THIS ESTIMATE IS BASED ON THE SCOPE CONTAINED IN THE FEASIBILITY, DATED: 1 APR 00

PROJECT: SMALL BOAT HARBOR
LOCATION: HAINES, ALASKA

DISTRICT: ALASKA
P.O.C.: FRANK ANTOLIN, CHIEF, CE

		CURRENT MCACES ESTIMATE PREPARED: 15 MAR 00 EFFECTIVE PRICING LEVEL: Apr 2002				AUTHORIZ./BUDGET YEAR: FY2004 EFFECT. PRICING LEVEL: 1 Oct 2002			.....FULLY FUNDED ESTIMATE..... FEATURE MID PT: Oct 2005		
ACCOUNT NUMBER	FEATURE DESCRIPTION	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	COST ($K)	CNTG ($K)	TOTAL ($K)	COST ($K)	CNTG ($K)	FULL ($K)
C-10-01	MOB DEMOB & PREWORK	$280	$56	20%	$336	$281	$56	$337	$307	$61	$368
C-02-03	RELOCATIONS	$100	$20	20%	$121	$101	$20	$121	$110	$22	$132
C-10-00	BREAKWATERS & SEAWALLS	$9,179	$1,836	20%	$11,014	$9,225	$1,845	$11,070	$10,069	$2,014	$12,083
C-12-02	NAV, PORTS & HARBORS	$5,800	$1,160	20%	$6,960	$5,829	$1,166	$6,995	$6,362	$1,273	$7,635
	TOTAL CONSTRUCTION COSTS =====>	$15,359	$3,072	20%	$18,431	$15,436	$3,087	$18,523	$16,848	$3,370	$20,218
P-01---	LANDS AND DAMAGES	$17	$3	20%	$20	$17	$3	$20	$19	$3	$22
P-30-02	PLANNING, ENGINEERING, DESIGN 3.4%	$525	$105	20%	$630	$528	$105	$633	$577	$115	$692
P-31-02	CONSTRUCTION MANAGEMENT 4.1%	$625	$125	20%	$750	$629	$126	$755	$687	$137	$824
	TOTAL OWNER COSTS==========>	$1,167	$233	20%	$1,400	$1,174	$234	$1,408	$1,283	$255	$1,538
	TOTAL PROJECT COSTS =========>	**$16,526**	**$3,305**	**20%**	**$19,831**	**$16,610**	**$3,321**	**$19,931**	**$18,131**	**$3,625**	**$21,756**

THIS TPCS REFLECTS A PROJECT COST CHANGE OF $ ~~~~~ ~~~~~~~~~~

THE MAXIMUM PROJECT COST IS =======> $ ~~~~~ ~~~~~~~~~~

TOTAL FEDERAL SHARED COSTS ==== 63% $13,783

TOTAL NON-FEDERAL COSTS ======= 37% $7,973

DISTRICT APPROVED:

_____ CHIEF, COST ENGINEERING

_____ CHIEF, REAL ESTATE

_____ CHIEF, ENGINEERING

_____ CHIEF, CON-OPS

_____ PROJECT MANAGER

_____ DDE (PM)

DIVISION APPROVED:

_____ CHIEF, COST ENGINEERING

_____ DIRECTOR, REAL ESTATE

_____ CHIEF, PROGRAMS MANAGEMENT

_____ DIRECTOR OF PPMD

APPROVED DATE: _____

THIS ESTIMATE IS BASED ON THE SCOPE CONTAINED IN THE FEASIBILITY, DATED: 1 APR 00

PROJECT: SMALL BOAT HARBOR
LOCATION: HAINES, ALASKA

DISTRICT: ALASKA
P.O.C.: FRANK ANTOLIN, CHIEF, CE

		CURRENT MCACES ESTIMATE PREPARED: 15 MAR 00 EFFECTIVE PRICING LEVEL: Apr 2002				AUTHORIZ./BUDGET YEAR: FY2004 EFFECT. PRICING LEVEL: 1 Oct 2002				.....FULLY FUNDED ESTIMATE..... CWCCIS - 30 Sep 98				
ACCOUNT NUMBER	FEATURE DESCRIPTION	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	OMB (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	EATURE MID PT	OMB (%)	COST ($K)	CNTG ($K)	FULL ($K)
C-10-01	MOB DEMOB & PREWORK	$280	$56	20%	$336	0.5%	$281	$56	$337	Oct 2005	9.2%	$307	$61	$368
C-10-00	BREAKWATERS & SEAWALLS	$9,179	$1,836	20%	$11,014	0.5%	$9,225	$1,845	$11,070	Oct 2005	9.2%	$10,069	$2,014	$12,083
C-12-02	MECHANICAL DREDGING	$92	$18	20%	$110	0.5%	$92	$18	$110	Oct 2005	9.2%	$100	$20	$120
C-12-02			$0	20%	$0	0.5%	$0	$0	$0	Oct 2005	9.2%	$0	$0	$0
	TOTAL CONSTRUCTION COSTS =====>	$9,551	$1,910	20%	$11,461		$9,598	$1,919	$11,517			$10,476	$2,095	$12,571
P-01---	LANDS AND DAMAGES 0.0%	$0	$0	#####	$0	0.5%	$0	$0	$0	Oct 2005	9.2%	$0	$0	$0
P-30-02	PLANNING, ENGINEERING, DESIGN 4.4%	$420	$84	20%	$504	0.5%	$422	$84	$506	Oct 2005	9.2%	$461	$92	$553
P-31-02	CONSTRUCTION MANAGEMENT 5.2%	$500	$100	20%	$600	0.5%	$503	$101	$604	Oct 2005	9.2%	$549	$110	$659
	TOTAL COSTS ==========>	$10,471	$2,094	20%	$12,565		$10,523	$2,104	$12,627			$11,486	$2,297	$13,783

**** TOTAL CONTRACT COST SUMMARY ****

THIS ESTIMATE IS BASED ON THE SCOPE CONTAINED IN THE FEASIBILITY, DATED: 1 APR 00

PROJECT: SMALL BOAT HARBOR
LOCATION: HAINES, ALASKA

DISTRICT: ALASKA
P.O.C.: FRANK ANTOLIN, CHIEF, CE

		CURRENT MCACES ESTIMATE PREPARED: 15 MAR 00 EFFECTIVE PRICING LEVEL: Apr 2002				AUTHORIZ./BUDGET YEAR: FY2004 EFFECT. PRICING LEVEL: 1 Oct 2002				.....FULLY FUNDED ESTIMATE..... CWCCIS - 30 Sep 98				
ACCOUNT NUMBER	FEATURE DESCRIPTION	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	OMB (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	EATURE MID PT	OMB (%)	COST ($K)	CNTG ($K)	FULL ($K)
C-12-01	MOB DEMOB & PREWORK	$0	$0	20%	$0	0.5%	0	0	0	Oct 2005	9.2%	0	0	0
C-02-03	RELOCATIONS	$100	$20	20%	$121	0.5%	$101	$20	$121	Oct 2005	9.2%	$110	$22	$132
C-12-05	MOORING BASIN DREDGING	$928	$186	20%	$1,113	0.5%	$933	$187	$1,120	Oct 2005	9.2%	$1,018	$204	$1,222
C-12-08	INNER HARBOR FACILITIES	$4,780	$956	20%	$5,736	0.5%	$4,804	$961	$5,765	Oct 2005	9.2%	$5,244	$1,049	$6,293
				20%										
	TOTAL CONSTRUCTION COSTS =====>	$5,808	$1,162	0%	$6,970		$5,838	$1,168	$7,006			$6,372	$1,275	$7,647
P-01---	LANDS AND DAMAGES	$17	$3	20%	$20	0.5%	$17	$3	$20	Oct 2005	9.2%	$19	$3	$22
P-30-01	PLANNING, ENGINEERING, DESIGN 1.8%	$105	$21	20%	$126	0.5%	$106	$21	$127	Oct 2005	9.2%	$116	$23	$139
P-31-01	CONSTRUCTION MANAGEMENT 2.2%	$125	$25	20%	$150	0.5%	$126	$25	$151	Oct 2005	9.2%	$138	$27	$165
	TOTAL COSTS ==========>	$6,055	$1,211	20%	$7,266		$6,087	$1,217	$7,304			$6,645	$1,328	$7,973

Haines Harbor - Portage Cove Site			Rev 2/26/02					
Quantity Estimate - Alt 4 (Existing Harbor Expansion North and South, two entrance channels)					$ 15,358,892.00			
Item	Description	Quantity	Unit	Spec	TOTAL $	$/cy		
1	Mob/Demob	LS	LS		$ 279,968.00			Overplace
							CY	
2	"Core" Rock	191,100	CM	0.5 kg < "Core" > 68 kg	$ 6,017,282.00	$ 23.99	249,949	10%
3	"B" Rock	39,100	CM	68 kg < "B" > 682 kg	$ 1,338,342.00	$ 25.08	51,141	5%
4	"A" Rock	38,500	CM	682 kg < "A" > 1136 kg	$ 1,706,166.00	$ 33.80	50,356	2%
							351,446	1.08
18	Concrete Floating BW (Box type)	70	LM	70 x 6.1 x 2.00 m conc.	$ -	$ 8,468.50	230	
	(w/ Nav. Aid base)							
	(GNF)							
17	Nav. Aid marker base	3	EA	2.13 x 2.13 x 0.61 m conc.	$ 33,857.00			
	(GNF)							
19B	Hydrographic surveys	LS	LS		$ 33,857.00			
	(GNF)							
10	Demo Exist. BW's (place as	2,600	CM	$ 49,014.00	$ 35,399.00	$ 10.41	3401	
	"core rock" in New BW)							
	(GNF)							
11	Demo Exist. BW's (fish ch., place as	1,000	CM	75 kg < Rock > 250 kg	$ 13,615.00	$ 10.41	1308	
	"core rock" in New BW)				$ 9,178,518.00			
	(GNF)							
5	Dredging/disposal (soft clay)*	3,400	CM	$ 915,257.00	$ 19,461.37	$ 4.38	4,447	
	(GNF)							
6	Dredging/disposal (hard clay)*	3,300	CM		$ 27,559.00	$ 6.12	4,316	
	(GNF)							
7	Dredging/disposal (boulders or rock)*	0	CM		$ -		0	
	(GNF)							
8	Dredging/disposal (soft clay)*	156,500	CM		$ 895,795.63	$ 4.38	204,694	
	(Local)							
19A	Hydrographic surveys	LS	LS	$ 33,857.00	$ 32,093.40	95%		
	(Local)							
19B	Hydrographic surveys	LS	LS		$ 1,763.60	5%		
	(GNF)							
9	Remove/relocate boulders**	1,900	CM	0.5 m < ** > 1.5 m diameter	$ 43,254.00	$ 17.41	2,485	
	(GNF)				$ 92,037.97		207,179	
12	Slope protection (fill)	N/A	CM		$ -			
	(Local)				$ 927,889.03			
13	Fill	N/A	CM					
	(Local)							
14	Furnish/Install 610 mm CMP	N/A	LM					
	(Local)							
15	Abandon exist. sewer outfall	320	LM	406.4 mm HDPE	$ 21,121.00	$ 20.12	1,050	
	(Local)							
16	Furnish/Install 406.4 mm HDPE	335	LM		$ 79,358.00	$ 72.20	1,099	
	sewer outfall and DIP diffuser				$ 100,479.00			
	(Local)							
20	Inner harbor facilities (floats,	LS	LS	ADOT/PF to provide cost	$ 4,780,000.00			
	gangways, etc.)							
	(Local)					63%	37%	
						FED SHARED	LOCAL	
	TOTAL CONSTRUCTION CONTRACT		Oct-02		$ 15,358,892.00	$ 9,550,523.97	$5,808,368.03	
	LANDS & DAMAGES		0.11%		$ 16,667.00	$ -	$ 16,667.00	
	PED		3.42%		$ 525,000.00	$ 420,000.00	$ 105,000.00	
	SIOH		4.07%		$ 625,000.00	$ 500,000.00	$ 125,000.00	
	SUBTOTAL CONSTRUCTION				$ 16,525,559.00	$10,470,523.97	$6,055,035.03	
	CONSTRUCTION CONTINGENCY		20.00%		$ 3,305,111.80	$ 2,094,104.79	$1,211,007.01	
	SUBTOTAL PROJECT				$ 19,830,670.80	$12,564,628.77	$7,266,042.03	
	ESCALATION TO MID_POINT		9.71%		$1,925,063	$ 1,219,711.48	$ 705,351.12	
Quantities based on AutoCadd, Excel spreadsheet, and contract survey.					$ 21,755,733.40	$13,784,340.25	$7,971,393.15	
* Assumes offshore disposal of dredged material < 5 Km east of project site.								
** Boulders can be used to construct tidal pools on adjacent beach as mitigation.								
Assume 3 construction seasons to complete project								

Alt 4, Haines SBH, Alaska
UPC=HNS001
** FEASIBILITY CWE **
Y:\CIV\SBH\HNS001\PSP\HNS002

Designed By: Alaska District Corp. Of Eng.
Estimated By: CENPA-EN-CE

Prepared By: AL ARRUDA / FRANK J. ANTOLIN
753-5672

Preparation Date: 02/12/02
Effective Date of Pricing: 03/01/02
Est Construction Time: 850 Days

Sales Tax: 0.00%

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DISCRIPTION OF WORK:
1. Construct a Small Boat Harbor for 279 vessels at Haines, Alaska, South of Skagway, Alaska.

2. Rubblemound Breakwater:Land-connected rubblemound breakwaters with a gap for fish passage and a crest of 7.89 meters (25.9ft) MLLW. Remove 46m (150.9lf) of existing breakwater. Construct a 72.9m (239.2lf) north spur; a 109.4m (358.9lf) north breakwater; a 489.1m (1604.7lf) main breakwater, a 62.2m (204.1lf) extension of existing south breakwater; and 49.9m (163.7lf) south spur. Maximum water depth is -7.25m (-23.8ft) MLLW along breakwater.

3. Rock Quantities:

	Neatline	+ Overplace	= (Total CY)
Armor Rock	38,500CM	770CM	51,363LCY
B Rock	39,100CM	1,955CM	53,698LCY
Core Rock	191,100CM	19,110CM	274,944LCY

4. Rock Source: The Contractor may use a local quarry or an off-site commercial source for the rock. The rock material can be barged or trucked to the site and placed by dumping combined with bucket/crane.

5. Unit prices for rubblemound construction are based upon quotes from Southeast Roadbuilders, Inc., which included mining and truck hauling from a quarry within 5 miles of the site. Assumed dredging and placing rock with land-based earth-moving equipment by the prime contractor.

6. Inner harbor prices are based upon data from AKDOT.

7. Dredge maneuver channel and outer basin to -4.9m and inner basin to -4.3m MLLW.

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3 . Construct Breakwater 'B' Rock.....6
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** CONTRACTOR SETTINGS **

		AMOUNT	PCT	PCT S	RISK	DIFF	SIZE	PERIOD	INVEST	ASSIST	SUBCON
AA General/Prime											
OVERHEAD	P		10.00								
HOME OFC	P		4.00								
PROFIT	C		7.30		0.090	0.090	0.040	0.120	0.080	0.120	0.030
BOND	C			(Class: B)							
EST CONT	P		5.00								

		QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST
01	Mob, Demob & Preparatory Work		280,000	0	56,000	336,000	
02	Relocations		100,500	0	20,100	120,600	
10	Breakwaters and Seawalls	783.49 M	9,178,500	0	1,835,700	11,014,200	14057.88
12	Navigation Ports & Harbors	6.56 HEC	5,799,900	0	1,160,000	6,959,900	1061621
TOTAL	Alt 4, Haines SBH, Alaska		15,358,900	0	3,071,800	18,430,700	
	********** ALTERNATES **********						
30	Planning, Engineering and Design		525,000	0	105,000	630,000	
31	Construction Management (S&I)		625,000	0	125,000	750,000	
_1	Lands and Damages		16,700	0	3,300	20,000	

		QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	TOTAL COST	UNIT COST
01	Mob, Demob & Preparatory Work			280,000	0	56,000	336,000	
02	Relocations							
02. 5	Abandon Existing Sewer Line	320.04	M	21,100	0	4,200	25,300	79.19
02.10	Furnish and Install HDPE Sewer	335.28	M	79,400	0	15,900	95,200	284.03
TOTAL	Relocations			100,500	0	20,100	120,600	
10	Breakwaters and Seawalls							
10.2	Construct Breakwater Core	191102.01	M3	6,017,300	0	1,203,500	7,220,700	37.78
10.3	Construct Breakwater 'B' Rock	39100.57	M3	1,338,300	0	267,700	1,606,000	41.07
10.4	Construct Breakwater 'A' Rock	38500.38	M3	1,706,200	0	341,200	2,047,400	53.18
10.5	Demo Existing Breakwater	3600.33	M3	49,000	0	9,800	58,800	16.34
10.7	Provide Hydrographic Surveys			33,900	0	6,800	40,600	
10.9	Construct Nav Aid Marker Base	4.00	EA	33,900	0	6,800	40,600	10156.99
TOTAL	Breakwaters and Seawalls	783.49	M	9,178,500	0	1,835,700	11,014,200	14057.88
12	Navigation Ports & Harbors							
12.10	Relocate Rock Under Water	1899.94	M3	43,300	0	8,700	51,900	27.32
12.11	Mech Dredge (soft clay)	159901.68	M3	915,300	0	183,100	1,098,300	6.87
12.12	Mech Dredge (hard clay)	3299.86	M3	27,600	0	5,500	33,100	10.02
12.13	Inner harbor facilities	6.56	HEC	4,780,000	0	956,000	5,736,000	874933.16
12.14	Provide Hydrographic Surveys			33,900	0	6,800	40,600	
TOTAL	Navigation Ports & Harbors	6.56	HEC	5,799,900	0	1,160,000	6,959,900	1061621
30	Planning, Engineering and Design			525,000	0	105,000	630,000	
31	Construction Management (S&I)			625,000	0	125,000	750,000	
_1	Lands and Damages			16,700	0	3,300	20,000	

		QUANTITY UOM	DIRECT	OVERHEAD	HOMEOFF	PROFIT	BOND	Est Cont	TOTAL COST	UNIT COST
01	Mob, Demob & Preparatory Work		215,000	21,500	9,500	18,000	2,700	13,300	280,000	
02	Relocations		77,200	7,700	3,400	6,400	1,000	4,800	100,500	
10	Breakwaters and Seawalls	783.49 M	7,048,600	704,900	310,100	588,600	89,200	437,100	9,178,500	11714.90
12	Navigation Ports & Harbors	6.56 HEC	5,563,200	78,300	34,500	65,400	9,900	48,600	5,799,900	884684.13
TOTAL	Alt 4, Haines SBH, Alaska		12,904,000	812,400	357,500	678,500	102,800	503,800	15,358,900	
	Constr Contingency	20.00 %							3,071,800	
	TOTAL INCL OWNER COSTS								18,430,700	
	********** ALTERNATES **********									
30	Planning, Engineering and Design		525,000	0	0	0	0	0	525,000	
	Constr Contingency	20.00 %							105,000	
	TOTAL INCL OWNER COSTS								630,000	
31	Construction Management (S&I)		625,000	0	0	0	0	0	625,000	
	Constr Contingency	20.00 %							125,000	
	TOTAL INCL OWNER COSTS								750,000	
_1	Lands and Damages		16,700	0	0	0	0	0	16,700	
	Constr Contingency	20.00 %							3,300	
	TOTAL INCL OWNER COSTS								20,000	

	QUANTITY	UOM	DIRECT	OVERHEAD	HOMEOFF	PROFIT	BOND	Est Cont	TOTAL COST	UNIT COST
01 Mob, Demob & Preparatory Work			215,000	21,500	9,500	18,000	2,700	13,300	280,000	
Constr Contingency	20.00	%							56,000	
TOTAL INCL OWNER COSTS									336,000	
02 Relocations										
02. 5 Abandon Existing Sewer Line	320.04	M	16,200	1,600	700	1,400	200	1,000	21,100	65.99
02.10 Furnish and Install HDPE Sewer	335.28	M	60,900	6,100	2,700	5,100	800	3,800	79,400	236.69
TOTAL Relocations			77,200	7,700	3,400	6,400	1,000	4,800	100,500	
Constr Contingency	20.00	%							20,100	
TOTAL INCL OWNER COSTS									120,600	
10 Breakwaters and Seawalls										
10.2 Construct Breakwater Core	191102.01	M3	4,620,900	462,100	203,300	385,900	58,500	286,500	6,017,300	31.49
10.3 Construct Breakwater 'B' Rock	39100.57	M3	1,027,800	102,800	45,200	85,800	13,000	63,700	1,338,300	34.23
10.4 Construct Breakwater 'A' Rock	38500.38	M3	1,310,200	131,000	57,700	109,400	16,600	81,200	1,706,200	44.32
10.5 Demo Existing Breakwater	3600.33	M3	37,600	3,800	1,700	3,100	500	2,300	49,000	13.61
10.7 Provide Hydrographic Surveys			26,000	2,600	1,100	2,200	300	1,600	33,900	
10.9 Construct Nav Aid Marker Base	4.00	EA	26,000	2,600	1,100	2,200	300	1,600	33,900	8464.16
TOTAL Breakwaters and Seawalls	783.49	M	7,048,600	704,900	310,100	588,600	89,200	437,100	9,178,500	11714.90
Constr Contingency	20.00	%							1,835,700	
TOTAL INCL OWNER COSTS									11,014,200	
12 Navigation Ports & Harbors										
12.10 Relocate Rock Under Water	1899.94	M3	33,200	3,300	1,500	2,800	400	2,100	43,300	22.77
12.11 Mech Dredge (soft clay)	159901.68	M3	702,900	70,300	30,900	58,700	8,900	43,600	915,300	5.72
12.12 Mech Dredge (hard clay)	3299.86	M3	21,200	2,100	900	1,800	300	1,300	27,600	8.35
12.13 Inner harbor facilities	6.56	HEC	4,780,000	0	0	0	0	0	4,780,000	729110.96
12.14 Provide Hydrographic Surveys			26,000	2,600	1,100	2,200	300	1,600	33,900	
TOTAL Navigation Ports & Harbors	6.56	HEC	5,563,200	78,300	34,500	65,400	9,900	48,600	5,799,900	884684.13
Constr Contingency	20.00	%							1,160,000	
TOTAL INCL OWNER COSTS									6,959,900	
30 Planning, Engineering and Design			525,000	0	0	0	0	0	525,000	
Constr Contingency	20.00	%							105,000	

		QUANTITY UOM	DIRECT	OVERHEAD	HOMEOFF	PROFIT	BOND	Est Cont	TOTAL COST	UNIT COST
	TOTAL INCL OWNER COSTS								630,000	
31	Construction Management (S&I)		625,000	0	0	0	0	0	625,000	
	Constr Contingency	20.00 %							125,000	
	TOTAL INCL OWNER COSTS								750,000	
_1	Lands and Damages		16,700	0	0	0	0	0	16,700	
	Constr Contingency	20.00 %							3,300	
	TOTAL INCL OWNER COSTS								20,000	

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01	Mob, Demob & Preparatory Work			0	0	0	0	215,000	215,000	
02	Relocations			1,100	47,600	11,500	18,100	0	77,200	
10	Breakwaters and Seawalls	783.49	M	16,700	909,100	1,070,900	5,037,500	31,100	7,048,600	8996.39
12	Navigation Ports & Harbors	6.56	HEC	7,100	311,500	445,700	0	4,806,000	5,563,200	848582.49
TOTAL	Alt 4, Haines SBH, Alaska			24,900	1,268,200	1,528,100	5,055,600	5,052,100	12,904,000	
	OVERHEAD	6.30	%						812,400	
	SUBTOTAL								13,716,400	
	HOME OFC	2.61	%						357,500	
	SUBTOTAL								14,073,900	
	PROFIT	4.82	%						678,500	
	SUBTOTAL								14,752,300	
	BOND	0.70	%						102,800	
	SUBTOTAL								14,855,100	
	EST CONT	3.39	%						503,800	
	TOTAL INCL INDIRECTS								15,358,900	
	Constr Contingency	20.00	%						3,071,800	
	TOTAL INCL OWNER COSTS								18,430,700	
	********** ALTERNATES **********									
30	Planning, Engineering and Design			0	0	0	0	525,000	525,000	
	Constr Contingency	20.00	%						105,000	
	TOTAL INCL OWNER COSTS								630,000	
31	Construction Management (S&I)			0	0	0	0	625,000	625,000	
	Constr Contingency	20.00	%						125,000	
	TOTAL INCL OWNER COSTS								750,000	
_1	Lands and Damages			0	0	0	0	16,700	16,700	
	Constr Contingency	20.00	%						3,300	
	TOTAL INCL OWNER COSTS								20,000	

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01 Mob, Demob & Preparatory Work			0	0	0	0	215,000	215,000	
OVERHEAD	10.00	%						21,500	
SUBTOTAL								236,500	
HOME OFC	4.00	%						9,500	
SUBTOTAL								246,000	
PROFIT	7.30	%						18,000	
SUBTOTAL								263,900	
BOND	1.03	%						2,700	
SUBTOTAL								266,600	
EST CONT	5.00	%						13,300	
TOTAL INCL INDIRECTS								280,000	
Constr Contingency	20.00	%						56,000	
TOTAL INCL OWNER COSTS								336,000	
02 Relocations									
02. 5 Abandon Existing Sewer Line	320.04	M	300	12,400	3,800	0	0	16,200	50.68
02.10 Furnish and Install HDPE Sewer	335.28	M	800	35,200	7,700	18,100	0	60,900	181.76
TOTAL Relocations			1,100	47,600	11,500	18,100	0	77,200	
OVERHEAD	10.00	%						7,700	
SUBTOTAL								84,900	
HOME OFC	4.00	%						3,400	
SUBTOTAL								88,300	
PROFIT	7.30	%						6,400	
SUBTOTAL								94,700	
BOND	1.03	%						1,000	
SUBTOTAL								95,700	
EST CONT	5.00	%						4,800	
TOTAL INCL INDIRECTS								100,500	
Constr Contingency	20.00	%						20,100	
TOTAL INCL OWNER COSTS								120,600	
10 Breakwaters and Seawalls									
10.2 Construct Breakwater Core	191102.01	M3	9,300	516,700	665,700	3,436,800	1,700	4,620,900	24.18

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
10.3	Construct Breakwater 'B' Rock	39100.57	M3	2,400	130,500	153,100	743,200	1,000	1,027,800	26.29
10.4	Construct Breakwater 'A' Rock	38500.38	M3	4,600	241,400	219,300	847,500	2,100	1,310,200	34.03
10.5	Demo Existing Breakwater	3600.33	M3	400	20,500	16,800	0	300	37,600	10.45
10.7	Provide Hydrographic Surveys			0	0	0	0	26,000	26,000	
10.9	Construct Nav Aid Marker Base	4.00	EA	0	0	16,000	10,000	0	26,000	6500.00
TOTAL	Breakwaters and Seawalls	783.49	M	16,700	909,100	1,070,900	5,037,500	31,100	7,048,600	8996.39
	OVERHEAD	10.00	%						704,900	
	SUBTOTAL								7,753,400	
	HOME OFC	4.00	%						310,100	
	SUBTOTAL								8,063,600	
	PROFIT	7.30	%						588,600	
	SUBTOTAL								8,652,200	
	BOND	1.03	%						89,200	
	SUBTOTAL								8,741,400	
	EST CONT	5.00	%						437,100	
	TOTAL INCL INDIRECTS								9,178,500	
	Constr Contingency	20.00	%						1,835,700	
	TOTAL INCL OWNER COSTS								11,014,200	
12	Navigation Ports & Harbors									
12.10	Relocate Rock Under Water	1899.94	M3	300	18,100	15,100	0	0	33,200	17.48
12.11	Mech Dredge (soft clay)	159901.68	M3	6,600	284,800	418,000	0	0	702,900	4.40
12.12	Mech Dredge (hard clay)	3299.86	M3	200	8,600	12,600	0	0	21,200	6.41
12.13	Inner harbor facilities	6.56	HEC	0	0	0	0	4,780,000	4,780,000	729110.96
12.14	Provide Hydrographic Surveys			0	0	0	0	26,000	26,000	
TOTAL	Navigation Ports & Harbors	6.56	HEC	7,100	311,500	445,700	0	4,806,000	5,563,200	848582.49
	OVERHEAD	1.41	%						78,300	
	SUBTOTAL								5,641,600	
	HOME OFC	0.61	%						34,500	
	SUBTOTAL								5,676,000	
	PROFIT	1.15	%						65,400	
	SUBTOTAL								5,741,400	
	BOND	0.17	%						9,900	
	SUBTOTAL								5,751,400	
	EST CONT	0.84	%						48,600	

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
	TOTAL INCL INDIRECTS								5,799,900	
	Constr Contingency	20.00	%						1,160,000	
	TOTAL INCL OWNER COSTS								6,959,900	
30	Planning, Engineering and Design			0	0	0	0	525,000	525,000	
	Constr Contingency	20.00	%						105,000	
	TOTAL INCL OWNER COSTS								630,000	
31	Construction Management (S&I)			0	0	0	0	625,000	625,000	
	Constr Contingency	20.00	%						125,000	
	TOTAL INCL OWNER COSTS								750,000	
_1	Lands and Damages			0	0	0	0	16,700	16,700	
	Constr Contingency	20.00	%						3,300	
	TOTAL INCL OWNER COSTS								20,000	

		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL	Mob, Demob & Preparatory Work					0	0	0	0	215,000	215,000	
02. Relocations												
02. 5. Abandon Existing Sewer Line (USER)												
AF AA <02215 2500 >	Waste, backfill, excess					0.01	0.59	0.26	0.00	0.00	0.86	
	excavated on-site material	4013.96	M3	CODFB10N	114.68	53	2,388	1,064	0	0	3,451	0.86
	Backfill, trench, front-end loader, 40 - 60 HP, no compaction											
	Assume trench is 5' wide at bottom and 10' deep. Assume 0.5 cy waste per lf of trench excavation.											
MIL AA <02228 0344 >	Excavate trench, hvy soil,					0.02	0.85	0.62	0.00	0.00	1.47	
	6'-10' D, 1.5 CY excavator	3211.17	M3	CODEB12B	103.98	62	2,727	1,981	0	0	4,708	1.47
	Assume trench is 5' wide at bottom and 10' deep. Assume 4 cy/lf of trench excavation.											
	The qty was off by one decimal. Should be 3211.2M3 (4200cy)											
CIV AA <02046 2930 >	Site dml, pipe removal, 15" dia,					0.52	22.71	2.48	0.00	0.00	25.18	
	conc, water/sewer, no excavation	320.04	M	CODLB6	5.72	168	7,268	792	0	0	8,060	25.18
TOTAL	Abandon Existing Sewer Line	320.04	M			282	12,383	3,837	0	0	16,219	50.68

02.10. Furnish and Install HDPE Sewer	QUANTY UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
02.10. Furnish and Install HDPE Sewer (USER) Furnish and Install 335 LM (1100LF) of (406.4mm (16inch) HDPE sewer line and DIP diffuser.										
MIL AA <02215 1220 > Backfill, trench, front-end loader, 40 - 60 HP, no compaction	3027.67 M3	CODFB10N	38.23	0.04	1.78	0.79	0.00	0.00	2.58	
				119	5,403	2,407	0	0	7,810	2.58
Assume trench is 5' wide at bottom and 10' deep. Assume 3.6 cy backfill per lf of trench excavation.										
M MIL AA <02215 2460 > Backfill, sand bedding trenches, front-end loader, 1.5 CY Assume trench is 5' wide at bottom and 10' deep. Assume 0.4 cy sand bed per lf of trench excavation. QUOTE: Pipe Bedding $6.00/cy, Truck $4.50/cy, Southeast Roadbuilders & Quarry, Haines, 907-766-2833, 7 Jan 02. AA	336.41 M3	CODFB10N	36.32	0.04	1.88	0.84	13.73	0.00	16.45	
				14	632	282	4,620	0	5,533	16.45
AF AA <02215 2500 > Waste, backfill, excess excavated on-site material Backfill, trench, front-end loader, 40 - 60 HP, no compaction	420.51 M3	CODFB10N	114.68	0.01	0.59	0.26	0.00	0.00	0.86	
				6	250	111	0	0	362	0.86
Assume trench is 5' wide at bottom and 10' deep. Assume 0.5 cy waste per lf of trench excavation.										
MIL AA <02220 6400 > Compaction, 1 ton roller, around structures & trenches	2523.06 M3	COFCB10A	19.11	0.08	3.57	0.46	0.00	0.00	4.03	
				198	9,005	1,164	0	0	10,168	4.03
Assume trench is 5' wide at bottom and 10' deep. Assume compact top 3 cy/lf of trench excavation.										
AF AA <02220 7060 > Compaction, struct/trench, 8" lifts, 2 passes 18" wide, vib plate	841.02 M3	COFCB18	41.10	0.07	3.10	0.04	0.00	0.00	3.13	
				61	2,606	31	0	0	2,636	3.13

02.10. Furnish and Install HDPE Sewer	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
Assume compact sand bed and first 2 ft of backfill. Assume 1 cy/lf of trench.											
M MIL AA <02220 9000 > Compaction, water, truck, 3000					0.01	0.53	0.28	0.30	0.00	1.10	
gal, 3 mile haul	3364.08	M3	COKBB45	180.44	37	1,776	932	1,006	0	3,714	1.10
Assume trench is 5' wide at bottom and 10' deep. Assume compact 4 cy/lf of trench excavation.											
MIL AA <02228 0344 > Excavate trench, hvy soil,					0.02	0.85	0.62	0.00	0.00	1.47	
6'-10' D, 1.5 CY excavator	3364.08	M3	CODEB12B	103.98	65	2,857	2,075	0	0	4,932	1.47
Assume trench is 5' wide at bottom and 10' deep. Assume 4 cy/lf of trench excavation.											
AF AA <02752 8000 > CB or manholes, sewer connection					0.00	0.00	0.00	0.00	0.00	0.00	
charge	1.00	EA	N/A	0.00	0	0	0	0	0	0	0.00
B CIV AA <02766 6060 > Piping, D&S, 20' sect, 16", corr					0.81	34.79	1.91	34.48	0.00	71.19	
polthn, type S, smooth wall	335.28	M	CLABB14	7.39	272	11,665	642	11,561	0	23,867	71.19
M CIV AA <02766 6130 > Piping, D&S, corr polthn,					0.00	0.00	0.00	10.93	0.00	10.93	
coupler, 16"	55.00	EA	N/A	0.00	0	0	0	601	0	601	10.93
M MIL AA <02753 0110 > Headwall, conc, CIP, 18" dia					20.96	1005.67	12.92	299.72	0.00	1318.31	
pipe, 30 deg skewed wingwall	1.00	EA	ACARC14H	0.29	21	1,006	13	300	0	1,318	1318.31
TOTAL Furnish and Install HDPE Sewer	335.28	M			793	35,198	7,656	18,088	0	60,942	181.76
TOTAL Relocations					1,075	47,581	11,493	18,088	0	77,162	

10.2 . Construct Breakwater Core	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST

10. Breakwaters and Seawalls
10.2 . Construct Breakwater Core

10.2 . 10 . Breakwater Core Complete
0.5 kf (1#) - 86kg (190#)

176,573 M3 (230,950 cy) x 1.10 overplace = 194,230 M3 (254,045 cy)

10.2 . 10 .2 . 'C' Rock - Commercial Quarry
Purchase rock and truck to site, 1#-190#. Core rock $8.00/cy, Load/haul $4.50/cy, TOTAL $12.50/cy.

QUOTE: Core rock $8.00/cy, Truck $4.50/cy, Southeast Roadbuilders & Quarry, Haines, 907-766-2833, 7 Jan 02. AA

TOTAL 'C' Rock - Commercial Quarry	274944	LCY		0	0	0	3,436,799	0	3,436,799	12.50

10.2 . 10 ._7. Place Core Stone - Land (ZOC DREDG1) ** OVERTIME **
160,600 M3 (210,060 cy) x 1.9Ton/cy = 339,108Ton x 1.1 overplace = 439,020Ton

Assume breakwater construction in less than 20ft depth of water.
Assume Core rock placement on land-connected BW by truck end-dump, dozer spread and backhoe dress up.
Assume 'B' rock placement by end-dump, dozer push and backhoe spread/dress up.
Assume 'A' rock placement by truck delivery, backhoe placement and floating crane dress up.

USR AA <02900 9001 > Core Placement: Assume spread time equals time to truck dump.	3326.82	HR	CODTN	1.00	1.25 4,159	71.68 238,455	138.79 461,745	0.00 0	0.00 0	210.47 700,200	210.47
L USR AA <02900 9001 > 10% Dress Slope: productivity 5	43076	MT	ZOC EXCAV4	95.25	0.04 1,809	2.14 92,326	1.82 78,199	0.00 0	0.04 1,709	4.00 172,234	4.00
L MIL AA <02234 0610 > Hauling, hwy haulers, 16.5 CY, Back down BW and end dump. Assume truck load/haul of material from quarry source to site/stage is covered under material cost and occurs just in time (no stockpiling or reloading).	210212	M3	CTDHB34C	63.08	0.02 3,327	0.88 185,917	0.60 125,787	0.00 0	0.00 0	1.48 311,704	1.48

Stage for backing 1.5min
Backup 720LF @3ft/sec 4.0min
Dump/place load 1.5min

10.2 . Construct Breakwater Core	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
Return 720LF @4ft/sec 3.0min Total truck cycle time 10.0min Productivity: 1cycle/10min x 50/hr = 5.0cycle/hr 16.5lcy/cycle x 5.0cycle/hr = 82.5 lcy/hr											
TOTAL Place Core Stone - Land	274944	LCY			9,294	516,697	665,732	0	1,709	1,184,138	4.31
TOTAL Breakwater Core Complete	274944	LCY			9,294	516,697	665,732	3,436,799	1,709	4,620,937	16.81
TOTAL Construct Breakwater Core	191102	M3			9,294	516,697	665,732	3,436,799	1,709	4,620,937	24.18

10.3 . Construct Breakwater 'B' Rock	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST

10.3 . Construct Breakwater 'B' Rock

10.3 . 15 . Breakwater 'B' Rock Complete
29 kg (64#) - 310 kg (683#)

37,500 M3 (49,048 cy) x 1.10 overplace = 41,250 M3 (51,500 cy)

10.3 . 15 .2 . 'B' Rock - Commercial Quarry
Purchase rock and truck to site, 190#-1890#. B rock $10.00/cy, Load/haul

$4.50/cy, TOTAL $14.50/cy. QUOTE: B rock $10.00/cy, Truck
$4.50/cy, Southeast Roadbuilders & Quarry, Haines, 907-766-2833, 7 Jan 02.
AA AA

TOTAL 'B' Rock - Commercial Quarry	51258	LCY			0	0	0	743,243	0	743,243	14.50

10.3 . 15 ._7. Place 'B' Stone - Land (ZOC DREDG1) ** OVERTIME **
160,600 M3 (210,060 cy) x 1.9Ton/cy = 339,108Ton x 1.1 overplace =
439,020Ton

Assume breakwater construction in less than 20ft depth of water.
Assume Core rock placement on land-connected BW by truck end-dump, dozer spread and backhoe dress up.
Assume 'B' rock placement by end-dump, dozer push and backhoe spread/dress up.
Assume 'A' rock placement by truck delivery, backhoe placement and floating crane dress up.

USR AA <02900 9001 > Core Placement: Assume spread time equals time to truck dump.					1.25	71.68	138.79	0.00	0.00	210.47	
	620.22	HR	CODTN	1.00	775	44,455	86,084	0	0	130,539	210.47
L USR AA <02900 9001 > 30% Dress Slope: Backhoe,					0.04	2.13	1.81	0.00	0.04	3.98	
	24092	MT	ZOC EXCAV4	95.71	1,007	51,393	43,529	0	956	95,878	3.98
L MIL AA <02234 0610 > Hauling, hwy haulers, 16.5 CY, Back down BW and end dump. Assume truck load/haul of material from quarry source to site/stage is covered under material cost and occurs just in time (no stockpiling or reloading).					0.02	0.88	0.60	0.00	0.00	1.48	
	39190	M3	CTDHB34C	63.08	620	34,661	23,451	0	0	58,111	1.48

Stage for backing 1.5min
Backup 720LF @3ft/sec 4.0min
Dump/place load 1.5min
Return 720LF @4ft/sec 3.0min
Total truck cycle time 10.0min

10.3 . Construct Breakwater 'B' Rock	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
Productivity: 1cycle/10min x 50/hr = 5.0cycle/hr 16.5lcy/cycle x 5.0cycle/hr = 82.5 lcy/hr											
TOTAL Place 'B' Stone - Land	51258	LCY			2,402	130,509	153,064	0	956	284,529	5.55
TOTAL Breakwater 'B' Rock Complete	53698	LCY			2,402	130,509	153,064	743,243	956	1,027,772	19.14
TOTAL Construct Breakwater 'B' Rock	39101	M3			2,402	130,509	153,064	743,243	956	1,027,772	26.29

10.4 . Construct Breakwater 'A' Rock	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST

10.4 . Construct Breakwater 'A' Rock

10.4 . 20 . Breakwater 'A' Rock Complete
857 kg (1890#) - 1430 kg (3150#)

56,400 M3 (73,768cy) x 1.02 overplace = 57,530 M3 (75,245 cy)

10.4 . 20 .2 . 'A' Rock - Commercial Quarry
Purchase rock and truck to site, 1890#-3150#. A rock $12.00/cy, Load/haul

$4.50/cy, TOTAL $16.50/cy. QUOTE: A rock $12.00/cy, Truck
$4.50/cy, Southeast Roadbuilders & Quarry, Haines, 907-766-2833, 7 Jan 02.
AA AA

TOTAL 'A' Rock - Commercial Quarry	51363 LCY			0	0	0	847,491	0	847,491	16.50

10.4 . 20 ._1. Place 'A' Stone - Land (ZOC DREDG1) ** OVERTIME **
160,600 M3 (210,060 cy) x 1.9Ton/cy = 339,108Ton x 1.1 overplace =
439,020Ton

Assume breakwater construction in less than 20ft depth of water.
Assume Core rock placement on land-connected BW by truck end-dump, dozer spread and backhoe dress up.
Assume 'B' rock placement by end-dump, dozer push and backhoe spread/dress up.
Assume 'A' rock placement by truck delivery, backhoe placement and floating crane dress up.

L USR AA <02900 9001 > 60% Dress Slope:Backhoe,				0.04	2.13	1.81	0.00	0.04	3.98	
	53098 MT	ZOC	EXCAV4	95.71	2,218	113,268	95,937	0	2,107	211,313	3.98
L MIL AA <02234 0610 > Hauling, hwy haulers, 16.5 CY,				0.02	0.88	0.60	0.00	0.00	1.48	
Back down BW and end dump.	39255 M3	CTDHB34C		63.08	621	34,718	23,489	0	0	58,207	1.48

Assume truck load/haul of material from quarry source to site/stage is covered under material cost and occurs just in time (no stockpiling or reloading).

Stage for backing	1.5min
Backup 720LF @3ft/sec	4.0min
Dump/place load	1.5min
Return 720LF @4ft/sec	3.0min
Total truck cycle time	10.0min

Productivity:
1cycle/10min x 50/hr =
5.0cycle/hr

10.4 . Construct Breakwater 'A' Rock	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
16.5lcy/cycle x 5.0cycle/hr = 82.5 lcy/hr											
USR AA <02900 9001 > 40% Dress Slope: Floating Crane					0.05	2.64	2.82	0.00	0.00	5.46	
	35399	MT	ZOC DREDG1	157.85	1,795	93,391	99,838	0	0	193,229	5.46
TOTAL Place 'A' Stone - Land	51343	LCY			4,634	241,378	219,264	0	2,107	462,749	9.01
TOTAL Breakwater 'A' Rock Complete	51363	LCY			4,634	241,378	219,264	847,491	2,107	1,310,240	25.51
TOTAL Construct Breakwater 'A' Rock	38500	M3			4,634	241,378	219,264	847,491	2,107	1,310,240	34.03

10.5 . Demo Existing Breakwater	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
10.5 . Demo Existing Breakwater											
10.5 . 15 . Breakwater 'B' Rock Complete 75 kg (64#) - 250 kg (683#)											
3600 M3 (4709 cy)											
10.5 . 15 2._ . Remove Rock (USER) 3600 M3 (4709 cy) x 1.9 Ton/cy = 8947Ton	** OVERTIME **										
L USR AA <02900 9001 > Remove Armored slope:Backhoe,					0.04	2.13	1.81	0.00	0.04	3.98	
	8116.59	MT	ZOC EXCAV4	95.71	339	17,314	14,665	0	322	32,301	3.98
L MIL AA <02234 0610 > Hauling, hwy haulers, 16.5 CY,					0.02	0.88	0.60	0.00	0.00	1.48	
Back down BW and end dump.	3600.33	M3	CTDHB34C	63.08	57	3,184	2,154	0	0	5,339	1.48
Assume truck load/haul of material from quarry source to site/stage is covered under material cost and occurs just in time (no stockpiling or reloading).											
Stage for backing 1.5min Backup 720LF @3ft/sec 4.0min Dump/place load 1.5min Return 720LF @4ft/sec 3.0min Total truck cycle time 10.0min											
Productivity: 1cycle/10min x 50/hr = 5.0cycle/hr 16.5lcy/cycle x 5.0cycle/hr = 82.5 lcy/hr											
TOTAL Remove Rock	4709.00	LCY			396	20,498	16,819	0	322	37,640	7.99
TOTAL Breakwater 'B' Rock Complete	3600.33	M3			396	20,498	16,819	0	322	37,640	10.45
TOTAL Demo Existing Breakwater	3600.33	M3			396	20,498	16,819	0	322	37,640	10.45

10.7 . Provide Hydrographic Surveys	QUANTY UOM CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
10.7 . Provide Hydrographic Surveys									
10.7 . . Hydro Surveys for Items 2 thru 7									
TOTAL Pre/Post Hydrographic Surveys	2.00 EA		0	0	0	0	18,000	18,000	9000.00
10.7 . . . Interim Hydrographic Surveys	** OVERTIME **								
USR AA <02000 > Hydrographic Survey			0.00	0.00	0.00	0.00	8000.00	8000.00	
	1.00 EA	0.00	0	0	0	0	8,000	8,000	8000.00
TOTAL Interim Hydrographic Surveys	1.00 EA		0	0	0	0	8,000	8,000	8000.00
TOTAL Hydro Surveys for Items 2 thru 7			0	0	0	0	26,000	26,000	
TOTAL Provide Hydrographic Surveys			0	0	0	0	26,000	26,000	

10.9 . Construct Nav Aid Marker Base	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
10.9 . Construct Nav Aid Marker Base											
10.9 . _ . Navigation Foundation (USER)	** OVERTIME **										
USR AA < > Navigation Foundation					0.00	0.00	4000.00	2500.00	0.00	6500.00	
	4.00	EA		0.00	0	0	16,000	10,000	0	26,000	6500.00
TOTAL Navigation Foundation	4.00	EA			0	0	16,000	10,000	0	26,000	6500.00
TOTAL Construct Nav Aid Marker Base	4.00	EA			0	0	16,000	10,000	0	26,000	6500.00
TOTAL Breakwaters and Seawalls	783.49	M			16,727	909,082	1,070,879	5,037,534	31,095	7,048,589	8996.39

12.10. Relocate Rock Under Water	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST

12. Navigation Ports & Harbors
Dredge 5.19 hec (558,650sf) basin and maneuver channel.
Soft Clay 5.0 hec (544,010sf) = (268,330cy)
Hard Clay 0.19 hec (14,640sf) = (11,180cy)
12.10. Relocate Rock Under Water
Assume slabs of shale rock too large to be 'dredged' will be drilled under water, broken and removed by crane.
Total dredge quantity: 2500 CM (3270cy) rock

12.10. . Rock Removal Complete
Assume that prep work, and drilling will be done for total quanity of rock.
Assume 10% of total dredge quantity for rock removal.

12.10. .10. Dredging rock (ZOC EXCAV4) ** OVERTIME **
Rock material removed w/barge and clam shell crane.

Use 37% swell factor for broken rock:
13,825bcy x 1.37 = 18940LCY

L USR AA <	> Rock dredge: productivity 5 CY bucket x 1.9 Tons x .55 fill factor = 5.2Tons/bucket Cycle time 50min work/hr x 1 cycle/2.2 min = 23 cycle/hr. 23 cycles/hr x 5.2 Tons cycle = 120 Ton/hr	4283.28	MT	ZOC EXCAV4	108.86	0.04 157	1.88 8,033	1.59 6,804	0.00 0	0.00 0	3.46 14,837	3.46
	TOTAL Dredging rock	2485.00	LCY			157	8,033	6,804	0	0	14,837	5.97
	TOTAL Rock Removal Complete	1899.94	M3			157	8,033	6,804	0	0	14,837	7.81

12.10.3 . Place Rock Tidal Pool
Assume slabs of shale rock too large to be 'dredged' will be drilled under water, broken and removed by crane.
Total dredge quantity: 2500 CM (3270cy) rock

12.10.3 5 . . Rock Placement Complete
Assume that prep work, and drilling will be done for total quanity of rock.
Assume 10% of total dredge quantity for rock removal.

12.10. Relocate Rock Under Water	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
L USR AA < > Rock dredge: productivity 5 CY bucket x 1.9 Tons x .55 fill factor = 5.2Tons/bucket Cycle time 50 min work/hr x 1 cycle/1.5 min = 33.3 cycle/hr. 33.3 cycles/hr x 5.2 Tons cycle = 174 Ton/hr					0.03	1.29	1.09	0.00	0.00	2.38	
	4283.28	MT	ZOC EXCAV4	158.76	108	5,509	4,666	0	0	10,174	2.38
L AF AA <02234 4200 > Hauling, w/loading, 12 CY truck, rock					0.04	2.42	1.90	0.00	0.00	4.32	
	1899.94	M3	CODEB30	68.81	83	4,589	3,616	0	0	8,205	4.32
TOTAL Rock Placement Complete	2485.00	LCY			191	10,097	8,282	0	0	18,379	7.40
TOTAL Place Rock Tidal Pool	1899.94	M3			191	10,097	8,282	0	0	18,379	9.67
TOTAL Relocate Rock Under Water	1899.94	M3			348	18,130	15,086	0	0	33,217	17.48

12.11. Mech Dredge (soft clay)	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
12.11. Mech Dredge (soft clay) 227,200 M3 (297,166cy)											
12.11.2 . Mech Dredge (soft clay) (USER)											
USR AA <02900 9001 > Tug & Barge, for dredging.					3.50	150.04	160.59	0.00	0.00	310.64	
	1195.00	HR	ZOC BARGE1	1.00	4,183	179,302	191,909	0	0	371,210	310.64
USR AA < > Mechanical Dredge, 5cy capacity					0.01	0.66	1.41	0.00	0.00	2.07	
long-reach excavator	159902	M3	CODEB12J	133.80	2,384	105,533	226,123	0	0	331,656	2.07
TOTAL Mech Dredge (soft clay)	38555	M2			6,567	284,834	418,032	0	0	702,866	18.23
TOTAL Mech Dredge (soft clay)	159902	M3			6,567	284,834	418,032	0	0	702,866	4.40

12.12. Mech Dredge (hard clay)	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
12.12. Mech Dredge (hard clay) 5600 M3 (7325cy)											
12.12.1 . Mech Dredge (hard clay)											
USR AA <02900 9001 > Tug & Barge, for dredging.					3.50	150.04	160.59	0.00	0.00	310.64	
	36.00	HR	ZOC BARGE1	1.00	126	5,402	5,781	0	0	11,183	310.64
USR AA < > Mechanical Dredge, 5cy capacity long-reach excavator					0.02	0.96	2.06	0.00	0.00	3.02	
	3299.86	M3	CODEB12J	91.75	72	3,176	6,805	0	0	9,981	3.02
TOTAL Mech Dredge (hard clay)	525.07	M2			198	8,578	12,586	0	0	21,164	40.31
TOTAL Mech Dredge (hard clay)	3299.86	M3			198	8,578	12,586	0	0	21,164	6.41

12.13. Inner harbor facilities	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
12.13. Inner harbor facilities											
12.13.1 . Inner harbor facilities Inner harbor costs provided by AKDOT Coastal Engineer thru CEPOA-EN-CW-HH.											
USR < > Floats, driven-down, plus 3 gangways and approach ramps, per AKDOT memo, 26Oct 01.	1.00	LS		0.00	0.00 0	0.00 0	0.00 0	0.00 0	4500000 4,500,000	4500000.00 4,500,000	4500000
USR < > Lighting, per AKDOT memo, 26Oct 01.	1.00	LS		0.00	0.00 0	0.00 0	0.00 0	0.00 0	280000.00 280,000	280000.00 280,000	280000.00
TOTAL Inner harbor facilities	279.00	EA			0	0	0	0	4,780,000	4,780,000	17132.62
TOTAL Inner harbor facilities	6.56	HEC			0	0	0	0	4,780,000	4,780,000	729110.96

12.14. Provide Hydrographic Surveys	QUANTY UOM CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
12.14. Provide Hydrographic Surveys									
12.14. . Hydro Surveys for Items 2 thru 7									
TOTAL Pre/Post Hydrographic Surveys	2.00 EA		0	0	0	0	18,000	18,000	9000.00
12.14. . . Interim Hydrographic Surveys	** OVERTIME **								
USR AA <02000 > Hydrographic Survey			0.00	0.00	0.00	0.00	8000.00	8000.00	
	1.00 EA	0.00	0	0	0	0	8,000	8,000	8000.00
TOTAL Interim Hydrographic Surveys	1.00 EA		0	0	0	0	8,000	8,000	8000.00
TOTAL Hydro Surveys for Items 2 thru 7			0	0	0	0	26,000	26,000	
TOTAL Provide Hydrographic Surveys			0	0	0	0	26,000	26,000	
TOTAL Navigation Ports & Harbors	6.56 HEC		7,113	311,542	445,705	0	4,806,000	5,563,247	848582.49
TOTAL Alt 4, Haines SBH, Alaska			24,915	1,268,205	1,528,077	5,055,622	5,052,095	12,903,998	

	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Planning, Engineering and Design					0	0	0	0	525,000	525,000	
TOTAL Construction Management (S&I)					0	0	0	0	625,000	625,000	

	QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
TOTAL Lands and Damages					0	0	0	0	16,667	16,667	

SRC	ITEM ID	DESCRIPTION	NO.	UOM	RATE	**** LABOR **** HOURS	COST	**** EQUIP **** HOURS	COST	TOTAL COST
	ACARC14H	3 carpnters + 1 vibrator, concrete				PROD = 100%			CREW HOURS =	3
MIL	B-CARPNTERF	Carpenters	1.00	HR	50.24	1.00	50.24			50.24
MIL	B-CARPNTERL	Carpenters	2.00	HR	49.24	2.00	98.47			98.47
MIL	B-RODMAN L	Rodmen, (Reinforcing)	1.00	HR	54.31	1.00	54.31			54.31
MIL	B-LABORER L	Laborers, (Semi-Skilled)	1.00	HR	42.11	1.00	42.11			42.11
MIL	B-CEMTFINRL	Cement Finishers	1.00	HR	42.79	1.00	42.79			42.79
GEN	XMEZ9520 E	VIBRATOR, CONCRETE	1.00	HR	3.70			1.00	3.70	3.70
	TOTAL					6.00	287.92	1.00	3.70	291.62
	CLABB14	5 laborers + 1 loader, BH, wheel, 0.80 CY FE bkt				PROD = 100%			CREW HOURS =	45
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00	HR	43.11	1.00	43.11			43.11
MIL	B-LABORER L	Laborers, (Semi-Skilled)	4.00	HR	42.11	4.00	168.43			168.43
MIL	B-EQOPRLT L	Equip. Operators, Light	1.00	HR	45.57	1.00	45.57			45.57
GEN	L50Z4640 E	LOADER/BH, WH, 0.80 CY (0.6 M3)	1.00	HR	14.15			1.00	14.15	14.15
	TOTAL					6.00	257.11	1.00	14.15	271.25
	CODEB12B	1 eqoprcrn + 1 hydr excavator, crawler, 1.50 CY				PROD = 100%			CREW HOURS =	63
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00	HR	49.24	1.00	49.24			49.24
MIL	B-EQOPROILL	Equip. Operators, Oilers	1.00	HR	39.07	1.00	39.07			39.07
GEN	H25Z3185 E	HYD EXCV, CRAWELR, 1.50 CY	1.00	HR	64.15			1.00	64.15	64.15
	TOTAL					2.00	88.31	1.00	64.15	152.46
	CODEB12J	1 eqoprcrn + 1 hydr excavator, crawler, 5.75 CY				PROD = 100%			CREW HOURS =	1231
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00	HR	49.24	1.00	49.24			49.24
MIL	B-EQOPROILL	Equip. Operators, Oilers	1.00	HR	39.07	1.00	39.07			39.07
MIL	H25CA031 E	HYD EXCAV, CRWLR, 5.75 CY BKT,	1.00	HR	189.21			1.00	189.21	189.21
	TOTAL					2.00	88.31	1.00	189.21	277.51
	CODEB30	1 eqoprmed + 1 hydr excavator, crawler, 1.50 CY				PROD = 100%			CREW HOURS =	28
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00	HR	47.16	1.00	47.16			47.16
MIL	B-TRKDVRHVL	Truck Drivers, Heavy	2.00	HR	48.09	2.00	96.18			96.18
GEN	H25Z3185 E	HYD EXCV, CRAWELR, 1.50 CY	1.00	HR	64.15			1.00	64.15	64.15
GEN	T50Z7420 E	TRUCK, 40,000 - 45,000 (18 144	2.00	HR	35.03			2.00	70.07	70.07
GEN	T40Z7090 E	REAR DUMP BODY, 12 CY (9.2 M3)	2.00	HR	3.13			2.00	6.26	6.26
	TOTAL					3.00	143.35	5.00	140.48	283.82
	CODFB10N	1 eqoprmed + 1 loader, F/E, crawler, 1.50 CY				PROD = 100%			CREW HOURS =	127
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00	HR	47.16	1.00	47.16			47.16
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50	HR	42.11	0.50	21.05			21.05
GEN	L35Z4240 E	LOADER, F/E, CRWLR, 1.50 CY	1.00	HR	30.39			1.00	30.39	30.39
	TOTAL					1.50	68.22	1.00	30.39	98.61

SRC	ITEM ID	DESCRIPTION	NO.	UOM	RATE	**** LABOR **** HOURS	COST	**** EQUIP **** HOURS	COST	TOTAL COST
	CODLB6	1 eqoprlt + 1 loader, BH, wheel,0.80 CY F/E bkt				PROD = 100%			CREW HOURS =	56
MIL	B-LABORER L	Laborers, (Semi-Skilled)	2.00	HR	42.11	2.00	84.22			84.22
MIL	B-EQOPRLT L	Equip. Operators, Light	1.00	HR	45.57	1.00	45.57			45.57
GEN	L50Z4640 E	LOADER/BH, WH, 0.80 CY (0.6 M3)	1.00	HR	14.15			1.00	14.15	14.15
	TOTAL					3.00	129.78	1.00	14.15	143.93
	CODTN	1 eqoprmed + 1 Dozer, Cat D-9L, 460 Hp				PROD = 100%			CREW HOURS =	3947
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00	HR	49.24	1.00	49.24			49.24
MIL	B-EQOPRCRNF	Equip. Operators, Crane/Shovel	0.25	HR	50.24	0.25	12.56			12.56
MIL	T10CA022 E	BLADE, UNIVERSAL, HYDR (FOR D9	1.00	HR	13.24			1.00	13.24	13.24
MIL	T15CA017 E	DOZER,CWLR, D-9N,PS (ADD BLADE	1.00	HR	136.53			1.00	136.53	136.53
	TOTAL					1.25	61.79	2.00	149.77	211.56
	COFCB10A	1 eqoprmed + 1 roller, walk-behind, vib, dbl				PROD = 100%			CREW HOURS =	132
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00	HR	47.16	1.00	47.16			47.16
MIL	B-LABORER L	Laborers, (Semi-Skilled)	0.50	HR	42.11	0.50	21.05			21.05
GEN	C10Z1440 E	ROLLER,WALK-BHND DBL DRUM 29.5"	1.00	HR	8.82			1.00	8.82	8.82
	TOTAL					1.50	68.22	1.00	8.82	77.03
	COFCB18	3 laborers + 1 compactor, vibroplate, 21" x 24"				PROD = 100%			CREW HOURS =	20
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00	HR	43.11	1.00	43.11			43.11
MIL	B-LABORER L	Laborers, (Semi-Skilled)	2.00	HR	42.11	2.00	84.22			84.22
GEN	C10Z1400 E	COMPACTOR, VIBROPLATE, 21"X24"P	1.00	HR	1.50			1.00	1.50	1.50
	TOTAL					3.00	127.33	1.00	1.50	128.83
	COKBB45	1 eqoprmed + 1 asphalt distributor, 3,000 gal				PROD = 100%			CREW HOURS =	19
MIL	B-EQOPRMEDL	Equip. Operators, Medium	1.00	HR	47.16	1.00	47.16			47.16
MIL	B-TRKDVRHVL	Truck Drivers, Heavy	1.00	HR	48.09	1.00	48.09			48.09
GEN	A25Z0580 E	ASPHALT DISTR,3000 GAL(11355L)	1.00	HR	16.60			1.00	16.60	16.60
GEN	T50Z7580 E	TRUCK, 40,000 - 45,000 (18 144	1.00	HR	33.37			1.00	33.37	33.37
	TOTAL					2.00	95.25	2.00	49.98	145.23
	CTDHB34C	1 trkdvrhv + 1 trailer, dump, 17 CY				PROD = 100%			CREW HOURS =	4633
MIL	B-TRKDVRHVL	Truck Drivers, Heavy	1.00	HR	48.09	1.00	48.09			48.09
GEN	T50Z7420 E	TRUCK, 40,000 - 45,000 (18 144	1.00	HR	35.03			1.00	35.03	35.03
GEN	T45Z7080 E	TRAILER, END DUMP,17 CY (13 M3)	1.00	HR	5.22			1.00	5.22	5.22
	TOTAL					1.00	48.09	2.00	40.25	88.34
	ZOC BARGE1	Tug and flat barge				PROD = 100%			CREW HOURS =	1231
MIL	M10SM021 E	INLAND TUG, 44' X 14', 1000HP,	1.00	HR	138.56			1.00	138.56	138.56
NON	XX0XX006 E	DREDGE BARGE, 500 TO 800 TON	1.00	HR	22.03			1.00	22.03	22.03
MIL	X-EQOPRMEDL	Outside Equip. Operators, Mediu	1.00	HR	47.54	1.00	47.54			47.54
MIL	X-DIVERTEDF	Outside Divers Tenders	1.00	HR	59.05	1.00	59.05			59.05
MIL	X-LABORER L	Outside Laborers, (Semi-Skilled	1.00	HR	37.93	1.00	37.93			37.93
FOP	FE-KITCH L	Kitchen Chiefs & Cooks	0.50	HR	11.04	0.50	5.52			5.52
	TOTAL					3.50	150.04	2.00	160.59	310.64

SRC	ITEM ID	DESCRIPTION	NO.	UOM	RATE	**** LABOR **** HOURS	COST	**** EQUIP **** HOURS	COST	TOTAL COST
	ZOC DREDG1	150T Floating Mech Dredge, 5CY Bucket & Tug			PROD = 100%				CREW HOURS =	224
USR *	XX0XX001 E	150ton Floating Crane 290hp W/2	1.00	HR	193.18			1.00	193.18	193.18
USR *	M10SM008 E	BOAT, 19' RSTABOUT,TRIHULL,2600	1.00	HR	31.92			1.00	31.92	31.92
USR *	H20SK002 E	HOIST, DOUBLE DRUM W/ 7/8" CABL	2.00	HR	40.08			2.00	80.16	80.16
USR *	G10KH003 S	GEN SET, 5.0 KW, PORTABLE	2.00	HR	2.18			2.00	4.36	4.36
USR *	XMIXX020 E	Small Tools	1.00	HR	1.57			1.00	1.57	1.57
USR	B25ES032 S	BKT,CLAM, 5.00CY, HVYDTY/SQ NOS	1.00	HR	14.55			1.00	14.55	14.55
MIL	X-LABORER L	Outside Laborers, (Semi-Skilled	1.00	HR	37.93	1.00	37.93			37.93
MIL	X-EQOPRHVYL	Outside Equip. Operators, Heavy	1.00	HR	49.24	1.00	49.24			49.24
MIL	X-EQOPRMEDL	Outside Equip. Operators, Mediu	1.00	HR	47.54	1.00	47.54			47.54
MIL	X-EQOPROILL	Outside Equip. Oilers	1.00	HR	39.28	1.00	39.28			39.28
MIL	X-EQOPRLT L	Marine Deck Engineer	1.00	HR	53.19	1.00	53.19			53.19
MIL	X-LABORER L	Marine Deck Hand	2.00	HR	37.93	2.00	75.87			75.87
MIL	M10SM021 E	INLAND TUG, 44' X 14',	1.00	HR	138.56			1.00	138.56	138.56
MIL	X-ELECTRN L	Tug Boat Captain	1.00	HR	57.82	1.00	57.82			57.82
GEN	XX0Z9760 E	DREDGE BARGE, 100 - 400 TON	1.00	HR	14.84			1.00	14.84	14.84
	TOTAL					8.00	360.86	10.00	479.14	840.01
*	ZOC EXCAV4	5.75 Cy Hydr. Excavator Long Reach + 3 Lab			PROD = 100%				CREW HOURS =	1410
MIL	B-EQOPRCRNL	Equip. Operators, Crane/Shovel	1.00	HR	49.24	1.00	49.24			49.24
MIL	B-LABORER L	Laborers, (Semi-Skilled)	2.00	HR	42.11	2.00	84.22			84.22
MIL	B-LABORER F	Laborers, (Semi-Skilled)	1.00	HR	43.11	1.00	43.11			43.11
MIL	H25CA031 E	HYD EXCAV, CRWLR, 5.75 CY BKT,	1.00	HR	189.21			1.00	189.21	189.21
	TOTAL					4.00	176.56	1.00	189.21	365.77

SRC	LABOR ID	DESCRIPTION	BASE	OVERTM	TXS/INS	FRNG	TRVL	RATE	UOM	UPDATE	**** TOTAL **** DEFAULT	HOURS
MIL	B-CARPNTER	Carpenter (added 10% more)	29.81	0.0%	25.9%	11.70	0.00	49.24	HR	01/24/02	31.68	10
MIL	B-CEMTFINR	Cement Finishers	27.85	0.0%	23.2%	8.48	0.00	42.79	HR	01/24/02	28.47	3
MIL	B-EQOPRCRN	Equip. Operators, Crane/Shovel	32.55	0.0%	22.1%	9.49	0.00	49.24	HR	01/23/02	32.62	7638
MIL	B-EQOPRLT	Equip. Operators, Light	29.71	0.0%	21.4%	9.49	0.00	45.57	HR	01/23/02	28.51	101
MIL	B-EQOPRMED	Equip. Operators, Medium	31.05	0.0%	21.3%	9.49	0.00	47.16	HR	01/23/02	30.27	305
MIL	B-EQOPROIL	Equip. Operators, Oilers	24.29	0.0%	21.8%	9.49	0.00	39.07	HR	01/23/02	24.69	1294
MIL	B-LABORER	Laborers, (Semi-Skilled)	24.94	0.0%	32.0%	9.20	0.00	42.11	HR	01/23/02	23.81	4763
MIL	B-RODMAN	Rodmen, (Reinforcing)	27.50	0.0%	49.9%	13.10	0.00	54.31	HR	01/24/02	36.56	3
MIL	B-TRKDVRHV	Truck Drivers, Heavy	31.65	0.0%	22.8%	9.22	0.00	48.09	HR	01/24/02	24.66	4707
FOP	FE-KITCH	Kitchen Chiefs & Cooks	8.36	0.0%	21.4%	0.89	0.00	11.04	HR	01/01/96	11.04	616
MIL	X-DIVERTED	Outside Divers Tenders	28.40	0.0%	63.6%	11.60	0.00	58.05	HR	01/24/02	37.48	1231
MIL	X-ELECTRN	Outside Electricians (added 10%	35.37	0.0%	22.6%	14.46	0.00	57.82	HR	01/24/02	33.43	224
MIL	X-EQOPRHVY	Outside Equip. Operators, Heavy	32.55	0.0%	22.1%	9.49	0.00	49.24	HR	01/24/02	31.93	224
MIL	X-EQOPRLT	Outside Equip. Operators, Light	30.34	0.0%	44.0%	9.49	0.00	53.19	HR	01/24/02	28.22	224
MIL	X-EQOPRMED	Outside Equip. Operators, Medium	31.05	0.0%	22.5%	9.49	0.00	47.54	HR	01/24/02	30.68	1455
MIL	X-EQOPROIL	Outside Equip. Oilers	24.29	0.0%	22.7%	9.49	0.00	39.28	HR	01/24/02	24.82	224
MIL	X-LABORER	Outside Laborers, (Semi-Skilled)	25.69	0.0%	11.8%	9.20	0.00	37.93	HR	01/24/02	24.50	1904

SRC	ID.NO.	EQUIPMENT DESCRIPTION	DEPR	FCCM	FUEL	FOG	TR WR	TR REP	EQ REP	TOTAL RATE		** TOTAL ** HOURS
GEN	A25Z0580	ASPHALT DISTR,3000 GAL(11355L)	5.56	1.78		1.80			7.47	16.60	HR	19
MIL	B25ES032	BKT,CLAM, 5.00CY, HVYDTY/SQ NOSE	4.70	1.68					4.87	11.26	HR	224
GEN	C10Z1400	COMPACTOR, VIBROPLATE, 21" X 24"	0.27	0.06	0.47	0.15			0.56	1.50	HR	20
GEN	C10Z1440	ROLLER,WALK-BHND DBL DRUM 29.5"	2.55	0.52	0.37	0.11			5.26	8.82	HR	132
MIL	G10KH003	GENERATOR, 5.0 KW, 120/240V,PORT	0.16	0.05	1.03	0.31			0.14	1.69	HR	449
MIL	H20SK002	HOIST, DOUBLE DRUM W/0.88" CABLE	12.92	4.61	4.86	1.45			16.25	40.08	HR	449
MIL	H25CA031	HYD EXCAV, CRWLR, 5.75 CY BKT,	49.83	24.42	19.07	5.67			90.21	189.21	HR	2641
GEN	H25Z3185	HYD EXCV, CRAWELR, 1.50 CY	18.91	7.44	9.22	4.35			24.24	64.15	HR	91
GEN	L35Z4240	LOADER, F/E, CRWLR, 1.50 CY	6.65	2.62	4.74	2.23			14.15	30.39	HR	127
GEN	L50Z4640	LOADER/BH, WH, 0.80 CY (0.6 M3),	3.15	1.46	3.16	1.25	0.70	0.13	4.30	14.15	HR	101
MIL	M10SM008	BOAT, 19' RSTABOUT,TRIHULL,2600#	2.32	0.98	18.76	7.44			2.40	31.92	HR	224
MIL	M10SM021	INLAND TUG, 44' X 14', 1000HP,	20.23	13.94	52.65	24.81			26.93	138.56	HR	1455
MAP	T10CA022	BLADE, UNIVERSAL, HYDR, D-9	4.90	1.93		0.19			6.23	13.24	HR	3947
MAP	T15CA017	DOZER,CWLR, D-9N,PS	36.96	14.54	19.48	6.76			58.79	136.53	HR	3947
GEN	T40Z7090	REAR DUMP BODY, 12 CY (9.2 M3)	1.26	0.40		0.09			1.38	3.13	HR	55
GEN	T45Z7080	TRAILER, END DUMP,17 CY (13 M3)	1.88	0.76			0.63	0.12	1.84	5.22	HR	4633
GEN	T50Z7420	TRUCK, 40,000 - 45,000 (18 144 -	9.27	3.00	9.46	3.29	0.44	0.08	9.49	35.03	HR	4689
GEN	T50Z7580	TRUCK, 40,000 - 45,000 (18 144 -	7.77	2.66	9.46	3.29	1.81	0.34	8.05	33.37	HR	19
GEN	XMEZ9520	VIBRATOR, CONCRETE	1.04	0.16	0.69	0.48			1.33	3.70	HR	3
NON	XMIXX020	SMALL TOOLS	0.50	0.22	0.16	0.07			0.63	1.57	HR	224
NON	XX0XX001	FLOATING CRANE, 150T, 250FT BOOM	64.50	23.00	18.19	7.94			79.55	193.18	HR	224
NON	XX0XX006	DREDGE BARGE, 500 TO 800 TON	7.36	2.63	2.08	0.90			9.07	22.03	HR	1231
GEN	XX0Z9760	DREDGE BARGE, 100 - 400 TON	4.96	1.76	1.40	0.61			6.11	14.84	HR	224

No errors detected...

* * * END OF ERROR REPORT * * *