and send it to me for signature if you'd like.

Regards,
Peter

Peter Hickman

VP General Counsel & Corporate Secretary

t. 709 737-1462 c. 709 697-3161 f. 709 737-1782

e. PHickman@nalcenergy.com

This email communication is confidential and legally privileged. Any unauthorized reproduction, distribution or disclosure of this email or any attachments is strictly prohibited. Please destroy/delete this email communication and attachments and notify me if this email was misdirected to you.

Scott Pelley

Peter - I have the form here in my office - please...

06/14/2017 02:07:51 PM

From: Scott Pelley/NLHydro
To: Peter Hickman/NLHydro@NLHYDRO
Cc: Andrew Sinnott/NLHydro@NLHYDRO, "Denes E. Bajzak PLC Inc. (denes.bajzak@bajzaklaw.com)" <denes.bajzak@bajzaklaw.com>, James Meaney/NLHydro@NLHYDRO, Lance Clarke/NLHydro@NLHYDRO, Michael Ladha/NLHydro@NLHYDRO, Philip Bursey/NLHydro@NLHydro
Date: 06/14/2017 02:07 PM
Subject: Re: CH0031 Due Diligence Review Exceptions - Approval

Peter - I have the form here in my office - please advise if you will be able to sign today



Scott W. Pelley, CA

Corporate Treasurer

Commercial, Treasury and Risk Management
Nalcor Energy

t. 709 737-1364 c. 709 730-2927

e. ScottPelley@nalcenergy.com

w. nalcenergy.com

You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

Philip Bursey

Peter, We plan on appending the attached docu...

06/14/2017 11:45:32 AM

From: Philip Bursey/NLHydro
To: Peter Hickman/NLHydro@NLHydro
Cc: Michael Ladha/NLHydro@NLHYDRO, "Denes E. Bajzak PLC Inc. (denes.bajzak@bajzaklaw.com)" <denes.bajzak@bajzaklaw.com>, Lance Clarke/NLHydro@NLHydro, James Meaney/NLHydro@NLHYDRO, Andrew Sinnott/NLHydro@NLHYDRO, Scott Pelley/NLHydro@NLHYDRO
Date: 06/14/2017 11:45 AM
Subject: CH0031 Due Diligence Review Exceptions - Approval

Peter,

We plan on appending the attached document to the Contract Review Approval form and incorporating the noted revisions in the LNTP .

We will tie Michael and yourself into any discussions with Contractor on these exceptions post issue of the LNTP to facilitate closure .

Please confirm you are OK to sign the Contract Review and Approval for based on the above .
[attachment "CorpLegalExceptionsCH0031DueDiligenceReview.pdf" deleted by Peter Hickman/NLHydro]

Regards,

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



CONTRACT REVIEW AND APPROVAL
Lower Churchill Project

Revision: 0

Date: 7-Jun-17

Approval Required Date: 14-Jun-17

AGREEMENT #: CH0031
AGREEMENT TITLE: Supply and Install Mechanical and Electrical Auxiliaries (MF)

The following have reviewed the attached Agreement # CH0031 titled Supply and Install Mechanical and Electrical Auxiliaries (MF) and authorize issuance with the changes noted, if any.

| | TITLE | NAME | SIGNATURE | DATE |
|--------------|------------------------------|-----------------|-----------|--------------|
| Prepared by: | Contract Administrator/Buyer | Philip Bursey | | 7 Jun - 2017 |
| Reviewed by: | Package Engineer | Jim Slade | | |
| Reviewed by: | Package Leader | David Wright | | |
| Reviewed by: | Area Manager | Paul Adams | | |
| Reviewed by: | Project Manager | Scott O'Brien | | |
| Approved By: | Supply Chain Manager | Pat Hussey | | |
| Reviewed by: | Deputy Project Director | Lance Clarke | | |
| Approved By: | Project Director | Paul Harrington | | |

DUE DILIGENCE (> \$10MM)

| | | | | |
|--------------|--|----------------|--|--|
| Reviewed by: | Assistant Corporate Secretary & Senior Legal Counsel | | | |
| Reviewed by: | External Legal | Denes Bajzak | | |
| Reviewed by: | Manager Risk & Insurance | Darren Marsh | | |
| Reviewed by: | Taxation Officer | Samantha Gosse | | |
| Reviewed by: | Project Controller | Gerald Cahill | | |
| Reviewed by: | Corporate Treasurer | Scott Pelley | | |

COLD EYES (>\$100M)

| | | | | |
|--------------|---|---------------|--|------------|
| Reviewed by: | Manager, Investment Evaluation | Dave Jones | | |
| Reviewed by: | General Manager, Finance | Carla Russell | | |
| Reviewed by: | General Counsel & Corporate Secretary | Peter Hickman | | June 15/17 |
| Reviewed by: | General Manager, Commercial, Treasury, & Risk | Auburn Warren | | |
| Reviewed by: | General Manager Finance, LCP | Jim Meaney | | |

Comments: This review document includes:
Agreement Articles, Exhibit 1 - Scope of Work, Exhibit 2 - Compensation, Exhibit 3 - Coordination Procedures & Exhibit 14 - Performance Security

Exhibit 2 - Some final wording revisions related to neutral funding for labour and support for reimbursement of labour costs are being finalized with recommended Bidder. These revisions will not affect risk or price and are being finalized in conjunction with LCP Finance (G. Cahill, J. Skinner)

20.4 The insurance policies required by Articles ~~20.120.1~~ shall be in place and shall be maintained until a Final Completion Certificate has been issued, with any completed operations coverage to continue after the Final Completion Certificate has been issued as set out in the policy.

Formatted: Font: Bold

**ARTICLE 21
LIABILITY AND INDEMNIFICATION**

21.1 The Parties hereby agree and acknowledge that if a provision in this ~~Article 21~~Article 21 conflicts with any other provision in this Agreement, the provision in this ~~Article 21~~Article 21 shall prevail.

Formatted: Font: Bold

Formatted: Font: Bold

21.2 For the purposes of this Agreement, any liability assumed or indemnity given by Contractor for the benefit of Company shall be deemed to be given by Contractor for the benefit of Company, its successors and assigns, Affiliates and Personnel.

21.3 It is agreed and understood that the exculpatory clauses and indemnity obligations of each Party as provided in this Agreement shall apply to any and all Claims whatsoever incurred by the indemnified Party.

21.4 Except as otherwise specifically stated in this Agreement, Company shall be liable to Contractor for any and all Claims which Contractor may at any time sustain or incur by reason of or in consequence of a breach or non-performance by Company or any agent, employee or licensee for whom Company is in law responsible arising from the performance or non-performance of any of the obligations of Company under this Agreement.

21.5 (a) Contractor shall be liable to Company, to the full extent it is ~~otherwise~~ liable at law, for any and all Claims which Company may at any time sustain or incur by reason of or in consequence of any one or more of the following:

Comment [A1]: Company: Pursuant to feedback from corporate due diligence review, Company believes that the word "otherwise" is not appropriate here. Otherwise than what? The liability stated in par.'s (i) to (iii) below should be qualified by "to the full extent it is liable at law". If Bidder disagrees, please provide a written explanation as to the rationale for this word.

- (i) any inaccuracy in any representation or warranty made by Contractor Group, its guarantors or any other Person that delivers to Company any document or security instrument containing any such representation or warranty pursuant to this Agreement;
- (ii) any breach or non-performance by Contractor Group, or any licensee, invitee or Person acting on behalf of Contractor of any of the obligations of Contractor in respect of the performance of the Work; and
- (iii) any action taken by Company to mitigate or cure a breach or non-performance by Contractor Group of any covenant or inaccuracy in any representation or warranty pursuant to this Agreement.

(b) Contractor shall defend, indemnify and shall hold Company harmless from and against any and all Claims which Company may at any time sustain or incur by reason of or in consequence of any one or more of the following:

- (i) any non-payment of amounts due and payable to Subcontractors, and Subcontractors' subcontractors, vendors and suppliers of every tier,

resulting from furnishing of services, material, equipment, labour or otherwise in connection with the performance of Work;

- (ii) any Claim in respect of loss or damage to the property of Contractor Group however caused, except to the extent the Claim is caused by the negligence or wilful act or omission by Company;
 - (iii) any Claim in respect of personal injury or death of Contractor's Personnel however caused, except to the extent the Claim is caused by the negligence or wilful act or omission by Company;
 - (iv) any Claim in respect of loss or damage to Company Group property arising from the negligence or wilful act or omission by Contractor; or
 - (v) any representation or holding out by Contractor that it is an agent of Company.
- 21.6 For all Subcontractors identified in Exhibit 8 - Subcontractors, Manufacturers and Material Sources, other Subcontractors performing Work at the Site and Subcontractors handling the Work or Company supplied items at a Worksite, Contractor shall include in all of such Subcontracts, a provision stating that such Subcontractors shall defend, protect, release, indemnify and hold Company harmless from and against all Claims for the death of or bodily injury to such Subcontractors and their respective Personnel, and for damage to or loss of the property of Subcontractors or their respective Personnel, unless the Claims were caused by the negligence or wilful act or omission by Company.

- 21.7 Except as provided in Article 21.4, Contractor shall:
- (a) be liable to Company for all Claims which Company may suffer, sustain, pay or incur; and
 - (b) defend, protect, release, indemnify and hold Company harmless from and against all Claims which may be brought against or suffered by Company or which Company may sustain, pay or incur;

directly or indirectly on account of the death of or bodily injury to third parties or Company and its Affiliates' Personnel, and for damage to or loss of property of third parties (such third parties shall not include Company and its Affiliates and Personnel), arising from or in connection with the performance, non-performance or purported performance of the Work, but only to the extent caused by the negligence or wilful misconduct of Contractor or any of its Personnel.

- 21.8 Without limiting the generality of ~~Article 21.5~~^{Article 15}, Contractor shall be liable for and defend, protect, release, indemnify and hold Company harmless from and against all Claims (including any fine, penalty or demand of any Authority having Jurisdiction) which may be brought against or suffered by Company or which Company may sustain, pay or incur, arising out of any failure by Contractor to comply with its obligations with respect to the environment under ~~Article 15~~^{Article 15}.

Comment [A2]: Company: Pursuant to feedback from corporate due diligence review, there is a gap in Article 21 respecting Company's and its Affiliates' Personnel. This has partially been due to the several previous revisions of the original template language of Article 21.5. The least intrusive way to address this gap is to revise Article 21.7 as here.

Formatted: Font: Bold

Formatted: Font: Bold



RE: *Confidential: RE: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Krupski, Joseph (NRCan/RNCan)

to:

JamesMeaney@lowerchurchillproject.ca, Nik Argirov

06/14/2017 10:43 AM

Cc:

"DavidWright@lowerchurchillproject.ca", "LanceClarke@lowerchurchillproject.ca",

"PhilipBursey@lowerchurchillproject.ca", "StevePellerin@lowerchurchillproject.ca"

Hide Details

From: "Krupski, Joseph (NRCan/RNCan)" <joseph.krupski@canada.ca>

To: "JamesMeaney@lowerchurchillproject.ca" <JamesMeaney@lowerchurchillproject.ca>,

Nik Argirov <nik@argirovglobal.com>

Cc: "DavidWright@lowerchurchillproject.ca" <DavidWright@lowerchurchillproject.ca>,

"LanceClarke@lowerchurchillproject.ca" <LanceClarke@lowerchurchillproject.ca>,

"PhilipBursey@lowerchurchillproject.ca" <PhilipBursey@lowerchurchillproject.ca>,

"StevePellerin@lowerchurchillproject.ca" <StevePellerin@lowerchurchillproject.ca>

Thanks Jim – yes, we are good on all matters.

From: JamesMeaney@lowerchurchillproject.ca [<mailto:JamesMeaney@lowerchurchillproject.ca>]

Sent: June 14, 2017 8:05 AM

To: Nik Argirov <nik@argirovglobal.com>

Cc: DavidWright@lowerchurchillproject.ca; Krupski, Joseph (NRCan/RNCan) <joseph.krupski@canada.ca>;

LanceClarke@lowerchurchillproject.ca; PhilipBursey@lowerchurchillproject.ca;

StevePellerin@lowerchurchillproject.ca

Subject: *Confidential: RE: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Thanks Nik.

Joe, just to confirm.....with Nik's sign off, Canada is good on all matters relating to this BOP contract? Just want to make sure nothing further coming from CBB or BF, as we need to move forward with the preferred bidder.

Thanks

Jim

James Meaney

Vice President Finance, Power Supply

Lower Churchill Project

t. 709 737-4860 c. 709 727-5283 f. 709 737-1901

e. JamesMeaney@lowerchurchillproject.ca

w. muskratfalls.nalcorenergy.com

You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

From: "Nik Argirov" <nik@argirovglobal.com>

To: <JamesMeaney@lowerchurchillproject.ca>

Cc: <DavidWright@lowerchurchillproject.ca>, <LanceClarke@lowerchurchillproject.ca>, <PhilipBursey@lowerchurchillproject.ca>, "Joseph

Krupski" <joseph.krupski@canada.ca>, <StevePellerin@lowerchurchillproject.ca>
Date: 06/14/2017 01:17 AM
Subject: RE: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Great! Thanks Jim. I don't have further questions and am OK with the contract.

Regards,
Nik

From: JamesMeaney@lowerchurchillproject.ca [<mailto:JamesMeaney@lowerchurchillproject.ca>]
Sent: Tuesday, June 13, 2017 6:09 PM
To: nik@argirovglobal.com
Cc: DavidWright@lowerchurchillproject.ca; LanceClarke@lowerchurchillproject.ca; PhilipBurse@lowerchurchillproject.ca; Joseph Krupski <joseph.krupski@canada.ca>; StevePellerin@lowerchurchillproject.ca
Subject: Fwd: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Hi Nik
See response to your inquiries below
Regards
Jim

Sent from my iPhone

Begin forwarded message:
From: "David Wright" <DavidWright@lowerchurchillproject.ca>
Date: June 13, 2017 at 1:20:07 PM NDT
To: "James Meaney" <JamesMeaney@lowerchurchillproject.ca>
Cc: "Philip Bursey" <PhilipBursey@lowerchurchillproject.ca>, "Lance Clarke" <LanceClarke@lowerchurchillproject.ca>
Subject: Re: Fwd: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)
Jim,

In response to Nik's questions, I have verified with our technical team the following:

- The LV (600V) switchgear, including all breakers and switches, is supplied and installed by the BOP (CH0031) contractor.
- The grounding and neutral cabinets are supplied and installed by the T&G (CH0030) contractor
-

Please let me know if further clarification is required.

Regards,
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. musktratfalls.nalcoreenergy.com

Lance Clarke---06/13/2017 12:43:01 PM---From: Lance Clarke/NLHydro To: David Wright/NLHydro@nlhydro

From: Lance Clarke/NLHydro
To: David Wright/NLHydro@nlhydro
Cc: Philip Bursey/NLHydro@nlhydro, James Meaney/NLHydro@nlhydro
Date: 06/13/2017 12:43 PM
Subject: Fwd: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

David

Can you please have a look at the questions below and get back to Jim ASAP.

Thx

Sent from my iPad

Begin forwarded message:

From: "Nik Argirov" <nik@argirovglobal.com>
Date: June 13, 2017 at 10:51:02 AM GMT-4
To: JamesMeaney@lowerchurchillproject.ca
Cc: "Joseph Krupski" <joseph.krupski@canada.ca>, PhilipBursey@lowerchurchillproject.ca,
LanceClarke@lowerchurchillproject.ca, StevePellerin@lowerchurchillproject.ca,
PHarrington@lowerchurchillproject.ca
Subject: RE: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Jim,

I have no further comments on the commercial part of the contract. I'm trying to better understand the division of equipment supply and installation between the BOP and Andritz. Perhaps this will be better done during my visit next week but still let me know please if, for example, the LV (600V) switchgear including all breakers and switches is supplied and installed by the BOP contractor. Also, who is responsible for the installation of some of the generator related equipment such as grounding or neutral cabinets or so?

Regards,

Nik

From: JamesMeaney@lowerchurchillproject.ca [<mailto:JamesMeaney@lowerchurchillproject.ca>]
Sent: Thursday, June 8, 2017 5:23 AM
To: Joseph Krupski <joseph.krupski@canada.ca>; Manzer, Alison <amanzer@casselsbrock.com>; 'Nik Argirov' <nik@argirovglobal.com>; 'John Medland' <jmedland@blairfranklin.com>; Boudreau, Anne: IC <anne.boudreau@ic.gc.ca>
Cc: PhilipBursey@lowerchurchillproject.ca; LanceClarke@lowerchurchillproject.ca; StevePellerin@lowerchurchillproject.ca;
'Angela Onesi' <aonesi@fasken.com>; PHarrington@lowerchurchillproject.ca
Subject: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Hi Folks

Please find attached for your review documents relating to the award of the MF Balance of Plant

CH0031 contract, the last remaining material construction contract named in the PFA.

We would also like to arrange a call for tomorrow afternoon (NL time) to walk through a summary presentation with you and address any questions.

Proposing to hold the call 2:30pm NL time (1:00pm EST). Please confirm if this works and I will send meeting invite/conference bridge once we finalize a time.

Thanks
Jim

James Meaney

Vice President Finance, Power Supply
Lower Churchill Project

t. 709 737-4860 c. 709 727-5283 f. 709 737-1901

e. JamesMeaney@lowerchurchillproject.ca

w. musktratfalls.nalcorenergy.com

You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

----- Forwarded by James Meaney/NLHydro on 06/08/2017 09:45 AM -----

From: Philip Bursley/NLHydro

To: Peter Hickman/NLHydro@NLHydro, Darren Marsh/NLHydro@NLHYDRO, Angelina M Hayes/NLHydro@NLHYDRO, Sonali Roy/NLHydro@NLHYDRO, Samantha Gosse/NLHydro@NLHYDRO, Andrew Sinnott/NLHydro@NLHYDRO, Scott Pelley/NLHydro@NLHYDRO, Auburn Warren/NLHydro@NLHYDRO, Carla Russell/NLHydro@NLHYDRO, James Meaney/NLHydro@NLHYDRO

Cc: Jim Slade/NLHydro@NLHydro, David Wright/NLHydro@NLHYDRO, Paul Adams/NLHydro@NLHYDRO, Scott O'Brien/NLHydro@NLHYDRO, Pat Hussey/NLHydro@NLHydro, Lance Clarke/NLHydro@NLHydro, Paul Harrington/NLHydro@NLHydro, "Denes E. Bajzak"

<denes.bajzak@bajzaklaw.com>, Gerald Cahill/NLHydro@NLHYDRO, Rich Hull/NLHydro@NLHYDRO

Date: 06/07/2017 04:42 PM

Subject: *Confidential: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF) - Due Diligence & Cold Eyes Review Requested Approval

Date: 12-June-2017

All,

Please find attached the documents for the due diligence and cold eyes review of CH0031. Andrew Sinnott is scheduling a meeting for tomorrow afternoon so that we can run through a brief presentation and respond to any questions you may have. Timing is critical for this review and approval process as we have been mandated a very tight schedule agreement award to accommodate the upcoming project update. For this reason if you are unable to attend tomorrows meeting please contact me, at your soonest convenience, with any questions you may have.

For the people working at the project office on Torbay Road, we will circulate the review form for your signature.

Please note the attached information is confidential.

Kind Regards,

Philip Bursey

Contracts Lead

PROJECT DELIVERY TEAM

Lower Churchill Project

t. 709 737-1830

e. PhilipBursey@lowerchurchillproject.ca

w. muskratfalls.nalcoreenergy.com



RE: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)
Nik Argirov
to:
JamesMeaney
06/14/2017 01:17 AM
Cc:
DavidWright, LanceClarke, PhilipBursey, "Joseph Krupski", StevePellerin
Hide Details
From: "Nik Argirov" <nik@argirovglobal.com> Sort List...
To: <JamesMeaney@lowerchurchillproject.ca>
Cc: <DavidWright@lowerchurchillproject.ca>, <LanceClarke@lowerchurchillproject.ca>, <PhilipBursey@lowerchurchillproject.ca>, "Joseph Krupski" <joseph.krupski@canada.ca>, <StevePellerin@lowerchurchillproject.ca>

Great! Thanks Jim. I don't have further questions and am OK with the contract.

Regards,
Nik

From: JamesMeaney@lowerchurchillproject.ca [<mailto:JamesMeaney@lowerchurchillproject.ca>]
Sent: Tuesday, June 13, 2017 6:09 PM
To: nik@argirovglobal.com
Cc: DavidWright@lowerchurchillproject.ca; LanceClarke@lowerchurchillproject.ca; PhilipBursey@lowerchurchillproject.ca; Joseph Krupski <joseph.krupski@canada.ca>; StevePellerin@lowerchurchillproject.ca
Subject: Fwd: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Hi Nik
See response to your inquiries below
Regards
Jim

Sent from my iPhone

Begin forwarded message:

From: "David Wright" <DavidWright@lowerchurchillproject.ca>
Date: June 13, 2017 at 1:20:07 PM NDT
To: "James Meaney" <JamesMeaney@lowerchurchillproject.ca>
Cc: "Philip Bursey" <PhilipBursey@lowerchurchillproject.ca>, "Lance Clarke" <LanceClarke@lowerchurchillproject.ca>
Subject: Re: Fwd: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Jim,

In response to Nik's questions, I have verified with our technical team the following:

- The LV (600V) switchgear, including all breakers and switches, is supplied and installed by the BOP (CH0031) contractor.

- The grounding and neutral cabinets are supplied and installed by the T&G (CH0030) contractor
-

Please let me know if further clarification is required.

Regards,
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

Lance Clarke---06/13/2017 12:43:01 PM---From: Lance Clarke/NLHydro To: David Wright/NLHydro@nlhydro

From: Lance Clarke/NLHydro
To: David Wright/NLHydro@nlhydro
Cc: Philip Bursey/NLHydro@nlhydro, James Meaney/NLHydro@nlhydro
Date: 06/13/2017 12:43 PM
Subject: Fwd: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

David

Can you please have a look at the questions below and get back to Jim ASAP.

Thx

Sent from my iPad

Begin forwarded message:

From: "Nik Argirov" <nik@argirovglobal.com>
Date: June 13, 2017 at 10:51:02 AM GMT-4
To: JamesMeaney@lowerchurchillproject.ca
Cc: "Joseph Krupski" <joseph.krupski@canada.ca>, PhilipBursey@lowerchurchillproject.ca, LanceClarke@lowerchurchillproject.ca, StevePellerin@lowerchurchillproject.ca, PHarrington@lowerchurchillproject.ca
Subject: RE: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Jim,

I have no further comments on the commercial part of the contract. I'm trying to better understand the division of equipment supply and installation between the BOP and

Andritz. Perhaps this will be better done during my visit next week but still let me know please if, for example, the LV (600V) switchgear including all breakers and switches is supplied and installed by the BOP contractor. Also, who is responsible for the installation of some of the generator related equipment such as grounding or neutral cabinets or so?

Regards,
Nik

From: JamesMeaney@lowerchurchillproject.ca
[<mailto:JamesMeaney@lowerchurchillproject.ca>]

Sent: Thursday, June 8, 2017 5:23 AM

To: Joseph Krupski <joseph.krupski@canada.ca>; Manzer, Alison <amanzer@casselsbrock.com>; 'Nik Argirov' <nik@argirovglobal.com>; 'John Medland' <jmedland@blairfranklin.com>; Boudreau, Anne: IC <anne.boudreau@ic.gc.ca>

Cc: PhilipBurse@lowerchurchillproject.ca; LanceClarke@lowerchurchillproject.ca; StevePellerin@lowerchurchillproject.ca; 'Angela Ones!' <aonesi@fasken.com>; PHarrington@lowerchurchillproject.ca

Subject: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Hi Folks

Please find attached for your review documents relating to the award of the MF Balance of Plant CH0031 contract, the last remaining material construction contract named in the PFA.

We would also like to arrange a call for tomorrow afternoon (NL time) to walk through a summary presentation with you and address any questions.

Proposing to hold the call 2:30pm NL time (1:00pm EST). Please confirm if this works and I will send meeting invite/conference bridge once we finalize a time.

Thanks
Jim

James Meaney

Vice President Finance, Power Supply
Lower Churchill Project

t. 709 737-4860 c. 709 727-5283 f. 709 737-1901

e. JamesMeaney@lowerchurchillproject.ca

w. muskratfalls.nalcorenergy.com

You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

----- Forwarded by James Meaney/NLHydro on 06/08/2017 09:45 AM -----

From: Philip Bursey/NLHydro

To: Peter Hickman/NLHydro@NLHydro, Darren Marsh/NLHydro@NLHYDRO, Angelina M Hayes/NLHydro@NLHYDRO, Sonali Roy/NLHydro@NLHYDRO, Samantha Gosse/NLHydro@NLHYDRO, Andrew Sinnott/NLHydro@NLHYDRO, Scott Pelley/NLHydro@NLHYDRO, Auburn

Warren/NLHydro@NLHYDRO, Carla Russell/NLHydro@NLHYDRO, James Meaney/NLHydro@NLHYDRO

Cc: Jim Slade/NLHydro@NLHYDRO, David Wright/NLHydro@NLHYDRO, Paul Adams/NLHydro@NLHYDRO, Scott O'Brien/NLHydro@NLHYDRO, Pat Hussey/NLHydro@NLHydro, Lance Clarke/NLHydro@NLHydro, Paul Harrington/NLHydro@NLHydro, "Denes E. Bajzak" <denes.bajzak@bajzaklaw.com>, Gerald

Cahill/NLHydro@NLHYDRO, Rich Hull/NLHydro@NLHYDRO

Date: 06/07/2017 04:42 PM

Subject: *Confidential: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF) - Due Diligence & Cold Eyes Review Requested Approval Date: 12-June-2017

All,

Please find attached the documents for the due diligence and cold eyes review of CH0031. Andrew Sinnott is scheduling a meeting for tomorrow afternoon so that we can run through a brief presentation and respond to any questions you may have. Timing is critical for this review and approval process as we have been mandated a very tight schedule agreement award to accommodate the upcoming project update. For this reason if you are unable to attend tomorrows meeting please contact me, at your soonest convenience, with any questions you may have.

For the people working at the project office on Torbay Road, we will circulate the review form for your signature.

Please note the attached information is confidential.

Kind Regards,

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



RE: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Krupski, Joseph (NRCAN/RNCAN)

to:

Nik Argirov, JamesMeaney@lowerchurchillproject.ca

06/13/2017 05:47 PM

Cc:

"PhilipBursey@lowerchurchillproject.ca", "LanceClarke@lowerchurchillproject.ca", "StevePellerin@lowerchurchillproject.ca", "PHarrington@lowerchurchillproject.ca", "amanzer@casselsbrock.com", "John Medland (jmedland@blairfranklin.com)", "Soomro, Humayun (NRCAN/RNCAN)", "McHattie, Joseph (NRCAN/RNCAN)"

Hide Details

From: "Krupski, Joseph (NRCAN/RNCAN)" <joseph.krupski@canada.ca> Sort List...

To: Nik Argirov <nik@argirovglobal.com>, "JamesMeaney@lowerchurchillproject.ca" <JamesMeaney@lowerchurchillproject.ca>

Cc: "PhilipBursey@lowerchurchillproject.ca" <PhilipBursey@lowerchurchillproject.ca>, "LanceClarke@lowerchurchillproject.ca" <LanceClarke@lowerchurchillproject.ca>, "StevePellerin@lowerchurchillproject.ca" <StevePellerin@lowerchurchillproject.ca>, "PHarrington@lowerchurchillproject.ca" <PHarrington@lowerchurchillproject.ca>, "amanzer@casselsbrock.com" <amanzer@casselsbrock.com>, "John Medland (jmedland@blairfranklin.com)" <jmedland@blairfranklin.com>, "Soomro, Humayun (NRCAN/RNCAN)" <humayun.soomro@canada.ca>, "McHattie, Joseph (NRCAN/RNCAN)" <joseph.mchattie@canada.ca>

Once Nik is comfortable, I am comfortable.

Joe

From: Nik Argirov [<mailto:nik@argirovglobal.com>]

Sent: June 13, 2017 10:50 AM

To: JamesMeaney@lowerchurchillproject.ca

Cc: Krupski, Joseph (NRCAN/RNCAN) <joseph.krupski@canada.ca>; PhilipBursey@lowerchurchillproject.ca; LanceClarke@lowerchurchillproject.ca; StevePellerin@lowerchurchillproject.ca; PHarrington@lowerchurchillproject.ca

Subject: RE: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Jim,

I have no further comments on the commercial part of the contract. I'm trying to better understand the division of equipment supply and installation between the BOP and Andritz. Perhaps this will be better done during my visit next week but still let me know please if, for example, the LV (600V) switchgear including all breakers and switches is supplied and installed by the BOP contractor. Also, who is responsible for the installation of some of the generator related equipment such as grounding or neutral cabinets or so?

Regards,

Nik

From: JamesMeaney@lowerchurchillproject.ca [<mailto:JamesMeaney@lowerchurchillproject.ca>]

Sent: Thursday, June 8, 2017 5:23 AM

To: Joseph Krupski <joseph.krupski@canada.ca>; Manzer, Alison <amanzer@casselsbrock.com>; 'Nik Argirov' <nik@argirovglobal.com>; 'John Medland' <jmedland@blairfranklin.com>; Boudreau, Anne: IC <anne.boudreau@ic.gc.ca>

Cc: PhilipBurse@lowerchurchillproject.ca; LanceClarke@lowerchurchillproject.ca;
StevePellerin@lowerchurchillproject.ca; 'Angela Ones' <aonesi@fasken.com>;
PHarrington@lowerchurchillproject.ca

Subject: *Confidential: Fw: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF BOP)

Hi Folks

Please find attached for your review documents relating to the award of the MF Balance of Plant CH0031 contract, the last remaining material construction contract named in the PFA.

We would also like to arrange a call for tomorrow afternoon (NL time) to walk through a summary presentation with you and address any questions.

Proposing to hold the call 2:30pm NL time (1:00pm EST). Please confirm if this works and I will send meeting invite/conference bridge once we finalize a time.

Thanks
Jim

James Meaney

Vice President Finance, Power Supply
Lower Churchill Project

t. 709 737-4860 c. 709 727-5283 f. 709 737-1901

e. JamesMeaney@lowerchurchillproject.ca

w. musktratfalls.nalcorenergy.com

You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

----- Forwarded by James Meaney/NLHydro on 06/08/2017 09:45 AM -----

From: Philip Bursey/NLHydro

To: Peter Hickman/NLHydro@NLHydro, Darren Marsh/NLHydro@NLHYDRO, Angelina M Hayes/NLHydro@NLHYDRO, Sonali Roy/NLHydro@NLHYDRO, Samantha Gosse/NLHydro@NLHYDRO, Andrew Sinnott/NLHydro@NLHYDRO, Scott Pelley/NLHydro@NLHYDRO, Auburn Warren/NLHydro@NLHYDRO, Carla Russell/NLHydro@NLHYDRO, James Meaney/NLHydro@NLHYDRO

Cc: Jim Slade/NLHydro@NLHYDRO, David Wright/NLHydro@NLHYDRO, Paul Adams/NLHydro@NLHYDRO, Scott O'Brien/NLHydro@NLHYDRO, Pat Hussey/NLHydro@NLHydro, Lance Clarke/NLHydro@NLHydro, Paul Harrington/NLHydro@NLHydro, "Denes E. Bajzak" <denes.bajzak@bajzaklaw.com>, Gerald Cahill/NLHydro@NLHYDRO, Rich Hull/NLHydro@NLHYDRO

Date: 06/07/2017 04:42 PM

Subject: *Confidential: CH0031 - Supply and Install Mechanical and Electrical Auxiliaries (MF) - Due Diligence & Cold Eyes Review Requested
Approval Date: 12-June-2017

All,

Please find attached the documents for the due diligence and cold eyes review of CH0031. Andrew Sinnott is scheduling a meeting for tomorrow afternoon so that we can run through a brief presentation and respond to any questions you may have. Timing is critical for this review and approval process as we have been mandated a very tight schedule agreement award to accommodate the upcoming project update. For this reason if you are unable to attend tomorrows meeting please contact me, at your soonest convenience, with any questions you may have.

For the people working at the project office on Torbay Road, we will circulate the review form for your signature.

Please note the attached information is confidential.

Kind Regards,

Philip Bursey

Contracts Lead

PROJECT DELIVERY TEAM

Lower Churchill Project

t. 709 737-1830

e. PhilipBursey@lowerchurchillproject.ca

w. muskratfalls.nalcorenergy.com

MUSKRAT FALLS CORPORATION

and

CAHILL-GANOTEC, A PARTNERSHIP

SUPPLY AND INSTALL AGREEMENT

Supply and Install Mechanical and Electrical Auxiliaries (MF)

Agreement No. CH0031-001

DATED AS OF JUNE 16, 2017

TABLE OF CONTENTS

| | |
|--|----|
| Article 1 Interpretation | 1 |
| Article 2 Contractor’s Status | 12 |
| Article 3 Contractor’s Obligations | 13 |
| Article 4 Contractor’s Design Obligations | 15 |
| Article 5 Contractor’s Personnel | 16 |
| Article 6 Subcontracts | 18 |
| Article 7 Performance Security | 19 |
| Article 8 Policy on Ethics/Conflicts of Interest | 19 |
| Article 9 Compliance With Laws | 20 |
| Article 10 Company’s Obligations | 20 |
| Article 11 Role and Responsibilities of Engineer | 21 |
| Article 12 Compensation and Terms of Payment | 22 |
| Article 13 Taxes | 28 |
| Article 14 Audit and Records | 30 |
| Article 15 Health, Safety and Environmental Protection | 31 |
| Article 16 Access and Quality | 34 |
| Article 17 Warranty | 35 |
| Article 18 Contractor Insurance | 38 |
| Article 19 Workers Compensation | 41 |
| Article 20 Project Insurance | 41 |
| Article 21 Liability and Indemnification | 43 |
| Article 22 Site and Transport Route Conditions | 47 |
| Article 23 Title and Risk | 48 |
| Article 24 Completion and Delivery | 50 |
| Article 25 Substantial and Final Completion | 51 |
| Article 26 Changes in the Work | 54 |
| Article 27 Publicity Communications | 57 |
| Article 28 Confidentiality | 57 |
| Article 29 Patents, Trademarks, Copyrights | 59 |
| Article 30 Assignment | 60 |
| Article 31 Force Majeure | 61 |
| Article 32 Default and Termination | 63 |
| Article 33 Bankruptcy, Insolvency and Receivership | 68 |
| Article 34 Suspension | 68 |

Article 35 Labour Relations 70
 Article 36 Liquidated Damages 71
 Article 37 Contractor’s Representations, Warranties and Covenants..... 72
 Article 38 Entirety of Agreement, Non Waiver 75
 Article 39 Dispute Resolution 76
 Article 40 Notices 77
 Article 41 Liens and Claims 78
 Article 42 Enurement, Time, Survival of Provisions 79
 Article 43 Counterparts..... 79

| Exhibit | Description |
|----------------|--|
| 1 | Scope of Work |
| 2 | Compensation |
| 3 | Coordination Procedures |
| 4 | Supplier Document Requirement List |
| 5 | Health and Safety Requirements |
| 6 | Environmental and Regulatory Compliance Requirements |
| 7 | Quality Requirements |
| 8 | Subcontractors, Manufacturers and Material Sources |
| 9 | Schedule |
| 10 | Declaration of Residency |
| 11 | Company Supplied Documents |
| 12 | Site Conditions |
| 13 | Provincial Benefits |
| 14 | Performance Security |
| 15 | Rules for Arbitration |

THIS AGREEMENT MADE as of **June 16, 2017**

BETWEEN:

MUSKRAT FALLS CORPORATION, a body corporate constituted pursuant to the *Corporations Act*, RSNL 1990, c. C-36, as amended, and having its head office at the City of St. John's, Province of Newfoundland and Labrador, Canada (hereinafter referred to as "**Company**")

- and -

Cahill-Ganotec, a Partnership, a partnership between G.J. Cahill (1979) Limited and Ganotec Inc., formed pursuant to the laws of the Province of Newfoundland and Labrador, Canada (hereinafter called "**Contractor**").

WHEREAS, Company desires the performance of certain Work described in this Agreement;

WHEREAS, Contractor is engaged in the business of performing such Work and will provide all expertise, equipment, material and personnel to perform the Work;

WHEREAS Company and Contractor wish to set out the terms and conditions on which Contractor shall carry out the Work;

NOW THEREFORE, the Parties, each in consideration of the promises and agreements of the other, hereby agree as follows:

ARTICLE 1 INTERPRETATION

1.1 The following Exhibits are attached hereto and shall form and be read and construed as an integral part of this Agreement:

| Exhibit | Description |
|----------------|--|
| 1 | Scope of Work |
| 2 | Compensation |
| 3 | Coordination Procedures |
| 4 | Supplier Document Requirement List |
| 5 | Health and Safety Requirements |
| 6 | Environmental and Regulatory Compliance Requirements |
| 7 | Quality Requirements |
| 8 | Subcontractors, Manufacturers and Material Sources |
| 9 | Schedule |

| Exhibit | Description |
|---------|----------------------------|
| 10 | Declaration of Residency |
| 11 | Company Supplied Documents |
| 12 | Site Conditions |
| 13 | Provincial Benefits |
| 14 | Performance Security |
| 15 | Rules for Arbitration |

- 1.2 For the purpose of this Agreement, except as is otherwise expressly provided or unless the context otherwise requires, the terms defined in this Article shall have the meanings assigned to them in this Article.
- (a) **"Acceptance"** means express acceptance, concurrence or consent in writing by Engineer and **"Accepted"**, **"Acceptable"** and **"Accept"** shall be construed accordingly.
- (b) **"Aconex"** means a cloud based computer software program for communication that can be accessed via an internet connection and a web browser.
- (c) **"Affiliate"** or **"Affiliate(s)"** has the meaning given to affiliate in the *Canada Business Corporations Act*, R.S.C. 1985, c. C-44 and includes any limited partnership whose general partner is an affiliate of Company under that statute.
- (d) **"Affiliate Assignee"** has the meaning ascribed thereto in **Article 30.1**.
- (e) **"Agent Party"** means initially the Security Trustee, and from time to time any agent or other person designated by the Security Trustee to enforce the Security Interests, or any receiver of the Affiliate Assignee or any person appointed as a receiver by the Security Trustee for the assets of the Affiliate Assignee. At any point in time there shall only be one Agent Party and the Security Trustee shall inform Contractor each time there is a change in the designation of the Agent Party.
- (f) **"Agreement"** means this document, including the Exhibits as referenced in **Article 1.1**, originally executed or as they may from time to time be supplemented, amended, revised or otherwise modified in accordance with the applicable provisions of this document and the Exhibits.
- (g) **"Applicable Laws"** means any laws, statutes, regulations, standards, codes, orders, directives or other rules enacted or issued from time to time by any Authority having jurisdiction over Contractor or Company or the activities carried out under this Agreement, including safety, occupational health, customs and excise, taxation, workers compensation, labour and environmental protection laws, statutes, regulations, standards, codes, orders, directives and other rules.

- (h) **"Approval"** means express acceptance, concurrence or consent in writing and **"Approve"** and **"Approved"** shall be construed accordingly.
- (i) **"Authority"** means any:
- (i) government or government department or agency;
 - (ii) municipality, local government authority or council;
 - (iii) other statutory authority;
 - (iv) fiscal or judicial body, commission, board, tribunal or agency; or
 - (v) other regulatory person or body;
- (excluding Company) having jurisdiction or authority in any way over Contractor or Company or the subject matter of the Agreement, including a right to impose a requirement or whose Approval is required with respect to the LCP or the Work.
- (j) **"Billing Information"** has the meaning ascribed thereto in **Article 12.6**.
- (k) **"Breach"** has the meaning ascribed thereto in **Article 30.2**.
- (l) **"Business Day"** means a day that is not a Saturday, Sunday or any other day which is a statutory holiday in the Province of Newfoundland and Labrador.
- (m) **"Change"** means any of the following:
- (i) An addition to the Work;
 - (ii) An increase or decrease in quantities of items forming part or all of the Work;
 - (iii) A deletion of any part of the Work;
 - (iv) A revision or modification to any part of the Work already completed;
 - (v) A variation to the schedule for the completion of a Milestone, including a delay in the completion of such Milestone resulting from an act or omission by Company provided that Contractor shall use reasonable care and diligence to mitigate such delay;
 - (vi) A modification in, variation to or deviation from the requirements set out in Exhibit 1 – Scope of Work;
- but for greater certainty, a Change shall not include:
- (A) modifications, revisions or deviations to the requirements of the Agreement that are necessary to make the Work satisfy the performance requirements set out in Exhibit 1 – Scope of Work;
 - (B) any items that can reasonably be inferred as being included in the Work, including the advancement and development of the design of any element of the Work within the Contactor's responsibility under the Agreement;

- (C) modifications, revisions or deviations to the requirements of Exhibit 1 – Scope of Work or any additional services that are requested by Company that are necessary because of delays attributable to Contractor Group;
 - (D) corrections or additional services that are required because of Contractor’s breach of any of its representations, covenants, warranties, guarantees or other obligations under this Agreement, including corrections or additional services made necessary due to noncompliance with the Agreement, Applicable Laws or the requirements of Authorities;
 - (E) the supply of any services, materials or equipment required to rectify any omissions, defects or deficiencies in the Work; or
 - (F) matters that might otherwise be grounds for alteration of a date for a completion of a Milestone but which coincide with any concurrent delay or other matter within Contractor’s responsibility under this Agreement.
- (n) **"Change Order"** means an order or directive for a Change issued in the form set out in Exhibit 3 – Coordination Procedures and signed by Company.
 - (o) **"Change Request"** means a request for a Change issued in the form set out in Exhibit 3 – Coordination Procedures.
 - (p) **"Claim"** means damages (including punitive and exemplary damages), expenses, costs, losses, injuries, liabilities, claims, liens, judgments, settlements, awards, remedies, debts, expenses, causes of action, demands, court costs, legal fees or disbursements.
 - (q) **"Commissioning"** means the checks, inspections, activities and tests required by the Technical Specifications to verify that the Work performs in accordance with the requirements of this Agreement and is safe for use and/or occupation.
 - (r) **"Company"** means Muskrat Falls Corporation and its successors and assigns.
 - (s) **"Company Group"** means collectively Company and Company’s Other Contractors (including Engineer), and the respective Affiliates and Personnel of each of the foregoing, and any independent engineer, and its Personnel, retained by or on behalf of an entity that provides financing to Company or any of its Affiliates for the LCP or any part thereof.
 - (t) **"Company's Other Contractors"** means all contractors and subcontractors of Company or its Affiliates, including all of their contractors and consultants (including any warranty surveyor or inspector) except Contractor and Subcontractors.
 - (u) **"Company Representative"** means the person designated in accordance with **Article 10.4**.

- (v) **"Company Supplied Data"** means those documents listed in Exhibit 11 – Company Supplied Documents, together with such other documents to be provided by Company as shall be designated by Company in writing from time to time.
- (w) **"Confidential Information"** has the meaning ascribed thereto in **Article 28.1**.
- (x) **"Contract Price"** means the sum of money specified in the Agreement, as the same may be adjusted from time to time by agreement between the Parties or in accordance with the terms of the Agreement, being the consideration for the satisfactory performance of the Work by Contractor in accordance with the Agreement and as specified in Exhibit 2 - Compensation.
- (y) **"Contractor"** means the Person identified as Contractor on the first page of this Agreement and its successors and permitted assigns.
- (z) **"Contractor Group"** means Contractor and Subcontractors (including Subcontractor's subcontractors of every tier) and their vendors and suppliers and the respective Affiliates and respective Personnel of each of the foregoing.
- (aa) **"Contractor's Items"** means all machinery, systems, fittings, parts, spare parts, apparatus, tools, materials, supplies and any other equipment, material or items which are necessary to be supplied by Contractor Group at their cost to perform the Work.
- (bb) **"Contractor's Personnel"** means the Personnel to be provided by Contractor Group from time to time to perform the Work.
- (cc) **"Contractor's Proprietary Information"** means information of a scientific or technical nature, including inventions, designs or trade secrets which Contractor employs in the course of performing the Work and is not otherwise required to be disclosed or delivered in accordance with other provisions in this Agreement.
- (dd) **"Contractor's Representative"** is the person nominated as such in accordance with **Article 5.5**.
- (ee) **"Court"** means a court of competent jurisdiction and includes the Supreme Court of Canada.
- (ff) **"Cure Period"** has the meaning ascribed thereto in **Article 30.2**.
- (gg) **"Defect"** means any error, omission, deficiency, defect and/or failure in design, materials, engineering, workmanship, manufacture and/or installation, but shall exclude deficiencies caused by:
 - (i) normal wear and tear by Company;

- (ii) alteration of the products of the Work by Company in conflict with Contractor's written instructions delivered to Company prior to the date of the Final Completion Certificate; or
 - (iii) Company's failure to comply with applicable manufacturer's written recommendations, including operations and maintenance manuals, delivered to Company prior to the date of the Final Completion Certificate; provided that such normal wear and tear, alteration and/or failure are not contemplated by the Technical Requirements.
- (hh) **"Deliver", "Delivered" or "Delivery"** means that point in time at which Contractor provides and Company takes physical possession of the Work (or any part), in accordance with **Article 24**.
- (ii) **"Dispute"** has the meaning ascribed thereto in **Article 39.1**.
- (jj) **"Drawings"** means the drawings set out in Exhibit 1 - Scope of Work.
- (kk) **"Effective Date"** means **June 16, 2017**.
- (ll) **"Engineer"** means Lower Churchill Management Corporation, or such other Person designated by Company in writing from time to time by giving Notice to Contractor, and any successors or assigns.
- (mm) **"Exhibits"** means the Exhibits forming part of this Agreement and identified in **Article 1.1**.
- (nn) **"Final Completion"** means that point in time when Contractor has completed all the Work except for Warranty obligations.
- (oo) **"Final Completion Certificate"** has the meaning ascribed thereto in **Article 25.7**.
- (pp) **"Force Majeure"** has the meaning ascribed thereto in **Article 31.1**.
- (qq) **"HST"** means all amounts exigible pursuant to Part IX of the *Excise Tax Act* (Canada), R.S.C. 1985, c. E-15, including, for greater certainty, the taxes commonly referred to as the goods and services tax (GST) and the harmonized sales tax.
- (rr) **"LCP"** means lower Churchill Projects which include hydroelectric power developments on the lower Churchill River located in the Labrador portion of the Province of Newfoundland and Labrador and associated power transmission facilities.
- (ss) **"LEG2/96"** means the 1996 "Model 'Consequences' Defects Wording" published by the London Engineering Group.

- (tt) "**Lower Churchill Construction Projects Benefits Strategy**" means the policy, strategy, obligations and procedures set out in the document located at www.NR.Gov.NL.CA/NR/Energy/LCP_Benefits_Strategy.pdf.
- (uu) "**Milestone**" has the meaning ascribed thereto in Exhibit 3 – Coordination Procedures.
- (vv) "**Milestone Schedule**" means the schedule for performance of the Work (or any part) as set out in Exhibit 9 – Schedule, as the same may be amended from time to time by agreement of the Parties or otherwise in accordance with the provisions of the Agreement.
- (ww) "**Notice**" means a written communication that is required to be delivered in accordance with **Article 40**.
- (xx) "**Party**" means Company or Contractor, as the context requires, and "**Parties**" means Company and Contractor collectively, and reference to any Party includes that Party's executors, administrators, substitutes (including persons taking by novation), successors and permitted assigns.
- (yy) "**Payment Certificate**" means the certificate for payment of all or any portion of the Contract Price that is issued by Contractor to Engineer for Approval by Company, all in accordance with **Article 12**.
- (zz) "**Payment Milestone**" means a Milestone identified in Exhibit 2 – Compensation for which payment of a portion of the Contract Price is to be made by Company to Contractor.
- (aaa) "**Person**" means an individual, a partnership, a corporation, a trust, an unincorporated organization, a union, a government or any department or agency thereof and the heirs, executors, administrators, successors, assigns or other legal representatives of an individual, and words importing persons have a similar meaning.
- (bbb) "**Personnel**" means the directors, officers, employees, consultants, non-employed representatives and agents of a Person.
- (ccc) "**Privacy Law**" means the *Access to Information and Protection of Privacy Act, 2015*, S.N.L. 2015, c. A-1.2, and all other applicable federal or provincial laws relating to disclosure of information, and the privacy, confidentiality or use of any information, about individuals and corporations.
- (ddd) "**Punch List**" means a list of Defects and/or items or parts of the Work that are not complete.
- (eee) "**Quality Plan**" means the plan described in Exhibit 7 – Quality Requirements.

- (fff) **"Security Interests"** means the following rights granted by Affiliate Assignee to the Security Trustee: (a) any right of set-off or combination of accounts intended to secure the payment or performance of an obligation; (b) any interest in property securing an obligation owed to, or a claim by, a Person other than the owner (which for the purposes hereof shall include a possessor under a title retention agreement and a lessee under a capital lease or in a sale and leaseback transaction), including by way of mortgage, pledge, charge, lien, assignment by way of security, hypothecation, security interest, hire purchase agreement, conditional sale agreement, deposit arrangement, deemed trust, title retention, capital lease, discount, factoring or securitization arrangement deemed trust, on recourse terms; (c) any preference, priority, adverse claim, levy, execution, seizure, attachment, garnishment or other encumbrance which binds property; and (d) any agreement to grant any of the foregoing rights or interests.
- (ggg) **"Security Trustee"** means the collateral trustee under a deed of trust and mortgage relating to senior secured bonds of the Affiliate Assignee, for and on behalf of the holders of such bonds from time to time, and any successor or assignee thereof.
- (hhh) **"Site"** means the location for the performance of Work as may be further described in Exhibit 1 – Scope of Work, which may include:
- (i) at the power plant, dam and/or immediate vicinity at Muskrat Falls (Labrador);
 - (ii) at any substations, converter stations, condenser stations and transition compounds at Churchill Falls (Labrador), Forteau Point (Labrador), Soldiers Pond (Newfoundland), Shoal Cove (Newfoundland); and/or
 - (iii) at power transmission line routes, including all roads and access routes to Muskrat Falls (Labrador), Churchill Falls (Labrador), Forteau Point (Labrador), Soldiers Pond (Newfoundland), Shoal Cove (Newfoundland) and associated transmission lines.
- (iii) **"Standard of a Prudent Contractor"** means good faith performance of contractual obligations and exercising that degree of care, skill, diligence, prudence, workmanship and foresight expected from a skilled and experienced contractor engaged in the same type of undertaking, in similar circumstances or conditions and in compliance with all Applicable Laws and to the satisfaction of Authorities.
- (jjj) **"Subcontract"** means an agreement (including any supplement or amendment) entered into between Contractor and any Person in the manner and to the extent permitted under the terms of the Agreement by which Contractor engages such Person to perform any part of the Work.
- (kkk) **"Subcontractor"** means any Person engaged by Contractor to perform any part of the Work pursuant to a Subcontract, and shall include the successors and permitted assigns of any such Person.

- (lll) **"Substantial Completion"** means that the Work has been completed to the extent specified in **Article 25.1**.
- (mmm) **"Substantial Completion Certificate"** means the certificate issued by Engineer in accordance with **Article 25.2**.
- (nnn) **"Suspension Expenses"** has the meaning ascribed thereto in **Article 34.2**.
- (ooo) **"Suspension Period"** has the meaning ascribed thereto in **Article 34.1**.
- (ppp) **"Tax"** or **"Taxes"** means any tax, fee, levy, duty (including, for greater certainty, all customs duties, anti-dumping duties and countervailing duties), charge, royalty or similar charge including, for greater certainty, any federal, state, provincial, municipal, local, aboriginal, foreign or any other assessment, governmental charge, imposition or tariff wherever imposed, assessed or collected, and whether based on or measured by gross receipts, income, profits, sales, use and occupation or otherwise, and including any income tax, capital gains tax, fuel tax, capital tax, goods and services tax, harmonized sales tax, value added tax, sales tax, withholding tax, property tax, business tax, ad valorem tax, transfer tax, franchise tax, payroll tax or excise tax, together with all interest, penalties, fines or additions imposed, assessed or collected with respect to any such amounts.
- (qqq) **"Technical Requirements"** means specifications, drawings, plans or other documentation of a technical or scientific nature, and tests, set out or referenced in the Exhibits.
- (rrr) **"Technical Specifications"** or **"Specifications"** means the document entitled "CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification (LCP Document No. MFA-SN-CD-3300-EN-SP-0002-01)" and all other specifications included in Exhibit 1 – Scope of Work.
- (sss) **"Term"** has the meaning ascribed thereto in **Article 1.16**.
- (ttt) **"Warranty"** means Contractor's obligations set out in **Article 17**.
- (uuu) **"Warranty Period"** has the meaning ascribed thereto in **Article 17.1**.
- (vvv) **"Warranty Work"** has the meaning ascribed thereto in **Article 17.6**.
- (www) **"Work"** means all design, engineering, labour, services and obligations to be performed and materials, equipment and products to be supplied by Contractor under the terms of this Agreement, as more particularly described in **Article 3** and Exhibit 1 – Scope of Work, including Changes and the provision of all Personnel, plant, supplies, facilities, documentation, records and other items necessary to the performance of such design, engineering, labour, services and obligations.
- (xxx) **"Worksite"** means any lands, waters and any other places on, under, over, in or through which the Work is to be performed, including design offices, workshops,

onshore facilities, factories, fabrication facilities and places where Contractor Items are obtained, stored or used for the purposes of this Agreement.

- 1.3 The doctrine of *contra proferentem* shall not apply in the interpretation of this Agreement, meaning that if there is any ambiguous language in this Agreement it shall not be interpreted more strongly against the Party who prepared or drafted the ambiguous language.
- 1.4 Where reference is made to a direction, response, act, decision, determination, consent, waiver, approval, notice, request or other communication of Company or to matters which must be satisfactory to Company, then, unless otherwise expressly stated, that matter is to be conducted or carried out at the sole and reasonable discretion of Company.
- 1.5 If the last day of any period of days set out in this Agreement falls on a day which is not a Business Day, such period of days shall be extended to the first Business Day immediately following the last day of such period of days. If anything in this Agreement falls to be done or held on a day which is not a Business Day, the same shall be done or held on the next succeeding Business Day.
- 1.6 Words importing the singular only shall include the plural and vice versa, words importing any gender shall include other genders and words importing persons shall include individuals, partnerships, associations, trusts, unincorporated organizations and corporations and vice versa. Where a word is defined in this Agreement, a derivative of that word shall have a corresponding meaning.
- 1.7 Unless otherwise expressly stated, reference herein to an Exhibit or to an Article, clause, subclause or other subdivision is a reference to such Exhibit to this Agreement or to such Article, clause, subclause or other subdivision within this Agreement. A reference to a Section is a reference to a paragraph, clause, subclause or other subdivision in an Exhibit.
- 1.8 The titles, headings, captions, recitals and the provision of a table of contents shall not be used in any way in construing or interpreting any provisions of this Agreement.
- 1.9 Except as otherwise defined in this Agreement, words and abbreviations which have well known technical or trade meanings are used in the Agreement in accordance with such recognized meanings.
- 1.10 The words "includes" and "including", whether or not used with the words "without limitation" or "but not limited to", shall not be construed to be limited by the specific enumeration of items but shall in all cases be without limitation and construed and interpreted to mean "includes without limitation" and "including without limitation".
- 1.11 Reference to any Act or legislation, or to a provision of an Act or legislation, is to the Act or legislation as amended and includes any statutory modification or re-enactment of it, a legislative provision substituted for it and any regulation, subordinate legislation or other statutory instrument issued under it.

- 1.12 If any provision in the Exhibits conflicts with a provision in the Articles of this Agreement, the provision in the Articles of this Agreement shall prevail. In the event that any provision in any of the Exhibits conflicts with any other provision in the Exhibits, priority shall be given in the order listed as follows:
- (a) Exhibit 1 - Scope of Work
 - (b) Exhibit 9 – Schedule
 - (c) Exhibit 2 – Compensation
 - (d) Exhibit 7 - Quality Requirements
 - (e) Exhibit 3 - Coordination Procedures
 - (f) Exhibit 11 - Company Supplied Documents
 - (g) the remaining Exhibits in their numerical order by Exhibit number
- except in respect of Technical Requirements, in which case the more stringent provision will prevail.
- 1.13 If the Standard of a Prudent Contractor conflicts with any other provision in this Agreement, the other provision in the Agreement shall prevail. Contractor shall give Notice to Company of any standard or requirement in this Agreement that Contractor considers is less stringent than the Standard of a Prudent Contractor.
- 1.14 The language of this Agreement shall be English and all communications and dealings under and the resolution of any disputes concerning this Agreement shall be conducted in the English language. All information, data or documentation of any nature that Contractor prepares in the performance of the Work, is required to submit to Company or is requested by Company to submit, shall be prepared in English.
- 1.15 Any Approval by Company or Acceptance by Engineer shall not waive Contractor's obligations under Applicable Laws or as outlined in this Agreement.
- 1.16 This Agreement shall be effective from the Effective Date and shall remain in full force and effect until the Work is complete, a Final Completion Certificate issued pursuant to **Article 25.10** and all Warranty obligations have been satisfied (the "**Term**"), unless earlier terminated in accordance with the provisions of this Agreement.
- 1.17 Whenever an amount of money is referred to in this Agreement, such amount shall, unless otherwise expressly stated, be deemed to be Canadian dollars.
- 1.18 The illegality or unenforceability of any provision of this Agreement shall in no way affect the legality or enforceability of any other provision hereof. Any illegal or unenforceable provision shall be deemed severed from this Agreement and the remainder of this Agreement shall be construed and enforced as if this Agreement did not contain such illegal or unenforceable provision.

- 1.19 This Agreement shall be construed and the relations between the Parties determined in accordance with the Applicable Laws of Newfoundland and Labrador and Canada, including any limitation periods, and reference to such Applicable Laws shall not, by application of conflict of laws rules or otherwise, require the application of the Applicable Laws in force in any jurisdiction other than Newfoundland and Labrador. The Parties hereby irrevocably attorn to the exclusive jurisdiction of the Courts of the Province of Newfoundland and Labrador and Canada for the resolution of any dispute arising hereunder.
- 1.20 The rights and recourse of Company and Contractor contained in the Agreement are cumulative and not in the alternative unless otherwise provided. The exercise of any such rights or recourse shall not constitute a waiver or renunciation of any other rights or recourse. Except as expressly provided in the Agreement, the obligations imposed by the Agreement and the rights and remedies available thereunder are in addition to and not a limitation of any obligations, rights and remedies otherwise imposed or available by law.
- 1.21 Company is entering into this Agreement, and Contractor acknowledges that Company is entering into this Agreement, solely in its own right and not on behalf of or as agent of Nalcor Energy or the Crown in right of the Province of Newfoundland and Labrador.
- 1.22 If Contractor is a joint venture or partnership of two or more Persons, all such Persons shall be jointly and severally liable to Company for all liabilities, indemnities and obligations of Contractor under, and relating to, this Agreement. Such Persons shall designate in writing one of them to act as a partner in charge with authority to bind the joint venture or partnership, as the case may be. The composition or the constitution of the joint venture or partnership, as the case may be, shall not be altered without the prior consent of Company. If requested by Company, Contractor shall provide to Company a copy of the joint venture agreement or partnership agreement, as applicable, excluding its financial terms, and such agreement shall be subject to the provisions of **Article 28**.

ARTICLE 2

CONTRACTOR'S STATUS

- 2.1 Contractor shall, for all purposes under this Agreement and in relation to any aspect of the performance of its obligations in respect of the Work, be an independent contractor and shall have responsibility for and control over the details and means of performing such obligations in accordance with the terms and conditions of this Agreement.
- 2.2 Contractor's Personnel shall not be employees of Company. Contractor's Personnel shall be under the direct supervision and control of Contractor and not of Company. Contractor accepts complete responsibility as the principal for Contractor's Personnel.
- 2.3 Nothing in this Agreement, nor the conduct of a Party, shall in any manner whatsoever constitute or be intended to constitute Contractor as the agent or representative or fiduciary of Company or any of its Affiliates, nor constitute or be intended to constitute a partnership or joint venture between Company and Contractor or any other Party, but rather as between Company and Contractor each Party shall be severally responsible, liable

and accountable for its own obligations under this Agreement or otherwise for any conduct arising therefrom and for all Claims, demands, actions and causes of action arising directly or indirectly therefrom.

- 2.4 Neither Party shall have the authority to make nor shall it make any statements, representations or commitments of any kind, or take any action, that will bind the other Party, except as expressly provided in this Agreement or as otherwise authorized in writing by the applicable Party.
- 2.5 Contractor acknowledges that it shall be carrying on business in the Province of Newfoundland and Labrador during the performance of the Work and agrees to comply with the registration and other relevant provisions of the *Corporations Act*, RSNL 1990, c. C-36.

ARTICLE 3

CONTRACTOR'S OBLIGATIONS

- 3.1 Contractor shall carry out all of its obligations under this Agreement and shall perform the Work, including:
- (a) any necessary design or engineering which is the responsibility of Contractor under this Agreement;
 - (b) all work required for the procurement, fabrication, manufacturing, construction, testing, transport, delivery, maintenance, storage, documentation, preservation, installation, commissioning, repair and remediation of the Work;
 - (c) provision of all supervision, services, labour, trades, drafting, accounting, purchasing, expediting, inspection, testing, Personnel, Contractor's Items, transportation, mobilization and demobilization required for the compliance with and fulfillment of all Contractor's obligations under this Agreement;
 - (d) provision and installation of all equipment, products and materials required by this Agreement at the Site;
 - (e) ensuring the Work conforms strictly as to quality and description with the particulars stated in Exhibit 1 - Scope of Work and Company Supplied Data and complies with all Applicable Laws;
 - (f) satisfaction of the performance requirements set out in Exhibit 1 – Scope of Work;
 - (g) provision of all documents as required under, and in accordance with, the terms of this Agreement;
 - (h) provision of any work not expressly detailed in this Agreement or in Contractor's proposal, but which is necessary for the performance of the Work in accordance with this Agreement;
 - (i) rectification of any and all deficiencies as noted by Company, Engineer or any Authority before the start of the Warranty Period and after such date as provided for in accordance with the Warranty;

- (j) completing the Work, and portions thereof, in accordance with Exhibit 9 - Schedule; and
 - (k) preparing and maintaining the schedules for the performance of the Work as set out and/or referenced in Exhibit 3 - Coordination Procedures.
- 3.2 Contractor shall review and verify the details contained in Exhibit 1 - Scope of Work and Exhibit 11 - Company Supplied Documents, and represents that it has a full knowledge and understanding of the nature and the scope of the Work, and including weather and all other conditions at Worksites. Contractor shall advise Company of any errors, omissions and inconsistencies in this Agreement and shall not proceed with any part of the Work affected by such until resolved by Engineer; provided that if such resolution results in a Change as defined by **Article 1.2(m)(v)** and **Articles 1.2(m)(A) to (F)** inclusive, then Contractor may proceed in accordance with **Articles 26.7** or **26.8** to seek an extension of the Milestone Schedule, provided that Contractor shall use reasonable care and diligence to mitigate such Change.
- 3.3 Contractor shall ensure the work it performs is sufficient to encompass all matters necessary for the proper and efficient fulfillment of Contractor's obligations under this Agreement. Without limitation, Contractor shall undertake the Work in accordance with Applicable Laws, this Agreement and as required by any Authority.
- 3.4 Contractor shall perform the Work to the Standard of a Prudent Contractor and shall ensure that Subcontractors shall perform to the same standard. Any material failure or any refusal or inability of Contractor to comply with the foregoing requirements shall constitute a breach of the terms and conditions of this Agreement. Contractor shall be solely responsible for any operations comprising the Work performed by Contractor Group.
- 3.5 Subject to **Article 10.3**, Contractor shall obtain and maintain all directions, guidelines, permits, certificates, authorizations, dispensations and licences of any type whatsoever necessary for the performance of the Work and shall comply with all Applicable Laws and requirements of Authorities. Contractor shall promptly notify Company in writing upon any discovery of a failure to adhere to the foregoing requirements in connection with the performance of the Work hereunder.
- 3.6 Contractor shall assist Company and provide necessary information and documents to support Company fulfilling Company's obligations set out in **Article 10.3**.
- 3.7 Contractor shall comply with all lawful instructions of Company pertaining to the performance of the Work, as communicated through the Company Representative, Engineer or otherwise in accordance with this Agreement; provided that if any such instruction results in a Change as defined by **Article 1.2(m)(v)** and **Articles 1.2(m)(A) to (F)** inclusive, then Contractor may proceed in accordance with **Articles 26.7** or **26.8** to seek an extension of the Milestone Schedule, provided that Contractor shall use reasonable care and diligence to mitigate such Change. The absence of instructions from Company shall not permit Contractor to avoid its duty to perform its obligations under this Agreement. If Contractor fails to comply with a lawful instruction, then Company may at Contractor's sole

- risk and cost take whatever measures Company considers necessary to implement the instruction.
- 3.8 Contractor shall cooperate with Company's Other Contractors and Company Personnel working at the Worksites with a view to reducing interference with Company's Other Contractors and Company Personnel or with the operations of Company; provided that if any such cooperation results in a Change as defined by **Article 1.2(m)(v)** and **Articles 1.2(m)(A) to (F)** inclusive, then Contractor may proceed in accordance with **Articles 26.7** or **26.8** to seek an extension of the Milestone Schedule, provided that Contractor shall use reasonable care and diligence to mitigate such Change.
- 3.9 Contractor shall at all times promptly take all steps necessary to maintain good labour relations with Contractor Personnel to the extent that such requirement is consistent with sound business practice in accordance with the Standard of a Prudent Contractor. Subject to **Article 31.1(c)**, the existence of any labour disturbance relating to Contractor Personnel shall not relieve Contractor of its obligations hereunder.
- 3.10 Contractor shall transfer all unused excess materials, if any, to Company at the completion of the Work or, at Company's option, such excess materials shall be sold by Contractor and any amounts realized from such sales shall be credited to Company as a deduction from the Contract Price.
- 3.11 Contractor shall take such action as Company may specify to enable Company to comply with all Applicable Laws to be complied with by Company and in particular, Applicable Laws governing the use of local personnel, goods and services, which are in effect or which may come into effect during the Term.
- 3.12 Contractor shall not change any location or place of origin identified in the Agreement for fabrication, manufacture or sourcing of equipment, materials or products without the prior Approval of Company.
- 3.13 Contractor shall be responsible, at its cost, for maintaining such inventories of Contractor's Items as necessary so as to avoid interruptions in the performance of the Work.

ARTICLE 4

CONTRACTOR'S DESIGN OBLIGATIONS

- 4.1 The provisions of this **Article 4** shall only apply to any design, engineering or architectural requirements that are the responsibility of Contractor under this Agreement.
- 4.2 All parts of the Work required by Applicable Laws to be performed by licensed or registered professional engineers or architects shall be performed by registered professional engineers and architects. In particular, any drawings, including design, installation and construction drawings, specific to the Province of Newfoundland and Labrador must be stamped by professional engineers registered to practice in the Province of Newfoundland and Labrador.

- 4.3 In the engineering and design of any equipment, products or materials to be incorporated into the Work and in the performance of the Work, Contractor shall exercise the standard of care normally exercised by licensed or registered professional engineers or architects having specialized knowledge, expertise and experience in the design of similar work.
- 4.4 For all engineering and design Contractor Group shall employ only engineering and design personnel who have the requisite knowledge and skills through education, training and experience to perform the engineering and design assigned to them.
- 4.5 Contractor shall design and engineer the Work for a useful life that is not less than the minimum stated in the Technical Requirements.
- 4.6 Contractor shall promptly remedy any error, omission, ambiguity, inconsistency or inadequacy, or any other Defect, in the Work identified by Engineer or Company before the start of the Warranty Period, and after such date as provided for in accordance with the Warranty.
- 4.7 Engineering and design review meetings will be scheduled and coordinated by Engineer in accordance with the provisions of Exhibit 3 – Coordination Procedures. Contractor shall attend all such engineering and design review meetings.
- 4.8 Contractor shall be solely responsible for all design and engineering for the Work for which it is responsible under this Agreement. Contractor shall not be relieved of its obligations under this Agreement by virtue of any Approval by Company or Acceptance by Engineer of Contractor's design and engineering or by virtue of a design and engineering review by Company Group.

ARTICLE 5

CONTRACTOR'S PERSONNEL

- 5.1 Contractor shall furnish and procure the numbers and classifications of Contractor's Personnel required to perform the Work. In the event Contractor fails to provide the numbers or classifications of Contractor's Personnel required in respect of the Work, Company may issue a Notice that Contractor is in default of this **Article 5.1**, and:
- (a) require Contractor within five (5) Business Days of such Notice to prepare an action plan to cure the default for Company's Approval;
 - (b) require Contractor to commence and diligently follow the Approved action plan; and
 - (c) if Contractor fails to commence and diligently follow the action plan, Company may, at Contractor's sole expense, retain other contractors and deduct the costs associated with retaining such other contractors from the applicable compensation payable by Company to Contractor for the period such positions remain unfilled by Contractor.
- 5.2 Contractor shall ensure that throughout the Term each of Contractor's Personnel has the qualifications, training and experience, and holds the licenses and certifications necessary to

- carry out assigned duties in the performance of the Work. Contractor shall furnish records of competence for all of Contractor's Personnel when requested to do so by Company.
- 5.3 Contractor shall immediately remove and/or replace, at Contractor's own expense, any of Contractor's Personnel if, in the sole and reasonable judgment of Company, any of Contractor's Personnel:
- (a) ceases to carry out his or her duties in a manner satisfactory to Company or engages in misconduct, unsafe activities, or is incompetent or negligent;
 - (b) is certified by a medical practitioner as being medically unfit for the duties required of him or her; or
 - (c) risks impairing his or her usefulness in the performance of his or her duties through the use of alcohol or drugs.
- 5.4 Unless otherwise Approved by Company, Contractor shall replace, or cause to be replaced, at Contractor's own expense, any of Contractor's Personnel who is transferred or dismissed by Contractor or any Subcontractor, or leaves Contractor's or Subcontractor's employ.
- 5.5 Contractor shall nominate in writing one of Contractor's Personnel as Contractor's Representative. Contractor's Representative shall:
- (a) be in charge of Contractor's Personnel and shall supervise Contractor's Personnel and maintain strict discipline in order to ensure the timely and efficient performance of the Work, and shall notify Company in writing of the occurrence of or threat of any labour dispute involving Contractor's Personnel;
 - (b) have full authority to act on behalf of and bind Contractor on all labour and Contractor's Personnel issues which arise between Company and Contractor;
 - (c) supervise the performance of the Work;
 - (d) have the authority to commit Contractor to any course of action within the bounds of its rights and obligations under this Agreement; and
 - (e) be authorized to receive on behalf of Contractor any Notices, information or decisions of Company made pursuant to this Agreement.
- 5.6 If positions of Contractor's Personnel of key importance to the performance of the Work are listed in Exhibit 3 – Coordination Procedures, Contractor shall not change any Personnel in such positions without the prior Approval of Company. In the event any such key Personnel leave the service of Contractor, Contractor shall promptly use all commercially reasonable efforts to retain suitably trained and experienced replacement key Personnel. In such circumstances, Company shall have the right, which shall be reasonably exercised by Company, to Approve such key Personnel. Contractor shall not retain such replacement key Personnel on a permanent basis without first obtaining Company's Approval, which shall not be unreasonably withheld or delayed.
- 5.7 Contractor shall be responsible for, and shall defend, protect, release, indemnify and hold Company Group harmless from and against all Claims of any nature incurred by Company

Group in connection with the payment of Contractor's Personnel, including all compensation, medical costs, Taxes (including all Canadian and foreign payroll and withholding Taxes and remittances), unemployment insurance premiums, Canada pension plan contributions and other benefits of whatever nature or as may be applicable in any jurisdiction (including any jurisdiction where the Work is performed or where the Personnel reside or are employed).

ARTICLE 6 SUBCONTRACTS

- 6.1 Subject to **Article 6.2** and **Article 6.3**, Contractor may employ Subcontractors to perform or support the performance of the Work or to furnish equipment to be provided by Contractor hereunder.
- 6.2 Contractor shall not Subcontract the whole of the Work. Subject to **Article 6.3**, Contractor shall not Subcontract the performance of any portion of the Work, or its obligations hereunder, without Company's prior Approval.
- 6.3 For all Subcontractors that are identified in Exhibit 8 – Subcontractors, Manufacturers and Material Sources, Contractor shall not be entitled to replace or add one or more Subcontractors without the prior Approval of Company, which Approval shall not be unreasonably withheld.
- 6.4 Any Subcontract permitted under this **Article 6** shall not relieve Contractor of any of its duties, obligations, warranties, liabilities or responsibilities under this Agreement. Contractor shall be responsible for the acts, omissions and negligence of any delegate and any Subcontractors and any of their respective Personnel as fully as if they were the acts, omissions or negligence of Contractor's own Personnel.
- 6.5 Contractor shall oversee the performance of all Subcontractors and delegates and keep such records and accounts and furnish such reports and information relative to Subcontractors as Company may reasonably request. No Subcontract shall bind or purport to bind Company. All Subcontracts shall contain:
- (a) a clear statement that Contractor is entering into such Subcontracts as principal and not as agent for any other Person; and
 - (b) a provision permitting the assignment of the Subcontract by Contractor to Company, at Company's option, without consent of Subcontractor.
- 6.6 Contractor shall ensure that any provisions of this Agreement which are required to be included in its Subcontracts have been so included. Contractor shall enforce the rights of Company under this Agreement with respect to the Work to be performed by any Subcontractors and the subcontracting thereof shall not prejudice such rights.
- 6.7 Contractor shall be responsible for, and shall defend, protect, release, indemnify and hold Company harmless from and against all Claims of any nature incurred by Company in

connection with the payment of Subcontractor or Subcontractor's Personnel, including all compensation, medical costs, Taxes (including all Canadian and foreign payroll and withholding Taxes and remittances), unemployment insurance premiums, Canada pension plan contributions and other benefits of whatever nature or as may be applicable in any jurisdiction (including any jurisdiction where the Work is performed or where the Personnel reside or are employed).

- 6.8 Contractor agrees and shall cause the Subcontractors to agree at all times to highlight the independent nature of the relationship between Company and Contractor wherever possible, including through the use of on-site signage and identifiable logo, letterhead, colour schemes and equipment identification.

ARTICLE 7 PERFORMANCE SECURITY

- 7.1 Contractor shall deliver on or before the Effective Date a letter of credit issued by a bank listed in Schedule I to the *Bank Act*, S.C. 1991, c.46 as security for the proper performance of Contractor's obligations under this Agreement, in the form and with the content specified in Exhibit 14 – Performance Security, the value and duration of which shall be:
- (a) equal to fifteen percent (15%) of the total estimated Contract Price stated in Exhibit 2 – Compensation, until a Final Completion Certificate has been issued pursuant to **Article 25**; and thereafter
 - (b) equal to five percent (5%) of the total estimated Contract Price stated in Exhibit 2 – Compensation, during the Warranty Period.
- 7.2 All costs and expenses incurred in relation to the establishment and maintenance of the letter of credit described in this **Article 7** shall be included in the Contract Price.
- 7.3 Company may claim and have recourse to the letter of credit if Contractor has not performed its obligations in accordance with the Agreement or if Company otherwise has a Claim against Contractor.

ARTICLE 8 POLICY ON ETHICS/CONFLICTS OF INTEREST

- 8.1 Contractor, in performing its obligations under this Agreement, shall establish and maintain appropriate business standards, procedures and controls including those necessary to avoid any real or apparent impropriety or adverse impact on the interests of Company and its Affiliates. Company reserves the right to review such standards and procedures at any time during the Term.
- 8.2 Contractor agrees to perform the Work and to conduct its operations in a manner which is in accordance with all Applicable Laws, consistent with the highest of ethical standards, including the Code of Business Conduct and Ethics set out in Exhibit 11 – Company Supplied

Documents, and to avoid any unlawful or unethical intervention in the political affairs of any country. Contractor agrees to cause all Subcontractors to adopt and enforce the foregoing policy.

- 8.3 Contractor shall not pay any commission or fee, or grant any rebate or make any loan to any Personnel of Company Group or government official, or favour any Personnel of Company Group or government official with any gift or entertainment of significant value or enter into any business arrangement with any Personnel of Company Group or government official. Contractor agrees to cause all Subcontractors engaged in the performance of the Work to adopt and enforce the foregoing policy.

ARTICLE 9 COMPLIANCE WITH LAWS

- 9.1 In performing the Work and carrying out the provisions of this Agreement, Contractor shall comply with all Applicable Laws.
- 9.2 Company may from time to time require Contractor to provide to Company, and Contractor shall promptly so provide, evidence acceptable to Company that Contractor has in all respects complied with the obligations set forth in **Article 9.1**.
- 9.3 Subject to **Article 21.4**, Contractor shall defend, protect, release, indemnify and hold Company harmless from and against all Claims which may be brought against Company or which Company may sustain, pay or incur as a result of any failure by Contractor to comply with its obligations under **Article 9.1** and **Article 9.2**.

ARTICLE 10 COMPANY'S OBLIGATIONS

- 10.1 Subject to the provisions of this Agreement, Company agrees to engage Contractor to perform the Work in accordance with the terms of this Agreement.
- 10.2 Company, through the Company Representative or Engineer, shall provide to Contractor such instructions and information which can only be provided by Company. The provision of any such instructions or information shall not in any way relieve Contractor of any of its obligations under this Agreement.
- 10.3 Company shall obtain all authorizations, permits and licenses: (a) as identified in Exhibit 6 - Environmental and Regulatory Compliance Requirements which Company is responsible to obtain in its own name; and (b) as required by Applicable Laws for the performance of the Work and which are required by such Applicable Laws to be and can only be obtained in Company's name.
- 10.4 Company shall designate a Company Representative who shall have authority to act on behalf of Company regarding matters under the Agreement, receive Notices and perform such other duties and acts reserved to the Company Representative under this Agreement.

- 10.5 The Company Representative, by Notice to Contractor, may delegate any of his or her authority to any nominated deputy. Such Notice shall specify the precise authority of such deputy.
- 10.6 Company may change the Company Representative at any time at its sole discretion by Notice to Contractor.
- 10.7 Company is not obligated to supply any equipment, products or materials unless expressly stated in the Exhibits that Company will supply specific equipment, products or materials. If any such equipment, products or materials are supplied by Company to Contractor, the equipment, products and materials shall be in the care and custody of Contractor from the time Contractor takes physical possession of them, but shall remain the property of Company. Contractor shall not use any such equipment, products and materials supplied by Company except for the purpose for which they were intended under this Agreement, and Contractor shall be responsible for the proper care, handling and maintenance of all such equipment and materials.

ARTICLE 11

ROLE AND RESPONSIBILITIES OF ENGINEER

- 11.1 Engineer has been retained by Company to provide procurement, construction management and contract administration services. Engineer shall have such powers, discretions, functions and authorities as are specified in or as may be implied from this Agreement and shall carry out such duties (including issuing instructions, decisions, orders and Acceptance). Wherever Engineer is required to exercise its discretion by the giving of a decision, opinion or Acceptance, or to determine the cost or value of any matter which may affect the rights or obligations of a Party, Engineer shall exercise such discretion impartially within the terms of this Agreement, having regard to all circumstances.
- 11.2 Contractor shall comply with the decisions, orders and instructions given by Engineer in accordance with this Agreement.
- 11.3 Engineer shall confirm any decision, order or instruction in writing and any decision, order or instruction shall not be effective until such written confirmation has been received by Contractor.
- 11.4 Engineer shall be the interpreter of first instance of the Technical Requirements.
- 11.5 Contractor agrees that all Contractor's Items may be subject to inspection and Acceptance from time to time by Engineer or any Authority. Any Contractor Item which is rejected for not performing to standards set out in this Agreement or by Applicable Laws shall be immediately repaired, or removed from the Site and replaced with Contractor's Items Acceptable to Engineer, by Contractor at Contractor's cost.

- 11.6 Contractor shall not commence any Work involving permanent installation of any equipment, materials or products until Contractor has submitted to Engineer and Engineer has Accepted the health, safety and environmental plans required by **Article 15** and drawings marked "Issued for Construction" for the part of the Work to be performed.
- 11.7 The Site will be available for permanent installation of any equipment, materials or products as part of the Work in accordance with the applicable Milestone dates of the Milestone Schedule, and Contractor shall not commence any Work related to such permanent installation at the Site until such Milestone dates or earlier as Approved by Company.
- 11.8 Where the Agreement calls for the Acceptance by Engineer or Approval by Company with respect to design, manufacture, installation, testing and commissioning of the Work, any such Acceptance or Approval is for general compliance with the Technical Requirements and does not relieve Contractor from satisfying all Technical Requirements. No inspection, review or Acceptance by Engineer or Approval by Company shall release Contractor from compliance with Contractor's obligations under this Agreement or Applicable Law.

ARTICLE 12

COMPENSATION AND TERMS OF PAYMENT

- 12.1 As full compensation for the performance by Contractor of all its obligations under this Agreement, Company shall pay Contractor the Contract Price, in accordance with the terms of this Agreement including **Article 12**, Exhibit 2 – Compensation and Exhibit 3 – Coordination Procedures. Only those rates and prices specifically identified in Exhibit 2 – Compensation shall be paid by Company and any costs not specifically identified in Exhibit 2 - Compensation shall be deemed to be included in such rates and prices. Company shall have no obligation to pay Contractor for the purchase of any goods or performance of services which have not been Approved by Company prior to the delivery of such goods or prior to the performance of such services.
- 12.2 Within thirty (30) days of the Effective Date, Engineer, on behalf of Company, shall provide Contractor with a pro forma invoice that sets out all relevant Company cost codes and required information. Contractor shall utilize said pro forma invoice and cost codes when billing Company.
- 12.3 Compensation to Contractor shall be paid:
- (a) monthly based on progress, and/or
 - (b) upon achieving a Payment Milestone,
- as further specified in Exhibit 2 – Compensation. Contractor shall be paid the portion of the Contract Price applicable to monthly progress or to a Payment Milestone following Approval by Company of a Payment Certificate and in accordance with the provisions of this **Article 12**.

- 12.4 Contractor shall provide, maintain and issue to Engineer, a detailed listing of the invoiced amounts of the Work and cash flow requirements regarding unbilled portions of the Work in accordance with the requirements set out in Exhibit 3 - Coordination Procedures. Contractor shall develop and present a format for the listing for Company Approval.
- 12.5 Contractor's invoices shall comply in all respects with Company's invoicing instructions as provided for in this Agreement, including Exhibit 2 – Compensation, Exhibit 3 – Coordination Procedures and Exhibit 13 - Provincial Benefits.
- 12.6 Invoices shall be accompanied by:
- (a) all relevant supporting documentation as Company or Engineer may require to verify completion of the Work, the accuracy of the fees, charges and third party charges invoiced including copies of any relevant third party invoices, receipts and purchase orders;
 - (b) timesheets Accepted by Engineer for any Work performed on a time and materials basis;
 - (c) receiving reports and a summary page of all third party invoices, complete with summary sheet cross referring to all backup information;
 - (d) a sworn declaration, in the form set out in Exhibit 2 - Compensation, that Contractor has paid Subcontractors, vendors and suppliers all amounts properly due for work, services, materials and equipment supplied or performed and billed by the Subcontractors, vendors and suppliers and included in Contractor's prior invoices for which Payment Certificates have been Approved by Company; and
 - (e) any other documentation Company may reasonably require.

(All invoicing requirements, information and documentation described in **Articles 12.5 , 12.6** and **12.22** shall be referred to as the "**Billing Information**". Billing Information should always comprise a summary sheet with cross referencing to all backup information which demonstrates a clear audit trail substantiating all charges presented on the invoice.)

- 12.7 Company shall not be required to pay any invoice from Contractor until complete Billing Information has been provided to Company. Company shall not be responsible or liable for any Claim arising from delays in payment due to Contractor not providing complete Billing Information.
- 12.8 Contractor shall submit an application for payment as follows:
- (a) For compensation based on monthly progress, Contractor shall issue to Engineer on the 25th day of each month during the performance of the Work, for Company's Approval, a Payment Certificate in the form set forth in Exhibit 3 – Coordination Procedures, that sets out:
 - (i) for Work items paid on a unit price basis, the number of units completed in that month together with the unit price and total claimed for each unit price item;

- (ii) for Work items paid on a lump sum basis, the percentage completed as of the 25th of the month together with the amount claimed for each lump sum item based on the percentage completed less any amounts previously paid by Company for each such item;
- (iii) for Work items paid on a reimbursable basis, Contractor will include such reimbursable items accompanied by appropriate references to the Agreement covering such items and a summary sheet cross referencing such items to all relevant Billing Information to demonstrate a clear audit trail substantiating all such items presented with the Payment Certificate;

and accompanied by all relevant supporting documentation as Engineer or Company may reasonably require to verify the progress achieved.

- (b) For compensation based on Payment Milestones, when Contractor considers that a Payment Milestone has been completed and the criteria for completion of that particular Milestone have been achieved, it shall issue to Engineer, for Company's Approval, a Payment Certificate in the form set forth in Exhibit 3 – Coordination Procedures, together with all relevant supporting documentation as Engineer or Company may reasonably require to verify the successful completion of the relevant Milestone criteria and achievement of the Payment Milestone.

12.9 Where payment is made for Work items on a unit price basis, the quantities of unit priced items in Exhibit 1 – Scope of Work and Schedule of Unit Prices in Exhibit 2 - Compensation are estimated quantities only. Any increase or decrease in the quantities of Work performed in respect of those items listed in Exhibit 1 – Scope of Work and Schedule of Units Prices in Exhibit 2 – Compensation shall not result in a change in the unit price for those items.

12.10 Within ten (10) Business Days of receipt of a Payment Certificate, Engineer shall review it and the associated supporting documentation and make a determination as set out in paragraphs (a) and (b) below. If Engineer determines that:

- (a) For Work compensated on a monthly progress basis:
 - (i) the progress claimed in the Payment Certificate has been achieved, Engineer shall recommend to Company that the Payment Certificate may be Approved; or
 - (ii) the progress claimed has not been achieved, Engineer shall amend the Payment Certificate to reflect the progress actually achieved and advise Contractor in writing the reasons for the revision, and recommend to Company that the revised Payment Certificate may be Approved; and
- (b) For Work compensated on a Payment Milestone basis:
 - (i) the Milestone has been achieved, Engineer shall recommend to Company that the Payment Certificate may be Approved; or
 - (ii) the Milestone has not been achieved, Engineer shall reject the Payment Certificate and advise Contractor in writing the reasons why the Milestone has not been achieved.

- 12.11 Upon receipt of a Payment Certificate Approved by Company, Contractor shall submit an invoice for the amount due as determined in accordance with Exhibit 2 – Compensation and the requirements of Exhibit 3 – Coordination Procedures. The invoice shall be supported by the Approved Payment Certificate and all Billing Information as Engineer or Company may reasonably require.
- 12.12 Contractor shall issue a single invoice and single neutral funding invoice for each payment period covering the services provided by Contractor. Contractor shall address invoices to:
- Muskrat Falls Corporation
350 Torbay Road Plaza, Suite No. 2
St. John's, NL
A1A 4E1
Attention: Lower Churchill Project Accounts Payable
- 12.13 If any Change affects the Contract Price, Contractor may issue an invoice for the Work completed pursuant to the applicable Change Order, as follows:
- (a) For Change Orders carried out on a lump sum or unit price basis, Contractor shall comply with the requirements outlined in **Articles 12.5** through **12.12** in the same manner as if the completion of the Change Order Work is payable by monthly progress or constitutes a Payment Milestone.
- (b) For Change Orders carried out on a reimbursable basis, Contractor shall include that portion of the Change completed in the previous month in its application for payment pursuant to **Article 12.8(a)**. Invoices in respect of such Changes shall be accompanied by all Billing Information including an executed copy of the relevant Change Order, a copy of time sheets Accepted by Engineer, daily progress reports and any other information as Engineer may require to verify the progress, completion and associated charges pertaining to the Change. The final invoice for reimbursable Changes shall also include any information as Engineer may reasonably require to verify the successful completion of the Change.
- 12.14 If Contractor fails to comply with the requirements of **Article 12.6**, the Work shall be deemed incomplete and Company may withhold monies otherwise payable to Contractor and/or return invoices to Contractor for resubmission until such Billing Information has been provided to the satisfaction of Company.
- 12.15 Within thirty (30) days following Engineer's receipt of a properly prepared invoice, accompanied by acceptable Billing Information in accordance with this **Article 12**, Company shall pay to Contractor the amount stated to be due, subject to all of the following:
- (a) Company shall be entitled to withhold from such payment any amount(s) required by Applicable Laws or permitted hereunder;
- (b) If Engineer disputes any item charged in any invoice, Engineer shall notify Contractor of the disputed item specifying the reason therefor and payment of such disputed item shall be withheld until settlement of the dispute, provided that payment shall be made on the undisputed portion;

- (c) Company shall be entitled to set off amounts which it owes to Contractor under this Agreement against amounts which Contractor owes to Company under this Agreement or any other agreement; and
 - (d) For any payments made by Company to Contractor by electronic transfer, Contractor shall provide Company with the necessary banking information to facilitate electronic transfer of funds to Contractor's bank. Any changes in Contractor's banking information or payment instructions shall be submitted in writing to the Company Representative. Company shall not be held liable or responsible for errors or delays resulting from incorrect or delayed submission of changes in banking instructions.
- 12.16 Company shall be entitled to deduct and shall retain from each payment a ten percent (10%) holdback pursuant to the *Mechanics' Lien Act*, R.S.N.L 1990, c.M-3. Company shall release the holdback funds in accordance with **Articles 25.6** and **25.12**.
- 12.17 Company shall be entitled to withhold payment, or to deduct from Contractor's compensation, any amounts associated with:
- (a) invoiced items reasonably disputed by Company;
 - (b) Contractor's failure to make payments promptly to Subcontractors, agents, or suppliers;
 - (c) Contractor's failure to remit or pay any Tax or make any other payment required under Applicable Laws where Company, acting reasonably, determines that any such remittance or payment may be assessed against Company;
 - (d) Defects in the Work not remedied;
 - (e) liens or claims filed or registered against property, or reasonable evidence indicating to Company the probability of claims or liens being filed or registered, with respect to the Work, other than a lien or claim properly filed or registered by Contractor as a result of Company's failure to pay amounts due to Contractor in accordance with the requirements of this Agreement; and
 - (f) any other matter as permitted or required by Applicable Laws or as expressly provided in Exhibit 2 – Compensation, or elsewhere in this Agreement.
- 12.18 Company's obligation to pay any amounts to Contractor under this Agreement is subject to the following terms and conditions, which are inserted for the sole benefit of Company and may be waived by Company in whole or in part in respect of any payment, without prejudicing the rights of Company at any time to assert such terms or conditions in respect of any subsequent payment, namely:
- (a) no notice of claim for lien (other than a claim for lien by Contractor as a result of Company's failure to pay amounts due to Contractor in accordance with the requirements of this Agreement) shall have been given in connection with the Work or if a notice of such a claim for lien shall have been given, such claim shall have been released, vacated or, if applicable, removed from title or the claim shall have

been secured through the delivery of a bond in respect of the full amount of the claim;

- (b) there shall exist no default, or any event which, with the passage of time or the giving of notice or both, would constitute a default on the part of Contractor; and
- (c) Company shall have received such other documents or satisfied such other conditions as Company or its project lenders may reasonably require and which are material to the Work.

12.19 If either Party fails to make payments as they become due under the terms of this Agreement or under an award by arbitration or Court, interest at the three (3) month Treasury Bill rate, as published by the Bank of Canada for the period in question, on unpaid amounts will also be due and payable until payment. Interest will apply at the rate and in the manner prescribed by **Article 12.19** on the amount of any claim settled pursuant to **Article 39** from the date the amount would have been due and payable under this Agreement, had it not been in dispute, until the date it is paid.

12.20 For greater certainty, Contractor and Company acknowledge that, notwithstanding any other provision of this Agreement, any amounts payable by Company to Contractor pursuant to this **Article 12** are exclusive of any HST as payable pursuant to section 165 of the *Excise Tax Act (Canada)*, R.S.C. 1985, c. E-15. If Contractor is required to collect from Company an amount of HST with respect to the provision of any goods or services supplied pursuant to this Agreement, then Company, subject to compliance by Contractor with this **Article 12**, shall pay the amount of such HST to Contractor.

12.21 Contractor represents and warrants that it is now and shall remain registered for the purposes of the HST in accordance with Part IX of the *Excise Tax Act (Canada)*, R.S.C. 1985, c. E-15, for the Term and that its HST Registration number is **82387 5513**.

12.22 Contractor shall provide, at all times when any HST is required to be collected, such documents and particulars relating to the supply as may be required by Company to substantiate a claim for any input tax credits as may be permitted pursuant to the *Excise Tax Act (Canada)*, R.S.C. 1985, c. E-15, in respect of such HST. Without limiting the foregoing, Contractor shall include on all invoices issued pursuant to this **Article 12** all of the following particulars:

- (a) HST registration number of Contractor;
- (b) the subtotal of all taxable supplies;
- (c) the applicable HST rate(s) and the amount of HST charged on such taxable supplies; and
- (d) a subtotal of any amounts charged for any "exempt" or "zero-rated" supplies as defined in Part IX of the *Excise Tax Act (Canada)*, R.S.C. 1985, c. E-15.

ARTICLE 13 TAXES

- 13.1 Contractor acknowledges that it shall be carrying on business in the Province of Newfoundland and Labrador (and elsewhere as applicable) during the performance of the Work and agrees to prepare and to file in a timely manner all Tax returns or declarations required by any applicable Authority or Applicable Laws having jurisdiction over this Agreement or any portion thereof. Contractor shall lawfully discharge its Tax obligations.
- 13.2 Subject to the obligation of Company to pay HST pursuant to **Article 12.20**, Contractor shall remit to the applicable Authority all HST collected from Company. Contractor shall use commercially reasonable efforts to require Subcontractors to pay all Taxes which may be lawfully imposed upon Subcontractors by any Authority having jurisdiction over such Subcontractors or this Agreement.
- 13.3 Contractor represents that Contractor's residence status for the purposes of Canadian income tax legislation is as set forth in Exhibit 10 – Declaration of Residency. Contractor shall advise Company of the country where Contractor is a resident for income tax purposes and shall give thirty (30) days' Notice to Company and obtain its prior written consent before making or allowing any change to its tax residency status. If Contractor obtains, and provides to Company a copy of, an income tax waiver from the Canada Revenue Agency (CRA) waiving a non-resident tax source deduction as may be required by Canadian income tax legislation, Company agrees not to withhold any such income tax deduction to the extent waived so long as the waiver is and remains in force. In any event, Contractor further agrees to be liable for all such Taxes and shall indemnify Company in respect thereof pursuant to **Article 21.9** of this Agreement.
- 13.4 If required by the Applicable Laws of any country having jurisdiction, Company shall have the right to withhold amounts, at the withholding rate specified by such Applicable Laws, from any compensation payable for the Work performed by Contractor Group, and any such amounts paid by Company to an Authority pursuant to such Applicable Laws shall, to the extent of such payment, be credited against and deducted from amounts otherwise owing to Contractor hereunder. Contractor shall note on each invoice whether any portion of the Work covered by such invoice was performed inside or outside of Canada for the purposes of Canadian income tax legislation or such other information requested or required by Company to properly assess withholding requirements. At the request of Contractor, Company shall deliver to Contractor properly documented evidence of all amounts so withheld which were paid to the proper Authority for the account of Contractor.
- 13.5 Contractor shall supply and arrange for all Contractor's Personnel to supply Company with all information relating to the activities under this Agreement that is necessary to enable Company or its Affiliates to comply with the lawful demand for information by any Authority. In the event Contractor does not supply or take all steps to arrange for any Subcontractor to supply such information and, as a result, an Authority imposes a Tax or fine upon Company or any of its Affiliates, Contractor shall forthwith pay or reimburse Company or any of its Affiliates for such Tax or fine.

- 13.6 Subject to the obligation of Company to pay HST pursuant to **Article 12.20**, the Contract Price shall include, and Contractor shall be responsible for, all other Taxes imposed on Company or Contractor Group, for the purchase, sale, importation and exportation of the Work, Contractor's Items, or personal property of any member of Contractor Group. Except as otherwise expressly provided herein, Contractor, or other members of Contractor Group making sales to Contractor or any other member of Contractor Group (and provided that such members are registered for the purposes of the HST in accordance with Part IX of the *Excise Tax Act* (Canada), R.S.C. 1985, c. E-15), shall be the "importer of record" for the purpose of importing into Canada all Contractor's Items and the Work, or any part thereof, and shall pay (and Contractor shall use its commercially reasonable efforts to require Contractor Group to pay) to the applicable Authority all Taxes payable in respect of all such importations. Notwithstanding anything in this Agreement to the contrary, Company shall be solely responsible for and shall, as required by Applicable Laws, pay the applicable Authority all Taxes imposed on equipment, materials, labor, services and other items provided by Company to Contractor in connection with the Work.
- 13.7 Contractor shall obtain for the benefit of Company all available exemptions from or recoveries of Taxes and shall employ all prudent mitigation strategies to minimize the amounts of Taxes required to be paid in accordance with Applicable Laws. In the event Contractor obtains any rebate, refund or recovery in respect of any such Taxes, it shall immediately be paid to Company to the extent that such amounts were paid by Company or reimbursed to Contractor by Company.
- 13.8 Notwithstanding any other provision of this Agreement, Contractor Group shall not make any statement, representation, filing, return or settlement regarding Taxes on behalf of Company to an Authority without the prior written consent of Company.
- 13.9 For greater certainty, Contractor and Company acknowledge that, notwithstanding any other provision of this Agreement, any amounts payable by Contractor to Company pursuant to this Agreement are exclusive of any HST payable pursuant to the *Excise Tax Act* (Canada), R.S.C. 1985, c. E-15 or any other Taxes exigible in respect of such amounts payable. If Company is required by Applicable Laws or any applicable Authority to collect from Contractor an amount of HST or other Taxes with respect to any such amounts payable pursuant to this Agreement, then Contractor shall pay the amount of such HST or other Taxes to Company. If the amounts payable by Contractor to Company pursuant to this Agreement are deemed by any Applicable Law to include an amount of HST or other Taxes, the amount otherwise payable pursuant to this Agreement shall be increased to the extent necessary so that the amount payable to Company, net of such HST or other Taxes, is equal to the amount that would have been payable to Company if such HST or other Taxes were not deemed to have been included in such amount.
- 13.10 For greater certainty, anti-dumping duties, countervailing duties and the like shall, in all cases, be borne by Contractor. Should any such duties become payable by Company, Contractor shall be liable for and defend, protect, release, indemnify and hold Company harmless from and against any such duties, together with any interest, penalties and reasonable costs related thereto, and Contractor shall immediately provide Company with

sufficient funds to pay such duties and other amounts in full. If Company has already paid such duties or other amounts, Contractor shall reimburse Company, on demand, the full amount of such duties and other amounts so paid.

ARTICLE 14

AUDIT AND RECORDS

- 14.1 Contractor shall maintain, and shall require each Subcontractor to maintain, in accordance with generally accepted accounting principles and practices satisfactory to Company, books, records, expense accounts and accounts pertaining to the provision of the Work, including Contractor's and Subcontractors' personnel records, correspondence, instructions, plans, drawings, receipts, vouchers, memoranda, tapes, data, models, data stored in computer libraries and such other documentation and related systems of controls necessary for an accurate audit and verification of costs of the Work provided, any other costs or expenses claimed under this Agreement and general contract compliance.
- 14.2 Contractor and Subcontractors shall preserve the documents, records, registers and systems of control described in **Article 14.1** during the provision of the Work and for a period of not less than seven (7) years after expiration or any termination of this Agreement or for such longer period as may be required under Applicable Laws. Thereafter, Contractor shall give no less than sixty (60) days' notice to Company of Contractor's or Subcontractors' intention to destroy any of said documents and Company shall have the option to take possession of such records.
- 14.3 Company shall, at all times, have access to and be authorized to examine and make copies, including electronic copies, of all documents, records and systems of control set forth in **Article 14.1** and such other documents and systems as may be related to this Agreement and shall be authorized to interview Contractor's Personnel as may be necessary for an accurate audit and verification of costs of the Work provided and general contract compliance. Company's rights under this **Article 14.3** shall not apply to the composition of any lump sum prices or any unit rates under this Agreement, except where such pricing is related in any way to a Claim.
- 14.4 Notification of any claims made or discrepancies disclosed by such audit shall be made in writing to Contractor. Contractor and Company shall diligently attempt to resolve and agree upon such audit claims or discrepancies. Upon an audit claim or discrepancy being resolved and agreed upon, Contractor shall forthwith reimburse Company for any monies due as a result of such agreement or determination. Company may set off any amounts owed to it by Contractor for audit claim or discrepancies against any payments owed to Contractor by Company.
- 14.5 Contractor shall not be reimbursed for any costs it may incur as a result of Company conducting an audit pursuant to this **Article 14**. All such audits shall be conducted during normal business hours of Contractor and Company shall give reasonable notice to Contractor of the audit and shall specify the matters which are the subject of the audit.

- 14.6 Within five (5) Business Days of Notice by Company to Contractor, Contractor shall deliver to Company the most recent annual audited financial statements of Contractor. Company shall keep such financial statements confidential in accordance with **Article 28**.

ARTICLE 15

HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION

- 15.1 Contractor shall be responsible for ensuring the health and safety of all Contractor's Personnel who are engaged in the performance of the Work and also be responsible for environmental management. Without limiting the foregoing, Contractor shall:
- (a) ensure that all Contractor's Items are maintained in safe, sound and proper condition and capable of performing the function for which each is intended and meets all industry standards and Applicable Laws;
 - (b) cease all activities in the area of any identified health, safety or environmental problem until such problem is resolved;
 - (c) immediately report to Engineer all health, safety and environmental problems and hazards;
 - (d) provide sufficient supervision, instruction and resources to ensure that Contractor Group's Work execution and Worksites comply with all Applicable Laws and good environmental practices;
 - (e) at its own expense and in accordance with Applicable Laws, supply and maintain Contractor's Personnel with personal protective equipment which shall be worn and used on all occasions as indicated by notices, instructions, good practice or as required by risk assessment;
 - (f) conduct such drills and tests of Contractor's Items, equipment, Personnel and procedures to ensure that they are available, trained and in place, respectively, for immediate and effective action in the event of emergency;
 - (g) comply with Company's emergency response requirements as described in Exhibit 11 – Company Supplied Documents;
 - (h) cooperate fully and comply with any directions given by Authorities, including the police, safety and environment regulatory officials and fire authorities; and
 - (i) report to Engineer monthly training compliance and safety statistics as identified by Engineer.
- 15.2 Contractor shall develop and submit to Engineer for Acceptance a detailed health and safety plan for the Work which demonstrates that, in connection with Contractor's performance of the Work, Contractor has identified risks pertaining to the health and safety of Contractor's Personnel, and that effective controls are implemented to prevent accidents and health and safety threats. Contractor's plan shall:
- (a) satisfy the requirements of Exhibit 5 – Health and Safety Requirements;

- (b) be structured in accordance with various elements within the Work such as fabrication, transportation, installation and commissioning;
 - (c) include measurable, achievable targets for health and safety performance, including: lost time frequency; total recordable frequency; injury severity data; and first aid cases;
 - (d) comply with Company's safety policies and procedures set out or described in Exhibit 11 – Company Supplied Documents; and
 - (e) comply with Applicable Laws and Exhibit 3 – Coordination Procedures.
- 15.3 Contractor shall develop and submit to Engineer for Acceptance a detailed environmental protection plan for the Work which demonstrates that, in connection with Contractor's performance of the Work, Contractor has identified risks pertaining to the environment and that effective controls are implemented to prevent threats and damage to the environment. Contractor's plan shall:
- (a) satisfy the requirements of Exhibit 6 – Environmental and Regulatory Compliance Requirements;
 - (b) be structured in accordance with various elements within the Work such as fabrication, transportation, installation and commissioning;
 - (c) include measurable, achievable targets for performance, including: performance criteria for environmental emissions and waste, and hazardous materials; and
 - (d) include an environmental management plan that satisfies the Technical Requirements and Applicable Laws.
- 15.4 Engineer, on behalf of Company, shall Accept Contractor's plans required by **Article 15.2** and **Article 15.3** provided the plans comply with this Agreement, Applicable Laws and any ordinances, orders and decrees of any Authority having jurisdiction over health, safety and environmental compliance of the Work or the Worksite and any other requirements of Company.
- 15.5 Contractor shall comply with all such standards and the provisions of the plans required by **Article 15.2** and **Article 15.3**, along with any changes thereto as Contractor may be notified from time to time by Engineer, and all Applicable Laws relating to occupational health, safety and environmental protection. Contractor shall ensure that all Contractor's Personnel involved in the performance of the Work comply with the provisions of Contractor's health, safety and environmental plans and all Applicable Laws relating to occupational health, safety, and environmental protection. Contractor shall appoint a safety officer who shall assist Contractor in safety matters relating to Contractor's Personnel.
- 15.6 Contractor shall promptly investigate and report to Engineer and Authorities having jurisdiction any near miss incidents or any accidents resulting in injury, death or illness to any of Contractor's Personnel engaged in the performance of the Work, any criminal acts,

- any damage to property or any adverse impact on the environment and any release of substances hazardous to the environment.
- 15.7 Contractor shall submit to Engineer for Acceptance Contractor's drug and alcohol policy which shall be in compliance with Applicable Laws. Contractor shall ensure that Contractor's Personnel who are engaged in the performance of the Work, are familiar with, and comply with, Contractor's drug and alcohol policy.
- 15.8 Company shall have the right to suspend performance of the Work for as long as necessary to prevent or stop any violation of this **Article 15** by a member of Contractor Group or Contractor's Personnel. During such period of suspension, Contractor shall not demobilize from any Worksite. No compensation shall be payable to Contractor by Company and Contractor shall not be entitled to compensation for any costs it incurs as a result of the suspension.
- 15.9 Company reserves the right to audit and inspect the Worksites to verify compliance with this **Article 15**, which audits and inspections may be performed by Engineer or such other third party as Company may direct.
- 15.10 Notwithstanding **Article 40.6**, in the event Company declares an emergency with respect to any matter affecting health, safety, the environment or potential damage to or loss of property, Contractor shall comply with verbal instructions issued by Company or Engineer with respect to such emergency. Company or Engineer shall confirm such instructions in writing at the first reasonable opportunity.
- 15.11 Contractor shall exercise all diligence to conduct operations under this Agreement in a manner that will prevent any adverse impact to the environment including seepage, discharge or escape of pollutants, hazardous substances, debris and damage to or destruction of habitat. Contractor shall be responsible for all risks and costs to:
- (a) handle, dispose and/or cleanup those hazardous substances, if any, identified in Exhibit 11 – Company Supplied Documents in respect of the Site;
 - (b) handle, dispose and/or cleanup those hazardous substances disposed of or discharged on the Site by Contractor Group in connection with or incidental to the performance of or default in any of Contractor's obligations under this Agreement;
 - (c) remediate any environmental damage arising from Contractor's performance of the Work including the removal and cleanup of any pollution, debris and hazardous substances;
 - (d) take such measures as are necessary in the circumstances to prevent or mitigate any environmental damage resulting from any pollution, seepage or discharge or escape of pollutants, debris, and hazardous substances arising from Contractor's performance of the Work; and
 - (e) take such measures that Contractor or Company is under instructions to take from any Authority having jurisdiction to so instruct.

15.12 If Contractor:

- (a) encounters hazardous substances at the Site; or
- (b) has reasonable grounds to believe that hazardous substances are present in or on or under any of the Site which are not disclosed in the Exhibit 11 – Company Supplied Documents or are present in or on or under or migrating from any other sites;

Contractor shall:

- (c) take all reasonable steps to secure such Site, including stopping the Work, to ensure that no individual suffers an injury, sickness or death and that no property is damaged or destroyed as a result of exposure to the presence of the hazardous substances;
 - (d) immediately report the circumstances to Engineer in writing; and
 - (e) report the circumstances to Authorities as required by Applicable Laws.
- 15.13 If hazardous substances are encountered during the Work, Contractor shall employ best practices and methods so as to minimize the costs of any work which may be required to handle and dispose of the hazardous substances and any environmental cleanup and to meet the requirements of Applicable Laws or Authorities.

ARTICLE 16

ACCESS AND QUALITY

- 16.1 Company shall, in accordance with this **Article 16**, have the right to send Company Group Personnel to the Worksites to monitor the progress of the Work, including to any manufacturing facility operated by any member of Contractor's Group where any materials, components, equipment or product is being manufactured, fabricated or assembled for the Work. At all times during the Term, Contractor Group Personnel shall provide all requisite assistance to Company Group Personnel.
- 16.2 Company Group Personnel shall, at all times during the Term, be granted unrestricted right of access to inspect the Work and monitor all the Work in progress or Contractor Items utilized in connection with the creation or construction of the Work for the purpose of determining that the Work is being created or constructed in accordance with this Agreement.
- 16.3 Contractor, with the prior Acceptance of Engineer, shall permit representatives of Authorities to enter onto and inspect a Worksite, with reasonable advance notice and escorted access to the Work. Contractor may provide, and each such Person shall accept, reasonable safety and security measures implemented by Contractor. Contractor shall also promptly provide information reasonably requested by Company, Authorities or any of their representatives.
- 16.4 Contractor shall include appropriate provisions in all its Subcontracts and purchase orders to ensure the proper enforceability of the provisions of this **Article 16**.

- 16.5 No inspection, representation, responsibility or action of any Company Group Personnel hereunder shall relieve Contractor Group of any of its obligations or liabilities under this Agreement or operate as a waiver or release of the same.
- 16.6 Commencing on the Effective Date and throughout the Term, Contractor shall maintain a Quality Plan in respect of every aspect of the Work in accordance with Exhibit 7 – Quality Requirements.
- 16.7 Notwithstanding any Company, Engineer, Authority or other third party inspection, testing or witnessing, Contractor shall be responsible for quality control, quality surveillance/inspection, testing and quality assurance of the Work to verify and be able to demonstrate compliance with the requirements of this Agreement. Contractor shall carry out its quality management activities in accordance with Exhibit 7 – Quality Requirements.
- 16.8 Contractor shall conduct tests on the Work in accordance and in compliance with the provisions of Exhibit 1 - Scope of Work, Quality Plan, Contractor's quality management system, Company Supplied Data and Applicable Laws. Company and Engineer shall have the right at all times to request and witness any such test on the Work contemplated by this **Article 16.8**.
- 16.9 Contractor shall rectify, at Contractor's sole cost, any failure to comply with the requirements of Exhibit 1 – Scope of Work and Applicable Laws that are identified during testing, commissioning and inspection of the Work.
- 16.10 Upon completion of work necessary to satisfy **Article 16.9** and at the request of Company or Engineer, Contractor shall re-test the Work at Contractor's sole cost in order to confirm that the requirements of this Agreement are met. Company or Engineer may further require Contractor to re-test in accordance with the Standard of a Prudent Contractor, at Contractor's cost, all the Work similar to that Work which originally failed any tests or inspection.
- 16.11 Company and Engineer shall have the right to reject any Work, workmanship, equipment and documentation which do not conform to this Agreement. Contractor shall, at its sole expense, promptly remove any items so rejected and shall immediately repair or replace the same and shall carry out such further inspections or tests on other parts of the Work, as Company or Engineer may reasonably require, to ensure that there are no similar parts of the Work that fail to conform with this Agreement.

ARTICLE 17 WARRANTY

- 17.1 Contractor agrees that, for a period of three (3) years following the date of Final Completion shown on the Final Completion Certificate ("**Warranty Period**"), it shall at its own expense promptly:
- (a) correct any Work which is not in accordance with this Agreement;

- (b) rectify and make good or cause to be rectified and made good all Defects in the Work which are detected and discovered; and
 - (c) have available at the Worksites or at a proximate location to the Worksites all necessary equipment, spare parts and labour to comply with the foregoing obligations.
- 17.2 Contractor shall provide to Company a products and workmanship warranty on any products, materials, and equipment incorporated into the Work to remain in effect for three (3) years from the date of Final Completion shown on the Final Completion Certificate. Such warranties shall provide for replacement of the component parts of such products or equipment or replacement of materials and shall cover incidental direct costs incurred by Company arising out of Defects in or failure of the warranted product, materials or equipment.
- 17.3 Contractor shall perform all tests and take all measurements specified in the Technical Specifications to be made and taken during the Warranty Period.
- 17.4 For the duration of the Warranty Period, Contractor warrants:
 - (a) all of the Work and Warranty Work, against any and all Defects; and
 - (b) to the extent that Contractor is responsible for design under this Agreement, the Work applicable to such design shall be fit for purpose, as more specifically set forth in the Technical Requirements, and where no purpose is specified, in accordance with the Standard of a Prudent Contractor; and all other Work and Warranty Work shall be in accordance with the Technical Requirements.
- 17.5 For the avoidance of doubt, the provisions of this **Article 17** shall also extend to all portions of the Work and Warranty Work carried out by Subcontractors. Contractor shall use commercially reasonable efforts to cause to be extended to Company any applicable representations, warranties, guarantees and obligations with respect to design, engineering, materials, workmanship, equipment, tools and supplies furnished by its Subcontractors. All such representations, warranties, guarantees and obligations of Subcontractors shall be:
 - (a) so written as to survive all Company and Contractor inspections, tests and Approvals; and
 - (b) extended to and be enforceable by Company, its successors and assigns.If applicable, Contractor shall assign to Company all of Contractor's rights and interest in all extended warranties for periods exceeding the Warranty Period which were received by Contractor from any of its Subcontractors or vendors.
- 17.6 If, within the Warranty Period, any of the Work is faulty, defective or deficient, Contractor, on receipt of Notice from Company, shall commence and diligently perform all services and work and supply all materials and equipment required to remedy such Defect to the Standard of a Prudent Contractor and in the manner and at the times that Company directs so that it conforms to the requirements in the Agreement ("**Warranty Work**").

- 17.7 During the period that Warranty Work is being performed, Contractor shall continue to cooperate with Company's Other Contractors and Company Personnel in accordance with **Article 3.8**.
- 17.8 If Contractor does not fulfill its requirements under this **Article 17** or fails to fulfill its requirements within the period set by Company, within five (5) Business Days of Notice to Contractor by Company, Company may have the Work which is the subject of the Notice from Company corrected by a third party at the sole cost of Contractor. Such recourse shall in no way relieve Contractor from its Warranty obligations.
- 17.9 Contractor shall not substitute any materials in performing Warranty Work without the prior Approval of Company.
- 17.10 All work required to be performed in accordance with the terms of this **Article 17** shall be performed at the expense of Contractor and shall not give rise to any right of Contractor to remuneration.
- 17.11 Contractor shall at its own cost, re-design, re-build and/or replace (at Contractor's option) any Work which, within the Warranty Period, fails to meet the requirements of this Agreement; provided that Company shall have the right to instruct Contractor to re-design, re-build and/or replace (at Company's option) such Work if such failure affects the operation of the LCP or any of the facilities referenced in **Articles 1.2(hh)(i) to (iii)** inclusive.
- 17.12 This Warranty is subject to the following additional terms and conditions:
- (a) Notwithstanding anything contained elsewhere in the Agreement, this Warranty shall apply to items manufactured and/or installed by Contractor, regardless of whether components or raw materials are supplied by others, but shall not extend to items supplied by Company Group, provided that Contractor's Work with respect to such items shall be warranted in accordance with **Article 17**.
 - (b) Subject to **Article 17.9** and **17.11**, Contractor shall have the option of repairing or replacing any Defects in the Work provided such repair or replacement meets all the requirements and specifications outlined in this Agreement.
- 17.13 Unless otherwise instructed by Company, Contractor shall remove from the Site and dispose of any parts or equipment that have been replaced, and Contractor shall be solely responsible for all costs associated with such removal and disposal. Company shall have the option, to be exercised at its discretion, to retain ownership of removed and replaced parts, and upon exercising such option Company may use or dispose of the parts as Company shall deem fit.
- 17.14 Company, itself or through Engineer, shall notify Contractor in writing with reasonable promptness after discovery of any Defect in respect of which Contractor shall be obliged pursuant to this **Article 17** to perform Warranty Work. Notice of any Defect discovered during the Warranty Period must be given to Contractor no more than sixty (60) days after the end of the Warranty Period.

- 17.15 Company, at its sole discretion, may retain independent third parties to inspect, test, review and/or observe the Work for compliance with this Agreement. Contractor, upon reasonable notice, shall provide such independent third parties access to the Work and to any facility in which any equipment or products are being manufactured for installation as part of the Work in order to permit the independent third parties to perform their duties.
- 17.16 Notwithstanding anything to the contrary in this Agreement, the Warranty is exclusive and no other warranties, whether express, implied, patent or latent, statutory or otherwise, in respect of Defects in the Work shall apply.

ARTICLE 18

CONTRACTOR INSURANCE

- 18.1 Contractor will procure insurance policies in accordance with the requirements of **Article 18.3** from a financially sound insurance company and which is acceptable to Company. If Contractor fails to procure such policies or fails to provide certificates of insurance confirming such coverage in a form and with content acceptable to Company within the time specified in **Article 18.2**, or if any insurance is cancelled and not immediately replaced with comparable insurance to the satisfaction of Company, then Company may at any time by Notice to Contractor terminate the Agreement.
- 18.2 Prior to commencing work at the Site or within ten (10) Business Days following the Effective Date, whichever is earlier, Contractor shall submit to Company certificates of insurance or such other documentation as Company may reasonably require evidencing the insurance required by **Article 18.3**. Failure of Company to advise Contractor of any insurance deficiencies shall not relieve Contractor of any liability related to its obligations under this **Article 18**. On written request by Company to Contractor, Contractor shall provide copies of insurance policies obtained by Contractor in accordance with **Article 18.3**.
- 18.3 Contractor shall at all times while conducting the Work carry at least the following insurance coverages with limits not less than those specified below, covering property and liability outside the scope of the insurance supplied by Company pursuant to **Article 20**. The cost of insurance procured by Contractor, including deductibles or self-insurance or policy retentions, shall be for the sole account of Contractor:

(a) Workers' Compensation

Workers' Compensation coverage for all of its Personnel engaged in the Work in accordance with the Applicable Laws of the jurisdictions in which the Work is performed. Contractor shall further ensure that non-residents are fully covered by Workers' Compensation insurance and Employer's Liability insurance with such coverage including an extraterritorial benefits extension providing benefits at least equal to those provided by the jurisdiction in which the Work is performed.

(b) Employer's Liability

Employer's Liability insurance, with limits as required by Applicable Laws, but not less than Canadian five million dollars (\$5,000,000.00) per accident covering each employee engaged in the Work.

(c) Commercial General Liability

For Contractor's off-Site premise and operations, Commercial General Liability insurance written on an occurrence basis with limits of not less than Canadian five million dollars (\$5,000,000.00) per occurrence for bodily injury and/or property damage including blanket contractual liability, sudden and accidental pollution liability for risks assumed by Contractor, broad form property damage, personal injury, contractor's protective liability, products and completed operations for a period of not less than twenty-four (24) months, contingent employer's liability and incidental medical malpractice.

(d) Automobile Liability Insurance

When not otherwise covered by Contractor's Commercial General Liability policy, Contractor shall obtain and maintain in effect automobile liability insurance covering all licensed vehicles whether owned, non-owned, leased or hired. Such insurance will provide a minimum combined single limit of liability for bodily injury and property damage of Canadian five million dollars (\$5,000,000.00) per occurrence.

(e) Owned and Non-owned Aircraft

To the extent that aircraft are used in the performance of the Work, owned and non-owned aircraft liability insurance with a combined single limit of Canadian ten million dollars (\$10,000,000.00) per occurrence.

(f) Property

"All risks" property insurance covering all real and personal property which Contractor owns, leases or has in its care, custody or control including all machinery and equipment to be used for the Work but not forming part of the Work. Notwithstanding the foregoing, Contractor may self-insure for property, including tools and equipment, for which it owns and valued at less than Canadian fifty thousand dollars (\$50,000.00).

(g) Property in Transit

If required by Exhibit 2 – Compensation, Contractor shall provide property insurance coverage for the full value of equipment, goods, products and materials to be incorporated into the Work with such coverage to apply during transportation from Contractor's plant, factory or distribution centre to the location for Delivery, with a maximum deductible of Canadian twenty-five

thousand dollars (\$25,000.00).

(h) Subcontractors

Contractor is required to ensure that each of the Subcontractors provides insurance similar to the foregoing, as well as insurance which:

- (i) is required by Applicable Laws; or
- (ii) is reasonably appropriate in respect of the Work to be performed.

When requested to do so by Company, Contractor shall provide or cause to be provided to Company certificates of insurance confirming such Subcontractor insurance policies or such other evidence of insurance acceptable in form and content acceptable to Company, acting reasonably. Contractor Group shall not perform Work during any period when any required policy of insurance is not in effect.

(i) Other

In addition to the insurance coverage specified in this **Article 18**, Contractor shall carry such other insurance policies and in such amounts:

- (i) as may be required in order to comply with Applicable Laws; and
- (ii) as agreed by the Parties with regard to liabilities assumed under the Agreement or in respect of specific activities performed for the Work.

18.4 All insurance policies required by this **Article 18** shall be endorsed to waive insurer's rights of subrogation against Company Group and their Personnel, stockholders, successors, assigns and Affiliates. All liability policies required above shall be endorsed to include Company Group and their Personnel, stockholders, successors, assigns and Affiliates as additional insureds and shall contain cross liability and severability of interest provisions. Except with respect to the insurance coverage to be procured by Company pursuant to **Article 20**, all of Contractor's insurance policies shall operate as primary to any insurance policies maintained by Company and their Personnel, stockholders, successors, assigns and Affiliates.

18.5 All policies obtained by Contractor in accordance with **Article 18.3** shall be further endorsed to provide Company thirty (30) days prior written notice of cancellation or any material change in coverage.

18.6 Contractor shall give Company prompt notification of any claim involving the Work with respect to any of the insurance policies referred to in **Article 18.3**, accompanied by full details of the incident giving rise to such claim. Contractor agrees to do all acts, matters and things as may be reasonably necessary or required to expedite the adjustment of any loss or damage covered by insurance so as to expedite the release and disposition of such insurance in the manner and for the purposes contemplated in this Agreement. If

requested by Company, Contractor shall advise Company in writing of the final resolution of any such insurance claims.

- 18.7 If requested by the other Party, a Party shall advise the other Party in writing of the final resolution of any such insurance claims.
- 18.8 Company may reduce or waive all or any portion of these insurance requirements under circumstances where the Work to be performed does not require equivalent insurance coverage. Such reduction or waiver shall be obtained in writing and shall in no way reduce or waive Contractor's responsibility or liability for the Work.
- 18.9 Nothing in this **Article 18** shall or is intended to limit the liability of Contractor under any other provision of this Agreement. The provisions of this **Article 18** will not be interpreted as relieving Contractor of any of its obligations under this Agreement. Contractor may purchase, at its own expense, any additional insurance it deems necessary.

ARTICLE 19

WORKERS COMPENSATION

- 19.1 Prior to the performance of the Work hereunder, Contractor shall provide Company with Contractor's Workers' Compensation number and a letter of good standing in accordance with the Applicable Laws of the jurisdiction in which the Work is performed.
- 19.2 Contractor shall at all times pay, or cause to be paid, any assessment or contribution required to be paid pursuant to Applicable Laws relating to Workers' Compensation in respect of Contractor's Personnel and, upon failure to do so, authorizes Company, in addition to any other rights of Company under this Agreement, to withhold and remit on behalf of Contractor an amount equal to such assessment or contribution, including any interest and penalty assessed thereon.
- 19.3 Upon completion of Subcontract work, each Subcontractor shall deliver to Engineer a clearance certificate from the Workplace Health, Safety and Compensation Commission of the Province of Newfoundland and Labrador.
- 19.4 Upon completion of the Work, Contractor and all Subcontractors which have not previously provided evidence of compliance with **Article 19.3** above shall deliver to Engineer a clearance certificate from the Workplace Health, Safety and Compensation Commission of the Province of Newfoundland and Labrador.

ARTICLE 20

PROJECT INSURANCE

- 20.1 The following insurance coverages shall be procured by Company. The policies listed below will cover Company Group, Contractor and subcontractors of every tier (but not including vendors and suppliers except to the extent a vendor or supplier performs operations at the Site) as their interests and/or liabilities may appear:

- (a) Construction All Risk (CAR) insurance, including design defect coverage to LEG2/96 or better, subject to a limit of not less than the total Contract Price, attaching on or in place and in effect as of the Effective Date.
- (b) Wrap-up liability insurance, with Company as the named insured and its Personnel, stockholders, successors, assigns and Affiliates as additional insureds, written on an occurrence basis with limits not less than Canadian fifty million dollars (\$50,000,000.00) per occurrence for bodily injury and/or property damage including contractual liability, broad form property damage, personal injury, contractor's protective liability, completed operations for a period of not less than twenty-four (24) months, contingent employer's liability, incidental medical malpractice, cross liability and severability of interest provisions.
- (c) Pollution liability insurance, with Company as the named insured and its Personnel, stockholders, successors, assigns and Affiliates as additional insureds, written with limits not less than Canadian ten million dollars (\$10,000,000.00) per occurrence and in the aggregate.

20.2 Insurance policies required by this **Article 20** shall:

- (i) be endorsed to waive insurer's rights of subrogation against Contractor and subcontractors of every tier (but not including vendors and suppliers except to the extent a vendor or supplier performs operations at the Site) and their stockholders, successors, assigns and Affiliates;
- (ii) include Contractor and subcontractors of every tier (but not including vendors and suppliers except to the extent a vendor or supplier performs operations at the Site) as additional insureds; and
- (iii) Company will provide Contractor thirty (30) days prior written notice of cancellation in coverage in accordance with **Article 20.1**.

20.3 Contractor shall be responsible for deductibles under the Construction All Risk (CAR) policy of Canadian two million dollars (\$2,000,000.00), under the wrap-up liability policy of Canadian one hundred thousand dollars (\$100,000.00), under the pollution liability policy of Canadian two hundred fifty thousand dollars (\$250,000.00), up to a maximum of five percent (5%) of the Contract Price for any one claim, provided that:

- (i) Contractor shall not be responsible for deductibles arising from claims for damage or loss caused by earth quake;
- (ii) Contractor shall not be responsible for deductibles arising from claims for damage or loss caused by flood except Contractor shall be responsible for deductibles where the flood was caused or exacerbated by the acts or omissions of Contractor; and
- (iii) to the extent a claim for damage or loss was caused by the negligence of Company, Company shall be responsible for that portion of the deductible which represents the proportion of fault attributable to Company.

- 20.4 The insurance policies required by **Articles 20.1** shall be in place and shall be maintained until a Final Completion Certificate has been issued, with any completed operations coverage to continue after the Final Completion Certificate has been issued as set out in the policy.

ARTICLE 21

LIABILITY AND INDEMNIFICATION

- 21.1 The Parties hereby agree and acknowledge that if a provision in this **Article 21** conflicts with any other provision in this Agreement, the provision in this **Article 21** shall prevail.
- 21.2 For the purposes of this Agreement, any liability assumed or indemnity given by Contractor for the benefit of Company shall be deemed to be given by Contractor for the benefit of Company, its successors and assigns, Affiliates and Personnel.
- 21.3 It is agreed and understood that the exculpatory clauses and indemnity obligations of each Party as provided in this Agreement shall apply to any and all Claims whatsoever incurred by the indemnified Party.
- 21.4 Except as otherwise specifically stated in this Agreement, Company shall be liable to Contractor for any and all Claims which Contractor may at any time sustain or incur by reason of or in consequence of a breach or non-performance by Company or any agent, employee or licensee for whom Company is in law responsible arising from the performance or non-performance of any of the obligations of Company under this Agreement.
- 21.5 (a) Contractor shall be liable to Company, to the full extent it is liable at law, for any and all Claims which Company may at any time sustain or incur by reason of or in consequence of any one or more of the following:
- (i) any inaccuracy in any representation or warranty made by Contractor Group, its guarantors or any other Person that delivers to Company any document or security instrument containing any such representation or warranty pursuant to this Agreement;
 - (ii) any breach or non-performance by Contractor Group, or any licensee, invitee or Person acting on behalf of Contractor of any of the obligations of Contractor in respect of the performance of the Work; and
 - (iii) any action taken by Company to mitigate or cure a breach or non-performance by Contractor Group of any covenant or inaccuracy in any representation or warranty pursuant to this Agreement.
- (b) Contractor shall defend, indemnify and shall hold Company harmless from and against any and all Claims which Company may at any time sustain or incur by reason of or in consequence of any one or more of the following:
- (i) any non-payment of amounts due and payable to Subcontractors, and Subcontractors' subcontractors, vendors and suppliers of every tier,

resulting from furnishing of services, material, equipment, labour or otherwise in connection with the performance of Work;

- (ii) any Claim in respect of loss or damage to the property of Contractor Group however caused, except to the extent the Claim is caused by the negligence or wilful act or omission by Company;
- (iii) any Claim in respect of personal injury or death of Contractor's Personnel however caused, except to the extent the Claim is caused by the negligence or wilful act or omission by Company;
- (iv) any Claim in respect of loss or damage to Company Group property arising from the negligence or wilful act or omission by Contractor; or
- (v) any representation or holding out by Contractor that it is an agent of Company.

21.6 For all Subcontractors identified in Exhibit 8 - Subcontractors, Manufacturers and Material Sources, other Subcontractors performing Work at the Site and Subcontractors handling the Work or Company supplied items at a Worksite, Contractor shall include in all of such Subcontracts, a provision stating that such Subcontractors shall defend, protect, release, indemnify and hold Company harmless from and against all Claims for the death of or bodily injury to such Subcontractors and their respective Personnel, and for damage to or loss of the property of Subcontractors or their respective Personnel, unless the Claims were caused by the negligence or wilful act or omission by Company.

21.7 Except as provided in **Article 21.4**, Contractor shall:

- (a) be liable to Company for all Claims which Company may suffer, sustain, pay or incur; and
- (b) defend, protect, release, indemnify and hold Company harmless from and against all Claims which may be brought against or suffered by Company or which Company may sustain, pay or incur;

directly or indirectly on account of the death of or bodily injury to third parties or Company's and its Affiliates' Personnel, and for damage to or loss of property of third parties (such third parties shall not include Company and its Affiliates and Personnel), arising from or in connection with the performance, non-performance or purported performance of the Work, but only to the extent caused by the negligence or wilful misconduct of Contractor or any of its Personnel.

21.8 Without limiting the generality of **Article 21.5**, Contractor shall be liable for and defend, protect, release, indemnify and hold Company harmless from and against all Claims (including any fine, penalty or demand of any Authority having jurisdiction) which may be brought against or suffered by Company or which Company may sustain, pay or incur, arising out of any failure by Contractor to comply with its obligations with respect to the environment under **Article 15**.

- 21.9 Without limiting the generality of **Article 21.5**, and subject to the obligation of Company to pay HST pursuant to **Article 12.20**, Contractor shall be liable for and defend, protect, release, indemnify and hold Company harmless from and against:
- (a) any and all Taxes imposed by any Authority on any of Contractor Group in respect of this Agreement, and any and all Claims including payment of Taxes which may be brought against or suffered by Company or which Company may sustain, pay or incur in conjunction with the foregoing as a result of the failure by Contractor to pay any and all Taxes imposed as stated herein;
 - (b) any and all Taxes imposed by any Authority in respect of the Work, or Contractor's Items, or any other items used by Contractor Group in the performance of the Work, or in respect of any services performed by Contractor Group in respect of this Agreement, and any and all Claims (including Taxes) which may be brought against or suffered by Company or which Company may sustain, pay or incur in conjunction with the foregoing as a result of the failure by any member of Contractor Group to pay any and all Taxes imposed as stated herein; and
 - (c) all Claims of any nature in connection with the payment of any of Contractor Group, including all compensation, medical costs, Taxes (including all Canadian and foreign payroll and withholding Taxes and remittances), unemployment insurance premiums, Canada pension plan contributions and other benefits of whatever nature or as may be applicable in any jurisdiction (including any jurisdiction where the Work is performed or where the Personnel of the foregoing reside or are employed).
- 21.10 Except as expressly provided otherwise herein, the liability and indemnities specified in this **Article 21** shall apply:
- (a) subject to **Articles 21.15** and **36.2**, without limit and without regard to the cause of any Claim, including the negligence or fault (whether sole, concurrent, gross (except when gross negligence or wilful misconduct is expressly provided as an exception to a specific provision hereof), active or passive negligence) or otherwise or wilful act or omission and including strict liability, breach of contract, breach of duty (statutory or otherwise) and including any pre-existing conditions, of either Party or any other Person (including the Party or Person seeking indemnity);
 - (b) whether or not any Claim is made or enjoyed by the Person sustaining the injury or loss or by the dependents, heirs, claimants, executors, administrators, successors, survivors or assigns of such Person.
- 21.11 The indemnities given in this **Article 21** shall apply in respect of the full liability of the indemnified Party for Claims, notwithstanding that the indemnified Party may be entitled to contribution thereto from any other Person and notwithstanding such liability may relate to the negligence of a third party, provided that in such case the indemnifying Party shall be fully subrogated to the rights of the indemnified Party against such third party.
- 21.12 If a Claim by a third party is asserted in circumstances which gives or may give rise to indemnification under this Article, the Party against whom the Claim is asserted (the "non-

indemnifying Party") shall, within fifteen (15) days of the assertion of such Claim, give Notice thereof to the other Party (the "indemnifying Party") and, at the discretion of the non-indemnifying Party, the indemnifying Party shall undertake the defence of such Claim. The Parties shall consult and cooperate in respect of such Claim and in determining whether such Claim and any legal proceedings relating thereto should be resisted, compromised or settled. Each Party shall make available to the other all information in its possession or to which it has access, and which it is legally entitled to disclose, which is or may be relevant to the particular Claim. The indemnifying Party shall provide the non-indemnifying Party with reasonable information as to the progress of such Claim on a regular basis. No such Claim shall be settled or compromised without the written consent of the indemnifying Party. Notwithstanding the foregoing, if the indemnifying Party, within a reasonable time after Notice of any such Claim is given to it by the non-indemnifying Party, fails to defend such Claim, the non-indemnifying Party shall have the right to undertake the defence and compromise or settle such Claim on behalf of and for the account of the indemnifying Party.

21.13 Notwithstanding **Article 21.5(b)(iv)**, during the period commencing at the time that Contractor has possession of, or control over, Work in which title has vested in Company pursuant to the provisions of **Article 23.2** or items free issued to Contractor, including items and/or services free issued by Company's Other Contractors, and until such time as Company takes care, custody and control of those items, Contractor shall:

- (a) be liable to Company for all Claims which Company may suffer, sustain, pay or incur directly or indirectly on account of damage to or loss of such Work or items or any other items free issued to Contractor; and
- (b) defend, protect, release, indemnify and hold Company harmless from and against all Claims which may be brought against or suffered by Company or which Company may sustain, pay or incur directly or indirectly on account of damage to or loss of such Work or items or any other items free issued to Contractor.

21.14 Notwithstanding anything herein to the contrary, no Party shall have responsibility and be liable under this Agreement to the other Party or its Affiliates or each of their officers, directors, employees and agents for any Claim in respect of loss of profit, business interruption, loss of use, loss of opportunity, loss of goodwill, cost of capital, cost of replacement power, loss of production or any similar indirect or consequential damages or losses resulting from, arising out of or in connection with the Work or any obligation pursuant to this Agreement howsoever caused even if a Party has been advised of the possibility of such damages or losses except that the foregoing exclusions of liability in this **Article 21.14** shall not apply to:

- (a) any payment in respect of a third party Claim for which one Party has an obligation to indemnify the other Party under this Agreement; and
- (b) any liquidated damages payable under this Agreement.

21.15 The maximum aggregate liability of Contractor to Company for a Claim arising out of or connected with the Work or performance or breach of this Agreement shall be limited to the sum of one hundred percent (100%) of the total estimated Contract Price stated in

Exhibit 2 – Compensation and actual insurance proceeds received from insurance to be maintained under this Agreement, provided however that such limitation shall not apply in cases of:

- (a) Claims for personal injury (including death);
- (b) Claims for property damage or loss, except for damage to or loss of the Work;
- (c) Contractor's fraud or willful misconduct;
- (d) Taxes, fines and/or penalties imposed by any Authority for which Contractor is liable under this Agreement;
- (e) Claims for infringement of patents and/or other intellectual property rights, or breach of the confidentiality provisions of this Agreement;
- (f) Claims for any environmental damage or loss; and
- (g) Any other Claims by a third party, including any Authority, for which Contractor has a duty to indemnify Company under this Agreement.

21.16 The limitations and exclusions of liability set forth in **Articles 21.13** and **21.14** shall take precedence over any other provision of this Agreement and shall apply whether the liability arises in contract, tort (including negligence), warranty, strict liability, indemnity or otherwise.

21.17 Company confirms that language exists in contract no.'s CH0007 (with Astaldi Canada Inc.), CH0030 (with Andritz Hydro Canada Inc.) and CH0032-001 (with Andritz Hydro Canada Inc.) that Company is not liable to such Company's Other Contractors for indirect, consequential or similar damages arising out of or in connection with any obligation pursuant to such contracts (except for liquidated damages). Notwithstanding the foregoing, if it is determined that Company is so liable, any liability or indemnity of Contractor under this Agreement for such damages shall be limited to the sum stated in **Article 21.15**.

ARTICLE 22

SITE AND TRANSPORT ROUTE CONDITIONS

22.1 Contractor shall inform itself fully as to the risks and contingencies and all other data, matters and things, local or otherwise, respecting the Site, transportation routes and any other aspects of the Work necessary to satisfactorily perform Contractor's obligations under this Agreement. Contractor shall be deemed to have been satisfied as to the suitability and availability of such Site, transportation routes including access routes to the Site, and such other aspects of the Work.

22.2 Contractor acknowledges and agrees that utilities and service connections may not be located as exactly shown on drawings provided by Company or Engineer. Contractor shall satisfy itself fully as to the exact location of all utilities and service connections and shall, at no additional cost, make such alterations to the Work as may be required to avoid conflicts in or damage to utilities and connections.

- 22.3 Contractor shall be solely responsible for determining the transport route for shipment of all equipment, materials and products Contractor requires to perform and complete the Work. Contractor shall conduct its own tests or investigations to satisfy itself as to all transport route conditions, including obstructions, road conditions, weight restrictions, size limitations and utilities. Contractor accepts all risks and contingencies associated with the shipment of all equipment, materials and products for the Work.
- 22.4 Contractor shall be solely responsible for and assumes all risks associated with the transportation of all Contractor's Personnel to and within the Site, and the cost of such transportation shall be included in the Contract Price.
- 22.5 Contractor waives its right to any claim against Company for additional compensation or any extension to a date for completion of performance of any part of the Work set out in the Milestone Schedule based on, resulting from or arising out of any differences between transport route conditions that may exist and those conditions that may have been assumed or anticipated by Contractor, including resulting from any assumptions, anticipations, misunderstandings or misinterpretation by Contractor of port, bridge or road conditions or from any information provided by Company or Engineer.
- 22.6 Contractor shall bear all costs and charges for special and/or temporary rights which Contractor may require, including those for transport of components of the Work and access to the Site. Contractor shall also obtain, at Contractor's cost, any additional facilities outside the Site which Contractor may require for purposes of Work.
- 22.7 Subject to **Article 31**, Contractor shall be solely responsible for and assumes all risks associated with weather conditions at the Site, and the cost of performing the Work under all weather conditions experienced at the Site shall be included in the Contract Price.

ARTICLE 23

TITLE AND RISK

- 23.1 Contractor warrants good title to all Contractor's Items, consumables, goods and other items furnished by it under this Agreement and that they are free from any liens or encumbrances in favour of third parties. Risk of and in Contractor's Items shall remain with Contractor throughout the Term.
- 23.2 Title to the Work (or any part of the Work) performed, including all Contractor's documentation related to the Work, shall vest in Company as and when performed or prepared. Title to all equipment, materials and products to be supplied by Contractor or its Subcontractors for incorporation into the Work shall vest in Company as and when identified and designated for incorporation into the Work. Contractor shall identify, segregate in a secure area so far as possible and mark or otherwise identify all equipment, materials and products for incorporation into the Work as property of Company. Title to any items free issued to Contractor by Company shall always remain vested in Company.

- 23.3 Company shall have the right, without prejudice to any other right it may have under the Agreement, to decline to pay for any part of the Work if Contractor is unable to provide evidence reasonably satisfactory to Company that title to the same has passed to Contractor or shall pass unconditionally to Company as provided in the Agreement, free from any liens or encumbrances in favour of any third parties.
- 23.4 For all Subcontractors identified in Exhibit 8 - Subcontractors, Manufacturers and Material Sources and other Subcontractors supplying equipment, materials and products for incorporation into the Work, Contractor shall cause the inclusion of terms consistent with the terms of **Articles 23.1, 23.2 and 23.3** in all such Subcontracts so that Company and Contractor shall have the rights herein set forth with respect to each such Subcontractor.
- 23.5 Contractor warrants to Company that Applicable Laws do not prevent Company from obtaining title to the Work in accordance with this **Article 23**.
- 23.6 Subject to **Article 17** and **23.8**, risk of and in the Work shall be assumed by Company upon issuance of a Substantial Completion Certificate, and Contractor shall assume the risk of and undertake the care and control of the Work until such time as the Substantial Completion Certificate is issued in accordance with **Article 25**.
- 23.7 Contractor shall make available to Company all data relating to the operation and performance of the Work in electronic media for use by Company during the Term and during the operation of the Work. Contractor shall undertake all reasonable efforts to ensure data is provided in a form fully useable to Company with well recognized industry standard applications, including the requirements of Exhibit 3 - Coordination Procedures and Exhibit 11 - Company Supplied Documents. Where the software necessary to enable Company to fully utilize data is based in whole or in part on Contractor's proprietary information/software, Contractor shall grant Company and its Affiliates a non-exclusive, royalty free, irrevocable and non-transferable license to such information/software. Where such information/software is not proprietary to Contractor and obtained through usage of information/software leased or purchased from third parties, Contractor shall, subject to Company's Approval, arrange for and obtain for the benefit of Company and its Affiliates a non-exclusive, royalty free, irrevocable and non-transferable license to use such information/software to enable Company to fully utilize data. All Contractor's costs associated with such provision are deemed to be included in the Contract Price and are not separately reimbursable.
- 23.8 Company, at its discretion and upon Notice to Contractor, may take possession of or use Work, and/or any part of the Work, at any time prior to Substantial Completion of such Work. If Company takes possession of or uses the Work following such Notice:
- (a) Company shall not be deemed to have Approved the Work or that part possessed or used;
 - (b) the Warranty obligations in **Article 17** shall apply except that the Warranty Periods for the Warranties shall commence upon use of the part of the Work to which the Notice applies, notwithstanding the time for commencement in those Articles, and continue for the period specified in **Article 17**;

- (c) Contractor shall be deemed to no longer have possession of or control over such Work, and risk of loss of such Work shall pass from Contractor to Company, only during such possession or use of such Work by Company; and
- (d) Except to the extent stated in **Article 23.8(c)**, Contactor shall not be relieved of its responsibilities and obligations under this Agreement.

ARTICLE 24

COMPLETION AND DELIVERY

- 24.1 The Work shall be completed and Delivered to Company in accordance with the Milestone Schedule. In the event the Work (or any part) shall be tendered for Delivery before the applicable date in the Milestone Schedule, Company may, but shall not be obliged to, take Delivery of such Work. Any part of the Work ready for Delivery before the applicable date in the Milestone Schedule shall be stored and maintained by and at the expense of Contractor until Delivered to Company.
- 24.2 If Contractor fails to commence performance of the Work on the Effective Date, or diligently proceed to complete the Work (or any part) for Delivery by the applicable date in the Milestone Schedule, Company may terminate the Agreement in accordance with **Article 32.1(c)** or may elect to continue with the Agreement if Contactor, in accordance with the provisions of **Article 24.3**, proposes an amended Milestone Schedule which is Approved by Company in a Change Order. Any changes to the Milestone Schedule pursuant to this **Article 24.2** and **Article 31** shall not result in an increase to the Contract Price or otherwise affect Company's rights to liquidated damages if a Milestone has not been achieved in accordance with the changed Milestone Schedule.
- 24.3 If Contractor has not or considers that it will not achieve a Milestone by the date specified in Exhibit 9 – Schedule:
- (a) Contractor shall, within ten (10) Business Days of determining that a Milestone will not be achieved, submit for review and comment by Engineer a written completion plan detailing steps Contractor shall take to complete all necessary Work to meet the requirements of the Milestone, and Engineer shall provide written comment to Contractor within ten (10) Business Days of receipt;
 - (b) Contractor shall then resubmit to Engineer within five (5) Business Days a revised completion plan addressing any comments provided by Engineer, and Engineer shall provide written comment within five (5) Business Days of receipt;
 - (c) Contractor shall revise or resubmit the completion plan within the time limits in paragraphs (a) and (b) above until Contractor has addressed all comments of Engineer; and
 - (d) Contractor shall then promptly provide the necessary services, labour, materials and equipment as may be required under the completion plan.

- 24.4 The preparation, review and revision of a completion plan and provision of services, labour, materials and equipment as required by the completion plan shall not relieve Contractor of its obligations to achieve a Milestone by the date specified in Exhibit 9 – Schedule or be the basis for an increase in compensation.
- 24.5 Delivery of the Work shall be performed in the manner specified in the Agreement. Except as specified otherwise in the Agreement, Contractor shall be responsible for and shall bear the cost of packaging, loading and/or carriage of the Work to the location for Delivery specified in the Agreement.
- 24.6 Contractor shall ensure that provisions corresponding to those contained in this **Article 24** are included in all Subcontracts with Subcontractors supplying equipment, materials and products for incorporation into the Work.

ARTICLE 25

SUBSTANTIAL AND FINAL COMPLETION

- 25.1 Substantial Completion of the Work shall have occurred if and only if all of the items in paragraphs (a) to (h), inclusive, of this **Article 25.1** have occurred to the satisfaction of Engineer in accordance with this Agreement:
- (a) The Work is ready for use or is being used for the purpose intended and is capable of achieving Final Completion at a cost of not more than two percent (2%) of the Contract Price;
 - (b) Contractor has delivered to Engineer all drawings, specifications, calculations, test data, performance data, equipment descriptions, equipment and system installation instruction manuals, integrated and coordinated operation and maintenance manuals, data, training aids and other technical documentation and information, for Company to use and maintain the Work;
 - (c) Engineer has prepared and delivered an updated Punch List to Contractor, which includes any minor items with respect to which Engineer has notified Contractor are incomplete or have Defects;
 - (d) Contractor has delivered to Engineer a Notice:
 - (i) detailing all outstanding Claims of Contractor under this Agreement with documentation sufficient in the opinion of Engineer to support such Claims, and Company shall not be liable to Contractor for any Claim under this Agreement which is not identified within that Notice and supported by sufficient documentation; or
 - (ii) certifying that there are no such outstanding Claims;
 - (e) Contractor has delivered to Engineer the latest available clearance certificate from the Workers' Compensation Board of Newfoundland and Labrador that no assessments or other amounts are owing to the date therein specified;

- (f) Contractor has removed all Contractor Group's Personnel, supplies, equipment, materials, rubbish and temporary facilities, except those reasonably required for completion of outstanding Punch List items, from the Site so that the Site is neat, clean and safe;
 - (g) Contractor shall have assigned to Company all representations, warranties, guarantees and obligations which Contractor received from Contractor Group subject to Contractor's right to retain the benefit of all Subcontractors that Contractor requires to complete the Work; and
 - (h) There being no liens filed or registered pursuant to the *Mechanics' Lien Act*, RSNL 1990, c.M-3, with respect to or arising from the Work at that time (other than liens properly filed or registered by Contractor as a result of Company's failure to pay amounts due to Contractor in accordance with the requirements of this Agreement), or if any such liens have been so filed or registered, all such liens shall have been vacated or removed from title or the claims relating to such liens shall have been secured through the delivery of bonds in respect of the full amounts of such claims.
- 25.2 When Contractor believes the requirements of Substantial Completion have been met, Contractor shall request from Engineer a Substantial Completion Certificate. Such request shall contain a declaration by Contractor that all the requirements of Substantial Completion have been met and a report of the results of any required tests for the Work with sufficient detail to enable Engineer to determine whether Substantial Completion has been achieved. If all requirements of Substantial Completion have been met, the date of Substantial Completion shall be the later of (i) the date specified in Contractor's request, and (ii) the date when the requirements of Substantial Completion were met. Promptly after Substantial Completion has been achieved as provided above, Engineer shall issue a Substantial Completion Certificate to Contractor, which states the date of Substantial Completion and Contractor shall turn over control and operation of the Work to Company.
- 25.3 If Contractor fails to rectify any items on the Punch List (following delivery to the Contractor pursuant to **Article 25.1(c)**) as soon as practicable, Engineer may notify Contractor and thereafter Company may employ others to carry out the rectification, the cost thereof being for the account of Contractor, without affecting any Warranties.
- 25.4 If any item of Work on the Punch List is not completed by the date specified on the Punch List for such item, Company may complete or employ others to complete the item and Contractor shall be liable for and pay Company all costs to complete such item, plus ten percent (10%), and Company may deduct such amount from any amount otherwise owing to Contractor, without affecting any Warranty.
- 25.5 Contractor's access to and continued presence at the Site after the date of Substantial Completion shall be for the purpose of achieving Final Completion. In performing such work Contractor will use its best efforts not to inconvenience or interfere with Company and Company's Other Contractors.
- 25.6 Within forty-five (45) days of the date of Substantial Completion, or such other time as may be specified in the *Mechanics' Lien Act*, RSNL 1990, c. M-3, and provided no liens have been

- filed or registered with respect to the Work (other than a claim for lien properly filed or registered by Contractor as a result of Company's failure to pay amounts due to Contractor in accordance with the requirements of this Agreement), Company shall pay Contractor three quarters of the holdback retained by Company pursuant to the *Mechanics' Lien Act*, RSNL 1990, c. M-3.
- 25.7 When Contractor has completed all the Work in accordance with the terms of this Agreement, except Warranty obligations, Contractor may by Notice to Company request written confirmation that Contractor has fully performed all of the Work hereunder (the "**Final Completion Certificate**").
- 25.8 By submission of the Notice to Company for confirmation that Contractor has fully performed all of the Work pursuant to **Article 25.7**, Contractor agrees that, as of the date of the issuance of the Notice, Contractor waives, remises, releases and discharges Company of any and all Claims as of the date of the Notice that are known, ought to have been known or discoverable by reasonable means by Contractor, which Contractor has or may have relating to or arising out of this Agreement and the subject matter of this Agreement, and all facts and circumstances related to the Work, save and except:
- (a) any Claims previously submitted in writing prior to the date of the Notice, and remaining unresolved; and
 - (b) the balance of the Contract Price payable, if any, upon the issuance of the Final Completion Certificate.
- 25.9 Company shall not be obliged to issue the Final Completion Certificate until Contractor has fulfilled all of its Work obligations, including:
- (a) satisfied all liens, claims or encumbrances affecting Company's property in connection with the Work or Warranty Work in accordance with **Article 41** (other than a claim for lien properly filed or registered by Contractor as a result of Company's failure to pay amounts due to Contractor in accordance with the requirements of this Agreement) or if any such liens, claims or encumbrances existed, all such liens, claims and encumbrances shall have been released, vacated or, if applicable, removed from title or such liens, claims and/or encumbrances shall have been secured through the delivery of bonds in respect of the full amounts of such liens, claims and/or encumbrances; and
 - (b) paid in full any and all outstanding obligations against the Work.
- 25.10 Upon Contractor satisfying the criteria set forth in **Article 25.9**, Company shall provide Contractor with the Final Completion Certificate in the form set forth in Exhibit 3 – Coordination Procedures within thirty (30) days of Contractor's Notice under **Article 25.7** or Contractor demonstrating that it has satisfied the criteria set forth in **Article 25.9**, whichever is later.
- 25.11 The issuance of the Final Completion Certificate shall not release Contractor from the provisions of this Agreement which expressly or by their nature extend beyond the expiration or any termination of this Agreement.

- 25.12 Within thirty (30) days after issuance of the Final Completion Certificate, Company shall pay Contractor the balance of the Contract Price for the Work, including the balance of the holdback retained by Company pursuant to the *Mechanics' Lien Act*, R.S.N.L. 1990, c.M-3, less:
- (a) an amount to satisfy any liens registered against the property of Company arising out of Contractor Group's performance of the Work;
 - (b) any amount Company is entitled to set off against payment to Contractor;
 - (c) any amount payable by Contractor to Company under this Agreement; and
 - (d) any amounts required or permitted to be withheld by Company by Applicable Laws or this Agreement.

ARTICLE 26 CHANGES IN THE WORK

- 26.1 Company has the right to make a Change at any time and from time to time during the performance of the Work by issuing a Change Order. Compensation for a Change shall be determined in accordance with Exhibit 2 – Compensation and Exhibit 3 – Coordination Procedures.
- 26.2 Contractor shall not perform and shall not be entitled to any compensation for a Change without a Change Order issued by Company to Contractor for the Change.
- 26.3 Contractor will comply with the requirements of Engineer and Exhibit 3 – Coordination Procedures in the development of the pricing, impacts on resources and schedule as it relates to such Change and present a comprehensive proposal covering the Change to Company for Approval.
- 26.4 Except to the extent expressly provided in a Change Order, no Changes shall vitiate or invalidate or be deemed to amend or be deemed to constitute a waiver of any provision of this Agreement. All Changes shall be governed by all the provisions of this Agreement. Changes will not result in any limitation of Contractor's Warranty under **Article 17**.
- 26.5 Contractor shall commence with and shall execute all Changes with all due diligence immediately upon receipt of a Change Order.
- 26.6 In the event the Parties fail to reach agreement on the pricing and impacts on resources and schedule with respect to a Change, Contractor shall perform the work specified in the Change Order as issued by Company and the Dispute will be handled in accordance with **Article 39**, but in no case shall the price of a Change exceed that amount determined in accordance with **Article 26.10** and **Article 26.11**.
- 26.7 If Contractor considers that a Change is necessary or desirable, Contractor may request a Change Order by submitting a Change Request in writing to Engineer in accordance with the procedure set out in Exhibit 3 – Coordination Procedures.

- 26.8 If Contractor considers that an occurrence has taken place which constitutes a Change, then Contractor shall, within ten (10) Business Days, contact Engineer and request a Change Order by submitting a Change Request to Engineer in accordance with the procedure set out in Exhibit 3 – Coordination Procedures. If Company:
- (a) agrees that the occurrence constitutes a Change, then Company shall issue a Change Order in respect of the Change;
 - (b) disagrees that the occurrence constitutes a Change, Contractor shall proceed with the Work without delay and such continuation of the Work shall be without prejudice to Contractor's rights to advance a Dispute under **Article 39**.

If Contractor fails to comply with the conditions of this **Article 26.8**, it will relinquish its right to request a Change Order and waives any claim it may have for additional compensation and for an extension of time to complete a Milestone arising from the occurrence.

- 26.9 Changes shall be invoiced and paid for in accordance with **Article 12**, Exhibit 2 – Compensation and Exhibit 3 – Coordination Procedures. Cost of the work carried out under a Change Order will reflect any discounts, rebates, refunds or free material credits earned with purchase of material or other goods and services charged under a Change.

- 26.10 The adjustment in the Contract Price for a Change Order carried out prior to agreement by Contractor and Company on the price for the Change shall be determined on the basis of the cost of expenditures to perform the work and/or cost savings for a reduction in work that are attributable to the Change as determined in accordance with **Articles 26.11** and **26.12(a)**, and overhead and profit as follows:

- (a) to the extent rates and prices in Exhibit 2 – Compensation apply, there shall be no allowance for overhead and profit (except as already included in those rates);
- (b) to the extent rates and prices in Exhibit 2 – Compensation do not apply:
 - (i) if a Change results in an increase in the Contract Price, an allowance for overhead and profit will be included as specified in Exhibit 2 - Compensation;
 - (ii) if a Change results in a decrease in the Contract Price, the deduction for overhead and profit shall be fifteen percent (15%) of the cost reduction; and
 - (iii) when both additions and deletions covering related work or substitutions are involved in a change in the Work, the allowance or deduction for overhead and profit will be calculated on the basis of the net increase or decrease, if any, with respect to that change in the Work.

- 26.11 Contractor will keep and present in such form as Company may require an itemized accounting of the cost of expenditures and savings referred to in **Article 26.10** together with supporting data. The cost of the Change shall be limited to the actual cost incurred by Contractor for the performance of the work attributable to the Change, using any applicable rates and prices in Exhibit 2 – Compensation, where the actual cost shall be limited to:

- (a) wages (including applicable Taxes) and benefits paid for labour and supervision in the direct employ of Contractor under applicable collective bargaining agreements;

- (b) the cost (including cost of transportation) of all equipment, material and products incorporated into the Work less any trade discounts;
- (c) the cost (including cost of transportation) of materials, supplies, equipment and maintenance thereof, which are consumed, less any trade discounts and cost less salvage value on such items used but not consumed and which remain the property of Contractor;
- (d) rental cost of all tools, machinery and equipment, exclusive of hand tools, whether rented from or provided by Contractor or others;
- (e) deposits lost;
- (f) the amounts of all costs arising out of Subcontracts;
- (g) the cost of quality assurance such as independent inspection and testing services;
- (h) any adjustment in duties, and bonding and/or insurance costs, for which Contractor is liable; and
- (i) the cost of removal and disposal of waste products and debris.

26.12 If the quantity of the Work is decreased or any part of the Work is deleted:

- (a) To the extent possible, the value of any deletion or reduction in the Work shall be determined using the rates and prices set out in Exhibit 2 – Compensation; and
- (b) Contractor shall not be entitled to claim any indirect or consequential damages, including loss of profits or loss of revenue.

26.13 If at any time after the start of the work directed by a Change Order for which there was no agreement on price, Company and Contractor reach agreement on the adjustment to the Contract Price and any adjustment to Exhibit 9 – Schedule, this agreement will be recorded in an amendment to the Change Order issued by Company.

26.14 If there is a change in Applicable Laws which makes modifications to the Work necessary or advisable, Company or Contractor may advise the other Party of the change in Applicable Law and present to the other Party a proposal for such modifications required as a result of the change in Applicable Laws. Contractor shall prepare and provide to Company the following:

- (a) details of the effect, if any, on the costs of the Work;
- (b) details of the impact, if any, on dates for completion of Milestones and/or the Technical Requirements; and
- (c) details of the impact on the Contract Price.

ARTICLE 27

PUBLICITY COMMUNICATIONS

- 27.1 Contractor agrees that all public relation matters arising out of or in connection with the Work shall be the sole responsibility of Company. Contractor shall obtain Company's Approval of the text of any announcement, publication or other type of communication concerning the Work.
- 27.2 Contractor shall not advertise or issue any information, publication, document or article (including photographs or film) for publication or media releases or other publicity relating to the Work, the Agreement, the LCP or Company's business and activities without Approval of Company except as may be required by Applicable Law. Contractor shall promptly notify Company in advance of any such advertisement, issuance or publication that may be required by Applicable Law.
- 27.3 Contractor shall refer to Company any enquiries from the media concerning the Work, the Agreement, the LCP or Company's business and activities.
- 27.4 Contractor shall include in each Subcontract a provision that incorporates the terms of **Articles 27.1, 27.2** and **27.3** such that those terms shall apply to each Subcontractor.

ARTICLE 28

CONFIDENTIALITY

- 28.1 The term "Confidential Information" shall mean all information and data, in whatever form, which a Party directly or indirectly acquires from the other Party or from the performance of the Work (including events witnessed by Contractor Group or Company Group and the Personnel of each of the foregoing in connection with the performance of the Work) and includes without limitation, Contractor's Proprietary Information. Confidential Information does not include information which:
- (a) prior to the time of disclosure or acquisition is lawfully in the public domain;
 - (b) after disclosure or acquisition becomes part of the public domain, through no act or omission on the part of a Party;
 - (c) prior to disclosure or acquisition was already lawfully in a Party's possession without limitation on disclosure to others;
 - (d) was obtained by a Party from a third party who is lawfully in possession of such information and is not subject to a contractual or fiduciary relationship with the other Party with respect to such information; or
 - (e) was independently developed by the receiving Party without the use of Confidential Information.

- 28.2 A Party shall not disclose the other Party's Confidential Information (including photographs of activities of Company but excluding Company's photographs of the Work) to any third party without the Approval of such other Party, except as provided in **Article 28.3**.
- 28.3 A Party (the disclosing Party) may disclose the other Party's Confidential Information to its Affiliates, Engineer and the directors, officers, employees, contractors, subcontractors, legal counsel, consultants and advisors of the foregoing, including the disclosing Party, to whom disclosure is required to enable the disclosing Party to perform its obligations hereunder or to any other Person if such disclosure is required by Applicable Laws, provided the disclosing Party has taken such reasonable and necessary precautions to prevent any of the foregoing parties from disclosing such information to any third party. The disclosing Party shall promptly notify the other Party in advance of any such intended disclosure. Any Approval in respect of Confidential Information shall apply only to the specific request for Approval made by a Party in respect of such Confidential Information. Company may disclose such necessary Contractor's Confidential Information to Company's bankers and to financial institutions from whom Company may seek financing for the LCP.
- 28.4 To the extent Company is subject to the provisions of the Privacy Law, all documents and other records in the custody of or under the control of Company and its Affiliates, and in relation to the Work in the custody of or under the control of Contractor, will be subject to the Privacy Law. Subject to the limitations of the Privacy Law and to the extent it applies to Company or its Affiliates, the confidentiality obligations contained in this Agreement shall apply.
- 28.5 Each Party who discloses Confidential Information of another Party to its Personnel shall ensure that any such Personnel are informed of the confidential nature of the information disclosed and that such Personnel comply with the Party's obligations under this **Article 28**.
- 28.6 **Article 28** does not apply to the disclosure of information by a Party in order to comply with any Applicable Law or legally binding order of any Court or Authority, as long as prior to such disclosure the disclosing Party to the extent it is able to do so, gives Notice to the other Party with full particulars of the proposed disclosure.
- 28.7 Contractor acknowledges that Company is subject to the access to information and Privacy Law pursuant to which the public may have access to Company's records.
- 28.8 If requested by a Party, whether prior to or after the expiry or earlier termination of the Agreement, the other Party shall promptly deliver to the requesting Party all Confidential Information provided by the requesting Party that is in the custody, possession or control of the other Party or any of its Personnel. Notwithstanding the foregoing, such other Party may keep a copy of such Confidential information for the purposes of legal archives, in contemplation of a dispute or litigation, or as required by Applicable Laws or to the extent that routine computer back-up procedures create copies in the associated back-up or archival computer storage system.
- 28.9 The breach of any of the conditions contained in this **Article 28** will be deemed to be a material breach of the Agreement.

ARTICLE 29

PATENTS, TRADEMARKS, COPYRIGHTS

- 29.1 Contractor grants to Company and its respective Affiliates a worldwide, non-exclusive, royalty-free, irrevocable, non-transferable license to use any of its intellectual property rights for the purposes of performance of the Work, the use and operation of any property resulting from the performance of the Work, for the purposes of interfacing the Work with equipment supplied by third parties and for servicing and maintaining such property, including to have service and maintenance by third parties.
- 29.2 Contractor agrees to disclose promptly to Company, all inventions or concepts which it or its Personnel may make as a result of the performance of the Work or which are wholly or in part based on or derived from the Work and which are based mainly or wholly on technical information supplied by Company. All rights, title and interest in and to such inventions, and to any design, specification, or drawings produced in the course of the performance of the Work shall belong to Company. Contractor agrees to execute or have executed all documents and to perform or have performed all such lawful acts as may be necessary to perfect Company's title to such inventions and, subject to reimbursement of all reasonable costs incurred, to assist Company in obtaining and maintaining patent coverage, trademark or copyright thereon throughout the world.
- 29.3 Contractor shall not incorporate anything in the Work which involves the use of a copyright, trademark, patent or proprietary information of a third party for which Company has no license rights. Contractor agrees to defend, indemnify and hold Company Group safe and harmless from and against any and all claims, losses, damages, costs (including legal costs), expenses and liabilities of every kind and nature arising out of or from any infringement or alleged infringement of patents or proprietary or protected rights covering the Work and any property, methods or processes furnished by Contractor. Contractor shall require its Subcontractors to provide the same rights and protections for Company Group that Contractor is required to provide pursuant to this **Article 29.3**.
- 29.4 Company agrees to indemnify and hold Contractor Group safe and harmless from and against any and all claims, losses, damages, costs (including legal costs), expenses and liabilities of every kind and nature arising out of or from any infringement or alleged infringement of patent or proprietary or protected rights covering property, methods or processes furnished by Company.
- 29.5 Subject to **Article 29.1** and **29.2**, and except for the intellectual property rights identified in **Article 29.1** which are owned by Contractor Group, all drawings, assembly procedures, process specifications, computer programs, documents and information developed by Contractor Group for the purposes of the Agreement or which may arise out of the performance of the Agreement by Contractor shall be the property of Company.

ARTICLE 30 ASSIGNMENT

30.1 Company may, without the Approval of Contractor, assign this Agreement, or any part thereof, to:

- (a) any Affiliate of Company (an "**Affiliate Assignee**");
- (b) any successor to or replacement corporation of Company or similar entity in connection with any merger, consolidation or other reorganization of Company or transfer of all or any part of Company's assets other than as contemplated in paragraph (a) above; or
- (c) any entity which has provided or provides financing for the LCP, or any part thereof, to Company or its Affiliates, successors and replacements;

and upon Notice by Company to Contractor of such assignment, Company shall be fully and finally released and discharged from all liabilities, obligations, any and all actions, causes of action and covenants, whether expressed or implied, Claims or demands for damages, sums due, indemnity, costs (including without limitation legal fees and disbursements), expenses, interest, loss or injury of every nature and kind whatsoever and howsoever arising, which Contractor may hereinafter have, in any way relating to or under this Agreement. In the case of an assignment to an entity described in paragraphs (a) or (b) of this **Article 30.1**, Contractor acknowledges and agrees that the assignee shall thereupon be the sole obligor for all past and any future obligations under this Agreement in the same manner and to the same extent as if it was the sole obligor and original party hereto in the place and stead of Company under this Agreement, the whole without any further action, Approval, notice or document being taken, obtained, sent or executed by or to any of the Parties at any time.

30.2 In the event of an assignment pursuant to **Article 30.1(c)**, Contractor agrees that:

- (a) prior to the exercise by Contractor of any rights it may have under the Agreement arising by reason of any breach by Company of the Agreement (any such breach, a "**Breach**"), including cancellation or suspension of Contractor's performance thereunder, Contractor shall give to the Agent Party at such time, written notice of the Breach at the time such notice is provided to Company. Upon receipt of such notice, such Agent Party shall be entitled, but shall in no way be obligated, to cure or cause to be cured such Breach and curable breaches which arose prior to such notice within sixty (60) days following the receipt by such Agent Party of such notice ("**Cure Period**"), provided that:
 - (i) such Cure Period will automatically be extended for the period of time Contractor is precluded by Applicable Laws or by virtue of any debt reorganization, insolvency or bankruptcy proceedings, from cancelling the Agreement; and
 - (ii) during the Cure Period, Contractor will not be obligated to supply goods or services or otherwise perform prospective obligations under the Agreement unless Contractor receives immediate payment for such goods, services or obligations; and

- (b) it shall not exercise any rights of cancellation or suspension under the Agreement before the expiry of the Cure Period, unless the Agent Party at such time, expressly notifies Contractor in writing that such Agent Party shall not:
- (i) cure or cause to be cured the Breach specified in the relevant notice if such Breach is of a curable nature; or
 - (ii) observe and perform the obligations of Company under the Agreement, including curing curable breaches which arose prior to such notice.
- 30.3 Company shall not assign this Agreement or any of its benefits or obligations thereunder to any third party, other than those described in **Article 30.1**, without Contractor's Approval, which Approval shall not be unreasonably withheld, conditioned or delayed.
- 30.4 Following any assignment by Company pursuant to this **Article 30**, this Agreement may be re-assigned to Company without Contractor's Approval.
- 30.5 Contractor shall not assign any of its interest in this Agreement without the Approval of Company. Such Approval shall not release or relieve Contractor from any representation or warranty given by Contractor or any obligation to be performed on the part of Contractor under this Agreement. Notwithstanding the foregoing, Contractor may at any time assign its interest in this Agreement to an Affiliate, provided that:
- (a) Contractor shall remain liable for any obligation to be performed on the part of Contractor under this Agreement, including Warranties, if the Affiliate fails to fulfill any such obligation;
 - (b) the letter of credit shall remain in place, remain effective and available to Company in the event the Affiliate fails to fulfill Contractor's obligation under this Agreement; and
 - (c) if the Affiliate has a tax residency status that is different than the tax residency status of Contractor as declared to Company in accordance with **Article 13.3** (or such subsequent tax residency approved by Company in accordance with **Article 13.3**), Contractor has obtained the prior written approval of Company of the proposed assignment to the Affiliate.
- 30.6 In the event of a transfer by sale, assignment, amalgamation, merger, trust, operation of law or otherwise of any shares, interest or voting rights of Contractor which may result in the change of identity of the Person exercising *de facto* or *de jure* control over Contractor, the provisions of **Article 30.5** shall apply.

ARTICLE 31

FORCE MAJEURE

- 31.1 For the purposes of this Agreement, Force Majeure shall mean and be limited to the following:

- (a) acts of God, riot, civil unrest, civil disturbance (including blockades to or from the Site), war, acts of civil or military authority, epidemics, quarantine restrictions, acts of terrorism;
 - (b) earthquake, flood, fire, storms in excess of a one hundred (100) year storm or other natural physical disaster, but excluding other weather conditions as such regardless of severity;
 - (c) strikes at a national level, industrial disputes at a national level, which affect a substantial or essential portion of the Work;
 - (d) a change in Applicable Law or the interpretation thereof (recognized by relevant Courts or relevant government authorities) which change could not on the Effective Date reasonably have been foreseen and which affects a substantial or essential portion of the Work; and
 - (e) maritime and aviation disasters.
- 31.2 Neither Contractor nor Company shall be responsible for any failure to fulfil any term or condition of this Agreement if and to the extent that such fulfilment has been delayed or rendered impossible by a Force Majeure occurrence of which the other Party has been notified in accordance with this **Article 31** and which is beyond the control and without the fault or negligence of the Party affected, and which by the exercise of reasonable diligence the said Party is unable to provide against.
- 31.3 A Party may not rely upon the provisions of **Article 31.2**:
- (a) unless it shall immediately upon being made aware of the Force Majeure occurrence notify the other Party of such Force Majeure and of the obligations expected to be affected thereby; and
 - (b) unless it shall immediately take all such steps as may be commercially reasonable in the circumstances to cause the discontinuance of, and to minimize the effect of, the Force Majeure occurrence and resume performance of the obligation affected by the Force Majeure as soon as reasonably possible.
- 31.4 Where Company claims Force Majeure and is entitled to rely upon the provisions of **Article 31.2**, then no compensation shall be payable to Contractor during the period that the Force Majeure occurrence continues to prevent performance by Company. Where Contractor claims Force Majeure and is entitled to rely on the provisions of **Article 31.2**, then no compensation shall be payable to Contractor during the period that the Force Majeure occurrence continues to prevent performance by Contractor.
- 31.5 (a) If Contractor is prevented from or delayed in performing any of its obligations as a result of an event of Force Majeure for a cumulative period of more than thirty (30) days or a consecutive period of more than fifteen (15) days during the Term, Company shall have the right thereafter to immediately terminate this Agreement upon giving Notice thereof to Contractor, and Company shall have no further liability whatsoever to Contractor (except payment for Work performed prior to such termination).

- (b) If Company is prevented from or delayed in performing any of its obligations as a result of an event of Force Majeure and Contractor is entitled to rely on the provisions of **Article 31.2**, then no compensation shall be payable to Contractor during the period that the Force Majeure occurrence continues to prevent performance by Company up to a maximum of thirty (30) consecutive days or ninety (90) cumulative days (either of which shall be referred to as the "Initial Force Majeure Period"). Where the Force Majeure occurrence continues, Contractor shall, at any time, have the right to terminate this Agreement after the expiry of the Initial Force Majeure Period upon giving five (5) days' Notice to Company and such Notice of termination shall be effective upon the expiry of such five (5) day period (the "FM Termination Date"), provided that such Notice of termination shall not be effective if Company provides Notice to Contractor before the intended FM Termination Date that Contractor is to remain on standby to complete the Work (the "Standby Notice"). If no Standby Notice is provided by Company prior to the intended FM Termination Date, this Agreement shall be terminated as of the FM Termination Date and, in such case, Company shall have no further liability whatsoever to Contractor (except for payment for Work performed prior to the FM Termination Date). If Company provides the Standby Notice prior to the intended FM Termination Date, then Contractor shall remain available to perform the Work and shall be entitled to a Change Order to the extent the Force Majeure occurrence(s) cause or result in a Change.

- 31.6 A Force Majeure occurrence shall in no circumstances entitle Contractor to an increase in the Contract Price.
- 31.7 Notwithstanding anything stated in this **Article 31** to the contrary, during any period in which the performance of the Work is prevented because of Force Majeure, Contractor and Company shall mutually agree either (a) to continue maintaining Contractor's Items and Personnel at or near the Worksite, in which case Company will reimburse Contractor at the rates outlined in Exhibit 2 - Compensation which is intended to cover only those expenses incurred by Contractor as a direct result of such prevention of performance, or (b) to demobilize Contractor's Items and Personnel.

ARTICLE 32

DEFAULT AND TERMINATION

- 32.1 Company may, without prejudice to any other right or remedy that it may have against Contractor, by giving Notice to Contractor, immediately terminate this Agreement in the event that any of the following shall occur:
- (a) Contractor breaches any of its material obligations under **Article 15** and has failed to commence and diligently pursue actions reasonably necessary to remedy such breach within fifteen (15) days or, if such breach is irremediable, Contractor fails to commence and diligently pursue actions reasonably necessary to mitigate or remedy the causes of such breach within fifteen (15) days;

- (b) Contractor becomes or is, in Company's reasonable opinion, likely to become insolvent or to go into liquidation;
- (c) Contractor fails to execute:
 - (i) the Work related to the achievement of either of Milestone No.'s M-UN1-1, M-UN2-1 or M-GEN-1 in accordance with Exhibit 9 – Schedule and has failed to commence and diligently pursue actions reasonably necessary to mitigate or remedy such failure so as to achieve, to the satisfaction of Company, the completion of either Milestone No. M-UN1-1, M-UN2-1 or M-GEN-1 within ninety (90) days after the applicable Milestone date identified for such Milestone in Exhibit 9 – Schedule; or
 - (ii) any other Work in accordance with Exhibit 9 – Schedule and has failed to commence and diligently pursue actions reasonably necessary to mitigate or remedy such failure within thirty (30) days;
- (d) the Work or any material part thereof becomes an actual or constructive total loss prior to Delivery (except if such loss is caused by Company Group or a Force Majeure occurrence) and Contractor has failed to recover from such loss within ten (10) days of such loss, or such other longer time period determined by Company at its discretion;
- (e) Contractor fails to obtain or maintain the insurance required in accordance with **Article 18**;
- (f) Contractor fails to procure or maintain the letter of credit in accordance with **Article 7**; or
- (g) Contractor is in breach of any other material obligations hereunder, including any terms, conditions, covenants, representations or warranties under this Agreement and has not commenced to rectify such breach within ten (10) Business Days after Notice thereof from Company or, after commencing to rectify such breach, is unable to rectify such breach within sixty (60) days of Company's Notice.

32.2 Notwithstanding **Article 32.1(g)**, if Company has provided ten (10) Business Days prior Notice to Contractor of the following applicable occurrence and Contractor has failed to remedy such occurrence within such ten (10) Business Day period, Company may, without prejudice to any other right or remedy that it may have against Contractor, by giving Notice to Contractor, immediately terminate this Agreement in the event that any of the following shall occur:

- (a) except in a case of a valid dispute over entitlement to payment, Contractor fails to make prompt payment for labour, materials, financing, skill or other services provided to Contractor by third parties in the performance of the Work; or
- (b) Contractor subcontracts or delegates any portion of the Work, or its obligations hereunder, without Company's Approval in accordance with **Article 6.2**; or
- (c) Contractor assigns this Agreement without Company's Approval pursuant to **Article 30.5**; or

- (d) Contractor disregards reasonable instructions of Company.
- 32.3 In the event Company terminates this Agreement pursuant to **Article 32.1** or **32.2**, Company may take title and possession of all Work and Company may complete the performance of the Work by whatever method it may deem expedient. In such case:
- (a) Company shall have no liability whatsoever to Contractor, except for any amounts payable up to the date of termination of this Agreement, subject to Company's rights of set off, provided that Contractor shall be reimbursed for all Work performed by Contractor, to the satisfaction of Company, prior to such termination;
 - (b) subject always to considerations of health, safety and of the environment, Contractor shall discontinue performance of the Work and shall comply in full with Company's instructions regarding such termination;
 - (c) Contractor shall use its best efforts to assign to Company or its nominee any Subcontracts, including any contracts related to Contractor Personnel or any equipment required to complete the Work;
 - (d) Contractor shall promptly deliver to Company all data, calculations and other materials associated with the Work, all on an appropriate medium, together with all drawings, specifications and other documents prepared or obtained by Contractor in connection with the Work and shall carry out Company's instructions concerning any cancellation or assignment of Subcontracts, purchase orders and any other matters arising out of this Agreement which Company decides are necessary or expedient; and
 - (e) Contractor shall allow Company, or its nominees, full right of access to the Worksites so as to remove or perform Work.
- 32.4 Notwithstanding any other provision of this Agreement:
- (a) Company may in its sole and absolute discretion and for any reason, including convenience of Company and without any fault or default on the part of Contractor, terminate this Agreement effective immediately upon giving Notice to Contractor or effective at a future date specified in the Notice; and
 - (b) subject to Contractor complying with its obligations to protect persons and property from damage, Contractor shall cease the performance of the Work immediately upon receiving that Notice or upon any later date specified in that Notice.
- 32.5 Company may, without prejudice to any other right or remedy that it may have against Contractor, terminate this Agreement in the event that Contractor is prevented from or delayed in performing any of its obligations as a result of an event of Force Majeure pursuant to **Article 31.5** by giving Notice of termination to Contractor.
- 32.6 In the event Company terminates the Agreement pursuant to **Article 32.4** or **Article 32.5**, Company may take title and possession of all Work and complete the performance of the Work by whatever method it may deem expedient. In such case:

- (a) For Milestone Work, Company shall reimburse Contractor the aggregate value of all achieved and Approved Milestones less the aggregate value of all amounts paid in relation to such achieved and Approved Milestones at the time of termination. Company shall also pay Contractor a proportionate value of any Milestone or lump sum Change Orders by progress, wherein such proportionate value is determined by demonstrated Work progress, as agreed between the Parties, associated with the achievement of such Milestones or lump sum Change Orders.
- (b) For reimbursable Change Orders, Company shall reimburse Contractor for actual Work performed up to the date of termination, subject to Contractor compliance with **Article 12.13(b)**.
- (c) Contractor shall clearly document and present to Company the costs incurred in the performance of the Agreement and the cancellation charges applicable to Subcontracts. In the event that costs incurred in the performance of the Agreement, together with the cancellation charges applicable to Subcontracts, are less than the amounts which have been previously paid to Contractor on account under the Agreement, Contractor shall reimburse Company in the amount of the difference within ten (10) Business Days of demand by Company following determination of the amount thereof.
- (d) Contractor shall, prior to paying or agreeing to pay any cancellation charges pursuant to such Subcontracts, contracts and other agreements, submit to Company the amount of such charges for Approval. If and to the extent that Company does not Approve the amount of such charges, Contractor shall not pay the same and the Parties shall jointly negotiate with the relevant third party or parties in an attempt to reduce the amount thereof.
- (e) In the event that the costs incurred in the performance of the Agreement, together with cancellation charges applicable to Subcontracts, are more than the amounts which have previously been paid to Contractor on account under the Agreement, Company shall reimburse Contractor in the amount of the difference within ten (10) Business Days of demand following determination of the amount thereof provided that Contractor has clearly documented the calculation resulting in such difference and has satisfied the requirements of paragraph (g) of this **Article 32.6**. In no event shall the aggregate of the amounts paid to Contractor under this Article exceed the Contract Price.
- (f) Subject always to considerations of health, safety and of the environment, Contractor shall discontinue performance of the Work and shall comply in full with Company's instructions regarding such termination.
- (g) Contractor shall promptly deliver to Company all data, calculations and other materials associated with the Work, all on an appropriate medium, together with all drawings, specifications and other documents prepared or obtained by Contractor in connection with the Work and shall carry out Company's instructions concerning any cancellation or assignment of Subcontracts, purchase orders and any other matters arising out of this Agreement which Company decides are necessary or expedient.

- (h) Contractor shall allow Company, or its nominees, full right of access to the Worksites so as to remove or perform Work.

32.7 Contractor shall be entitled to terminate this Agreement upon Notice to Company, after exercising due diligence, if:

- (a) Company has failed to pay an undisputed invoice eighty (80) days after the invoice has become payable pursuant to this Agreement;
- (b) Company substantially fails to perform its material obligations under the Agreement relating to access to the Site;
- (c) Company or its assets becomes the subject of any proceeding (whether initiated by Company or another Person) under bankruptcy or insolvency laws, including proceedings under the *Companies' Creditors' Arrangement Act* (Canada), R.S.C. 1985, c. C-36;
- (d) Company becomes the subject of any proceeding for liquidation, or winding-up (whether initiated by Company or another Person);
- (e) a receiver or receiver-manager of all or any part of Company's assets is appointed by a Court or by any of its creditors; or
- (f) Company commits an act of bankruptcy as defined in the *Bankruptcy and Insolvency Act* (Canada), R.S.C. 1985, c. B-3, or commits any other act or omission which would entitle any of Company's creditors to initiate a process or proceeding to take possession of any of Company's assets or to have any of Company's assets distributed among such creditors.

In the event of an occurrence described by **Articles 32.7(a) or 32.7(b)**, Contractor may, upon giving ten (10) Business Days' Notice to Company, terminate this Agreement if Company has failed to commence and diligently pursue actions reasonably necessary to mitigate, remedy or to cure the default described by **Articles 32.7(a) or 32.7(b)** within the ten (10) Business Day period. However, in the case of **Articles 32.7(c) to 32.7(f)** inclusive, Contractor may, by Notice, terminate this Agreement immediately.

32.8 Upon termination of this Agreement by Contractor pursuant to **Article 32.7**:

- (a) Contractor shall promptly:
 - (i) cease all further Work, except for such work as may have been instructed by Engineer for the protection of life or property or for the safety of the Work;
 - (ii) deliver to Engineer Contractor's documents, plant, materials and other work;
 - (iii) remove all Contractor's Items from the Site, except as necessary for safety; and
 - (iv) demobilize from the Site.
- (b) Company shall promptly:
 - (i) return to Contractor the performance security referenced in **Article 7**; and
 - (ii) pay Contractor in accordance with **Article 32.6**.

- 32.9 The Parties acknowledge and confirm their respective obligations to make commercially reasonable efforts to mitigate any damages or costs arising from any termination of this Agreement.

ARTICLE 33

BANKRUPTCY, INSOLVENCY AND RECEIVERSHIP

- 33.1 Company shall have the right, without limiting any of its other rights or remedies, to terminate this Agreement immediately by giving Notice of termination to Contractor pursuant to **Article 32.1** if:
- (a) Contractor or its assets becomes the subject of any proceeding (whether initiated by Contractor or another Person) under bankruptcy or insolvency laws, including proceedings under the *Companies' Creditors' Arrangement Act* (Canada), R.S.C. 1985, c. C-36; or
 - (b) Contractor becomes the subject of any proceeding for liquidation, reorganization or winding-up (whether initiated by Contractor or another Person); or
 - (c) a receiver or receiver-manager of all or any part of Contractor's assets is appointed by a Court or by any of its creditors; or
 - (d) Contractor commits an act of bankruptcy as defined in the *Bankruptcy and Insolvency Act* (Canada), R.S.C. 1985, c. B-3, or commits any other act or omission which would entitle any of Contractor's creditors to initiate a process or proceeding to take possession of any of Contractor's assets or to have any of the Contractor's assets distributed among such creditors.
- 33.2 If this Agreement is terminated by Company under **Article 33.1**, Company shall be entitled to withhold further payments to Contractor and set-off those payments against any amounts which Contractor owes or will owe to Company under this Agreement or any other agreement and Company reserves to itself all other rights, remedies and counterclaims to which it may be entitled hereunder or at law or equity.

ARTICLE 34

SUSPENSION

- 34.1 Company may at any time during the Term, at Company's sole discretion for any reason, suspend performance of the Work, or any part thereof, by giving Notice to Contractor (such period of suspension hereinafter "**Suspension Period**"). The Work shall be resumed by Contractor on a date as may be specified by Company in a Notice to Contractor. During the Suspension Period, Contractor shall properly protect and secure the Work as Approved in advance by Company.

- 34.2 Subject to **Article 34.3** and **Article 34.4**, Company shall reimburse Contractor its reasonable expenses at the applicable rates stated in Exhibit 2 – Compensation for personnel and equipment necessary for compliance with any suspension order and associated reinstatement order (which Contractor shall use its reasonable care and diligence to mitigate), including without limitation demobilization, security, protection, preservation and remobilization costs (the "**Suspension Expenses**"). Subject to the foregoing, in no event shall Contractor be entitled to any compensation for items covered in **Article 21.14** that may have resulted from such suspension or reinstatement order.
- 34.3 Pursuant to **Article 15.8**, Company shall have the right to suspend performance of the Work for as long as necessary to prevent or stop any contravention of **Article 15**. During such period of suspension, no Suspension Expenses shall be payable to Contractor by Company.
- 34.4 In case of suspension due to Contractor's failure to perform the Work in accordance with **Article 3**, Contractor shall not be entitled to Suspension Expenses incurred from the moment the Notice of suspension was given until a reinstatement order (if any) is given by Company but shall remain liable, without prejudice to Company's other rights under this Agreement.
- 34.5 If Company suspends the Work for any reason whatsoever, Contractor shall not be entitled to Suspension Expenses if Contractor would have otherwise been delayed in performing the Work during the suspension period due to fault or default on the part of Contractor or as a result of Force Majeure.
- 34.6 Contractor shall cause all terms of this Article to be inserted in all Subcontracts so that Company and Contractor shall have the rights herein set forth with respect to all Subcontractors.
- 34.7 If there is a suspension under **Article 34.1** for greater than one hundred twenty (120) days, either consecutively or in the aggregate, Contractor may give Company five (5) Business Days' Notice of Contractor's intent to suspend or terminate the Agreement. Company may, by Notice to Contractor, require Contractor to resume the Work within such five (5) Business Day period, in which case this Agreement shall remain in full force and effect. Any further suspension under **Article 34.1** shall entitle Contractor, upon Notice to Company, to immediately suspend or terminate this Agreement at its sole discretion, without prejudice to Contractor's right to Suspension Expenses subject to the terms of this **Article 34**. If Company does not require Contractor to resume the Work within such five (5) Business Day period, then this Agreement shall be suspended or terminated (as the case may be as stated in Contractor's Notice) upon the expiry of such period without any further Notice, without prejudice to Contractor's right to Suspension Expenses subject to the terms of this **Article 34**. For the purposes of this **Article 34.7**, "Business Day" shall have the meaning ascribed to it in **Article 1.2(I)** and means a period of twenty-four (24) consecutive hours from midnight of the day previous to such Business Day to midnight of such Business Day.
- 34.8 In the event of a suspension pursuant to this **Article 34** that is not attributable to any act or omission by Contractor Group, and if such suspension results in a Change as defined by **Article 1.2(m)(v)** and **Articles 1.2(m)(A) to (F)** inclusive, then Contractor may proceed in

accordance with **Articles 26.7 or 26.8** to seek an extension of the Milestone Schedule, provided that Contractor shall use reasonable care and diligence to mitigate such Change.

- 34.9 Contractor shall have the right to suspend performance of the Work in the event Company has failed to pay an undisputed invoice forty-five (45) days after the invoice has become payable pursuant to this Agreement, and Contractor has given Company Notice of such failure and Company is unable to cure and has failed to commence to cure such failure within ten (10) Business Days. If such suspension results in a Change as defined by **Article 1.2(m)(v)** and **Articles 1.2(m)(A) to (F)** inclusive, then Contractor may proceed in accordance with **Articles 26.7 or 26.8** to seek an extension of the Milestone Schedule, provided that Contractor shall use reasonable care and diligence to mitigate such Change.

ARTICLE 35 LABOUR RELATIONS

- 35.1 Contractor acknowledges that some or all of Company's Other Contractors and their subcontractors at the Site may be union or non-union and that Company requires Contractor to ensure that labour peace shall be maintained. Contractor shall take all necessary precautions to avoid labour disputes and to minimize the disruption in the event of any dispute.
- 35.2 Contractor represents and warrants that no collective or other agreement with its Personnel or between its Subcontractors and their workers, and no expiry or termination of any such agreement, will adversely affect labour peace at the Worksites or delay Contractor's performance of the Work.
- 35.3 Contractor represents and warrants that it and its Subcontractors, if unionized, have written agreements with the unions representing the workers employed by them that include provisions that non-affiliation rights in any collective agreement or pursuant to any statutory right will not be exercised in connection with the Work. Any and all such agreements shall be submitted to Engineer within five (5) Business Days of the Effective Date or of the date an agreement comes into effect.
- 35.4 Whenever Contractor has knowledge that any actual or potential labour dispute is delaying or threatening to delay the schedule and performance of the Work, Contractor shall immediately advise Engineer in writing, including all relevant information with respect to such dispute or potential dispute and potential impact on the schedule and performance of the Work.
- 35.5 Without restricting the generality of Company's right to terminate the Agreement, Company may, but is not obligated to, give Notice to Contractor requiring Contractor to terminate any Subcontract by giving five (5) days' notice to the Subcontractor if:
- (a) the workers of the Subcontractor, or anyone employed by or through the Subcontractor:

- (i) declare or engage in a strike, a work stoppage or a refusal to supply material; or
 - (ii) engage in a slowdown or other concerted activity which restricts or limits or, is likely to restrict or limit, the progress or performance of the Work; or
 - (iii) picket or cause picketing to occur or support picketing by the refusal to Work, or continue to Work at or in the Worksites whether in support of lawful strike or for any other reason; or
 - (iv) does not comply with **Article 8**.
- (b) the Subcontractor, or anyone engaged by or through the Subcontractor, imposes a lockout, lawful or unlawful, against their workers engaged in performing the Work.
- 35.6 Contractor shall ensure that all Subcontracts allow termination in each of the events set out in **Article 35.5**.
- 35.7 The sole cost and expense of preventing, avoiding or removing any of the matters or events giving rise to a labour disruption caused or contributed to by Contractor Group, shall be borne by Contractor who shall use reasonable commercial efforts to prevent, avoid and remove any and all such labour disruptions within five (5) days of the commencement of such disruptions, including making any necessary applications for injunctive or other relief to the Court.
- 35.8 Except for strikes, labour disputes or industrial disputes referenced in **Article 31.1(c)**, delays in the performance of the Work as a result of any strike, industrial dispute, labour disruption or labour dispute are to be considered as a delay attributable to Contractor, and for which Contractor shall not be entitled to compensation or an extension to the date for completion of a Milestone.

ARTICLE 36

LIQUIDATED DAMAGES

- 36.1 For each Milestone specified in Exhibit 2 – Compensation as being subject to liquidated damages, if Contractor fails to Deliver that part of the Work to achieve the Milestone by the date specified, Contractor shall pay Company as liquidated damages the full amount stipulated in Exhibit 2 – Compensation for each day, including any part thereof, of the delay of that Milestone, from the date the delay commenced to the date the Milestone is achieved, unless the failure to achieve the Milestone is due to an event of Force Majeure, a Change affecting the Milestone or a Suspension Period. Liquidated damages shall cease to accrue on termination under **Articles 32** or **33**. Subject to **Article 32.1(c)**, liquidated damages shall constitute Company's sole and exclusive remedy, and satisfaction of all of Contractor's liabilities, for delay by Contractor in the performance of the Work under this Agreement.
- 36.2 Contractor's limit of liability for liquidated damages payable by Contractor to Company pursuant to this **Article 36** shall be a maximum of five percent (5%) of the total estimated Contract Price stated in Exhibit 2 – Compensation as of the Effective Date.

- 36.3 Contractor acknowledges that Company's damages for which Contractor is responsible as determined in accordance with **Article 36.1** are difficult to ascertain, and that the remedies of Company described therein are fair and reasonable in the circumstances, and Contractor agrees that it will not challenge the validity of any such remedies in any legal proceedings or otherwise claim or assert that any such remedies are invalid or unenforceable. Contractor agrees that Company may plead this **Article 36.3** in any legal proceedings as an estoppel and complete answer in defence to any challenge, claim or assertion. For clarification, **Articles 36.1, 36.2 and 36.3** shall not be construed as restricting the rights or remedies of Company:
- (a) with respect to the exercise by Company of any remedy otherwise available under this Agreement or at law;
 - (b) in respect of any Claim by Company that a breach of this Agreement by Contractor has occurred; or
 - (c) as to the amount or value of any damages incurred or suffered by Company as a result of any breach by Contractor (other than a delay covered by liquidated damages).
- 36.4 Company shall have the right to payment by Contractor of liquidated damages from time to time by giving Notice to Contractor. Any such Notice shall specify the amount of such damages and Contractor shall pay the amount so specified within thirty (30) days of the date of such Notice. Failure by Company to give Contractor a Notice shall not constitute a waiver of Company's right to claim all liquidated damages under this **Article 36**.
- 36.5 Company has the right to set off any amount of liquidated damages, plus interest determined in accordance with **Article 12.19**, owed by Contractor to Company against any amount due or to become due from Company to Contractor under the Agreement.

ARTICLE 37

CONTRACTOR'S REPRESENTATIONS, WARRANTIES AND COVENANTS

- 37.1 Contractor represents and warrants that during the Term:
- (a) it has the required skills, experience, facilities, equipment and capacity to perform the Work in a timely manner and in accordance with the terms of this Agreement, Applicable Laws, the Standard of a Prudent Contractor and sound industry accepted practices;
 - (b) all Contractor's Personnel involved in carrying out any of the Work have the qualifications, training and experience, and hold such valid licences and certificates of competence, as are required to carry out their duties in relation to the Work (including visas and work permits);
 - (c) each of Contractor's Items is of good quality, in good working condition, is in compliance with all Applicable Laws and is fit for its intended use as contemplated in this Agreement; and

- (d) the making and performance of this Agreement are within its powers, have been duly authorized by all necessary action and do not and will not violate any Applicable Law or any provision of its governing documents.

37.2 Contractor covenants that during the Term it shall:

- (a) perform the Work in a diligent, safe, efficient and timely manner and in accordance with the Standard of a Prudent Contractor;
- (b) perform the Work continuously and in accordance with this Agreement, using only Contractor's Personnel and Subcontractors Approved by Company;
- (c) use quality assurance programs in performing the Work which comply with the requirements of Exhibit 7 – Quality Requirements, all Applicable Laws and industry accepted practices;
- (d) schedule all long lead time equipment or products for manufacture at the earliest possible date;
- (e) not displace or set back in a manufacturing queue or production schedule the equipment or product to be manufactured for the Work in favour of another customer or client of Contractor following such equipment or product placement in a manufacturing queue or production schedule;
- (f) supply materials, equipment and products for installation into the Work that are new and meet or exceed the standards specified in this Agreement ;
- (g) maintain, at its sole risk, cost and expense, all Contractor's Items throughout the Term;
- (h) comply with, and ensure Contractor's Personnel and Subcontractors comply with, all health and safety requirements set out in Exhibit 5 – Health and Safety Requirements and Applicable Laws;
- (i) comply with, and ensure Contractor's Personnel and Subcontractors comply with, all environment and regulatory requirements set out in Exhibit 6 – Environmental and Regulatory Compliance Requirements and Applicable Laws;
- (j) take all steps necessary to maintain good labour relations with Contractor's Personnel to the extent that such requirement is consistent with sound business practice;
- (k) comply, on a timely basis, with all instructions of Company consistent with the provisions of this Agreement, including health, safety and environmental instructions;
- (l) provide such reports, records, and other information relating to the performance of the Work as Company may request from time to time, including copies of the qualifications and credentials of Contractor's Personnel and Subcontractors and information relating to quality assurance programs, and permit Company to inspect Contractor's Items and Worksites, to enable Company to satisfy itself that Contractor is complying with the terms of this Agreement;

- (m) obtain for the benefit of Company all available exemptions and/or refunds from Taxes; and
 - (n) implement and maintain a cost effectiveness program ensuring all techniques proposed for the performance of the Work are or have been reviewed to ensure that they are cost effective.
- 37.3 Contractor warrants and acknowledges that it has reviewed and understands the Applicable Laws and Lower Churchill Construction Projects Benefits Strategy governing the use of personnel, goods and services in the Work. Contractor shall, throughout the Term, take such action as Company may specify to enable Company to comply with all Applicable Laws regarding the use of Canadian and Newfoundland and Labrador personnel, goods and services, including any Newfoundland and Labrador Benefits requirements and those requirements set forth in Exhibit 13 - Provincial Benefits of this Agreement. Where Contractor is permitted to subcontract, Contractor shall ensure that Subcontractors comply with such requirements. In addition, Contractor shall provide reports in the manner and format described in Exhibit 13 - Provincial Benefits of this Agreement throughout the term of this Agreement.
- 37.4 Contractor warrants and acknowledges that, except for the Technical Specifications, any information provided by Company or Engineer prior to or after execution of this Agreement, including any and all reports, data, interpretations, recommendations and information, was prepared solely for the purpose of study to consider the general feasibility of the Work and not for the purpose of design, manufacture or installation. Company does not warrant and is not liable for the accuracy, sufficiency, adequacy, completeness or content of any such information or any information subsequently supplied by Company or by Engineer, all of which has been provided to Contractor for general information only and on the condition that such information shall not be relied on by Contractor that Contractor has either fully satisfied itself as to its sufficiency and accuracy or has fully accepted all risks and contingencies associated with such information.
- 37.5 Contractor shall, maintain, at its sole risk, cost and expense, all Contractor's Items throughout the Term in the manner necessary to ensure that the warranties and covenants in **Article 37.1** and **Article 37.2** shall be true and accurate at all times during the Term. If any of Contractor's Items do not at any time conform to the warranties and covenants given in **Article 37.1** and **Article 37.2**, Contractor shall, at Contractor's sole expense, repair such Contractor's Items or replace with items which conform in all respects to such representations and warranties.
- 37.6 Contractor agrees that all of its representations, warranties and covenants contained in this Agreement are and shall be deemed to be material and shall be conditions of this Agreement.

ARTICLE 38

ENTIRETY OF AGREEMENT, NON WAIVER

- 38.1 This Agreement, as executed by authorized representatives of Company and Contractor, constitutes the entire agreement between the Parties with respect to the matters dealt with herein. This Agreement replaces and supersedes all prior agreements, documents, writings and verbal understandings between the Parties in respect of the Work and there are no oral or written understandings, representations or commitments of any kind, express or implied, which are not expressly set forth herein. Subject to Applicable Laws, no Party shall be bound by or be liable for any statement, representation, promise, warranty, inducement, agreement, obligation or understanding of any kind or nature not set forth in this Agreement.
- 38.2 No modification of this Agreement by Contractor or Company, either before or after the execution of this Agreement, shall be of any force or effect unless such modification is in writing, is expressly stated to be a modification of this Agreement and is signed by duly authorized representatives of each of the Parties, with the exception of the following Exhibits where changes to same may be issued solely by Company (in which case **Article 26** shall apply only if such a change constitutes a Change as defined under **Article 1.2(m)**):
- (a) Exhibit 3 – Coordination Procedures;
 - (b) Exhibit 5 – Health and Safety Requirements;
 - (c) Exhibit 6 – Environmental and Regulatory Compliance Requirements;
 - (d) Exhibit 10 – Declaration of Residency;
 - (e) Exhibit 11 – Company Supplied Documents;
 - (f) Exhibit 12 – Site Conditions;
 - (g) Exhibit 13 – Provincial Benefits.
- 38.3 No waiver of any provision of this Agreement shall be of any force unless such waiver is in writing, is expressly stated to be a waiver of a specified provision of this Agreement and is signed by the Party to be bound thereby. Either Party's waiver of any breach of, or failure to enforce, any of the covenants, conditions or other provisions of this Agreement, at any time, shall not in any way affect or limit that Party's right thereafter to enforce or compel strict compliance with every covenant, condition or other provision hereof.
- 38.4 Each of the Parties shall, from time to time, at its own cost and expense, execute or cause to be executed all such further documents and do or cause to be done all things which are necessary to give effect to the provisions of this Agreement.

ARTICLE 39 DISPUTE RESOLUTION

- 39.1 If any dispute, controversy, claim, question or difference of opinion arises between the Parties under this Agreement including an interpretation, enforceability, performance, breach or validity of this Agreement ("**Dispute**"), the Party raising the Dispute shall give Notice to the other Party in writing within thirty (30) days of the Dispute arising, and such Notice shall provide all relevant particulars of the Dispute.
- 39.2 Upon issuance of the Notice of Dispute, the Parties shall, acting in good faith and a commercially reasonable manner, attempt to resolve the Dispute in the following manner:
- (a) Within fifteen (15) days of the Notice, the senior project managers for each of Company and Contractor shall meet to attempt to resolve the Dispute;
 - (b) If not resolved by senior project managers, the project sponsors or representative Vice Presidents for each of Company and Contractor will meet within thirty (30) days following the meeting of the project managers to attempt to resolve the Dispute; and
 - (c) If not resolved by project sponsors or representative Vice Presidents, the Presidents and/or Chief Executive Officers for each of Company and Contractor will meet within thirty (30) days following the meeting of the project sponsors or representative Vice Presidents to attempt to resolve the Dispute.
- 39.3 If the Dispute is not resolved by the Parties within ninety (90) days from the date of delivery of the Notice of Dispute then a Party may by Notice to the other Party require the Dispute to be resolved by binding arbitration in accordance with Exhibit 15 – Rules for Arbitration.
- 39.4 Notwithstanding the existence of a Dispute and the referral of the Dispute to the resolution procedures in this **Article 39**, Company and Contractor shall, to the extent reasonably possible, continue to perform their obligations under this Agreement without interruption or delay, unless:
- (a) advised in writing by Company to suspend or discontinue Work; or
 - (b) this Agreement has been terminated by a Party, in which case performance of the Work shall cease and the Parties shall perform their respective obligations upon termination as set out in **Article 32**.

The continuation of such performance shall in no way amount to a waiver of, or in any way prejudice, the position that is taken by the Parties in the Dispute. There shall be no extension to the date for completion of a Milestone by reason that a Dispute has been referred to the dispute resolution process in this **Article 39**, unless as a result of the dispute resolution process a determination is made that Contractor is entitled to such extension.

ARTICLE 40 NOTICES

- 40.1 Unless otherwise specified in the Agreement, any Notice given or made pursuant to the Agreement shall:
- (a) be in writing;
 - (b) be marked to the attention of Contractor Representative, in the case of Contractor, or to Company Representative, in the case of Company;
 - (c) where given by Company, be signed or authorized by either Company Representative, an officer, a director or company secretary of Company, or a duly authorized representative of Company;
 - (d) where given by Contractor, be signed or authorized by either Contractor Representative, an officer, a director or company secretary of Contractor, or a duly authorized representative of Contractor; and
 - (e) be delivered by prepaid post, by hand or by Aconex to the Party to whom the Notice is addressed at its address specified in **Article 40.3** or such other address as that Party may have notified to the other Party.
- 40.2 A Notice will be taken to be duly given:
- (a) in the case of delivery by hand, when delivered
 - (b) in the case of delivery by post, five (5) Business Days after the date of posting (if posted to an address in the same country) or twenty (20) Business Days after the date of posting (if posted to an address in another country); and
 - (c) in the case of delivery by Aconex, at the time and date recorded by Aconex for delivery to the recipient.
- 40.3 Any Notice given or made under the Agreement shall be delivered to the intended recipient by hand, post or Aconex to the address below or the address last notified by the intended recipient to the sender by Notice:
- (a) to Company:
Muskrat Falls Corporation
Re: Lower Churchill Project
350 Torbay Road Plaza, Suite No. 2
St. John's, NL
Canada A1A 4E1
Attention: Scott O'Brien, Project Manager Muskrat Falls Generation
E-mail: ScottOBrien@lowerchurchillproject.ca
 - (b) to Contractor:
Cahill-Ganotec, a Partnership

The Tower Corporate Campus
240 Waterford Bridge Road, Suite 101
St. John's, NL
A1E 1E2

Attention: James Parmiter

E-mail: jparmiter@cahill.ca

- 40.4 Except where Notice is given using Aconex in accordance with **Articles 40.2** and **40.3**, if the Parties use any other form of electronic mail for day to day communication such electronic mail shall not be used for and will not constitute Notice under the Agreement where the Agreement expressly requires that a Notice be given.
- 40.5 Any technical communications pertaining to the Work shall be between Engineer and Contractor Representative. Engineer shall, subject to the terms of this Agreement, be authorized to act on behalf of Company in all technical matters concerning the Work but not to commit or bind Company to a Change or an amendment of the Agreement.
- 40.6 Except where expressly provided otherwise in the Agreement, verbal communications will not constitute formal communication or Notice under the Agreement and neither Party has any obligation to act on any verbal communication or instruction unless and until it is confirmed in writing. Any action taken by a Party based on verbal communications, instructions or assurances will be at that Party's sole risk and will be without liability to or recourse against the other Party.
- 40.7 A Party may, from time to time, give Notice to the other Party of any change to its address.

ARTICLE 41

LIENS AND CLAIMS

- 41.1 Without prejudice to the provisions of this **Article 41**, Contractor shall prevent the imposition of any liens, claims, encumbrances or attachments by or on behalf of any third party against Contractor's Items, the Work, and Company property wherever located, or any portion thereof and any liens or attachments which nevertheless are imposed shall be promptly vacated and removed from title by Contractor, at Contractor's sole cost, and Contractor shall indemnify, defend and hold Company Group harmless from and against the same.
- 41.2 Contractor shall defend, protect, release, indemnify and hold Company Group harmless from and against, and shall keep Contractor's Items, Company's property, Worksites and Work thereon free and clear of all liens, charges, claims, assessments, fines and levies suffered, created, or committed by Contractor Group, save only (a) liens or encumbrances created with the prior written consent of Company voluntarily in favour of financial organizations in connection with Contractor's obtaining reasonable, prudent and necessary financing, or (b) as may be required in order to preserve Contractor's lien rights to the extent of any nonpayment of amounts owing to Contractor by Company in accordance with the requirements of this Agreement. Company may post on any of Contractor's property such

notices as it may desire to protect itself against such liens, claims, assessments, fines and levies.

- 41.3 Notwithstanding the efforts of Contractor hereunder, if Company suffers costs or expenses or becomes liable for payment as a result of the imposition of such liens or attachments, then without prejudice to any other rights or remedies available to Company, Company shall have the right to withhold and set off an amount equal to any such costs, expenses or payments incurred or made by Company from any payments due to Contractor hereunder.

ARTICLE 42

ENUREMENT, TIME, SURVIVAL OF PROVISIONS

- 42.1 This Agreement shall be binding upon and enure to the benefit of the Parties, their respective successors permitted assignees.
- 42.2 Time is of the essence with respect to Milestones in the Milestone Schedule.
- 42.3 The following provisions of this Agreement shall survive the termination or expiration of this Agreement and remain in full force and effect: **Articles 1.17, 1.19, 3.6, 5.1, 5.7, 6.7, 9.3, 10.7, Article 12, Article 13, Article 14, Article 17, Article 21, Article 23, Article 24, Article 27, Article 28, Article 29, Article 32, and Article 41.**

ARTICLE 43

COUNTERPARTS

- 43.1 This Agreement may be executed in any number of counterparts and any Party may transmit by facsimile or email in portable document format to the other Party a copy of this Agreement executed by that Party, the receipt of which shall have the same force and effect as if the original thereof had in fact been delivered at the same time.
- 43.2 Any original, facsimile copy, portable document format or photocopy of this Agreement bearing one or more signatures on behalf of a Party shall be admissible against that Party in any legal proceeding as evidence of the execution and delivery of this Agreement by that Party and without the requirement to produce an executed original of the Agreement.
- 43.3 Each person signing the Agreement as an authorized representative of a Party hereby represents and warrants that he or she is duly authorized to sign the Agreement for that Party and that the Agreement will, upon having been so executed, be binding on that Party in accordance with its terms.

EXECUTED AS AN AGREEMENT:

For and on behalf of **Muskrat Falls Corporation**

Signature of Authorized Representative

Signature of Authorized Representative

Name of Authorized Representative

Name of Authorized Representative

For and on behalf of **Cahill-Ganotec,
a Partnership:**

For and on behalf of **G.J. Cahill (1979) Limited:**

Signature of Authorized Representative

Signature of Authorized Representative

Name of Authorized Representative

Name of Authorized Representative

For and on behalf of **Ganotec Inc.:**

Signature of Authorized Representative

Signature of Authorized Representative

Name of Authorized Representative

Name of Authorized Representative

Execution Page to Agreement number CH0031-001 dated the **16th** day of **June**, 2017 between Muskrat Falls Corporation and Cahill-Ganotec, a Partnership.

Exhibit 1

Scope of Work

Agreement Number: CH0031-001

EXHIBIT 1


SCOPE OF WORK




This Exhibit 1 - Scope of Work incorporates the following documents:

1. CH0031 Supply and Install Mechanical and Electrical Auxiliaries Scope of Work Specification Document No. **MFA-SN-CD-3300-EN-SP-0002-01 revision C2**;
2. CH0031 Supply and Install Mechanical and Electrical Auxiliaries Technical Document List Document No. **MFA-SN-CD-3300-EN-LS-0003-01 revision C1**; and
3. The Technical Requirements, which includes technical specifications and drawings, listed in the above referenced documents.

Document Front Sheet



| | | | | |
|----------------------------|--|--------------------------------|--|---------------|
| NE-LCP Contractor/Supplier | Contract or Purchase Number and Description: LC-G-002 (Project 505573) | | Contractor/Supplier Name: SNC –Lavalin Inc. | |
| | Document Title: CH0031 Supply and Install Mechanical and Electrical Auxiliaries Scope of Work Specification | | Total Number of Pages Incl. Front Sheet 33 | |
| | Contractor Document Number: 505573-3321-40EW-0001 | | Revision Number: 06 | |
| | Supplier Document Number: | | Revision Number: | |
| | NE-LCP Document Number: MFA-SN-CD-3300-EN-SP-0002-01 | | NE-LCP Issue Number: C2 | |
| | Approver's Signature:  | | Date (dd-mmm-yyyy): 15 JUN 2017 | Review Class: |
| Comments: | | Equipment Tag or Model Number: | | |

| | | | | | |
|-------------------|---|------------------------------------|--|------------------------------------|--|
| NE-LCP | REVIEW DOES NOT CONSTITUTE APPROVAL OF DESIGN DETAILS, CALCULATIONS, TEST METHODS OR MATERIAL DEVELOPED AND/OR SELECTED BY THE CONTRACTOR, NOR DOES IT RELIEVE THE CONTRACTOR FROM FULL COMPLIANCE WITH CONTRACTUAL OR OTHER OBLIGATIONS. | | | | |
| | <input checked="" type="checkbox"/> 01 – REVIEWED AND ACCEPTED – NO COMMENTS <input type="checkbox"/> 02 – REVIEWED – INCORPORATE COMMENTS, REVISE AND RESUBMIT <input type="checkbox"/> 03 – REVIEWED - NOT ACCEPTED <input type="checkbox"/> 04 – INFORMATION ONLY <input type="checkbox"/> 05 – NOT REVIEWED | | | | |
| | Lead Reviewer:  | Date (dd-mmm-yyyy): 15-JUN-2017 | Project Manager:  | Date (dd-mmm-yyyy): 15 JUN 2017 | |
| | NE-LCP Management:  | Date (dd-mmm-yyyy): 15-JUN-2017 | | | |
| General Comments: | | | | | |

| | | | |
|-------------------------|---|-----|-------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and Install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

**LOWER CHURCHILL PROJECT
MUSKRAT FALLS HYDROELECTRIC DEVELOPMENT**


**CH0031
SUPPLY AND INSTALL MECHANICAL AND ELECTRICAL AUXILIARIES
SCOPE OF WORK SPECIFICATION**

Prepared by:



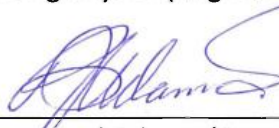
 Jim Slade / Albert Mitchelmore (Package Engineers)

Approved by:



 For Greg Snyder (Engineering Manager)

Approved by:



 Paul Adams (Area Manager)

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and Install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

REVISION LIST

| Revision | | | | | | |
|----------|--------|-------|-------|-------------|------------------|---|
| N° | By | Appr. | Appr. | Date | Revised pages | Remarks |
| C2 | JS/AM | GS | PA | 15-Jun-2017 | 23 | Re-Issued for Construction Para 3.8.1 revised |
| C1 | JS/AM | GS | PA | 6-Jun-2017 | | Issued for Construction |
| B4 | JS/AM | GS | FG | 27-Feb-2017 | | Re-issued for bid, General Revision for complete document |
| B3 | JS/AM | GS | FG | 30-Nov-2015 | | Re-issued for bid, General Revision for complete document |
| B2 | JS/DAW | GS | FG | 31-Mar-2014 | | Re-issued for Bid |
| B1 | JS/DAW | GS | FG | 10-Mar-2014 | | Issued for Bid |

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

TABLE OF CONTENTS

SCOPE OF WORK

PART 1 GENERAL.....2

1.1 Project Description..... 2

1.2 General Description of WORK..... 3

1.3 Language and Units..... 5

1.4 Climatic Data 5

1.5 Hydrometeorological Data..... 5

PART 2 SCOPE OF WORK6

2.1 Work Included..... 6

2.2 NOT USED..... 17

2.3 Company Supplied items..... 18

PART 3 SPECIAL REQUIREMENTS19

3.1 General..... 19

3.2 Site Conditions 20

3.3 COMPANY SUPPLIED DOCUMENTS..... 20

3.4 DELETED 20

3.5 DELETED 20

3.6 Documents 21

3.7 Mechanical Completion, Commissioning AND Turn-Over Requirements 21

3.8 Access to Work Areas at Site and Interface with Company’s Other Contractors..... 23

3.9 Installation 24

3.10 Mobilization 25

3.11 Contractor’s Temporary Facilities..... 26

3.12 Preparatory Work 27

3.13 Demobilization and Clean-up..... 27

3.14 Setting-out and Surveying..... 28

PART 4 CONTRACTOR SUPPLIED TECHNICAL INFORMATION.....30

4.1 General..... 30

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

PART 1 GENERAL

1.1 PROJECT DESCRIPTION

- 1.1.1** The LCP, located on the Churchill River in the Province of Newfoundland and Labrador, Canada, consists of the Muskrat Falls Generating Station with a capacity of 824 MW (4 units of 206 MW), associated transmission lines, the Spillway and Dams.
- 1.1.2** The LCP Site of Muskrat Falls is located on the lower reaches of the Churchill River approximately 35 km west of the Town of Happy Valley – Goose Bay. Permanent access to the Site is from the south shore, via a road extension from the existing Trans Labrador Highway. The Muskrat Falls Hydroelectric Development consists of the following main components:
- 1.1.2.1** Main access road, including upgrading and construction of over 22 km of new road with several stream crossings;
- 1.1.2.2** Approximately 20 km of Site roads to be constructed to reach the main structures, laydown areas, accommodation complex, borrow areas and spoil disposal area;
- 1.1.2.3** Accommodation complex;
- 1.1.2.4** Contractor and Company's laydown areas;
- 1.1.2.5** Reservoir preparation including some 130 km of forest access road, forest harvesting, and bank stabilization;
- 1.1.2.6** Intake, Powerhouse, Spillway, Transition Dams, North Dam and South Dam;
- 1.1.2.7** North Spur stabilization works;
- 1.1.2.8** Switchyards at Muskrat Falls and Churchill Falls;
- 1.1.2.9** AC to DC Converter Station;
- 1.1.2.10** High voltage overhead transmission lines and associated infrastructure; and
- 1.1.2.11** Environmental habitat (fish and terrestrial) protection, remediation and replacement.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

1.2 GENERAL DESCRIPTION OF WORK

1.2.1 General

1.2.1.1 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.

1.2.1.2 Some of the Work will be staged and involve a mix of permanent and temporary Work and equipment.

1.2.1.3 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 Group's Personnel.

1.2.2 Spillway Equipment

1.2.2.1 The Spillway will have five bays each with a gate and hoist and in its initial configuration will be used for diversion of the entire river during the construction phase of the LCP. In its final configuration the Spillway, when combined with overflow discharge at the North Dam, will be able to pass the probable maximum flood for the LCP.

1.2.2.2 In its initial configuration for river diversion each Spillway bay will essentially be flat bottomed with the Spillway gate sill at EL. 5.0 m. In its final configuration each Spillway bay will have a parabolic rollway with the gate sill at El. 18.0 m.

1.2.2.3 A Spillway electrical building will be provided to house a stepdown transformer, alternating current (AC) distribution for the Spillway equipment, Spillway gate controls and backup diesel generator. This Work will proceed in phases to accommodate the various stages of construction and river diversion and will involve a combination of permanent and temporary facilities.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

1.2.2.4 The design, supply, installation and completions of Spillway concrete works, gates, stoplogs, 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 Work.

1.2.3 Intake Equipment

1.2.3.1 The powerhouse Intake will have four turbine/generator units with three intake bays per unit. From upstream to downstream each intake bay will have trashracks and guides, bulkhead gate guides, and an intake gate and guides. One set of bulkhead gates will be provided to isolate one bay of one unit to permit maintenance to be performed on the gate in that bay.

1.2.3.2 The Intake gates will be operated by a wire rope hoist and will be used for the isolation of the water passages to perform maintenance on the turbine/generator. The Intake gates will also be capable of opening under maximum differential head to fill the water passages and to close under maximum head and maximum discharge as part of an emergency shutdown sequence to protect the turbine and generator.

1.2.3.3 The design, supply, installation and completions of Intake concrete works, the Intake trashrack, Intake bulkhead gates, Intake gates and hoists and hoist motor control centers (MCC) will be by Company’s Other Contractors but the power supply MCCs in the Intake and Intake building ancillary services as well as final connection to the Powerhouse power supply and controls are components of the Work.

1.2.4 Powerhouse Equipment

1.2.4.1 The design, supply, installation and completions of Powerhouse concrete structure, the turbines and generators, the Powerhouse crane, the Powerhouse elevator, the Powerhouse embedded piping, as well as supply of electrical equipment such as the isolated phase bus (IPB), generator circuit breakers (GCB) and generator step up (GSU) transformers, shall be by Company’s Other Contractors.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

1.3 LANGUAGE AND UNITS

1.3.1 The language used for all nameplates, submittals, and documentation shall be English. All minutes of meeting and package correspondence shall be in English.

1.3.2 All designs and drawings shall be prepared in accordance with the International System of Units (SI) and the units of measurement shall be SI.

1.3.3 All instrument's graduations and inscriptions shall comply with the SI system.

1.4 CLIMATIC DATA

1.4.1 Climatological data is included in Document LCP-SN-CD-0000-EV-RP-0003-01, Climatological Data Report found in Exhibit 11 - Company Supplied Documents.

1.5 HYDROMETEOROLOGICAL DATA

1.5.1 Hydrometeorological data is summarized on MFA-SN-CD-2000-CV-DD-0003-01, Muskrat Falls Bulk Excavation Hydrometeorological Data found in Exhibit 11 - Company Supplied Documents.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

PART 2 SCOPE OF WORK

2.1 WORK INCLUDED

- 2.1.1** The Work shall include: the design, supply, fabrication, shipment, erection and installation, registration, start-up, field-testing, Completions, documentation per Exhibit 4 - Supplier Document Requirement List (SDRL), training, warranty and all other services and items specified herein, as set forth in the Technical Requirements, and/or as necessary for construction start-up, operation during diversion, and final operation of the facilities presented in Exhibit 1 – Scope of Work. There are four distinct Work areas identified as Powerhouse, Spillway, Intake and the dams that include the North Dam, North Transition Dam, South Dam, Center Transition Dam and South Transition Dam.
- 2.1.2** The terms “Technical Specifications”, “Technical Requirements” and “Drawings” are defined in Article 1.
- 2.1.2.1** Throughout this document “Completions” is defined as all activities involved in preservation, mechanical completion, handover, commissioning and turnover to operations.
- 2.1.3** Powerhouse Electrical
- 2.1.3.1** The Work included shall be as follows, and as described in the Technical Requirements:
- 2.1.3.1.1** Supply, installation and Completions of four (4) 15 kV – 600Vac, 2500 kVA dry type station service transformers including accessories.
- 2.1.3.1.2** Supply, installation and Completions of all electrical equipment associated with the station service system including power supplies and integrated programmable automatic transfer controls and load management system for all 600 Vac switchgear and MCCs .
- 2.1.3.1.3** Design, supply, installation and Completions of equipment housekeeping pads as per the Technical Requirements.
- 2.1.3.1.4** Supply, installation and Completions of all station service 600V busways and associated electrical equipment.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 2.1.3.1.5 Supply, installation and Completions of all electrical equipment associated with alternating current (AC) distribution systems including 600 Vac, 600/347 Vac, 208/120 Vac distribution panelboards and 600-600/347 Vac and 600-208/120 Vac dry type transformers and 120 Vac distribution. Included in this scope is the 25 kV-600Vac dry type step up transformer for the permanent power supply to the Spillway electrical system.

- 2.1.3.1.6 Supply, installation and Completions of all electrical equipment associated with the direct current (DC) distribution systems including 125 Vdc and 48 Vdc batteries, chargers, battery racks, battery load bank, battery lifting device, switch boards, panel boards and isolation and monitoring equipment.

- 2.1.3.1.7 Supply, installation and Completions of all electrical equipment associated with the 120Vac UPS system including all chargers, inverters, transfer and bypass switches, isolating devices and distribution panel boards.

- 2.1.3.1.8 Supply, installation and Completions of all electrical equipment associated with surface grounding connections to the embedded grounding in the powerhouse including equipment and miscellaneous grounding. Powerhouse embedded groundings shall be supplied by Company's Other Contractor.

- 2.1.3.1.9 Supply, installation and Completions of all electrical equipment associated with cabling for the powerhouse electrical equipment, instrumentation and controls. This Work includes 25 kVac power cable (including terminations and connections) for the permanent power supply to the Spillway electrical system, 600Vac power supplies (including cable and connection) to the disconnect switches for the powerhouse crane, powerhouse elevator and draft tube gantry crane; all power, control, communications and grounding cables within the powerhouse.

- 2.1.3.1.10 Excavation, backfilling and Completions of trench for the buried cable routing between the Powerhouse duct bank and the switchyard control building including, disposal of all non re-usable material, transporting, placement and compaction of fill materials. This Work also includes supply and installation of grounding conductor (in duct bank and trench) from Powerhouse to switchyard control building and supply and installation of concrete encased rigid polyvinyl chloride (PVC) culverts for buried cables at road

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

crossings. Contractor shall coordinate with Company's Other Contractors that will provide cabling in the same trench.

- 2.1.3.1.11 Supply, installation and Completions of all electrical equipment associated with 120Vac convenience and 600Vac power outlets and normal and emergency lighting systems (including 347 V inverter and lighting controls) with the exception of the high bay lighting on the generator floor and powerhouse exterior metal siding mounted wall lighting which are installed by Company's Other Contractor.
- 2.1.3.1.12 Supply, installation and Completions of powerhouse building electrical heating system.
- 2.1.3.1.13 Supply, installation and Completions of all electrical equipment associated with the powerhouse cable tray and conduit systems for support and routing of all power, control, telecommunications and fiber optic cables within the powerhouse.
- 2.1.3.1.14 Design, supply, installation and Completions of structural support system for all powerhouse cable tray and conduit systems.
- 2.1.3.1.15 Design, supply, installation and Completions of any platforms/staging within the electrical shaft necessary to provide permanent access for the safe installation and maintenance of the cable trays, cables etc. Contractor shall describe in its Execution Plan (as referenced in Exhibit 3 – Coordination procedures) how this Work will be performed.
- 2.1.3.1.16 Supply, installation and Completions of all field wiring, outlet jacks, termination plates and other equipment associated with the communications and telephone system, plant security and access control system (SACS), closed circuit television (CCTV) cameras and public announcement (PA) systems. Supply and installation of telephones, SACS, CCTV cameras and PA equipment is provided by Company's Other Contractors.
- 2.1.3.1.17 Installation, assembly and Completions of major electrical equipment for the four (4) turbine generators, IPBs, GCBs and GSUs. This major electrical equipment is supplied by Company's Other Contractors.
- 2.1.3.1.18 Supply, installation and Completions of all connectors, conductors and test links necessary for the connection of the 315 kV line drops from overhead transmission lines

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

(provided by Company’s Other Contractors) to the GSU high voltage bushings and lightning arresters, and Completions of the complete installation.

2.1.3.1.19 Design, supply, installation and Completions of multi-zoned fire detection system for the powerhouse.

2.1.3.1.20 De-energization, disconnection, removal and Completions of all temporary power cables supplied and installed by Company’s Other Contractors for use during the powerhouse construction including:

- temporary power cable to powerhouse crane disconnect;
- temporary power cable to draft tube gallery disconnect;
- temporary power cable to powerhouse elevator disconnect; and
- Powerhouse high bay lighting.

2.1.3.1.21 Supply, installation and Completions of all electrical distribution and controls required for the powerhouse mechanical equipment and systems.

2.1.3.1.22 Design, supply, installation and Completions of automatic transfer and load management systems for the powerhouse and intake including:

- Automatic transfer systems of all powerhouse switchgear and MCCs;
- Automatic transfer system of intake main MCCs; and
- Load Management system of the Essential Services MCC/Switchgear and the intake main MCCs.

2.1.4 Powerhouse Mechanical, Piping and HVAC

2.1.4.1 The Work included shall be as follows, and as described in the Technical Requirements:

2.1.4.1.1 Supply, installation and Completions of all mechanical and piping equipment associated with powerhouse HVAC system including air handling units, fans, motors, heating coils, ductwork, louvers, grilles, dampers, cooling units, humidifiers, energy management and control system (EMCS) and all associated controls and control wiring.

2.1.4.1.2 Supply, installation and Completions of all mechanical and piping equipment associated with the powerhouse raw and cooling water system including pipe, fittings, valves, self

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

cleaning and manual strainers, instrumentation, controls panels and all other accessories.

- 2.1.4.1.3 Supply, installation and Completions of all mechanical and piping equipment associated with the powerhouse service water system including pipe, fittings, valves, service water pumps , valve stations, instrumentation, control panels and all other accessories.
- 2.1.4.1.4 Supply, installation and Completions of all mechanical and piping equipment associated with the turbine shaft seal water system including pipe, fittings, valves, sand filtration system, instrumentation, control panels and all other accessories.
- 2.1.4.1.5 Supply, installation and Completions of all mechanical and piping equipment associated with the powerhouse dewatering system including pipe, fittings, valves, vertical turbine pumps, portable pump, filters, oil skimmer, instrumentation, control panels and all other accessories.
- 2.1.4.1.6 Supply, installation and Completions of all mechanical and piping equipment associated with the powerhouse drainage system including pipe, fittings, valves, vertical turbine pumps, portable pump, instrumentation, control panels and all other accessories.
- 2.1.4.1.7 Supply, installation and Completions of all mechanical and piping equipment associated with the powerhouse oily water drainage system including pipe, fittings, valves, oily water separator, all instrumentation, control panels and all other accessories.
- 2.1.4.1.8 Supply, installation and Completions of all mechanical and piping equipment associated with the powerhouse wastewater system including pipe, fittings, valves pumps, wastewater transfer tank, instrumentation, control panels and all other accessories; except that Completions of the wastewater system shall include piping and equipment which shall be supplied and installed by Company's Other Contractor as follows: septic tank; septic distribution chambers, piping for the septic tile field, underground piping from the Powerhouse and from the Converter Station to the septic tank.
- 2.1.4.1.9 Design, supply, installation and Completions of all mechanical and piping equipment associated with the powerhouse fire protection system including pipe, fittings, valves, main and jockey pumps, motors and controllers, generator and transformer deluge cabinets, sprinkler systems, clean agent extinguishing system for protection of the

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

control and communications rooms, stand pipe and hose stations, instrumentation, control panels, portable fire extinguishers and all other accessories.

- 2.1.4.1.10 Supply, installation and Completions of all mechanical and piping equipment associated with the powerhouse domestic water system including pipe, fittings, valves, pumps, sand and anthracite filters, anionic exchanger, cartridge and active carbon filters, ultraviolet sterilizer and hypochlorite dosing tanks, hot water heaters, instrumentation, control panels and all other accessories.
- 2.1.4.1.11 Supply, installation, Completions and registration of all mechanical and piping equipment associated with the powerhouse low pressure compressed air system including pipe, fittings, valves, compressors, air receiver storage tanks, water/oil separators, instrumentation, control panels and all other accessories.
- 2.1.4.1.12 Supply, installation, Completions and registration of all mechanical and piping equipment associated with the powerhouse high pressure compressed air system including pipe, fittings, valves, compressors, water/oil separators, air receiver storage tanks, instrumentation, control panels and all other accessories.
- 2.1.4.1.13 DELETED
- 2.1.4.1.14 Supply, installation and Completions of all mechanical and piping equipment associated with the piezometer and water level systems, including all level instrumentation, cabling and connections to the piezometer instrumentation panels.
- 2.1.4.1.15 Supply, installation and Completions of all mechanical and piping equipment associated with the lubricating/hydraulic oil system including pipe spools, fittings, valves, oil storage tanks, flame arrestors, mobile pumping unit, mobile oil filtration unit, instrumentation, control panels and all other accessories.
- 2.1.4.1.16 Design, supply, installation and Completions of any platforms/staging within the mechanical shaft necessary to provide permanent access for the safe installation and maintenance of the mechanical equipment, ductwork etc.
- 2.1.4.1.17 DELETED

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 2.1.4.1.18 Supply, installation and Completions of one (1) general purpose 1 Metric Tonne (MT) electric hoist mechanical system for installation and removal of the portable draft tube dewatering pumps.
- 2.1.4.1.19 Supply, installation and Completions of all equipment associated with the miscellaneous hoists.
- 2.1.4.1.20 Supply, installation and Completions of equipment housekeeping pads as per the Technical Requirements.
- 2.1.5** Powerhouse Architectural Interior Works
- 2.1.5.1 The Work included shall be as follows, and as described in the Technical Requirements:
- 2.1.5.1.1 DELETED
- 2.1.5.1.2 Supply, installation and Completions of all architectural equipment associated with the powerhouse concrete masonry unit system for interior walls and partitions.
- 2.1.5.1.3 Supply, installation and Completions of all architectural equipment associated with the powerhouse gypsum board wall assemblies, including non-structural metal stud framing, thermal and acoustic insulation, for interior partitions.
- 2.1.5.1.4 Supply, installation and Completions of all architectural equipment associated with the powerhouse cementitious panel partitions, including metal studs, board/blanket insulation, vapour barrier, fire stopping, metal trims, control joints, acoustical sealant, joint compound, joint tape and all necessary accessories.
- 2.1.5.1.5 Supply, installation and Completions of all architectural equipment associated with the powerhouse interior metal doors, frames and hardware, including mechanical and electrical shaft access doors.
- 2.1.5.1.6 Supply, installation and Completions of all architectural equipment associated with the powerhouse windows including metal frames, frame anchorage, reinforcement, glazing, adhesives, primer and painting.
- 2.1.5.1.7 Supply, installation and Completions of all architectural equipment associated with the powerhouse coiling counter doors.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 2.1.5.1.8 Supply, installation and Completions of all architectural equipment associated with the powerhouse interior fixed glazing in metal frames.
- 2.1.5.1.9 Supply, installation and Completions of all architectural equipment associated with the powerhouse floor finishes, including coatings, ceramic and quarry tile, resilient sheet and tile flooring and safety sheet flooring.
- 2.1.5.1.10 Supply, installation and Completions of all architectural equipment associated with the powerhouse wall finishes, including painting of masonry, gypsum board and metal, drainage board systems, etc.
- 2.1.5.1.11 Supply, installation and Completions of all architectural equipment associated with the powerhouse ceiling systems, including suspended acoustical panel systems and suspended gypsum board ceiling systems.
- 2.1.5.1.12 Supply, installation and Completions of all architectural equipment associated with the powerhouse fire and safety systems, including fireproofing, firestopping and safety blankets.
- 2.1.5.1.13 Supply, installation and Completions of all architectural equipment associated with the powerhouse toilet and washroom accessories, including toilet partitions, grab bars, tissue and towel dispensers, waste receptacles, hand dryers, soap dispensers, cabinets and shelving.
- 2.1.5.1.14 Supply, installation and Completions of all architectural equipment associated with the powerhouse plastic laminated window sills.
- 2.1.5.1.15 Supply, installation and Completions of all architectural equipment associated with the powerhouse architectural woodwork, including kitchen cabinets and hardware, washroom vanities, plastic laminates and trimwork.
- 2.1.5.1.16 Supply, installation and Completions of all architectural equipment associated with the powerhouse identification and directional signage.
- 2.1.5.1.17 Supply, installation and Completions of all architectural equipment associated with the powerhouse miscellaneous architectural specialties.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

2.1.6 Spillway Area

2.1.6.1 The Work included shall be as follows, and as described in the Technical Requirements:

2.1.6.1.1 Supply, installation and Completions of all low voltage (LV) power, control and communication cables and associated electrical equipment.

2.1.6.1.2 Supply, installation and Completions of all electrical equipment associated with the hardware for cable support between the Spillway electrical room and the North Transition Dam.

2.1.6.1.3 Supply, installation and Completions of all power, communications and control cables and associated electrical equipment between the Spillway electrical room and the powerhouse.

2.1.6.1.4 Removal and Completions of all temporary power equipment supplied and installed by Company's Other Contractors for use during the powerhouse construction including:

- Removal of 125 Vdc batteries and chargers from the Spillway electrical room; and
- Removal of 25 kVac construction power supply (including cabling) to the Spillway after commissioning of the permanent supply.

2.1.7 Intake - Gate Rooms and Maintenance Areas

2.1.7.1 The Work included shall be as follows, and as described in the Technical Requirements:

2.1.7.1.1 Supply, installation and Completions of all mechanical and piping equipment associated with HVAC and drainage systems.

2.1.7.1.2 Supply, installation and Completions of all electrical equipment associated with the normal and emergency lighting systems.

2.1.7.1.3 Supply, installation and Completions of all electrical equipment associated with the convenience receptacles and power outlets.

2.1.7.1.4 Supply, installation and Completions of all electrical equipment associated with the 600 Vac, 600/347 Vac, 208/120 Vac, 125 Vdc distribution panels and main MCC's.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 2.1.7.1.5 Supply, installation and Completions of all electrical equipment associated with the 600-600/347 Vac and 600-208/120 Vac dry type transformers.
- 2.1.7.1.6 Supply, installation and Completions of all electrical equipment associated with the 600 Vac Busways between main MCC sections.
- 2.1.7.1.7 Supply, installation and Completions of all power, control and communication cables and associated electrical equipment including cable and connection to trash cleaner disconnect switch.
- 2.1.7.1.8 Supply, installation and Completions of all electrical equipment associated with the cable tray and conduit systems.
- 2.1.7.1.9 Design, supply, installation and Completions of structural support system for all cable tray and conduit systems.
- 2.1.7.1.10 Supply, installation and Completions of all electrical equipment associated with the piezometer and water level system.
- 2.1.7.1.11 Supply, installation and Completions of all electrical equipment associated with the surface grounding and connections to embedded grounding.
- 2.1.7.1.12 Design, supply, installation and Completions of all electrical equipment and wiring for integration with the powerhouse fire detection system.
- 2.1.7.1.13 Supply, installation and Completions of all electrical equipment associated with the radiant heaters.
- 2.1.7.1.14 Supply, installation and Completions of all wiring, outlet jacks, termination plates and other equipment associated with the communications and telephone system, plant SACS, CCTV cameras and PA systems. Supply and installation of telephones, SACS, CCTV cameras and PA equipment is provided by Company's Other Contractors.
- 2.1.8** North Dam, North Transition Dam, Centre Transition Dam and South Transition Dam
- 2.1.8.1 The Work included shall be as follows, and as described in the Technical Requirements:

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 2.1.8.1.1 Supply, installation and Completions of all electrical equipment associated with surface grounding and connection to embedded/buried grounding.
- 2.1.8.1.2 Supply, installation and Completions of all mechanical and piping equipment associated with HVAC and drainage systems.
- 2.1.8.1.3 Supply, installation and Completions of all electrical equipment associated with the normal and emergency lighting systems for galleries.
- 2.1.8.1.4 Supply, installation and Completions of all electrical equipment associated with the outdoor lighting for the Dams.
- 2.1.8.1.5 Supply, installation and Completions of all electrical equipment associated with 600 Vac, 600/347 Vac and 208/120 Vac panels and distribution system.
- 2.1.8.1.6 Supply, installation and Completions of all electrical equipment associated with 600-600/347 Vac and 600-208/120 Vac dry type transformers.
- 2.1.8.1.7 Supply, installation and Completions of all electrical equipment associated with cable tray systems.
- 2.1.8.1.8 Design, supply, installation and Completions of all structural supports for cable trays.
- 2.1.9 Powerhouse Diesel Generator System**
- 2.1.9.1 The Work included shall be as follows, and as described in the Technical Requirements:
 - 2.1.9.1.1 Supply, installation and Completions of all equipment associated with the diesel generator system at the Powerhouse including diesel generator, double wall fuel storage tank, double wall closed top day tank, fuel tank monitoring systems, day tank stand, storage tank access stairs, leakage monitoring system, generator exhaust system, combustion air/heat relief Intake system, radiator exhaust/recirculation system piping, valving, instrumentation and controls.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

2.1.10 Additional General Requirements and Information

2.1.10.1 In addition to the specific technical requirements listed in Sections 2.1.1 to 2.1.9 inclusive, the following additional requirements shall be the responsibility of Contractor. The Work included shall be as follows, and as described in the Technical Requirements:

2.1.10.1.1 Design, supply, installation and Completions of temporary construction power supply including all equipment and cabling required for Contractor’s equipment and activities to complete the Work. Refer to Exhibit 12 - Site Conditions for more detailed information.

2.1.10.1.2 Decommissioning, removal and Completions of all Contractor installed temporary electrical systems and equipment used to supply electrical power for Contractor’s equipment and activities upon completion of the Work.

2.1.10.1.3 Mechanical completion, pre-commissioning and commissioning procedures and test reports of supplied and installed equipment and systems.

2.1.10.1.4 Unloading, storage and preservation of equipment supplied by Company’s Other Contractors for installation as part of the Work.

2.1.10.1.5 Surface grounding to all fixed metal objects (in addition to those shown on the layout Drawings) including handrails, door frames, pipes, ductwork, gratings, etc.

2.1.10.1.6 Wiring and cables as necessary (in addition to cables listed on cable schedule) including cables between light fixtures, receptacles, switches, thermostats etc.

2.1.10.1.7 Unloading, storage and preservation of equipment supplied by Contractor.

2.2 NOT USED

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

2.3 COMPANY SUPPLIED ITEMS

2.3.1 For clarity, the following items are performed or provided by Company's Other Contractors and therefore are not part of the Work:

| Description of Excluded Work | |
|--|--------|
| Supply and installation of heavy mechanical equipment related to Intake, Spillway and draft tube gates and trash cleaner | CH0032 |
| Supply and installation of Powerhouse civil and structure | CH0007 |
| Supply and installation of architectural works related to the envelop of the Powerhouse and the Intake | CH0007 |
| Supply and installation of embedded grounding and embedded conduits | CH0007 |
| Supply and Installation of electrical work which includes high bay lighting for the generator floor, associated lighting panel boards, transformers, disconnect switches, lighting contactors and switches, wiring and power cables, from the construction power 600V switchgear to the lighting distribution system, required for operational lighting system | CH0007 |
| Supply and Installation of exterior lighting fixtures attached to the Powerhouse metal panel walls | CH0007 |
| Supply and installation of Powerhouse cranes | CH0033 |
| Supply and installation of Powerhouse elevator | CH0034 |
| Grounding of chain link fences and gates in the powerhouse parking area and in Contractor's laydown area | CH0007 |
| Supply and installation of embedded and non-embedded metalwork which includes piping, HVAC louvres, embedded grounding and related works | CH0007 |
| Supply and installation of turbine, generator, excitation system and governor | CH0030 |
| Supply and installation of powerhouse and unit control and protection systems | CH0030 |
| Supply and installation of control cables between the powerhouse and the switchyard associated with the interlocks and supply and installation of fibre optic cables between the | CH0030 |

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

| | |
|--|-----------------|
| powerhouse and spillway for spillway controls. | |
| 600 V construction power switchgear | PH0058 & CH0005 |
| Supply and installation of turbine pit hoist | CH0030 |
| Supply and installation of 315 kV overhead lines between Powerhouse and switchyard | CT0319 |
| Supply of generator step-up (GSU) transformers | PH0014 |
| Supply of isolated phase bus (IPB) | PH0015 |
| Supply of generator circuit breakers (GCB) | PH0016 |
| Supply and installation of spillway electrical building and equipment required within the building for diversion stage | CH0032 |
| Supply of communication intelligent (programmable) equipment such as communication switches and telephones | CD0510 |
| Supply and installation of access control, intrusion alarm, CCTV and public announcement (PA) systems intelligent (programmable) equipment such as controllers and cameras | CD0510 |
| Supply, installation and termination of OPGW fiber-optic cables | CT0391 |
| Supply, installation and termination of fiber-optic cables from Powerhouse communication room to switchyard and fiber-optic cable from Powerhouse to Spillway | CD0510 |
| Muskrat Falls Construction Power | CH0068 |

PART 3 SPECIAL REQUIREMENTS

3.1 GENERAL

- 3.1.1** The overall LCP schedule requires that some of the Work be performed during cold weather months. Contractor shall take all necessary measures for year round installation, including the use of heated shelters and Contractor shall design, supply, install and remove temporary shelters.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 3.1.2** Where an area is used by Contractor as shelter for the execution of its Work before the area is completed, it is the responsibility of Contractor to supply, install and subsequently remove any temporary walls and enclosure as may be required.

- 3.1.3** All temporary Works shall be designed and approved by a Professional Engineer member of the Professional Engineers and Geoscientists Newfoundland and Labrador (PEGNL). The Professional Engineer shall be subject to the Acceptance of Engineer prior to starting any Work. All designs and drawings shall be submitted to Engineer for review and Acceptance before starting any Work.

- 3.1.4** Contractor shall submit the required documentation to Engineer for review and Acceptance in accordance with the SDRL.

- 3.1.5** Training of Company Group Personnel shall be as identified in the Technical Requirements.

- 3.1.6** Where there are conflicts between the Technical Specifications and the Drawings, the Technical Specifications shall have precedence. Any discrepancies shall be forwarded in writing to Engineer for resolution prior to execution of the Work.

- 3.1.7** Where there are conflicts between or within the relevant codes, standards or acts, priority shall be given to the more stringent. Any discrepancies shall be forwarded in writing to Engineer for resolution prior to execution of the Work.

- 3.2** **SITE CONDITIONS**

- 3.2.1** This Scope of Work Specification shall be read in conjunction with Exhibit 12 - Site Conditions.

- 3.3** **COMPANY SUPPLIED DOCUMENTS**

- 3.3.1** Company supplied documents are listed in Exhibit 11- Company Supplied Documents. Contractor shall comply with all requirements of Company Supplied Documents.

- 3.4** **DELETED**

- 3.5** **DELETED**

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

3.6 DOCUMENTS

3.6.1 Drawings Provided to Contractor

3.6.1.1 The design Drawings are intended to indicate the location, type and scope of Work to be carried out. They are not to be used for construction.

3.6.1.2 DELETED

3.6.1.3 Contractor shall submit for review and Acceptance by Engineer all documents as specified in the Technical Requirements, as indicated in the SDRL and as necessary for the execution of the Work.

3.6.1.4 The turnaround time for Engineer's review of Contractor's document submissions is 21 calendar days.

3.6.2 Drawings

The Drawings are included in Exhibit 1 – Scope of Work, and are listed in document MFA-SN-CD-3300-EN-LS-0003-01 - CH0031- Supply and Install Mechanical and Electrical Auxiliaries Technical Documents List.

3.6.2.1 Contractor shall only execute the Work based on Contractor's Issued for Construction Drawings that have been Accepted by Engineer, or based on the Drawings.

3.6.3 Technical Specifications

Technical requirements are included in the Technical Specifications which are listed in MFA-SN-CD-3300-EN-LS-0003-01 - CH0031 - Supply and Install Mechanical and Electrical Auxiliaries Technical Document List, all of which are included in Exhibit 1 – Scope of Work.

3.7 MECHANICAL COMPLETION, COMMISSIONING AND HAND-OVER REQUIREMENTS

3.7.1 Completions activities shall be per MFA-SN-CD-3300-EN-TS-0002-01 – Preservation, Mechanical Completion and Commissioning Requirements (which is included in Exhibit 1 – Scope of Work) and other Agreement Requirements.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 3.7.2** Documentation and records of Completions including mechanical completion, testing, pre-commissioning, commissioning, preservation and hand over requirements shall be provided by Contractor for all Work performed.
- 3.7.3** Contractor shall provide for Completions at Site, all Personnel, Contractor’s Items, materials and consumables necessary to operate, install/remove and test all equipment supplied as part of the Work to demonstrate that it meets all of the requirements of this Agreement.
- 3.7.4** Contractor shall provide Personnel, Contractor’s Items, materials and consumables necessary to support integrated testing and commissioning activities of Company’s Other Contractors where Contractor’s Work and equipment interfaces with work and equipment of Company’s Other Contractors. Contractor shall be responsible for this support task until Contractor’s equipment is formally turned over to Company.
- 3.7.5** Contractor shall supply a complete set of certified as-built drawings to Engineer for Acceptance. The certification shall include, as a minimum, a red line mark-up of all additions, deletions and changes to the Drawings and Contractor’s issued for construction drawings. As-built drawings shall include the Drawings as well as Contractor prepared drawings supplied in accordance with the SDRL. A stamp shall be applied that states “Certified As-built” and shall be signed and dated by Contractor.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

3.8 ACCESS TO WORK AREAS AT SITE AND INTERFACE WITH COMPANY'S OTHER CONTRACTORS

- 3.8.1** Contractor acknowledges that during the execution of the Work, work will be carried out by Company's Other Contractors at the Work areas at Site, including as identified in Section 2.3.1. Consequently, Contractor will not have exclusive, unfettered or continuous access to such Work areas, and therefore such access will be limited and restricted due to such work being performed by Company's Other Contractors. In the execution of the Work, Contractor shall cooperate with Company in the co-ordination of the Work and access to such Work areas with Company's Other Contractors. Contractor shall fully co-operate with Company's Other Contractors and shall take all necessary steps and comply with all directions and/or prioritizations of Engineer or Company where such steps, directions and/or prioritizations are intended to avoid impeding the work of Company's Other Contractors or to meet the development and construction schedule of the LCP.
- 3.8.2** Contractor shall attend engineering, LCP interface and co-ordination meetings between Contractor, Engineer and Company's Other Contractors to resolve issues relating to the interface of technical, engineering, material procurement, manufacturing, installation, schedule activities and other matters.
- 3.8.3** Contractor shall undertake best efforts for the timely resolution of issues raised and/or discussed in the interface meetings and during the execution of the Work.
- 3.8.4** Engineer may, at its sole discretion, direct Contractor with respect to the resolution of interfaces; however this will not relieve Contractor of its responsibilities and obligations under this Agreement and associated with the Work.
- 3.8.5** Contractor shall prepare an Interface Register for Engineer Acceptance as the basis for managing and coordinating the interface Work. The Interface Register shall be updated and submitted monthly as per the SDRL.
- 3.8.6** Contractor shall actively seek required information from Engineer and Company's Other Contractors and clearly identify to Company what information is required and when the information is needed.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

3.8.7 Contractor shall comply with LCP-PT-MD-0000-PM-PR-0004-01 - Technical Interface Management Procedure which is included in Exhibit 11 – Company Supplied Documents.

3.9 INSTALLATION

3.9.1 General

3.9.1.1 Contractor shall be responsible for all activities necessary for installation of the Work, including activities required for:

3.9.1.1.1 Transportation, offloading, secure storage and preservation of all permanent equipment, spares, ancillary, installation equipment and free issued equipment to Contractor’s laydown areas and warehouses;

3.9.1.1.2 Pre and post installation surveys;

3.9.1.1.3 Installation of all components;

3.9.1.1.4 Provision of housekeeping pads for floor mounted equipment;

3.9.1.1.5 Lifting operations;

3.9.1.1.6 Inspection, mechanical completion, testing and commissioning;

3.9.1.1.7 Cleaning and care of the facilities in its care, custody and control; and

3.9.1.1.8 Coordination with Company’s Other Contractors for all aspects of the Work.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 3.9.2** If any Contractor supplied equipment is discontinued by manufacturer and thus not available, Contractor shall replace it in a timeframe Acceptable to the Engineer, with equipment Accepted by Engineer, which shall be at least equivalent in quality and performance.
- 3.9.3** Contractor shall perform Worksite reinstatement, including removal of all temporary works and debris dropped or discharged by Contractor and including all installation aids and rigging.
- 3.9.4** Contractor shall perform constructability and hazard peer reviews with Engineer, Company’s Other Contractors and other members of Contractor Group prior to commencement of the Work.
- 3.9.5** Contractor shall operate and maintain construction services based on a twenty-four (24) hour day - seven (7) day week for the duration of the Work.
- 3.9.6** On completion of the Work, all temporary works and services shall be dismantled by Contractor and removed from the Site as part of Contractor’s demobilization unless directed otherwise by Engineer.
- 3.10 MOBILIZATION**
- 3.10.1** Mobilization shall include:
 - 3.10.1.1 Provision of a pre-mobilization schedule covering all checking, testing and calibration activities;
 - 3.10.1.2 Checking, testing and calibration of Contractor’s Items;
 - 3.10.1.3 Submission of test and survey reports;
 - 3.10.1.4 Site preparation and readiness activities;
 - 3.10.1.5 Provision and Delivery of spares;
 - 3.10.1.6 Modification and repairs, as necessary, for all parts of Contractor’s Items to enable them to correctly and safely perform their function;

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

- 3.10.1.7 Loadout of Contractor’s Items and Contractor supplied materials and equipment from Contractor's loadout facilities or nominated ports;
- 3.10.1.8 Shipment of Contractor’s Items and Contractor supplied materials and equipment to the Work areas at Site;
- 3.10.1.9 Transporation of Contractor’s Personnel to the Site;
- 3.10.1.10 Set-up of Contractor’s Items, including temporary facilities as described in Section 3.11 of this Scope of Work; and
- 3.10.1.11 Set-up and establishment of Contractor’s offices at Site as per Exhibit 12 – Site Conditions.
- 3.10.2** Contractor is responsible for all mobilization of Contractor’s Items and Personnel required for the execution of the Work.
- 3.10.3** Engineer may, at its sole discretion, witness Contractor’s mobilization and demobilization activities.
- 3.10.4** Contractor shall immediately advise Engineer of any change to the mobilization date.
- 3.10.5** Daily notice of the actual mobilization date shall be given to Engineer for each of the last fourteen (14) days prior to the actual mobilization date.
- 3.11** **CONTRACTOR’S TEMPORARY FACILITIES**
- 3.11.1** Contractor shall erect Contractor’s Items, including its offices and other buildings to carry out the Work, subject to securing prior Acceptance from Engineer.
- 3.11.2** Contractor shall undertake the supply, installation, operation and disassembly, including Work required for all temporary works and services necessary beyond the connecting points indicated by Engineer and as further detailed in Exhibit 12 - Site Conditions.
- 3.11.3** DELETED
- 3.11.4** Contractor shall submit to Engineer, for Acceptance, all plans and specifications for all temporary systems and facilities it shall require for the execution of the Work, and shall be submitted no later than sixty (60) days before the start of installation Work.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

3.11.5 From electrical connection points provided by Company, as indicated in Exhibit 12 - Site Conditions, Contractor shall provide, install and maintain its own distribution network and provide circuit breakers, fuse holders and various required materials in order to protect the electric circuit and transformer for the power needs of its construction services and its facilities. The electrical connection Work shall be done in accordance with applicable electrical codes and coordinated with Engineer, and be subject to Acceptance of Engineer, prior to connecting to Company’s network.

3.11.6 Engineer has the right at all times to inspect the temporary facilities and all temporary electrical systems installed by Contractor and at Contractor’s expense require any changes it deems necessary or not in accordance with plans Accepted by Engineer or as required by Applicable Laws or Authorities.

3.12 PREPARATORY WORK

3.12.1 Contractor shall perform, prior to commencement of installation activities, all survey and preparatory operations as necessary to allow completion of the Work.

3.13 DEMOBILIZATION AND CLEAN-UP

3.13.1 Contractor shall be responsible for the removal of its entire temporary works, failed components and tooling from Site.

3.13.2 Contractor shall restore all areas of Site, under its care custody and control, to its original state or in a condition Acceptable to Engineer.

3.13.3 Any remedial operation that Engineer deems necessary shall be performed by Contractor.

3.13.4 Upon completion and Acceptance of the Work, Contractor shall demobilize Contractor’s Items and Personnel.

3.13.5 Demobilization and clean-up shall be completed in accordance with the Agreement Requirements including Exhibit 6 - Environmental and Regulatory Compliance Requirements.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

3.13.6 Upon completion of the Work and during the demobilization process, Contractor shall dismantle all temporary electrical services that it installed and demonstrate completion of Work to Engineer for Acceptance.

3.14 SETTING-OUT AND SURVEYING

3.14.1 General

3.14.1.1 The checking of any setting-out or of any line or level by Engineer shall not in any way relieve Contractor of its responsibility for the accuracy of the Work and Contractor shall carefully protect and preserve all bench-marks, sight-rails, pegs and other reference points used in setting-out or surveying the Work.

3.14.1.2 Contractor is responsible for surveying required for setting-out and as-built profiles of the Work.

3.14.1.3 Contractor is responsible for locating, confirming and protecting reference points prior to starting any Work at the Site, and protecting the permanent reference points during construction.

3.14.1.4 Contractor shall establish permanent benchmarks on Site referenced to the permanent reference points and recording the coordinates of the benchmarks in the project record documents.

3.14.1.5 Contractor is responsible for the accurate setting-out of the Work in relation to reference points, lines and levels shown on all drawings or given in writing by Engineer.

3.14.1.6 Contractor is responsible for the accuracy of the positions, levels, dimensions and alignments of all parts of the Work.

3.14.1.7 Contractor shall provide all Contractor’s Items and Personnel required for the foregoing responsibilities.

3.14.1.8 If at any time during the execution of the Work, any error appears in the position, levels, dimensions or alignments of any part of the Work, Contractor shall, at its own cost, rectify such errors to the satisfaction of Engineer.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

3.14.2 Pre-Installation Surveys

3.14.2.1 Prior to commencing any installation activities, Contractor shall carry out pre-installation surveys of the Work areas at Site.

3.14.2.2 Contractor shall be responsible for locating and confirming the position, configuration and status of the existing structures and items.

3.14.2.3 Contractor shall submit the results of the pre-installation survey(s) to Engineer for review and Acceptance.

3.14.3 Installation Survey

3.14.3.1 Contractor shall perform surveys during installation activities as required to ensure the correct installation of the Work in accordance with the requirements of the Agreement.

3.14.4 As-Built Survey

3.14.4.1 Contractor shall perform an as-built survey at completion of the Work.

3.14.4.2 Contractor shall provide Engineer with the results of the as-built survey and identify, for Engineer Acceptance, any remedial measures proposed by Contractor.

3.14.4.3 All components requiring remedial Work shall be re-surveyed as necessary to establish the final as-built system condition.

| | | | |
|--|--|------------|--------------------|
| LOWER CHURCHILL PROJECT | CH0031 Supply and install Mechanical and Electrical Auxiliaries Scope of Work Specification | Rev | Date |
| | LCP Doc. No. MFA-SN-CD-3300-EN-SP-0002-01 | C2 | 15-Jun-2017 |
| | SLI Doc. No. 505573-3321-40EW-0001 | 06 | |

PART 4 CONTRACTOR SUPPLIED TECHNICAL INFORMATION

4.1 GENERAL

4.1.1 The technical information required from Contactor is described in the Technical Specifications and summarized in the SDRL.

END OF SECTION

Exhibit 2

Compensation

Agreement Number: CH0031-001

EXHIBIT 2

COMPENSATION

TABLE OF CONTENTS

| | | |
|-----------|---|-----------|
| 1 | GENERAL..... | 3 |
| 2 | DEFINITIONS | 4 |
| 3 | LABOUR COMPONENT..... | 8 |
| 4 | TRAVEL COSTS FOR TRADE LABOUR..... | 10 |
| 5 | NON LABOUR COMPONENT..... | 11 |
| 6 | REIMBURSABLE CHANGE ORDERS..... | 13 |
| 7 | OPERATING SPARES..... | 16 |
| 8 | CHANGES | 16 |
| 9 | STANDBY TIME | 17 |
| 10 | PROJECT LABOUR AGREEMENT..... | 18 |
| 11 | COMPENSATION..... | 19 |
| 12 | MILESTONE PAYMENT SCHEDULE | 19 |
| 13 | PERFORMANCE SECURITY..... | 19 |
| 14 | LIQUIDATED DAMAGES FOR DELAY | 19 |
| 15 | CONTRACT PRICE ADJUSTMENT..... | 21 |
| 16 | NEUTRAL FUNDING | 22 |

Appendices:

APPENDIX A - SCHEDULE OF PRICE BREAKDOWN
APPENDIX B - MILESTONE PAYMENT SCHEDULE
APPENDIX C - SMALL TOOLS, CONSUMABLES AND PPE
APPENDIX D - PERSONNEL RATE SCHEDULE
APPENDIX E - EQUIPMENT RATE SCHEDULE
APPENDIX F - PLA LABOUR OVERHEAD AND PROFIT APPLICATION
APPENDIX G - SWORN DECLARATION
APPENDIX H - OPERATING SPARES PRICE SCHEDULE
APPENDIX I - ESTIMATED PLA LABOUR HOURS BY TRADE
APPENDIX J - MONTHLY PAYMENT FORECAST SCHEDULE
APPENDIX K - RATES FOR CHANGES

1 GENERAL

- 1.1. Company shall compensate Contractor for the Work, in accordance with the provisions of this Agreement. The Contract Price, as calculated in Appendix A - Schedule of Price Breakdown, shall consist of:
- the total of the Reimbursable Cost of Labour, and the Labour Overhead and Profit applied on a sliding scale based on its relationship to the Adjusted Target Cost of Labour; all in accordance with Section 3 of this Exhibit 2;
 - the actual Travel Cost for Trades Labour as stipulated in the Project Labour Agreement between the Muskrat Falls Employer's Association Inc. and the Resource Development Trades Council of Newfoundland and Labrador (i.e. the "Project Labour Agreement"); all in accordance with Section 4.1 of this Exhibit 2 (these costs are flow through expenses without mark-up; travel time is not a reimbursable cost as per the Project Labour Agreement);
 - the fixed lump sum amounts and unit prices as listed in the Non Labour Component of Appendix A - Schedule of Price Breakdown; all in accordance with Section 5 of this Exhibit 2; and
 - any adjustment in compensation pursuant to Article 26 – Changes in the Work.
- 1.2. Contractor, in managing the Reimbursable Cost of Labour, shall:
- maintain timekeeping records on a daily basis for each member of the Contractor Group PLA Labour in a form satisfactory to Company which shall include number of hours paid, number of hours worked, type of work, work area, number of overtime hours, reason for the overtime, and such other information Company deems appropriate;
 - make efforts consistent with the Standard of a Prudent Contractor to ensure the Reimbursable Cost of Labour is less than the Target Cost of Labour;
 - manage the Work to the Standard of a Prudent Contractor managing a lump sum or fixed price contract;
 - utilize the sections in the Project Labour Agreement to support high levels of labour productivity, including but not limited to Section 7.10 (Contractor Group's right to evaluate all persons to determine their level of competency, qualifications and physical and mental fitness to perform the required work), Section 18 (productivity enhancement through the utilization of work teams), Section 19.08 (ensure breaks are limited to the prescribed period - ten (10) minutes for an eight (8) hour shift and fifteen (15) minutes for a ten (10) hour shift), 19.09 (ensure Contractor Group employees are in attendance at their work location and prepared to commence work at the scheduled starting time, ensure such employees are only paid when they start work at their designated work location and ensure the Contractor Group workers are not at the designated brass points until the quit time (end of shift)) and Section 36 (commissioning to fully utilize the flexibility in choosing the type of worker(s), selecting the worker(s) and performing the Work to maximize

- productivity);
- develop and fully implement a Labour Productivity Management Plan, as described in Section 3.2 of this Exhibit 2 and Section 2.4 of Exhibit 3 – Coordination Procedures;
 - actively participate in meetings or programs requested by Company to facilitate Contractor’s efforts in maximizing productivity; and
 - maximize, where appropriate, Work that can be more cost effectively performed off Site.
- 1.3. All lump sum amounts, unit rates, reimbursable items and prices stated in this Exhibit 2 shall be fully inclusive of all amounts, rates and prices for Contractor’s performance of the Work and all of its obligations under this Agreement.
- 1.4. Invoices shall be issued by Contractor in accordance with Article 12 – Compensation and Terms of Payment, this Exhibit 2 – Compensation, and Exhibit 3 – Coordination Procedures.
- 1.5. All lump sum amounts, unit rates, and prices stated in this Exhibit 2 shall be fully inclusive of all amounts for small tools, consumables and PPE as described in this Exhibit 2, Appendix C – Small Tools, Consumables and PPE.
- 1.6. The currency of payment of the Agreement is Canadian dollars (CAD).
- 1.7. The Contract Price is comprised of the Labour Component (Section 3), the Travel Cost for Trades Labour (Section 4) and the Non Labour Component (Section 5) as set out herein.
- 1.8. Unless otherwise noted, all lump sum amounts, unit rates, reimbursable items and prices stated in this Exhibit 2 are exclusive of HST.

2 DEFINITIONS

The definitions below shall apply to this Exhibit 2 including its Appendices.

“Adjusted Target Cost of Labour” or **“ATCL”** means the Target Cost of Labour adjusted for the effect of Change Orders issued to adjust the quantities of the unit Price Items in Appendix A - Schedule Of Price Breakdown or issued as a result of a Change Request Approved by Company after the Effective Date, and reconciled after the issuance of the Final Completion Certificate for the actual quantities installed of each unit Price Item in Appendix A - Schedule of Price Breakdown. The Adjusted Target Cost of Labour at any time after the Effective Date is the summation of the Target Cost of Labour and the estimated Reimbursable Cost of Labour related to each issued Change Order. For greater certainty, the Target Cost of Labour shall be adjusted for Change Orders once Approved by Company.

Notwithstanding the above, the Adjusted Target Cost of Labour shall not be adjusted for Less Than Threshold Changes. The ATCL adjustment mechanism outlined in Section 6.3(a) shall only be employed for a Change that is over the LTTC threshold. The Parties expect that the Work will experience a reasonable level of LTTC's and agree that these LTTC's shall be excluded from the ATCL adjustment mechanism outlined in Section 6.3(a). This exclusion shall not apply to: (a) Changes in quantities in accordance with Section 5.7, or (b) Changes in design made by Company.

“Demobilization” means all amounts for all activities associated with the removal and transportation of Contractor's Items and Contractor's Personnel from the Site to a location of Contractor's choosing. Contractor will be eligible to submit a Payment Certificate for Demobilization following issuance of the Substantial Completion Certificate.

“Disallowed Items” means:

- any PLA Labour amounts in excess of what would be expended by a Contractor performing to the Standard of a Prudent Contractor while managing a lump sum or fixed price contract;
- subject to a written notice from Company's Site representative to Contractor's Site representative followed by a five (5) day period, any PLA Labour amounts incurred by Contractor (after the expiration of such period) as a result of not utilizing the sections in the Project Labour Agreement included to maximize labour productivity; provided however that PLA Labour amounts incurred prior to the expiration of such period would not be disallowed;
- any PLA Labour amounts incurred to settle a grievance or potential grievance under the provisions of the PLA, except to the extent the grievance is caused by Company actions;
- For the installation of any permanent equipment, materials or products as part of the Work, any PLA Labour amounts incurred by Contractor in the performance of the elements of the Work that were agreed to be performed offsite as listed below:
 - Large bore piping (2" and above, butt welded) shop fabrication;
 - Shop fabrication of HVAC components and equipment (note that ductwork will be broken down and shipped flat ready for reassembly on site)
 - Shop assembly of Control panels;
 - Structural fabrication of landings for electrical and mechanical shafts;
- subject to a written notice from Company's Site representative to Contractor's Site representative followed by a five (5) day period, any PLA Labour amounts incurred by Contractor (after the expiration of such period) in the performance of activities associated with temporary facilities, site installation (Price Item number 2), construction aids, equipment maintenance or any other works which will not be included in the permanent Work, that can be more cost effectively performed off Site.
- any PLA Labour amounts incurred by Contractor to correct Work which has not been executed in accordance with the Technical Requirements prior to Final Completion;

- any PLA Labour amounts to satisfy Warranty obligations;
- any PLA Labour amounts incurred by Contractor in the preparation and resolution of a Claim, after a Company decision to proceed with a Change Order under Article 26.6, or after a Company decision under Article 26.8(b); or for anything related to Article 39 – Dispute Resolution;
- any PLA Labour amounts covered by insurance, or by an equipment service agreement;
- any PLA Labour amounts associated with the maintenance, repair and lubing of Contractor’s Items used in Change Work; and
- PLA Labour amounts which cannot be reasonably justified from Contractor’s records.

“Equipment Cost” means the total amount of Contractor’s Items, excluding Materials Cost and those items included in the Price Item ‘Site Installation’, required to complete one unit of a Price Item and includes all amounts of overhead and profit for this price component. The Equipment Cost is included in the Non Labour Component of the Contract Price.

“Labour Component” means the Reimbursable Cost of Labour and Labour Overhead and Profit for all aspects of the Work for Contractor Group. For greater certainty, the Labour Component excludes travel costs and board associated with the Work.

“Labour Overhead and Profit” means the compensation for overhead and profit, which includes an allowance for head office personnel and profit, on the Reimbursable Cost of Labour, calculated in accordance with Section 3.4 of this Exhibit 2.

“Less Than Threshold Change” or **“LTTC”** means a Change which results in less than or equal to one hundred (100) PLA Labour Hours.

“Manpower Cost” is the total estimated cost of PLA Labour required to complete one unit of a Price Item.

“Materials Cost” means all amounts for Contractor supplied permanent materials to be incorporated into the Work, and all Contractor’s Items and Contractor’s Personnel required for the performance of the Work which are not included in the Labour Component or Equipment Cost, and includes all costs of overhead and profit for this price component. The Material Cost is included in the Non Labour Component of the Contract Price.

“Mobilization” means all amounts for all activities associated with the preparation and transportation of Contractor’s Items and Contractor’s Personnel to the Site ready to begin the performance of the Work at the Site, all to the satisfaction of Engineer. Mobilization shall include organizational and project management, equipment transportation, setting up and all preparation necessary for performing the Work, including all costs associated with Contractor’s Personnel attending Engineer’s safety orientation courses. Mobilization shall also include the submission and Acceptance for use (Code 1) of all documents in Exhibit 4 - Supplier Document

Requirement List (“SDRL”) with Submission Requirement Date of ARO+8 or lower.

“**Non Labour Component**” means all amounts, including overhead and profit which are required to perform the Work, excluding the Labour Component. The Non Labour Component includes Materials Cost and Equipment Cost.

“**PLA Labour**” means all Contractor Group’s Personnel on Site who perform Work and are covered under the Project Labour Agreement.

“**PLA Labour Hours**” means the estimated number of PLA Labour hours required to complete one unit of a Price Item.

“**PPE**” means personal protection equipment.

“**Price Item**” means the price item as numbered in Appendix A - Schedule of Price Breakdown and Appendix K – Rates for Changes. Each Price Item includes a Labour Component and a Non Labour Component.

“**Productivity Factor**” is determined by the calculation, “Earned/Actual”, where “Earned” means the completion of units of a Price Item, weighted by PLA Labour Hours (as specified in Appendix A – Schedule of Price Breakdown), as Accepted by Engineer and “Actual” means the actual hours expended by PLA Labour in the completion of the units of a Price Item, as recorded on Engineer Approved timesheets.

“**Project Labour Agreement**” or “**PLA**” has the meaning ascribed thereto in Section 10 of this Exhibit 2.

“**Reimbursable Cost of Labour**” means the cost of Wages and Benefits, both direct and indirect, paid by Contractor Group to PLA Labour in the execution of the Work less the amounts for Disallowed Items.

“**Site Installation**” means all temporary buildings needed for the Work, but not involved directly in its execution, including Site offices, lunch trailers, wash cars, warehouses, enclosures, stores, garage, carpenter shop, workshops, laboratories and the like; it also includes the furniture needed for the offices (desks, chairs, bookcases, etc.) and the equipment normally needed to make each of the other buildings fully functional for its purpose.

“**Staff Labour**” mean’s Contractor’s Personnel, other than PLA Labour, involved in the performance of the Work at Site, and includes all other amounts associated with Staff Labour performing Work on Site. Staff Labour is included in the Materials Cost.

“**Target Cost of Labour**” means Contractor’s estimate of the Reimbursable Cost of Labour for the performance of the Work, being the summation of the Manpower Cost for all lump sum and unit Price Items as listed in Appendix A - Schedule of Price Breakdown. The Target Cost of

Labour includes adjustment of the Wages and Benefits subject to Section 15 herein.

“Travel Cost for Trades Labour” means the actual cost, without any markups or burdens applied, of travel allowances and travel expenses of the PLA Labour working at Site, applied strictly in accordance with the Project Labour Agreement. Travel Cost for Trades Labour is included in the Materials Cost.

“Wages and Benefits” means compensation paid by Contractor to PLA Labour, at the rates set out in Appendix D – Personnel Rates Schedule, in accordance with the Project Labour Agreement and includes the government burdens associated with such Wages and Benefits which Contractor is required to pay for Canada Pension Plan (CPP), Canada Employment Insurance (EI), Newfoundland Health and Post-Secondary Education (HAPSET), and Newfoundland Workplace, Health, Safety and Compensation (WHSCC). Wages and Benefits do not include: 1) any mark-up or profit of any kind, bonuses, incentives or special allowances paid to the PLA Labour; 2) tax equalization payments for PLA Labour.

3 LABOUR COMPONENT

3.1 The provisions of this Section 3 define the total compensation for the Labour Component of Price Items, and the Labour Component includes the Reimbursable Cost of Labour and the Labour Overhead and Profit applied on a sliding scale based on its relationship to the Adjusted Target Cost of Labour.

3.2 Reimbursable Cost of Labour

As full compensation for the Labour Component, and subject to Sections 3.3 to 3.4 of this Exhibit 2, Company will pay Contractor the total of the Reimbursable Cost of Labour, and the Labour Overhead and Profit.

A summary report of daily time sheets shall be prepared by Contractor showing breakdown of hours in accordance with Company’s costing system and listing the names, category, hours worked (differentiating straight time and overtime), type of work, work area and reasons for overtime, for each member of PLA Labour. This summary report, including supporting Contractor representative signed timesheets, shall be submitted daily to Engineer for checking and Approval. Contractor shall also submit on a weekly basis a report which summarizes all Reimbursable Cost of Labour incurred during the week as reported via the daily summary reports. The content and format of this weekly summary shall be Accepted by Engineer and, at a minimum, shall contain a breakdown of hours in accordance with Company’s costing system and listing the names for PLA Labour, category, hours worked (differentiating straight time and overtime), type of work, work area and reasons for overtime and the Reimbursable Cost of Labour. The weekly report shall also include supporting data collected from Contractor’s brassing (time card) system for the week being reported.

Contractor shall submit a cost management plan, as required under Section 6 of Exhibit 3 – Coordination Procedures. The plan shall incorporate the requirements of this Section 3 and such other elements that may be required by Company to ensure that costs charged to Company are in accordance with this Agreement and have actually been paid by Contractor.

Contractor shall submit to Company a Labour Productivity Management Plan for the PLA Labour requirements for the Work as particularly set out in Appendix I – Estimated PLA Labour Hours by Trade, which plan shall incorporate the obligations of Contractor in Section 1.2 of this Exhibit 2 and Section 2.4 of Exhibit 3 – Coordination Procedures, and any other initiatives Contractor may utilize to ensure labour productivity opportunities are maximized. PLA Labour shall not be mobilized to Site until the Labour Productivity Management Plan is Accepted by Engineer.

3.3 Target Cost of Labour

3.3.1 As of the Effective Date, the Target Cost of Labour is \$63,920,703.06.

3.3.2 An Adjusted Target Cost of Labour shall be calculated with the issuance of each applicable Change Order and will be reconciled prior to the issuance of the Final Completion Certificate.

3.3.3 Contractor shall be compensated for the Reimbursable Cost of Labour at the rates set out in Appendix D – Personnel Rate Schedule – PLA Labour, as adjusted in accordance with Section 15.1 herein.

3.4 Labour Overhead and Profit

3.4.1 Labour Overhead and Profit shall be applied to the Reimbursable Cost of Labour on a sliding scale based on its relationship to the ATCL. The Labour Overhead and Profit multiplier shall be applied to the portions of the Reimbursable Cost of Labour falling within the bands as set out in Table 1 below. The Labour Overhead and Profit shall be calculated in accordance with Appendix F – PLA Labour Overhead and Profit Application.

TABLE 1

| 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 |

| Reimbursable Cost of Labour Overhead and Application of Overhead and Profit Banding | Overhead and Profit Multiplier |
|--|---------------------------------------|
| 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 |

3.4.2 Labour Overhead and Profit shall be paid monthly based on the actual amount of PLA Labour incurred in the month being invoiced.

3.5 Billing Information

The Reimbursable Cost of Labour and associated Labour Overhead and Profit shall be paid monthly based on the actual amount of billable PLA Labour paid in the payment period being invoiced. Contractor will submit Billing Information to coincide with Contractor's payroll cycle for Company review and Approval. The Approved Billing Information will form the basis of the supporting documentation required when submitting a Payment Certificate and include, without limitation:

- a) A summary of billable hours supported by the Company Approved daily timesheet summaries;
- b) Detailed payroll reports sourced from Contractor's project management system and/or payroll and accounting system summarizing the billable PLA Labour and associated payroll burdens, in a form acceptable to Company;
- c) Any other information Engineer may require to confirm the accuracy and completeness of Reimbursable Cost of Labour and associated Labour Overhead and Profit.

4 TRAVEL COSTS FOR TRADE LABOUR

4.1 Company shall in accordance with Exhibit 12 – Site Conditions reimburse Contractor at cost for Travel Cost for Trades Labour. Company shall not pay any mark-up on any Travel Cost for Trade Labour. An estimate of Travel Cost for Trades Labour, which is included in the Materials Cost, is contained in Appendix A - Schedule of Price Breakdown Price Item 4 – Travel Costs for Trade Labour.

4.2 For Contractor's Personnel not covered by the Project Labour Agreement working at Site or other Worksites, travel amounts are included in the Staff Labour value and as such are not subject to additional reimbursement under the Agreement.

5 NON LABOUR COMPONENT

- 5.1 This Section 5 covers the Non Labour Component of the Contract Price which is comprised of the lump sums and unit prices under the heading “Non Labour Component” as set out in Appendix A – Schedule of Price Breakdown.
- 5.2 For the purposes of progress payments, the total price of the Non Labour Component for each system, as identified in Appendix B – Milestone Payment Schedule and priced in Appendix A – Schedule of Price Breakdown, will be treated as a lump sum.
- 5.3 As a condition precedent of eligibility to submit applications for payment in accordance with Article 12 - Compensation and Terms of Payment, Contractor shall have a Company Approved schedule of values, which includes each system which is intended to act in conjunction with Appendix B – Milestone Payment Schedule, to provide for clear and straightforward criteria for progress payments of the Non Labour Component of each system. Subject to the Articles of Agreement and other provisions in this Exhibit 2, the schedule of values shall be used as the basis for Contractor’s applications for payment. The schedule of values shall include the total price for the Non Labour Component of each system.
- 5.4 Measurement of progress of the Non Labour Component of the Work shall be undertaken on a monthly basis (or as otherwise required by Engineer) by Contractor in accordance with the schedule of values and Appendix B – Milestone Payment Schedule. Progress achieved, based on the Milestone Payment Schedule and schedule of values, and Accepted by Engineer shall form the basis of monthly progress payments which shall be documented on a Payment Certificate. Only Company Approved Payment Certificates shall form the basis of monthly invoices of Contractor.
- 5.5 Following Acceptance of completions certificates and the documents required by the SDRL for a system, Contractor will prepare a detailed take-off of the actual quantities of Work installed and revised values for each discipline within the system based on the as-built drawings and submit the detailed take-off and amended pricing to Company for Approval. Upon issuance of a Change Order, Contractor will invoice for any increase or credit in the system discipline value as set out in Appendix A – Schedule of Price Breakdown. For clarity the quantity adjustment shall only apply to the quantity of Price Items that are set out directly on Drawings or schedules provided in the Technical specifications, and like items or equivalent items installed as part of the Work are deemed to be included in other rates or prices unless added as a Change. For clarity, payment for Changes in quantities will be processed throughout the execution of the Work.

5.6 Lump Sum Price Items

- 5.6.1 The following provisions in this Section 5.6 apply only to Work priced on a lump sum basis. Lump sum Price Items are identified in Appendix A – Schedule of Price Breakdown under Unit of Measure as ‘LS’.
- 5.6.2 The Non Labour Component of all of the lump sum Price Items stated in Appendix A – Schedule of Price Breakdown are fixed prices.
- 5.6.3 Each lump sum Price Item stated in Appendix A – Schedule of Price Breakdown shall include all elements necessary to achieve completion of the Price Item, including interconnection with other elements of the Work and to interface with materials provided by and work performed by Company Group as necessary to complete the Work, and to make all elements of the Work perform in accordance with the Technical Requirements, whether specifically identified or whether inherent in the Work. For greater certainty the lump sum Price Items listed in Appendix A – Schedule of Price Breakdown are intended only as a means of breaking down the Work for measurement and payment purposes and the fixed lump sum price includes all elements of Contractor’s Items and Contractor’s Personnel necessary to complete the fixed lump sum portion of the Work in accordance with the requirements of the Agreement.

5.7 Unit Price Items

- 5.7.1 The provisions in this Section 5.7 apply only to Work completed on a unit price basis. Unit Price Items are identified in Appendix A – Schedule of Price Breakdown under Unit of Measure as ‘ea’, ‘each’, ‘Linear Meter’, ‘m’, ‘m2’ or ‘mm’.
- 5.7.2 All of the Price Items for Work completed on a unit price basis are stated in Appendix A – Schedule of Price Breakdown of this Exhibit.
- 5.7.3 The Non Labour Component of all of the unit Price Items stated in Appendix A – Schedule of Price Breakdown are fixed prices and include all amounts for overhead and profit; provided, however, quantities may be adjusted as stated in Section 5.7.5.
- 5.7.4 Each unit Price Item stated in Appendix A – Schedule of Price Breakdown shall include all elements necessary to achieve completion of the Price Item, including interconnection with other elements of the Work and to interface with materials provided by and work performed by Company Group as necessary to complete the Work, and to make all elements of the Work perform in accordance with the Technical Requirements, whether specifically identified or whether inherent in the Work. For greater certainty the unit Price Items listed in Appendix A – Schedule of

Price Breakdown are intended only as a means of breaking down the Work for measurement and payment purposes and the fixed unit price includes all elements of Contractor's Items and Contractor's Personnel necessary to complete the fixed unit price portion of the Work in accordance with the requirements of the Agreement.

- 5.7.5 Quantities of units estimated in Appendix A – Schedule of Price Breakdown are not fixed, as independent circumstances shall control actual quantities installed. Payment for unit Price Items shall only be for the actual quantities of Work completed in accordance with the Agreement and not estimated quantities. There will be no adjustment of any unit price due to variances from the estimated quantities (whether increases/decreases).

6 REIMBURSABLE CHANGE ORDERS

- 6.1 The following provisions in this Section 6 apply only to Work resulting from a Change Order which has been determined to be completed on a cost reimbursable basis.
- 6.2 This Section 6, with the exception of Section 6.3 (a), is to be interpreted in accordance with Articles 26.10 and 26.11 of this Agreement.
- 6.3 Full compensation to Contractor for complete performance of any Change Order performed on a reimbursable basis shall be the sum of the following costs and mark-ups:
- (a) The total Reimbursable Cost of Labour for PLA Labour working directly on the Work of the Change Order calculated using the applicable rates in Appendix D – Personnel Rate Schedule; the Reimbursable Cost of Labour for the Change Order shall be added to or subtracted from the Adjusted Target Cost of Labour. A mark-up of thirteen percent (13%) for Labour Overhead and Profit shall be applied to the Reimbursable Cost of Labour for the Change Order;
 - (b) For Contractor's equipment working directly on the Work of the Change Order, the sum of Contractor's equipment rates, as detailed in Appendix E – Equipment Rate Schedule, multiplied by Accepted hours of use as detailed on timesheets; these rates include for profit and overhead, and consequently they shall be treated as meeting the requirements of Article 26.10 (a); and
 - (c) Pre-Accepted Materials Cost, travel and mileage expenses, and third party expenses necessary to perform the Change Order.

Contractor shall advise Company in writing when it has expended seventy-five percent (75%) of the total estimated price for any item of Change Work to be compensated on a reimbursable basis, along with a forecast of the cost to complete the item of Change Work.

The Contractor shall not be compensated for any Contractor's Personnel not identified in

Appendix D – Personnel Rate Schedule or a Change Order issued by Company.

- 6.4 Subject to Company pre-Approval, when Contractor purchases materials on a reimbursable basis:
- (a) All actual costs to Contractor for materials supplied for incorporation into the permanent facility to which the Change Work applies (including those costs related to transportation to the Site) shall be at actual invoiced cost to Contractor (exclusive of HST) as substantiated by invoices certified as paid or by such documentation as may be required by Company, plus a mark-up of thirteen percent (13%) for Contractor overhead and profit.
 - (b) To be eligible for reimbursement, invoicing for third party supplied materials shall be fully supported by Billing Information and any other documentation that Engineer may reasonably require.
 - (c) Company reserves the right to provide, at no cost to Contractor, materials, equipment, services, supplies or incidentals required to perform the Change Work.
 - (d) This Section does not include consumables, personal protection equipment, and small tools which cost Contractor less than \$2,000 Canadian dollars; all as illustrated in Appendix C – Small Tools, Consumables and PPE. These are covered under Section 6.3 (a).
- 6.5 Subject to Company pre-Approval, when Contractor supplies equipment on a reimbursable basis:
- (a) All costs of Contractor for Contractor-owned equipment shall be at the rates set forth in Appendix E – Equipment Rate Schedule.
 - (b) When Contractor's equipment does not resemble the equipment having rental rates listed in Appendix E – Equipment Rate Schedule, the rate of such equipment shall be determined insofar as it is practical to do so, in accordance with and in the manner provided for in the latest revised edition of the publication of the Government of Newfoundland and Labrador, Department of Works, Services and Transportation, Highway Design Division's Form 1000 entitled "Newfoundland Equipment Rental Schedule" at the time of the Effective Date.
 - (c) All costs of Contractor, exclusive of HST, for equipment which is rented from third parties and does not resemble the equipment having rental rates listed in Appendix E – Equipment Rate Schedule must be Accepted prior to rental and shall be at actual cost, exclusive of HST, to Contractor, including transportation to the Site, as substantiated by invoices certified paid or by such documentation as may be required by Company, plus a mark-up of thirteen percent (13%) for Contractor overhead and profit.
 - (d) To be eligible for reimbursement, invoicing for third party equipment shall be

fully supported by Billing Information and any other documentation that Engineer may reasonably require.

- (e) For reimbursable Change Work, Company reserves the right to substitute and provide, at no cost to Contractor, equipment to perform the Change Work. Contractor shall not be allowed to claim for loss of profit and/or any other of its own costs resulting from such substitution by Company.
- 6.6 Subject to Company pre-Approval, when Contractor requires third party services to assist with Change Work being performed on a reimbursable basis:
- (a) Contractor shall secure pre-Acceptance of any third party services, materials, tools, supplies and consumables that are required for the performance of the Change Work and are additional to that which is included in Appendix A - Schedule of Price Breakdown, unit prices and lump sum amounts, rates and prices outlined herein. Company shall reimburse Contractor for the actual, documented and necessary costs (exclusive of HST), plus a mark-up of thirteen percent (13%) for Contractor overhead and profit, of such materials, tools, supplies, consumables, equipment and/or services.
 - (b) In no instance shall the third party rates plus mark-up exceed Contractor's rates for similar work or equipment.
 - (c) To be eligible for reimbursement, invoicing for third party services shall be fully supported by Billing Information and any other documentation that Engineer may reasonably require.
- 6.7 Travel Cost for Trades Labour will be treated in accordance with Section 4.
- 6.8 For all Change Work carried out on a reimbursable basis, Contractor shall prepare time sheets, using the rates listed in Appendix D – Personnel Rate Schedule and equipment rates listed in Appendix E – Equipment Rate Schedule, and identifying the material and third party services assigned to the performance of the Change Work, which will be provided daily to the Engineer for Acceptance.
- 6.9 When Contractor uses materials, equipment and/or services of any of its Affiliates or any Person with which Contractor has a non-arm's length relationship (including but not limited to common ownership, subsidiary, strategic partner or licensee) to undertake reimbursable Change Work, then Contractor shall be entitled to charge Company the actual documented base cost of such Affiliate or Person (as the case may be) for such materials, equipment and/or services, subject to the removal of any element of overhead and/or profit, plus a mark-up of thirteen percent (13%).
- 6.10 Contractor shall include requests for compensation for Change Work performed on a reimbursable basis on a fully documented Payment Certificate applicable to the time period in which the reimbursable Change Work was performed.

6.11 For all Change Work carried out on a reimbursable basis and to be performed by third party suppliers or service providers, Contractor shall solicit a minimum of three bids for material purchases of \$25,000.00 Canadian and greater. Contractor shall select the qualified bidder with the lowest bid unless otherwise directed and/or Accepted by Engineer. Contractor's procurement process for all Change Work carried out on a reimbursable basis shall be subject to Acceptance. At Engineer's request, all received bids and bid evaluation information, including Contractor's award recommendation, shall be made available to Engineer prior to award.

7 OPERATING SPARES

7.1 Appendix H - Operating Spares Price Schedule of this Exhibit 2, details Contractor's recommended two (2) year operational spares and the associated unit prices. For the Term of the Agreement, Company may, at its sole discretion, purchase any number and any type of operational spares listed in Appendix H – Operating Spares Price Schedule at the unit prices outlined therein.

7.2 The unit prices specified shall include all amounts associated with design, manufacture, testing, preservation, storage, transport and delivery of the spares and all associated documentation. Spares shall be delivered to the Site in accordance with Incoterms 2010, Delivered Duty Paid (DDP). Supply shall be deemed to be complete upon delivery of the operational spares and all associated documentation.

7.3 Company will issue a Change Order to Contractor covering all purchases of operating spares.

8 CHANGES

8.1 Compensation for a Change shall be determined in accordance with the Articles of Agreement, this Exhibit 2 and Exhibit 3 – Coordination Procedures. Rates and prices outlined in Appendix A - Schedule of Price Breakdown, Appendix K – Rates for Changes, Appendix D - Personnel Rate Schedule, the Project Labour Agreement and Appendix E - Equipment Rate Schedule will apply for both increases and decreases in the Work.

8.2 Each Price Item stated in Appendix K – Rates for Changes shall include all elements necessary to achieve completion of the Price Item including interconnection with other elements of the Work and to interface with materials provided by and work performed by Company Group as necessary to complete the Work and to make all elements of the Work perform in accordance with the Technical Requirements, whether specifically identified or whether inherent in the Work. For greater certainty the Price Items listed in Appendix K – Rates for Changes are intended only as a means of breaking down the Work for measurement and payment purposes, and the unit price includes all elements

of Contractor's Items and Contractor's Personnel necessary to complete the Work relating to such Price Item in accordance with the requirements of the Agreement. To the extent that some aspects of a Change Order may be performed off of the Site, the Labour Component and/or Equipment Cost components of a Price Item may not apply.

For example, where there is a unit price per meter of piping in Appendix K – Rates for Changes, the rate includes all costs of Contractor's Personnel for planning and execution of the Work, all of Contractor's Items including Materials Cost (including pipe, fittings, hangers, supports, fasteners, seals, and the like) as required, Equipment Cost (including fitting equipment, fabrication equipment, materials handling, inspection equipment, consumables and the like) and overhead and profit as necessary to fabricate and install the piping spool in accordance with the Technical Requirements. The same logic shall be applied to each Price Item in Appendix K – Rates for Changes.

- 8.3 To the extent rates and prices in Appendix A – Schedule of Price Breakdown, Appendix K – Rates for Changes or elsewhere in this Exhibit 2 do not apply to a Change, such Change shall be evaluated and agreed by the Parties on the basis of a reasonable estimate of the Reimbursable Cost of Labour for the Change, and a fixed price adjustment to the Non Labour Component.
- 8.4 Each Change Order issued shall record the estimate of the Reimbursable Cost of Labour for the Change, the fixed price for the Non Labour Component for the Change, and the Adjusted Target Cost of Labour as a result of that Change Order.

Where any Work relating to a Change that has been Approved by Company, but Company and Contractor have not agreed on a price for such Change Work:

- (a) the adjustment to the Contract Price shall be in accordance with the provisions of the Articles of this Agreement; and
- (b) for the purpose of Article 26.10(b)(i) of this Agreement, the allowance referenced therein shall be the total of:
 - (i) the percentage amount stated in Section 6.4(a) for purchased materials;
 - (ii) the percentage amount stated in Section 6.5(c) for supplied equipment;
 - (iii) the percentage amount stated in Section 6.6(a) for third party services;
 - (iv) an amount in accordance with Section 6.3(a) for the Labour Component;but only if, and to the extent that, purchased materials, supplied equipment, third party services and/or labour are required for such Change Work and Approved by Company.

9 STANDBY TIME

- 9.1 When Company directs Contractor to temporarily cease performance of any aspect of the Work for a reason that is not related to Contractor's performance of the Work or

weather, the following provisions will apply:

- (a) Company will pay Contractor for stand-by time of:
 - (i) equipment, other than rented equipment and operated rented equipment, at fifty percent (50%) of the applicable rate stated in Appendix E - Equipment Rate Schedule; and
 - (ii) rented equipment and operated rented equipment at one hundred percent (100%) of the lessor's invoice price;where it is necessary to retain the equipment in the Work area for extended periods as Approved by Company.
- (b) For all standby time Approved by Company, Contractor shall prepare daily time sheets for all labour (PLA Labour and Staff Labour) and equipment assigned to the performance of the Work, which will be reviewed, and if Accepted, signed by the Engineer. For greater certainty, Staff Labour time sheets are for records purposes only, and Contractor shall only be entitled to an adjustment to compensation for Staff Labour to the extent the Exhibit 9 - Milestone Date M-UN4-1 and/or the Final Completion date is adjusted. Copies of time sheets shall accompany all Contractor invoices.
- (c) Standby time for PLA Labour shall be in the minimum amount in accordance with section 21 (Reporting Time) of the Project Labour Agreement.
- (d) Pursuant to Section 9.1(a), payment for equipment standby will be limited to the applicable monthly, weekly or daily rate, the proration of which shall be applied once within a twenty-four hour period or forty hours in a week.

Notwithstanding the above, no compensation will be allowed for equipment that is inoperable due to breakdown, unavailability or the like. No payment will be allowed for equipment that is not operating because the Work has been delayed or suspended by Contractor for its own reasons.

10 PROJECT LABOUR AGREEMENT

A Special Project Order ("SPO") has been enacted to bring into effect a Collective Agreement between the Muskrat Falls Employers' Association Inc. and the Resource Development Trades Council of Newfoundland and Labrador ("Project Labour Agreement" or "PLA"), which is included in Exhibit 11 - Company Supplied Documents, as well as a summary of its key provisions.

Contractor shall be bound to the terms of the PLA for the duration of its work under the PLA, become a member of the Muskrat Falls Employers' Association, designate in writing staff persons to be the Contractor's representative and his/her alternate for all Muskrat Falls Employers' Association meetings, ensure Contractor is represented at all Muskrat Falls Employers' Association meetings and designate in writing at least one (1) staff person to be responsible for daily labour relations matters at the Site. Prior to working at Site, all

Contractor's Personnel will be required to attend an LCP Site orientation session that includes: health, safety and environment obligations; human resources policies, including respectful workplace, cultural sensitivity, gender equity and diversity; and labour relations, including PLA overview, Site standards, corrective action and dispute resolution.

11 COMPENSATION

11.1 Pursuant to Article 12.3, Contractor shall invoice each month: for the Reimbursable Cost of Labour and the Travel Costs for Trades Labour incurred in that month; for the associated Labour Overhead and Profit for the month; and for the actual progress on the Non Labour Component for the month.

12 MILESTONE PAYMENT SCHEDULE

12.1 Company will pay Contractor monthly, in accordance with Appendix B – Milestone Payment Schedule, for actual costs incurred and progress achieved. Appendix J - Monthly Payment Forecast Schedule of this Exhibit 2 includes the Monthly Payment Forecast Schedule. This Schedule is meant as a forecast only. Contractor shall update the Monthly Payment Forecast Schedule as on a monthly basis, to keep it current.

13 PERFORMANCE SECURITY

13.1 Contractor will be compensated in accordance with Appendix B – Milestone Payment Schedule for the performance security required under Article 7 of this Agreement, at the rate specified below.

13.2 Contractor will be compensated in accordance with Appendix B – Milestone Payment Schedule for performance security, provided in the value of an advance payment of up to 10% of the Materials Cost and Equipment Cost components of Contract Price and in the form set out in Exhibit 14 – Performance Security of this Agreement, at the rate specified below.

| Performance Security Type | Rate |
|---------------------------|---|
| Letter Of Credit | Fixed rate of 3% of letter of credit value per year |

14 LIQUIDATED DAMAGES FOR DELAY

14.1 If Contractor fails to deliver that part of the Work to achieve any of the following Milestones (as stated in this Section 14) by the date specified for such Milestone in Exhibit 9 - Schedule, Contractor shall pay Company as liquidated damages the full amount stipulated for that Milestone for each day, including any part thereof, of the delay of that Milestone, from the date the delay commenced to the date the Milestone is achieved, as

more particularly described below, subject to the liability limit referred to in Article 36.2 of this Agreement, unless the failure to achieve the Milestone is due to an event of Force Majeure or otherwise excused under the Agreement.

- (a) If Contractor achieves the below specified Milestone within 15 days of the applicable Milestone Date set out in Exhibit 9 – Schedule, no liquidated damages will apply regarding such Milestone.
- (b) If Contractor achieves the below specified Milestone between 16 and 45 days inclusive after the applicable Milestone Date set out in Exhibit 9 – Schedule, Contractor shall pay Company as liquidated damages the amount specified in Table 2 – Column (b) regarding such Milestone, for each day (or part thereof) of such failure during this time period.
- (c) If Contractor achieves the below specified Milestone between 46 and 60 days inclusive after the applicable Milestone Date set out in Exhibit 9 – Schedule, Contractor shall pay Company as liquidated damages the amount specified in Table 2 – Column (c) regarding such Milestone, for each day (or part thereof) of such failure during this time period.
- (d) If Contractor achieves the below specified Milestone 61 days after the applicable Milestone Date set out in Exhibit 9 – Schedule, or later, Contractor shall pay Company as liquidated damages the amount specified in Table 2 – Column (d) regarding such Milestone, for each day (or part thereof) of such failure during this time period.

TABLE 2

| Milestone # | Milestone Description | (a) Liquidated Damages per day | (b) Liquidated Damages per day | (c) Liquidated Damages per day | (d) Liquidated Damages per day |
|--------------------|--|---|---|---|---|
| M-UN1-1 | Unit 1 CH0031 Work Required In All Areas To Commission (dry test) Unit 1 complete, and ready for integrated testing with Company’s Other Contractors, in accordance with the Technical Requirements. | \$0.00 | \$56,250.00 | \$75,000.00 | \$125,000 |

| Milestone # | Milestone Description | (a) Liquidated Damages per day | (b) Liquidated Damages per day | (c) Liquidated Damages per day | (d) Liquidated Damages per day |
|-------------|---|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| M-GEN-1 | CH0031 Work for Units 1-4 Intake gates complete and ready for integrated testing with Company's Other Contractors, in accordance with the Technical Requirements. | \$0.00 | \$56,250.00 | \$75,000.00 | \$125,000 |
| M-UN2-1 | Unit 2 CH0031 Work Required To Commission (dry test) Unit 2 complete, and ready for integrated testing with Company's Other Contractors, in accordance with the Technical Requirements. | \$0.00 | \$18,000.00 | \$26,000.00 | \$40,000 |
| M-UN3-1 | Unit 3 CH0031 Work Required To Commission (dry test) Unit 3 complete, and ready for integrated testing with Company's Other Contractors, in accordance with the Technical Requirements. | \$0.00 | \$18,000.00 | \$26,000.00 | \$40,000 |
| M-UN4-1 | Unit 4 CH0031 Work Required To Commission (dry test) Unit 4 complete, and ready for integrated testing with Company's Other Contractors, in accordance with the Technical Requirements. | \$0.00 | \$18,000.00 | \$26,000.00 | \$40,000 |

15 CONTRACT PRICE ADJUSTMENT

15.1 PLA Labour

PLA Labour shall be subject to adjustment in accordance with the Project Labour Agreement (PLA).

The Adjusted Target Cost of Labour is deemed to include adjustments associated with the PLA up to and including 1st day of May, 2018. In the event any portion of the Work subject to Adjusted Target Cost of Labour continues after the 1st day of May, 2018, the portion of the Adjusted Target Cost of Labour that will be performed after 1-May-2018 will be adjusted upwards or downwards in proportion to changes in PLA rates.

16 NEUTRAL FUNDING

16.1 Company and Contractor agree to establish cash forecasting and advance funding procedures that will result in a neutral funding arrangement for Reimbursable Cost of Labour and Labour Overhead and Profit (LOH&P).

16.2 No earlier than thirty (30) days prior to the 25th of each month, Contractor shall prepare and submit a neutral funding invoice covering the applicable payment period, in a format and detail acceptable to Company, supported by the following:

- (a) Company Approved cash forecast representing the forecasted amount of Contractor's cost related to Reimbursable Cost of Labour and the associated LOH&P for the applicable payment period.
- (b) Company Approved Productivity Factor (PF) calculated for the immediate preceding payment period. For purposes of calculating neutral funding amounts the Productivity Factor will not exceed 1.
- (c) In the event the PF falls below 1, at Company's sole discretion, the amount of neutral funding will be determined by the following calculation:

$$\text{Neutral Funding} = \text{Cash Forecast} \times \text{Productivity Factor}$$

16.3 Company shall process and pay Contractor's neutral funding invoice within thirty (30) days of receipt. Funding arrangements will be reviewed periodically to ensure that the desired results are achieved.

16.4 All neutral funding provided to Contractor shall be offset against the Contractor's invoice for the corresponding payment period. Where funding to Contractor by Company exceeds Contractor's invoiced amount associated with Reimbursable Cost of Labour and LOH&P, such excess shall be deducted from amounts owing to Contractor.

Where the funding to Contractor by Company is less than Contractor's invoiced amount associated with Reimbursable Cost of Labour and LOH&P, the difference shall be paid to Contractor within thirty (30) days of invoice receipt by Company, subject to Contractor's compliance with Article 12 – Compensation and Terms of Payment, Exhibit 2 – Compensation and Exhibit 3 – Coordination Procedures.

- 16.5 Contractor shall make best efforts to provide accurate estimates of the Reimbursable Cost of Labour. If neutral funding to Contractor by Company for Reimbursable Cost of Labour and LOH&P regularly exceeds Contractor's actual invoiced amounts associated with Reimbursable Cost of Labour and LOH&P, Company retains the right to modify or cease neutral funding arrangements.
- 16.6 Company reserves the right to reduce the neutral funding invoice amount should the forecasted amount of Contractor's Reimbursable Cost of Labour and LOH&P change subsequent to submission of the neutral funding invoice.
- 16.7 The aggregate amount of neutral funding shall not exceed the Target Cost of Labour unless otherwise Approved by Company; at its sole discretion.

APPENDIX A

SCHEDULE OF PRICE BREAKDOWN

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|--|----------|--|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|------------------------|-----------------------------|-----------------------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) D = C x 13% | 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 | | |
| | | | | | 0.13 | | | | | | | | | | | |
| GENERAL | | | | | | | | | | | | | | | | |
| 1 | 0000.01 | Mobilization | LS | 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 | 1.0 | 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 | 1.0 | 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 | Staff Labour | LS | 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 |
| 4 | | Estimate of Travel Cost for Trades Labour | Estimate | 1.0 | | | | | | | \$4,975,871.23 | \$4,975,871.23 | | | 4,975,871.23 | 4,975,871.23 |
| 4c | | Letter of Credit - Work - Agreement Article 7.1(a) | LS | 1.0 | | | | | | | \$2,697,437.90 | \$2,697,437.90 | | | 2,697,437.90 | 2,697,437.90 |
| 4d | | Letter of Credit - Warranty Period - Agreement Article 7.1(b) | LS | 1.0 | | | | | | | \$851,822.49 | \$851,822.49 | | | 851,822.49 | 851,822.49 |
| ST01 | | SUB-TOTAL INDIRECT COSTS (GENERAL) | | | | | 13102.2 | | \$153,987.19 | \$1,184,516.81 | | \$42,570,983.08 | | \$4,864,998.26 | | \$48,774,485.34 |
| PIPING/MECHANICAL SYSTEMS | | | | | | | | | | | | | | | | |
| PIPING/MECHANICAL - DESIGN AND ENGINEERING | | | | | | | | | | | | | | | | |
| 5 | 3343.010 | WFS (Fire Protection Water) | LS | 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 | Mechanical Shaft Platform/Staging Design and Engineering | LS | 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 | | \$232,007.91 | | \$701.00 | | \$232,708.91 |
| PIPING/MECHANICAL - SUPPLY AND INSTALLATION | | | | | | | | | | | | | | | | |
| WPS (Domestic Water) | | | | | | | | | | | | | | | | |
| 7 | 3352.001 | Water treatment plant: Sand & Antracite Filter 3352-FR-6000 | ea | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 2.0 | 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 | 2.0 | 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 | 1.0 | 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-FQJ-6000 | ea | 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 | 1.0 | 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 | 1.0 | 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 | 2.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 3.0 | 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 | 1.0 | 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 | 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 | 11.0 | 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 | 46,227.57 | 46,227.57 |
| 27 | 3352.021 | Urinal 3352-UR-7000 / 7001 | ea | 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 | 10.0 | 9.6 | 869.37 | 96.2 | 113.02 | 1,130.19 | 8,693.74 | 220.54 | 2,205.45 | 248.72 | 2,487.17 | 14,515.54 | 14,515.54 |
| 29 | 3352.023 | Lavatory 3352-LAV-6000 / 6002 | ea | 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 | 1.0 | 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 | 3.0 | 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 | 1.0 | 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 | 1.0 | 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 | 2.0 | 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 | 2.0 | 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 | 2.0 | 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 | 11.0 | 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 | 4.0 | 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 | 1.0 | 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 | 2.0 | 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 | 1.0 | 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 |
| 42 | 3352.036 | Pipe NPS 1/2 Type K, Piping Specification NB11 | m | 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 | 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 | 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 | 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 | 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 | 53.0 | 0.2 | 22.10 | 13.0 | 2.87 | 152.29 | 1,171.46 | 1.65 | 87.71 | 5.53 | 32.16 | 1,704.43 | |
| 48 | 3352.042 | Weld NPS 1/2, Piping Specification NB11 | ea | 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 | 63.0 | 1.3 | 118.10 | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | | NON LABOUR COMPONENT | | | | TOTAL PRICE J = A x J |
|-----|----------|--|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|----------------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) D = C x 13% | 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 | |
| | | | | | | | | | | | | | | | | |
| 57 | 3352.051 | Tee Reducing NPS 3/4 x 1/2 Type K, Piping Specification NB11 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 3.0 | 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 | 0.0 | 2.6 | 231.52 | 0.0 | 30.10 | 0.00 | 0.00 | 0.00 | 0.00 | 72.78 | 0.00 | 425.66 | 0.00 |
| 68 | 3352.062 | Ball Valve NPS 3/4, Valve Specification VBA11 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 1,738.66 |
| 74 | 3352.068 | Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11 | ea | 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 | 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 | 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 | 2.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 1.3 | 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 | 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 | 77.0 | 0.2 | 220.95 | 18.8 | 2.87 | 1,699.65 | 315.27 | 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 | 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 | 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 1-1/2 x 3/4 Type K, Piping Specification NB11 | ea | 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 | 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 | 0.2 | 16.64 | 0.2 | 2.16 | 2.16 | 16.64 | 5.73 | 5.73 | 5.05 | 29.59 | 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 | 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 | 1.0 | 0.2 | 16.64 | 0.2 | 2.16 | 2.16 | 16.64 | 5.73 | 5.73 | 5.05 | 29.59 | 29.59 | 29.59 |
| 105 | 3352.099 | Cap NPS 1-1/2 Type K, Piping Specification NB11 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 NB1 | | | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|-----|----------|---|-----------------|---------------|----------------------------------|-----------------------------|-------------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|----------------------|-----------------------------|-------------------|-----------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS D | LABOUR OH&P (per unit) D = C x 13% | 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 | | | |
| | | | | | 0.13 | | | | | | | | | | | | |
| 126 | 3352.120 | Ball Valve NPS 2, Valve Specification VBA08 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 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 | 1.0 | 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 | 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 | 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 SDS (Wastewater) | Linear meter | 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 | |
| 159 | 3353.010 | Septic pumping station 3353-SPS-5000 | ea | 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 | 2.0 | 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 | 5.0 | 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 | 1.0 | 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 | 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 | 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 SW Sch.DWV NPS 1-1/2, Piping Specification PA01 | ea | 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 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 76.1 | 0.6 | 499.76 | 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 | 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 | El | | | | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

| | | LABOUR COMPONENT | | | | | | | | | NON LABOUR COMPONENT | | | | | | |
|-----|----------|--|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|--|
| | | 0.13 | | | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 | |
| 193 | 3353.350 | Sanitary Tee SW Sch.DWV NPS 3, Piping Specification PA01 | ea | 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 | 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 | 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 | 9.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 32.0 | 0.2 | 14.43 | 5.1 | 1.88 | 60.01 | 461.65 | 17.99 | 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 | 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 | 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 | 9.0 | 0.6 | 56.84 | 5.7 | 7.39 | 51.55 | 396.50 | 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 | 4.0 | 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 | 14.0 | 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 | 14.0 | 0.3 | 51.55 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | |
| | | ASS (Low Pressure Compressed Air) | | | | | | | | | | | | | | | |
| 216 | 3441.010 | Low pressure compressor 3441-COM-5000 / 5001 | ea | 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 | 4.0 | 17.9 | 1,620.98 | 71.7 | 210.73 | 842.91 | 6,483.91 | 0.00 | 2,212.82 | 380.95 | 1,523.82 | 2,212.66 | 8,850.63 | |
| 218 | 3441.030 | Air tank 3441-TK-5000 | ea | 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 | 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 | 3.0 | 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 | 3.0 | 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 | 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 | 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 | 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 | 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 | 2.0 | 0.8 | 19.28 | 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 | 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 | 1.0 | 2.2 | 198.25 | 2.2 | 25.77 | 25.77 | 198.25 | 91.26 | 91.26 | 64.96 | 380.25 | 380.25 | 380.25 | |
| 229 | 3441.140 | Pipe identification NPS 1/2 | Linear meter | 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 | 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 | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 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 | 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 | 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 | 3.3 | 296.68 | 3.3 | 38.57 | 38.57 | 296.68 | 122.57 | 122.57 | 94.40 | 552.22 | 552.22 | 552.22 | |
| 239 | 3441.240 | Weld NPS 3/4, Piping Specification GB11 | ea | 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 | 48.0 | 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 | 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 | 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 | 35.5 | 0.6 | 50.58 | 19.9 | 6.58 | 33.75 | 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 | 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 | 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 | 34.0 | 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 | 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 | 1.0 | 0.6 | 49.91 | 0.6 | 6.49 | 6.49 | 49.91 | 1.28 | 1.28 | 11.98 | 69.66 | 69.66 | 69.66 | |
| 249 | 3441.340 | Victaulic Coupling NPS 1, Style 77 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 3.0 | 2.2 | 197.78 | 6.6 | 25.71 | 77.14 | 593.35 | 20.08 | 60.23 | 5 | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | LABOUR COMPONENT | | | | | | | | | | NON LABOUR COMPONENT | | | | | |
|-----|----------|--|-----------------|---------------|-------------------------------------|--------------------------------|--------------------|--|------------------------------------|---------------------------------------|------------------------------|----------------------|--------------------------------|-------------------|---------------------------------|--------------------------|--|
| | | 0.13 | | | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 | |
| 261 | 3441.460 | Union FNPT NPS 2, Piping Specification GB11 | ea | 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 | 26.0 | 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 | 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 | 4.0 | 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 | 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 | 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 | 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 | 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 | 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 | 5.0 | 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 | 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 | 23.0 | 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 | 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 | 27.0 | 0.8 | 263.85 | 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 | 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 | 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 | 13.0 | 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 | 15.0 | 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 | 1.0 | 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 AHS (High Pressure Compressed Air) | Linear meter | 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 | |
| 281 | 3442.010 | Compressor 3442-COM-5000 / 5001 | ea | 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 | 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 | ea | 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 | 2.0 | 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 | 1.0 | 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 | 2.0 | 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 | ea | 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 | ea | 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 | ea | 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 | 2.0 | 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 | 2.0 | 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 | 10.0 | 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 | 2.0 | 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 | 2.0 | 3.7 | 329.95 | 7.3 | 42.89 | 85.79 | 659.89 | 35.02 | 70.04 | 84.60 | 169.19 | 492.45 | 984.91 | |
| 295 | 3442.150 | Pipe NPS 1/2 Sch.40S, Piping Specification SB11 | m | 0.0 | 44.0 | 3,976.03 | 0.0 | 516.88 | 0.00 | 0.00 | 154.84 | 0.00 | 965.60 | 0.00 | 5,613.35 | 0.00 | |
| 296 | 3442.160 | Olet FNPT NPS 1/2 Sch.40S, Piping Specification SB11 | ea | 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 | 0.0 | 3.7 | 329.95 | 0.0 | 42.89 | 0.00 | 0.00 | 109.52 | 0.00 | 99.59 | 0.00 | 581.95 | 0.00 | |
| 298 | 3442.180 | Pipe identification NPS 1/2 | Linear meter | 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 | 29.6 | 1.8 | 160.53 | 52.6 | 20.87 | 617.63 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 8.0 | 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 | 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 | 10.0 | 0.6 | 51.18 | 5.7 | 6.65 | 66.50 | 511.55 | 12.06 | 120.57 | 14.46 | 84.36 | 84.36 | 843.13 | |
| 309 | 3442.290 | Pipe NPS 1 Sch.10S, Piping Specification SB11 | m | 0.0 | 0.6 | 49.91 | 0.0 | 6.49 | 0.00 | 0.00 | 4.56 | 0.00 | 12.64 | 0.00 | 73.60 | 0.00 | |
| 310 | 3442.300 | Pipe NPS 1 Sch.40S, Piping Specification SB11 | m | 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 | 60.0 | 0.6 | 53.88 | 35.8 | 7.00 | 420.28 | 3,232.94 | 8.11 | 486.77 | 14.30 | 857.79 | 83.30 | 4,997.78 | |
| 312 | 3442.320 | Elbow 90 degrees FNPT Sch.40S NPS 1, Piping Specification SB11 | ea | 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 | 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 | 5.0 | 0.6 | 52.68 | 2.9 | 6.85 | 34.24 | 263.40 | 22.61 | 113.06 | 16.93 | 84.66 | 99.07 | 495.35 | |
| 315 | 3442.350 | Union SW / FNPT Class 3000 NPS 1, Piping Specification SB11 | ea | 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 | 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 | |
| 317 | 3442.370 | Flexible Connector Penflex 800SS MNPT NPS 1 | ea | 0.0 | 0.7 | 66.54 | 0.0 | 8.65 | 0.00 | 0.00 | 61.51 | 0.00 | 28.02 | 0.00 | 164.71 | 0.00 | |
| 318 | 3442.380 | Flange SW 150RF NPS 1 c/w Hardware, Piping Specification SB11 | ea | 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 | 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 | 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 | 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 | 155.0 | 2.5 | 224.79 | 385.4 | 29.22 | 4,529.58 | 34,842.90 | 31.31 | 4,853.03 | 59.10 | 9,161.14 | 344.43 | 53,386.65 | |
| 323 | | | | | | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | | LABOUR COMPONENT | | | | | | | NON LABOUR COMPONENT | | | | | |
|-----|----------|---|-----------------|------------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | 0.13 | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 328 | 3442.480 | Tee Reducing SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11 | ea | 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 |
| 329 | 3442.490 | Tee Reducing SW Class 3000 NPS 2 x 2 x 1, Piping Specification SB11 | ea | 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 | 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 | 1.0 | 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 | 2.0 | 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 | 3.0 | 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 | 1.0 | 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 | 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 | 2.0 | 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 | 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 | 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 | 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 |
| 340 | 3443.020 | WFS (Fire Protection Water) | LS | 1.0 | 26448.3 | 2,391,081.99 | 26,448.3 | 310,840.66 | 310,840.66 | 2,391,081.99 | 5,244,861.68 | 5,244,861.68 | 590,230.91 | 590,230.91 | 8,537,015.24 | 8,537,015.24 |
| | | WCD (Clear Water Drainage) | | | | | | | | 50.00 | | | | | | |
| 341 | 3444.001 | Drainage pump 3444-P-5000 to 5002 | ea | 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 | 0.0 | 124.1 | 11,218.27 | 0.0 | 1,458.38 | 0.00 | 0.00 | 51,712.21 | 0.00 | 13,047.47 | 0.00 | 77,436.33 | 0.00 |
| 343 | 3444.003 | Oil skimmer 3444-OS-0000 | ea | 0.0 | 62.0 | 5,609.14 | 0.0 | 729.19 | 0.00 | 0.00 | 18,382.40 | 0.00 | 5,019.09 | 0.00 | 29,739.82 | 0.00 |
| 344 | 3444.004 | Air vent 3444-AV-0001 to 0003 | ea | 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 | 3.0 | 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 | 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 | 3.0 | 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 | 2.0 | 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 | 1.0 | 24.6 | 2,227.85 | 24.6 | 289.62 | 2,227.85 | 5,652.55 | 5,652.55 | 1,661.60 | 1,661.60 | 9,831.62 | 9,831.62 | 9,831.62 |
| 350 | 3444.010 | Oil sheen detector 3444-LSH-0001 | ea | 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 | 3.0 | 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 | 1.0 | 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 | 9.7 | 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 | 9.0 | 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 | 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 | 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 | 19.0 | 1.8 | 164.97 | 34.7 | 21.45 | 407.49 | 3,134.52 | 346.43 | 6,582.10 | 108.52 | 2,061.81 | 641.36 | 12,185.92 |
| 358 | 3444.018 | Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11 | ea | 14.0 | 0.6 | 102.91 | 8.8 | 7.35 | 102.91 | 791.60 | 203.25 | 2,845.54 | 54.21 | 758.92 | 321.36 | 4,498.97 |
| 359 | 3444.019 | Olet SW Class 3000 NPS 1, Piping Specification SB11 | ea | 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 | 10.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 4.0 | 0.7 | 66.54 | 7.1 | 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 | 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 | 1.0 | 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 | 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 | 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 | 1.0 | 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 | 89.1 | 0.0 | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|-----|----------|--|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) D = C x 13% | 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 | | |
| | | | | | 0.13 | | | | | | | | | | | |
| 396 | 3444.056 | Flange Welding Neck 15ORF Sch.STD NPS 4 c/w hardware, Piping Specification CB11 | ea | 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 15ORF NPS 4 c/w hardware, Piping Specification CB11 | ea | 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 | 1.0 | 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 | 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 | 1.0 | 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 | 39.9 | 0.6 | 261.69 | 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 | 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 | 16.0 | 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 | 2.0 | 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 | 6.0 | 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 | 1.0 | 0.2 | 16.64 | 0.2 | 2.16 | 2.16 | 16.64 | 12.42 | 16.64 | 6.42 | 37.64 | 37.64 | 37.64 |
| 407 | 3444.067 | Tee wye SW Sch.DWV NPS 4, Piping Specification PA01 | ea | 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 | 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 | 0.0 | 0.4 | 33.27 | 0.0 | 4.33 | 0.00 | 33.27 | 10.51 | 0.00 | 9.92 | 0.00 | 58.02 | 0.00 |
| 410 | 3444.070 | Pipe identification NPS 4 | Linear meter | 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 | 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 15ORF Sch.STD NPS 6 c/w hardware, Piping Specification CB11 | ea | 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 15ORF NPS 6 c/w hardware, Piping Specification CB11 | ea | 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 | 1.0 | 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 | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 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 | 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 15ORF Sch.STD NPS 10 c/w hardware, Piping Specification CB11 | ea | 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 15ORF Sch.STD NPS 10 c/w hardware, Piping Specification CB11 | ea | 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 | 3.0 | 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 | 3.0 | 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 | 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 | 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 | 3.0 | 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 | 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 | 3.0 | 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 15ORF Sch.STD NPS 10 c/w hardware, Piping Specification CB11 | ea | 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 | 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 | 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 | 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 | 2.0 | 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 | 2.0 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 |
| | | WDS (Dewatering) | | | | | 0.0 | \$0.00 | | | | \$0.00 | | \$0.00 | | |
| 441 | 3445.010 | Dewatering pump 3445-P-5000 to 5002 | ea | 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 | Submersible pump 3445-P-0001 | ea | 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 | 12.0 | 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 | 3.0 | 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 | 8.0 | 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 | 1.0 | 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 | 2.0 | 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 | 2.0 | 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 transmitter 3445-LT-0001 | ea | 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 | 3.0 | 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 | 1.0 | 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 | 1.0 | 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 | 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 | 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 | 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 | 11.0 | 3.2 | 287.98 | 35.0 | 37.44 | 411.81 | 3,167.79 | 107.60 | 1,1 | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | LABOUR COMPONENT | | | | | | | | NON LABOUR COMPONENT | | | | | |
|-----|----------|--|------------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | 0.13 | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 461 | 3445.210 | Pipe identification NPS 3/4 | Linear meter | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | IS | 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 | 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 | Pipe NPS 2 Sch.40S, Piping Specification SB11 | m | 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 | 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 | 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 | Elbow 45 degrees BW Sch.40S NPS 2, Piping Specification SB11 | ea | 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 | 3.0 | 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 | 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 | 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 | 1.0 | 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 | 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 | 8.0 | 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 | 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 | 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 | 9.0 | 0.3 | 29.27 | 2.9 | 3.80 | 34.24 | 263.40 | 9.07 | 85.24 | 8.78 | 79.06 | 51.33 | 461.94 |
| 487 | 3445.470 | Pipe identification NPS 2 | Linear meter | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 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 | 1.0 | 7.5 | 676.53 | 7.5 | 87.95 | 87.95 | 676.53 | 2,867.35 | 2,867.35 | 736.27 | 4,368.10 | 4,368.10 | 4,368.10 |
| 493 | 3445.530 | Pipe painting NPS 6 | Linear meter | 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 | Pipe identification NPS 6 | Linear meter | 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 | 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 | 4.0 | 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 | 4.0 | 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 | 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 | 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 | 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 | 4.0 | 7.9 | 717.78 | 31.8 | 93.31 | 373.24 | 2,871.11 | 775.70 | 1,911.64 | 324.86 | 1,299.43 | 1,911.64 | 7,646.57 |
| 502 | 3445.620 | Pipe painting NPS 8 | Linear meter | 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 | 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 | 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 | 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 | 3.0 | 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 | 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 | 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 | 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 | 3.0 | 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 | 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 | 4,755.91 |
| 512 | 3445.720 | Pipe identification NPS 12 | Linear meter | 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 | 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 | 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 | 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 | Victaulic Coupling NPS 16, Style 231 | ea | 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 | 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, |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE | TOTAL PRICE |
|-----|----------|---|-----------------|----------|-----------------------------|------------------------|--------------------|------------------------|--------------------|-----------------------|----------------------|-----------------|------------------------|-------------------|------------|-------------|
| | | | | | PLA LABOUR HOURS (per unit) | LABOUR COST (per unit) | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) | LABOUR OH&P (Ext.) | COST OF LABOUR (Ext.) | MAT. COST (per unit) | MAT. TOTAL COST | EQUIP. COST (per unit) | TOTAL EQUIP. COST | | |
| | | | | | | | | | | | | | | | | |
| 527 | 3445.870 | Tee Sch.STD NPS 24, Piping Specification CB11 | ea | 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 | 3.0 | 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 | 1.0 | 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 | 1.0 | 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 | 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 | 10.0 | 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 | 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 | 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 |
| | | OLS (Lubricating/Hydraulic Oil) | | | | | 0.0 | \$0.00 | | | | 50.00 | | 50.00 | 50.00 | |
| 535 | 3446.010 | Oil storage tank 3446-TK-6000 / 6001 | ea | 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 | 2.0 | 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 | 1.0 | 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 | 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 | Olet SW Class 3000 NPS 1/2, Piping Specification CB11 | ea | 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 | 6.0 | 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 | 2.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 |
| | | ODS (Oily Water Drainage) | | | | | 0.0 | \$0.00 | | | | \$0.00 | | \$0.00 | \$0.00 | |
| 559 | 3447.010 | Oil Skimmer 3447-OS-6000 | ea | 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 | 1.0 | 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 | 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 | 8.0 | 1.8 | 158.74 | 14.1 | 20.64 | 165.08 | 1,269.88 | 10.67 | 85.33 | 39.45 | 229.49 | 85.33 | 1,835.91 |
| 563 | 3447.050 | Elbow 45 degrees BW Sch.STD NPS 4, Piping Specification CB11 | ea | 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 | 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 | 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 | 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 | 36.9 | 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 | 8.0 | 3.8 | 340.35 | 30.1 | 44.25 | 353.96 | 2,722.77 | 19.66 | 157.25 | 83.94 | 488.19 | 390.54 | 3,905.54 |
| 569 | 3447.110 | Weld NPS 6, Piping Specification CB11 | ea | 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 | 36.9 | 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 | 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 |
| | | WCS (Raw/Cooling Water) | | | | | 0.0 | \$0.00 | | | | \$0.00 | | \$0.00 | \$0.00 | |
| 572 | 3448.001 | Self cleaning strainer 3448-STM-1000 / 2000 / 3000 / 4000 | ea | 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 | 4.0 | 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 | 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 | 12.0 | 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 | 4.0 | 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 | 4.0 | 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 | 8.0 | 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 | 4.0 | 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 | P | | | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001

Appendix A - Schedule of Price Breakdown

| | | | | | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | | |
|-----|----------|---|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | 0.13 | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 | 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 | 12.0 | 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 | 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 | 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 | 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 | 20.0 | 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 | 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 | 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 | 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 | 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 | 16.0 | 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 | 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 | 0.6 | 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 | 4.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 4.0 | 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 ONPS 2 x 1, Piping Specification SB11 | ea | 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 | 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 | 0.6 | 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 | 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 | 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 | 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 | 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 | 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 | 4.0 | 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 | 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 | 8.0 | 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 | 12.0 | 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 | 4.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 7.0 | 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 | 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 | 12.0 | 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 | 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 | 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 | 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 | 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 | 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 | 4.0 | 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 | 4.0 | 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 | 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 | 4.0 | 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 | 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 | 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 | 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 | 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 | 3.0 | 0.7 | 60.54 | 2.0 | 7.87 | 23.61 | 181.61 | 122.19 | 366.58 | 38.83 | 116.48 | 168.27 | 688.27 |
| 650 | 3448.079 | Tee BW Sch.STD NPS 12, Piping Specification CB11 | ea | 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 | 2.0 | 1.0 | 90.81 | 2.0 | 11.80 | 23.61 | 181.61 | 50.27 | 100.53 | 31.47 | 184.34 | 368.68 | 737.36 |
| 652 | 3448.081 | Weld NPS 12, Piping Specification CB11 | ea | 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 | 19.8 | 10.9 | 982.58 | 215.3 | 127.74 | 2,530.71 | 19,466.98 | 8 | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|-------|----------|--|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) D = C x 13% | 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 | | |
| | | | | | | | | | | | | | | | | |
| 661 | 3448.090 | Flange Slip-On 150RF NPS 14 c/w hardware, Piping Specification SB11 | ea | 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 | 12.0 | 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 | 8.0 | 1.0 | 94.81 | 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 | 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 | 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 | 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 | 4.0 | 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 | 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 | 28.0 | 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 | 4.0 | 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 | 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 | 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 | 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 | 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 | 1.0 | 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 | 4.0 | 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 | 1.0 | 1.1 | 128.80 | 1.1 | 12.80 | 98.44 | 98.44 | 757.71 | 175.68 | 1,044.63 | 175.68 | 1,044.63 | 1,044.63 |
| 678 | 3448.107 | Victaulic Reducing Tee NPS 16 x 16 x 14, Style W77 | ea | 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 | 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 | 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 | 3.0 | 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 | 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 | 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 |
| 684 | 3449.001 | Service water pump 3449-P-6000 to 6002 | ea | 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 | 7.0 | 4.8 | 392.55 | 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 | 8.0 | 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 | 3.0 | 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 | 16.0 | 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 | 2.0 | 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 | 6.0 | 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 | 2.0 | 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 | 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 | 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 | 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 | 4.0 | 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 | 5.8 | 1.7 | 113.72 | 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 | 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 | 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 | 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 | 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 | 1.0 | 0.6 | 49.91 | 0.6 | 6.49 | 6.49 | 49.91 | 10.54 | 13.84 | 13.84 | 80.78 | 80.78 | 80.78 |
| 700 | 3449.017 | Union PE/NPT Sch.40S NPS 1/2, Piping Specification SB11 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 0.6 | 57.54 | 1.3 | 7.48 | 14.96 | 115.07 | 0.62 | 1.25 | 13.65 | 27.29 | 158.57 | |
| 711 | 3449.028 | Pipe identification NPS 1/2 | Linear meter | 0.0 | 0.0 | 0.00 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.35 | 0.00 | 14.02 | 0.00 |
| 712 | 3449.029 | Pipe NPS 3/4 Sch.10S, Piping Specification SB11 | m | 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</ | | | | | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001

Appendix A - Schedule of Price Breakdown

| | | LABOUR COMPONENT | | | | | | | | | | NON LABOUR COMPONENT | | | | | |
|------|----------|---|-----------------|----------|-----------------------------|------------------------|--------------------|------------------------|--------------------|-----------------------|----------------------|----------------------|------------------------|-------------------|-------------------|-------------|--|
| 0.13 | | | | | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY | PLA LABOUR HOURS (per unit) | LABOUR COST (per unit) | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) | LABOUR OH&P (Ext.) | COST OF LABOUR (Ext.) | MAT. COST (per unit) | MAT. TOTAL COST | EQUIP. COST (per unit) | TOTAL EQUIP. COST | UNIT PRICE | TOTAL PRICE | |
| | | | | A | B | C | | D = C x 13% | E = A x D | F = A x C | G | | H | | I = C + D + G + H | J = A x J | |
| 726 | 3449.043 | Pipe NPS 1 Sch.10S, Piping Specification SB11 | m | 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 | 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 | 25.0 | 0.6 | 175.90 | 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 | 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 | 3449.047 | Elbow 90 degrees SW Class 3000 NPS 1, Piping Specification SB11 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 3449.055 | Coupling Stainless Steel Compression MNPT 1.25inx1.25in | ea | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 24.0 | 1.2 | 107.90 | 28.7 | 14.03 | 336.66 | 2,589.68 | 26.19 | 178.75 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 1.0 | 0.7 | 66.54 | 0.7 | 8.65 | 66.54 | 66.54 | 10.39 | 17.72 | 10.39 | 17.72 | 103.30 | 103.30 | |
| 755 | 3449.072 | Concentric Reducer SW Class 3000 NPS 2 x 1-1/2, Piping Specification SB11 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 5.0 | 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 | 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 | 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 | 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 | 28.0 | 0.6 | 195.18 | 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 | 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 | 9.0 | 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 | 4.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 3.0 | 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 | 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 | 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 | 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 , | | | | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001 Appendix A - Schedule of Price Breakdown

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|-----|----------|---|-----------------|---------------|----------------------------------|-----------------------------|-------------------------|--|--------------------------------------|---|---------------------------|----------------------|-----------------------------|------------------------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS D | LABOUR OH&P (per unit) D = C x 13% E | LABOUR OH&P (Ext.) E = A x D F | COST OF LABOUR (Ext.) F = A x C G | MAT. COST (per unit) G | MAT. TOTAL COST H | EQUIP. COST (per unit) H | TOTAL EQUIP. COST I | | |
| | | | | | | | | | | | | | | | | |
| 795 | 3449.112 | Concentric Reducer BW Sch.10S NPS 4 x 2-1/2, Piping Specification SB11 | ea | 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 15ORF Sch.10S NPS 2-1/2 c/w hardware, Piping Specification SB11 | ea | 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 15ORF NPS 2-1/2 c/w hardware, Piping Specification SB11 | ea | 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 | 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 | 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 | 31.0 | 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 | 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 | 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 | 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 | 6.0 | 0.5 | 46.68 | 3.1 | 6.07 | 36.41 | 280.05 | 56.51 | 339.09 | 22.34 | 131.60 | 131.60 | 789.61 |
| 805 | 3449.122 | Victaulic concentric reducer NPS 2-1/2 x 2, Style 52 | ea | 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 | 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 | 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 | 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 | 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 | 48.0 | 2.6 | 239.20 | 127.0 | 31.10 | 1,492.62 | 11,481.67 | 20.85 | 1,007.77 | 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 | 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 | 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 15ORF Sch.STD NPS 3 c/w hardware, Piping Specification CB11 | ea | 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 | 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 | 2.0 | 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 | 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 | 1.0 | 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 | 2.0 | 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 | 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 | 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 | 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 | 16.1 | 0.6 | 50.28 | 8.9 | 6.54 | 105.07 | 808.24 | 12.06 | 193.92 | 14.25 | 1,336.23 | 83.13 | 1,336.23 |
| 823 | 3449.140 | Pipe painting NPS 3 | Linear meter | 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 | 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 | 7.0 | 1.8 | 145.80 | 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 15ORF Sch.STD NPS 4 c/w hardware, Piping Specification CB11 | ea | 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 | 2.0 | 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 2-1/2, Piping Specification CB11 | ea | 1.0 | 3.5 | 313.32 | 3.5 | 40.73 | 40.73 | 313.32 | 19.98 | 77.66 | 19.98 | 77.66 | 451.70 | 451.70 |
| 829 | 3449.146 | Reducing lateral BW Sch.STD NPS 4 x 2, Piping Specification CB11 | ea | 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 | 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 | 1.0 | 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 | 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 | 6.0 | 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 | 1.8 | 164.98 | 1.8 | 21.45 | 21.45 | 164.98 | 34.33 | 266.45 | 45.69 | 266.45 | 266.45 | 266.45 |
| 835 | 3449.152 | Weld NPS 4 Piping Specification CB11 | ea | 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 | 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 | 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 | 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 | 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 | 1.0 | 3.5 | 313.32 | 3.5 | 40.73 | 40.73 | 313.32 | 19.98 | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 2.0 | 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 | 3.0 | 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 | 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 | 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 | 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 | 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 | 12.0 | 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 | 2.0 | 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 | 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 | 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 | 1.0 | 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 15ORF Sch.STD NPS 6 c/w hardware, Piping Specification CB11 | ea | 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 | 0.0 | 6.0 | 544.84 | 0.0 | 70.83 | 0.00</ | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | LABOUR COMPONENT | | | | | | | NON LABOUR COMPONENT | | | | | | |
|-----|----------|---|------------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | 0.13 | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 863 | 3449.180 | Victaulic coupling NPS 6, Style 77 | ea | 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 | 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 | 3.0 | 5.3 | 186.29 | 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 | 3.0 | 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 | 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 | 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 | 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 | 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 | 9.3 | 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 | 1.0 | 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 | 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 | 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 | 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 | 9.4 | 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 | 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 | 9.3 | 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 |
| | | ABR (Brake Air) | | | | | 0.0 | | \$0.00 | | | | | \$0.00 | | \$0.00 |
| 879 | 344A.01 | Air tank 344A-TK-5000 | ea | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 2.0 | 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 | 2.0 | 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 | 3.0 | 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 | 2.0 | 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 | 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 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 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 | 9.0 | 0.6 | 53.14 | 5.3 | 6.91 | 62.18 | 478.28 | 5.37 | 48.30 | 13.57 | 78.99 | 710.89 | 710.89 |
| 896 | 344A.18 | Elbow 45 degrees SW Class 3000 NPS 3/4, Piping Specification SB11 | ea | 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 | 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 | 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 | 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 | Eccentric Reducer SW Class 3000 NPS 3/4 x 1/2, Piping Specification SB11 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 40.0 | 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 | 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 | 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 | 4.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 2.0 | 1.2 | 107.44 | 2.4 | 13.97 | 27.93 | 214.88 | 44.57 | 89.14 | 34.22 | 200.20 | 68.44 | 400.39 |
| 917 | 344A.39 | Tee Reducing SW Class 3000 NPS 2 x 2 x 3/4, Piping Specification SB11 | ea | 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 | 5.0 | 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 | 1.0 | 0.6 | 49.91 | 0.6 | 6.49 | 6.49 | 49.91 | 10.62 | 10.62 | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | | | |
|-----|---------|---|-----------------|------------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | 0.13 | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 930 | 344B.03 | Lubrication water pump 344B-P-5000 / 5001 | ea | 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 | 1.0 | 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 | 6.0 | 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 | 18.0 | 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 | 2.0 | 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 | 5.0 | 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 | 1.0 | 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 | 6.0 | 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 | 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 | 3.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 1.0 | 3.3 | 302.30 | 3.3 | 39.29 | 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 | 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 | 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 | 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 | 2.0 | 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 | 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 | 3.9 | 0.6 | 50.63 | 2.2 | 6.58 | 198.25 | 12.06 | 47.23 | 14.33 | 56.09 | 83.60 | 47.23 | 327.34 |
| 956 | 344B.29 | Pipe NPS 1 Sch.40, Piping Specification PA02 | m | 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 | 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 | 0.0 | 0.2 | 16.64 | 0.0 | 2.16 | 0.00 | 0.00 | 0.00 | 0.00 | 4.42 | 0.00 | 25.76 | 0.00 |
| 959 | 344B.32 | Pipe identification NPS 1 | Linear meter | 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 15ORF Sch.10S NPS 1-1/4 c/w hardware, Piping Specification SB11 | m | 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 | 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 | 4.0 | 0.0 | 0.00 | 0.0 | 0.00 | 0.00 | 0.00 | 257.01 | 1,028.03 | 51.74 | 206.97 | 1,234.99 | |
| 963 | 344B.36 | Pipe NPS 1-1/2 Sch.10S, Piping Specification SB11 | m | 15.0 | 3.3 | 298.06 | 49.5 | 38.75 | 581.22 | 4,470.95 | 16.50 | 426.68 | 73.37 | 1,100.58 | 6,400.25 | |
| 964 | 344B.37 | Elbow 90 degrees SW Class 3000 NPS 1-1/2, Piping Specification SB11 | ea | 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 | 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 15ORF NPS 1-1/2 c/w hardware, Piping Specification SB11 | m | 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 | 2.0 | 0.6 | 57.54 | 1.3 | 7.48 | 14.96 | 115.07 | 8.20 | 16.40 | 15.18 | 88.39 | 176.78 | |
| 968 | 344B.41 | Weld NPS 1-1/2 Piping Specification SB11 | ea | 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 | 0.0 | 0.6 | 49.91 | 0.0 | 6.49 | 0.00 | 0.00 | 34.54 | 0.00 | 18.69 | 109.63 | 0.00 | |
| 970 | 344B.43 | Victaulic elbow 90 degrees NPS 1-1/2, Style 410SS | ea | 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 420SS | ea | 0.0 | 0.9 | 83.18 | 0.0 | 10.81 | 0.00 | 0.00 | 260.14 | 0.00 | 71.92 | 0.00 | 426.05 | |
| 972 | 344B.45 | Ball Valve NPS 1-1/2, Valve Specification VBA11 | ea | 0.0 | 3.7 | 329.95 | 0.0 | 42.89 | 0.00 | 0.00 | 209.89 | 0.00 | 119.79 | 0.00 | 702.52 | |
| 973 | 344B.46 | Pipe insulation NPS 1-1/2 | Linear meter | 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 | 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 | 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 | 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 | 6.0 | 0.3 | 27.50 | 1.8 | 3.57 | 21.45 | 164.98 | 26.97 | 161.83 | 11.89 | 69.93 | 419.60 | |
| 978 | 344B.51 | Tee SW Class 3000 NPS 2, Piping Specification SB11 | ea | 1.0 | 1.3 | 115.07 | 1.3 | 14.96 | 14.96 | 115.07 | 44.57 | 44.57 | 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 | 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 | 1.0 | 1.3 | 115.07 | 1.3 | 14.96 | 14.96 | 115.07 | 95.67 | 95.67 | 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 | 2.0 | 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 | 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 | 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 | 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 | 6.0 | 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 | 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 420SS | ea | 2.0 | 1.2 | 107.44 | 2.4 | 13.97 | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | | | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | | |
|--------|----------|--|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | 0.13 | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 998 | 344B.71 | Eccentric reducer BW Sch.10S NPS 2-1/2 x 2, Piping Specification SB11 | m | 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 | 344B.72 | Flange Welding Neck 150RF Sch.10S NPS 2-1/2 c/w hardware, Piping Specification SB11 | m | 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 | Weld NPS 2-1/2 Piping Specification SB11 | ea | 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 | Butterfly valve NPS 2-1/2, Valve Specification VBU01 | ea | 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 | Pipe insulation NPS 2-1/2 | Linear meter | 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 | Pipe identification NPS 2-1/2 | Linear meter | 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 | Flange Welding Neck 150RF Sch.10S NPS 4 c/w hardware, Piping Specification SB11 | m | 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 | Elbow 90 degrees BW Sch.10S NPS 4, Piping Specification SB11 | ea | 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 | Weld NPS 2 Piping Specification SB11 | ea | 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 | Victaulic coupling NPS 4, Style 07 | ea | 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 | Butterfly valve NPS 4, Valve Specification VBU01 | ea | 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 | Pipe insulation NPS 4 | Linear meter | 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 | Pipe identification NPS 4 WLS (Piezometer and Water Level) | Linear meter | 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 |
| 1011 | 344C.01 | Level transmitter 344C-LT-6000 / 9000 / 9001 | ea | 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 | 4.0 | 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 | 8.0 | 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 | Instrumentation cabinet 344C-IC-1000 / 1001 / 2000 / 2001 / 3000 / 3001 / 4000 / 4001 (Detail PD14 and PD15) | ea | 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 |
| | | Mechanical Shop Equipment | | | | | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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-BGMR-6000 | ea | 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 machine 3440-PTHDR-6000 | ea | 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 | 48.6 | 4,393.32 | 97.2 | 571.13 | 1,142.26 | 8,786.63 | 10,039.08 | 12,027.05 | 2,043.06 | 4,086.12 | 14,564.09 | 24,054.09 |
| 1029 | 3440.015 | Floor handling crane 3440-CGM-6000 | ea | 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 | 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 | 11.2 | 1,013.42 | 11.2 | 131.74 | 131.74 | 1,013.42 | 1,094.86 | 1,094.86 | 2,698.62 | 2,698.62 | 4,588.62 | 4,588.62 |
| 1032 | 3440.018 | Working table 3440-WT-6001 / 6002 | ea | 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 Instrumentation | ea | 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 |
| | | | | | | | 0 | \$0.00 | \$0.00 | \$0.00 | | \$0.00 | | \$0.00 | \$0.00 | \$0.00 |
| 1034 | 3440.020 | Detail AT1 | ea | 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 | 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 | 3.7 | 329.95 | 18.3 | 42.89 | 214.47 | 1,649.74 | 482.81 | 2,414.05 | 174.74 | 1,030.39 | 5,151.97 | 5,151.97 |
| 1037 | 3440.023 | Detail AT4 | ea | 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 | 14.6 | 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 | 38.0 | 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 | 3.0 | 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 | 1.0 | 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 | 9.0 | 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 | 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 | 0.00 | 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 | 0.00 | 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 | \$0.00 | \$0.00 |
| 1044 | 3440.030 | S-C50-06 | ea | 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 | 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 | 2.0 | 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 | 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 | 0.0 | 22.1 | 1,996.33 | 0.0 | 259.52 | 0.00 | 0.00 | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

| | | | | | LABOUR COMPONENT | | | | | NON LABOUR COMPONENT | | | | | | |
|------|----------|------------------------|-----------------|---------------|----------------------------------|-----------------------------|-------------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|--------------------------------------|-------------------------------------|-------------------|------------|-------------|
| | | | | | 0.13 | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS D | LABOUR OH&P (per unit) E = C x 13% | LABOUR OH&P (Ext.) F = A x D | COST OF LABOUR (Ext.) G = A x C | MAT. COST (per unit) H | MAT. TOTAL COST I = C + D + G + H | EQUIP. COST (per unit) J = A x J | TOTAL EQUIP. COST | UNIT PRICE | TOTAL PRICE |
| 1059 | 3440.045 | S-E50-04 | ea | 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 | 3.0 | 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 | 3.0 | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 6.0 | 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 | 6.0 | 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 | 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 | 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 | 1.0 | 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 | 3.0 | 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 | 3.0 | 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 | 4.0 | 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 | 8.0 | 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 | 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 | 3440.061 | S-E56-01 | ea | 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 | 3440.062 | S-E57-05 | ea | 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 | 2.0 | 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 | 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 | 3440.065 | S-H51-11 | ea | 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 | 1.0 | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 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 | 2.0 | 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 | 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 | 3440.073 | S-H53 | ea | 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 | 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 | 3440.075 | S-J50-02 | ea | 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 | 3440.076 | S-J50-03 | ea | 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 | 3440.077 | S-J50-04 | ea | 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 | 3440.078 | S-J50-05 | ea | 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 | 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 | 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 | 3440.081 | S-J50-09 | ea | 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 | 3440.082 | S-J50-10 | ea | 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 | 3440.083 | S-J50-11 | ea | 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 | 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 | 3440.085 | S-J50-20 | ea | 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 | 3440.086 | S-J51-10 | ea | 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 | 3440.087 | S-J51-11 | ea | 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 | 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 | 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 | 3440.090 | S-J51-14 | ea | 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 | 3440.091 | S-J51-15 | ea | 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 | 3440.092 | S-J51-17 | ea | 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 | 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 | 3440.094 | S-J51-19 | ea | 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 | 3440.095 | S-J51-20 | ea | 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 | 4.0 | 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 | 3.0 | 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 | 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 | 3440.099 | S-J51-205 | ea | 6.0 | 2.2 | 200.79 | 13.3 | 26.10 | 156.61 | 1,204.73 | 114.14 | 684.86 | 70.17 | 411.20 | 421.01 | 2,467.22 |
| 1114 | 3440.100 | S-J51-21 | ea | 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 | 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 | 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 | 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 | 2.0 | 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 | 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 | 3440.106 | S-J51-27 | ea | 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 | 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 | 1.0 | 4.4 | 396.50 | 4.4 | 51.55 | 51.55 | 396.50 | 128.50 | 119.06 | 119.06 | 695.60 | 695.60 | 695.60 |
| 1123 | 3440.109 | S-J51-31 | ea | 14.0 | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|------|----------|------------------------|-----------------|---------------|-------------------------------------|--------------------------------|--------------------|--|------------------------------------|---------------------------------------|------------------------------|----------------------|--------------------------------|-------------------|-----------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) D = C x 13% | 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 | | | |
| | | | | | | | | | | | | | | | 0.13 | | |
| 1128 | 3440.114 | S-J51-40 | ea | 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 | 2.0 | 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 | 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 | 1.0 | 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 | 3.0 | 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 | 4.0 | 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 | 16.0 | 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 | 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 | 3440.122 | S-J52-33 | ea | 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 | 16.0 | 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 | 4.0 | 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 | 1.0 | 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 | 3.0 | 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 | 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 | 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 | 3440.129 | S-J54-90 | ea | 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 | 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 | 3440.131 | S-J56-40 | ea | 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 | 3440.132 | S-J57-30 | ea | 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 | 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 | 2.0 | 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 | 2.0 | 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 | 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 | 3440.137 | S-J60-10 | ea | 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 | 1.0 | 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 | 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 | 3440.140 | S-J60-22 | ea | 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 | 3.0 | 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 | 1.0 | 4.4 | 396.50 | 4.4 | 51.55 | 51.55 | 396.50 | 521.94 | 198.26 | 198.26 | 1,168.24 | 1,168.24 | 1,168.24 | |
| 1157 | 3440.143 | S-J62-20 | ea | 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 | 3.0 | 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 | 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 | 3440.146 | S-J63-40 | ea | 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 | 3440.147 | S-J63-50 | ea | 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 | 3440.148 | S-J63-60 | ea | 3.0 | 5.7 | 517.11 | 17.2 | 67.22 | 201.67 | 1,551.32 | 435.96 | 1,229.87 | 209.30 | 627.90 | 1,229.59 | 3,688.76 | |
| 1163 | 3440.149 | S-J64-10 | ea | 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 | 3440.150 | S-J64-20 | ea | 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 | 1.0 | 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 | 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 | 1.0 | 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 | 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 | 3440.155 | S-L50-40 | ea | 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 | 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 | 3440.157 | S-L52-20 | ea | 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 | 5.0 | 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 | 9.0 | 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 | 9.0 | 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 | 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 | 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 | 3440.163 | S-L54-50 | ea | 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 | 3440.164 | S-L54-51 | ea | 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 | 2.0 | 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 | 1.0 | 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 | 3.0 | 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 | 2.0 | 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 | 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 | 2.0 | 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 | 15.0 | 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 | 4.0 | 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 | 4.0 | 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 | 5.0 | 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 | 2.0 | 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 | 6.0 | 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 | 4.0 | 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 | | | | | | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | | | LABOUR COMPONENT | | | | | NON LABOUR COMPONENT | | | | | | |
|-------|----------|---------------------------------------|-----------------|----------|-----------------------------|------------------------|--------------------|------------------------|--------------------|-----------------------|----------------------|-----------------|------------------------|-------------------|-------------------|-------------|
| | | | | | 0.13 | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY | PLA LABOUR HOURS (per unit) | LABOUR COST (per unit) | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) | LABOUR OH&P (Ext.) | COST OF LABOUR (Ext.) | MAT. COST (per unit) | MAT. TOTAL COST | EQUIP. COST (per unit) | TOTAL EQUIP. COST | UNIT PRICE | TOTAL PRICE |
| | | | | A | B | C | | D = C x 13% | E = A x D | F = A x C | G | | H | | I = C + D + G + H | J = A x J |
| 1197 | 3440.183 | S-L66-01 | ea | 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 | 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 | 2.0 | 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 | 3.0 | 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 | 1.0 | 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 | 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 | 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 | 2.0 | 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 | 8.0 | 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 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 4.0 | 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 | 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 | 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 | 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 | 40.0 | 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 | 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 | 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 | 7.0 | 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 | 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 | 2.0 | 14.5 | 1,311.48 | 29.0 | 170.49 | 340.98 | 2,622.96 | 301.07 | 602.15 | 368.83 | 361.07 | 2,151.88 | 4,303.75 |
| 1232 | 3440.218 | S-M57-05 | ea | 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 | 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 | 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 | 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 | 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 | 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 | 42.0 | 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 | 3.0 | 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 | 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 | 1.0 | 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 | 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 | 2.0 | 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 | 16.0 | 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 | 16.0 | 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 | 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 | 5.0 | 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 | 1.0 | 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 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 12.0 | 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 | 2.0 | 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 | 3.0 | 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 Platform/Staging | LS | 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 | 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 | 4.4 | 401.6 | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | | LABOUR COMPONENT | | | | | | | NON LABOUR COMPONENT | | | | | |
|--------|----------|---|-----------------|------------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | 0.13 | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 1259 | 3351.010 | EDD (Dewatering gallery supply and Exhaust) | LS | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | EWB (Exhaust Welding Hood) | LS | 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 | 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 | 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 | 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 |
| ST04 | | SUB-TOTAL HVAC SYSTEM - SUPPLY, INSTALLATION | | | | | 89790.2 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| | | ELECTRICAL - SUPPLY AND INSTALLATION | | | | | | | | | | | | | | |
| | | ELECTRICAL - DESIGN AND ENGINEERING | | | | | | | | | | | | | | |
| 1287 | 3343.020 | Fire Detection System - Electrical Engineering | LS | 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 | 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 | 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 | \$0.00 | \$254,537.48 | \$254,537.48 | \$769.08 | \$769.08 | \$255,306.56 | \$255,306.56 |
| | | ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION | | | | | | | | | | | | | | |
| 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 4.0 | 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 | 4.0 | 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 | 4.0 | 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 | 2.0 | 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 | 1.0 | 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 | 4.0 | 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 | 4.0 | 59.3 | 5,362.36 | 237.3 | 697.11 | 2,788.43 | 21,449.45 | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|-------|----------|---|-----------------|---------------|----------------------------------|-----------------------------|----------------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS 0.13 | LABOUR OH&P (per unit) D = C x 13% | 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 | | |
| | | | | | | | | | | | | | | | | |
| 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 | 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 | 11.0 | 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 | 1.0 | 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 | 4.0 | 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 | 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 | 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 | 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 |
| 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 | 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 | 2.0 | 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 | 2.0 | 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 | 4.0 | 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 | 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 | 1.0 | 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 | 4.0 | 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 | 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 | 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 | 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 | 4.0 | 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 | 2.0 | 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 | 2.0 | 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 | 2.0 | 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 | 1.0 | 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 | 1.0 | 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 | 4.0 | 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 | 2.0 | 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 | 2.0 | 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 | 2.0 | 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 | 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 | 2.0 | 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 | 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: | | | | | | | | | | | | | | |
| 1330 | 3000.021 | 30 Amp | ea | 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 | 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 | 14.0 | 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 | 10.0 | 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 | 4.0 | 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 |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | LABOUR COMPONENT | | | | | | | NON LABOUR COMPONENT | | | | | | |
|-------|----------|---|------------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | 0.13 | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| | | Heavy Duty Safety Switch, 600 V, three phase, unfused, visible blade, NEMA 4X enclosure, size as follows: | | | | | | | | | | | | | | |
| 1335 | 3000.026 | 30 Amp | ea | 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 | 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 | 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 | 2.0 | 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 | 2.0 | 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 | 3.0 | 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 | 12.0 | 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 | 2.0 | 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: | | | | | | | | | | | | | | |
| 1343 | 3000.034 | 2.0 kW | ea | 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 | 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 | 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 | 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 | 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 | 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 | 13.0 | 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 | 8.0 | 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 | 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 | Convactor heater, commercial type with sloped top, 5 kW, 600 V, three phase, with low-voltage relay. | ea | 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 | 11.0 | 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 | 4.0 | 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 | 28.0 | 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: | | | | | | | | | | | | | | |
| 1356 | 3000.047 | 30 Amp | ea | 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 | 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: | | | | | | | | | | | | | | |
| 1358 | 3000.049 | 30 Amp | ea | 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 | 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 | 4.0 | 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 | 1.0 | 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: | | | | | | | | | | | | | | |
| 1362 | 3000.053 | 150 mm | m | 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 | 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 | 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 | 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 | 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 | 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: | | | | | | | | | | | | | | |
| 1367 | 3000.058 | 300 mm | ea | 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 | 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 | 87.0 | 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 | 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: | | | | | | | | | | | | | | |
| 1371 | 3000.062 | 150 mm | ea | 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: | | | | | | | | | | | | | | |
| 1372 | 3000.063 | 300 mm | ea | 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 | 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 | 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: | | | | | | | | | | | | | | |
| 1375 | 3000.066 | 150 mm | ea | 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 |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | LABOUR COMPONENT | | | | | | | | NON LABOUR COMPONENT | | | | | |
|------|----------|---|------------------|---------------|----------------------------------|-----------------------------|-------------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | 0.13 | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS D | LABOUR OH&P (per unit) D = C x 13% | 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 |
| | | 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: | | | | | | | | | | | | | | |
| 1376 | 3000.067 | 300 mm | ea | 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 | 6.0 | 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 | 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: | | | | | | | | | | | | | | |
| 1379 | 3000.070 | 150 mm | ea | 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: | | | | | | | | | | | | | | |
| 1380 | 3000.071 | 300 mm | ea | 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 | 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 | 7.0 | 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: | | | | | | | | | | | | | | |
| 1383 | 3000.074 | 150 mm | ea | 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: | | | | | | | | | | | | | | |
| 1384 | 3000.075 | 150mm | ea | 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 | 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 | 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 | 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 | 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: | | | | | | | | | | | | | | |
| 1389 | 3000.080 | 300 mm | ea | 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 | 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 | 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: | | | | | | | | | | | | | | |
| 1392 | 3000.083 | 300mm | ea | 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 | 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 | 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: | | | | | | | | | | | | | | |
| 1395 | 3000.086 | 300mm | ea | 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 | 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 | 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 | 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: | | | | | | | | | | | | | | |
| 1399 | 3000.090 | 300mm | ea | 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 | 5.0 | 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 | 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 | 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: | | | | | | | | | | | | | | |
| 1403 | 3000.094 | 1C #4/0 AWG | m | 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 | 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 | 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 | 14,265.0 | 0.2 | 22.42 | 3,537.0 | 2.91 | 41,569.26 | 319,763.53 | 4.04 | 86,754.55 | 6.08 | 35,45 | 505,719.79 | |
| 1407 | 3000.098 | 2C #10 AWG | m | 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 | 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 | 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 | 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 | 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 | 30.0 | 0.4 | 142.56 | 12.1 | 4.75 | 142.56 | 1,096.59 | 31.71 | 951.18 | 14.97 | 87.98 | 951.18 | 2,639.54 |
| 1413 | 3000.104 | 2C #2/0 AWG | m | 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 | 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 | 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 | 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 | 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 | 1,340.0 | 0.3 | 28.71 | 425.5 | 3.73 | 16,558.49 | 38,469.55 | 12.36 | 12,374.57 | 9.23 | 54.03 | 72,403.65 | |
| 1419 | 3000.110 | 3C #4 AWG | m | 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 | 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 |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | LABOUR COMPONENT | | | | | | | | | | NON LABOUR COMPONENT | | | | | |
|-------|----------|---|-----------------|---------------|----------------------------------|-----------------------------|-------------------------|-------------------------------------|---------------------------------|------------------------------------|---------------------------|----------------------|-----------------------------|-------------------|---------------------------------|--------------------------|--|
| | | 0.13 | | | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS D | LABOUR OH&P (per unit) E = A x D | 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 | |
| 1421 | 3000.112 | 3C #1 AWG | m | 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 | 0.4 | 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 | 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 | 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 | 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 | 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 | |
| 1425a | Added | 3C #500 kcmil Tray Cable | m | 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 | 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 | 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 | 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 | 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 | 30.0 | 0.4 | 138.77 | 11.8 | 4.63 | 1,067.49 | 26.21 | 409.20 | 13.64 | 80.06 | 2,401.91 | 80.06 | 2,401.91 | |
| 1430a | Added | 4C #3 AWG | m | 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 | 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 | 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 | 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 | | | | | | | | | | | | | | | |
| 1434 | 3000.125 | 1C #4/0 AWG | ea | 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 | 12.0 | 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 | 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 | 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 | 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 | 54.0 | 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 | 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 | 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 | 1.0 | 3.8 | 339.66 | 3.8 | 44.16 | 44.16 | 339.66 | 85.21 | 26.21 | 85.10 | 495.12 | 495.12 | 495.12 | |
| 1443 | 3000.134 | 2C #1 AWG | ea | 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 | 6.0 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 4.0 | 7.3 | 656.09 | 29.0 | 85.29 | 341.17 | 2,624.35 | 92.49 | 369.95 | 172.81 | 1,006.68 | 4,026.71 | 4,026.71 | |
| 1457 | 3000.148 | 3C #500 kcmil | ea | 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 | 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 | 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 | 66.0 | 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 | 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 | 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 | 4.0 | 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 | 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 | 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 | 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 | 2.0 | 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 | 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 | 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 | 2.0 | 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 | 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 | 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 | | | |

SCHEDULE OF PRICE BREAKDOWN

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|-------|----------|---|-----------------|---------------|-------------------------------------|--------------------------------|--------------------|--|------------------------------------|---------------------------------------|------------------------------|-----------------|--------------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | 0.13 | | | | | | MAT. COST (per unit) G | MAT. TOTAL COST | EQUIP. COST (per unit) H | TOTAL EQUIP. COST | | |
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) D = C x 13% | LABOUR OH&P (Ext.) E = A x D | COST OF LABOUR (Ext.) F = A x C | | | | | | |
| | | 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: | | | | | | | | | | | | | | |
| 1471 | 3000.162 | 4C # 14 AWG | m | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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) | | | | | | | | | | | | | | |
| 1480 | 3000.171 | 4C # 14 AWG | ea | 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 | 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 | 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 | 3.4 | 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 | 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 | 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 | 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 | 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 | 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: | | | | | | | | | | | | | | |
| 1489 | 3000.180 | 2P # 16 AWG | m | 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 | 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 | 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 | 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 | 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 | 0.2 | 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 | 1.0 | 0.3 | 3.24 | 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 | 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 # 18 AWG | m | 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 | 0.5 | 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: | | | | | | | | | | | | | | |
| 1496 | 3000.187 | 2P # 16 AWG | ea | 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 | 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 | 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 | 9.4 | 885.44 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | ea | 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 | 0.3 | 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 | 0.6 | 53.14 | 7.05 | 6.91 | 82.90 | 637.72 | 0.00 | 0.00 | 12.49 | 149.87 | 72.54 | 870.50 |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | | | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | | |
|-------|----------|--|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | 0.13 | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 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 | 3,020.0 | 0.2 | 17.61 | 588.2 | 2.29 | 6,913.22 | 53,178.62 | 11.00 | 33,221.23 | 6.35 | 19,186.04 | 37.25 | 112,499.12 |
| 1507a | Added | Armored 12C SM FO FT-4 PVC outer jacket Orange in colour | m | 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 | 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 SM FO FT-4 PVC outer jacket Orange in colour - Terminations | ea | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 gasketed polycarbonate lens, suitable for damp or wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V | ea | 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 gasketed polycarbonate lens, suitable for damp or wet locations, 2 x 32 W lamps, premium electronic ballast, 347 V | ea | 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 | 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 | 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 | 227.0 | 15.5 | 1,403.09 | 3,523.0 | 182.40 | 41,405.08 | 318,500.58 | 420.03 | 95,346.95 | 414.31 | 94,048.13 | 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 | 33.0 | 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 | 30.0 | 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 | 34.0 | 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 | 16.0 | 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 | 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 | 2.0 | 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 | 2.0 | 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, gasketed refractor, suitable for damp or wet locations, wall-mounted, 175 W metal halide lamp, HPF ballast, 347 V. | ea | 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 | 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 | 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 | 24.0 | 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 |

SCHEDULE OF PRICE BREAKDOWN

| | | | | | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | | |
|------|----------|--|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | 0.13 | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 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 | 1.0 | 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 | 17.0 | 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 | 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 | 57.0 | 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 | 20.0 | 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 aperture with clear reflector, 30 W LED array and driver, 1500 lumen, 347 V. | ea | 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 | 2.0 | 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, gasketed refractor, suitable for damp or wet locations, wall-mounted, 250 W high pressure sodium lamp, HPF ballast, 347 V. | ea | 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, gasketed refractor, suitable for damp or wet locations, wall-mounted, 150 W high pressure sodium lamp, HPF ballast, 347 V. | ea | 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, gasketed refractor, suitable for damp or wet locations, wall-mounted, 100 W high pressure sodium lamp, HPF ballast, 347 V. | ea | 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, gasketed refractor, suitable for damp or wet locations, wall-mounted, 70 W high pressure sodium lamp, HPF ballast, 347 V. | ea | 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, gasketed 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 | 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 | 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 | 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 | 6.0 | 9.9 | 894.19 | 59.4 | 116.24 | 697.47 | 5,365.14 | 140.65 | 843.91 | 238.46 | 1,430.78 | 1,389.55 | 8,337.30 |
| 1546 | 3000.234 | Light Switch, maintained contact pushbutton ON-OFF, 15 Amp, 347 Volt | ea | 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 | 7.0 | 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 | 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 | 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 | 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 | 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 | 4.0 | 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 | 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 | 287.0 | 6.9 | 623.50 | 1,979.3 | 81.05 | 23,262.62 | 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 | 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 | 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 | 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 kmil | m | 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 | 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 (switch, power outlet, etc.) | ea | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 |

SCHEDULE OF PRICE BREAKDOWN

| | | | LABOUR COMPONENT | | | | | | | | NON LABOUR COMPONENT | | | | | |
|-------|----------|---|------------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|------------------------|-----------------------------|-----------------------|---------------------------------|--------------------------|
| | | | 0.13 | | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| 1569a | Added | Grounding of Misc Mechanical Equipment & Fixed Steel Objects | ea | 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 | 1.0 | 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 | 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 | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 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 | 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 | 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 | 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 | 0.00 | 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 | 0.00 | 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 | | | | | 204104.0 | | \$2,398,785.40 | \$18,452,195.35 | | \$18,674,166.51 | | \$7,835,114.57 | | \$47,360,261.83 |
| | | ELECTRICAL - FREE ISSUED MATERIALS - ASSEMBLY AND INSTALLATION | | | | | | | | | | | | | | |
| 1576 | 3460.010 | Generator Step Up Transformer Unit 1 - Installation, Assembly | LS | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 |
| 1579a | Added | Spare Generator Step Up Transformer | LS | 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 |
| 1580 | 3436.010 | Installation, Assembly of Unit 1 IPB | LS | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 |
| 1587a | Added | Generator Circuit Breaker House Keeping pads | LS | 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 | | | | | 50089.5 | | \$588,690.01 | \$4,528,384.72 | | \$641,464.81 | | \$1,078,562.58 | | \$6,837,102.12 |
| | | ARCHITECTURAL | | | | | | | | | | | | | | |
| | | POWERHOUSE ARCHITECTURAL - SUPPLY & INSTALL | | | | | | | | | | | | | | |
| 1588 | 3320.010 | Concrete Unit Masonry wall Type B2a Height = full height | m2 | 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 | 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 | 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 | 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 | 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 | 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 | 14.0 | 25.9 | 2,338.36 | 362.1 | 303.99 | 4,255.81 | 32,737.03 | 164.68 | 3,389.73 | 582.70 | 8,157.84 | 3,389.73 | 47,456.16 |
| 1595 | 3320.080 | Concrete Unit Masonry wall Type B4a height = 2.8m | m2 | 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 | 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 | 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 | 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 Wall W1c height = 4.5m | m2 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 |

SCHEDULE OF PRICE BREAKDOWN

| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | EST. QTY A | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | UNIT PRICE I = C + D + G + H | TOTAL PRICE J = A x J |
|--|----------|---|-----------------|---------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | PLA LABOUR HOURS (per unit) B | LABOUR COST (per unit) C | TOTAL LABOUR HOURS | LABOUR OH&P (per unit) D = C x 13% | 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 | | |
| | | | | | 0.13 | | | | | | | | | | | |
| 1615 | 3320.280 | Partition Wall W13a height = 3.0m | m2 | 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 | 150.0 | 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 | 105.0 | 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 | 10.0 | 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 | 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 | 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 | 20.0 | 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 | 80.0 | 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 | 130.0 | 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 | 2.0 | 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 | 5.0 | 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 | 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 | 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 | 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 | 14.0 | 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 | 11.0 | 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 | 102.0 | 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 | 22.0 | 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 | 7.0 | 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 |
| 1633a | Added | Door type DT-3B | ea | 1.0 | 18.3 | 1,649.74 | 18.25 | 214.47 | 214.47 | 1,649.74 | 4,144.25 | 1,222.06 | 1,222.06 | 7,230.52 | 7,230.52 | 7,230.52 |
| 1634 | 3320.470 | Coiling counter doors (roller shutters) | ea | 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 | 7.0 | 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 | 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 | 325.0 | 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 | 165.0 | 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 | 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 | 800.0 | 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 | 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 | 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 | 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 | 20.0 | 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 | 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 | 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 | 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 | 9.0 | 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 | 370.0 | 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 | 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 | 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 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 0.0 | 0.00 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ST08 | | SUB-TOTAL ARCHITECTURAL - SUPPLY & INSTALL | | | | | 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 INSTALLTION | | | | | | | | | | | | | | | | |
| 1657 | 3437.010 | Emergency Diesel Generator Set | LS | 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 | 1.0 | 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 | | | | | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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</ | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | | | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | | |
|---|----------|---|-----------------|---------------|-------------------------------------|--------------------------------|--------------------|--|------------------------------------|---------------------------------------|------------------------------|-----------------|--------------------------------|-------------------|---------------------------------|--------------------------|
| | | | | | 0.13 | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| ST10 | | SUB-TOTAL PIPING/MECHANICAL - SINGLE CONTRACTOR DYNAMIC COMMISSIONING | | | | | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | EPH (Exhaust Welding Hood) | LS | 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 | 1.0 | 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 | 1.0 | 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 |
| ST11 | | SUB-TOTAL HVAC SYSTEM - SINGLE CONTRACTOR DYNAMIC COMMISSIONING | | | | | 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 | 1.0 | 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 | 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 | 1.0 | 3777.4 | 44,394.63 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | 1.0 | 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 | | | | | | | | | | | | | | | |

SCHEDULE OF PRICE BREAKDOWN

CH0031-001
Appendix A - Schedule of Price Breakdown

| | | | | LABOUR COMPONENT | | | | | | NON LABOUR COMPONENT | | | | | | |
|--------------------------------|----------|--|-----------------|------------------|----------------------------------|-----------------------------|--------------------|---------------------------------------|---------------------------------|------------------------------------|---------------------------|-----------------|-----------------------------|-------------------|---------------------------------|--------------------------|
| | | | | 0.13 | | | | | | | | | | | | |
| No | Subcode | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | 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 13% | 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 |
| ST12 | | SUB-TOTAL ELECTRICAL SYSTEMS - SINGLE CONTRACTOR DYNAMIC COMMISSIONING | | | | | 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 | 1.0 | 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 | | | | | 881.4 | | \$10,358.75 | \$79,682.68 | | \$25,593.83 | | \$20,887.32 | | \$136,522.58 |
| ST14 | | SUBTOTALS | | | | | 707,042 | | \$8,309,691.40 | \$63,920,703.06 | | \$93,182,476.71 | | \$27,430,276.90 | | \$192,843,148.06 |
| TOTAL ESTIMATED CONTRACT PRICE | | | | | | | | | | | | | | | | \$192,843,148.06 |

APPENDIX B

MILESTONE PAYMENT SCHEDULE

MILESTONE PAYMENT SCHEDULE

LABOUR COMPONENT

| Item # | Item Description | Payment Schedule | Criteria |
|--------|-----------------------------|------------------------|---|
| All | Reimbursable Cost of Labour | Neutral Funded Monthly | Neutral Funded Monthly a) Support in accordance with Exhibit 2 Section 16.2. |

NON LABOUR COMPONENT

| Item # | Item Description | Payment Schedule | Criteria |
|--------|---|--|--|
| 1 | Mobilization | a) 15% upon submittal of "A" series (General) documents per SDRL with Submission Requirement Date of ARO+8 or earlier. b) 10% on Acceptance (Code 2) of documents in SDRL with Submission Requirement Date of ARO+8 or earlier. c) 50% after Commencement of Mobilization. d) 25% after Completion of Mobilization. | a) Confirmation all documents have been submitted to Engineer for review and Acceptance. b) Confirmation all documents are returned to Contractor as Code 2). c) As Approved by Company where Commencement of Mobilization is defined as a Site office installed and ready for occupancy and Project Manager is on-Site. d) As Approved by Company where Completion of Mobilization is considered to be: 1) Approval (Code 1) of "A" series (General) documents per SDRL with Submission Requirement Date of ARO+8 or earlier; and 2) Begin installation of permanent Work on Site. |
| PM | Staff Labour | Monthly payments of: a) 3.214% for Month 1 – 28 inclusive (90% of total) b) 1.00% for Months 29-38 inclusive (10% of total) Based on 38 month schedule | Approved Monthly Payment Certificate. |
| | Advance Payment (Optional at Contractor's discretion) | Advance payment of up to 10% of Materials Cost and Equipment Cost components of Contract Price. Up-front payment to be paid back as % (equivalent to the percentage of the advance payment) of future | a) Schedule of values Approved By Company b) Control Schedule Submitted to Engineer c) Performance Security, strictly in accordance with Agreement requirements, received by Company |

| Item # | Item Description | Payment Schedule | Criteria |
|---------------|---|---|--|
| | | invoices | |
| 2 | Site Installation | 2.78% per month (1/36 of Price Item) beginning after Commencement of Site Installation for months 1-36. | a) Commencement of Site Installation is defined as a Site office installed and ready for occupancy and preliminary site team is on-Site. b) Approved Monthly Payment Certificate. |
| 3 | Demobilization | 100% upon Completion of Demobilization. | As Approved by Company that Contractor has completed Demobilization |
| 4 | Travel Cost for Trades Labour | Monthly | Demonstrated by submittal of receipts or other supporting documentation as required by Company. |
| 4(c) & (d) | Performance Security | 100% upon Provision of Performance Security by Contractor. | Notification of Approval by Company. |
| 5 – 6 | Piping Mechanical - Design and Engineering | a) 50% upon Piping Mechanical - Design and Engineering Contract Award. b) 50% on Approval for use (Code 1) of all engineering deliverables in accordance with the SDRL. | a) Notification of Approval by Company. b) Confirmation all documents are returned to Contractor as Code 1. |
| 7 – 1258b | Piping Mechanical - Supply And Installation | a) 10% upon issuance by Contractor of Purchase Order or Subcontract. b) 50% upon receipt of Materials at Site. c) 20% on installation based on monthly earned progress as Approved by Company. d) 10% on Acceptance of Mechanical Completion Certificates. e) 10% on Acceptance (Code 1) of all associated document deliverables in accordance with the SDRL. | a) Provision of Purchase Order or Agreement by Contractor. b) Confirmation by Contractor that Materials have been received. c) Approval by Company of earned progress. d) Provision of Accepted Mechanical Completion Certificate by Contractor. e) Confirmation all documents are returned to Contractor as Code 1. |
| 1259 – 1286.5 | HVAC Systems - Supply and Installation | a) 10% upon issuance by Contractor of Purchase Order or Subcontract. b) 50% upon receipt of Materials at Site. c) 20% on installation based on monthly earned progress as Approved by Company. d) 10% on Acceptance of Mechanical Completion Certificates. e) 10% on Acceptance (Code 1) of all associated | a) Provision of Purchase Order or Agreement by Contractor. b) Confirmation by Contractor that Materials have been received. c) Approval by Company of earned progress. d) Provision of Accepted Mechanical Completion Certificate by Contractor. e) Confirmation all documents are returned to |

Appendix B
Milestone Payment Schedule
Agreement Number: CH0031-001

| Item # | Item Description | Payment Schedule | Criteria |
|--------------|--|---|--|
| | | document deliverables in accordance with the SDRL. | Contractor as Code 1. |
| 1287 - 1289 | Electrical Engineering | a) 50% upon issuance of Electrical Engineering Subcontract. b) 50% on Approval for use (Code 1) of all engineering deliverables in accordance with the SDRL. | a) Provision of Subcontract. b) Confirmation all documents are returned to Contractor as Code 1. |
| 1290 – 1575f | Electrical - Contractor Supplied - Supply and Installation | a) 10% upon issuance of Purchase Order or Subcontract. b) 50% upon receipt of Materials at Site. c) 20% on installation based on monthly earned progress as Approved by Company. d) 10% on Acceptance of Mechanical Completion Certificates. e) 10% on Acceptance (Code 1) of all associated document deliverables in accordance with the SDRL. | a) Provision of Purchase Order or Agreement by Contractor. b) Confirmation by Contractor that Materials have been received. c) Approval by Company of earned progress. d) Provision of Accepted Mechanical Completion Certificate by Contractor e) Confirmation all documents are returned to Contractor as Code 1. |
| 1576 – 1587a | Electrical - Free Issued Materials - Assembly and Installation | a) 85% on installation based on monthly earned progress as Approved by Company. b) 5% on Acceptance of Mechanical Completion Certificates. c) 10% on Acceptance (Code 1) of all associated document deliverables in accordance with the SDRL. | a) Approval by Company of earned progress. b) Provision of Accepted Mechanical Completion Certificate by Contractor. c) Confirmation all documents are returned to Contractor as Code 1. |
| 1588 - 1656 | Powerhouse Architectural - Supply and Installation | a) 10% upon issuance by Contractor of Purchase Order or Subcontract. b) 50% upon receipt of Materials at Site. c) 20% on installation based on monthly earned progress as Approved by Company. d) 10% on Acceptance of Mechanical Completion Certificates. e) 10% on Acceptance (Code 1) of all associated document deliverables in accordance with the SDRL. | a) Provision of Purchase Order or Agreement by Contractor. b) Confirmation by Contractor that Materials have been received. c) Approval by Company of earned progress. d) Provision of Accepted Mechanical Completion Certificate by Contractor. e) Confirmation all documents are returned to Contractor as Code 1. |
| 1657 - 1658 | Diesel Generator System - Supply and Installation | a) 10% upon issuance by Contractor of Purchase Order or Subcontract. b) 60% upon receipt of Materials at Site. | a) Provision of Purchase Order or Agreement by Contractor. b) Confirmation by Contractor that Materials |

| Item # | Item Description | Payment Schedule | Criteria |
|---------------|--|--|---|
| | | c) 10% on installation based on monthly earned progress as Approved by Company. d) 10% on Acceptance of Mechanical Completion Certificates. e) 10% on Acceptance (Code 1) of all associated document deliverables in accordance with the SDRL. | have been received. c) Approval by Company of earned progress. d) Provision of Accepted Mechanical Completion Certificate by Contractor. e) Confirmation all documents are returned to Contractor as Code 1. |
| 1659 – 1673 | Piping/Mechanical Systems – Single Contractor Dynamic Commissioning | 100% on completion of Single Contractor Dynamic Commissioning. | By system and Engineer’s Acceptance of handover documentation for RFO. |
| 1674 – 1701.4 | HVAC Systems – Single Contractor Dynamic Commissioning | 100% on completion of Single Contractor Dynamic Commissioning. | By system and Engineer’s Acceptance of handover documentation for RFO. |
| 1702 – 1725 | Electrical Systems – Single Contractor Dynamic Commissioning | 100% on completion of Single Contractor Dynamic Commissioning. | By system and Engineer’s Acceptance of handover documentation for RFO. |
| 1726 | Powerhouse Diesel Generator System – Single Contractor Dynamic Commissioning | 100% on completion of Single Contractor Dynamic Commissioning | By system and Engineer’s Acceptance of handover documentation for RFO. |

APPENDIX C

SMALL TOOLS, CONSUMABLES AND PPE

The following lists include, but are not limited to, items that Company classifies as "Personal Protective Equipment", "Consumables", and "Small Tools", whether recoverable or non-recoverable.

1. PERSONAL PROTECTIVE EQUIPMENT

All personal protective equipment shall meet the requirements of Occupational Health and Safety Regulations.

| | |
|------------------------------------|---|
| APRON, WELDERS | HALF FACE or FULL FACE RESPIRATOR WITH CARTRIDGES – ALL TYPES |
| BELT, SAFETY | HARD HAT |
| BLANKET, FIRE | HEARING PROTECTION |
| BLOCK, WELDING HELMET | HOOD, WELDING |
| BOOT, SAFETY, ALL TYPES | INSECTICIDE |
| BRACKET, FOR FACE SHIELD | LANYARD FOR SAFETY BELTS |
| BRACKET, FIBER BROW, SAFETY SHIELD | LENS, WELDING |
| CAPS, PLASTIC SAFETY (FOR REBAR) | LIFE LINE |
| CURTAIN, WELDER | LOCKS |
| DUST MASK | MOUNTING VISOR AND KWIK-KLIP |
| DISPOSABLE MASK | PULLER, FUSE SAFETY |
| EYESHIELD, FOR BENCH GRINDER | RAIN WEAR, JACKET AND OVERALLS |
| FIRST AID SUPPLIES | SAFETY HARNESS |
| FLARE, ROAD, NON-ELECTRIC | SIREN, ELECTRIC |
| GLASSES, SAFETY | STRAP, CHIN |
| GLOVES, WORK, ALL TYPES | SWEAT BANDS |
| GOGGLES, SAFETY | TABLET, SALT |
| GUARDS, SHIN | VISOR, SHIELD, CLEAR |
| GUARDS, TOE, METAL W/STRAP | WELDING SHIELDS |

2. CONSUMABLES

| | | | |
|--|---|-----|---|
| ABRASIVES | EXPANDER, TUBEROLLS | AND | PAD, POLISHING |
| ACID | MANDRELS | | PADLOCKS |
| ADAPTORS, TOOL – all types | FASTENERS | | PAINT (for erection marking) |
| ADHESIVE | FEELER STOCK | | PAINT STICK |
| ALCOHOL | FILE, METAL CUTTING | | PAN, DRAIN |
| ANTIFREEZE | FILE, WOOD CUTTING | | PAPER – sand, toilet |
| ANTI-SPLATTER SPRAY | FILTER – for vacuum cleaner | | PASTE – solder |
| APRON, WELDERS | FILTERS | | PATTERNS |
| ARBORS, HOLE SAW | FISHTAPE, HAND | | PENCIL, CARPENTER |
| AUGER, HAND - post hole digger | FITTINGS, ALEMITE & HOSE | | PENS, WRITING, MARKING |
| BADGES | FLAMBEAU, KEROSENE | | PETROLEUM JELLY |
| BAG, DUST – for belt sander | FLASHLIGHT | | PICK, CLAY |
| BAG, BOLT | FLINT | | PLUG, PIPE TEST |
| BANDS, SAFETY HAT | FLUID CLEANING | | PLUNGER, BATHROOM |
| BARRELS, WATER or TRASH | FLUX - brazing, welding | | POCKET, LINEMAN'S |
| BATTERY – flashlight and lantern | FORK, SEED | | POUCH, CANVAS |
| BELTING, BELT DRESSING | FORM TIES | | POUCH, ROD |
| BINS, TRASH | FRAME, HACKSAW | | POWDER, SCOURING |
| BITS – small hand tool, all types | FUELS (for construction equipment) | | PULLER, WIRE |
| BLADES – small hand tool, all types | FUNNELS, ALL TYPES | | PUMICE |
| BLANKET – wool, rubber | FUSE (except for permanent plant use) | | PUNCH AND CHISEL SETS |
| BOX, CARDBOARD | GARBAGE BAGS | | PUNCH, CONDUIT |
| BRACKET, FLOAT HANDLE | GASKETS, HOSE | | PUNCH, PIN SET |
| BRICK, RUBBING | GLOVES, WORK, all types | | PUTTY |
| BROOM – all types | GLUE | | RAGS |
| BRUSH – all types | GLYCERINE | | RAKE, GARDEN |
| BUCKET – all types | GOGGLES, WORK, all types | | RAKE, CONCRETE |
| BULB – blow out, dust | GRAPHITE | | RAKE, ROAD |
| BULB – flashlight, lantern, light | GREASE | | REAMER, TAPER PIN (Hand Only) |
| BURLAP | GRIPS, PLASTIC for pliers | | RIGGING HOOKS |
| CABLES, RIGGING | GROMMETS | | ROPE, MANILA |
| CAN, OIL | GUIDE, HINGE-BUTT for router | | ROPE, POLYPROPYLENE |
| CAN, SAFETY | GUN, CAULKING | | ROPE, WIRE |
| CARBIDE | GUN, GREASE | | RULE - Extension, Wood, Fiberglass, Folding |
| CARBORUNDUM – Blocks, Stones | HASPS | | RULE, TAPE |
| Walk | HATCHET | | RUST PREVENTIVE |
| CHAIN, SAFETY | HINGES | | SANDBLAST NOZZLES |
| CHAIN, LOADBINDER | HOE | | SCISSORS, ELECTRICIAN |
| CHALK | HOOK, SNAP | | SCRAPER, HAND |
| CHALK LINE BOX | HOOK, TIMBER | | SCRAPER, SIDEWALK |
| CHAMOIS | HOSE, AIR, ¾" /Dia. Max. (Air Tools Only) | | SCRAPER, WALL |
| CHARCOAL AND COKE | HOSE WATER to ¾" | | SCREEN CLOTH – Wire |
| CHISEL – all types | HOSE, GREASE, GUN | | SCREW RUNNER |
| CHOKER – all types | HOSE, TWIN WELDING | | SCREW STARTER |
| CHUCKS, TOOL – all types | ICE | | SCREWDRIVER, All Types |
| CLAMP, CABLE | INK, LAYOUT – for Millwrights | | SHACKLES |
| CLAMP, HOSE | IRON, CAULKING | | SHEATH, PLUMB BOB |
| CLEANER, DRAIN | IRON, PACKING | | SHIMS |
| CLEANER, HAND | IRON, YARNING | | SILICONE SPRAY |
| CLEANER, TIP | JAW, BOLT CUTTER REPLACEMENT | | SOAP |
| CLIPS, WIRE ROPE | JITTERBUG – Concrete Hand | | SOAP STONE |
| CLOTH, DROP, PAINTER'S | JOINT RUNNER | | SOLDER |
| CLOTH, EMERY | KEEL (lumber crayon) | | SOLVENT |
| CLOTH, STRAINING | KEY, CHUCK | | SPONGE |
| COAL and COKE | KEY, EJECTOR for Roto Hammers | | STAKE - survey |
| COMPOUND - cleaning, pipe, thread grinding | | | STAPLES |
| | | | STRING, NYLON |

| | | |
|---|--|---|
| COMPOUND, SWEEPING | KEY, HEX | TACKS |
| COMPOUND, WIRE PULLING | LASHING, WIRE ROPE | TAG, BLANK, WIRE TWIST |
| CONNECTORS – Cord, Cotter Pins | LATCHES | TARPAULIN |
| CORD, PLUMB BOB | LATTERNS, 6 VOLT LENS - Welding | TAP, TAPER, HAND |
| CORD, SASH | LIGHTER, SPARK | TAPE - adhesive, masking, friction, rubber, plumbers, etc. |
| CORK | LIME, MARKING | TEMPIL STICKS |
| CRAYON, LUMBER | LINE, FISH | THIMBLES, WIRE ROPE |
| CRAYON – Temperature Indicating | LITHARGE | TIP, TORCH WELDING |
| CREOSOTE | LUBRICANT – thread cutting, electric wire pulling | TOOL BOXES, BINS |
| CUP – drinking | LUGS | TOOL, BRUSHING for Vacuum cleaner |
| CUTTER WHEELS – tools, all types | MARKER, METAL | TOOL, CREVICE, 15” for Vacuum |
| DIE NUTS – Hexagon Rethread | MARKER, PIPE CONTOUR | TOOL, MAJOR FLOOR, 14” |
| DIES, BUTTON | MENDERS, HOSE | TOOL STEEL |
| DIES, KNOCKOUT | MIRROR, INSPECTION | TOWEL – Paper |
| DIES, PIPE – for Hand Threaders Only | MOP | TORCH, HEATING |
| DIES, TMB – 8, Compression Tools | NAILS | TORCH, CUTTING |
| DIPPERS | NIPPLES, HOSE | TROWEL, HAND |
| DISC, GRINDING | NOZZLE, WATER | TRUNBUCKLES |
| DISINFECTANT | NUT RUNNER | TURPENTINE |
| DISPENSER, PAPER CUP | NUT SETTER | TWINE |
| DRESSING, BELT | OFFICE SUPPLIES | VISQUEEN – Non-reinforced |
| DRILL BIT – Small Hand Tool, All Types | OIL - all types | WASHERS |
| EDGER, CONCRETE HAND | PACKING MATERIAL | WASHING POWDER |
| ELECTRODE HOLDERS | | WASHROOM SUPPLIES |
| | | WASTE – Cotton |
| | | WATER CANS |
| | | WELD ROD |
| | | WELDING GASES |
| | | WHEEL, DEPRESSED CENTER |
| | | WHEELBARROW, All Types |
| | | WHEEL ABRASIVE |
| | | WHEEL, WIRE |
| | | WICKS, LANTERN |
| | | WIRE - tie & miscellaneous |
| | | WOOL – steel |
| | | WRAP AROUNDS |

3. SMALL TOOLS

| | | | |
|--|---|---|--|
| ADAPTER - hose, pipe thread | DOOR HANGING KIT | MOVER - freight car, hand | SOLDERING IRON |
| ADZE | DRESSER - grinding wheel | NAILER, AIR | SPADE |
| ANVIL | DRILL - all types: hand, electric, pneumatic | NIBBLER, SHEET METAL | SPEED, PORTABLE |
| APRON | DRILL PRESS | NIPPER | SPIKE- marlin |
| ARBOUR | DRILL STAND - bench | NOTCHER, PIPE | SPRAYER, ORCHARD |
| AUGER, GASOLINE (Post Hole Digger) | DYNAMOMETER | NOZZLE - hose, weld | SPREADER, FLANGE |
| AWL | ELCOMETER - paint thickness gauge | NUT - die, driver | SQUARE- combination, framing, etc. |
| AXE | EMBOSSER, TAPE, HAND | OILER - can, hand | SQUEEGEE |
| BABBITT | ETCHER, ELECTRIC | OVEN - welding rod | STAND, DRILL |
| BANDING MACHINE – Hand Type | EXPANDER- tube | PAIL | STAND, GRINDER |
| BAR- claw, crow, pinch, etc. | EXTENSION, SOCKET SET | PEDESTAL, GRINDER | STAND, PIPE |
| BARREL- trash | EXTENSION CORD | PIN, BARREL | STAND, REEL, TELESCOPING SCREW |
| BASE, MAGNETIC/DAILY TEST INDICATOR | EXTRACTOR - pipe & screw | PIN, BULL | STAPLE- tacker |
| BELT- safety w/strap | FAN - electric | PIN, DRAFT | STAPLER, ELECTRIC OR HAND |
| BENDER - hydraulic, manual | FILE - hand | PINCER | STAR DRILL |
| BENDER, CABLE | FLARING TOOL | PLANE – wood | STEAM HEATER |
| BENDER, PIPE | FLASHLIGHT - c/w bulb & batteries | PLANE, BENCH JACK | STENCIL- steel, brass, paper |
| BENDER, TUBING | FLATTER - blacksmith | PLANE, BLOCK | STONE - OIL |
| BENDER, LOAD | FLOAT, CONCRETE – Hand Only | PLANE, ELECTRIC | STRAIGHT EDGE |
| BEVEL | FORGE - blacksmith | PLANE, VERSI | STRAINER- air line |
| BEVELLER - load | FORK - barn | PLANNER, POWER BLOCK – Electric | STRAPPER |
| BINDER - load | FULLER - blacksmith | HD | STRIPPER- wire |
| BIT - auger, carpenter | FURNACE, PROPANE – Melting | PLIERS – all types | SUPPORT, PIPE – Roller type |
| BLOCK - chain, rope, cable, etc. | GAD | PLUMB BOB | SWEDGING TOOL KIT |
| BLOCKS, WOOD | GAUGE- drill, feeler, wire thickness, tire, etc. | POINT - trammel | SWIVEL |
| BLOCKS, METAL – Snatch | GRINDER- electric, pneumatic | POLE - pike, range | TACHOMETER |
| BLOWER – Pneumatic Powered | GRAB, PIPE OF 20" | POT - melting, fire, welding rod, lead | TAMPER- hand, pneumatic |
| BOB, PLUMB | GRINDER, ELECTRIC | POUCH - tool | TANK, LP – 20# only |
| BOSUN CHAIRS | GRIP- cable | PRESTOLITE OUTFIT | TAP- bolt, pipe, wrench |
| BOX - tool box or tool bag | GROOVING, TOOL | PROTRACTOR | TAPE- steel measuring |
| BOX, GANG (Craft Storage) | GUN- grease caulking, paint, heat (115V), pop rivet, powder actuated, soldering | PULLER, FUSE SAFETY | TAPEWRITER, EMBOSSING – Hand type |
| BRACE - ratchet | HACKSAW, POWER | PULLER, WHEEL GEAR | TAPPER |
| BROOMS | HAMMERS - all types: pneumatic, hand | PULLER- nail, wire, spike road | TELEPHONE- hand set, electrician's testing |
| BURNER, WEED | HANDLES - all types | PULLEY, CABLE | TEMPLATE, HINGE-BUTT |
| CABLE - welding, electrode, ground, etc. | HATCHET & HANDLE - for hand threader sets | PULLEY, WELL | TESTER- battery, hardness, antifreeze, circuit, insulation, motor rotation, etc. |
| CALLIPERS | HATCHET, WRENCH | PUMP- hand, barrel, sump, test | THIMBLE- pipe |
| CANS | HEATER - portable: fuel, electric (115V), LP, Kerosene | PUNCH- center, back out, arch, knockout, hob, gasket, sheet metal, stud, etc. | THREADER- pipe chain, etc. |
| CART - concrete | HOD - brick, mortar | RADIO- portable, 2 way, intercom | TONGS, BRICK CARRIER |
| CART, WELDING BOTTLE 2 | HOE | RASP | TONGS, CHAIN |
| CASTERS | HOIST - portable, all types | REAMER- pipe, bridge burring, etc. | TONGS, PIPE |
| CAULKING TOOL - yarning iron | HOOD - welding, sandblasting | REAMER, INNER, OUTER – for copper tubing | TONGS, SHEET METAL |
| CENTER FINDER SET - Wiggler | HOOK - packing, eye, cant, lug, etc. | REAMER, STRAIGHT – Pipe only | TONG- blacksmith, pipe, |
| CHAIN - surveyor, measuring, steel loading | HORSES - mason, saw | REEL, TIE WIRE | TOOL, FLARING |
| CHAIN, BOSUN'S | INDICATOR - dial, test | REGULATOR- welding gas | TOOL, PICK UP, MAG |
| CHARGER - battery | IRON - tire | RESPIRATOR- dusts c/w refill | TOOL, SOIL PIPE ASSEMBLY |
| CHUCK - taper, drill | JACK - flange, hydraulic, mechanical, screw | RIGGERS ROPE- manila, wire | TOOL- clamping (hose) |
| CLAMP - pipe, aligning, saw, carpenter, etc. | | RIVETER, HAND | TOOLS- cement worker |
| CLIMBER – Adjustable w/Pad and Straps | | ROLLER, PIPE | TORCH- blow, soldering |
| CLIPPER - bolt | | ROLLER, paint | Cutting, propane, acetylene, |
| COOLER - drinking water | | ROUTER, ELECTRIC | prestolite |
| COMBINATION SETS – 6" to 18" | | RULES- all types | TRANSFORMER- dry type |
| | | RUSH DRILL | TROLLEY |

Exhibit 2

Compensation

Agreement Number: CH0031-001

| | | | |
|---|---------------------------------|--|--|
| CONNECTOR - welding, cable | JIG - weld coupon bending test | SANDER- disc, belt | TROWEL |
| CONVEYOR - gravity, roller | KEY - welding, gas tank | SAW - portable, all types: hand, power | TRUCK- hand |
| CORD - electric extension | KNIFE - draw, putty | SCALER, NEEDLE | TURNBUCKLE |
| COUPLING - hose | KNOCKOUT, HAND | SCRAPER- bearing, miscellaneous | TWISTER- wire |
| CREEPER, FLOOR | LADDER - steel, extension, etc. | SCREW STOP | UMBRELLA |
| CRIMPER, BAND | LADLE - melting, lead | SCREW PLANE (set) | UNIVERSAL – for socket sets |
| CRIMPER - electrician's | LANTERNS - all types | SCRIBER SET- nail, rivet | VACUUM CLEANER, HD |
| CRIMPING TOOL - Wire | LEAD JOINT RUNNER | SHARPENER, DRILL BIT | VIBRATOR, CONCRETE- pneumatic, Electric |
| CUTTER - bar, wire, pipe-hand, pipe-gearred, gasket, etc. | LEVEL - hand, line, etc. | SHEAR- bar, tinnern | WISE, MACHINIST |
| CYLINDER, HYDRAULIC – for Porta Powers | LIGHT - portable, flood, drop | SHEAR, ANGLE IRON | WISE, PIPE |
| DIE- pipe, bolt, c/w head, stock | LINE - mason, chalk | SHEARS, ELECTRIC, HAND | WEDGE |
| DIGGER - hand, pneumatic | LUBRICATOR - air line | SHEARS, TRIMMING, ROTARY | WELDING TOOLS |
| DIVIDER – wing | MALLET | SHEAVES, CABLE, TRAY METAL | WELDING & CUTTING OUTFIT (Oxy/Acetelyne) |
| DIVIDER, SPRING TYPE | MANDREL - all types | SHEETING- plastic, paper | WHEEL- grinding |
| DOLLY, BARREL | MARKER, LIME, ROLLING | SHIELD- face | WHEELBARROW |
| DOLLY, BEAM | MATTOCK | SHOVEL | WINCH- hand |
| DOLLY, CATERPILLAR | MAUL | SIREN, ELECTRIC | WRENCHES- all types |
| DOLLY, MACHINE | MEGGER METER | SLEEVE- morse, taper, shank | |
| DOLLY, PIPE | METER - vibration | SLING- canvas, pipe, wire, rope, nylon | |
| DOLLY, PRY | METER, AMP – Clamp-on w/Case | SNIP- tinner | |
| DOLLY, WAREHOUSE | METER, MILLIVOLT | SNIPS, AVIATION, HAND | |
| DOLLY BAR - pivot | METER, MOISTURE | SNIPS, METAL CUT, HAND | |
| | METER, VOLT | SNIPS, TRIM HAND | |
| | MICROMETER | SOCKET for hand tools only | |
| | MIRROR, INSEPCTION | SOCKET SET | |
| | MITER BOX – Electric or hand | | |
| | MORTISER, LOCK - Electric | | |

APPENDIX D

PERSONNEL RATE SCHEDULE

PERSONNEL RATE SCHEDULE

PLA LABOUR

Rates Effective from 01 May 2017 – 30 April 2018 - DAYSHIFT

| Trade or Classification | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)*F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*1.5)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*2)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
|--|------------------|--|---|-----------------------------|--|--|-----------------------------|-------------------------------------|---|--|--|
| Boilermakers - Multiplier / Fixed Value | | | 12.0% | 3.50 | 10.90% | 11.68 | 3.00 | 5.00 | | | |
| Boilermakers - General foreperson | 45.83 | - | 5.50 | 3.50 | 5.98 | 11.68 | | 1.50 | 73.99 | 110.23 | 146.47 |
| Boilermakers - foreperson | 44.73 | - | 5.37 | 3.50 | 5.84 | 11.68 | | 1.50 | 72.62 | 108.18 | 143.74 |
| Boilermakers - Assistant foreperson | 43.38 | - | 5.21 | 3.50 | 5.68 | 11.68 | | 1.50 | 70.94 | 105.67 | 140.39 |
| Boilermakers - Journeyman | 41.68 | - | 5.00 | 3.50 | 5.47 | 11.68 | 3.00 | 5.00 | 75.33 | 109.00 | 142.66 |
| Boilermakers - Helper | 31.26 | - | 3.75 | 3.50 | 4.20 | 11.68 | 3.00 | 5.00 | 62.39 | 89.58 | 116.78 |
| Boilermakers - Apprentice - Level 3 | 37.51 | - | 4.50 | 3.50 | 4.96 | 11.68 | 3.00 | 5.00 | 70.15 | 101.23 | 132.31 |
| Boilermakers - Apprentice - Level 2 | 31.26 | - | 3.75 | 3.50 | 4.20 | 11.68 | 3.00 | 5.00 | 62.39 | 89.58 | 116.78 |
| Boilermakers - Apprentice - Level 1 | 25.01 | - | 3.00 | 3.50 | 3.44 | 11.68 | 3.00 | 5.00 | 54.63 | 77.94 | 101.25 |
| Bricklayers - Multiplier / Fixed Value | | | 10.0% | 3.50 | 10.90% | 8.95 | 2.00 | 3.75 | | | |
| Bricklayers - General foreperson | 51.19 | - | 5.12 | 3.50 | 6.52 | 8.95 | | 1.50 | 76.78 | 114.42 | 152.06 |
| Bricklayers - foreperson | 49.06 | - | 4.91 | 3.50 | 6.26 | 8.95 | | 1.50 | 74.18 | 110.52 | 146.85 |
| Bricklayers - Journeyman - Group 1 | 42.66 | - | 4.27 | 3.50 | 5.50 | 8.95 | 2.00 | 3.75 | 70.62 | 103.06 | 135.49 |
| Bricklayers - Journeyman - Group 2 | 39.25 | - | 3.92 | 3.50 | 5.09 | 8.95 | 2.00 | 3.75 | 66.46 | 96.82 | 127.17 |
| Bricklayers - Journeyman - Group 3 | 41.02 | - | 4.10 | 3.50 | 5.30 | 8.95 | 2.00 | 3.75 | 68.62 | 100.06 | 131.49 |
| Bricklayers - Apprentice - 1st 6 months | 23.89 | - | 2.39 | 3.50 | 3.25 | 8.95 | 2.00 | 3.75 | 47.72 | 68.71 | 89.70 |
| Bricklayers - Apprentice - 2nd 6 months | 26.45 | - | 2.64 | 3.50 | 3.55 | 8.95 | 2.00 | 3.75 | 50.85 | 73.39 | 95.94 |
| Bricklayers - Apprentice - 3rd 6 months | 29.01 | - | 2.90 | 3.50 | 3.86 | 8.95 | 2.00 | 3.75 | 53.97 | 78.08 | 102.19 |
| Bricklayers - Apprentice - 4th 6 months | 31.57 | - | 3.16 | 3.50 | 4.17 | 8.95 | 2.00 | 3.75 | 57.09 | 82.76 | 108.43 |
| Bricklayers - Apprentice - 5th 6 months | 34.13 | - | 3.41 | 3.50 | 4.47 | 8.95 | 2.00 | 3.75 | 60.21 | 87.44 | 114.68 |
| Bricklayers - Apprentice - 6th 6 months | 36.26 | - | 3.63 | 3.50 | 4.73 | 8.95 | 2.00 | 3.75 | 62.82 | 91.35 | 119.88 |
| Bricklayers - Apprentice - 7th 6 months | 38.39 | - | 3.84 | 3.50 | 4.99 | 8.95 | 2.00 | 3.75 | 65.42 | 95.25 | 125.08 |
| Bricklayers - Apprentice - 8th 6 months | 40.53 | - | 4.05 | 3.50 | 5.24 | 8.95 | 2.00 | 3.75 | 68.02 | 99.15 | 130.29 |
| Carpenters - Multiplier / Fixed Value | | | 13% | 3.50 | 10.90% | 11.75 | 2.00 | 3.75 | | | |
| Carpenters - General foreperson | 45.07 | - | 5.86 | 3.50 | 5.93 | 11.75 | | 1.50 | 73.61 | 109.67 | 145.73 |
| Carpenters - Non-working foreperson | 43.19 | - | 5.61 | 3.50 | 5.70 | 11.75 | | 1.50 | 71.26 | 106.14 | 141.01 |
| Carpenters - Working foreperson | 41.32 | - | 5.37 | 3.50 | 5.47 | 11.75 | 2.00 | 3.75 | 73.16 | 106.87 | 140.58 |
| Carpenters - Journeyman carpenter welder scaffolder | 37.56 | - | 4.88 | 3.50 | 5.01 | 11.75 | 2.00 | 3.75 | 68.45 | 99.80 | 131.15 |
| Carpenters - Helper | 22.54 | - | 2.93 | 3.50 | 3.16 | 11.75 | 2.00 | 3.75 | 49.63 | 71.57 | 93.51 |
| Carpenters - Apprentice - 1 | 24.41 | - | 3.17 | 3.50 | 3.39 | 11.75 | 2.00 | 3.75 | 51.97 | 75.08 | 98.19 |
| Carpenters - Apprentice - 2 | 26.29 | - | 3.42 | 3.50 | 3.62 | 11.75 | 2.00 | 3.75 | 54.33 | 78.61 | 102.90 |
| Carpenters - Apprentice - 3 | 30.05 | - | 3.91 | 3.50 | 4.08 | 11.75 | 2.00 | 3.75 | 59.04 | 85.69 | 112.33 |
| Carpenters - Apprentice - 4 | 33.80 | - | 4.39 | 3.50 | 4.55 | 11.75 | 2.00 | 3.75 | 63.74 | 92.73 | 121.73 |
| Electricians - Multiplier / Fixed Value | | | 13.0% | 3.50 | 10.90% | 9.75 | 2.00 | 3.75 | | | |
| Electricians - General foreperson | 48.93 | - | 6.36 | 3.50 | 6.41 | 9.75 | | 1.50 | 76.45 | 113.93 | 151.40 |
| Electricians - Non-working foreperson | 46.81 | - | 6.09 | 3.50 | 6.15 | 9.75 | | 1.50 | 73.79 | 109.94 | 146.09 |
| Electricians - Working foreperson | 44.68 | - | 5.81 | 3.50 | 5.89 | 9.75 | 2.00 | 3.75 | 75.37 | 110.18 | 144.99 |
| Electricians - Apprentice/Journeyman electrician welder/welder | 44.68 | - | 5.81 | 3.50 | 5.89 | 9.75 | 2.00 | 3.75 | 75.37 | 110.18 | 144.99 |
| Electricians - Journeyman | 42.55 | - | 5.53 | 3.50 | 5.62 | 9.75 | 2.00 | 3.75 | 72.70 | 106.18 | 139.66 |
| Electricians - Apprentice - 1st year | 23.40 | - | 3.04 | 3.50 | 3.26 | 9.75 | 2.00 | 3.75 | 48.71 | 70.19 | 91.67 |

PERSONNEL RATE SCHEDULE

PLA LABOUR

Rates Effective from 01 May 2017 – 30 April 2018 - DAYSHIFT

| Trade or Classification | Base Rate | Shift Premium per Hour | Vacation & Holiday Pay | LCP Premium | Govt. Payroll Burdens | Union Benefits and Funds | Small Tools | Consumables and PPE | Straight Time Rate per Hour | Overtime Rate (1.5x) per Hour | Overtime Rate (2.0x) per Hour |
|--|-----------|------------------------|------------------------|--------------|------------------------|--------------------------|--------------|---------------------|-----------------------------|---|---|
| Reference Formula | (B) | (C) fixed | (D) =sum(B?:C?)*CS? | (E) fixed | (F) =sum(B?:E?)*FS? | (G) fixed | (H) fixed | (I) fixed | (J) =sum(B?:I?) | (K) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*1.5)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | (L) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*2)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
| Electricians - Apprentice - 2nd year | 27.66 | - | 3.60 | 3.50 | 3.79 | 9.75 | 2.00 | 3.75 | 54.04 | 78.19 | 102.33 |
| Electricians - Apprentice - 3rd year | 29.79 | - | 3.87 | 3.50 | 4.05 | 9.75 | 2.00 | 3.75 | 56.71 | 82.20 | 107.68 |
| Electricians - Apprentice - 4th year | 34.04 | - | 4.43 | 3.50 | 4.57 | 9.75 | 2.00 | 3.75 | 62.04 | 90.18 | 118.33 |
| Hotel and Restaurant - Multiplier / Fixed Value | | | 13.0% | 1.00 | 10.90% | 16.04 | 2.00 | 3.75 | | | |
| Hotel and Restaurant - Group 1 - Security | 40.45 | - | 5.26 | 1.00 | 5.09 | 16.04 | 2.00 | 3.75 | 73.59 | 107.51 | 141.43 |
| Hotel and Restaurant - Group 2 - Security | 38.91 | - | 5.06 | 1.00 | 4.90 | 16.04 | 2.00 | 3.75 | 71.66 | 104.61 | 137.57 |
| Hotel and Restaurant - Group 3 - Security | 37.43 | - | 4.87 | 1.00 | 4.72 | 16.04 | 2.00 | 3.75 | 69.81 | 101.83 | 133.86 |
| Hotel and Restaurant - Group 1 | 41.39 | - | 5.38 | 1.00 | 5.21 | 16.04 | 2.00 | 3.75 | 74.77 | 109.27 | 143.78 |
| Hotel and Restaurant - Group 2 | 38.42 | - | 4.99 | 1.00 | 4.84 | 16.04 | 2.00 | 3.75 | 71.05 | 103.70 | 136.34 |
| Hotel and Restaurant - Group 3 | 37.43 | - | 4.87 | 1.00 | 4.72 | 16.04 | 2.00 | 3.75 | 69.81 | 101.83 | 133.86 |
| Hotel and Restaurant - Group 4 | 36.40 | - | 4.73 | 1.00 | 4.59 | 16.04 | 2.00 | 3.75 | 68.51 | 99.89 | 131.28 |
| Hotel and Restaurant - Group 5 | 35.92 | - | 4.67 | 1.00 | 4.53 | 16.04 | 2.00 | 3.75 | 67.91 | 98.99 | 130.07 |
| Hotel and Restaurant - Group 6 | 35.42 | - | 4.60 | 1.00 | 4.47 | 16.04 | 2.00 | 3.75 | 67.29 | 98.06 | 128.82 |
| Hotel and Restaurant - Group 7 | 34.40 | - | 4.47 | 1.00 | 4.35 | 16.04 | 2.00 | 3.75 | 66.01 | 96.13 | 126.26 |
| Insulators - Multiplier / Fixed Value | | | 13.0% | 3.50 | 10.90% | 10.65 | 2.00 | 3.75 | | | |
| Insulators - General foreperson | 44.58 | - | 5.80 | 3.50 | 5.87 | 10.65 | 2.00 | 1.50 | 71.90 | 107.09 | 142.29 |
| Insulators - Non-working foreperson | 42.08 | - | 5.47 | 3.50 | 5.57 | 10.65 | 2.00 | 1.50 | 68.76 | 102.39 | 136.02 |
| Insulators - Working foreperson | 41.33 | - | 5.37 | 3.50 | 5.47 | 10.65 | 2.00 | 3.75 | 72.07 | 105.23 | 138.39 |
| Insulators - Journeyman mechanic | 40.08 | - | 5.21 | 3.50 | 5.32 | 10.65 | 2.00 | 3.75 | 70.51 | 102.88 | 135.26 |
| Insulators - Apprentice - 1st year | 24.05 | - | 3.13 | 3.50 | 3.34 | 10.65 | 2.00 | 3.75 | 50.42 | 72.75 | 95.08 |
| Insulators - Apprentice - 2nd year | 26.05 | - | 3.39 | 3.50 | 3.59 | 10.65 | 2.00 | 3.75 | 52.93 | 76.52 | 100.10 |
| Insulators - Apprentice - 3rd year | 30.06 | - | 3.91 | 3.50 | 4.08 | 10.65 | 2.00 | 3.75 | 57.95 | 84.05 | 110.15 |
| Insulators - Apprentice - 4th year | 34.07 | - | 4.43 | 3.50 | 4.58 | 10.65 | 2.00 | 3.75 | 62.97 | 91.58 | 120.19 |
| Ironworkers - Multiplier / Fixed Value | | | 13.5% | 3.50 | 10.90% | 10.28 | 3.00 | 5.00 | | | |
| Ironworkers - Structural General foreperson | 49.39 | - | 6.67 | 3.50 | 6.49 | 10.28 | 3.00 | 1.50 | 77.84 | 116.01 | 154.17 |
| Ironworkers - Structural foreperson | 47.33 | - | 6.39 | 3.50 | 6.24 | 10.28 | 3.00 | 1.50 | 75.24 | 112.11 | 148.98 |
| Ironworkers - Structural Connectors | 42.07 | - | 5.68 | 3.50 | 5.59 | 10.28 | 3.00 | 5.00 | 75.12 | 108.68 | 142.24 |
| Ironworkers - Structural Journeyman | 41.16 | - | 5.56 | 3.50 | 5.47 | 10.28 | 3.00 | 5.00 | 73.97 | 106.96 | 139.95 |
| Ironworkers - Structural Apprentice - 1st 1,000 hrs | 28.81 | - | 3.89 | 3.50 | 3.95 | 10.28 | 3.00 | 5.00 | 58.43 | 83.65 | 108.86 |
| Ironworkers - Structural Apprentice - 2nd 1,000 hrs | 32.93 | - | 4.45 | 3.50 | 4.46 | 10.28 | 3.00 | 5.00 | 63.61 | 91.42 | 119.22 |
| Ironworkers - Structural Apprentice - 3rd 1,000 hrs | 37.04 | - | 5.00 | 3.50 | 4.96 | 10.28 | 3.00 | 5.00 | 68.79 | 99.18 | 129.57 |
| Ironworkers - Structural Apprentice - 4th 1,000 hrs | 39.10 | - | 5.28 | 3.50 | 5.22 | 10.28 | 3.00 | 5.00 | 71.38 | 103.08 | 134.77 |
| Ironworkers - Rebar General foreperson | 48.01 | - | 6.48 | 3.50 | 6.32 | 10.28 | 3.00 | 1.50 | 76.10 | 113.40 | 150.70 |
| Ironworkers - Rebar foreperson | 46.01 | - | 6.21 | 3.50 | 6.08 | 10.28 | 3.00 | 1.50 | 73.58 | 109.62 | 145.66 |
| Ironworkers - Rebar Journeyman | 40.01 | - | 5.40 | 3.50 | 5.33 | 10.28 | 3.00 | 5.00 | 72.53 | 104.79 | 137.05 |
| Ironworkers - Rebar Apprentice - 1st 1,000 hrs | 28.01 | - | 3.78 | 3.50 | 3.85 | 10.28 | 3.00 | 5.00 | 57.42 | 82.13 | 106.83 |
| Ironworkers - Rebar Apprentice - 2nd 1,000 hrs | 32.01 | - | 4.32 | 3.50 | 4.34 | 10.28 | 3.00 | 5.00 | 62.45 | 89.68 | 116.91 |
| Ironworkers - Rebar Apprentice - 3rd 1,000 hrs | 36.01 | - | 4.86 | 3.50 | 4.84 | 10.28 | 3.00 | 5.00 | 67.49 | 97.24 | 126.98 |
| Ironworkers - Rebar Apprentice - 4th 1,000 hrs | 38.01 | - | 5.13 | 3.50 | 5.09 | 10.28 | 3.00 | 5.00 | 70.01 | 101.01 | 132.02 |
| Labourers - Multiplier / Fixed Value | | | 13.0% | 3.50 | 10.90% | 11.59 | 2.00 | 3.75 | | | |

PERSONNEL RATE SCHEDULE

PLA LABOUR

Rates Effective from 01 May 2017 – 30 April 2018 - DAYSHIFT

| Trade or Classification | Reference Formula | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)*F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*1.5)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*2)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
|---|-------------------|---------------|----------------------------------|--|-----------------------|---|------------------------------------|-----------------------|-------------------------------|--|---|---|
| Labourers - Class 1 | | 36.80 | - | 4.78 | 3.50 | 4.92 | 11.59 | 2.00 | 3.75 | 67.34 | 98.13 | 128.93 |
| Labourers - Class 2 | | 36.84 | - | 4.79 | 3.50 | 4.92 | 11.59 | 2.00 | 3.75 | 67.39 | 98.21 | 129.03 |
| Labourers - Class 3 | | 36.90 | - | 4.80 | 3.50 | 4.93 | 11.59 | 2.00 | 3.75 | 67.46 | 98.32 | 129.18 |
| Labourers - Class 4 | | 36.95 | - | 4.80 | 3.50 | 4.93 | 11.59 | 2.00 | 3.75 | 67.53 | 98.42 | 129.30 |
| Labourers - Class 5 | | 37.00 | - | 4.81 | 3.50 | 4.94 | 11.59 | 2.00 | 3.75 | 67.59 | 98.51 | 129.43 |
| Labourers - Class 6 | | 37.05 | - | 4.82 | 3.50 | 4.95 | 11.59 | 2.00 | 3.75 | 67.65 | 98.60 | 129.55 |
| Labourers - Class 7 | | 37.23 | - | 4.84 | 3.50 | 4.97 | 11.59 | 2.00 | 3.75 | 67.88 | 98.94 | 130.01 |
| Labourers - Class 8 | | 37.30 | - | 4.85 | 3.50 | 4.98 | 11.59 | 2.00 | 3.75 | 67.97 | 99.07 | 130.18 |
| Labourers - Class 9 | | 37.75 | - | 4.91 | 3.50 | 5.03 | 11.59 | 2.00 | 3.75 | 68.53 | 99.92 | 131.31 |
| Labourers - Class 10 | | 37.85 | - | 4.92 | 3.50 | 5.04 | 11.59 | 2.00 | 3.75 | 68.65 | 100.11 | 131.56 |
| Labourers - Class 11 | | 42.85 | - | 5.57 | 3.50 | 5.66 | 11.59 | 2.00 | 3.75 | 74.92 | 109.51 | 144.09 |
| Labourers - Class 1 - foreperson | | 38.55 | - | 5.01 | 3.50 | 5.13 | 11.59 | | 1.50 | 65.28 | 97.17 | 129.06 |
| Labourers - Class 2 - foreperson | | 38.59 | - | 5.02 | 3.50 | 5.14 | 11.59 | | 1.50 | 65.33 | 97.25 | 129.16 |
| Labourers - Class 3 - foreperson | | 38.65 | - | 5.02 | 3.50 | 5.14 | 11.59 | | 1.50 | 65.41 | 97.36 | 129.31 |
| Labourers - Class 4 - foreperson | | 38.70 | - | 5.03 | 3.50 | 5.15 | 11.59 | | 1.50 | 65.47 | 97.46 | 129.44 |
| Labourers - Class 5 - foreperson | | 38.75 | - | 5.04 | 3.50 | 5.16 | 11.59 | | 1.50 | 65.53 | 97.55 | 129.57 |
| Labourers - Class 6 - foreperson | | 38.80 | - | 5.04 | 3.50 | 5.16 | 11.59 | | 1.50 | 65.60 | 97.64 | 129.69 |
| Labourers - Class 7 - foreperson | | 38.98 | - | 5.07 | 3.50 | 5.18 | 11.59 | | 1.50 | 65.82 | 97.98 | 130.14 |
| Labourers - Class 8 - foreperson | | 39.05 | - | 5.08 | 3.50 | 5.19 | 11.59 | | 1.50 | 65.91 | 98.11 | 130.32 |
| Labourers - Class 9 - foreperson | | 39.50 | - | 5.14 | 3.50 | 5.25 | 11.59 | | 1.50 | 66.47 | 98.96 | 131.45 |
| Labourers - Class 10 - foreperson | | 39.60 | - | 5.15 | 3.50 | 5.26 | 11.59 | | 1.50 | 66.60 | 99.15 | 131.70 |
| Labourers - Class 11 - foreperson | | 44.60 | - | 5.80 | 3.50 | 5.88 | 11.59 | | 1.50 | 72.86 | 108.55 | 144.23 |
| Labourers - Class 1 - General foreperson | | 39.30 | - | 5.11 | 3.50 | 5.22 | 11.59 | | 1.50 | 66.22 | 98.58 | 130.94 |
| Labourers - Class 2 - General foreperson | | 39.34 | - | 5.11 | 3.50 | 5.23 | 11.59 | | 1.50 | 66.27 | 98.66 | 131.04 |
| Labourers - Class 3 - General foreperson | | 39.40 | - | 5.12 | 3.50 | 5.24 | 11.59 | | 1.50 | 66.35 | 98.77 | 131.19 |
| Labourers - Class 4 - General foreperson | | 39.45 | - | 5.13 | 3.50 | 5.24 | 11.59 | | 1.50 | 66.41 | 98.87 | 131.32 |
| Labourers - Class 5 - General foreperson | | 39.50 | - | 5.14 | 3.50 | 5.25 | 11.59 | | 1.50 | 66.47 | 98.96 | 131.45 |
| Labourers - Class 6 - General foreperson | | 39.55 | - | 5.14 | 3.50 | 5.25 | 11.59 | | 1.50 | 66.54 | 99.05 | 131.57 |
| Labourers - Class 7 - General foreperson | | 39.73 | - | 5.16 | 3.50 | 5.28 | 11.59 | | 1.50 | 66.76 | 99.39 | 132.02 |
| Labourers - Class 8 - General foreperson | | 39.80 | - | 5.17 | 3.50 | 5.28 | 11.59 | | 1.50 | 66.85 | 99.52 | 132.20 |
| Labourers - Class 9 - General foreperson | | 40.25 | - | 5.23 | 3.50 | 5.34 | 11.59 | | 1.50 | 67.41 | 100.37 | 133.33 |
| Labourers - Class 10 - General foreperson | | 40.35 | - | 5.25 | 3.50 | 5.35 | 11.59 | | 1.50 | 67.54 | 100.56 | 133.58 |
| Labourers - Class 11 - General foreperson | | 45.35 | - | 5.90 | 3.50 | 5.97 | 11.59 | | 1.50 | 73.80 | 109.96 | 146.11 |
| Linespersons - Multiplier / Fixed Value | | | | 13.0% | 3.50 | 10.90% | 8.15 | 2.00 | 3.75 | | | |
| Linespersons - General foreperson | | 42.14 | - | 5.48 | 3.50 | 5.57 | 8.15 | | 1.50 | 66.35 | 98.77 | 131.19 |
| Linespersons - foreperson | | 40.14 | - | 5.22 | 3.50 | 5.33 | 8.15 | | 1.50 | 63.84 | 95.01 | 126.18 |
| Linespersons - Lead linesman | | 39.62 | - | 5.15 | 3.50 | 5.26 | 8.15 | 2.00 | 3.75 | 67.44 | 98.28 | 129.13 |
| Linespersons - Utility worker | | 32.79 | - | 4.26 | 3.50 | 4.42 | 8.15 | 2.00 | 3.75 | 58.88 | 85.44 | 112.01 |
| Linespersons - Mechanic | | 36.15 | - | 4.70 | 3.50 | 4.84 | 8.15 | 2.00 | 3.75 | 63.09 | 91.76 | 120.43 |
| Linespersons - Operator + Driller/blaster | | 35.48 | - | 4.61 | 3.50 | 4.75 | 8.15 | 2.00 | 3.75 | 62.25 | 90.50 | 118.75 |
| Linespersons - Full-time storekeeper | | 34.74 | - | 4.52 | 3.50 | 4.66 | 8.15 | 2.00 | 3.75 | 61.32 | 89.11 | 116.90 |
| Linespersons - Instrument Person | | 33.38 | - | 4.34 | 3.50 | 4.49 | 8.15 | 2.00 | 3.75 | 59.62 | 86.55 | 113.49 |
| Linespersons - Journeyman linesman or splicer | | 38.94 | - | 5.06 | 3.50 | 5.18 | 8.15 | 2.00 | 3.75 | 66.59 | 97.00 | 127.42 |

PERSONNEL RATE SCHEDULE

PLA LABOUR

Rates Effective from 01 May 2017 – 30 April 2018 - DAYSHIFT

| Trade or Classification | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*CS? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)* FS? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)- (\$C?*(1+\$D\$?)))*1.5)+ (\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)- (\$C?*(1+\$D\$?)))*2)+(\$C ?*(1+\$D\$?))+SUM(\$H?: \$I?) |
|--|------------------|--|---|-----------------------------|--|--|-----------------------------|--|--|---|---|
| Linespersons - Apprentice - 1st year | 21.42 | - | 2.78 | 3.50 | 3.02 | 8.15 | 2.00 | 3.75 | 44.62 | 64.06 | 83.50 |
| Linespersons - Apprentice - 2nd year | 25.31 | - | 3.29 | 3.50 | 3.50 | 8.15 | 2.00 | 3.75 | 49.50 | 71.38 | 93.26 |
| Linespersons - Apprentice - 3rd year | 27.26 | - | 3.54 | 3.50 | 3.74 | 8.15 | 2.00 | 3.75 | 51.95 | 75.04 | 98.14 |
| Linespersons - Apprentice - 4th year | 31.16 | - | 4.05 | 3.50 | 4.22 | 8.15 | 2.00 | 3.75 | 56.83 | 82.36 | 107.90 |
| Millwrights - Multiplier / Fixed Value | | | 13.0% | 3.50 | 10.90% | | 2.50 | 5.00 | | | |
| Millwrights - General foreperson | 47.95 | - | 6.23 | 3.50 | 6.29 | 14.10 | | 1.50 | 79.57 | 118.61 | 157.64 |
| Millwrights - Non-working foreperson | 45.95 | - | 5.97 | 3.50 | 6.04 | 13.70 | | 1.50 | 76.67 | 114.25 | 151.83 |
| Millwrights - Working foreperson | 43.96 | - | 5.71 | 3.50 | 5.80 | 13.29 | 2.50 | 5.00 | 79.76 | 115.90 | 152.03 |
| Millwrights - Journeymen millwright, welder, machinist | 39.96 | - | 5.20 | 3.50 | 5.30 | 12.48 | 2.50 | 5.00 | 73.95 | 107.17 | 140.39 |
| Millwrights - Apprentice 0-1000 hrs | 23.98 | - | 3.12 | 3.50 | 3.34 | 9.23 | 2.50 | 5.00 | 50.66 | 72.24 | 93.82 |
| Millwrights - Apprentice 1001-2000 hrs | 25.97 | - | 3.38 | 3.50 | 3.58 | 9.63 | 2.50 | 5.00 | 53.56 | 76.59 | 99.61 |
| Millwrights - Apprentice 2001-3000 hrs | 27.97 | - | 3.64 | 3.50 | 3.83 | 10.04 | 2.50 | 5.00 | 56.47 | 80.96 | 105.45 |
| Millwrights - Apprentice 3001-4000 hrs | 29.97 | - | 3.90 | 3.50 | 4.07 | 10.45 | 2.50 | 5.00 | 59.39 | 85.34 | 111.29 |
| Millwrights - Apprentice 4001-5000 hrs | 31.97 | - | 4.16 | 3.50 | 4.32 | 10.85 | 2.50 | 5.00 | 62.30 | 89.70 | 117.10 |
| Millwrights - Apprentice 5001-6000 hrs | 33.97 | - | 4.42 | 3.50 | 4.57 | 11.26 | 2.50 | 5.00 | 65.21 | 94.07 | 122.93 |
| Millwrights - Apprentice 6001-7000 hrs | 35.96 | - | 4.67 | 3.50 | 4.81 | 11.67 | 2.50 | 5.00 | 68.12 | 98.42 | 128.73 |
| Millwrights - Apprentice 7001-8000 hrs | 37.96 | - | 4.93 | 3.50 | 5.06 | 12.07 | 2.50 | 5.00 | 71.02 | 102.78 | 134.55 |
| Operating Engineers - Multiplier / Fixed Value | | | 13.0% | 3.50 | 10.90% | 12.65 | 2.00 | 3.75 | | | |
| Operating Engineers - Group 1 - JP | 39.28 | - | 5.11 | 3.50 | 5.22 | 12.65 | 2.00 | 3.75 | 71.51 | 104.39 | 137.26 |
| Operating Engineers - Group 1 - General foreperson | 47.14 | - | 6.13 | 3.50 | 6.19 | 12.65 | | 1.50 | 77.10 | 114.90 | 152.70 |
| Operating Engineers - Group 1 - Non-Working foreperson | 45.17 | - | 5.87 | 3.50 | 5.95 | 12.65 | | 1.50 | 74.64 | 111.21 | 147.78 |
| Operating Engineers - Group 1 - Working foreperson | 45.17 | - | 5.87 | 3.50 | 5.95 | 12.65 | 2.00 | 3.75 | 78.89 | 115.46 | 152.03 |
| Operating Engineers - Group 2 - JP | 38.28 | - | 4.98 | 3.50 | 5.10 | 12.65 | 2.00 | 3.75 | 70.25 | 102.51 | 134.76 |
| Operating Engineers - Group 2 - General foreperson | 45.94 | - | 5.97 | 3.50 | 6.04 | 12.65 | | 1.50 | 75.60 | 112.65 | 149.70 |
| Operating Engineers - Group 2 - Non-Working foreperson | 44.02 | - | 5.72 | 3.50 | 5.80 | 12.65 | | 1.50 | 73.20 | 109.05 | 144.90 |
| Operating Engineers - Group 2 - Working foreperson | 44.02 | - | 5.72 | 3.50 | 5.80 | 12.65 | 2.00 | 3.75 | 77.45 | 113.30 | 149.15 |
| Operating Engineers - Group 3 - JP | 37.88 | - | 4.92 | 3.50 | 5.05 | 12.65 | 2.00 | 3.75 | 69.75 | 101.75 | 133.76 |
| Operating Engineers - Group 3 - General foreperson | 45.46 | - | 5.91 | 3.50 | 5.98 | 12.65 | | 1.50 | 75.00 | 111.75 | 148.49 |
| Operating Engineers - Group 3 - Non-Working foreperson | 43.56 | - | 5.66 | 3.50 | 5.75 | 12.65 | | 1.50 | 72.62 | 108.18 | 143.75 |
| Operating Engineers - Group 3 - Working foreperson | 43.56 | - | 5.66 | 3.50 | 5.75 | 12.65 | 2.00 | 3.75 | 76.87 | 112.43 | 148.00 |
| Operating Engineers - Group 4 - JP | 36.89 | - | 4.80 | 3.50 | 4.93 | 12.65 | 2.00 | 3.75 | 68.51 | 99.89 | 131.27 |
| Operating Engineers - Group 4 - General foreperson | 44.27 | - | 5.75 | 3.50 | 5.84 | 12.65 | | 1.50 | 73.51 | 109.51 | 145.52 |
| Operating Engineers - Group 4 - Non-Working foreperson | 42.42 | - | 5.52 | 3.50 | 5.61 | 12.65 | | 1.50 | 71.20 | 106.04 | 140.89 |
| Operating Engineers - Group 4 - Working foreperson | 42.42 | - | 5.52 | 3.50 | 5.61 | 12.65 | 2.00 | 3.75 | 75.45 | 110.29 | 145.14 |
| Operating Engineers - Group 5 - JP | 36.15 | - | 4.70 | 3.50 | 4.83 | 12.65 | 2.00 | 3.75 | 67.58 | 98.50 | 129.42 |
| Operating Engineers - Group 5 - General foreperson | 43.38 | - | 5.64 | 3.50 | 5.73 | 12.65 | | 1.50 | 72.40 | 107.84 | 143.29 |
| Operating Engineers - Group 5 - Non-Working foreperson | 41.57 | - | 5.40 | 3.50 | 5.50 | 12.65 | | 1.50 | 70.13 | 104.44 | 138.76 |
| Operating Engineers - Group 5 - Working foreperson | 41.57 | - | 5.40 | 3.50 | 5.50 | 12.65 | 2.00 | 3.75 | 74.38 | 108.69 | 143.01 |
| Operating Engineers - 1st period | 22.97 | - | 2.99 | 3.50 | 3.21 | 12.65 | 2.00 | 3.75 | 51.07 | 73.73 | 96.40 |
| Operating Engineers - 2nd period | 24.88 | - | 3.23 | 3.50 | 3.45 | 12.65 | 2.00 | 3.75 | 53.46 | 77.32 | 101.17 |
| Operating Engineers - 3rd period | 26.80 | - | 3.48 | 3.50 | 3.68 | 12.65 | 2.00 | 3.75 | 55.87 | 80.93 | 105.99 |
| Operating Engineers - 4th period | 28.71 | - | 3.73 | 3.50 | 3.92 | 12.65 | 2.00 | 3.75 | 58.26 | 84.52 | 110.77 |

PERSONNEL RATE SCHEDULE

PLA LABOUR

Rates Effective from 01 May 2017 – 30 April 2018 - DAYSHIFT

| Trade or Classification | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)* F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)- (\$C?*(1+\$D\$?)))*1.5)+ (\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)- (\$C?*(1+\$D\$?)))*2)+(\$C ?(1+\$D\$?))+SUM(\$H?: \$I?) |
|--|------------------|--|--|-----------------------------|---|--|-----------------------------|--|--|---|--|
| Operating Engineers - 5th period | 30.62 | - | 3.98 | 3.50 | 4.15 | 12.65 | 2.00 | 3.75 | 60.65 | 88.11 | 115.56 |
| Operating Engineers - 6th period | 34.45 | - | 4.48 | 3.50 | 4.63 | 12.65 | 2.00 | 3.75 | 65.45 | 95.31 | 125.16 |
| Operating Engineers - Clerical Group 1 | 30.93 | - | 4.02 | 3.50 | 4.19 | 12.65 | 2.00 | 3.75 | 61.04 | 88.69 | 116.34 |
| Operating Engineers - Clerical Group 2 | 33.15 | - | 4.31 | 3.50 | 4.47 | 12.65 | 2.00 | 3.75 | 63.83 | 92.86 | 121.90 |
| Operating Engineers - Clerical Group 3 | 34.49 | - | 4.48 | 3.50 | 4.63 | 12.65 | 2.00 | 3.75 | 65.51 | 95.38 | 125.26 |
| Painters - Multiplier / Fixed Value | | | 13.0% | 3.50 | 10.90% | 10.25 | 2.00 | 4.00 | | | |
| Painters - General foreperson - Group 1 | 40.75 | - | 5.30 | 3.50 | 5.40 | 10.25 | | 1.50 | 66.70 | 99.30 | 131.90 |
| Painters - Non-working foreperson - Group 1 | 40.25 | - | 5.23 | 3.50 | 5.34 | 10.25 | | 1.50 | 66.07 | 98.36 | 130.65 |
| Painters - Chargehands and working foremen - Group 1 | 39.75 | - | 5.17 | 3.50 | 5.28 | 10.25 | 2.00 | 4.00 | 69.95 | 101.92 | 133.89 |
| Painters - Group 1 | 38.25 | - | 4.97 | 3.50 | 5.09 | 10.25 | 2.00 | 4.00 | 68.07 | 99.10 | 130.13 |
| Painters - General foreperson - Group 2 | 43.75 | - | 5.69 | 3.50 | 5.77 | 10.25 | | 1.50 | 70.46 | 104.94 | 139.42 |
| Painters - Non-working foreperson - Group 2 | 43.25 | - | 5.62 | 3.50 | 5.71 | 10.25 | | 1.50 | 69.83 | 104.00 | 138.16 |
| Painters - Chargehands and working foremen - Group 2 | 42.75 | - | 5.56 | 3.50 | 5.65 | 10.25 | 2.00 | 4.00 | 73.71 | 107.56 | 141.41 |
| Painters - Group 2 | 41.25 | - | 5.36 | 3.50 | 5.46 | 10.25 | 2.00 | 4.00 | 71.83 | 104.74 | 137.65 |
| Painters - Apprentice - 1st year | 22.95 | - | 2.98 | 3.50 | 3.21 | 10.25 | 2.00 | 4.00 | 48.89 | 70.34 | 91.78 |
| Painters - Apprentice - 2nd year | 28.69 | - | 3.73 | 3.50 | 3.92 | 10.25 | 2.00 | 4.00 | 56.09 | 81.13 | 106.17 |
| Painters - Apprentice - 3rd year | 34.43 | - | 4.48 | 3.50 | 4.62 | 10.25 | 2.00 | 4.00 | 63.28 | 91.92 | 120.56 |
| Plumbers and pipefitters - Multiplier / Fixed Value | | | 10.0% | 3.50 | 10.90% | 13.08 | 3.00 | 5.00 | | | |
| Plumbers and pipefitters - General foreperson | 50.68 | - | 5.07 | 3.50 | 6.46 | 13.08 | | 1.50 | 80.29 | 119.68 | 159.07 |
| Plumbers and pipefitters - foreperson | 48.56 | - | 4.86 | 3.50 | 6.21 | 13.08 | | 1.50 | 77.70 | 115.81 | 153.91 |
| Plumbers and pipefitters - Journeyman | 42.23 | - | 4.22 | 3.50 | 5.45 | 13.08 | 3.00 | 5.00 | 76.48 | 110.71 | 144.95 |
| Plumbers and pipefitters - Apprentice - 2nd year | 27.45 | - | 2.74 | 3.50 | 3.67 | 13.08 | 3.00 | 5.00 | 58.45 | 83.67 | 108.89 |
| Plumbers and pipefitters - Apprentice - 3rd year | 31.67 | - | 3.17 | 3.50 | 4.18 | 13.08 | 3.00 | 5.00 | 63.60 | 91.40 | 119.20 |
| Plumbers and pipefitters - Apprentice - 4th year | 35.90 | - | 3.59 | 3.50 | 4.69 | 13.08 | 3.00 | 5.00 | 68.76 | 99.14 | 129.51 |
| Sheet metal - Multiplier / Fixed Value | | | 13.0% | 3.50 | 10.90% | 9.26 | 2.00 | 3.75 | | | |
| Sheet metal - General foreperson | 46.72 | - | 6.07 | 3.50 | 6.14 | 9.26 | | 1.50 | 73.19 | 109.03 | 144.88 |
| Sheet metal - Non-working foreperson | 45.72 | - | 5.94 | 3.50 | 6.01 | 9.26 | | 1.50 | 71.93 | 107.15 | 142.37 |
| Sheet metal - Working foreperson | 44.72 | - | 5.81 | 3.50 | 5.89 | 9.26 | 2.00 | 3.75 | 74.93 | 109.52 | 144.11 |
| Sheet metal - Journeyman | 42.72 | - | 5.55 | 3.50 | 5.64 | 9.26 | 2.00 | 3.75 | 72.42 | 105.76 | 139.10 |
| Sheet metal - Welder | 43.72 | - | 5.68 | 3.50 | 5.77 | 9.26 | 2.00 | 3.75 | 73.68 | 107.64 | 141.61 |
| Sheet metal - Apprentice - 2nd year | 25.63 | - | 3.33 | 3.50 | 3.54 | 9.26 | 2.00 | 3.75 | 51.01 | 73.64 | 96.27 |
| Sheet metal - Apprentice - 3rd year | 32.04 | - | 4.16 | 3.50 | 4.33 | 9.26 | 2.00 | 3.75 | 59.04 | 85.69 | 112.33 |
| Sheet metal - Apprentice - 4th year | 36.31 | - | 4.72 | 3.50 | 4.85 | 9.26 | 2.00 | 3.75 | 64.39 | 93.72 | 123.04 |
| Teamsters - Multiplier / Fixed Value | | | 13.0% | 3.50 | 10.90% | 10.55 | 2.00 | 3.75 | | | |
| Teamsters - Group 1 teamster | 37.85 | - | 4.92 | 3.50 | 5.04 | 10.55 | 2.00 | 3.75 | 67.61 | 98.54 | 129.47 |
| Teamsters - Working foreperson Group 1 | 39.35 | - | 5.11 | 3.50 | 5.23 | 10.55 | 2.00 | 3.75 | 69.49 | 101.36 | 133.23 |
| Teamsters - Non-working foreperson Group 1 | 39.35 | - | 5.11 | 3.50 | 5.23 | 10.55 | | 1.50 | 65.24 | 97.11 | 128.98 |
| Teamsters - General foreperson Group 1 | 39.85 | - | 5.18 | 3.50 | 5.29 | 10.55 | | 1.50 | 65.87 | 98.05 | 130.23 |
| Teamsters - Group 2 teamster | 37.63 | - | 4.89 | 3.50 | 5.02 | 10.55 | 2.00 | 3.75 | 67.34 | 98.13 | 128.93 |
| Teamsters - Working foreperson Group 2 | 39.13 | - | 5.09 | 3.50 | 5.20 | 10.55 | 2.00 | 3.75 | 69.22 | 100.95 | 132.69 |

PERSONNEL RATE SCHEDULE

PLA LABOUR

Rates Effective from 01 May 2017 – 30 April 2018 - DAYSHIFT

| Trade or Classification | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)*F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*1.5)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*2)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
|--|------------------|--|---|-----------------------------|--|--|-----------------------------|-------------------------------------|---|--|--|
| Teamsters - Non-working foreperson Group 2 | 39.13 | - | 5.09 | 3.50 | 5.20 | 10.55 | | 1.50 | 64.97 | 96.70 | 128.44 |
| Teamsters - General foreperson Group 2 | 39.63 | - | 5.15 | 3.50 | 5.26 | 10.55 | | 1.50 | 65.60 | 97.64 | 129.69 |
| Teamsters - Group 3 teamster | 37.42 | - | 4.86 | 3.50 | 4.99 | 10.55 | 2.00 | 3.75 | 67.08 | 97.74 | 128.40 |
| Teamsters - Working foreperson Group 3 | 38.92 | - | 5.06 | 3.50 | 5.18 | 10.55 | 2.00 | 3.75 | 68.96 | 100.56 | 132.16 |
| Teamsters - Non-working foreperson Group 3 | 38.92 | - | 5.06 | 3.50 | 5.18 | 10.55 | | 1.50 | 64.71 | 96.31 | 127.91 |
| Teamsters - General foreperson Group 3 | 39.42 | - | 5.12 | 3.50 | 5.24 | 10.55 | | 1.50 | 65.33 | 97.25 | 129.16 |
| Teamsters - Group 4 teamster | 37.85 | - | 4.92 | 3.50 | 5.04 | 10.55 | 2.00 | 3.75 | 67.61 | 98.54 | 129.47 |
| Teamsters - Working foreperson Group 4 | 39.35 | - | 5.11 | 3.50 | 5.23 | 10.55 | 2.00 | 3.75 | 69.49 | 101.36 | 133.23 |
| Teamsters - Non-working foreperson Group 4 | 39.35 | - | 5.11 | 3.50 | 5.23 | 10.55 | | 1.50 | 65.24 | 97.11 | 128.98 |
| Teamsters - General foreperson Group 4 | 39.85 | - | 5.18 | 3.50 | 5.29 | 10.55 | | 1.50 | 65.87 | 98.05 | 130.23 |
| Teamsters - Group 5 teamster | 43.25 | - | 5.62 | 3.50 | 5.71 | 10.55 | 2.00 | 3.75 | 74.38 | 108.70 | 143.01 |
| Teamsters - Working foreperson Group 5 | 44.75 | - | 5.82 | 3.50 | 5.89 | 10.55 | 2.00 | 3.75 | 76.26 | 111.52 | 146.77 |
| Teamsters - Non-working foreperson Group 5 | 44.75 | - | 5.82 | 3.50 | 5.89 | 10.55 | | 1.50 | 72.01 | 107.27 | 142.52 |
| Teamsters - General foreperson Group 5 | 45.25 | - | 5.88 | 3.50 | 5.96 | 10.55 | | 1.50 | 72.64 | 108.21 | 143.78 |
| Teamsters - Group 6 teamster | 48.96 | - | 6.36 | 3.50 | 6.41 | 10.55 | 2.00 | 3.75 | 81.54 | 119.43 | 157.33 |
| Teamsters - Working foreperson Group 6 | 50.46 | - | 6.56 | 3.50 | 6.60 | 10.55 | 2.00 | 3.75 | 83.42 | 122.25 | 161.09 |
| Teamsters - Non-working foreperson Group 6 | 50.46 | - | 6.56 | 3.50 | 6.60 | 10.55 | | 1.50 | 79.17 | 118.00 | 156.84 |
| Teamsters - General foreperson Group 6 | 50.96 | - | 6.62 | 3.50 | 6.66 | 10.55 | | 1.50 | 79.79 | 118.94 | 158.09 |
| Teamsters - Group 4 Apprentice 1 | 26.49 | - | 3.44 | 3.50 | 3.65 | 10.55 | 2.00 | 3.75 | 53.38 | 77.20 | 101.01 |
| Teamsters - Group 4 Apprentice 2 | 30.28 | - | 3.94 | 3.50 | 4.11 | 10.55 | 2.00 | 3.75 | 58.12 | 84.31 | 110.50 |
| Teamsters - Group 4 Apprentice 3 | 34.06 | - | 4.43 | 3.50 | 4.58 | 10.55 | 2.00 | 3.75 | 62.87 | 91.43 | 119.98 |
| Elevator Constructors - Multiplier / Fixed Value | | | 12.0% | 3.50 | 10.90% | 4.09 | 2.00 | 3.75 | | | |
| Elevator Constructors - Mechanic | 45.55 | - | 5.47 | 3.50 | 5.94 | 4.09 | 2.00 | 3.75 | 70.30 | 102.57 | 134.85 |
| Elevator Constructors - Mechanic in charge I | 51.24 | - | 6.15 | 3.50 | 6.64 | 4.09 | 2.00 | 3.75 | 77.37 | 113.18 | 148.98 |
| Elevator Constructors - Mechanic in charge II | 52.38 | - | 6.29 | 3.50 | 6.78 | 4.09 | 2.00 | 3.75 | 78.78 | 115.30 | 151.82 |
| Elevator Constructors - Probationary Helper I | 22.78 | - | 2.73 | 3.50 | 3.16 | 4.09 | 2.00 | 3.75 | 42.02 | 60.15 | 78.28 |
| Elevator Constructors - Probationary Helper II | 25.05 | - | 3.01 | 3.50 | 3.44 | 4.09 | 2.00 | 3.75 | 44.83 | 64.38 | 83.92 |
| Elevator Constructors - Helper I | 31.89 | - | 3.83 | 3.50 | 4.28 | 4.09 | 2.00 | 3.75 | 53.33 | 77.12 | 100.91 |
| Elevator Constructors - Helper II | 34.16 | - | 4.10 | 3.50 | 4.55 | 4.09 | 2.00 | 3.75 | 56.15 | 81.35 | 106.54 |
| Elevator Constructors - Improver helper | 36.44 | - | 4.37 | 3.50 | 4.83 | 4.09 | 2.00 | 3.75 | 58.98 | 85.60 | 112.22 |

**PERSONNEL RATE SCHEDULE
PLA LABOUR**

Rates Effective from 01 May 2017 – 30 April 2018 - NIGHTSHIFT

| Trade or Classification | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)*F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*1.5)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*2)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
|--|------------------|-------------------------------------|---|-----------------------------|--|--|-----------------------------|-------------------------------------|---|--|--|
| Boilermakers - Multiplier / Fixed Value | | 3.00 | 12.0% | 3.50 | 10.90% | 11.68 | 3.00 | 5.00 | | | |
| Boilermakers - General foreperson | 45.83 | 3.00 | 5.86 | 3.50 | 6.34 | 11.68 | | 1.50 | 77.71 | 114.14 | 150.57 |
| Boilermakers - foreperson | 44.73 | 3.00 | 5.73 | 3.50 | 6.21 | 11.68 | | 1.50 | 76.35 | 112.09 | 147.83 |
| Boilermakers - Assistant foreperson | 43.38 | 3.00 | 5.57 | 3.50 | 6.04 | 11.68 | | 1.50 | 74.67 | 109.58 | 144.48 |
| Boilermakers - Journeyman | 41.68 | 3.00 | 5.36 | 3.50 | 5.84 | 11.68 | 3.00 | 5.00 | 79.06 | 112.91 | 146.76 |
| Boilermakers - Helper | 31.26 | 3.00 | 4.11 | 3.50 | 4.56 | 11.68 | 3.00 | 5.00 | 66.12 | 93.49 | 120.87 |
| Boilermakers - Apprentice - Level 3 | 37.51 | 3.00 | 4.86 | 3.50 | 5.33 | 11.68 | 3.00 | 5.00 | 73.88 | 105.14 | 136.40 |
| Boilermakers - Apprentice - Level 2 | 31.26 | 3.00 | 4.11 | 3.50 | 4.56 | 11.68 | 3.00 | 5.00 | 66.12 | 93.49 | 120.87 |
| Boilermakers - Apprentice - Level 1 | 25.01 | 3.00 | 3.36 | 3.50 | 3.80 | 11.68 | 3.00 | 5.00 | 58.35 | 81.85 | 105.35 |
| Bricklayers - Multiplier / Fixed Value | | 3.00 | 10.0% | 3.50 | 10.90% | 8.95 | 2.00 | 3.75 | | | |
| Bricklayers - General foreperson | 51.19 | 3.00 | 5.42 | 3.50 | 6.88 | 8.95 | | 1.50 | 80.44 | 118.26 | 156.08 |
| Bricklayers - foreperson | 49.06 | 3.00 | 5.21 | 3.50 | 6.62 | 8.95 | | 1.50 | 77.84 | 114.36 | 150.87 |
| Bricklayers - Journeyman - Group 1 | 42.66 | 3.00 | 4.57 | 3.50 | 5.86 | 8.95 | 2.00 | 3.75 | 74.28 | 106.90 | 139.51 |
| Bricklayers - Journeyman - Group 2 | 39.25 | 3.00 | 4.22 | 3.50 | 5.45 | 8.95 | 2.00 | 3.75 | 70.12 | 100.66 | 131.19 |
| Bricklayers - Journeyman - Group 3 | 41.02 | 3.00 | 4.40 | 3.50 | 5.66 | 8.95 | 2.00 | 3.75 | 72.28 | 103.90 | 135.51 |
| Bricklayers - Apprentice - 1st 6 months | 23.89 | 3.00 | 2.69 | 3.50 | 3.61 | 8.95 | 2.00 | 3.75 | 51.38 | 72.55 | 93.72 |
| Bricklayers - Apprentice - 2nd 6 months | 26.45 | 3.00 | 2.94 | 3.50 | 3.91 | 8.95 | 2.00 | 3.75 | 54.51 | 77.23 | 99.96 |
| Bricklayers - Apprentice - 3rd 6 months | 29.01 | 3.00 | 3.20 | 3.50 | 4.22 | 8.95 | 2.00 | 3.75 | 57.63 | 81.92 | 106.21 |
| Bricklayers - Apprentice - 4th 6 months | 31.57 | 3.00 | 3.46 | 3.50 | 4.53 | 8.95 | 2.00 | 3.75 | 60.75 | 86.60 | 112.45 |
| Bricklayers - Apprentice - 5th 6 months | 34.13 | 3.00 | 3.71 | 3.50 | 4.83 | 8.95 | 2.00 | 3.75 | 63.87 | 91.28 | 118.70 |
| Bricklayers - Apprentice - 6th 6 months | 36.26 | 3.00 | 3.93 | 3.50 | 5.09 | 8.95 | 2.00 | 3.75 | 66.48 | 95.19 | 123.90 |
| Bricklayers - Apprentice - 7th 6 months | 38.39 | 3.00 | 4.14 | 3.50 | 5.35 | 8.95 | 2.00 | 3.75 | 69.08 | 99.09 | 129.10 |
| Bricklayers - Apprentice - 8th 6 months | 40.53 | 3.00 | 4.35 | 3.50 | 5.60 | 8.95 | 2.00 | 3.75 | 71.68 | 102.99 | 134.31 |
| Carpenters - Multiplier / Fixed Value | | 3.00 | 13% | 3.50 | 10.90% | 11.75 | 2.00 | 3.75 | | | |
| Carpenters - General foreperson | 45.07 | 3.00 | 6.25 | 3.50 | 6.30 | 11.75 | | 1.50 | 77.37 | 113.61 | 149.86 |
| Carpenters - Non-working foreperson | 43.19 | 3.00 | 6.00 | 3.50 | 6.07 | 11.75 | | 1.50 | 75.02 | 110.08 | 145.14 |
| Carpenters - Working foreperson | 41.32 | 3.00 | 5.76 | 3.50 | 5.84 | 11.75 | 2.00 | 3.75 | 76.92 | 110.81 | 144.71 |
| Carpenters - Journeyman carpenter welder scaffolder | 37.56 | 3.00 | 5.27 | 3.50 | 5.38 | 11.75 | 2.00 | 3.75 | 72.21 | 103.75 | 135.28 |
| Carpenters - Helper | 22.54 | 3.00 | 3.32 | 3.50 | 3.53 | 11.75 | 2.00 | 3.75 | 53.39 | 75.51 | 97.64 |
| Carpenters - Apprentice - 1 | 24.41 | 3.00 | 3.56 | 3.50 | 3.76 | 11.75 | 2.00 | 3.75 | 55.73 | 79.03 | 102.32 |
| Carpenters - Apprentice - 2 | 26.29 | 3.00 | 3.81 | 3.50 | 3.99 | 11.75 | 2.00 | 3.75 | 58.08 | 82.56 | 107.03 |
| Carpenters - Apprentice - 3 | 30.05 | 3.00 | 4.30 | 3.50 | 4.45 | 11.75 | 2.00 | 3.75 | 62.80 | 89.63 | 116.46 |
| Carpenters - Apprentice - 4 | 33.80 | 3.00 | 4.78 | 3.50 | 4.91 | 11.75 | 2.00 | 3.75 | 67.50 | 96.68 | 125.85 |
| Electricians - Multiplier / Fixed Value | | 3.00 | 13.0% | 3.50 | 10.90% | 9.75 | 2.00 | 3.75 | | | |
| Electricians - General foreperson | 48.93 | 3.00 | 6.75 | 3.50 | 6.78 | 9.75 | | 1.50 | 80.21 | 117.87 | 155.53 |
| Electricians - Non-working foreperson | 46.81 | 3.00 | 6.48 | 3.50 | 6.52 | 9.75 | | 1.50 | 77.55 | 113.88 | 150.22 |
| Electricians - Working foreperson | 44.68 | 3.00 | 6.20 | 3.50 | 6.25 | 9.75 | 2.00 | 3.75 | 79.13 | 114.12 | 149.12 |
| Electricians - Apprentice/Journeyman electrician welder/welder | 44.68 | 3.00 | 6.20 | 3.50 | 6.25 | 9.75 | 2.00 | 3.75 | 79.13 | 114.12 | 149.12 |
| Electricians - Journeyman | 42.55 | 3.00 | 5.92 | 3.50 | 5.99 | 9.75 | 2.00 | 3.75 | 76.46 | 110.13 | 143.79 |
| Electricians - Apprentice - 1st year | 23.40 | 3.00 | 3.43 | 3.50 | 3.63 | 9.75 | 2.00 | 3.75 | 52.47 | 74.13 | 95.80 |

**PERSONNEL RATE SCHEDULE
PLA LABOUR**

Rates Effective from 01 May 2017 – 30 April 2018 - NIGHTSHIFT

| Trade or Classification | Base Rate | Shift Premium per Hour | Vacation & Holiday Pay | LCP Premium | Govt. Payroll Burdens | Union Benefits and Funds | Small Tools | Consumables and PPE | Straight Time Rate per Hour | Overtime Rate (1.5x) per Hour | Overtime Rate (2.0x) per Hour |
|--|-----------|------------------------|-------------------------|--------------|-------------------------|--------------------------|--------------|---------------------|-----------------------------|---|---|
| Reference Formula | (B) | (C) fixed | (D) =sum(B?:C?)*C\$? | (E) fixed | (F) =sum(B?:E?)*F\$? | (G) fixed | (H) fixed | (I) fixed | (J) =sum(B?:I?) | (K) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*1.5)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | (L) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*2)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
| Electricians - Apprentice - 2nd year | 27.66 | 3.00 | 3.99 | 3.50 | 4.16 | 9.75 | 2.00 | 3.75 | 57.80 | 82.13 | 106.46 |
| Electricians - Apprentice - 3rd year | 29.79 | 3.00 | 4.26 | 3.50 | 4.42 | 9.75 | 2.00 | 3.75 | 60.47 | 86.14 | 111.81 |
| Electricians - Apprentice - 4th year | 34.04 | 3.00 | 4.82 | 3.50 | 4.94 | 9.75 | 2.00 | 3.75 | 65.80 | 94.13 | 122.46 |
| Hotel and Restaurant - Multiplier / Fixed Value | | 3.00 | 13.0% | 1.00 | 10.90% | 16.04 | 2.00 | 3.75 | | | |
| Hotel and Restaurant - Group 1 - Security | 40.45 | 3.00 | 5.65 | 1.00 | 5.46 | 16.04 | 2.00 | 3.75 | 77.35 | 111.45 | 145.56 |
| Hotel and Restaurant - Group 2 - Security | 38.91 | 3.00 | 5.45 | 1.00 | 5.27 | 16.04 | 2.00 | 3.75 | 75.42 | 108.56 | 141.70 |
| Hotel and Restaurant - Group 3 - Security | 37.43 | 3.00 | 5.26 | 1.00 | 5.09 | 16.04 | 2.00 | 3.75 | 73.57 | 105.78 | 137.99 |
| Hotel and Restaurant - Group 1 | 41.39 | 3.00 | 5.77 | 1.00 | 5.58 | 16.04 | 2.00 | 3.75 | 78.53 | 113.22 | 147.91 |
| Hotel and Restaurant - Group 2 | 38.42 | 3.00 | 5.38 | 1.00 | 5.21 | 16.04 | 2.00 | 3.75 | 74.81 | 107.64 | 140.47 |
| Hotel and Restaurant - Group 3 | 37.43 | 3.00 | 5.26 | 1.00 | 5.09 | 16.04 | 2.00 | 3.75 | 73.57 | 105.78 | 137.99 |
| Hotel and Restaurant - Group 4 | 36.40 | 3.00 | 5.12 | 1.00 | 4.96 | 16.04 | 2.00 | 3.75 | 72.27 | 103.84 | 135.40 |
| Hotel and Restaurant - Group 5 | 35.92 | 3.00 | 5.06 | 1.00 | 4.90 | 16.04 | 2.00 | 3.75 | 71.67 | 102.94 | 134.20 |
| Hotel and Restaurant - Group 6 | 35.42 | 3.00 | 4.99 | 1.00 | 4.84 | 16.04 | 2.00 | 3.75 | 71.05 | 102.00 | 132.95 |
| Hotel and Restaurant - Group 7 | 34.40 | 3.00 | 4.86 | 1.00 | 4.72 | 16.04 | 2.00 | 3.75 | 69.77 | 100.08 | 130.39 |
| Insulators - Multiplier / Fixed Value | | 3.00 | 13.0% | 3.50 | 10.90% | 10.65 | 2.00 | 3.75 | | | |
| Insulators - General foreperson | 44.58 | 3.00 | 6.19 | 3.50 | 6.24 | 10.65 | 2.00 | 1.50 | 75.65 | 111.04 | 146.42 |
| Insulators - Non-working foreperson | 42.08 | 3.00 | 5.86 | 3.50 | 5.93 | 10.65 | 2.00 | 1.50 | 72.52 | 106.34 | 140.15 |
| Insulators - Working foreperson | 41.33 | 3.00 | 5.76 | 3.50 | 5.84 | 10.65 | 2.00 | 3.75 | 75.83 | 109.18 | 142.52 |
| Insulators - Journeyman mechanic | 40.08 | 3.00 | 5.60 | 3.50 | 5.69 | 10.65 | 2.00 | 3.75 | 74.27 | 106.83 | 139.39 |
| Insulators - Apprentice - 1st year | 24.05 | 3.00 | 3.52 | 3.50 | 3.71 | 10.65 | 2.00 | 3.75 | 54.18 | 76.69 | 99.21 |
| Insulators - Apprentice - 2nd year | 26.05 | 3.00 | 3.78 | 3.50 | 3.96 | 10.65 | 2.00 | 3.75 | 56.69 | 80.46 | 104.23 |
| Insulators - Apprentice - 3rd year | 30.06 | 3.00 | 4.30 | 3.50 | 4.45 | 10.65 | 2.00 | 3.75 | 61.71 | 87.99 | 114.28 |
| Insulators - Apprentice - 4th year | 34.07 | 3.00 | 4.82 | 3.50 | 4.95 | 10.65 | 2.00 | 3.75 | 66.73 | 95.53 | 124.32 |
| Ironworkers - Multiplier / Fixed Value | | 3.00 | 13.5% | 3.50 | 10.90% | 10.28 | 3.00 | 5.00 | | | |
| Ironworkers - Structural General foreperson | 49.39 | 3.00 | 7.07 | 3.50 | 6.86 | 10.28 | 3.00 | 1.50 | 81.61 | 119.97 | 158.32 |
| Ironworkers - Structural foreperson | 47.33 | 3.00 | 6.79 | 3.50 | 6.61 | 10.28 | 3.00 | 1.50 | 79.01 | 116.07 | 153.12 |
| Ironworkers - Structural Connectors | 42.07 | 3.00 | 6.08 | 3.50 | 5.96 | 10.28 | 3.00 | 5.00 | 78.90 | 112.64 | 146.39 |
| Ironworkers - Structural Journeyman | 41.16 | 3.00 | 5.96 | 3.50 | 5.85 | 10.28 | 3.00 | 5.00 | 77.75 | 110.92 | 144.10 |
| Ironworkers - Structural Apprentice - 1st 1,000 hrs | 28.81 | 3.00 | 4.29 | 3.50 | 4.32 | 10.28 | 3.00 | 5.00 | 62.21 | 87.61 | 113.01 |
| Ironworkers - Structural Apprentice - 2nd 1,000 hrs | 32.93 | 3.00 | 4.85 | 3.50 | 4.83 | 10.28 | 3.00 | 5.00 | 67.39 | 95.38 | 123.37 |
| Ironworkers - Structural Apprentice - 3rd 1,000 hrs | 37.04 | 3.00 | 5.41 | 3.50 | 5.34 | 10.28 | 3.00 | 5.00 | 72.56 | 103.14 | 133.72 |
| Ironworkers - Structural Apprentice - 4th 1,000 hrs | 39.10 | 3.00 | 5.68 | 3.50 | 5.59 | 10.28 | 3.00 | 5.00 | 75.16 | 107.04 | 138.91 |
| Ironworkers - Rebar General foreperson | 48.01 | 3.00 | 6.89 | 3.50 | 6.69 | 10.28 | 3.00 | 1.50 | 79.88 | 117.36 | 154.85 |
| Ironworkers - Rebar foreperson | 46.01 | 3.00 | 6.62 | 3.50 | 6.45 | 10.28 | 3.00 | 1.50 | 77.36 | 113.58 | 149.81 |
| Ironworkers - Rebar Journeyman | 40.01 | 3.00 | 5.81 | 3.50 | 5.70 | 10.28 | 3.00 | 5.00 | 76.30 | 108.75 | 141.20 |
| Ironworkers - Rebar Apprentice - 1st 1,000 hrs | 28.01 | 3.00 | 4.19 | 3.50 | 4.22 | 10.28 | 3.00 | 5.00 | 61.19 | 86.09 | 110.98 |
| Ironworkers - Rebar Apprentice - 2nd 1,000 hrs | 32.01 | 3.00 | 4.73 | 3.50 | 4.71 | 10.28 | 3.00 | 5.00 | 66.23 | 93.64 | 121.05 |
| Ironworkers - Rebar Apprentice - 3rd 1,000 hrs | 36.01 | 3.00 | 5.27 | 3.50 | 5.21 | 10.28 | 3.00 | 5.00 | 71.27 | 101.20 | 131.13 |
| Ironworkers - Rebar Apprentice - 4th 1,000 hrs | 38.01 | 3.00 | 5.54 | 3.50 | 5.46 | 10.28 | 3.00 | 5.00 | 73.78 | 104.97 | 136.16 |
| Labourers - Multiplier / Fixed Value | | 3.00 | 13.0% | 3.50 | 10.90% | 11.59 | 2.00 | 3.75 | | | |

**PERSONNEL RATE SCHEDULE
PLA LABOUR**

Rates Effective from 01 May 2017 – 30 April 2018 - NIGHTSHIFT

| Trade or Classification | Reference Formula | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)*F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*1.5)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*2)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
|---|-------------------|---------------|----------------------------------|--|-----------------------|---|------------------------------------|-----------------------|-------------------------------|--|---|--|
| Labourers - Class 1 | | 36.80 | 3.00 | 5.17 | 3.50 | 5.28 | 11.59 | 2.00 | 3.75 | 71.10 | 102.08 | 133.06 |
| Labourers - Class 2 | | 36.84 | 3.00 | 5.18 | 3.50 | 5.29 | 11.59 | 2.00 | 3.75 | 71.15 | 102.15 | 133.16 |
| Labourers - Class 3 | | 36.90 | 3.00 | 5.19 | 3.50 | 5.30 | 11.59 | 2.00 | 3.75 | 71.22 | 102.27 | 133.31 |
| Labourers - Class 4 | | 36.95 | 3.00 | 5.19 | 3.50 | 5.30 | 11.59 | 2.00 | 3.75 | 71.29 | 102.36 | 133.43 |
| Labourers - Class 5 | | 37.00 | 3.00 | 5.20 | 3.50 | 5.31 | 11.59 | 2.00 | 3.75 | 71.35 | 102.45 | 133.56 |
| Labourers - Class 6 | | 37.05 | 3.00 | 5.21 | 3.50 | 5.32 | 11.59 | 2.00 | 3.75 | 71.41 | 102.55 | 133.68 |
| Labourers - Class 7 | | 37.23 | 3.00 | 5.23 | 3.50 | 5.34 | 11.59 | 2.00 | 3.75 | 71.64 | 102.89 | 134.14 |
| Labourers - Class 8 | | 37.30 | 3.00 | 5.24 | 3.50 | 5.35 | 11.59 | 2.00 | 3.75 | 71.73 | 103.02 | 134.31 |
| Labourers - Class 9 | | 37.75 | 3.00 | 5.30 | 3.50 | 5.40 | 11.59 | 2.00 | 3.75 | 72.29 | 103.86 | 135.44 |
| Labourers - Class 10 | | 37.85 | 3.00 | 5.31 | 3.50 | 5.41 | 11.59 | 2.00 | 3.75 | 72.41 | 104.05 | 135.69 |
| Labourers - Class 11 | | 42.85 | 3.00 | 5.96 | 3.50 | 6.03 | 11.59 | 2.00 | 3.75 | 78.68 | 113.45 | 148.22 |
| Labourers - Class 1 - foreperson | | 38.55 | 3.00 | 5.40 | 3.50 | 5.50 | 11.59 | | 1.50 | 69.04 | 101.12 | 133.19 |
| Labourers - Class 2 - foreperson | | 38.59 | 3.00 | 5.41 | 3.50 | 5.51 | 11.59 | | 1.50 | 69.09 | 101.19 | 133.29 |
| Labourers - Class 3 - foreperson | | 38.65 | 3.00 | 5.41 | 3.50 | 5.51 | 11.59 | | 1.50 | 69.17 | 101.31 | 133.44 |
| Labourers - Class 4 - foreperson | | 38.70 | 3.00 | 5.42 | 3.50 | 5.52 | 11.59 | | 1.50 | 69.23 | 101.40 | 133.57 |
| Labourers - Class 5 - foreperson | | 38.75 | 3.00 | 5.43 | 3.50 | 5.52 | 11.59 | | 1.50 | 69.29 | 101.49 | 133.69 |
| Labourers - Class 6 - foreperson | | 38.80 | 3.00 | 5.43 | 3.50 | 5.53 | 11.59 | | 1.50 | 69.36 | 101.59 | 133.82 |
| Labourers - Class 7 - foreperson | | 38.98 | 3.00 | 5.46 | 3.50 | 5.55 | 11.59 | | 1.50 | 69.58 | 101.93 | 134.27 |
| Labourers - Class 8 - foreperson | | 39.05 | 3.00 | 5.47 | 3.50 | 5.56 | 11.59 | | 1.50 | 69.67 | 102.06 | 134.45 |
| Labourers - Class 9 - foreperson | | 39.50 | 3.00 | 5.53 | 3.50 | 5.62 | 11.59 | | 1.50 | 70.23 | 102.90 | 135.57 |
| Labourers - Class 10 - foreperson | | 39.60 | 3.00 | 5.54 | 3.50 | 5.63 | 11.59 | | 1.50 | 70.36 | 103.09 | 135.83 |
| Labourers - Class 11 - foreperson | | 44.60 | 3.00 | 6.19 | 3.50 | 6.25 | 11.59 | | 1.50 | 76.62 | 112.49 | 148.36 |
| Labourers - Class 1 - General foreperson | | 39.30 | 3.00 | 5.50 | 3.50 | 5.59 | 11.59 | | 1.50 | 69.98 | 102.53 | 135.07 |
| Labourers - Class 2 - General foreperson | | 39.34 | 3.00 | 5.50 | 3.50 | 5.60 | 11.59 | | 1.50 | 70.03 | 102.60 | 135.17 |
| Labourers - Class 3 - General foreperson | | 39.40 | 3.00 | 5.51 | 3.50 | 5.60 | 11.59 | | 1.50 | 70.11 | 102.72 | 135.32 |
| Labourers - Class 4 - General foreperson | | 39.45 | 3.00 | 5.52 | 3.50 | 5.61 | 11.59 | | 1.50 | 70.17 | 102.81 | 135.45 |
| Labourers - Class 5 - General foreperson | | 39.50 | 3.00 | 5.53 | 3.50 | 5.62 | 11.59 | | 1.50 | 70.23 | 102.90 | 135.57 |
| Labourers - Class 6 - General foreperson | | 39.55 | 3.00 | 5.53 | 3.50 | 5.62 | 11.59 | | 1.50 | 70.29 | 103.00 | 135.70 |
| Labourers - Class 7 - General foreperson | | 39.73 | 3.00 | 5.55 | 3.50 | 5.65 | 11.59 | | 1.50 | 70.52 | 103.34 | 136.15 |
| Labourers - Class 8 - General foreperson | | 39.80 | 3.00 | 5.56 | 3.50 | 5.65 | 11.59 | | 1.50 | 70.61 | 103.47 | 136.33 |
| Labourers - Class 9 - General foreperson | | 40.25 | 3.00 | 5.62 | 3.50 | 5.71 | 11.59 | | 1.50 | 71.17 | 104.31 | 137.45 |
| Labourers - Class 10 - General foreperson | | 40.35 | 3.00 | 5.64 | 3.50 | 5.72 | 11.59 | | 1.50 | 71.30 | 104.50 | 137.70 |
| Labourers - Class 11 - General foreperson | | 45.35 | 3.00 | 6.29 | 3.50 | 6.34 | 11.59 | | 1.50 | 77.56 | 113.90 | 150.24 |
| Linespersons - Multiplier / Fixed Value | | | 3.00 | 13.0% | 3.50 | 10.90% | 8.15 | 2.00 | 3.75 | | | |
| Linespersons - General foreperson | | 42.14 | 3.00 | 5.87 | 3.50 | 5.94 | 8.15 | | 1.50 | 70.11 | 102.71 | 135.32 |
| Linespersons - foreperson | | 40.14 | 3.00 | 5.61 | 3.50 | 5.70 | 8.15 | | 1.50 | 67.60 | 98.96 | 130.31 |
| Linespersons - Lead linesman | | 39.62 | 3.00 | 5.54 | 3.50 | 5.63 | 8.15 | 2.00 | 3.75 | 71.20 | 102.23 | 133.26 |
| Linespersons - Utility worker | | 32.79 | 3.00 | 4.65 | 3.50 | 4.79 | 8.15 | 2.00 | 3.75 | 62.64 | 89.39 | 116.14 |
| Linespersons - Mechanic | | 36.15 | 3.00 | 5.09 | 3.50 | 5.21 | 8.15 | 2.00 | 3.75 | 66.85 | 95.70 | 124.56 |
| Linespersons - Operator + Driller/blaster | | 35.48 | 3.00 | 5.00 | 3.50 | 5.12 | 8.15 | 2.00 | 3.75 | 66.01 | 94.45 | 122.88 |
| Linespersons - Full-time storekeeper | | 34.74 | 3.00 | 4.91 | 3.50 | 5.03 | 8.15 | 2.00 | 3.75 | 65.08 | 93.05 | 121.03 |
| Linespersons - Instrument Person | | 33.38 | 3.00 | 4.73 | 3.50 | 4.86 | 8.15 | 2.00 | 3.75 | 63.38 | 90.50 | 117.62 |
| Linespersons - Journeyman linesman or splicer | | 38.94 | 3.00 | 5.45 | 3.50 | 5.55 | 8.15 | 2.00 | 3.75 | 70.35 | 100.95 | 131.55 |

**PERSONNEL RATE SCHEDULE
PLA LABOUR**

Rates Effective from 01 May 2017 – 30 April 2018 - NIGHTSHIFT

| Trade or Classification | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)* F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)- (\$C?*(1+\$D\$?)))*1. 5)+(\$C?*(1+\$D\$?)) +SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)- (\$C?*(1+\$D\$?)))*2)+ (\$C?*(1+\$D\$?))+SUM (\$H?:\$I?) |
|--|------------------|--|--|-----------------------------|---|--|-----------------------------|--|--|--|---|
| Linespersons - Apprentice - 1st year | 21.42 | 3.00 | 3.17 | 3.50 | 3.39 | 8.15 | 2.00 | 3.75 | 48.38 | 68.01 | 87.63 |
| Linespersons - Apprentice - 2nd year | 25.31 | 3.00 | 3.68 | 3.50 | 3.87 | 8.15 | 2.00 | 3.75 | 53.26 | 75.33 | 97.39 |
| Linespersons - Apprentice - 3rd year | 27.26 | 3.00 | 3.93 | 3.50 | 4.11 | 8.15 | 2.00 | 3.75 | 55.70 | 78.99 | 102.27 |
| Linespersons - Apprentice - 4th year | 31.16 | 3.00 | 4.44 | 3.50 | 4.59 | 8.15 | 2.00 | 3.75 | 60.59 | 86.31 | 112.03 |
| Millwrights - Multiplier / Fixed Value | | 3.00 | 13.0% | 3.50 | 10.90% | | 2.50 | 5.00 | | | |
| Millwrights - General foreperson | 47.95 | 3.00 | 6.62 | 3.50 | 6.66 | 12.56 | | 1.50 | 81.79 | 120.24 | 158.68 |
| Millwrights - Non-working foreperson | 45.95 | 3.00 | 6.36 | 3.50 | 6.41 | 12.18 | | 1.50 | 78.90 | 115.91 | 152.92 |
| Millwrights - Working foreperson | 43.96 | 3.00 | 6.10 | 3.50 | 6.17 | 11.80 | 2.50 | 5.00 | 82.03 | 117.61 | 153.18 |
| Millwrights - Journeymen millwright, welder, machinist | 39.96 | 3.00 | 5.59 | 3.50 | 5.67 | 11.05 | 2.50 | 5.00 | 76.27 | 108.96 | 141.65 |
| Millwrights - Apprentice 0-1000 hrs | 23.98 | 3.00 | 3.51 | 3.50 | 3.71 | 8.03 | 2.50 | 5.00 | 53.22 | 74.38 | 95.55 |
| Millwrights - Apprentice 1001-2000 hrs | 25.97 | 3.00 | 3.77 | 3.50 | 3.95 | 8.41 | 2.50 | 5.00 | 56.09 | 78.69 | 101.29 |
| Millwrights - Apprentice 2001-3000 hrs | 27.97 | 3.00 | 4.03 | 3.50 | 4.20 | 8.78 | 2.50 | 5.00 | 58.98 | 83.02 | 107.06 |
| Millwrights - Apprentice 3001-4000 hrs | 29.97 | 3.00 | 4.29 | 3.50 | 4.44 | 9.16 | 2.50 | 5.00 | 61.86 | 87.35 | 112.84 |
| Millwrights - Apprentice 4001-5000 hrs | 31.97 | 3.00 | 4.55 | 3.50 | 4.69 | 9.54 | 2.50 | 5.00 | 64.75 | 91.67 | 118.60 |
| Millwrights - Apprentice 5001-6000 hrs | 33.97 | 3.00 | 4.81 | 3.50 | 4.94 | 9.91 | 2.50 | 5.00 | 67.63 | 96.00 | 124.36 |
| Millwrights - Apprentice 6001-7000 hrs | 35.96 | 3.00 | 5.06 | 3.50 | 5.18 | 10.29 | 2.50 | 5.00 | 70.50 | 100.30 | 130.11 |
| Millwrights - Apprentice 7001-8000 hrs | 37.96 | 3.00 | 5.32 | 3.50 | 5.43 | 10.67 | 2.50 | 5.00 | 73.38 | 104.63 | 135.87 |
| Operating Engineers - Multiplier / Fixed Value | | 3.00 | 13.0% | 3.50 | 10.90% | 12.65 | 2.00 | 3.75 | | | |
| Operating Engineers - Group 1 - JP | 39.28 | 3.00 | 5.50 | 3.50 | 5.59 | 12.65 | 2.00 | 3.75 | 75.27 | 108.33 | 141.39 |
| Operating Engineers - Group 1 - General foreperson | 47.14 | 3.00 | 6.52 | 3.50 | 6.56 | 12.65 | | 1.50 | 80.86 | 118.85 | 156.83 |
| Operating Engineers - Group 1 - Non-Working foreperson | 45.17 | 3.00 | 6.26 | 3.50 | 6.32 | 12.65 | | 1.50 | 78.40 | 115.16 | 151.91 |
| Operating Engineers - Group 1 - Working foreperson | 45.17 | 3.00 | 6.26 | 3.50 | 6.32 | 12.65 | 2.00 | 3.75 | 82.65 | 119.41 | 156.16 |
| Operating Engineers - Group 2 - JP | 38.28 | 3.00 | 5.37 | 3.50 | 5.47 | 12.65 | 2.00 | 3.75 | 74.01 | 106.45 | 138.89 |
| Operating Engineers - Group 2 - General foreperson | 45.94 | 3.00 | 6.36 | 3.50 | 6.41 | 12.65 | | 1.50 | 79.36 | 116.59 | 153.83 |
| Operating Engineers - Group 2 - Non-Working foreperson | 44.02 | 3.00 | 6.11 | 3.50 | 6.17 | 12.65 | | 1.50 | 76.96 | 112.99 | 149.03 |
| Operating Engineers - Group 2 - Working foreperson | 44.02 | 3.00 | 6.11 | 3.50 | 6.17 | 12.65 | 2.00 | 3.75 | 81.21 | 117.24 | 153.28 |
| Operating Engineers - Group 3 - JP | 37.88 | 3.00 | 5.31 | 3.50 | 5.42 | 12.65 | 2.00 | 3.75 | 73.51 | 105.70 | 137.88 |
| Operating Engineers - Group 3 - General foreperson | 45.46 | 3.00 | 6.30 | 3.50 | 6.35 | 12.65 | | 1.50 | 78.76 | 115.69 | 152.62 |
| Operating Engineers - Group 3 - Non-Working foreperson | 43.56 | 3.00 | 6.05 | 3.50 | 6.12 | 12.65 | | 1.50 | 76.38 | 112.13 | 147.88 |
| Operating Engineers - Group 3 - Working foreperson | 43.56 | 3.00 | 6.05 | 3.50 | 6.12 | 12.65 | 2.00 | 3.75 | 80.63 | 116.38 | 152.13 |
| Operating Engineers - Group 4 - JP | 36.89 | 3.00 | 5.19 | 3.50 | 5.30 | 12.65 | 2.00 | 3.75 | 72.27 | 103.84 | 135.40 |
| Operating Engineers - Group 4 - General foreperson | 44.27 | 3.00 | 6.14 | 3.50 | 6.20 | 12.65 | | 1.50 | 77.27 | 113.46 | 149.64 |
| Operating Engineers - Group 4 - Non-Working foreperson | 42.42 | 3.00 | 5.91 | 3.50 | 5.98 | 12.65 | | 1.50 | 74.96 | 109.99 | 145.02 |
| Operating Engineers - Group 4 - Working foreperson | 42.42 | 3.00 | 5.91 | 3.50 | 5.98 | 12.65 | 2.00 | 3.75 | 79.21 | 114.24 | 149.27 |
| Operating Engineers - Group 5 - JP | 36.15 | 3.00 | 5.09 | 3.50 | 5.20 | 12.65 | 2.00 | 3.75 | 71.34 | 102.45 | 133.55 |
| Operating Engineers - Group 5 - General foreperson | 43.38 | 3.00 | 6.03 | 3.50 | 6.10 | 12.65 | | 1.50 | 76.15 | 111.79 | 147.42 |
| Operating Engineers - Group 5 - Non-Working foreperson | 41.57 | 3.00 | 5.79 | 3.50 | 5.87 | 12.65 | | 1.50 | 73.89 | 108.39 | 142.89 |
| Operating Engineers - Group 5 - Working foreperson | 41.57 | 3.00 | 5.79 | 3.50 | 5.87 | 12.65 | 2.00 | 3.75 | 78.14 | 112.64 | 147.14 |
| Operating Engineers - 1st period | 22.97 | 3.00 | 3.38 | 3.50 | 3.58 | 12.65 | 2.00 | 3.75 | 54.83 | 77.68 | 100.53 |
| Operating Engineers - 2nd period | 24.88 | 3.00 | 3.62 | 3.50 | 3.82 | 12.65 | 2.00 | 3.75 | 57.22 | 81.26 | 105.30 |
| Operating Engineers - 3rd period | 26.80 | 3.00 | 3.87 | 3.50 | 4.05 | 12.65 | 2.00 | 3.75 | 59.63 | 84.88 | 110.12 |
| Operating Engineers - 4th period | 28.71 | 3.00 | 4.12 | 3.50 | 4.29 | 12.65 | 2.00 | 3.75 | 62.02 | 88.46 | 114.90 |

**PERSONNEL RATE SCHEDULE
PLA LABOUR**

Rates Effective from 01 May 2017 – 30 April 2018 - NIGHTSHIFT

| Trade or Classification | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)* F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)- (\$C?*(1+\$D\$?)))*1. 5)+(\$C?*(1+\$D\$?)) +SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)- (\$C?*(1+\$D\$?)))*2)+(5)+ (\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
|--|------------------|--|--|-----------------------------|---|--|-----------------------------|--|--|--|---|
| Operating Engineers - 5th period | 30.62 | 3.00 | 4.37 | 3.50 | 4.52 | 12.65 | 2.00 | 3.75 | 64.41 | 92.05 | 119.69 |
| Operating Engineers - 6th period | 34.45 | 3.00 | 4.87 | 3.50 | 5.00 | 12.65 | 2.00 | 3.75 | 69.21 | 99.25 | 129.29 |
| Operating Engineers - Clerical Group 1 | 30.93 | 3.00 | 4.41 | 3.50 | 4.56 | 12.65 | 2.00 | 3.75 | 64.80 | 92.64 | 120.47 |
| Operating Engineers - Clerical Group 2 | 33.15 | 3.00 | 4.70 | 3.50 | 4.84 | 12.65 | 2.00 | 3.75 | 67.59 | 96.81 | 126.03 |
| Operating Engineers - Clerical Group 3 | 34.49 | 3.00 | 4.87 | 3.50 | 5.00 | 12.65 | 2.00 | 3.75 | 69.27 | 99.33 | 129.39 |
| Painters - Multiplier / Fixed Value | | 3.00 | 13.0% | 3.50 | 10.90% | 10.25 | 2.00 | 4.00 | | | |
| Painters - General foreperson - Group 1 | 40.75 | 3.00 | 5.69 | 3.50 | 5.77 | 10.25 | | 1.50 | 70.46 | 103.24 | 136.03 |
| Painters - Non-working foreperson - Group 1 | 40.25 | 3.00 | 5.62 | 3.50 | 5.71 | 10.25 | | 1.50 | 69.83 | 102.30 | 134.77 |
| Painters - Chargehands and working foremen - Group 1 | 39.75 | 3.00 | 5.56 | 3.50 | 5.65 | 10.25 | 2.00 | 4.00 | 73.71 | 105.86 | 138.02 |
| Painters - Group 1 | 38.25 | 3.00 | 5.36 | 3.50 | 5.46 | 10.25 | 2.00 | 4.00 | 71.83 | 103.04 | 134.26 |
| Painters - General foreperson - Group 2 | 43.75 | 3.00 | 6.08 | 3.50 | 6.14 | 10.25 | | 1.50 | 74.22 | 108.88 | 143.55 |
| Painters - Non-working foreperson - Group 2 | 43.25 | 3.00 | 6.01 | 3.50 | 6.08 | 10.25 | | 1.50 | 73.59 | 107.94 | 142.29 |
| Painters - Chargehands and working foremen - Group 2 | 42.75 | 3.00 | 5.95 | 3.50 | 6.02 | 10.25 | 2.00 | 4.00 | 77.47 | 111.50 | 145.54 |
| Painters - Group 2 | 41.25 | 3.00 | 5.75 | 3.50 | 5.83 | 10.25 | 2.00 | 4.00 | 75.59 | 108.68 | 141.78 |
| Painters - Apprentice - 1st year | 22.95 | 3.00 | 3.37 | 3.50 | 3.58 | 10.25 | 2.00 | 4.00 | 52.65 | 74.28 | 95.91 |
| Painters - Apprentice - 2nd year | 28.69 | 3.00 | 4.12 | 3.50 | 4.29 | 10.25 | 2.00 | 4.00 | 59.85 | 85.07 | 110.30 |
| Painters - Apprentice - 3rd year | 34.43 | 3.00 | 4.87 | 3.50 | 4.99 | 10.25 | 2.00 | 4.00 | 67.04 | 95.86 | 124.69 |
| Plumbers and pipefitters - Multiplier / Fixed Value | | 3.00 | 10.0% | 3.50 | 10.90% | 13.08 | 3.00 | 5.00 | | | |
| Plumbers and pipefitters - General foreperson | 50.68 | 3.00 | 5.37 | 3.50 | 6.82 | 13.08 | | 1.50 | 83.95 | 123.52 | 163.09 |
| Plumbers and pipefitters - foreperson | 48.56 | 3.00 | 5.16 | 3.50 | 6.57 | 13.08 | | 1.50 | 81.36 | 119.65 | 157.93 |
| Plumbers and pipefitters - Journeyman | 42.23 | 3.00 | 4.52 | 3.50 | 5.81 | 13.08 | 3.00 | 5.00 | 80.14 | 114.55 | 148.97 |
| Plumbers and pipefitters - Apprentice - 2nd year | 27.45 | 3.00 | 3.04 | 3.50 | 4.03 | 13.08 | 3.00 | 5.00 | 62.11 | 87.51 | 112.91 |
| Plumbers and pipefitters - Apprentice - 3rd year | 31.67 | 3.00 | 3.47 | 3.50 | 4.54 | 13.08 | 3.00 | 5.00 | 67.26 | 95.24 | 123.22 |
| Plumbers and pipefitters - Apprentice - 4th year | 35.90 | 3.00 | 3.89 | 3.50 | 5.05 | 13.08 | 3.00 | 5.00 | 72.42 | 102.97 | 133.53 |
| Sheet metal - Multiplier / Fixed Value | | 3.00 | 13.0% | 3.50 | 10.90% | 9.26 | 2.00 | 3.75 | | | |
| Sheet metal - General foreperson | 46.72 | 3.00 | 6.46 | 3.50 | 6.51 | 9.26 | | 1.50 | 76.95 | 112.98 | 149.00 |
| Sheet metal - Non-working foreperson | 45.72 | 3.00 | 6.33 | 3.50 | 6.38 | 9.26 | | 1.50 | 75.69 | 111.10 | 146.50 |
| Sheet metal - Working foreperson | 44.72 | 3.00 | 6.20 | 3.50 | 6.26 | 9.26 | 2.00 | 3.75 | 78.69 | 113.47 | 148.24 |
| Sheet metal - Journeyman | 42.72 | 3.00 | 5.94 | 3.50 | 6.01 | 9.26 | 2.00 | 3.75 | 76.18 | 109.71 | 143.23 |
| Sheet metal - Welder | 43.72 | 3.00 | 6.07 | 3.50 | 6.14 | 9.26 | 2.00 | 3.75 | 77.44 | 111.59 | 145.74 |
| Sheet metal - Apprentice - 2nd year | 25.63 | 3.00 | 3.72 | 3.50 | 3.91 | 9.26 | 2.00 | 3.75 | 54.77 | 77.59 | 100.40 |
| Sheet metal - Apprentice - 3rd year | 32.04 | 3.00 | 4.55 | 3.50 | 4.70 | 9.26 | 2.00 | 3.75 | 62.80 | 89.63 | 116.46 |
| Sheet metal - Apprentice - 4th year | 36.31 | 3.00 | 5.11 | 3.50 | 5.22 | 9.26 | 2.00 | 3.75 | 68.15 | 97.66 | 127.17 |
| Teamsters - Multiplier / Fixed Value | | 3.00 | 13.0% | 3.50 | 10.90% | 10.55 | 2.00 | 3.75 | | | |
| Teamsters - Group 1 teamster | 37.85 | 3.00 | 5.31 | 3.50 | 5.41 | 10.55 | 2.00 | 3.75 | 71.37 | 102.48 | 133.60 |
| Teamsters - Working foreperson Group 1 | 39.35 | 3.00 | 5.50 | 3.50 | 5.60 | 10.55 | 2.00 | 3.75 | 73.25 | 105.30 | 137.36 |
| Teamsters - Non-working foreperson Group 1 | 39.35 | 3.00 | 5.50 | 3.50 | 5.60 | 10.55 | | 1.50 | 69.00 | 101.05 | 133.11 |
| Teamsters - General foreperson Group 1 | 39.85 | 3.00 | 5.57 | 3.50 | 5.66 | 10.55 | | 1.50 | 69.63 | 101.99 | 134.36 |
| Teamsters - Group 2 teamster | 37.63 | 3.00 | 5.28 | 3.50 | 5.39 | 10.55 | 2.00 | 3.75 | 71.10 | 102.08 | 133.06 |
| Teamsters - Working foreperson Group 2 | 39.13 | 3.00 | 5.48 | 3.50 | 5.57 | 10.55 | 2.00 | 3.75 | 72.98 | 104.90 | 136.82 |

**PERSONNEL RATE SCHEDULE
PLA LABOUR**

Rates Effective from 01 May 2017 – 30 April 2018 - NIGHTSHIFT

| Trade or Classification | Reference Formula | Base Rate (B) | Shift Premium per Hour (C) fixed | Vacation & Holiday Pay (D) =sum(B?:C?)*C\$? | LCP Premium (E) fixed | Govt. Payroll Burdens (F) =sum(B?:E?)*F\$? | Union Benefits and Funds (G) fixed | Small Tools (H) fixed | Consumables and PPE (I) fixed | Straight Time Rate per Hour (J) =sum(B?:I?) | Overtime Rate (1.5x) per Hour (K) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*1.5)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) | Overtime Rate (2.0x) per Hour (L) =((SUM(\$B?:\$G?)-(\$C?*(1+\$D\$?)))*2)+(\$C?*(1+\$D\$?))+SUM(\$H?:\$I?) |
|--|-------------------|---------------|----------------------------------|--|-----------------------|---|------------------------------------|-----------------------|-------------------------------|--|---|---|
| Teamsters - Non-working foreperson Group 2 | | 39.13 | 3.00 | 5.48 | 3.50 | 5.57 | 10.55 | | 1.50 | 68.73 | 100.65 | 132.57 |
| Teamsters - General foreperson Group 2 | | 39.63 | 3.00 | 5.54 | 3.50 | 5.63 | 10.55 | | 1.50 | 69.36 | 101.59 | 133.82 |
| Teamsters - Group 3 teamster | | 37.42 | 3.00 | 5.25 | 3.50 | 5.36 | 10.55 | 2.00 | 3.75 | 70.84 | 101.68 | 132.53 |
| Teamsters - Working foreperson Group 3 | | 38.92 | 3.00 | 5.45 | 3.50 | 5.55 | 10.55 | 2.00 | 3.75 | 72.72 | 104.50 | 136.29 |
| Teamsters - Non-working foreperson Group 3 | | 38.92 | 3.00 | 5.45 | 3.50 | 5.55 | 10.55 | | 1.50 | 68.47 | 100.25 | 132.04 |
| Teamsters - General foreperson Group 3 | | 39.42 | 3.00 | 5.51 | 3.50 | 5.61 | 10.55 | | 1.50 | 69.09 | 101.19 | 133.29 |
| Teamsters - Group 4 teamster | | 37.85 | 3.00 | 5.31 | 3.50 | 5.41 | 10.55 | 2.00 | 3.75 | 71.37 | 102.48 | 133.60 |
| Teamsters - Working foreperson Group 4 | | 39.35 | 3.00 | 5.50 | 3.50 | 5.60 | 10.55 | 2.00 | 3.75 | 73.25 | 105.30 | 137.36 |
| Teamsters - Non-working foreperson Group 4 | | 39.35 | 3.00 | 5.50 | 3.50 | 5.60 | 10.55 | | 1.50 | 69.00 | 101.05 | 133.11 |
| Teamsters - General foreperson Group 4 | | 39.85 | 3.00 | 5.57 | 3.50 | 5.66 | 10.55 | | 1.50 | 69.63 | 101.99 | 134.36 |
| Teamsters - Group 5 teamster | | 43.25 | 3.00 | 6.01 | 3.50 | 6.08 | 10.55 | 2.00 | 3.75 | 78.14 | 112.64 | 147.14 |
| Teamsters - Working foreperson Group 5 | | 44.75 | 3.00 | 6.21 | 3.50 | 6.26 | 10.55 | 2.00 | 3.75 | 80.02 | 115.46 | 150.90 |
| Teamsters - Non-working foreperson Group 5 | | 44.75 | 3.00 | 6.21 | 3.50 | 6.26 | 10.55 | | 1.50 | 75.77 | 111.21 | 146.65 |
| Teamsters - General foreperson Group 5 | | 45.25 | 3.00 | 6.27 | 3.50 | 6.33 | 10.55 | | 1.50 | 76.40 | 112.15 | 147.91 |
| Teamsters - Group 6 teamster | | 48.96 | 3.00 | 6.75 | 3.50 | 6.78 | 10.55 | 2.00 | 3.75 | 85.30 | 123.38 | 161.45 |
| Teamsters - Working foreperson Group 6 | | 50.46 | 3.00 | 6.95 | 3.50 | 6.97 | 10.55 | 2.00 | 3.75 | 87.18 | 126.20 | 165.21 |
| Teamsters - Non-working foreperson Group 6 | | 50.46 | 3.00 | 6.95 | 3.50 | 6.97 | 10.55 | | 1.50 | 82.93 | 121.95 | 160.96 |
| Teamsters - General foreperson Group 6 | | 50.96 | 3.00 | 7.01 | 3.50 | 7.03 | 10.55 | | 1.50 | 83.55 | 122.89 | 162.22 |
| Teamsters - Group 4 Apprentice 1 | | 26.49 | 3.00 | 3.83 | 3.50 | 4.01 | 10.55 | 2.00 | 3.75 | 57.14 | 81.14 | 105.14 |
| Teamsters - Group 4 Apprentice 2 | | 30.28 | 3.00 | 4.33 | 3.50 | 4.48 | 10.55 | 2.00 | 3.75 | 61.88 | 88.26 | 114.63 |
| Teamsters - Group 4 Apprentice 3 | | 34.06 | 3.00 | 4.82 | 3.50 | 4.95 | 10.55 | 2.00 | 3.75 | 66.63 | 95.37 | 124.11 |
| Elevator Constructors - Multiplier / Fixed Value | | | 3.00 | 12.0% | 3.50 | 10.90% | 4.09 | 2.00 | 3.75 | | | |
| Elevator Constructors - Mechanic | | 45.55 | 3.00 | 5.83 | 3.50 | 6.31 | 4.09 | 2.00 | 3.75 | 74.03 | 106.48 | 138.94 |
| Elevator Constructors - Mechanic in charge I | | 51.24 | 3.00 | 6.51 | 3.50 | 7.00 | 4.09 | 2.00 | 3.75 | 81.09 | 117.08 | 153.08 |
| Elevator Constructors - Mechanic in charge II | | 52.38 | 3.00 | 6.65 | 3.50 | 7.14 | 4.09 | 2.00 | 3.75 | 82.51 | 119.21 | 155.91 |
| Elevator Constructors - Probationary Helper I | | 22.78 | 3.00 | 3.09 | 3.50 | 3.53 | 4.09 | 2.00 | 3.75 | 45.74 | 64.06 | 82.38 |
| Elevator Constructors - Probationary Helper II | | 25.05 | 3.00 | 3.37 | 3.50 | 3.81 | 4.09 | 2.00 | 3.75 | 48.56 | 68.28 | 88.01 |
| Elevator Constructors - Helper I | | 31.89 | 3.00 | 4.19 | 3.50 | 4.64 | 4.09 | 2.00 | 3.75 | 57.06 | 81.03 | 105.01 |
| Elevator Constructors - Helper II | | 34.16 | 3.00 | 4.46 | 3.50 | 4.92 | 4.09 | 2.00 | 3.75 | 59.87 | 85.25 | 110.64 |
| Elevator Constructors - Improver helper | | 36.44 | 3.00 | 4.73 | 3.50 | 5.20 | 4.09 | 2.00 | 3.75 | 62.71 | 89.51 | 116.31 |

**PERSONNEL RATE SCHEDULE
PLA LABOUR**

The following conditions apply to the Personnel Rate Schedules - PLA Labour in this Appendix D.

- Column B: Base rate as per the Project Labour Agreement.
- Column C: The shift premium of \$3.00 per hour and is applied to the second and third shifts. Vacation and holiday pay are added to the shift premium. The shift premium is not included in the calculation of overtime.
- Column D: Vacation pay includes vacation and recognized holiday pay as per the Project Labour Agreement.
- Column E: Lower Churchill Project (LCP) Premium as per the Project Labour Agreement.
- Column F: Government Payroll burdens includes employment insurance (EI), Workplace Health Safety and Compensation Commission (WHSCC), and Canada Pension Plan (CPP) premiums, and the health and post-secondary education tax (HAPSET), and any other government payroll burdens, as applicable. Company reserves the right to verify for any over recovery on EI, CPP and WHSCC premiums, since these are subject to a maximum for the year. Refer to General Note 4. There is no maximum limit for the HAPSET tax.
- Column G: Union Benefits and Funds as per the Project Labour Agreement.
- Column H: Small Tools includes all tools with a replacement value of less than two thousand (\$2,000.00) Canadian Dollars each. Refer to Exhibit 2 - Appendix C for a typical listing of these types of small tools. Such items shall be furnished by the Contractor complete with all accessories and expendable operating parts and shall be maintained in good condition including the replacement of parts as may be necessary.
- Column I: Consumables whether recoverable or non-recoverable and Personal Protective Equipment (refer Exhibit 2 - Appendix C).
- Column J: The Straight Time Rate includes the total of columns B to I inclusive.
- Column K: Overtime Rate at 1.5 x is the all-in rate for labour costs when the overtime premium at 1.5 x is applicable in accordance with the Project Labour Agreement. Overtime Rate = 1.5 x (the sum of the costs in Columns B, D, E, F and G), plus the sum of the costs in columns C, H and I.
- Column L: Overtime Rate at 2.0 x is the all-in rate for labour costs when the overtime premium at 2.0 x is applicable in accordance with the Project Labour Agreement. Overtime Rate = 2.0 x (the sum of the costs in Columns B, D, E, F and G), plus the sum of the costs in columns C, H and I.

General:

**PERSONNEL RATE SCHEDULE
PLA LABOUR**

The following conditions apply to the Personnel Rate Schedules - PLA Labour in this Appendix D.

- 1) Currency of the rates is Canadian Dollars
- 2) Shift Premium is the incremental charge applied to the Straight Time Rate and Overtime Rate for shift Personnel.
- 3) The payroll burden rates expressed in dollars in this Schedule may be revised annually as necessary to reflect changes in statutory allowances.
- 4) Column (F) - Govt. Payroll Burdens is intended as an estimate of Employment Insurance (EI), Workplace Health Safety and Compensation Commission (WHSCC), Canada Pension Plan (CPP) and health and post-secondary education tax (HAPSET) only. **It is the intention of this Agreement that Company will pay Contractor's actual cost plus Labour Overhead and Profit for these components of the labour rates.** The payroll burden rates contained in column (F) - Govt. Payroll Burdens may be revised annually as necessary to reflect changes in statutory rates. Within ninety (90) days after the end of each calendar year, and also as part of the Billing Information for the Payment Certificate issued prior to Final Completion, Contractor shall perform a reconciliation of the difference between (a) the total payroll burden costs paid by Company (more specifically, the CPP, EI, HAPSET and WHSCC covered in the rates above), and (b) the actual payroll burden amounts paid by Contractor to Authorities; all as it pertains to this Agreement. Contractor shall provide Company with a report of the results along with any documentation Company may require to verify the amounts contained in the report. The form and content of such report shall be subject to the Approval of Company. In addition, Company reserves the right to verify the established dollar values and revisions thereto. In the event the Contractor has over recovered on its payroll burden costs, the Contractor shall refund to Company the difference between the actual and costs assumed in the rates for Govt. Payroll Burdens.
- 5) Whenever the Rates are to be used in conjunction with Article **34.1** and Section 9 – Standby – of Exhibit 2, the Straight Time Rate as calculated above, but reduced by the sum of columns (H) + (I), shall apply.
- 6) Whenever the Rates are to be used in conjunction with Article **31.7** and Section 9 – Standby – of Exhibit 2, the Straight Time Rate as calculated above, but reduced by the sum of columns (H) + (I), shall apply and no Labour Overhead and Profit shall be applied to the Rates.
- 7) Rate tables do not include the 'Tool Premium' due to some Operating Engineers under the Project Labour Agreement. Contractor will apply this rate as applicable under the Project Labour Agreement.

**PERSONNEL RATE SCHEDULE
NON PLA LABOUR**

Rates apply to each category of worker which will Work on the Site but are not be covered under the Project Labour Agreement.

| Category | Total Rate per hour |
|----------------------------------|---------------------|
| Project Manager | \$ 178.00 |
| Project Controls Lead | \$ 135.00 |
| Planner | \$ 130.00 |
| Scheduler | \$ 105.00 |
| Contract Administrator | \$ 105.00 |
| Cost Control | \$ 95.00 |
| Quantity Surveyor | \$ 95.00 |
| QA / QC Lead | \$ 140.00 |
| QC Inspector | \$ 105.00 |
| Document Control | \$ 70.00 |
| HSE Lead | \$ 120.00 |
| HSE Advisor | \$ 105.00 |
| Construction Manager | \$ 150.00 |
| Superintendent | \$ 135.00 |
| Project Engineer | \$ 120.00 |
| Field Engineer | \$ 105.00 |
| Purchaser | \$ 83.00 |
| Material Control | \$ 90.00 |
| Admin Assistant | \$ 54.00 |
| Clerk / Travel Coordinator | \$ 54.00 |
| Commissioning / Turnover Manager | \$ 140.00 |
| Field Engineer - Survey | \$ 120.00 |
| Commissioning Quality Engineer | \$ 130.00 |
| Commissioning Supervisor | \$ 130.00 |
| Testing Technician / Engineer | \$ 130.00 |

- Rates in this table apply to Changes only.
- Rates include all amounts associated with the provision of Personnel, in the above categories, performing Work on Site, including overhead, burdens and profit.
- Staff rates to be adjusted annually starting in January 2018 to reflect any increase in the previous year's Consumer Price Index (All Items for Newfoundland and Labrador).
- No overtime premium rate shall apply in any circumstance.

APPENDIX E

EQUIPMENT RATE SCHEDULE

EQUIPMENT RATE SCHEDULE

| | Equipment Type | Manufacturer and Model Number | Size | Year | Quantity Available | First Shift | | | | Second Shift | | | |
|----|---|-------------------------------|------|------|--------------------|-------------|----------|----------|-----------|--------------|----------|----------|-----------|
| | | | | | | Hour | Day | Week | Month | Hour | Day | Week | Month |
| 1 | Bucket Truck | | | | | 150.00 | 1,200.00 | 4,800.00 | 14,400.00 | 150.00 | 1,200.00 | 4,800.00 | 14,400.00 |
| 2 | Excavator | | | | | 130.00 | 1,040.00 | 4,160.00 | 12,480.00 | 130.00 | 1,040.00 | 4,160.00 | 12,480.00 |
| 3 | Go Track | | | | | 130.00 | 1,040.00 | 4,160.00 | 12,480.00 | 130.00 | 1,040.00 | 4,160.00 | 12,480.00 |
| 4 | Pole Trailer | | | | | 125.00 | 1,000.00 | 4,000.00 | 12,000.00 | 125.00 | 1,000.00 | 4,000.00 | 12,000.00 |
| 5 | Tension Stringer | | | | | 150.00 | 1,200.00 | 4,800.00 | 14,400.00 | 150.00 | 1,200.00 | 4,800.00 | 14,400.00 |
| 6 | Tension Puller | | | | | 175.00 | 1,400.00 | 5,600.00 | 16,800.00 | 175.00 | 1,400.00 | 5,600.00 | 16,800.00 |
| 7 | Tractor Trailer | | | | | 190.00 | 1,520.00 | 6,080.00 | 18,240.00 | 190.00 | 1,520.00 | 6,080.00 | 18,240.00 |
| 8 | Skid Steer Loader | | | | | 43.75 | 350.00 | 1,770.00 | 5,300.00 | 43.75 | 350.00 | 1,770.00 | 5,300.00 |
| 9 | Snow Blower | | | | | 8.75 | 70.00 | 330.00 | 1,000.00 | 8.75 | 70.00 | 330.00 | 1,000.00 |
| 10 | Office Complex | | | | | N/A | N/A | N/A | 36,000.00 | N/A | N/A | N/A | N/A |
| 11 | Lavatory Skid Self Contained | | | | | 41.18 | 329.43 | 1,317.71 | 3,993.06 | N/A | N/A | N/A | N/A |
| 12 | Lunch / Office trailers 12 x 60 complete with furniture | | | | | 46.41 | 371.25 | 1,485.00 | 4,500.00 | N/A | N/A | N/A | N/A |
| 13 | Container, 20' | | | | | 4.16 | 33.26 | 133.03 | 403.13 | N/A | N/A | N/A | N/A |
| 14 | Container, 40' | | | | | 5.99 | 47.89 | 191.57 | 580.50 | N/A | N/A | N/A | N/A |
| 15 | 3/4 T Pick-Up | | | | | 36.09 | 288.75 | 1,155.00 | 3,500.00 | 36.09 | 288.75 | 1,155.00 | 3,500.00 |

Appendix E
 Equipment Rate Schedule
 Agreement Number: CH0031-001

| | Equipment Type | Manufacturer and | Size | Year | Quantity Available | First Shift | | | | Second Shift | | | |
|----|----------------------------|------------------|------|------|--------------------|-------------|----------|----------|-----------|--------------|----------|----------|-----------|
| | | | | | | Hour | Day | Week | Month | Hour | Day | Week | Month |
| 16 | 1/2 T Pick-Up | | | | | 33.00 | 264.00 | 1,056.00 | 3,200.00 | 33.00 | 264.00 | 1,056.00 | 3,200.00 |
| 17 | 15 Passenger Van | | | | | 36.09 | 288.75 | 1,155.00 | 3,500.00 | 36.09 | 288.75 | 1,155.00 | 3,500.00 |
| 18 | Boom Truck 25 - 28T | | | | | 185.63 | 1,485.00 | 5,940.00 | 18,000.00 | 185.63 | 1,485.00 | 5,940.00 | 18,000.00 |
| 19 | Carry Deck Crane 15T - 18T | | | | | 176.25 | 1,410.00 | 5,650.00 | 17,000.00 | 176.25 | 1,410.00 | 5,650.00 | 17,000.00 |
| 20 | Highway Tractor | | | | | 185.63 | 1,485.00 | 5,940.00 | 18,000.00 | 185.63 | 1,485.00 | 5,940.00 | 18,000.00 |
| 21 | Bus (40 Passenger) | | | | | N/A | N/A | N/A | 4,500.00 | N/A | N/A | N/A | 4,500.00 |
| 22 | Scissor 19FT Elect Mini | | | | | 9.34 | 74.75 | 298.98 | 906.00 | 9.34 | 74.75 | 298.98 | 906.00 |
| 23 | Scissor 24-26FT Elect | | | | | 11.22 | 89.76 | 359.04 | 1,088.00 | 11.22 | 89.76 | 359.04 | 1,088.00 |
| 24 | Scissor 30-35FT IC 4WD | | | | | 21.23 | 169.87 | 679.47 | 2,059.00 | 21.23 | 169.87 | 679.47 | 2,059.00 |
| 25 | Scissor 36-49FT IC 4WD | | | | | 25.97 | 207.74 | 830.94 | 2,518.00 | 25.97 | 207.74 | 830.94 | 2,518.00 |
| 26 | Boom 30-33FT Elect Narrow | | | | | 23.72 | 189.75 | 759.00 | 2,300.00 | 23.72 | 189.75 | 759.00 | 2,300.00 |
| 27 | Boom 40-45ft Elect | | | | | 28.96 | 231.66 | 926.64 | 2,808.00 | 28.96 | 231.66 | 926.64 | 2,808.00 |
| 28 | Boom 45ft IC Artic 4WD | | | | | 33.05 | 264.41 | 1,057.65 | 3,205.00 | 33.05 | 264.41 | 1,057.65 | 3,205.00 |
| 29 | Boom 60ft IC Artic 4WD | | | | | 38.60 | 308.80 | 1,235.19 | 3,743.00 | 38.60 | 308.80 | 1,235.19 | 3,743.00 |
| 30 | Boom 65ft IC Stick 4WD | | | | | 38.60 | 308.80 | 1,235.19 | 3,743.00 | 38.60 | 308.80 | 1,235.19 | 3,743.00 |
| 31 | Boom 80ft IC Artic 4WD | | | | | 81.43 | 651.42 | 2,605.68 | 7,896.00 | 81.43 | 651.42 | 2,605.68 | 7,896.00 |
| 32 | Boom 86ft IC Stick 4WD | | | | | 84.10 | 672.79 | 2,691.15 | 8,155.00 | 84.10 | 672.79 | 2,691.15 | 8,155.00 |
| 33 | Welder 400AMP Diesel | | | | | 16.25 | 130.00 | 510.00 | 1,525.00 | 16.25 | 130.00 | 510.00 | 1,525.00 |

Appendix E
Equipment Rate Schedule
Agreement Number: CH0031-001

| | Equipment Type | Manufacturer and | Size | Year | Quantity Available | First Shift | | | | Second Shift | | | |
|----|---------------------------------|------------------|------|------|--------------------|-------------|--------|----------|----------|--------------|--------|----------|----------|
| | | | | | | Hour | Day | Week | Month | Hour | Day | Week | Month |
| 34 | Compressor 185CFM Diesel | | | | | 10.16 | 81.26 | 325.05 | 985.00 | 10.16 | 81.26 | 325.05 | 985.00 |
| 35 | Light Tower Small Diesel | | | | | 16.56 | 132.50 | 530.00 | 1,590.00 | 16.56 | 132.50 | 530.00 | 1,590.00 |
| 36 | Generator 125-149 KVA | | | | | 31.06 | 248.49 | 993.96 | 3,012.00 | 31.06 | 248.49 | 993.96 | 3,012.00 |
| 37 | Generator 70-79 KVA | | | | | 26.30 | 210.38 | 841.50 | 2,550.00 | 26.30 | 210.38 | 841.50 | 2,550.00 |
| 38 | Generator 19-29 KVA | | | | | 19.35 | 154.77 | 619.08 | 1,876.00 | 19.35 | 154.77 | 619.08 | 1,876.00 |
| 39 | Forklift 5000lb Warehouse | | | | | 19.66 | 157.25 | 628.98 | 1,906.00 | 19.66 | 157.25 | 628.98 | 1,906.00 |
| 40 | Forklift 6000lb Warehouse | | | | | 19.66 | 157.25 | 628.98 | 1,906.00 | 19.66 | 157.25 | 628.98 | 1,906.00 |
| 41 | Forklift 8000lb Warehouse | | | | | 21.34 | 170.69 | 682.77 | 2,069.00 | 21.34 | 170.69 | 682.77 | 2,069.00 |
| 42 | Forklift 10000lb Warehouse | | | | | 25.45 | 203.61 | 814.44 | 2,468.00 | 25.45 | 203.61 | 814.44 | 2,468.00 |
| 43 | Forklift 15000lb Warehouse | | | | | 43.48 | 347.82 | 1,391.28 | 4,216.00 | 43.48 | 347.82 | 1,391.28 | 4,216.00 |
| 44 | Forklift Variable Reach 12000lb | | | | | 52.66 | 421.25 | 1,684.98 | 5,106.00 | 52.66 | 421.25 | 1,684.98 | 5,106.00 |
| 45 | Forklift Variable Reach 10000lb | | | | | 43.78 | 350.21 | 1,400.85 | 4,245.00 | 43.78 | 350.21 | 1,400.85 | 4,245.00 |
| 46 | Forklift Variable Reach 8000lb | | | | | 37.19 | 297.50 | 1,189.98 | 3,606.00 | 37.19 | 297.50 | 1,189.98 | 3,606.00 |
| 47 | Burndy Y35 Crimping Tool | | | | | 8.77 | 70.13 | 280.50 | 850.00 | 8.77 | 70.13 | 280.50 | 850.00 |
| 48 | Cable Puller/Pusher | | | | | 8.04 | 64.35 | 257.40 | 780.00 | 8.04 | 64.35 | 257.40 | 780.00 |
| 49 | Cable Reel Roller, 15t | | | | | 24.23 | 193.88 | 775.50 | 2,350.00 | 24.23 | 193.88 | 775.50 | 2,350.00 |
| 50 | Electric Welding Machine | | | | | 8.66 | 69.30 | 277.20 | 840.00 | 8.66 | 69.30 | 277.20 | 840.00 |
| 51 | Greenlee Pulley/Roller System, | | | | | 9.28 | 74.25 | 297.00 | 900.00 | 9.28 | 74.25 | 297.00 | 900.00 |

Appendix E
Equipment Rate Schedule
Agreement Number: CH0031-001

| | Equipment Type | Manufacturer and | Size | Year | Quantity Available | First Shift | | | | Second Shift | | | |
|----|---|------------------|------|------|--------------------|-------------|--------|--------|----------|--------------|--------|--------|----------|
| | | | | | | Hour | Day | Week | Month | Hour | Day | Week | Month |
| | Asst'd | | | | | | | | | | | | |
| 52 | Plate Tamper DSL 1000LB | | | | | 21.88 | 175.07 | 700.26 | 2,122.00 | 21.88 | 175.07 | 700.26 | 2,122.00 |
| 53 | Greenlee Tugger - 6,500 lb. | | | | | 7.22 | 57.75 | 231.00 | 700.00 | 7.22 | 57.75 | 231.00 | 700.00 |
| 54 | Greenlee Tugger - 8,000 lb. | | | | | 8.04 | 64.35 | 257.40 | 780.00 | 8.04 | 64.35 | 257.40 | 780.00 |
| 55 | Hydraulic K.O. Cutters - 1/2" to 2" | | | | | 3.61 | 28.88 | 115.50 | 350.00 | 3.61 | 28.88 | 115.50 | 350.00 |
| 56 | Hydraulic K.O. Cutters - 1/2" to 4" | | | | | 3.85 | 30.77 | 123.09 | 373.00 | 3.85 | 30.77 | 123.09 | 373.00 |
| 57 | Magnetic Drill Press, 3/4",Milwak. 1/2" Chuck | | | | | 5.16 | 41.25 | 165.00 | 500.00 | 5.16 | 41.25 | 165.00 | 500.00 |
| 58 | Portable Pipe Threader - 1/2" to 2" | | | | | 3.35 | 26.81 | 107.25 | 325.00 | 3.35 | 26.81 | 107.25 | 325.00 |
| 59 | Rigid Pipe Bender - 3/4" to 4" | | | | | 12.89 | 103.13 | 412.50 | 1,250.00 | 12.89 | 103.13 | 412.50 | 1,250.00 |
| 60 | Rigid Pipe Threading Machine - 1/2" to 4" | | | | | 7.73 | 61.88 | 247.50 | 750.00 | 7.73 | 61.88 | 247.50 | 750.00 |
| 61 | Victaulic Groover Large | | | | | 6.51 | 52.08 | 208.33 | 625.00 | 6.51 | 52.08 | 208.33 | 625.00 |
| 62 | Victaulic Groover Small | | | | | 4.69 | 37.50 | 150.00 | 450.00 | 4.69 | 37.50 | 150.00 | 450.00 |
| 63 | 1 KV Megger | | | | | 7.43 | 59.40 | 237.60 | 720.00 | 7.43 | 59.40 | 237.60 | 720.00 |
| 64 | 5 KV Megger | | | | | 8.66 | 69.30 | 277.20 | 840.00 | 8.66 | 69.30 | 277.20 | 840.00 |
| 65 | Burndy Y35 Crimping Tool | | | | | 8.25 | 66.00 | 264.00 | 800.00 | 8.25 | 66.00 | 264.00 | 800.00 |
| 66 | Cable Fault Locator | | | | | 24.23 | 193.88 | 775.50 | 2,350.00 | 24.23 | 193.88 | 775.50 | 2,350.00 |
| 67 | Communicator | | | | | 19.80 | 158.40 | 633.60 | 1,920.00 | 19.80 | 158.40 | 633.60 | 1,920.00 |
| 68 | Digital Dielectric Test | | | | | | | | | | | | |

Appendix E
 Equipment Rate Schedule
 Agreement Number: CH0031-001

| | Equipment Type | Manufacturer and | Size | Year | Quantity Available | First Shift | | | | Second Shift | | | |
|----|---------------------------------------|------------------|------|------|--------------------|-------------|--------|----------|----------|--------------|--------|----------|----------|
| | | | | | | Hour | Day | Week | Month | Hour | Day | Week | Month |
| | Set | | | | | 11.14 | 89.10 | 356.40 | 1,080.00 | 11.14 | 89.10 | 356.40 | 1,080.00 |
| 69 | Digital Hipot Test Set | | | | | 21.04 | 168.30 | 673.20 | 2,040.00 | 21.04 | 168.30 | 673.20 | 2,040.00 |
| 70 | Hot Sticks Rate 46KV/CW Test Meter | | | | | 10.83 | 86.63 | 346.50 | 1,050.00 | 10.83 | 86.63 | 346.50 | 1,050.00 |
| 71 | HV Injection Unit | | | | | 44.86 | 358.88 | 1,435.50 | 4,350.00 | 44.86 | 358.88 | 1,435.50 | 4,350.00 |
| 72 | MA & V Source | | | | | 18.82 | 150.56 | 602.25 | 1,825.00 | 18.82 | 150.56 | 602.25 | 1,825.00 |
| 73 | Power Quality Analyzer | | | | | 12.89 | 103.13 | 412.50 | 1,250.00 | 12.89 | 103.13 | 412.50 | 1,250.00 |
| 74 | Regulated Power Supply | | | | | 7.63 | 61.05 | 244.20 | 740.00 | 7.63 | 61.05 | 244.20 | 740.00 |
| 75 | Relay Test Set | | | | | 19.49 | 155.93 | 623.70 | 1,890.00 | 19.49 | 155.93 | 623.70 | 1,890.00 |
| 76 | Scope Meter | | | | | 8.51 | 68.06 | 272.25 | 825.00 | 8.51 | 68.06 | 272.25 | 825.00 |

NOTES

1. The rates include, but are not limited to, the cost of equipment rental, fuel, lubricants, tires, expendable parts, service, maintenance, calibration, repairs, storage, insurance, licenses, depreciation, interest, taxes, overhead, mark-up and profit.
2. The rates include labour and equipment for fuelling, lubricating, servicing, maintaining, repairing, spare parts and installation.
3. The rates exclude operator's labour costs.
4. Rates are applicable only to actual operating time.
5. For any equipment not listed, rental rates will be agreed to in writing by Company prior to the deployment and use of such equipment. Equipment rented or leased from a third party shall be compensated at actual documented invoice cost plus the markup set out in Exhibit 2 – Section 6.5(c). Third party leasing shall be subject to the Approval of Company in advance of the deployment and use of such equipment. In the event of third party leased equipment requires operation and maintenance, the appropriate rate for same shall be subject to the Approval of Company in advance of the deployment and use of such equipment.
6. If Approved by Company, the time required to mobilize and demobilize equipment not located at the Site and which is to be deployed at the Site on Change Order Work will be compensated. Compensation will include loading and transportation costs where this is more efficient than travelling the equipment. The cost of demobilizing the equipment will not be compensated if such equipment is used at the Site for Work performed on a lump sum or unit price basis.

APPENDIX F

PLA LABOUR OVERHEAD AND PROFIT APPLICATION

PLA Labour Overhead and Profit Application

Target Cost of Labour Adjustment

| Description | Amount |
|------------------------------------|-----------------|
| Target Cost of Labour | \$63,920,703.06 |
| Labour Cost Adjustments | |
| Adjusted Target Cost of Labour | \$63,920,703.06 |
| Reimbursable Cost of Labour | |
| Labour Cost Difference (Minimum=0) | \$0.00 |

| Percentage Range | Amount | OH&P Multiplier | Labour Overhead & Profit | Manpower Cost | Total | X Target Cost Labour |
|---|-----------------|-----------------|--------------------------|---------------|-------|----------------------|
| Up to Reimbursable Cost of Labour | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | |
| 0-17 above Reimbursable Cost of Labour | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| >17-34 above Reimbursable Cost of Labour | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| >34-51 above Reimbursable Cost of Labour | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| >51-68 above Reimbursable Cost of Labour | 0.00 | -0.23 | 0.00 | 0.00 | 0.00 | 0.00 |
| >68-85 above Reimbursable Cost of Labour | 0.00 | -0.56 | 0.00 | 0.00 | 0.00 | 0.00 |
| >85-102 above Reimbursable Cost of Labour | 0.00 | -0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| >103 above Reimbursable Cost of Labour | 0.00 | -0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | | |
| | \$63,920,703.06 | | 0.00 | | | |

Exhibit 2
Compensation
Agreement Number: CH0031-001

APPENDIX G

SWORN DECLARATION

Exhibit 2
 Compensation
 Agreement Number: CH0031-001

SWORN DECLARATION – ACCOMPANYING INVOICE FOR PAYMENT

C A N A D A) IN THE MATTER OF THE AGREEMENT
) BETWEEN MUSKRAT FALLS CORPORATION AND
 PROVINCE OF NEWFOUNDLAND) **[CONTRACTOR]**
 AND LABRADOR) DATED AS OF **[DATE]** FOR THE
) **[DESCRIPTION OF WORK]**
) BEING AGREEMENT NO. **[INSERT NO.]**
) (the “Agreement”)

I, **[●]**, of the City of **[●]**, in the **[Province]/[State]** of **[●]**, **[Country]**, do solemnly declare that:

1. I am the **[title]** of **[full legal name of Contractor]** and as such have personal knowledge of the facts set out in this Declaration.
2. Defined terms used in this sworn Declaration but not defined in this Declaration have the meanings given to those terms in the Agreement.
3. All (a) payments due to Subcontractors, (b) wages and benefit payments due to any of Contractor’s Personnel, and (c) Taxes, contributions, premiums, allowances and remittances due to any Authority, pension fund, benefit plan or union fund in accordance with a collective agreement or Applicable Laws, have been paid in a timely manner on or before the date of the Invoice and associated Payment Certificate to which this Declaration relates, subject to any withholdings or holdbacks required by Applicable Laws.
4. Title to the applicable part of the Work will pass to Company in accordance with Article 23 of the Agreement.
5. (a) There are no known outstanding Claims under the Agreement, including but not limited to Claims by Contractor against Company, except for those Claims which have already been communicated to Company in a timely manner in the form of Notice required by the Agreement and which are described and listed in the Appendix to this Declaration, including an estimate of the value of each such Claim;
 or
 (b) There are outstanding Claims, including but not limited to Claims by Contractor against Company, which have not been communicated to Company and each of these Claims is described and listed in the Appendix to this Declaration and is delivered to Company in a timely manner, and there are no other known outstanding Claims under the Agreement, except for those Claims which have already been communicated to Company in a timely manner in the form of Notice required by the Agreement and which are described and listed in the Appendix to this Declaration, including an estimate of the value of each such Claim.
6. The last application for payment for which we have received payment is No. _____ dated the _____ day of _____, 20__.

I make this Declaration conscientiously believing it to be true and knowing it is of the same force as if made under oath.

DECLARED before me at the City of)
[•],)
in the [Province]/[State] of)
[•],)
[Country])
on [Month], [Date], 20[•])
)
)

Name:
A Commissioner, etc.

Declarant

APPENDIX TO SWORN DECLARATION
[Date]

(a) Claims previously communicated to Company:

Description

Estimated Value

(b) Claims not previously communicated to Company:

Description:

Estimated Value:

APPENDIX H

OPERATING SPARES PRICE SCHEDULE

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

TABLE OF CONTENTS

Agreement Number: CH0031-001

| Packaging | Description |
|--|--|
| Water Treatment Plant: Magnor | See A2.3 Water Treatment Plant Magnor |
| Water Treatment: Xylem | See A2.3 Water Treatment Xylem |
| Diesel Generator: Generatrice Drummond | See A2.3 Diesel Generator Generatrice Drummond |
| Compressed Air: Kaeser | See A2.3 Compressed Air Kaeser |
| Filtration: John Brooks | See A2.3 Filtration John Brooks |
| Oil Skimmers: Rotator Products | See A2.3 Oil Skimmers Rotator Products |
| Instrumentation: PIC | See A2.3 Instrumentation PIC |
| Mobile Pumping Filtering: HydraFab | See A2.3 Mobile Pumping Filtering HydraFab |
| Filtration: General Filtration | See A2.3 Filtration General Filtration |
| Water Treatment Plant: Natpro | See A2.3 Water Treatment Plant Natpro |
| HVAC Air Handling Unit | See A2.3 HVAC Air Handling Unit |

Note: Where it is not otherwise stated delivery terms for items in the following tables are Incoterms: DDP Muskrat Falls Generating Facility, Newfoundland and Labrador

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Water Treatment Plant Magnor

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|---|------------|--------------|-----------------|----------------------------|--------------------------------|---|
| Butterfly valve Bray 4" series 31 | 31-713/S04 | Bray | 31-713/S04 | 0.1 | 4 | \$ 483.00/EA CAD X-work Boucherville QC |
| Butterfly valve Bray 2 1/2" series 31 | 31-713/S01 | Bray | 31-713/S01 | 0.1 | 4 | \$ 201.25/EA CAD X-work Boucherville QC |
| Bray electric actuator series 70 | S70 | Bray | S70 | 0.1 | 4 | \$ 1391.50/EA CAD X-work Boucherville QC |
| Filtering media : Anthracite | 1625-0001 | Magnus | 1625-0001 | 2 cu.ft | 4 | \$ 42.49/cu ft CAD X-work Boucherville QC |
| Filtering media : Sand | 1615-0013 | Magnus | 1615-0013 | 200 lb | 4 | \$ 0.41/lb CAD X-work Boucherville QC |
| Man-hole gasket | 1830-0046 | Magnus | 1830-0046 | 2 | 4 | \$ 78.87/EA CAD X-work Boucherville QC |
| VALVE FLOW-TEK #7205-3-RRL 1" SS, SOCKET WELD | 7205-3-RRL | Bray | 7205-3-RRL | 0.1 | 4 | \$ 178.25/EA CAD X-work Boucherville QC |
| VALVE FLOW-TEK #7207-3-RRL 1 1/2" SS, SOCKET WELD | 7207-3-RRL | Bray | 7207-3-RRL | 0.1 | 4 | \$ 293.25/EA CAD X-work Boucherville QC |
| VALVE FLOW-TEK #7203-3-RRL 1/2" SS, SOCKET WELD | 7203-3-RRL | Bray | 7203-3-RRL | 0.1 | 4 | \$ 92/EA CAD X-work Boucherville QC |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Water Treatment Plant Magnor

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|---|---------------------------|--------------|---------------------------|----------------------------|--------------------------------|--|
| VALMATIC AIR VENT SERIES 200-SS #201CX075 | 201CX075 | VALMATIC | 201CX075 | 0.1 | 16-18 | \$ 6468.75/EA CAD X-work Boucherville QC |
| PRESSURE SWITCH SERIE 400 | J402K- S147B-M201- M446 | WAJAX | J402K-S147B-M201-M446 | 0.1 | 8 | \$ 4588.5/EA CAD X-work Boucherville QC |
| PRESSURE GAUGE WINTERS SERIE PFP645Z R2R1, 600-1000 kPag, 4PO SS304, 1/4NPT | PFP645Z R2R1 | WINTERS | PFP645Z R2R1 | 0.1 | 4 | \$ 891.25/EA CAD X-work Boucherville QC |
| SWAGELOK VALVE SERIES 60 1/4" #SS-62TS4 | SS-62TS4 | SWAGELOK | SS-62TS4 | 0.1 | 4 | \$ 368/EA CAD X-work Boucherville QC |
| DIFF PRESS GAUGE ASHCROFT TYPE 1127 P/N 45- 1127SD-02L 0-70KPA/PSI | 45-1127SD-02L 0-70KPA/PSI | ASHCROFT | 45-1127SD-02L 0-70KPA/PSI | 0.1 | 8 | \$ 2242.5/EA CAD X-work Boucherville QC |
| Filter control valve 2850NXT | 1105-0107 | Magnus | 1105-0107 | 0.1 | 4 | \$ 1376.55/EA CAD X-work Boucherville QC |
| Exchanger control valve 2900NXT | 1105-0081 | Magnus | 1105-0081 | 0.1 | 4 | \$ 2472.50/EA CAD X-work Boucherville QC |
| UV lamp SPV410 | 1485-0102 | Magnus | 1485-0102 | 3 | 4 | \$ 138.00/EA CAD X-work Boucherville QC |
| UV quartz sleeve | 1485-0182 | Magnus | 1485-0182 | 3 | 4 | \$ 63.25/EA CAD X-work Boucherville QC |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Water Treatment Plant Magnor

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|------------------------------|-----------|--------------|-----------------|----------------------------|--------------------------------|--|
| UV controler | 1490-0009 | Magnus | 1490-0009 | 3 | 4 | \$ 661.25/EA CAD X-work Boucherville QC |
| UV sensor | 1440-0008 | Magnus | 1440-0008 | 3 | 4 | \$ 431.25/EA CAD X-work Boucherville QC |
| Chlorine dosing pump | 1705-0019 | Magnus | 1705-0019 | 0.2 | 6 | \$ 2673.75/EA CAD X-work Boucherville QC |
| Chlorine back pressure valve | 2040-0099 | Magnus | 2040-0099 | 0.2 | 4 | \$ 346.15/EA CAD X-work Boucherville QC |
| Chlorine relief valve | 2040-0107 | Magnus | 2040-0107 | 0.2 | 4 | \$ 392.15/EA CAD X-work Boucherville QC |
| Chlorine flow switch | 1715-0020 | Magnus | 1715-0020 | 0.2 | 4 | \$ 1277.65/EA CAD X-work Boucherville QC |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Water Treatment Xylem

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price (CAD) |
|---------------------------------|----------|--------------|-----------------|----------------------------|--------------------------------|------------------|
| 2250 88HP Pump Basic Repair Kit | 6019007 | Xylem | 6019007 | 0.5 | 2 | \$4,016.71 |
| 2251 88HP Pump Impeller | 5188500 | Xylem | 5188500 | 0.5 | 2 | \$3,089.39 |
| 2250 58HP Pump Basic Repair Kit | 6019006 | Xylem | 6019006 | 0.5 | 2 | \$2,849.17 |
| 2251 58HP Pump Impeller | 4625200 | Xylem | 4625200 | 0.5 | 2 | \$742.01 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule
 Agreement Number: CH0031-001

Compressed Air Kaeser

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|--|---------------|---------------|-----------------|----------------------------|--------------------------------|------------------|
| Set of Filter Cartridges | ANK-Filt | L.M.F. | | 1 Set / Year | Stock | \$ 516.12/EA CAD |
| Set Gasket Valve Inspection | ANK- GAS | L.M.F. | | 1 Set / Year | 3 Weeks ARO | \$ 422.83/EA CAD |
| Various Service Kits (solenoid, Vent Valve, check valve) | | L.M.F. | | 1 Set / Year | 3 Weeks ARO | \$ 3308.76/EA |
| Set of Gaskets | | L.M.F. | | 1 Set /2Years | 3 Weeks ARO | \$ 1603.20/EA |
| Complete Set of Valves | | L.M.F. | | 1 Set /2Years | 3 Weeks ARO | \$ 11391.60/EA |
| Maintenance Kit | AN5YRCKC SD2 | Kaeser | | 1 Set / Year | Stock | \$ 2979.60/EA |
| High Pressure Compressor Oil | ANP122-5 | Schell Corena | | 4 Pails / Year | Stock | \$ 291.60/EA CAD |
| Low Pressure Compressor Oil | M-460 | Kaeser | | 4 Pails / Year | Stock | \$ 429.60/EA CAD |
| Filter Separator Cartridge | USLS-485 | Kaeser | | 1 / Year | Stock | \$ 225.60/EA CAD |
| Oil/Water Separator Cartridge | ANKCF200 CART | Kaeser | | 1 / Year | Stock | \$ 721.20/EA CAD |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Filtration John Brooks

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price (Incoterm) (specify currency) |
|----------------|----------|--------------|-----------------------------|----------------------------|--------------------------------|--|
| Spare Screen | 3442,07 | IFC | SC0100YT1500003 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 27.14/EA CAD |
| Gasket | 3442,07 | IFC | SC0100YT1500003 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 14.95/EA CAD |
| Spare Screen | 3442,08 | IFC | SC0100YT1500003 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 27.14/EA CAD |
| Gasket | 3442,08 | IFC | SC0100YT1500003 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 14.95/EA CAD |
| Spare Screen | 344A,02 | IFC | SC0100YT600003 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 27.14/EA CAD |
| Gasket | 344A,02 | IFC | SC0100YT600003 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 13.80/EA CAD |
| Spare Screen | 344A,03 | IFC | SC0100YT600003 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 27.14/EA CAD |
| Gasket | 344A,03 | IFC | SC0100YT600003 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 13.80/EA CAD |
| Basket 300mesh | 344B,02 | Eaton | #85, 2-1/2" Flang | 1 /STRAINER/YEAR | 2-3 weeks | \$ 217.41/EA CAD |
| Gasket | 344B,02 | Eaton | gasket for #85 2-1/2" Flang | 1 /STRAINER/YEAR | 2-3 weeks | \$ 28.52/EA CAD |
| Basket | 344B,02 | IFC | YF150, 2-1/2" Flang ed | 1 /STRAINER/YEAR | 2-3 weeks | \$ 141.57/EA CAD |
| Gasket | 344B,02 | IFC | gasket for YF150 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 20.59/EA CAD |
| Basket 300mesh | 3449,02 | Eaton | #85, 1-1/2" SW | 1 /STRAINER/YEAR | 2-3 weeks | \$ 133.00/EA CAD |
| Gasket | 3449,02 | Eaton | gasket for #85 1-1/2" SW | 1 /STRAINER/YEAR | 2-3 weeks | \$ 25.30/EA CAD |
| Basket | 3449,02 | IFC | YSW300, 1-1/2" | 1 /STRAINER/YEAR | 2-3 weeks | \$ 44.51/EA CAD |
| Gasket | 3449,02 | IFC | gasket for YSW300 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 11.50/EA CAD |
| Basket 300mesh | 3449,03 | Eaton | #85, 2-1/2" Flang | 1 /STRAINER/YEAR | 2-3 weeks | \$ 217.41/EA CAD |
| Gasket | 3449,03 | Eaton | gasket for #85 2-1/2" Flang | 1 /STRAINER/YEAR | 2-3 weeks | \$ 28.52/EA CAD |
| Basket | 3449,03 | IFC | YF150, 2-1/2" Flang ed | 1 /STRAINER/YEAR | 2-3 weeks | \$ 141.57/EA CAD |
| Gasket | 3449,03 | IFC | gasket for YF150 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 20.59/EA CAD |
| Spare Basket | 3448,01 | Eaton | Model#73 | 1 /STRAINER/YEAR | 2-3 weeks | \$ 3775.84/EA CAD |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Filtration John Brooks

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price (Incoterm) (specify currency) |
|---------------------|----------|-----------------------|--------------------|----------------------------|--------------------------------|--|
| Spare Basket | 3448,01 | IFC | BF125CI | 1 /STRAINER/YEAR | 2-3 weeks | \$ 1128.04/EA CAD |
| Gasket | 3448,01 | IFC | gasket for BF125CI | 1 /STRAINER/YEAR | 2-3 weeks | \$ 51.75/EA CAD |
| MEDIA KIT, INLET | 344B,01 | Lakos | 106433 | 0.20 Each | 2-3 weeks | \$ 34.94/EA CAD |
| MEDIA KIT, OUTLET | 344B,01 | Lakos | 128411 | 0.20 Each | 2-3 weeks | \$ 34.94/EA CAD |
| 12 V SOLENOID VALVE | 344B,01 | Lakos | 108131 | 0.20 Each | 2-3 weeks | \$ 194.06/EA CAD |
| MURPHY SWITCH | 344B,01 | Lakos | 107833 | 0.20 Each | 2-3 weeks | \$ 388.13/EA CAD |
| SPIN CLEAN FILTER | 344B,01 | Lakos | 123245 | 0.20 Each | 2-3 weeks | \$ 41.4/EA CAD |
| BACKWASH VALVE | 344B,01 | Lakos | 108030 | 0.20 Each | 2-3 weeks | \$ 64.69/EA CAD |
| 316SS Impeller | 3444 | TRU20 | TBA | 0.25 Each | 10-12 weeks | \$ 2951.36/EA CAD |
| Shaft | 3444 | TRU20 | TBA | 0.25 Each | 10-12 weeks | \$ 1702.71/EA CAD |
| Mechanical Seal | 3444 | TRU20 | TBA | 0.25 Each | 10-12 weeks | \$ 3334.06/EA CAD |
| Bearing | 3444 | TRU20 | TBA | 0.5 Each | 10-12 weeks | \$ 216.21/EA CAD |
| Shaft sleeve | 3444 | TRU20 | TBA | 0.5 Each | 10-12 weeks | \$ 529.74/EA CAD |
| Wear ring | 3444 | TRU20 | TBA | 0.5 Each | 10-12 weeks | \$ 421.62/EA CAD |
| Gasket | 3444 | TRU20 | TBA | 1 Each | 10-12 weeks | \$ 162.16/EA CAD |
| O ring | 3444 | TRU20 | TBA | 1 Each | 10-12 weeks | \$ 108.11/EA CAD |
| K12 Spare Seal | 3444 | National Pump Company | TBA | 0.25 Each | 8 Weeks | \$ 6500.64/EA CAD |
| K12 Spare Wear Ring | 3444 | National Pump Company | TBA | 0.25 Each | 8 Weeks | \$ 2818.89/EA CAD |
| K20 Spare Seal | 3444 | National Pump Company | TBA | 0.25 Each | 8 Weeks | \$ 8911.35/EA CAD |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Filtration John Brooks

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price (Incoterm) (specify currency) |
|---------------------|----------|-----------------------|-----------------|----------------------------|--------------------------------|--|
| K20 Spare Wear Ring | 3444 | National Pump Company | TBA | 0.25 Each | 8 Weeks | \$ 10 002.54/EA CAD |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Oil Skimmers Rotator Products

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|---------------------------|----------|--------------|-----------------|----------------------------|--------------------------------|------------------|
| Hydro Tube (length 14.8m) | | Oil Skimmer | | 0.3 | | \$ 792.35/EA CAD |
| Hydro Tube (length 14.8m) | | Oil Skimmer | | 0.3 | | \$ 792.35/EA CAD |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Instrumentation PIC

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|--|----------|--------------------------------------|------------------------|----------------------------|--------------------------------|------------------|
| Complete RTD assembly for 14 inch pipe | P/N | M01- R2D8.5- SSX-T1(0- 50C)- TW(316) | Metalogic Technologies | Very Low | 4 | \$ 453.10/EA CAD |
| Complete RTD assembly for 6 inch pipe | P/N | M01- R2D4.5- SSX-T1(0- 50C)- TW(316) | Metalogic Technologies | Very Low | 4 | \$ 425.50/EA CAD |
| Complete RTD assembly for 4 inch pipe | P/N | M01- R2D4.5- SSX-T1(0- 50C)- TW(316) | Metalogic Technologies | Very Low | 4 | \$ 425.50/EA CAD |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Mobile Pumping Filtering HydraFab

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|---|--------------|--------------|-----------------|----------------------------|--------------------------------|-------------------|
| 7 micron filter element to provide a Beta 5(c)=1000 rating. | 3446-FR-5000 | PALL | UE319AP20Z | 24 | 6 weeks | \$ 483.08/EA CAD |
| Water Removal Filter Element | 3446-FR-5001 | STAUFF | SP- 300EW10B | 56 | 6 weeks | \$ 1215.04/EA CAD |
| 2` HOSE ASSEMBLY 3M LONG NPT | N2490 | ALGOOD | N2940 | 2 | 1 week | \$ 805.00/EA CAD |
| 2" VITON MAIN SEAL KIT FOR CPL AND ADP (REQUIRE 2 PER SET) | | DRY LINK | K020250201 | 4 | 4 weeks | \$ 818.80/EA CAD |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Filtration General Filtration

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|----------------------------------|-----------|--------------|-----------------|----------------------------|--------------------------------|------------------|
| Automatic Strainer 2596 | | | | | | |
| Cover O-Ring | TBA | Eaton | TBA | 8 | 3 to 4 weeks | \$ 200.32/EA USD |
| Shaft seal replacement kit | TBA | Eaton | TBA | 16 | 3 to 4 weeks | \$ 556.45/EA USD |
| Drive Pin | TBA | Eaton | TBA | 8 | 3 to 4 weeks | \$ 103.87/EA USD |
| Shaft Bushing | TBA | Eaton | TBA | 8 | 3 to 4 weeks | \$ 1069.87/EA |
| Element | TBA | Eaton | TBA | 4 | 6 to 8 weeks | \$ 8152.38/EA |
| Simplex Strainer Model 73 | | | | | | |
| Basket 20 mesh | XST052160 | Eaton | XST052160M | 4 | 4 to 6 weeks | \$ 8987.95/EA |
| Gasket | ORS469B70 | Eaton | ORS469B70 | 8 | 3 to 4 weeks | \$ 128.80/EA USD |
| Y-strainer 1.5 | | | | | | |
| Screen | TBA | Eaton | TBA | 7 | 3 to 4 weeks | \$ 142.30/EA USD |
| Gasket | TBA | Eaton | TBA | 14 | 3 to 4 weeks | \$ 25.97/EA USD |
| Y-strainer 2.5 | | | | | | |
| Screen | TBA | Eaton | TBA | 8 | 3 to 4 weeks | \$ 183.85/EA USD |
| Gasket | TBA | Eaton | TBA | 20 | 3 to 4 weeks | \$ 30.12/EA USD |
| Screen 50 micron (325 mesh) | TBA | Eaton | TBA | 2 | 3 to 4 weeks | \$ 232.67/EA USD |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Water Treatment Plant Natpro

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|---|----------|--------------|-----------------|----------------------------|--------------------------------|---------------------|
| Service Water Pump 3449-P6000/6001 & 6002 | | | | | | |
| Seal Repair Kit | | Aurora | | One | 4 - 6 Weeks | \$ 5635.00/EA CAD |
| Overhaul Kit | | Aurora | | One | 4 - 6 Weeks | \$ 7705.00/EA CAD |
| Rotating Assembly | | Auroa | | - | TBA | \$ 16 675.00/EA CAD |
| | | | | | | |
| Grinder Submersible Pump 3353-P5000/5001 | | | | | | |
| Seals, Oring & Bearings | | Hydromatic | | 1 per Pump | 4 - 5 Weeks | \$ 4600.00/EA CAD |
| Impellers | | Hydromatic | | 1 per Pump | 4 - 5 Weeks | \$ 1828.50/EA CAD |
| Cutters (Radial & Stationary) | | Hydromatic | | 1 per Pump | 4 - 5 Weeks | \$ 1966.50/EA CAD |
| | | | | | | |
| Lubrification Water Pump 344B-P5000/5001 | | | | | | |
| Seal Kit | | Aurora | | 1 per Pump | 4-5 Weeks | \$ 385.25/EA CAD |
| Gasket Kit | | Aurora | | 1 per Pump | 4-5 Weeks | \$ 57.50/EA CAD |
| Stack Kt | | Aurora | | 1 per Pump | 4-5 Weeks | \$ 1914.75/EA CAD |
| | | | | | | |
| Dewatering Pump 3445-P5000/5001 & 5002 | | | | | | |
| Mechanical Seal, Rubber Line Shaft Bearings & Gaskets | | | | 1 | 4 - 5 Weeks | \$ 5175.00/EA CAD |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Water Treatment Plant Natpro

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|---|----------|--------------|-----------------|----------------------------|--------------------------------|-------------------|
| Water Treatment Plant Pump 3352-P6000/6001 | | | | | | |
| Seal Kit | | Aurora | | 1 per Pump | 4-5 Weeks | \$ 385.25/EA CAD |
| Gasket Kit | | Aurora | | 1 per Pump | 4-5 Weeks | \$ 57.50/EA CAD |
| Stack Kt | | Aurora | | 1 per Pump | 4-5 Weeks | \$ 1914.75/EA CAD |
| Drainage Pump 3444-P5000/5001 & 5002 | | | | | | |
| Mechanical Seal, Rubber Line Shaft Bearings & Gaskets | | | | | 4 - 5 Weeks | \$ 5175.00/EA CAD |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule
 Agreement Number: CH0031-001

Air Handling Units

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|----------------------------------|----------|--------------|-----------------|----------------------------|--------------------------------|------------|
| Motors | | | | | | |
| 1 HP | | PF-SWSI | | N/A | 2 Weeks | 514.15 ea |
| 2 HP | | PF-SWSI | | N/A | 2 Weeks | 514.15 ea |
| 3 HP | | PF-SWSI | | N/A | 2 Weeks | 734.5 ea |
| 5 HP | | PF-SWSI | | N/A | 2 Weeks | 881.4 ea |
| 7.5 HP | | PF-SWSI | | N/A | 2 Weeks | 1175.2 ea |
| 10 HP | | PF-SWSI | | N/A | 2 Weeks | 1469 ea |
| 15 HP | | PF-SWSI | | N/A | 2 Weeks | 1762.8 ea |
| Filters | | | | | | |
| Merv 8 - AAF Perfect Pleat Ultra | | PF-SWSI | | N/A | 2 Weeks | 23.73 ea |
| Merv 14 - AAF Varicel VXL | | PF-SWSI | | N/A | 2 Weeks | 587.6 ea |
| VFD | | | | | | |
| 1 HP | | | | N/A | 2 Weeks | 1322.1 ea |
| 2 HP | | | | N/A | 2 Weeks | 1322.1 ea |
| 3 HP | | | | N/A | 2 Weeks | 1469 ea |
| 7.5 HP | | | | N/A | 2 Weeks | 1762.8 ea |
| 10 HP | | | | N/A | 2 Weeks | 1909.7 ea |
| 15 HP | | | | N/A | 2 Weeks | 2203.5 ea |
| 60 HP | | | | N/A | 2 Weeks | 7345 ea |
| Duct Heaters | | | | | | |
| Transformers | | Neptronic | DP 10-9050 | N/A | 2 Weeks | 37.29 ea |
| | | Neptronic | DP 10-9051 | N/A | 2 Weeks | 49.72 ea |
| Contactors | | Neptronic | DP 11-6002 | N/A | 2 Weeks | 42.94 ea |
| | | Neptronic | DP 11-1003 | N/A | 2 Weeks | 51.98 ea |
| | | Neptronic | DP 11-1005 | N/A | 2 Weeks | 98.31 ea |
| Solid State Relays | | Neptronic | DW SSR50Y2 | N/A | 2 Weeks | 427.14 ea |
| | | Neptronic | DW SSR50Y1 | N/A | 2 Weeks | 275.72 ea |
| | | Neptronic | DW SSR25Y2 | N/A | 2 Weeks | 397.76 ea |
| HEC Boards | | Neptronic | NW HEC0000SS | N/A | 2 Weeks | 82.49 ea |

OPERATING SPARES PRICE SCHEDULE

Operating Spares Price Schedule

Agreement Number: CH0031-001

Air Handling Units

| Description | Part No. | Manufacturer | Manuf. Part No. | Expected annual usage rate | Lead time for delivery (weeks) | Unit price |
|--|----------|--------------|-----------------|----------------------------|--------------------------------|------------|
| | | Neptronic | NW HEC0S02SS | N/A | 2 Weeks | 108.48 ea |
| Roof & Wall Exhaust Fans Motors | | | | | | |
| 1 HP | | Greenheck | | N/A | 2 Weeks | 791 ea |
| 1.5 HP | | Greenheck | | N/A | 2 Weeks | 791 ea |
| | | | | | | |
| | | | | | | |

APPENDIX I

ESTIMATED PLA LABOUR HOURS BY TRADE

ESTIMATED PLA LABOUR HOURS BY TRADE

Appendix I
 Estimated PLA Labour Hours By Trade
 Agreement Number: CH0031-001

| Trade | Number of LOA Person-Days | Travel KMs | Regular Time Person-Hours | Overtime (1.5x) Person-Hours | Overtime (2.0x) Person-Hours | Second Shift Person-Hours | Third Shift Person-Hours | Travel Time Hours | Total Person-Hours |
|------------------------------|---------------------------|--------------|---------------------------|------------------------------|------------------------------|---------------------------|--------------------------|-------------------|--------------------|
| Electrical | | | 74,672 | 37,336 | 18,668 | 39,033 | | | 169,709 |
| Piping & Mechanical | | | 29,655 | 14,827 | 7,414 | 15,501 | | | 67,398 |
| Piping Insulation | | | 6,019 | 3,010 | 1,505 | 3,146 | | | 13,680 |
| Instrumentation | | | 1,400 | 700 | 350 | 732 | | | 3,183 |
| HVAC & Duct Installation | | | 19,052 | 9,526 | 4,763 | 9,959 | | | 43,299 |
| EMCS | | | 5,068 | 2,534 | 1,267 | 2,649 | | | 11,519 |
| Fire Protection | | | 6,295 | 3,148 | 1,574 | 3,291 | | | 14,307 |
| Architectural | | | 48,898 | 24,449 | 12,225 | 25,560 | | | 111,132 |
| Structural | | | 655 | 328 | 164 | 343 | | | 1,489 |
| Commissioning | | | 7,867 | 3,933 | 1,967 | 4,112 | | | 17,879 |
| Mob & Demob | | | 3,767 | 1,883 | 942 | 1,969 | | | 8,560 |
| Craft Support PLA Labour | | | 108,479 | 54,239 | 27,120 | 56,705 | | | 246,543 |
| *LOA = Living Out Allowance. | | Total | 311,827 | 155,913 | 77,957 | 163,000 | | | 708,698 |

APPENDIX J

MONTHLY PAYMENT FORECAST SCHEDULE

MONTHLY PAYMENT FORECAST SCHEDULE

Appendix J
 Monthly Payment Forecast Schedule
 Agreement Number: CH0031-001

| MONTH | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Reimbursable Cost Labour | \$ 181,543 | \$ 208,415 | \$ 201,697 | \$ 1,234,555 | \$ 2,357,560 | \$ 2,015,097 | \$ 2,372,246 | \$ 2,122,429 | \$ 2,900,315 | \$ 3,303,709 | \$ 3,488,377 | \$ 3,209,188 | \$ 4,063,471 |
| Travel Allowances | \$ - | \$ 12,506 | \$ 14,357 | \$ 13,895 | \$ 85,047 | \$ 162,410 | \$ 138,818 | \$ 163,421 | \$ 146,212 | \$ 199,799 | \$ 227,589 | \$ 240,310 | \$ 221,077 |
| Indirect Costs (General) PMT | \$ - | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 |
| Mobilization | \$ - | \$ - | \$ 162,571 | \$ 650,283 | \$ - | \$ - | \$ 270,951 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Site Installation | \$ - | \$ - | \$ - | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 |
| Demobilization | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Piping Mechanical - Design & Engineering | \$ - | \$ 116,354 | \$ - | \$ - | \$ - | \$ - | \$ 54,884 | \$ - | \$ 61,470 | \$ - | \$ - | \$ - | \$ - |
| Piping Mechanical - Supply & Installation | \$ - | \$ - | \$ 535,343 | \$ 965,095 | \$ 374,566 | \$ 164,109 | \$ 1,847,633 | \$ 387,707 | \$ 1,104,284 | \$ 882,843 | \$ 717,360 | \$ 1,428,538 | \$ 1,386,248 |
| HVAC System - Supply & Installation | \$ - | \$ - | \$ 29,734 | \$ 381,862 | \$ 808,807 | \$ 110,788 | \$ 284,921 | \$ 411,223 | \$ 262,182 | \$ 228,770 | \$ 187,671 | \$ 633,855 | \$ 256,187 |
| Electrical - Design & Engineering | \$ - | \$ 127,653 | \$ - | \$ - | \$ - | \$ - | \$ 91,474 | \$ - | \$ 36,180 | \$ - | \$ - | \$ - | \$ - |
| Electrical - Supply and Installation | \$ - | \$ - | \$ 2,143,250 | \$ 372,201 | \$ 1,021,641 | \$ 319,002 | \$ 1,035,226 | \$ 757,595 | \$ 412,899 | \$ 1,253,310 | \$ 1,433,348 | \$ 713,090 | \$ 283,714 |
| Electrical -Free Issued Materials - Assembly & Installation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 48,999 | \$ 79,081 |
| Architectural - Supply & Installation | \$ - | \$ - | \$ 374,312 | \$ 30,147 | \$ 66,460 | \$ 560,221 | \$ 21,230 | \$ 2,536 | \$ 395,402 | \$ 30,667 | \$ 164,126 | \$ 58,628 | \$ 80,915 |
| Diesel Generator System - Supply & Installation | \$ - | \$ - | \$ 29,260 | \$ - | \$ 44,499 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 12,293 | \$ 279,289 | \$ 12,293 |
| Piping Mechanical - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| HVAC System - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Electrical - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Diesel Generator System - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| INVOICE AMOUNT | \$ 181,543 | \$ 1,564,295 | \$ 4,589,890 | \$ 4,855,076 | \$ 5,965,619 | \$ 4,538,665 | \$ 7,324,421 | \$ 5,051,949 | \$ 6,525,982 | \$ 7,106,137 | \$ 7,437,801 | \$ 7,818,935 | \$ 7,590,026 |
| Mechanics Lien Holdback | \$ (18,154) | \$ (156,429) | \$ (458,989) | \$ (485,508) | \$ (596,562) | \$ (453,867) | \$ (732,442) | \$ (505,195) | \$ (652,598) | \$ (710,614) | \$ (743,780) | \$ (781,894) | \$ (759,003) |
| TOTAL INVOICE AMOUNT | \$ 163,389 | \$ 1,407,865 | \$ 4,130,901 | \$ 4,369,569 | \$ 5,369,057 | \$ 4,084,799 | \$ 6,591,979 | \$ 4,546,754 | \$ 5,873,383 | \$ 6,395,523 | \$ 6,694,021 | \$ 7,037,042 | \$ 6,831,023 |

**Preliminary Estimate. Subject to change based on final payment terms, cash flow assumptions and detailed construction schedule and execution plan

MONTHLY PAYMENT FORECAST SCHEDULE

Appendix J
 Monthly Payment Forecast Schedule
 Agreement Number: CH0031-001

| MONTH | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|---|-----------------------|-----------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Reimbursable Cost Labour | \$ 3,915,987 | \$ 4,797,768 | \$ 5,382,393 | \$ 5,038,523 | \$ 4,325,631 | \$ 4,627,317 | \$ 3,754,129 | \$ 2,242,729 | \$ 1,756,062 | \$ 1,904,015 | \$ 860,533 | \$ 348,556 | \$ 150,765 |
| Travel Allowances | \$ 279,928 | \$ 269,768 | \$ 330,513 | \$ 370,787 | \$ 347,098 | \$ 297,988 | \$ 318,771 | \$ 258,618 | \$ 154,499 | \$ 120,973 | \$ 131,165 | \$ 59,281 | \$ 24,012 |
| Indirect Costs (General) PMT | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 |
| Mobilization | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Site Installation | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 |
| Demobilization | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Piping Mechanical - Design & Engineering | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Piping Mechanical - Supply & Installation | \$ 1,532,016 | \$ 352,074 | \$ 791,437 | \$ 1,239,286 | \$ 989,937 | \$ 725,856 | \$ 1,844,450 | \$ 467,107 | \$ 198,051 | \$ 255,342 | \$ 398,322 | \$ 45,910 | \$ 158,251 |
| HVAC System - Supply & Installation | \$ 2,621,468 | \$ 982,541 | \$ 405,670 | \$ 1,383,103 | \$ 823,470 | \$ 1,064,910 | \$ 437,217 | \$ 529,156 | \$ 237,099 | \$ 354,718 | \$ 352,931 | \$ 10,180 | \$ - |
| Electrical - Design & Engineering | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Electrical - Supply and Installation | \$ 1,920,376 | \$ 2,939,815 | \$ 744,696 | \$ 2,618,135 | \$ 643,159 | \$ 1,436,765 | \$ 886,980 | \$ 298,862 | \$ 233,162 | \$ 495,082 | \$ 152,771 | \$ 10,061 | \$ 234,808 |
| Electrical -Free Issued Materials - Assembly & Installation | \$ 123,540 | \$ 161,873 | \$ 161,873 | \$ 161,873 | \$ 161,873 | \$ 189,479 | \$ 148,839 | \$ 93,625 | \$ 75,151 | \$ 94,616 | \$ 45,069 | \$ 64,534 | \$ 25,604 |
| Architectural - Supply & Installation | \$ 108,913 | \$ 268,679 | \$ 54,057 | \$ 402,846 | \$ 172,733 | \$ 51,951 | \$ 268,652 | \$ 399,949 | \$ 39,275 | \$ 189,284 | \$ 344,929 | \$ - | \$ 93,885 |
| Diesel Generator System - Supply & Installation | \$ 12,293 | \$ 56,792 | \$ 56,792 | \$ 175,558 | \$ - | \$ 29,260 | \$ 29,260 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Piping Mechanical - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ 32,878 | \$ 32,878 | \$ 32,878 | \$ 32,878 | \$ 32,878 | \$ 32,878 | \$ 32,878 | \$ 32,878 | \$ 32,878 |
| HVAC System - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ 12,261 | \$ 12,261 | \$ 12,261 | \$ 12,261 | \$ 12,261 | \$ 12,261 | \$ 12,261 | \$ 12,261 | \$ 12,261 |
| Electrical - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ 167,062 | \$ 167,062 | \$ 167,062 | \$ 167,062 | \$ 167,062 | \$ 167,062 | \$ 167,062 | \$ 167,062 | \$ 167,062 |
| Diesel Generator System - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ 23,241 | \$ 23,241 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| INVOICE AMOUNT | \$ 11,721,560 | \$ 11,036,348 | \$ 9,134,469 | \$ 12,597,149 | \$ 8,906,380 | \$ 9,866,006 | \$ 9,107,537 | \$ 5,709,284 | \$ 4,112,538 | \$ 4,833,269 | \$ 3,704,960 | \$ 1,957,762 | \$ 2,106,565 |
| Mechanics Lien Holdback | \$ (1,172,156) | \$ (1,103,635) | \$ (913,447) | \$ (1,259,715) | \$ (890,638) | \$ (986,601) | \$ (910,754) | \$ (570,928) | \$ (411,254) | \$ (483,327) | \$ (370,496) | \$ (195,776) | \$ (210,657) |
| TOTAL INVOICE AMOUNT | \$ 10,549,404 | \$ 9,932,713 | \$ 8,221,022 | \$ 11,337,434 | \$ 8,015,742 | \$ 8,879,405 | \$ 8,196,783 | \$ 5,138,356 | \$ 3,701,285 | \$ 4,349,942 | \$ 3,334,464 | \$ 1,761,985 | \$ 1,895,909 |

**Preliminary Estimate. Subject to change based on

MONTHLY PAYMENT FORECAST SCHEDULE

Appendix J
 Monthly Payment Forecast Schedule
 Agreement Number: CH0031-001

| MONTH | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|---|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
| Reimbursable Cost Labour | \$ 162,326 | \$ 85,460 | \$ - | \$ 290,906 | \$ 1,973,851 | \$ 1,598,423 | \$ 424,798 | \$ 392,927 | \$ 208,728 | \$ - | \$ 302,468 | \$ 27,497 | \$ - | \$ - |
| Travel Allowances | \$ 10,386 | \$ 11,182 | \$ 5,887 | \$ - | \$ 20,040 | \$ 135,976 | \$ 110,114 | \$ 29,264 | \$ 27,068 | \$ 14,379 | \$ - | \$ 20,837 | \$ 1,894 | \$ - |
| Indirect Costs (General) PMT | \$ 1,099,366 | \$ 1,099,366 | \$ 1,099,366 | \$ 342,025 | \$ 342,025 | \$ 342,025 | \$ 342,025 | \$ 342,025 | \$ 342,025 | \$ 342,025 | \$ 342,025 | \$ 342,025 | \$ 342,025 | \$ - |
| Mobilization | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Site Installation | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 | \$ 107,673 |
| Demobilization | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 384,818 | \$ - |
| Piping Mechanical - Design & Engineering | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Piping Mechanical - Supply & Installation | \$ 1,493,392 | \$ 1,365,259 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| HVAC System - Supply & Installation | \$ 738,972 | \$ 738,972 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Electrical - Design & Engineering | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Electrical - Supply and Installation | \$ 2,074,666 | \$ 2,074,666 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Electrical -Free Issued Materials - Assembly & Installation | \$ 45,069 | \$ 38,930 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Architectural - Supply & Installation | \$ 310,269 | \$ 216,384 | \$ - | \$ 16,687 | \$ 113,222 | \$ 91,687 | \$ 24,367 | \$ 22,539 | \$ 11,973 | \$ - | \$ - | \$ - | \$ - | \$ - |
| Diesel Generator System - Supply & Installation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Piping Mechanical - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| HVAC System - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Electrical - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Diesel Generator System - Single Contractor Dynamic Commissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| INVOICE AMOUNT | \$ 6,042,119 | \$ 5,737,892 | \$ 1,212,926 | \$ 757,291 | \$ 2,556,811 | \$ 2,275,784 | \$ 1,008,976 | \$ 894,427 | \$ 697,466 | \$ 464,077 | \$ 752,165 | \$ 498,031 | \$ 836,410 | \$ 107,673 |
| Mechanics Lien Holdback | \$ (604,212) | \$ (573,789) | \$ (121,293) | \$ (75,729) | \$ (255,681) | \$ (227,578) | \$ (100,898) | \$ (89,443) | \$ (69,747) | \$ (46,408) | \$ (75,217) | \$ (49,803) | \$ (83,641) | \$ 18,907,854 |
| TOTAL INVOICE AMOUNT | \$ 5,437,907 | \$ 5,164,103 | \$ 1,091,633 | \$ 681,562 | \$ 2,301,130 | \$ 2,048,206 | \$ 908,079 | \$ 804,984 | \$ 627,720 | \$ 417,669 | \$ 676,949 | \$ 448,228 | \$ 752,769 | \$ 19,015,527 |

**Preliminary Estimate. Subject to change based on

MONTHLY PAYMENT FORECAST SCHEDULE

Appendix J
 Monthly Payment Forecast Schedule
 Agreement Number: CH0031-001

| MONTH | Total |
|---|-----------------------|
| Reimbursable Cost Labour | \$ 72,230,394 |
| Travel Allowances | \$ 4,975,871 |
| Indirect Costs (General) PMT | \$ 34,202,484 |
| Mobilization | \$ 1,083,805 |
| Site Installation | \$ 3,983,892 |
| Demobilization | \$ 384,818 |
| Piping Mechanical - Design & Engineering | \$ 232,709 |
| Piping Mechanical - Supply & Installation | \$ 21,650,417 |
| HVAC System - Supply & Installation | \$ 14,276,404 |
| Electrical - Design & Engineering | \$ 255,307 |
| Electrical - Supply and Installation | \$ 26,509,281 |
| Electrical -Free Issued Materials - Assembly & Installation | \$ 1,720,027 |
| Architectural - Supply & Installation | \$ 4,986,925 |
| Diesel Generator System - Supply & Installation | \$ 737,589 |
| Piping Mechanical - Single Contractor Dynamic Commissioning | \$ 295,901 |
| HVAC System - Single Contractor Dynamic Commissioning | \$ 110,351 |
| Electrical - Single Contractor Dynamic Commissioning | \$ 1,503,558 |
| Diesel Generator System - Single Contractor Dynamic Commissioning | \$ 46,481 |
| INVOICE AMOUNT | \$ 189,186,215 |

Mechanics Lien Holdback \$ -

TOTAL INVOICE AMOUNT \$ **189,186,215**

**Preliminary Estimate. Subject to change based on

APPENDIX K

RATES FOR CHANGES

RATES FOR CHANGES

Appendix K
Rates For Changes
Agreement Number: CH0031-001

| PRICE ITEM | WBS CODE | | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | ESTIMATED QUANTITY of UNITS | LABOUR COMPONENT | | | | NON LABOUR COMPONENT | | UNIT PRICE | TOTAL PRICE | | |
|--|----------|------|---|-----------------|-----------------------------|------------------|-----------------------------|--------------------------|---------------------------------------|---------------------------------------|---------------------------|------------|-------------|---------------------------|---------------------------|
| | No | CODE | | | | SUBCODE | PLA LABOUR HOURS (per unit) | MANPOWER COST (per unit) | LABOUR OVERHEAD AND PROFIT (per unit) | LABOUR OVERHEAD AND PROFIT (extended) | COST OF LABOUR (extended) | | | MATERIALS COST (per unit) | EQUIPMENT COST (per unit) |
| | | | | | | | | | | | | | | | |
| Spillway Feeder Switchgear, 600 V, 3 phase, 3 wire, 1600 A, 42 kA IC, Components as follows: | | | | | | | | | | | | | | | |
| 1 | | | Vertical Section | ea | 1 | 28.1 | \$2,552.31 | \$331.80 | \$331.80 | \$2,552.31 | \$17,236.18 | \$332.44 | \$20,452.73 | | |
| 2 | | | Transition Section | ea | 1 | 28.1 | \$2,552.31 | \$331.80 | \$331.80 | \$2,552.31 | \$18,959.80 | \$332.44 | \$22,176.35 | | |
| 3 | | | Incoming circuit breaker (electrically interlocked) - 1600 A, 3-pole | ea | 1 | 18.0 | \$1,633.48 | \$212.35 | \$212.35 | \$1,633.48 | \$33,279.64 | \$212.76 | \$35,338.23 | | |
| 4 | | | Auto/Manual Transfer Control scheme | ea | 1 | 15.0 | \$1,361.23 | \$176.96 | \$176.96 | \$1,361.23 | \$35,362.50 | \$177.30 | \$37,077.99 | | |
| 5 | | | outgoing circuit breaker - 1600 A, 3-pole | ea | 1 | 18.0 | \$1,633.48 | \$212.35 | \$212.35 | \$1,633.48 | \$39,059.64 | \$212.76 | \$41,118.23 | | |
| 6 | | | control, protection and metering | ea | 1 | 30.0 | \$2,722.46 | \$353.92 | \$353.92 | \$2,722.46 | \$87,637.35 | \$354.60 | \$91,068.34 | | |
| Station Service Switchgear, 600 V, 3 phase, 3 wire, 3200 A, 42 kA IC, Components as follows: | | | | | | | | | | | | | | | |
| 7 | | | Vertical Section | ea | 1 | 42.2 | \$3,829.14 | \$497.79 | \$497.79 | \$3,829.14 | \$20,286.97 | \$498.74 | \$25,112.65 | | |
| 8 | | | Transition Section | ea | 1 | 42.2 | \$3,829.14 | \$497.79 | \$497.79 | \$3,829.14 | \$33,568.47 | \$498.74 | \$38,394.15 | | |
| 9 | | | Incoming circuit breaker (electrically interlocked) - 3200 A, 3-pole | ea | 1 | 21.0 | \$1,905.72 | \$247.74 | \$247.74 | \$1,905.72 | \$40,573.52 | \$248.22 | \$42,975.21 | | |
| 10 | | | bus-tie circuit breaker - 3200 A, 3-pole | ea | 1 | 21.0 | \$1,905.72 | \$247.74 | \$247.74 | \$1,905.72 | \$36,347.16 | \$248.22 | \$38,748.85 | | |
| 11 | | | Auto/Manual Transfer Control scheme | ea | 1 | 15.0 | \$1,361.23 | \$176.96 | \$176.96 | \$1,361.23 | \$35,362.50 | \$177.30 | \$37,077.99 | | |
| 12 | | | outgoing circuit breaker - 1600 A, 3-pole | ea | 1 | 18.0 | \$1,633.48 | \$212.35 | \$212.35 | \$1,633.48 | \$16,697.99 | \$212.76 | \$18,756.58 | | |
| 13 | | | outgoing circuit breaker - 1200 A, 3-pole | ea | 1 | 15.0 | \$1,361.23 | \$176.96 | \$176.96 | \$1,361.23 | \$16,697.99 | \$177.30 | \$18,413.48 | | |
| 14 | | | outgoing circuit breaker - 800 A, 3-pole | ea | 1 | 12.0 | \$1,088.98 | \$141.57 | \$141.57 | \$1,088.98 | \$14,049.06 | \$141.84 | \$15,421.46 | | |
| 15 | | | control, protection and metering | ea | 1 | 30.0 | \$2,722.46 | \$353.92 | \$353.92 | \$2,722.46 | \$93,482.55 | \$354.60 | \$96,913.53 | | |
| Motor Control Centre, 600 V, 3 phase, 3 wire, 42 kA, components as follows: | | | | | | | | | | | | | | | |
| 16 | | | MCC vertical Section, 800A including bus and ground bars | ea | 1 | 18.8 | \$1,701.54 | \$221.20 | \$221.20 | \$1,701.54 | \$2,474.20 | \$221.63 | \$4,618.57 | | |
| 17 | | | MCC vertical Section, 1200A including bus and ground bars | ea | 1 | 23.4 | \$2,127.60 | \$276.59 | \$276.59 | \$2,127.60 | \$2,564.14 | \$277.12 | \$5,245.46 | | |
| 18 | | | Incoming circuit breakers (electrically interlocked) - 800 A, 3-pole | ea | 1 | 12.0 | \$1,088.98 | \$141.57 | \$141.57 | \$1,088.98 | \$33,279.64 | \$141.84 | \$34,652.03 | | |
| 19 | | | Incoming circuit breakers (electrically interlocked) - 1200 A, 3-pole | ea | 1 | 15.0 | \$1,361.23 | \$176.96 | \$176.96 | \$1,361.23 | \$33,279.64 | \$177.30 | \$34,995.13 | | |
| 20 | | | Auto/Manual Transfer Control scheme | ea | 1 | 15.0 | \$1,361.23 | \$176.96 | \$176.96 | \$1,361.23 | \$35,362.50 | \$177.30 | \$37,077.99 | | |
| 21 | | | FVNR motor starter - size 5 | ea | 1 | 12.0 | \$1,088.98 | \$141.57 | \$141.57 | \$1,088.98 | \$6,100.40 | \$141.84 | \$7,472.79 | | |
| 22 | | | FVNR motor starter - size 4 | ea | 1 | 10.5 | \$952.86 | \$123.87 | \$123.87 | \$952.86 | \$4,633.21 | \$124.11 | \$5,834.06 | | |
| 23 | | | FVNR motor starter - size 3 | ea | 1 | 9.0 | \$816.74 | \$106.18 | \$106.18 | \$816.74 | \$3,869.06 | \$106.38 | \$4,898.36 | | |
| 24 | | | FVNR motor starter - size 2 | ea | 1 | 7.5 | \$680.62 | \$88.48 | \$88.48 | \$680.62 | \$3,612.89 | \$88.65 | \$4,470.64 | | |
| 25 | | | FVNR motor starter - size 1 | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$3,511.71 | \$70.92 | \$4,197.91 | | |
| 26 | | | 3-pole contactor - 100 Amp | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$4,293.25 | \$70.92 | \$4,979.45 | | |
| 27 | | | 3-pole contactor - 60 Amp | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$3,881.19 | \$70.92 | \$4,567.38 | | |
| 28 | | | 3-pole contactor - 50 Amp | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$3,881.19 | \$70.92 | \$4,567.38 | | |
| 29 | | | 3-pole contactor - 25 Amp | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$3,015.86 | \$70.92 | \$3,702.05 | | |
| 30 | | | 3-pole contactor - 15 Amp | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$2,919.02 | \$70.92 | \$3,605.21 | | |
| 31 | | | outgoing circuit breaker - 400 A, 3-pole | ea | 1 | 9.0 | \$816.74 | \$106.18 | \$106.18 | \$816.74 | \$3,902.00 | \$106.38 | \$4,931.30 | | |
| 32 | | | outgoing circuit breaker - 225 A, 3-pole | ea | 1 | 7.5 | \$680.62 | \$88.48 | \$88.48 | \$680.62 | \$3,697.13 | \$88.65 | \$4,554.88 | | |
| 33 | | | outgoing circuit breaker - 200 A, 3-pole | ea | 1 | 7.5 | \$680.62 | \$88.48 | \$88.48 | \$680.62 | \$3,697.13 | \$88.65 | \$4,554.88 | | |
| 34 | | | outgoing circuit breaker - 150 A, 3-pole | ea | 1 | 7.5 | \$680.62 | \$88.48 | \$88.48 | \$680.62 | \$3,697.13 | \$88.65 | \$4,554.88 | | |
| 35 | | | outgoing circuit breaker - 100 A, 3-pole | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$2,014.77 | \$70.92 | \$2,700.96 | | |
| 36 | | | outgoing circuit breaker - 60 A, 3-pole | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$2,014.77 | \$70.92 | \$2,700.96 | | |
| 37 | | | outgoing circuit breaker - 40 A, 3-pole | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$1,367.59 | \$70.92 | \$2,053.79 | | |
| 38 | | | outgoing circuit breaker - 25 A, 3-pole | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$1,367.59 | \$70.92 | \$2,053.79 | | |
| 39 | | | outgoing circuit breaker - 20 A, 3-pole | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$1,265.89 | \$70.92 | \$1,952.09 | | |
| 40 | | | outgoing circuit breaker - 15 A, 3-pole | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$1,265.89 | \$70.92 | \$1,952.09 | | |
| 41 | | | variable frequency drive - 60 HP | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$19,364.52 | \$70.92 | \$20,050.71 | | |
| 42 | | | variable frequency drive - 1 HP | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$8,878.99 | \$70.92 | \$9,565.18 | | |
| 125 Vdc Distribution Switchboard (Station Control and Protection), 800 A, 14 kA IC, Components as follows: | | | | | | | | | | | | | | | |
| 43 | | | Incoming circuit breaker - 400 A, 2-pole | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$3,015.30 | \$70.92 | \$3,701.50 | | |
| 44 | | | bus-tie circuit breaker - 400 A, 2-pole | ea | 1 | 6.0 | \$544.49 | \$70.78 | \$70.78 | \$544.49 | \$3,015.30 | \$70.92 | \$3,701.50 | | |
| 45 | | | outgoing circuit breakers - 150 A, 2-pole | ea | 1 | 4.5 | \$408.37 | \$53.09 | \$53.09 | \$408.37 | \$3,015.30 | \$53.19 | \$3,529.95 | | |
| 46 | | | outgoing circuit breakers - 125 A, 2-pole | ea | 1 | 4.5 | \$408.37 | \$53.09 | \$53.09 | \$408.37 | \$3,015.30 | \$53.19 | \$3,529.95 | | |

RATES FOR CHANGES

Appendix K
Rates For Changes
Agreement Number: CH0031-001

| PRICE ITEM | | | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | ESTIMATED QUANTITY of UNITS | LABOUR COMPONENT | | | | NON LABOUR COMPONENT | | UNIT PRICE | TOTAL PRICE | |
|------------|------|---------|--|-----------------|-----------------------------|-----------------------------|--------------------------|---------------------------------------|---------------------------------------|---------------------------|---------------------------|------------|-------------------|---------------------------|
| No | CODE | SUBCODE | | | | PLA LABOUR HOURS (per unit) | MANPOWER COST (per unit) | LABOUR OVERHEAD AND PROFIT (per unit) | LABOUR OVERHEAD AND PROFIT (extended) | COST OF LABOUR (extended) | MATERIALS COST (per unit) | | | EQUIPMENT COST (per unit) |
| | | E | | | A | B | C | D = C x % | E = A x D | F = A x C | G | H | I = C + D + G + H | J = A x I |
| 47 | | | outgoing circuit breakers - 100 A, 2-pole | ea | 1 | 4.5 | \$408.37 | \$53.09 | \$53.09 | \$408.37 | \$3,015.30 | \$53.19 | \$3,529.95 | \$3,529.95 |
| 48 | | | outgoing circuit breakers - 60 A, 2-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$884.35 | \$35.46 | \$1,227.45 | \$1,227.45 |
| 49 | | | control, protection and metering | ea | 1 | 30.0 | \$2,722.46 | \$353.92 | \$353.92 | \$2,722.46 | \$21,787.73 | \$354.60 | \$25,218.72 | \$25,218.72 |
| | | | 125 Vdc Distribution Switchboard (Field Flashing and Emerg. Ltg), 1200 A, 14 kA IC, Components as follows: | | | | | | | | | | | |
| 50 | | | Incoming circuit breaker - 1200 A, 2-pole | ea | 1 | 15.0 | \$1,361.23 | \$176.96 | \$176.96 | \$1,361.23 | \$6,108.80 | \$177.30 | \$7,824.29 | \$7,824.29 |
| 51 | | | Incoming circuit breaker - 600 A, 2-pole | ea | 1 | 12.0 | \$1,088.98 | \$141.57 | \$141.57 | \$1,088.98 | \$4,413.70 | \$141.84 | \$5,786.09 | \$5,786.09 |
| 52 | | | outgoing circuit breakers - 1000 A, 2-pole | ea | 1 | 15.0 | \$1,361.23 | \$176.96 | \$176.96 | \$1,361.23 | \$6,108.80 | \$177.30 | \$7,824.29 | \$7,824.29 |
| 53 | | | outgoing circuit breakers - 100 A, 2-pole | ea | 1 | 4.5 | \$408.37 | \$53.09 | \$53.09 | \$408.37 | \$3,015.30 | \$53.19 | \$3,529.95 | \$3,529.95 |
| 54 | | | control, protection and metering | ea | 1 | 30.0 | \$2,722.46 | \$353.92 | \$353.92 | \$2,722.46 | \$23,966.51 | \$354.60 | \$27,397.49 | \$27,397.49 |
| | | | 48 Vdc Distribution Switchboard (Telecommunications), 400 A, Components as follows: | | | | | | | | | | | |
| 55 | | | Incoming circuit breaker - 100 A, 2-pole, Cordex type GJ | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$207.55 | \$35.46 | \$550.65 | \$550.65 |
| 56 | | | outgoing circuit breakers - 50 A, 2-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$40.39 | \$35.46 | \$383.49 | \$383.49 |
| 57 | | | outgoing circuit breakers - 30 A, 2-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$40.39 | \$35.46 | \$383.49 | \$383.49 |
| 58 | | | outgoing circuit breakers - 20 A, 2-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$40.39 | \$35.46 | \$383.49 | \$383.49 |
| | | | Uninterruptible Power Supply (UPS) Distribution Switchboard, 225 A, 120 Vac, single phase, 60 Hz, Components as follows: | | | | | | | | | | | |
| 59 | | | Incoming circuit breaker - 225 A, 2-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$1,257.62 | \$35.46 | \$1,600.72 | \$1,600.72 |
| 60 | | | bus-tie circuit breaker - 125 A, 2-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$1,257.62 | \$35.46 | \$1,600.72 | \$1,600.72 |
| 61 | | | outgoing circuit breakers - 70 A, 1-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$582.27 | \$35.46 | \$925.36 | \$925.36 |
| 62 | | | outgoing circuit breakers - 30 A, 1-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$582.27 | \$35.46 | \$925.36 | \$925.36 |
| 63 | | | outgoing circuit breakers - 15 A, 1-pole | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$582.27 | \$35.46 | \$925.36 | \$925.36 |
| 63 | | | control, protection and metering | ea | 1 | 15.0 | \$1,361.23 | \$176.96 | \$176.96 | \$1,361.23 | \$10,449.18 | \$177.30 | \$12,164.67 | \$12,164.67 |
| | | | Copper Busway assembly, low impedance compact type, totally enclosed, sprinkler-proof, 1200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus, Components as follows: | | | | | | | | | | | |
| 64 | | | straight length | m | 1 | 7.3 | \$658.93 | \$85.66 | \$85.66 | \$658.93 | \$870.77 | \$85.82 | \$1,701.18 | \$1,701.18 |
| 65 | | | 90° elbows | each | 1 | 13.4 | \$1,214.90 | \$157.94 | \$157.94 | \$1,214.90 | \$323.32 | \$158.24 | \$1,854.39 | \$1,854.39 |
| 66 | | | flanged end sections | each | 1 | 15.5 | \$1,409.28 | \$183.21 | \$183.21 | \$1,409.28 | \$432.89 | \$183.56 | \$2,208.94 | \$2,208.94 |
| 67 | | | expansion joints | each | 1 | 14.9 | \$1,355.50 | \$176.22 | \$176.22 | \$1,355.50 | \$1,407.70 | \$176.55 | \$3,115.97 | \$3,115.97 |
| | | | Copper Busway assembly, low impedance compact type, totally enclosed, sprinkler-proof, 1600 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus, Components as follows: | | | | | | | | | | | |
| 68 | | | straight length | m | 1 | 9.1 | \$821.45 | \$106.79 | \$106.79 | \$821.45 | \$1,161.02 | \$106.99 | \$2,196.25 | \$2,196.25 |
| 69 | | | 90° elbows | each | 1 | 16.6 | \$1,506.47 | \$195.84 | \$195.84 | \$1,506.47 | \$369.98 | \$196.22 | \$2,268.52 | \$2,268.52 |
| 70 | | | flanged end sections | each | 1 | 20.0 | \$1,814.25 | \$235.85 | \$235.85 | \$1,814.25 | \$625.35 | \$236.31 | \$2,911.76 | \$2,911.76 |
| 71 | | | expansion joint | each | 1 | 19.1 | \$1,731.71 | \$225.12 | \$225.12 | \$1,731.71 | \$1,693.34 | \$225.55 | \$3,875.73 | \$3,875.73 |
| | | | Copper Busway assembly, low impedance compact type, totally enclosed, sprinkler-proof, 3200 A, 600 V, 3 phase, 3 wire, dedicated internal ground bus, Components as follows: | | | | | | | | | | | |
| 72 | | | straight length | m | 1 | 11.6 | \$1,048.99 | \$136.37 | \$136.37 | \$1,048.99 | \$1,932.15 | \$136.63 | \$3,254.14 | \$3,254.14 |
| 73 | | | 90° elbows | each | 1 | 26.8 | \$2,429.80 | \$315.87 | \$315.87 | \$2,429.80 | \$419.43 | \$316.48 | \$3,481.58 | \$3,481.58 |
| 74 | | | flanged end sections | each | 1 | 31.2 | \$2,834.76 | \$368.52 | \$368.52 | \$2,834.76 | \$931.79 | \$369.23 | \$4,504.30 | \$4,504.30 |
| 75 | | | expansion joint | each | 1 | 23.8 | \$2,157.07 | \$280.42 | \$280.42 | \$2,157.07 | \$2,101.66 | \$280.96 | \$4,820.12 | \$4,820.12 |
| | | | Panelboard, 600 V, 3 phase, 3 wire, 35kA components as follows: | | | | | | | | | | | |
| 76 | | | MCCB 15A, 3P, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$530.22 | \$35.46 | \$873.32 | \$873.32 |
| 77 | | | MCCB 20A, 3P, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$530.22 | \$35.46 | \$873.32 | \$873.32 |
| 78 | | | MCCB 30A, 3P, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$530.22 | \$35.46 | \$873.32 | \$873.32 |
| 79 | | | MCCB 40A, 3P, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$530.22 | \$35.46 | \$873.32 | \$873.32 |
| 80 | | | MCCB 50A, 3P, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$3,172.35 | \$35.46 | \$3,515.45 | \$3,515.45 |
| 81 | | | MCCB 60A, 3P, GFI, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$3,172.35 | \$35.46 | \$3,515.45 | \$3,515.45 |
| 82 | | | MCCB 100A, 3P, GFI, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$3,189.66 | \$35.46 | \$3,532.76 | \$3,532.76 |

RATES FOR CHANGES

Appendix K
Rates For Changes
Agreement Number: CH0031-001

| PRICE ITEM | | | WBS CODE | PRICE ITEM DESCRIPTION | UNIT OF MEASURE | ESTIMATED QUANTITY of UNITS | LABOUR COMPONENT | | | | NON LABOUR COMPONENT | | UNIT PRICE | TOTAL PRICE | |
|---|------|----------|-----------------------------|---|-----------------|-----------------------------|--------------------------|---------------------------------------|---------------------------------------|---------------------------|---------------------------|---------------------------|-------------------|-------------|------------|
| No | CODE | SUBCOD E | PLA LABOUR HOURS (per unit) | | | | MANPOWER COST (per unit) | LABOUR OVERHEAD AND PROFIT (per unit) | LABOUR OVERHEAD AND PROFIT (extended) | COST OF LABOUR (extended) | MATERIALS COST (per unit) | EQUIPMENT COST (per unit) | | | |
| | | | | | A | B | C | D = C x %? | E = A x D | F = A x C | G | H | I = C + D + G + H | J = A x I | |
| | | | | Panelboard, 600/347 V, 3 phase, 4 wire, 35kA components as follows: | | | | | | | | | | | |
| 83 | | | | MCCB 15A, 1P, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$468.70 | \$35.46 | \$811.80 | \$811.80 |
| 84 | | | | MCCB 20A, 1P, with viewing windows | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$468.70 | \$35.46 | \$811.80 | \$811.80 |
| | | | | Panelboard, 120/208 V, 3 phase, 4 wire, 10kA components as follows: | | | | | | | | | | | |
| 85 | | | | MCCB 15A, 1P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$8.29 | \$35.46 | \$351.39 | \$351.39 |
| 86 | | | | MCCB 15A, 1P, GFI | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$79.50 | \$35.46 | \$422.59 | \$422.59 |
| 87 | | | | MCCB 15A, 2P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$17.98 | \$35.46 | \$361.08 | \$361.08 |
| 88 | | | | MCCB 15A, 3P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$61.53 | \$35.46 | \$404.63 | \$404.63 |
| 89 | | | | MCCB 20A, 1P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$8.29 | \$35.46 | \$351.39 | \$351.39 |
| 90 | | | | MCCB 20A, 1P, GFI | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$79.50 | \$35.46 | \$422.59 | \$422.59 |
| 91 | | | | MCCB 20A, 2P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$17.98 | \$35.46 | \$361.08 | \$361.08 |
| 92 | | | | MCCB 20A, 3P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$61.53 | \$35.46 | \$404.63 | \$404.63 |
| 93 | | | | MCCB 30A, 1P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$10.02 | \$35.46 | \$353.12 | \$353.12 |
| 94 | | | | MCCB 30A, 2P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$20.40 | \$35.46 | \$363.49 | \$363.49 |
| 95 | | | | MCCB 30A, 3P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$63.95 | \$35.46 | \$407.04 | \$407.04 |
| 96 | | | | MCCB 40A, 2P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$20.40 | \$35.46 | \$363.49 | \$363.49 |
| 97 | | | | MCCB 90A, 3P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$1,846.79 | \$35.46 | \$2,189.89 | \$2,189.89 |
| 98 | | | | MCCB 125A, 3P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$1,846.79 | \$35.46 | \$2,189.89 | \$2,189.89 |
| | | | | Panelboard, 125 Vdc, 14kA components as follows: | | | | | | | | | | | |
| 99 | | | | MCCB 15A, 2P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$405.09 | \$35.46 | \$748.19 | \$748.19 |
| 100 | | | | MCCB 20A, 2P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$405.09 | \$35.46 | \$748.19 | \$748.19 |
| 101 | | | | MCCB 30A, 2P | ea | 1 | 3.0 | \$272.25 | \$35.39 | \$35.39 | \$272.25 | \$405.09 | \$35.46 | \$748.19 | \$748.19 |
| SUB-TOTAL ELECTRICAL - CONTRACTOR SUPPLIED - SUPPLY AND INSTALLATION | | | | | | | | | | | | | | | |
| LABOUR RATES - ENGINEERING/DESIGN (Site or Home Office) | | | | | | | | | | | | | | | |
| 102 | | | | Senior Engineer | Hour | 1 | | | | \$0.00 | \$0.00 | | | \$180.80 | \$180.80 |
| 103 | | | | Intermediate Engineer | Hour | 1 | | | | \$0.00 | \$0.00 | | | \$135.60 | \$135.60 |
| 104 | | | | Junior Engineer | Hour | 1 | | | | \$0.00 | \$0.00 | | | \$101.70 | \$101.70 |
| 105 | | | | Senior Designer/Autocad | Hour | 1 | | | | \$0.00 | \$0.00 | | | \$118.65 | \$118.65 |
| 106 | | | | Intermediate Designer/Autocad | Hour | 1 | | | | \$0.00 | \$0.00 | | | \$96.05 | \$96.05 |
| 107 | | | | Junior Designer/Autocad | Hour | 1 | | | | \$0.00 | \$0.00 | | | \$73.45 | \$73.45 |
| FOR THE LOWER CHURCHILL PROJECT - MUSKRAT FALLS | | | | | | | | | | | | | | | |
| Note 1: If there has been an error in the calculation to establish the total of Column J (TOTAL PRICE), then the figures of the Column C (MANPOWER COST / UNIT), Column D (LABOUR OVERHEAD AND PROFIT), Column G (MATERIALS COST), Column H (EQUIPMENT COST) and A (ESTIMATED QUANTITY) will prevail. | | | | | | | | | | | | | | | |

EXHIBIT 3

COORDINATION PROCEDURES

TABLE OF CONTENTS

1 INTRODUCTION..... 2
2 EARLY ACTIVITIES AND GENERAL EXECUTION 2
3 ORGANIZATION, ADMINISTRATION AND REPORTING 5
4 INTERFACE MANAGEMENT 12
5 PROCUREMENT AND MATERIAL MANAGEMENT..... 13
6 COST MANAGEMENT 14
7 SCHEDULE MANAGEMENT 15
8 CHANGES TO THE WORK 21
9 RISK MANAGEMENT 24
10 ENGINEERING REQUIREMENTS 26
11 CONSTRUCTION MANAGEMENT 28
12 INVOICING AND PAYMENT..... 30
13 INFORMATION MANAGEMENT 32

- Appendix A – Change Request
- Appendix B – Change Order
- Appendix C – Site Query
- Appendix D – Site Instruction
- Appendix E – Engineering Change Notice
- Appendix F – Field Work Order
- Appendix G – Concession Request
- Appendix H – Payment Certificate
- Appendix I – Substantial Completion Certificate
- Appendix J – Request for Final Completion Certificate
- Appendix K – Final Completion Certificate

1 INTRODUCTION

This Exhibit 3 – Coordination Procedures is intended to govern Contractor, Engineer and Company in the administration and management of the Agreement.

Contractor shall use its own systems, methods and procedures in the administration of the Work. However, Company has certain requirements regarding Agreement administration, monitoring and coordination, consistency and project controls with which Contractor shall comply. These requirements are described in this Exhibit 3. Where necessary, Contractor shall adapt its own systems, methods and procedures to satisfy such Company requirements.

It is Company's intention that Company and Contractor work together to mutually agree on a set of methods and procedures for performing the Work. In this regard, Company will require a series of meetings in Company offices immediately following Effective Date. During the meetings, Contractor, Company and Engineer will review Contractor's proposed methods and procedures for executing the Work. Following this review, the Parties will agree on any modifications to Contractor's methods and procedures required to satisfy the requirements of this Exhibit 3 – Coordination Procedures.

2 EARLY ACTIVITIES AND GENERAL EXECUTION

2.1 SCOPE

This Section 2 sets forth minimum early activities associated with preparation for execution as well as general execution activities.

2.2 OBJECTIVES

Contractor shall employ a systematic management approach to the Work embracing sound management principles, including:

- a) Finalization of an execution plan as it pertains to the Work (as described in Section 2.4 below); and
- b) Understanding of and alignment with Company's objectives, priorities, and philosophies with the aim of Contractor developing appropriate plans and procedures.

2.3 CONTRACTOR'S DUTIES

Contractor shall:

- a) review Contractor's proposed execution plan with Company. Update the plan with all Accepted changes and enhancements and maintain on an ongoing basis;
- b) participate in meetings, as scheduled by Engineer, to mutually agree on methods and procedures for performing the Work. Meetings shall be held in Company offices and may be scheduled to begin within fourteen (14) days of the Effective Date and shall be completed within forty-five (45) days of the Effective Date;
- c) provide all information requested by Company to support Company's appraisal of

Contractor's performance of the Work, including performance of other members of Contractor Group. Such information may include, without limitation, Contractor Group systems, methods and procedures for performing the Work; copies of calculations, working drawings, specifications, purchase requisitions and recommendations (if applicable); estimates; labor productivity data; schedules; procedures; and alternative studies;

- d) Contractor shall maintain close management alignment with Company and Engineer during execution of the Work;
- e) actively support and participate in project reviews as required by Company and as they relate to the Work.

2.4 SPECIFIC REQUIREMENTS

Early Deliverables

A list of all early deliverables and the timing of their submission to Company is specified in Exhibit 4 - Supplier Document Requirements List.

Execution Plan

The execution plan forms an integral part of this Agreement. Contractor shall make all changes based on Engineer's comments and submit a final execution plan (based on the execution plan submitted by Contractor with its bid in response to the Request for Proposal relating to this Agreement) to Engineer for Acceptance by the date specified in Exhibit 4 – Supplier Document Requirements List. The execution plan will serve as the basis for developing the detailed plans for the Work.

The execution plan shall:

- a) Document the results of the overall planning process for the Work. The execution plan is a framework from which will evolve execution strategies and approaches, work plans, risk identification and mitigation plans, detailed procedures, organizational structures, logic networks, schedules and other material needed by Contractor's Personnel to develop execution details and Contractor's plans for the Work, including detailed fabrication and construction plans;
- b) Document Contractor's objectives, priorities and philosophies that are based on and consistent with Company's objectives, priorities and philosophy for the Work; and
- c) Outline formalized processes to be employed to identify broad strategic issues, evaluate impact, develop mitigation measures/action plans, and to follow-up on results of mitigation measures/action plans.

Contractor shall maintain the execution plan as a living, working document. Changes to such plan will be subject to the review and Approval of Company. As changes arise, Contractor shall identify and document critical issues and/or potential constraints that could adversely affect the accomplishment of Company's objectives for the Work and shall submit such changes to Company for Approval.

Coordination Teams

As one of the early project activities, coordination teams will be established at various levels within Contractor's and Company's organizations. Contractor and Company will mutually agree on the composition of each team and agree on the frequency of meetings. If there is a failure to agree on such composition and/or frequency, Engineer shall have the authority to determine these matters.

The initial meetings of the coordination teams will be to:

- a) Develop positive working relationships between team members;
- b) Develop plans to meet objectives, guidelines for individual and team behaviors, and teamwork, and determine Contractor / Company success criteria;
- c) Identify and review, as appropriate by team, challenging areas or areas of opportunity which require special attention; and
- d) Establish the initial framework for the specific plans for the Work as referenced in this Exhibit 3.

Labour Productivity Management Plan

Contractor shall submit to Company a labour productivity management plan by the date specified in Exhibit 4 – Supplier Document Requirements List, which plan shall incorporate the obligations of Contractor in Section 1.2 of Exhibit 2 – Compensation. In addition, the labour productivity management plan shall incorporate the obligations of Contractor as listed below and other initiatives Contractor shall utilize to ensure labour productivity opportunities are maximized throughout the execution of the Work. Work shall not commence until the labour productivity management plan is Approved by Company.

The labour productivity management plan shall document Contractor's plans for:

- a) Workforce acquisition to ensure workers with competencies and qualifications are available when required to support timely completion of work;
- b) Program to ensure workers hired are assessed to confirm they have the competencies and qualifications required to efficiently perform work;
- c) A program for periodic review of each worker's performance and competency, including provide feedback, correct deficiencies, corrective action if appropriate, and obtaining input from workers, for the purposes of optimizing the performance and competency of Contractor Group's workers;
- d) A supervisory training program to provide or upgrade the skills to effectively manage safety, quality, and productivity while maximizing employee engagement;
- e) Tracking and informing Contractor Group's workers of performance targets and results using simplified performance tracking metrics;
- f) Inclusion of performance and productivity discussions and metrics during supervision weekly meetings;
- g) Implementation of work teams and trade specific productivity initiatives;
- h) A program to monitor, report and enforce break times, start times, and finish times to ensure compliance with PLA and maximize productive work;

- i) A labour management plan to proactively address workplace issues, ensure compliance with PLA and utilize language in PLA designed to enhance productivity; and
- j) Such other plans the Contractor considers appropriate to ensure work is completed on or ahead of schedule, and at or lower than the estimated cost.

Contractor's senior management, including Contractor's project manager, shall attend meetings with Company Group Personnel and/or union representatives scheduled for the purpose of improving labour relations and productivity on Site. Contractor commits to taking an active role in ensuring labour productivity and performance.

Contractor shall convene a 'productivity task force/ cold eyes review team, which will include two (2) senior project directors (one from G.J. Cahill & Company (1979) Limited and one from Ganotec Inc.) that are not employed on the Work, which will meet prior to mobilization and at three (3) month intervals thereafter, in order to perform a cold eyes review and assessment focused on productivity and schedule. These senior resources will issue findings to the Contractor and Company project teams for consideration.

3 ORGANIZATION, ADMINISTRATION AND REPORTING

3.1 CONTRACTOR'S DUTIES

Contractor shall:

- a) submit proposed, and Accepted or Company Approved organization charts, identifying key positions required for executing the Work. These shall be included within the Execution Plan;
- b) provide information required by Company and seek Company's Approval on matters as required by the Agreement;
- c) participate in regular meetings with Company, Engineer and Company's Other Contractors to discuss the status of the Work, methods for resolving problems encountered or anticipated, and other topics pertinent to the Work;
- d) produce timely, accurate and consistent progress reports for the Work that facilitate proactive management; and
- e) provide to Company Group Personnel offices, logistical support and facilities at Contractor's offices and the Worksite(s), as required by Company and Engineer (to be specified in Section 3.2.6 below, if required).

3.2 SPECIFIC REQUIREMENTS

3.2.1 CONTRACTOR ORGANIZATION

Within the time specified in Exhibit 4 - Supplier Document Requirements List, and to be included in the execution plan, Contractor shall submit a description of its project organization for the Work indicating clear lines of decision making, authority and responsibility addressing as a minimum the following:

- a) Project management organization;

- b) Health and safety management organization both at home office and for the Worksite(s);
- c) Quality management organization, including Quality Manager, Worksite(s) quality organizations and vendor inspection organization;
- d) Engineering management organization;
- e) Technical interface management;
- f) Provincial benefits management;
- g) Regulatory and environment organization(s);
- h) Procurement organization, including purchasing, subcontracting and material management for both Contractor’s home office and for the Worksite(s);
- i) Project controls including cost and schedule management for both Contractor’s home office and for the Worksite(s);
- j) Technical organization, including engineering, design, constructability and document control;
- k) Construction Worksite(s) including engineering support, planning, cost and schedule control, material management, quality, safety and construction operations (including field supervision);
- l) Completions organization (if applicable); and
- m) Start-up organization (if applicable).

Each organization within the overall organization of the Work shall have key Personnel assigned and have designated authority and responsibility for the given portion of Work.

For each position designated as being key Personnel, the following information shall be provided:

- a) Roles and responsibilities;
- b) Job titles;
- c) Approval authority assigned to each position;
- d) Contact address(es) and telephone number(s); and
- e) Candidate's most recent resume.

Contractor shall update the organization charts, contact addresses and phone numbers as changes occur to the Work, as Contractor's overall organization changes or as requested by Engineer.

The organization charts shall clearly indicate how and to whom Contractor's organization for the Work reports in its home and/or any affiliated offices and the relationship of Contractor's organization for the Work to its corporate and/or departmental organization.

Listed below are Contractor’s key Personnel for the management, control and execution of the Work. Contractor shall maintain up-to-date organization charts, which shall be submitted to Engineer in the event of changes.

| POSITION DESCRIPTION (TITLE) | NAME |
|------------------------------|-----------------|
| Project Manager | Robert Mercer |
| Deputy Project Manager | Charles Lavigne |

| | |
|--|------------------|
| Industrial Relations and Logistics Coordinator | Melissa Hickey |
| HSE Lead | Kevin Fewer |
| QA/QC Lead | Chris Rideout |
| Project Engineer Lead | Jamie Schurmans |
| Procurement/Materials Control Lead | Frank Collins |
| Construction Manager | Rol Roberts |
| Project Controls Manager | Tim Harrington |
| Planner / Scheduler | Stephane Lacasse |
| Planner / Scheduler | Xavier Guillot |
| Completion Commissioning and Start-up Manager | Amr Elmazariky |

Key Personnel shall be assigned on a full time basis and be committed to continue throughout the Term in order to maintain continuity. The appointment, transfer and replacement of key Personnel shall be subject to Engineer's prior Acceptance.

3.2.2 CORRESPONDENCE AND COMMUNICATION REQUIREMENTS

Correspondence and Notices

Company and Contractor shall jointly establish a correspondence plan and procedures which shall be periodically updated so as to keep them current.

Aconex shall be utilized to manage all written communication between Company/Engineer and Contractor. Aconex is an electronic document management system which is a secure on-line platform for storing, managing and distributing project information that can be accessed via an internet connection and a web browser (www.aconex.com). The implementation of Aconex Mail will be coordinated during the kick-off meeting between Contractor and Engineer.

The Aconex module, "LCP Rev Controlled", will be utilized for all technical documentation (refer to the document entitled "Supplier/Contractor Document Requirements" provided in Exhibit 11 - Company Supplied Documents).

Administration:

- A. All formal correspondence and notices relating to the Agreement shall be exchanged between Engineer, Contractor's Representative and the Company Representative, using official letterhead and submitted c/o Company's Document Control via Aconex and shall include the following: subject, date and reference correspondence. Letters will be, to the degree possible, specific to one subject matter.
- B. All Agreement deliverables shall be exchanged between Contractor's Representative and Engineer, as defined for each deliverable.
- C. All Agreement deliverables shall be submitted to Engineer c/o Company Document Control via Aconex, using a uniquely numbered document transmittal.
- D. The Company Approved date format for the LCP is dd-mmm-yyyy (i.e. 20-Oct-2013).

Company and Contractor Representatives

All formal correspondence, documents and Agreement deliverables required by the Agreement, including this Exhibit 3 – Coordination Procedures, from Contractor to Company shall be addressed to the Company Representative. Likewise all correspondence from Company to Contractor shall be sent to Contractor's Representative.

Company Representative

The Company Representative has the responsibility of managing the Agreement on behalf of Company, including Approval of Changes, amendments to the Agreement and issuance and receiving of Notices.

The Company Representative has the authority to stop the Work for the purposes of safety, quality and risk of damaging Company property under the care, custody and control of Contractor. Notification of stoppage can be addressed verbally, and then supported by writing. Contractor shall resume Work when appropriate actions are addressed to the satisfaction of Company. No compensation will be provided for Work stoppages of this nature.

The Company Representative may delegate any of his or her responsibilities to any nominated deputy. Notice of delegation shall be provided to Contractor's Representative and Engineer in writing.

Engineer

Engineer's role and responsibilities are detailed in Article 11 of this Agreement. Company may delegate any of Engineer's responsibilities to any nominated deputy. Notice of delegation shall be provided to Contractor's Representative in writing.

Contractor's Representative

Contractor shall appoint a Contractor's Representative for the Work, who shall have full authority to receive instructions and administer the Agreement for and on behalf of Contractor, in addition to those authorities stated in the Articles of this Agreement.

The Contractor's Representative shall have the responsibility for receiving, acknowledging, countersigning and returning any instructions, decisions, Notices, authorizations and acknowledgements to Contractor under this Agreement, in addition to those responsibilities stated in the Articles of this Agreement. Contractor's Representative shall also be responsible for administering, monitoring, reviewing and coordinating all aspects of the Work on behalf of Contractor.

Contractor's Representative may delegate any of his or her responsibilities to any nominated deputy upon prior Notice to the Company Representative and Engineer. Notifications, information, authorizations, acknowledgements and decisions from any such nominated deputy shall be as if from Contractor's Representative.

3.2.3 REPORTS AND MEETINGS

Contractor shall submit reports to Company on the progress of engineering, procurement, construction and completions, and on the status of other activities for the Work as otherwise provided below and other provisions in this Exhibit 3 – Coordination Procedures (see Section 7.7 for further details).

Weekly Report

Contractor shall submit a weekly report (“Weekly Report”), which shall reflect the current status of the Work, progress and issues. The timing, format and content shall be as agreed between Contractor and Engineer, but shall address the following as a minimum:

- Brief summary of status of the Work;
- Management and administration;
- Significant items planned for the following weeks;
- Health, safety and environment;
- Quality management;
- Highlights and concerns including any required and implemented corrective action in all of the following main areas:
 - engineering
 - procurement
 - manufacturing
 - fabrication
 - construction
 - installation
 - completions;
- Interface activities;
- Status of Change Requests; and
- Receipt of major components and/or materials at the Site.

Monthly Progress Report

Contractor shall submit a monthly progress report (“Monthly Progress Report”) based on a cut-off date to be defined by Engineer. The timing of the submission of this report shall be by close of business no later than the 5th calendar day of the following month. The first Monthly Progress Report shall be issued not later than forty-five (45) calendar days after the Effective Date. The format and content of the Monthly Progress Report shall be as agreed between Contractor and Engineer, but shall address the following as a minimum:

- a) Highlights in bullet point style of the significant accomplishments achieved and issues addressed during the reporting period;
- b) A description of problems or delays encountered or anticipated, and corrective actions initiated or contemplated to counteract or minimize the effect of such problem, together

- with the results of any corrective actions already taken;
- c) The Worksites' safety status including health and safety statistics for the past month and for the Work to date. The content and format for the safety statistics are provided in Exhibit 5 – Health and Safety Requirements. Major safety problems shall be highlighted and action plans to improve conditions outlined. Safety initiatives undertaken during the past month and/or planned for the forthcoming month shall be discussed;
 - d) Short narrative covering all significant events during the reporting period;
 - e) Management, including mobilization, systems implementation, procedures development and other administrative activities;
 - f) Current status of the Work. Progress data (progress curves, histograms, productivity information and Summary Schedules) shall be provided on graphs which show actual versus planned progress as further described in Section 7 of this Exhibit 3 – Coordination Procedures for: (i) engineering, (ii) equipment and materials orders, (iii) equipment and materials deliveries at the Worksite(s), (iv) construction, (v) completions and (vi) overall Work progress. For activities that are behind schedule, an analysis of reasons for the slippage shall be included, together with a description of actions to be taken to recover;
 - g) All constructability issues;
 - h) The quality status including quality statistics for the past month and for the Work to date;
 - i) Interface management status;
 - j) Cost and financial reports as defined and/or specified in Sections 6 and 13 of this Exhibit 3 – Coordination Procedures;
 - k) The status of planning, scheduling and schedule control, including coverage of relevant activities called for within Section 7 of this Exhibit 3 – Coordination Procedures;
 - l) The status of Changes, if any, and the corresponding current value of the Contract Price including the effect of Change Orders and Change Requests;
 - m) The status of procurement and subcontracting, including placement of Subcontracts (including Subcontractors' subcontracts of every tier), status of spare parts orders, performance of Subcontractors (including Subcontractors' subcontracts of every tier), and Subcontract administration matters (including Subcontractors' subcontracts of every tier);
 - n) The status of items involving Authorities such as inspections, approvals, permits, clearances and licenses, as further described in Exhibit 6 - Environmental and Regulatory Compliance Requirements;
 - o) Provincial benefits report as described in Exhibit 13– Provincial Benefits;
 - p) Monthly risk report consisting of the following:
 - A structured narrative that describes major risk activities and events during the reporting period containing major changes in the Risk Register (as defined in Section 9.1(c) below) with a focus on medium and high level risks;
 - Highlights of the most important risk management activities and events; and
 - An updated Risk Register (as defined in Section 9.1(c) below); and
 - q) Status of planned tests and/or hold points.

Final Contract Report

A final report summarizing the Work shall be submitted by Contractor to Engineer for

Acceptance, the content and timing of which shall be specified by Engineer. Such an Accepted final report shall be submitted to Engineer by Contractor prior to Contractor's request by Notice for a Final Completion Certificate.

Meetings

Meetings of key Contractor's Personnel, the Company Representative, Engineer and/or Company Personnel, shall be held regularly.

Monthly and weekly progress meetings will be held, details of format and content of which will be as agreed between Contractor and Engineer. If there is a failure to agree on such format and/or content, Engineer shall have the authority to determine these matters.

Engineer may hold other meetings with Contractor to discuss matters of technical, interface management, health, safety, environmental, design, quality, verification, certification, documentation, engineering data, cost, accounting, scheduling, construction, progress and the like, and as may be otherwise required for the Work and the Agreement. Contractor shall ensure sufficient and appropriate qualified Personnel are available to attend.

In general, meetings shall adhere to the following guidelines:

- a) The agenda items for any meeting will be issued by Engineer to the Parties no less than two Business Days prior to such meeting. Both Engineer and Contractor shall ensure, in accordance with their respective responsibilities that reports, reproducible documentation and forward planning information relating to agenda items are issued in sufficient time to allow adequate preparatory study and evaluation;
- b) The meeting will address only the items covered by the agenda and any other minor topics relevant to the Parties and subject concerned;
- c) In those instances where matters of urgency need to be addressed, Company and Contractor will make every effort to address such items at the earliest opportunity; and
- d) It shall be the responsibility of Engineer to record minutes of all meetings unless otherwise instructed by Engineer. Minutes should be brief, indicate with whom the responsibility for action lies, the date the action was assigned and the date required for completion of such action. Minutes should also state the results of assigned actions outlined in previous minutes, including the actual date of completion of the action.

Photographs

Contractor shall provide photographs as Company may request of sufficient quality for possible inclusion in Company's publications depicting significant activities and general progress of the Work.

3.2.4 INFORMATION SYSTEMS AND TECHNOLOGY (IS/IT)

Contractor shall:

- a) establish and maintain an IS/IT infrastructure and associated computing environment to

- ensure overall reliability, performance and security control;
- b) provide access, for Engineer and Company Personnel, to any software applications and supporting services required in order for Engineer and Company to perform their work;
 - c) maintain and upgrade path for electronic formats that will keep data formats compatible with that of Engineer;
 - d) securely transfer data and information electronically to Engineer on a timely basis using industry recognized standards, processes, systems and methodologies;
 - e) ensure control practices and risk mitigation plans are in place to provide protection and safeguard for all data and information related to the Work including but not limited to access management, data corruption, data loss, backup and disaster recovery procedures; and
 - f) within thirty (30) days of the Effective Date, provide to Engineer a description of the IS/IT support organization and how it is structured to support the Work.

3.2.5 DATA

All documentation and information, including correspondence, notes reports, information identified and/or required by this Agreement, drawings, specifications, schedules, weekly, bi-weekly and/or monthly reports, databases, records, videos, photos and other documents (hereinafter collectively referred to as "Data") shall be made available to Engineer and Company in electronic native format as well as hard copy. The transfer of Data will be by storage medium such as optical or magnetic discs, or other form specified from time to time by Engineer. Contractor shall undertake all reasonable efforts to ensure Data is provided in a form fully useable by Engineer and Company with well recognized industry standard applications.

Where the software necessary to enable Engineer and Company to fully utilize Data is based in whole or in part on Contractor's proprietary information/software, Contractor shall grant Company Group a non-exclusive, perpetual, royalty free, irrevocable and non-transferable (except to a permitted assignee of this Agreement) license to such information/software.

Where the software is not proprietary to Contractor and obtained through usage of software leased or purchased from third parties, Contractor shall, subject to Company Approval, arrange for and obtain for the benefit of Company Group a non-exclusive, perpetual, royalty free, irrevocable and non-transferable (except to a permitted assignee of this Agreement) license to use such software to enable Engineer and Company to fully utilize Data.

Throughout the Term, Company in conjunction with Engineer shall review Data to ascertain what data is to be passed to Company by Contractor for future use.

4 INTERFACE MANAGEMENT

Notwithstanding anything as stated elsewhere in this Agreement, Company shall conduct and provide an opportunity to Contractor to attend, and Contractor shall attend, at least daily coordination meetings between Contractor and Company's Other Contractors that will impact Contractor's Work schedule or interface with Contractor in the performance of the Work.

Notwithstanding the foregoing statement, Company's failure to conduct such meetings every day shall not constitute a Change. Contractor shall provide timely input into coordination activities and meetings.

Contractor shall manage external interfaces with other organizations involved in the LCP as described in LCP-PT-MD-0000-PM-PR-0004-01 Technical Interface Management Procedure (as set out in Exhibit 11 – Company Supplied Documents), including Engineer, Company's Other Contractors and their subcontractor(s) and vendor(s) of every tier, Authorities and other entities associated with the Work. Refer to Exhibit 1 - Scope of Work for further information on interfaces at each of the Work areas at the Site.

5 PROCUREMENT AND MATERIAL MANAGEMENT

Contractor shall maintain records of materials procured for the Work. Engineer will have the right to carry out periodic inspection of all Contractor Group's storage and inventory control records for the Work as well as physical spot checks of all material held in storage.

5.1 COMPANY SUPPLIED ITEMS

Contractor shall:

- a) receive from Company all Company supplied items and as applicable unload, unpack, inspect, and confirm receipt and condition of receipt by issuing a material receiving report to Engineer confirming Contractor acceptance of items and the condition of items at the time of acceptance;
- b) ensure that all materials are used correctly and no materials are substituted without prior Acceptance;
- c) be responsible for the security and safe keeping of all Company supplied items and ensure all items are visually marked as being provided for the Work;
- d) maintain index records and account for all Company supplied items received and installed, and the remaining surplus and scrap. The index shall, at a minimum, include description, part number, serial number, storage location, status and receipt date;
- e) secure, protect and maintain all Company supplied items in accordance with specifications and preservation requirements in accordance with industry practice and standards and as set forth in this Agreement; and
- f) be responsible for any costs incurred as a result of Contractor's failure to properly store, preserve and protect Company supplied items.

Company shall have the right to inspect Company supplied items at Contractor Group's storage location(s) and storage records at any time without prior Notice. Such inspection shall not relieve Contractor of any responsibility for the accountability and safe keeping of Company supplied items.

5.2 INSPECTION

Contractor shall be responsible for and undertake inspection of Contractor Group's supplied

equipment and materials for the Work. When requested, Contractor shall issue to Engineer inspection reports accompanied by all relevant inspection documents.

5.3 SHIPPING

Contractor shall be responsible for shipment of all materials, components and equipment to the Worksite(s), including those shipments made by all members of Contractor Group. Contractor shall satisfy itself that shipping arrangements by such members are satisfactory, or alternatively organize critical shipments itself or through the use of an appointed shipping or forwarding agent.

Contractor shall establish and issue to all members of Contractor Group proper packaging, shipping and marking instructions including necessary addresses, proforma invoices, bills of lading, customs releases and the like, depending on the various methods of transport, border crossings and receiving location(s).

Contractor shall be responsible for all necessary loading and off loading at all locations.

A logistics and transportation strategy shall be produced by Contractor and submitted to Company by the date specified in Exhibit 4 – Supplier Document Requirements List for Company review and Approval.

6 COST MANAGEMENT

6.1 COST CONTROL ACCOUNTS

Engineer will provide cost control accounts to Contractor within thirty (30) days of the Effective Date. The cost control accounts will be cross referenced to the compensation amounts outlined in Exhibit 2 – Compensation and will be used as the basis for all cost reporting.

6.2 COST REPORTS

Contractor will submit to Company, by the 20th day of each and every calendar month, an incurred cost flow report specifying:

- a) the costs actually incurred by the Contractor from the Effective Date up to the 25th day of such month (accordingly, the final five day period of such month shall be estimated); and
- b) the estimated cost flow to be incurred by Contractor from the 25th day of such month to the remainder of the Term.

Such report shall be consistent with the control accounts and payment elements contained in Exhibit 2 – Compensation.

In addition, Contractor shall prepare a cost report to be included as a section of the Monthly Progress Report. Reporting will be consistent with the control accounts and payment elements contained in Exhibit 2 – Compensation. Within thirty (30) days of the Effective Date, Contractor

shall submit to Engineer a sample cost report for Acceptance. In general, the cost report shall address the following as a minimum:

- a) Contract Price and all changes thereto;
- b) Forecast final Contract Price (previous period, current period and monthly variance);
- c) Reimbursable cost status, if applicable;
- d) Change Order status;
- e) Contract incurred cost flow (actual/forecast); and
- f) Invoice and payment status, including cash flow forecast by currency.

6.3 COST MANAGEMENT PLAN

Where the Work includes significant elements of reimbursable activities, Contractor shall prepare and submit to Company, within thirty (30) days of the Effective Date, a cost management plan for Company review and Approval.

7 SCHEDULE MANAGEMENT

This Section 7 sets forth the minimum requirements for Contractor's planning, scheduling, measurement and reporting of physical progress, and schedule control activities for the Work.

7.1 DEFINITIONS

- a. **Earned Value Management:** A method to measure the value of Work performed. It compares the effort of Work that was actually expended with what was physically completed.
- b. **Control Schedule (CS):** A detailed control schedule forms the benchmark for comparison and identification of schedule deviations. The CS shall represent the total Work execution and interfaces with others (Milestones, key dates, design, procurement, regulatory, fabrication and manufacturing, transportation, installation, construction and completion) covering the entire duration of the Work, and includes roll-up details of all Contractor's schedules. The CS is to be a schedule network, which is calculated using the critical path method. Contractor will ensure that the CS aligns with Exhibit 9 - Schedule. The CS shall be developed using Primavera (P6 or later version) or equivalent. If software other than Primavera is used, the native file shall have the capability to be easily converted to Primavera P6 and shall be subject to the Acceptance of Engineer.
- c. **Milestone:** The start or completion of an activity in the performance of the Work and which is identified as such in Exhibit 9 – Schedule.
- d. **Control Schedule Baseline Document (CSBD):** A series of schedules, s-curves, histograms, tables and narrative which together form the basis of the control schedule. The Control Schedule Baseline Document is updated and re-issued following re-baselining of the CS. The CSBD includes the CS, as well as identification of critical and near-critical path(s). The CSBD shall provide supporting documentation to the CS. It shall include all baseline

assumptions regarding schedule durations, logic, installation rates, progress weighting and relevant material as deemed necessary by Engineer.

- e. **Summary Schedule (SS)**: The summary schedule incorporates all Milestones and is a roll-up of schedule information from the detailed control schedule such as engineering, procurement, construction, fabrication, installation and completions and any subject deemed necessary by Engineer to adequately convey a rollup or the CS.
- f. **Schedule Development and Control Plan (SDCP)**: A formal document providing the approach to planning and schedule control including schedule development, interfaces, analysis, forecasting, reporting, corrective action and the method for incorporation of Changes. The SDCP addresses the scheduling interfaces between Contractor and other members of Contractor Group, as well as Contractor and Engineer. In particular, the plan shall provide a detailed description of Contractor's progress measurement system including how Contractor measures, verifies and reports physical progress of each major activity of the Work (such as engineering, procurement, fabrication, manufacturing, permitting, transportation, construction/installation and completion etc.).
- g. **Monthly Cut-Off Date**: The month end date that Contractor uses as a basis to compile its progress during the month. The Monthly Cut-off Date will be agreed between Contractor and Engineer based on the nature of the Work. If there is a failure to agree on such date, Engineer shall have the authority to determine the date.

7.2 CONTRACTOR'S DUTIES

With respect to planning, scheduling and schedule control of the Work, Contractor will:

- a) prepare, implement and maintain a schedule development and control plan (SDCP) in accordance with the date specified in Exhibit 4 – Supplier Document Requirements List for the Work using methods and procedures that are in accordance with industry recommended practice (i.e., Association for Advancement of Cost Engineering);
- b) impose the same control schedule and progress measurement requirements in the Agreement on other members of Contractor Group;
- c) analyze and calculate Work completed using industry recognized earned value Management practices where actual progress is based on physical Work completed measured against the current Work plan. Incorporate the results of progress and related status information into schedule forecasts, Weekly Reports and Monthly Progress Reports, as required under this Agreement;
- d) develop recovery plans and associated schedules if slippage is apparent, or as required by Company. Recovery plans will be reviewed with Company and implemented upon Company's Approval. Recovery plans will be monitored and adjustments made as needed to keep the Work on schedule;
- e) make changes in the schedule preparation, progress measurement and schedule control procedures at Engineer's request;
- f) provide Engineer with the control schedule (CS) in hard copy and electronic form, in accordance with the date specified in Exhibit 4 – Supplier Document Requirements List. The

native electronic file shall include all information necessary to duplicate Contractor's schedule, progress measurement analysis and resource requirements. In addition to the electronic file, the schedule software settings, calendar definitions and application generated scheduling report shall be included; and

- g) Provide a control schedule baseline document (CSBD) in accordance with the date specified in Exhibit 4 – Supplier Document Requirements List.

7.3 SCHEDULE DEVELOPMENT AND CONTROL PLAN (SDCP)

Contractor's schedule development and control plan shall cover all areas of schedule development and control, including development, analysis, forecasting, reporting and corrective action. In particular, the plan shall provide a detailed description of Contractor's progress measurement system.

Contractor's schedule development and control plan will, include:

- a) How Contractor's detailed schedule and current Work plans will be developed, reviewed and updated;
- b) Methodology that Contractor will use to analyze and forecast the progress of the Work relative to current schedules;
- c) How interface management will be addressed. Interface management includes all key internal interfaces within the Work as well as all key interfaces between Contractor, other members of Contractor Group and Company's Other Contractors. The plan will define, including how interfaces are identified, stewarded and their status reported;
- d) Identification of how interfaces, outside of Contractor's control, could impact the Control Schedule;
- e) The number, types, uses, frequency of updates (and responsibility for updates) and level of detail for each of the various schedules Contractor intends to use to control the Work;
- f) Methods for analyzing critical path and conducting float analysis;
- g) Procedure for re-baselining the control schedule (subject to Engineer's Acceptance);
- h) Coding system for schedules;
- i) The methods that will be used to measure physical progress of each of the various activities or groups of activities such as engineering, procurement logistics, fabrication, manufacturing, construction, completions and installation etc. Methods for engineering shall specifically address use of computer aided design and drafting (CADD), both 2D and 3D);
- j) Procedures within Contractor's organization for review and verification of progress measurement information prepared at each Worksite;
- k) The methods to control over progressing of activities; and verification methods confirming that all activities reported as 100% complete are actually complete;
- l) The method for recognizing the impact of rework on apparent progress, during engineering, procurement, fabrication and construction and the method for specifically progressing and tracking the Work;
- m) The methods and procedures for incorporating the effects of Changes on the assessment of progress;
- n) The method for weighting and combining individual and overall progress measurements to

arrive at the discipline and overall progress assessments for engineering, procurement, fabrication, installation, completions and other major activities related to the Work. Progress weightings shall be subject to Engineer's review and Acceptance, and once Accepted shall not be changed without Engineer's prior Acceptance; and

- o) Contractor plans to manage and report receipt of materials and/or components at the Worksites.

7.4 CONTROL SCHEDULE BASELINE DOCUMENT (CSBD)

Contractor shall prepare and submit to Engineer for its review and Acceptance the control schedule baseline document in hard copy, portable document format (PDF) and native electronic format. All information required to reproduce the control schedule baseline document including scheduling software settings, working calendars, application time conversion factors, and precedence and scheduling output reports from the scheduling software, will be included with the submission.

The CSBDocument shall be organized into an overall summary section and a detailed section for each component of the Work (such as engineering, procurement, manufacturing, fabrication, testing and handover). Each section shall be organized as follows:

- a) Assumptions underpinning the execution methodology and CS, as well as any issues that may impact the Work. This section will also include the basis for any planned changes to the CS;
- b) Summary schedule;
- c) Progress curves and tables;
- d) Critical and sub-critical path(s); and
- e) Control schedule.

7.5 CONTROL SCHEDULE (CS)

A detailed CS for the Work will be prepared by the Contractor and submitted to Engineer for its review and Acceptance. Contractor shall develop the CS in accordance with Company's work breakdown structure and code of accounts and Exhibit 9 - Schedule. The CS will show activities that provide sufficient detail in all areas of Work execution (such as Milestones, key dates, design, procurement, manufacturing, transportation, installation, construction, completions and all relevant interfaces) to enable monitoring and control of the Work.

7.6 GENERAL SCHEDULING AND PROGRESS REQUIREMENTS

Contractor's planning, scheduling and schedule control activities for the Work will, at a minimum, include the following:

- a) A time-scaled critical path method (CPM) logic network that shall set forth the order and estimated times by which planned activities are to be completed. This network shall identify the critical and subcritical paths (a subcritical path is defined as any series of activities whose completion is within one (1) week of the critical path completion). The logic network shall clearly indicate all restraints and interrelationships and shall incorporate

Exhibit 9 - Schedule;

- b) A description of those activities associated with material sources, other members of Contractor Group and fabrication. All interfaces will be incorporated into the CS;
- c) All schedule and progress information (CS, SS, tables, histograms, s-curves, document register, procurement plan, manufacturing schedule and support documentation) shall be issued on a monthly basis;
- d) Progress measurements such that the physical progress of the Work can be related easily to the CS activities. Progress shall be evaluated on discrete, identifiable deliverables for each Work activity weighted by budgeted person hours or other methods to determine a total percent for each activity. Physical progress measurement relates to the assessment of the proportion of actual Work accomplished towards completion of given components of the Work;
- e) The ability to assess progress for all progress earning activities required for each component of Work, regardless of source. As additional progress earning components are identified, they will be added to the base level of Work through a change management process, to be accomplished and progress measured and reported;
- f) Indicate the schedule calendars used to develop the schedule including, daily work hours, work week, shift schedule, scheduled facility shutdowns (if any) and holidays. Any planned non-work periods shall be clearly indicated with an explanation indicating the period of non-work and the rationale for the non-work period;
- g) Show status of all interfaces within the components of the Work (such as engineering, procurement, manufacturing, fabrication, construction and completions);
- h) Exclude home office and field support functions, such as project management, coordination, engineering office follow-up during construction, construction and fabrication management and supervision, warehousing, material handling and clean-up, from physical progress measurements;
- i) Produce and maintain a schedule network that is logically linked, with a minimal number of constraints utilized. Where constraints are required, the fewest possible constraints necessary to meet the required objective will be used. The reason for the constraint shall be noted in the notebook file for that activity. Constraints that affect the backward pass calculation of the network ("Mandatory Finish", "Mandatory Start", "Finish On Or Before", "Start On Or Before", "Finish On", "Start On") are to be strictly avoided, unless Accepted by Engineer;
- j) Use of activity lags is discouraged. If a lag is used, the reason and rationale for the lag shall be noted in the notebook file for that activity;
- k) Scheduling option that retains the current logic ("retained logic") of activities started out of sequence will be used. Where necessary, the logic for those activities for which the relationship is no longer applicable will be manually changed;
- l) Schedule time forecasting shall not be based upon the percentage of schedule completed. The scheduling control software function for linking remaining duration and such percentage shall be disabled;
- m) Control schedule will be structured to provide five (5) activity code fields, for summarization and reporting purposes, for exclusive use by Engineer. Each code field will be ten (10) characters in length and will be titled LCP1, LCP2, LCP3, LCP4 and LCP5. Engineer will provide the applicable coding to Contractor for inclusion within these code

- fields. Contractor will populate and maintain these code fields for all schedule activities;
- n) Schedule calendars and activity codes will be prefixed with the six character package identifier and a dash (for example, "CH0031-"). This is to prevent potential data errors in Engineer's planning system;
 - o) Schedule activity descriptions shall clearly identify the work associated with the activity, and shall be consistently applied throughout the schedule;
 - p) Activity durations shall not, in general, exceed twice the update frequency;
 - q) Start to finish (SF) relationship types shall be avoided;
 - r) Open ends within the schedule network shall be avoided;
 - s) Network logic shall be consistently applied throughout the schedule;
 - t) The "Work Breakdown Structure" (WBS) shall not be the only coding system used within the schedule network. Activity codes are required to enable effective schedule development, review and analysis;
 - u) Gantt or bar chart displays shall have the current schedule bar assigned to position 1, with the baseline schedule bar assigned to position 2; and
 - v) Engineer will have free and direct access to all information associated with Contractor's progress and performance management systems, including planning, scheduling, progress measurement, person hours, resources and productivity data.

7.7 PROGRESS REPORTING

Contractor shall provide Weekly Reports and Monthly Progress Reports as described in Section 3 of this Exhibit 3 – Coordination Procedures and, with respect to progress reporting, as more fully detailed below:

- a) Weekly Reports shall include the following:
 - Number of daily resources (headcounts and man-hours) by trade;
 - Progress table including quantities/statistics for current engineering, procurement, and fabrication/construction/installation/completions activities;
 - A Primavera two (2) week look ahead schedule with activities in-progress and completed in the previous week; and
 - A resource histogram showing a two (2) week look ahead and actual resources the previous week.
- b) Monthly Progress Reports shall include the following:
 - Planning and schedule control reports will be updated and issued monthly. Reports shall include the control schedule, summary schedule, tables, resource histograms, progress s-curves, document register, procurement plan, manufacturing schedule and support documentation. Contractor shall supply a copy of the schedule using Primavera (P6 or later version) or equivalent, as well as hard copy format. If software other than Primavera is used, the native file shall have the capability to be easily converted to Primavera P6 and shall be subject to the Acceptance of Engineer;
 - Deviations from schedule in time or progress, reasons for delays and deviations with recommended actions for recovery;
 - Status of planned tests and/or hold points;
 - Tabulation of project man-hours addressing planned, actual and forecast at completion;

- Progress table including quantities/ statistics for current engineering, procurement, and fabrication/ construction/ installation/ completions activities; and
- Identification of critical and sub-critical path(s).

8 CHANGES TO THE WORK

8.1 INTRODUCTION

This Section 8 sets forth minimum requirements for identifying and processing Changes in support of Article 26 of this Agreement.

Changes will be initiated in one of two ways:

- a) by completing a Change Request, in the form as attached to this Exhibit 3 – Coordination Procedures as Appendix A – Change Request; or
- b) by the issuance of a Change Order (which includes a Field Work Order).

Change Orders will be in one of the forms set out in this Exhibit 3 – Coordination Procedures - an interim document and a final document. The Field Work Order form is an interim document used for Company directed Changes issued at the Site. The maximum value of a Field Work Order, in the form as attached to this Exhibit 3 as Appendix F – Field Work Order, shall be limited to \$25,000.00. Company shall issue the final Change Order form for each Field Work Order or for a group of Field Work Orders. The final Change Order form shall also be used for Changes initiated by Change Requests and for any Change not subject of a Field Work Order.

Contractor shall specify its assessment of cost and schedule impacts in each Change Request or proposal presented in accordance with this Section 8.

If Company issues a Change Order (including a Field Work Order) to proceed with a Change on a reimbursable basis, Contractor shall prepare daily time sheets for Company's signature covering such Change and submit them to Company within twenty four (24) hours where the Change is performed on Site, or within one (1) week where the Change was performed elsewhere, after such Change has been performed. Company's signature of Contractor presented time sheets shall not commit Company to any particular payment in respect of the Change, but shall serve as a record of events in the eventual resolution of any difference of opinion between Company and Contractor regarding the cost or schedule impacts of the Change. Contractor shall also present details of its assessment of any effect of the Change on the Control Schedule.

Company will be entitled to an equitable reduction in the Contract Price and/or an equitable adjustment of the Control Schedule in respect of any reduction in the Work pursuant to a Change Order and in accordance with the provisions of Article 26 of this Agreement.

Contractor is not entitled to recover any costs related to preparation and administration of Change Orders, responses to Change Requests or preparation of Change Requests.

Each Change Order shall be deemed to take full account of the cumulative effects on the

Contract Price and of all prior Change Orders.

8.2 ENGINEER REQUESTED CHANGES

Company may issue a Change Order (including a Field Work Order) directly to Contractor or may request a proposal from Contractor for a contemplated Change through Engineer by issuance of a Change Request.

Upon receipt of a Change Request from Engineer, Contractor shall prepare a proposal for the Change Request and submit it within five (5) Business Days to Engineer for further processing. Contractor's proposal shall include:

- a) A detailed execution methodology for the proposed Change;
- b) A detailed schedule for the execution of the Change and the impact on the Control Schedule;
- c) An estimated price for the Change using the items in the applicable schedule(s) of Exhibit 2 - Compensation or if such schedule(s) is not applicable, a lump sum price for the Change (if Contractor proposes any other method of compensation it shall provide its rationale for that method); and
- d) Details of the impact on the execution plan, the quality plan, the health and safety plan referenced in Article 15.2 of this Agreement and the environmental protection plan referenced in Article 15.3 of this Agreement.

If Contractor cannot present the proposal for the Change Request to Engineer within five (5) Business Days of the receipt of the relevant Change Request from Engineer, Contractor shall promptly notify Engineer and provide reasons for the delay and the date the proposal will be ready. Contractor shall not unduly delay submission of the proposal to Engineer. Engineer, at its sole discretion, can reject any proposal not submitted in accordance with the requirements outlined herein.

Engineer will review Contractor's proposal within ten (10) Business Days and either Accept and return a Change Order (in the form as attached to this Exhibit 3 – Coordination Procedures as Appendix B - Change Order) for Contractor execution or reject the proposal for resubmission or cancellation.

8.3 CONTRACTOR IDENTIFIED CHANGES

Contractor may request a Change by submitting a Change Request to Engineer. The Change Request will include:

- a) A detailed explanation of why Contractor considers that a Change has occurred along with detailed support to enable Engineer to easily evaluate and assess the merits of the Change Request. Contractor shall specify the relevant provision(s) of the Agreement which it interprets as the basis for the Change Request;
- b) A detailed schedule for the execution of the Change and the impact on the control schedule;
- c) An estimated price for the Change using the items in the applicable schedule(s) in Exhibit 2

- Compensation or if such schedule(s) is not applicable, a lump sum price for the Change (if Contractor proposes any other method of compensation it shall provide its rationale for that method); and
- d) Details of the impact on the execution plan, the quality plan, the health and safety plan referenced in Article 15.2 of this Agreement and the environmental protection plan referenced in Article 15.3 of this Agreement.

Contractor has the responsibility to identify, by the issuance of a Change Request, any change to the Work that it believes to be necessary for environmental integrity, or that will benefit Company in terms of capital or operating cost, or improved performance flexibility, safety or operation of the Work.

8.4 CHANGE ORDER PRICE

Contractor's proposed price for any Change will generally be stated as an estimate based on the rates in the applicable schedule(s) in Exhibit 2 - Compensation or if such schedule(s) is not applicable, then a lump sum price shall be proposed. If Contractor proposes any other method of compensation, it shall provide its rationale for such method. Contractor shall provide such substantiation as Company may reasonably request regarding such proposed price. Each lump sum price for a Change shall be determined using the rates and prices outlined in Exhibit 2 - Compensation or on a basis to be agreed between Engineer and Contractor if there are no applicable rates in Exhibit 2 – Compensation.

For any Change proposed to be compensated on a reimbursable basis, Contractor shall include an estimated total price for the Change in the Change Request or in its proposal in response to a Change Request. Changes performed on a reimbursable basis will be priced in accordance with Exhibit 2 – Compensation.

Each Change Order shall fully define the terms of payment and invoicing provisions. Contractor shall not be entitled to additional compensation in respect of:

- a) Personnel already assigned full time to the Work, except when such Personnel are paid overtime, shift premiums or their assignment to the Work is extended, specifically in relation to the Change; and
- b) Contractor's Items already assigned full time to the Work, except when the hire period of rented items is extended specifically in relation to the Change.

8.5 CHANGE IMPACT ON CONTROL SCHEDULE

Contractor will submit to Engineer, all necessary information to support any proposed impact of a Change on the control schedule, in both hard copy and electronic format. The information shall include detailed critical path analysis, identification and full accounting for the use of float and the current control schedule.

Each Change Order shall be deemed to take full account of the cumulative effects on the control schedule and all prior Change Orders. Due consideration will be given to cumulative

effects that may not have manifested themselves in previous Change Orders, such as a Change that is accommodated by reducing available float. Any cumulative schedule effects assessed by Contractor shall be supported by detailed analysis to account for the use of float. This analysis shall include an electronic version of the current control schedule that clearly highlights the schedule effects to enable Engineer to verify Contractor's analysis prior to the issuance of the relevant Change Order.

Contractor shall update the control schedule for Company's Approval within five (5) Business Days after Company's issuance of any Change Order affecting the control schedule.

8.6 CHANGE REGISTER

Contractor shall maintain, fully updated at all times, a register of all Change Requests and Change Orders (with Field Work Orders identified separately). The register will include:

- a) Change Request number and date;
- b) Change Order number and date and reference to a Change Request;
- c) Brief description of the Change;
- d) Status of Change Request and Change Order;
- e) Value;
- f) Effects on Control Schedule; and
- g) Brief description of the basis for the Change Request.

Each Change Request will be identified by means of a unique sequential reference number beginning with 1000 for any Change Request issued by Engineer and Company, and 2000 for any Change Request issued by Contractor. Each Change Order will be identified by means of a unique reference number, which will be assigned by Engineer.

All Change Orders that affect the control schedule shall be individually detailed, by reference number and summary description, in the successive Control Schedule updates issued by Contractor for Company's Approval.

Contractor shall submit the Change register in the Monthly Progress Report or more frequently as required by Engineer.

9 RISK MANAGEMENT

Contractor's risk management activities will be a continuation of the risk assessment process initiated during the bidding process. Requirements for ongoing risk management and reporting will be agreed between Contractor and Engineer at the kick-off meeting. If there is a failure to agree on such requirements, Engineer shall have the authority to determine these matters. Engineer shall have the authority to specify the type of risks (such as schedule, quality, cost, safety and environmental) which shall be reported by Contractor. Some risks will be identified as "internal" risks, not subject to reporting.

9.1 RISK MANAGEMENT REQUIREMENTS

- a) Contractor shall establish and implement a risk management system to identify, address and manage safety, health and environment, cost, schedule, quality and other execution risks, for the duration of the Work.
- b) Contractor's risk management system shall be based on the following principals:
 - All risks shall be identified and captured in the risk register (as defined in Section 9.1(c) below);
 - All risk scenarios shall be evaluated for elimination or mitigation through appropriate measures; and
 - All higher and medium risk scenarios and associated risk management strategies shall be communicated and accepted by the appropriate level of Contractor's management.
- c) Contractor's risk management system shall include the following features:
 - Contractor shall develop a risk management plan indicating the formal risk process to be followed during Work execution, with risk assessment approach and frequency. The plan shall also include assessments required for safety, health and environment and execution risks referenced elsewhere in this Exhibit 3 – Coordination Procedures;
 - Contractor shall develop and maintain a risk register (“Risk Register”) to capture all details required to monitor identified risks. The format and content shall be subject to the Acceptance of Engineer. It shall be submitted as part of the Monthly Progress Report, along with other reporting requirements specified within this Exhibit 3 – Coordination Procedures;
 - Contractor shall perform risk assessments using qualified and knowledgeable Personnel. Contractor shall consult with Engineer regarding meeting target levels of safety. Contractor shall also include active involvement of Engineer's Personnel and external expertise, as appropriate;
 - Risk assessments and recommended prevention and/or mitigation measures shall be formally documented in the Risk Register;
 - Risk mitigation and prevention strategies for assessed risks in the higher and medium categories are required to be reviewed for acceptability by specified levels of Contractor's and Engineer's management. These strategies shall be supported by formal actions captured in an action log and be appropriate to the nature and magnitude of the risk, with decisions and updates clearly documented;
 - Results of formal risk assessments shall be considered in the preparation or review of emergency response plans and procedures; and
 - Follow-up processes to ensure that decisions have been implemented shall be formally documented and maintained in an action log. At a predetermined frequency, compliance reviews shall be undertaken to verify that formal risk assessments and follow-up actions are implemented.
- d) Where appropriate, Engineer shall be invited to observe and/or participate in risk assessments performed by Contractor. Results of risk assessments related to the Work shall be distributed to Engineer upon completion of any of the assessments included within Contractor's risk management plan.
- e) Contractor shall also participate in risk assessments conducted by Engineer, Company or

Company's Other Contractors when these risk assessments relate to activities for which interfaces exist with the Work or where Contractor is involved.

10 ENGINEERING REQUIREMENTS

10.1 INTRODUCTION

This Section 10 sets forth minimum requirements for engineering coordination in support of the Agreement, including Article 3 of this Agreement and the document entitled "Supplier/Contractor Document Requirements" included in Exhibit 11 – Company Supplied Documents.

10.2 GENERAL REQUIREMENTS

- a) As part of the requirement in Section 2.4 to submit its execution plan for the Work, Contractor shall include a detailed engineering management plan for the first ninety (90) days following the Effective Date. This plan will address planning activities, staff, offices and other resource mobilization, software acquisition and schedule development.
- b) It is the responsibility of Contractor to maintain an electronic system for monitoring, recording and tracking all revisions and changes to drawings and documentation.
- c) Any documents which require Approval of any Authority, will be submitted to such Authority by Contractor for Approval, unless otherwise agreed.
- d) All applicable documents shall be marked "Issued for Construction" or similar status, prior to commencement of fabrication, manufacture, construction or installation of the Work.
- e) Contractor shall not commence any Work involving permanent installation of any equipment, materials or products until Contractor has submitted to Engineer and Engineer has Accepted the health, safety and environmental protection plans required by Article 15 of the Agreement.

10.3 DESIGN CONTROL

Contractor shall establish and implement a system to control engineering activities in order to ensure achievement of a satisfactory level of quality and compliance with requirements including those of all Authorities and the Agreement.

Contractor's engineering control activities shall include the following:

- a) Implement a system for (internal) discipline checking, including the use of check lists where appropriate, to substantiate compliance with the requirements of Authorities, Agreement requirements and Supplier and Subcontractor requirements. Discipline checks shall be documented and traceable;
- b) Ensure that all aspects of the design (including Supplier information) are systematically verified;
- c) Ensure that there is no conflict between documents; and
- d) Systematically record, for each revision of all documents, originator, checker, Contractor and approval signatures, and, where required, Company Approval, and to incorporate

comments as required during the checking and approval processes.

10.4 ENGINEER/COMPANY REVIEW AND ACCEPTANCE/APPROVAL OF CONTRACTOR DOCUMENTS

Throughout this Section 10.4 and elsewhere in this Agreement, wherever there is a stated requirement for Approval by Company or Acceptance of a Contractor drawing, procedure, specification or other documentation (Document), this shall mean:

- a) Contractor shall carry out its internal inter-discipline checking (IDC) to verify the quality of the Document. Contractor will verify product requirements, catalogue numbers and similar data and that Contractor has checked and coordinated each Document with the requirements of the Work and of the Agreement.
- b) After Contractor's IDC, and subject to the Document being free of significant "holds", Contractor shall issue the Document for Company's/Engineer's review and comments.
- c) Related engineering required to allow Company/Engineer to review each Document must be made available by Contractor, if not already in Company's/Engineer's possession.
- d) Contractor shall revise the Document to take account of Company's/Engineer's comments as part of the Work.
- e) Where required/specified by Company/Engineer, Contractor shall obtain Company's/Engineer's Approval/Acceptance of the Document before it is issued for implementation.
- f) Company/Engineer will review and return Documents in accordance with the schedule agreed upon. The review periods are based upon Contractor issuing quality documents in a regular flow; undue batching of large quantities of documents issued at irregular intervals will entitle Company/Engineer to an extended review period applicable to each batch;
- g) Company's/Engineer's review is for conformity to the requirements of this Agreement design concept and for general arrangement only.
- h) Company's/Engineer's review will not relieve Contractor of responsibility for errors or omissions in any Document submitted by Contractor or for meeting all requirements of this Agreement unless Company/Engineer expressly notes the Approval/Acceptance of a deviation on the Document.
- i) Upon Company's/Engineer's request, Contractor will revise and resubmit Documents which Company/Engineer reasonably rejects as inconsistent with this Agreement unless otherwise directed by Company/Engineer. Contractor will notify Company/Engineer in writing of any revisions to the resubmission other than those requested by Company/Engineer.
- j) Company/Engineer shall have the right to raise additional comments at any time to address Contractor's errors and omissions, and Contractor shall incorporate such comments into the Work.

10.5 TECHNICAL QUERY PROCEDURE

Requests for clarification or guidance related to technical details contained within Company supplied data, shall be formally presented by Contractor to Engineer as a Site Query (SQ). Refer to Section 11 below for details on the use of an SQ.

11 CONSTRUCTION MANAGEMENT

11.1 OBJECTIVES

In executing the Work, Contractor shall ensure that the other members of Contractor Group will:

- a) assign experienced and qualified project management Personnel and craft workers with demonstrated skills during the field work / construction phase of the Work and provide continuity of such Personnel throughout the execution of the Work;
- b) maintain adequate controls and oversight during the field work / construction phase of the Work to ensure conformance with all requirements of this Agreement;
- c) minimize Work execution risks and risks to Company's assets;
- d) develop adequate contingency and recovery plans to mitigate impacts on schedule of unforeseen events (e.g. weather events); and
- e) provide Worksite(s) that are safe, secure and free of industrial health hazards.

11.2 CONTRACTOR'S DUTIES

With respect to the Work, Contractor shall:

- a) plan and co-ordinate the design, fabrication, transportation, installation, construction and completions of the Work with Engineer to ensure all interfaces are identified and managed;
- b) identify execution risks and develop mitigation plans and procedures covering all reasonable events during the field work / construction phases;
- c) conduct all engineering for field work, fabrication, transportation, construction and completions as stipulated in this Agreement;
- d) prepare, maintain and implement:
 - emergency preparedness and response procedures;
 - detailed fabrication, construction, transportation and material management plans for major Worksites;
 - security measures at the Worksite; and
 - a health and safety program;
- e) provide all construction and installation equipment, tools and temporary facilities required to perform the Work;
- f) provide Personnel and facilities for all field testing, inspection, supervision and coordination activities associated with the Work;
- g) support Company's construction management activities related to the Work;
- h) contractor shall not commence any Work involving permanent installation of any equipment, materials or products until Contractor has submitted to Engineer and Engineer has Accepted the health, safety and environmental protection plans required by Article 15 of this Agreement; and
- i) perform all temporary works in accordance with the procedure for Muskrat Falls Work Permit, as included in Exhibit 11 – Company Provided Documents.

11.3 SITE QUERY (SQ)

The site query (SQ) process, as described in this Exhibit 3 – Coordination Procedures, shall be used by Contractor to facilitate the timely resolution of minor engineering and construction problems encountered at the Worksites. The SQ is used to formally transmit and co-ordinate technical queries with Engineer and to document the resolution to the query. Engineer shall not be involved in answering Site Queries which are entirely within Contractor's own responsibility.

Contractor may raise an SQ (in the form attached as Appendix C - Site Query) to clarify Technical Requirements which require a formal response. The SQ will include separate sections for Contractor's query and for Engineer's response. Any relevant documents that might assist those assigned to respond to the query in understanding the issue should be included or referenced with mark-ups as required. Contractor's SQ shall be approved by an appropriate level of authority within Contractor's organization and submitted formally to Engineer (distribution list to be provided). Contractor shall assign an SQ number based upon the Accepted numbering system which will be provided to Contractor.

Engineer shall review the SQ and provide a response within the appropriate sections of the SQ. It will be Contractor's responsibility to implement any actions associated with the response. Responses may simply be explanatory in nature and require no additional action. Where appropriate, an SQ response may be accompanied by a site instruction (in the form attached as Appendix D - Site Instruction) or an engineering change notice (in the form attached as Appendix E - Engineering Change Notice). An SQ will remain open until any associated actions have been completed, to the satisfaction of Engineer.

Open SQs shall be reviewed at weekly Site meetings in order to resolve all matters relating to their resolution.

11.4 SITE INSTRUCTION (SI)

The site instruction (SI) process, as described in this Exhibit 3 – Coordination Procedures, shall be used to provide a formal record of an instruction or verbal agreement originated directly at Site from Engineer to the Contractor.

Site instructions (in the form attached as Appendix D - Site Instruction) will be provided to address the following items (examples only):

- a) Instructions to Contractor related to safety or quality;
- b) Confirmation of verbal instructions/notifications;
- c) Site administration;
- d) Reporting requirements;
- e) Work clarification; and
- f) Instruction subsequent to a site query response.

Open site instructions shall be reviewed at weekly meetings in order to resolve all matters relating to their implementation.

11.5 ENGINEERING CHANGE NOTICE (ECN)

The engineering change notice (ECN) process, as described in this Exhibit 3 – Coordination Procedures, will be followed by Engineer to highlight the issuance of any engineering design change to Contractor whenever:

- a) Issued for construction (IFC) drawings or specifications are revised after their issue to Contractor;
- b) New IFC drawings or specifications are issued that are not listed in Exhibit 1 - Scope of Work; and
- c) IFC, sketches, documents or any such typical instructions are issued.

Engineer will generate an ECN, using the form found in Appendix E - Engineering Change Notice of this Exhibit 3 – Coordination Procedures, to describe and communicate Issued for Construction (IFC) document changes to Contractor. These changes will be described on the ECN form and accompanied by the associated drawings, specifications, sketches and related documents for implementation by Contractor. Where an ECN is the result of an SQ or a SI, it will reference the relevant document. The ECN will be assigned a unique number by Engineer for future reference and reporting.

11.6 CONCESSION REQUEST

The concession request (in the form attached as Appendix G – Concession Request) shall be used by Contractor to facilitate Engineer or Company written authorization to use, substitute, or release item(s) that do not conform to the contractual or specified requirements.

12 INVOICING AND PAYMENT

12.1 OBJECTIVES

Contractor shall submit accurate, complete and detailed invoices that reflect the Work completed by Contractor, in a format that will be established by Engineer and with the necessary supporting/verification documentation to enable Engineer to efficiently attest the invoices and recommend Approval and payment of Contractor's invoices by Company, and all in accordance with the Articles of this Agreement.

12.2 CONTRACTOR'S DUTIES

- a) Contractor shall submit invoices in accordance with this Agreement complete with Company Approved Payment Certificates and all supporting/verification documentation Acceptable to Engineer.
- b) Contractor shall submit to Engineer, a monthly report that summarizes invoices submitted and payments made, along with applicable dates of both the invoices and the payments and other pertinent information that Engineer or Company may require.
- c) Contractor shall submit to the Engineer, each month, a cash forecast report by currency for the following three (3) months. This report shall be submitted by the 15th day of every

month.

12.3 PROCEDURAL REQUIREMENTS

- a) Contractor shall submit to Engineer one original invoice, along with one (1) PDF copy of the invoice and all required Billing Information. At Engineer's request, all supporting schedules and calculations supporting the invoice shall be provided in native file format.
- b) Each invoice shall be organized such that it is easily understood and:
 - contains a clear description of the completed Work being invoiced;
 - the charges can be easily and efficiently verified against this Agreement and the Billing Information; and
 - all charges are clearly cross referenced to the Billing Information.
- c) All invoice amounts shall be detailed based on Company's code of accounts.
- d) The invoice shall include the following information:
 - Contractor's name, address and tax identification number (HST registration number);
 - Invoice date and invoice number;
 - Agreement number and name;
 - Charges detailed by code of accounts along with cumulative value of all invoices for this Agreement detailed by Company's code of accounts;
 - Adjustments, if any, from prior invoices;
 - Subtotal, tax (HST applicable to the invoice) and total;
 - All invoices shall be in the currencies detailed in Exhibit 2 - Compensation;
 - Complete and accurate supporting documentation, including without limitation Billing Information and any other pertinent information that Company may require to verify completion of the Work, the accuracy of the fees, charges and third party charges; complete with a summary sheet cross referencing all supporting documentation to the charges covered on the invoice;
 - Approved Payment Certificate (in the form as stated in Appendix H - Payment Certificate) accompanied by all relevant supporting documentation;
 - If Contractor is a non-resident, in accordance with Exhibit 10 – Declaration of Residency, Contractor shall note on each invoice whether any portion of the Work covered by such invoice was performed inside or outside of Canada for the purposes of Canadian income tax legislation, or such other information requested or required by Company to properly assess withholding requirements; and
 - Where appropriate, Change Order amounts may be shown separately and the invoice will itemize charges associated with each Change Order, including without limitation, a detailed description of each item being invoiced. A copy of the Change Order shall accompany the invoice.
- e) Before Company pays an invoice, Company may request clarification or substantiation in relation to any charges on the invoice and Contractor shall promptly comply with any such request. Invoice review meetings (or pre-payment meetings) may be held to agree on charges to be included on an invoice.
- f) If an invoice is deemed incorrect by Company, Company is entitled to reject such invoice and shall provide reasons for the rejection.
- g) A Final Completion Certificate will be required before final payment will be made. When

Contractor believes the requirements of Final Completion have been satisfied, as described in Article 25 of the Agreement, Contractor shall request by Notice a Final Completion Certificate. Such request shall be in the form as contained in Appendix J - Request for Final Completion Certificate.

12.4 INVOICING FOR CHANGE WORK

Contractor shall submit separate invoices for Changes, unless Company or Engineer directs otherwise, with the Change Order number and date mentioned on the invoice. Invoicing provisions shall be specified on each Change Order. All Changes shall be subject to the compensation provisions and payment terms set out in Article 12 of this Agreement, Exhibit 2 – Compensation and Exhibit 3 – Coordination Procedures.

Contractor will not invoice Company for any amounts which result in the cumulative amount invoiced being greater than the Contract Price.

Under no circumstances will Contractor present invoices for a Change, nor will Company compensate Contractor for any Change, in the absence of a Change Order.

12.5 BANKING INFORMATION

- a) Payments of invoices shall, where possible, be made by electronic funds transfer to Contractor's bank account, as specified in writing by Contractor to Company Representative.
- b) Any changes in Contractor's banking information or payment instructions shall be submitted in writing to Company Representative. Company shall not be held responsible for errors or delays resulting from incorrect or delayed submission of changes in banking instructions by Contractor.

13 INFORMATION MANAGEMENT

13.1 SCOPE

This Section 13 provides the minimum requirements in relation to information management (IM) which includes the areas of records and document management and control.

13.2 OBJECTIVES

- A. To establish an effective IM environment for the execution of this Agreement, where people can work safely and collaboratively with a confidence that information, and the systems that manage it, are accessible, accurate, reliable, up to date and timely throughout the Term.
- B. For the function of IM and its associated processes, to be seen as an enabler and not a hindrance to project progress and success.

- C. To establish clear communication methods for the exchange of information, both technical and non-technical.
- D. To use standards (electronic formats, physical formats, data, numbering, etc.) to ensure a consistent information deliverable for incorporation into Company systems, regardless of origin.
- E. To produce and deliver a quality information asset that will support and enable the ongoing operation and maintenance of physical assets.
- F. To provide the people, processes and tools required to facilitate and enable efficient and effective IM practices for the execution of this Agreement.
- G. To ensure that adequate orientation, training and guidance is provided to all team members in the specific areas of IM and supporting systems.
- H. Personal, confidential and restricted information shall be handled using best practice protocol to ensure access to only authorized Personnel in both the physical and electronic environments.
- I. No incidents of illegal information brokering as Contractor performs the Work.

13.3 CONTRACTOR'S DUTIES

Contractor shall:

- A. Develop an IM plan (including procedures, organizational charts, systems, training programs, etc.) to address the following areas of IM:
 - a. Administrative records management; and
 - b. Document management/control (engineering services, Contractor, procedural, etc.);
- B. Adhere to the documents included in Exhibit 11 - Company Supplied Documents;
- C. Provide statistical and status reporting for documentation and data as defined by Company;
- D. Ensure all IM related standards and procedures agreed between Company and Contractor are followed by Contractor's Personnel;
- E. Facilitate inspections and assessments of IM processes and systems by Company Representative for Contractor Group;
- F. Provide process improvement suggestions throughout the Term where there are efficiencies to be gained; and
- G. Highlight and work to resolve any IM related issues relating to the Work.

13.4 COMPANY'S AUTHORITY

Company shall have the authority to:

- A. Provide general oversight to the IM components relating to the execution of this Agreement;
- B. Review and Approve plans and procedural documentation created by Contractor in support of IM for the execution of this Agreement;
- C. Conduct inspections and assessments of Contractor Group's IM programs and systems as appropriate;
- D. Provide statistical reporting requirements to Contractor as required;
- E. Provide applicable IM related standards to Contractor;

- F. Identify restricted information as appropriate;
- G. Provide process improvement suggestions throughout the Term where there are efficiencies to be gained; and
- H. Highlight and work to resolve any IM related issues or inefficiencies relating to the execution of this Agreement.

13.5 SPECIFIC REQUIREMENTS

13.5.1 ADMINISTRATIVE RECORDS

- A. Contractor shall maintain a distinct set of project related administrative records consisting of all non-revision controlled information received or created/generated in support of the Work. Administrative records shall be managed in an electronic content environment. Contractor shall provide reports of these records upon request from Company. Contractor shall provide copies of records as requested by Company at any point during the Term.
- B. Contractor may use existing file plans and classification systems within its own organization, but shall capture all communication with Company using Aconex.
- C. Contractor shall maintain a correspondence register within Aconex.
- D. Formal correspondence shall be by letter and shall be limited to one subject per letter. The subject line shall include reference to Agreement numbering as well as the specific subject.
- E. All correspondence shall be sent by Aconex. Use of signed PDF documents is acceptable. Details on the use and application of Aconex will be provided by Company and addressed at the kick-off meeting accordingly. Contractor shall be aware of the following:
 - a. Aconex is a cloud based computer software program that can be accessed via an internet connection and a web browser (www.aconex.com).
 - b. Aconex Project Mail is a module within Aconex that can be used to send and receive emails similar in function to most other email software systems (i.e., Microsoft Outlook, Lotus Notes, etc.).
 - c. Tutorials for using Aconex and Aconex Project Mail are available at (www.aconex.com).
 - d. Aconex serves as an electronic project mailroom and archive.
 - e. All correspondence relating to the project can be created, delivered, recorded and archived by the system.
 - f. On Aconex, project mail is not held in individuals' folders but in a company mailbox, the equivalent of a central filing system.
 - g. Correspondence is available to all project participants within the organization and confidentiality can be enabled when required.
 - h. All project mail is delivered on company specific templates, maintaining a firm's identity within the project.
 - i. Aconex mail functions are very familiar, as they mirror standard email packages.
 - j. Files may be attached to any piece of project mail from the controlled documents register, or the local drive or network.
 - k. Hard copy letters and existing documents can be captured into the system through a scan/registration process, ensuring all correspondence is logged.
 - l. All project mail is automatically logged and cannot be deleted or modified once sent.

- m. Mail can be filtered by a variety of attributes, free text and wildcards. Mail to or from any members within a company or project can be found instantly, ensuring accountability and full quality assurance.
- n. Support for the use of this system can be provided from Aconex at 1-888-5-ACONEX or speak with any member of the LCP Information Management Team (LCPDCC@lowerchurchillproject.ca).

13.5.2 DOCUMENT MANAGEMENT/CONTROL

- A. Company will facilitate the document numbering upon submission by Contractor of the initial supplier document register as per Exhibit 4 – Supplier Document Requirements List. All documents, and all pages and sheets within, shall bear this number and the associated revision number.
- B. All documents shall be prepared and submitted by Contractor in accordance with the document entitled “Supplier/Contractor Document Requirements” (as provided in Exhibit 11 - Company Supplied Documents) and as required under Exhibit 4 – Supplier Document Requirements List.

APPENDIX A
CHANGE REQUEST

| LOWER CHURCHILL PROJECT | CHANGE REQUEST | | | | |
|--|-----------------------|----------------------------|------|------------|----------------|
| Change Request Title: _____ | | CHR No. (Reference): _____ | | | |
| Agreement No: _____ | | Rev. No: _____ | | | |
| Agreement Title: _____ | | CHO No.: _____ | | | |
| Company: _____ | | Date: _____ | | | |
| Contractor/Supplier: _____ | | Aconex No.: _____ | | | |
| _____ | | DAN No.: _____ | | | |
| _____ | | PCN No.: _____ | | | |
| Description of Change Request and Reason (attach all supporting information): | | | | | |
| Supporting information that forms part of this Change Request: | | | | | |
| Description of impact on Control Schedule: | | | | | |
| Revised Finish Date: | | | | | |
| Lump sum price (or estimated cost) and adjustment to the Contract Price: | | | | | |
| Item | Description | UOM | QTY | Unit Price | Extended Price |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Value of this Change Request: | | | | | \$ |
| ORIGINATOR <input type="checkbox"/> COMPANY <input type="checkbox"/> CONTRACTOR/SUPPLIER | | | | | |
| Title | Name | Signature | Date | | |
| | | | | | |
| | | | | | |
| RECEIVED BY: | | | | | |
| Title | Name | Signature | Date | | |
| | | | | | |

APPENDIX B

CHANGE ORDER

| | | | |
|--|---|---|--|
| LOWER CHURCHILL PROJECT | CHANGE ORDER Between [Insert Company Name] and [Insert Contractor/Supplier Name] | | |
| Agreement No: _____ | CHO No. _____ | | |
| Agreement Title: _____ | Rev. No: _____ | | |
| Company: _____ | CHR No. _____ | | |
| Contractor/Supplier: _____ | Date: _____ | | |
| Change Title: _____ | | | |
| Description of Change: | | | |
| Supporting information that forms part of this Change Order: | | | |
| Change Includes: <input type="checkbox"/> Price <input type="checkbox"/> Schedule Adjustment Type: <input type="checkbox"/> Lump Sum <input type="checkbox"/> Unit Rate <input type="checkbox"/> Fixed Amount <input type="checkbox"/> Estimate <input type="checkbox"/> Reimbursable | Original Contract Price _____ Previous Change Orders Price _____ Backcharges _____ This Change Order Price _____ Total Contract Price to Date \$ _____ | | |
| Impact on Control Schedule: | | | |
| Revised Finished Date: _____ | | | |
| This Change Order shall form and be read and construed as an integral part of the above-noted Agreement. The above adjustment to the Contract Price constitutes full compensation (including all impacts costs) to the Contractor/Supplier for the above Change. | | | |
| APPROVAL | | | |
| Issued by Company: | | Acknowledgement of Contractor/Supplier Receipt: Contractor/Supplier Representative Name: _____ | |
| Supply Chain Manager: | | | |
| Signature: _____ | Date: _____ | Signature: _____ | |
| Company Representative Name: _____ | | _____ | |
| Signature: _____ | Date: _____ | Date: _____ | |

APPENDIX C

SITE QUERY

| | |
|------------------------------------|-------------------|
| LOWER CHURCHILL PROJECT | SITE QUERY |
|------------------------------------|-------------------|

| | | | |
|-----------------------------|------------------------------------|----------------|-------------|
| QUERY TITLE: | | | |
| Company: | Date | Page of | |
| Project Name: | Site Query No.: (Reference) | | Rev. |
| Contractor/Supplier: | Aconex No.: | | |
| Agreement No.: | Physical Component (WBS): | | |
| Agreement Title: | | | |

1. QUERY DETAILS

| | | |
|--|--|--|
| | | |
|--|--|--|

| DOCUMENT NO. | REV. | TITLE |
|--------------|------|-------|
| | | |
| | | |
| | | |
| | | |

| TITLE | NAME/COMPANY | SIGNATURE | DATE |
|--------------|--------------|-----------|------|
| Prepared by: | | | |

2. RESPONSE / PROPOSED SOLUTION (If Applicable)

Comments:

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

| TITLE | NAME | SIGNATURE | DATE |
|--------------------------|------|-----------|------|
| Prepared by: | | | |
| Reviewed by: | | | |
| Approved by Site: | | | |
| Approved by Home Office: | | | |

3. CLOSE OUT

Quality Verification Required: Yes No

Comments:

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

| TITLE | NAME | SIGNATURE | DATE |
|---------------------------------|------|-----------|------|
| Accepted by (Quality/Resident): | | | |

APPENDIX D
SITE INSTRUCTION

| | | | |
|------------------------------------|-------------------------|--|--|
| LOWER CHURCHILL PROJECT | SITE INSTRUCTION | | |
|------------------------------------|-------------------------|--|--|

| | | | |
|---|---|---------------------------------|---------|
| Company: | Date | Rev. | Page of |
| SIN Title: | | | |
| Project Name & Location: | Site Instruction No.: | | |
| Contractor: | SITE INSTRUCTION RELATED TO: | | |
| Agreement No.: | Safety: <input type="checkbox"/> | Other: <input type="checkbox"/> | |
| Agreement Title: | Environment: <input type="checkbox"/> | | |
| Plant Area / Bldg No.: | Quality: <input type="checkbox"/> | | |
| Reference Specification: | Work Clarification: <input type="checkbox"/> | | |
| Reference Drawing No.: | Site Administration: <input type="checkbox"/> | | |
| <i>This Site Instruction is not intended to alter the agreement amount nor vary the agreement in anyway. It is issued solely to ensure and facilitate compliance with the agreement requirements.</i> | | | |
| Instruction: | | | |
| Reason: | | | |
| Approvals | | | |
| TITLE | NAME | SIGNATURE | DATE |
| Originator: | | | |
| Reviewed by: Resident Engineer | | | |
| Approved by: Area Construction Manager | | | |

LCP-PT-MD-0000-CS-FR-0001-01, REV. B5

APPENDIX E
ENGINEERING CHANGE NOTICE

| | | |
|-------------------------|---------------------------|-------------|
| Lower Churchill Project | ENGINEERING CHANGE NOTICE | Page 1 of 2 |
| | | ECN No.: |
| | | Date : |

| | |
|---------------------------|-------------|
| ECN Title: | |
| Agreement No.: | Contractor: |
| Agreement Title: | |
| Physical Component (WBS): | |

| This ECN is issued for: | |
|--------------------------|--|
| <input type="checkbox"/> | The Issue for Construction (IFC) of new technical documents not previously issued. |
| <input type="checkbox"/> | The Issue for Construction (IFC) of revised technical documents previously issued. |

| Summary Description of Changes | |
|--------------------------------|--|
| | |

| | Title | Name | Signature | Date |
|--------------|--------------------------|------|-----------|------|
| Prepared by: | Discipline Engineer | | | |
| Reviewed by: | Lead Discipline Engineer | | | |
| Approved by: | Component Eng. Manager | | | |
| Approved by: | Package Leader | | | |
| Approved by: | Project Manager | | | |

LCP-PT-MD-0000-EN-FR-0004-01, Rev. B6

APPENDIX F

FIELD WORK ORDER

| | | | | |
|--|---|---|---|--------------------------|
| LOWER CHURCHILL PROJECT | FIELD WORK ORDER <small>(In no case shall this Field Work Order (FWO) exceed \$ 25,000 CAD)</small> | | | |
| Company: | Date | Rev. | Page of | |
| Project Name & Location: | Field Work Order No.: | | | |
| Contractor: | FIELD WORK ORDER RELATED TO: | | | |
| Agreement No.: | SAFETY | <input type="checkbox"/> | ENVIRONMENT | <input type="checkbox"/> |
| Agreement Title: | QUALITY | <input type="checkbox"/> | SCOPE | <input type="checkbox"/> |
| Plant Area / Bldg No.: | OTHER | <input type="checkbox"/> | | |
| Reference Specification: | | | | |
| Reference Drawing No.: | | | | |
| Description of the Work: | | | | |
| | Title | Name | Signature | Date |
| Originated by: | | | | |
| Reason: | | | | |
| Schedule Impact: | | | | |
| Work Start Date: | | | | |
| Lump Sum Price: | Estimated Price: | Unit Price <input type="checkbox"/> | Time & Materials <input type="checkbox"/> | |
| Company: | | | | |
| _____ Contract Administrator Date: | | _____ Area Construction Manager Date: | | |
| Acknowledgment of Receipt: | | | | |
| Contractor: | | | | |
| _____ Signature | _____ Title | _____ Date | | |

LCP-PT-MD-0000-SC-FR-0002-01, Rev B3

APPENDIX G

CONCESSION REQUEST

| | | | | |
|--|---------------------------|--|---------------------|------|
| Lower Churchill Project | CONCESSION REQUEST | | | |
| Concession Request No.: | | CON Rev. No: | Date: | |
| Concession Request Title: | | | Page 1 of 2 | |
| Contractor Name & Location: | | TYPE <input type="checkbox"/> Documentation <input type="checkbox"/> Electrical <input type="checkbox"/> Fabrication <input type="checkbox"/> Welding <input type="checkbox"/> Mechanical <input type="checkbox"/> <input type="checkbox"/> Instruments Contractor <input type="checkbox"/> Material <input type="checkbox"/> Civil / <input type="checkbox"/> Code / Specification Architectur <input type="checkbox"/> Other - Specify <input type="checkbox"/> Structural | | |
| Agreement Number: | | | | |
| Agreement Title: | | | | |
| Physical Component WBS: | | | | |
| Type of Materials: | | | | |
| Tag / Pour ID/Part No.: | | | | |
| Reference Documents | | | | |
| Document No | Rev. | Document Title | | |
| | | | | |
| | | | | |
| Quantity involved: | | | | |
| 1. BY CONTRACTOR | | | | |
| Description of concession (attach applicable documentation): | | | | |
| | | | | |
| Requirements: | | | | |
| | | | | |
| Proposed action and justification (attach applicable documentation): | | | | |
| | | | | |
| Adverse Consequences: | | | | |
| 1. | Cost: | | 2. Schedule: | |
| 1.1 | Contractor / Supplier: | | 3. Warranty: | |
| 1.2 | Subcontractor: | | 4. Quality Control: | |
| 1.3 | LCP Team: | | 5. Other | |
| 1.4 | Company (Operations): | | Specify: | |
| Signature by Contractor hereby expressly waives all rights of Contractor to any cost and / or schedule impact for any approved concession, however Company reserves the right to recover any costs and / or schedule credits associated with the same. | | | | |
| REQUESTED BY CONTRACTOR: | TITLE | NAME | SIGNATURE | DATE |
| | | | | |

LCP-PT-MD-0000-EN-FR-0002-01, Rev. B8

| Lower Churchill Project | CONCESSION REQUEST | | | | | |
|--|---------------------------|-----------|-----------|--------------------------|---|---------|
| 2. REVIEWS BY COMPANY | | | | | Page 2 of 2 | |
| DISCIPLINE | NAME | SIGNATURE | DATE | RECOMMENDED | | REMARKS |
| | | | | YES | NO | |
| Discipline Engineer: | | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Discipline Engineer: | | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Quality: | | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Resident Engineer: | | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| Package Leader: | | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | | | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. APPROVALS BY COMPANY | | | | | | |
| Recommendation: | | | | | <input type="checkbox"/> Accepted <input type="checkbox"/> Accepted with conditions <input type="checkbox"/> Rejected | |
| | | | | | | |
| | NAME | SIGNATURE | DATE | | | |
| Component Engineering Manager | | | | | | |
| Area Manager / Area Construction Manager: | | | | | | |
| Contract Administrator: | | | | | | |
| Company Operations Implications: (if required) | | | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | | | | | |
| APPROVED BY: | TITLE | NAME | SIGNATURE | DATE | | |
| | | | | | | |
| 4. CONFIRMATION OF IMPLEMENTATION BY CONTRACTOR | | | | | | |
| Comments: | | | | | | |
| | | | | | | |
| CONFIRMED BY: | TITLE | NAME | SIGNATURE | DATE | | |
| | | | | | | |
| 5. LCP QUALITY VERIFICATION REQUIRED (CLOSE-OUT) <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | |
| Comments: | | | | | | |
| | | | | | | |
| ACCEPTED BY: (LCP QUALITY / RESIDENT ENGINEER) | TITLE | NAME | SIGNATURE | DATE | | |
| | | | | | | |

LCP-PT-MD-0000-EN-FR-0002-01, Rev. B8

APPENDIX H

PAYMENT CERTIFICATE

PAYMENT CERTIFICATE

Date: _____

Agreement #: _____

Agreement Title: _____

Contractor/Supplier: _____

Milestone / Monthly Progress
Payment Description: _____

Milestone / Monthly Progress
Payment Amount: _____

Work Executed for Monthly Progress / Milestone Completion criteria and status (list below):

Contractor/Supplier:
Contractor/Supplier hereby notifies Company that it considers that it has executed the associated Work or met the criteria for achieving the above-noted Milestone(s) and requests Company Approval.

By: _____
Contractor/Supplier Representative

Date: _____

Company Approval:
Company hereby Approves this Payment Certificate.
Company Approval of this Payment Certificate does not relieve Contractor/Supplier of any of its obligations under the Agreement.

By: _____
Company Representative

Date: _____

LCP-PT-MD-0000-SC-FR-0083-01 Rev B1

APPENDIX I

SUBSTANTIAL COMPLETION CERTIFICATE

SUBSTANTIAL COMPLETION CERTIFICATE

Project: Lower Churchill Project

Agreement No.: _____

Agreement Title: _____

Contractor: _____

1. Engineer confirms that, pursuant to the Articles of the Agreement, Contractor has met all requirements of Substantial Completion effective as of **[insert date]**.
2. Attached hereto is a Punch List, which includes items with respect to which Company and/or Engineer has notified Contractor are incomplete, defective or deficient. If Contractor fails to rectify any such items:
 - (i) by the date specified on the Punch List for such item; or
 - (ii) as soon as practicable, if no such date is specified on the Punch list for such item;
 Company reserves its right to invoke any of its rights or remedies pursuant to the Agreement.
3. Nothing expressed or implied herein shall be construed to prejudice Contractor's obligation to complete or rectify all nonconforming Work items in accordance with the Agreement, and to achieve Final Completion.

Attachments:

1. _____
2. _____
3. _____

Engineer:

Acknowledgement of Contractor Receipt:

By: _____
Engineer Representative

By: _____
Contractor Representative

Name: _____

Name: _____

Date: _____

Date: _____

APPENDIX J

REQUEST FOR FINAL COMPLETION CERTIFICATE

REQUEST FOR FINAL COMPLETION CERTIFICATE

Agreement No.: _____
 Agreement Title: _____
 Contractor: _____

To Engineer:

In accordance with the Agreement, Contractor hereby confirms that it has completed the Work and all the requirements of Final Completion (as described in the Agreement) have been met, all in accordance with the Agreement, excluding its Warranty obligations.

Contractor agrees that, as of the date of its confirmation below, the Contractor waives, remises, releases and discharges the Company of any and all Claims that are known, ought to have been known or discoverable by reasonable means by the Contractor, which Contractor has or may have relating to or arising out of this Agreement and the subject matter of this Agreement, and all facts and circumstances related to the Work, save and except:

- a) Only those Claims previously submitted by Contractor in writing and remaining unresolved prior to the date of Contractor's below confirmation, as listed below:

 _____ ;

and

- b) The balance of the Contract Price payable, if any, upon the issuance of the Final Completion Certificate.

| |
|--|
| <p>Contractor Confirmation:</p> <p>Contractor confirms it has completed the Work in accordance with the above-noted Agreement.</p> <p>By: _____ Contractor Representative</p> <p>Acknowledgement of Engineer Receipt:</p> <p>By: _____ Engineer</p> <p>Date: _____</p> |
|--|

APPENDIX K

FINAL COMPLETION CERTIFICATE

FINAL COMPLETION CERTIFICATE

Agreement No.: _____

Agreement Title: _____

To Contractor:

Company hereby confirms that the Date of Final Completion of the Work is **[date]**.

By: _____
Company Representative

Date: _____

EXHIBIT 14

PERFORMANCE SECURITY

(date of issue)

To: *(COMPANY'S LEGAL NAME)*
(address)

From: *(ISSUING BANK)*
(address)

Subject: Our Irrevocable Standby Letter of Credit - Performance Number *(#)*

WHEREAS *(legal name of Contractor)* having its head office at *(address of Contractor)* (hereinafter referred to as the "Applicant"), has signed a contract bearing the effective date of *(insert date)*, and reference number *(insert number)* with Muskrat Falls Corporation having its head office at 500 Columbus Drive, St. John's, NL A1B 0C9 (hereinafter referred to as the "Beneficiary"), for *(insert contract description)* (hereinafter referred to as the "Contract");

WHEREAS under Article 7 of the Contract, the Applicant is required to provide to the Beneficiary an Irrevocable Standby Letter of Credit - Performance to secure the performance of its obligations under the Contract;

We, *(name and address of bank)* (hereinafter referred to as the "Bank"), for the account of the Applicant, hereby issue in favor of the Beneficiary our transferable Irrevocable Standby Letter of Credit – Performance in the amount of *(insert)* Canadian Dollars *(\$****)* (hereinafter referred to as the "Credit"), representing seven and one half percent (7.5%) of the Contract Price. We hereby irrevocably and unconditionally undertake to pay to the Beneficiary at sight, without protest or notification, and without inquiring any further proof or conditions, and without consideration for any objections or protests which the Applicant may make, any sum or sums not exceeding the aggregate sum of *(insert)* Canadian Dollars *(\$****)*, free of all imposts, taxes, duties, charges, fees, withholdings and/or deductions whatsoever both present and future, of any nature whatsoever and by whomsoever imposed, and without set-off or counterclaim, upon presentation to the Bank of a demand in writing duly signed by two (2) Beneficiary's officers against this Credit, provided the demand is in the form set out in Exhibit "A" hereto, which forms an integral part of this Credit, and that such demand is made no later than on the *(insert)* day of *(insert month, year)* (hereinafter referred to as the "Expiry Date") or any new expiry date (as defined below). Only the Beneficiary or a transferee may make drawings under this Credit.

This Credit shall be automatically extended for one (1) year periods from the Expiry Date or from any subsequent expiry date (hereinafter referred to as "New Expiry Date") successively, unless the Bank sends by express courier to the Beneficiary at the above-mentioned address, with a copy to the Applicant, a written notice at least ninety (90) days prior to the Expiry Date or a New Expiry Date, stating that the Bank elects not to extend this Credit for any such additional period. In the event the Bank elects not to extend the Expiry Date or any New Expiry Date of this Credit, then the Bank hereby unconditionally and irrevocably undertakes to pay to

the Beneficiary the total amount then outstanding under this Credit upon presentation to the Bank by the Beneficiary, prior to the Expiry Date or the New Expiry Date, of a demand for payment stating that the Bank has elected not to extend this Credit and that the Beneficiary is therefore entitled to such payment, provided the demand is in the form set out in Exhibit "B" attached hereto, which forms an integral part of this Credit. Such demand to be accompanied by the original of this Credit and its amendments, if any, for the Beneficiary's endorsement purpose; provided that the Bank shall return to the Beneficiary the original of this Credit and its amendments, if any, in the case of a partial drawing.

Notwithstanding the foregoing, in no event will this Credit extend beyond *(insert date)* (hereinafter referred to as the "Final Expiry Date").

This Credit may be automatically reduced by a certificate issued by the Beneficiary, in its letterhead, to the Bank stating the amount of reduction applicable to this Credit and presented to the Bank by the Applicant or the Beneficiary.

The terms of this Credit set forth in full the terms of our undertaking and this undertaking is not in any way modified, amended or amplified by reference to any document, instrument referred to in this Credit, or in which this Credit is referred to, or to which this Credit is related, and any such reference does not incorporate by reference any document, instrument or agreement.

Partial drawings are authorized. All costs related to this Credit are for the account of the Applicant.

The Beneficiary may transfer its rights under this Credit, in their entirety (but not in part) to any transferee; provided, however, that the transfer complies with applicable law and the transferee is not an entity that the Bank is prohibited to deal with. Transfer of the Beneficiary's rights under this Credit to any such transferee shall be effected only upon the presentation to us of this Credit accompanied by a transfer letter in the form attached hereto as Exhibit "C", as applicable, and the original of this Credit and its amendments, if any. Upon such transfer, the transferee shall have no further rights to transfer this Credit.

We consent to such transfer without charges or fees of any kind to the Beneficiary. Any charges due in connection with a transfer of this Credit, being the Bank's transfer fee of \$250 shall be for the Applicant.

This Credit is subject to the Uniform Customs and Practice for Documentary Credits (2007 Revision) of the International Chamber of Commerce (ICC Publication no. 600) and for matters not covered by the Uniform Customs and Practice for Documentary Credits (2007 Revision) of the International Chamber of Commerce, (ICC Publication no. 600) it shall be governed by and interpreted in accordance with the laws of the Province of Newfoundland and Labrador and the laws of Canada, applicable therein.

(NAME OF BANK)

per:

EXHIBIT "A"

(date)

To: *(full name & address of the issuing bank)*

From: *(full name & address of Company)*

Subject: This is the form of demand specified in the Irrevocable Standby Letter of Credit - Performance number *(number)* issued on the *(date)* by *(name of the issuing bank)*

Dear Sirs,

We, the undersigned, being the Beneficiary under the above captioned Irrevocable Standby Letter of Credit – Performance (hereinafter referred to as the “Credit”) issued by *(name and address of the issuing bank)* on the instructions of *(name of the Contractor)* the Applicant, hereby request you to pay to us on receipt by you of the present demand the amount of *(currency and amount in figures and letters)*.

We state and declare:

that the Applicant is an Insolvent Party as defined in Contract number *(insert)*, or is a Defaulting Party as defined in Contract number *(insert)* and has failed to rectify or taken reasonable steps to rectify the default or breach;

and

that the Beneficiary has sent by facsimile at *(insert fax number)* and by express courier to the Applicant, attention of *(insert name)* a written notice of default, specifying the nature of default, at least fifteen (15) calendar days prior to this demand;

that as a result thereof, we have become entitled under the terms of the Contract number *(insert)* to be paid the amount claimed above;

and

that said amount has not otherwise been paid to us, whether directly or indirectly, by or on behalf of the Applicant.

The original of the Credit and its amendments, if any, are enclosed herewith.

(name of Company)
(address of Company)

per: _____
Name: _____
Title: _____

per: _____
Name: _____
Title: _____

EXHIBIT "B"

This is the form of demand specified in Irrevocable Standby Letter of Credit – Performance number [#] issued on the [date], by [name of the issuing bank]

[date]

To: (ISSUING BANK'S NAME)
 (address)

From: (COMPANY'S NAME)
 (address)

Subject: This is the demand specified in Irrevocable Standby Letter of Credit – Performance number [#] issued on the [date], by [name of the issuing bank]

Dear Sirs,

We, the undersigned, being the Beneficiary under the above captioned Irrevocable Standby Letter of Credit – Performance (hereinafter referred to as the "Credit") issued by [issuing bank's name and address] on the instructions of [Contractor's name] (the "Applicant"), hereby request you to pay to us on receipt by you of the present demand the amount of [currency and amount in figures and letters] only.

We state and declare:

that the Beneficiary has been notified by the Bank of its election not to extend the Credit and that the Beneficiary is therefore entitled to such payment; and

30 days have passed from the receipt of the Bank's notice not to extend the Credit and that as of the date of the present demand for payment the Applicant has not provided the Beneficiary with a satisfactory substitute irrevocable standby letter of credit – performance or alternate satisfactory security.

The original of the Credit and its amendments, if any, are enclosed herewith.

[Company's name and address]

per: _____
 Name: _____
 Title: _____

per: _____
 Name: _____
 Title: _____

cc to the Applicant

EXHIBIT "C"

This is the form of transfer specified in Irrevocable Standby Letter of Credit – Performance number [#] issued on the [date], by [name of the issuing bank].

_____, 20____

Name and Address of Issuing Bank:

Attention:

Re: Your Irrevocable Standby Letter of Credit – Performance ("Credit") number _____ dated _____ in favour of (insert Company name) _____

To Whom it May Concern:

The undersigned Beneficiary, (insert Company name), hereby irrevocably transfers and assigns to:

 (Name and Address of Transferee)

(the "Transferee") all rights of the undersigned Beneficiary to draw under the above Credit in its entirety, subject to the same terms and conditions.

By this transfer, all rights of the undersigned Beneficiary in such Credit are transferred to the Transferee and the Transferee shall have the sole right relating to any amendments whether to increase or extensions or other amendments and whether now existing or hereafter made, all amendments are to be advised to the Transferee without necessity of any consent of or notice to the undersigned Beneficiary.

The original of such Letter of Credit is returned herewith together with any and all amendments, and we ask you to endorse the transfer on the reverse side of the original Letter of Credit, and forward it directly to the Transferee with your customary Notice of Transfer.

Signature Authenticated

Yours very Truly

 (Name of Bank)

 (Name of Beneficiary)

 (Signature of Bank)

 (Signature of Beneficiary)