

HMS Project No.: 10104

1. MACHINE SHOP/OFFICE BUILDING (20,511 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

08 - MECHANICAL (Continued)

Clean clogged drain piping (20%)	105	LF	1.00	105	4.50	473	5.50	578
Check water piping and repair minor leaks (10%)	70	LF	5.00	350	8.50	595	13.50	945
Service boilers, pumps, expansion tank, separator and flues	2	EA	300.00	600	1200.00	2,400	1500.00	3,000
Replace heating coil valves and controls (20%)	2	EA	135.00	270	75.00	150	210.00	420
Repair CUH and UH (10%)	8	EA	110.00	880	135.00	1,080	245.00	1,960
Replace baseboard enclosures (10%)	7	LF	14.00	98	9.50	67	23.50	165
Drain and add new glycol media for heating	340	GAL	12.50	4,250	3.25	1,105	15.75	5,355
Check and repair leaks on hydronic piping (10%)	105	LF	5.70	599	10.50	1,103	16.20	1,702
Replace miscellaneous faulty hydronic valves	6	EA	152.00	912	95.00	570	247.00	1,482
Service 13,620 CFM AHU, replace sheaves, bearings and belts	1	EA	550.00	550	1750.00	1,750	2300.00	2,300
Service 2,900 CFM AHU, replace sheaves, bearings and belts	1	EA	250.00	250	850.00	850	1100.00	1,100

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D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

08 - MECHANICAL (Continued)

Service exhaust fans, 800 to 135 CFM	3	EA	50.00	150	215.00	645	265.00	795
Service exhaust fans, 2,000 to 1,240 CFM	4	EA	100.00	400	350.00	1,400	450.00	1,800
Clean grilles, diffusers, louvers, etc.	56	EA	3.00	168	25.00	1,400	28.00	1,568
Clean ductwork (10%)	580	LBS	0.20	116	1.10	638	1.30	754
Service dust collection system and drains	1	LOT	300.00	300	700.00	700	1000.00	1,000
Service welding hood and fan	1	LOT	70.00	70	175.00	175	245.00	245
Service DDC system for entire facility	20,511	SF	0.15	3,077	0.35	7,179	0.50	10,256
Service and recertify sprinkler system	20,973	SF	0.10	2,097	0.25	5,243	0.35	7,340
Change fuel oil filters and valves at burners	6	EA	115.00	690	145.00	870	260.00	1,560
SUBTOTAL:				\$ 17,782		\$ 32,523		\$ 50,305
General Conditions, Overhead and Profit	27.00%			4,801		8,781		13,582
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			3,839		7,022		10,861
TOTAL 08 - MECHANICAL:				\$ 26,422		\$ 48,326		\$ 74,748

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D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

09 - ELECTRICAL

Service MDP and subpanels and re-tag	7	EA	250.00	1,750	650.00	4,550	900.00	6,300
Service 75 KVA transformers	2	EA	200.00	400	500.00	1,000	700.00	1,400
Megger test main conductors and re-tag feeders	360	LF	0.30	108	1.15	414	1.45	522
Check ground rod connections	2	EA			25.00	50	25.00	50
Clean and relamp fixtures (20%)	40	EA	18.00	720	50.00	2,000	68.00	2,720
Change exit sign/emergency light batteries (30%)	12	EA	95.00	1,140	55.00	660	150.00	1,800
Check devices, replace missing plates, etc. (10%)	22	EA	5.00	110	20.00	440	25.00	550
Service lighting controls	2	EA	30.00	60	75.00	150	105.00	210
Check motor connections, starter/disconnect switches, etc.	52	EA			35.00	1,820	35.00	1,820
Megger test conductors and re-tag feeders	7,686	LF	0.10	769	0.30	2,306	0.40	3,075
Service fire alarm and annunciator panels	2	EA	150.00	300	350.00	700	500.00	1,000
Replace facility fire alarm devices (20%)	10	EA	125.00	1,250	120.00	1,200	245.00	2,450

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			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

09 - ELECTRICAL (Continued)

Check and service data/com systems	1	LOT	250.00	250	650.00	650	900.00	900
SUBTOTAL:				\$ 6,857		\$ 15,940		\$ 22,797
General Conditions, Overhead and Profit	27.00%			1,851		4,304		6,155
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			1,480		3,441		4,921
TOTAL 09 - ELECTRICAL:				\$ 10,188		\$ 23,685		\$ 33,873

10 - EQUIPMENT

Appliances and Equipment

Repair appliances	5	EA						N.I.C.
Repair shop equipment	1	LOT						N.I.C.
Minor repairs to casework (missing hardware, etc.)	118	LF	3.50	413	6.75	797	10.25	1,210
Repair dock bumper, hydraulic lifts, door seals, strip curtains, etc.	1	LOT	500.00	500	1200.00	1,200	1700.00	1,700

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D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

10 - EQUIPMENT (Continued)

Furnishings

Clean Venetian blinds	636	SF	0.10	64	0.70	445	0.80	509
SUBTOTAL:				\$ 977		\$ 2,442		\$ 3,419
General Conditions, Overhead and Profit	27.00%			264		659		923
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			211		527		738
TOTAL 10 - EQUIPMENT:				\$ 1,452		\$ 3,628		\$ 5,080
TOTAL D. PERIODIC RENEWAL/REPLACEMENT COSTS:				\$ 81,275		\$ 152,894		\$ 234,169

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS

NOTE: All costs are in 2011 dollars and have not been escalated to the end of life of building at 30 years period. Also, all replacement costs are based on major components or GFA of building arrived from "as-built" drawings.

01 - SITE WORK

NOTE: All major site improvements and utilities components with site section elsewhere.

New Building

Building pad preparation	18,000	SF	1.35	24,300	1.20	21,600	2.55	45,900
Mechanical utilities connections to new building: Water, sewer, storm drain and fuel	1	LOT	2500.00	2,500	5500.00	5,500	8000.00	8,000
Electrical utilities connections to new building: Power and communications	1	LOT	1500.00	1,500	3000.00	3,000	4500.00	4,500

Demolish Existing Building

Remove equipment, disconnect utilities and demolish existing metal framed building up to slab level	20,511	SF			9.15	187,676	9.15	187,676
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			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

01 - SITE WORK (Continued)

Demolish Existing Building (Continued)

Demolish slab and foundations up to 18" below grade	16,070	SF			3.55	57,049	3.55	57,049
Level and grade site	16,070	SF	1.30	20,891	1.50	24,105	2.80	44,996
Dispose debris (except salvageable materials)	450	TONS	70.00	31,500	20.00	9,000	90.00	40,500
SUBTOTAL:				\$ 80,691		\$ 307,930		\$ 388,621
General Conditions, Overhead and Profit	37.00%			29,856		113,934		143,790
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			18,793		71,717		90,510
TOTAL 01 - SITE WORK:				\$ 129,340		\$ 493,581		\$ 622,921

02 - SUBSTRUCTURE

Concrete foundations, bases and stem walls, insulated and dampproofed	730	LF	48.50	35,405	27.00	19,710	75.50	55,115
Foundation drains, geowrap and drain rock	580	LF	9.50	5,510	8.75	5,075	18.25	10,585
6" reinforced concrete slab at shop and dock (145 CY)	7,845	SF	6.90	54,131	4.20	32,949	11.10	87,080

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

02 - SUBSTRUCTURE (Continued)

5" reinforced concrete slab elsewhere	8,505	SF	5.50	46,778	3.80	32,319	9.30	79,097
Elevator pit and ladder	1	EA	1500.00	1,500	2500.00	2,500	4000.00	4,000
SUBTOTAL:				\$ 143,324		\$ 92,553		\$ 235,877
General Conditions, Overhead and Profit	37.00%			53,030		34,245		87,275
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			33,380		21,556		54,936
TOTAL 02 - SUBSTRUCTURE:				\$ 229,734		\$ 148,354		\$ 378,088

03 - SUPERSTRUCTURE

Structural steel columns, beams, etc. for mezzanine floors	30	TONS	2300.00	69,000	2000.00	60,000	4300.00	129,000
1 1/2" steel decking with 4" concrete topping	4,905	SF	5.40	26,487	3.35	16,432	8.75	42,919
Mezzanine guardrails	63	LF	49.00	3,087	23.00	1,449	72.00	4,536
Rigid steel roof frame, beams, bracings and roof/wall purlins and girts	85	TONS	2500.00	212,500	2000.00	170,000	4500.00	382,500
1 1/2" steel roof decking	18,835	SF	2.90	54,622	1.15	21,660	4.05	76,282

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

03 - SUPERSTRUCTURE (Continued)

Concrete filled steel stairs and framing	694	SF	38.50	26,719	25.00	17,350	63.50	44,069
Multi-pipe railing	26	LF	49.00	1,274	23.00	598	72.00	1,872
Single pipe railing	126	LF	18.50	2,331	12.00	1,512	30.50	3,843
Special inspections	1	LOT	25000.00	25,000			25000.00	25,000
40 ton crane and operator	2	MOS	23500.00	47,000	6000.00	12,000	29500.00	59,000
SUBTOTAL:				\$ 468,020		\$ 301,001		\$ 769,021
General Conditions, Overhead and Profit	37.00%			173,167		111,370		284,537
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			109,002		70,103		179,105
TOTAL 03 - SUPERSTRUCTURE:				\$ 750,189		\$ 482,474		\$ 1,232,663

04 - EXTERIOR CLOSURE

Metal siding, studs, plywood insulation, vapor retarder and gypboard wall assembly	17,872	SF	10.20	182,294	5.75	102,764	15.95	285,058
Corrugated siding wainscot	1,680	SF	6.80	11,424	2.90	4,872	9.70	16,296

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

04 - EXTERIOR CLOSURE (Continued)

Single doors	14	EA	790.00	11,060	245.00	3,430	1035.00	14,490
Double doors	2	PRS	1825.00	3,650	565.00	1,130	2390.00	4,780
32'0"x28'0" overhead door	1	EA	25650.00	25,650	5200.00	5,200	30850.00	30,850
16'0"x16'0" overhead door	1	EA	7170.00	7,170	1350.00	1,350	8520.00	8,520
12'0"x16'0" overhead door	1	EA	5370.00	5,370	965.00	965	6335.00	6,335
12'0"x14'0" overhead door	1	EA	4700.00	4,700	845.00	845	5545.00	5,545
8'0"x14'0" overhead doors	3	EA	3150.00	9,450	670.00	2,010	3820.00	11,460
Insulated glazed PVC windows	560	SF	41.50	23,240	9.25	5,180	50.75	28,420
Metal louvers	50	SF	26.00	1,300	7.00	350	33.00	1,650
Caulking and sealants	1	LOT	1000.00	1,000	2200.00	2,200	3200.00	3,200
SUBTOTAL:				\$ 286,308		\$ 130,296		\$ 416,604
General Conditions, Overhead and Profit	37.00%			105,934		48,210		154,144

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		66,681		30,346		97,027
TOTAL 04 - EXTERIOR CLOSURE:			\$ 458,923		\$ 208,852		\$ 667,775

05 - ROOFING

5/8" plywood sheathing and ice/water shield	18,532	SF	1.50	27,798	1.70	31,504	3.20	59,302
Prefinished metal roofing	18,532	SF	5.70	105,632	3.50	64,862	9.20	170,494
Metal gutters	508	LF	4.30	2,184	3.90	1,981	8.20	4,165
Downspouts	292	VLF	6.15	1,796	3.30	964	9.45	2,760
Flashings	720	LF	3.30	2,376	2.55	1,836	5.85	4,212
R-38 batt insulation and vapor retarder to building areas	16,070	SF	1.15	18,481	0.65	10,446	1.80	28,927
SUBTOTAL:				\$ 158,267		\$ 111,593		\$ 269,860
General Conditions, Overhead and Profit	37.00%			58,559		41,289		99,848
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			36,860		25,990		62,850
TOTAL 05 - ROOFING:				\$ 253,686		\$ 178,872		\$ 432,558

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

06 - INTERIOR CONSTRUCTION

Metal studs/gypboard partitions	14,500	SF	2.25	32,625	3.65	52,925	5.90	85,550
Doors	35	EA	770.00	26,950	290.00	10,150	1060.00	37,100
Windows	155	SF	32.50	5,038	8.50	1,318	41.00	6,356
Floor sealers	15,756	SF	0.35	5,515	1.05	16,544	1.40	22,059
Ceramic tiles	1,120	SF	6.75	7,560	9.50	10,640	16.25	18,200
Vinyl tiles	3,635	SF	1.65	5,998	1.35	4,907	3.00	10,905
Ceramic tile base	150	LF	5.60	840	7.50	1,125	13.10	1,965
Rubber base	1,800	LF	1.20	2,160	1.30	2,340	2.50	4,500
FRP wall panels	336	SF	3.00	1,008	2.50	840	5.50	1,848
Paint metal wainscot	816	SF	0.25	204	1.45	1,183	1.70	1,387
Paint gypboard walls	44,000	SF	0.25	11,000	1.45	63,800	1.70	74,800
5/8" gypboard ceilings, painted	3,531	SF	1.70	6,003	2.60	9,181	4.30	15,184
Acoustic tile ceilings and bracings	1,575	SF	2.15	3,386	1.70	2,678	3.85	6,064

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

06 - INTERIOR CONSTRUCTION (Continued)

Paint exposed steel beams, columns, etc. (GFA)	20,511	SF	0.20	4,102	1.35	27,690	1.55	31,792
Toilet partitions	4	EA	875.00	3,500	200.00	800	1075.00	4,300
Urinal screens	2	EA	240.00	480	80.00	160	320.00	640
Toilet accessories	56	EA	65.00	3,640	45.00	2,520	110.00	6,160
Fire extinguishers, cabinet mounted	8	EA	170.00	1,360	80.00	640	250.00	2,000
Shower seats	2	EA	267.00	534	105.00	210	372.00	744
Lockers	57	EA	247.00	14,079	75.00	4,275	322.00	18,354
Benches	30	LF	39.00	1,170	15.00	450	54.00	1,620
Rain gear hook sets	50	EA	15.00	750	10.00	500	25.00	1,250
Interior door signage	33	EA	33.00	1,089	15.00	495	48.00	1,584
Miscellaneous specialties	1	LOT	3500.00	3,500	1000.00	1,000	4500.00	4,500
Exterior building mounted signs	1	LOT	1700.00	1,700	550.00	550	2250.00	2,250
SUBTOTAL:				\$ 144,191		\$ 216,921		\$ 361,112

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

06 - INTERIOR CONSTRUCTION (Continued)

General Conditions, Overhead and Profit	37.00%		53,351		80,261		133,612
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		33,582		50,521		84,103
TOTAL 06 - INTERIOR CONSTRUCTION:			\$ 231,124		\$ 347,703		\$ 578,827

07 - CONVEYING

2-stop elevator	1	EA	55000.00	55,000	25000.00	25,000	80000.00	80,000
Elevator permits and inspections	1	LOT	3500.00	3,500	500.00	500	4000.00	4,000
10 ton bridge crane, rails and controls	1	LOT	35000.00	35,000	15000.00	15,000	50000.00	50,000
SUBTOTAL:				\$ 93,500		\$ 40,500		\$ 134,000
General Conditions, Overhead and Profit	37.00%			34,595		14,985		49,580
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			21,776		9,432		31,208
TOTAL 07 - CONVEYING:				\$ 149,871		\$ 64,917		\$ 214,788

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

08 - MECHANICAL

Plumbing fixtures and rough-in	20,511	GFA	3.20	65,635	4.55	93,325	7.75	158,960
HVAC systems	20,511	GFA	26.50	543,542	15.00	307,665	41.50	851,207
Controls, test and balance	20,511	GFA	3.95	81,018	3.20	65,635	7.15	146,653
Dust collection system	1	LOT	22000.00	22,000	8500.00	8,500	30500.00	30,500
Portable welding hood and arm	1	LOT	4500.00	4,500	1500.00	1,500	6000.00	6,000
Fuel oil, day tanks, pumps, piping and connections	1	LOT	16500.00	16,500	5000.00	5,000	21500.00	21,500
Wet pipe sprinkler system	20,511	SF	2.20	45,124	2.50	51,278	4.70	96,402
SUBTOTAL:				\$ 778,319		\$ 532,903		\$ 1,311,222
General Conditions, Overhead and Profit	37.00%			287,978		197,174		485,152
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			181,270		124,113		305,383
TOTAL 08 - MECHANICAL:				\$ 1,247,567		\$ 854,190		\$ 2,101,757

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

09 - ELECTRICAL

480 volt service and distribution	20,511	SF	3.70	75,891	2.90	59,482	6.60	135,373
Exterior HPS fixtures	12	EA	395.00	4,740	150.00	1,800	545.00	6,540
Interior metal halide fixtures	40	EA	467.00	18,680	170.00	6,800	637.00	25,480
Fluorescent fixtures	140	EA	148.00	20,720	90.00	12,600	238.00	33,320
Miscellaneous industrial fixtures	50	EA	130.00	6,500	80.00	4,000	210.00	10,500
Exit signs	18	EA	167.00	3,006	115.00	2,070	282.00	5,076
Emergency light fixtures	36	EA	247.00	8,892	125.00	4,500	372.00	13,392
Conduit, wiring and devices	20,511	SF	2.50	51,278	3.75	76,916	6.25	128,194
Fire alarm system	20,511	SF	1.70	34,869	2.10	43,073	3.80	77,942
Data/com systems	20,511	SF	1.55	31,792	2.00	41,022	3.55	72,814
SUBTOTAL:				\$ 256,368		\$ 252,263		\$ 508,631
General Conditions, Overhead and Profit	37.00%			94,856		93,337		188,193

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			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		59,708		58,752		118,460
TOTAL 09 - ELECTRICAL:			\$ 410,932		\$ 404,352		\$ 815,284

10 - EQUIPMENT

Appliances	5	EA						N.I.C.
Casework	118	LF	140.00	16,520	35.00	4,130	175.00	20,650
Shop equipment	1	LOT						By Others
Dock bumpers, leveler, lights, seals, etc.	1	LOT	32500.00	32,500	7500.00	7,500	40000.00	40,000
Window blinds	636	SF	8.25	5,247	1.20	763	9.45	6,010
SUBTOTAL:				\$ 54,267		\$ 12,393		\$ 66,660
General Conditions, Overhead and Profit	37.00%			20,079		4,585		24,664
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			12,639		2,886		15,525
TOTAL 10 - EQUIPMENT:				\$ 86,985		\$ 19,864		\$ 106,849

TOTAL E. TOTAL REPLACEMENT COST:				\$ 3,948,351		\$ 3,203,159		\$ 7,151,510
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HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

A. OPERATIONS COSTS

Building operations costs like utilities, power, regular clean-up, etc.

12 MOS

By Others

TOTAL A. OPERATIONS COSTS:

By Others

B. IMMEDIATE REPAIRS (2011)

None

C. REGULAR MAINTENANCE COSTS

Following inspections performed by local professionals once a year.

Check unit heater and eyewash sink for proper operation once a year

1 Time

50.00

50

200.00

200

250.00

250

Check electrical panel and disconnect switch for proper operation once a year

1 Time

50.00

50

250.00

250

300.00

300

TOTAL C. REGULAR MAINTENANCE COSTS:

\$ 100

\$ 450

\$ 550

D. PERIODIC RENEWAL/REPLACEMENT COSTS

At 5-year intervals.

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

02 - SUBSTRUCTURE

Check concrete foundation and slab for cracks, etc. and repair as necessary	1,089	SF	0.50	545	1.15	1,252	1.65	1,797
SUBTOTAL:				\$ 545		\$ 1,252		\$ 1,797
General Conditions, Overhead and Profit	27.00%			147		338		485
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			118		270		388
TOTAL 02 - SUBSTRUCTURE:				\$ 810		\$ 1,860		\$ 2,670

03 - SUPERSTRUCTURE

Check rigid steel roof framing for soundness and repair any defects	1,089	SF	0.70	762	1.20	1,307	1.90	2,069
SUBTOTAL:				\$ 762		\$ 1,307		\$ 2,069
General Conditions, Overhead and Profit	27.00%			206		353		559
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			165		282		447
TOTAL 03 - SUPERSTRUCTURE:				\$ 1,133		\$ 1,942		\$ 3,075

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

04 - EXTERIOR CLOSURE

Check and repair fence and gate	33	LF	15.00	495	7.00	231	22.00	726
Check and repair exterior wall system (3% of wall area)	70	SF	6.50	455	3.70	259	10.20	714
Change single door hardware	1	EA	425.00	425	240.00	240	665.00	665
Service 10'0"x14'0" roll-up door	1	EA	70.00	70	220.00	220	290.00	290
SUBTOTAL:				\$ 1,445		\$ 950		\$ 2,395
General Conditions, Overhead and Profit	27.00%			390		257		647
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			312		205		517
TOTAL 04 - EXTERIOR CLOSURE:				\$ 2,147		\$ 1,412		\$ 3,559

05 - ROOFING

Patch/repair metal roofing and insulation (assume 3%)	35	SF	5.70	200	3.50	123	9.20	323
SUBTOTAL:				\$ 200		\$ 123		\$ 323
General Conditions, Overhead and Profit	27.00%			54		33		87

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			43		27		70
TOTAL 05 - ROOFING:				<u>\$ 297</u>		<u>\$ 183</u>		<u>\$ 480</u>

06 - INTERIOR CONSTRUCTION

Patch and repair interior finishes and specialties (5%)	55	SF	2.25	124	2.70	149	4.95	273
SUBTOTAL:				<u>\$ 124</u>		<u>\$ 149</u>		<u>\$ 273</u>
General Conditions, Overhead and Profit	27.00%			33		40		73
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			27		32		59
TOTAL 06 - INTERIOR CONSTRUCTION:				<u>\$ 184</u>		<u>\$ 221</u>		<u>\$ 405</u>

07 - CONVEYING

None.

08 - MECHANICAL

Service 3 KW explosion proof unit heater	1	EA	50.00	50	150.00	150	200.00	200
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HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

08 - MECHANICAL (Continued)

Replace eyewash station valves	1	LOT	115.00	115	150.00	150	265.00	265
Check water piping for leaks and repairs as necessary	60	LF	5.00	300	8.50	510	13.50	810
Ventilation and sprinkler systems								None
SUBTOTAL:				\$ 465		\$ 810		\$ 1,275
General Conditions, Overhead and Profit	27.00%			126		219		345
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			100		175		275
TOTAL 08 - MECHANICAL:				\$ 691		\$ 1,204		\$ 1,895

09 - ELECTRICAL

Service 100 amp panel and disconnect switch	1	LOT	50.00	50	150.00	150	200.00	200
Megger test and re-tag feeders	25	LF	1.00	25	2.50	63	3.50	88
Relamp explosion proof fixtures and re-gasket	6	EA	125.00	750	165.00	990	290.00	1,740
Relamp exterior fixtures	2	EA	60.00	120	85.00	170	145.00	290

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

09 - ELECTRICAL (Continued)

Megger test conductors, check devices and re-tag	216	LF	0.50	108	1.10	238	1.60	346
Fire alarm and communication system								None
SUBTOTAL:				\$ 1,053		\$ 1,611		\$ 2,664
General Conditions, Overhead and Profit	27.00%			284		435		719
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			227		348		575
TOTAL 09 - ELECTRICAL:				\$ 1,564		\$ 2,394		\$ 3,958

10 - EQUIPMENT

None.

TOTAL D. PERIODIC RENEWAL/REPLACEMENT COSTS:				\$ 6,826		\$ 9,216		\$ 16,042
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HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS

Replacement of facility after 30 years in 2011 dollars.

01 - SITE WORK

New Building

Building pad preparation	1,200	SF	1.80	2,160	1.50	1,800	3.30	3,960
Water/sewer/storm drain connections	1	LOT	500.00	500	1500.00	1,500	2000.00	2,000
Electric power connections	1	LOT	300.00	300	700.00	700	1000.00	1,000

Demolish Existing Building

Disconnect utilities and demolish existing metal framed building up to slab level	1,089	SF			7.50	8,168	7.50	8,168
Demolish 6" concrete bin wall	224	SF			10.00	2,240	10.00	2,240
Demolish concrete slab and foundations up to 18" below grade	1,089	SF			5.50	5,990	5.50	5,990
Level and grade site	1,089	SF	1.50	1,634	1.25	1,361	2.75	2,995
Dispose debris	50	TONS	70.00	3,500	20.00	1,000	90.00	4,500

SUBTOTAL:

\$ 8,094	\$ 22,759	\$ 30,853
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HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

01 - SITE WORK (Continued)

General Conditions, Overhead and Profit	37.00%			2,995		8,421		11,416
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			1,885		5,301		7,186
TOTAL 01 - SITE WORK:				\$ 12,974		\$ 36,481		\$ 49,455

02 - SUBSTRUCTURE

Concrete foundations, bases and stem walls, insulated and dampproofed	132	LF	52.00	6,864	30.00	3,960	82.00	10,824
4" concrete slab	1,089	SF	4.10	4,465	3.50	3,812	7.60	8,277
16"x12" trench drain and grating	60	LF	43.00	2,580	15.00	900	58.00	3,480
SUBTOTAL:				\$ 13,909		\$ 8,672		\$ 22,581
General Conditions, Overhead and Profit	37.00%			5,146		3,209		8,355
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			3,239		2,020		5,259
TOTAL 02 - SUBSTRUCTURE:				\$ 22,294		\$ 13,901		\$ 36,195

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

03 - SUPERSTRUCTURE

6" concrete bin walls	224	SF	22.50	5,040	17.25	3,864	39.75	8,904
Rigid steel frame, purlins and girts	8	TONS	2500.00	20,000	2000.00	16,000	4500.00	36,000
1 1/2" steel roof decking	1,147	SF	2.90	3,326	1.15	1,319	4.05	4,645
Special inspections	1	LOT	7000.00	7,000			7000.00	7,000
10 ton crane and operator	0.50	MOS	12000.00	6,000	6000.00	3,000	18000.00	9,000
SUBTOTAL:				\$ 41,366		\$ 24,183		\$ 65,549
General Conditions, Overhead and Profit	37.00%			15,305		8,948		24,253
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			9,634		5,632		15,266
TOTAL 03 - SUPERSTRUCTURE:				\$ 66,305		\$ 38,763		\$ 105,068

04 - EXTERIOR CLOSURE

8'0" chain link fence	23	LF	43.75	1,006	14.50	334	58.25	1,340
10'0"x8'0" gate	1	EA	990.00	990	255.00	255	1245.00	1,245

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

04 - EXTERIOR CLOSURE (Continued)

Metal siding, studs, plywood, insulation and gypboard walls	2,294	SF	10.20	23,399	5.75	13,191	15.95	36,590
10'0"x14'0" overhead door	1	EA	3350.00	3,350	700.00	700	4050.00	4,050
Single door	1	EA	790.00	790	245.00	245	1035.00	1,035
SUBTOTAL:				\$ 29,535		\$ 14,725		\$ 44,260
General Conditions, Overhead and Profit	37.00%			10,928		5,448		16,376
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			6,879		3,429		10,308
TOTAL 04 - EXTERIOR CLOSURE:				\$ 47,342		\$ 23,602		\$ 70,944

05 - ROOFING

5/8" plywood sheathing and ice/water shield	1,147	SF	1.50	1,721	1.70	1,950	3.20	3,671
Metal roofing, purlins, R-38 insulation and vapor retarder	1,147	SF	6.85	7,857	4.15	4,760	11.00	12,617
Flashings	132	LF	3.50	462	2.70	356	6.20	818
SUBTOTAL:				\$ 10,040		\$ 7,066		\$ 17,106

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

General Conditions, Overhead and Profit	37.00%			3,715		2,614		6,329
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			2,338		1,646		3,984
TOTAL 05 - ROOFING:				\$ 16,093		\$ 11,326		\$ 27,419

06 - INTERIOR CONSTRUCTION

Partitions and doors								None
Interior finishes - minimal	1,089	SF	0.55	599	1.75	1,906	2.30	2,505
Specialties	1	LOT	350.00	350	150.00	150	500.00	500
SUBTOTAL:				\$ 949		\$ 2,056		\$ 3,005
General Conditions, Overhead and Profit	37.00%			351		761		1,112
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			221		479		700
TOTAL 06 - INTERIOR CONSTRUCTION:				\$ 1,521		\$ 3,296		\$ 4,817

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

08 - MECHANICAL

Emergency eye wash station	1	EA	650.00	650	275.00	275	925.00	925
Interior hose bib	1	EA	95.00	95	125.00	125	220.00	220
Plumbing rough-in	2	EA	330.00	660	550.00	1,100	880.00	1,760
3 KW explosion proof electric unit heater and thermostat	1	EA	2575.00	2,575	475.00	475	3050.00	3,050
Ventilation and sprinkler system								None
SUBTOTAL:				\$ 3,980		\$ 1,975		\$ 5,955
General Conditions, Overhead and Profit	37.00%			1,473		731		2,204
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			927		460		1,387
TOTAL 08 - MECHANICAL:				\$ 6,380		\$ 3,166		\$ 9,546

09 - ELECTRICAL

100 amp panel	1	EA	1850.00	1,850	1050.00	1,050	2900.00	2,900
30 amp disconnect switch	1	EA	785.00	785	250.00	250	1035.00	1,035

HMS Project No.: 10104

2. 33'0"x33'0" HAZMAT STORAGE BUILDING (1,089 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

09 - ELECTRICAL (Continued)

Feeders and conductors	1	LOT	500.00	500	1200.00	1,200	1700.00	1,700
Explosion proof fixtures	6	EA	1375.00	8,250	250.00	1,500	1625.00	9,750
Exterior fixtures	2	EA	365.00	730	150.00	300	515.00	1,030
Conduit, wiring and devices	1,089	SF	2.00	2,178	2.75	2,995	4.75	5,173
Remote fire alarm system	1	LOT	3000.00	3,000	2000.00	2,000	5000.00	5,000
SUBTOTAL:				\$ 17,293		\$ 9,295		\$ 26,588
General Conditions, Overhead and Profit	37.00%			6,398		3,439		9,837
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			4,027		2,165		6,192
TOTAL 09 - ELECTRICAL:				\$ 27,718		\$ 14,899		\$ 42,617

10 - EQUIPMENT

None.

TOTAL E. TOTAL REPLACEMENT COST:				\$ 200,627		\$ 145,434		\$ 346,061
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HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

A. OPERATIONS COSTS

Building operations costs like utilities, power, regular clean-up, etc.

12 MOS

By Others

TOTAL A. OPERATIONS COSTS:

By Others

B. IMMEDIATE REPAIRS (2011)

None

C. REGULAR MAINTENANCE COSTS

Following inspections performed by local professionals once a year.

Check compressors for proper operation once a year (2)	1	Time	150.00	150	450.00	450	600.00	600
Check electrical panel and disconnect switch once a year	1	Time	50.00	50	250.00	250	300.00	300
TOTAL C. REGULAR MAINTENANCE COSTS:				\$ 200		\$ 700		\$ 900

D. PERIODIC RENEWAL/REPLACEMENT COSTS

NOTE: As-built of this building not available. Quantities assumed on footprint area and height.

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

02 - SUBSTRUCTURE

Check concrete foundation and slab for cracks, etc. and repair as necessary	660	SF	0.45	297	1.05	693	1.50	990
SUBTOTAL:				\$ 297		\$ 693		\$ 990
General Conditions, Overhead and Profit	27.00%			80		187		267
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			64		150		214
TOTAL 02 - SUBSTRUCTURE:				\$ 441		\$ 1,030		\$ 1,471

03 - SUPERSTRUCTURE

Check rigid steel roof framing for soundness and repair any defects	660	SF	0.50	330	1.00	660	1.50	990
SUBTOTAL:				\$ 330		\$ 660		\$ 990
General Conditions, Overhead and Profit	27.00%			89		178		267
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			71		142		213
TOTAL 03 - SUPERSTRUCTURE:				\$ 490		\$ 980		\$ 1,470

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

04 - EXTERIOR CLOSURE

Check and repair exterior wall system (3% of wall area)	36	SF	8.00	288	3.70	133	11.70	421
Change double door hardware	1	EA	650.00	650	325.00	325	975.00	975
SUBTOTAL:				\$ 938		\$ 458		\$ 1,396
General Conditions, Overhead and Profit	27.00%			253		124		377
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			202		99		301
TOTAL 04 - EXTERIOR CLOSURE:				\$ 1,393		\$ 681		\$ 2,074

05 - ROOFING

Patch/repair metal roofing and insulation (assume 3%)	25	SF	5.70	143	3.50	88	9.20	231
SUBTOTAL:				\$ 143		\$ 88		\$ 231
General Conditions, Overhead and Profit	27.00%			39		24		63
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			31		19		50
TOTAL 05 - ROOFING:				\$ 213		\$ 131		\$ 344

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

06 - INTERIOR CONSTRUCTION

Patch and repair interior finishes and specialties (5%)	18	SF	2.25	41	2.70	49	4.95	90
SUBTOTAL:				\$ 41		\$ 49		\$ 90
General Conditions, Overhead and Profit	27.00%			11		13		24
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			9		11		20
TOTAL 06 - INTERIOR CONSTRUCTION:				\$ 61		\$ 73		\$ 134

07 - CONVEYING

None.

08 - MECHANICAL

Minimal plumbing repairs	660	SF	0.50	330	1.50	990	2.00	1,320
Minor repairs to compressors (2)	1	LOT	300.00	300	700.00	700	1000.00	1,000
Repair ventilation system	660	SF	1.00	660	2.75	1,815	3.75	2,475

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

08 - MECHANICAL (Continued)

Sprinklers								None
SUBTOTAL:				\$ 1,290		\$ 3,505		\$ 4,795
General Conditions, Overhead and Profit	27.00%			348		946		1,294
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			278		757		1,035
TOTAL 08 - MECHANICAL:				\$ 1,916		\$ 5,208		\$ 7,124

09 - ELECTRICAL

Service 150 amp panel and disconnect switch	1	LOT	75.00	75	275.00	275	350.00	350
Megger test and re-tag feeders	50	LF	1.00	50	2.50	125	3.50	175
Relamp light fixtures	6	EA	48.00	288	60.00	360	108.00	648
Relamp exterior fixture	1	EA	60.00	60	85.00	85	145.00	145
Megger test conductors, check devices and re-tag	150	LF	0.50	75	1.10	165	1.60	240

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

09 - ELECTRICAL (Continued)

Fire alarm and communication system						None
SUBTOTAL:			\$ 548		\$ 1,010	\$ 1,558
General Conditions, Overhead and Profit	27.00%		148		273	421
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		118		218	336
TOTAL 09 - ELECTRICAL:			\$ 814		\$ 1,501	\$ 2,315

10 - EQUIPMENT

None.

TOTAL D. PERIODIC RENEWAL/REPLACEMENT COSTS:			\$ 5,328		\$ 9,604	\$ 14,932
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HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS

Replacement of facility after 30 years in 2011 dollars.

01 - SITE WORK

New Building

Building pad preparation	800	SF	1.80	1,440	1.50	1,200	3.30	2,640
Water and sewer connections	1	LOT	400.00	400	1200.00	1,200	1600.00	1,600
Electric power connections	1	LOT	200.00	200	500.00	500	700.00	700

Demolish Existing Building

Disconnect utilities and demolish existing metal framed building up to slab level	660	SF			8.00	5,280	8.00	5,280
Demolish concrete slab and foundations up to 18" below grade	660	SF			5.50	3,630	5.50	3,630
Level and grade site	660	SF	1.50	990	1.25	825	2.75	1,815
Dispose debris	18	TONS	70.00	1,260	20.00	360	90.00	1,620
SUBTOTAL:				\$ 4,290		\$ 12,995		\$ 17,285

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

01 - SITE WORK (Continued)

General Conditions, Overhead and Profit	37.00%			1,587		4,808		6,395
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			999		3,027		4,026
TOTAL 01 - SITE WORK:				\$ 6,876		\$ 20,830		\$ 27,706

02 - SUBSTRUCTURE

Concrete foundations, bases and stem walls, insulated and dampproofed	104	LF	52.00	5,408	30.00	3,120	82.00	8,528
4" concrete slab	660	SF	4.10	2,706	3.50	2,310	7.60	5,016
SUBTOTAL:				\$ 8,114		\$ 5,430		\$ 13,544
General Conditions, Overhead and Profit	37.00%			3,002		2,009		5,011
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			1,890		1,265		3,155
TOTAL 02 - SUBSTRUCTURE:				\$ 13,006		\$ 8,704		\$ 21,710

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

03 - SUPERSTRUCTURE

Rigid steel frame, purlins and girts	6	TONS	2500.00	15,000	2000.00	12,000	4500.00	27,000
1 1/2" steel roof decking	816	SF	2.90	2,366	1.15	938	4.05	3,304
Special inspections	1	LOT	5000.00	5,000			5000.00	5,000
10 crane and operator	0.50	MOS	12000.00	6,000	6000.00	3,000	18000.00	9,000
SUBTOTAL:				\$ 28,366		\$ 15,938		\$ 44,304
General Conditions, Overhead and Profit	37.00%			10,495		5,897		16,392
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			6,606		3,712		10,318
TOTAL 03 - SUPERSTRUCTURE:				\$ 45,467		\$ 25,547		\$ 71,014

04 - EXTERIOR CLOSURE

Metal siding, studs, plywood, insulation and gypboard walls	1,200	SF	10.20	12,240	5.75	6,900	15.95	19,140
Double door	1	PR	1800.00	1,800	650.00	650	2450.00	2,450
SUBTOTAL:				\$ 14,040		\$ 7,550		\$ 21,590

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

04 - EXTERIOR CLOSURE (Continued)

General Conditions, Overhead and Profit	37.00%			5,195		2,794		7,989
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			3,270		1,758		5,028
TOTAL 04 - EXTERIOR CLOSURE:				\$ 22,505		\$ 12,102		\$ 34,607

05 - ROOFING

5/8" plywood sheathing and ice/water shield	816	SF	1.50	1,224	1.70	1,387	3.20	2,611
Metal roofing, purlins, R-38 insulation and vapor retarder	816	SF	6.85	5,590	4.15	3,386	11.00	8,976
Flashings	116	LF	3.50	406	2.70	313	6.20	719
SUBTOTAL:				\$ 7,220		\$ 5,086		\$ 12,306
General Conditions, Overhead and Profit	37.00%			2,671		1,882		4,553
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			1,681		1,185		2,866
TOTAL 05 - ROOFING:				\$ 11,572		\$ 8,153		\$ 19,725

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

06 - INTERIOR CONSTRUCTION

Partitions and doors								None
Interior finishes - minimal	660	SF	0.55	363	1.75	1,155	2.30	1,518
Specialties	1	LOT	250.00	250	100.00	100	350.00	350
SUBTOTAL:				\$ 613		\$ 1,255		\$ 1,868
General Conditions, Overhead and Profit	37.00%			227		464		691
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			143		292		435
TOTAL 06 - INTERIOR CONSTRUCTION:				\$ 983		\$ 2,011		\$ 2,994

08 - MECHANICAL

Plumbing drains, hose bib and piping	660	SF	5.00	3,300	8.00	5,280	13.00	8,580
Electric unit heater	1	EA	700.00	700	200.00	200	900.00	900
Ventilation fan and controls	1	EA	1250.00	1,250	550.00	550	1800.00	1,800
Louver and damper	1	EA	150.00	150	100.00	100	250.00	250
150 HP compressor and piping	1	LOT	85000.00	85,000	12000.00	12,000	97000.00	97,000

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

08 - MECHANICAL (Continued)

350 HP compressor and piping	1	LOT	195000.00	195,000	25000.00	25,000	220000.00	220,000
Sprinkler system								None
SUBTOTAL:				\$ 285,400		\$ 43,130		\$ 328,530
General Conditions, Overhead and Profit	37.00%			105,598		15,958		121,556
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			66,470		10,045		76,515
TOTAL 08 - MECHANICAL:				\$ 457,468		\$ 69,133		\$ 526,601

09 - ELECTRICAL

Service and distribution	660	SF	3.50	2,310	4.75	3,135	8.25	5,445
Interior light fixtures	6	EA	200.00	1,200	105.00	630	305.00	1,830
Exterior fixtures	1	EA	380.00	380	120.00	120	500.00	500
Exit sign	1	EA	167.00	167	115.00	115	282.00	282
Emergency light	1	EA	250.00	250	130.00	130	380.00	380
Conduit, wiring and devices	660	SF	2.00	1,320	3.00	1,980	5.00	3,300

HMS Project No.: 10104

3. 30'0"x22'0" AIR COMPRESSOR BUILDING (660 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

09 - ELECTRICAL (Continued)

Small fire alarm system	660	SF	1.50	990	1.70	1,122	3.20	2,112
480 power to compressors	2	LOTS	15000.00	30,000	10000.00	20,000	25000.00	50,000
Data/comm								None
SUBTOTAL:				\$ 36,617		\$ 27,232		\$ 63,849
General Conditions, Overhead and Profit	37.00%			13,548		10,076		23,624
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			8,528		6,342		14,870
TOTAL 09 - ELECTRICAL:				\$ 58,693		\$ 43,650		\$ 102,343

10 - EQUIPMENT

None.

TOTAL E. TOTAL REPLACEMENT COST:				\$ 616,570		\$ 190,130		\$ 806,700
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HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

A. OPERATIONS COSTS

Building operations costs like utilities, power, regular clean-up, etc.

12 MOS

By Others

TOTAL A. OPERATIONS COSTS:

By Others

B. IMMEDIATE REPAIRS (2011)

None

C. REGULAR MAINTENANCE COSTS

Following inspections performed by local professionals once a year.

Check OWS for proper operation once a year

1	Time	100.00	100	500.00	500	600.00	600
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Check electrical panel and disconnect switch once a year

1	Time	75.00	75	400.00	400	475.00	475
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TOTAL C. REGULAR MAINTENANCE COSTS:

\$ 175

\$ 900

\$ 1,075

D. PERIODIC RENEWAL/REPLACEMENT COSTS

NOTE: As-built of this building not available. Quantities assumed on footprint area and height.

HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

02 - SUBSTRUCTURE

Check concrete foundation and slab for cracks, etc. and repair as necessary	600	SF	0.20	120	0.50	300	0.70	420
SUBTOTAL:				\$ 120		\$ 300		\$ 420
General Conditions, Overhead and Profit	27.00%			32		81		113
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			26		65		91
TOTAL 02 - SUBSTRUCTURE:				\$ 178		\$ 446		\$ 624

03 - SUPERSTRUCTURE

Check rigid steel roof framing for soundness and repair any defects	600	SF	0.50	300	1.00	600	1.50	900
SUBTOTAL:				\$ 300		\$ 600		\$ 900
General Conditions, Overhead and Profit	27.00%			81		162		243
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			65		130		195
TOTAL 03 - SUPERSTRUCTURE:				\$ 446		\$ 892		\$ 1,338

HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

04 - EXTERIOR CLOSURE

Check and repair exterior wall system (3% of wall area)	36	SF	6.50	234	3.70	133	10.20	367
Change double door hardware	1	EA	650.00	650	325.00	325	975.00	975
SUBTOTAL:				\$ 884		\$ 458		\$ 1,342
General Conditions, Overhead and Profit	27.00%			239		124		363
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			191		99		290
TOTAL 04 - EXTERIOR CLOSURE:				\$ 1,314		\$ 681		\$ 1,995

05 - ROOFING

Patch/repair metal roofing and insulation (assume 3%)	25	SF	5.70	143	3.50	88	9.20	231
SUBTOTAL:				\$ 143		\$ 88		\$ 231
General Conditions, Overhead and Profit	27.00%			39		24		63
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			31		19		50
TOTAL 05 - ROOFING:				\$ 213		\$ 131		\$ 344

HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

06 - INTERIOR CONSTRUCTION

Patch and repair interior finishes and specialties (5%)	18	SF	2.25	41	2.70	49	4.95	90
SUBTOTAL:				\$ 41		\$ 49		\$ 90
General Conditions, Overhead and Profit	27.00%			11		13		24
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			9		11		20
TOTAL 06 - INTERIOR CONSTRUCTION:				\$ 61		\$ 73		\$ 134

07 - CONVEYING

None.

08 - MECHANICAL

Service 3 KW unit heater	1	EA	50.00	50	125.00	125	175.00	175
Replace eyewash station valves	1	LOT	150.00	150	125.00	125	275.00	275
Check plumbing fixtures and piping and repair as necessary	1	LOT	250.00	250	850.00	850	1100.00	1,100

HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

08 - MECHANICAL (Continued)

Repair ventilation	600	SF	2.50	1,500	3.75	2,250	6.25	3,750
Repair OWS equipment	1	LOT	500.00	500	1500.00	1,500	2000.00	2,000
SUBTOTAL:				\$ 2,450		\$ 4,850		\$ 7,300
General Conditions, Overhead and Profit	27.00%			662		1,310		1,972
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			529		1,047		1,576
TOTAL 08 - MECHANICAL:				\$ 3,641		\$ 7,207		\$ 10,848

09 - ELECTRICAL

Service 150 amp panel and disconnect switch	1	LOT	75.00	75	275.00	275	350.00	350
Megger test and re-tag feeders	70	LF	1.00	70	2.50	175	3.50	245
Relamp light fixtures and re-gasket	6	EA	48.00	288	60.00	360	108.00	648
Relamp exterior light fixtures and re-gasket	1	EA	60.00	60	85.00	85	145.00	145
Megger test conductor, check devices and re-tag	175	LF	0.50	88	1.10	193	1.60	281

HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

09 - ELECTRICAL (Continued)

Fire alarm and communication system						None
SUBTOTAL:			\$ 581		\$ 1,088	\$ 1,669
General Conditions, Overhead and Profit	27.00%		157		294	451
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		125		235	360
TOTAL 09 - ELECTRICAL:			\$ 863		\$ 1,617	\$ 2,480

10 - EQUIPMENT

None.

TOTAL D. PERIODIC RENEWAL/REPLACEMENT COSTS:			\$ 6,716		\$ 11,047	\$ 17,763
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HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS

Replacement of facility after 30 years in 2011 dollars.

01 - SITE WORK

New Building

Building pad preparation	800	SF	1.80	1,440	1.50	1,200	3.30	2,640
Exterior deck and steps	96	SF	42.00	4,032	25.00	2,400	67.00	6,432
Water and sewer connections	1	LOT	400.00	400	1200.00	1,200	1600.00	1,600
Electric power connections	1	LOT	200.00	200	500.00	500	700.00	700

Demolish Existing Building

Disconnect utilities and demolish existing metal framed building up to slab level	600	SF			8.00	4,800	8.00	4,800
Remove OWS equipment	1	LOT			750.00	750	750.00	750
Demolish concrete slab and foundations up to 18" below grade	600	SF			5.50	3,300	5.50	3,300
Level and grade site	600	SF	1.50	900	1.25	750	2.75	1,650

HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

01 - SITE WORK (Continued)

Demolish Existing Building (Continued)

Dispose debris	20	TONS	70.00	1,400	20.00	400	90.00	1,800
SUBTOTAL:				\$ 8,372		\$ 15,300		\$ 23,672
General Conditions, Overhead and Profit	37.00%			3,098		5,661		8,759
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			1,950		3,563		5,513
TOTAL 01 - SITE WORK:				\$ 13,420		\$ 24,524		\$ 37,944

02 - SUBSTRUCTURE

Concrete foundations, bases and stem walls, insulated and dampproofed	100	LF	52.00	5,200	30.00	3,000	82.00	8,200
4" concrete slab	600	SF	4.10	2,460	3.50	2,100	7.60	4,560
SUBTOTAL:				\$ 7,660		\$ 5,100		\$ 12,760
General Conditions, Overhead and Profit	37.00%			2,834		1,887		4,721

HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		1,784		1,188		2,972
TOTAL 02 - SUBSTRUCTURE:			\$ 12,278		\$ 8,175		\$ 20,453

03 - SUPERSTRUCTURE

Rigid steel frame, purlins and girts	6	TONS	2500.00	15,000	2000.00	12,000	4500.00	27,000
1 1/2" steel roof decking	816	SF	2.90	2,366	1.15	938	4.05	3,304
Special inspections	1	LOT	5000.00	5,000			5000.00	5,000
10 ton crane and operator	0.50	MOS	12000.00	6,000	6000.00	3,000	18000.00	9,000
SUBTOTAL:				\$ 28,366		\$ 15,938		\$ 44,304
General Conditions, Overhead and Profit	37.00%			10,495		5,897		16,392
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			6,606		3,712		10,318
TOTAL 03 - SUPERSTRUCTURE:				\$ 45,467		\$ 25,547		\$ 71,014

04 - EXTERIOR CLOSURE

Metal siding, studs, plywood, insulation and gypboard walls	1,200	SF	9.80	11,760	5.75	6,900	15.55	18,660
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HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

04 - EXTERIOR CLOSURE (Continued)

10'0"x14'0" overhead door	1	EA	3350.00	3,350	700.00	700	4050.00	4,050
Single door	1	EA	790.00	790	245.00	245	1035.00	1,035
SUBTOTAL:				\$ 15,900		\$ 7,845		\$ 23,745
General Conditions, Overhead and Profit	37.00%			5,883		2,903		8,786
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			3,703		1,827		5,530
TOTAL 04 - EXTERIOR CLOSURE:				\$ 25,486		\$ 12,575		\$ 38,061

05 - ROOFING

5/8" plywood sheathing and ice/water shield	816	SF	1.50	1,224	1.70	1,387	3.20	2,611
Metal roofing, purlins, R-38 insulation and vapor retarder	816	SF	6.85	5,590	4.15	3,386	11.00	8,976
Flashings	116	LF	3.50	406	2.70	313	6.20	719
SUBTOTAL:				\$ 7,220		\$ 5,086		\$ 12,306
General Conditions, Overhead and Profit	37.00%			2,671		1,882		4,553

HMS Project No.: 10104

4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			1,681		1,185		2,866
TOTAL 05 - ROOFING:				\$ 11,572		\$ 8,153		\$ 19,725

06 - INTERIOR CONSTRUCTION

Partitions and doors								None
Interior finishes - minimal	600	SF	0.55	330	1.75	1,050	2.30	1,380
Specialties	1	LOT	250.00	250	100.00	100	350.00	350
SUBTOTAL:				\$ 580		\$ 1,150		\$ 1,730
General Conditions, Overhead and Profit	37.00%			215		426		641
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			135		268		403
TOTAL 06 - INTERIOR CONSTRUCTION:				\$ 930		\$ 1,844		\$ 2,774

08 - MECHANICAL

Plumbing drains, hose bibs and piping	600	SF	5.00	3,000	8.00	4,800	13.00	7,800
Electric unit heater	1	EA	700.00	700	200.00	200	900.00	900

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4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

08 - MECHANICAL (Continued)

Ventilation fan and controls	1	EA	1250.00	1,250	550.00	550	1800.00	1,800
Louver and damper	1	EA	150.00	150	100.00	100	250.00	250
Sprinkler system								None
<u>OWS Equipment/Piping</u>								
5,000 gallon oily water tank	1	EA	13500.00	13,500	1700.00	1,700	15200.00	15,200
5,000 gallon pressured water tank	1	EA	16500.00	16,500	2500.00	2,500	19000.00	19,000
4" to 6" diameter pump out and effluent piping in arctic pipe	150	LF	85.00	12,750	65.00	9,750	150.00	22,500
30 GPM/15 HP OWS duplex pumps	2	EA	40000.00	80,000	3500.00	7,000	43500.00	87,000
Wash down collection tank	1	EA	5000.00	5,000	1500.00	1,500	6500.00	6,500
Filter press feed	1	EA	3500.00	3,500	800.00	800	4300.00	4,300
Skimming hopper, tanks, pumps, drop box, etc.	1	LOT	15000.00	15,000	4000.00	4,000	19000.00	19,000
Piping, valves and gauges	1	LOT	21000.00	21,000	8500.00	8,500	29500.00	29,500
SUBTOTAL:				\$ 172,350		\$ 41,400		\$ 213,750

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4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

General Conditions, Overhead and Profit	37.00%			63,770		15,318		79,088
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			40,140		9,642		49,782
TOTAL 08 - MECHANICAL:				\$ 276,260		\$ 66,360		\$ 342,620

09 - ELECTRICAL

Service and distribution	600	SF	5.00	3,000	7.00	4,200	12.00	7,200
Interior light fixtures	6	EA	200.00	1,200	105.00	630	305.00	1,830
Exterior light fixtures	2	EA	380.00	760	120.00	240	500.00	1,000
Exit sign	1	EA	167.00	167	115.00	115	282.00	282
Emergency light	1	EA	250.00	250	130.00	130	380.00	380
OWS controller and connection	1	EA	3500.00	3,500	1500.00	1,500	5000.00	5,000
Conduit, wiring and devices	600	SF	5.00	3,000	8.50	5,100	13.50	8,100
Data/comm								None
SUBTOTAL:				\$ 11,877		\$ 11,915		\$ 23,792

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4. 30'0"x20'0" OIL/WATER SEPARATOR BUILDING (600 SF)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

General Conditions, Overhead and Profit	37.00%		4,394		4,409		8,803
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		2,766		2,775		5,541
TOTAL 09 - ELECTRICAL:			\$ 19,037		\$ 19,099		\$ 38,136

10 - EQUIPMENT

None.

TOTAL E. TOTAL REPLACEMENT COST:			\$ 404,450		\$ 166,277		\$ 570,727
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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

A. OPERATIONS COSTS

Site maintenance costs like snow removal and landscaping	12	MOS						By Others
Site utilities costs like water, sewer/storm, power and data/comm billings	12	MOS						By Others

TOTAL A. OPERATIONS COSTS: By Others

B. IMMEDIATE REPAIRS (2011)

01 - SITE WORK

A.

Sweep paved surfaces to remove sediment and debris	45,075	SF	0.02	902	0.05	2,254	0.07	3,156
Mark ADA parking stalls	4	EA	20.00	80	45.00	180	65.00	260
ADA signs, posts and bases	4	EA	128.00	512	105.00	420	233.00	932
SUBTOTAL A:				\$ 1,494		\$ 2,854		\$ 4,348
General Conditions, Overhead and Profit	27.00%			403		771		1,174

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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

B. IMMEDIATE REPAIRS (2011) (Continued)

01 - SITE WORK (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	15.00%		285		544		829
TOTAL A:			<u>\$ 2,182</u>		<u>\$ 4,169</u>		<u>\$ 6,351</u>

B. Site Electrical

1. Install weather shelters over power stations	1	LOT	24500.00	24,500	12000.00	12,000	36500.00	36,500
SUBTOTAL B1:				<u>\$ 24,500</u>		<u>\$ 12,000</u>		<u>\$ 36,500</u>
General Conditions, Overhead and Profit	27.00%			6,615		3,240		9,855
Contingencies and Escalation to 2011 at 5.00% per Annum	15.00%			4,667		2,286		6,953
TOTAL B1:				<u>\$ 35,782</u>		<u>\$ 17,526</u>		<u>\$ 53,308</u>
2. Protect and route existing cables via utilidors, overhead pull boxes, etc.	1	LOT	192000.00	192,000	100000.00	100,000	292000.00	292,000
SUBTOTAL B2:				<u>\$ 192,000</u>		<u>\$ 100,000</u>		<u>\$ 292,000</u>
General Conditions, Overhead and Profit	27.00%			51,840		27,000		78,840

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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

B. IMMEDIATE REPAIRS (2011) (Continued)

01 - SITE WORK (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	15.00%			36,576		19,050		55,626
TOTAL B2:				<u>\$ 280,416</u>		<u>\$ 146,050</u>		<u>\$ 426,466</u>
3. New shore tie structure at dry dock #2		1 LOT	225000.00	225,000	140000.00	140,000	365000.00	365,000
SUBTOTAL B3:				<u>\$ 225,000</u>		<u>\$ 140,000</u>		<u>\$ 365,000</u>
General Conditions, Overhead and Profit	27.00%			60,750		37,800		98,550
Contingencies and Escalation to 2011 at 5.00% per Annum	15.00%			42,863		26,670		69,533
TOTAL B3:				<u>\$ 328,613</u>		<u>\$ 204,470</u>		<u>\$ 533,083</u>
TOTAL B. IMMEDIATE REPAIRS (2011):				<u>\$ 646,993</u>		<u>\$ 372,215</u>		<u>\$ 1,019,208</u>

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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

C. REGULAR MAINTENANCE COSTS

Following inspections performed by local professionals once a year.

Fire hydrant pressure tests	10	EA	50.00	500	350.00	3,500	400.00	4,000
Sewer manhole inspections	5	EA			150.00	750	150.00	750
Storm drain catch basin inspections	5	EA			150.00	750	150.00	750
Water meter calibration test	1	EA			200.00	200	200.00	200
Inspect 2,000 gallon fuel tank	1	EA			350.00	350	350.00	350
Electrical transformers and power tests	5	EA	100.00	500	700.00	3,500	800.00	4,000
Data/comm service inspections	1	LOT			300.00	300	300.00	300
Inspect fences, site grading, pavements, etc.	1	LOT			1000.00	1,000	1000.00	1,000
TOTAL C. REGULAR MAINTENANCE COSTS:					\$ 1,000	\$ 10,350		\$ 11,350

D. PERIODIC RENEWAL/REPLACEMENT COSTS

1. SITE DEVELOPMENT - SITE WORK

The following costs are based on 5-years cycle for 30-years in 2011 dollars and have not been escalated.

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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

1. SITE DEVELOPMENT - SITE WORK (Continued)

Repair boundary fences for minor damage (assume 5%)	47	LF	15.00	705	10.00	470	25.00	1,175
Repair 25'0" gate	1	EA	50.00	50	250.00	250	300.00	300
Patch cracked pavements (2% of area)	900	SF	1.50	1,350	1.70	1,530	3.20	2,880
Regrade gravel pad (10%)	6,570	SF			0.20	1,314	0.20	1,314
SUBTOTAL:				\$ 2,105		\$ 3,564		\$ 5,669
General Conditions, Overhead and Profit	27.00%			568		962		1,530
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			454		769		1,223
TOTAL 1. SITE DEVELOPMENT - SITE WORK:				\$ 3,127		\$ 5,295		\$ 8,422

2. SITE DEVELOPMENT - SITE MECHANICAL/ELECTRICAL UTILITIES

Mechanical

Service fire hydrants for proper functions	10	EA	150.00	1,500	450.00	4,500	600.00	6,000
Paint fire hydrant pipe bollards	18	EA	25.00	450	65.00	1,170	90.00	1,620

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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

2. SITE DEVELOPMENT - SITE MECHANICAL/ELECTRICAL UTILITIES (Continued)

Mechanical (Continued)

Repair water lines (5%)	67	LF	18.00	1,206	27.00	1,809	45.00	3,015
Clean sewer lines and (5) manholes	1,480	LF	0.20	296	3.25	4,810	3.45	5,106
Clean storm drains and (5) catch basins	1,170	LF	0.20	234	3.25	3,803	3.45	4,037
Replace valves and accessories on 2,000 gallon fuel tank	1	LOT	350.00	350	750.00	750	1100.00	1,100
Repair air lines (5%)	70	LF	5.00	350	8.50	595	13.50	945

Electrical

Replace area light fixture lamps (20%)	4	EA	135.00	540	250.00	1,000	385.00	1,540
Repair 500 KVA transformer	1	EA	1000.00	1,000	1500.00	1,500	2500.00	2,500
Megger test feeders	1	LOT	100.00	100	800.00	800	900.00	900

SUBTOTAL:				\$ 6,026		\$ 20,737		\$ 26,763
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General Conditions, Overhead and Profit	27.00%			1,627		5,599		7,226
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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%	1,301	4,477	5,778
TOTAL 1. SITE DEVELOPMENT - SITE MECHANICAL/ELECTRICAL:		\$ 8,954	\$ 30,813	\$ 39,767
TOTAL D. PERIODIC RENEWAL/REPLACEMENT COSTS:		\$ 12,081	\$ 36,108	\$ 48,189

E. TOTAL REPLACEMENT COSTS

1. SITE DEVELOPMENTS

Demolition

Remove existing pavements and dispose for recycling	45,075	SF			0.45	20,284	0.45	20,284
Remove concrete walks	3,300	SF			1.50	4,950	1.50	4,950
Remove fencing and gate	960	LF			5.00	4,800	5.00	4,800
Remove miscellaneous structures	1	LOT			1500.00	1,500	1500.00	1,500
Dispose debris	75	TONS	70.00	5,250	20.00	1,500	90.00	6,750

New Work

6" D1 subbase	1,122	CY	25.00	28,050	8.00	8,976	33.00	37,026
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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

1. SITE DEVELOPMENTS (Continued)

New Work (Continued)

2" AC pavement	45,075	SF	1.65	74,374	1.10	49,583	2.75	123,957
4" concrete walks over subbase	3,300	SF	4.15	13,695	3.10	10,230	7.25	23,925
Stripe stalls and cross hatch marking	5	EA	25.00	125	65.00	325	90.00	450
Handicapped accessible signs, posts and bases	4	EA	125.00	500	105.00	420	230.00	920
Traffic signs, posts and bases	4	EA	137.00	548	110.00	440	247.00	988
8'0" chain link fencing, posts and bases	935	LF	39.50	36,933	15.00	14,025	54.50	50,958
25'0" gate, power operated	1	EA	5850.00	5,850	2000.00	2,000	7850.00	7,850
Regrade gravel pad to new contours	1,460	CY	12.00	17,520	7.50	10,950	19.50	28,470
SUBTOTAL:				\$ 182,845		\$ 129,983		\$ 312,828
General Conditions, Overhead and Profit	30.00%			54,854		38,995		93,849
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			40,409		28,726		69,135
TOTAL 1. SITE DEVELOPMENTS:				\$ 278,108		\$ 197,704		\$ 475,812

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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

2. SITE MECHANICAL/ELECTRICAL

Demolition

Excavate and remove water lines and backfill with same materials	1,570	LF			12.50	19,625	12.50	19,625
Excavate and remove fire hydrants and bollards	10	EA			500.00	5,000	500.00	5,000
Excavate and remove sewer lines	860	LF			12.50	10,750	12.50	10,750
Excavate and remove manholes	5	EA			500.00	2,500	500.00	2,500
Excavate and remove storm drains	1,170	LF			10.00	11,700	10.00	11,700
Excavate and remove manhole and catch basins	14	EA			500.00	7,000	500.00	7,000
Excavate and remove air lines	1,405	LF			10.00	14,050	10.00	14,050
Drain and remove 2,000 gallon fuel oil tank and piping	1	LOT			2500.00	2,500	2500.00	2,500
Remove transformers and wiring	10	EA			950.00	9,500	950.00	9,500
Remove light pole, fixtures and wiring	22	EA			550.00	12,100	550.00	12,100
Excavate and remove data/comm conduits (2)	740	LF			8.00	5,920	8.00	5,920
Dispose debris	55	TONS	70.00	3,850	20.00	1,100	90.00	4,950

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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

2. SITE MECHANICAL/ELECTRICAL (Continued)

New Mechanical Work

6" DI water line and fittings	1,330	LF	28.25	37,573	33.50	44,555	61.75	82,128
2" copper line and fittings to buildings	140	LF	13.70	1,918	18.00	2,520	31.70	4,438
6" gate valves and box	10	EA	735.00	7,350	180.00	1,800	915.00	9,150
2" gate valves	2	EA	120.00	240	85.00	170	205.00	410
Fire hydrants	10	EA	2275.00	22,750	1325.00	13,250	3600.00	36,000
4" pipe bollards and bases	18	EA	275.00	4,950	185.00	3,330	460.00	8,280
Building and main connections	3	EA	150.00	450	280.00	840	430.00	1,290
Concrete thrust blocks	16	EA	165.00	2,640	100.00	1,600	265.00	4,240
18" CMP storm drain pipe	256	LF	19.20	4,915	15.50	3,968	34.70	8,883
12" CMP storm drain pipe	876	LF	15.70	13,753	13.00	11,388	28.70	25,141
8" CMP storm drain pipe	40	LF	11.00	440	8.25	330	19.25	770
48" diameter x 72" storm drain manhole	1	EA	2750.00	2,750	1500.00	1,500	4250.00	4,250
Inlet grate catch basins	9	EA	1450.00	13,050	830.00	7,470	2280.00	20,520

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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

2. SITE MECHANICAL/ELECTRICAL (Continued)

New Mechanical Work (Continued)

Manhole/catch basin connections	20	EA	45.00	900	95.00	1,900	140.00	2,800
6" DI sewer line and fittings	1,480	LF	24.50	36,260	28.00	41,440	52.50	77,700
4" DI sewer line and fittings to building	120	LF	16.00	1,920	21.00	2,520	37.00	4,440
48" diameter x 72" manholes	5	EA	2750.00	13,750	1500.00	7,500	4250.00	21,250
Building and main connections	3	EA	150.00	450	280.00	840	430.00	1,290
2" air lines and fittings	1,405	LF	13.25	18,616	15.00	21,075	28.25	39,691
Air hydrants and couplings	4	EA	775.00	3,100	350.00	1,400	1125.00	4,500
2,000 gallon fuel oil tank and piping	1	LOT	22500.00	22,500	3200.00	3,200	25700.00	25,700
Trenching and backfill for mechanical utilities	10,552	CY	3.50	36,932	10.30	108,686	13.80	145,618
Bedding material	650	CY	24.00	15,600	7.50	4,875	31.50	20,475
6" PVC marker tape	5,527	LF	0.52	2,874	0.33	1,824	0.85	4,698

New Electrical Work

25'0" light poles, fixtures and bases	22	EA	2275.00	50,050	1500.00	33,000	3775.00	83,050
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5. SWITCH/SHIP YARD SITE DEVELOPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

2. SITE MECHANICAL/ELECTRICAL (Continued)

New Electrical Work (Continued)

Conduit and wiring	3,300	LF	3.80	12,540	8.50	28,050	12.30	40,590
300 KVA to 750 KVA pad mounted transformers including pads	10	EA	22500.00	225,000	4500.00	45,000	27000.00	270,000
3/4"x10'0" ground rods, #1/0 bare copper and connections	20	EA	85.00	1,700	225.00	4,500	310.00	6,200
2" to 4" buried feeders and conductors	960	LF	14.50	13,920	23.00	22,080	37.50	36,000
Trenching and backfill including bedding	750	CY	3.30	2,475	9.50	7,125	12.80	9,600
6" PVC marker tape	4,260	LF	0.52	2,215	0.33	1,406	0.85	3,621
SUBTOTAL:				\$ 577,431		\$ 530,887		\$ 1,108,318
General Conditions, Overhead and Profit	30.00%			173,229		159,266		332,495
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			127,612		117,326		244,938
TOTAL 2. SITE MECHANICAL/ELECTRICAL:				\$ 878,272		\$ 807,479		\$ 1,685,751

TOTAL E. TOTAL REPLACEMENT COST:				\$ 1,156,380		\$ 1,005,183		\$ 2,161,563
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6. SHEET PILING CELLS (15)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

A. OPERATIONS COSTS

TOTAL A. OPERATIONS COSTS: No Work

B. IMMEDIATE REPAIRS (2011)

01 - SITE WORK

Replace timber components of pier and wharf fenders	15	EA	350.00	5,250	1250.00	18,750	1600.00	24,000
Install cathodic protection to steel members, sheet piles and wales, etc.	45,520	SF	2.85	129,732	8.50	386,920	11.35	516,652
Install cathodic protection to 18" diameter piles	56	EA	750.00	42,000	1075.00	60,200	1825.00	102,200
Reattach fender chains	1	LOT	500.00	500	1500.00	1,500	2000.00	2,000
Repair damaged valve supports	1	LOT	2500.00	2,500	4500.00	4,500	7000.00	7,000
New covers over 8'0" walkway conduit	8	EA	340.00	2,720	415.00	3,320	755.00	6,040
Transition plate at pier and wharf	8	LF	37.00	296	15.00	120	52.00	416
Replace dry dock connection arms	1	LOT	2500.00	2,500	8500.00	8,500	11000.00	11,000
New bull rail and supports	200	LF	78.00	15,600	35.00	7,000	113.00	22,600
Replace utility trench damaged valves	1	LOT	5000.00	5,000	12000.00	12,000	17000.00	17,000

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6. SHEET PILING CELLS (15)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

B. IMMEDIATE REPAIRS (2011) (Continued)

01 - SITE WORK (Continued)

Reattach access gangways at dry dock #1	1	EA	750.00	750	1850.00	1,850	2600.00	2,600
Fill batter piles with concrete	12	EA	250.00	3,000	450.00	5,400	700.00	8,400
SUBTOTAL:				\$ 209,848		\$ 510,060		\$ 719,908
General Conditions, Overhead and Profit	30.00%			62,954		153,018		215,972
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			46,376		112,723		159,099
TOTAL 01 - SITE WORK:				\$ 319,178		\$ 775,801		\$ 1,094,979

TOTAL B. IMMEDIATE REPAIRS (2011):				\$ 319,178		\$ 775,801		\$ 1,094,979
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C. REGULAR MAINTENANCE COSTS

Following inspections performed by local professionals once a year.

Inspect exposed surfaces of cells for corrosion, marine growth, etc. (local professional)	1	TIME	250.00	250	2500.00	2,500	2750.00	2,750
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TOTAL C. REGULAR MAINTENANCE COSTS:				\$ 250		\$ 2,500		\$ 2,750
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HMS Project No.: 10104

6. SHEET PILING CELLS (15)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS

D1. COSTS BASED ON 5 YEARS CYCLE (5 TIMES TOTAL)

Remove marine growth from exposed surfaces of sheet piling and arc segments (boat operation)	45,520	SF	0.75	34,140	2.25	102,420	3.00	136,560
Remove marine growth from 18" diameter timber fender piles (12)	2,261	SF	1.00	2,261	3.50	7,914	4.50	10,175
Remove marine growth from concrete caps	4,480	SF	1.00	4,480	3.50	15,680	4.50	20,160
Remove marine growth from 16" diameter support piles	7,016	SF	1.00	7,016	3.50	24,556	4.50	31,572
SUBTOTAL:				\$ 47,897		\$ 150,570		\$ 198,467
General Conditions, Overhead and Profit	30.00%			14,369		45,171		59,540
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			10,585		33,276		43,861
TOTAL D1. PERIODIC RENEWAL/REPLACEMENT COSTS (5 YEAR):				\$ 72,851		\$ 229,017		\$ 301,868

D2. COSTS THAT OCCUR RIGHT AWAY AFTER 15 YEARS (2 TIMES TOTAL)

Sandblast sheet piling (boat operation)	45,520	SF	0.85	38,692	4.20	191,184	5.05	229,876
Sandblast 16" diameter support piles	7,016	SF	1.00	7,016	5.00	35,080	6.00	42,096

HMS Project No.: 10104

6. SHEET PILING CELLS (15)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D2. COSTS THAT OCCUR RIGHT AWAY AFTER 15 YEARS (2 TIMES TOTAL) (Continued)

Apply 160 mil, (3) part polyurethane coating to sheet piling	45,520	SF	2.75	125,180	9.50	432,440	12.25	557,620
Apply 160 mil, (3) part polyurethane coating to 16" diameter piles	7,016	SF	2.75	19,294	10.25	71,914	13.00	91,208
SUBTOTAL:				\$ 190,182		\$ 730,618		\$ 920,800
General Conditions, Overhead and Profit	30.00%			57,055		219,185		276,240
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			42,030		161,467		203,497
TOTAL D2. PERIODIC RENEWAL/REPLACEMENT COSTS (15 YEARS):				\$ 289,267		\$ 1,111,270		\$ 1,400,537

D3. ONE TIME COST FOR 20 YEARS DESIGN LIFE

Apply impressed current cathodic protection to sheet piling (20 year design life)	45,520	SF	2.85	129,732	8.50	386,920	11.35	516,652
Apply impressed current cathodic protection to 18" diameter support piles (20 year design life)	56	EA	750.00	42,000	1075.00	60,200	1825.00	102,200
SUBTOTAL:				\$ 171,732		\$ 447,120		\$ 618,852
General Conditions, Overhead and Profit	30.00%			51,520		134,136		185,656

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6. SHEET PILING CELLS (15)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D3. ONE TIME COST FOR 20 YEARS DESIGN LIFE (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%	37,953	98,814	136,767
TOTAL D3. PERIODIC RENEWAL/REPLACEMENT COSTS (20 YEARS):		\$ 261,205	\$ 680,070	\$ 941,275

E. TOTAL REPLACEMENT COSTS

DEMOLITION

Mobilization-demobilization pile extracting rig	1	LOT	2000.00	2,000	5000.00	5,000	7000.00	7,000
Cut sheet piling exposed to water for removal (boat operation)	1,160	VLF	5.00	5,800	13.50	15,660	18.50	21,460
Extract sheet piling cells and arc segments and salvaged material	45,520	SF	1.70	77,384	6.50	295,880	8.20	373,264
Demolish concrete caps	78	CY	50.00	3,900	350.00	27,300	400.00	31,200
Extract 16" diameter x 30'0" long support piles and salvaged materials	56	EA	100.00	5,600	675.00	37,800	775.00	43,400
Remove fender system	560	LF	5.00	2,800	65.00	36,400	70.00	39,200
Dispose debris	170	TONS	70.00	11,900	20.00	3,400	90.00	15,300

NEW WORK

Mobilize-demobilize pile driving rig	1	LOT	2000.00	2,000	5000.00	5,000	7000.00	7,000
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HMS Project No.: 10104

6. SHEET PILING CELLS (15)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Drive hot dipped galvanized sheet piling and arc segments	45,520	SF	22.00	1,001,440	17.00	773,840	39.00	1,775,280
Weld new piling to existing cells left in place	1,160	VLF	15.00	17,400	32.00	37,120	47.00	54,520
Drive 16" diameter x 35'0" long hot dipped galvanized steel piles	56	EA	2750.00	154,000	1375.00	77,000	4125.00	231,000
Pile cap plates and driving shoes	56	EA	190.00	10,640	275.00	15,400	465.00	26,040
Cut piles to elevation	56	EA	25.00	1,400	135.00	7,560	160.00	8,960
Apply impressed current cathodic protection to sheet piling	42,520	SF	2.85	121,182	8.50	361,420	11.35	482,602
Apply impressed current cathodic protection to 16" diameter support piles	56	EA	620.00	34,720	750.00	42,000	1370.00	76,720
2'6"x1'6" thick reinforced concrete pile caps (9)	78	CY	625.00	48,750	350.00	27,300	975.00	76,050
Shotrock fill behind sheet piling	945	CY	18.20	17,199	8.50	8,033	26.70	25,232
36" diameter x 9" thick rubber fenders	560	LF	275.00	154,000	135.00	75,600	410.00	229,600
W14x90# galvanized steel wale with 8" diameter rail	560	LF	185.00	103,600	105.00	58,800	290.00	162,400

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6. SHEET PILING CELLS (15)	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Drive 18" diameter x 30'0" long treated timber fender pile and connect to wales	12	EA	950.00	11,400	730.00	8,760	1680.00	20,160
12" diameter x 24" solid steel ship anchor bollards	11	EA	875.00	9,625	450.00	4,950	1325.00	14,575
SUBTOTAL:				\$ 1,796,740		\$ 1,924,223		\$ 3,720,963
General Conditions, Overhead and Profit	30.00%			539,022		577,267		1,116,289
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			397,080		425,253		822,333
TOTAL E. TOTAL REPLACEMENT COST:				\$ 2,732,842		\$ 2,926,743		\$ 5,659,585

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7. CONCRETE DOCK AND PIER	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

A. OPERATIONS COSTS

Maintain dock, ramps and sidewalks. Clean during summer months and keep free of ice in winter months

12 MOS

By Others

TOTAL A. OPERATIONS COSTS:

By Others

B. IMMEDIATE REPAIRS (2011)

With Item 6

C. REGULAR MAINTENANCE COSTS

Following inspections performed by local professionals once a year.

Inspect dock surfaces, piling and fendering system for damage, etc. (local professional)

1 TIME

100.00

100

2000.00

2,000

2100.00

2,100

TOTAL C. REGULAR MAINTENANCE COSTS:

\$ 100

\$ 2,000

\$ 2,100

D. PERIODIC RENEWAL/REPLACEMENT COSTS

D1. COSTS BASED ON 5 YEARS CYCLE (5 TIMES TOTAL)

Replace damaged 3"x12" treated planks at utility trench (10%)

703

SF

6.70

4,710

7.75

5,448

14.45

10,158

HMS Project No.: 10104

7. CONCRETE DOCK AND PIER	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

D1. COSTS BASED ON 5 YEARS CYCLE (5 TIMES TOTAL) (Continued)

Repair boiler	1	EA	500.00	500	1200.00	1,200	1700.00	1,700
Repair leaks on potable water, fire water, steam, sewer and air piping in trench (10%)	500	LF	15.00	7,500	23.00	11,500	38.00	19,000
Megger test and re-tag power lines in trench	1,005	LF	1.50	1,508	4.50	4,523	6.00	6,031
Remove marine growth from pile caps and underside dock (boat operation)	24,640	SF	0.75	18,480	2.25	55,440	3.00	73,920
Remove marine growth from 18" diameter timber fenders (boat operation)	1,140	SF	1.00	1,140	3.50	3,990	4.50	5,130
Remove marine growth from 24"x30" diameter steel piles	10,852	SF	1.00	10,852	3.50	37,982	4.50	48,834
Repair dock fendering system (15%)	70	LF	248.00	17,360	110.00	7,700	358.00	25,060
Clean expansion joints	960	LF			6.50	6,240	6.50	6,240
SUBTOTAL:				\$ 62,050		\$ 134,023		\$ 196,073
General Conditions, Overhead and Profit	30.00%			18,615		40,207		58,822

HMS Project No.: 10104

7. CONCRETE DOCK AND PIER	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		13,713		29,619		43,332
TOTAL D1. PERIODIC RENEWAL/REPLACEMENT COSTS (5 YEARS):			\$ 94,378		\$ 203,849		\$ 298,227

D2. COSTS THAT OCCUR RIGHT AWAY AFTER 15 YEARS (2 TIMES TOTAL)

Sandblast 24" and 30" diameter steel piles	10,852	SF	1.00	10,852	5.00	54,260	6.00	65,112
Apply 160 mil, (3) part polyurethane coating	10,852	SF	2.75	29,843	9.50	103,094	12.25	132,937
SUBTOTAL:				\$ 40,695		\$ 157,354		\$ 198,049
General Conditions, Overhead and Profit	30.00%			12,209		47,206		59,415
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			8,994		34,775		43,769
TOTAL D2. PERIODIC RENEWAL/REPLACEMENT COSTS (15 YEARS):				\$ 61,898		\$ 239,335		\$ 301,233

D3. ONE TIME COST FOR 20 YEARS DESIGN LIFE

Apply impressed current cathodic protection system to 24" diameter steel piles (20 year design)	96	EA	750.00	72,000	930.00	89,280	1680.00	161,280
SUBTOTAL:				\$ 72,000		\$ 89,280		\$ 161,280

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7. CONCRETE DOCK AND PIER	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D3. ONE TIME COST FOR 20 YEARS DESIGN LIFE (Continued)

General Conditions, Overhead and Profit	30.00%		21,600		26,784		48,384
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		15,912		19,731		35,643
TOTAL D3. PERIODIC RENEWAL/REPLACEMENT COSTS (20 YEARS):			\$ 109,512		\$ 135,795		\$ 245,307

E. TOTAL REPLACEMENT COSTS

DEMOLITION

Mobilization-demobilization pile extracting rig	1	LOT	2000.00	2,000	3000.00	3,000	5000.00	5,000
Demolish 12'0" wide concrete utility trench on landside	540	LF			110.00	59,400	110.00	59,400
Demolish steam boiler	1	EA			2000.00	2,000	2000.00	2,000
Remove trench piping (5)	5,025	LF			10.25	51,506	10.25	51,506
Remove power (1)	1,005	LF			5.00	5,025	5.00	5,025
Demolish 7'0"x7'0" junction box, heater, cabinet and grating	9	EA			800.00	7,200	800.00	7,200
Demolish precast concrete double tee dock slab panels, trench and expansion joints	18,400	SF			12.50	230,000	12.50	230,000

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7. CONCRETE DOCK AND PIER	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

DEMOLITION (Continued)

Demolish 2'6"x1'6" concrete pile caps	134	CY	50.00	6,700	350.00	46,900	400.00	53,600
Extract 24" diameter x 45'0" long piles and salvage material	48	EA	110.00	5,280	720.00	34,560	830.00	39,840
Extract 30" diameter x 45'0" long piles and salvage material	48	EA	120.00	5,760	855.00	41,040	975.00	46,800
Remove dock fendering system	460	LF	5.00	2,300	65.00	29,900	70.00	32,200
Extract 18" diameter x 40'0" long timber fender piles	11	EA	100.00	1,100	675.00	7,425	775.00	8,525
Remove ladders, railing, etc.	1	LOT			2500.00	2,500	2500.00	2,500
Remove ship anchor bollards	13	EA			350.00	4,550	350.00	4,550
Dispose debris	650	TONS	70.00	45,500	20.00	13,000	90.00	58,500

NEW WORK

Mobilization-demobilization pile driving rig	1	LOT	2000.00	2,000	3000.00	3,000	5000.00	5,000
Drive 24" diameter x 45'0" long hot dipped galvanized steel piles	48	EA	3200.00	153,600	1500.00	72,000	4700.00	225,600

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7. CONCRETE DOCK AND PIER	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Drive 30" diameter x 45'0" long hot dipped galvanized steel piles	24	EA	3500.00	84,000	1700.00	40,800	5200.00	124,800
Drive 30" diameter batter piles	24	EA	3700.00	88,800	2500.00	60,000	6200.00	148,800
Pile cap plates and shoes	98	EA	225.00	22,050	280.00	27,440	505.00	49,490
Cut piles to elevation	98	EA	25.00	2,450	135.00	13,230	160.00	15,680
Apply impressed current cathodic protection system to steel piles	98	EA	700.00	68,600	900.00	88,200	1600.00	156,800
2'6"x1'6" thick reinforced concrete pile caps	100	CY	625.00	62,500	350.00	35,000	975.00	97,500
Concrete walls and slab to utility trench	1,338	CY	570.00	762,660	300.00	401,400	870.00	1,164,060
7'0"x7'0" galvanized checker plate junction box covers	9	EA	1470.00	13,230	330.00	2,970	1800.00	16,200
3"x12" treated wood plate cover at trench	6,692	SF	6.15	41,156	5.20	34,798	11.35	75,954
8" thick precast concrete slab with 6"x24" deep double tee stem dock girders	13,800	SF	18.50	255,300	10.00	138,000	28.50	393,300
2"x8" expansion joint and cover at slab panels	720	LF	35.00	25,200	13.00	9,360	48.00	34,560

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7. CONCRETE DOCK AND PIER	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

2"x24" expansion joint and cover at trench	216	LF	58.00	12,528	21.00	4,536	79.00	17,064
36" diameter x 9" thick rubber fender at dock	460	LF	275.00	126,500	135.00	62,100	410.00	188,600
W14x90# galvanized steel wale with 8" diameter rail	460	LF	185.00	85,100	105.00	48,300	290.00	133,400
Drive 18" diameter x 45'0" long treated timber fender and connect to wale	11	EA	950.00	10,450	730.00	8,030	1680.00	18,480
12" diameter x 24" solid steel ship anchor bollards	13	EA	875.00	11,375	450.00	5,850	1325.00	17,225
Galvanized steel ladders, railing, etc.	1	LOT	7500.00	7,500	2500.00	2,500	10000.00	10,000
New steam boiler, piping, power and enclosure	1	EA	45000.00	45,000	12000.00	12,000	57000.00	57,000
2" insulated potable water line and valving in utility trench	1,005	LF	16.00	16,080	25.00	25,125	41.00	41,205
4" fire water line and valving in utility trench	1,005	LF	23.50	23,618	31.00	31,155	54.50	54,773
4" sewage line and valving in utility trench	1,005	LF	21.00	21,105	27.00	27,135	48.00	48,240
2" air line and valving in utility trench	1,005	LF	18.00	18,090	26.00	26,130	44.00	44,220

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7. CONCRETE DOCK AND PIER	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

2" steam line and valving in utility trench	460	LF	24.00	11,040	32.00	14,720	56.00	25,760
Junction box cabinet, circuit breakers including M&E utility connections and heater	9	EA	14750.00	132,750	2800.00	25,200	17550.00	157,950
Shore power cables, outlet boxes and connection	1,005	LF	10.50	10,553	18.00	18,090	28.50	28,643
SUBTOTAL:				\$ 2,181,875		\$ 1,775,075		\$ 3,956,950
General Conditions, Overhead and Profit	30.00%			654,563		532,523		1,187,086
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			482,194		392,292		874,486
TOTAL E. TOTAL REPLACEMENT COST:				\$ 3,318,632		\$ 2,699,890		\$ 6,018,522

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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

A. OPERATIONS COSTS

Maintain dock/ramp clean during summer months and free of ice in winter months	12	MOS						By Others
Utilities fees	12	MOS						By Others

TOTAL A. OPERATIONS COSTS: **By Others**

B. IMMEDIATE REPAIRS (2011)

With Item 6

C. REGULAR MAINTENANCE COSTS

Safe dock operations, verification by State of Alaska (average every 2-years)	1	LOT			10000.00	10,000	10000.00	10,000
Inspect dock/ramp surfaces, piling, framing and fendering system, 1 time/year (local professional)	1	TIME	500.00	500	3500.00	3,500	4000.00	4,000
Inspect dolphins (local professional)	3	EA	150.00	450	550.00	1,650	700.00	2,100
Inspect ballast tanks, piping and pumps (local professional)	12	EA	100.00	1,200	500.00	6,000	600.00	7,200
Inspect mooring arms, dock winches, crane, capstans, etc. (local professional)	1	LOT	500.00	500	4500.00	4,500	5000.00	5,000

HMS Project No.: 10104

8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

C. REGULAR MAINTENANCE COSTS (Continued)

Inspect dock utilities and shore power (local professional)	1	LOT	300.00	300	1500.00	1,500	1800.00	1,800
Inspect communication and bridge control equipment (local professional)	1	LOT	300.00	300	1500.00	1,500	1800.00	1,800
Develop written maintenance program	1	LOT	500.00	500	7500.00	7,500	8000.00	8,000
TOTAL C. REGULAR MAINTENANCE COSTS:				\$ 3,750		\$ 36,150		\$ 39,900

D. PERIODIC RENEWAL/REPLACEMENT COSTS

D1. COSTS BASED ON 5 YEARS CYCLE (5 TIMES TOTAL)

Repair hinged pin ramp connections (2)	23	LF	20.00	460	35.00	805	55.00	1,265
Repair roller feet connection	23	LF	27.00	621	45.00	1,035	72.00	1,656
Repair dock and ramp guardrails (5.00%)	50	LF	10.00	500	20.00	1,000	30.00	1,500
Remove marine growth from under side dock and ramps	56,312	SF	0.75	42,234	2.25	126,702	3.00	168,936
Remove marine growth from ballast tank, bulkheads and walls	6,180	SF	0.75	4,635	2.25	13,905	3.00	18,540

Note: Dock deck and bottom not painted.

HMS Project No.: 10104

8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

D1. COSTS BASED ON 5 YEARS CYCLE (5 TIMES TOTAL) (Continued)

Service flood valves and dewatering pumps	1	LOT	300.00	300	1500.00	1,500	1800.00	1,800
Service 60 HP fire pumps	2	EA	150.00	300	800.00	1,600	950.00	1,900
Service 15 HP fueling pump	1	EA	100.00	100	800.00	800	900.00	900
Service fire hydrants	16	EA	50.00	800	250.00	4,000	300.00	4,800
Recharge 20# fire extinguishers	4	EA	75.00	300	55.00	220	130.00	520
Repair toilet plumbing fixtures	6	EA	50.00	300	150.00	900	200.00	1,200
Service sewage piping and 6,000 gallon holding tank as necessary	1	EA	500.00	500	2500.00	2,500	3000.00	3,000
Service oily water piping and 6,000 gallon holding tank	1	EA	500.00	500	2500.00	2,500	3000.00	3,000
Repair mooring arms	3	EA	700.00	2,100	2000.00	6,000	2700.00	8,100
Repair power operated capstans	6	EA	300.00	1,800	1000.00	6,000	1300.00	7,800
Repair ground tackles	1	LOT	300.00	300	800.00	800	1100.00	1,100
Repair vertical and horizontal wood fendering system (10%)	52	LF	150.00	7,800	175.00	9,100	325.00	16,900

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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

D1. COSTS BASED ON 5 YEARS CYCLE (5 TIMES TOTAL) (Continued)

Minor repairs to 10 ton crane and railings	1	LOT	1000.00	1,000	2500.00	2,500	3500.00	3,500
Service equipment motor control center	1	EA	200.00	200	900.00	900	1100.00	1,100
Minor repair to 300 KW generator and switchgear	1	LOT	1000.00	1,000	2500.00	2,500	3500.00	3,500
Minor repairs to controls and communication systems	1	LOT	1000.00	1,000	3000.00	3,000	4000.00	4,000
Repair mechanical and electrical equipment of companion way	2	LOTS	350.00	700	550.00	1,100	900.00	1,800
Relamp dock flood lights (50%)	8	EA	130.00	1,040	155.00	1,240	285.00	2,280
Relamp standard safety lights (20%)	4	EA	100.00	400	120.00	480	220.00	880
SUBTOTAL:				\$ 68,890		\$ 191,087		\$ 259,977
General Conditions, Overhead and Profit	30.00%			20,667		57,326		77,993
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			15,225		42,230		57,455
TOTAL D1. PERIODIC RENEWAL/REPLACEMENT COSTS (5 YEARS):				\$ 104,782		\$ 290,643		\$ 395,425

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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

D2. COSTS THAT OCCUR RIGHT AWAY AFTER 15 YEARS (2 TIMES TOTAL)

Sand blast bulkhead, wing walls and railings, etc.	15,300	SF	1.00	15,300	5.00	76,500	6.00	91,800
Sand blast dolphin piles	6,782	SF	1.00	6,782	5.50	37,301	6.50	44,083
Apply 160 mil (3) part polyurethane coating to bulkheads and walls	6,180	SF	2.75	16,995	9.50	58,710	12.25	75,705
Apply 160 mil (3) part polyurethane coating to dolphin piles	6,782	SF	2.75	18,651	12.20	82,740	14.95	101,391
SUBTOTAL:				\$ 57,728		\$ 255,251		\$ 312,979
General Conditions, Overhead and Profit	30.00%			17,318		76,575		93,893
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			12,758		56,410		69,168
TOTAL D2. PERIODIC RENEWAL/REPLACEMENT COSTS (15 YEARS):				\$ 87,804		\$ 388,236		\$ 476,040

D3. ONE TIME COST FOR 20 YEARS DESIGN LIFE

Apply impressed current cathodic protection system to dock surfaces	52,230	SF	2.85	148,856	8.50	443,955	11.35	592,811
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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

D. PERIODIC RENEWAL/REPLACEMENT COSTS (Continued)

D3. ONE TIME COST FOR 20 YEARS DESIGN LIFE (Continued)

Apply impressed current cathodic protection system to dolphin piles

12	EA	1250.00	15,000	1725.00	20,700	2975.00	35,700
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Note: Dock deck and bottom not painted.

SUBTOTAL:				\$ 163,856	\$ 464,655	\$ 628,511
General Conditions, Overhead and Profit	30.00%		49,157	139,397	188,554	
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%		36,212	102,689	138,901	
TOTAL D3. PERIODIC RENEWAL/REPLACEMENT COSTS (20 YEARS):			\$ 249,225	\$ 706,741	\$ 955,966	

E. TOTAL REPLACEMENT COSTS

DEMOLITION

Demolish ramps and rails and salvage materials	2,662	SF		6.00	15,972	6.00	15,972
Demolish dry dock completely and salvage materials	52,330	SF		10.25	536,383	10.25	536,383
Demolish dry dock mechanical and electrical systems	1	LOT		35000.00	35,000	35000.00	35,000

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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

Demolish dry dock mooring arms, capstans, crane, etc.	1	LOT			65000.00	65,000	65000.00	65,000
Mobilization-demobilization pile extracting barge mounted rig	1	LOT	2500.00	2,500	7500.00	7,500	10000.00	10,000
Extract 48" diameter x 45'0" long dolphin piles	12	EA			2200.00	26,400	2200.00	26,400
Dispose unsalvageable debris	150	TONS	70.00	10,500	20.00	3,000	90.00	13,500

NEW WORK

Piling

Mobilization-demobilization barge mounted pile driving rig	1	LOT	2000.00	2,000	6000.00	6,000	8000.00	8,000
Drive 48" diameter x 45'0" long hot dipped galvanized steel dolphin piles	12	EA	6500.00	78,000	2700.00	32,400	9200.00	110,400
Pile cap plates and driving shoes	12	EA	450.00	5,400	575.00	6,900	1025.00	12,300
Dolphin timber fendering system	150	LF	248.00	37,200	110.00	16,500	358.00	53,700

Dry Dock Construction

Galvanized steel floor framing	1,610	TONS	2500.00	4,025,000	2000.00	3,220,000	4500.00	7,245,000
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HMS Project No.: 10104

8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Dry Dock Construction (Continued)

Galvanized steel wing walls and bulkheads framing	365	TONS	2500.00	912,500	1800.00	657,000	4300.00	1,569,500
7/16" galvanized steel bottom plates (470 tons)	52,330	SF	28.00	1,465,240	12.00	627,960	40.00	2,093,200
5/8" deck plates (670 tons)	52,330	SF	28.00	1,465,240	10.00	523,300	38.00	1,988,540
3/8" wing wall plates (92 tons)	12,160	SF	17.00	206,720	8.00	97,280	25.00	304,000
7/16" bulkhead plating (72 tons)	8,240	SF	21.00	173,040	9.50	78,280	30.50	251,320
Water ballasts tanks including sea chests	12	EA	23500.00	282,000	6000.00	72,000	29500.00	354,000
4'0"x4'0" access hatches	12	EA	1800.00	21,600	700.00	8,400	2500.00	30,000
Guard railings	990	LF	49.00	48,510	15.20	15,048	64.20	63,558
Steel ladders and steps	1	LOT	10000.00	10,000	5000.00	5,000	15000.00	15,000

Ramps

Steel truss ramp and decking including integral handrails, hinged pin and roller feet connections	2,662	SF	52.50	139,755	27.00	71,874	79.50	211,629
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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Dock Fendering

Wooden timber fendering system	515	LF	165.00	84,975	145.00	74,675	310.00	159,650
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Mooring Arms & Winches

Mooring arms comprising support bracket, linkage arm and gripper	3	EA	12000.00	36,000	5000.00	15,000	17000.00	51,000
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Power operated capstans	6	EA	22500.00	135,000	7000.00	42,000	29500.00	177,000
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12"x24" steel anchor bollards	24	EA	590.00	14,160	235.00	5,640	825.00	19,800
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Double bitts and roller fairleads	1	LOT	20000.00	20,000	7000.00	7,000	27000.00	27,000
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Concrete keel blocks with wood caps set at 6'0" o/c	63	EA	245.00	15,435	155.00	9,765	400.00	25,200
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Concrete bilge blocks set at 16'0" o/c	34	EA	210.00	7,140	150.00	5,100	360.00	12,240
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Dock Flood and Lift System

12" electric operated OSY inlet valve	12	EA	6500.00	78,000	1350.00	16,200	7850.00	94,200
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12" flap valves	12	EA	3200.00	38,400	800.00	9,600	4000.00	48,000
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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Dock Flood and Lift System (Continued)

12" rising stem gate valves	12	EA	3750.00	45,000	880.00	10,560	4630.00	55,560
Dewatering pumps	12	EA	5500.00	66,000	1200.00	14,400	6700.00	80,400
Ballast tanks flooding/dewatering piping	12	LOTS	1800.00	21,600	3500.00	42,000	5300.00	63,600
Flood outlet scuppers at wing walls	12	EA	225.00	2,700	170.00	2,040	395.00	4,740

Crane

10 ton fully revolving roller mounted crane and rails	1	EA	165000.00	165,000	48000.00	48,000	213000.00	213,000
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Control House and Deck Access

24'0"x8'0" prefabricated control house and ladders atop wing wall	1	EA	115000.00	115,000	25000.00	25,000	140000.00	140,000
15'0"x6'0" companion way with skylight and stairs	2	EA	49000.00	98,000	10000.00	20,000	59000.00	118,000
Safety deck water tight access doors	4	EA	3500.00	14,000	900.00	3,600	4400.00	17,600

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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Control House and Deck Access (Continued)

Electric heat and light at control house, companion ways and safety deck access space	3,012	SF	18.00	54,216	13.00	39,156	31.00	93,372
Mechanical ventilation at control house, companion ways and safety deck access space	3,012	SF	10.00	30,120	8.00	24,096	18.00	54,216

Fire Fighting Service

369 GPM and 60 HP diesel engine fire pumps	2	EA	68500.00	137,000	8500.00	17,000	77000.00	154,000
60 GPM, 15 HP electric jockey pump	1	EA	12500.00	12,500	2300.00	2,300	14800.00	14,800
Fire hydrants	16	EA	2950.00	47,200	1500.00	24,000	4450.00	71,200
5" fire mains and fittings	1,860	LF	45.00	83,700	53.00	98,580	98.00	182,280
5" Stortz fitting for fire truck connection	1	EA	650.00	650	210.00	210	860.00	860
20# fire extinguishers	4	EA	385.00	1,540	80.00	320	465.00	1,860
9 liter Halon 1211 container	1	EA	1250.00	1,250	250.00	250	1500.00	1,500

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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Fire Fighting Service (Continued)

45 liter dry powder container	1	EA	750.00	750	100.00	100	850.00	850
100% spare charges for fire extinguishers	1	LOT	250.00	250	25.00	25	275.00	275

Potable Water and Plumbing

Plumbing fixtures	6	EA	650.00	3,900	250.00	1,500	900.00	5,400
Service stations	4	EA	485.00	1,940	250.00	1,000	735.00	2,940
Plumbing rough-in	10	EA	500.00	5,000	900.00	9,000	1400.00	14,000
2 1/2" insulated water main	510	LF	15.50	7,905	22.50	11,475	38.00	19,380
2" insulated water main	150	LF	13.20	1,980	19.00	2,850	32.20	4,830
6,000 gallon sewage tank and level switch	1	EA	18500.00	18,500	3500.00	3,500	22000.00	22,000
Displacement pump	1	EA	2500.00	2,500	300.00	300	2800.00	2,800
Sewage pump out connections	4	EA	150.00	600	120.00	480	270.00	1,080
3" sewer line	680	LF	12.00	8,160	15.50	10,540	27.50	18,700

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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Potable Water and Plumbing (Continued)

Connection to sewer main	1	EA	225.00	225	450.00	450	675.00	675
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Oily Waste Connection

6,000 gallon water oil tank	1	EA	21000.00	21,000	3800.00	3,800	24800.00	24,800
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Displacement pump	1	EA	2800.00	2,800	350.00	350	3150.00	3,150
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Oily waste pump out connections	4	EA	200.00	800	150.00	600	350.00	1,400
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3" waste line	730	LF	12.00	8,760	15.50	11,315	27.50	20,075
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Connection to OWS building	1	EA	120.00	120	170.00	170	290.00	290
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Compressed Air

Auxiliary controls compressor	1	EA	2750.00	2,750	1000.00	1,000	3750.00	3,750
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4" shore and dock lines	480	LF	28.75	13,800	41.00	19,680	69.75	33,480
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2" branch lines	1,790	LF	13.80	24,702	23.00	41,170	36.80	65,872
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Air station and coupling	16	EA	240.00	3,840	155.00	2,480	395.00	6,320
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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Controls

Dock equipment controls systems	1	LOT	150000.00	150,000	75000.00	75,000	225000.00	225,000
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Electrical

12.5 KV, 60 Hz transformer and pad	1	EA	27000.00	27,000	6700.00	6,700	33700.00	33,700
Switchboard	1	EA	32000.00	32,000	12500.00	12,500	44500.00	44,500
Motor control center	1	EA	12500.00	12,500	2500.00	2,500	15000.00	15,000
12.5 KV power to dock	550	LF	18.50	10,175	23.75	13,063	42.25	23,238
Dock power cables and conduit	1,520	LF	13.00	19,760	20.00	30,400	33.00	50,160
Dock weatherproof service points	4	EA	250.00	1,000	150.00	600	400.00	1,600
300 KW emergency generator package	1	EA	80000.00	80,000	9000.00	9,000	89000.00	89,000
Switchgear and automatic transfer switch	1	LOT	25000.00	25,000	7000.00	7,000	32000.00	32,000
Conduit, wiring and equipment connections	1	LOT	2500.00	2,500	6500.00	6,500	9000.00	9,000
Safety deck lighting and poles	24	EA	2450.00	58,800	1100.00	26,400	3550.00	85,200

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8. FLOATING DRY DOCK AND RAMPS #1	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

E. TOTAL REPLACEMENT COSTS (Continued)

NEW WORK (Continued)

Electrical (Continued)

Flood lighting and poles	16	EA	2900.00	46,400	1300.00	20,800	4200.00	67,200
Beacons	3	EA	1250.00	3,750	500.00	1,500	1750.00	5,250
Weatherproof devices, conduit and wiring	1	LOT	5500.00	5,500	12500.00	12,500	18000.00	18,000
Public address and communication systems	1	LOT	30000.00	30,000	12000.00	12,000	42000.00	42,000
SUBTOTAL:				\$ 10,844,458		\$ 7,041,937		\$ 17,886,395
General Conditions, Overhead and Profit	30.00%			3,253,337		2,112,581		5,365,918
Contingencies and Escalation to 2011 at 5.00% per Annum	17.00%			2,396,625		1,556,268		3,952,893
TOTAL E. TOTAL REPLACEMENT COST:				\$ 16,494,420		\$ 10,710,786		\$ 27,205,206