

FAC 1724 General Purpose Simulator Facility

RUC: \$176.18 SF

Source: USACE PAX Newsletter 3.2.2 dated 20 Mar 09
CatCode 17210
Deflated to FY-090 using Appendix C of newsletter
In V12, Tri-Service and USACE PAX Newsletter values were updated while all other values were inflated only.

SUC: \$3.36 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:

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Terminal Cutoff is the removal of a single task occurrence if that task occurs within 10% of the end of the design life and if the frequency of the task exceeds 20% of the design life. This prevents scheduling major work near the end of the design life.										
Design Life= 50		C.S.F.=100 S.F; MSF=1000 S.F		This spreadsheet was exported from R.S. Means CostWorks						
Average S.F= 10,376		Sq=100 S.F; M.L.F=1000 L.F								
Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff
Repair brick wall - 1st floor	25	1 Bric	243.600	S.F.	9,013.20	10,952.26	2008 Qtr 2	2	1 \$	10,952.26
Replace aluminum siding - 2nd floor	35	1 Carp	2.400	C.S.F.	1,353.48	1,630.75	2008 Qtr 2	1	1 \$	1,630.75
Refinish aluminum siding - 2nd floor	20	1 Pord	24.300	C.S.F.	5,712.20	7,007.39	2008 Qtr 2	2	2 \$	14,014.78
Replace glass - 1st floor (1% of glass)	1	1 Carp	17.500	S.F.	158.38	185.85	2008 Qtr 2	50	50 \$	9,292.50
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	1 Carp	29.200	Ea.	3,356.83	3,977.04	2008 Qtr 2	2	2 \$	7,954.08
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	1 Carp	292.000	Ea.	128,071.20	149,793.08	2008 Qtr 2	1	0 \$	-
Replace glass - 2nd floor (1% of glass)	1	1 Carp	9.700	S.F.	847.78	1,038.39	2008 Qtr 2	50	50 \$	51,919.25
Repair 2'-0" x 3'-0" aluminum window - 2nd floor	20	1 Carp	16.200	Ea.	2,489.94	2,987.60	2008 Qtr 2	2	2 \$	5,975.21
Replace 2'-0" x 3'-0" aluminum window - 2nd floor	50	1 Carp	162.000	Ea.	77,330.70	90,916.02	2008 Qtr 2	1	0 \$	-
Repair aluminum storefront door	12	1 Carp	2.000	Ea.	827.88	981.36	2008 Qtr 2	4	3 \$	2,944.08
Replace 3'-0" x 7'-0" aluminum storefront doors	50	1 Carp	2.000	Ea.	3,362.52	3,948.16	2008 Qtr 2	1	0 \$	-
Repair 12' x 12' steel roll-up door	10	1 Carp	1.000	Ea.	832.61	964.54	2008 Qtr 2	5	5 \$	4,822.70
Refinish 12' x 12' steel roll-up door	5	1 Pord	1.000	Ea.	168.83	205.54	2008 Qtr 2	10	10 \$	2,055.40
Replace 12' x 12' steel roll-up door	35	2 Carp	1.000	Ea.	3,325.27	3,849.55	2008 Qtr 2	1	1 \$	3,849.55
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	4	1 Pord	4.000	Ea.	131.64	161.24	2008 Qtr 2	12	12 \$	1,934.88
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 and visual inspection built-up roofing	0.5	2 Rofc	5.100	M.S.F.	149.63	180.29	2008 Qtr 2	100	100 \$	18,028.50
Non-destructive moisture inspection built-up roofing	5	2 Rofc	5.100	M.S.F.	462.98	559.98	2008 Qtr 2	10	10 \$	5,599.80
Minor membrane repairs - (2% of roof area) built-up roofing	1	G5	1.000	Sq.	344.52	407.04	2008 Qtr 2	50	50 \$	20,352.00
Flashing repairs - (2 S.F. per sq. repaired) built-up roofing	1	2 Rofc	2.000	S.F.	6.72	8.00	2008 Qtr 2	50	50 \$	400.00
Minor membrane replacement - (25% of roof area) built-up roofing	15	G5	12.900	Sq.	7,668.15	9,147.13	2008 Qtr 2	3	3 \$	27,441.40
Place new membrane over existing built-up roofing	20	G5	0.000	Sq.	0.00	0.00	2008 Qtr 2	2	2 \$	-
Total roof replacement built-up roofing	28	G1	51.800	Sq.	29,566.40	35,014.21	2008 Qtr 2	1	1 \$	35,014.21
Repair steel painted interior door	14	1 Carp	3.000	Ea.	503.25	594.42	2008 Qtr 2	3	3 \$	1,783.26
Refinish 3'-0" x 7'-0" steel painted interior door	4	1 Pord	3.000	Ea.	148.20	182.46	2008 Qtr 2	12	12 \$	2,189.52
Replace 3'-0" x 7'-0" steel painted interior door	60	1 Carp	3.000	Ea.	2,812.62	3,269.88	2008 Qtr 2	0	0 \$	-
Repair solid core wood door interior	11	1 Carp	6.500	Ea.	1,090.38	1,287.91	2008 Qtr 2	4	4 \$	5,151.64
Refinish 3'-0" x 7'-0" solid core wood door interior	4	1 Pord	65.000	Ea.	2,744.30	3,378.70	2008 Qtr 2	12	12 \$	40,544.40
Replace 3'-0" x 7'-0" solid core wood door interior	40	1 Carp	65.000	Ea.	23,835.50	27,632.80	2008 Qtr 2	1	1 \$	27,632.80
Repair concrete steps	15	1 Cefi	7.500	S.F.	127.43	148.35	2008 Qtr 2	3	3 \$	445.05
Replace concrete steps	100	2 Cefi	75.000	S.F.	3,713.25	4,506.75	2008 Qtr 2	0	0 \$	-
Refinish wood stair railing interior	7	1 Pord	57.000	L.F.	116.28	144.78	2008 Qtr 2	7	7 \$	1,013.46
Replace wood stair railing interior	40	1 Carp	57.000	L.F.	627.00	759.24	2008 Qtr 2	1	1 \$	759.24
Repair 8" concrete block wall - (2% of walls) painted	25	1 Bric	0.500	C.S.F.	505.61	607.01	2008 Qtr 2	2	1 \$	607.01
Refinish concrete block wall painted	4	1 Pord	2.600	C.S.F.	252.64	307.14	2008 Qtr 2	12	12 \$	3,685.66
Replace 8" concrete block wall painted	75	2 Bric	26.400	C.S.F.	28,454.18	34,219.42	2008 Qtr 2	0	0 \$	-
Repair fabric wall finish fabric interior	9	1 Pord	52.100	S.Y.	1,312.40	1,589.57	2008 Qtr 2	5	5 \$	7,947.86
Replace fabric wall finish fabric interior	50	1 Pord	521.600	S.Y.	73,300.45	89,433.54	2008 Qtr 2	1	0 \$	-

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Description	Design Life= 50	C.S.F.=100 S.F; MSF=1000 S.F	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurences	Terminal Cutoff
	Average S.F= 10,376	Sq=100 S.F; M.L.F=1000 L.F							
	Frequency	Crew	Qty						
Repair 5/8" drywall - (2% of walls)	20	1 Carp	514.100	S.F.	817.42	981.93 2008 Qtr 2	2	2 \$	1,963.86
Replace 5/8" drywall	75	2 Carp	25,708.000	S.F.	57,328.84	69,154.52 2008 Qtr 2	0	0 \$	-
Repair med. wt. vinyl wall covering - (2% of walls)	1	1 Pord	0.100	C.S.F.	22.22	26.72 2008 Qtr 2	50	50 \$	1,336.05
Replace medium weight vinyl wall covering	15	1 Pord	7.000	C.S.F.	2,021.95	2,445.73 2008 Qtr 2	3	3 \$	7,337.19
Refinish concrete floor finished	25	2 Cefi	87.100	C.S.F.	30,436.22	36,642.10 2008 Qtr 2	2	1 \$	36,642.10
Replace vinyl floor	18	1 Tilf	28.700	S.Y.	1,370.43	1,673.21 2008 Qtr 2	2	2 \$	3,346.42
Check / minor repairs drinking fountain	1	1 Plum	3.000	Ea.	112.74	142.02 2008 Qtr 2	50	50 \$	7,101.00
Repair internal leaks drinking fountain	4	1 Plum	3.000	Ea.	105.42	130.29 2008 Qtr 2	12	12 \$	1,563.48
Correct water pressure drinking fountain	2	1 Plum	3.000	Ea.	96.63	121.50 2008 Qtr 2	25	25 \$	3,037.50
Replace refrigerant drinking fountain	2	1 Plum	3.000	Ea.	47.52	56.58 2008 Qtr 2	25	25 \$	1,414.50
Repair drain leak drinking fountain	4	1 Plum	3.000	Ea.	67.89	81.09 2008 Qtr 2	12	12 \$	973.08
Replace fountain drinking fountain	10	2 Plum	3.000	Ea.	3,017.52	3,580.71 2008 Qtr 2	5	5 \$	17,903.55
Replace washer in spud connection lavatory, vitreous china	7	1 Plum	14.000	Ea.	336.14	396.62 2008 Qtr 2	7	7 \$	2,776.34
Replace washer in faucet lavatory, vitreous china	2	1 Plum	14.000	Ea.	137.90	172.06 2008 Qtr 2	25	25 \$	4,301.50
Replace faucets lavatory, vitreous china	10	1 Plum	14.000	Ea.	1,728.86	2,086.84 2008 Qtr 2	5	5 \$	10,434.20
Clean out strainer and P trap lavatory, vitreous china	2	1 Plum	14.000	Ea.	378.56	469.98 2008 Qtr 2	25	25 \$	11,749.50
Replace lavatory, vitreous china	35	2 Plum	14.000	Ea.	7,422.66	8,899.80 2008 Qtr 2	1	1 \$	8,899.80
Replace faucet washer sink, stainless steel	2	1 Plum	1.000	Ea.	9.79	12.19 2008 Qtr 2	25	25 \$	304.75
Clean trap sink, stainless steel	3	1 Plum	1.000	Ea.	6.60	8.25 2008 Qtr 2	16	16 \$	132.00
Replace faucets sink, stainless steel	10	1 Plum	1.000	Ea.	123.49	149.06 2008 Qtr 2	5	5 \$	745.30
Unstop sink, stainless steel	2	1 Plum	1.000	Ea.	32.21	40.50 2008 Qtr 2	25	25 \$	1,012.50
Replace sink, stainless steel	40	2 Plum	1.000	Ea.	801.70	942.17 2008 Qtr 2	1	1 \$	942.17
Replace flush valve diaphragm tankless water closet	10	1 Plum	13.000	Ea.	919.62	1,079.78 2008 Qtr 2	5	5 \$	5,398.90
Rebuild flush valve tankless water closet	20	1 Plum	13.000	Ea.	1,715.74	2,080.13 2008 Qtr 2	2	2 \$	4,160.26
Unplug clogged line tankless water closet	5	1 Plum	13.000	Ea.	2,187.38	2,732.34 2008 Qtr 2	10	10 \$	27,323.40
Replace tankless water closet	35	2 Plum	13.000	Ea.	7,124.00	8,428.68 2008 Qtr 2	1	1 \$	8,428.68
Replace tankless flush valve	25	1 Plum	13.000	Ea.	2,723.50	3,189.81 2008 Qtr 2	2	1 \$	3,189.81
Replace wax ring gasket tankless water closet	5	1 Plum	13.000	Ea.	1,424.41	1,783.60 2008 Qtr 2	10	10 \$	17,836.00
Replace flush valve diaphragm urinal	7	1 Plum	4.000	Ea.	282.96	332.24 2008 Qtr 2	7	7 \$	2,325.68
Rebuild flush valve urinal	20	1 Plum	4.000	Ea.	527.92	640.04 2008 Qtr 2	2	2 \$	1,280.08
Unplug line urinal	5	1 Plum	4.000	Ea.	448.56	559.64 2008 Qtr 2	10	10 \$	5,596.40
Replace wall-hung urinal	35	2 Plum	4.000	Ea.	3,366.52	4,026.28 2008 Qtr 2	1	1 \$	4,026.28
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	4.000	Ea.	62.88	76.72 2008 Qtr 2	10	10 \$	767.20
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
Drain and flush water heater, electric, 120 gallon	7	1 Plum	1.000	Ea.	226.43	283.04 2008 Qtr 2	7	7 \$	1,981.28

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Design Life= 50		C.S.F=100 S.F; MSF=1000 S.F		This spreadsheet was exported		Terminal Cutoff is the removal of a single task occurrence if that task occurs within 10% of the end of the design life and if the frequency of the task exceeds 20% of the design life. This prevents scheduling major work near the end of the design life.				
Average S.F= 10,376		Sq=100 S.F; M.L.F=1000 L.F		from R.S. Means CostWorks						
Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff
Check operation water heater, electric, 120 gallon	3	1 Plum	1.000	Ea.	1.98	2.48 2008 Qtr 2		16	16 \$	39.68
Replace water heater, electric, 120 gallon	15	2 Plum	1.000	Ea.	9,192.45	10,543.79 2008 Qtr 2		3	3 \$	31,631.37
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
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 rooftop unit, 25 ton	10	Q6	2.000	Ea.	51,642.18	59,845.78 2008 Qtr 2		5	5 \$	299,228.90
Replace single zone rooftop unit, 25 ton	15	Q7	1.000	Ea.	34,098.40	39,677.60 2008 Qtr 2		3	3 \$	119,032.80
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	104.000	Ea.	6,622.72	8,159.84 2008 Qtr 2		2	2 \$	16,319.68
Replace fire alarm bell, 6"	20	1 Elec	2.000	Ea.	284.56	343.02 2008 Qtr 2		2	2 \$	686.04
Repair failed breaker, 3 pole circuit breaker	4	1 Elec	2.000	Ea.	1,050.08	1,214.56 2008 Qtr 2		12	12 \$	14,574.72
Maintenance and inspection C.B., 3 pole circuit breaker	0.33	1 Elec	2.000	Ea.	45.82	57.00 2008 Qtr 2		151	151 \$	8,607.00
Replace C.B. enclosed, 600 V, 3 pole circuit breaker	12	1 Elec	2.000	Ea.	1,987.20	2,316.18 2008 Qtr 2		4	3 \$	6,948.54
Maintenance and inspection lighting panel, indoor	3	1 Elec	2.000	Ea.	57.00	71.26 2008 Qtr 2		16	16 \$	1,140.16
Replace fluor. ballast for fluorescent lighting fixture, 80 W	10	1 Elec	292.000	Ea.	29,077.36	35,063.36 2008 Qtr 2		5	5 \$	175,316.80
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	292.000	Ea.	7,428.48	9,104.56 2008 Qtr 2		5	5 \$	45,522.80
Replace fixture fluorescent lighting fixture, 80 W	20	1 Elec	0.000	Ea.	0.00	0.00 2008 Qtr 2		2	2 \$	-
Maintenance and repair receptacles and plugs	20	1 Elec	587.000	Ea.	18,249.83	22,734.51 2008 Qtr 2		2	2 \$	45,469.02
Replace receptacle/plug receptacles and plugs	20	1 Elec	587.000	Ea.	30,970.12	37,814.54 2008 Qtr 2		2	2 \$	75,629.08
Maintenance and repair wiring devices, switches	10	1 Elec	235.000	Ea.	7,306.15	9,101.55 2008 Qtr 2		5	5 \$	45,507.75
Replace switch wiring devices, switches	15	1 Elec	235.000	Ea.	12,034.35	14,652.25 2008 Qtr 2		3	3 \$	43,956.75
Check and repair manual pull station	10	1 Elec	3.000	Ea.	207.63	254.61 2008 Qtr 2		5	5 \$	1,273.05
Replace manual pull station	15	1 Elec	3.000	Ea.	377.22	455.67 2008 Qtr 2		3	3 \$	1,367.01
Repair smoke detector	10	1 Elec	21.000	Ea.	801.99	987.00 2008 Qtr 2		5	5 \$	4,935.00
Check operation smoke detector	1	1 Elec	21.000	Ea.	239.40	300.30 2008 Qtr 2		50	50 \$	15,015.00
Replace smoke detector	15	1 Elec	21.000	Ea.	3,980.55	4,766.79 2008 Qtr 2		3	3 \$	14,300.37
					\$785,087.80	\$935,747.95				
									MR Subtotal	\$ 1,560,260.36
									MR Per Year	\$ 31,205.21

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Average S.F= 10,376		Sq=100 S.F; M.L.F=1000 L.F		from R.S. Means CostWorks		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	Occurences In Design Life	Adjusted Occurences	Terminal Cutoff
								PM Per Year	\$	4,755.64
								Subtotal	\$	35,960.85
								Total Per Unit	\$	3.47

CostWorks 2009 Quarter 1 - FAC 1724 General Purpose Simulator Facility

Qty	Assembly Number	Description	Total In-House	Total Incl. O&P	Zip Code Prefix	Type	Release
8.000	D3045 160 1950	VAV Boxes, annualized	490.48	608.00	200	FMR	2008 Qtr 2
6.000	B2035 225 1950	Door, emergency egress, swinging, annualized	297.06	345.06	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
68.000	C1025 110 1950	Fire doors, swinging, annualized	1,692.52	2,030.48	200	FMR	2008 Qtr 2
3.000	D2015 800 1950	Drink fountain, annualized	148.50	178.08	200	FMR	2008 Qtr 2
4.000	D2015 100 1950	Urinals, annualized	51.72	64.60	200	FMR	2008 Qtr 2
13.000	D2015 100 2950	Toilet (vacuum breaker type), annualized	168.09	209.95	200	FMR	2008 Qtr 2
14.000	D2015 100 4950	Lavatories, annualized	345.52	421.12	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 220 1950	Circuit breaker, high voltage air, annualized	53.96	67.18	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
			\$3,927.93	\$4,755.64			

FAC 1724 Sustainment by Year - Terminal Cutoff Applied

