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F.E.R.C. LICENSE APPLICATION
ESTIMATE
WAIANA
DEVIL CANYON

723

SUSITNA HYDROELECTRIC PROJECT

F.E.R.C. LICENSE APPLICATION

ESTIMATE

WATANA

DEVIL CANYON

VAX/VMS HODY
VAX/VMS HODY
VAX/VMS HODY

DEAPPSUM 8-MAR-1983 10:29
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DISK\$TECHNICAL:CHODY.SUFERCJDEAPPSUM.OUT;1
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DD DD	EE	AA AA	PP PP	PP PP	SS	UU	UU	MM	MM
DD DD	EEEEEEEE	AA AA	PPPPPPPP	PPPPPPPP	SSSSSS	UU	UU	MM	MM
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DD DD	EE	AAAAAAAAAA	PP	PP	SS	UU	UU	MM	MM
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VAX/VMS HODY
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VAX/VMS
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VAX/VMS

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
PRODUCTION PLANT							
330	LAND & LAND RIGHTS						
.1	LAND						
	LAND	1	LS	22,050,000.00	22,050		
.2	LAND RIGHTS						
	LAND RIGHTS - IN ABOVE	1	LS	0.00	0		
.3	MISC CHARGES & CREDITS						
	MISC CHARGES/CREDIT-IN ABOVE	1	LS	0.00	0		
						22,050	
CONTINGENCY							
		20.0	%			4,410	
331	POWERPLANT STRUCTURE IMPROVEMENTS						
.1	POWERHOUSE						
.11	POWERHOUSE & DRAFT TUBE						
.111	EXCAVATION						
	POWERHOUSE VAULT ROCK	95,800	CY	49.49	4,741		
	DRAFT TUBE ROCK	16,800	CY	49.49	831		
					5,573		
.113	SURFACE PREPARATION/GROUTING						
	POWERHOUSE						
	SURFACE PREPARATION	88,700	SF	1.61	143		
	DRAFT TUBE						
	SURFACE PREPARATION	51,300	SF	1.61	83		
	GROUT CURTAIN-(U/S OF P-H)						
	DRILL HOLES	43,800	LF	13.95	611		
	CEMENT	17,500	CF	40.58	710		
					1,547		
.114	CONCRETE & SHOTCRETE						
	POWERHOUSE						
	CONCRETE	23,800	CY	346.35	8,243		
	CONCRETE OVERBREAK 12"H/6"V	1,800	CY	223.48	402		
	REINFORCING STEEL	1,200	TON	1,433.75	1,721		
	2" SHOTCRETE	1,900	SF	2.62	5		
	3" SHOTCRETE	3,400	SF	3.83	13		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
	DRAFT TUBE						
	CONCRETE	8,000	CY	346.35	2,771		
	CONCRETE OVERBREAK 6"	1,650	CY	223.48	369		
	REINFORCING STEEL	660	TON	1,433.75	946		
	2" SHOTCRETE	800	SF	2.62	2		
					14,472		
.115	SUPPORT & ANCHORS						
	POWERHOUSE						
	ROCKBOLTS 1" @ 25' HY	780	EACH	624.34	487		
	ROCKBOLTS 1" @ 15'	500	EACH	373.18	187		
	STEEL MESH	31,000	SF	2.94	91		
	STEEL SUPPORT	105	TON	6,376.70	670		
	DRAFT TUBE						
	ROCKBOLTS 1" @ 25' HY	100	EACH	624.34	62		
	ROCKBOLTS 1" @ 12'	140	EACH	267.81	37		
	ROCKBOLTS 1" @ 9'	70	EACH	219.06	15		
	STEEL MESH	12,600	SF	2.94	37		
					1,587		
.117	DRAINAGE						
	HOLES (U/S OF POWERHOUSE)	15,000	LF	24.97	375		
	HOLES (POWERHOUSE CROWN)	21,960	LF	24.97	548		
					923		
.118	STRUCTURAL - MISC STEELWORK						
	POWERHOUSE & DRAFT TUBE						
	STRUCTURAL STEEL/CRANE RAILS	1	LS	1,498,695.00	1,499		
	STEEL COMP. WATER PIPE(8')	1	LS	1,976,250.00	1,976		
					3,475		
.119	ARCHITECTURAL						
	POWERHOUSE						
	ARCHITECTURAL	1	LS	750,200.00	750		
					750		
.110	MECHANICAL						
	DRAFT TUBE GATES	2	SETS	270,000.00	540		
	DRAFT TUBE GATE GUIDES	4	SETS	110,000.00	440		
	DRAFT TUBE CRANE	1	EACH	450,000.00	450		
	PUMP INTAKE TRSHRKS & GUIDES	1	LS	160,000.00	160		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
					\$ 1,000's	\$ 1,000's	
	PUMP OUTLET STOPLOGS/GUIDES	1	LS	70,000.00	70		
					1,660		
					=====		
					29,986		
.12	ACCESS TUNNELS & PORTALS						
.121	EXCAVATION						
	TUNNELS - ROCK						
	35'x28' MAIN TUNNEL	106,000	CY	53.41	5,661		
	35'x28' TRANSFORMER GALLERY TUNNEL	17,000	CY	45.15	768		
	12'x7' GROUTING GALLERY TUNNEL	2,300	CY	217.59	500		
	2'x7' SURGE CHAMBER ACCESS TUNNEL	7,800	CY	75.31	587		
	35'x28' PENSTOCK ACCESS TUNNEL	50,000	CY	79.75	3,988		
	28'x22' PENSTOCK ELBOW ACCESS TUNNEL	10,000	CY	79.75	798		
	27'x21' ACCESS SHAFT TUNNEL	3,300	CY	208.54	688		
	14'x12' CONNECTOR TUNNEL	1,600	CY	208.54	334		
	MAIN PORTAL						
	ROCK	5,000	CY	26.60	133		

					13,457		
.123	SURFACE PREPARATION						
	TUNNELS						
	MAIN TUNNEL SLAB	112,000	SF	1.10	123		
	PENSTOCK ACC TUNNEL SLAB	52,560	SF	1.10	58		
	MAIN PORTAL						
	HORIZONTAL	200	SF	1.09	0		
	INCLINED	2,100	SF	1.58	3		

					185		
.124	CONCRETE & SHOTCRETE						
	MAIN PORTALS						
	CONCRETE SLAB	30	CY	199.95	6		
	CONCRETE WALLS	570	CY	199.95	114		
	CONCRETE OVERBREAK 12'H/6"V	40	CY	181.35	7		
	REINFORCING STEEL	40	TON	1,419.80	57		
	TUNNELS						
	CONCRETE SLAB MAIN TUNNEL	4,030	CY	252.03	1,016		
	CONC PLUGS PENS ELBOW ACCESS	10,000	CY	377.80	3,778		
	CONC OVERBREAK MAIN TUN 6"	2,130	CY	172.64	368		
	REINFORCING STEEL MAIN TUN	140	TON	1,433.75	201		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
	2" SHOTCRETE MAIN TUNNEL	7,950	SF	2.62	21		
	2" SHOTCRETE TRANSFORMER GAL.	1,260	SF	2.62	3		
	2" SHOTCRETE SURGE CHAMB ACC	800	SF	2.62	2		
	2" SHOTCRETE PENSTOCK ACCESS	3,750	SF	2.62	10		
	2" SHOTCRETE PENST ELBOW ACC	3,750	SF	2.62	10		
	2" SHOTCRETE ACCESS SHAFT	750	SF	2.62	2		
	2" SHOTCRETE GROUT GALLERY	470	SF	2.62	1		
	2" SHOTCRETE CONNECTOR TUN	330	SF	2.62	1		

					5,596		
.125	SUPPORT & ANCHORS						
	MAIN TUNNEL						
	ROCKBOLTS 1" @ 12'	1,440	EACH	267.81	386		
	ROCKBOLTS 1" @ 9'	190	EACH	219.06	42		
	STEEL MESH	132,500	SF	3.22	427		
	STEEL SUPPORT	120	TON	6,376.70	765		
	MAIN TUNNEL PORTAL						
	ROCKBOLTS 1" @ 15'	50	EACH	365.51	18		
	TRANSFORMER GALLERY TUNNEL						
	ROCKBOLTS 1" @ 12'	230	EACH	267.81	62		
	ROCKBOLTS 1" @ 9'	30	EACH	219.06	7		
	STEEL MESH	20,940	SF	3.22	67		
	STEEL SUPPORT	20	TON	6,376.70	128		
	GROUTING GALLERY TUNNEL						
	ROCKBOLTS 3/4" @ 6'	220	EACH	165.97	37		
	SUPPORT STEEL	3	TON	6,376.70	19		
	STEEL MESH	100	SF	3.22	0		
	SURGE CHAMBER TUNNEL						
	ROCKBOLTS 1" @ 12'	150	EACH	267.81	40		
	ROCKBOLTS 1" @ 9'	30	EACH	219.06	7		
	STEEL SUPPORT	13	TON	6,376.70	83		
	STEEL MESH	13,200	SF	3.22	43		
	PENSTOCK ACCESS TUNNEL						
	ROCKBOLTS 1" @ 12'	680	EACH	267.81	182		
	ROCKBOLTS 1" @ 9'	90	EACH	219.06	20		
	STEEL SUPPORT	60	TON	6,376.70	383		
	STEEL MESH	62,150	SF	3.22	200		
	PENSTOCK ELBOW ACCESS TUNNEL						
	ROCKBOLTS 1" @ 12'	280	EACH	267.81	75		
	ROCKBOLTS 1" @ 9'	80	EACH	219.06	18		
	STEEL SUPPORT	20	TON	6,376.70	128		

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				\$	\$ 1,000's	\$ 1,000's	
	STEEL MESH	14,760	SF	3.22	48		
	ACCESS SHAFT TUNNEL						
	ROCKBOLTS 1" @ 12'	50	EACH	267.81	13		
	ROCKBOLTS 1" @ 9'	50	EACH	219.06	11		
	STEEL SUPPORT	20	TON	6,376.70	126		
	STEEL MESH	2,500	SF	3.22	8		
	CONNECTOR TUNNEL						
	ROCKBOLTS 3/4" @ 6'	160	EACH	165.97	27		
	STEEL SUPPORT	2	TON	6,376.70	13		
	STEEL MESH	70	SF	3.22	0		

					3,380		
.129	ARCHITECTURAL						
	MAIN PORTAL DOORS	2	SETS	75,175.00	150		

					150		
.12C	MECHANICAL						
	VENTILATING SYSTEM						
	(INCL IN 63.71 & 63.72)						

					0		
					=====		
					22,768		
.13	ACCESS SHAFT						
.131	EXCAVATION						
	ROCK	14,500	CY	125.19	1,815		

					1,815		
.133	SURFACE PREPARATION						
	SHAFT	70,200	SF	1.61	113		

					113		
.134	CONCRETE & SHOTCRETE						
	CONCRETE LINING	3,600	CY	469.74	1,691		
	CONCRETE OVERBREAK 6"	1,300	CY	274.13	356		

					2,047		
.135	SUPPORT & ANCHORS						
	ROCKBOLTS 3/4" @ 6'	1,120	EACH	165.97	186		

					186		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
.138	STRUCTURAL - MISC STEELWORK MISCELLANEOUS STEELWORK	50	TON	3,673.50	184	184	
.139	ARCHITECTURAL (INCL IN 331.2 CNTRL BLDG)				184		
.13C	MECHANICAL ELEVATORS	1	LS	1,000,000.00	1,000	1,000	
					5,345		
.14	FIRE PROTECTION HEADTANK						
.141	EXCAVATION ROCK	1,150	CY	305.13	351	351	
.143	SURFACE PREPARATION HEAD TANK	2,800	SF	1.10	3	3	
.144	CONCRETE & SHOTCRETE CONCRETE CONC. OVERBREAK 4" REINFORCING STEEL	250 45 10	CY CY TON	484.07 202.71 1,433.75	121 9 14	144	
.145	SUPPORT & ANCHORS ROCKBOLTS 1" @ 12' ROCKBOLTS 1" @ 9' STEEL MESH STEEL SUPPORT	25 10 1,200 2	EACH EACH SF TON	267.81 219.06 3.22 6,376.70	7 2 4 13	26	
.148	STRUCTURAL - MISC STEELWORK MISCELLANEOUS STEELWORK	1	LS	23,250.00	23	23	

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
.14C	MECHANICAL PIPING/VALVES - (INCLUDED IN 335.12)					0	
					547		
.15	BUS TUNNELS (TOTALS FOR 4 BUS TUNNELS)						
.151	EXCAVATION						
	ROCK HORIZONTAL	3,200	CY	117.51	376		
	ROCK INCLINED	2,000	CY	331.02	662		
					1,038		
.153	SURFACE PREPARATION TUNNEL	11,300	SF	1.10	12		
					12		
.154	CONCRETE & SHOTCRETE						
	CONCRETE SLAB	800	CY	410.22	328		
	CONCRETE OVERBREAK 12"	360	CY	236.50	85		
	REINFORCING STEEL	40	TON	1,433.75	57		
	2" SHOTCRETE	520	SF	2.62	1		
					472		
.155	SUPPORT & ANCHORS						
	ROCKBOLTS 1" @ 25'	80	EACH	624.34	50		
	ROCKBOLTS 1" @ 12'	110	EACH	267.81	29		
	ROCKBOLTS 1" @ 9'	30	EACH	219.06	7		
	STEEL MESH	8,600	SF	3.22	28		
	STEEL SUPPORT	14	TON	6,376.70	89		
					203		
					1,725		
.16	TRANSFORMER GALLERY						
.161	EXCAVATION						
	ROCK	28,800	CY	45.15	1,300		
					1,300		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
.163	SURFACE PREPARATION TRANSFORMER GALLERY	26,500	SF	1.10	29		

					29		
.164	CONCRETE & SHOTCRETE						
	CONCRETE BASE SLAB	2,810	CY	614.39	1,726		
	CONCRETE OVERBREAK 12"H/6"V	820	CY	188.45	155		
	REINFORCING STEEL	140	TON	1,433.75	201		
	3" SHOTCRETE	1,100	SF	3.83	4		

					2,086		
.165	SUPPORT & ANCHORS						
	ROCKBOLTS 1" @ 25' HY	170	EACH	624.34	106		
	ROCKBOLTS 1" @ 15'	90	EACH	373.18	34		
	STEEL MESH	22,200	SF	2.94	65		
	STEEL SUPPORT	17	TON	6,376.70	108		

					313		
.167	DRAINAGE						
	HOLES (IN GALLERY CROWN)	8,900	LF	24.97	222		

					222		
					=====		
					3,951		
.17	CABLE SHAFTS						
	(TOTALS FOR 2 SHAFTS)						
.171	EXCAVATION						
	ROCK	3,000	CY	331.02	993		

					993		
.173	SURFACE PREPARATION						
	SHAFTS	36,000	SF	1.61	58		

					58		
.174	CONCRETE & SHOTCRETE						
	CONCRETE LINING	920	CY	875.84	806		
	CONCRETE OVERBREAK 6"	670	CY	438.62	294		

					1,100		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
.175	SUPPORT & ANCHORS ROCKBOLTS 3/4" @ 6'	570	EACH	165.97	95		

					95		
.178	STRUCTURAL - MISC STEELWORK MISCELLANEOUS STEELWORK	13	TON	7,750.00	101		

					101		
.179	ARCHITECTURAL ENCLOSURES	1	LS	89,900.00	90		

					90		
.17C	MECHANICAL MANHOIST	2	EACH	230,000.00	460		

					460		
					=====		
					2,896		
.18	DEWATERING (DURING CONSTRUCT)						
.181	DEWATERING (POWER FAC)						
	DEWATERING	1	LS	697,500.00	698		

					698		
					=====		
					698		
.19	INSTRUMENTATION						
.191	INSTRUMENTATION						
	INSTRUMENTATION	1	LS	773,450.00	773		

					773		
					=====		
					773		
.2	MISC. BUILDINGS & STRUCTURES						
	MISC. BUILDINGS & STRUCTURES	1	LS	199,950.00	200		
					=====		
					200		
						68,889	
CONTINGENCY		15.0	%			10,333	

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
					\$	\$ 1,000's	
332	RESERVOIR, DAMS & WATERWAYS						
.1	RESERVOIR						
.11	CLEARING						
	CLEARING	6,350	ACRE	1,550.00	9,843		
					=====		
					9,843		
.2	DIVERSION TUNNELS/COFFERDAMS						
.21	DIVERSION TUNNELS/PORTALS						
.211	EXCAVATION						
	TUNNEL						
	ROCK	48,300	CY	60.14	2,905		
	EXCAVATE CONCRETE FOR PLUG	450	CY	60.14	27		
	UPSTREAM PORTAL						
	OVERBURDEN	1,950	CY	9.25	18		
	ROCK	50,200	CY	26.60	1,335		
	DOWNSTREAM PORTAL						
	OVERBURDEN	6,600	CY	9.25	61		
	ROCK	54,000	CY	26.60	1,436		

					5,783		
.213	SURFACE PREPARATION/GROUTING						
	UPSTREAM PORTAL						
	HORIZONTAL	4,400	SF	1.09	5		
	INCLINED	15,300	SF	1.58	24		
	DOWNSTREAM PORTAL						
	HORIZONTAL	1,300	SF	1.09	1		
	INCLINED	2,900	SF	1.58	5		
	GROUT TUNNEL PLUG						
	DRILL HOLES	2,050	LF	6.05	12		
	CEMENT	410	CF	33.37	14		

					61		
.214	CONCRETE & SHOTCRETE						
	TUNNEL						
	CONCRETE LINING	8,100	CY	282.26	2,286		
	CONCRETE PLUG	3,000	CY	213.67	641		
	CONCRETE OVERBREAK 6"	3,200	CY	156.70	501		
	REINFORCING STEEL	15	TON	1,433.75	22		
	2" SHOTCRETE	4,400	SF	2.62	12		

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				\$	\$ 1,000's	\$ 1,000's	
	UPSTREAM PORTAL						
	CONCRETE HEADWALL	2,800	CY	320.85	898		
	CONCRETE LINING	1,550	CY	279.00	432		
	CONCRETE PIER	400	CY	279.00	112		
	OVERBREAK 12"H/6"V	500	CY	232.50	116		
	REINFORCING STEEL	310	TON	1,419.80	440		
	DOWNSTREAM PORTAL						
	CONCRETE HEADWALL	1,000	CY	320.85	321		
	OVERBREAK 12"H/6"V	100	CY	232.50	23		
	REINFORCING STEEL	65	TON	1,419.80	92		

					5,897		
.215	SUPPORT & ANCHORS						
	TUNNEL						
	ROCKBOLTS 1" @ 12'	800	EACH	267.81	214		
	ROCKBOLTS 1" @ 9'	90	EACH	219.06	20		
	STEEL MESH	76,900	SF	3.22	248		
	STEEL SUPPORT	90	TON	6,376.70	574		
	UPSTREAM PORTAL						
	ROCKBOLTS 1" @ 15'	80	EACH	365.51	29		
	ROCK ANCHORS 1" @ 25'	40	EACH	613.40	25		
	ROCK DOWELS	60	EACH	233.74	14		
	DOWNSTREAM PORTAL						
	ROCKBOLTS 1" @ 15'	120	EACH	365.51	44		
	ROCK ANCHORS 1" @ 25'	30	EACH	613.40	18		

					1,186		
.21C	MECHANICAL						
	UPSTREAM GATE						
	GATE EQUIPMENT	2	EACH	1,280,000.00	2,560		
	DOWNSTREAM OUTLET						
	STOPLOG GUIDES	1	SET	35,000.00	35		
	STOPLOGS INCL FOLLOWERS	1	LS	0.00	0		

					2,595		
					=====		
					15,521		
.22	UPSTREAM COFFERDAM						
.222	FILL						
	CORE	4,600	CY	5.53	25		

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				\$	\$ 1,000's	\$ 1,000's	
	FINE/FILTER	2,800	CY	17.48	49		
	COARSE FILTER	2,700	CY	15.27	41		
	ROCK SHELL	19,800	CY	5.33	106		
	CLOSURE DIKE	41,900	CY	5.53	232		
	RIP RAP	7,000	CY	12.32	86		

					539		
.223	SURFACE PREPARATION/GROUTING CUTOFF & GROUT						
	HOLES	1,600	LF	13.59	22		
	GROUT	256,000	CF	39.91	10,217		

					10,239		
.220	DEWATERING						
	INITIAL DEWATERING	1	LS	758,105.00	758		
	DEWATERING MAINTENANCE	1	LS	3,870,040.00	3,870		

					4,628		
					=====		
					15,406		
.23	DOWNSTREAM COFFERDAM						
.231	EXCAVATION						
	REMOVAL OF COFFERDAM	42,000	CY	7.25	305		

					305		
.232	FILL						
	RIP RAP	1,650	CY	12.32	20		
	CLOSURE DIKE	47,000	CY	5.53	260		

					280		
.233	SURFACE PREP/GROUTING						
	CUTOFF & GROUT						
	HOLES	2,300	LF	13.59	31		
	CEMENT	368,000	CF	39.91	14,687		

					14,718		
					=====		
					15,303		

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				\$	\$ 1,000's	\$ 1,000's	
.3	MAIN DAM						
.31	MAIN DAM						
.311	EXCAVATION						
	OVERBURDEN	35,600	CY	6.23	222		
	ROCK	320,700	CY	27.06	8,678		
					8,900		
.313	SURFACE PREPARATION/GROUTING						
	SURFACE PREPARATION						
	UNDER DAM/THRUST BLOCKS	171,000	SF	1.58	270		
	CONSOLIDATION GROUT						
	DRILL HOLES	176,900	LF	6.05	1,070		
	CEMENT	176,900	CF	33.37	5,903		
	GROUT CURTAIN						
	DRILL HOLES	259,000	LF	13.59	3,520		
	CEMENT	103,600	CF	39.91	4,135		
					14,898		
.314	CONCRETE & SHOTCRETE						
	DAM						
	CONCRETE	1,281,000	CY	201.50	258,122		
	CONCRETE OVERBREAK	10,400	CY	201.50	2,096		
	REINFORCING STEEL	4,500	TON	1,419.80	6,389		
	THRUSTBLOCKS						
	CONCRETE	105,500	CY	201.50	21,258		
	CONCRETE OVERBREAK	1,100	CY	201.50	222		
	REINFORCING STEEL	375	TON	1,419.80	532		
	JOINT GROUTING						
	GROUTING	1	LS	2,542,000.00	2,542		
					291,161		
.315	SUPPORT & ANCHORS						
	ROCKBOLTS 1" @ 25'	580	EACH	613.40	356		
	STEEL MESH (ON SLOPES)	275,000	SF	2.43	668		
					1,024		
.317	DRAINAGE						
	HOLES	65,800	LF	24.37	1,604		
					1,604		
					317,586		

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				\$	\$ 1,000's	\$ 1,000's	
.32	GROUT GALLERIES/PORTALS						
.321	EXCAVATION						
	TUNNELS/SHAFTS - CORE AREA						
	ROCK HORIZONTAL	13,100	CY	217.59	2,850		
	ROCK INCLINED	5,300	CY	305.13	1,617		
	ROCK VERTICAL	3,400	CY	296.08	1,007		
	TUNNELS/SHAFTS ACCESS						
	ROCK HORIZONTAL	12,400	CY	217.59	2,698		
	PORTALS						
	OVERBURDEN	28,700	CY	9.25	265		
	ROCK	16,500	CY	26.60	439		
					8,877		
.323	SURFACE PREPARATION						
	PORTALS						
	HORIZONTAL	50	SF	1.09	0		
	INCLINED	410	SF	1.58	1		
					1		
.324	CONCRETE & SHOTCRETE						
	TUNNELS - CORE AREA						
	CONCRETE SLAB	1,800	CY	474.58	854		
	CONCRETE OVERBREAK 6"	900	CY	379.60	342		
	REINFORCING STEEL	62	TON	1,433.75	89		
	2" SHOTCRETE	3,300	SF	2.62	9		
	TUNNELS - ACCESS						
	CONCRETE SLAB	1,400	CY	474.58	664		
	CONCRETE OVERBREAK 6"	700	CY	379.60	266		
	REINFORCING STEEL	50	TON	1,433.75	72		
	2" SHOTCRETE	2,500	SF	2.62	7		
	SHAFTS - CORE AREA						
	2" SHOTCRETE	6,500	SF	2.62	17		
	PORTALS (4 PORTALS)						
	CONCRETE	40	CY	199.95	8		
	REINFORCING STEEL	3	TON	1,419.80	4		
					2,331		
.325	SUPPORT & ANCHORS						
	TUNNELS - CORE AREA						
	ROCKBOLTS 1" @ 12'	150	EACH	267.81	40		
	ROCKBOLTS 1" @ 9'	30	EACH	219.06	7		

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				\$	\$ 1,000's	\$ 1,000's	
	ROCKBOLTS 3/4" @ 6'	1,250	EACH	165.97	207		
	STEEL MESH	12,200	SF	3.30	40		
	STEEL SUPPORT	27	TON	6,376.70	172		
	TUNNELS ACCESS						
	ROCKBOLTS 3/4" @ 6'	1,200	EACH	165.97	199		
	STEEL MESH	500	SF	3.30	2		
	STEEL SUPPORT	12	TON	6,376.70	77		
	SHAFTS - CORE AREA						
	ROCKBOLTS 3/4" @ 6'	200	EACH	165.97	50		
	STEEL MESH	1,300	SF	3.30	4		
	PORTALS						
	ROCKBOLTS 1" @ 15'	150	EACH	365.51	55		
					853		
.328	STRUCTURAL - MISC STEELWORK						
	STEEL/GUIDES SHAFT	50	TON	3,673.50	184		
	STEEL STAIRWAY	1	LS	93,775.00	94		
					277		
.329	ARCHITECTURAL						
	PORTAL DOORS	4	EACH	19,995.00	80		
	HEADSHAFT STRUCTURE	1	LS	434,000.00	434		
					514		
.32C	MECHANICAL						
	ELEVATOR	1	LS	750,000.00	750		
	OVERHEAD CRANE	1	LS	430,000.00	430		
	MISC MECHANICAL EQUIPMENT	1	LS	120,000.00	120		
					1,300		
					14,153		
.33	INSTRUMENTATION						
.331	INSTRUMENTATION (DAN)						
	INSTRUMENTATION	1	LS	3,906,000.00	3,906		
					3,906		
					3,906		

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				\$	\$ 1,000's	\$ 1,000's	
.4	SADDLE DAM						
.41	MAIN SADDLE DAM						
.411	EXCAVATION						
	OVERBURDEN	1,145,000	CY	5.63	6,446		
	ROCK	301,000	CY	19.42	5,845		

					12,292		
.412	FILL						
	IMPERVIOUS CORE	313,500	CY	50.95	15,973		
	FINE FILTER	231,000	CY	20.13	4,650		
	COARSE FILTER	193,000	CY	17.90	3,455		
	ROCK SHELL (UPSTREAM)	534,000	CY	4.82	2,574		
	RIP RAP	174,500	CY	12.32	2,150		
	ROCK SHELL (DOWNSTREAM)	345,000	CY	4.82	1,663		
	ROCKFILL	127,000	CY	4.82	612		
	FILTER FABRIC						
	FILTER FABRIC	190,000	SF	0.84	160		

					31,236		
.413	SURFACE PREPARATION/GROUTING						
	SURFACE PREPARATION						
	UNDER DAM CORE	191,500	SF	1.58	303		
	UNDER DAM SHELL	432,500	SF	1.09	471		
	DENTAL CONCRETE						
	DENTAL CONCRETE	7,100	CY	179.80	1,277		
	CONSOLIDATION GROUT						
	DRILL HOLES	57,500	LF	6.05	348		
	CEMENT	57,500	CF	33.37	1,919		
	GROUT CURTAIN (SEE 332.313)						

					4,317		
.417	DRAINAGE (SEE 332.317)						

					0		
					=====		
					47,845		
.5	OUTLET FACILITY VALVES (IN DAM)						
.51	OUTLET FACILITY VALVES						
.51C	MECHANICAL						
	TRASHRACKS/GUIDES	1	LS	1,850,000.00	1,850		

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				\$	\$ 1,000's	\$ 1,000's	
	BULKHEAD GATE GUIDES	1	LS	1,220,000.00	1,220		
	BULKHEAD GATES & FOLLOWERS	2	EACH	220,000.00	440		
	GANTRY CRANE	1	LS	700,000.00	700		
	FIXED CONE VALVES (7 PLUS 2 SPARE)	1	LS	3,200,000.00	3,200		
	RING FOLLOWER GATES (7)	1	LS	6,300,000.00	6,300		
	MISC. MECHANICAL EQUIPMENT	1	LS	800,000.00	800		
	MISC. ELECTRICAL SYSTEMS	1	LS	100,000.00	100		
					14,610		
					=====		
					14,610		
.52	MAIN (CHUTE) SPILLWAY						
.521	EXCAVATION						
	APPROACH						
	OVERBURDEN	44,000	CY	8.03	353		
	ROCK USEABLE	80,000	CY	19.42	1,554		
	ROCK WASTE	17,000	CY	19.42	330		
	CONTROL STRUCTURE (TO END OF ROLLWAY)						
	OVERBURDEN	21,500	CY	8.03	173		
	ROCK USEABLE	87,000	CY	20.04	1,743		
	ROCK WASTE	15,000	CY	17.92	269		
	CHUTE & FLIP (END ROLLWAY TO END FLIP)						
	OVERBURDEN	128,500	CY	8.03	1,032		
	ROCK USEABLE (INCLINED)	38,000	CY	24.80	942		
	ROCK USEABLE (VERTICAL)	401,000	CY	24.80	9,945		
	ROCK WASTE	93,500	CY	19.42	1,816		
	OUTFALL (FROM END OF BASIN)						
	OVERBURDEN	44,500	CY	8.03	357		
	ROCK USEABLE	141,500	CY	21.37	3,024		
	ROCK WASTE	41,500	CY	15.98	663		
	DRAIN TUNNEL						
	ROCK HORIZONTAL	1,500	CY	212.59	326		
	ROCK INCLINED	2,300	CY	305.13	702		
	RIVER CHANNEL						
	ALLUVIUM EXCAVATION	67,000	CY	6.48	434		
					23,664		

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				\$	\$ 1,000's	\$ 1,000's	
.523	SURFACE PREPARATION/GROUTING						
	SURFACE PREPARATION						
	SPILLWAY						
	ROCK HORIZONTAL	108,000	SF	1.09	118		
	ROCK INCLINED	41,500	SF	1.58	66		
	CONSOLIDATION GROUT						
	DRILL HOLES	22,000	LF	6.05	133		
	CEMENT	22,000	CF	33.37	734		
	GROUT CURTAIN (SEE 332.313)						

					1,051		
.524	CONCRETE & SHOTCRETE						
	CONCRETE STRUCTURE						
	(TO END OF ROLLWAY)						
	(INCLUDING STORAGE AREAS)						
	CONCRETE OUTER WALLS	15,500	CY	217.00	3,364		
	CONCRETE PIERS (FULL LENGTH)	7,700	CY	217.00	1,671		
	CONCRETE DECK	1,600	CY	217.00	347		
	CONCRETE ROLLWAY SLAB	33,000	CY	217.00	7,161		
	CONCRETE OVERBREAK 12"H/6"V	1,400	CY	170.50	239		
	REINFORCING STEEL	2,300	TON	1,419.80	3,266		
	CONCRETE CHUTE & FLIP						
	(END ROLLWAY TO END FLIP)						
	(INCL BOX DRAIN GALLERIES)						
	CONCRETE SLAB	13,000	CY	221.65	2,881		
	CONCRETE WALLS	20,500	CY	235.60	4,830		
	CONCRETE OVERBREAK 18"H/6"V	6,300	CY	155.00	977		
	REINFORCING STEEL	1,300	TON	1,419.80	1,846		
	CONCRETE DRAIN GALLERY						
	CONCRETE SLAB	400	CY	465.00	186		
	CONCRETE OVERBREAK 6"	200	CY	279.00	56		
	REINFORCING STEEL	14	TON	1,419.80	20		
	2" SHOTCRETE DOME	2,500	SF	2.59	6		

					26,848		
.525	SUPPORT & ANCHORS						
	DRAINAGE TUNNEL						
	STEEL SUPPORT	4	TON	6,376.70	26		
	STEEL MESH	500	SF	3.30	2		
	ROCKBOLTS DRAINAGE GALLERY						
	3/4" @ 6'	400	EACH	165.97	66		

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				\$	\$ 1,000's	\$ 1,000's	
	ROCKBOLTS APPROACH						
	1" @ 15'	140	EACH	373.18	52		
	ROCKBOLTS CHUTE & STRUCTURE						
	1" @ 15'	85	EACH	373.18	32		
	SLAB/WALL ANCHORS						
	1" @ 10'	3,700	EACH	238.54	883		

					1,060		
.527	DRAINAGE						
	DRILL HOLES						
	BOX DRAINS (TO DRAIN TUNNEL)	28,000	LF	24.97	699		
	3" RELIEF	500	LF	24.97	12		

					712		
.52C	MECHANICAL						
	GATE EQUIPMENT	3	EACH	1,850,000.00	5,550		
	STOPLOG GUIDES	3	SETS	45,000.00	135		
	STOPLOGS INCLUDING FOLLOWERS	1	SET	480,000.00	480		
	MISCELLANEOUS ELECTRICAL	1	LS	100,000.00	100		

					6,265		
					=====		
					59,599		
.53	EMERGENCY SPILLWAY						
.531	EXCAVATION (INCLUDING -						
	BRIDGE & FUSE PLUG)						
	OVERBURDEN	281,500	CY	3.55	999		
	ROCK USEABLE	1,019,000	CY	20.15	20,533		
	ROCK WASTE	215,500	CY	19.76	4,258		

					25,790		
.532	FILL						
	FUSE PLUG	26,000	CY	9.89	257		

					257		
.533	SURFACE PREPARATION/GROUTING						
	SURFACE PREP (UNDER FUSE PLUG)						
	HORIZONTAL	75,500	SF	1.09	82		
	INCLINED	2,500	SF	1.58	4		
	CONSOLIDATION GROUTING						

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				\$	\$ 1,000's	\$ 1,000's	
	DRILL HOLES	23,000	LF	6.05	139		
	CEMENT	23,000	CF	33.37	768		
	GROUT CURTAIN (SEE 332.313)						
					993		
.534	CONCRETE						
	GROUND SLAB	6,000	CY	170.50	1,023		
	CONCRETE OVERBREAK 12"H/12"V	3,000	CY	170.50	512		
	REINFORCING STEEL	210	TON	1,419.80	298		
					1,833		
.535	SUPPORT & ANCHORS						
	ROCKBOLTS 1" @ 15'	300	EACH	365.51	110		
	ROCK ANCHORS 1" @ 25'	760	EACH	613.40	466		
					576		
.538	BRIDGE						
	BRIDGE	1	LS	1,250,075.00	1,250		
					1,250		
					30,699		
.6	POWER INTAKES						
.61	POWER INTAKE STRUCT & APP						
.611	EXCAVATION						
	OVERBURDEN	97,600	CY	8.03	784		
	ROCK	216,200	CY	20.04	4,333		
					5,116		
.613	SURFACE PREPARATION						
	HORIZONTAL	15,900	SF	1.09	17		
	INCLINED	74,000	SF	1.58	117		
					134		
.614	CONCRETE & SHOTCRETE						
	STRUCTURE						
	CONCRETE STRUCTURE	37,900	CY	268.15	10,163		
	CONCRETE OVERBREAK 12"H/6"V	1,340	CY	165.85	222		
	REINFORCING STEEL	2,500	TON	1,419.80	3,550		
					13,935		

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				\$	\$ 1,000's	\$ 1,000's	
.615	SUPPORT & ANCHORS APPROACH						
	ROCKBOLTS 1" @ 15'	150	EACH	365.51	55		
					55		
.61C	MECHANICAL						
	TRASHRACKS/GUIDES	4	SETS	170,000.00	680		
	BULKHEAD GATE GUIDES	4	SETS	75,000.00	300		
	BULKHEAD GATES & FOLLOWERS	1	SET	275,000.00	275		
	INTAKE GANTRY CRANE	1	EACH	1,250,000.00	1,250		
	INTAKE GATE EQUIPMENT	4	EACH	910,000.00	3,640		
	MISCELLANEOUS ELECTRICAL	1	LS	100,000.00	100		
					6,245		
.61D	INTAKE BUILDING						
	INTAKE BUILDING	1	LS	199,950.00	200		
					200		
					25,685		
.7	SURGE CHAMBER						
.71	SURGE CHAMBER						
.711	EXCAVATION						
	CHAMBER ROCK	153,800	CY	49.49	7,612		
	VENT SHAFT ROCK	2,300	CY	331.02	761		
					8,373		
.713	SURFACE PREPARATION						
	SURFACE PREP	6,100	SF	1.10	7		
					7		
.714	CONCRETE & SHOTCRETE CHAMBER						
	CONCRETE CHAMBER	1,300	CY	256.90	334		
	CONCRETE OVERBREAK	140	CY	220.38	31		
	REINFORCING STEEL	65	TON	1,433.75	93		
	3" SHOTCRETE	3,200	SF	3.83	12		
	2" SHOTCRETE	2,300	SF	2.62	6		
	VENT SHAFT						
	2" SHOTCRETE	6,300	SF	2.62	17		
					493		

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				\$	\$ 1,000's	\$ 1,000's	
.715	SUPPORT & ANCHORS						
	CHAMBER						
	ROCKBOLTS 1" @ 25' HY	725	EACH	624.34	453		
	ROCKBOLTS 1" @ 15'	600	EACH	373.18	224		
	STEEL MESH	29,400	SF	2.94	86		
	STEEL SUPPORT	70	TON	6,376.70	446		
	VENT SHAFT						
	ROCKBOLTS 3/4" @ 6'	400	EACH	165.97	66		
	STEEL MESH	1,300	SF	3.19	4		

					1,280		
.717	DRAINAGE						
	HOLES (IN CHAMBER CROWN)	13,650	LF	24.97	341		

					341		
					=====		
					10,493		
.8	PENSTOCKS						
.81	PENSTOCKS						
.811	EXCAVATION						
	TUNNELS						
	ROCK HORIZONTAL	10,500	CY	79.75	837		
	ROCK INCLINED	44,600	CY	157.85	7,040		

					7,877		
.813	SURFACE PREPARATION/GROUTING						
	SURFACE PREPARATION						
	TUNNELS	173,500	SF	1.10	191		
	CONTACT GROUTING						
	CONTACT GROUTING	1	LS	82,925.00	83		
	CONSOLIDATION GROUTING						
	CONSOLIDATION GROUTING	1	LS	224,130.00	224		

					498		
.814	CONCRETE & SHOTCRETE						
	CONCRETE LINER	17,600	CY	483.20	8,504		
	CONCRETE PLUG	10,000	CY	377.80	3,778		
	CONCRETE OVERBREAK 6"	4,700	CY	346.18	1,627		
	CONCRETE OVERBREAK PLUG	860	CY	346.18	298		
	REINFORCING STEEL	18	TON	1,433.75	26		

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					\$ 1,000's	\$ 1,000's	
	2" SHOTCRETE	19,100	SF	2.62	50		
					14,283		
.815	SUPPORT & ANCHORS						
	ROCKBOLTS 1" @ 25'	100	EACH	624.34	62		
	ROCKBOLTS 1" @ 6'	1,350	EACH	165.97	224		
	STEEL MESH	86,800	SF	3.22	279		
					566		
.818	STRUCTURAL - MISC STEELWORK						
	STEEL LINER	2,000	TON	4,862.35	9,725		
					9,725		
					32,949		
.9	TAILRACE WORKS						
.91	TAILRACE TUNNELS/PORTALS						
.911	EXCAVATION						
	TUNNELS						
	ROCK	329,300	CY	50.92	16,768		
	PORTAL						
	OVERBURDEN	40,000	CY	9.25	370		
	ROCK	21,000	CY	26.60	559		
					17,697		
.913	SURFACE PREPARATION						
	TUNNELS						
	TUNNEL	582,000	SF	1.61	937		
	PORTAL						
	HORIZONTAL	400	SF	1.09	0		
	INCLINED	2,700	SF	1.58	4		
					942		
.914	CONCRETE & SHOTCRETE						
	TUNNELS						
	CONCRETE LINING	31,700	CY	219.88	6,970		
	CONC OVERBREAK 6"	16,200	CY	156.52	2,536		
	REINFORCING STEEL	13	TON	1,433.75	19		
	2" SHOTCRETE	17,500	SF	2.62	46		
	PORTAL						

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				\$	\$ 1,000's	\$ 1,000's	
	CONCRETE BASE SLAB	100	CY	320.85	32		
	CONCRETE WALLS	650	CY	320.85	209		
	CONC OVERBREAK 12"H/6"V	50	CY	232.50	12		
	REINFORCING STEEL	50	TON	1,419.80	71		

					9,894		
.915	SUPPORT & ANCHORS						
	TUNNELS						
	ROCKBOLTS 1" @ 12'	3,160	EACH	267.81	846		
	ROCKBOLTS 1" @ 9'	490	EACH	219.06	107		
	STEEL MESH	291,000	SF	3.22	937		
	STEEL SUPPORT	232	TON	6,376.70	1,479		
	PORTAL						
	ROCKBOLTS 1" @ 15'	100	EACH	365.51	37		

					3,407		
.91C	MECHANICAL						
	STOPLOG GUIDES	1	LS	41,000.00	41		

					41		
					=====		
					31,979		
						645,577	
CONTINGENCY		15.0	%			96,837	
333	WATERWHEELS, TURBINES & GENERATORS						
.1	TURBINES & GOVERNORS						
.11	TURBINES & GOVERNORS						
.111	SUPPLY	4	EACH	3,850,000.00	15,400		
.112	INSTALL	4	EACH	1,150,000.00	4,600		
					=====		
					20,000		
.2	GENERATORS & EXCITERS						
.21	GENERATORS & EXCITERS						
	(SUPPLY & INSTALL)						
.211	GENERATORS & EXCITERS	4	EACH	5,500,000.00	22,000		
					=====		
					22,000		
						42,000	
CONTINGENCY		10.0	%			4,200	

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				\$	\$ 1,000's	\$ 1,000's	
334	ACCESSORY ELECTRICAL EQUIPMENT						
.1	CONNECTIONS, SUPPORTS & STRUCT.						
.11	STRUCTURES						
.111	STRUCT (INCL BELOW)						
.12	CONDUCTORS & INSULATORS						
.121	GENERATOR ISOLATED PHASE BUS	1	LS	2,000,000.00	2,000		
.122	HV POWER CABLES & ACCESS.	1	LS	1,200,000.00	1,200		
.123	LV POWER CABLES & ACCESS.	1	LS	400,000.00	400		
.124	CONTROL CABLES & ACCESSORIES	1	LS	600,000.00	600		
.125	GROUNDING SYSTEM	1	LS	150,000.00	150		
.13	CONDUITS & FITTINGS						
.131	CONDUITS & FITTINGS	1	LS	300,000.00	300		
					=====		
					4,650		
.2	SWITCHGEAR & CONTROL EQUIPMENT						
.21	AUXILIARY TRANSFORMERS						
.211	AUXILIARY TRANSFORMERS	4	EACH	30,000.00	120		
.22	CIRCUIT BREAKERS						
.221	CIR BRKRS (NOT REQ'D)						
.23	SURGE PROT & GEN CUBICLES						
.231	SURGE PROT & GEN CUBICLES	1	LS	310,000.00	310		
.24	SWITCHBOARDS						
.241	SWITCHBOARDS	1	LS	720,000.00	720		
.25	AUX. POWER EQPT-INCL BAT						
.251	AUX. POWER EQUIPMENT	1	LS	220,000.00	220		
					=====		
					1,370		
.3	CUBICLES & APPURTENANCES						
.31	CONTROL, RELAY & METER BRDS						
.311	CONTROL, RELAY & METER BOARD	1	LS	700,000.00	700		
.32	COMPUTER CONTROL SYSTEM						
.321	COMPUTER CONTROL SYS (INCL IN 353)						
.33	SUPERVIS. & TELEMET. SYS						
.331	SUPERV & TELEMET. SYS (INCL IN 353)						
					=====		
					700		

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				\$	\$ 1,000's	\$ 1,000's	
.4	POWER TRANSFORMERS						
.41	POWER TRANSFORMERS						
.411	POWER TRANSFORMERS	13	EACH	380,000.00	4,940		
					=====		
					4,940		
.5	LIGHTING SYSTEM						
.51	POWERHOUSE & TRANS GALLERY						
.511	POWERHOUSE & TRANS GALLERY	1	LS	660,000.00	660		
.52	ACCESS TUNNELS & ROADS						
.521	ACCESS TUNNELS & ROADS	1	LS	170,000.00	170		
					=====		
					830		
.6	MISC. ELECTRICAL EQUIPMENT						
.61	MISC. ELECTRICAL EQUIPMENT						
.611	MISC. ELECTRICAL EQUIPMENT	1	LS	220,000.00	220		
					=====		
					220		
.7	SURFACE ACCESSORY ELEC EQUIPMENT						
.71	4.16 KV & LV EQUIPMENT						
.711	SWITCHBOARD	1	LS	70,000.00	70		
.712	CABLES	1	LS	220,000.00	220		
.713	AUX TRANSFORMERS	1	LS	120,000.00	120		
.73	DIESEL GENERATORS - STANDBY						
.731	DIESEL GENERATORS - STANDBY	2	EACH	150,000.00	300		
.74	EXTERIOR LIGHTING						
.741	EXTERIOR LIGHTING	1	LS	250,000.00	250		
					=====		
					960		
						13,670	
CONTINGENCY		10.0	%			1,367	
335	MISC. POWERPLANT EQUIPMENT						
.1	AUXILIARY SYSTEMS - UNDERGROUND						
.11	STATION WATER SYSTEMS						
.111	STATION WATER SYSTEMS	1	LS	1,300,000.00	1,300		
.12	FIRE PROTECTION SYSTEMS						

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				\$	\$ 1,000's	\$ 1,000's	
.121	FIRE PROTECTION SYSTEMS	1	LS	1,000,000.00	1,000		
.13	COMPRESSED AIR SYSTEMS						
.131	COMPRESSED AIR SYSTEMS	1	LS	1,400,000.00	1,400		
.14	OIL HANDLING SYSTEMS						
.141	OIL HANDLING SYSTEMS	1	LS	1,000,000.00	1,000		
.15	DRAINAGE & DEWATERING						
.151	DRAINAGE & DEWATERING	1	LS	1,500,000.00	1,500		
.16	HEAT, VENT & COOLING SYS						
.161	HEAT, VENT & COOLING SYS	1	LS	1,200,000.00	1,200		
.17	MISCELLANEOUS						
.171	MISCELLANEOUS	1	LS	900,000.00	900		
					=====		
					8,300		
.2	AUXILIARY SYS - SURFACE FACS						
.21	AUX SYS - SURFACE FACS						
.211	AUX SYS - SURFACE FACS	1	LS	150,000.00	150		
					=====		
					150		
.3	AUXILIARY EQUIPMENT						
.31	POWERHOUSE CRANES						
.311	POWERHOUSE CRANES	2	EACH	900,000.00	1,800		
.32	ELEVATORS						
.321	ELEVATORS	1	LS	230,000.00	230		
.33	MISC. CRANES & HOIST						
.331	MISC. CRANES & HOIST	1	LS	150,000.00	150		
.34	MACHINE SHOP EQUIPMENT						
.341	MACHINE SHOP EQUIPMENT	1	LS	200,000.00	200		
					=====		
					2,380		
.4	GENERAL STATION EQUIPMENT (INCLUDED IN MECHANICAL & ELECTRICAL SYSTEMS)						
					=====		
					0		
.5	COMMUNICATIONS EQUIPMENT COMMUNICATIONS EQUIPMENT	1	LS	90,000.00	90		
					=====		
					90		
						10,920	
CONTINGENCY		10.0	%			1,092	

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				\$	\$ 1,000's	\$ 1,000's	
336	ROADS, RAIL & AIR FACILITIES						
.1	ROADS						
.11	PERMANENT ACCESS ROAD						
.111	WATANA-DEVIL CANYON (36 MILES)						
	CLEARING	510	ACRE	5,760.16	2,938		
	WASTE EXCAVATION	1,349,000	CY	4.81	6,489		
	COMMON EXCAVATION	1,408,500	CY	4.20	5,916		
	ROCK EXCAVATION	146,500	CY	14.40	2,110		
	BORROW	137,600	CY	6.01	827		
	NFS SUBBASE MATERIAL	373,000	CY	8.41	3,137		
	GRADE "A" BASE MATERIAL	203,500	CY	16.80	3,419		
	D-1 BASE MATERIAL	169,800	TON	21.61	3,669		
	GUARDRAIL	6,050	LF	43.20	261		
	18" CULVERTS	23,000	LF	28.80	662		
	36" CULVERTS	1	LS	294,000.00	294		
	FABRIC	49,900	SY	2.99	149		
	THAW PIPES	24,500	LF	43.19	1,058		
	TOPSOIL & SEED	290	ACRE	3,599.36	1,044		
	TRAFFIC CONTROL DEVICES	36	MILE	17,998.28	648		
	BRIDGES	88,400	SF	180.00	15,912		
					48,533		
	MAINTENANCE						
	MAINTENANCE	288	MI/YRS	10,000.36	2,880		
					2,880		
					51,413		
.12	SITE ROADS						
	SITE ROADS	7	MILE	4,128,053.00	28,896		
	MAINTENANCE	60	MI/YRS	95,103.32	5,706		
					34,603		
.13	PERMANENT ROADS AT SITE						
	PERMANENT ROADS	3.5	MILE	499,999.00	1,750		
					1,750		

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				\$	\$ 1,000's	\$ 1,000's	
.14	MAINTENANCE CANTWELL TO WATANA MAINTENANCE	650	MI/YRS	9,000.00	5,850 =====		
					5,850		
.15	PERMANENT RAILROAD (INCL RLHD) GOLD CREEK-DEVIL CANYON - RAIL						
.151	GOLD CREEK - RAILROAD						
	CLEARING	162	ACRE	5,760.16	933		
	WASTE EXCAVATION	407,420	CY	4.81	1,960		
	COMMON EXCAVATION	798,405	CY	4.20	3,353		
	ROCK EXCAVATION	2,200	CY	14.40	32		
	BORROW	108,500	CY	6.01	652		
	SURBALAST	171,634	CY	8.60	1,476		
	GRADE "A" BASE MATERIAL	4,900	CY	16.80	82		
	D-1 BASE MATERIAL	2,400	TON	21.61	52		
	A. C. SURFACING	2,200	TON	79.21	174		
	DOCK LUMBER	16	MBF	580.00	9		
	18" CULVERTS	4,850	LF	28.80	140		
	36" + CULVERTS	1	LS	46,079.80	46		
	FABRIC	3,121	SY	2.99	9		
	THAW PIPES	10,100	LF	43.19	436		
	TOPSOIL & SEED	104	ACRE	3,599.36	374		
	RAIL YARD CONTROL DEVICES	1	LS	720.01	1		
	TRACKAGE	98,975	LF	139.98	13,855		

					23,585		
	MAINTENANCE						
	RAIL	98	MI/YRS	13,549.40	1,328		
	RAILHEAD	7	YEARS	28,599.99	200		

					1,528		
					=====		
					25,113		
						118,728	
CONTINGENCY		20.0 %				23,746	

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				\$	\$ 1,000's	\$ 1,000's	
TRANSMISSION PLANT							
350	LAND & LAND RIGHTS LAND & LAND RIGHTS (INCLUDED IN WATANA)				=====		
					0		
						0	
352	SUBSTATION & SWITCHING STATION SUBSTATION & SWITCHING STATION STRUCTURES & IMPROVEMENTS						
.1	SWITCHYARD	1	LS	6,930,000.00	6,930		
	.11 SWITCHYARD				=====		
					6,930		
						6,930	
	CONTINGENCY	15.0	%			1,040	
353	SUBSTATION/SWITCHING STATION EQPT SUBSTATION/SWITCHING STATION EQPT						
	ESTER	1	LS	2,890,000.00	2,890		
	WILLOW	1	LS	7,050,000.00	7,050		
	KNIK ARM	1	LS	1,155,000.00	1,155		
	UNIVERSITY	1	LS	8,900,000.00	8,900		
					=====		
					19,995		
	WILLOW ENERGY MANAGE SYS (EMS) WATANA & DEVIL CANYON IN- PLANT MONITOR & CONTROL ERPT	1	LS	1,213,000.00	1,213		
					=====		
					1,213		
						21,208	
	CONTINGENCY	15.0	%			3,181	

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					\$ 1,000's	\$ 1,000's	
354	STEEL TOWERS & FIXTURES STEEL TOWERS & FIXTURES TOWERS (INCLUDING FOUND- ATION & HARDWARE)	546	EACH	53,123.00	29,005 =====	29,005	
						29,005	
	CONTINGENCY	15.0	%			4,351	
356	CONDUCTORS & DEVICES CONDUCTORS & DEVICES CONDUCTORS SUBMARINE CABLES	124 3	MILE EACH	100,175.00 7,291,700.00	12,422 21,875 =====	34,297	
						34,297	
	CONTINGENCY	15.0	%			5,145	
359	ROADS & TRAILS ROADS & TRAILS (INCLUDED IN WATANA)				=====	0	
						0	
	GENERAL PLANT						
389	LAND & LAND RIGHTS LAND & LAND RIGHTS (INCLUDED IN 330)				=====	0	
						0	

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					\$ 1,000's	\$ 1,000's	
390	STRUCTURES & IMPROVEMENTS STRUCTURES & IMPROVEMENTS (INCLUDED IN 331.2)				=====		
					0	0	
391	OFFICE FURNITURE/EQUIPMENT OFFICE FURNITURE/EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
392	TRANSPORTATION EQUIPMENT TRANSPORTATION EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
393	STORES EQUIPMENT STORES EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
394	TOOLS SHOP & GARAGE EQUIPMENT TOOLS SHOP & GARAGE EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	

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					\$ 1,000's	\$ 1,000's	
395	LABORATORY EQUIPMENT LABORATORY EQUIPMENT (INCLUDED IN 399)				=====	0	0
396	POWER OPERATED EQUIPMENT POWER OPERATED EQUIPMENT (INCLUDED IN 399)				=====	0	0
397	COMMUNICATIONS EQUIPMENT COMMUNICATIONS EQUIPMENT (INCLUDED IN 399)				=====	0	0
398	MISCELLANEOUS EQUIPMENT MISCELLANEOUS EQUIPMENT (INCLUDED IN 399)				=====	0	0
399	OTHER TANGIBLE PROPERTY OTHER TANGIBLE PROPERTY OTHER TANGIBLE PROPERTY	1	LS	5,000,000.00	5,000 =====	5,000	5,000

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				\$	\$ 1,000's	\$ 1,000's	
	INDIRECT COSTS						
61	TEMPORARY CONSTRUCTION FACILITIES TEMPORARY CONSTRUCTION FACILITIES (INCLUDED IN DIRECT COSTS)				=====		
					0	0	
62	CONSTRUCTION EQUIPMENT CONSTRUCTION EQUIPMENT (INCLUDED IN DIRECT COSTS)				=====		
					0	0	
63	MAIN CONSTRUCTION CAMP						
.1	MAIN CONSTRUCTION CAMP						
.11	SITE PREPARATION						
	CLEARING						
	CLEARING	57	ACRE	11,786.00	672		
	INSTALL GRANULAR PAD						
	INSTALL GRANULAR PAD	301,800	CY	7.23	2,182		
	CONSTRUCT ROADWAYS						
	MAIN ROADS IN CAMP [34']	3,950	LF	28.53	113		
	CONNECT. RD. TO ACCESS RD.	7,200	LF	203.76	1,467		
	SECONDARY RD [24']	300	LF	26.92	8		
	DRAINAGE						
	DITCHING	26,900	LF	2.91	78		
	CULVERTS	640	LF	28.85	18		
	PERIMETER FENCING						
	PERIMETER FENCING	6,200	LF	16.32	101		

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				\$	\$ 1,000's	\$ 1,000's	
	PARKING AREAS						
	INSIDE CAMP	18,500	SF	0.50	9		
	PARKING LOT - OUTSIDE CAMP	2	ACRE	11,665.30	23		
	ELECTRIC PLUG-INS - IN CAMP	250	EACH	93.72	23		
	SITE REHABILITATION						
	SITE REHABILITATION	57	ACRE	8,257.30	471		
						5,166	
.12	BUILDINGS						
	BACHLR DORMS-108 MAN CMPLX	13	EACH	244,415.00	3,177		
	BACHLR DORMS-MGMNT-TYPE A	4	EACH	80,910.40	324		
	BACHLR DORMS-MGMNT-TYPE B	5	EACH	69,954.80	350		
	GUEST HSES-1 EA OWN/MGR/CON	2	EACH	86,986.00	174		
	CAMP MANAGER'S OFFICES	2	EACH	36,478.00	73		
	STAFF CLUBHOUSE	1	EACH	185,640.00	186		
	DINING HALL	1	EACH	1,686,040.00	1,686		
	RECREATION BUILDING	1	EACH	680,720.00	681		
	GYMNASIUM	1	EACH	1,548,360.00	1,548		
	SECURITY OFFICE	1	EACH	203,864.00	204		
	SOILS/MATERIALS LABORATORY	1	EACH	450,160.00	450		
	MAINTENANCE BUILDING	1	EACH	402,560.00	403		
	WAREHOUSE - MANAGERS	1	EACH	964,920.00	965		
	WAREHOUSE - FOOD SERVICE	1	EACH	650,760.00	651		
	COMMUNICATION BUILDING	1	EACH	37,454.40	37		
	HOSPITAL	1	EACH	1,293,932.00	1,294		
	ICE RINK	1	EACH	2,039,456.00	2,039		
	BANK	1	EACH	158,692.00	159		
	STORE	1	EACH	94,184.00	94		
	LAUNDRY	1	EACH	64,721.00	65		
	PERMAWALK						
	6 FEET WIDE	300	LF	51.13	15		
	10 FEET WIDE	1,420	LF	79.55	113		
						14,688	
.13	UTILITIES						
.131	WATER						
	SUPPLY SYSTEM						
	INTAKE POOL & CRIB						
	IN SUSITNA RIVER	1	LS	26,515.66	27		
	PUMP STATION						

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				\$	\$ 1,000's	\$ 1,000's	
	400 GPM BOOSTER PUMP STATION	1	LS	163,300.00	163		
	400 GPM SUPPLY LINE	1	LS	81,224.00	81		
	4" HEAT TRACING & INSULAT	9,000	LF	36.04	324		
	4" UTILIDORS	9,000	LF	26.53	239		
	UTILIDORS	4,500	LF	76.86	346		
	TREATMENT PLANT .8 MGD	1	LS	896,801.00	897		
	RESERVOIRS						
	900,000 GALLONS	1	EACH	212,010.00	212		
	500,000 GALLONS	1	EACH	117,789.00	118		
	PUMP STATION 4000 GPM	1	LS	48,760.63	49		
	CAMP DISTRIBUTION SYSTEM DISTRIB LINES - BURIED						
	10"	800	LF	77.01	62		
	8"	240	LF	67.61	16		
	6"	100	LF	58.48	6		
	DISTRIB LINE UTILDOR PIPING						
	10" DI	1,800	LF	61.94	111		
	8" DI	2,300	LF	52.55	121		
	6" DI	1,300	LF	41.05	53		
	4" DI	1,380	LF	35.71	49		
	HEAT TRACING & INSUL						
	10" PIPE	2,600	LF	45.23	118		
	8" PIPE	2,540	LF	33.30	85		
	6" PIPE	1,400	LF	29.34	41		
	4" PIPE	1,380	LF	26.53	37		
	PIPE FITTINGS						
	HYDRANTS	12	EA	1,550.64	19		
	VALVES	1	LS	8,520.00	9		
	UTILIDORS						
	UTILIDORS	6,780	LF	76.86	521		
.132	SEWAGE COLLECTION SYS-UTILIDOR PIPING						
	12" PIPE	2,800	LF	101.39	284		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
	10" PIPE	400	LF	79.01	32		
	8" PIPE	2,200	LF	51.45	113		
	6" PIPE	2,300	LF	41.05	94		
	4" PIPE	1,580	LF	36.42	58		
	HEAT TRACING & INSUL						
	12"	2,800	LF	51.99	146		
	10"	400	LF	45.23	18		
	8"	2,200	LF	33.30	73		
	6"	2,300	LF	29.34	67		
	4"	1,580	LF	26.53	42		
	TREATMENT PLANT						
	SKIMMING TANK	1	EACH	29,233.10	29		
	LAGOONS (1 @ 385' x 205' & 1 @ 280' x 155')	2	EACH	208,898.00	418		
	ROTATING BIO CONTACTORS	3	EACH	98,268.19	295		
	PHYS/CHEM UNIT	1	EACH	77,603.88	78		
	CLARIFIER	1	EACH	146,920.00	147		
	DISINFECTION	1	EACH	77,603.88	78		
	HEAT PUMP	1	EACH	11,300.00	11		
	THICKENER	1	EACH	86,720.72	87		
	FILTER PRESS	1	EACH	85,590.72	86		
	DRYING BEDS	1	EACH	73,022.86	73		
	BUILDING	1	EACH	232,365.00	232		
	CONTROLS/INSTRUMENTATION	1	LS	101,511.00	102		
	PIPING, VALVES, & FITTINGS	1	LS	287,133.00	287		
	LABORATORY	1	EACH	31,075.00	31		
	OUTFALL						
	OUTFALL LINE (10")	4,200	LF	84.87	356		
	OUTFALL STRUCTURE	1	EACH	162,303.00	162		
	UTILIDORS						
	UTILIDORS	1,100	LF	64.41	71		
.133	ELECTRICAL						
	GENERATING STATIONS						
	BUILDING	1	EACH	44,934.40	45		
	GENERATORS (850 KW)	2	EACH	178,274.00	357		
	DAY TANK	1	EACH	3,668.50	4		
	FUEL STORAGE TANK	1	EACH	173,189.00	173		
	SUBSTATION	1	EACH	97,933.71	98		
	DISTRIBUTION						
	DISTRIBUTION	1	LS	219,052.00	219		
	LIGHTING						

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				\$	\$ 1,000's	\$ 1,000's	
	POLE MOUNTED LUMINAIRES	24	EACH	1,507.42	36		
	FLOOD LIGHTS	15	EACH	565.00	8		
.134	CAMP HEATING						
	FUEL OIL DISTRIBUTION	1	LS	240,096.00	240		
.135	FIRE PROTECTION						
	FIRE HOUSE						
	FIRE HOUSE	1	LS	286,960.00	287		
	FIRE ALARM SYSTEM						
	FIRE ALARM SYSTEM	1	LS	192,453.00	192		
	SPRINKLER SYSTEM						
	MESS HALL	1	LS	13,542.00	14		
	RECREATION HALL	1	LS	27,084.00	27		
	HOSPITAL	1	LS	7,583.52	8		
	SCHOOL	1	LS	10,289.48	10		
.136	TELEPHONE SYSTEM						
	TELEPHONE SYSTEM CAMP (WIRE)	1	LS	363,548.00	364		
	MICROWAVE	1	LS	684,254.00	684		
.137	TV/RADIO STATION						
	TV/RADIO STATION	1	LS	155,833.00	156		
.138	SOLID WASTE FACILITY						
	SOLID WASTE FACILITY	1	LS	78,859.70	79		
	INCINERATOR	1	LS	92,300.00	92		
.139	PETROLEUM STORAGE FACILITY						
	GARAGE/MAINTENANCE BLDG						
	GARAGE/MAINTENANCE BUILDING	1	EACH	239,360.00	239		
	TANKS						
	50,000 GAL	4	EACH	23,667.14	95		
	100,000 GAL	10	EACH	42,600.00	426		
	EARTHWORK						
	CLEARING & GRUBBING	6	ACRE	20,041.88	120		
	BERMS	20,000	CY	27.59	552		
	PIPING						
	PIPING	1	LS	154,767.00	155		
	FUEL STATION						
	FUEL STATION	1	LS	307,519.00	308		

					12,159		
					=====		
					32,012		

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				\$	\$ 1,000's	\$ 1,000's	
.2	MAIN CONSTRUCTION VILLAGE						
.21	SITE PREPARATION						
	CLEARING						
	CLEARING	62	ACRE	11,926.58	739		
	INSTALL GRANULAR PAD						
	INSTALL GRANULAR PAD	300,000	CY	7.17	2,151		
	SITE REHABILITATION						
	SITE REHABILITATION	62	ACRE	8,358.12	518		
	CONSTRUCT ROADWAYS						
	MAIN ROAD 34' WIDE	2,000	LF	28.33	65		
	SECONDARY ROADS 24' WIDE	12,600	LF	27.11	342		
	CONNECTION TO ACCESS RD 34'	4,000	LF	223.56	894		
	DRAINAGE						
	DITCHING	37,600	LF	2.95	111		
	CULVERTS - 170 LOTS	3,950	LF	28.76	114		
	PERIMETER FENCING						
	PERIMETER FENCING	7,100	LF	16.32	116		
	PARKING AREAS						
	PARKING AREAS	37,500	SF	0.50	19		
	ELECTRICAL PLUG-INS	25	EACH	93.72	2		
					5,071		
.22	BUILDINGS						
	SINGLE FAMILY UNIT - 2 BDRM	36	EACH	22,826.20	822		
	SINGLE FAMILY UNIT - 3 BDRM	92	EACH	23,338.60	2,147		
	SINGLE FAMILY UNIT - 2 BDRM	9	EACH	35,550.80	320		
	SINGLE FAMILY UNIT - 3 BDRM	9	EACH	36,282.80	327		
	SINGLE FAMILY UNIT - 4 BDRM	9	EACH	40,638.20	366		
	SCHOOL	1	LS	584,040.00	584		
	GYMNASIUM	1	LS	452,880.00	453		
	SWIMMING POOL	1	LS	748,000.00	748		
	RECREATION CENTER	1	LS	651,712.00	652		
	STORE	1	LS	587,520.00	588		
	GAS STATION	1	LS	232,084.00	232		
					7,237		
.23	UTILITIES						
.231	WATER						

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				\$	\$ 1,000's	\$ 1,000's	
	SUPPLY LINE						
	6" PUMP STATION 3500 GPM	4,900	FT	38.33	188		
	RESERVOIR (800,000 GAL)	1	EACH	86,194.00	86		
	DISTRIBUTION SYSTEM	1	EACH	181,767.00	182		
	DISTRIBUT LINES-BURIED						
	10" DI	553	LF	77.01	43		
	8" DI	198	LF	67.38	13		
	6" DI	169	LF	58.49	10		
	DISTRIBUT LINES-UTILIDOR						
	10"	3,650	LF	60.80	222		
	8"	2,250	LF	52.55	118		
	6"	1,850	LF	41.05	76		
	HEAT TRACING & INSULAT						
	10" PIPE	4,230	LF	45.23	191		
	8" PIPE	2,448	LF	33.44	82		
	6" PIPE	2,019	LF	29.34	59		
	VALVES						
	10", 8" & 6"	1	LS	13,177.60	13		
	HYDRANTS						
	HYDRANTS	21	EACH	1,549.22	33		
.232	SEWAGE						
	COLLECTION SYSTEM						
	PIPING						
	12" PIPE	100	LF	79.01	8		
	10" PIPE	450	LF	61.83	28		
	8" PIPE	2,200	LF	51.42	113		
	6" PIPE	3,950	LF	41.05	162		
	HEAT TRACING & INSULAT						
	12" PIPE	100	LF	51.99	5		
	10" PIPE	450	LF	45.23	20		
	8" PIPE	2,200	LF	33.30	73		
	6" PIPE	3,950	LF	29.34	116		
	PUMPING SYSTEM						
	PUMP STATION	1	LS	81,792.00	82		
	6" FORCE MAIN	10,050	LF	41.05	413		
	UTILIDORS						
	MAIN RUNS IN VILLAGE	6,800	LF	77.40	526		
	STREET CROSSING 50 LF EA	900	LF	77.40	70		
	PUMP STA TO TREATMENT PLANT	5,500	LF	80.94	445		
	STUBS TO HOUSE LOTS	3,400	LF	77.40	263		

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				\$	\$ 1,000's	\$ 1,000's	
	STUBS TO BUILDINGS	150	LF	77.40	12		
.233	INTEGRATED OFFICE AREA						
	OWNER/MGRS OFFICE	1	LS	426,683.00	427		
.234	ELECTRICAL						
	GENERATING STATIONS						
	BUILDING	1	EACH	44,934.40	45		
	GENERATORS 950 KW	2	EACH	178,274.00	357		
	DAY TANKS	1	EACH	3,116.30	3		
	FUEL STORAGE TANKS	1	EACH	173,615.00	174		
	SUBSTATIONS WITH WIRING	1	EACH	97,921.28	98		
	DISTRIBUTION						
	DISTRIBUTION	1	LS	125,660.00	126		
.235	FIRE ALARM SYSTEM						
	FIRE ALARM SYSTEM	1	LS	17,303.26	17		
.236	TELEPHONE SYSTEM						
	TELEPHONE SYSTEM	1	LS	169,580.00	170		
					5,067		
					=====		
					17,376		
.3	ACCESS ROAD CAMPS						
	ACCESS ROAD/RAILHEAD CAMP						
	FACS, CATERING & OPER SUPT	70,000	HANDAY	83.99	5,879		
					=====		
					5,879		
.4	CAMP CREDIT						
	SALVAGE VALUE FOR BUILDINGS						
	EQUIPMENT, & UTILITIES	1	LS	-2,500,000.00	-2,500		
					=====		
					-2,500		
.5	PERMANENT TOWN						
	PERMANENT TOWN	1	LS	2,139,997.00	2,140		
					=====		
					2,140		
.6	MAIN CONSTR CATERING & SUPPORT						
	MAIN CONSTR CATERING & SUPT	1,550,000	HANDAY	67.00	103,850		
					=====		
					103,850		

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				\$	\$ 1,000's	\$ 1,000's	
.7	ELECTRIC POWER						
	.71 34.5 KV SYSTEM						
	.711 TRANSFORMER STATION	1	LS	733,104.00	733		
	.712 DISTRIBUTION SYSTEM	1	LS	1,367,100.00	1,367		

					2,100		
	.72 CONSTRUCTION CAMP POWER						
	.721 CONSTRUCTION CAMP POWER	140,300	MWH	70.00	9,821		

					9,821		
	.73 CONSTRUCTION POWER						
	.731 CONSTRUCTION POWER	50,000	MWH	70.00	3,500		

					3,500		
					=====		
					15,421		
.8	CONSTRUCTION HEATING & VENTIL						
	.81 HEATING & VENTILATION PLANT						
	.811 HEATING & VENTILATION PLANT	1	LS	2,464,500.00	2,465		

					2,465		
	.82 HEATING & VENTIL OPERATION						
	.821 HEATING & VENTIL OPERATION	1,870	DAY	4,056.35	7,585		

					7,585		
					=====		
					10,050		
						184,228	
	CONTINGENCY	10.0 %				18,423	
64	LABOR EXPENSE						
	LABOR EXPENSE						
	(INCLUDED IN DIRECT COSTS)						
					=====		
					0		
						0	

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
65	SUPERINTENDENCE SUPERINTENDENCE (INCLUDED IN DIRECT COSTS)				=====	0	
						0	
66	INSURANCE INSURANCE (INCLUDED IN DIRECT COSTS)				=====	0	
						0	
68	MITIGATION .111 OUT-OF-KIND COSTS	1	LS	4,300,000.00	4,300	4,300	
	CONTINGENCY	10.0	%			430	
69	FEEES FEEES (INCLUDED IN DIRECT COSTS)				=====	0	
						0	
	SUBTOTAL					1,381,356	
						=====	
						1,381,356	
71	ENGINEERING	12.5	%		172,670		

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				\$	\$ 1,000's	\$ 1,000's	
72	LEGAL EXPENSES	0.0	%		0		INCLUDED IN 71
75	TAXES	0.0	%		0		NOT APPLICABLE
76	ADMINISTRATIVE & GEN. EXPENSES	0.0	%		0		INCLUDED IN 71
77	INTEREST	0.0	%		0		NOT INCLUDED
80	EARNINGS/EXPENSES DURING CONSTR.	0.0	%		0		NOT INCLUDED
TOTAL PROJECT COST						1,554,026	

VAX/VMS
VAX/VMS
VAX/VMS

VAX/VMS
VAX/VMS
VAX/VMS

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
PRODUCTION PLANT							
330	LAND & LAND RIGHTS						
.1	LAND						
	LAND	1	LS	51,000,000.00	51,000		
.2	LAND RIGHTS						
	LAND RIGHTS - IN ABOVE	0	LS	0.00	0		
.3	MISC CHARGES & CREDITS						
	MISC CHARGES/CREDIT-IN ABOVE	0	LS	0.00	0		
						51,000	
	CONTINGENCY	20.0	%			10,200	
331	POWERPLANT STRUCTURE IMPROVEMENTS						
.1	POWERHOUSE						
.11	POWERHOUSE & DRAFT TUBE						
.111	EXCAVATION						
	POWERHOUSE VAULT ROCK	122,500	CY	46.43	5,688		
	DRAFT TUBE ROCK	25,200	CY	46.43	1,170		
					6,858		
.113	SURFACE PREPARATION/GROUTING						
	POWERHOUSE						
	SURFACE PREPARATION	99,000	SF	1.51	149		
	DRAFT TUBE						
	SURFACE PREPARATION	76,500	SF	1.51	116		
	GROUT CURTAIN (U/S OF P-H)						
	DRILL HOLES	43,800	LF	13.05	572		
	CEMENT	17,500	CF	38.25	669		
					1,506		
.114	CONCRETE & SHOTCRETE						
	POWERHOUSE						
	CONCRETE	32,600	CY	326.00	10,628		
	CONC OVERBREAK 12"H/6"V	2,400	CY	210.34	505		
	REINFORCING STEEL	1,630	TON	1,356.17	2,211		
	4" SHOTCRETE	41,000	SF	4.77	196		
	DRAFT TUBE						

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				\$	\$ 1,000's	\$ 1,000's	
	CONCRETE	12,000	CY	326.00	3,912		
	CONCRETE OVERBREAK 6"	2,500	CY	210.34	526		
	REINFORCING STEEL	990	TON	1,356.17	1,343		
	2" SHOTCRETE	6,100	SF	2.48	15		
					19,334		
.115	SUPPORT & ANCHORS						
	POWERHOUSE						
	ROCKBOLTS 1" @ 25' HY	970	EACH	586.70	569		
	ROCKBOLTS 1" @ 15'	1,970	EACH	349.86	689		
	STEEL MESH	44,600	SF	2.77	124		
	STEEL SUPPORT	137	TON	6,022.00	825		
	DRAFT TUBE						
	ROCKBOLTS 1" @ 25' HY	150	EACH	586.70	88		
	ROCKBOLTS 1" @ 12'	390	EACH	251.17	98		
	ROCKBOLTS 1" @ 9'	190	EACH	205.42	39		
	STEEL MESH	18,900	SF	2.99	57		
					2,488		
.117	DRAINAGE						
	HOLES (U/S OF POWERHOUSE)	15,000	LF	23.36	350		
	HOLES (POWERHOUSE CROWN)	28,500	LF	23.36	666		
					1,016		
.118	STRUCTURAL - MISC STEELWORK						
	POWERHOUSE & DRAFT TUBE						
	STRUCTURAL STEEL/CRANE RAILS	1	LS	3,091,425.00	3,091		
					3,091		
.119	ARCHITECTURAL						
	POWERHOUSE						
	ARCHITECTURAL	1	LS	1,252,449.00	1,252		
					1,252		
.11C	MECHANICAL						
	DRAFT TUBE GATES	4	SETS	193,220.00	773		
	DRAFT TUBE GATE GUIDES	6	SETS	90,736.00	544		
	DRAFT TUBE CRANE	1	LS	608,096.00	608		
					1,925		
					37,472		

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				\$	\$ 1,000's	\$ 1,000's	
.12	ACCESS TUNNELS & PORTALS						
.121	EXCAVATION						
	TUNNELS - ROCK						
	MAIN TUNNEL	50,250	CY	50.14	2,520		
	TRANSFORMER GALLERY TUNNEL	17,750	CY	50.14	890		
	GROUTING GALLERY TUNNEL	1,900	CY	204.28	388		
	SURGE CHAMBER ACCESS TUNNEL	7,250	CY	74.81	542		
	PENSTOCK ACCESS TUNNEL	61,500	CY	74.81	4,601		
	PENSTOCK ELBOW ACCESS TUNNEL	15,000	CY	74.81	1,122		
	ACCESS SHAFT TUNNEL	1,300	CY	74.81	97		
	CONNECTOR TUNNEL	1,900	CY	195.66	372		
	PORTALS						
	OVERBURDEN	6,000	CY	8.66	52		
	ROCK	3,000	CY	25.00	75		
					10,659		
.123	SURFACE PREPARATION						
	TUNNELS						
	MAIN TUNNEL SLAB	53,100	SF	1.02	54		
	PENSTOCK ACCESS TUNNEL SLAB	65,200	SF	1.02	67		
	MAIN PORTAL						
	HORIZONTAL	200	SF	1.02	0		
	INCLINED	2,100	SF	1.48	3		
					124		
.124	CONCRETE & SHOTCRETE						
	MAIN PORTAL						
	CONCRETE SLAB	30	CY	188.33	6		
	CONCRETE WALLS	570	CY	188.33	107		
	CONCRETE OVERBREAK 12'H/9"V	50	CY	170.87	9		
	REINFORCING STEEL	40	TON	1,343.12	54		
	TUNNELS						
	CONCRETE SLAB MAIN TUNNEL	1,950	CY	237.13	462		
	CONC PLUGS PENST ELBOW ACC	15,000	CY	355.57	5,334		
	CONC OVERBREAK MAIN TUN 6"	1,000	CY	162.72	163		
	REINFORCING STEEL	70	TON	1,356.17	95		
	2" SHOTCRETE MAIN TUNNEL	20,100	SF	2.48	50		
	2" SHOTCRETE TRANSFORMER GAL	7,100	SF	2.48	18		
	2" SHOTCRETE SURGE CHAMBER ACC	3,900	SF	2.48	10		
	2" SHOTCRETE PENSTOCK ACCESS	24,700	SF	2.48	61		
	2" SHOTCRETE PENST ELBOW ACC	7,100	SF	2.48	18		

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				\$	\$ 1,000's	\$ 1,000's	
	2" SHOTCRETE ACCESS SHAFT	300	SF	2.48	1		
	2" SHOTCRETE GROUT GALLERY	800	SF	2.48	2		
	2" SHOTCRETE CONNECTOR TUN	800	SF	2.48	2		
					6,390		
.125	SUPPORT & ANCHORS						
	MAIN TUNNEL						
	ROCKBOLTS 1" @ 12'	1,200	EACH	251.17	301		
	ROCKBOLTS 1" @ 9'	250	EACH	205.42	51		
	STEEL MESH	63,000	SF	3.00	189		
	STEEL SUPPORT	66	TON	6,022.00	397		
	MAIN TUNNEL PORTAL						
	ROCKBOLTS 1" @ 15'	50	EACH	349.84	17		
	TRANSFORMER GALLERY TUNNEL						
	ROCKBOLTS 1" @ 12'	410	EACH	251.15	103		
	ROCKBOLTS 1" @ 9'	70	EACH	205.42	14		
	STEEL MESH	22,500	SF	2.77	62		
	STEEL SUPPORT	24	TON	6,022.00	145		
	GROUTING GALLERY TUNNEL						
	ROCKBOLTS 3/4" @ 6'	160	EACH	155.56	25		
	STEEL MESH	160	SF	3.00	0		
	STEEL SUPPORT	2	TON	6,022.00	12		
	SURGE CHAMBER TUNNEL						
	ROCKBOLTS 1" @ 12'	230	EACH	251.15	58		
	ROCKBOLTS 1" @ 9'	50	EACH	205.42	10		
	STEEL MESH	12,050	SF	3.00	36		
	STEEL SUPPORT	14	TON	6,022.00	84		
	PENSTOCK ACCESS TUNNEL						
	ROCKBOLTS 1" @ 12'	1,430	EACH	251.15	359		
	ROCKBOLTS 1" @ 9'	240	EACH	205.42	49		
	STEEL MESH	77,500	SF	3.00	233		
	STEEL SUPPORT	58	TON	6,022.00	349		
	PENSTOCK ELBOW ACCESS TUNNEL						
	ROCKBOLTS 1" @ 12'	420	EACH	251.15	105		
	ROCKBOLTS 1" @ 9'	120	EACH	205.42	25		
	STEEL MESH	22,500	SF	3.00	68		
	STEEL SUPPORT	30	TON	6,022.00	181		
	ACCESS SHAFT TUNNEL						
	ROCKBOLTS 1" @ 12'	20	EACH	251.15	5		
	ROCKBOLTS 1" @ 9'	20	EACH	205.42	4		
	STEEL MESH	930	SF	3.00	3		

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				\$	\$ 1,000's	\$ 1,000's	
	STEEL SUPPORT	8	TON	6,022.00	48		
	CONNECTOR TUNNEL						
	ROCKBOLTS 3/4" @ 6'	160	EACH	155.56	25		
	STEEL MESH	160	SF	3.00	0		
	STEEL SUPPORT	2	TON	6,022.00	12		
					2,973		
.129	ARCHITECTURAL MAIN PORTAL DOORS	2	SETS	71,349.51	143		
					143		
.12C	MECHANICAL VENTILATING SYSTEM (INCL IN 63.81 & 63.82)				0		
					20,288		
.13	ACCESS SHAFT						
.131	EXCAVATION ROCK	13,700	CY	117.38	1,608		
					1,608		
.133	SURFACE PREPARATION SHAFT	64,000	SF	1.51	97		
					97		
.134	CONCRETE & SHOTCRETE CONCRETE LINING	3,350	CY	442.47	1,482		
	CONCRETE OVERBREAK 6"	1,220	CY	258.43	315		
					1,798		
.135	SUPPORT & ANCHORS ROCKBOLTS 3/4" @ 6'	1,050	EACH	155.56	163		
					163		
.138	STRUCTURAL - MISC STEELWORK MISCELLANEOUS STEELWORK	50	TON	3,480.78	174		
					174		

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				\$	\$ 1,000's	\$ 1,000's	
.139	ARCHITECTURAL CONTROL BUILDING (INCL IN 331.2 CONT BLDG)				----- 0		
.13C	MECHANICAL ELEVATORS	1	LS	1,012,380.00	1,012	----- 1,012 =====	
					4,852		
.14	FIRE PROTECTION HEADTANK						
.141	EXCAVATION ROCK	1,150	CY	286.17	329	----- 329	
.143	SURFACE PREPARATION HEADTANK	2,800	SF	1.03	3	----- 3	
.144	CONCRETE & SHOTCRETE CONCRETE CONC OVERBREAK 6" REINFORCING STEEL	250 45 10	CY CY TON	454.56 190.88 1,356.17	114 9 14	----- 136	
.145	SUPPORT & ANCHORS ROCKBOLTS 1" @ 12' ROCKBOLTS 1" @ 9' STEEL MESH STEEL SUPPORT	25 10 1,200 2	EACH EACH SF TON	251.15 205.42 3.00 6,022.00	6 2 4 12	----- 24	
.148	STRUCTURAL - MISC STEELWORK MISCELLANEOUS STEELWORK	1	LS	22,030.14	22	----- 22	
.14C	MECHANICAL PIPING/VALVES - (INCL IN 335.12)				----- 0 =====	514	

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				\$	\$ 1,000's	\$ 1,000's	
.15	BUS TUNNELS (TOTALS FOR 3 BUS TUNNELS)						
.151	EXCAVATION						
	ROCK HORIZONTAL	2,700	CY	110.20	298		
	ROCK INCLINED	1,300	CY	310.10	403		
					701		
.153	SURFACE PREPARATION TUNNELS	7,100	SF	1.51	11		
					11		
.154	CONCRETE & SHOTCRETE						
	CONCRETE SLAB	350	CY	385.37	135		
	CONCRETE OVERBREAK 12"	250	CY	222.43	56		
	REINFORCING STEEL	18	TON	1,356.17	24		
	2" SHOTCRETE	2,200	SF	2.48	5		
					220		
.155	SUPPORT & ANCHORS						
	ROCKBOLTS 1" @ 25'	60	EACH	586.70	35		
	ROCKBOLTS 1" @ 12'	140	EACH	251.15	35		
	ROCKBOLTS 1" @ 9'	50	EACH	205.42	10		
	STEEL MESH	6,800	SF	3.00	20		
	STEEL SUPPORT	11	TON	6,022.00	66		
					167		
					=====		
					1,099		
.16	TRANSFORMER GALLERY						
.161	EXCAVATION ROCK	26,800	CY	42.37	1,136		
					1,136		
.163	SURFACE PREPARATION TRANSFORMER GALLERY	24,600	SF	1.03	25		
					25		
.164	CONCRETE & SHOTCRETE						
	CONCRETE BASE SLAB	2,400	CY	578.61	1,389		
	CONCRETE OVERBREAK 12"H/6"V	770	CY	177.57	137		

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				\$	\$ 1,000's	\$ 1,000's	
	REINFORCING STEEL	120	TON	1,356.17	163		
					1,688		
.165	SUPPORT & ANCHORS						
	ROCKBOLTS 1" @ 25' HY	600	EACH	586.70	352		
	ROCKBOLTS 1" @ 15'	270	EACH	349.84	94		
	STEEL MESH	20,700	SF	2.77	57		
	STEEL SUPPORT	29	TON	6,022.00	175		
					678		
.167	DRAINAGE						
	HOLES (IN GALLERY CROWN)	8,300	LF	23.36	194		
					194		
					3,721		
.17	CABLE SHAFTS						
	(TOTALS FOR 2 SHAFTS)						
.171	EXCAVATION						
	ROCK	3,400	CY	310.10	1,054		
					1,054		
.173	SURFACE PREPARATION						
	SHAFTS	41,400	SF	1.51	63		
					63		
.174	CONCRETE & SHOTCRETE						
	CONCRETE LINING	1,040	CY	824.91	858		
	CONCRETE OVERBREAK 6"	900	CY	413.10	330		
					1,188		
.175	SUPPORT & ANCHORS						
	ROCKBOLTS 3/4" @ 6'	650	EACH	155.56	101		
					101		
.178	STRUCTURAL - MISC STEELWORK						
	MISCELLANEOUS STEELWORK	18	TON	7,343.38	132		
					132		

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				\$	\$ 1,000's	\$ 1,000's	
.179	ARCHITECTURAL ENCLOSURES	1	LS	85,260.58	85		
					85		
.17C	MECHANICAL MANHOIST	2	EACH	222,760.00	446		
					446		
					=====		
					3,069		
.18	DEWATERING (DURING CONSTRUCT.)						
.181	DEWATERING (POWER FACILITIES) DEWATERING	1	LS	567,465.00	567		
					567		
					=====		
					567		
.19	INSTRUMENTATION						
.191	INSTRUMENTATION INSTRUMENTATION	1	LS	728,299.00	728		
					728		
					=====		
					728		
.2	MISC. BUILDINGS & STRUCTURES CONTROL BUILDING	1	LS	1,896,326.00	1,896		
					=====		
					1,896		
.3	PERMANENT TOWN (INCLUDED IN 63.5)						
					=====		
					0		
						74,207	
CONTINGENCY		15.0	%			11,131	

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				\$	\$ 1,000's	\$ 1,000's	
332	RESERVOIR, DAMS & WATERWAYS						
.1	RESERVOIR						
.11	CLEARING						
	CLEARING	37,500	ACR	1,452.67	54,475		
					=====		
					54,475		
.2	DIVERSION TUNNELS/COFFERDAMS (BASED UPON ACCELERATED SCHED						ULE)
.21	DIVERSION TUNNELS/PORTALS - (INCL COMBINED TAILRACE/DIV- ERSION TUNNEL & PORTAL - SEE 332.9)						
.211	EXCAVATION						
	UPPER TUNNEL						
	ROCK	221,000	CY	54.62	12,071		
	LOWER TUNNEL						
	ROCK	208,000	CY	54.62	11,361		
	EXCAVATE CONCRETE FOR PLUG	700	CY	54.62	38		
	UPSTREAM UPPER PORTAL						
	ROCK USEABLE (FACE ONLY)	11,200	CY	32.81	367		
	UPSTREAM LOWER PORTAL (INCL MOST EXC FOR UPPER PORTAL)						
	ROCK USEABLE	108,000	CY	32.81	3,543		
	ROCK WASTE	21,750	CY	32.81	714		
	DOWNSTREAM PORTALS						
	OVERBURDEN	17,000	CY	8.82	150		
	ROCK USEABLE	120,000	CY	32.81	3,937		
	ROCK WASTE	28,000	CY	32.81	919		
	EMERGENCY RELEASE CHAMBERS						
	EXCAVATE CONCRETE FOR PLUGS	1,800	CY	52.36	94		
	GATE CHAMBER	4,700	CY	52.36	246		
	ACCESS TUNNEL TO GATE CHAMBER						
	ROCK	19,100	CY	52.36	1,000		

					34,441		
.212	FILL						
	TEMPORARY COFFERDAM TO CONSTRUCT UPSTREAM PORTALS	23,000	CY	5.79	133		

					133		

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				\$	\$ 1,000's	\$ 1,000's	
.213	SURFACE PREP/GROUTING						
	UPSTREAM UPPER PORTAL						
	HORIZONTAL	3,200	SF	1.07	3		
	INCLINED	8,600	SF	1.57	14		
	UPSTREAM LOWER PORTAL						
	HORIZONTAL	1,300	SF	1.07	1		
	INCLINED	14,900	SF	1.57	23		
	DOWNSTREAM UPPER PORTAL						
	HORIZONTAL	6,100	SF	1.07	7		
	INCLINED	20,500	SF	1.57	32		
	DOWNSTREAM LOWER PORTAL						
	HORIZONTAL	600	SF	1.07	1		
	INCLINED	5,600	SF	1.57	9		
	GROUT UPPER TUNNEL PLUGS						
	DRILL HOLES	4,100	LF	13.49	55		
	CEMENT	820	CF	38.89	32		
	GROUT LOWER TUN PERM PLUG						
	DRILL HOLES	2,050	LF	13.49	28		
	CEMENT	410	CF	38.89	16		

					221		
.214	CONCRETE & SHOTCRETE						
	UPPER TUNNEL						
	CONCRETE LINING	42,400	CY	282.30	11,970		
	CONC LINING OVERBREAK 6"	10,200	CY	157.77	1,609		
	REINFORCING STEEL	24	TON	1,423.49	34		
	2" SHOTCRETE	56,000	SF	2.62	147		
	LOWER TUNNEL						
	CONCRETE LINING	37,600	CY	282.30	10,614		
	CONCRETE FOR PLUG	6,200	CY	216.96	1,345		
	CONC LINING OVERBREAK 6"	10,000	CY	157.77	1,578		
	REINFORCING STEEL	24	TON	1,423.49	34		
	2" SHOTCRETE	57,900	SF	2.62	152		
	UPSTREAM UPPER PORTAL						
	CONCRETE HEADWALL	3,200	CY	318.70	1,020		
	CONCRETE LINING	1,300	CY	318.70	414		
	CONCRETE SLAB	750	CY	318.70	239		
	CONCRETE PIERS	800	CY	318.70	255		
	CONCRETE OVERBREAK 12"H/6"V	300	CY	231.30	69		
	REINFORCING STEEL	400	TON	1,387.35	555		
	UPSTREAM LOWER PORTAL						

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				\$	\$ 1,000's	\$ 1,000's	
	CONCRETE HEADWALL	4,500	CY	318.70	1,434		
	CONCRETE LINING	3,000	CY	318.70	956		
	CONCRETE SLAB	300	CY	318.70	96		
	CONCRETE PIERS	700	CY	318.70	223		
	CONCRETE OVERBREAK 12"H/6"V	350	CY	231.30	81		
	REINFORCING STEEL	600	TON	1,387.35	832		
	DOWNSTREAM UPPER PORTAL						
	CONCRETE HEADWALL	500	CY	318.70	159		
	CONCRETE SLAB	100	CY	318.70	32		
	CONCRETE OVERBREAK 12"H/6"V	100	CY	231.30	23		
	REINFORCING STEEL	40	TON	1,387.35	55		
	DOWNSTREAM LOWER PORTAL						
	CONCRETE HEADWALL	2,500	CY	318.70	797		
	CONCRETE SLAB	100	CY	318.70	32		
	CONCRETE OVERBREAK 12"H/6"V	150	CY	231.30	35		
	REINFORCING STEEL	170	TON	1,387.35	236		
	DOWNSTREAM FLIP BUCKET						
	CONCRETE SLAB	800	CY	318.70	255		
	CONCRETE WALLS	2,300	CY	318.70	733		
	CONCRETE INVERT	1,200	CY	318.70	382		
	CONCRETE OVERBREAK 12"H/6"V	410	CY	231.30	95		
	REINFORCING STEEL	280	TON	1,387.35	388		
	DOWNSTREAM RETAINING WALL						
	CONCRETE SLAB	200	CY	318.70	64		
	CONCRETE WALLS	2,000	CY	318.70	637		
	CONCRETE OVERBREAK 12"H/6"V	110	CY	231.30	25		
	REINFORCING STEEL	90	TON	1,387.35	125		
	EMERGENCY RELEASE CHAMBERS						
	CONCRETE PLUG	15,300	CY	385.29	5,895		
	4" SHOTCRETE	2,790	SF	5.03	14		
	ACCESS TUNNEL TO GATE CHAMBER						
	2" SHOTCRETE	12,800	SF	2.62	34		
					43,674		
.215	SUPPORT 3 ANCHORS						
	LOWER TUNNEL						
	ROCKBOLTS 1" @ 12'	3,650	EACH	278.41	1,016		
	ROCKBOLTS 1" @ 9'	620	EACH	227.80	141		
	STEEL MESH	217,100	SF	3.26	708		
	STEEL SUPPORT	220	TON	6,391.02	1,406		
	UPPER TUNNEL						

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				\$	\$ 1,000's	\$ 1,000's	
	ROCKBOLTS 1" @ 12'	3,530	EACH	278.41	983		
	ROCKBOLTS 1" @ 9'	600	EACH	227.80	137		
	STEEL MESH	210,200	SF	3.26	685		
	STEEL SUPPORT	213	TON	6,391.02	1,361		
	UPSTREAM LOWER PORTAL						
	ROCKBOLTS 1" @ 15'	240	EACH	366.92	88		
	ANCHORS 1" @ 25'	290	EACH	611.02	177		
	UPSTREAM UPPER PORTAL						
	ROCKBOLTS 1" @ 15'						
	(INCL IN LOWER PORTAL)						
	ANCHORS 1" @ 25'	130	EACH	611.02	79		
	DOWNSTREAM LOWER PORTAL						
	ROCKBOLTS 1" @ 15'	200	EACH	366.92	73		
	DOWNSTREAM UPPER PORTAL						
	ROCKBOLTS 1" @ 15'	100	EACH	366.92	37		
	RETAINING WALL -						
	ANCHORS - 1" @ 25'	100	EACH	611.02	61		
	EMERGENCY RELEASE CHAMBERS						
	ROCKBOLTS 1" @ 25' HY	100	EACH	622.54	62		
	ROCKBOLTS 1" @ 15' HY	125	EACH	374.97	47		
	STEEL MESH	3,600	SF	3.20	12		
	STEEL SUPPORT	14	TON	6,292.28	88		
	METAL ROOF ANCHORS 3/4" @ 6'	20	EACH	166.87	3		
	ACCESS TUNNEL TO GATE CHAMBER						
	ROCKBOLTS 1" @ 12'	775	EACH	268.77	208		
	ROCKBOLTS 1" @ 9'	240	EACH	219.89	53		
	STEEL MESH	39,900	SF	3.20	128		
	STEEL SUPPORT	55	TON	6,292.28	346		
					7,900		
.218	STRUCTURAL - MISC STEELWORK						
	SUSPENDED METAL ROOF						
	EMERGENCY RELEASE CHAMBERS	2,775	SF	47.11	131		
					131		
.21C	MECHANICAL						
	UPSTREAM LOWER GATES						
	GATE EQUIPMENT	2	EACH	2,371,556.00	4,743		
	UPSTREAM UPPER GATES						
	GATE EQUIPMENT	2	EACH	1,328,814.00	2,658		
	TRASHRACKS	1	LS	761,500.00	762		

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				\$	\$ 1,000's	\$ 1,000's	
	DOWNSTREAM LOWER OUTLET						
	STOPLOG GUIDES	1	LS	60,809.60	61		
	STOPLOGS INCLUDES FOLLOWER	1	LS	844,996.00	845		
	DOWNSTREAM UPPER OUTLET						
	STOPLOG GUIDES	1	LS	35,312.80	35		
	LOW LEVEL RELEASE						
	SLIDE GATES INCL STEEL LINER	9	EACH	1,552,338.00	13,971		

					23,074		
					=====		
					109,574		
.22	UPSTREAM COFFERDAM						
.221	EXCAVATION						
	OVERBURDEN REMOVAL	1,000	CY	6.05	6		

					6		
.222	FILL						
	ROCK FILL	38,400	CY	5.37	206		
	FINE FILTER	16,600	CY	17.02	283		
	COARSE FILTER	15,900	CY	14.85	236		
	ROCK SHELL	196,500	CY	5.16	1,014		
	CLOSURE DIKE	58,500	CY	5.37	314		
	RIP RAP	21,200	CY	12.08	256		

					2,309		
.223	CUTOFF						
	SLURRY WALL						
	EXCAVATION	4,850	CY	2.41	12		
	SLURRY WALL	43,600	SF	34.80	1,517		

					1,529		
.22D	DEWATERING						
	INITIAL DEWATERING	1	LS	2,538,616.00	2,539		
	DEWATERING MAINTENANCE	1	LS	10,215,697.00	10,216		

					12,754		
					=====		
					16,598		

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				\$	\$ 1,000's	\$ 1,000's	
.23	DOWNSTREAM COFFERDAM						
.231	EXCAVATION						
	OVERBURDEN	5,000	CY	6.05	30		
	ROCK	500	CY	5.16	3		
	REMOVAL OF COFFERDAM	14,500	CY	7.05	102		

					135		
.232	FILL						
	RIP RAP	1,800	CY	12.08	22		
	CLOSURE DIKE	15,200	CY	5.37	82		

					103		
.233	CUTOFF						
	SLURRY WALL						
	EXCAVATION	1,830	CY	2.41	4		
	SLURRY WALL	14,500	SF	34.80	574		

					579		
					=====		
					817		
.3	MAIN DAM						
.31	MAIN DAM						
.311	EXCAVATION						
	OVERBURDEN - ABOVE EL 1470	2,026,000	CY	5.83	11,812		
	OVERBURDEN-ALLUV-BELOW EL 1470	5,320,000	CY	5.58	29,686		
	ROCK USEABLE-ABOVE EL 1470	1,289,000	CY	21.84	28,152		
	ROCK USEABLE-BELOW EL 1470	478,000	CY	22.18	10,602		
	ROCK WASTE - ABOVE EL 1470	1,950,000	CY	21.84	42,588		
	ROCK WASTE - BELOW EL 1470	869,500	CY	25.43	22,111		

					144,950		
.312	FILL						
	RIP RAP (UPSTREAM)	1,547,000	CY	11.53	17,837		
	GRAVEL (UPSTREAM)	25,194,000	CY	9.92	249,924		
	COARSE FILTER (UPSTREAM)	1,646,000	CY	14.28	23,505		
	FINE FILTER (UPSTREAM)	2,011,000	CY	16.36	32,900		
	CORE (IMPERVIOUS)	8,254,000	CY	12.24	101,029		
	FINE FILTER (DOWNSTREAM)	2,253,000	CY	16.36	36,859		
	COARSE FILTER (DOWNSTREAM)	1,910,000	CY	14.28	27,275		
	SHELL - ROCK GRAVEL (D/S)	11,342,000	CY	9.25	104,914		

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				\$	\$ 1,000's	\$ 1,000's	
	SHELL-ROCK FR OTHER SOURCES	5,418,000	CY	4.99	27,036		
	COBBLES (DOWNSTREAM FACE)	2,003,000	CY	8.09	16,204		
	ROAD BASE	12,000	CY	16.36	196		
	FROST PROTECTION						
	PROCESS PROTECTION	960,000	CY	4.58	4,397		
	PLACE PROTECTION	960,000	CY	1.46	1,402		
	REMOVE 1' PROTECT & WASTE	93,000	CY	3.20	298		
	SCARIFY CORE SURFACE	193	ACRE	408.16	79		
	FILTER FABRIC						
	FILTER FABRIC	740,000	SF	0.39	289		

					644,142		
.313	SURFACE PREP/GROUTING						
	SURFACE PREPARATION						
	UNDER CORE/FILTERS						
	ABOVE ELEVATION 1500	1,675,000	SF	1.48	2,479		
	BELOW ELEVATION 1500	613,000	SF	1.48	907		
	UNDER SHELL						
	ABOVE ELEVATION 1500	5,186,000	SF	1.02	5,290		
	BELOW ELEVATION 1500	2,584,000	SF	1.02	2,636		
	CONSOLIDATION GROUT						
	DRILL HOLES	687,000	LF	5.66	3,888		
	CEMENT	687,000	CF	31.55	21,675		
	GROUT CURTAIN						
	DRILL HOLES	465,000	LF	12.72	5,915		
	CEMENT	186,000	CF	37.63	6,999		
	DENTAL CONCRETE						
	DENTAL CONCRETE	85,000	CY	169.48	14,406		

					64,195		
.317	DRAINAGE						
	HOLES	136,000	LF	22.79	3,099		

					3,099		
					=====		
					856,387		
.32	GROUT GALLERIES/PORTALS						
.321	EXCAVATION						
	TUNNELS/SHAFTS - CORE AREA						
	ROCK HORIZONTAL	10,100	CY	204.28	2,063		

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				\$	\$ 1,000's	\$ 1,000's	
	ROCK INCLINED	11,300	CY	286.17	3,234		
	ROCK VERTICAL	2,000	CY	277.56	555		
	TUNNELS/SHAFTS - ACCESS						
	ROCK HORIZONTAL	13,000	CY	204.28	2,656		
	ROCK INCLINED	2,000	CY	286.17	572		
	PORTALS						
	OVERBURDEN	3,600	CY	8.82	32		
	ROCK	1,000	CY	25.26	25		

					9,137		
.323	SURFACE PREPARATION						
	PORTALS						
	HORIZONTAL	30	SF	1.03	0		
	INCLINED	200	SF	1.51	0		

					0		
.324	CONCRETE & SHOTCRETE						
	TUNNELS - CORE AREA						
	CONCRETE PLUGS	1,000	CY	201.23	201		
	CONCRETE SLAB	2,300	CY	445.69	1,025		
	CONCRETE OVERBREAK 6"	1,150	CY	356.56	410		
	REINFORCING STEEL	80	TON	1,356.17	108		
	2" SHOTCRETE	15,000	SF	2.48	37		
	TUNNELS - ACCESS						
	CONCRETE SLAB	1,600	CY	445.69	713		
	CONCRETE OVERBREAK 6"	800	CY	356.56	285		
	REINFORCING STEEL	60	TON	1,356.17	81		
	2" SHOTCRETE	5,400	SF	2.48	13		
	SHAFTS - CORE AREA						
	2" SHOTCRETE	5,000	SF	2.48	12		
	PORTALS (2 PORTALS)						
	CONCRETE	20	CY	191.02	4		
	REINFORCING STEEL	2	TON	1,356.17	3		

					2,894		
.325	SUPPORT & ANCHORS						
	TUNNELS - CORE AREA						
	ROCKBOLTS 3/4" @ 6'	1,800	EACH	155.54	280		
	STEEL MESH	3,000	SF	2.54	8		
	STEEL SUPPORT	20	TON	6,022.00	120		
	TUNNELS - ACCESS						

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				\$	\$ 1,000's	\$ 1,000's	
	ROCKBOLTS 3/4" @ 6'	1,200	EACH	155.56	187		
	STEEL MESH	1,100	SF	2.54	3		
	STEEL SUPPORT	20	TON	6,022.00	120		
	SHAFTS - CORE AREA						
	ROCKBOLTS 3/4" @ 6'	350	EACH	155.56	54		
	STEEL MESH	1,000	SF	2.54	3		
	PORTALS						
	ROCKBOLTS 1" @ 15'	30	EACH	349.84	10		

					785		
.329	ARCHITECTURAL						
	PORTAL DOORS	2	EACH	18,969.13	38		
	VENT SYS (INCL W/ 331.12C)						

					38		
					=====		
					12,855		
.33	INSTRUMENTATION						
.331	INSTRUMENTATION (DAH)						
	INSTRUMENTATION	1	LS	9,190,609.00	9,191		

					9,191		
					=====		
					9,191		
.4	RELICT CHANNEL						
.41	SHORE PROTECTION						
.411	EXCAVATION						
	OVERBURDEN STRIPPING-2' THK	2,200	CY	5.83	13		

					13		
.412	FILL						
	DUMP & SPREAD						
	FILTER MATERIAL - 2' LAYER	2,200	CY	14.18	31		
	ROCK SPALLS/RIP RAP-3' AVE	3,300	CY	4.99	16		
	SHORE PROTECTION						
	RIP RAP	24,000	CY	11.53	277		
	WASTE ROCK	24,000	CY	11.53	277		

					601		
					=====		
					614		

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				\$	\$ 1,000's	\$ 1,000's	
.42	CHANNEL FILTER BLANKET						
.421	FILL						
	COARSE FILTER	2,900,000	CY	16.75	48,575		
	FINE FILTER	2,180,000	CY	18.84	41,071		
	RIP RAP	182,000	CY	11.53	2,098		

					91,745		
.422	SURFACE PREPARATION						
	CLEARING & GRUBBING	460	ACRE	2,003.23	921		
	EXCAVATION	2,236,000	CY	7.53	16,837		

					17,759		
					=====		
					109,503		
.5	OUTLET FACILITIES						
.51	OUTLET FACILITIES - (INTAKE						
	CIVIL WORK INCL IN POWER IN-						
	TAKE - SEE 332.61 DISCHARGE						
	CIVIL WORK - SEE 332.52)						
.511	EXCAVATION						
	INLET (SEE 332.611)						
	OUTLET (SEE 332.521)						
	TUNNELS						
	ROCK HORIZONTAL	83,000	CY	53.17	4,413		
	ROCK INCLINED	9,000	CY	94.74	853		

					5,266		
.513	SURFACE PREP/GROUTING						
	SURFACE PREPARATION						
	INLET (SEE 332.613)						
	OUTLET (SEE 332.523)						
	TUNNELS	323,500	SF	1.03	333		
	CONTACT GROUTING	1	LS	246,476.00	246		

					580		
.514	CONCRETE & SHOTCRETE						
	INLET (SEE 332.614)						
	OUTLET (SEE 332.524)						
	TUNNELS						
	CONCRETE LINING	27,200	CY	445.69	12,123		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
	CONCRETE OVERBREAK 6"	6,200	CY	207.13	1,284		
	2" SHOTCRETE	12,000	SF	2.48	30		
	3" SHOTCRETE	19,400	SF	3.63	70		
					13,507		
.515	SUPPORT & ANCHORS						
	INLET (SEE 332.615)						
	OUTLET (SEE 332.525)						
	TUNNELS						
	ROCKBOLTS 1" @ 6'	2,400	EACH	155.56	373		
	STEEL MESH	94,500	SF	3.00	284		
					657		
.51C	MECHANICAL						
	INLET						
	TRASH RACKS/GUIDES	1	LS	657,636.00	658		
	GATE EQUIPMENT	2	EACH	1,554,932.00	3,110		
	STOPLOG GUIDES	2	SETS	95,874.00	192		
	OUTLET						
	FIXED CONE VALVES-6+1SPARE	1	LS	1,926,692.00	1,927		
	RING FOLLOWER GATES	6	EACH	873,350.00	5,240		
	STEEL MANIFOLD LINER	1,950	TON	4,167.36	8,126		
	MISC MECHANICAL EQUIPMENT	1	LS	405,980.00	406		
	MISC ELECTRICAL SYSTEMS	1	LS	100,920.00	101		
					19,759		
					39,769		
.52	MAIN (CHUTE) SPILLWAY (INCLUDES						
	CIVIL WORKS FOR OUTLET FACILI-						
	TIES - SEE 332.51)						
.521	EXCAVATION						
	APPROACH						
	OVERBURDEN	64,000	CY	7.51	481		
	ROCK USEABLE	318,500	CY	18.28	5,822		
	ROCK WASTE	64,000	CY	18.28	1,170		
	CONTROL STRUCTURE						
	(TO END OF ROLLWAY)						
	OVERBURDEN	8,500	CY	7.51	64		
	ROCK WASTE	18,500	CY	16.88	312		

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				\$	\$ 1,000's	\$ 1,000's	
	ROCK USEABLE (INCLINED)	37,500	CY	18.86	707		
	ROCK USEABLE (VERTICAL)	76,500	CY	18.86	1,443		
	UPPER CHUTE						
	(END ROLLWAY TO STA 11+00)						
	OVERBURDEN	104,500	CY	7.51	785		
	ROCK WASTE	77,500	CY	18.28	1,417		
	ROCK USEABLE (INCLINED)	215,000	CY	23.33	5,016		
	ROCK USEABLE (VERTICAL)	134,000	CY	23.33	3,126		
	LOWER CHUTE						
	(STATION 11+00 TO 17+00)						
	OVERBURDEN	79,500	CY	7.51	597		
	ROCK WASTE	43,500	CY	15.07	656		
	ROCK USEABLE (INCLINED)	107,500	CY	20.13	2,164		
	ROCK USEABLE (VERTICAL)	45,000	CY	20.13	906		
	VALVE BLOCK/FLIP & OUTFALL						
	(FROM STA 17+00 TO END FLIP)						
	OVERBURDEN	52,000	CY	7.51	391		
	ROCK WASTE	71,000	CY	15.07	1,070		
	ROCK USEABLE (INCLINED)	316,000	CY	20.13	6,361		
	ROCK USEABLE (VERTICAL)	58,000	CY	20.13	1,168		
	DRAIN TUNNEL						
	ROCK HORIZONTAL	4,500	CY	200.55	902		
	ROCK INCLINED	3,000	CY	280.58	842		
	RIVER CHANNEL						
	ALLUVIUM EXCAVATION	1,060,000	CY	6.06	6,424		

					41,822		
.522	FILL						
	GRANULAR BACKFILL	5,000	CY	9.25	46		
	IMPERVIOUS	1,000	CY	12.24	12		

					58		
.523	SURFACE PREP/GROUTING						
	FOUNDATION PREP						
	SPILLWAY						
	ROCK HORIZONTAL	240,000	SF	1.02	245		
	ROCK INCLINED	166,000	SF	1.48	246		
	CONSOLIDATION GROUTING						
	DRILL HOLES	54,000	LF	5.66	306		
	CEMENT	54,000	CF	31.55	1,704		
	GROUT CURTAIN(SEE 332.313)				-----		
					2,500		

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				\$	\$ 1,000's	\$ 1,000's	
.524	CONCRETE & SHOTCRETE						
	CONCRETE APPROACH & STRUCTURE						
	CONCRETE OUTERWALLS	20,500	CY	204.55	4,193		
	CONCRETE PIERS (FULL LENGTH)	8,000	CY	204.55	1,636		
	CONCRETE DECK	1,600	CY	204.55	327		
	CONCRETE ROLLWAY SLABS	19,500	CY	204.55	3,989		
	CONCRETE OVERBREAK 12"H/6"V	1,300	CY	160.82	209		
	REINFORCING STEEL	2,700	TON	1,343.12	3,626		
	CONCRETE CHUTE (INCL BOX DRAIN GALLERIES) (FROM END OF ROLLWAY)						
	CONCRETE SLAB	22,000	CY	204.55	4,500		
	CONCRETE WALLS	10,500	CY	219.31	2,303		
	CONC OVERBREAK 18"H/6"V	11,000	CY	146.22	1,608		
	REINFORCING STEEL	1,300	TON	1,343.12	1,746		
	CONCRETE VALVE BLOCK/FLIP - & OUTFALL						
	CONCRETE BLOCK/BUCKET	29,500	CY	204.55	6,034		
	CONCRETE OUTFALL LINING	2,500	CY	204.55	511		
	CONC OVERBREAK 12"H/6"V	2,400	CY	146.22	351		
	REINFORCING STEEL	1,300	TON	1,343.12	1,746		
	CONCRETE DRAIN GALLERY						
	CONCRETE SLAB	1,000	CY	437.33	437		
	REINFORCING STEEL	30	TON	1,343.12	40		
	CONCRETE OVERBREAK 6"	500	CY	262.54	131		
	2" SHOTCRETE DOME	5,000	SF	2.45	12		
					33,402		
.525	SUPPORT & ANCHORS						
	DRAINAGE TUNNEL						
	STEEL SUPPORT	7	TON	5,945.15	42		
	STEEL MESH	1,000	SF	2.71	3		
	ROCKBOLTS DRAINAGE GALLERY						
	3/4" @ 6'	576	EACH	152.31	88		
	ROCKBOLTS APPROACH						
	1" @ 15'	275	EACH	342.66	94		
	ROCKBOLTS CHUTE & STRUCTURE						
	1" @ 15'	112	EACH	342.66	38		
	ROCKBOLTS VALVE BLOCK/BUCKET						
	1" @ 15'	46	EACH	342.66	16		
	SLAB/WALL ANCHORS						

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				\$	\$ 1,000's	\$ 1,000's	
	1" @ 10'	9,300	EACH	219.21	2,039		

					2,319		
.527	DRAINAGE						
	DRILL HOLES						
	BOX DRAINS (TO DRAIN TUNNEL)	54,000	LF	22.79	1,231		
	3' RELIEF	640	LF	22.79	15		

					1,245		
.52C	MECHANICAL						
	GATE EQUIPMENT	3	EACH	1,986,950.00	5,961		
	STOPLOG GUIDES	3	SETS	41,265.13	124		
	STOPLOGS INCLUDES FOLLOWER	1	SET	427,268.00	427		
	MISC ELECTRICAL	1	LS	100,920.00	101		

					6,613		
					=====		
					87,960		
.53	EMERGENCY SPILLWAY						
.531	EXCAVATION						
	(INCLUDING BRIDGE & FUSE PLUG)						
	OVERBURDEN	4,440,000	CY	3.32	14,741		
	ROCK USEABLE	2,893,000	CY	18.97	54,880		
	ROCK WASTE	543,000	CY	18.60	10,100		

					79,721		
.532	FILL						
	FUSE PLUG	29,400	CY	9.25	272		

					272		
.533	SURFACE PREP/GROUTING						
	SURFACE PREPARATION						
	(UNDER FUSE PLUG)						
	INCLINED	5,200	SF	1.48	8		
	HORIZONTAL	46,100	SF	1.02	47		
	CONSOLIDATION GROUTING						
	DRILL HOLES	15,400	LF	5.66	87		
	CEMENT	15,400	CF	31.55	486		

					628		

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				\$	\$ 1,000's	\$ 1,000's	
.535	SUPPORT & ANCHORS ROCKBOLTS 1" @ 15'	730	EACH	342.66	250	250	
.538	BRIDGE BRIDGE	1	LS	1,833,337.00	1,833	1,833	
					82,704		
.6	POWER INTAKE (INCL INLET EXC & INLET STRUCT CIVIL WORKS FOR OUTLET FACILITIES-SEE 332.51)						
.61	INTAKE STRUCT & APPROACH						
.611	EXCAVATION						
	OVERBURDEN	574,000	CY	7.51	4,311		
	ROCK USEABLE	1,274,000	CY	20.44	26,041		
	ROCK WASTE	134,000	CY	20.44	2,739		
					33,090		
.613	SURFACE PREPARATION						
	HORIZONTAL	30,200	SF	1.02	31		
	INCLINED	96,200	SF	1.48	142		
					173		
.614	CONCRETE & SHOTCRETE STRUCTURE						
	CONCRETE STRUCTURE	117,700	CY	252.71	29,744		
	CONCRETE OVERBREAK 12"H/6"V	2,900	CY	156.47	454		
	REINFORCING STEEL	7,650	TON	1,343.12	10,275		
					40,473		
.615	SUPPORT & ANCHORS STRUCTURE						
	ROCKBOLTS 1" @ 15'	330	EACH	342.66	113		
					113		
.61C	MECHANICAL						
	TRASHRACKS/GUIDES	6	SETS	485,566.00	2,913		
	GATE EQUIPMENT	6	EACH	971,836.00	5,831		

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				\$	\$ 1,000's	\$ 1,000's	
	BULKHEAD GATE GUIDES	6	SETS	100,613.00	604		
	BULKHEAD GATES INCL FOLLOWER	1	SET	315,060.00	315		
	SHUTTER WITH GUIDES	6	SETS	324,048.00	1,944		
	ICE ROOM WITH HOIST	6	SETS	558,648.00	3,352		
	ICE ROOM GUIDES	6	SETS	252,237.00	1,513		
	INTAKE SERVICE CRANE	1	EACH	354,784.00	355		
	BUBBLER SYSTEM	1	LS	403,864.00	404		
	MISCELLANEOUS ELECTRICAL	1	LS	100,828.00	101		

					17,332		
.610	INTAKE BUILDING						
	INTAKE BUILDING	1	LS	101,288.00	101		

					101		
					=====		
					91,283		
.7	SURGE CHAMBER						
.71	SURGE CHAMBER						
.711	EXCAVATION						
	CHAMBER ROCK	101,000	CY	46.43	4,689		
	VENT SHAFT ROCK	2,200	CY	310.10	682		

					5,372		
.713	SURFACE PREPARATION						
	SURFACE PREPARATION	29,700	SF	1.03	31		

					31		
.714	CONCRETE & SHOTCRETE						
	CHAMBER						
	CONCRETE	6,000	CY	241.67	1,450		
	CONCRETE OVERBREAK	1,000	CY	207.41	207		
	REINFORCING STEEL	300	TON	1,356.17	407		
	4" SHOTCRETE	38,400	SF	4.77	183		
	VENT SHAFT						
	2" SHOTCRETE	5,900	SF	2.48	15		

					2,262		
.715	SUPPORT & ANCHORS						
	CHAMBER						
	ROCKBOLTS 1" @ 25' HY	570	EACH	586.70	334		

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				\$	\$ 1,000's	\$ 1,000's	
	ROCKBOLTS 1" @ 15'	2,110	EACH	349.84	738		
	STEEL MESH	28,900	SF	2.77	80		
	STEEL SUPPORT	66	TON	6,022.00	397		
	VENT SHAFT						
	ROCKBOLTS 3/4" @ 6'	370	EACH	155.56	58		
	STEEL MESH	1,200	SF	3.00	4		

					1,611		
.717	DRAINAGE						
	HOLES (IN CHAMBER CROWN)	15,500	LF	23.37	362		

					362		
.71C	MECHANICAL						
	STOPLOG GUIDES	2	SETS	317,576.00	635		
	STOPLOG INCLUDES FOLLOWER	1	SET	1,605,944.00	1,606		

					2,241		
					=====		
					11,879		
.8	PENSTOCKS						
.81	PENSTOCKS						
.811	EXCAVATION						
	TUNNELS						
	ROCK HORIZONTAL	53,400	CY	74.81	3,995		
	ROCK INCLINED	54,000	CY	147.96	7,990		

					11,985		
.813	SURFACE PREP/GROUTING						
	SURFACE PREPARATION						
	TUNNELS	378,000	SF	1.51	571		
	CONTACT GROUTING						
	CONTACT GROUTING	1	LS	247,649.00	248		
	CONSOLIDATION GROUTING						
	CONSOLIDATION GROUTING	1	LS	343,898.00	344		

					1,162		
.814	CONCRETE & SHOTCRETE						
	CONCRETE LINER	37,200	CY	455.02	16,927		
	CONCRETE OVERBREAK 6"	10,600	CY	325.83	3,454		
	REINFORCING STEEL	27	TON	1,356.17	37		

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				\$	\$ 1,000's	\$ 1,000's	
	3" SHOTCRETE	34,000	SF	3.63	123		
	2" SHOTCRETE	20,800	SF	2.48	52		

					20,592		
.815	SUPPORT & ANCHORS						
	ROCKBOLTS 1" @ 25'	150	EACH	586.70	88		
	ROCKBOLTS 1" @ 6'	4,200	EACH	155.56	653		
	STEEL MESH	193,000	SF	3.03	585		

					1,326		
.818	STRUCTURAL - MISC STEELWORK						
	STEEL LINER	2,400	TON	4,548.77	10,917		

					10,917		
					=====		
					45,982		
.9	TAILRACE WORKS (1 PORTAL WITH COMBINED TAILRACE/DIVERSION TUNNEL INCLUDED IN DIVERSION WORKS 332.21)						
.91	TAILRACE TUNNELS/PORTALS						
.911	EXCAVATION TUNNELS						
	ROCK	135,000	CY	53.17	7,178		
	PORTALS						
	OVERBURDEN	3,200	CY	8.66	28		
	ROCK USEABLE	46,000	CY	25.00	1,150		
	ROCK WASTE	14,500	CY	25.00	363		

					8,718		
.913	SURFACE PREPARATION TUNNELS						
	TUNNELS	266,000	SF	1.51	402		
	PORTALS						
	HORIZONTAL	600	SF	1.02	1		
	INCLINED	6,000	SF	1.48	9		

					411		
.914	CONCRETE & SHOTCRETE TUNNELS						

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				\$	\$ 1,000's	\$ 1,000's	
	CONCRETE LINING	14,500	CY	207.15	3,004		
	CONCRETE OVERBREAK 6"	7,500	CY	147.77	1,108		
	2" SHOTCRETE	45,600	SF	2.48	113		
	REINFORCING STEEL	22	TON	1,356.17	30		
	PORTALS						
	CONCRETE BASE SLAB	100	CY	301.85	30		
	CONCRETE WALLS	2,900	CY	301.85	875		
	CONCRETE OVERBREAK 12"H/6"V	110	CY	218.69	24		
	REINFORCING STEEL	195	TON	1,343.12	262		
					5,446		
.915	SUPPORT & ANCHORS						
	TUNNELS						
	ROCKBOLTS 1" @ 12'	2,750	EACH	251.15	691		
	ROCKBOLTS 1" @ 9'	480	EACH	205.42	99		
	STEEL SUPPORT	132	TONS	6,022.00	795		
	STEEL MESH	133,000	SF	3.00	399		
	PORTALS						
	ROCKBOLTS 1" @ 15'	110	EACH	342.66	38		
					2,021		
.91C	MECHANICAL						
	STOPLOG GUIDES	1	SET	50,368.00	50		
	STOPLOGS INCLUDES FOLLOWER	1	SET	609,200.00	609		
					660		
					17,256		
						1,546,847	
	CONTINGENCY	15.0 %				232,027	
333	WATERWHEELS, TURBINES & GENERATORS						
.11	TURBINES & GOVERNORS						
.111	SUPPLY	6	EACH	3,971,760.00	23,831		
.112	INSTALL	6	EACH	1,200,313.00	7,202		
.2	GENERATORS & EXCITERS						
.21	GENERATORS & EXCITERS (SUPPLY & INSTALL)						
.211	GENERATORS & EXCITERS	6	EACH	5,798,671.00	34,792		
					34,792		
						65,824	
	CONTINGENCY	10.0 %				6,582	

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				\$	\$ 1,000's	\$ 1,000's	
334	ACCESSORY ELECTRICAL EQUIPMENT						
.1	CONNECTIONS, SUPPORTS & STRUCT.						
.11	STRUCTURES						
.111	STRUCT (INCL BELOW)						
.12	CONDUCTORS & INSULATORS						
.121	GEN ISOLATED PHASE BUS	1	LS	3,246,000.00	3,246		
.122	HV POWER CABLES & ACCESS.	1	LS	1,314,352.00	1,314		
.123	LV POWER CABLES & ACCESS.	1	LS	606,164.00	606		
.124	CONTROL CABLES & ACCESS.	1	LS	1,110,488.00	1,110		
.125	GROUNDING SYSTEM	1	LS	151,564.00	152		
.13	CONDUITS & FITTINGS						
.131	CONDUITS & FITTINGS	1	LS	403,680.00	404		
					=====		
					6,832		
.2	SWITCHGEAR & CONTROL EQUIPMENT						
.21	AUXILIARY TRANSFORMERS						
.211	AUXILIARY TRANSFORMERS	4	EACH	39,579.60	158		
.22	CIRCUIT BREAKERS GEN						
.221	CIRCUIT BREAKERS GEN	6	EACH	709,507.00	4,257		
.23	SURGE PROT & GEN CUBICLES						
.231	SURGE PROT & GEN CUBICLES	1	LS	466,808.00	467		
.24	SWITCHBOARDS						
.241	SWITCHBOARDS	1	LS	792,236.00	792		
.25	AUX. POWER EQPT-INCL BAT						
.251	AUX. POWER EQUIPMENT	1	LS	223,183.00	223		
					=====		
					5,898		
.3	CUBICLES & APPURTENANCES						
.31	CONTROL, RELAY & METER BRDS						
.311	CONTROL, RELAY & METER BOARDS	1	LS	908,648.00	909		
.32	COMPUTER CONTROL SYSTEM						
.321	COMPUTER CONTROL SYSTEM (INCLUDED IN TRANS-EMS)						
.33	SUPERVIS. & TELEMETER SYS						
.331	SUPERVIS & TELEMETER SYS (INCLUDED IN TRANS-EMS)						
					=====		
					909		

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				\$	\$ 1,000's	\$ 1,000's	
.4	POWER TRANSFORMERS						
.41	POWER TRANSFORMERS						
.411	POWER TRANSFORMERS	10	EACH	497,360.00	4,974		
					=====		
					4,974		
.5	LIGHTING SYSTEM						
.51	POWERHOUSE & TRANS. GALLERY						
.511	POWERHOUSE & TRANS. GALLERY	1	LS	779,384.00	779		
.52	ACCESS TUNNELS & ROADS						
.521	ACCESS TUNNELS & ROADS	1	LS	171,748.00	172		
					=====		
					951		
.6	MISC. ELECTRICAL EQUIPMENT						
.61	MISC. ELECTRICAL EQUIPMENT						
.611	MISC. ELECTRICAL EQUIPMENT	1	LS	334,416.00	334		
					=====		
					334		
.7	SURFACE ACCESSORY ELEC EQPT						
.71	34.5 KV & LV EQUIPMENT						
.711	SWITCHBOARD	1	LS	91,288.00	91		
.712	CABLES	1	LS	191,840.00	192		
.713	AUX TRANSFORMERS	1	LS	121,840.00	122		
.73	DIESEL GENERATORS - STANDBY						
.731	DIESEL GENERATORS - STANDBY	2	EACH	152,300.00	305		
.74	EXTERIOR LIGHTING						
.741	EXTERIOR LIGHTING	1	LS	151,472.00	151		
.75	MINIC BOARD - CONTROL BLDG						
.751	MINIC BOARD - CONTROL BLDG	1	LS	504,048.00	504		
					=====		
					1,365		
						21,263	
	CONTINGENCY	10.0 %				2,126	
335	MISCS. POWERPLANT EQUIPMENT						

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				\$	\$ 1,000's	\$ 1,000's	
.1	AUXILIARY SYSTEMS - UNDERGROUND						
.11	STATION WATER SYSTEMS						
.111	STATION WATER SYSTEMS	1	LS	2,120,884.00	2,121		
.12	FIRE PROTECTION SYSTEMS						
.121	FIRE PROTECTION SYSTEMS	1	LS	1,212,420.00	1,212		
.13	COMPRESSED AIR SYSTEMS						
.131	COMPRESSED AIR SYSTEMS	1	LS	1,515,824.00	1,516		
.14	OIL HANDLING SYSTEMS						
.141	OIL HANDLING SYSTEMS	1	LS	1,011,224.00	1,011		
.15	DRAINAGE & DEWATERING						
.151	DRAINAGE & DEWATERING	1	LS	2,220,884.00	2,221		
.16	HEAT, VENT. & COOLING SYS.						
.161	HEAT, VENT. & COOLING SYS.	1	LS	1,522,632.00	1,523		
.17	MISCELLANEOUS						
.171	MISCELLANEOUS	1	LS	1,011,040.00	1,011		
					=====		
					10,615		
.2	AUXILIARY SYS - SURFACE FACS						
.21	AUX SYS - SURFACE FACS						
.211	AUX SYS - SURFACE FACS	1	LS	303,220.00	303		
					=====		
					303		
.3	AUXILIARY EQUIPMENT						
.31	POWERHOUSE CRANES						
.311	POWERHOUSE CRANES	2	EACH	912,420.00	1,825		
.32	ELEVATORS						
.321	ELEVATORS	1	LS	232,484.00	232		
.33	MISC. CRANES & HOIST						
.331	MISC. CRANES & HOIST	1	LS	152,208.00	152		
.34	MACHINE SHOP EQUIPMENT						
.341	MACHINE SHOP EQUIPMENT	1	LS	609,016.00	609		
					=====		
					2,819		
.4	GENERAL STATION EQUIPMENT						
	(INCLUDED IN MECHANICAL						
	& ELECTRICAL SYSTEMS)						
	GENERAL STATION EQUIPMENT	1	LS	0.00	0		
					=====		
					0		

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				\$	\$ 1,000's	\$ 1,000's	
.5	COMMUNICATIONS EQUIPMENT						
	COMMUNICATIONS EQUIPMENT	1	LS	91,159.20	91		
					=====		
					91		
						13,828	
	CONTINGENCY	10.0	%			1,383	
336	ROADS, RAIL & AIR FACILITIES						
.11	PERMANENT ACCESS ROADS						
.111	UPGRADING DENALI HWY (23 MILES)						
	(PRICES BASED ON ACCELERATED SCHEDULE)						
	CLEARING	17	ACRE	6,454.81	110		
	WASTE EXCAVATION	72,300	CY	5.43	393		
	COMMON EXCAVATION	289,000	CY	4.75	1,373		
	BORROW	22,000	CY	6.79	149		
	NFS SUBBASE MATERIAL	15,000	CY	9.52	143		
	GRADE "A" BASE MATERIAL	55,900	CY	19.00	1,062		
	D-1 BASE MATERIAL	64,200	TON	24.43	1,568		
	AC SURFACING	15,500	TON	82.81	1,284		
	GUARDRAIL	3,300	LF	45.63	151		
	18" CULVERTS	4,400	LF	31.33	138		
	36" + CULVERTS	1	LS	53,669.53	54		
	THAW PIPES	110	LF	46.99	5		
	TOPSOIL & SEED	11	ACRE	3,793.91	42		
	TRAFFIC CONTROL DEVICES	23	MILE	19,126.41	440		
	BRIDGES	1,900	SF	188.54	358		

					7,268		
	MAINTENANCE						
	MAINTENANCE	184	MI/YRS	10,000.36	1,840		

					1,840		
.112	DENALI HIGHWAY TO WATANA(42 MI)						
	(PRICES BASED ON ACCELERATED SCHEDULE)						
	CLEARING	850	ACRE	6,454.81	5,487		
	WASTE EXCAVATION	2,167,000	CY	5.43	11,767		
	COMMON EXCAVATION	2,087,400	CY	4.75	9,915		
	ROCK EXCAVATION	41,800	CY	15.84	662		
	NFS SUBBASE MATERIAL	613,000	CY	9.52	5,836		

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				\$	\$ 1,000's	\$ 1,000's	
	GRADE "A" BASE MATERIAL	238,000	CY	19.00	4,522		
	D-1 BASE MATERIAL	198,500	TON	24.43	4,849		
	GUARDRAIL	7,000	LF	45.63	319		
	18" CULVERTS	29,600	LF	31.33	927		
	36" CULVERTS	1	LS	398,560.00	399		
	FABRIC	19,950	SY	3.11	62		
	THAW PIPES	28,750	LF	46.99	1,351		
	TOPSOIL & SEED	500	ACRE	3,793.91	1,897		
	TRAFFIC CONTROL DEVICES	42	MILE	19,126.41	803		
					48,796		
	MAINTENANCE						
	MAINTENANCE	336	MI/YRS	9,000.00	3,024		
					3,024		
					60,929		
.12	SITE ROADS						
.121	CONSTRUCTION ROADS						
	SITE ROADS	20	MILE	4,234,292.00	84,686		
	MAINTENANCE	141	MI/YRS	90,285.78	12,730		
					97,416		
					97,416		
.13	PERMANENT ROADS						
.132	PERMANENT ROADS						
	PERMANENT ROADS	6	MILE	503,495.00	3,021		
					3,021		
					3,021		
.2	RAIL FACILITIES						
.21	RAILHEAD - CANTWELL						
(PRICES BASED ON ACCELERATED SCHEDULE)							
	RAILHEAD						
	CLEARING	25	ACRE	6,454.81	161		
	WASTE EXCAVATION	78,000	CY	5.43	424		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
	COMMON EXCAVATION	505,000	CY	4.75	2,399		
	GRADE "A" BASE MATERIAL	4,900	CY	19.00	93		
	D-1 BASE MATERIAL	2,400	TON	24.43	59		
	A.C. SURFACING	2,200	TON	82.81	182		
	TOPSOIL & SEED	15	ACRE	3,793.91	57		
	RAILYARD CONTROL DEVICES	1	LS	765.15	1		
	SUBBALLAST	25,800	CY	9.72	251		
	TRACKAGE	19,700	LF	148.31	2,922		
	DOCK LUMBER	16	MBF	590.67	9		

					6,557		
.22	STORAGE/HANDLING FACILITIES INSTALL	1	LS	6,199,700.00	6,200		
	FACILITIES OPERATE	1	LS	32,724,000.00	32,724		

					38,924		
					=====		
					45,481		
.3	AIRSTRIP						
.31	AIRSTRIP						
	PERMANENT AIRSTRIP	1	LS	5,992,018.00	5,992		
	TEMPORARY AIRSTRIP	1	LS	1,017,642.00	1,018		

					7,010		
					=====		
					7,010		
						213,857	
CONTINGENCY		20.0	%			42,771	
	TRANSMISSION PLANT						
350	LAND & LAND RIGHTS						
	LAND & LAND RIGHTS						
	TRANSMISSION	179	MILE	40,000.00	7,160		
	SUBSTATIONS (4 SITES)	1	LS	1,100,000.00	1,100		
					=====		
					8,260		
						8,260	
CONTINGENCY		20.0	%			1,652	

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				\$	\$ 1,000's	\$ 1,000's	
352	SUBSTATION & SWITCHING STATION SUBSTATION & SWITCHING STATION STRUCTURES & IMPROVEMENTS						
.1	SWITCHYARD						
.11	SWITCHYARD	1	LS	11,730,688.00	11,731		

					11,731		
					=====		
					11,731		
						11,731 ^x	
	CONTINGENCY	15.0	%			1,760 ^x	
353	SUBSTATION/SWITCHING STATION EQPT SUBSTATION/SWITCHING STATION EQPT						
	ESTER	1	LS	24,822,260.00	24,822		
	WILLOW	1	LS	15,484,464.00	15,484		
	KNIK ARM	1	LS	12,786,880.00	12,787		
	UNIVERSITY	1	LS	38,005,120.00	38,005		
	DEVIL CANYON	1	LS	15,249,600.00	15,250		
					=====		
					106,348		
	WILLOW ENERGY MNGHT SYS (EMS)						
	EQUIPMENT & SYSTEM COSTS	1	LS	11,679,224.00	11,679		
	MICROWAVE COMMUNICATION EQPT	1	LS	4,959,376.00	4,959		
	EMS CONTROL CENTER BUILDING	1	LS	3,898,824.00	3,899		
	WATANA & DEVIL CAN IN-						
	PLANT MONITOR & CONTROL EQPT	1	LS	3,679,504.00	3,680		
					=====		
					24,217		
						130,565	
	CONTINGENCY	15.0	%			19,585	
354	STEEL TOWERS & FIXTURES						

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				\$	\$ 1,000's	\$ 1,000's	
	STEEL TOWERS & FIXTURES TOWERS (INCLUDING FOUNDATION & HARDWARE)	2,447	EACH	53,680.15	131,355 =====	131,355	
						131,355	
	CONTINGENCY	15.0	%			19,703	
356	CONDUCTORS & DEVICES CONDUCTORS & DEVICES CONDUCTORS SUBMARINE CABLES	556 6	MILE EACH	100,832.00 7,368,317.00	56,063 44,210 =====		
					100,273		
						100,273	
	CONTINGENCY	15.0	%			15,041	
359	ROADS & TRAILS ROADS & TRAILS ROADS & TRAILS CLEARING & ROADS	200 340	MILE MILE	36,145.36 18,072.68	7,229 6,145 =====		
					13,374		
						13,374	
	CONTINGENCY	20.0	%			2,675	
	GENERAL PLANT						
389	LAND & LAND RIGHTS LAND & LAND RIGHTS (INCLUDED IN 330)				=====		
					0		
						0	

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				\$	\$ 1,000's	\$ 1,000's	
390	STRUCTURES & IMPROVEMENTS STRUCTURES & IMPROVEMENTS (INCLUDED IN 331.2)				=====		
					0	0	
391	OFFICE FURNITURE/EQUIPMENT OFFICE FURNITURE/EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
392	TRANSPORTATION EQUIPMENT TRANSPORTATION EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
393	STORES EQUIPMENT STORES EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
394	TOOLS SHOP & GARAGE EQUIPMENT TOOLS SHOP & GARAGE EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	

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				\$	\$ 1,000's	\$ 1,000's	
395	LABORATORY EQUIPMENT LABORATORY EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
396	POWER OPERATED EQUIPMENT POWER OPERATED EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
397	COMMUNICATIONS EQUIPMENT COMMUNICATIONS EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
398	MISCELLANEOUS EQUIPMENT MISCELLANEOUS EQUIPMENT (INCLUDED IN 399)				=====		
					0	0	
399	OTHER TANGIBLE PROPERTY OTHER TANGIBLE PROPERTY OTHER TANGIBLE PROPERTY	1	LS	5,092,000.00	5,092 =====	5,092	
						5,092	

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					\$	\$ 1,000's	\$ 1,000's
	INDIRECT COSTS						
61	TEMPORARY CONSTRUCTION FACILITIES TEMPORARY CONSTRUCTION FACILITIES (INCLUDED IN DIRECT COSTS)				=====	0	0
62	CONSTRUCTION EQUIPMENT CONSTRUCTION EQUIPMENT (INCLUDED IN DIRECT COSTS)				=====	0	0
63	MAIN CONSTRUCTION CAMP						
.1	MAIN CONSTRUCTION CAMP						
.11	SITE PREPARATION						
	CLEARING						
	CLEARING	145	ACRE	4,550.93		660	
	INSTALL GRANULAR PAD						
	INSTALL GRANULAR PAD	788,000	CY	4.72		3,719	
	SITE REHABILITATION						
	SITE REHABILITATION	145	ACRE	8,652.72		1,255	
	CONSTRUCT ROADWAYS						
	MAIN ROADS IN CAMP [34']	9,100	LF	20.59		187	
	CONNECT. RD. TO ACCESS RD.	1,800	LF	87.76		158	
	DRAINAGE						
	DITCHING	24,800	LF	4.87		121	
	CULVERTS	1,200	LF	30.38		36	
	PERIMETER FENCING						

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				\$	\$ 1,000's	\$ 1,000's	
	PERIMETER FENCING	9,900	LF	17.12	169		
	PARKING AREAS						
	PARKING AREAS-INSIDE CAMP	1	LS	62,044.56	62		
	PARK LOT-OUT CAMP(500 CARS)	4	ACRE	12,158.20	49		
	ELECTRICAL PLUG-INS	500	EACH	99.13	50		

					6,466		
.12	BUILDINGS						
	BACHELOR DORMS-108 MAN CMPLX	24	EACH	426,948.00	10,247		
	BACHELOR DORMS-MGMT-TYPE A	8	EACH	136,308.00	1,090		
	BACHELOR DORMS-MGMT-TYPE B	9	EACH	117,132.00	1,054		
	GUEST HSS-1 EA OWN/MGR/CON	3	EACH	144,488.00	433		
	CAMP MANAGER'S OFFICES	3	EACH	51,570.81	155		
	STAFF CLUBHOUSE	1	EACH	324,910.00	325		
	DINING HALL	1	EACH	1,877,264.00	1,877		
	DINING HALL	1	EACH	1,877,264.00	1,877		
	RECREATION BLDG.	1	EACH	1,089,375.00	1,089		
	RECREATION BLDG.	1	EACH	1,089,375.00	1,089		
	GYMNASIUM	1	EACH	2,837,414.00	2,837		
	SECURITY OFFICE	1	EACH	285,324.00	285		
	SOILS/MATERIALS LAB.	1	EACH	704,186.00	704		
	MAINTENANCE BLDG.	1	EACH	674,951.00	675		
	WAREHOUSE - MANAGERS	1	EACH	908,244.00	908		
	WAREHOUSE - FOOD SERVICE	1	EACH	1,232,577.00	1,233		
	COMMUNICATION BLDG.	1	EACH	107,271.00	107		
	HOSPITAL	1	EACH	2,747,965.00	2,748		
	ICE RINK	1	EACH	1,959,854.00	1,960		
	BANK	1	EACH	307,913.00	308		
	STORE	1	EACH	159,747.00	160		
	LAUNDRY	1	EACH	68,625.97	69		
	PERMAWALK						
	6 FEET WIDE	670	LF	89.54	60		
	10 FEET WIDE	2,170	LF	139.27	302		
	16 FEET WIDE	730	LF	238.75	174		
	RELOCATE 160 MAN CAMP						
	RELOCATE 160 MAN CAMP	1	LS	226,881.00	227		

					31,995		
.13	UTILITIES						

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				\$	\$ 1,000's	\$ 1,000's	
.131	WATER						
	SUPPLY SYSTEM						
	INTAKE						
	3.4 MG POND	1	LS	349,521.00	350		
	PUMP STATION						
	600 GPM	1	LS	158,229.00	158		
	BOOSTER PUMP STATION						
	600 GPM	1	LS	153,424.00	153		
	SUPPLY LINE						
	6" DI PIPE	10,000	LF	42.98	430		
	4" DI PIPE	10,000	LF	38.14	381		
	HEAT TRACING & INSULAT						
	6" PIPE	10,000	LF	30.90	309		
	4" PIPE	10,000	LF	27.94	279		
	UTILIDOR						
	UTILIDOR	10,000	LF	86.11	861		
	TREATMENT PLANT						
	0.9 MGD	1	LS	2,348,168.00	2,348		
	BACK-UP WELLS						
	BACK-UP WELLS	1	LS	300,125.00	300		
	DISTRIBUTION MAIN TO CAMP						
	6" DI PIPE	3,500	LF	42.98	150		
	4" DI PIPE	3,500	LF	38.14	133		
	HEAT TRACING & INSULAT						
	6" PIPE	3,500	LF	30.90	108		
	4" PIPE	3,500	LF	27.94	98		
	UTILIDORS						
	UTILIDORS	3,500	LF	86.11	301		
	RESERVOIRS						
	1 EA @ 0.8 MG & 1.2 MG	1	LS	283,914.00	284		
	PUMP STATION						
	4750 GPM	1	LS	94,457.75	94		
	CAMP DISTRIBUTION SYSTEM						
	DISTRIB LINES-BURIED						
	12"	2,130	LF	95.92	204		
	6"	300	LF	61.15	18		
	DISTRIB LINE UTILIDOR						
	PIPING						
	12" DIAMETER	2,530	LF	82.81	210		
	6" DIAMETER	3,470	LF	42.98	149		
	4" DIAMETER	605	LF	38.14	23		

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
				\$	\$ 1,000's	\$ 1,000's	
	HEAT TRACING & INSULAT						
	12" PIPE	4,660	LF	54.82	255		
	6" PIPE	3,770	LF	30.90	116		
	4" PIPE	605	LF	27.94	17		
	HYDRANTS						
	HYDRANTS	12	EACH	1,637.15	20		
	VALVES						
	VALVES	1	LS	13,746.06	14		
	UTILIDORS						
	UTILIDORS	7,500	LF	81.21	609		
.132	SEWAGE						
	COLLECTION SYSTEM						
	PIPING						
	16" PIPE	650	LF	113.74	74		
	12" PIPE	1,850	LF	82.81	153		
	8" PIPE	2,950	LF	53.87	159		
	6" PIPE	1,600	LF	42.98	69		
	4" PIPE	1,200	LF	38.14	46		
	HEAT TRACING & INSULAT						
	16"	605	LF	74.40	45		
	12"	1,850	LF	54.82	101		
	8"	2,950	LF	35.09	104		
	6"	1,600	LF	30.90	49		
	4"	1,200	LF	27.94	34		
	UTILIDORS						
	UTILIDORS	1,200	LF	86.11	103		
	TREATMENT PLANT						
	SKIMMING TANK	1	EACH	25,126.67	25		
	LAGOONS - (1 @ 385' x						
	205' & 2 @ 280' x 155')	3	EACH	136,912.00	411		
	ROTATING BIO CONTACTORS	6	EACH	204,128.00	1,225		
	PHYS/CHEM UNIT	1	EACH	135,235.00	135		
	CLARIFIER	1	EACH	251,927.00	252		
	DISINFECTION	1	EACH	135,235.00	135		
	HEAT PUMP	1	EACH	11,976.16	12		
	THICKENER	1	EACH	149,240.00	149		
	FILTER PRESS	1	EACH	145,830.00	146		
	DRYING BEDS	2	EACH	67,688.38	135		
	BUILDING	1	EACH	407,946.00	408		
	CONTROLS/INSTRUMENTATION	1	LS	170,272.00	170		
	PIPING, VALVES, FITTINGS	1	LS	483,932.00	484		

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				\$	\$ 1,000's	\$ 1,000's	
	LABORATORY	1	EACH	75,281.36	75		
	OUTFALL						
	OUTFALL LINE (8")	2,000	LF	75.52	151		
	OUTFALL STRUCTURE	1	EACH	79,336.35	79		
.133	ELECTRICAL						
	GENERATING STATION						
	BUILDING	1	EACH	260,000.00	260		
	GENERATORS	4	EACH	1,009,400.00	4,038		
	DAY TANK	1	EACH	130,000.00	130		
	FUEL STORAGE TANK	2	EACH	260,000.00	520		
	SUBSTATION	1	EACH	100,153.00	100		
	DISTRIBUTION SYSTEM						
	DISTRIBUTION SYSTEM	1	LS	200,266.00	200		
	LIGHTING						
	POLE MOUNTED LUMINAIRS	60	EACH	2,019.65	121		
	FLOOD LIGHTS	25	EACH	750.89	19		
.134	CAMP HEATING						
	FUEL OIL DISTRIBUTION	1	LS	159,776.00	160		
.135	FIRE PROTECTION						
	FIRE HOUSE						
	FIRE HOUSE	1	LS	507,767.00	508		
	ALARM SYSTEM						
	ALARM SYSTEM	1	LS	259,263.00	259		
	SPRINKLER SYSTEM						
	MESS HALLS	1	LS	53,634.01	54		
	REC HALLS	1	LS	44,699.55	45		
	HOSPITAL	1	LS	23,843.39	24		
	SCHOOL	1	LS	35,765.09	36		
.136	TELEPHONE SYSTEM						
	TELEPHONE SYSTEM CAMP (WIRE)	1	LS	655,797.00	656		
	MICROWAVE	1	LS	3,197,497.00	3,197		
.137	TV/RADIO STATION						
	TV/RADIO STATION	1	LS	250,384.00	250		
.138	SOLID WASTE FACILITY						
	SOLID WASTE FACILITY	1	LS	149,752.00	150		
	INCINERATOR	1	LS	96,200.00	96		
.139	PETROLEUM STORAGE FACILITY						
	GARAGE/MAINTENANCE BLDG						
	GARAGE/MAINTENANCE BUILDING	1	EACH	225,273.00	225		
	TANKS						
	50,000 GAL	4	EACH	25,460.16	102		

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				\$	\$ 1,000's	\$ 1,000's	
	100,000 GAL	36	EACH	45,827.38	1,650		
	EARTHWORK						
	CLEARING & GRUBBING	14	ACRE	13,140.92	184		
	BERMS	45,000	CY	30.68	1,381		
	PIPING						
	PIPING	1	LS	224,821.00	225		
	FUEL STATION						
	FUEL STATION	1	LS	387,580.00	388		

					28,282		
					=====		
					66,743		
.2	MAIN CONSTRUCTION VILLAGE						
.21	SITE PREPARATION						
	CLEARING						
	CLEARING	116	ACRE	4,550.93	528		
	INSTALL GRANULAR PAD						
	INSTALL GRANULAR PAD	743,000	CY	5.73	4,257		
	SITE REHABILITATION						
	SITE REHABILITATION	116	ACRE	8,692.68	1,008		
	CONSTRUCT ROADWAYS						
	MAIN ROAD 34' WIDE	2,200	LF	25.71	57		
	SECONDARY ROADS 24' WIDE	17,600	LF	21.37	376		
	CONNECTION TO ACC RD 34'	1,600	LF	98.51	158		
	DRAINAGE						
	DITCHING	42,800	LF	3.71	159		
	CULVERTS - 360 LOTS	8,500	LF	30.15	256		
	PERIMETER FENCING						
	PERIMETER FENCING	10,700	LF	17.12	183		
	PARKING AREAS						
	PARKING AREAS	36,000	SF	0.36	13		
	ELECTRICAL PLUG-INS	25	EACH	99.13	2		

					6,998		
.22	BUILDINGS						
	SINGLE FAMILY UNIT - 2 BDRM	74	EACH	40,265.94	2,980		
	SINGLE FAMILY UNIT - 3 BDRM	188	EACH	42,284.82	7,950		
	SINGLE FAMILY UNIT - 2 BDRM	16	EACH	61,875.14	990		

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				\$	\$ 1,000's	\$ 1,000's	
	SINGLE FAMILY UNIT - 3 BDRM	16	EACH	64,759.25	1,036		
	SINGLE FAMILY UNIT - 4 BDRM	16	EACH	76,890.69	1,230		
	SCHOOL	1	LS	1,642,493.00	1,642		
	GYMNASIUM	1	LS	993,496.00	993		
	SWIMMING POOL	1	LS	705,744.00	706		
	RECREATION CENTER	1	LS	864,793.00	865		
	STORE	1	LS	1,225,533.00	1,226		
	GAS STATION	1	LS	219,649.00	220		
					19,837		
.23	UTILITIES						
.231	WATER						
	SUPPLY LINE						
	4"	8,300	FT	37.74	313		
	PUMP STATION - 160 GPM	1	LS	110,374.00	110		
	WATER STORAGE TANK - 1.0 MG	1	EACH	145,630.00	146		
	DISTRIBUTION SYSTEM						
	PIPING						
	12" DI	1,300	LF	82.81	108		
	10" DI	1,000	LF	64.91	65		
	8" DI	1,500	LF	53.87	81		
	6" DI	8,500	LF	42.98	365		
	HEAT TRACING & INSULAT						
	12" PIPE	1,300	LF	54.82	71		
	10" PIPE	1,000	LF	47.72	48		
	8" PIPE	1,500	LF	35.09	53		
	6" PIPE	8,500	LF	30.90	263		
	4" PIPE	8,300	LF	27.94	232		
	VALVES						
	12"	2	EACH	1,845.15	4		
	10"	2	EACH	1,348.34	3		
	8"	2	EACH	1,063.05	2		
	6"	17	EACH	719.93	12		
	HYDRANTS						
	HYDRANTS	18	EACH	1,637.15	29		
.232	SEWAGE						
	COLLECTION SYSTEM						
	PIPING						
	14" PIPE	700	LF	96.75	68		
	12" PIPE	800	LF	82.81	66		
	10" PIPE	1,100	LF	64.91	71		

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				\$	\$ 1,000's	\$ 1,000's	
	8" PIPE	4,500	LF	53.87	242		
	6" PIPE	5,100	LF	42.98	219		
	HEAT TRACING & INSULAT						
	14" PIPE	700	LF	66.17	46		
	12" PIPE	800	LF	54.82	44		
	10" PIPE	1,100	LF	47.72	52		
	8" PIPE	4,500	LF	35.09	158		
	6" PIPE	18,900	LF	30.90	584		
	PUMPING SYSTEM						
	PUMP STATION	1	LS	141,330.00	141		
	BOOSTER PUMP STATION						
	BOOSTER PUMP STATION	1	LS	141,327.00	141		
	6" FORCE MAIN	13,800	LF	42.98	593		
	UTILIDORS						
	MAIN RUNS IN VILLAGE	12,200	LF	81.77	998		
	STREET CROSSING 50 LF EA	1,000	LF	91.77	82		
	PUMP STA TO TREATMT PLANT	8,300	LF	85.46	709		
	STUBS TO HSE 360 LOTS @ 20'	7,200	LF	81.77	589		
	STUBS TO BLDGS - 10 @ 25'	250	LF	81.77	20		
.233	INTEGRATED OFC AREA						
	OWNER/MGRS OFFICE	1	EACH	904,319.00	904		
.234	ELECTRICAL						
	GENERATING STATIONS						
	BUILDING	1	EACH	260,000.00	260		
	GENERATORS	4	EACH	1,009,400.00	4,038		
	DAY TANK	1	EACH	130,000.00	130		
	FUEL STORAGE TANK	2	EACH	260,000.00	520		
	SUBSTATION	1	EACH	100,153.00	100		
	DISTRIBUTION						
	DISTRIBUTION	1	LS	250,379.00	250		
.235	FIRE ALARM SYSTEM						
	FIRE ALARM SYSTEM	1	LS	18,381.39	18		
.236	TELEPHONE SYSTEM						
	TELEPHONE SYSTEM	1	LS	437,149.00	437		
					13,388		
					=====		
					40,222		

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				\$	\$ 1,000's	\$ 1,000's	
.3	ACCESS ROAD CAMPS						
.31	ACCESS ROAD/RAILHEAD CAMP FACS, CATERING & OPER SUPT	80,000	HANDAY	84.42	6,754		
.32	RAILHEAD CAMP OPERATION FACS, CATERING & OPER SUPT	90,000	HANDAY	62.28	5,605		

					12,359		
					=====		
					12,359		
.4	CAMP CREDIT						
	SALVAGE VALUE FOR BUILDINGS, EQUIPMENT & UTILITIES	1	LS	-9,165,600.00	-9,166		
					=====		
					-9,166		
.5	PERMANENT TOWN						
	PERMANENT TOWN	1	LS	16,739,006.00	16,739		
					=====		
					16,739		
.6	MAIN CONSTR CATERING & SUPPORT						
	CATERING & SUPPORT	3,140,000	HANDAY	62.28	195,559		
					=====		
					195,559		
.7	ELECTRIC POWER						
.71	34.5 KV SYSTEM						
.711	TRANSFORMER STATION	1	LS	710,300.00	710		
.712	DISTRIBUTION SYSTEM (9 MI)	1	LS	1,314,339.00	1,314		

					2,025		
.72	CONSTRUCTION CAMP						
.721	DIESEL GENERATION	105,000	MWhr	195.00	20,475		

					20,475		
.73	CONSTRUCTION POWER						
.731	DIESEL GENERATION	81,000	MWhr	195.00	15,795		

					15,795		
					=====		
					38,295		

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				\$	\$ 1,000's	\$ 1,000's	
.8	CONSTRUCTION HEATING & VENTIL.						
.81	HEATING & VENTILATION PLANT	1	LS	2,305,500.00	2,306		
.811	HEATING & VENTIL. PLANT				-----		
					2,306		
.82	HEATING & VENTIL. OPERATION	2,700	DAY	3,794.65	10,246		
.821	HEATING & VENTILATION OPER				-----		
					10,246		
					=====		
					12,551		
						373,303	
	CONTINGENCY	10.0	%			37,330	
64	LABOR EXPENSE						
	LABOR EXPENSE						
	(INCLUDED IN DIRECT COSTS)				=====		
					0		
						0	
65	SUPERINTENDENCE						
	SUPERINTENDENCE						
	(INCLUDED IN DIRECT COSTS)				=====		
					0		
						0	
66	INSURANCE						
	INSURANCE						
	(INCLUDED IN DIRECT COSTS)				=====		
					0		
						0	

SUSITHA HYDROELECTRIC PROJECT
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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT	TOTAL	REMARKS
					\$ 1,000's	\$ 1,000's	
68	MITIGATION						
	OUT-OF-KIND COSTS	1	LS	29,200,000.00	29,200	29,200	
	CONTINGENCY	10.0	%			2,920	
69	FEEs						
	FEEs						
	(INCLUDED IN DIRECT COSTS)						
					=====	0	
						0	
	SUBTOTAL					-----	
						3,196,864	
						=====	
						3,196,864	
71	ENGINEERING	12.5	%		399,608		
	TOTAL PROJECT COST					=====	
						3,596,472	

VAX/VMS HODY
VAX/VMS HODY
VAX/VMS HODY

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DISK\$TECHNICAL:[HODY,SUFERC]DEAPFDETL.OUT;1
DISK\$TECHNICAL:[HODY,SUFERC]DEAPFDETL.OUT;1
DISK\$TECHNICAL:[HODY,SUFERC]DEAPFDETL.OUT;1

VAX/VMS
VAX/VMS
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DD DD	EE	AA AA	PP PP	PP PP	DD DD	EE	TT	LL
DD DD	EE	AA AA	PP PP	PP PP	DD DD	EE	TT	LL
DD DD	EE	AA AA	PP PP	PP PP	DD DD	EE	TT	LL
DD DD	EE	AA AA	PP PP	PP PP	DD DD	EE	TT	LL
DD DD	EEEEEEEE	AA AA	PPPPPPPP	PPPPPPPP	DD DD	EEEEEEEE	TT	LL
DD DD	EEEEEEEE	AA AA	PPPPPPPP	PPPPPPPP	DD DD	EEEEEEEE	TT	LL
DD DD	EE	AAAAAAAAAA	PP	PP	DD DD	EE	TT	LL
DD DD	EE	AAAAAAAAAA	PP	PP	DD DD	EE	TT	LL
DD DD	EE	AA AA	PP	PP	DD DD	EE	TT	LL
DD DD	EE	AA AA	PP	PP	DD DD	EE	TT	LL
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VAX/VMS HODY
VAX/VMS HODY
VAX/VMS HODY

DEAPFDETL 8-MAR-1983 10:31
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DISK\$TECHNICAL:[HODY,SUFERC]DEAPFDETL.OUT;1
DISK\$TECHNICAL:[HODY,SUFERC]DEAPFDETL.OUT;1
DISK\$TECHNICAL:[HODY,SUFERC]DEAPFDETL.OUT;1

VAX/VMS
VAX/VMS
VAX/VMS

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DEVIL CANYON																			
ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
PRODUCTION PLANT																			
330	LAND & LAND RIGHTS																		
.1	LAND	1	LS		0		0		0		22.050		0		0		22.050	1.00	22.050
	LAND																		
.2	LAND RIGHTS	1	LS																
	LAND RIGHTS - IN ABOVE																		
.3	MISC CHARGES & CREDITS	1	LS																
	MISC CHARGES/CREDIT-IN ABOVE																		
					0		0		0		22.050		0		0		22.050		
331	POWERPLANT STRUCTURE IMPROVEMENTS																		
.1	POWERHOUSE																		
.11	POWERHOUSE & DRAFT TUBE																		
.111	EXCAVATION	95,800	CY	14.80	1,418	4.99	478	0.00	0	0.00	0	5.46	523	6.68	640	31.93	3,059	1.55	4,741
	POWERHOUSE VAULT ROCK	16,800	CY	14.80	249	4.99	84	0.00	0	0.00	0	5.46	92	6.68	112	31.93	536	1.55	831
.113	SURFACE PREPARATION/GROUTING																		
	POWERHOUSE	88,700	SF	0.59	52	0.06	5	0.00	0	0.00	0	0.18	16	0.21	19	1.04	92	1.55	143
	SURFACE PREPARATION																		
	DRAFT TUBE	51,300	SF	0.59	30	0.06	3	0.00	0	0.00	0	0.18	9	0.21	11	1.04	53	1.55	83
	SURFACE PREPARATION																		
	GROUT CURTAIN-(U/S OF P-H)	43,800	LF	6.05	265	0.25	11	0.00	0	0.00	0	1.21	53	1.49	65	9.00	394	1.55	611
	DRILL HOLES	17,500	CF	11.18	196	0.62	11	10.50	184	0.00	0	1.75	31	2.13	37	26.18	458	1.55	710
	CEMENT																		
.114	CONCRETE & SHOTCRETE																		
	POWERHOUSE	23,800	CY	90.00	2,142	29.96	713	44.60	1,061	0.00	0	26.50	631	32.39	771	223.45	5,318	1.55	8,243
	CONCRETE	1,800	CY	56.68	102	3.00	5	44.60	80	0.00	0	17.95	32	21.95	40	144.18	260	1.55	402
	CONCRETE OVERBREAK 12"H/6"V	1,200	TON	235.00	282	19.00	23	540.00	648	0.00	0	59.00	71	72.00	86	925.00	1,110	1.55	1,721
	REINFORCING STEEL	1,900	SF	0.57	1	0.00	0	0.92	2	0.00	0	0.09	0	0.11	0	1.69	3	1.55	5
	2" SHOTCRETE	3,400	SF	0.80	3	0.00	0	1.39	5	0.00	0	0.13	0	0.15	1	2.47	8	1.55	13
	3" SHOTCRETE																		
	DRAFT TUBE	8,000	CY	90.00	720	29.96	240	44.60	357	0.00	0	26.50	212	32.39	259	223.45	1,788	1.55	2,771
	CONCRETE	1,650	CY	56.68	94	3.00	5	44.60	74	0.00	0	17.95	30	21.95	36	144.18	238	1.55	369
	CONCRETE OVERBREAK 6"	660	TON	235.00	155	19.00	13	540.00	356	0.00	0	59.00	39	72.00	48	925.00	611	1.55	946
	REINFORCING STEEL	800	SF	0.57	0	0.00	0	0.92	1	0.00	0	0.09	0	0.11	0	1.69	1	1.55	2
	2" SHOTCRETE																		
.115	SUPPORT & ANCHORS																		
	POWERHOUSE	780	EACH	183.63	143	0.00	0	98.96	77	0.00	0	54.12	42	66.15	52	402.80	314	1.55	487
	ROCKBOLTS 1" @ 25' HY	500	EACH	128.86	64	0.00	0	27.50	14	0.00	0	37.98	19	46.42	23	240.76	120	1.55	187
	ROCKBOLTS 1" @ 13'																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	STEEL MESH	31,000	SF	1.00	31	0.02	1	0.58	18	0.00	0	0.14	4	0.16	5	1.90	59	1.55	91
	STEEL SUPPORT	105	TON	1383.00	145	0.00	0	2125.00	223	0.00	0	272.70	29	333.30	35	4114.00	432	1.55	670
	DRAFT TUBE																		
	ROCKBOLTS 1" @ 25' HY	100	EACH	183.63	18	0.00	0	98.90	10	0.00	0	54.12	5	66.15	7	402.80	40	1.55	62
	ROCKBOLTS 1" @ 12'	140	EACH	90.20	13	0.00	0	23.50	3	0.00	0	26.59	4	32.49	5	172.78	24	1.55	37
	ROCKBOLTS 1" @ 9'	70	EACH	74.10	5	0.00	0	18.70	1	0.00	0	21.84	2	26.69	2	141.33	10	1.55	15
	STEEL MESH	12,000	SF	1.00	13	0.02	0	0.58	7	0.00	0	0.14	2	0.16	2	1.90	24	1.55	37
.117	DRAINAGE																		
	HOLES (U/S OF POWERHOUSE)	15,000	LF	10.30	155	0.26	4	0.00	0	0.00	0	2.50	38	3.05	46	16.11	242	1.55	375
	HOLES (POWERHOUSE CROWN)	21,960	LF	10.30	226	0.26	6	0.00	0	0.00	0	2.50	55	3.05	67	16.11	354	1.55	548
.118	STRUCTURAL - MISC STEELWORK																		
	POWERHOUSE & DRAFT TUBE																		
	STRUCTURAL STEEL/CRANE RAILS	1	LS		213		0		725		0		13		16		967	1.55	1,499
	STEEL COMP. WATER PIPE(8')	1	LS		446		0		765		0		29		35		1,275	1.55	1,976
.119	ARCHITECTURAL																		
	POWERHOUSE																		
	ARCHITECTURAL	1	LS		121		0		363		0		0		0		484	1.55	750
.11C	MECHANICAL																		
	DRAFT TUBE GATES	2	SETS	15000	30	0	0	252000	504	0	0	1350	3	1650	3	270000	540	1.00	540
	DRAFT TUBE GATE GUIDES	4	SETS	55000	220	0	0	43500	174	0	0	5170	21	6330	25	110000	440	1.00	440
	DRAFT TUBE CRANE	1	EACH		65		0		340		0		20		25		450	1.00	450
	PUMP INTAKE TRSHRKS & GUIDES	1	LS		10		0		145		0		2		3		160	1.00	160
	PUMP OUTLET STOPLOGS/GUIDES	1	LS		25		0		40		0		2		3		70	1.00	70
.12	ACCESS TUNNELS & PORTALS																		
.121	EXCAVATION																		
	TUNNELS - ROCK																		
	MAIN TUNNEL	106,000	CY	14.39	1,525	6.44	683	0.00	0	0.00	0	6.13	650	7.50	795	34.46	3,653	1.55	5,662
	TRANSFORMER GALLERY TUNNEL	17,000	CY	12.19	207	5.11	87	0.00	0	0.00	0	5.32	90	6.51	111	29.13	495	1.55	768
	GROUTING GALLERY TUNNEL	2,300	CY	66.93	154	27.44	63	0.00	0	0.00	0	20.70	48	25.31	58	140.38	323	1.55	500
	SURGE CHAMBER ACCESS TUNNEL	7,800	CY	22.46	175	7.36	57	0.00	0	0.00	0	8.45	66	10.32	80	48.59	379	1.55	587
	PENSTOCK ACCESS TUNNEL	50,000	CY	23.93	1,197	7.54	377	0.00	0	0.00	0	8.99	450	10.99	550	51.45	2,573	1.55	3,987
	PENSTOCK ELBOW ACCESS TUNNEL	10,000	CY	23.93	239	7.54	75	0.00	0	0.00	0	8.99	90	10.99	110	51.45	515	1.55	797
	ACCESS SHAFT TUNNEL	3,300	CY	66.93	221	21.60	71	0.00	0	0.00	0	20.70	68	25.31	84	134.54	444	1.55	688
	CONNECTOR TUNNEL	1,600	CY	66.93	107	21.60	35	0.00	0	0.00	0	20.70	33	25.31	40	134.54	215	1.55	334
	MAIN PORTAL																		
	ROCK	5,000	CY	4.44	22	4.22	21	0.00	0	0.00	0	3.82	19	4.68	23	17.16	86	1.55	133
.123	SURFACE PREPARATION																		
	TUNNELS																		
	MAIN TUNNEL SLAB	112,000	SF	0.38	43	0.04	4	0.00	0	0.00	0	0.13	15	0.16	18	0.71	80	1.55	123
	PENSTOCK ACC TUNNEL SLAB	52,560	SF	0.38	20	0.04	2	0.00	0	0.00	0	0.13	7	0.16	8	0.71	37	1.55	58
	MAIN PORTAL																		
	HORIZONTAL	200	SF	0.37	0	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.70	0	1.55	0
	INCLINED	2,100	SF	0.57	1	0.06	0	0.00	0	0.00	0	0.18	0	0.21	0	1.02	2	1.55	3
.124	CONCRETE & SHOTCRETE																		
	MAIN PORTALS																		
	CONCRETE SLAB	30	CY	46.50	1	3.00	0	44.60	1	0.00	0	15.70	0	19.20	1	129.00	4	1.55	6

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	CONCRETE WALLS	570	CY	46.50	27	3.00	2	44.60	25	0.00	0	15.70	9	19.20	11	129.00	74	1.55	114
	CONCRETE OVERBREAK 12'H/6'V	40	CY	39.50	2	1.00	0	44.60	2	0.00	0	14.35	1	17.55	1	117.00	5	1.55	7
	REINFORCING STEEL	40	TON	226.00	9	19.00	1	540.00	22	0.00	0	59.00	2	72.00	3	916.00	37	1.55	57
TUNNELS																			
	CONCRETE SLAB MAIN TUNNEL	4,030	CY	68.00	274	6.60	27	44.60	180	0.00	0	19.53	79	23.87	96	162.60	655	1.55	1,016
	CONC PLUGS PENS ELBOW ACCESS	10,000	CY	97.24	972	36.00	360	44.60	446	0.00	0	29.65	297	36.25	363	243.74	2,437	1.55	3,778
	CONC OVERBREAK MAIN TUN 6'	2,130	CY	35.88	76	1.00	2	44.60	95	0.00	0	13.45	29	16.45	35	111.38	237	1.55	368
	REINFORCING STEEL MAIN TUN	140	TON	235.00	33	19.00	3	540.00	76	0.00	0	59.00	8	72.00	10	925.00	130	1.55	201
	2" SHOTCRETE MAIN TUNNEL	7,950	SF	0.57	5	0.00	0	0.92	7	0.00	0	0.09	1	0.11	1	1.69	13	1.55	21
	2" SHOTCRETE TRANSFORMER GAL	1,260	SF	0.57	1	0.00	0	0.92	1	0.00	0	0.09	0	0.11	0	1.69	2	1.55	3
	2" SHOTCRETE SURGE CHAMB ACC	800	SF	0.57	0	0.00	0	0.92	1	0.00	0	0.09	0	0.11	0	1.69	1	1.55	2
	2" SHOTCRETE PENSTOCK ACCESS	3,750	SF	0.57	2	0.00	0	0.92	3	0.00	0	0.09	0	0.11	0	1.69	6	1.55	10
	2" SHOTCRETE PENST ELBOW ACC	3,750	SF	0.57	2	0.00	0	0.92	3	0.00	0	0.09	0	0.11	0	1.69	6	1.55	10
	2" SHOTCRETE ACCESS SHAFT	750	SF	0.57	0	0.00	0	0.92	1	0.00	0	0.09	0	0.11	0	1.69	1	1.55	2
	2" SHOTCRETE GROUT GALLERY	470	SF	0.57	0	0.00	0	0.92	0	0.00	0	0.09	0	0.11	0	1.69	1	1.55	1
	2" SHOTCRETE CONNECTOR TUN	330	SF	0.57	0	0.00	0	0.92	0	0.00	0	0.09	0	0.11	0	1.69	1	1.55	1
.125 SUPPORT & ANCHORS																			
	MAIN TUNNEL																		
	ROCKBOLTS 1" @ 12'	1,440	EACH	90.20	130	0.00	0	23.50	34	0.00	0	26.59	38	32.49	47	172.78	249	1.55	386
	ROCKBOLTS 1" @ 9'	190	EACH	74.10	14	0.00	0	18.70	4	0.00	0	21.84	4	26.69	5	141.33	27	1.55	42
	STEEL MESH	132,500	SF	1.04	138	0.03	4	0.68	90	0.00	0	0.15	20	0.18	24	2.08	276	1.55	427
	STEEL SUPPORT	120	TON	1383.00	166	0.00	0	2125.00	255	0.00	0	272.70	33	333.30	40	4114.00	494	1.55	765
	MAIN TUNNEL PORTAL																		
	ROCKBOLTS 1" @ 15'	50	EACH	123.91	6	0.00	0	27.50	1	0.00	0	37.98	2	46.42	2	235.81	12	1.55	18
	TRANSFORMER GALLERY TUNNEL																		
	ROCKBOLTS 1" @ 12'	230	EACH	90.20	21	0.00	0	23.50	5	0.00	0	26.59	6	32.49	7	172.78	40	1.55	62
	ROCKBOLTS 1" @ 9'	30	EACH	74.10	2	0.00	0	18.70	1	0.00	0	21.84	1	26.69	1	141.33	4	1.55	7
	STEEL MESH	20,940	SF	1.04	22	0.03	1	0.68	14	0.00	0	0.15	3	0.18	4	2.08	44	1.55	68
	STEEL SUPPORT	20	TON	1383.00	28	0.00	0	2125.00	43	0.00	0	272.70	5	333.30	7	4114.00	82	1.55	128
	GROUTING GALLERY TUNNEL																		
	ROCKBOLTS 3/4" @ 6'	220	EACH	58.00	13	0.00	0	11.10	2	0.00	0	17.09	4	20.89	5	107.08	24	1.55	37
	SUPPORT STEEL	3	TON	1383.00	4	0.00	0	2125.00	6	0.00	0	272.70	1	333.30	1	4114.00	12	1.55	19
	STEEL MESH	100	SF	1.04	0	0.03	0	0.68	0	0.00	0	0.15	0	0.18	0	2.08	0	1.55	0
	SURGE CHAMBER TUNNEL																		
	ROCKBOLTS 1" @ 12'	150	EACH	90.20	14	0.00	0	23.50	4	0.00	0	26.59	4	32.49	5	172.78	26	1.55	40
	ROCKBOLTS 1" @ 9'	30	EACH	74.10	2	0.00	0	18.70	1	0.00	0	21.84	1	26.69	1	141.33	4	1.55	7
	STEEL SUPPORT	13	TON	1383.00	18	0.00	0	2125.00	28	0.00	0	272.70	4	333.30	4	4114.00	53	1.55	83
	STEEL MESH	13,200	SF	1.04	14	0.03	0	0.68	9	0.00	0	0.15	2	0.18	2	2.08	27	1.55	43
	PENSTOCK ACCESS TUNNEL																		
	ROCKBOLTS 1" @ 12'	680	EACH	90.20	61	0.00	0	23.50	16	0.00	0	26.59	18	32.49	22	172.78	117	1.55	182
	ROCKBOLTS 1" @ 9'	90	EACH	74.10	7	0.00	0	18.70	2	0.00	0	21.84	2	26.69	2	141.33	13	1.55	20
	STEEL SUPPORT	60	TON	1383.00	83	0.00	0	2125.00	128	0.00	0	272.70	16	333.30	20	4114.00	247	1.55	383
	STEEL MESH	62,150	SF	1.04	65	0.03	2	0.68	42	0.00	0	0.15	9	0.18	11	2.08	129	1.55	200
	PENSTOCK ELBOW ACCESS TUNNEL																		
	ROCKBOLTS 1" @ 12'	280	EACH	90.20	25	0.00	0	23.50	7	0.00	0	26.59	7	32.49	9	172.78	48	1.55	75
	ROCKBOLTS 1" @ 9'	80	EACH	74.10	6	0.00	0	18.70	1	0.00	0	21.84	2	26.69	2	141.33	11	1.55	18

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	STEEL SUPPORT	20	TON	1383.00	28	0.00	0	2125.00	43	0.00	0	272.70	5	333.30	7	4114.00	82	1.55	128
	STEEL MESH	14,760	SF	1.04	15	0.03	0	0.68	10	0.00	0	0.15	2	0.18	3	2.08	31	1.55	48
	ACCESS SHAFT TUNNEL																		
	ROCKBOLTS 1" @ 12'	50	EACH	90.20	5	0.00	0	23.50	1	0.00	0	26.59	1	32.49	2	172.78	9	1.55	13
	ROCKBOLTS 1" @ 9'	50	EACH	74.10	4	0.00	0	18.70	1	0.00	0	21.84	1	26.69	1	141.33	7	1.55	11
	STEEL SUPPORT	20	TON	1383.00	28	0.00	0	2125.00	43	0.00	0	272.70	5	333.30	7	4114.00	82	1.55	128
	STEEL MESH	2,500	SF	1.04	3	0.03	0	0.68	2	0.00	0	0.15	0	0.18	0	2.08	5	1.55	8
	CONNECTOR TUNNEL																		
	ROCKBOLTS 3/4" @ 6'	160	EACH	58.00	9	0.00	0	11.10	2	0.00	0	17.09	3	20.89	3	107.08	17	1.55	27
	STEEL SUPPORT	2	TON	1383.00	3	0.00	0	2125.00	4	0.00	0	272.70	1	333.30	1	4114.00	8	1.55	13
	STEEL MESH	70	SF	1.04	0	0.03	0	0.68	0	0.00	0	0.15	0	0.18	0	2.08	0	1.55	0
.129	ARCHITECTURAL																		
	MAIN PORTAL DOORS	2	SETS	6300	13	0	0	41200	82	0	0	450	1	550	1	49500	97	1.55	150
.12C	MECHANICAL																		
	VENTILATING SYSTEM																		
	(INCL IN 63.71 & 63.72)																		
.13	ACCESS SHAFT																		
.131	EXCAVATION	14,500	CY	40.40	586	10.04	146	0.00	0	0.00	0	13.65	198	16.68	242	80.77	1,171	1.55	1,815
	ROCK																		
.133	SURFACE PREPARATION	70,200	SF	0.59	41	0.06	4	0.00	0	0.00	0	0.18	13	0.21	15	1.04	73	1.55	113
	SHAFT																		
.134	CONCRETE & SHOTCRETE																		
	CONCRETE LINING	3,600	CY	79.56	286	69.00	248	44.60	161	0.00	0	49.45	178	60.45	218	303.06	1,091	1.55	1,691
	CONCRETE OVERBREAK 6"	1,300	CY	48.36	63	30.00	39	44.60	58	0.00	0	24.25	32	29.65	39	176.86	230	1.55	356
.135	SUPPORT & ANCHORS																		
	ROCKBOLTS 3/4" @ 6'	1,120	EACH	58.00	65	0.00	0	11.10	12	0.00	0	17.09	19	20.89	23	107.08	120	1.55	186
.138	STRUCTURAL - MISC STEELWORK																		
	MISCELLANEOUS STEELWORK	50	TON	592.00	30	0.00	0	1660.00	83	0.00	0	53.00	3	65.00	3	2370.00	119	1.55	184
.139	ARCHITECTURAL																		
	(INCL IN 331.2 CNTRL BLDG)																		
.13C	MECHANICAL																		
	ELEVATORS	1	LS		250		0		700		0		23		28		1,000	1.00	1,000
.14	FIRE PROTECTION HEADTANK																		
.141	EXCAVATION	1,150	CY	100.40	115	27.44	32	0.00	0	0.00	0	31.06	36	37.96	44	196.86	226	1.55	351
	ROCK																		
.143	SURFACE PREPARATION	2,800	SF	0.38	1	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.71	2	1.55	3
	HEAD TANK																		
.144	CONCRETE & SHOTCRETE																		
	CONCRETE	250	CY	163.80	41	20.00	5	44.60	11	0.00	0	37.75	9	46.15	12	312.30	78	1.55	121
	CONC. OVERBREAK 6"	45	CY	46.28	2	2.00	0	44.60	2	0.00	0	17.05	1	20.85	1	130.78	6	1.55	9
	REINFORCING STEEL	10	TON	235.00	2	19.00	0	540.00	5	0.00	0	59.00	1	72.00	1	925.00	9	1.55	14
.145	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 12'	25	EACH	90.20	2	0.00	0	23.50	1	0.00	0	26.59	1	32.49	1	172.78	4	1.55	7
	ROCKBOLTS 1" @ 9'	10	EACH	74.10	1	0.00	0	18.70	0	0.00	0	21.84	0	26.69	0	141.33	1	1.55	2
	STEEL MESH	1,200	SF	1.04	1	0.03	0	0.68	1	0.00	0	0.15	0	0.18	0	2.08	2	1.55	4
	STEEL SUPPORT	2	TON	1383.00	3	0.00	0	2125.00	4	0.00	0	272.70	1	333.30	1	4114.00	8	1.55	13

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.148	STRUCTURAL - MISC STEELWORK	1	LS		4		0		11		0		0		1		15	1.55	23
	MISCELLANEOUS STEELWORK																		
.14C	MECHANICAL																		
	PIPING/VALVES -																		
	(INCLUDED IN 335.12)																		
.15	BUS TUNNELS																		
	(TOTALS FOR 4 BUS TUNNELS)																		
.151	EXCAVATION	3,200	CY	37.88	121	9.64	31	0.00	0	0.00	0	12.73	41	15.56	50	75.81	243	1.55	376
	ROCK HORIZONTAL	2,000	CY	115.35	231	16.26	33	0.00	0	0.00	0	36.88	74	45.07	90	213.56	427	1.55	662
	ROCK INCLINED																		
.153	SURFACE PREPARATION	11,300	SF	0.38	4	0.04	0	0.00	0	0.00	0	0.13	1	0.16	2	0.71	8	1.55	12
	TURNFL																		
.154	CONCRETE & SHOTCRETE																		
	CONCRETE SLAB	800	CY	121.16	97	16.00	13	44.60	36	0.00	0	37.30	30	45.60	36	264.66	212	1.55	328
	CONCRETE OVERBREAK 12"	360	CY	67.08	24	0.00	0	44.60	16	0.00	0	18.40	7	22.50	8	152.58	55	1.55	85
	REINFORCING STEEL	40	TON	235.00	9	19.00	1	540.00	22	0.00	0	59.00	2	72.00	3	925.00	37	1.55	57
	2" SHOTCRETE	520	SF	0.57	0	0.00	0	0.92	0	0.00	0	0.09	0	0.11	0	1.69	1	1.55	1
.155	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 25'	80	EACH	183.63	15	0.00	0	98.90	8	0.00	0	54.12	3	66.15	5	402.80	32	1.55	50
	ROCKBOLTS 1" @ 12'	110	EACH	90.20	10	0.00	0	23.50	3	0.00	0	26.59	3	32.49	4	172.78	19	1.55	29
	ROCKBOLTS 1" @ 9'	30	EACH	74.10	2	0.00	0	18.70	1	0.00	0	21.84	1	26.69	1	141.33	4	1.55	7
	STEEL MESH	8,600	SF	1.04	9	0.03	0	0.68	6	0.00	0	0.15	1	0.18	2	2.08	18	1.55	28
	STEEL SUPPORT	14	TON	1383.00	19	0.00	0	2125.00	30	0.00	0	272.70	4	333.30	5	4114.00	58	1.55	89
.16	TRANSFORMER GALLERY																		
.161	EXCAVATION	28,800	CY	12.19	351	5.11	147	0.00	0	0.00	0	5.32	153	6.51	187	29.13	839	1.55	1,300
	ROCK																		
.163	SURFACE PREPARATION	26,500	SF	0.38	10	0.04	1	0.00	0	0.00	0	0.13	3	0.16	4	0.71	19	1.55	29
	TRANSFORMER GALLERY																		
.164	CONCRETE & SHOTCRETE	2,810	CY	165.88	466	100.00	281	44.60	125	0.00	0	38.65	109	47.25	133	396.38	1,114	1.55	1,726
	CONCRETE BASE SLAB	820	CY	41.08	34	3.00	2	44.60	37	0.00	0	14.80	12	18.10	15	121.58	100	1.55	155
	CONCRETE OVERBREAK 12"H/6"V	140	TON	235.00	33	19.00	3	540.00	76	0.00	0	59.00	8	72.00	10	925.00	130	1.55	201
	REINFORCING STEEL	1,100	SF	0.80	1	0.00	0	1.39	2	0.00	0	0.13	0	0.15	0	2.47	3	1.55	4
	3" SHOTCRETE																		
.165	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 25' HY	170	EACH	183.63	31	0.00	0	98.90	17	0.00	0	54.12	9	66.15	11	402.80	68	1.55	106
	ROCKBOLTS 1" @ 15'	90	EACH	128.86	12	0.00	0	27.50	2	0.00	0	37.98	3	46.42	4	240.76	22	1.55	34
	STEEL MESH	22,200	SF	1.00	22	0.02	0	0.58	13	0.00	0	0.14	3	0.16	4	1.90	42	1.55	65
	STEEL SUPPORT	17	TON	1383.00	24	0.00	0	2125.00	36	0.00	0	272.70	5	333.30	6	4114.00	70	1.55	108
.167	DRAINAGE	8,900	LF	10.30	92	0.26	2	0.00	0	0.00	0	2.50	22	3.05	27	16.11	143	1.55	222
	HOLES (IN GALLERY CROWN)																		
.17	CABLE SHAFTS																		
	(TOTALS FOR 2 SHAFTS)																		
.171	EXCAVATION	3,000	CY	115.35	346	16.26	49	0.00	0	0.00	0	36.88	111	45.07	135	213.56	641	1.55	993
	ROCK																		
.173	SURFACE PREPARATION	36,000	SF	0.59	21	0.06	2	0.00	0	0.00	0	0.18	6	0.21	8	1.04	37	1.55	58
	SHAFTS																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.174	CONCRETE & SHOTCRETE																		
	CONCRETE LINING	920	CY	131.56	121	164.00	151	44.60	41	0.00	0	101.20	93	123.70	114	565.06	520	1.55	806
	CONCRETE OVERBREAK 6"	670	CY	77.48	52	60.00	40	44.60	30	0.00	0	45.40	30	55.50	37	282.98	190	1.55	294
.175	SUPPORT & ANCHORS																		
	ROCKBOLTS 3/4" @ 6'	570	EACH	59.00	33	0.00	0	11.10	6	0.00	0	17.09	10	20.89	12	107.08	61	1.55	95
.178	STRUCTURAL - MISC STEELWORK																		
	MISCELLANEOUS STEELWORK	13	TON	1200.00	16	3500.00	46	0.00	0	0.00	0	135.00	2	165.00	2	5000.00	45	1.55	101
.179	ARCHITECTURAL																		
	ENCLOSURES	1	LS		18		0		29		0		5		6		58	1.55	90
.17C	MECHANICAL																		
	HANDIST	2	EACH	60000	120	0	0	160000	320	0	0	4000	8	6000	12	230000	460	1.00	460
.18	DEWATERING (DURING CONSTRUCT)																		
.181	DEWATERING (POWER FAC)																		
	DEWATERING	1	LS		45		396		0		0		4		5		450	1.55	698
.19	INSTRUMENTATION																		
.191	INSTRUMENTATION																		
	INSTRUMENTATION	1	LS		283		0		178		0		17		21		499	1.55	773
.2	MISC. BUILDINGS & STRUCTURES																		
	MISC. BUILDINGS & STRUCTURES	1	LS		26		0		97		0		3		3		129	1.55	200
					18,103		5,151		10,098		0		5,490		6,711		45,553		
332	RESERVOIR, DAMS & WATERWAYS																		
.1	RESERVOIR																		
.11	CLEARING																		
	CLEARING	6,350	ACRE	275.00	1,746	100.00	635	0.00	0	0.00	0	281.00	1,784	344.00	2,184	1000.00	6,350	1.55	9,843
.2	DIVERSION TUNNELS/COFFERDAMS																		
.21	DIVERSION TUNNELS/PORTALS																		
.211	EXCAVATION																		
	TUNNEL																		
	ROCK	48,300	CY	17.22	832	5.37	259	0.00	0	0.00	0	7.29	352	8.92	431	38.80	1,874	1.55	2,905
	EXCAVATE CONCRETE FOR PLUG	450	CY	17.22	8	5.37	2	0.00	0	0.00	0	7.29	3	8.92	4	38.80	17	1.55	27
	UPSTREAM PORTAL																		
	OVERBURDEN	1,950	CY	2.74	5	0.00	0	0.00	0	0.00	0	1.45	3	1.78	3	5.97	12	1.55	18
	ROCK	50,200	CY	4.44	223	4.22	212	0.00	0	0.00	0	3.82	192	4.68	235	17.16	861	1.55	1,335
	DOWNSTREAM PORTAL																		
	OVERBURDEN	6,600	CY	2.74	18	0.00	0	0.00	0	0.00	0	1.45	10	1.78	12	5.97	39	1.55	61
	ROCK	54,000	CY	4.44	240	4.22	228	0.00	0	0.00	0	3.82	206	4.68	253	17.16	927	1.55	1,436
.213	SURFACE PREPARATION/GROUTING																		
	UPSTREAM PORTAL																		
	HORIZONTAL	4,400	SF	0.37	2	0.04	0	0.00	0	0.00	0	0.13	1	0.16	1	0.70	3	1.55	5
	INCLINED	15,300	SF	0.57	9	0.06	1	0.00	0	0.00	0	0.18	3	0.21	3	1.02	16	1.55	24
	DOWNSTREAM PORTAL																		
	HORIZONTAL	1,300	SF	0.37	0	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.70	1	1.55	1
	INCLINED	2,900	SF	0.57	2	0.06	0	0.00	0	0.00	0	0.18	1	0.21	1	1.02	3	1.55	5

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	GROUT TUNNEL PLUG																		
	DRILL HOLES	2,050	LF	2.47	5	0.25	1	0.00	0	0.00	0	0.53	1	0.65	1	3.90	8	1.55	12
	CEMENT	410	CF	7.05	3	0.25	0	12.50	5	0.00	0	0.78	0	0.95	0	21.53	9	1.55	14
.214	CONCRETE & SHOTCRETE TUNNEL																		
	CONCRETE LINING	8,100	CY	54.60	442	52.10	422	44.60	361	0.00	0	13.86	112	16.94	137	182.10	1,475	1.55	2,286
	CONCRETE PLUG	3,000	CY	48.10	144	6.25	19	44.60	134	0.00	0	17.50	53	21.40	64	137.85	414	1.55	641
	CONCRETE OVERBREAK 6"	3,200	CY	28.60	92	1.00	3	44.60	143	0.00	0	12.10	39	14.80	47	101.10	324	1.55	501
	REINFORCING STEEL	15	TON	235.00	4	19.00	0	540.00	8	0.00	0	59.00	1	72.00	1	925.00	14	1.55	22
	2" SHOTCRETE	4,460	SF	0.57	3	0.00	0	0.92	4	0.00	0	0.09	0	0.11	0	1.69	7	1.55	12
	UPSTREAM PORTAL																		
	CONCRETE HEADWALL	2,800	CY	86.10	241	19.20	54	44.60	125	0.00	0	25.70	72	31.40	88	207.00	580	1.55	898
	CONCRETE LINING	1,550	CY	52.50	81	52.10	81	44.60	69	0.00	0	13.86	21	16.94	26	180.00	279	1.55	432
	CONCRETE PIER	400	CY	52.50	21	52.10	21	44.60	18	0.00	0	13.86	6	16.94	7	180.00	72	1.55	112
	OVERBREAK 12"H/6"V	500	CY	64.50	32	0.00	0	44.60	22	0.00	0	18.40	9	22.50	11	150.00	75	1.55	116
	REINFORCING STEEL	310	TON	226.00	70	19.00	6	540.00	167	0.00	0	59.00	18	72.00	22	916.00	284	1.55	440
	DOWNSTREAM PORTAL																		
	CONCRETE HEADWALL	1,000	CY	86.10	86	19.20	19	44.60	45	0.00	0	25.70	26	31.40	31	207.00	207	1.55	321
	OVERBREAK 12"H/6"V	100	CY	64.50	6	0.00	0	44.60	4	0.00	0	18.40	2	22.50	2	150.00	15	1.55	23
	REINFORCING STEEL	65	TON	226.00	15	19.00	1	540.00	35	0.00	0	59.00	4	72.00	5	916.00	60	1.55	92
.215	SUPPORT & ANCHORS TUNNEL																		
	ROCKBOLTS 1" @ 12'	800	EACH	90.20	72	0.00	0	23.50	19	0.00	0	26.59	21	32.49	26	172.78	138	1.55	214
	ROCKBOLTS 1" @ 9'	90	EACH	74.10	7	0.00	0	18.70	2	0.00	0	21.84	2	26.69	2	141.33	13	1.55	20
	STEEL MESH	76,900	SF	1.04	80	0.03	2	0.38	52	0.00	0	0.15	12	0.18	14	2.08	160	1.55	248
	STEEL SUPPORT	90	TON	1383.00	124	0.00	0	2125.00	191	0.00	0	272.70	25	333.30	30	4114.00	370	1.55	574
	UPSTREAM PORTAL																		
	ROCKBOLTS 1" @ 15'	80	EACH	123.91	10	0.00	0	27.50	2	0.00	0	37.98	3	46.42	4	235.81	19	1.55	29
	ROCK ANCHORS 1" @ 25'	40	EACH	176.57	7	0.00	0	98.90	4	0.00	0	54.12	2	66.15	3	395.74	16	1.55	25
	ROCK BOWELS	60	EACH	77.45	5	0.00	0	20.60	1	0.00	0	23.74	1	29.01	2	150.80	9	1.55	14
	DOWNSTREAM PORTAL																		
	ROCKBOLTS 1" @ 15'	120	EACH	123.91	15	0.00	0	27.50	3	0.00	0	37.98	5	46.42	6	235.81	28	1.55	44
	ROCK ANCHORS 1" @ 25'	30	EACH	176.57	5	0.00	0	98.90	3	0.00	0	54.12	2	66.15	2	395.74	12	1.55	18
.21C	MECHANICAL																		
	UPSTREAM GATE																		
	GATE EQUIPMENT	2	EACH	255000	510	0	0	925000	1,850	0	0	45000	90	55000	110	1280000	2,560	1.00	2,560
	DOWNSTREAM OUTLET																		
	STOPLOG GUIDES	1	SET		19		0		13		0		1		2		35	1.00	35
	STOPLOGS INCL FOLLOWERS	1	LS																
.22	UPSTREAM COFFERDAM																		
.222	FILL																		
	CORE	4,600	CY	0.98	5	0.00	0	0.00	0	0.00	0	1.17	5	1.42	7	3.57	16	1.55	25
	FINE/FILTER	2,800	CY	3.43	10	0.12	0	0.00	0	0.00	0	3.48	10	4.25	12	11.28	32	1.55	49
	COARSE FILTER	2,700	CY	2.90	8	0.07	0	0.00	0	0.00	0	3.10	8	3.78	10	9.85	27	1.55	41
	ROCK SHELL	19,800	CY	0.92	18	0.00	0	0.00	0	0.00	0	1.13	22	1.39	28	3.44	68	1.55	106
	CLOSURE DIKE	41,900	CY	0.98	41	0.00	0	0.00	0	0.00	0	1.17	49	1.42	59	3.57	150	1.55	232

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.223	RIP RAP	7,000	CY	2.85	20	0.00	0	0.00	0	0.00	0	2.30	16	2.80	20	7.95	56	1.55	86
	SURFACE PREPARATION/GROUTING																		
	CUTOFF & GROUT																		
	HOLES	1,600	LF	5.82	9	0.25	0	0.00	0	0.00	0	1.21	2	1.49	2	8.77	14	1.55	22
	GROUT	256,000	CF	10.75	2,752	0.62	159	10.50	2,688	0.00	0	1.75	448	2.13	545	25.75	6,592	1.55	10,218
.22D	DEWATERING																		
	INITIAL DEWATERING	1	LS		119		279		0		0		41		50		489	1.55	758
	DEWATERING MAINTENANCE	1	LS		1,576		143		0		0		350		428		2,497	1.55	3,870
.23	DOWNSTREAM COFFERDAM																		
.231	EXCAVATION																		
	REMOVAL OF COFFERDAM	42,000	CY	1.32	55	0.01	0	0.00	0	0.00	0	1.51	63	1.84	77	4.68	197	1.55	305
.232	FILL																		
	RIP RAP	1,650	CY	2.85	5	0.00	0	0.00	0	0.00	0	2.30	4	2.80	5	7.95	13	1.55	20
	CLOSURE DIKE	47,000	CY	0.98	46	0.00	0	0.00	0	0.00	0	1.17	55	1.42	67	3.57	168	1.55	260
.233	SURFACE PREP/GROUTING																		
	CUTOFF & GROUT																		
	HOLES	2,300	LF	5.82	13	0.25	1	0.00	0	0.00	0	1.21	3	1.49	3	8.77	20	1.55	31
	CEMENT	368,000	CF	10.75	3,956	0.62	228	10.50	3,864	0.00	0	1.75	644	2.13	784	25.75	9,476	1.55	14,688
.3	MAIN DAM																		
.31	MAIN DAM																		
.311	EXCAVATION																		
	OVERBURDEN	35,600	CY	1.09	39	0.00	0	0.00	0	0.00	0	1.32	47	1.61	57	4.02	143	1.55	222
	ROCK	320,700	CY	6.12	1,963	4.24	1,360	0.00	0	0.00	0	3.20	1,026	3.90	1,251	17.46	5,599	1.55	8,679
.313	SURFACE PREPARATION/GROUTING																		
	SURFACE PREPARATION																		
	UNDER DAM/THRUST ROCKS	171,000	SF	0.57	97	0.06	10	0.00	0	0.00	0	0.18	31	0.21	36	1.02	174	1.55	270
	CONSOLIDATION GROUT																		
	DRILL HOLES	176,900	LF	2.47	437	0.25	44	0.00	0	0.00	0	0.53	94	0.65	115	3.90	690	1.55	1,069
	CEMENT	176,900	CF	7.05	1,247	0.25	44	12.50	2,211	0.00	0	0.78	138	0.95	168	21.53	3,809	1.55	5,903
	GROUT CURTAIN																		
	DRILL HOLES	259,000	LF	5.82	1,507	0.25	65	0.00	0	0.00	0	1.21	313	1.49	386	8.77	2,271	1.55	3,521
	CEMENT	193,600	CF	10.75	1,114	0.62	64	10.50	1,088	0.00	0	1.75	181	2.13	221	25.75	2,668	1.55	4,135
.314	CONCRETE & SHOTCRETE																		
	DAM																		
	CONCRETE	1,281,000	CY	53.25	68,213	10.50	13,451	33.55	42,978	0.00	0	14.70	18,831	18.00	23,058	130.00	166,530	1.55	258,121
	CONCRETE OVERBREAK	10,400	CY	53.25	554	10.50	109	33.55	349	0.00	0	14.70	153	18.00	187	130.00	1,352	1.55	2,096
	REINFORCING STEEL	4,500	TON	226.00	1,017	19.00	86	540.00	2,430	0.00	0	59.00	266	72.00	324	916.00	4,122	1.55	6,389
	THRUSTBLOCKS																		
	CONCRETE	105,500	CY	53.25	5,618	10.50	1,108	33.55	3,540	0.00	0	14.70	1,551	18.00	1,899	130.00	13,715	1.55	21,258
	CONCRETE OVERBREAK	1,100	CY	53.25	59	10.50	12	33.55	37	0.00	0	14.70	16	18.00	20	130.00	143	1.55	222
	REINFORCING STEEL	375	TON	226.00	85	19.00	7	540.00	203	0.00	0	59.00	22	72.00	27	916.00	344	1.55	532
	JOINT GROUTING																		
	GROUTING	1	LS		1,090		375		0		0		79		96		1,640	1.55	2,542
.315	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 25'	580	EACH	176.57	102	0.00	0	98.90	57	0.00	0	54.12	31	66.15	38	395.74	230	1.55	356
	STEEL MESH (ON SLOPES)	275,000	SF	0.25	69	0.00	0	1.17	322	0.00	0	0.07	19	0.08	22	1.57	432	1.55	669

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQUIP. OWNERSHIP		EQUIP. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.317	DRAINAGE HOLES	65,800	LF	9.91	652	0.26	17	0.00	0	0.00	0	2.50	165	3.05	201	15.72	1,034	1.55	1,603
.32	GROUT GALLERIES/PORTALS																		
.321	EXCAVATION																		
	TUNNELS/SHAFTS - CORE AREA																		
	ROCK HORIZONTAL	13,100	CY	66.93	877	27.44	359	0.00	0	0.00	0	20.70	271	25.31	332	140.38	1,839	1.55	2,850
	ROCK INCLINED	5,300	CY	100.40	532	27.44	145	0.00	0	0.00	0	31.06	165	37.96	201	196.86	1,043	1.55	1,617
	ROCK VERTICAL	3,400	CY	100.40	341	21.60	73	0.00	0	0.00	0	31.06	106	37.96	129	91.02	649	1.55	1,007
	TUNNELS/SHAFTS ACCESS																		
	ROCK HORIZONTAL	12,400	CY	66.93	830	27.44	340	0.00	0	0.00	0	20.70	257	25.31	314	140.38	1,741	1.55	2,698
	PORTALS																		
	OVERBURDEN	28,700	CY	2.74	79	0.00	0	0.00	0	0.00	0	1.45	42	1.78	51	5.97	171	1.55	266
	ROCK	16,500	CY	4.44	73	4.22	70	0.00	0	0.00	0	3.92	63	4.68	77	17.16	283	1.55	439
.323	SURFACE PREPARATION																		
	PORTALS																		
	HORIZONTAL	50	SF	0.37	0	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.70	0	1.55	0
	INCLINED	410	SF	0.57	0	0.06	0	0.00	0	0.00	0	0.18	0	0.21	0	1.02	0	1.55	1
.324	CONCRETE & SHOTCRETE																		
	TUNNELS - CORE AREA																		
	CONCRETE SLAB	1,800	CY	160.68	289	20.00	36	44.60	80	0.00	0	36.40	66	44.50	80	306.18	551	1.55	854
	CONCRETE OVERBREAK 6"	900	CY	127.40	115	10.00	9	44.60	40	0.00	0	28.30	25	34.60	31	244.90	220	1.55	342
	REINFORCING STEEL	62	TON	235.00	15	19.00	1	540.00	33	0.00	0	59.00	4	72.00	4	925.00	57	1.55	89
	2" SHOTCRETE	3,300	SF	0.57	2	0.00	0	0.92	3	0.00	0	0.09	0	0.11	0	1.69	6	1.55	9
	TUNNELS - ACCESS																		
	CONCRETE SLAB	1,400	CY	160.68	225	20.00	28	44.60	62	0.00	0	36.40	51	44.50	62	306.18	429	1.55	664
	CONCRETE OVERBREAK 6"	700	CY	127.40	89	10.00	7	44.60	31	0.00	0	28.30	20	34.60	24	244.90	171	1.55	266
	REINFORCING STEEL	50	TON	235.00	12	19.00	1	540.00	27	0.00	0	59.00	3	72.00	4	925.00	46	1.55	72
	2" SHOTCRETE	2,500	SF	0.57	1	0.00	0	0.92	2	0.00	0	0.09	0	0.11	0	1.69	4	1.55	7
	SHAFTS - CORE AREA																		
	2" SHOTCRETE	6,500	SF	0.57	4	0.00	0	0.92	6	0.00	0	0.09	1	0.11	1	1.69	11	1.55	17
	PORTALS (4 PORTALS)																		
	CONCRETE	40	CY	46.50	2	3.00	0	44.60	2	0.00	0	15.70	1	19.20	1	129.00	5	1.55	8
	REINFORCING STEEL	3	TON	226.00	1	19.00	0	540.00	2	0.00	0	59.00	0	72.00	0	916.00	3	1.55	4
.325	SUPPORT & ANCHORS																		
	TUNNELS - CORE AREA																		
	ROCKBOLTS 1" @ 12'	150	EACH	90.20	14	0.00	0	23.50	4	0.00	0	26.59	4	32.49	5	172.78	26	1.55	40
	ROCKBOLTS 1" @ 9'	30	EACH	74.10	2	0.00	0	18.70	1	0.00	0	21.84	1	26.69	1	141.33	4	1.55	7
	ROCKBOLTS 3/4" @ 6'	1,250	EACH	58.00	73	0.00	0	11.10	14	0.00	0	17.09	21	20.89	26	107.08	134	1.55	207
	STEEL MESH	12,200	SF	1.05	13	0.03	0	0.71	9	0.00	0	0.15	2	0.19	2	2.13	26	1.55	40
	STEEL SUPPORT	27	TON	1383.00	37	0.00	0	2125.00	57	0.00	0	272.70	7	333.30	9	4114.00	111	1.55	172
	TUNNELS ACCESS																		
	ROCKBOLTS 3/4" @ 6'	1,200	EACH	58.00	70	0.00	0	11.10	13	0.00	0	17.09	21	20.89	25	107.08	128	1.55	199
	STEEL MESH	500	SF	1.05	1	0.03	0	0.71	0	0.00	0	0.15	0	0.19	0	2.13	1	1.55	2
	STEEL SUPPORT	12	TON	1383.00	17	0.00	0	2125.00	26	0.00	0	272.70	3	333.30	4	4114.00	49	1.55	77
	SHAFTS - CORE AREA																		
	ROCKBOLTS 3/4" @ 6'	300	EACH	58.00	17	0.00	0	11.10	3	0.00	0	17.09	5	20.89	6	107.08	32	1.55	50

ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
	STEEL MESH	1,300	SF	1.05	1	0.03	0	0.71	1	0.00	0	0.15	0	0.19	0	2.13	3	1.55	4
	PORTALS																		
	ROCKBOLTS 1" @ 15'	150	EACH	123.91	19	0.00	0	27.50	4	0.00	0	37.98	6	46.42	7	235.81	35	1.55	55
.328	STRUCTURAL - MISC STEELWORK																		
	STEEL/GUIDES SHAFT	50	TON	592.00	30	0.00	0	1660.00	83	0.00	0	53.00	3	65.00	3	2370.00	119	1.55	184
	STEEL STAIRWAY	1	LS		6		0		50		0		2		3		61	1.55	94
.329	ARCHITECTURAL																		
	PORTAL DOORS	4	EACH	2600.00	10	0.00	0	9900.00	40	0.00	0	180.00	1	220.00	1	12900.00	52	1.55	80
	HEADSHAFT STRUCTURE	1	LS		85		0		167		0		12		16		280	1.55	434
.32C	MECHANICAL																		
	ELEVATOR	1	LS		185		0		525		0		17		23		750	1.00	750
	OVERHEAD CRANE	1	LS		129		0		258		0		19		24		430	1.00	430
	MISC MECHANICAL EQUIPMENT	1	LS		36		0		72		0		5		7		120	1.00	120
.33	INSTRUMENTATION																		
.331	INSTRUMENTATION (DAM)																		
	INSTRUMENTATION	1	LS		1,449		882		0		0		85		104		2,520	1.55	3,906
.4	SADDLE DAM																		
.41	MAIN SADDLE DAM																		
.411	EXCAVATION																		
	OVERBURDEN	1,145,000	CY	0.99	1,134	0.00	0	0.00	0	0.00	0	1.19	1,363	1.45	1,660	3.63	4,156	1.55	6,442
	ROCK	301,000	CY	3.46	1,041	4.24	1,276	0.00	0	0.00	0	2.17	653	2.66	801	12.53	3,772	1.55	5,846
.412	FILL																		
	IMPERVIOUS CORE	313,500	CY	9.15	2,869	0.00	0	0.00	0	0.00	0	10.67	3,345	13.05	4,091	32.87	10,305	1.55	15,972
	FINE FILTER	231,000	CY	3.91	903	0.12	28	0.00	0	0.00	0	4.03	931	4.93	1,139	12.99	3,001	1.55	4,651
	COARSE FILTER	193,000	CY	3.37	650	0.07	14	0.00	0	0.00	0	3.65	704	4.46	861	11.55	2,229	1.55	3,455
	ROCK SHELL (UPSTREAM)	534,000	CY	0.93	497	0.00	0	0.00	0	0.00	0	0.98	523	1.20	641	3.11	1,661	1.55	2,574
	RIP RAP	174,500	CY	2.85	497	0.00	0	0.00	0	0.00	0	2.30	401	2.80	489	7.95	1,387	1.55	2,150
	ROCK SHELL (DOWNSTREAM)	345,000	CY	0.93	321	0.00	0	0.00	0	0.00	0	0.98	338	1.20	414	3.11	1,073	1.55	1,663
	ROCKFILL	127,000	CY	0.93	118	0.00	0	0.00	0	0.00	0	0.98	124	1.20	152	3.11	395	1.55	612
	FILTER FABRIC																		
	FILTER FABRIC	190,000	SF	0.07	13	0.00	0	0.19	36	0.00	0	0.01	2	0.27	51	0.54	163	1.55	159
.413	SURFACE PREPARATION/GROUTING																		
	SURFACE PREPARATION																		
	UNDER DAM CORE	191,500	SF	0.57	109	0.06	11	0.00	0	0.00	0	0.18	34	0.21	40	1.02	195	1.55	303
	UNDER DAM SHELL	432,500	SF	0.37	160	0.04	17	0.00	0	0.00	0	0.13	56	0.16	69	0.70	303	1.55	469
	DENTAL CONCRETE																		
	DENTAL CONCRETE	7,100	CY	40.50	288	3.00	21	44.60	317	0.00	0	12.55	89	15.35	109	116.00	824	1.55	1,277
	CONSOLIDATION GROUT																		
	DRILL HOLES	57,500	LF	2.47	142	0.25	14	0.00	0	0.00	0	0.53	30	0.65	37	3.90	224	1.55	348
	CEMENT	57,500	CF	7.05	405	0.25	14	12.50	719	0.00	0	0.78	45	0.95	55	21.53	1,238	1.55	1,919
	GROUT CURTAIN (SEE 332.313)																		
.417	DRAINAGE (SEE 332.317)																		
.5	OUTLET FACILITY VALVES (IN DAM)																		
.51	OUTLET FACILITY VALVES																		
.51C	MECHANICAL																		
	TRASHRACKS/GUIDES	1	LS		470		0		1,170		0		95		116		1,850	1.00	1,850

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	BULKHEAD GATE GUIDES	1	LS		750	0		330		0		63		77		1,220	1.00	1,220	
	BULKHEAD GATES & FOLLOWERS	2	EACH	30000	60	0	0	180000	360	0	0	4500	9	5500	11	220000	440	1.00	440
	GANTRY CRANE	1	LS		150	0	0		400		0		68		83		700	1.00	700
	FIXED CONE VALVES (7 PLUS 2 SPARE)	1	LS		600	0		2,460		0		63		77		3,200	1.00	3,200	
	RING FOLLOWER GATES (7)	1	LS		1,130	0		4,920		0		113		138		6,300	1.00	6,300	
	MISC. MECHANICAL EQUIPMENT	1	LS		250	0		500		0		23		28		800	1.00	800	
	MISC. ELECTRICAL SYSTEMS	1	LS		45	0		50		0		2		3		100	1.00	100	
.52	MAIN (CHUTE) SPILLWAY																		
.521	EXCAVATION																		
	APPROACH																		
	OVERBURDEN	44,000	CY	1.24	55	0.00	0	0.00	0	0.00	0	1.77	78	2.17	95	5.16	228	1.55	353
	ROCK USEABLE	80,000	CY	3.46	277	4.24	339	0.00	0	0.00	0	2.17	174	2.66	213	12.53	1,002	1.55	1,554
	ROCK WASTE	17,000	CY	3.46	59	4.24	72	0.00	0	0.00	0	2.17	37	2.66	45	12.53	213	1.55	330
	CONTROL STRUCTURE (TO END OF ROLLWAY)																		
	OVERBURDEN	21,500	CY	1.24	27	0.00	0	0.00	0	0.00	0	1.77	38	2.17	47	5.18	111	1.55	173
	ROCK USEABLE	87,000	CY	3.64	317	4.34	378	0.00	0	0.00	0	2.23	194	2.72	237	12.93	1,125	1.55	1,744
	ROCK WASTE	15,000	CY	2.84	43	4.30	65	0.00	0	0.00	0	1.99	30	2.43	36	11.56	173	1.55	269
	CHUTE & FLIP (END ROLLWAY TO END FLIP)																		
	OVERBURDEN	128,500	CY	1.24	159	0.00	0	0.00	0	0.00	0	1.77	227	2.17	279	5.18	666	1.55	1,032
	ROCK USEABLE (INCLINED)	38,000	CY	5.09	193	5.15	196	0.00	0	0.00	0	2.59	98	3.17	120	16.00	608	1.55	942
	ROCK USEABLE (VERTICAL)	401,000	CY	5.09	2,041	5.15	2,065	0.00	0	0.00	0	2.59	1,039	3.17	1,271	16.00	6,416	1.55	9,945
	ROCK WASTE	93,500	CY	3.46	324	4.24	396	0.00	0	0.00	0	2.17	203	2.66	249	12.53	1,172	1.55	1,816
	OUTFALL (FROM END OF BASIN)																		
	OVERBURDEN	44,500	CY	1.24	55	0.00	0	0.00	0	0.00	0	1.77	79	2.17	97	5.18	231	1.55	357
	ROCK USEABLE	141,500	CY	4.57	647	5.15	729	0.00	0	0.00	0	1.83	259	2.24	317	13.79	1,951	1.55	3,024
	ROCK WASTE	41,500	CY	2.94	122	4.24	176	0.00	0	0.00	0	1.41	59	1.72	71	10.31	428	1.55	663
	DRAIN TUNNEL																		
	ROCK HORIZONTAL	1,500	CY	66.93	100	27.44	41	0.00	0	0.00	0	20.70	31	25.31	38	140.38	211	1.55	326
	ROCK INCLINED	2,300	CY	100.40	231	27.44	63	0.00	0	0.00	0	31.06	71	37.96	87	196.86	453	1.55	702
	RIVER CHANNEL																		
	ALLUVIUM EXCAVATION	67,000	CY	1.01	68	0.01	1	0.00	0	0.00	0	1.42	95	1.74	117	4.18	280	1.55	434
.523	SURFACE PREPARATION/GROUTING																		
	SURFACE PREPARATION																		
	SPILLWAY																		
	ROCK HORIZONTAL	108,000	SF	0.37	40	0.04	4	0.00	0	0.00	0	0.13	14	0.16	17	0.70	76	1.55	117
	ROCK INCLINED	41,500	SF	0.57	24	0.06	2	0.00	0	0.00	0	0.18	7	0.21	9	1.02	42	1.55	66
	CONSOLIDATION GROUT																		
	DRILL HOLES	22,000	LF	2.47	54	0.25	6	0.00	0	0.00	0	0.53	12	0.65	14	3.90	86	1.55	133
	CEMENT	22,000	CF	7.05	155	0.25	6	12.50	275	0.00	0	0.78	17	0.95	21	21.53	474	1.55	734
	GROUT CURTAIN (SEE 332.313)																		
.524	CONCRETE & SHOTCRETE																		
	CONCRETE STRUCTURE																		

SUSITNA HYDROELECTRIC PROJECT
F.E.R.C. LICENSE APPLICATION ESTIMATE - ACRES AMERICAN
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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
	(TO END OF ROLLWAY) (INCLUDING STORAGE AREAS)																		
	CONCRETE OUTER WALLS	15,500	CY	44.70	693	13.55	210	44.60	691	0.00	0	16.72	259	20.43	317	140.00	2,170	1.55	3,364
	CONCRETE PIERS (FULL LENGTH)	7,700	CY	44.70	344	13.55	104	44.60	343	0.00	0	16.72	129	20.43	157	140.00	1,078	1.55	1,671
	CONCRETE DECK	1,600	CY	44.70	72	13.55	22	44.60	71	0.00	0	16.72	27	20.43	33	140.00	224	1.55	347
	CONCRETE ROLLWAY SLAB	33,000	CY	44.70	1,475	13.55	447	44.60	1,472	0.00	0	16.72	552	20.43	674	140.00	4,620	1.55	7,161
	CONCRETE OVERBREAK 12"H/6"V	1,400	CY	32.50	46	5.00	7	44.60	62	0.00	0	12.55	18	15.35	21	110.00	154	1.55	239
	REINFORCING STEEL	2,300	TON	226.00	520	19.00	44	540.00	1,242	0.00	0	59.00	136	72.00	166	916.00	2,107	1.55	3,266
	CONCRETE CHUTE & FLIP (END ROLLWAY TO END FLIP) (INCL BOX DRAIN GALLERIES)																		
	CONCRETE SLAB	13,000	CY	51.10	664	7.30	95	44.60	580	0.00	0	18.00	234	22.00	286	143.00	1,959	1.55	2,881
	CONCRETE WALLS	20,500	CY	56.15	1,151	11.30	232	44.60	914	0.00	0	17.98	369	21.97	450	152.00	3,116	1.55	4,830
	CONCRETE OVERBREAK 18"H/6"V	6,300	CY	24.50	154	2.00	13	44.60	281	0.00	0	13.00	82	15.90	100	100.00	630	1.55	977
	REINFORCING STEEL	1,300	TON	226.00	294	19.00	25	540.00	702	0.00	0	59.00	77	72.00	94	916.00	1,191	1.55	1,846
	CONCRETE DRAIN GALLERY																		
	CONCRETE SLAB	400	CY	129.50	52	3.00	17	44.60	18	0.00	0	37.30	15	45.60	18	300.00	120	1.55	186
	CONCRETE OVERBREAK 6"	200	CY	69.50	14	13.00	3	44.60	9	0.00	0	23.80	5	29.10	6	180.00	36	1.55	56
	REINFORCING STEEL	14	TON	226.00	3	19.00	0	540.00	8	0.00	0	59.00	1	72.00	1	916.00	13	1.55	20
	2" SHOTCRETE DOME	2,500	SF	0.55	1	0.00	0	0.92	2	0.00	0	0.09	0	0.11	0	1.67	4	1.55	6
.525	SUPPORT & ANCHORS DRAINAGE TUNNEL																		
	STEEL SUPPORT	4	TON	1383.00	6	0.00	0	2125.00	9	0.00	0	272.70	1	333.30	1	4114.00	16	1.55	26
	STEEL MESH	500	SF	1.05	1	0.03	0	0.71	0	0.00	0	0.15	0	0.19	0	2.13	1	1.55	2
	ROCKBOLTS DRAINAGE GALLERY 3/4" @ 6'	400	EACH	58.00	23	0.00	0	11.10	4	0.00	0	17.09	7	20.89	8	107.08	43	1.55	66
	ROCKBOLTS APPROACH 1" @ 15'	140	EACH	128.86	18	0.00	0	27.50	4	0.00	0	37.98	5	46.42	6	240.76	34	1.55	52
	ROCKBOLTS CHUTE & STRUCTURE 1" @ 15'	85	EACH	128.86	11	0.00	0	27.50	2	0.00	0	37.98	3	46.42	4	240.76	20	1.55	32
	SLAB/WALL ANCHORS 1" @ 10'	3,700	EACH	80.55	298	0.00	0	20.60	76	0.00	0	23.74	88	29.01	107	153.90	569	1.55	883
.527	DRAINAGE DRILL HOLES																		
	BOX DRAINS (TO DRAIN TUNNEL)	28,000	LF	10.30	288	0.26	7	0.00	0	0.00	0	2.50	70	3.05	85	16.11	451	1.55	699
	3" RELIEF	500	LF	10.30	5	0.26	0	0.00	0	0.00	0	2.50	1	3.05	2	16.11	8	1.55	12
.52C	MECHANICAL																		
	GATE EQUIPMENT	3	EACH	373333	1,120	0	0	1410000	4,230	0	0	30000	90	36667	110	1850000	5,550	1.00	5,550
	STOPLOG GUIDES	3	SETS	28333	85	0	0	15000	45	0	0	750	2	917	3	45000	135	1.00	135
	STOPLOGS INCLUDING FOLLOWERS	1	SET		20		0		452		0		4		4		480	1.00	480
	MISCELLANEOUS ELECTRICAL	1	LS		43		0		52		0		2		3		100	1.00	100
.53	EMERGENCY SPILLWAY																		
.531	EXCAVATION (INCLUDING - BRIDGE & FUSE PLUG)																		
	OVERBURDEN	281,500	CY	0.52	146	0.00	0	0.00	0	0.00	0	0.80	225	0.97	273	2.29	645	1.55	999
	ROCK USEABLE	1,019,000	CY	3.64	3,709	4.34	4,422	0.00	0	0.00	0	2.26	2,303	2.76	2,812	13.00	13,247	1.55	20,533

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.532	ROCK WASTE	215,500	CY	3.11	670	4.30	927	0.00	0	0.00	0	2.40	517	2.94	634	12.75	2,748	1.55	4,259
	FILL																		
.533	FUSE PLUG	26,000	CY	1.86	48	0.61	0	0.00	0	0.00	0	2.03	53	2.48	64	6.38	166	1.55	257
	SURFACE PREPARATION/GROUTING																		
	SURFACE PREP (UNDER FUSE PLUG)																		
	HORIZONTAL	75,500	SF	0.37	28	0.04	3	0.00	0	0.00	0	0.13	10	0.16	12	0.70	53	1.55	82
	INCLINED	2,500	SF	0.57	1	0.06	0	0.00	0	0.00	0	0.18	0	0.21	1	1.02	3	1.55	4
	CONSOLIDATION GROUTING																		
	DRILL HOLES	23,000	LF	2.47	57	0.25	6	0.00	0	0.00	0	0.53	12	0.65	15	3.90	90	1.55	139
	CEMENT	23,000	CF	7.05	162	0.25	6	12.50	288	0.00	0	0.78	18	0.95	22	21.53	495	1.55	768
	GROUT CURTAIN (SEE 332.313)																		
.534	CONCRETE																		
	GROUND SLAB	6,000	CY	32.50	195	5.00	30	44.60	268	0.00	0	12.55	75	15.35	92	110.00	660	1.55	1,023
	CONCRETE OVERBREAK 12"H/12"V	3,000	CY	32.50	98	5.00	15	44.60	134	0.00	0	12.55	38	15.35	46	110.00	330	1.55	511
	REINFORCING STEEL	210	TON	226.00	47	19.00	4	540.00	113	0.00	0	59.00	12	72.00	15	916.00	192	1.55	298
.535	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 15'	300	EACH	123.91	37	0.00	0	27.50	8	0.00	0	37.98	11	46.42	14	235.81	71	1.55	110
	ROCK ANCHORS 1" @ 25'	760	EACH	176.57	134	0.00	0	98.90	75	0.00	0	54.12	41	66.15	50	395.74	301	1.55	466
.538	BRIDGE																		
	BRIDGE	1	LS		262		504		0		0		18		22		807	1.55	1,250
.6	POWER INTAKES																		
.61	POWER INTAKE STRUCT & APP																		
.611	EXCAVATION																		
	OVERBURDEN	97,600	CY	1.24	121	0.00	0	0.00	0	0.00	0	1.77	173	2.17	212	5.18	506	1.55	784
	ROCK	216,200	CY	3.64	787	4.34	938	0.00	0	0.00	0	2.23	482	2.72	588	12.93	2,795	1.55	4,333
.613	SURFACE PREPARATION																		
	HORIZONTAL	15,900	SF	0.37	6	0.04	1	0.00	0	0.00	0	0.13	2	0.16	3	0.70	11	1.55	17
	INCLINED	74,000	SF	0.57	42	0.06	4	0.00	0	0.00	0	0.18	13	0.21	16	1.02	75	1.55	117
.614	CONCRETE & SHOTCRETE																		
	STRUCTURE																		
	CONCRETE STRUCTURE	37,900	CY	57.90	2,194	25.00	948	44.60	1,690	0.00	0	20.48	776	25.02	948	173.00	6,557	1.55	10,163
	CONCRETE OVERBREAK 12"H/6"V	1,340	CY	31.50	42	5.00	7	44.60	60	0.00	0	11.65	16	14.25	19	107.00	143	1.55	222
	REINFORCING STEEL	2,500	TON	226.00	565	19.00	48	540.00	1,350	0.00	0	59.00	148	72.00	180	916.00	2,290	1.55	3,550
.615	SUPPORT & ANCHORS																		
	APPROACH																		
	ROCKBOLTS 1" @ 15'	150	EACH	123.91	19	0.00	0	27.50	4	0.00	0	37.98	6	46.42	7	235.81	35	1.55	55
.61C	MECHANICAL																		
	TRASHRACKS/GUIDES	4	SETS	45000	180	0	0	108000	432	0	0	7650	31	9350	37	170000	680	1.00	680
	BULKHEAD GATE GUIDES	4	SETS	36250	145	0	0	30000	120	0	0	3938	16	4813	19	75000	300	1.00	300
	BULKHEAD GATES & FOLLOWERS	1	SET	15	0	0	0	0	255	0	0	0	2	0	3	0	275	1.00	275
	INTAKE GANTRY CRANE	1	EACH	200	0	0	0	0	950	0	0	0	45	0	55	0	1,250	1.00	1,250
	INTAKE GATE EQUIPMENT	4	EACH	187500	750	0	0	685000	2,740	0	0	16875	68	20625	83	910000	3,640	1.00	3,640
	MISCELLANEOUS ELECTRICAL	1	LS		45	0	0	0	50	0	0	0	2	0	3	0	100	1.00	100
.61D	INTAKE BUILDING																		
	INTAKE BUILDING	1	LS		39		0		77		0		6		7		129	1.55	200

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.7	SURGE CHAMBER																		
.71	SURGE CHAMBER																		
.711	EXCAVATION																		
	CHAMBER ROCK	153,800	CY	14.80	2,276	4.99	767	0.00	0	0.00	0	5.46	840	6.68	1,027	31.93	4,911	1.55	7,612
	VENT SHAFT ROCK	2,300	CY	115.35	265	16.26	37	0.00	0	0.00	0	36.88	85	45.07	104	213.56	491	1.55	761
.713	SURFACE PREPARATION																		
	SURFACE PREP	6,100	SF	0.38	2	0.04	0	0.00	0	0.00	0	0.13	1	0.16	1	0.71	4	1.55	7
.714	CONCRETE & SHOTCRETE																		
	CHAMBER																		
	CONCRETE CHAMBER	1,300	CY	71.24	93	6.00	8	44.60	58	0.00	0	19.75	26	24.15	31	165.74	215	1.55	334
	CONCRETE OVERBREAK	140	CY	56.68	8	2.00	0	44.60	6	0.00	0	17.50	2	21.40	3	142.18	20	1.55	31
	REINFORCING STEEL	65	TON	235.00	15	19.00	1	540.00	35	0.00	0	59.00	4	72.00	5	925.00	60	1.55	93
	3" SHOTCRETE	3,200	SF	0.80	3	0.00	0	1.39	4	0.00	0	0.13	0	0.15	0	2.47	8	1.55	12
	2" SHOTCRETE	2,360	SF	0.57	1	0.00	0	0.92	2	0.00	0	0.09	0	0.11	0	1.69	4	1.55	6
	VENT SHAFT																		
	2" SHOTCRETE	6,300	SF	0.57	4	0.00	0	0.92	6	0.00	0	0.09	1	0.11	1	1.69	11	1.55	17
.715	SUPPORT & ANCHORS																		
	CHAMBER																		
	ROCKBOLTS 1" @ 25' HY	725	EACH	183.63	133	0.00	0	98.90	72	0.00	0	54.12	39	66.15	48	402.80	292	1.55	453
	ROCKBOLTS 1" @ 15'	600	EACH	128.86	77	0.00	0	27.50	17	0.00	0	37.98	23	46.42	28	240.76	144	1.55	224
	STEEL MESH	29,400	SF	1.00	29	0.02	1	0.58	17	0.00	0	0.14	4	0.16	5	1.90	56	1.55	87
	STEEL SUPPORT	70	TON	1383.00	97	0.00	0	2125.00	149	0.00	0	272.70	19	333.30	23	4114.00	288	1.55	446
	VENT SHAFT																		
	ROCKBOLTS 3/4" @ 6'	400	EACH	58.00	23	0.00	0	11.10	4	0.00	0	17.09	7	20.89	8	107.08	43	1.55	66
	STEEL MESH	1,300	SF	1.03	1	0.03	0	0.67	1	0.00	0	0.15	0	0.18	0	2.06	3	1.55	4
.717	DRAINAGE																		
	HOLES (IN CHAMBER CROWN)	13,650	LF	10.30	141	0.26	4	0.00	0	0.00	0	2.50	34	3.05	42	16.11	220	1.55	341
.8	PENSTOCKS																		
.81	PENSTOCKS																		
.811	EXCAVATION																		
	TUNNELS																		
	ROCK HORIZONTAL	10,500	CY	23.93	251	7.54	79	0.90	0	0.00	0	8.99	94	10.99	115	51.45	540	1.55	837
	ROCK INCLINED	44,600	CY	50.89	2,270	11.02	491	0.00	0	0.00	0	17.97	801	21.96	979	101.84	4,542	1.55	7,040
.813	SURFACE PREPARATION/GROUTING																		
	SURFACE PREPARATION																		
	TUNNELS	173,500	SF	0.38	66	0.04	7	0.00	0	0.00	0	0.13	23	0.16	28	0.71	123	1.55	191
	CONTACT GROUTING																		
	CONTACT GROUTING	1	LS		28		15		0		0		5		6		54	1.55	83
	CONSOLIDATION GROUTING																		
	CONSOLIDATION GROUTING	1	LS		59		79		0		0		3		4		145	1.55	224
.814	CONCRETE & SHOTCRETE																		
	CONCRETE LINER	17,600	CY	97.24	1,711	68.00	1,197	44.60	785	0.00	0	45.85	807	56.05	986	311.74	5,487	1.55	8,504
	CONCRETE PLUG	10,000	CY	97.24	972	36.00	360	44.60	446	0.00	0	29.65	297	36.25	363	243.74	2,437	1.55	3,778
	CONCRETE OVERBREAK 6"	4,700	CY	86.84	408	30.00	141	44.60	210	0.00	0	27.85	131	34.05	160	223.34	1,050	1.55	1,627
	CONCRETE OVERBREAK PLUG	860	CY	86.84	75	30.00	26	44.60	38	0.00	0	27.85	24	34.05	29	223.34	192	1.55	298
	REINFORCING STEEL	18	TON	235.00	4	19.00	0	540.00	16	0.00	0	59.00	1	72.00	1	925.00	17	1.55	26

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
	2" SHOTCRETE	19,100	SF	0.57	11	0.00	0	0.92	18	0.00	0	0.09	2	0.11	2	1.69	32	1.55	50
	SUPPORT 2 ANCHORS																		
	ROCKBOLTS 1" @ 25'	100	EACH	183.63	18	0.00	0	98.90	10	0.00	0	54.12	5	66.15	7	402.80	40	1.55	62
	ROCKBOLTS 1" @ 6'	1,350	EACH	58.00	78	0.00	0	11.10	15	0.00	0	17.09	23	20.89	28	107.08	145	1.55	224
	STEEL MESH	86,800	SF	1.04	90	0.03	3	0.68	59	0.00	0	0.15	13	0.18	16	2.08	181	1.55	280
.81	STRUCTURAL - RISC STEELWORK																		
	STEEL LINER	2,600	TON	967.00	1,934	0.00	0	1260.00	3,720	0.00	0	140.00	230	170.00	340	3137.00	6,274	1.55	9,725
.9	TAILRACE WORKS																		
.91	TAILRACE TUNNELS/PORTALS																		
.911	EXCAVATION																		
	TUNNELS																		
	BACK	329,300	CY	13.50	4,446	6.47	2,131	0.00	0	0.00	0	5.80	1,910	7.08	2,331	32.85	10,818	1.55	16,757
	PORTAL																		
	OVERBURDEN	40,000	CY	2.74	110	0.00	0	0.00	0	0.00	0	1.45	58	1.78	71	5.97	239	1.55	370
	ROCK	21,000	CY	4.44	93	4.22	89	0.00	0	0.00	0	3.92	80	4.68	98	17.16	360	1.55	559
.913	SOIL PREPARATION																		
	TUNNELS																		
	TUNNEL	582,000	SF	0.59	343	0.06	35	0.00	0	0.00	0	0.18	105	0.21	122	1.04	605	1.55	938
	PORTAL																		
	HORIZONTAL	400	SF	0.37	0	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.70	0	1.55	0
	INCLINED	2,700	SF	0.57	2	0.06	0	0.00	0	0.00	0	0.18	0	0.21	1	1.02	3	1.55	4
.914	CONCRETE & SHOTCRETE																		
	TUNNELS																		
	CONCRETE LINING	31,700	CY	48.36	1,533	12.00	317	44.60	1,414	0.00	0	17.50	555	21.40	678	141.86	4,497	1.55	6,970
	CONC OVERBREAK 6"	16,200	CY	25.48	413	6.00	97	44.60	723	0.00	0	11.20	181	13.70	222	100.98	1,636	1.55	2,536
	REINFORCING STEEL	13	TON	235.00	3	19.00	0	540.00	7	0.00	0	59.00	1	72.00	1	925.00	12	1.55	19
	2" SHOTCRETE	17,500	SF	0.57	10	0.00	0	0.92	16	0.00	0	0.09	2	0.11	2	1.69	30	1.55	46
	PORTAL																		
	CONCRETE BASE SLAB	100	CY	86.10	9	19.20	2	44.60	4	0.00	0	25.70	3	31.40	3	207.00	21	1.55	32
	CONCRETE WALLS	650	CY	86.10	56	19.20	12	44.60	29	0.00	0	25.70	17	31.40	20	207.00	135	1.55	209
	CONC OVERBREAK 12"H/6"W	50	CY	64.50	3	0.00	0	44.60	2	0.00	0	18.40	1	22.50	1	150.00	8	1.55	12
	REINFORCING STEEL	50	TON	226.00	11	19.00	1	540.00	27	0.00	0	59.00	3	72.00	4	916.00	46	1.55	71
.915	SUPPORT & ANCHORS																		
	TUNNELS																		
	ROCKBOLTS 1" @ 12'	3,160	EACH	90.20	285	0.00	0	23.50	74	0.00	0	26.59	84	32.49	103	172.78	546	1.55	846
	ROCKBOLTS 1" @ 9'	490	EACH	74.10	36	0.00	0	18.70	9	0.00	0	21.84	11	26.69	13	141.33	69	1.55	107
	STEEL MESH	291,000	SF	1.04	303	0.03	9	0.68	198	0.00	0	0.15	44	0.18	52	2.08	605	1.55	938
	STEEL SUPPORT	232	TON	1383.00	321	0.00	0	2125.00	493	0.00	0	272.70	63	333.30	77	4114.00	954	1.55	1,479
	PORTAL																		
	ROCKBOLTS 1" @ 15'	100	EACH	123.91	12	0.00	0	27.50	3	0.00	0	37.98	4	46.42	5	235.81	24	1.55	37
.916	MECHANICAL																		
	STOPLOG GUIDES	1	LS		20		0		16		0		2		3		41	1.00	41
					158,250		42,414		104,780		0		54,899		67,181		427,524		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
333	WATERWHEELS, TURBINES & GENERATORS																		
.1	TURBINES & GOVERNORS																		
.11	TURBINES & GOVERNORS																		
.111	SUPPLY	4	EACH	0	0	0	0	3792500	15,170	0	0	25875	104	31625	127	3850000	15,400	1.00	15,400
.112	INSTALL	4	EACH	1070000	4,280	0	0	0	0	0	0	36000	144	44000	176	1150000	4,600	1.00	4,600
.2	GENERATORS & EXCITERS																		
.21	GENERATORS & EXCITERS (SUPPLY & INSTALL)																		
.211	GENERATORS & EXCITERS	4	EACH	1100000	4,400	0	0	4250000	17,000	0	0	67500	270	82500	330	5500000	22,000	1.00	22,000
					8,680		0		32,170		0		518		633		42,000		
334	ACCESSORY ELECTRICAL EQUIPMENT																		
.1	CONNECTIONS, SUPPORTS & STRUCT.																		
.11	STRUCTURES																		
.111	STRUCT (INCL BELOW)																		
.12	CONDUCTORS & INSULATORS																		
.121	GENERATOR ISOLATED PHASE BUS	1	LS		500	0		1,450		0		23		28		2,000	1.00	2,000	
.122	HV POWER CABLES & ACCESS.	1	LS		500	0		670		0		14		17		1,200	1.00	1,200	
.123	LV POWER CABLES & ACCESS.	1	LS		180	0		210		0		5		6		400	1.00	400	
.124	CONTROL CABLES & ACCESSORIES	1	LS		250	0		335		0		7		8		600	1.00	600	
.125	GROUNDING SYSTEM	1	LS		60	0		85		0		2		3		150	1.00	150	
.13	CONDUITS & FITTINGS																		
.131	CONDUITS & FITTINGS	1	LS		75	0		150		0		35		40		300	1.00	300	
.2	SWITCHGEAR & CONTROL EQUIPMENT																		
.21	AUXILIARY TRANSFORMERS																		
.211	AUXILIARY TRANSFORMERS	4	EACH	4000	16	0	0	25,000	100	0	0	450	2	550	2	30000	120	1.00	120
.22	CIRCUIT BREAKERS																		
.221	CIR BRKR (NOT REQ'D)																		
.23	SURGE PROT & GEN CUBICLES																		
.231	SURGE PROT & GEN CUBICLES	1	LS		56	0		250		0		2		2		310	1.00	310	
.24	SWITCHBOARDS																		
.241	SWITCHBOARDS	1	LS		130	0		575		0		7		8		720	1.00	720	
.25	AUX. POWER EQPT-INCL BAT																		
.251	AUX. POWER EQUIPMENT	1	LS		35	0		180		0		2		3		220	1.00	220	
.3	CUBICLES & APPURTENANCES																		
.31	CONTROL, RELAY & METER BRDS																		
.311	CONTROL, RELAY & METER BOARD	1	LS		300	0		370		0		14		17		700	1.00	700	
.32	COMPUTER CONTROL SYSTEM																		
.321	COMPUTER CONTROL SYS (INCL IN 353)																		
.33	SUPERVIS. & TELEMET. SYS																		
.331	SUPERV & TELEMETER SYS (INCL IN 353)																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$	\$ 000	\$ 000
.4	POWER TRANSFORMERS																		
.41	POWER TRANSFORMERS																		
.411	POWER TRANSFORMERS	13	EACH	53077	690			0	307692	4,000	0	8654	113	10577	137	380000	4,940	1.00	4,940
.5	LIGHTING SYSTEM																		
.51	POWERHOUSE & TRANS GALLERY																		
.511	POWERHOUSE & TRANS GALLERY	1	LS		180			0	430		0		23		28		660	1.00	660
.52	ACCESS TUNNELS & ROADS																		
.521	ACCESS TUNNELS & ROADS	1	LS		50			0	90		0		14		17		170	1.00	170
.6	MISC. ELECTRICAL EQUIPMENT																		
.61	MISC. ELECTRICAL EQUIPMENT																		
.611	MISC. ELECTRICAL EQUIPMENT	1	LS		50			0	150		0		9		11		220	1.00	220
.7	SURFACE ACCESSORY ELFC EQUIPMENT																		
.71	4.16 KV & LV EQUIPMENT																		
.711	SWITCHBOARD	1	LS		13			0	55		0		1		1		70	1.00	70
.712	CABLES	1	LS		87			0	121		0		5		7		220	1.00	220
.713	AUX TRANSFORMERS	1	LS		16			0	100		0		2		2		120	1.00	120
.73	DIESEL GENERATORS - STANDBY																		
.731	DIESEL GENERATORS - STANDBY	2	EACH	30000	60	0	0	115000	230	0	0	2000	4	3000	6	150000	300	1.00	300
.74	EXTERIOR LIGHTING																		
.741	EXTERIOR LIGHTING	1	LS		90			0	150		0		4		6		250	1.00	250
					3,338		0		9,701		0		284		347		13,670		
335	MISC. POWERPLANT EQUIPMENT																		
.1	AUXILIARY SYSTEMS - UNDERGROUND																		
.11	STATION WATER SYSTEMS																		
.111	STATION WATER SYSTEMS	1	LS		630			0	600		0		32		39		1,300	1.00	1,300
.12	FIRE PROTECTION SYSTEMS																		
.121	FIRE PROTECTION SYSTEMS	1	LS		485			0	450		0		29		36		1,000	1.00	1,000
.13	COMPRESSED AIR SYSTEMS																		
.131	COMPRESSED AIR SYSTEMS	1	LS		600			0	780		0		9		11		1,400	1.00	1,400
.14	OIL HANDLING SYSTEMS																		
.141	OIL HANDLING SYSTEMS	1	LS		450			0	560		0		23		28		1,000	1.00	1,000
.15	DRAINAGE & DEWATERING																		
.151	DRAINAGE & DEWATERING	1	LS		229			0	1,250		0		14		17		1,500	1.00	1,500
.16	HEAT, VENT & COOLING SYS																		
.161	HEAT, VENT & COOLING SYS	1	LS		400			0	750		0		23		28		1,200	1.00	1,200
.17	MISCELLANEOUS																		
.171	MISCELLANEOUS	1	LS		315			0	540		0		20		25		900	1.00	900
.2	AUXILIARY SYS - SURFACE FACs																		
.21	AUX SYS - SURFACE FACs																		
.211	AUX SYS - SURFACE FACs	1	LS		45			0	100		0		2		3		150	1.00	150
.3	AUXILIARY EQUIPMENT																		
.31	POWERHOUSE CRANES																		
.311	POWERHOUSE CRANES	2	EACH	125000	250	0	0	700000	1,400	0	0	33750	68	41250	83	900000	1,800	1.00	1,800

SUSTINA HYDROELECTRIC PROJECT
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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.32	ELEVATORS																		
.321	ELEVATORS	1	LS		85		0		135		0		5		6		230	1.00	230
.33	MISC. CRANES & HOIST																		
.331	MISC. CRANES & HOIST	1	LS		25		0		120		0		2		3		150	1.00	150
.34	MACHINE SHOP EQUIPMENT																		
.341	MACHINE SHOP EQUIPMENT	1	LS		30		0		160		0		4		6		200	1.00	200
.4	GENERAL STATION EQUIPMENT (INCLUDED IN MECHANICAL & ELECTRICAL SYSTEMS)																		
.5	COMMUNICATIONS EQUIPMENT																		
	COMMUNICATIONS EQUIPMENT	1	LS		25		0		63		0		1		1		90	1.00	90
					3,560		0		6,848		0		230		282		10,920		
336	ROADS, RAIL & AIR FACILITIES																		
.1	ROADS																		
.11	PERMANENT ACCESS ROAD																		
.111	WATANA-DEVIL CANYON (36 MILES)																		
	CLEARING	510	ACRE	1090.00	556	389.00	198	0.00	0	0.00	0	1479.00	754	934.00	476	3892.00	1,985	1.48	2,938
	WASTE EXCAVATION	1,349,000	CY	0.88	1,187	0.00	0	0.00	0	0.00	0	1.36	1,835	1.01	1,362	3.25	4,384	1.48	6,489
	COMMON EXCAVATION	1,408,500	CY	0.77	1,085	0.00	0	0.00	0	0.00	0	1.19	1,676	0.88	1,239	2.84	4,000	1.48	5,920
	ROCK EXCAVATION	146,500	CY	2.63	385	3.11	456	0.00	0	0.00	0	1.85	271	2.14	314	9.73	1,425	1.48	2,110
	DORROW	137,600	CY	1.30	179	0.00	0	0.00	0	0.00	0	1.58	217	1.18	162	4.06	559	1.48	827
	NFS SUBBASE MATERIAL	373,000	CY	1.82	679	0.00	0	0.00	0	0.00	0	2.21	824	1.65	615	5.68	2,119	1.48	3,136
	GRADE "A" BASE MATERIAL	203,500	CY	3.41	694	0.00	0	0.00	0	0.00	0	4.88	993	3.06	623	11.35	2,310	1.48	3,418
	D-1 BASE MATERIAL	169,800	TON	4.38	744	0.00	0	0.00	0	0.00	0	6.28	1,066	3.94	669	14.60	2,479	1.48	3,669
	GUARDRAIL	6,050	LF	5.84	35	21.60	131	0.00	0	0.00	0	0.58	4	1.17	7	29.19	177	1.48	261
	18" CULVERTS	23,000	LF	6.62	152	9.73	224	0.00	0	0.00	0	1.36	31	1.75	40	19.46	448	1.48	662
	36" CULVERTS	1	LS		52		135		0		0		6		6		199	1.48	294
	FABRIC	49,900	SY	0.30	15	1.72	86	0.00	0	0.00	0	0.00	0	0.00	0	2.02	101	1.48	149
	THAW PIPES	24,500	LF	9.92	243	14.59	357	0.00	0	0.00	0	2.04	50	2.63	64	29.18	715	1.48	1,058
	TOPSOIL & SEED	290	ACRE	316.00	92	1727.00	501	0.00	0	0.00	0	170.00	49	219.00	64	2432.00	705	1.48	1,044
	TRAFFIC CONTROL DEVICES	36	MILE	2919.00	105	8513.00	306	0.00	0	0.00	0	243.00	9	486.00	17	12161.00	438	1.48	648
	BRIDGES	88,400	SF	17.03	1,505	96.08	8,493	0.00	0	0.00	0	3.65	323	4.86	430	121.62	10,751	1.48	15,912
	MAINTENANCE																		
	MAINTENANCE	288	MI/YRS	2162.00	623	0.00	0	0.00	0	0.00	0	2635.00	759	1960.00	564	6757.00	1,946	1.48	2,880
.12	SITE ROADS																		
	SITE ROADS	7	MILE	1004121	7,029	474	3	0	0	0	0	808875	5,662	975755	6,830	2789225	19,525	1.48	28,896
	MAINTENANCE	60	MI/YRS	20420	1,225	0	0	0	0	0	0	20019	1,201	23820	1,429	64259	3,856	1.48	5,706
.13	PERMANENT ROADS AT SITE																		
	PERMANENT ROADS	3.5	MILE	60811	213	128378	449	0	0	0	0	91216	319	57432	201	337837	1,182	1.48	1,750
.14	MAINTENANCE CANTWELL TO WATANA																		
	MAINTENANCE	650	MI/YRS	1945.95	1,265	0.00	0	0.00	0	0.00	0	2371.62	1,542	1763.51	1,146	6081.08	3,953	1.48	5,850

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.15	PERMANENT RAILROAD (INCL RLHD)																		
	GOLD CREEK-DEVIL CANYON - RAIL																		
.151	GOLD CREEK - RAILROAD																		
	CLEARING	162	ACRE	1090.00	177	389.00	63	0.00	0	0.00	0	1479.00	240	934.00	151	3892.00	631	1.48	933
	WASTE EXCAVATION	407,420	CY	0.88	359	0.00	0	0.00	0	0.00	0	1.36	554	1.01	411	3.25	1,324	1.48	1,960
	COMMON EXCAVATION	798,405	CY	0.77	615	0.00	0	0.00	0	0.00	0	1.19	950	0.88	703	2.84	2,267	1.48	3,356
	ROCK EXCAVATION	2,200	CY	2.63	6	3.11	7	0.00	0	0.00	0	1.85	4	2.14	5	9.73	21	1.48	32
	BORROW	108,500	CY	1.30	141	0.00	0	0.00	0	0.00	0	1.58	171	1.18	128	4.06	441	1.48	652
	SUBBALAST	171,634	CY	1.74	299	0.00	0	0.00	0	0.00	0	2.50	429	1.57	269	5.81	997	1.48	1,476
	GRADE "A" BASE MATERIAL	4,900	CY	3.41	17	0.00	0	0.00	0	0.00	0	4.88	24	3.06	15	11.35	56	1.48	82
	D-1 BASE MATERIAL	2,400	TON	4.38	11	0.00	0	0.00	0	0.00	0	6.28	15	3.94	9	14.60	35	1.48	52
	A. C. SURFACING	2,200	TON	3.75	8	40.67	89	0.00	0	0.00	0	5.35	12	3.75	8	53.52	118	1.48	174
	DOCK LUMBER	16	MBF	0.00	0	391.89	6	0.00	0	0.00	0	0.00	0	0.00	0	391.89	6	1.48	9
	18" CULVERTS	4,850	LF	6.62	32	9.73	47	0.00	0	0.00	0	1.36	7	1.75	8	19.46	94	1.48	140
	36" + CULVERTS	1	LS		8		21		0		0		1		1		31	1.48	46
	FABRIC	3,121	SY	0.30	1	1.72	5	0.00	0	0.00	0	0.00	0	0.00	0	2.02	6	1.48	9
	THAW PIPES	10,100	LF	9.92	100	14.59	147	0.00	0	0.00	0	2.04	21	2.63	27	29.18	295	1.48	436
	TOPSOIL & SEED	104	ACRE	316.00	33	1727.00	180	0.00	0	0.00	0	170.00	18	219.00	23	2432.00	253	1.48	374
	RAIL YARD CONTROL DEVICES	1	LS		0		0		0		0		0		0		0	1.48	1
	TRACKAGE	98,975	LF	20.81	2,060	68.10	6,740	0.00	0	0.00	0	1.89	187	3.78	374	94.58	9,361	1.48	13,854
	MAINTENANCE																		
	RAIL	98	MI/YRS	2930.00	287	0.00	0	0.00	0	0.00	0	3570.00	350	2655.00	260	9155.00	897	1.48	1,328
	RAILHEAD	7	YEARS	6183.78	43	0.00	0	0.00	0	0.00	0	7536.49	53	5604.05	39	19324.32	135	1.48	200
					22,257		18,647		0		0		20,626		18,694		80,224		
	TRANSMISSION PLANT																		
350	LAND & LAND RIGHTS																		
	LAND & LAND RIGHTS																		
	(INCLUDED IN WATANA)																		
					0		0		0		0		0		0		0		
352	SUBSTATION & SWITCHING STATION																		
	SUBSTATION & SWITCHING STATION																		
	STRUCTURES & IMPROVEMENTS																		
.1	SWITCHYARD																		
	.11 SWITCHYARD	1	LS		721		0		5,900		0		134		175		6,930	1.00	6,930
					721		0		5,900		0		134		175		6,930		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000		\$ 000
353	SUBSTATION/SWITCHING STATION EQPT																		
	SUBSTATION/SWITCHING STATION EQPT	1	LS		348	0		2,455		0		39		48			2,890	1.00	2,890
	ESTER	1	LS		840	0		6,090		0		95		115			7,050	1.00	7,050
	WILLOW	1	LS		140	0		980		0		16		19			1,155	1.00	1,155
	KNIK ARM	1	LS		1,068	0		7,565		0		120		147			8,900	1.00	8,900
	UNIVERSITY																		
	WILLOW ENERGY MANAGE SYS (EMS)																		
	WATANA & DEVIL CANYON IN-	1	LS		354	0		770		0		40		49			1,213	1.00	1,213
	PLANT MONITOR & CONTROL EQPT																		
					2,750	0		17,770		0		310		378			21,208		
354	STEEL TOWERS & FIXTURES																		
	STEEL TOWERS & FIXTURES																		
	TOWERS (INCLUDING FOUND-	546	EACH	18274	9,978	0	0	30280	16,533	0	0	2056	1,123	2513	1,372	53123	29,005	1.00	29,005
	ATION & HARDWARE)				9,978	0			16,533	0			1,123		1,372		29,005		
356	CONDUCTORS & DEVICES																		
	CONDUCTORS & DEVICES	124	MILE	54791	6,794	0	0	35715	4,429	0	0	3868	480	5801	719	100175	12,422	1.00	12,422
	CONDUCTORS	3	EACH	2781250	8,344	0	0	4166700	12,500	0	0	156250	469	187500	563	7291700	21,875	1.00	21,875
	SUBMARINE CABLES				15,138	0			16,929	0			948		1,282		34,297		
359	ROADS & TRAILS																		
	ROADS & TRAILS																		
	(INCLUDED IN WATANA)				0	0		0		0		0		0			0		
	GENERAL PLANT																		
389	LAND & LAND RIGHTS																		
	LAND & LAND RIGHTS																		
	(INCLUDED IN 330)				0	0		0		0		0		0			0		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
63	MAIN CONSTRUCTION CAMP																		
.1	MAIN CONSTRUCTION CAMP																		
.11	SITE PREPARATION																		
	CLEARING																		
	CLEARING	57	ACRE	2201.00	125	270.00	15	0.00	0	0.00	0	3378.00	193	2451.00	140	8300.00	473	1.42	672
	INSTALL GRANULAR PAD																		
	INSTALL GRANULAR PAD	301,800	CY	1.65	498	0.00	0	0.00	0	0.00	0	1.99	601	1.45	438	5.09	1,536	1.42	2,181
	CONSTRUCT ROADWAYS																		
	MAIN ROADS IN CAMP [34']	3,950	LF	6.15	24	0.00	0	0.00	0	0.00	0	8.11	32	5.83	23	20.09	79	1.42	113
	CONNECT. RD. TO ACCESS RD.	7,200	LF	16.11	332	0.00	0	0.00	0	0.00	0	56.41	406	40.97	295	143.49	1,033	1.42	1,467
	SECONDARY RD [24']	300	LF	5.88	2	0.00	0	0.00	0	0.00	0	7.76	2	5.32	2	18.96	6	1.42	8
	DRAINAGE																		
	DITCHING	26,900	LF	0.98	26	0.00	0	0.00	0	0.00	0	0.68	18	0.39	10	2.05	55	1.42	78
	CULVERTS	640	LF	6.87	4	10.09	6	0.00	0	0.00	0	1.48	1	1.86	1	20.32	13	1.42	18
	PERIMETER FENCING																		
	PERIMETER FENCING	6,200	LF	6.56	41	4.20	26	0.00	0	0.00	0	0.33	2	0.40	2	11.49	71	1.42	101
	PARKING AREAS																		
	INSIDE CAMP	18,500	SF	0.11	2	0.00	0	0.00	0	0.00	0	0.14	3	0.10	2	0.35	6	1.42	9
	PARKING LOT - OUTSIDE CAMP	2	ACRE	2663.00	5	0.00	0	0.00	0	0.00	0	3212.00	6	2340.00	5	8215.00	16	1.42	23
	ELECTRIC PLUG-INS - IN CAMP	250	EACH	13.00	3	53.00	13	0.00	0	0.00	0	0.00	0	0.00	0	66.00	17	1.42	23
	SITE REHABILITATION																		
	SITE REHABILITATION	57	ACRE	1483.00	85	404.00	23	0.00	0	0.00	0	2276.00	130	1652.00	94	5815.00	331	1.42	471
.12	BUILDINGS																		
	BACHLR DORMS-108 MAN CMPLX	13	EACH	90800	1,180	99540	1,294	0	0	0	0	4400	57	5600	73	200340	2,604	1.22	3,177
	BACHLR DORMS-MGMT-TYPE A	4	EACH	31000	124	31920	128	0	0	0	0	1600	6	1800	7	66320	265	1.22	324
	BACHLR DORMS-MGMT-TYPE B	5	EACH	27600	138	26640	133	0	0	0	0	1300	7	1800	9	57340	287	1.22	350
	GUEST HSES-1 EA OWN/MGR/CON	2	EACH	34500	69	33600	67	0	0	0	0	1400	3	1800	4	71300	143	1.22	174
	CAMP MANAGER'S OFFICES	2	EACH	12600	25	16000	32	0	0	0	0	600	1	700	1	29900	60	1.22	73
	STAFF CLUBHOUSE	1	EACH		60		73	0	0	0	0		2		3		137	1.36	186
	DINING HALL	1	EACH		595		710	0	0	0	0		35		42		1,382	1.22	1,686
	RECREATION BUILDING	1	EACH		244		255	0	0	0	0		17		20		536	1.27	681
	GYMNASIUM	1	EACH		449		648	0	0	0	0		20		22		1,139	1.36	1,548
	SECURITY OFFICE	1	EACH		75		66	0	0	0	0		4		5		150	1.36	204
	SOILS/MATERIALS LABORATORY	1	EACH		175		135	0	0	0	0		9		12		331	1.36	450
	MAINTENANCE BUILDING	1	EACH		128		132	0	0	0	0		16		20		296	1.36	403
	WAREHOUSE - MANAGERS	1	EACH		368		307	0	0	0	0		17		18		710	1.36	965
	WAREHOUSE - FOOD SERVICE	1	EACH		116		346	0	0	0	0		8		9		479	1.36	651
	COMMUNICATION BUILDING	1	EACH		7		20	0	0	0	0		0		0		28	1.36	37
	HOSPITAL	1	EACH		96		826	0	0	0	0		65		73		1,061	1.22	1,294
	ICE RINK	1	EACH		805		598	0	0	0	0		44		53		1,500	1.36	2,039
	BANK	1	EACH		53		70	0	0	0	0		3		4		130	1.22	159
	STORE	1	EACH		35		38	0	0	0	0		2		3		77	1.22	94

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	LAUNDRY PERMAWALK	1	EACH		25		23		0		0		2		3		53	1.22	65
	6 FEET WIDE	300	LF	20.45	6	15.56	5	0.00	0	0.00	0	0.00	0	0.00	0	36.01	11	1.42	15
	10 FEET WIDE	1,420	LF	31.89	45	24.22	34	0.00	0	0.00	0	0.00	0	0.00	0	56.02	80	1.42	113
.13	UTILITIES																		
.131	WATER SUPPLY SYSTEM																		
	INTAKE POOL & CRIB IN SUSITNA RIVER	1	LS		5		2		0		0		7		5		19	1.42	27
	PUMP STATION 400 GPM	1	LS		36		75		0		0		2		2		115	1.42	163
	BOOSTER PUMP STATION 400 GPM	1	LS		17		39		0		0		0		1		57	1.42	81
	SUPPLY LINE 4"	9,000	LF	10.47	94	6.30	57	0.00	0	0.00	0	3.87	35	4.74	43	25.38	228	1.42	324
	HEAT TRACING & INSULAT 4"	9,000	LF	8.00	72	10.68	96	0.00	0	0.00	0	0.00	0	0.00	0	18.68	168	1.42	239
	UTILIDORS	4,500	LF	10.04	45	40.00	180	0.00	0	0.00	0	1.84	8	2.25	10	54.13	244	1.42	346
	TREATMENT PLANT .8 MGD	1	LS		98		474		0		0		27		33		632	1.42	897
	RESERVOIRS																		
	900,000 GALLONS	1	EACH		23		95		0		0		18		13		149	1.42	212
	500,000 GALLONS	1	EACH		13		53		0		0		10		7		83	1.42	118
	PUMP STATION 4000 GPM	1	LS		12		30		0		0		0		0		43	1.13	49
	CAMP DISTRIBUTION SYSTEM																		
	DISTRIB LINES - BURIED																		
	10"	800	LF	20.57	16	12.28	10	0.00	0	0.00	0	9.62	8	11.76	9	54.23	43	1.42	62
	8"	240	LF	18.00	4	10.08	2	0.00	0	0.00	0	8.79	2	10.74	3	47.61	11	1.42	16
	6"	100	LF	16.76	2	7.14	1	0.00	0	0.00	0	7.78	1	9.50	1	41.18	4	1.42	6
	DISTRIB LINE UTILDOR PIPING																		
	10" DI	1,800	LF	17.06	31	12.88	23	0.00	0	0.00	0	6.16	11	7.52	14	43.62	79	1.42	111
	8" DI	2,300	LF	14.50	33	10.88	25	0.00	0	0.00	0	5.23	12	6.40	15	37.01	85	1.42	121
	6" DI	1,300	LF	12.08	16	7.14	9	0.00	0	0.00	0	4.36	6	5.33	7	29.91	38	1.42	53
	4" DI	1,380	LF	10.24	14	6.30	9	0.00	0	0.00	0	3.87	5	4.74	7	25.15	35	1.42	49
	HEAT TRACING & INSUL																		
	10" PIPE	2,600	LF	10.75	28	21.10	55	0.00	0	0.00	0	0.00	0	0.00	0	31.85	83	1.42	118
	8" PIPE	2,540	LF	9.38	24	14.07	36	0.00	0	0.00	0	0.00	0	0.00	0	23.45	60	1.42	85
	6" PIPE	1,400	LF	8.55	12	12.11	17	0.00	0	0.00	0	0.00	0	0.00	0	20.44	29	1.42	41
	4" PIPE	1,380	LF	8.00	11	10.68	15	0.00	0	0.00	0	0.00	0	0.00	0	18.58	26	1.42	37
	PIPE FITTINGS																		
	HYDRANTS	12	EA	267.00	3	825.00	19	0.00	0	0.00	0	0.00	0	0.00	0	1092.00	13	1.42	19
	VALVES	1	LS		2		4		0		0		0		0		6	1.42	9
	UTILIDORS																		

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	UTILIDORS	6,780	LF	10.04	68	40.00	271	0.00	0	0.00	0	1.84	12	2.25	15	54.13	367	1.42	521
.132	SEWAGE COLLECTION SYS-UTILIDOR PIPING																		
	12" PIPE	2,800	LF	24.00	67	24.15	68	0.00	0	0.00	0	10.46	29	12.79	36	71.40	200	1.42	284
	10" PIPE	400	LF	21.48	9	16.94	7	0.00	0	0.00	0	7.75	3	9.47	4	55.64	22	1.42	32
	8" PIPE	2,200	LF	14.50	32	10.08	22	0.00	0	0.00	0	5.24	12	6.41	14	36.23	80	1.42	113
	6" PIPE	2,300	LF	12.08	28	7.14	16	0.00	0	0.00	0	4.36	10	5.33	12	28.91	66	1.42	94
	4" PIPE	1,580	LF	10.74	17	6.30	10	0.00	0	0.00	0	3.87	6	4.74	7	25.65	41	1.42	58
	HEAT TRACING & INSUL																		
	12"	2,800	LF	13.50	38	23.11	65	0.00	0	0.00	0	0.00	0	0.00	0	36.61	103	1.42	146
	10"	400	LF	10.75	4	21.10	8	0.00	0	0.00	0	0.00	0	0.00	0	31.85	13	1.42	18
	8"	2,200	LF	9.38	21	14.07	31	0.00	0	0.00	0	0.00	0	0.00	0	23.45	52	1.42	73
	6"	2,300	LF	8.55	20	12.11	28	0.00	0	0.00	0	0.00	0	0.00	0	20.66	48	1.42	67
	4"	1,580	LF	8.00	13	10.68	17	0.00	0	0.00	0	0.00	0	0.00	0	18.68	30	1.42	42
	TREATMENT PLANT																		
	SKIMMING TANK	1	EACH		7		17		0		0		1		1		26	1.13	29
	LAGOONS (1 @ 385' x 205' & 1 @ 280' x 155')	2	EACH	32766	66	67446	135	0	0	0	0	27016	54	19883	40	147111	294	1.42	418
	ROTATING BIO CONTACTORS	3	EACH	32612	98	54351	163	0	0	0	0	0	0	0	0	86963	261	1.13	295
	PHYS/CHEM UNIT	1	EACH		29		40		0		0		0		0		69	1.13	78
	CLARIFIER	1	EACH		54		76		0		0		0		0		130	1.13	147
	DISINFECTION	1	EACH		29		40		0		0		0		0		69	1.13	78
	HEAT PUMP	1	EACH		2		7		0		0		0		0		10	1.13	11
	THICKENER	1	EACH		32		45		0		0		0		0		77	1.13	87
	FILTER PRESS	1	EACH		32		44		0		0		0		0		76	1.13	86
	DRYING BEDS	1	EACH		19		39		0		0		3		4		65	1.13	73
	BUILDING	1	EACH		162		29		0		0		6		8		206	1.13	232
	CONTROLS/INSTRUMENTATION	1	LS		16		74		0		0		0		0		90	1.13	102
	PIPING, VALVES, & FITTINGS	1	LS		46		208		0		0		0		0		254	1.13	287
	LABORATORY	1	EACH		5		23		0		0		0		0		28	1.13	31
	OUTFALL																		
	OUTFALL LINE (10")	4,200	LF	27.91	117	15.48	82	0.00	0	0.00	0	12.48	52	15.24	64	75.11	315	1.13	356
	OUTFALL STRUCTURE	1	EACH		42		30		0		0		19		23		114	1.42	162
	UTILIDORS																		
	UTILIDORS	1,100	LF	10.66	12	40.00	44	0.00	0	0.00	0	2.85	3	3.49	4	57.00	63	1.13	71
.133	ELECTRICAL																		
	GENERATING STATIONS																		
	BUILDING	1	EACH		18		15		0		0		0		0		33	1.36	45
	GENERATORS (850 KW)	2	EACH	17160	34	143000	286	0	0	0	0	858	2	1049	2	162067	324	1.10	357
	DAY TANK	1	EACH		0		3		0		0		0		0		3	1.10	4
	FUEL STORAGE TANK	1	EACH		16		86		0		0		11		8		122	1.42	173
	SUBSTATION	1	EACH		25		60		0		0		1		1		87	1.13	98
	DISTRIBUTION																		
	DISTRIBUTION	1	LS		89		85		0		0		3		3		180	1.22	219
	LIGHTING																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	POLE MOUNTED LUMINATRS	24	EACH	267.00	6 1067.00	26	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1334.00	32	1.13	36
	FLOOR LIGHTS	15	EACH	100.00	2 400.00	6	0.00	0	0.00	0	0.00	0	0.00	0	0.00	500.00	8	1.13	8
.134	CAMP HEATING																		
	FUEL OIL DISTRIBUTION	1	LS		88		104		0		0		2		3		197	1.22	240
.135	FIRE PROTECTION																		
	FIRE HOUSE																		
	FIRE HOUSE	1	LS		112		83		0		0		7		9		211	1.36	287
	FIRE ALARM SYSTEM																		
	FIRE ALARM SYSTEM	1	LS		96		62		0		0		0		0		158	1.22	192
	SPRINKLER SYSTEM																		
	MESS HALL	1	LS		7		4		0		0		0		0		11	1.22	14
	RECREATION HALL	1	LS		10		12		0		0		0		0		22	1.22	27
	HOSPITAL	1	LS		4		2		0		0		0		0		6	1.22	8
	SCHOOL	1	LS		5		3		0		0		0		0		8	1.22	10
.136	TELEPHONE SYSTEM																		
	TELEPHONE SYSTEM CAMP (WIRE)		LS		236		62		0		0		0		0		298	1.22	364
	MICROWAVE	1	LS		10		662		0		0		2		3		677	1.01	684
.137	TV/RADIO STATION																		
	TV/RADIO STATION	1	LS		17		125		0		0		0		0		142	1.10	156
.138	SOLID WASTE FACILITY																		
	SOLID WASTE FACILITY	1	LS		32		20		0		0		2		2		56	1.42	79
	INCINERATOR	1	LS		23		42		0		0		0		0		65	1.42	92
.139	PETROLEUM STORAGE FACILITY																		
	GARAGE/MAINTENANCE BLDG																		
	GARAGE/MAINTENANCE BUILDING	1	EACH		91		75		0		0		5		6		176	1.36	239
	TANKS																		
	50,000 GAL	4	EACH	0	0	16667	67	0	0	0	0	0	0	0	0	16667	67	1.42	95
	100,000 GAL	10	EACH	0	0	30000	300	0	0	0	0	0	0	0	0	30000	300	1.42	426
	EARTHWORK																		
	CLEARING & GRUBBING	6	ACRE	3794.00	23 270.00	2	0.00	0	0.00	0	5824.00	35	4226.00	25	14114.00	85	1.42	120	
	BERMS	20,000	CY	2.82	56 12.53	251	0.00	0	0.00	0	2.36	47	1.72	34	19.43	389	1.42	552	
	PIPING																		
	PIPING	1	LS		53		56		0		0		0		0		109	1.42	155
	FUEL STATION																		
	FUEL STATION	1	LS		139		72		0		0		3		3		217	1.42	308
.2	MAIN CONSTRUCTION VILLAGE																		
.21	SITE PREPARATION																		
	CLEARING																		
	CLEARING	62	ACRE	2091.00	130 270.00	17	0.00	0	0.00	0	3390.00	210	2648.00	164	8399.00	521	1.42	739	
	INSTALL GRANULAR PAD																		
	INSTALL GRANULAR PAD	300,000	CY	1.61	483 0.00	0	0.00	0	0.00	0	1.97	591	1.47	441	5.05	1,515	1.42	2,151	
	SITE REHABILITATION																		
	SITE REHABILITATION	62	ACRE	1410.00	87 404.00	25	0.00	0	0.00	0	2286.00	142	1786.00	111	5886.00	365	1.42	518	
	CONSTRUCT ROADWAYS																		
	MAIN ROAD 34' WIDE	2,300	LF	6.14	14 0.00	0	0.00	0	0.00	0	8.16	19	5.65	13	19.95	46	1.42	65	

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	SECONDARY ROADS 24' WIDE	12,600	LF	5.88	74	0.00	0	0.00	0	0.00	0	7.81	98	5.40	58	19.09	241	1.42	342
	CONNECTION TO ACCESS RD 34'	4,000	LF	50.01	200	0.00	0	0.00	0	0.00	0	61.82	247	45.61	182	157.44	630	1.42	894
	DRAINAGE																		
	DITCHING	37,600	LF	1.00	38	0.00	0	0.00	0	0.00	0	0.69	26	0.39	15	2.08	78	1.42	111
	CULVERTS - 170 LOTS	3,950	LF	6.89	27	10.03	40	0.00	0	0.00	0	1.47	6	1.86	7	20.25	80	1.42	114
	PERIMETER FENCING																		
	PERIMETER FENCING	7,100	LF	6.56	47	4.20	30	0.00	0	0.00	0	0.33	2	0.40	3	11.49	82	1.42	116
	PARKING AREAS																		
	PARKING AREAS	37,500	SF	0.11	4	0.00	0	0.00	0	0.00	0	0.14	5	0.10	4	0.35	13	1.42	19
	ELECTRICAL PLUG-INS	25	EACH	13.00	0	53.00	1	0.30	0	0.00	0	0.00	0	0.00	0	66.00	2	1.42	2
.22	BUILDINGS																		
	SINGLE FAMILY UNIT - 2 BDRM	36	EACH	8500.00	306	9380.00	338	0.00	0	0.00	0	370.00	13	460.00	17	18710.00	674	1.22	822
	SINGLE FAMILY UNIT - 3 BDRM	92	EACH	8500.00	782	9800.00	902	0.00	0	0.00	0	370.00	34	460.00	42	19130.00	1,760	1.22	2,147
	SINGLE FAMILY UNIT - 2 BDRM	9	EACH	13500	122	14460	130	0	0	0	0	520	5	660	6	29140	262	1.22	320
	SINGLE FAMILY UNIT - 3 BDRM	9	EACH	13500	122	15060	136	0	0	0	0	520	5	660	6	29740	268	1.22	327
	SINGLE FAMILY UNIT - 4 BDRM	9	EACH	15000	135	16940	152	0	0	0	0	600	5	770	7	33310	300	1.22	366
	SCHOOL	1	LS		200		250		0		0		9		12		471	1.24	584
	GYMNASIUM	1	LS		9		315		0		0		4		5		333	1.36	453
	SWIMMING POOL	1	LS		231		310		0		0		4		5		550	1.36	748
	RECREATION CENTER	1	LS		196		276		0		0		3		4		479	1.36	652
	STORE	1	LS		250		160		0		0		10		12		432	1.36	588
	GAS STATION	1	LS		46		124		0		0		1		1		171	1.36	232
.23	UTILITIES																		
.231	WATER																		
	SUPPLY LINE																		
	6"	4,900	FT	12.08	59	6.30	31	0.00	0	0.00	0	3.87	19	4.74	23	26.99	132	1.42	188
	PUMP STATION 3500 GPM	1	EACH		10		50		0		0		0		0		61	1.42	86
	RESERVOIR (800,000 GAL)	1	EACH		20		82		0		0		15		11		128	1.42	182
	DISTRIBUTION SYSTEM																		
	DISTRIBUT LINES-BURIED																		
	10" DI	553	LF	20.57	11	12.28	7	0.00	0	0.00	0	9.62	5	11.76	7	54.23	30	1.42	43
	8" DI	198	LF	18.00	4	10.08	2	0.00	0	0.00	0	8.72	2	10.65	2	47.45	9	1.42	13
	6" DI	169	LF	16.76	3	7.14	1	0.00	0	0.00	0	7.78	1	9.51	2	41.19	7	1.42	10
	DISTRIBUT LINES-UTILIDOR																		
	10"	3,650	LF	17.06	62	12.06	44	0.00	0	0.00	0	6.16	22	7.52	27	42.82	156	1.42	222
	8"	2,250	LF	14.50	33	10.88	24	0.00	0	0.00	0	5.23	12	6.40	14	37.01	83	1.42	118
	6"	1,850	LF	12.68	22	7.14	13	0.00	0	0.00	0	4.36	8	5.33	10	28.91	53	1.42	76
	HEAT TRACING & INSULAT																		
	10" PIPE	4,230	LF	10.75	45	21.10	89	0.00	0	0.00	0	0.00	0	0.00	0	31.85	135	1.42	191
	8" PIPE	2,448	LF	9.38	23	14.17	35	0.00	0	0.00	0	0.00	0	0.00	0	23.55	58	1.42	82
	6" PIPE	2,019	LF	8.55	17	12.11	24	0.00	0	0.00	0	0.00	0	0.00	0	20.66	42	1.42	59
	VALVES																		
	10", 8", & 6"	1	LS		2		7		0		0		0		0		9	1.42	13
	HYDRANTS																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	HYDRANTS	21	EACH	266.00	6	825.00	17	0.00	0	0.00	0	0.00	0	0.00	0	1091.00	23	1.42	33
.232	SEWAGE COLLECTION SYSTEM PIPING																		
	12" PIPE	100	LF	21.48	2	16.94	2	0.00	0	0.00	0	7.75	1	9.47	1	55.64	6	1.42	8
	10" PIPE	450	LF	17.06	8	12.88	6	0.00	0	0.00	0	6.12	3	7.48	3	43.54	20	1.42	28
	8" PIPE	2,200	LF	14.50	32	10.08	22	0.00	0	0.00	0	5.23	12	6.40	14	36.21	80	1.42	113
	6" PIPE	3,950	LF	12.08	48	7.14	28	0.00	0	0.00	0	4.36	17	5.33	21	28.91	114	1.42	162
	HEAT TRACING & INSULAT																		
	12" PIPE	100	LF	13.50	1	23.11	2	0.00	0	0.00	0	0.00	0	0.00	0	36.61	4	1.42	5
	10" PIPE	450	LF	10.75	5	21.15	9	0.00	0	0.00	0	0.00	0	0.00	0	31.85	14	1.42	20
	8" PIPE	2,200	LF	9.38	21	14.07	31	0.00	0	0.00	0	0.00	0	0.00	0	23.45	52	1.42	73
	6" PIPE	3,950	LF	8.55	34	12.11	48	0.00	0	0.00	0	0.00	0	0.00	0	20.66	82	1.42	116
	PUMPING SYSTEM																		
	PUMP STATION	1	LS		7		47		0		0		2		2		58	1.42	82
	6" PUMP MAIN	10,950	LF	12.00	121	7.14	72	0.00	0	0.00	0	4.36	44	5.33	54	28.91	291	1.42	413
	UTILITIES																		
	MAIN RNS IN VILLAGE	6,800	LF	10.42	71	40.00	272	0.00	0	0.00	0	1.84	13	2.25	15	54.51	371	1.42	526
	STREET CROSSING 50 LF EA	900	LF	10.42	9	40.00	36	0.00	0	0.00	0	1.84	2	2.25	2	54.51	49	1.42	70
	PUMP STA TO TREATMENT PLANT	5,500	LF	10.66	59	40.00	220	0.00	0	0.00	0	2.85	16	3.49	19	57.00	314	1.42	445
	STURS TO HOUSE LOTS	3,400	LF	10.42	35	40.00	136	0.00	0	0.00	0	1.84	6	2.25	8	54.51	185	1.42	263
	STURS TO BUILDINGS	150	LF	10.42	2	40.00	6	0.00	0	0.00	0	1.84	0	2.25	0	54.51	8	1.42	12
.233	INTEGRATED OFFICE AREA																		
	OWNER/WORKS OFFICE	1	LS		146		181		0		0		10		13		350	1.22	427
.234	ELECTRICAL																		
	GENERATING STATIONS																		
	BUILDING	1	EACH		18		15		0		0		0		0		33	1.36	45
	GENERATORS 950 KW	2	EACH	17160	34	143000	286	0	0	0	0	858	2	1049	2	162067	324	1.10	357
	DAY TANKS	1	EACH		0		3		0		0		0		0		3	1.10	3
	FUEL STORAGE TANKS	1	EACH		16		36		0		0		1		8		122	1.42	174
	SUBSTATIONING WITH WIRING	1	EACH		25		60		0		0		1		1		87	1.13	98
	DISTRIBUTION																		
	DISTRIBUTION	1	LS		51		49		0		0		1		2		103	1.22	126
.235	FIRE ALARM SYSTEM																		
	FIRE ALARM SYSTEM	1	LS		9		6		0		0		0		0		14	1.22	17
.236	TELEPHONE SYSTEM																		
	TELEPHONE SYSTEM	1	LS		110		29		0		0		0		0		139	1.22	170
.3	ACCESS ROAD CAMPS																		
	ACCESS ROAD/RAILHEAD CAMP																		
	FACS, CATERING & OPER SUCT	70,000	HANDAY	22.95	1,607	15.61	1,093	0.00	0	0.00	0	9.29	650	11.30	791	59.15	4,141	1.42	5,880
.4	CAMP CREDIT																		
	SALVAGE VALUE FOR BUILDINGS																		
	EQUIPMENT, & UTILITIES	1	LS		0		-2,500		0		0		0		0		-2,500	1.00	-2,500
.5	PERMANENT TOWN																		
	PERMANENT TOWN	1	LS		375		1,065		0		0		31		37		1,507	1.42	2,140

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
.6	MAIN CONSTR CATERING & SUPPORT																		
	MAIN CONSTR CATERING & SUPT	1,550,000	HANDAY	42.17	65,363	14.93	23,142	0.00	0	0.00	0	1.22	1,891	1.50	2,325	59.82	92,721	1.12	103,848
.7	ELECTRIC POWER																		
	.71 34.5 KV SYSTEM																		
	.711 TRANSFORMER STATION	1	LS		80		378		0		0		6		8		473	1.55	733
	.712 DISTRIBUTION SYSTEM	1	LS		406		476		0		0		0		0		882	1.55	1,367
	.72 CONSTRUCTION CAMP POWER																		
	.721 CONSTRUCTION CAMP POWER	140,300	MWH	0.00	0	70.00	9,821	0.00	0	0.00	0	0.00	0	0.00	0	70.00	9,821	1.00	9,821
	.73 CONSTRUCTION POWER																		
	.731 CONSTRUCTION POWER	50,000	MWH	0.00	0	70.00	3,500	0.00	0	0.00	0	0.00	0	0.00	0	70.00	3,500	1.00	3,500
.8	CONSTRUCTION HEATING & VENTIL																		
	.81 HEATING & VENTILATION PLANT																		
	.811 HEATING & VENTILATION PLANT	1	LS		220		0		0		0		1,370		0		1,590	1.55	2,465
	.82 HEATING & VENTIL OPERATION																		
	.821 HEATING & VENTIL OPERATION	1,870	DAY	807.00	1,509	0.00	0	0.00	0	0.00	0	0.00	0	1810.00	3,385	2617.00	4,894	1.55	7,585
					83,093		53,808		0		0		7,807		9,825		154,533		
64	LABOR EXPENSE																		
	LABOR EXPENSE																		
	(INCLUDED IN DIRECT COSTS)																		
					0		0		0		0		0		0		0		
65	SUPERINTENDENCE																		
	SUPERINTENDENCE																		
	(INCLUDED IN DIRECT COSTS)																		
					0		0		0		0		0		0		0		
66	INSURANCE																		
	INSURANCE																		
	(INCLUDED IN DIRECT COSTS)																		
					0		0		0		0		0		0		0		
68	MITIGATION																		
	.111 OUT-OF-KIND COSTS	1	LS		0		0		0		4,300		0		0		4,300	1.00	4,300
					0		0		0		4,300		0		0		4,300		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
69	FEES FEES (INCLUDED IN DIRECT COSTS)				0		0		0		0		0		0		0		
	SUBTOTAL				325,869		120,020		225,729		26,350		92,369		106,879		897,215		1,206,811
	TOTAL PROJECT DETAIL				325,869		120,020		225,729		26,350		92,369		106,879		897,215	1.35	1,206,811

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000000	UUUUUUUUUU	TT		99	111111

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H      H      0      0      0      0      Y      Y
H      H      00000      0      0      0      Y      Y
HHHHH      0      0      0      0      0      0      Y      Y
H      H      0      0      0      0      0      0      Y      Y
H      H      0      0      0      0      0      0      Y      Y
H      H      000      00000      0      0      Y      Y

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
PRODUCTION PLANT																			
330	LAND & LAND RIGHTS																		
.1	LAND	1	LS		0		0		0		51,000		0		0		51,000	1.00	51,000
.2	LAND RIGHTS		LS																
	LAND RIGHTS - IN ABOVE																		
.3	MISC CHARGES & CREDITS		LS																
	MISC CHARGES/CREDIT-IN ABOVE																		
					0		0		0		51,000		0		0		51,000		
331	POWERPLANT STRUCTURE IMPROVEMENTS																		
.1	POWERHOUSE																		
.11	POWERHOUSE & DRAFT TUBE																		
.111	EXCAVATION																		
	POWERHOUSE VAULT ROCK	122,500	CY	14.80	1,813	5.08	622	0.00	0	0.00	0	5.46	669	6.68	818	32.02	3,922	1.45	5,688
	DRAFT TUBE ROCK	25,200	CY	14.80	373	5.08	128	0.00	0	0.00	0	5.46	138	6.68	168	32.02	807	1.45	1,170
.113	SURFACE PREPARATION/GROUTING																		
	POWERHOUSE																		
	SURFACE PREPARATION	99,000	SF	0.59	58	0.06	6	0.00	0	0.00	0	0.18	18	0.21	21	1.04	103	1.45	149
	DRAFT TUBE																		
	SURFACE PREPARATION	76,500	SF	0.59	45	0.06	5	0.00	0	0.00	0	0.18	14	0.21	16	1.04	80	1.45	115
	GROUT CURTAIN (U/S OF P-H)																		
	DRILL HOLES	43,800	LF	6.05	265	0.25	11	0.00	0	0.00	0	1.21	53	1.49	65	9.00	394	1.45	572
	CEMENT	17,500	CF	11.18	196	0.53	11	10.69	187	0.00	0	1.75	31	2.13	37	26.38	462	1.45	669
.114	CONCRETE & SHOTCRETE																		
	POWERHOUSE																		
	CONCRETE	32,600	CY	90.01	2,934	30.51	995	45.42	1,481	0.00	0	26.50	864	32.39	1,056	224.83	7,329	1.45	10,628
	CONC OVERBREAK 12"H/6"V	2,400	CY	56.68	136	3.06	7	45.42	109	0.00	0	17.95	43	21.95	53	145.06	348	1.45	505
	REINFORCING STEEL	1,630	TON	235.00	383	19.35	32	549.94	896	0.00	0	59.00	96	72.00	117	935.29	1,525	1.45	2,211
	4" SHOTCRETE	41,000	SF	1.03	42	0.00	0	1.89	77	0.00	0	0.17	7	0.20	8	3.29	135	1.45	196
	DRAFT TUBE																		
	CONCRETE	12,000	CY	90.01	1,080	30.51	366	45.42	545	0.00	0	26.50	318	32.39	389	224.83	2,698	1.45	3,912
	CONCRETE OVERBREAK 6"	2,500	CY	56.68	142	3.06	8	45.42	114	0.00	0	17.95	45	21.95	55	145.06	363	1.45	526
	REINFORCING STEEL	990	TON	235.00	233	19.35	19	549.94	544	0.00	0	59.00	58	72.00	71	935.29	926	1.45	1,343
	2" SHOTCRETE	6,100	SF	0.57	3	0.00	0	0.94	6	0.00	0	0.09	1	0.11	1	1.71	10	1.45	15
.115	SUPPORT & ANCHORS																		
	POWERHOUSE																		
	ROCKBOLTS 1" @ 25' HY	970	EACH	183.63	178	0.00	0	100.72	98	0.00	0	54.12	52	66.15	64	404.62	392	1.45	569
	ROCKBOLTS 1" @ 15'	1,070	EACH	128.87	254	0.00	0	28.01	55	0.00	0	37.98	75	46.42	91	241.28	475	1.45	689
	STEEL MESH	4,500	SF	1.00	45	0.02	1	0.59	26	0.00	0	0.14	6	0.16	7	1.91	85	1.45	124

SUSITNA HYDROELECTRIC PROJECT
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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
PRODUCTION PLANT																			
330	LAND & LAND RIGHTS																		
.1	LAND	1	LS		0		0		0		51,000		0		0		51,000	1.00	51,000
.2	LAND RIGHTS		LS																
.3	MISC CHARGES & CREDITS		LS																
	MISC CHARGES/CREDIT-IN ABOVE		LS																
					0		0		0		51,000		0		0		51,000		
331	POWERPLANT STRUCTURE IMPROVEMENTS																		
.1	POWERHOUSE																		
.11	POWERHOUSE & DRAFT TUBE																		
.111	EXCAVATION																		
	POWERHOUSE VAULT ROCK	122,500	CY	14.80	1,813	5.08	622	0.00	0	0.00	0	5.46	669	6.68	818	32.02	3,922	1.45	5,688
	DRAFT TUBE ROCK	25,200	CY	14.80	373	5.08	128	0.00	0	0.00	0	5.46	138	6.68	168	32.02	807	1.45	1,170
.113	SURFACE PREPARATION/GROUTING																		
	POWERHOUSE																		
	SURFACE PREPARATION	99,000	SF	0.59	58	0.06	6	0.00	0	0.00	0	0.18	18	0.21	21	1.04	103	1.45	149
	DRAFT TUBE																		
	SURFACE PREPARATION	76,500	SF	0.59	45	0.06	5	0.00	0	0.00	0	0.18	14	0.21	16	1.04	80	1.45	115
	GROUT CURTAIN (U/S OF P-H)																		
	DRILL HOLES	43,800	LF	6.05	265	0.25	11	0.00	0	0.00	0	1.21	53	1.49	65	9.00	394	1.45	572
	CEMENT	17,500	CF	11.18	196	0.63	11	10.69	187	0.00	0	1.75	31	2.13	37	26.38	462	1.45	669
.114	CONCRETE & SHOTCRETE																		
	POWERHOUSE																		
	CONCRETE	32,600	CY	90.01	2,934	30.51	995	45.42	1,481	0.00	0	26.50	864	32.39	1,056	224.83	7,329	1.45	10,628
	CONC OVERBREAK 12"H/6"W	2,400	CY	56.68	136	3.06	7	45.42	109	0.00	0	17.95	43	21.95	53	145.06	348	1.45	505
	REINFORCING STEEL	1,630	TON	235.00	383	19.35	32	549.94	896	0.00	0	59.00	96	72.00	117	935.29	1,525	1.45	2,211
	4" SHOTCRETE	41,000	SF	1.03	42	0.00	0	1.89	77	0.00	0	0.17	7	0.20	8	3.29	135	1.45	196
	DRAFT TUBE																		
	CONCRETE	12,000	CY	90.01	1,080	30.51	346	45.42	545	0.00	0	26.50	318	32.39	389	224.83	2,698	1.45	3,912
	CONCRETE OVERBREAK 6"	2,500	CY	56.68	142	3.06	8	45.42	114	0.00	0	17.95	45	21.95	55	145.06	363	1.45	526
	REINFORCING STEEL	990	TON	235.00	233	19.35	19	549.94	544	0.00	0	59.00	58	72.00	71	935.29	926	1.45	1,343
	2" SHOTCRETE	6,100	SF	0.57	3	0.00	0	0.94	6	0.00	0	0.09	1	0.11	1	1.71	10	1.45	15
.115	SUPPORT & ANCHORS																		
	POWERHOUSE																		
	ROCKBOLTS 1" @ 25' HY	970	EACH	183.63	178	0.00	0	100.72	98	0.00	0	54.12	52	66.15	64	404.62	392	1.45	569
	ROCKBOLTS 1" @ 15'	1,970	EACH	128.87	254	0.00	0	28.01	55	0.00	0	37.98	75	46.42	91	241.28	475	1.45	689
	STEEL MESH	44,600	SF	1.00	45	0.02	1	0.59	26	0.00	0	0.14	6	0.16	7	1.91	85	1.45	124

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	STEEL SUPPORT	137	TON	1383.00	189	0.00	0	2164.10	296	0.00	0	272.70	37	333.30	46	4153.10	569	1.45	825
	DRAFT TUBE																		
	ROCKBOLTS 1" @ 25' HY	150	EACH	183.63	28	0.00	0	100.72	15	0.00	0	54.12	8	66.15	10	404.62	61	1.45	88
	ROCKBOLTS 1" @ 12'	390	EACH	90.21	35	0.00	0	23.93	9	0.00	0	26.59	10	32.49	13	173.22	68	1.45	98
	ROCKBOLTS 1" @ 9'	190	EACH	74.10	14	0.00	0	19.04	4	0.00	0	21.84	4	26.69	5	141.67	27	1.45	39
	STEEL MESH	18,900	SF	1.07	20	0.02	0	0.65	12	0.00	0	0.14	3	0.18	3	2.06	39	1.45	56
.117	DRAINAGE																		
	HOLES (U/S OF POWERHOUSE)	15,000	LF	10.30	155	0.26	4	0.00	0	0.00	0	2.50	38	3.05	46	16.11	242	1.45	350
	HOLES (POWERHOUSE CROWN)	28,500	LF	10.30	294	0.26	7	0.00	0	0.00	0	2.50	71	3.05	87	16.11	459	1.45	666
.118	STRUCTURAL - MISC STEELWORK																		
	POWERHOUSE & DRAFT TUBE																		
	STRUCTURAL STEEL/CRANE RAILS	1	LS		463		0		1,606		0		28		35		2,132	1.45	3,091
.119	ARCHITECTURAL																		
	POWERHOUSE																		
	ARCHITECTURAL	1	LS		213		0		651		0		0		0		864	1.45	1,252
.11C	MECHANICAL																		
	DRAFT TUBE GATES	4	SETS	12500	50	0	0	178220	713	0	0	1125	5	1375	6	193220	773	1.00	773
	DRAFT TUBE GATE GUIDES	6	SETS	33333	200	0	0	40736	244	0	0	7500	45	9167	55	90736	544	1.00	544
	DRAFT TUBE CRANE	1	LS		100		0		448		0		27		33		608	1.00	608
.12	ACCESS TUNNELS & PORTALS																		
.121	EXCAVATION																		
	TUNNELS - ROCK																		
	MAIN TUNNEL	50,250	CY	14.39	723	6.56	330	0.00	0	0.00	0	6.13	308	7.50	377	34.58	1,738	1.45	2,520
	TRANSFORMER GALLERY TUNNEL	17,750	CY	14.39	255	6.56	116	0.00	0	0.00	0	6.13	109	7.50	133	34.58	614	1.45	890
	GROUTING GALLERY TUNNEL	1,900	CY	66.93	127	27.94	53	0.00	0	0.00	0	20.70	39	25.31	48	140.88	268	1.45	388
	SURGE CHAMBER ACCESS TUNNEL	7,250	CY	23.93	173	7.68	56	0.00	0	0.00	0	8.99	65	10.99	80	51.59	374	1.45	542
	PENSTOCK ACCESS TUNNEL	61,500	CY	23.93	1,472	7.68	472	0.00	0	0.00	0	8.99	553	10.99	676	51.59	3,173	1.45	4,601
	PENSTOCK ELBOW ACCESS TUNNEL	15,000	CY	23.93	359	7.68	115	0.00	0	0.00	0	8.99	135	10.99	165	51.59	774	1.45	1,122
	ACCESS SHAFT TUNNEL	1,300	CY	23.93	31	7.68	10	0.00	0	0.00	0	8.99	12	10.99	14	51.59	67	1.45	97
	CONNECTOR TUNNEL	1,900	CY	66.93	127	22.00	42	0.00	0	0.00	0	20.70	39	25.31	48	134.94	256	1.45	372
	PORTALS																		
	OVERBURDEN	6,000	CY	2.74	16	0.00	0	0.00	0	0.00	0	1.45	9	1.78	11	5.97	36	1.45	52
	ROCK	3,000	CY	4.44	13	4.30	13	0.00	0	0.00	0	3.82	11	4.68	14	17.24	52	1.45	75
.123	SURFACE PREPARATION																		
	TUNNELS																		
	MAIN TUNNEL SLAB	53,100	SF	0.37	20	0.04	2	0.00	0	0.00	0	0.13	7	0.16	8	0.70	37	1.45	54
	PENSTOCK ACCESS TUNNEL SLAB	65,200	SF	0.37	24	0.04	3	0.00	0	0.00	0	0.13	8	0.16	10	0.70	46	1.45	66
	MAIN PORTAL																		
	HORIZONTAL	200	SF	0.37	0	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.70	0	1.45	0
	INCLINED	2,100	SF	0.57	1	0.06	0	0.00	0	0.00	0	0.18	0	0.21	0	1.02	2	1.45	3
.124	CONCRETE & SHOTCRETE																		
	MAIN PORTAL																		
	CONCRETE SLAB	30	CY	46.50	1	3.06	0	45.42	1	0.00	0	15.70	0	19.20	1	129.88	4	1.45	6
	CONCRETE WALLS	170	CY	46.50	27	3.06	2	45.42	26	0.00	0	15.70	9	19.20	11	129.88	74	1.45	107
	CONCRETE OVERBREAK 12'H/9"V	50	CY	39.50	2	1.02	0	45.42	2	0.00	0	14.35	1	17.55	1	117.84	6	1.45	9
	REINFORCING STEEL	40	TON	226.00	9	19.35	1	549.94	22	0.00	0	59.00	2	72.00	3	926.29	37	1.45	54

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
TUNNELS																			
	CONCRETE SLAB MAIN TUNNEL	1,950	CY	58.00	133	6.72	13	45.42	89	0.00	0	19.53	38	23.87	47	163.54	319	1.45	462
	CONC PLUGS PENST ELBOW ACC	15,000	CY	97.24	1,459	36.66	550	45.42	681	0.00	0	29.65	445	36.25	544	245.22	3,678	1.45	5,334
	CONC OVERBREAK MAIN TUN 6"	1,000	CY	35.88	36	1.02	1	45.42	45	0.00	0	13.45	13	16.45	16	112.22	112	1.45	163
	REINFORCING STEEL	70	TON	235.00	16	19.35	1	549.94	38	0.00	0	59.00	4	72.00	5	935.29	65	1.45	95
	2" SHOTCRETE MAIN TUNNEL	20,100	SF	0.57	11	0.00	0	0.94	19	0.00	0	0.09	2	0.11	2	1.71	34	1.45	50
	2" SHOTCRETE TRANSFORMER GAL	7,100	SF	0.57	4	0.00	0	0.94	7	0.00	0	0.09	1	0.11	1	1.71	12	1.45	18
	2" SHOTCRETE SURGE CHAMB ACC	3,900	SF	0.57	2	0.00	0	0.94	4	0.00	0	0.09	0	0.11	0	1.71	7	1.45	10
	2" SHOTCRETE PENSTOCK ACCESS	24,700	SF	0.57	14	0.00	0	0.94	23	0.00	0	0.09	2	0.11	3	1.71	42	1.45	61
	2" SHOTCRETE PENST ELBOW ACC	7,100	SF	0.57	4	0.00	0	0.94	7	0.00	0	0.09	1	0.11	1	1.71	12	1.45	18
	2" SHOTCRETE ACCESS SHAFT	300	SF	0.57	0	0.00	0	0.94	0	0.00	0	0.09	0	0.11	0	1.71	1	1.45	1
	2" SHOTCRETE GROUT GALLERY	800	SF	0.57	0	0.00	0	0.94	1	0.00	0	0.09	0	0.11	0	1.71	1	1.45	2
	2" SHOTCRETE CONNECTOR TUN	800	SF	0.57	0	0.00	0	0.94	1	0.00	0	0.09	0	0.11	0	1.71	1	1.45	2
125	SUPPORT & ANCHORS																		
MAIN TUNNEL																			
	ROCKBOLTS 1" @ 12'	1,200	EACH	90.21	108	0.00	0	23.93	29	0.00	0	26.59	32	32.49	39	173.22	208	1.45	301
	ROCKBOLTS 1" @ 9'	250	EACH	74.10	19	0.00	0	19.04	5	0.00	0	21.84	5	26.69	7	141.67	35	1.45	51
	STEEL MESH	63,000	SF	1.03	65	0.03	2	0.68	43	0.00	0	0.15	9	0.18	11	2.07	130	1.45	189
	STEEL SUPPORT	66	TON	1383.00	91	0.00	0	2164.10	143	0.00	0	272.70	18	333.30	22	4153.10	274	1.45	397
MAIN TUNNEL PORTAL																			
	ROCKBOLTS 1" @ 15'	50	EACH	128.86	6	0.00	0	28.01	1	0.00	0	37.98	2	46.42	2	241.27	12	1.45	17
TRANSFORMER GALLERY TUNNEL																			
	ROCKBOLTS 1" @ 12'	410	EACH	90.20	37	0.00	0	23.93	10	0.00	0	26.59	11	32.49	13	173.21	71	1.45	103
	ROCKBOLTS 1" @ 9'	70	EACH	74.10	5	0.00	0	19.04	1	0.00	0	21.84	2	26.69	2	141.67	10	1.45	14
	STEEL MESH	22,500	SF	1.00	23	0.02	0	0.59	13	0.00	0	0.14	3	0.16	4	1.91	43	1.45	62
	STEEL SUPPORT	24	TON	1383.00	33	0.00	0	2164.10	52	0.00	0	272.70	7	333.30	8	4153.10	100	1.45	145
GROUTING GALLERY TUNNEL																			
	ROCKBOLTS 3/4" @ 6'	160	EACH	58.00	9	0.00	0	11.30	2	0.00	0	17.09	3	20.89	3	107.28	17	1.45	25
	STEEL MESH	160	SF	1.03	0	0.03	0	0.68	0	0.00	0	0.15	0	0.18	0	2.07	0	1.45	0
	STEEL SUPPORT	2	TON	1383.00	3	0.00	0	2164.10	4	0.00	0	272.70	1	333.30	1	4153.10	8	1.45	12
SURGE CHAMBER TUNNEL																			
	ROCKBOLTS 1" @ 12'	230	EACH	90.20	21	0.00	0	23.93	6	0.00	0	26.59	6	32.49	7	173.21	40	1.45	58
	ROCKBOLTS 1" @ 9'	50	EACH	74.10	4	0.00	0	19.04	1	0.00	0	21.84	1	26.69	1	141.67	7	1.45	10
	STEEL MESH	12,050	SF	1.03	12	0.03	0	0.68	8	0.00	0	0.15	2	0.18	2	2.07	25	1.45	36
	STEEL SUPPORT	14	TON	1383.00	19	0.00	0	2164.10	30	0.00	0	272.70	4	333.30	5	4153.10	58	1.45	84
PENSTOCK ACCESS TUNNEL																			
	ROCKBOLTS 1" @ 12'	1,430	EACH	90.20	129	0.00	0	23.93	34	0.00	0	26.59	38	32.49	46	173.21	248	1.45	359
	ROCKBOLTS 1" @ 9'	240	EACH	74.10	18	0.00	0	19.04	5	0.00	0	21.84	5	26.69	6	141.67	34	1.45	49
	STEEL MESH	77,500	SF	1.03	80	0.03	2	0.68	53	0.00	0	0.15	12	0.18	14	2.07	160	1.45	233
	STEEL SUPPORT	58	TON	1383.00	80	0.00	0	2164.10	126	0.00	0	272.70	16	333.30	19	4153.10	241	1.45	349
PENSTOCK ELBOW ACCESS TUNNEL																			
	ROCKBOLTS 1" @ 12'	420	EACH	90.20	38	0.00	0	23.93	10	0.00	0	26.59	11	32.49	14	173.21	73	1.45	105
	ROCKBOLTS 1" @ 9'	120	EACH	74.10	9	0.00	0	19.04	2	0.00	0	21.84	3	26.69	3	141.67	17	1.45	25
	STEEL MESH	22,500	SF	1.03	23	0.03	1	0.68	15	0.00	0	0.15	3	0.18	4	2.07	47	1.45	68
	STEEL SUPPORT	30	TON	1383.00	41	0.00	0	2164.10	65	0.00	0	272.70	8	333.30	10	4153.10	125	1.45	181
ACCESS SHAFT TUNNEL																			

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	ROCKBOLTS 1" @ 12'	20	EACH	90.20	2	0.00	0	23.93	0	0.00	0	26.59	1	32.49	1	173.21	3	1.45	5
	ROCKBOLTS 1" @ 9'	20	EACH	74.10	1	0.00	0	19.04	0	0.00	0	21.84	0	26.69	1	141.67	3	1.45	4
	STEEL MESH	930	SF	1.03	1	0.03	0	0.68	1	0.09	0	0.15	0	0.18	0	2.07	2	1.45	3
	STEEL SUPPORT	8	TON	1383.00	11	0.00	0	2164.10	17	0.00	0	272.70	2	333.30	3	4153.10	33	1.45	48
	CONNECTOR TUNNEL																		
	ROCKBOLTS 3/4" @ 6'	160	EACH	58.00	9	0.00	0	11.30	2	0.00	0	17.09	3	20.89	3	107.28	17	1.45	25
	STEEL MESH	160	SF	1.03	0	0.03	0	0.68	0	0.00	0	0.15	0	0.18	0	2.07	0	1.45	0
	STEEL SUPPORT	2	TON	1383.00	3	0.00	0	2164.10	4	0.00	0	272.70	1	333.30	1	4153.10	8	1.45	12
.129	ARCHITECTURAL																		
	MAIN PORTAL DOORS	2	SETS	9100	18	0	0	39107	78	0	0	450	1	550	1	49207	98	1.45	143
.120	MECHANICAL																		
	VENTILATING SYSTEM																		
	(INCL IN 63.81 & 63.82)																		
.13	ACCESS CHAFT																		
.131	EXCAVATION																		
	ROCK	13,700	CY	40.40	553	10.22	140	0.00	0	0.00	0	13.65	187	16.68	229	80.95	1,109	1.45	1,608
.133	SURFACE PREPARATION																		
	SHAFT	64,000	SF	0.59	38	0.06	4	0.00	0	0.00	0	0.18	12	0.21	13	1.04	67	1.45	97
.134	CONCRETE & SHOTCRETE																		
	CONCRETE LINING	3,350	CY	79.56	267	70.27	235	45.42	152	0.00	0	49.45	166	60.45	203	305.15	1,022	1.45	1,482
	CONCRETE OVERBREAK 6"	1,220	CY	48.36	59	30.55	37	45.42	55	0.00	0	24.25	30	29.65	36	178.23	217	1.45	315
.135	SUPPORT & ANCHORS																		
	ROCKBOLTS 3/4" @ 6'	1,050	EACH	58.00	61	0.00	0	11.30	12	0.00	0	17.09	18	20.89	22	107.28	113	1.45	163
.138	STRUCTURAL - MISC STEELWORK																		
	MISCELLANEOUS STEELWORK	50	TON	592.00	30	0.00	0	1690.54	85	0.00	0	53.00	3	65.00	3	2400.54	120	1.45	174
.139	ARCHITECTURAL																		
	CONTROL BUILDING																		
	(INCL IN 331.2 CONT BLDG)																		
.130	MECHANICAL																		
	ELEVATORS	1	LS		250		0		713		0		23		27		1,012	1.00	1,012
.14	FIRE PROTECTION HEADTANK																		
.141	EXCAVATION																		
	ROCK	1,150	CY	100.40	115	27.94	32	0.00	0	0.00	0	31.06	36	37.96	44	197.36	227	1.45	329
.143	SURFACE PREPARATION																		
	HEADTANK	2,800	SF	0.38	1	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.71	2	1.45	3
.144	CONCRETE & SHOTCRETE																		
	CONCRETE	250	CY	163.80	41	20.37	5	45.42	11	0.00	0	37.75	9	46.15	12	313.49	78	1.45	114
	CONC OVERBREAK 6"	45	CY	46.28	2	2.04	0	45.42	2	0.00	0	17.05	1	20.85	1	131.64	6	1.45	9
	REINFORCING STEEL	10	TON	235.00	2	19.35	0	549.94	5	0.00	0	59.00	1	72.00	1	935.29	9	1.45	14
.145	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 12'	25	EACH	90.20	2	0.00	0	23.93	1	0.00	0	26.59	1	32.49	1	173.21	4	1.45	6
	ROCKBOLTS 1" @ 9'	10	EACH	74.10	1	0.00	0	19.04	0	0.00	0	21.84	0	26.69	0	141.67	1	1.45	2
	STEEL MESH	1,200	SF	1.03	1	0.03	0	0.68	1	0.00	0	0.15	0	0.18	0	2.07	2	1.45	4
	STEEL SUPPORT	2	TON	1383.00	3	0.00	0	2164.10	4	0.00	0	272.70	1	333.30	1	4153.10	8	1.45	12
.148	STRUCTURAL - MISC STEELWORK																		
	MISCELLANEOUS STEELWORK	1	LS		4		0		11		0		0		1		15	1.45	22

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.14C	MECHANICAL PIPING/VALVES - (INCL IN 335.12)																		
.15	BUS TUNNELS (TOTALS FOR 3 BUS TUNNELS)																		
.151	EXCAVATION																		
	ROCK HORIZONTAL	2,700	CY	37.89	102	9.82	27	0.00	0	0.00	0	12.73	34	15.56	42	76.00	205	1.45	298
	ROCK INCLINED	1,300	CY	115.35	150	16.56	22	0.00	0	0.00	0	36.88	48	45.07	59	213.86	278	1.45	403
.153	SURFACE PREPARATION TUNNELS	7,100	SF	0.59	4	0.06	0	0.00	0	0.00	0	0.18	1	0.21	1	1.04	7	1.45	11
.154	CONCRETE & SHOTCRETE																		
	CONCRETE SLAB	350	CY	121.16	42	16.29	6	45.42	16	0.00	0	37.30	13	45.60	16	265.77	93	1.45	135
	CONCRETE OVERBREAK 12"	250	CY	67.08	17	0.00	0	45.42	11	0.00	0	18.40	5	22.50	6	153.40	38	1.45	56
	REINFORCING STEEL	18	TON	235.00	4	19.35	0	549.94	10	0.00	0	59.00	1	72.00	1	935.29	17	1.45	24
	2" SHOTCRETE	2,200	SF	0.57	1	0.00	0	0.94	2	0.00	0	0.09	0	0.11	0	1.71	4	1.45	5
.155	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 25'	60	EACH	183.63	11	0.00	0	100.72	6	0.00	0	54.12	3	66.15	4	404.62	24	1.45	35
	ROCKBOLTS 1" @ 12'	140	EACH	90.20	13	0.00	0	23.93	3	0.00	0	26.59	4	32.49	5	173.21	24	1.45	35
	ROCKBOLTS 1" @ 9'	50	EACH	74.10	4	0.00	0	19.04	1	0.00	0	21.84	1	26.69	1	141.67	7	1.45	10
	STEEL MESH	6,800	SF	1.03	7	0.03	0	0.68	5	0.00	0	0.15	1	0.18	1	2.07	14	1.45	20
	STEEL SUPPORT	11	TON	1383.00	15	0.00	0	2164.10	24	0.00	0	272.70	3	333.30	4	4153.10	46	1.45	66
.16	TRANSFORMER GALLERY																		
.161	EXCAVATION																		
	ROCK	26,800	CY	12.19	327	5.20	139	0.00	0	0.00	0	5.32	143	6.51	174	29.22	783	1.45	1,135
.163	SURFACE PREPARATION TRANSFORMER GALLERY	24,600	SF	0.38	9	0.04	1	0.00	0	0.00	0	0.13	3	0.16	4	0.71	17	1.45	25
.164	CONCRETE & SHOTCRETE																		
	CONCRETE BASE SLAB	2,400	CY	165.88	398	101.84	244	45.42	109	0.00	0	38.65	93	47.25	113	399.04	958	1.45	1,389
	CONCRETE OVERBREAK 12"H/6"V	770	CY	41.08	32	3.06	2	45.42	35	0.00	0	14.80	11	18.10	14	122.46	94	1.45	137
	REINFORCING STEEL	120	TON	235.00	28	19.35	2	549.94	66	0.00	0	59.00	7	72.00	9	935.29	112	1.45	163
.165	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 25' HY	600	EACH	183.63	110	0.00	0	100.72	60	0.00	0	54.12	32	66.15	40	404.62	243	1.45	352
	ROCKBOLTS 1" @ 15'	270	EACH	128.86	35	0.00	0	28.01	8	0.00	0	37.98	10	46.42	13	241.27	65	1.45	94
	STEEL MESH	20,700	SF	1.00	21	0.02	0	0.59	12	0.00	0	0.14	3	0.16	3	1.91	40	1.45	57
	STEEL SUPPORT	29	TON	1383.00	40	0.00	0	2164.10	63	0.00	0	272.70	8	333.30	10	4153.10	120	1.45	175
.167	DRAINAGE HOLES (IN GALLERY CROWN)	8,300	LF	10.30	85	0.26	2	0.00	0	0.00	0	2.50	21	3.05	25	16.11	134	1.45	194
.17	CABLE SHAFTS (TOTALS FOR 2 SHAFTS)																		
.171	EXCAVATION																		
	ROCK	3,400	CY	115.35	392	16.56	56	0.00	0	0.00	0	36.88	125	45.07	153	213.86	727	1.45	1,054
.173	SURFACE PREPARATION SHAFTS	41,400	SF	0.59	24	0.06	2	0.00	0	0.00	0	0.18	7	0.21	9	1.04	43	1.45	62
.174	CONCRETE & SHOTCRETE																		
	CONCRETE LINING	1,040	CY	131.56	137	167.02	174	45.42	47	0.00	0	101.20	105	123.70	129	568.90	592	1.45	858
	CONCRETE OVERBREAK 6"	800	CY	77.48	62	61.10	49	45.42	36	0.00	0	45.40	36	55.50	44	284.90	228	1.45	330

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.175	SUPPORT & ANCHORS ROCKBOLTS 3/4" @ 6'	650	EACH	58.00	38	0.00	0	11.30	7	0.00	0	17.09	11	20.89	14	107.28	70	1.45	101
.178	STRUCTURAL - MISC STEELWORK MISCELLANEOUS STEELWORK	18	TON	1200.00	22	0.00	0	3564.40	64	0.00	0	135.00	2	165.00	3	5064.40	91	1.45	132
.179	ARCHITECTURAL ENCLOSURES	1	LS		12		0		44		0		1		2		59	1.45	85
.17C	MECHANICAL MANHOIST	2	EACH	60000	120	0	0	152760	306	0	0	4500	9	5500	11	222760	446	1.00	446
.18	DEWATERING (DURING CONSTRUCT.)																		
.181	DEWATERING (POWER FACILITIES) DEWATERING	1	LS		0		0		130		0		117		144		391	1.45	567
.19	INSTRUMENTATION																		
.191	INSTRUMENTATION INSTRUMENTATION	1	LS		283		0		181		0		17		21		502	1.45	728
.2	MISC. BUILDINGS & STRUCTURES CONTROL BUILDING	1	LS		258		0		986		0		29		35		1,308	1.45	1,896
.3	PERMANENT TOWN (INCLUDED IN 63.5)																		
					20,156		5,190		13,150		0		6,180		7,551		52,226		
332	RESERVOIR, DAMS & WATERWAYS																		
.1	RESERVOIR																		
.11	CLEARING CLEARING	37,500	ACRE	275.00	10,313	101.84	3,819	0.00	0	0.00	0	281.00	10,538	344.00	12,900	1001.84	37,569	1.45	54,475
.2	DIVERSION TUNNELS/COFFERDAMS (BASED UPON ACCELERATED SCHED																		
.21	DIVERSION TUNNELS/PORTALS - (INCL COMBINED TAILRACE/DIV- ERSION TUNNEL & PORTAL - SEE 332.9)																		
.211	EXCAVATION UPPER TUNNEL	221,000	CY	17.45	3,856	5.60	1,238	0.00	0	0.00	0	7.39	1,633	7.23	1,596	37.67	8,325	1.45	12,071
	LOWER TUNNEL	208,000	CY	17.45	3,630	5.60	1,165	0.00	0	0.00	0	7.39	1,537	7.23	1,504	37.67	7,835	1.45	11,361
	EXCAVATE CONCRETE FOR PLUG	700	CY	17.45	12	5.60	4	0.00	0	0.00	0	7.39	5	7.23	5	37.67	26	1.45	38
	UPSTREAM UPPER PORTAL																		
	ROCK USEABLE (FACE ONLY)	11,200	CY	6.77	76	4.30	48	0.00	0	0.00	0	5.78	65	5.78	65	22.63	253	1.45	368
	UPSTREAM LOWER PORTAL (INCL HOST EXC FOR UPPER PORTAL)																		
	ROCK USEABLE	108,000	CY	6.77	731	4.30	464	0.00	0	0.00	0	5.78	624	5.78	624	22.63	2,444	1.45	3,544
	ROCK WASTE	21,750	CY	6.77	147	4.30	94	0.00	0	0.00	0	5.78	126	5.78	126	22.63	492	1.45	714
	DOWNSTREAM PORTALS																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	OVERBURDEN	17,000	CY	2.85	48	0.00	0	0.00	0	0.00	0	1.45	25	1.78	30	6.08	103	1.45	150
	ROCK USEABLE	120,000	CY	6.77	812	4.30	516	0.00	0	0.00	0	5.78	694	5.78	694	22.63	2,716	1.45	3,938
	ROCK WASTE	28,000	CY	6.77	190	4.30	120	0.00	0	0.00	0	5.78	162	5.78	162	22.63	634	1.45	919
	EMERGENCY RELEASE CHAMBERS																		
	EXCAVATE CONCRETE FOR PLUGS	1,800	CY	14.39	26	6.56	12	0.00	0	0.00	0	7.66	14	7.50	14	36.11	65	1.45	94
	GATE CHAMBER	4,700	CY	14.39	68	6.56	31	0.00	0	0.00	0	7.66	36	7.50	35	36.11	170	1.45	246
	ACCESS TUNNEL TO GATE CHAMBER																		
	ROCK	19,100	CY	14.39	275	6.56	125	0.00	0	0.00	0	7.66	146	7.50	143	36.11	690	1.45	1,000
.212	FILL																		
	TEMPORARY COFFERDAM TO CONSTRUCT UPSTREAM PORTALS	23,000	CY	1.11	26	0.00	0	0.00	0	0.00	0	1.46	34	1.42	33	3.99	92	1.45	133
.213	SURFACE PREP/GROUTING																		
	UPSTREAM UPPER PORTAL																		
	HORIZONTAL	3,200	SF	0.38	1	0.04	0	0.00	0	0.00	0	0.16	1	0.16	1	0.74	2	1.45	3
	INCLINED	8,600	SF	0.59	5	0.06	1	0.00	0	0.00	0	0.22	2	0.21	2	1.08	9	1.45	13
	UPSTREAM LOWER PORTAL																		
	HORIZONTAL	1,300	SF	0.38	0	0.04	0	0.00	0	0.00	0	0.16	0	0.16	0	0.74	1	1.45	1
	INCLINED	14,900	SF	0.59	9	0.06	1	0.00	0	0.00	0	0.22	3	0.21	3	1.08	16	1.45	23
	DOWNSTREAM UPPER PORTAL																		
	HORIZONTAL	6,100	SF	0.38	2	0.04	0	0.00	0	0.00	0	0.16	1	0.16	1	0.74	5	1.45	7
	INCLINED	20,500	SF	0.59	12	0.06	1	0.00	0	0.00	0	0.22	5	0.21	4	1.08	22	1.45	32
	DOWNSTREAM LOWER PORTAL																		
	HORIZONTAL	600	SF	0.38	0	0.04	0	0.00	0	0.00	0	0.16	0	0.16	0	0.74	0	1.45	1
	INCLINED	5,600	SF	0.59	3	0.06	0	0.00	0	0.00	0	0.22	1	0.21	1	1.08	6	1.45	9
	GROUT UPPER TUNNEL PLUGS																		
	DRILL HOLES	4,100	LF	6.05	25	0.25	1	0.00	0	0.00	0	1.51	6	1.49	6	9.30	38	1.45	55
	CEMENT	820	CF	11.18	9	0.63	1	10.69	9	0.00	0	2.19	2	2.13	2	26.82	22	1.45	32
	GROUT LOWER TUN PERM PLUG																		
	DRILL HOLES	2,050	LF	6.05	12	0.25	1	0.00	0	0.00	0	1.51	3	1.49	3	9.30	19	1.45	28
	CEMENT	410	CF	11.18	5	0.63	0	10.69	4	0.00	0	2.19	1	2.13	1	26.82	11	1.45	16
.214	CONCRETE & SHOTCRETE																		
	UPPER TUNNEL																		
	CONCRETE LINING	42,400	CY	61.95	2,627	53.06	2,250	45.42	1,926	0.00	0	17.32	734	16.94	718	194.69	8,255	1.45	11,970
	CONC LINING OVERBREAK 6"	10,200	CY	32.45	331	1.02	10	45.42	463	0.00	0	15.12	154	14.80	151	108.81	1,110	1.45	1,609
	REINFORCING STEEL	24	TON	266.68	6	19.35	0	549.94	13	0.00	0	73.75	2	72.00	2	981.72	24	1.45	34
	2" SHOTCRETE	56,000	SF	0.65	36	0.00	0	0.94	53	0.00	0	0.11	6	0.11	6	1.81	101	1.45	147
	LOWER TUNNEL																		
	CONCRETE LINING	37,600	CY	61.95	2,329	53.06	1,995	45.42	1,708	0.00	0	17.32	651	16.94	637	194.69	7,320	1.45	10,615
	CONCRETE FOR PLUG	6,200	CY	54.58	338	6.36	39	45.42	282	0.00	0	21.87	136	21.40	133	149.63	928	1.45	1,345
	CONC LINING OVERBREAK 6"	10,000	CY	32.45	325	1.02	10	45.42	454	0.00	0	15.12	151	14.80	148	108.81	1,088	1.45	1,578
	REINFORCING STEEL	24	TON	266.68	6	19.35	0	549.94	13	0.00	0	73.75	2	72.00	2	981.72	24	1.45	34
	2" SHOTCRETE	57,900	SF	0.65	38	0.00	0	0.94	54	0.00	0	0.11	6	0.11	6	1.81	105	1.45	152
	UPSTREAM UPPER PORTAL																		
	CONCRETE HEADWALL	3,200	CY	97.72	313	19.55	63	45.42	145	0.00	0	25.70	82	31.40	100	219.79	703	1.45	1,020
	CONCRETE LINING	1,300	CY	97.72	127	19.55	25	45.42	59	0.00	0	25.70	33	31.40	41	219.79	286	1.45	414
	CONCRETE SLAB	750	CY	97.72	73	19.55	15	45.42	34	0.00	0	25.70	19	31.40	24	219.79	165	1.45	239

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	CONCRETE PIERS	800	CY	97.72	78	19.55	16	45.42	36	0.00	0	25.70	21	31.40	25	219.79	176	1.45	255
	CONCRETE OVERBREAK 12"H/6"V	300	CY	73.20	22	0.00	0	45.42	14	0.00	0	18.40	6	22.50	7	159.52	48	1.45	69
	REINFORCING STEEL	400	TON	256.50	103	19.35	8	549.94	220	0.00	0	59.00	24	72.00	29	956.79	383	1.45	555
	UPSTREAM LOWER PORTAL																		
	CONCRETE HEADWALL	4,500	CY	97.72	440	19.55	88	45.42	204	0.00	0	25.70	116	31.40	141	219.79	989	1.45	1,434
	CONCRETE LINING	3,000	CY	97.72	293	19.55	59	45.42	136	0.00	0	25.70	77	31.40	94	219.79	659	1.45	956
	CONCRETE SLAB	300	CY	97.72	29	19.55	6	45.42	14	0.00	0	25.70	8	31.40	9	219.79	66	1.45	96
	CONCRETE PIERS	700	CY	97.72	68	19.55	14	45.42	32	0.00	0	25.70	18	31.40	22	219.79	154	1.45	223
	CONCRETE OVERBREAK 12"H/6"V	350	CY	73.20	26	0.00	0	45.42	16	0.00	0	18.40	6	22.50	8	159.52	56	1.45	81
	REINFORCING STEEL	600	TON	256.50	154	19.35	12	549.94	330	0.00	0	59.00	35	72.00	43	956.79	574	1.45	832
	DOWNSTREAM UPPER PORTAL																		
	CONCRETE HEADWALL	500	CY	97.72	49	19.55	10	45.42	23	0.00	0	25.70	13	31.40	16	219.79	110	1.45	159
	CONCRETE SLAB	100	CY	97.72	10	19.55	2	45.42	5	0.00	0	25.70	3	31.40	3	219.79	22	1.45	32
	CONCRETE OVERBREAK 12"H/6"V	100	CY	73.20	7	0.00	0	45.42	5	0.00	0	18.40	2	22.50	2	159.52	16	1.45	23
	REINFORCING STEEL	40	TON	256.50	10	19.35	1	549.94	22	0.00	0	59.00	2	72.00	3	956.79	38	1.45	55
	DOWNSTREAM LOWER PORTAL																		
	CONCRETE HEADWALL	2,500	CY	97.72	244	19.55	49	45.42	114	0.00	0	25.70	64	31.40	79	219.79	549	1.45	797
	CONCRETE SLAB	100	CY	97.72	10	19.55	2	45.42	5	0.00	0	25.70	3	31.40	3	219.79	22	1.45	32
	CONCRETE OVERBREAK 12"H/6"V	150	CY	73.20	11	0.00	0	45.42	7	0.00	0	18.40	3	22.50	3	159.52	24	1.45	35
	REINFORCING STEEL	170	TON	256.50	44	19.35	3	549.94	93	0.00	0	59.00	10	72.00	12	956.79	163	1.45	236
	DOWNSTREAM FLIP BUCKET																		
	CONCRETE SLAB	800	CY	97.72	78	19.55	16	45.42	36	0.00	0	25.70	21	31.40	25	219.79	176	1.45	255
	CONCRETE WALLS	2,300	CY	97.72	225	19.55	45	45.42	104	0.00	0	25.70	59	31.40	72	219.79	506	1.45	733
	CONCRETE INVERT	1,200	CY	97.72	117	19.55	23	45.42	55	0.00	0	25.70	31	31.40	38	219.79	264	1.45	382
	CONCRETE OVERBREAK 12"H/6"V	410	CY	73.20	30	0.00	0	45.42	19	0.00	0	18.40	8	22.50	9	159.52	65	1.45	95
	REINFORCING STEEL	280	TON	256.50	72	19.35	5	549.94	154	0.00	0	59.00	17	72.00	20	956.79	268	1.45	388
	DOWNSTREAM RETAINING WALL																		
	CONCRETE SLAB	200	CY	97.72	20	19.55	4	45.42	9	0.00	0	25.70	5	31.40	6	219.79	44	1.45	64
	CONCRETE WALLS	2,000	CY	97.72	195	19.55	39	45.42	91	0.00	0	25.70	51	31.40	63	219.79	440	1.45	637
	CONCRETE OVERBREAK 12"H/6"V	110	CY	73.20	8	0.00	0	45.42	5	0.00	0	18.40	2	22.50	2	159.52	18	1.45	25
	REINFORCING STEEL	90	TON	256.50	23	19.35	2	549.94	49	0.00	0	59.00	5	72.00	6	956.79	86	1.45	125
	EMERGENCY RELEASE CHAMBERS																		
	CONCRETE PLUG	15,300	CY	110.33	1,688	36.66	561	45.42	695	0.00	0	37.06	567	36.25	555	265.72	4,066	1.45	5,895
	4" SHOTCRETE	2,790	SF	1.17	3	0.00	0	1.89	5	0.00	0	0.21	1	0.20	1	3.47	10	1.45	14
	ACCESS TUNNEL TO GATE CHAMBER																		
	2" SHOTCRETE	12,800	SF	0.65	8	0.00	0	0.94	12	0.00	0	0.11	1	0.11	1	1.81	23	1.45	34
.215	SUPPORT & ANCHORS																		
	LOWER TUNNEL																		
	ROCKBOLTS 1" @ 12'	3,650	EACH	102.35	374	0.00	0	23.93	87	0.00	0	33.24	121	32.49	119	192.01	701	1.45	1,016
	ROCKBOLTS 1" @ 9'	620	EACH	84.07	52	0.00	0	19.04	12	0.00	0	27.30	17	26.69	17	157.10	97	1.45	141
	STEEL MESH	217,100	SF	1.17	254	0.03	7	0.68	148	0.00	0	0.19	41	0.18	39	2.25	488	1.45	708
	STEEL SUPPORT	220	TON	1569.40	345	0.00	0	2164.10	476	0.00	0	340.80	75	333.30	73	4407.60	970	1.45	1,406
	UPPER TUNNEL																		
	ROCKBOLTS 1" @ 12'	3,530	EACH	102.35	361	0.00	0	23.93	84	0.00	0	33.24	117	32.49	115	192.01	678	1.45	983
	ROCKBOLTS 1" @ 9'	600	EACH	84.07	50	0.00	0	19.04	11	0.00	0	27.30	16	26.69	16	157.10	94	1.45	137
	STEEL MESH	210,200	SF	1.17	246	0.03	6	0.68	143	0.00	0	0.19	40	0.18	38	2.25	473	1.45	686

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	STEEL SUPPORT	213	TON	1569.40	334	0.00	0	2164.10	461	0.00	0	340.80	73	333.30	71	4407.60	939	1.45	1,361
	UPSTREAM LOWER PORTAL																		
	ROCKBOLTS 1" @ 15'	240	EACH	140.64	34	0.00	0	28.01	7	0.00	0	37.98	9	46.42	11	253.05	61	1.45	88
	ANCHORS 1" @ 25'	290	EACH	200.40	58	0.00	0	100.72	29	0.00	0	54.12	16	66.15	19	421.39	122	1.45	177
	UPSTREAM UPPER PORTAL																		
	ROCKBOLTS 1" @ 15'																		
	(INCL IN LOWER PORTAL)																		
	ANCHORS 1" @ 25'	130	EACH	200.40	26	0.00	0	100.72	13	0.00	0	54.12	7	66.15	9	421.39	55	1.45	79
	DOWNSTREAM LOWER PORTAL																		
	ROCKBOLTS 1" @ 15'	200	EACH	140.64	28	0.00	0	28.01	6	0.00	0	37.98	8	46.42	9	253.05	51	1.45	73
	DOWNSTREAM UPPER PORTAL																		
	ROCKBOLTS 1" @ 15'	100	EACH	140.64	14	0.00	0	28.01	3	0.00	0	37.98	4	46.42	5	253.05	25	1.45	37
	RETAINING WALL -																		
	ANCHORS - 1" @ 25'	100	EACH	200.40	20	0.00	0	100.72	10	0.00	0	54.12	5	66.15	7	421.39	42	1.45	61
	EMERGENCY RELEASE CHAMBERS																		
	ROCKBOLTS 1" @ 25' HY	100	EACH	208.35	21	0.00	0	100.72	10	0.00	0	54.12	5	66.15	7	429.34	43	1.45	62
	ROCKBOLTS 1" @ 15' HY	125	EACH	146.21	18	0.00	0	28.01	4	0.00	0	37.98	5	46.40	6	258.60	32	1.45	47
	STEEL MESH	3,600	SF	1.17	4	0.03	0	0.68	2	0.00	0	0.15	1	0.18	1	2.21	8	1.45	12
	STEEL SUPPORT	14	TON	1569.40	22	0.00	0	2164.10	30	0.00	0	272.70	4	333.30	5	4339.50	61	1.45	88
	METAL ROOF ANCHORS 3/4" @ 6'	20	EACH	65.80	1	0.00	0	11.30	0	0.00	0	17.09	0	20.89	0	115.08	2	1.45	3
	ACCESS TUNNEL TO GATE CHAMBER																		
	ROCKBOLTS 1" @ 12'	775	EACH	102.35	79	0.00	0	23.93	19	0.00	0	26.59	21	32.49	25	185.36	144	1.45	238
	ROCKBOLTS 1" @ 9'	240	EACH	84.08	20	0.00	0	19.04	5	0.00	0	21.84	5	26.69	6	151.65	36	1.45	53
	STEEL MESH	39,900	SF	1.17	47	0.03	1	0.68	27	0.00	0	0.15	6	0.18	7	2.21	88	1.45	128
	STEEL SUPPORT	55	TON	1569.40	86	0.00	0	2164.10	119	0.00	0	272.70	15	333.30	18	4339.50	239	1.45	346
.21B	STRUCTURAL - MISC STEELWORK																		
	SUSPENDED METAL ROOF																		
	EMERGENCY RELEASE CHAMBERS	2,775	SF	14.16	39	0.00	0	18.33	51	0.00	0	0.00	0	0.00	0	32.49	90	1.45	131
.21C	MECHANICAL																		
	UPSTREAM LOWER GATES																		
	GATE EQUIPMENT	2	EACH	525000	1,050	0	0	1746556	3,493	0	0	45000	90	55000	110	2371556	4,743	1.00	4,743
	UPSTREAM UPPER GATES																		
	GATE EQUIPMENT	2	EACH	232500	465	0	0	1041314	2,083	0	0	24750	50	30250	61	1328814	2,658	1.00	2,658
	TRASHRACKS	1	LS		90		0		637		0		16		19		762	1.00	762
	DOWNSTREAM LOW OUTLET																		
	STOPLOG GUIDES	1	LS		6		0		45		0		5		6		61	1.00	61
	STOPLOGS INCLUDES FOLLOWER	1	LS		10		0		830		0		2		3		845	1.00	845
	DOWNSTREAM UPPER OUTLET																		
	STOPLOG GUIDES	1	LS		14		0		17		0		2		2		35	1.00	35
	LOW LEVEL RELEASE																		
	SLIDE GATES INCL STEEL LINER	9	EACH	233000	2,097	0	0	1236338	11,127	0	0	37500	338	45500	410	1552338	13,971	1.00	13,971
.22	UPSTREAM COFFERDAM																		
.221	EXCAVATION																		
	OVERBURDEN REMOVAL	1,000	CY	1.24	1	0.00	0	0.00	0	0.00	0	1.32	1	1.61	2	4.17	4	1.45	6
.222	FILL																		
	ROCK FILL	38,400	CY	1.11	43	0.00	0	0.00	0	0.00	0	1.17	45	1.42	55	3.70	142	1.45	206

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	FINE FILTER	16,600	CY	3.89	65	0.12	2	0.00	0	0.00	0	3.48	58	4.25	71	11.74	195	1.45	283
	COARSE FILTER	15,900	CY	3.29	52	0.07	1	0.00	0	0.00	0	3.10	49	3.78	60	10.24	163	1.45	236
	ROCK SHELL	196,500	CY	1.04	204	0.00	0	0.00	0	0.00	0	1.13	222	1.39	273	3.56	700	1.45	1,014
	CLOSURE DIKE	58,500	CY	1.11	65	0.00	0	0.00	0	0.00	0	1.17	68	1.42	83	3.70	216	1.45	314
	RIP RAP	21,200	CY	3.23	68	0.00	0	0.00	0	0.00	0	2.30	49	2.80	59	8.33	177	1.45	256
.223	CUTOFF SLURRY WALL																		
	EXCAVATION	4,850	CY	0.52	3	0.01	0	0.00	0	0.00	0	0.51	2	0.62	3	1.66	8	1.45	12
	SLURRY WALL	43,600	SF	6.52	284	12.88	562	0.00	0	0.00	0	2.07	90	2.53	110	24.00	1,046	1.45	1,517
.22D	DEWATERING																		
	INITIAL DEWATERING	1	LS		400		0		707		0		291		353		1,751	1.45	2,539
	DEWATERING MAINTENANCE	1	LS		4,420		458		0		0		975		1,192		7,045	1.45	10,216
.23	DOWNSTREAM COFFERDAM																		
.231	EXCAVATION																		
	OVERBURDEN	5,000	CY	1.24	6	0.00	0	0.00	0	0.00	0	1.32	7	1.61	8	4.17	21	1.45	30
	ROCK	500	CY	1.04	1	0.00	0	0.00	0	0.00	0	1.13	1	1.39	1	3.56	2	1.45	3
	REMOVAL OF COFFERDAM	14,500	CY	1.50	22	0.01	0	0.00	0	0.00	0	1.51	22	1.84	27	4.86	70	1.45	102
.232	FILL																		
	RIP RAP	1,800	CY	3.23	6	0.00	0	0.00	0	0.00	0	2.30	4	2.80	5	8.33	15	1.45	22
	CLOSURE DIKE	15,200	CY	1.11	17	0.00	0	0.00	0	0.00	0	1.17	18	1.42	22	3.70	56	1.45	82
.233	CUTOFF SLURRY WALL																		
	EXCAVATION	1,830	CY	0.52	1	0.01	0	0.00	0	0.00	0	0.51	1	0.62	1	1.66	3	1.45	4
	SLURRY WALL	16,500	SF	6.52	108	12.88	213	0.00	0	0.00	0	2.07	34	2.53	42	24.00	396	1.45	574
.3	MAIN DAM																		
.31	MAIN DAM																		
.311	EXCAVATION																		
	OVERBURDEN - ABOVE EL 1470	2,026,000	CY	1.09	2,208	0.00	0	0.00	0	0.00	0	1.32	2,674	1.61	3,262	4.02	8,145	1.45	11,810
	OVERBURDEN - BELOW EL 1470	5,320,000	CY	1.07	5,692	0.00	0	0.00	0	0.00	0	1.25	6,650	1.53	8,140	3.85	20,482	1.45	29,699
	ROCK USEABLE - ABOVE EL 1470	1,289,000	CY	4.70	6,058	4.92	6,342	0.00	0	0.00	0	2.45	3,158	2.99	3,854	15.06	19,412	1.45	28,148
	ROCK USEABLE - BELOW EL 1470	478,000	CY	5.00	2,390	5.24	2,505	0.00	0	0.00	0	2.28	1,090	2.78	1,329	15.30	7,313	1.45	10,604
	ROCK WASTE - ABOVE EL 1470	1,950,000	CY	4.70	9,165	4.92	9,594	0.00	0	0.00	0	2.45	4,778	2.99	5,831	15.06	29,367	1.45	42,562
	ROCK WASTE - BELOW EL 1470	869,500	CY	6.12	5,321	4.32	3,756	0.00	0	0.00	0	3.20	2,782	3.90	3,391	17.54	15,251	1.45	22,114
.312	FILL																		
	RIP RAP (UPSTREAM)	1,547,000	CY	2.85	4,409	0.00	0	0.00	0	0.00	0	2.30	3,558	2.80	4,332	7.95	12,299	1.45	17,833
	GRAVEL (UPSTREAM)	25,194,000	CY	1.96	49,380	0.02	504	0.00	0	0.00	0	2.19	55,175	2.67	67,268	6.84	172,327	1.45	249,874
	COARSE FILTER (UPSTREAM)	1,646,000	CY	2.99	4,773	0.07	115	0.00	0	0.00	0	3.10	5,103	3.78	6,222	9.85	16,213	1.45	23,509
	FINE FILTER (UPSTREAM)	2,011,000	CY	3.43	6,898	0.12	241	0.00	0	0.00	0	3.48	6,998	4.25	8,547	11.28	22,684	1.45	32,892
	CORE (IMPERVIOUS)	8,254,000	CY	2.28	18,819	0.01	83	0.00	0	0.00	0	2.77	22,864	3.38	27,899	8.44	69,664	1.45	101,012
	FINE FILTER (DOWNSTREAM)	2,253,000	CY	3.43	7,728	0.12	270	0.00	0	0.00	0	3.48	7,840	4.25	9,575	11.28	25,414	1.45	36,850
	COARSE FILTER (DOWNSTREAM)	1,910,000	CY	2.90	5,539	0.07	134	0.00	0	0.00	0	3.10	5,921	3.78	7,220	9.85	18,814	1.45	27,280
	SHELL - ROCK & GRAVEL (D/S)	11,342,000	CY	1.86	21,096	0.01	113	0.00	0	0.00	0	2.03	23,024	2.48	28,128	6.38	72,362	1.45	104,925
	SHELL - ROCK FR OTHER SOURCES	5,418,000	CY	0.92	4,985	0.00	0	0.00	0	0.00	0	1.13	6,122	1.39	7,531	3.44	18,638	1.45	27,025
	COBBLES (DOWNSTREAM FACE)	2,003,000	CY	1.99	3,986	0.00	0	0.00	0	0.00	0	1.62	3,245	1.97	3,946	5.58	11,177	1.45	16,206
	ROAD BASE	12,000	CY	3.43	41	0.12	1	0.00	0	0.00	0	3.48	42	4.25	51	11.28	135	1.45	196
	FROST PROTECTION																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	PROCESS PROTECTION	960,000	CY	0.89	854	0.00	0	0.00	0	0.00	0	1.02	979	1.25	1,200	3.16	3,034	1.45	4,399
	PLACE PROTECTION	960,000	CY	0.38	365	0.00	0	0.00	0	0.00	0	0.28	269	0.35	336	1.01	970	1.45	1,406
	REMOVE 1" PROTECT & WASTE	93,000	CY	0.46	43	0.00	0	0.00	0	0.00	0	0.79	73	0.96	89	2.21	206	1.45	298
	SCARIFY CORE SURFACE	193	ACRE	114.12	22	0.00	0	0.00	0	0.00	0	75.32	15	92.05	18	281.49	54	1.45	79
	FILTER FABRIC																		
	FILTER FABRIC	740,000	SF	0.07	52	0.00	0	0.19	141	0.00	0	0.00	0	0.01	7	0.27	200	1.45	290
.313	SURFACE PREP. & FINISHING																		
	SURFACE PREPARATION																		
	UNDER CORE/FILTERS																		
	ABOVE ELEVATION 1500	1,675,000	SF	0.57	955	0.06	101	0.00	0	0.00	0	0.18	302	0.21	352	1.02	1,709	1.45	2,477
	BELOW ELEVATION 1500	613,000	SF	0.57	349	0.06	37	0.00	0	0.00	0	0.18	110	0.21	129	1.02	625	1.45	907
	UNDER SHELL																		
	ABOVE ELEVATION 1500	5,186,000	SF	0.37	1,919	0.04	207	0.00	0	0.00	0	0.13	674	0.16	830	0.70	3,630	1.45	5,264
	BELOW ELEVATION 1500	2,584,000	SF	0.37	956	0.04	103	0.00	0	0.00	0	0.13	336	0.16	413	0.70	1,809	1.45	2,623
	CONSOLIDATION GROUT																		
	DRILL HOLES	687,000	LF	2.47	1,697	0.25	172	0.00	0	0.00	0	0.53	364	0.65	447	3.90	2,679	1.45	3,885
	CEMENT	687,000	CF	7.05	4,843	0.25	172	12.73	8,746	0.00	0	0.78	536	0.95	653	21.76	14,949	1.45	21,676
	GROUT CURTAIN																		
	DRILL HOLES	465,000	LF	5.82	2,706	0.25	116	0.00	0	0.00	0	1.21	563	1.49	693	8.77	4,078	1.45	5,913
	CEMENT	186,000	CF	10.75	7,300	0.63	117	10.69	1,988	0.00	0	1.75	326	2.13	396	25.95	4,827	1.45	6,999
	DENTAL CONCRETE																		
	DENTAL CONCRETE	85,000	CY	40.50	3,443	3.06	260	45.42	3,961	0.00	0	12.55	1,067	15.35	1,305	116.88	9,935	1.45	14,405
.317	DRAINAGE																		
	HOLES	136,000	LF	9.91	1,348	0.26	35	0.00	0	0.00	0	2.50	340	3.05	415	15.72	2,138	1.45	3,100
.32	GROUT GALLERIES/PORTALS																		
.321	EXCAVATION																		
	TUNNELS/SHAFTS - CORE AREA																		
	ROCK HORIZONTAL	10,100	CY	66.93	676	27.94	282	0.00	0	0.00	0	20.70	209	25.31	256	140.88	1,423	1.45	2,063
	ROCK INCLINED	11,300	CY	100.40	1,135	27.94	316	0.00	0	0.00	0	31.06	351	37.96	429	197.36	2,230	1.45	3,234
	ROCK VERTICAL	2,000	CY	100.40	201	22.00	44	0.00	0	0.00	0	31.06	62	37.96	76	191.42	383	1.45	555
	TUNNELS/SHAFTS - ACCESS																		
	ROCK HORIZONTAL	13,000	CY	66.93	870	27.94	363	0.00	0	0.00	0	20.70	269	25.31	329	140.88	1,831	1.45	2,656
	ROCK INCLINED	2,000	CY	100.40	201	27.94	56	0.00	0	0.00	0	31.06	62	37.96	76	197.36	395	1.45	572
	PORTALS																		
	OVERBURDEN	3,600	CY	2.85	10	0.00	0	0.00	0	0.00	0	1.45	5	1.78	6	6.08	22	1.45	32
	ROCK	1,000	CY	4.62	5	4.30	4	0.00	0	0.00	0	3.82	4	4.68	5	17.42	17	1.45	25
.323	SURFACE PREPARATION																		
	PORTALS																		
	HORIZONTAL	30	SF	0.38	0	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.71	0	1.45	0
	INCLINED	200	SF	0.59	0	0.06	0	0.00	0	0.00	0	0.18	0	0.21	0	1.04	0	1.45	0
.324	CONCRETE & SHOTCRETE																		
	TUNNELS - CORE AREA																		
	CONCRETE PLOGS	1,000	CY	48.10	48	6.36	6	45.42	45	0.00	0	17.50	18	21.40	21	138.78	139	1.45	201
	CONCRETE SLAB	2,300	CY	160.68	370	20.37	47	45.42	104	0.00	0	36.40	84	44.50	102	307.37	707	1.45	1,025
	CONCRETE OVERBREAK 6"	1,150	CY	127.40	147	10.18	12	45.42	52	0.00	0	28.30	33	34.60	40	245.90	283	1.45	410
	REINFORCING STEEL	80	TON	235.00	19	19.35	2	549.94	44	0.00	0	59.00	5	72.00	6	935.29	75	1.45	108

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	2" SHOTCRETE	15,000	SF	0.57	9	0.00	0	0.94	14	0.00	0	0.09	1	0.11	2	1.71	26	1.45	37
	TUNNELS - ACCESS																		
	CONCRETE SLAB	1,600	CY	160.68	257	20.37	33	45.42	73	0.00	0	36.40	58	44.50	71	307.37	492	1.45	713
	CONCRETE OVERBREAK 6"	800	CY	127.40	102	10.18	8	45.42	36	0.00	0	28.30	23	34.60	28	245.90	197	1.45	285
	REINFORCING STEEL	60	TON	235.00	14	19.35	1	549.94	33	0.00	0	59.00	4	72.00	4	935.29	56	1.45	81
	2" SHOTCRETE	5,400	SF	0.57	3	0.00	0	0.94	5	0.00	0	0.09	0	0.11	1	1.71	9	1.45	13
	SHAFTS - CORE AREA																		
	2" SHOTCRETE	5,000	SF	0.57	3	0.00	0	0.94	5	0.00	0	0.09	0	0.11	1	1.71	9	1.45	12
	PORTALS (2 PORTALS)																		
	CONCRETE	20	CY	48.36	1	3.06	0	45.42	1	0.00	0	15.70	0	19.20	0	131.74	3	1.45	4
	REINFORCING STEEL	2	TON	235.00	0	19.35	0	549.94	1	0.00	0	59.00	0	72.00	0	935.29	2	1.45	3
	.325 SUPPORT & ANCHORS																		
	TUNNELS - CORE AREA																		
	ROCKBOLTS 3/4" @ 6'	1,800	EACH	57.99	104	0.00	0	11.30	20	0.00	0	17.09	31	20.89	38	107.27	193	1.45	280
	STEEL MESH	3,000	SF	1.03	3	0.00	0	0.46	1	0.00	0	0.12	0	0.14	0	1.75	5	1.45	8
	STEEL SUPPORT	20	TON	1383.00	28	0.00	0	2164.10	43	0.00	0	272.70	5	333.30	7	4153.10	83	1.45	120
	TUNNELS - ACCESS																		
	ROCKBOLTS 3/4" @ 6'	1,200	EACH	58.00	70	0.00	0	11.30	14	0.00	0	17.09	21	20.89	25	107.28	129	1.45	187
	STEEL MESH	1,100	SF	1.03	1	0.00	0	0.46	1	0.00	0	0.12	0	0.14	0	1.75	2	1.45	3
	STEEL SUPPORT	20	TON	1383.00	28	0.00	0	2164.10	43	0.00	0	272.70	5	333.70	7	4153.10	83	1.45	120
	SHAFTS - CORE AREA																		
	ROCKBOLTS 3/4" @ 6'	350	EACH	58.00	20	0.00	0	11.30	4	0.00	0	17.09	6	20.89	7	107.28	38	1.45	54
	STEEL MESH	1,000	SF	1.03	1	0.00	0	0.46	0	0.00	0	0.12	0	0.14	0	1.75	2	1.45	3
	PORTALS																		
	ROCKBOLTS 1" @ 15'	30	EACH	128.86	4	0.00	0	28.01	1	0.00	0	37.98	1	46.42	1	241.27	7	1.45	10
	.329 ARCHITECTURAL																		
	PORTAL DOORS	2	EACH	2600	5	0	0	10082	20	0	0	180	0	220	0	13082	26	1.45	38
	VENT SYS (INCL W/ 331.12C)																		
	.33 INSTRUMENTATION																		
	.331 INSTRUMENTATION (DAM)																		
	INSTRUMENTATION	1	LS		3,630		0		2,233		0		214		261		6,338	1.45	9,191
	.4 RELICT CHANNEL																		
	.41 SHORE PROTECTION																		
	.411 EXCAVATION																		
	OVERBURDEN STRIPPING-2' THK	2,200	CY	1.09	2	0.00	0	0.00	0	0.00	0	1.32	3	1.61	4	4.02	9	1.45	13
	.412 FILL																		
	DUMP & SPREAD																		
	FILTER MATERIAL - 2' LAYER	2,200	CY	2.90	6	0.00	0	0.00	0	0.00	0	3.10	7	3.78	8	9.78	22	1.45	31
	ROCK SPALLS/RIP RAP-3' AVE	3,300	CY	0.92	3	0.00	0	0.00	0	0.00	0	1.13	4	1.39	5	3.44	11	1.45	16
	SHORE PROTECTION																		
	RIP RAP	24,000	CY	2.85	68	0.00	0	0.00	0	0.00	0	2.30	55	2.80	67	7.95	191	1.45	277
	WASTE ROCK	24,000	CY	2.85	68	0.00	0	0.00	0	0.00	0	2.30	55	2.80	67	7.95	191	1.45	277
	.42 CHANNEL FILTER BLANKET																		
	.421 FILL																		
	COARSE FILTER	2,900,000	CY	3.37	9,773	0.07	203	0.00	0	0.00	0	3.65	10,585	4.46	12,934	11.55	33,495	1.45	48,568
	FINE FILTER	2,180,000	CY	3.91	8,524	0.12	262	0.00	0	0.00	0	4.03	8,785	4.93	10,747	12.99	28,318	1.45	41,061

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.422	RIP RAP	182,000	CY	2.85	519	0.00	0	0.00	0	0.00	0	2.30	419	2.80	510	7.95	1,447	1.45	2,098
	SURFACE PREPARATION																		
	CLEARING & GRUBBING	460	ACRE	379.00	174	140.54	65	0.00	0	0.00	0	388.00	178	474.00	218	1381.54	636	1.45	921
	EXCAVATION	2,236,000	CY	1.56	3,488	0.00	0	0.00	0	0.00	0	1.63	3,645	2.00	4,472	5.19	11,605	1.45	16,827
.5	OUTLET FACILITIES																		
.51	OUTLET FACILITIES - (INTAKE																		
	CIVIL WORK INCL IN POWER IN-																		
	TAKE - SEE 332.61 DISCHARGE																		
	CIVIL WORK - SEE 332.52)																		
.511	EXCAVATION																		
	INLET (SEE 332.611)																		
	OUTLET (SEE 332.521)																		
	TUNNELS																		
	ROCK HORIZONTAL	83,000	CY	15.69	1,302	6.41	532	0.00	0	0.00	0	6.56	544	8.01	665	36.67	3,044	1.45	4,413
	ROCK INCLINED	9,000	CY	29.94	269	7.79	70	0.00	0	0.00	0	12.42	112	15.19	137	65.34	588	1.45	853
.513	SURFACE PREP/GROUTING																		
	SURFACE PREPARATION																		
	INLET (SEE 332.613)																		
	OUTLET (SEE 332.523)																		
	TUNNELS	323,500	SF	0.38	123	0.04	13	0.00	0	0.00	0	0.13	42	0.16	52	0.71	230	1.45	333
	CONTACT GROUTING	1	LS		83		0		49		0		15		18		170	1.45	246
.514	CONCRETE & SHOTCRETE																		
	INLET (SEE 332.614)																		
	OUTLET (SEE 332.524)																		
	TUNNELS																		
	CONCRETE LINING	27,200	CY	160.68	4,370	20.37	554	45.42	1,235	0.00	0	36.40	990	44.50	1,210	307.37	8,360	1.45	12,123
	CONCRETE OVERBREAK 6"	6,200	CY	46.48	288	13.80	86	45.42	282	0.00	0	16.72	104	20.43	127	142.85	886	1.45	1,284
	2" SHOTCRETE	12,000	SF	0.57	7	0.00	0	0.94	11	0.00	0	0.09	1	0.11	1	1.71	21	1.45	30
	3" SHOTCRETE	19,400	SF	0.80	16	0.00	0	1.42	28	0.00	0	0.13	3	0.15	3	2.50	49	1.45	70
.515	SUPPORT & ANCHORS																		
	INLET (SEE 332.615)																		
	OUTLET (SEE 332.525)																		
	TUNNELS																		
	ROCKBOLTS 1" @ 6'	2,400	EACH	58.00	139	0.00	0	11.30	27	0.00	0	17.09	41	20.89	50	107.28	257	1.45	373
	STEEL MESH	94,500	SF	1.03	97	0.03	3	0.68	64	0.00	0	0.15	14	0.18	17	2.07	196	1.45	284
.51C	MECHANICAL																		
	INLET																		
	TRASH RACKS/GUIDES	1	LS		170		0		423		0		29		36		658	1.00	658
	GATE EQUIPMENT	2	EACH	125000	250	0	0	1379932	2,760	0	0	22500	45	27500	55	1554932	3,110	1.00	3,110
	STOPLOG GUIDES	2	SETS	40000	80	0	0	48374	97	0	0	3400	7	4100	8	95874	192	1.00	192
	OUTLET																		
	FIXED CONE VALVES-6+1SPARE	1	LS		285		0		1,533		0		50		60		1,927	1.00	1,927
	RING FOLLOWER GATES	6	EACH	75000	450	0	0	744450	4,467	0	0	24400	146	29500	177	873350	5,240	1.00	5,240
	STEEL MANIFOLD LINER	1,950	TON	850.00	1,658	0.00	0	1884.04	3,674	0.00	0	63.00	123	77.00	150	2874.04	5,604	1.45	8,126
	MISC MECHANICAL EQUIPMENT	1	LS		60		0		331		0		7		8		406	1.00	406
	MISC ELECTRICAL SYSTEMS	1	LS		45		0		51		0		2		3		101	1.00	101

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.52	MAIN (CHUTE) SPILLWAY (INCLUDES CIVIL WORKS FOR OUTLET FACILITIES - SEE 332.51)																		
.521	EXCAVATION APPROACH																		
	OVERBURDEN	64,000	CY	1.24	79	0.00	0	0.00	0	0.00	0	1.77	113	2.17	139	5.18	332	1.45	481
	ROCK USEABLE	318,500	CY	3.46	1,102	4.32	1,376	0.00	0	0.00	0	2.17	491	2.66	847	12.61	4,016	1.45	5,824
	ROCK WASTE	64,000	CY	3.46	221	4.32	276	0.00	0	0.00	0	2.17	139	2.66	170	12.61	807	1.45	1,170
	CONTROL STRUCTURE (TO END OF ROLLWAY)																		
	OVERBURDEN	8,500	CY	1.24	11	0.00	0	0.00	0	0.00	0	1.77	15	2.17	18	5.18	44	1.45	64
	ROCK WASTE	18,500	CY	2.84	53	4.38	81	0.00	0	0.00	0	1.99	37	2.43	45	11.64	215	1.45	312
	ROCK USEABLE (INCLINED)	37,500	CY	3.64	137	4.42	165	0.00	0	0.00	0	2.23	84	2.72	102	13.01	488	1.45	707
	ROCK USEABLE (VERTICAL)	76,500	CY	3.64	278	4.42	338	0.00	0	0.00	0	2.23	171	2.72	208	13.01	995	1.45	1,443
	UPPER CHUTE (END ROLLWAY TO STA 11+00)																		
	OVERBURDEN	104,500	CY	1.24	130	0.00	0	0.00	0	0.00	0	1.77	185	2.17	227	5.18	541	1.45	785
	ROCK WASTE	77,500	CY	3.46	268	4.32	335	0.00	0	0.00	0	2.17	168	2.66	206	12.61	977	1.45	1,417
	ROCK USEABLE (INCLINED)	215,000	CY	5.09	1,094	5.24	1,127	0.00	0	0.00	0	2.59	557	3.17	682	16.09	3,459	1.45	5,016
	ROCK USEABLE (VERTICAL)	134,000	CY	5.09	682	5.24	702	0.00	0	0.00	0	2.59	347	3.17	425	16.09	2,156	1.45	3,126
	LOWER CHUTE (STATION 11+00 TO 17+00)																		
	OVERBURDEN	79,500	CY	1.24	99	0.00	0	0.00	0	0.00	0	1.77	141	2.17	173	5.18	412	1.45	597
	ROCK WASTE	43,500	CY	2.94	128	4.32	188	0.00	0	0.00	0	1.41	61	1.72	75	10.39	452	1.45	655
	ROCK USEABLE (INCLINED)	107,500	CY	4.57	491	5.24	563	0.00	0	0.00	0	1.83	197	2.24	241	13.88	1,492	1.45	2,164
	ROCK USEABLE (VERTICAL)	45,000	CY	4.57	206	5.24	236	0.00	0	0.00	0	1.83	82	2.24	101	13.88	625	1.45	906
	VALVE BLOCK/FLIP & OUTFALL (FROM STA 17+00 TO END FLIP)																		
	OVERBURDEN	52,000	CY	1.24	64	0.00	0	0.00	0	0.00	0	1.77	92	2.17	113	5.18	269	1.45	391
	ROCK WASTE	71,000	CY	2.94	209	4.32	307	0.00	0	0.00	0	1.41	100	1.72	122	10.39	738	1.45	1,070
	ROCK USEABLE (INCLINED)	316,000	CY	4.57	1,444	5.24	1,656	0.00	0	0.00	0	1.83	578	2.24	708	13.88	4,386	1.45	6,360
	ROCK USEABLE (VERTICAL)	58,000	CY	4.57	265	5.24	304	0.00	0	0.00	0	1.83	106	2.24	130	13.88	805	1.45	1,167
	DRAIN TUNNEL																		
	ROCK HORIZONTAL	4,500	CY	64.36	290	27.94	126	0.00	0	0.00	0	20.70	93	25.31	114	138.31	622	1.45	902
	ROCK INCLINED	3,000	CY	96.54	290	27.94	84	0.00	0	0.00	0	31.06	93	37.96	114	193.50	581	1.45	842
	RIVER CHANNEL																		
	ALLUVIUM EXCAVATION	1,060,000	CY	1.01	1,071	0.01	11	0.00	0	0.00	0	1.42	1,505	1.74	1,844	4.18	4,431	1.45	6,425
.522	FILL																		
	GRANULAR BACKFILL	5,000	CY	1.86	9	0.01	0	0.00	0	0.00	0	2.03	10	2.48	12	6.38	32	1.45	46
	IMPERVIOUS	1,000	CY	2.28	2	0.01	0	0.00	0	0.00	0	2.77	3	3.38	3	8.44	8	1.45	12
.523	SURFACE PREP/GROUTING																		
	FOUNDATION PREP																		
	SPILLWAY																		
	ROCK HORIZONTAL	240,000	SF	0.37	89	0.04	10	0.00	0	0.00	0	0.13	31	0.16	38	0.70	168	1.45	244
	ROCK INCLINED	166,000	SF	0.57	95	0.06	10	0.00	0	0.00	0	0.18	30	0.21	35	1.02	169	1.45	246
	CONSOLIDATION GROUTING																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	DRILL HOLES	54,000	LF	2.47	133	0.25	14	0.00	0	0.00	0	0.53	29	0.65	35	3.90	211	1.45	305
	CEMENT	54,000	CF	7.05	381	0.25	14	12.73	687	0.00	0	0.78	42	0.95	51	21.76	1,175	1.45	1,704
.524	GROUT CURTAIN(SEE 332.313)																		
	CONCRETE & SHOTCRETE																		
	CONCRETE APPROACH & STRUCTURE																		
	CONCRETE OUTERWALLS	20,500	CY	44.70	916	13.80	283	45.42	931	0.00	0	16.72	343	20.43	419	141.07	2,892	1.45	4,193
	CONCRETE PIERS (FULL LENGTH)	8,000	CY	44.70	358	13.80	110	45.42	363	0.00	0	16.72	134	20.43	163	141.07	1,129	1.45	1,636
	CONCRETE DECK	1,600	CY	44.70	72	13.80	22	45.42	73	0.00	0	16.72	27	20.43	33	141.07	226	1.45	327
	CONCRETE ROLLWAY SLABS	19,500	CY	44.70	872	13.80	269	45.42	886	0.00	0	16.72	326	20.43	398	141.07	2,751	1.45	3,989
	CONCRETE OVERBREAK 12"H/6"V	1,300	CY	32.50	42	5.09	7	45.42	59	0.00	0	12.55	16	15.35	20	110.91	144	1.45	209
	REINFORCING STEEL	2,700	TON	226.00	610	19.35	52	549.94	1,485	0.00	0	59.00	159	72.00	194	926.29	2,501	1.45	3,626
	CONCRETE CHUTE																		
	(INCL BOX DRAIN GALLERIES)																		
	(FROM END OF ROLLWAY)																		
	CONCRETE SLAB	22,000	CY	44.70	983	13.80	304	45.42	999	0.00	0	16.72	368	20.43	449	141.07	3,104	1.45	4,500
	CONCRETE WALLS	10,500	CY	44.70	469	23.98	252	45.42	477	0.00	0	16.72	176	20.43	215	151.25	1,588	1.45	2,303
	CONC OVERBREAK 18"H/6"V	11,000	CY	27.50	303	1.02	11	45.42	500	0.00	0	12.10	133	14.80	163	100.84	1,109	1.45	1,608
	REINFORCING STEEL	1,300	TON	226.00	294	19.35	25	549.94	715	0.00	0	59.00	77	72.00	94	926.29	1,204	1.45	1,746
	CONCRETE VALVE BLOCK/FLIP -																		
	& OUTFALL																		
	CONCRETE BLOCK/BUCKET	29,500	CY	44.70	1,319	13.80	407	45.42	1,340	0.00	0	16.72	493	20.43	603	141.07	4,162	1.45	6,034
	CONCRETE OUTFALL LINING	2,500	CY	44.70	112	13.80	35	45.42	114	0.00	0	16.72	42	20.43	51	141.07	353	1.45	511
	CONC OVERBREAK 12"H/6"V	2,400	CY	27.50	66	1.02	2	45.42	109	0.00	0	12.10	29	14.80	36	100.84	242	1.45	351
	REINFORCING STEEL	1,300	TON	226.00	294	19.35	25	549.94	715	0.00	0	59.00	77	72.00	94	926.29	1,204	1.45	1,746
	CONCRETE DRAIN GALLERY																		
	CONCRETE SLAB	1,000	CY	129.50	130	43.79	44	45.42	45	0.00	0	37.30	37	45.60	46	301.61	302	1.45	437
	REINFORCING STEEL	30	TON	226.00	7	19.35	1	549.94	16	0.00	0	59.00	2	72.00	2	926.29	28	1.45	40
	CONCRETE OVERBREAK 6"	500	CY	69.50	35	13.24	7	45.42	23	0.00	0	23.80	12	29.10	15	181.06	91	1.45	131
	2" SHOTCRETE DOME	5,000	SF	0.55	3	0.00	0	0.94	5	0.00	0	0.09	0	0.11	1	1.69	8	1.45	12
.525	SUPPORT & ANCHORS																		
	DRAINAGE TUNNEL																		
	STEEL SUPPORT	7	TON	1330.00	9	0.00	0	2164.10	15	0.00	0	272.70	2	333.30	2	4100.10	29	1.45	42
	STEEL MESH	1,000	SF	0.96	1	0.02	0	0.59	1	0.00	0	0.14	0	0.16	0	1.87	2	1.45	3
	ROCKBOLTS DRAINAGE GALLERY																		
	3/4" @ 6'	576	EACH	55.76	32	0.00	0	11.30	7	0.00	0	17.09	10	20.89	12	105.04	61	1.45	88
	ROCKBOLTS APPROACH																		
	1" @ 15'	275	EACH	123.91	34	0.00	0	28.01	8	0.00	0	37.98	10	46.42	13	236.32	65	1.45	94
	ROCKBOLTS CHUTE & STRUCTURE																		
	1" @ 15'	112	EACH	123.91	14	0.00	0	28.01	3	0.00	0	37.98	4	46.42	5	236.32	26	1.45	38
	ROCKBOLTS VALVE BLOCK/BUCKET																		
	1" @ 15'	46	EACH	123.91	6	0.00	0	28.01	1	0.00	0	37.98	2	46.42	2	236.32	11	1.45	16
	SLAB/WALL ANCHORS																		
	1" @ 10'	9,300	EACH	77.45	720	0.00	0	20.98	195	0.00	0	23.74	221	29.01	270	151.18	1,406	1.45	2,039
.527	DRAINAGE																		
	DRILL HOLES																		
	BOX DRAINS (TO DRAIN TUNNEL)	54,000	LF	9.91	535	0.26	14	0.00	0	0.00	0	2.50	135	3.05	165	15.72	849	1.45	1,231

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.52C	3" RELIEF MECHANICAL	640	LF	9.91	6	0.26	0	0.00	0	0.00	0	2.50	2	3.05	2	15.72	10	1.45	15
	GATE EQUIPMENT	3	EACH	395300	1,186	0	0	1491650	4,475	0	0	45000	135	55000	165	1986950	5,961	1.00	5,961
	STOPLOG GUIDES	3	SETS	16670	50	0	0	17995	54	0	0	3000	9	3600	11	41265	124	1.00	124
	STOPLOGS INCLUDES FOLLOWER	1	SET		20		0		402		0		2		3		427	1.00	427
	MISC ELECTRICAL	1	LS		45		0		51		0		2		3		101	1.00	101
.53	EMERGENCY SPILLWAY																		
.531	EXCAVATION (INCLUDING BRIDGE & FUSE PLUG)																		
	OVERBURDEN	4,440,000	CY	0.52	2,309	0.00	0	0.00	0	0.00	0	0.80	3,552	0.97	4,307	2.29	10,168	1.45	14,743
	ROCK USEABLE	2,893,000	CY	3.64	10,531	4.42	12,787	0.00	0	0.00	0	2.26	6,538	2.76	7,985	13.08	37,840	1.45	54,869
	ROCK WASTE	543,000	CY	3.11	1,689	4.38	2,378	0.00	0	0.00	0	2.40	1,303	2.94	1,596	12.83	6,967	1.45	10,102
.532	FILL																		
	FUSE PLUG	29,400	CY	1.86	55	0.01	0	0.00	0	0.00	0	2.03	60	2.48	73	6.38	188	1.45	272
.533	SURFACE PREP/GROUTING																		
	SURFACE PREPARATION (UNDER FUSE PLUG)																		
	INCLINED	5,200	SF	0.57	3	0.06	0	0.00	0	0.00	0	0.18	1	0.21	1	1.02	5	1.45	8
	HORIZONTAL	46,100	SF	0.37	17	0.04	2	0.00	0	0.00	0	0.13	6	0.16	7	0.70	32	1.45	47
	CONSOLIDATION GROUTING																		
	DRILL HOLES	15,400	LF	2.47	38	0.25	4	0.00	0	0.00	0	0.53	8	0.65	10	3.90	60	1.45	87
	CEMENT	15,400	CF	7.05	109	0.25	4	12.73	196	0.00	0	0.78	12	0.95	15	21.76	335	1.45	486
.535	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 15'	730	EACH	123.91	90	0.00	0	28.01	20	0.00	0	37.98	28	46.42	34	236.32	173	1.45	250
.53B	BRIDGE																		
	BRIDGE	1	LS		406		0		795		0		28		35		1,264	1.45	1,833
.6	POWER INTAKE (INCL. INLET EXC & INLET STRUCT CIVIL WORKS FOR OUTLET FACILITIES-SEE 332.51)																		
.61	INTAKE STRUCT & APPROACH																		
.611	EXCAVATION																		
	OVERBURDEN	574,000	CY	1.24	712	0.00	0	0.00	0	0.00	0	1.77	1,016	2.17	1,246	5.18	2,973	1.45	4,311
	ROCK USEABLE	1,274,000	CY	4.45	5,669	4.32	5,504	0.00	0	0.00	0	2.40	3,058	2.93	3,733	14.10	17,963	1.45	26,047
	ROCK WASTE	134,000	CY	4.45	596	4.32	579	0.00	0	0.00	0	2.40	322	2.93	393	14.10	1,889	1.45	2,740
.613	SURFACE PREPARATION																		
	HORIZONTAL	30,200	SF	0.37	11	0.04	1	0.00	0	0.00	0	0.13	4	0.16	5	0.70	21	1.45	31
	INCLINED	96,200	SF	0.57	55	0.06	6	0.00	0	0.00	0	0.18	17	0.21	20	1.02	98	1.45	142
.614	CONCRETE & SHOTCRETE STRUCTURE																		
	CONCRETE STRUCTURE	117,700	CY	57.90	6,815	25.46	2,997	45.42	5,346	0.00	0	20.48	2,410	25.02	2,945	174.28	20,513	1.45	29,743
	CONCRETE OVERBREAK 12"H/6"V	2,900	CY	31.50	91	5.09	15	45.42	132	0.00	0	11.65	34	14.25	41	107.91	313	1.45	454
	REINFORCING STEEL	7,650	TON	226.00	1,729	19.35	148	549.94	4,207	0.00	0	59.00	451	72.00	551	926.29	7,086	1.45	10,275
.615	SUPPORT & ANCHORS																		
	STRUCTURE																		
	ROCKBOLTS 1" @ 15'	330	EACH	123.91	41	0.00	0	28.01	9	0.00	0	37.98	13	46.42	15	236.32	78	1.45	113

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.61C	MECHANICAL																		
	TRASHRACKS/GUIDES	6	SETS	127500	765	0	0	308066	1,848	0	0	22500	135	27500	165	485566	2,913	1.00	2,913
	GATE EQUIPMENT	6	EACH	275000	1,650	0	0	655086	3,931	0	0	18750	113	23000	138	971836	5,831	1.00	5,831
	BULKHEAD GATE GUIDES	6	SETS	50000	300	0	0	33913	203	0	0	7500	45	9200	55	100613	604	1.00	604
	BULKHEAD GATES INCL FOLLOWER	1	SET		20	0	0		280	0	0		7		8	315	1.00	315	
	SHUTTER WITH GUIDES	6	SETS	66700	400	0	0	224048	1,344	0	0	15000	90	18300	110	324048	1,944	1.00	1,944
	ICE ROOM WITH HOIST	6	SETS	41700	250	0	0	478648	2,872	0	0	17250	104	21050	126	558648	3,352	1.00	3,352
	ICE ROOM GUIDES	6	SETS	100000	600	0	0	123837	743	0	0	12750	77	15650	94	252237	1,513	1.00	1,513
	INTAKE SERVICE CRANE	1	EACH		60	0	0		265	0	0		14		17	355	1.00	355	
	BUBBLER SYSTEM	1	LS		180	0	0		214	0	0		5		6	404	1.00	404	
	MISCELLANEOUS ELECTRICAL	1	LS		50	0	0		46	0	0		2		3	101	1.00	101	
.61D	INTAKE BUILDING																		
	INTAKE BUILDING	1	LS		25	0	0		71	0	0		2		3	101	1.00	101	
.7	SURGE CHAMBER																		
.71	SURGE CHAMBER																		
.711	EXCAVATION																		
	CHAMBER ROCK	101,000	CY	14.80	1,495	5.08	513	0.00	0	0.00	0	5.46	551	6.68	675	32.02	3,234	1.45	4,689
	VENT SHAFT ROCK	2,200	CY	115.35	254	16.56	36	0.00	0	0.00	0	36.88	81	45.07	99	213.86	470	1.45	682
.713	SURFACE PREPARATION																		
	SURFACE PREPARATION	29,700	SF	0.38	11	0.04	1	0.00	0	0.00	0	0.13	4	0.16	5	0.71	21	1.45	31
.714	CONCRETE & SHOTCRETE																		
	CHAMBER																		
	CONCRETE	6,000	CY	71.24	427	6.11	37	45.42	273	0.00	0	19.75	119	24.15	145	166.67	1,000	1.45	1,450
	CONCRETE OVERBREAK	1,000	CY	56.68	57	2.04	2	45.42	45	0.00	0	17.50	18	21.40	21	143.04	143	1.45	207
	REINFORCING STEEL	300	TON	235.00	71	19.35	6	549.94	165	0.00	0	59.00	18	72.00	22	935.29	281	1.45	407
	4" SHOTCRETE	38,400	SF	1.03	40	0.00	0	1.89	73	0.00	0	0.17	7	0.20	8	3.29	126	1.45	183
	VENT SHAFT																		
	2" SHOTCRETE	5,900	SF	0.57	3	0.00	0	0.94	6	0.00	0	0.09	1	0.11	1	1.71	10	1.45	15
.715	SUPPORT & ANCHORS																		
	CHAMBER																		
	ROCKBOLTS 1" @ 25' HY	570	EACH	183.63	105	0.00	0	100.72	57	0.00	0	54.12	31	66.15	38	404.62	231	1.45	334
	ROCKBOLTS 1" @ 15'	2,110	EACH	128.86	272	0.00	0	28.01	59	0.00	0	37.98	80	46.42	98	241.27	509	1.45	738
	STEEL MESH	28,900	SF	1.00	29	0.02	1	0.59	17	0.00	0	0.14	4	0.16	5	1.91	55	1.45	80
	STEEL SUPPORT	66	TON	1383.00	91	0.00	0	2164.10	143	0.00	0	272.70	18	333.30	22	4153.10	274	1.45	397
	VENT SHAFT																		
	ROCKBOLTS 3/4" @ 6'	370	EACH	58.00	21	0.00	0	11.30	4	0.00	0	17.09	6	20.89	8	107.28	40	1.45	58
	STEEL MESH	1,200	SF	1.03	1	0.03	0	0.68	1	0.00	0	0.15	0	0.18	0	2.07	2	1.45	4
.717	DRAINAGE																		
	HOLES (IN CHAMBER CROWN)	15,500	LF	10.31	160	0.26	4	0.00	0	0.00	0	2.50	39	3.05	47	16.12	250	1.45	362
.71C	MECHANICAL																		
	STOPLOG GUIDES	2	SETS	147500	295	0	0	142576	285	0	0	12400	25	15100	30	317576	635	1.00	635
	STOPLOG INCLUDES FOLLOWER	1	SET		100	0	0		1,436	0	0		32		39	1,606	1.00	1,606	
.8	PENSTOCKS																		
.81	PENSTOCKS																		
.811	EXCAVATION																		
	TUNNELS																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.61C	MECHANICAL																		
	TRASHRACKS/GUIDES	6	SETS	127500	765	0	0	308066	1,848	0	0	22500	135	27500	165	485566	2,913	1.00	2,913
	GATE EQUIPMENT	6	EACH	275000	1,650	0	0	655086	3,931	0	0	18750	113	23000	138	971836	5,831	1.00	5,831
	BULKHEAD GATE GUIDES	6	SETS	50000	300	0	0	33913	203	0	0	7500	45	9200	55	100613	604	1.00	604
	BULKHEAD GATES INCL FOLLOWER	1	SET		20		0		280		0		7		8		315	1.00	315
	SHUTTER WITH GUIDES	6	SETS	66700	400	0	0	224048	1,344	0	0	15000	90	18300	110	324048	1,944	1.00	1,944
	ICE ROOM WITH HOIST	6	SETS	41700	250	0	0	978648	2,872	0	0	17250	104	21050	126	558648	3,352	1.00	3,352
	ICE ROOM GUIDES	6	SETS	100000	600	0	0	123837	743	0	0	12750	77	15650	94	252237	1,513	1.00	1,513
	INTAKE SERVICE CRANE	1	EACH		60		0		265		0		14		17		355	1.00	355
	BUBBLER SYSTEM	1	LS		180		0		214		0		5		6		404	1.00	404
	MISCELLANEOUS ELECTRICAL	1	LS		50		0		46		0		2		3		101	1.00	101
.61D	INTAKE BUILDING																		
	INTAKE BUILDING	1	LS		25		0		71		0		2		3		101	1.00	101
.7	SURGE CHAMBER																		
.71	SURGE CHAMBER																		
.711	EXCAVATION																		
	CHAMBER ROCK	101,000	CY	14.80	1,495	5.08	513	0.00	0	0.00	0	5.46	551	6.68	675	32.02	3,234	1.45	4,689
	VENT SHAFT ROCK	2,200	CY	115.35	254	16.56	36	0.00	0	0.00	0	36.88	81	45.07	99	213.86	470	1.45	682
.713	SURFACE PREPARATION																		
	SURFACE PREPARATION	29,700	SF	0.38	11	0.04	1	0.00	0	0.00	0	0.13	4	0.16	5	0.71	21	1.45	31
.714	CONCRETE & SHOTCRETE																		
	CHAMBER																		
	CONCRETE	6,000	CY	71.24	427	6.11	37	45.42	273	0.00	0	19.75	119	24.15	145	166.67	1,000	1.45	1,450
	CONCRETE OVERBREAK	1,000	CY	56.68	57	2.04	2	45.42	45	0.00	0	17.50	18	21.40	21	143.04	143	1.45	207
	REINFORCING STEEL	300	TON	235.00	71	19.35	6	549.94	165	0.00	0	59.00	18	72.00	22	935.29	281	1.45	407
	4" SHOTCRETE	38,400	SF	1.03	40	0.00	0	1.89	73	0.00	0	0.17	7	0.20	8	3.29	126	1.45	183
	VENT SHAFT																		
	2" SHOTCRETE	5,900	SF	0.57	3	0.00	0	0.94	6	0.00	0	0.09	1	0.11	1	1.71	10	1.45	15
.715	SUPPORT & ANCHORS																		
	CHAMBER																		
	ROCKBOLTS 1" @ 25' HY	570	EACH	183.63	105	0.00	0	100.72	57	0.00	0	54.12	31	66.15	38	404.62	231	1.45	334
	ROCKBOLTS 1" @ 15'	2,110	EACH	128.86	272	0.00	0	28.01	59	0.00	0	37.98	80	46.42	98	241.27	509	1.45	738
	STEEL MESH	28,900	SF	1.00	29	0.02	1	0.59	17	0.00	0	0.14	4	0.16	5	1.91	55	1.45	80
	STEEL SUPPORT	66	TON	1383.00	91	0.00	0	2164.10	143	0.00	0	272.70	18	333.30	22	4153.10	274	1.45	397
	VENT SHAFT																		
	ROCKBOLTS 3/4" @ 6'	370	EACH	58.00	21	0.00	0	11.30	4	0.00	0	17.09	6	20.89	8	107.28	40	1.45	58
	STEEL MESH	1,200	SF	1.03	1	0.03	0	0.68	1	0.00	0	0.15	0	0.18	0	2.07	2	1.45	4
.717	DRAINAGE																		
	HOLES (IN CHAMBER CROWN)	15,500	LF	10.31	160	0.26	4	0.00	0	0.00	0	2.50	39	3.05	47	16.12	250	1.45	362
.71C	MECHANICAL																		
	STOPLOG GUIDES	2	SETS	147500	295	0	0	142576	285	0	0	12400	25	15100	30	317576	635	1.00	635
	STOPLOG INCLUDES FOLLOWER	1	SET		100		0		1,436		0		32		39		1,606	1.00	1,606
.8	PENSTOCKS																		
.81	PENSTOCKS																		
.811	EXCAVATION																		
	TUNNELS																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	ROCK HORIZONTAL	53,400	CY	23.93	1,278	7.68	410	0.00	0	0.00	0	8.99	480	10.99	587	51.59	2,755	1.45	3,995
	ROCK INCLINED	54,000	CY	50.89	2,748	11.22	606	0.00	0	0.00	0	17.97	970	21.96	1,186	102.04	5,510	1.45	7,990
.813	SURFACE PREP/GROUTING																		
	SURFACE PREPARATION																		
	TUNNELS	378,000	SF	0.59	223	0.06	23	0.00	0	0.00	0	0.18	68	0.21	79	1.04	393	1.45	570
	CONTACT GROUTING																		
	CONTACT GROUTING	1	LS		88		0		49		0		15		18		171	1.45	248
	CONSOLIDATION GROUTING																		
	CONSOLIDATION GROUTING	1	LS		89		0		120		0		13		15		237	1.45	344
.814	CONCRETE & SHOTCRETE																		
	CONCRETE LINER	37,200	CY	97.24	3,617	69.25	2,576	45.42	1,690	0.00	0	45.85	1,706	56.05	2,085	313.81	11,674	1.45	16,927
	CONCRETE OVERBREAK 6"	10,600	CY	86.84	921	30.55	324	45.42	481	0.00	0	27.85	295	34.05	361	224.71	2,382	1.45	3,454
	REINFORCING STEEL	27	TON	235.00	6	19.35	1	549.94	15	0.00	0	59.00	2	72.00	2	935.29	25	1.45	37
	3" SHOTCRETE	34,000	SF	0.80	27	0.00	0	1.42	48	0.00	0	0.13	4	0.15	5	2.50	85	1.45	123
	2" SHOTCRETE	20,800	SF	0.57	12	0.00	0	0.94	20	0.00	0	0.09	2	0.11	2	1.71	36	1.45	52
.815	SUPPORT & ANCHORS																		
	ROCKBOLTS 1" @ 25'	150	EACH	183.63	28	0.00	0	100.72	15	0.00	0	54.12	8	66.15	10	404.62	61	1.45	88
	ROCKBOLTS 1" @ 6'	4,200	EACH	58.00	244	0.00	0	11.30	47	0.00	0	17.09	72	20.89	88	107.28	451	1.45	653
	STEEL MESH	193,000	SF	1.04	201	0.03	6	0.89	133	0.00	0	0.15	29	0.18	35	2.09	403	1.45	585
.818	STRUCTURAL - MISC STEELWORK																		
	STEEL LINER	2,400	TON	930.00	2,232	0.00	0	2052.08	4,925	0.00	0	70.00	168	85.00	204	3137.08	7,529	1.45	10,917
.9	TAILRACE WORKS (1 PORTAL WITH COMBINED TAILRACE/DIVERSION TUNNEL INCLUDED IN DIVERSION WORKS 332.21)																		
.91	TAILRACE TUNNELS/PORTALS																		
.911	EXCAVATION																		
	TUNNELS																		
	ROCK	135,000	CY	15.69	2,118	6.41	865	0.00	0	0.00	0	6.56	886	8.01	1,081	36.67	4,950	1.45	7,178
	PORTALS																		
	OVERBURDEN	3,200	CY	2.74	9	0.00	0	0.00	0	0.00	0	1.45	5	1.78	6	5.97	19	1.45	28
	ROCK USEABLE	46,000	CY	4.44	204	4.30	198	0.00	0	0.00	0	3.82	176	4.68	215	17.24	793	1.45	1,150
	ROCK WASTE	14,500	CY	4.44	64	4.30	62	0.00	0	0.00	0	3.82	55	4.68	68	17.24	250	1.45	362
.913	SURFACE PREPARATION																		
	TUNNELS																		
	TUNNELS	266,000	SF	0.59	157	0.06	16	0.00	0	0.00	0	0.18	48	0.21	56	1.04	277	1.45	401
	PORTALS																		
	HORIZONTAL	600	SF	0.37	0	0.04	0	0.00	0	0.00	0	0.13	0	0.16	0	0.70	0	1.45	1
	INCLINED	6,000	SF	0.57	3	0.06	0	0.00	0	0.00	0	0.18	1	0.21	1	1.02	6	1.45	9
.914	CONCRETE & SHOTCRETE																		
	TUNNELS																		
	CONCRETE LINING	14,500	CY	48.36	701	10.18	148	45.42	659	0.00	0	17.50	254	21.40	310	142.86	2,071	1.45	3,004
	CONCRETE OVERBREAK 6"	7,500	CY	25.48	191	6.11	46	45.42	341	0.00	0	11.20	84	13.70	103	101.91	764	1.45	1,108
	2" SHOTCRETE	45,600	SF	0.57	26	0.00	0	0.94	43	0.00	0	0.09	4	0.11	5	1.71	78	1.45	113
	REINFORCING STEEL	22	TON	235.00	5	19.35	0	549.94	12	0.00	0	59.00	1	72.00	2	935.29	21	1.45	30
	PORTALS																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	CONCRETE BASE SLAB	100	CY	86.10	9	19.55	2	45.42	5	0.00	0	25.70	3	31.40	3	208.17	21	1.45	30
	CONCRETE WALLS	2,900	CY	86.10	250	19.55	57	45.42	132	0.00	0	25.70	75	31.40	91	208.17	604	1.45	875
	CONCRETE OVERBREAK 12"H/6"V	110	CY	64.50	7	0.00	0	45.42	5	0.00	0	18.40	2	22.50	2	150.82	17	1.45	24
	REINFORCING STEEL	195	TON	226.00	44	19.35	4	549.94	107	0.00	0	59.00	12	72.00	14	926.29	181	1.45	262
.915	SUPPORT & ANCHORS																		
	TUNNELS																		
	ROCKBOLTS 1" @ 12'	2,750	EACH	90.20	248	0.00	0	23.93	66	0.00	0	26.59	73	32.49	89	173.21	476	1.45	691
	ROCKBOLTS 1" @ 9'	480	EACH	74.10	36	0.00	0	19.04	9	0.00	0	21.84	10	26.69	13	141.67	68	1.45	99
	STEEL SUPPORT	132	TONS	1383.00	183	0.00	0	2164.10	286	0.00	0	272.70	36	333.30	44	4153.10	548	1.45	795
	STEEL WESH	133,000	SF	1.03	137	0.03	4	0.68	90	0.00	0	0.15	20	0.18	24	2.07	275	1.45	399
	PORTALS																		
	ROCKBOLTS 1" @ 15'	110	EACH	123.91	14	0.00	0	28.01	3	0.00	0	37.98	4	46.42	5	236.32	26	1.45	38
.91C	MECHANICAL																		
	STOPLOG GUIDES	1	SET		25		0		20		0		2		3		50	1.00	50
	STOPLOGS INCLUDES FOLLOWER	1	SET		90		0		509		0		5		6		609	1.00	609
					337,062		82,364		110,653		0		251,082		304,673		1,085,833		
333	WATERWHEELS, TURBINES & GENERATORS																		
.11	TURBINES & GOVERNORS																		
.111	SUPPLY	6	EACH	0	0	0	0	3971760	23,831	0	0	0	0	0	0	3971760	23,831	1.00	23,831
.112	INSTALL	6	EACH	983000	5,898	0	0	33913	203	0	0	82500	495	100900	605	1200313	7,202	1.00	7,202
.2	GENERATORS & EXCITERS																		
.21	GENERATORS & EXCITERS (SUPPLY & INSTALL)																		
.211	GENERATORS & EXCITERS	6	EACH	1366700	8,200	0	0	4357021	26,142	0	0	33750	203	41200	247	5798671	34,792	1.00	34,792
					14,098		0		50,176		0		698		853		65,824		
334	ACCESSORY ELECTRICAL EQUIPMENT																		
.1	CONNECTIONS, SUPPORTS & STRUCT.																		
.11	STRUCTURES																		
.111	STRUCT (INCL BELOW)																		
.12	CONDUCTORS & INSULATORS																		
.121	GEN ISOLATED PHASE BUS	1	LS		650		0		2,546		0		23		28		3,246	1.00	3,246
.122	HV POWER CABLES & ACCESS.	1	LS		455		0		794		0		29		36		1,314	1.00	1,314
.123	LV POWER CABLES & ACCESS.	1	LS		240		0		341		0		11		14		606	1.00	606
.124	CONTROL CABLES & ACCESS.	1	LS		470		0		580		0		27		33		1,110	1.00	1,110
.125	GROUNDING SYSTEM	1	LS		62		0		87		0		1		2		152	1.00	152
.13	CONDUITS & FITTINGS																		
.131	CONDUITS & FITTINGS	1	LS		195		0		204		0		2		3		404	1.00	404
.2	SWITCHGEAR & CONTROL EQUIPMENT																		
.21	AUXILIARY TRANSFORMERS																		
.211	AUXILIARY TRANSFORMERS	4	EACH	5000	20	0	0	32080	128	0	0	1100	4	1400	6	39580	158	1.00	158

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
.22	CIRCUIT BREAKERS GEN																		
.221	CIRCUIT BREAKERS GEN	6	EACH	166700	1,000	0	0	526207	3,157	0	0	7500	45	9100	55	709507	4,257	1.00	4,257
.23	SURGE PROT & GEN CUBICLES																		
.231	SURGE PROT & GEN CUBICLES	1	LS		85	0	0		377	0	0		2		3		467	1.00	467
.24	SWITCHBOARDS																		
.241	SWITCHBOARDS	2	LS		105	0	0		677	0	0		5		6		792	1.00	792
.25	AUX. POWER EQPT-INCL BAT																		
.251	AUX. POWER EQUIPMENT	1	LS		45	0	0		176	0	0		1		1		223	1.00	223
.3	CUBICLES & APPURTENANCES																		
.31	CONTROL, RELAY & METER BRDS																		
.311	CONTROL, RELAY & METER BOARDS	1	LS		405	0	0		479	0	0		11		14		909	1.00	909
.32	COMPUTER CONTROL SYSTEM																		
.321	COMPUTER CONTROL SYSTEM (INCLUDED IN TRANS-EMS)																		
.33	SUPERVIS. & TELEMETER SYS																		
.331	SUPERVIS & TELEMETER SYS (INCLUDED IN TRANS-EMS)																		
.4	POWER TRANSFORMERS																		
.41	POWER TRANSFORMERS	10	EACH	72000	720	0	0	407360	4,074	0	0	8100	81	9900	99	497360	4,974	1.00	4,974
.5	LIGHTING SYSTEM																		
.51	POWERHOUSE & TRANS. GALLERY																		
.511	POWERHOUSE & TRANS. GALLERY	1	LS		220	0	0		519	0	0		18		22		779	1.00	779
.52	ACCESS TUNNELS & ROADS																		
.521	ACCESS TUNNELS & ROADS	1	LS		70	0	0		97	0	0		2		3		172	1.00	172
.6	MISC. ELECTRICAL EQUIPMENT																		
.61	MISC. ELECTRICAL EQUIPMENT																		
.611	MISC. ELECTRICAL EQUIPMENT	1	LS		50	0	0		244	0	0		18		22		334	1.00	334
.7	SURFACE ACCESSORY ELEC EQPT																		
.71	34.5 KV & LV EQUIPMENT																		
.711	SWITCHBOARD	1	LS		16	0	0		71	0	0		2		2		91	1.00	91
.712	CABLES	1	LS		82	0	0		102	0	0		4		5		192	1.00	192
.713	AUX TRANSFORMERS	1	LS		16	0	0		102	0	0		2		2		122	1.00	122
.73	DIESEL GENERATORS - STANDBY																		
.731	DIESEL GENERATORS - STANDBY	2	EACH	17500	35	0	0	127300	255	0	0	3400	7	4100	8	152300	305	1.00	305
.74	EXTERIOR LIGHTING																		
.741	EXTERIOR LIGHTING	1	LS		65	0	0		81	0	0		2		3		151	1.00	151
.75	MIMIC BOARD - CONTROL BLDG																		
.751	MIMIC BOARD - CONTROL BLDG	1	LS		180	0	0		224	0	0		45		55		504	1.00	504
					5,186		0		15,316		0		343		418		21,263		

335 MISCS. POWERPLANT EQUIPMENT

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
.22	CIRCUIT BREAKERS GEN																		
.221	CIRCUIT BREAKERS GEN	6	EACH	166700	1,000	0	0	526207	3,157	0	0	7500	45	9100	55	709507	4,257	1.00	4,257
.23	SURGE PROT & GEN CUBICLES																		
.231	SURGE PROT & GEN CUBICLES	1	LS		85	0	0		377		0		2		3		467	1.00	467
.24	SWITCHBOARDS																		
.241	SWITCHBOARDS	1	LS		105	0	0		677		0		5		6		792	1.00	792
.25	AUX. POWER EQPT-INCL BAT																		
.251	AUX. POWER EQUIPMENT	1	LS		45	0	0		176		0		1		1		223	1.00	223
.3	CUBICLES & APPURTENANCES																		
.31	CONTROL, RELAY & METER BRDS																		
.311	CONTROL, RELAY & METER BOARDS	1	LS		405	0	0		479		0		11		14		909	1.00	909
.32	COMPUTER CONTROL SYSTEM																		
.321	COMPUTER CONTROL SYSTEM (INCLUDED IN TRANS-EMS)																		
.33	SUPERVIS. & TELEMETER SYS																		
.331	SUPERVIS & TELEMETER SYS (INCLUDED IN TRANS-EMS)																		
.4	POWER TRANSFORMERS																		
.41	POWER TRANSFORMERS	10	EACH	72000	720	0	0	407360	4,074	0	0	8100	81	9900	99	497360	4,974	1.00	4,974
.5	LIGHTING SYSTEM																		
.51	POWERHOUSE & TRANS. GALLERY																		
.511	POWERHOUSE & TRANS. GALLERY	1	LS		220	0	0		519		0		18		22		779	1.00	779
.52	ACCESS TUNNELS & ROADS																		
.521	ACCESS TUNNELS & ROADS	1	LS		70	0	0		97		0		2		3		172	1.00	172
.6	MISC. ELECTRICAL EQUIPMENT																		
.61	MISC. ELECTRICAL EQUIPMENT	1	LS		50	0	0		244		0		18		22		334	1.00	334
.7	SURFACE ACCESSORY ELEC EQPT																		
.71	34.5 KV & LV EQUIPMENT																		
.711	SWITCHBOARD	1	LS		16	0	0		71		0		2		2		91	1.00	91
.712	CABLES	1	LS		82	0	0		102		0		4		5		192	1.00	192
.713	AUX TRANSFORMERS	1	LS		16	0	0		102		0		2		2		122	1.00	122
.73	DIESEL GENERATORS - STANDBY																		
.731	DIESEL GENERATORS - STANDBY	2	EACH	17500	35	0	0	127300	255	0	0	3400	7	4100	8	152300	305	1.00	305
.74	EXTERIOR LIGHTING																		
.741	EXTERIOR LIGHTING	1	LS		65	0	0		81		0		2		3		151	1.00	151
.75	MIMIC BOARD - CONTROL BLDG																		
.751	MIMIC BOARD - CONTROL BLDG	1	LS		180	0	0		224		0		45		55		504	1.00	504
					5,186		0		15,316		0		343		418		21,263		

335 MISC. POWERPLANT EQUIPMENT

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
.1	AUXILIARY SYSTEMS - UNDERGROUND																		
.11	STATION WATER SYSTEMS																		
.111	STATION WATER SYSTEMS	1	LS		900		0		1,156		0		29		36		2,121	1.00	2,121
.12	FIRE PROTECTION SYSTEMS																		
.121	FIRE PROTECTION SYSTEMS	1	LS		500		0		687		0		11		14		1,212	1.00	1,212
.13	COMPRESSED AIR SYSTEMS																		
.131	COMPRESSED AIR SYSTEMS	1	LS		625		0		876		0		7		8		1,516	1.00	1,516
.14	OIL HANDLING SYSTEMS																		
.141	OIL HANDLING SYSTEMS	1	LS		380		0		621		0		5		6		1,011	1.00	1,011
.15	DRAINAGE & DEWATERING																		
.151	DRAINAGE & DEWATERING	1	LS		950		0		1,156		0		52		63		2,221	1.00	2,221
.16	HEAT., VENT. & COOLING SYS.																		
.161	HEAT., VENT. & COOLING SYS.	1	LS		250		0		1,253		0		9		11		1,523	1.00	1,523
.17	MISCELLANEOUS																		
.171	MISCELLANEOUS	1	LS		350		0		611		0		23		28		1,011	1.00	1,011
.2	AUXILIARY SYS - SURFACE FAC																		
.21	AUX SYS - SURFACE FAC																		
.211	AUX SYS - SURFACE FAC	1	LS		120		0		178		0		2		3		303	1.00	303
.3	AUXILIARY EQUIPMENT																		
.31	POWERHOUSE CRANES																		
.311	POWERHOUSE CRANES	2	EACH	135000	270	0	0	687420	1,375	0	0	40500	81	49500	99	912420	1,825	1.00	1,825
.32	ELEVATORS																		
.321	ELEVATORS	1	LS		85		0		137		0		5		6		232	1.00	232
.33	MISC. CRANES & HOIST																		
.331	MISC. CRANES & HOIST	1	LS		25		0		122		0		2		3		152	1.00	152
.34	MACHINE SHOP EQUIPMENT																		
.341	MACHINE SHOP EQUIPMENT	1	LS		100		0		499		0		5		6		609	1.00	609
.4	GENERAL STATION EQUIPMENT (INCLUDED IN MECHANICAL & ELECTRICAL SYSTEMS)																		
.4	GENERAL STATION EQUIPMENT	1	LS																
.5	COMMUNICATIONS EQUIPMENT																		
.5	COMMUNICATIONS EQUIPMENT	1	LS		25		0		64		0		1		1		91	1.00	91
					4,580		0		8,736		0		231		281		13,828		
336	ROADS, RAIL & AIR FACILITIES																		
.11	PERMANENT ACCESS ROADS																		
.111	UPGRADING DENALI HWY (23 MILES)																		
	(PRICES BASED ON ACCELERATED SCHEDULE)																		
	CLEARING	17	ACRE	1286.20	22	396.16	7	0.00	0	0.00	0	1642.00	28	1037.00	18	4361.36	74	1.48	110
	WASTE EXCAVATION	72,300	CY	1.04	75	0.00	0	0.00	0	0.00	0	1.51	109	1.12	81	3.67	265	1.48	393
	COMMON EXCAVATION	289,000	CY	0.91	263	0.00	0	0.00	0	0.00	0	1.32	381	0.98	283	3.21	928	1.48	1,373
	BORROW	22,000	CY	1.53	34	0.00	0	0.00	0	0.00	0	1.75	39	1.31	29	4.59	101	1.48	149
	NFS SUBBASE MATERIAL	15,000	CY	2.15	32	0.00	0	0.00	0	0.00	0	2.45	37	1.83	27	6.43	96	1.48	143

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	GRADE "A" BASE MATERIAL	55,900	CY	4.02	225	0.00	0	0.00	0	0.00	0	5.42	303	3.40	190	12.84	718	1.48	1,062
	D-1 BASE MATERIAL	64,200	TON	5.17	332	0.00	0	0.00	0	0.00	0	6.97	447	4.37	201	16.51	1,060	1.48	1,569
	AC SURFACING	15,500	TON	4.43	69	41.42	642	0.00	0	0.00	0	5.94	92	4.16	64	55.95	867	1.48	1,283
	GUARDRAIL	3,300	LF	6.89	23	22.00	73	0.00	0	0.00	0	0.64	2	1.30	4	30.93	102	1.48	151
	18" CULVERTS	4,400	LF	7.81	34	9.91	44	0.00	0	0.00	0	1.51	7	1.94	9	21.17	93	1.48	138
	36" CULVERTS	1	LS		11		23		0		0		1		1	36	1.48	54	
	THAW PIPES	110	LF	11.71	1	14.86	2	0.00	0	0.00	0	2.26	0	2.92	0	31.75	3	1.48	5
	TOPSOIL & SEED	11	ACRE	372.88	4	1758.78	19	0.00	0	0.00	0	188.70	2	243.09	3	2563.45	28	1.48	42
	TRAFFIC CONTROL DEVICES	23	MILE	3444.42	79	8669.64	199	0.00	0	0.00	0	269.73	6	539.46	12	12923.25	297	1.48	440
	BRIDGES	1,900	SF	20.10	38	97.85	186	0.00	0	0.00	0	4.05	8	5.39	10	127.39	242	1.48	358
	MAINTENANCE																		
	MAINTENANCE	184	MI/YRS	2162.00	398	0.00	0	0.00	0	0.00	0	2635.00	485	1960.00	361	6757.00	1,243	1.48	1,840
.112	DENALI HIGHWAY TO WATANA(42 MI)																		
	(PRICES BASED ON ACCELERATED SCHEDULE)																		
	CLEARING	850	ACRE	1286.20	1,093	396.16	337	0.00	0	0.00	0	1642.00	1,396	1037.00	881	4361.36	3,707	1.48	5,487
	WASTE EXCAVATION	2,167,000	CY	1.04	2,254	0.00	0	0.00	0	0.00	0	1.51	3,272	1.12	2,427	3.67	7,953	1.48	11,770
	COMMON EXCAVATION	2,087,400	CY	0.91	1,900	0.00	0	0.00	0	0.00	0	1.32	2,755	0.98	2,046	3.21	6,701	1.48	9,917
	ROCK EXCAVATION	41,800	CY	3.10	130	3.17	133	0.00	0	0.00	0	2.05	86	2.38	99	10.70	447	1.48	662
	NFS SUBBASE MATERIAL	613,000	CY	2.15	1,318	0.00	0	0.00	0	0.00	0	2.45	1,502	1.83	1,122	6.43	3,942	1.48	5,834
	GRADE "A" BASE MATERIAL	238,000	CY	4.02	957	0.00	0	0.00	0	0.00	0	5.42	1,290	3.40	809	12.84	3,056	1.48	4,523
	D-1 BASE MATERIAL	198,500	TON	5.17	1,026	0.00	0	0.00	0	0.00	0	6.97	1,384	4.37	867	16.51	3,277	1.48	4,850
	GUARDRAIL	7,000	LF	6.89	48	22.00	154	0.00	0	0.00	0	0.64	4	1.30	9	30.83	216	1.48	319
	18" CULVERTS	29,600	LF	7.81	231	9.91	293	0.00	0	0.00	0	1.51	45	1.94	57	21.17	627	1.48	927
	36" CULVERTS	1	LS		79		174		0		0		8		8	269	1.48	399	
	FABRIC	19,950	SY	0.35	7	1.75	35	0.00	0	0.00	0	0.00	0	0.00	0	2.10	42	1.48	62
	THAW PIPES	28,750	LF	11.71	337	14.86	427	0.00	0	0.00	0	2.26	65	2.92	84	31.75	913	1.48	1,351
	TOPSOIL & SEED	500	ACRE	372.88	186	1758.78	879	0.00	0	0.00	0	188.70	94	243.09	122	2563.45	1,282	1.48	1,897
	TRAFFIC CONTROL DEVICES	42	MILE	3444.42	145	8669.64	364	0.00	0	0.00	0	269.73	11	539.46	23	12923.25	543	1.48	803
	MAINTENANCE																		
	MAINTENANCE	336	MI/YRS	1945.95	654	0.00	0	0.00	0	0.00	0	2371.62	797	1763.51	593	6081.08	2,043	1.48	3,024
.12	SITE ROADS																		
.121	CONSTRUCTION ROADS																		
	SITE ROADS	20	MILE	1018077	20,362	494	15	0	0	0	0	829096	16,582	1013341	20,267	2861098	57,220	1.48	84,686
	MAINTENANCE	141	MI/YRS	21912	3,090	50	7	0	0	0	0	17294	2,438	21748	3,066	61004	8,602	1.48	12,730
.13	PERMANENT ROADS																		
.132	PERMANENT ROADS																		
	PERMANENT ROADS	6	MILE	60811	365	130740	784	0	0	0	0	91216	547	57432	345	340199	2,041	1.48	3,021
.2	RAIL FACILITIES																		
.21	RAILHEAD - CANTWELL																		
	(PRICES BASED ON ACCELERATED SCHEDULE)																		
	RAILHEAD																		
	CLEARING	25	ACRE	1286.20	32	396.16	10	0.00	0	0.00	0	1642.00	41	1037.00	26	4361.36	109	1.48	161
	WASTE EXCAVATION	78,000	CY	1.04	81	0.00	0	0.00	0	0.00	0	1.51	118	1.12	87	3.67	286	1.48	424
	COMMON EXCAVATION	505,000	CY	0.91	460	0.00	0	0.00	0	0.00	0	1.32	667	0.98	495	3.21	1,621	1.48	2,399
	GRADE "A" BASE MATERIAL	4,900	CY	4.02	20	0.00	0	0.00	0	0.00	0	5.42	27	3.40	17	12.84	62	1.48	93
	D-1 BASE MATERIAL	2,400	TON	5.17	12	0.00	0	0.00	0	0.00	0	6.97	17	4.37	10	16.51	40	1.48	59

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	A.C. SURFACING	2,200	TON	4.43	10	41.42	91	0.00	0	0.00	0	5.94	13	4.16	9	55.95	123	1.48	182
	TOPSOIL & SEED	15	ACRE	372.88	6	1758.78	26	0.00	0	0.00	0	188.70	3	243.09	4	2563.45	38	1.48	57
	RAILYARD CONTROL DEVICES	1	LS		0		0		0		0		0		0		1	1.48	1
	SUBBALLAST	25,800	CY	2.05	53	0.30	0	0.00	0	0.00	0	2.78	72	1.74	45	6.57	170	1.48	251
	TRACKAGE	19,700	LF	24.56	484	69.35	1,366	0.00	0	0.00	0	2.10	41	4.20	83	100.21	1,974	1.48	2,922
	DOCK LUMBER	16	HBF	0.00	0	399.10	6	0.00	0	0.00	0	0.00	0	0.00	0	399.10	6	1.48	9
	.22 STORAGE/HANDLING FAC																		
	FACILITIES INSTALL	1	LS		1,431		238		1,431		0		477		1,192		4,769	1.30	6,200
	FACILITIES OPERATE	1	LS		16,362		1,364		0		0		2,727		6,818		27,270	1.20	32,724
	.3 AIRSTRIP																		
	.31 AIRSTRIP																		
	PERMANENT AIRSTRIP	1	LS		1,122		749		0		0		1,286		891		4,049	1.48	5,992
	TEMPORARY AIRSTRIP	1	LS		230		12		0		0		263		182		688	1.48	1,018
					56,122		8,656		1,431		0		39,975		44,058		150,241		
	TRANSMISSION PLANT																		
350	LAND & LAND RIGHTS																		
	LAND & LAND RIGHTS	179	MILE	0	0	0	0	0	0	40000	7,160	0	0	0	0	40000	7,160	1.00	7,160
	TRANSMISSION	1	LS		0		0		0		1,100		0		0		1,100	1.00	1,100
	SUBSTATIONS (4 SITES)				0		0		0		8,260		0		0		8,260		
352	SUBSTATION & SWITCHING STATION																		
	SUBSTATION & SWITCHING STATION																		
	STRUCTURES & IMPROVEMENTS																		
	.1 SWITCHYARD																		
	.11 SWITCHYARD	1	LS		1,211		0		10,001		0		225		294		11,731	1.00	11,731
					1,211		0		10,001		0		225		294		11,731		
353	SUBSTATION/SWITCHING STATION EQPT																		
	SUBSTATION/SWITCHING STATION EQPT																		
	ESTER	1	LS		2,932		0		21,157		0		336		403		24,822	1.00	24,822
	WILLOW	1	LS		1,829		0		13,198		0		206		251		15,484	1.00	15,484
	KNIK ARM	1	LS		1,512		0		10,897		0		170		208		12,787	1.00	12,787
	UNIVERSITY	1	LS		4,496		0		32,385		0		506		618		38,005	1.00	38,005
	DEVIL CANYON	1	LS		1,812		0		12,985		0		204		249		15,250	1.00	15,250

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
63	MAIN CONSTRUCTION CAMP																		
.1	MAIN CONSTRUCTION CAMP																		
.11	SITE PREPARATION																		
	CLEARING																		
	CLEARING	145	ACRE	385.00	56 1823.95	264	0.00	0	0.00	0	524.00	76	342.00	50	3074.95	446	1.48	660	
	INSTALL GRANULAR PAD																		
	INSTALL GRANULAR PAD	788,000	CY	1.02	804 0.00	0	0.00	0	0.00	0	1.26	993	0.91	717	3.19	2,514	1.48	3,720	
	SITE REHABILITATION																		
	SITE REHABILITATION	145	ACRE	1432.00	208 411.43	60	0.00	0	0.00	0	2297.00	333	1713.00	248	5846.43	848	1.48	1,255	
	CONSTRUCT ROADWAYS																		
	MAIN ROADS IN CAMP (34')	9,100	LF	4.22	38 0.00	0	0.00	0	0.00	0	5.82	53	3.87	35	13.91	127	1.48	187	
	CONNECT. RD. TO ACCESS RD.	1,800	LF	18.72	34 0.00	0	0.00	0	0.00	0	23.73	43	16.85	30	59.30	107	1.48	158	
	DRAINAGE																		
	DITCHING	24,800	LF	1.58	39 0.00	0	0.00	0	0.00	0	1.09	27	0.62	15	3.29	82	1.48	121	
	CULVERTS	1,200	LF	6.89	8 10.38	12	0.00	0	0.00	0	1.48	2	1.78	2	20.53	25	1.48	36	
	PERIMETER FENCING																		
	PERIMETER FENCING	9,900	LF	6.56	65 4.28	42	0.00	0	0.00	0	0.33	3	0.40	4	11.57	115	1.48	170	
	PARKING AREAS																		
	PARKING AREAS-INSIDE CAMP	1	LS		14	0		0		0		19		9		42	1.48	62	
	PARK LOT-OUT CAMP(500 CARS)	4	ACRE	2663.00	11 0.00	0	0.00	0	0.00	0	3212.00	13	2340.00	9	3215.00	33	1.48	49	
	ELECTRICAL PLUG-INS	500	EACH	13.00	7 53.98	27	0.00	0	0.00	0	0.00	0	0.00	0	66.98	33	1.48	50	
.12	BUILDINGS																		
	BACHELOR DORMS-108 MAN CMPLX	24	EACH	80500	1,932 272880	6,548	0	0	0	0	3720	89	4720	113	361820	8,684	1.18	10,247	
	BACHELOR DORMS-HGUNT-TYPE A	8	EACH	26950	216 83346	684	0	0	0	0	1350	11	1670	13	115516	924	1.18	1,090	
	BACHELOR DORMS-HGUNT-TYPE B	9	EACH	23450	211 73325	660	0	0	0	0	1130	10	1360	12	99265	893	1.18	1,054	
	GUEST HSS-1 EA OWN/HGR/CON	3	EACH	30450	91 88967	267	0	0	0	0	1340	4	1690	5	122447	367	1.18	433	
	CAMP MANAGER'S OFFICES	3	EACH	10850	33 31774	95	0	0	0	0	480	1	600	2	43704	131	1.18	155	
	STAFF CLUBHOUSE	1	EACH		95	118	0	0	0	0		3		40		256	1.27	325	
	DINING HALL	1	EACH		240	1,323	0	0	0	0		13		15		1,591	1.18	1,877	
	DINING HALL	1	EACH		240	1,323	0	0	0	0		13		15		1,591	1.18	1,877	
	RECREATION BLDG.	1	EACH		220	675	0	0	0	0		12		16		923	1.18	1,089	
	RECREATION BLDG.	1	EACH		220	675	0	0	0	0		12		16		923	1.18	1,089	
	GYMNASIUM	1	EACH		870	1,283	0	0	0	0		39		42		2,234	1.27	2,837	
	SECURITY OFFICE	1	EACH		50	188	0	0	0	0		1		2		242	1.18	285	
	SOILS/MATERIALS LAB.	1	EACH		175	358	0	0	0	0		9		12		554	1.27	704	
	MAINTENANCE BLDG.	1	EACH		256	269	0	0	0	0		3		4		531	1.27	675	
	WAREHOUSE - MANAGERS	1	EACH		368	313	0	0	0	0		17		18		715	1.27	908	
	WAREHOUSE - FOOD SERVICE	1	EACH		231	705	0	0	0	0		17		18		771	1.27	1,233	
	COMMUNICATION BLDG.	1	EACH		70	20	0	0	0	0		0		0		91	1.18	107	
	HOSPITAL	1	EACH		181	2,108	0	0	0	0		18		22		2,329	1.18	2,748	
	ICE RINK	1	EACH		805	642	0	0	0	0		44		53		1,543	1.27	1,960	
	BANK	1	EACH		46	208	0	0	0	0		3		4		261	1.18	308	

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	STORE	1	EACH		35		97		0		0		1		2		135	1.18	160
	LAUNDRY	1	EACH		15		40		0		0		2		2		58	1.18	69
	PERMAWALK																		
	6 FEET WIDE	670	LF	34.08	23	26.42	18	0.00	0	0.00	0	0.00	0	0.00	0	60.50	41	1.48	60
	10 FEET WIDE	2,170	LF	53.00	115	41.10	89	0.00	0	0.00	0	0.00	0	0.00	0	94.10	204	1.48	302
	16 FEET WIDE	730	LF	90.88	66	70.44	51	0.00	0	0.00	0	0.00	0	0.00	0	161.32	118	1.48	174
	RELOCATE 160 MAN CAMP																		
	RELOCATE 160 MAN CAMP	1	LS		141		20		0		0		10		14		186	1.22	224
.13	UTILITIES																		
.131	WATER																		
	SUPPLY SYSTEM																		
	INTAKE																		
	3.4 MG POND	1	LS		12		221		0		0		1		1		236	1.48	350
	PUMP STATION																		
	600 GPM	1	LS		20		85		0		0		1		1		107	1.48	158
	BOOSTER PUMP STATION																		
	600 GPM	1	LS		14		89		0		0		0		0		104	1.48	153
	SUPPLY LINE																		
	6" DI PIPE	10,000	LF	12.08	121	7.27	73	0.00	0	0.00	0	4.36	44	5.33	53	29.04	290	1.48	430
	4" DI PIPE	10,000	LF	10.74	107	6.42	64	0.00	0	0.00	0	3.87	39	4.74	47	25.77	258	1.48	381
	HEAT TRACING & INSULAT																		
	6" PIPE	10,000	LF	8.55	86	12.33	123	0.00	0	0.00	0	0.00	0	0.00	0	20.88	209	1.48	309
	4" PIPE	10,000	LF	8.00	80	10.88	109	0.00	0	0.00	0	0.00	0	0.00	0	18.88	189	1.48	279
	UTILIDORS																		
	UTILIDOR	10,000	LF	11.10	111	40.74	407	0.00	0	0.00	0	2.85	29	3.49	35	58.18	582	1.48	861
	TREATMENT PLANT																		
	0.9 MGD	1	LS		30		1,528		0		0		26		3		1,587	1.48	2,348
	BACK-UP WELLS																		
	BACK-UP WELLS	1	LS		30		153		0		0		9		11		203	1.48	300
	DISTRIBUTION MAIN TO CAMP																		
	6" DI PIPE	3,500	LF	12.08	42	7.27	25	0.00	0	0.00	0	4.36	15	5.33	19	29.04	102	1.48	150
	4" DI PIPE	3,500	LF	10.74	38	6.42	22	0.00	0	0.00	0	3.87	14	4.74	17	25.77	90	1.48	133
	HEAT TRACING & INSULAT																		
	6" PIPE	3,500	LF	8.55	30	12.33	43	0.00	0	0.00	0	0.00	0	0.00	0	20.88	73	1.48	108
	4" PIPE	3,500	LF	8.00	28	10.88	38	0.00	0	0.00	0	0.00	0	0.00	0	18.88	66	1.48	98
	UTILIDORS																		
	UTILIDORS	3,500	LF	11.10	39	40.74	143	0.00	0	0.00	0	2.85	10	3.49	12	58.18	204	1.48	301
	RESERVOIRS																		
	1 EA @ 0.8 MG & 1.2 MG	1	LS		21		157		0		0		8		6		192	1.48	284
	PUMP STATION																		
	4750 GPM	1	LS		10		53		0		0		0		0		64	1.48	94
	CAMP DISTRIBUTION SYSTEM																		
	DISTRIB LINES-BURIED																		
	12"	2,130	LF	24.25	52	17.25	37	0.00	0	0.00	0	10.49	22	12.82	27	64.81	138	1.48	204
	6"	300	LF	16.76	5	7.27	2	0.00	0	0.00	0	7.78	2	9.51	3	41.32	12	1.48	18

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	DISTRIB LINE UTILIDOR																		
	PIPING																		
	12" DIAMETER	2,530	LF	21.48	54	17.25	44	0.00	0	0.00	0	7.75	20	9.47	24	55.95	142	1.48	209
	6" DIAMETER	3,470	LF	12.08	42	7.27	25	0.00	0	0.00	0	4.36	15	5.33	18	29.04	101	1.48	149
	4" DIAMETER	605	LF	10.74	6	6.42	4	0.00	0	0.00	0	3.87	2	4.74	3	25.77	16	1.48	23
	HEAT TRACING & INSULAT																		
	12" PIPE	4,660	LF	13.50	63	23.54	110	0.00	0	0.00	0	0.00	0	0.00	0	37.04	173	1.48	255
	6" PIPE	3,770	LF	8.55	32	12.33	46	0.00	0	0.00	0	0.00	0	0.00	0	20.88	79	1.48	117
	4" PIPE	605	LF	8.00	5	10.88	7	0.00	0	0.00	0	0.00	0	0.00	0	18.88	11	1.48	17
	HYDRANTS																		
	HYDRANTS	12	EACH	266.00	3	840.18	10	0.00	0	0.00	0	0.00	0	0.00	0	1106.18	13	1.48	20
	VALVES																		
	VALVES	1	LS		2		7		0		0		0		0		9	1.48	14
	UTILIDORS																		
	UTILIDORS	7,500	LF	10.04	75	40.74	306	0.00	0	0.00	0	1.84	14	2.25	17	54.87	412	1.48	609
.132	SEWAGE																		
	COLLECTION SYSTEM																		
	PIPING																		
	16" PIPE	650	LF	29.00	19	24.59	16	0.00	0	0.00	0	10.46	7	12.80	8	76.85	50	1.48	74
	12" PIPE	1,850	LF	21.48	40	17.25	32	0.00	0	0.00	0	7.75	14	9.47	18	55.95	104	1.48	153
	8" PIPE	2,950	LF	14.50	43	10.27	30	0.00	0	0.00	0	5.23	15	6.40	19	36.40	107	1.48	159
	6" PIPE	1,600	LF	12.08	19	7.27	12	0.00	0	0.00	0	4.36	7	5.33	9	29.04	46	1.48	69
	4" PIPE	1,200	LF	10.74	13	6.42	8	0.00	0	0.00	0	3.87	5	4.74	6	25.77	31	1.48	46
	HEAT TRACING & INSULAT																		
	16"	605	LF	21.75	13	28.52	17	0.00	0	0.00	0	0.00	0	0.00	0	50.27	30	1.48	45
	12"	1,850	LF	13.50	25	23.54	44	0.00	0	0.00	0	0.00	0	0.00	0	37.04	69	1.48	101
	8"	2,950	LF	9.38	28	14.33	42	0.00	0	0.00	0	0.00	0	0.00	0	23.71	70	1.48	104
	6"	1,600	LF	8.55	14	12.33	20	0.00	0	0.00	0	0.00	0	0.00	0	20.88	33	1.48	49
	4"	1,200	LF	8.00	10	10.88	13	0.00	0	0.00	0	0.00	0	0.00	0	18.88	23	1.48	34
	UTILIDORS																		
	UTILIDORS	1,200	LF	11.10	13	40.74	49	0.00	0	0.00	0	2.85	3	3.49	4	58.18	70	1.48	103
	TREATMENT PLANT																		
	SKIMMING TANK	1	EACH		11		2		0		0		2		2		17	1.48	25
	LAGOONS - C1 @ 385' x																		
	205' & 2 @ 280' x 155'	3	EACH	20432	61	42831	128	0	0	0	0	16846	51	12399	37	92508	278	1.48	411
	ROTATING BID CONTACTORS	6	EACH	20407	122	103912	623	0	0	0	0	6122	37	7483	45	137924	828	1.48	1,225
	PHYS/CHEM UNIT	1	EACH		18		61		0		0		6		7		91	1.48	135
	CLARIFIER	1	EACH		32		115		0		0		10		13		170	1.48	252
	DISINFECTION	1	EACH		18		61		0		0		6		7		91	1.48	135
	HEAT PUMP	1	EACH		2		5		0		0		6		7		91	1.48	135
	THICKENER	1	EACH		19		68		0		0		6		7		101	1.48	149
	FILTER PRESS	1	EACH		19		66		0		0		6		7		99	1.48	146
	DRYING BEDS	2	EACH	13571	27	27640	55	0	0	0	0	2036	4	2488	5	45735	91	1.48	135
	BUILDING	1	EACH		115		206		0		0		11		14		346	1.18	408
	CONTROLS/INSTRUMENTATION	1	LS		57		58		0		0		0		0		115	1.48	170
	PIPING, VALVES, FITTINGS	1	LS		162		165		0		0		0		0		327	1.48	484

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	LABORATORY	1	EACH		3		48		0		0		0		0				
	OUTFALL																51	1.48	75
	OUTFALL LINE (8")	2,000	LF	7.42	15	37.68	75	0.00	0	0.00	0	2.67	5	3.26	7	51.03	102	1.48	151
.133	ELECTRICAL	1	EACH		20		14		0		0		9		11		54	1.48	79
	GENERATING STATION																		
	BUILDING	1	EACH		50		20		0		80								
	GENERATORS	4	EACH	72100	288	510750	2,163	36050	144	0		36050	144	36050	30	721000	200	1.30	260
	DAY TANK	1	EACH		20		60		0		0		5		144		2,884	1.40	4,038
	FUEL STORAGE TANK	2	EACH	40000	80	120000	240	0	0	0	0		15		15		100	1.30	130
	SUBSTATION	1	EACH		11		54		0		0	10000	20	30000	60	200000	400	1.30	520
	DISTRIBUTION SYSTEM												1		1		68	1.48	100
	DISTRIBUTION SYSTEM	1	LS		23		109		0		0				2			135	1.48
	LIGHTING																		200
	POLE MOUNTED LUMINAIRS	60	EACH	227.00	14	1086.63	65	0.00	0	0.00	0	18.00	1	33.00	2	1364.63	82	1.48	121
.134	CAMP HEATING	25	EACH	100.00	3	407.36	10	0.00	0	0.00	0	0.00	0	0.00	0	507.36	13	1.48	19
	FUEL OIL DISTRIBUTION	1	LS		55		53		0		0				0		108	1.48	160
.135	FIRE PROTECTION																		
	FIRE HOUSE																		
	FIRE HOUSE	1	LS		112		215		0		0		7		9		343	1.48	508
	ALARM SYSTEM	1	LS		110		65		0		0				0		175	1.48	259
	ALARM SYSTEM																		
	SPRINKLER SYSTEM																		
	MESS HALLS	1	LS		23		13		0		0				0		36	1.48	54
	REC HALLS	1	LS		19		11		0		0				0		30	1.48	45
	HOSPITAL	1	LS		10		6		0		0				0		16	1.48	24
.136	SCHOOL	1	LS		15		9		0		0				0		24	1.48	36
.136	TELEPHONE SYSTEM																		
	TELEPHONE SYSTEM CAMP (WIRE)	1	LS		279		164		0		0				0				
.137	MICROWAVE	1	LS		427		1,520		0		0		96		117		443	1.48	656
.137	TV/RADIO STATION																2,160	1.48	3,197
	TV/RADIO STATION	1	LS		33		136		0		0				0		169	1.48	250
.138	SOLID WASTE FACILITY																		
	SOLID WASTE FACILITY	1	LS		53		42		0		0				0				
	INCINERATOR	1	LS		23		42		0		0		3		3		101	1.48	150
.139	PETROLEUM STORAGE FACILITY																65	1.48	96
	GARAGE/MAINTENANCE BLDG																		
	GARAGE/MAINTENANCE BUILDING	1	EACH		91		76		0		0		5		6		177	1.27	225
	TANKS																		
	50,000 GAL	4	EACH	0	0	17203	69	0	0	0	0	0	0	0	0	17203	69	1.48	102
	100,000 GAL	36	EACH	0	0	30964	1,115	0	0	0	0	0	0	0	0	30964	1,115	1.48	1,650
	EARTHWORK																		
	CLEARING & GRUBBING	14	ACRE	2395.09	34	0.00	0	0.00	0	0.00	0	3738.00	52	2746.00	38	8879.00	124	1.48	184
	BERMS	45,000	CY	2.82	127	13.83	622	0.00	0	0.00	0	2.36	106	1.72	77	20.73	933	1.48	1,381
	PIPING																		

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				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	PIPING	1	LS		48		84		0		0		0		0		152	1.48	225
	FUEL STATION																		
	FUEL STATION	1	LS		109		145		0		0		4		4		262	1.48	388
.2	MAIN CONSTRUCTION VILLAGE																		
.21	SITE PREPARATION																		
	CLEARING																		
	CLEARING	116	ACRE	385.00	45	1823.95	212	0.00	0	0.00	0	524.00	61	342.00	40	3074.95	357	1.48	528
	INSTALL GRANULAR PAD																		
	INSTALL GRANULAR PAD	743,000	CY	1.24	921	0.00	0	0.00	0	0.00	0	1.53	1,137	1.10	817	3.87	2,875	1.48	4,256
	SITE REHABILITATION																		
	SITE REHABILITATION	116	ACRE	1442.00	167	411.43	48	0.00	0	0.00	0	2299.00	267	1721.00	200	5873.43	681	1.48	1,008
	CONSTRUCT ROADWAYS																		
	MAIN ROAD 34' WIDE	2,200	LF	4.61	10	0.00	0	0.00	0	0.00	0	8.56	19	4.20	9	17.37	38	1.48	57
	SECONDARY ROADS 24' WIDE	17,600	LF	4.41	78	0.00	0	0.00	0	0.00	0	6.02	106	4.01	71	14.44	254	1.48	376
	CONNECTION TO ACC RD 34'	1,600	LF	21.14	34	0.00	0	0.00	0	0.00	0	26.60	43	18.82	30	66.56	106	1.48	158
	DRAINAGE																		
	DITCHING	42,800	LF	1.12	48	0.00	0	0.00	0	0.00	0	0.87	37	0.52	22	2.51	107	1.48	159
	CULVERTS - 360 LOTS	8,500	LF	6.89	59	10.15	86	0.00	0	0.00	0	1.47	12	1.86	16	20.37	173	1.48	256
	PERIMETER FENCING																		
	PERIMETER FENCING	10,700	LF	6.56	70	4.28	46	0.00	0	0.00	0	0.33	4	0.40	4	11.57	124	1.48	183
	PARKING AREAS																		
	PARKING AREAS	36,000	SF	0.07	3	0.00	0	0.00	0	0.00	0	0.10	4	0.07	3	0.24	9	1.48	13
	ELECTRICAL PLUG-INS	25	EACH	13.00	0	53.98	1	0.00	0	0.00	0	0.00	0	0.00	0	66.98	2	1.48	2
.22	BUILDINGS																		
	SINGLE FAMILY UNIT - 2 BDRM	74	EACH	7700	570	25664	1,899	0	0	0	0	340	25	420	31	34124	2,525	1.18	2,980
	SINGLE FAMILY UNIT - 3 BDRM	188	EACH	7700	1,448	27375	5,146	0	0	0	0	340	64	420	79	35835	6,737	1.18	7,950
	SINGLE FAMILY UNIT - 2 BDRM	16	EACH	12250	196	39107	626	0	0	0	0	480	8	600	10	52437	839	1.18	990
	SINGLE FAMILY UNIT - 3 BDRM	14	EACH	12250	196	41551	665	0	0	0	0	480	8	600	10	54881	878	1.18	1,036
	SINGLE FAMILY UNIT - 4 BDRM	16	EACH	14000	224	49902	798	0	0	0	0	560	9	700	11	65162	1,043	1.18	1,230
	SCHOOL	1	LS		272		1,093		0		0		14		14		1,392	1.18	1,642
	GYMNASIUM	1	LS		315		458		0		0		4		5		782	1.27	993
	SWIMMING POOL	1	LS		231		316		0		0		4		5		556	1.27	706
	RECREATION CENTER	1	LS		163		563		0		0		3		4		733	1.18	865
	STORE	1	LS		385		619		0		0		16		18		1,039	1.18	1,226
	GAS STATION	1	LS		46		126		0		0		1		1		173	1.27	220
.23	UTILITIES																		
.231	WATER																		
	SUPPLY LINE																		
	4"	8,300	FT	10.47	87	6.42	53	0.00	0	0.00	0	3.87	32	4.74	39	25.50	212	1.48	313
	PUMP STATION - 160 GPM	1	LS		12		61		0		0		0		0		75	1.48	110
	WATER STORAGE TANK - 1.0 MG	1	EACH		11		77		0		0		6		4		98	1.48	146
	DISTRIBUTION SYSTEM																		
	PIPING																		
	12" DI	1,300	LF	21.48	28	17.25	22	0.00	0	0.00	0	7.75	10	9.47	12	55.95	73	1.48	108

SUSITMA HYDROELECTRIC PROJECT
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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERH. MATERIALS		SUBCONTRACTS		EQPY. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	10" DI	1,000	LF	17.06	17	13.12	13	0.00	0	0.00	0	6.16	6	7.52	8	43.86	44	1.48	65
	8" DI	1,500	LF	14.50	22	10.27	15	0.00	0	0.00	0	5.23	8	6.40	10	36.40	55	1.48	81
	6" DI	8,500	LF	12.08	103	7.27	62	0.00	0	0.00	0	4.36	37	5.33	45	29.04	247	1.48	365
	HEAT TRACING & INSULAT																		
	12" PIPE	1,300	LF	13.50	18	23.54	31	0.00	0	0.00	0	0.00	0	0.00	0	37.04	48	1.48	71
	10" PIPE	1,000	LF	10.75	11	21.49	21	0.00	0	0.00	0	0.00	0	0.00	0	32.24	32	1.48	48
	8" PIPE	1,500	LF	9.38	14	14.33	21	0.00	0	0.00	0	0.00	0	0.00	0	23.71	36	1.48	53
	6" PIPE	8,500	LF	8.55	73	12.33	105	0.00	0	0.00	0	0.00	0	0.00	0	20.88	177	1.48	263
	4" PIPE	8,300	LF	8.00	66	10.88	90	0.00	0	0.00	0	0.00	0	0.00	0	18.88	157	1.48	232
	VALVES																		
	12"	2	EACH	432.00	1	814.72	2	0.00	0	0.00	0	0.00	0	0.00	0	1246.72	2	1.48	4
	10"	2	EACH	300.00	1	611.04	1	0.00	0	0.00	0	0.00	0	0.00	0	911.04	2	1.48	3
	8"	2	EACH	260.00	1	458.28	1	0.00	0	0.00	0	0.00	0	0.00	0	718.28	1	1.48	2
	6"	17	EACH	130.00	2	356.44	6	0.00	0	0.00	0	0.00	0	0.00	0	486.44	8	1.48	12
	HYDRANTS																		
	HYDRANTS	18	EACH	266.00	5	840.18	15	0.00	0	0.00	0	0.00	0	0.00	0	1106.18	20	1.48	29
.232	SEWAGE COLLECTION SYSTEM																		
	PIPING																		
	14" PIPE	700	LF	25.00	18	20.37	14	0.00	0	0.00	0	9.00	6	11.00	8	65.37	46	1.48	68
	12" PIPE	800	LF	21.48	17	17.25	14	0.00	0	0.00	0	7.75	6	9.47	8	55.95	45	1.48	66
	10" PIPE	1,100	LF	17.06	19	13.12	14	0.00	0	0.00	0	6.16	7	7.52	8	43.86	48	1.48	71
	8" PIPE	4,500	LF	14.50	65	10.27	46	0.00	0	0.00	0	5.23	24	6.40	29	36.40	164	1.48	242
	6" PIPE	5,100	LF	12.08	62	7.27	37	0.00	0	0.00	0	4.36	22	5.33	27	29.04	148	1.48	219
	HEAT TRACING & INSULAT																		
	14" PIPE	700	LF	19.25	13	25.46	18	0.00	0	0.00	0	0.00	0	0.00	0	44.71	31	1.48	46
	12" PIPE	800	LF	13.50	11	23.54	19	0.00	0	0.00	0	0.00	0	0.00	0	37.04	30	1.48	44
	10" PIPE	1,100	LF	10.75	12	21.49	24	0.00	0	0.00	0	0.00	0	0.00	0	32.24	35	1.48	52
	8" PIPE	1,500	LF	9.38	42	14.33	64	0.00	0	0.00	0	0.00	0	0.00	0	23.71	107	1.48	158
	6" PIPE	18,900	LF	8.55	162	12.33	233	0.00	0	0.00	0	0.00	0	0.00	0	20.88	395	1.48	584
	PUMPING SYSTEM																		
	PUMP STATION	1	LS		11		80		0		0		2		2		95	1.48	141
	BOOSTER PUMP STATION																		
	BOOSTER PUMP STATION	1	LS		11		80		0		0		2		2		95	1.48	141
	6" FORCE MAIN	13,800	LF	12.08	167	7.27	100	0.00	0	0.00	0	4.36	60	5.33	74	29.04	401	1.48	593
	UTILIDORS																		
	MAIN RUNS IN VILLAGE	12,200	LF	10.42	127	40.74	497	0.00	0	0.00	0	1.84	22	2.25	27	55.25	674	1.48	998
	STREET CROSSING 50 LF EA	1,000	LF	10.42	10	40.74	41	0.00	0	0.00	0	1.84	2	2.25	2	55.25	55	1.48	82
	PUMP STA TO TREATMT PLANT	8,300	LF	12.91	107	40.74	338	0.00	0	0.00	0	1.84	15	2.25	19	57.74	479	1.48	709
	STUBS TO HSE 360 LOTS @ 20'	7,200	LF	10.42	75	40.74	293	0.00	0	0.00	0	1.84	13	2.25	16	55.25	398	1.48	589
	STUBS TO BLDGS - 10 @ 25'	250	LF	10.42	3	40.74	10	0.00	0	0.00	0	1.84	0	2.25	1	55.25	14	1.48	20
.233	INTEGRATED OFC AREA																		
	OWNER/MGRS OFFICE	1	EACH		202		547		0		0		8		10		766	1.18	904
.234	ELECTRICAL																		
	GENERATING STATIONS																		
	BUILDING	1	EACH		50		20		0		80		20		30		200	1.30	260

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000				
	GENERATORS	4	EACH	72100	288	540750	2,163	36050	144	0	0	36050	144	36050	144	721000	2,884	1.40	4,038
	DAY TANK	1	EACH		20		60		0		0		5		15		100	1.30	130
	FUEL STORAGE TANK	2	EACH	40000	80	120000	240	0	0	0	0	10000	20	30000	60	200000	400	1.30	520
	SUBSTATION	1	EACH		11		54		0		0		1		1		68	1.48	100
	DISTRIBUTION																		
	DISTRIBUTION	1	LS		28		136		0		0		2		3		169	1.48	250
	.235 FIRE ALARM SYSTEM																		
	FIRE ALARM SYSTEM	1	LS		8		5		0		0		0		0		12	1.48	18
	.236 TELEPHONE SYSTEM																		
	TELEPHONE SYSTEM	1	LS		186		109		0		0		0		0		295	1.48	437
.3	ACCESS ROAD CAMPS																		
	.31 ACCESS ROAD/RAILHEAD CAMP																		
	FACS, CATERING & OPER SUPT	80,000	MANDAY	22.00	1,760	15.28	1,222	0.00	0	0.00	0	8.89	711	10.87	870	57.04	4,563	1.48	6,754
	.32 RAILHEAD CAMP OPERATION																		
	FACS, CATERING & OPER SUPT	90,000	MANDAY	37.96	3,416	15.20	1,368	0.00	0	0.00	0	1.10	99	1.35	122	55.61	5,005	1.12	5,605
.4	CAMP CREDIT																		
	SALVAGE VALUE FOR BUILDINGS,																		
	EQUIPMENT & UTILITIES	1	LS		0		-9,166		0		0		0		0		-9,166	1.00	-9,166
.5	PERMANENT TOWN																		
	PERMANENT TOWN	1	LS		2,775		8,033		0		0		226		276		11,310	1.48	16,739
.6	MAIN CONSTR CATERING & SUPPORT																		
	CATERING & SUPPORT	3,140,000	MANDAY	37.96	119,194	15.20	47,728	0.00	0	0.00	0	1.10	3,454	1.35	4,239	55.61	174,615	1.12	195,569
.7	ELECTRIC POWER																		
	.71 34.5 KV SYSTEM																		
	.711 TRANSFORMER STATION	1	LS		80		385		0		0		6		8		480	1.48	710
	.712 DISTRIBUTION SYSTEM (9 MI)	1	LS		307		537		0		0		20		24		888	1.48	

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ITEM	DESCRIPTION	QUANTITY	UNITS	LABOR		JOB MATERIALS		PERM. MATERIALS		SUBCONTRACTS		EQPT. OWNERSHIP		EQPT. OPERATION		EQUIV. UNIT PRICE	TOTAL AMOUNT	FACTOR	NEW TOTAL
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT				
				\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000	\$	\$ 000		\$ 000
65	SUPERINTENDENCE SUPERINTENDENCE (INCLUDED IN DIRECT COSTS)				0		0		0		0		0		0		0		
66	INSURANCE INSURANCE (INCLUDED IN DIRECT COSTS)				0		0		0		0		0		0		0		
68	MITIGATION OUT-OF-KIND COSTS	1	LS		0		0		0		29,200		0		0		29,200	1.00	29,200
					0		0		0		29,200		0		0		29,200		
69	FEES FEES (INCLUDED IN DIRECT COSTS)				0		0		0		0		0		0		0		
SUBTOTAL					715,180		197,137		444,523		88,620		322,192		407,845		2,175,496		2,789,858
TOTAL PROJECT DETAIL				*****	715,180	*****	197,137	*****	444,523	*****	88,620	*****	322,192	*****	407,845	*****	2,175,496	1.28	2,789,858