		DG3			Alstom		
Item	Units	Qty	Cost	Unit Cost	Qty	Cost	Unit Cost Notes
Formwork	M2	5,143	6,953,351	1,352	23,234		
Rebar	kg	819,215	2,697,717	3.29	697,578		
Concrete	m3	10,296	4,624,156	449	8,884		
Cost per m3 of concrete	m3	10,296	14,275,224	1,386			
Excavation	m3		841,181	9.04	93,057		
Backfilling	m3		1,296,210	17.49	74,094		

DG3 Notes

JM cost per m3 of concrete is ~ 1,000, including indirects; cost above direct only

Astaldi's price, including indirects = $720/m3

Formwork quantity is reasonable based on concrete volume but unit price for formwork is off

Example of formwork cost for spillway

Pre-fab formwork cost (3 re-uses)	8,400,000
Set and strip	29,750,000
Total cost	38,150,000
Total M2	87,800
Cost per m2	434.51

LINE DRILLING

140 mm ϕ @ 250 MM

1 M OF DRILLING = .25 m² OF WALL

SPILLWAY + POWERHOUSE

$\frac{13600 \text{ m}^2}{.25 \text{ m}^2/\text{m}}$ = 54400 M + 10% = 60000 M

60000 M × 40.00/M = 2,400,000.00

PRE SHEAR 3ϕ" — 20" CC = LOAD EVERY 2ND HOLE

$\frac{13600 \text{ m}^2}{.5 \text{ m}^2/\text{M}}$ = 27200 M @ 35.00 = 952000.00

OVERHEAD: DEDUCTIONS.

ENVIRONMENT REQUIREMENTS:
MONITOR 313400.00

HEALTH & SAFETY. 246800.00 —
~~300,000.00~~
~~2~~46 800 —

PERMITS — 30 000.00

INSURANCES — ~~450000.00~~ 200000

BONDS — 450 000.00

LETTER OF CREDIT 450,000.00 + $80

2.1. ENGINEERING
2.1.1 SDRL 50000.00 — +100
2.1.2 AS BUILTS 50000.00

MARK

INTAKE / POWERHOUSE BUDGET PRICE

1) CONCRETE – INCLUDING FORMWORK + REBAR + FINISHING ETC.

$1365.00 / m³ PLUG CONCRETE $250.00/m³ SUPPLY

2. CONCRETE – WITHOUT REBAR

$1050.00 / m³

3) REBAR $4.60 / KG WITH PLUG $3300 / TONNE INSTALLED

McN 13

JOB:

CONTRACT BID ITEM:

QUANTITY: OVERHEAD INTAKE / POWERHOUSE

SHEET 1 OF 3

PREPARED BY:

CHECKED BY:

ESTIMATE WORK SHEET

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	PROJECT MANAGER	36	MTHS			720000					79200		79200	40500	918900	
	DEPUTY PROJECT MANAGER	36	MTHS			630000					79200		79200	40500	828900	
	CONSTRUCTION MANAGER	36	MTHS			600000					79200		79200	40500	798900	
9	CONCRETE SUPERINTENDENTS	72	MTHS			1200000					105600		105600	81000	1492200	
2	FORMWORK "	72	MTHS			1200000					105600		105600	81000	1492200	
	QUANTITY SURVEYOR	34	MTHS			544000					68000		68000	40800	720800	
	PROJECT ENGINEER	36	MTHS			612000					79200		79200	40500	810900	
4	FIELD ENGINEERS	136	MTHS			2176000					272000		272000	163200	2883200	
2	OFFICE ENGINEERS	72	MTHS			792000									792000	
2	STUDENT ENGINEER	68	MTHS			612000									612000	
2	DRAFTPERSONS	68	MTHS			748000									748000	
2	INSTRUMENTMAN	72	MTHS			1296000					105600		105600	81000	1588200	
3	RODMAN	106	MTHS			1431000									1431000	
	OFFICE MANAGER	36	MTHS			397500									397500	
4	OFFICE CLERKS	136	MTHS			1224000									1224000	
	SECRETARY	36	MTHS			390000									390000	
	SWITCHBOARD OPERATOR	36	MTHS			390000									390000	
	2 - COST CONTROL ENGINEERS	72	MTHS			720000									720000	
	QUALITY CONTROL PERSON	36	MTHS			396000					79200		79200	40500	594900	
	SAFETY MANAGER	36	MTHS			360000					79200		79200	40500	558900	
	MASTER MECHANICS	36	MTHS			594000					79200		79200	40500	792900	
	MECHANICS	72	MTHS			1029600									1029600	
2	WAREHOUSE ATTENDANTS	72	MTHS			720000									720000	
	OFFICE + SUPPLIES	36	MTHS				200000	400000							600000	
	TOTAL					18782100	200000	400000			1211200		1211200	730500	22535000	

McN 13

JOB:

CONTRACT BID ITEM:

QUANTITY:

SHEET 2 OF 3

PREPARED BY:

CHECKED BY:

ESTIMATE WORK SHEET

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
						18782100	200000	400000			1211200		1211200	730500	22535100	
	COMMUNICATIONS	36	MTHS				220000								220000	
	WATER + ICE	36	MTHS				36000								36000	
	WASHROOM SUPPLIES + JANITOR	36	MTHS			468000	72000								540000	
RAILER'S WAREHOUSE'	PROJECT FACILITIES	36	MTHS	✓		432000	100000				500000				1032000	
	PUBLIC RELATIONS	36	MTHS				72000								72000	
	FORMWORK CONSOLIDATI	LS							100000						100000	
	LEGAL + AUDIT	LS							400000						400000	
	BONDS + INSURANCE	LS.					4000000	(PLUG)							4000000	
	PERMITS	LS					50000	(PLUG)							50000	
	SERVICE TRUCK	36	MTHS	✓		495000					128000		120000	80000	823000	
	WELDING "	36	MTHS	✓		495000	300000				128000		120000	80000	1123000	
	PITMAN + DRIVER	36	MTHS	✓		495000					140000		120000	80000	835000	
	STAKE TRUCK + HIAB	36	MTHS	✓		495000					140000		120000	80000	835000	
	4 - BUSES	144	MTHS	✓		1800000					200000		150000	60000	2310000	
B	BOARD STAFF (APT'S)	36	MTHS				1152000	(PLUG)							1152000	
	TRAVEL STAFF	36	MTHS				2500000	PLUG							2500000	
	TRAVEL CRAFT	36	MTHS				18000000	PLUG							18000000	
	SANITARY FACILITIES	36	MTHS	✓		72000					150000				222000	
	TOWER LIGHTS	36	MTHS	✓							250000		100000	40000	390000	
	SNOW CLEARING	15	MTHS			210000					150000		90000	75000	525000	
	SAFETY SUPPLIES	LS.					300000	PLUG							300000	
	SMALL TOOLS	LS					3000000								3000000	
	ENVIRONMENTAL MONITOR	36	MTHS			296000					79200		79200	40500	594900	
	TOTAL					24140100	30000000	400000	500000		3176400		2110400	1266000	61594900	

McN 13

JOB :

CONTRACT BID ITEM :

QUANTITY :

ESTIMATE WORK SHEET

SHEET 3 OF 3

PREPARED BY :

CHECKED BY :

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
						24140100	30052000	400000	500000		3176460		2110400	1266000	60594900	
	PURCHASING AGENT	36	MAN			397500									397500	
	OFFICE SET-UP	LS.				150000	150000		80000		50000		25000	20000	475000	
	MOBILIZATION + DEMOB	L.S.				500000			2000000			200000	200000	150000	3050000	
	LAYDOWN AREAS	L.S.				200000					160000		100000	80000	480000	
	TEMPORARY SITE BLDG'S	LS				200000	250000				100000		50000	50000	650000	
	TOTAL OVERHEAD					25587600	30402000	400000	2580000		3426400	200000	2485400	1566000	66647400	
	DIRECT COST					113087692	30264581	86582775	76575000		76468812	9817976	6319447	4076391	334570575	
	TOTAL COST					138675243	60766531	86982775	79155000		110732 12	10017976	8804847	5742391	401217975	
												CONTING.		5%	20600900	
															421278875	
												10%			42127890	
										FACTOR =	1.39%				463406765	
										SUPERSTRUCTURE + TRANS. DAMS					70000	
															523406765	
	TOTAL															

McN 13

JOB:

CONTRACT BID ITEM:

QUANTITY: DIRECT COST

ESTIMATE WORK SHEET

SHEET OF

PREPARED BY:

CHECKED BY:

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
1.	EDGE FORMS (START FORMS OFF ROCK)	10000	M^2			2976750	1000000					155400	116550	58450	4307150	$430^{71}/m^2$
2	FORMWORK ONE SIDED AGAINST ROCK	15500	M^2			6200000	1162500					852500	361420	258607	8834927	$570/M^2$
3	WALL 2-SIDED W/ PRE-FAB	35800	M^2			4462500	3500000					204050	145950	87500	8400000	$240^{60}/m^2$
	(A) SET & STRIP	87807	M^2			22171200	2634210					2963424	1206438	769173	29744512	$338^{73}/m^2$
4)	DRAFT TUBE	11669	M^2			8767468	4784290					897463	421485	263486	15074132	$1291^{81}/m^2$
5	SCROLL CASE ROOF	4510	M^2			2615800	1578500					273982	127813	79962	4676057	$1036^{82}/m^2$
6	SOFFIT FORMWORK	17626	M^2			7023656	2818960					1145202	587055	293870	11878743	$673^{93}/m^2$
7	CURVED WALLS	11301	M^2			4529878	1130050					468140	220422	139113	6487604	$574^{07}/m^2$
8	BOX-OUTS	13781	M^2			4685540	826860					305940	229453	115071	6162864	$447^{20}/m^2$
9.	BULKHEADS	22531	M^2			6714238	1351860		PLUG			400150	300113	150507	8916868	$395^{75}/m^2$
10	CONCRETE SUPPLY & PLACE	339358	M^3			14931752		8483950	($250.00/m³) SUPPLY		1136850	1883437	848395	376687	104016600	$306^{51}/m^3$
11	CURE CONCRETE	339358	M^3			1696790						135743	101807	67872	2022212	$5^{90}/m^3$
12	JOINT PREPARATION	178007	M^2			1646565					178007	106805	106805	78323	2116505	$11^{90}/m^2$
13	WET FINISH	64353	M^2			1662835	128706					25740	25740	12870	855891	$13^{30}/m^2$
14	POINT & PATCH ETC.	267719	M^2			3663968	1338595				531955				5534518	$20^{67}/M^2$
15	WATERSTOP	63312	M			2089296		1266240							3355536	53/M
16	JOINT FILLER	11927	M^2			739400		477035							1216435	$102/m^2$
17	FALSEWORK-ACCESS GENERAL SCAFFOLD	600000	M^3	(PLUG)		2400000	1800000								4200000	$70^{93}/m^3$
18	RE-STEEL (PLUG)	23000	TONNE	180	150				7590000						7590000	330.00/TONNE
						97917143	20405831	8658275	7590000		1846812	9817976	4719447	2751391	30368055	
	ENVIRONMENTAL	36	MTHS			1200000	250000		75000		250000		200000	150000	2145000	
	CRANE SUPPORT	36	MTHS			11460000	600000		100000		4950000		1050000	1125000	18745000	
	WEATHER PROTECTION	L.S.				2500000	6000000		500000		600000		250000	150000	10000000	
	TOTAL					113087143	30364831	8658275	7675000		7646812	9817976	6319447	4176391	334570575	

McN 13

JOB:
CONTRACT BID ITEM:
QUANTITY:

ESTIMATE WORK SHEET

SHEET OF
PREPARED BY:
CHECKED BY:

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	CRANE SUPPORT															
3	550 EC - H20 - ANCHOR BOLTS	3	EA				60000								60000	
	SET-UP/ DISMANTLE	3	EA			20000			80000						100000	
	TOWER SET-UP TECH SUPPORT								20000						20000	
						20000	60000		100000						180000	
	CRANE SUPPORT	36	MTHS													
	550-EC TOWER CRANE	45000	HRS			2925000					2250000			450000	5625000	
	SIGNAL PERSON	45000	HRS			2745000									2745000	
	66 - TON MOBILE	15000	HRS			945000					900000		450000	300000	2595000	
	200 TON CRAWLER	15000	HRS			945000					1800000		600000	375000	3720000	
	OILER	15000	HRS			915000									915000	
						8475000					4950000		1050000	1125000	15600000	
	35 % OT					2965000									2965000	
						11460000	60000		100000		4950000		1050000	1125000	18745000	
	WEATHER PROTECTION															
	TEMPORARY HEAT &															
	ENCLOSURES - PROPANE	STRICTLY		PLUG		1500000	6000000		1000000		600000		250000	150000	10,000000	
	ETC.															
	TOTAL															

McN 13

JOB:

CONTRACT BID ITEM:

QUANTITY: SEE PRE-FAB STRAIGHT

ESTIMATE WORK SHEET

SHEET OF

PREPARED BY:

CHECKED BY:

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	PRE FAB CURVED FORMWORK				SAY	50%	— LRE-USE									
	PRE-FAB CREW					567						35	25	15	642	
	35% OT					198.50									198.50	
						765.50	100 1M² (FORMWORK)					35	25	15	840.50	
		1 MH/M²				85.05						3.89	1.78	1.67	93.39	
		3.5 MH/M²				212.63						9.73	6.95	4.18	233.49	
	SET & STRIP					1009.80						135	55	35	1234.80	
		1 MH/m²				84.15	50 1M² (FORMWORK MAT'LS)					11.25	4.58	2.92	102.90/m²	
		3.5 MH/m²				294.53						36.56	16.03	10.22	357.34/m²	
	PRE-FAB	5650	m²			1201395	565000					54975	39268	23617	1884255	
	SET & STRIP	11301	m²			3328483	565050					413165	181155	115496	4603349	
						4529878	1130050					468140	220423	139113	6487604	574.17/m²
	TOTAL															

McN 13

JOB:

CONTRACT BID ITEM:

QUANTITY:

ESTIMATE WORK SHEET

SHEET 2 OF

PREPARED BY:

CHECKED BY:

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	PRE-FAB SPIRAL CASE ROOF															
		3.5 MH	/M2			297.68						13.62	9.73	5.85	326.88	/M2
	SET & STRIP SPIRAL CASE ROOF															
		5. MH	/M2			406						61.35	25.00	15.90	508.35	/M2
	DRAFT TUBE															
	PRE FAB + SET & STRIP	1	M2			746.20	410.00					76.91	36.12	22.58	1291.81	/M2
	SPIRAL CASE ROOF															
	PRE-FAB + SET & STRIP	1	M2			580.00	350.00					60.75	28.34	17.73	1036.82	/M2
	TOTAL															

McN 13

JOB :

CONTRACT BID ITEM :

QUANTITY :

ESTIMATE WORK SHEET

SHEET 1 OF

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CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	PREFAB FORMS D.T. ELBOW															
	FOREMAN + 1½ TON	1	HR			65						10	10	5	90	
	CARPENTERS	6	HRS			378									378	
	LABOURER	1	HRS			61									61	
	12 TON PITMAN	1	HR			63						25	15	10	113	
	35% OT					198^{50}									198^{50}	
						765^{50}						35	25	15	840^{50}	
		1 MH/M²				85^{05}						3^{89}	2^{78}	1^{67}	93^{39}	
		2 MH/M²				170^{10}						7^{78}	5^{56}	3^{34}	186^{78}	
		3 MH/M²				255^{15}						11^{67}	8^{34}	5^{01}	280^{17}	
		3.5 MH/M²				297^{68}						13^{62}	9^{73}	5^{85}	326^{88}	
		4.0 MH/M²				340^{20}						15^{56}	11^{12}	6^{68}	373^{56}	
	SET & STRIP D.T. ELBOW															
	FOREMAN + 1½ TON	1		HR		65						10	10	5	90	
	CARPENTERS	6		HRS		378									378	
	LABOURER	1		HR		61									61	
	12 TON PITMAN	1		HR		63						25	15	10	113	
	125 TON CRANE + OILER	1		HRS		120						100	30	20	270	
	35% O.T.					206^{10}									206^{10}	
						893^{10}						135	55	35	1118^{10}	
		1 MH/M²				81^{20}						12^{27}	5^{00}	3^{18}	101^{65}	
		4 MH/M²				324^{80}						49^{08}	20^{00}	12^{72}	406^{60}/M²	
		5 MH/M²				406						61^{35}	25^{00}	15^{90}	508^{25}/M²	
	TOTAL															

McN 13

JOB :

CONTRACT BID ITEM :

QUANTITY :

ESTIMATE WORK SHEET

SHEET 2 OF 2

PREPARED BY :

CHECKED BY :

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	SITE OFFICE & SET-UP ETC															
	FOREMAN + 1 1/2 TON	200	HRS			13000					2000		2000	1000	18000	
	3- CARPENTARS	600	HRS			37800									37800	
	3- LABOURERS	600	HRS			36600									36600	
	1 - 345 BACHOE	200	HRS			12600					11000		11000	9000	43600	
	1 - PITMAN	200	HRS			12600					6000		4000	3000	25600	
	1 - 65 TON CRANE	200	HRS			13000					14000		5000	3000	35000	
	MAIN OFFICE						100000		50000						150000	
	FIELD OFFICE						50000		30000						80000	
						125600	150000		80000		33000		22000	16000	426600	
	SAY 1 TOWER CRANE					1400000	20000		418000		533000		6000	109000	2486000	
	IN SPILLWAY					1525600	170000		498000		566000		28000	125000	2912600	
	TOTAL															

McN 13

JOB :

CONTRACT BID ITEM :

QUANTITY :

ESTIMATE WORK SHEET

SHEET OF

PREPARED BY :

CHECKED BY :

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	MUSKRAT FALLS — ROAD MAINTENANCE							600 MTHS X 20 KM/MTH = 1200 KM-MTHS								
	SAN LINE WORK 25 HRS/MTH — 15000 HRS. FOREMAN 50% OF TIME —															
	FOREMAN + 1½ TON	7500	HRS		65.10	487500					75000		75000	37500	675000	
	GRADER	15000	HRS		62.50	937500					900000		375000	225000	2437500	
	966 LOADE C/W WING ETC	6250	HRS		62.50	390625					375000		156250	125000	1046875	
	FLYER (TANDEM) C/W SANDER	6250	HRS		62.50	390625					312500		187500	125000	1015625	
	WATER TRUCKS	6000	HRS		62.50	375000					600000	100 PLUS			975000	
	BLADES/WINGS ETC						100000								100000	
	CALCIUM						500000	(PLUS)							500000	
	CLASS "A"	6000	m^3			600000	180000			100000					340000	
	35% GT					925000									925000	
						3511250	780000			100000	2262500		793750	512500	8315000	
													OH	25%	2083750	
															10398750	
													15%		1503000	
															11521750	
											THIS IS ON HIGH SIDE			9600 KM-MTH VS 21000 KM-MTH		
													DOES THIS FIGURE INCLUDE INDIRECTS PLUS PROFIT			
	TOTAL															

JOB:
CONTRACT BID ITEM:
QUANTITY: MUSKRAT FALLS – SPILLWAY

ESTIMATE WORK SHEET

SHEET OF
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CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	FORMWORK CREW	PREFAB – STRAIGHT														
	FOREMAN + 1½TON	1	HR			65						10	10	5	90	
	CARPENTERS (JOURNEYMEN)	6	HRS			378									378	
	LABOURERS	2	HRS			122									122	
	12 TON PITMAN CRANE	1	HR			63						25	15	10	113	
	35% OT					198.45									198.45	
						826.45						35	25	15	901.45	
		1 MH/M²				82.65						3.50	2.50	1.50	90.15	
		1.5 MH/M²				123.98						5.25	3.75	2.25	135.23	
		2 MH/M²				165.30						7.00	5.00	3.00	180.30	
	SET & STRIP	2-SIDED FORMS														
	SAME CREW + OPERATOR					826.45						35	25	15	901.45	
	120-TON CRANE + OILER + LAB					181						100	30	20	331	
						1007.45						135	55	35	1232.45	
		1 MH/M²				83.95						11.25	4.58	2.92	102.70	/M²
		2.5 MH/M²				209.88						28.13	11.45	7.30	256.76	/M²
		3.0 MH/M²				251.85						33.75	13.74	8.76	308.10	/M²
		4 MH/M²				335.80						45	18.32	11.68	410.80	M²
	SAY 3 MH/M²					251.85	30.40 (MAT'LS)					33.75	13.74	8.76	338.10	/M²
	SET & STRIP	1-SIDED FORMS														
		4 MH/M²				335.80	30					45	18.32	11.68	440.80	/M²
	ROCK BOLTS	1/M²				50	40					10	5	5	110	/M²
	TOTAL ETC					385.80	70					55	23.32	16.68	550.80	/M²

JOB :
CONTRACT BID ITEM :
QUANTITY :

ESTIMATE WORK SHEET

SHEET OF
PREPARED BY :
CHECKED BY :

CODE	DESCRIPTION	ESTIMATED QUANTITY	ESTIMATED UNIT	UNIT COST LAB.	UNIT COST MAT.	LABOUR	MATERIAL CONSTR.	MATERIAL PERMANENT	SUB TRADES	HIRED TRUCKS	RENTS OUTSIDE	RENTS COMPANY	FUELS & LUBES	MAINT. & REPAIRS	DIRECT COST AMOUNT	DIRECT COST UNIT
	(CURVED) SOFFIT FORMWORK															
	FOREMAN + 1½ TON	1	HR			65						10	10	5	90	
	CARPENTERS	6	HRS			378									378	
	LABOURERS	2	HRS			122									122	
	12 TON PITMAN	1	HR			63						25	15	10	113	
	125 TON CRANE + OILER	1	HR			120						100	30	20	270	
	35% OT					261.80									261.80	
						1009.80						135	55	35	1234.80	
		1 MH/M²				84.15						11.25	4.58	2.92	102.90	
	SAY 4MH/M²					336.60	60					45	18.32	11.68	471.60/M²	
					+	FALSE WORK										
	TOTAL															

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	SUPPLY SET & STRIP BOX — OUTS															
	FOREMAN + 1½ TON	1	HR			65						10	10	5	90	
	CARPENTERS	6	HRS			378									378	
	LABOURERS	1	HR			61									61	
	22 TON GROVE	1	HR			63						30	20	10	123	
	35% OT					198^{45}									198^{45}	
	90% AVAILABILITY					85^{05}									85^{05}	
						850^{50}						40	30	15	935^{50}	
		1 MH / M^2				94^{50}						4^{44}	3^{33}	1^{67}	103^{94}	
		2 MH / M^2				189						8^{88}	6^{66}	3^{34}	207^{88}	
		3 MH / M^2				283^{50}						13^{32}	9^{99}	5^{01}	311^{82}	
		4 MH / M^2				378						17^{76}	13^{32}	6^{68}	415^{76}	
		5 MH / M^2				472^{50}						22^{20}	16^{65}	8^{35}	519^{70}	
	SAY	4 MH / M^2				378	60	(MATERIALS)				17^{76}	13^{32}	6^{68}	475^{76} / M^2	
	BULKHEADS SAY	3 MH / M^2				283^{50}	50	(")				13^{32}	9^{99}	5^{01}	361^{82} / M^2	
	START FORMS OFF ROCK (EDGE — FOOTINGS)															
	CREW + CREW					850^{50}						40	30	15	935^{50}	
	SAY	4 MH / M^2				378	70					17^{76}	13^{32}	6^{68}	485^{76} / M^2	
	TOTAL															

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	CONCRETE JOINT PREPARATION (GREEN CUT)															
	LABOUR FOREMAN	1	HR			65						10	10	5	90	
	GEN - LABOURERS	2	HRS			122									122	
	LABOUR ON POWER TOOLS	2	HRS			122									122	
	185 CFM COMPRESSOR											10	5	2	17	
	15 KW GEN SET											10	5	5	20	
	HYDRO BLASTER										40		10	10	60	
	35% OT					108^{15}									108^{15}	
	90% AVAIL					46^{35}									46^{35}	
						463^{50}					40	30	30	22	585^{50}	
		$25 M^2$	/HR			18^{54}					1^{60}	1^{20}	1^{20}	0^{88}	$23^{42}/M^2$	
	CURE CONCRETE															
	LABOUR FOREMAN	1	HR			65						10	10	5	90	
	3 - LABOURERS	3	HRS			183									183	
	15 KW GEN SET	1	HR									10	5	5	20	
	35% OT					86^{80}									86^{80}	
						334^{80}						20	15	10	379^{80}	
		$50 M^3$/HR				6^{75}						0^{40}	0^{30}	0^{20}	$7^{65}/M^3$	
	WET FINISH															
	FOREMAN + 1½ TON	1	HR			65						10	10	5	90	
	CEMENT FINISHERS	2	HRS			126									126	
	35% OT					66^{85}									66^{85}	
						257^{85}						10	10	5	282^{85}	
	$25 M^2$/HR					10^{31}						0^{40}	0^{40}	0^{20}	$11^{31}/M^2$	
	TOTAL															
	POINT & PATCH					13^{68}	5^{00}				2^{00}				$20^{68}/m^2$	

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	CONCRETE PLACING															
	FOREMAN + 1½ TON	1	HR			65						10	10	5	90	
	3 - VIB MEN	3	HRS			187.50									187.50	
	1 - LAB WITH TRUCK	1	HR			61									61	
	2 - LABS WITH HOSE	2	HRS			122									122	
	1 - PUMP OPERTOR	1	HR			63						80	30	10	183	
	1 - PLACING BOOM	1	HR			63					50			10	123	
	GEN SET 15 KW											15	5	5	25	
	BUCKETS / VIBRATORS										10			5	15	
	35% OT					196.53									196.53	
	90% AVAIL.					84.22									84.22	
						842.25					60	105	45	35	1087.25	
		10 m^3/HR				84.23					6.00	10.50	4.50	3.50	108.73	/M^3
		12 M^3/HR				70.19					5.00	8.75	3.75	2.92	90.61	/M^3
		15 m^3/HR				56.15					4.00	7.00	3.00	2.33	72.48	/M^3
		18 m^3/HR				46.79					3.33	5.83	2.50	1.94	60.39	/M^3
		20 m^3/HR				42.11					3.00	5.25	2.25	1.75	54.36	/M^3
		25 m^3/HR				33.69					2.40	4.20	1.80	1.40	43.49	/M^3
		30 m^3/HR				28.08					2.00	3.50	1.50	1.17	36.25	/M^3
		35 m^3/HR				24.06					1.71	3.00	1.29	1.00	31.06	/M^3
	TOTAL															