

FAC 2171 Electronic and Communication Maintenance Shop

RUC: \$183.00 SF

Source: USACE PAX Newsletter 3.2.2 dated 20 Mar 09
CC 21710
Deflated to FY-09 using Appendix C of newsletter
In V12, Tri-Service and USACE PAX Newsletter values were updated while all
other values were inflated only.

SUC: \$2.58 SF

Source: Cost Works model in \$FY-08, inflated to \$FY-09 using Green Book Table 5-6
(O&M less DHP)
In V12, values were inflated only.
Model follows:

Chart: A chart showing relative annual sustainment requirements follows:

FAC 2171 Electronic and Communication Maintenance Shop
CostWorks 2008 Quarter 2

	Design Life= 50 Average S.F= 6,721	C.S.F.=100 S.F; MSF=1000 S.F Sq=100 S.F; M.L.F=1000 L.F	This spreadsheet was exported from R.S. Means CostWorks		Terminal Cutoff is the removal of a single task occurrenceif that task occurs within 10% of the end of the design life and if the frequency of the task exceeds 20% of the design llife. This prevents scheduling major work near the end of the design life.					
Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff
Repair 8" concrete block wall - 1st floor	25	1 Bric	343.600	S.F.	6,892.62	8,383.84	2008 Qtr 2	2	1	\$ 8,383.84
Replace 8" concrete block wall - 1st floor	60	2 Bric	34.360	C.S.F.	34,183.73	41,148.51	2008 Qtr 2	0	0	\$ -
Replace aluminum siding - 2nd floor	35	1 Carp	27.300	C.S.F.	15,395.84	18,549.80	2008 Qtr 2	1	1	\$ 18,549.80
Refinish aluminum siding - 2nd floor	20	1 Pord	27.300	C.S.F.	6,417.41	7,872.50	2008 Qtr 2	2	2	\$ 15,745.00
Replace glass - 2nd floor (1% of glass)	1	1 Carp	1.800	S.F.	90.34	110.23	2008 Qtr 2	50	50	\$ 5,511.60
Repair 3'-9" x 5'-5" steel frame window - 2nd flr.	20	1 Carp	9.000	Ea.	2,715.84	3,198.87	2008 Qtr 2	2	2	\$ 6,397.74
Refinish 3'-9" x 5'-5" steel frame window - 2nd flr.	5	1 Pord	9.000	Ea.	1,119.87	1,379.97	2008 Qtr 2	10	10	\$ 13,799.70
Replace 3'-9" x 5'-5" steel frame window - 2nd flr.	45	1 Carp	9.000	Ea.	14,271.84	16,449.39	2008 Qtr 2	1	1	\$ 16,449.39
Finish new 3'-9" x 5'-5" st. fr. window - 2nd flr.	45	1 Pord	9.000	Ea.	1,040.40	1,281.15	2008 Qtr 2	1	1	\$ 1,281.15
Refinish 12' x 24' steel double roll-up door	5	1 Pord	2.000	Ea.	677.06	824.04	2008 Qtr 2	10	10	\$ 8,240.40
Replace 12' x 24' steel double roll-up door	35	2 Carp	2.000	Ea.	13,302.80	15,441.28	2008 Qtr 2	1	1	\$ 15,441.28
Repair steel, painted, door	14	1 Carp	4.000	Ea.	2,329.76	2,745.44	2008 Qtr 2	3	3	\$ 8,236.32
Refinish 3'-0" x 7'-0" steel, painted, door	12	1 Pord	4.000	Ea.	131.64	161.24	2008 Qtr 2	4	3	\$ 483.72
Replace 3'-0" x 7'-0" steel, painted, door	45	1 Carp	4.000	Ea.	2,128.32	2,480.16	2008 Qtr 2	1	1	\$ 2,480.16
Debris removal by hand & visual inspection metal steep roofing	1	2 Rofc	5.070	M.S.F.	89.99	108.50	2008 Qtr 2	50	50	\$ 5,424.90
Minor finish repairs - (2% of roof area) metal steep roofing	5	2 Rofc	101.500	S.F.	275.07	326.83	2008 Qtr 2	10	10	\$ 3,268.30
Flashing replacement - (2 S.F. per sq. repaired) metal steep roofing	5	2 Rofc	2.000	S.F.	28.88	34.66	2008 Qtr 2	10	10	\$ 346.60
Minor replacement - (2.5% of roof area) metal steep roofing	20	2 Rofc	126.900	S.F.	1,134.49	1,347.68	2008 Qtr 2	2	2	\$ 2,695.36
Total metal panel replacement metal steep roofing	30	2 Rofc	0.000	Sq.	0.00	0.00	2008 Qtr 2	1	1	\$ -
Repair steel painted interior door	14	1 Carp	10.000	Ea.	1,677.50	1,981.40	2008 Qtr 2	3	3	\$ 5,944.20
Refinish 3'-0" x 7'-0" steel painted interior door	12	1 Pord	10.000	Ea.	494.00	608.20	2008 Qtr 2	4	3	\$ 1,824.60
Replace 3'-0" x 7'-0" steel painted interior door	60	1 Carp	10.000	Ea.	9,375.40	10,899.60	2008 Qtr 2	0	0	\$ -
Replace insulating glass (3% of glass) fully glazed wooden doors	1	1 Carp	0.100	S.F.	4.54	5.32	2008 Qtr 2	50	50	\$ 266.10
Repair fully glazed wood door	10	1 Carp	2.000	Ea.	335.50	396.28	2008 Qtr 2	5	5	\$ 1,981.40
Refinish 3'-0" x 7'-0" fully glazed wood door	12	1 Pord	2.000	Ea.	138.44	170.78	2008 Qtr 2	4	3	\$ 512.34
Replace 3'-0" x 7'-0" fully glazed wood door	40	1 Carp	2.000	Ea.	1,962.04	2,294.52	2008 Qtr 2	1	1	\$ 2,294.52
Repair concrete steps	15	1 Cefi	36.000	S.F.	611.64	712.08	2008 Qtr 2	3	3	\$ 2,136.24
Replace concrete steps	100	2 Cefi	36.000	S.F.	1,782.36	2,163.24	2008 Qtr 2	0	0	\$ -
Refinish metal stair railing interior	12	1 Pord	23.000	S.F.	31.51	39.10	2008 Qtr 2	4	3	\$ 117.30
Replace metal stair railing interior	45	2 Sswk	23.000	L.F.	825.01	953.12	2008 Qtr 2	1	1	\$ 953.12
Repair 8" concrete block wall - (2% of walls) painted	25	1 Bric	1.300	C.S.F.	1,314.57	1,578.23	2008 Qtr 2	2	1	\$ 1,578.23
Refinish concrete block wall painted	12	1 Pord	63.600	C.S.F.	6,180.01	7,513.07	2008 Qtr 2	4	3	\$ 22,539.20
Replace 8" concrete block wall painted	75	2 Bric	63.600	C.S.F.	68,548.72	82,437.68	2008 Qtr 2	0	0	\$ -
Refinish concrete floor finished	25	2 Cefi	65.400	C.S.F.	22,853.38	27,513.13	2008 Qtr 2	2	1	\$ 27,513.13
Acoustic tile repairs - (2% of ceilings)	9	1 Carp	0.300	C.S.F.	134.00	159.50	2008 Qtr 2	5	5	\$ 797.51
Replace acoustic tile ceiling, fire-rated	20	1 Carp	15.200	C.S.F.	6,127.88	7,280.80	2008 Qtr 2	2	2	\$ 14,561.60
Check / minor repairs drinking fountain	1	1 Plum	1.000	Ea.	37.58	47.34	2008 Qtr 2	50	50	\$ 2,367.00
Repair internal leaks drinking fountain	4	1 Plum	1.000	Ea.	35.14	43.43	2008 Qtr 2	12	12	\$ 521.16
Correct water pressure drinking fountain	2	1 Plum	1.000	Ea.	32.21	40.50	2008 Qtr 2	25	25	\$ 1,012.50
Replace refrigerant drinking fountain	2	1 Plum	1.000	Ea.	15.84	18.86	2008 Qtr 2	25	25	\$ 471.50
Repair drain leak drinking fountain	4	1 Plum	1.000	Ea.	22.63	27.03	2008 Qtr 2	12	12	\$ 324.36
Replace fountain drinking fountain	10	2 Plum	1.000	Ea.	1,005.84	1,193.57	2008 Qtr 2	5	5	\$ 5,967.85

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CostWorks 2008 Quarter 2

Design Life= 50		C.S.F=100 S.F; MSF=1000 S.F		This spreadsheet was exported from		Terminal Cutoff is the removal of a single task occurrenceif that task occurs within					
Average S.F= 6,721		Sq=100 S.F; M.L.F=1000 L.F		R.S. Means CostWorks		10% of the end of the design life and if the frequency of the task exceeds 20% of the design llife. This prevents scheduling major work near the end of the design life.					
Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurences	Terminal Cutoff	
Inspect and clean spray heads, emergency eye wash	3	1 Plum	1.000	Ea.	37.80	47.44	2008 Qtr 2	16	16	\$	759.04
Replace eye wash station, emergency eye wash	25	2 Plum	1.000	Ea.	573.92	695.88	2008 Qtr 2	2	1	\$	695.88
Replace washer in spud connection lavatory, vitreous china	7	1 Plum	4.000	Ea.	96.04	113.32	2008 Qtr 2	7	7	\$	793.24
Replace washer in faucet lavatory, vitreous china	2	1 Plum	4.000	Ea.	39.40	49.16	2008 Qtr 2	25	25	\$	1,229.00
Replace faucets lavatory, vitreous china	10	1 Plum	4.000	Ea.	493.96	596.24	2008 Qtr 2	5	5	\$	2,981.20
Clean out strainer and P trap lavatory, vitreous china	2	1 Plum	4.000	Ea.	108.16	134.28	2008 Qtr 2	25	25	\$	3,357.00
Replace lavatory, vitreous china	35	2 Plum	4.000	Ea.	2,120.76	2,542.80	2008 Qtr 2	1	1	\$	2,542.80
Replace faucet washer sink, iron enamel	2	1 Plum	1.000	Ea.	9.79	12.19	2008 Qtr 2	25	25	\$	304.75
Clean trap sink, iron enamel	3	1 Plum	1.000	Ea.	6.60	8.25	2008 Qtr 2	16	16	\$	132.00
Replace faucets sink, iron enamel	10	1 Plum	1.000	Ea.	123.49	149.06	2008 Qtr 2	5	5	\$	745.30
Unstop sink sink, iron enamel	2	1 Plum	1.000	Ea.	32.21	40.50	2008 Qtr 2	25	25	\$	1,012.50
Replace sink, P.E.C.I. sink, iron enamel	35	2 Plum	1.000	Ea.	552.72	657.69	2008 Qtr 2	1	1	\$	657.69
Inspect / clean shower head fiberglass	3	1 Plum	2.000	Ea.	75.60	94.88	2008 Qtr 2	16	16	\$	1,518.08
Replace mixing valve barrel shower, fiberglass	2	1 Plum	2.000	Ea.	296.30	352.64	2008 Qtr 2	25	25	\$	8,816.00
Replace mixing valve shower, fiberglass	10	1 Plum	2.000	Ea.	549.36	658.00	2008 Qtr 2	5	5	\$	3,290.00
Replace shower and fittings, fiberglass	20	2 Plum	2.000	Ea.	1,953.30	2,303.16	2008 Qtr 2	2	2	\$	4,606.32
Replace flush valve diaphragm tankless water closet	10	1 Plum	4.000	Ea.	282.96	332.24	2008 Qtr 2	5	5	\$	1,661.20
Rebuild flush valve tankless water closet	20	1 Plum	4.000	Ea.	527.92	640.04	2008 Qtr 2	2	2	\$	1,280.08
Unplug clogged line tankless water closet	5	1 Plum	4.000	Ea.	673.04	840.72	2008 Qtr 2	10	10	\$	8,407.20
Replace tankless water closet	35	2 Plum	4.000	Ea.	2,192.00	2,593.44	2008 Qtr 2	1	1	\$	2,593.44
Replace tankless flush valve	25	1 Plum	4.000	Ea.	838.00	981.48	2008 Qtr 2	2	1	\$	981.48
Replace wax ring gasket tankless water closet	5	1 Plum	4.000	Ea.	438.28	548.80	2008 Qtr 2	10	10	\$	5,488.00
Replace flush valve diaphragm urinal	7	1 Plum	1.000	Ea.	70.74	83.06	2008 Qtr 2	7	7	\$	581.42
Rebuild flush valve urinal	20	1 Plum	1.000	Ea.	131.98	160.01	2008 Qtr 2	2	2	\$	320.02
Unplug line urinal	5	1 Plum	1.000	Ea.	112.14	139.91	2008 Qtr 2	10	10	\$	1,399.10
Replace wall-hung urinal	35	2 Plum	1.000	Ea.	841.63	1,006.57	2008 Qtr 2	1	1	\$	1,006.57
Replace pipe and fittings, copper 3/4"	20	2 Plum	32.000	L.F.	567.04	687.36	2008 Qtr 2	2	2	\$	1,374.72
Replace pipe and fittings, copper 2"	25	2 Plum	16.000	L.F.	652.96	785.76	2008 Qtr 2	2	1	\$	785.76
Repair damaged pipe insulation, fiberglass 3/4"	5	Q14	2.000	Ea.	31.44	38.36	2008 Qtr 2	10	10	\$	383.60
Repair damaged pipe insulation, fiberglass 2"	5	Q14	2.000	Ea.	36.92	45.06	2008 Qtr 2	10	10	\$	450.60
Replace pipe insulation, fiberglass 3/4"	5	Q14	0.030	M.L.F.	188.67	229.84	2008 Qtr 2	10	10	\$	2,298.39
Replace pipe insulation, fiberglass 2"	5	Q14	0.010	M.L.F.	74.26	90.69	2008 Qtr 2	10	10	\$	906.91
Minor repairs, adjustments water heater, gas / oil, 1150 GPH	2	2 Plum	1.000	Ea.	75.64	94.18	2008 Qtr 2	25	25	\$	2,354.50
Clean & service water heater, gas / oil, 1150 GPH	2	2 Plum	1.000	Ea.	453.84	566.08	2008 Qtr 2	25	25	\$	14,152.00
Replace water heater, gas / oil, 1150 GPH	20	2 Plum	1.000	Ea.	26,100.80	30,172.40	2008 Qtr 2	2	2	\$	60,344.80
Unclog floor drain, PVC	20	1 Plum	1.000	Ea.	37.09	45.87	2008 Qtr 2	2	2	\$	91.74
Repair joint pipe and fittings, PVC	10	1 Plum	2.000	Ea.	231.88	288.28	2008 Qtr 2	5	5	\$	1,441.40
Replace pipe, 4" pipe and fittings, PVC	30	2 Plum	200.000	L.F.	11,840.00	14,638.00	2008 Qtr 2	1	1	\$	14,638.00
General maintenance & repair drain: roof, scupper, area	1	1 Plum	2.000	Ea.	56.70	71.34	2008 Qtr 2	50	50	\$	3,567.00
Replace drain: roof, scupper, area	40	1 Plum	2.000	Ea.	796.68	936.28	2008 Qtr 2	1	1	\$	936.28

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Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff	
Resolder joint pipe & fittings, oxygen	12	1 Plum	1.000	Ea.	52.14	65.04	2008 Qtr 2	4	3	\$	195.12
Replace pipe and fittings, oxygen	25	2 Plum	100.000	L.F.	1,763.00	2,139.00	2008 Qtr 2	2	1	\$	2,139.00
Replace roof mounted exhaust fan, 8500 CFM exhaust fan	20	Q20	1.000	Ea.	2,619.48	3,050.64	2008 Qtr 2	2	2	\$	6,101.28
Repair single zone rt. unit, 5 ton	10	2 Stpi	2.000	Ea.	3,859.42	4,629.12	2008 Qtr 2	5	5	\$	23,145.60
Replace single zone rt. unit, 5 ton	15	Q5	1.000	Ea.	7,276.88	8,588.60	2008 Qtr 2	3	3	\$	25,765.80
Repair fan coil unit, 1 ton	10	1 Stpi	2.000	Ea.	738.44	882.04	2008 Qtr 2	5	5	\$	4,410.20
Replace fan coil unit, 1 ton	15	Q5	2.000	Ea.	2,196.60	2,591.12	2008 Qtr 2	3	3	\$	7,773.36
Minor repairs to fire alarm control panel	5	1 Elec	1.000	Ea.	107.84	130.97	2008 Qtr 2	10	10	\$	1,309.70
Maintenance and inspection fire alarm control panel	0.5	1 Elec	1.000	Ea.	30.54	38.17	2008 Qtr 2	100	100	\$	3,817.00
Replace fire alarm control panel	15	1 Elec	1.000	Ea.	2,615.62	3,107.84	2008 Qtr 2	3	3	\$	9,323.52
Inspect sprinkler system	1	1 Plum	1.000	Ea.	26.55	32.89	2008 Qtr 2	50	50	\$	1,644.50
Replace sprinkler head	20	1 Plum	21.000	Ea.	1,337.28	1,647.66	2008 Qtr 2	2	2	\$	3,295.32
Replace fire alarm bell, 6"	20	1 Elec	2.000	Ea.	284.56	343.02	2008 Qtr 2	2	2	\$	686.04
Maintenance and inspection lighting panel, indoor	3	1 Elec	2.000	Ea.	57.00	71.26	2008 Qtr 2	16	16	\$	1,140.16
Maintenance and repair safety switch, 3 pole safety switch, heavy duty	8	1 Elec	2.000	Ea.	57.00	71.26	2008 Qtr 2	6	6	\$	427.56
Maintenance and inspection safety switch, 3 pole, heavy duty	1	1 Elec	2.000	Ea.	57.00	71.26	2008 Qtr 2	50	50	\$	3,563.00
Replace safety switch, heavy duty	25	2 Elec	2.000	Ea.	1,160.96	1,361.42	2008 Qtr 2	2	1	\$	1,361.42
Maintenance and repair motor starter, up to 600 V	5	1 Elec	2.000	Ea.	341.50	415.00	2008 Qtr 2	10	10	\$	4,150.00
Maintenance and inspection motor starter, up to 600 V	0.5	1 Elec	2.000	Ea.	76.34	95.70	2008 Qtr 2	100	100	\$	9,570.00
Replace starter motor starter, up to 600 V	18	1 Elec	2.000	Ea.	1,056.36	1,260.82	2008 Qtr 2	2	2	\$	2,521.64
Replace fluor. ballast for fluorescent lighting fixture, 80 W	10	1 Elec	108.000	Ea.	10,754.64	12,968.64	2008 Qtr 2	5	5	\$	64,843.20
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	108.000	Ea.	2,747.52	3,367.44	2008 Qtr 2	5	5	\$	16,837.20
Replace M.H. ballast mercury halide fixture, 175 W	10	1 Elec	20.000	Ea.	3,820.00	4,477.80	2008 Qtr 2	5	5	\$	22,389.00
Replace lamp mercury halide fixture, 175 W	5	1 Elec	20.000	Ea.	1,479.80	1,749.40	2008 Qtr 2	10	10	\$	17,494.00
Maintenance and repair receptacles and plugs	20	1 Elec	58.000	Ea.	1,803.22	2,246.34	2008 Qtr 2	2	2	\$	4,492.68
Replace receptacle/plug receptacles and plugs	20	1 Elec	58.000	Ea.	3,060.08	3,736.36	2008 Qtr 2	2	2	\$	7,472.72
Maintenance and repair wiring devices, switches	10	1 Elec	22.000	Ea.	683.98	852.06	2008 Qtr 2	5	5	\$	4,260.30
Replace switch wiring devices, switches	15	1 Elec	22.000	Ea.	1,126.62	1,371.70	2008 Qtr 2	3	3	\$	4,115.10
Check and repair manual pull station	10	1 Elec	5.000	Ea.	346.05	424.35	2008 Qtr 2	5	5	\$	2,121.75
Replace manual pull station	15	1 Elec	5.000	Ea.	628.70	759.45	2008 Qtr 2	3	3	\$	2,278.35
					\$332,258.78	\$396,938.50					
										MR Subtotal	\$ 645,948.64
										MR Per Year	\$ 12,918.97
										PM Per Year	\$ 4,988.33
										Subtotal	\$ 17,907.30
										Total Per Unit	\$ 2.6

CostWorks 2009 Quarter 1 - FAC 2171 Electronic and Communication Maintenance Shop

Qty	Assembly Number	Description	Total In-House	Total Incl. O&P	Zip Code	Prefix	Type	Release
1.000	D3095 110 1950	Air compressor, gas engine powered, annualized	1,180.53	1,474.60	200		FMR	2008 Qtr 2
4.000	D3045 160 1950	VAV Boxes, annualized	245.24	304.00	200		FMR	2008 Qtr 2
1.000	E1095 122 1950	Crane, electric bridge, up to 5 ton, annualized	152.92	186.81	200		FMR	2008 Qtr 2
6.000	D3065 100 1950	Controls, central system, electro/pneumatic, annua	911.70	1,106.34	200		FMR	2008 Qtr 2
4.000	B2035 225 1950	Door, emergency egress, swinging, annualized	198.04	230.04	200		FMR	2008 Qtr 2
1.000	B2035 400 1950	Door, overhead, manual, up to 24' high x 25' wide,	134.74	162.55	200		FMR	2008 Qtr 2
12.000	C1025 110 1950	Fire doors, swinging, annualized	298.68	358.32	200		FMR	2008 Qtr 2
4.000	D2015 100 4950	Lavatories, annualized	98.72	120.32	200		FMR	2008 Qtr 2
1.000	D2015 100 1950	Urinals, annualized	12.93	16.15	200		FMR	2008 Qtr 2
4.000	D2015 100 2950	Toilet (vacuum breaker type), annualized	51.72	64.60	200		FMR	2008 Qtr 2
2.000	D2015 100 5950	Showers, annualized	39.70	47.60	200		FMR	2008 Qtr 2
1.000	D2015 800 1950	Drink fountain, annualized	49.50	59.36	200		FMR	2008 Qtr 2
1.000	D2025 260 1950	Water heater, gas, to 120 gal., annualized	156.50	189.02	200		FMR	2008 Qtr 2
2.000	D3045 120 1950	Fan coil unit, annualized	431.42	533.20	200		FMR	2008 Qtr 2
2.000	D5015 260 1950	Panelboard, 225 A and above, annualized	113.92	135.42	200		FMR	2008 Qtr 2
			\$4,076.26	\$4,988.33				

FAC 2171 Sustainment by Year - Terminal Cutoff Applied

