

**FAC 7422    Indoor Swimming Pool**

RUC:            \$201.49 SF

Source:        USACE PAX Newsletter 3.2.2 dated 20 Mar 09  
CatCode 74072  
Deflated to FY-09 using Appendix C MCON  
In V12, Tri-Service and USACE PAX Newsletter values were updated while all  
other values were inflated only.

SUC:            \$3.26 SF

Source:        Cost Works model, 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 the relative annual sustainment requirements follows:

**FAC 7422 Indoor Swimming Pool**  
**CostWorks 2008 Quarter 2**

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= 40  
Average S.F= 11,555  
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

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	309.000	S.F.	11,433.00	13,892.64	2008 Qtr 2	1	1 \$	13,892.64
Replace brick wall - 2nd floor	75	2 Bric	34.600	C.S.F.	70,777.41	84,928.81	2008 Qtr 2	0	0 \$	-
Replace glass - 1st floor (1% of glass)	1	1 Carp	5.400	S.F.	48.87	57.35	2008 Qtr 2	40	40 \$	2,236.57
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	1 Carp	9.000	Ea.	1,034.64	1,225.80	2008 Qtr 2	2	1 \$	1,225.80
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	1 Carp	90.000	Ea.	39,474.00	46,169.10	2008 Qtr 2	0	0 \$	-
Replace glass - 2nd floor (1% of glass)	1	1 Carp	5.600	S.F.	489.44	599.48	2008 Qtr 2	40	40 \$	23,379.72
Repair 2'-0" x 3'-0" aluminum window - 2nd floor	20	1 Carp	9.400	Ea.	1,444.78	1,733.55	2008 Qtr 2	2	1 \$	1,733.55
Replace 2'-0" x 3'-0" aluminum window - 2nd floor	50	1 Carp	94.000	Ea.	44,870.90	52,753.74	2008 Qtr 2	0	0 \$	-
Repair aluminum storefront door	12	1 Carp	2.000	Ea.	827.88	981.36	2008 Qtr 2	3	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	0	0 \$	-
Repair steel, painted, door	14	1 Carp	8.000	Ea.	4,659.52	5,490.88	2008 Qtr 2	2	2 \$	10,981.76
Refinish 3'-0" x 7'-0" steel, painted, door	12	1 Pord	8.000	Ea.	263.28	322.48	2008 Qtr 2	3	3 \$	967.44
Replace 3'-0" x 7'-0" steel, painted, door	45	1 Carp	8.000	Ea.	4,256.64	4,960.32	2008 Qtr 2	0	0 \$	-
Debris removal and visual inspection built-up roofing	1	2 Rofc	63.500	M.S.F.	1,863.09	2,244.73	2008 Qtr 2	40	40 \$	87,544.28
Non-destructive moisture inspection built-up roofing	5	2 Rofc	127.100	M.S.F.	11,538.14	13,955.58	2008 Qtr 2	8	8 \$	97,689.06
Minor membrane repairs - (2% of roof area) built-up roofing	5	G5	2.500	Sq.	861.30	1,017.60	2008 Qtr 2	8	8 \$	7,123.20
Flashing repairs - (2 S.F. per sq. repaired) built-up roofing	5	2 Rofc	5.000	S.F.	16.80	20.00	2008 Qtr 2	8	8 \$	140.00
Minor membrane replacement - (25% of roof area) built-up roofing	20	G5	31.700	Sq.	18,843.43	22,477.84	2008 Qtr 2	2	1 \$	22,477.84
Place new membrane over existing built-up roofing	20	G5	127.1	Sq.	43,769.43	51,734.78	2008 Qtr 2	2	1 \$	51,734.78
Total roof replacement built-up roofing	28	G1	127.1	Sq.	72,546.14	85,913.25	2008 Qtr 2	1	1 \$	85,913.25
Replace safety glass (3% of glass) aluminum interior door	1	1 Carp	0.800	S.F.	13.54	16.10	2008 Qtr 2	40	40 \$	628.06
Replace 3'-0" x 7'-0" alum. dr., fr. & vision lite aluminum interior	50	1 Carp	7.000	Ea.	16,062.83	18,488.82	2008 Qtr 2	0	0 \$	-
Repair steel painted interior door	14	1 Carp	17.000	Ea.	2,851.75	3,368.38	2008 Qtr 2	2	2 \$	6,736.76
Refinish 3'-0" x 7'-0" steel painted interior door	12	1 Pord	1.700	Ea.	83.98	103.39	2008 Qtr 2	3	3 \$	310.18
Replace 3'-0" x 7'-0" steel painted interior door	60	1 Carp	17.000	Ea.	15,938.18	18,529.32	2008 Qtr 2	0	0 \$	-
Repair 4" x 4" thin set ceramic tile - (2% of walls)	10	1 Tilf	0.200	C.S.F.	150.82	182.47	2008 Qtr 2	4	3 \$	547.42
Replace 4" x 4" thin set ceramic tile	75	1 Tilf	11.300	C.S.F.	9,273.80	11,238.19	2008 Qtr 2	0	0 \$	-
Repair 8" concrete block wall - (2% of walls) painted	25	1 Bric	0.100	C.S.F.	101.12	121.40	2008 Qtr 2	1	1 \$	121.40
Refinish concrete block wall painted	12	1 Pord	0.500	C.S.F.	48.59	59.07	2008 Qtr 2	3	3 \$	177.20
Replace 8" concrete block wall painted	75	2 Bric	5.400	C.S.F.	5,820.17	6,999.43	2008 Qtr 2	0	0 \$	-
Repair 5/8" drywall - (2% of walls)	20	1 Carp	314.000	S.F.	499.26	599.74	2008 Qtr 2	2	1 \$	599.74
Replace 5/8" drywall	75	2 Carp	15,700.000	S.F.	35,011.00	42,233.00	2008 Qtr 2	0	0 \$	-
Replace carpet	12	2 Tilf	353.200	S.Y.	15,939.92	18,415.85	2008 Qtr 2	3	3 \$	55,247.54
Ceramic tile floor repairs - (2% of floors)	15	1 Tilf	0.300	C.S.F.	185.40	230.97	2008 Qtr 2	2	2 \$	461.93
Replace 2" x 2" thin set ceramic tile floor	50	1 Tilf	19.000	C.S.F.	25,533.91	30,734.02	2008 Qtr 2	0	0 \$	-
Refinish concrete floor finished	25	2 Cefi	66.300	C.S.F.	23,167.87	27,891.75	2008 Qtr 2	1	1 \$	27,891.75
Replace rubber tile floor	18	1 Tilf	422.200	S.Y.	74,822.28	88,011.81	2008 Qtr 2	2	2 \$	176,023.62
Repair sheetrock ceiling - (2% of ceilings)	20	1 Carp	0.900	C.S.F.	314.33	383.64	2008 Qtr 2	2	1 \$	383.64
Replace sheetrock ceiling	40	2 Carp	47.700	C.S.F.	17,092.34	20,869.23	2008 Qtr 2	1	0 \$	20,869.23

**FAC 7422 Indoor Swimming Pool**  
**CostWorks 2008 Quarter 2**

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= 40  
Average S.F= 11,555  
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

Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff
Check / minor repairs drinking fountain	1	1 Plum	3.000	Ea.	112.74	142.02	2008 Qtr 2	40	40 \$	5,538.78
Repair internal leaks drinking fountain	4	1 Plum	3.000	Ea.	105.42	130.29	2008 Qtr 2	10	10 \$	1,172.61
Correct water pressure drinking fountain	2	1 Plum	3.000	Ea.	96.63	121.50	2008 Qtr 2	20	20 \$	2,308.50
Replace refrigerant drinking fountain	2	1 Plum	3.000	Ea.	47.52	56.58	2008 Qtr 2	20	20 \$	1,075.02
Repair drain leak drinking fountain	4	1 Plum	3.000	Ea.	67.89	81.09	2008 Qtr 2	10	10 \$	729.81
Replace fountain drinking fountain	10	2 Plum	3.000	Ea.	3,017.52	3,580.71	2008 Qtr 2	4	3 \$	10,742.13
Replace washer in spud connection lavatory, vitreous china	7	1 Plum	7.000	Ea.	168.07	198.31	2008 Qtr 2	5	5 \$	991.55
Replace washer in faucet lavatory, vitreous china	2	1 Plum	7.000	Ea.	68.95	86.03	2008 Qtr 2	20	20 \$	1,634.57
Replace faucets lavatory, vitreous china	10	1 Plum	7.000	Ea.	864.43	1,043.42	2008 Qtr 2	4	3 \$	3,130.26
Clean out strainer and P trap lavatory, vitreous china	2	1 Plum	7.000	Ea.	189.28	234.99	2008 Qtr 2	20	20 \$	4,464.81
Replace faucet washer sink, iron enamel	2	1 Plum	2.000	Ea.	19.58	24.38	2008 Qtr 2	20	20 \$	463.22
Clean trap sink, iron enamel	3	1 Plum	2.000	Ea.	13.20	16.50	2008 Qtr 2	13	13 \$	198.00
Replace faucets sink, iron enamel	10	1 Plum	2.000	Ea.	246.98	298.12	2008 Qtr 2	4	3 \$	894.36
Unstop sink sink, iron enamel	2	1 Plum	2.000	Ea.	64.42	81.00	2008 Qtr 2	20	20 \$	1,539.00
Inspect / clean shower head	3	1 Plum	15.000	Ea.	567.00	711.60	2008 Qtr 2	13	13 \$	8,539.20
Replace shower surface, ceramic tile	30	D7	15.000	Ea.	12,809.70	15,387.00	2008 Qtr 2	1	1 \$	15,387.00
Replace flush valve diaphragm tankless water closet	10	1 Plum	6.000	Ea.	424.44	498.36	2008 Qtr 2	4	3 \$	1,495.08
Rebuild flush valve tankless water closet	20	1 Plum	6.000	Ea.	791.88	960.06	2008 Qtr 2	2	1 \$	960.06
Unplug clogged line tankless water closet	5	1 Plum	6.000	Ea.	1,009.56	1,261.08	2008 Qtr 2	8	8 \$	8,827.56
Replace tankless water closet	35	2 Plum	6.000	Ea.	3,288.00	3,890.16	2008 Qtr 2	1	1 \$	3,890.16
Replace tankless flush valve	25	1 Plum	6.000	Ea.	1,257.00	1,472.22	2008 Qtr 2	1	1 \$	1,472.22
Replace wax ring gasket tankless water closet	5	1 Plum	6.000	Ea.	657.42	823.20	2008 Qtr 2	8	8 \$	5,762.40
Repair circulator pump, 1/12 - 3/4 H.P.	5	1 Stpi	2.000	Ea.	141.98	168.50	2008 Qtr 2	8	8 \$	1,179.50
Replace circulator pump, 1/12 - 3/4 H.P.	15	Q1	2.000	Ea.	4,968.88	5,740.94	2008 Qtr 2	2	2 \$	11,481.88
Repair damaged pipe insulation, fiberglass 3/4"	5	Q14	4.000	Ea.	62.88	76.72	2008 Qtr 2	8	8 \$	537.04
Repair damaged pipe insulation, fiberglass 2"	5	Q14	2.000	Ea.	36.92	45.06	2008 Qtr 2	8	8 \$	315.42
Replace pipe insulation, fiberglass 3/4"	5	Q14	0.030	M.L.F.	188.67	229.84	2008 Qtr 2	8	8 \$	1,608.87
Replace pipe insulation, fiberglass 2"	5	Q14	0.010	M.L.F.	74.26	90.69	2008 Qtr 2	8	8 \$	634.84
Replace pipe and fittings, copper 3/4"	20	2 Plum	32.000	L.F.	567.04	687.36	2008 Qtr 2	2	1 \$	687.36
Replace pipe and fittings, copper 2"	25	2 Plum	16.000	L.F.	652.96	785.76	2008 Qtr 2	1	1 \$	785.76
Minor repairs, adjustments water heater, gas / oil, 1150 GPH	2	2 Plum	1.000	Ea.	75.64	94.18	2008 Qtr 2	20	20 \$	1,789.42
Clean & service water heater, gas / oil, 1150 GPH	2	2 Plum	1.000	Ea.	453.84	566.08	2008 Qtr 2	20	20 \$	10,755.52
Replace water heater, gas / oil, 1150 GPH	20	2 Plum	1.000	Ea.	26,100.80	30,172.40	2008 Qtr 2	2	1 \$	30,172.40
Replace 1000 gallon solar storage tank	20	Q9	1.000	Ea.	6,244.32	7,247.32	2008 Qtr 2	2	1 \$	7,247.32
General maintenance & repair drain: roof, scupper, area	1	1 Plum	4.000	Ea.	113.40	142.68	2008 Qtr 2	40	40 \$	5,564.52
Replace drain: roof, scupper, area	40	1 Plum	4.000	Ea.	1,593.36	1,872.56	2008 Qtr 2	1	0 \$	1,872.56
Replace 1000 L.F. of hung 4" diam steel pipe natural gas	75	Q15	0.270	M.L.F.	17,576.56	21,259.57	2008 Qtr 2	0	0 \$	-
Repair single zone rooftop unit, 25 ton	10	Q6	2.000	Ea.	51,642.18	59,845.78	2008 Qtr 2	4	3 \$	179,537.34
Replace single zone rooftop unit, 25 ton	15	Q7	1.000	Ea.	34,098.40	39,677.60	2008 Qtr 2	2	2 \$	79,355.20

**FAC 7422 Indoor Swimming Pool**  
**CostWorks 2008 Quarter 2**

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= 40  
Average S.F= 11,555  
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

Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff
Minor repairs to fire alarm control panel	5	1 Elec	1.000	Ea.	107.84	130.97	2008 Qtr 2	8	8 \$	916.79
Maintenance and inspection fire alarm control panel	0.5	1 Elec	1.000	Ea.	30.54	38.17	2008 Qtr 2	80	80 \$	3,015.43
Replace fire alarm control panel	15	1 Elec	1.000	Ea.	2,615.62	3,107.84	2008 Qtr 2	2	2 \$	6,215.68
Inspect sprinkler system	1	1 Plum	1.000	Ea.	26.55	32.89	2008 Qtr 2	40	40 \$	1,282.71
Replace sprinkler head	20	1 Plum	62.000	Ea.	3,948.16	4,864.52	2008 Qtr 2	2	1 \$	4,864.52
Replace fire alarm bell, 6"	20	1 Elec	2.000	Ea.	284.56	343.02	2008 Qtr 2	2	1 \$	343.02
Maintenance and inspection safety switch, 3 pole, heavy duty	1	1 Elec	6.000	Ea.	171.00	213.78	2008 Qtr 2	40	40 \$	8,337.42
Maintenance and repair safety switch, 3 pole safety switch, heavy duty	8	1 Elec	6.000	Ea.	171.00	213.78	2008 Qtr 2	5	5 \$	855.12
Replace safety switch, heavy duty	25	2 Elec	6.000	Ea.	3,482.88	4,084.26	2008 Qtr 2	1	1 \$	4,084.26
Repair switchgear 1200 A mainframe	5	1 Elec	1.000	Ea.	1,694.09	1,975.10	2008 Qtr 2	8	8 \$	13,825.70
Maintenance and inspection switchgear, mainframe	1	1 Elec	1.000	Ea.	45.81	57.01	2008 Qtr 2	40	40 \$	2,223.39
Replace switchgear 1200 A mainframe	20	3 Elec	1.000	Ea.	4,052.28	4,808.24	2008 Qtr 2	2	1 \$	4,808.24
Maintenance and repair secondary transformer, dry	10	1 Elec	2.000	Ea.	482.98	567.08	2008 Qtr 2	4	3 \$	1,701.24
Maintenance and inspection secondary transformer, dry	0.5	1 Elec	2.000	Ea.	114.02	142.52	2008 Qtr 2	80	80 \$	11,259.08
Replace transformer 500 KVA	30	R3	2.000	Ea.	48,395.76	55,631.94	2008 Qtr 2	1	1 \$	55,631.94
Replace lamp emergency lighting fixture	2	1 Elec	6.000	Ea.	324.00	384.84	2008 Qtr 2	20	20 \$	7,311.96
Replace emergency lighting fixture	20	1 Elec	6.000	Ea.	5,059.50	5,829.60	2008 Qtr 2	2	1 \$	5,829.60
Maintenance and repair exit light	20	1 Elec	6.000	Ea.	196.98	239.22	2008 Qtr 2	2	1 \$	239.22
Replace lamp exit light	5	1 Elec	6.000	Ea.	74.10	87.72	2008 Qtr 2	8	8 \$	614.04
Replace lighting fixture exit light	20	1 Elec	6.000	Ea.	753.84	907.44	2008 Qtr 2	2	1 \$	907.44
Maintenance and inspection battery, dry	1	1 Elec	18.000	Ea.	513.00	641.34	2008 Qtr 2	40	40 \$	25,012.26
Replace battery, dry	5	1 Elec	18.000	Ea.	3,259.08	3,748.32	2008 Qtr 2	8	8 \$	26,238.24
Replace fluor. ballast for fluorescent lighting fixture, 80 W	10	1 Elec	96.000	Ea.	9,559.68	11,527.68	2008 Qtr 2	4	3 \$	34,583.04
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	96.000	Ea.	2,442.24	2,993.28	2008 Qtr 2	4	3 \$	8,979.84
Replace M.H. ballast mercury halide fixture, 175 W	10	1 Elec	14.000	Ea.	2,674.00	3,134.46	2008 Qtr 2	4	3 \$	9,403.38
Replace lamp mercury halide fixture, 175 W	5	1 Elec	14.000	Ea.	1,035.86	1,224.58	2008 Qtr 2	8	8 \$	8,572.06
Maintenance and repair receptacles and plugs	20	1 Elec	90.000	Ea.	2,798.10	3,485.70	2008 Qtr 2	2	1 \$	3,485.70
Replace receptacle/plug receptacles and plugs	20	1 Elec	90.000	Ea.	4,748.40	5,797.80	2008 Qtr 2	2	1 \$	5,797.80
Maintenance and repair wiring devices, switches	10	1 Elec	23.000	Ea.	715.07	890.79	2008 Qtr 2	4	3 \$	2,672.37
Replace switch wiring devices, switches	15	1 Elec	23.000	Ea.	1,177.83	1,434.05	2008 Qtr 2	2	2 \$	2,868.10
Minor repairs to annunciation panel	5	1 Elec	1.000	Ea.	107.84	130.97	2008 Qtr 2	8	8 \$	916.79
Maintenance and inspection annunciation panel	0.5	1 Elec	1.000	Ea.	30.54	38.17	2008 Qtr 2	80	80 \$	3,015.43
Replace annunciation panel	15	1 Elec	1.000	Ea.	844.71	1,008.28	2008 Qtr 2	2	2 \$	2,016.56
Check and repair manual pull station	10	1 Elec	4.000	Ea.	276.84	339.48	2008 Qtr 2	4	3 \$	1,018.44
Replace manual pull station	15	1 Elec	4.000	Ea.	502.96	607.56	2008 Qtr 2	2	2 \$	1,215.12
Repair smoke detector	10	1 Elec	25.000	Ea.	954.75	1,175.00	2008 Qtr 2	4	3 \$	3,525.00
Check operation smoke detector	1	1 Elec	25.000	Ea.	285.00	357.50	2008 Qtr 2	40	40 \$	13,942.50
Replace smoke detector	15	1 Elec	25.000	Ea.	4,738.75	5,674.75	2008 Qtr 2	2	2 \$	11,349.50

**FAC 7422 Indoor Swimming Pool**  
**CostWorks 2008 Quarter 2**

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= 40  
Average S.F= 11,555

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

Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff
					\$854,468.18	\$1,010,575.32				
								Total	\$	1,413,602.61
								Per Year	\$	35,340.07
								PM per Year	\$	3,575.23
								Total Per Year	\$	38,915.30
								Total Per Unit	\$	3.37

**CostWorks 2008 Quarter 2 - FAC 7422 Indoor Swimming Pool**

Qty	Description	Bare Total	Total In-House	Total Incl. O&P	Zip Code Prefix	Type	Release
10.000	Door, emergency egress, swinging, annualized	430.80	495.10	575.10	200	FMR	2008 Qtr 2
24.000	Fire doors, swinging, annualized	472.28	590.84	710.12	200	FMR	2008 Qtr 2
12.000	Urinals, annualized	124.68	155.16	193.80	200	FMR	2008 Qtr 2
16.000	Toilet (vacuum breaker type), annualized	166.24	206.88	258.40	200	FMR	2008 Qtr 2
16.000	Lavatories, annualized	315.52	394.88	481.28	200	FMR	2008 Qtr 2
20.000	Showers, annualized	328.00	397.00	476.00	200	FMR	2008 Qtr 2
4.000	Drink fountain, annualized	160.48	198.00	237.44	200	FMR	2008 Qtr 2
1.000	Water heater, steam 2500 gal., annualized	97.67	117.29	143.80	200	FMR	2008 Qtr 2
2.000	Fan, axial, 5,000 to 10,000 CFM, annualized	112.26	145.00	178.26	200	FMR	2008 Qtr 2
2.000	Transformer, dry type 500 KVA and over, annualize	100.28	119.56	146.10	200	FMR	2008 Qtr 2
1.000	Panelboard, 225 A and above, annualized	49.28	56.96	67.71	200	FMR	2008 Qtr 2
6.000	Light, emergency, hardwired system, annualized	69.66	85.50	107.22	200	FMR	2008 Qtr 2
		<b>\$2,427.15</b>	<b>\$2,962.17</b>	<b>\$3,575.23</b>			

FAC 7422 Sustainment by Year - Terminal Cutoff Applied

