

FAC 2111 AIRCRAFT MAINTENANCE HANGAR

FY24 SUC:	\$4.46 / SF
Source:	Calculated using R.S. Means CostWorks 2023 Qtr 4 component prices

FAC 2111 AIRCRAFT MAINTENANCE HANGAR

SUC \$4.46

Release 2023 Qtr 4

UM SF

Zip Code Prefix 222

Design Life 40

Type MR

Average Size 29046.0

Adjusted Occurrences are the occurrences remaining after subtracting Repair/Replacement Overlaps. Overlap reduction removes a repair when it occurs the same year as a replacement.

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Refinish fire escape stair and platform	7	3.00 Flight	\$1,827.94	\$2,197.42	5.7143	5	5	\$10,987.12	\$10,987.12
Replace fire escape stair and platform	25	3.00 Flight	\$19,016.90	\$23,197.84	1.6000	1	1	\$23,197.84	\$23,197.84
Replace aluminum siding, 1st floor	35	23.30 C.S.F.	\$14,437.83	\$17,390.07	1.1429	1	1	\$17,390.07	\$17,390.07
Replace aluminum siding, 2nd floor	35	23.30 C.S.F.	\$17,705.08	\$21,449.23	1.1429	1	1	\$21,449.23	\$21,449.23
Replace aluminum siding, 3rd floor	35	23.30 C.S.F.	\$19,679.80	\$23,902.57	1.1429	1	1	\$23,902.57	\$23,902.57
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	15.60 S.F.	\$205.13	\$240.87	40.0000	40	40	\$9,634.87	\$9,634.87
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	84.00 Ea.	\$13,130.31	\$15,646.80	2.0000	2	2	\$31,293.60	\$31,293.60
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	84.00 Ea.	\$56,913.39	\$66,805.45	0.8000	0	0	\$0.00	\$0.00
Repair steel, painted, door	14	6.00 Ea.	\$4,214.01	\$5,005.16	2.8571	2	2	\$10,010.31	\$10,010.31
Refinish 3'-0" x 7'-0" steel, painted, door	4	6.00 Ea.	\$276.33	\$338.38	10.0000	10	10	\$3,383.77	\$3,383.77
Replace 3'-0" x 7'-0" steel, painted, door	45	6.00 Ea.	\$5,502.66	\$6,371.56	0.8889	0	0	\$0.00	\$0.00
Replace 12' x 24' steel double roll-up door	35	2.00 Ea.	\$11,217.86	\$13,331.58	1.1429	1	1	\$13,331.58	\$13,331.58
Remove and replace electric bi-folding hangar door motor	15	6.00 Ea.	\$3,970.36	\$4,631.68	2.6667	2	2	\$9,263.36	\$9,263.36
Remove and replace electric bi-folding hangar door cables	15	6.00 Ea.	\$3,736.20	\$4,545.45	2.6667	2	2	\$9,090.91	\$9,090.91
Remove and replace electric bi-folding hangar door	20	6.00 Ea.	\$345,993.69	\$400,829.22	2.0000	2	2	\$801,658.44	\$801,658.44
Debris removal, by hand and visual inspection, metal panel roofing	1	30.00 M.S.F.	\$736.23	\$897.99	40.0000	40	40	\$35,919.40	\$35,919.40
Minor metal roof finish repairs, 2% of roof area, metal panel roofing	5	423.00 S.F.	\$1,955.13	\$2,323.52	8.0000	8	8	\$18,588.18	\$18,588.18
Metal roof flashing replacement, 2 SF/sq repaired, metal panel roofing	1	21.00 S.F.	\$531.45	\$635.17	40.0000	40	40	\$25,406.90	\$25,406.90
Minor metal roof panel replacement, 2.5% of roof area	20	423.00 S.F.	\$5,447.40	\$6,457.60	2.0000	2	2	\$12,915.19	\$12,915.19
Total metal roof panel replacement	30	290.00 Sq.	\$256,632.03	\$304,233.81	1.3333	1	1	\$304,233.81	\$304,233.81
Repair steel painted interior door	14	10.00 Ea.	\$2,789.88	\$3,256.82	2.8571	2	2	\$6,513.64	\$6,513.64
Refinish 3'-0" x 7'-0" steel painted interior door	4	10.00 Ea.	\$576.52	\$708.77	10.0000	10	10	\$7,087.73	\$7,087.73
Replace 3'-0" x 7'-0" steel painted interior door	60	10.00 Ea.	\$12,795.48	\$14,839.17	0.6667	0	0	\$0.00	\$0.00
Repair solid core wood door, interior	11	8.00 Ea.	\$2,231.91	\$2,605.46	3.6364	3	3	\$7,816.37	\$7,816.37
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	8.00 Ea.	\$352.12	\$433.90	10.0000	10	9	\$4,339.02	\$3,905.12
Replace 3'-0" x 7'-0" solid core wood door, interior	40	8.00 Ea.	\$4,532.40	\$5,232.78	1.0000	1	1	\$5,232.78	\$5,232.78

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Repair medium weight vinyl wall covering - (2% of walls)	1	0.10 C.S.F.	\$46.32	\$54.29	40.0000	40	40	\$2,171.47	\$2,171.47
Replace medium weight vinyl wall covering	15	5.24 C.S.F.	\$2,689.22	\$3,178.96	2.6667	2	2	\$6,357.92	\$6,357.92
Repair 5/8" drywall - (2% of walls)	20	104.00 S.F.	\$173.78	\$212.37	2.0000	2	2	\$424.73	\$424.73
Replace 5/8" drywall	75	5,199.00 S.F.	\$12,284.28	\$15,085.28	0.5333	0	0	\$0.00	\$0.00
Refinish concrete floor finished	25	146.00 C.S.F.	\$60,820.28	\$73,382.32	1.6000	1	1	\$73,382.32	\$73,382.32
Replace vinyl sheet flooring	18	143.77 S.Y.	\$12,452.47	\$14,999.72	2.2222	2	2	\$29,999.45	\$29,999.45
Replace carpet	8	192.00 S.Y.	\$10,367.34	\$11,988.96	5.0000	5	5	\$59,944.78	\$59,944.78
Repair gypsum board ceiling - (2% of ceilings)	20	0.97 C.S.F.	\$372.70	\$457.65	2.0000	2	2	\$915.31	\$915.31
Refinish gypsum board ceiling, up to 12' high	20	48.53 C.S.F.	\$7,042.19	\$8,663.95	2.0000	2	1	\$17,327.90	\$8,663.95
Replace gypsum board ceiling, up to 12' high	40	48.53 C.S.F.	\$19,126.09	\$23,492.82	1.0000	1	1	\$23,492.82	\$23,492.82
Replace flush valve diaphragm tankless water closet	10	12.00 Ea.	\$327.17	\$406.27	4.0000	4	4	\$1,625.09	\$1,625.09
Rebuild flush valve tankless water closet	20	12.00 Ea.	\$2,302.57	\$2,775.23	2.0000	2	2	\$5,550.46	\$5,550.46
Unplug clogged line tankless water closet	5	12.00 Ea.	\$2,759.15	\$3,453.98	8.0000	8	8	\$27,631.84	\$27,631.84
Replace tankless water closet	35	12.00 Ea.	\$16,998.65	\$19,659.85	1.1429	1	1	\$19,659.85	\$19,659.85
Replace tankless flush valve	25	12.00 Ea.	\$3,242.91	\$3,806.61	1.6000	1	1	\$3,806.61	\$3,806.61
Replace wax ring gasket for tankless water closet	5	12.00 Ea.	\$1,789.97	\$2,238.64	8.0000	8	8	\$17,909.13	\$17,909.13
Replace flush valve diaphragm for a urinal	7	8.00 Ea.	\$218.11	\$270.85	5.7143	5	5	\$1,354.24	\$1,354.24
Rebuild flush valve for a urinal	20	8.00 Ea.	\$1,535.05	\$1,850.15	2.0000	2	2	\$3,700.30	\$3,700.30
Unplug line urinal	5	8.00 Ea.	\$1,221.14	\$1,528.65	8.0000	8	8	\$12,229.22	\$12,229.22
Replace wall-hung urinal	35	8.00 Ea.	\$8,700.16	\$10,464.37	1.1429	1	1	\$10,464.37	\$10,464.37
Replace washer in spud connection lavatory, vitreous china	7	14.00 Ea.	\$242.50	\$295.97	5.7143	5	5	\$1,479.86	\$1,479.86
Replace washer in faucet lavatory, vitreous china	2	14.00 Ea.	\$189.94	\$236.84	20.0000	20	20	\$4,736.82	\$4,736.82
Replace faucets lavatory, vitreous china	10	13.00 Ea.	\$2,541.14	\$3,056.58	4.0000	4	4	\$12,226.32	\$12,226.32
Clean out strainer and P trap lavatory, vitreous china	2	13.00 Ea.	\$478.64	\$599.18	20.0000	20	20	\$11,983.58	\$11,983.58
Replace lavatory, vitreous china	35	14.00 Ea.	\$10,062.12	\$12,087.68	1.1429	1	1	\$12,087.68	\$12,087.68
Replace faucet washer sink, service/utility	2	1.00 Ea.	\$13.45	\$16.77	20.0000	20	20	\$335.39	\$335.39
Clean trap	3	1.00 Ea.	\$9.01	\$11.27	13.3333	13	13	\$146.56	\$146.56
Replace faucets sink, service/utility	10	1.00 Ea.	\$195.47	\$235.12	4.0000	4	4	\$940.49	\$940.49
Unstop sink	2	1.00 Ea.	\$44.01	\$55.09	20.0000	20	20	\$1,101.88	\$1,101.88
Replace sink, P.E.C.I. service/utility	35	1.00 Ea.	\$1,674.37	\$1,957.84	1.1429	1	1	\$1,957.84	\$1,957.84
Inspect / clean shower head shower, terrazzo	3	8.00 Ea.	\$412.28	\$516.11	13.3333	13	13	\$6,709.41	\$6,709.41
Replace shower and fittings, aluminum	25	8.00 Ea.	\$8,792.65	\$10,482.46	1.6000	1	1	\$10,482.46	\$10,482.46
Replace shower, glazed C.M.U.	25	8.00 Ea.	\$16,325.37	\$19,356.60	1.6000	1	1	\$19,356.60	\$19,356.60
Check / minor repairs drinking fountain	1	3.00 Ea.	\$154.57	\$193.50	40.0000	40	40	\$7,740.01	\$7,740.01
Repair internal leaks drinking fountain	4	3.00 Ea.	\$143.30	\$179.39	10.0000	10	10	\$1,793.91	\$1,793.91

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Correct water pressure drinking fountain	2	3.00 Ea.	\$132.03	\$165.28	20.0000	20	20	\$3,305.63	\$3,305.63
Replace refrigerant drinking fountain	2	3.00 Ea.	\$106.22	\$124.29	20.0000	20	20	\$2,485.78	\$2,485.78
Repair drain leak drinking fountain	4	3.00 Ea.	\$87.29	\$105.57	10.0000	10	8	\$1,055.68	\$844.54
Replace fountain drinking fountain	10	3.00 Ea.	\$4,862.44	\$5,712.90	4.0000	4	4	\$22,851.61	\$22,851.61
Inspect and clean spray heads, emergency eye wash	3	4.00 Ea.	\$206.14	\$258.05	13.3333	13	13	\$3,354.70	\$3,354.70
Replace eye wash station, emergency eye wash	25	4.00 Ea.	\$3,143.65	\$3,822.20	1.6000	1	1	\$3,822.20	\$3,822.20
Replace pipe and fittings, copper 3/4"	20	32.00 L.F.	\$799.91	\$969.47	2.0000	2	2	\$1,938.94	\$1,938.94
Replace pipe and fittings, copper 2"	25	16.00 L.F.	\$838.84	\$1,008.95	1.6000	1	1	\$1,008.95	\$1,008.95
Remove old insulation & replace with new, pipe 3/4", wall 1"	15	32.00 L.F.	\$315.87	\$387.02	2.6667	2	2	\$774.04	\$774.04
Overhaul water heater, gas / oil, 70 gallon	5	1.00 Ea.	\$172.87	\$216.40	8.0000	8	8	\$1,731.18	\$1,731.18
Clean & service water heater, gas / oil, 70 gallon	1	1.00 Ea.	\$206.10	\$258.00	40.0000	40	40	\$10,320.02	\$10,320.02
Replace water heater, gas / oil, 70 gallon	12	1.00 Ea.	\$3,214.32	\$3,737.78	3.3333	3	3	\$11,213.35	\$11,213.35
Replace storage tank, glass lined, P.E., 80 gal.	50	1.00 Ea.	\$4,781.79	\$5,449.34	0.8000	0	0	\$0.00	\$0.00
Inspect / check pump / motor operation, lubricate circulation pump, 1/12 HP	0.5	1.00 Ea.	\$8.44	\$10.56	80.0000	80	80	\$844.95	\$844.95
Replace pump / motor assembly circulation pump, 1/12 HP	10	1.00 Ea.	\$1,218.91	\$1,426.89	4.0000	4	4	\$5,707.58	\$5,707.58
Unclog main drain pipe & fittings, cast iron	10	1.00 Ea.	\$48.84	\$61.14	4.0000	4	4	\$244.56	\$244.56
Replace pipe & fittings, cast iron, 4"	40	10.00 L.F.	\$578.72	\$703.19	1.0000	1	1	\$703.19	\$703.19
Unclog floor drain, PVC	20	1.00 Ea.	\$50.45	\$63.16	2.0000	2	2	\$126.31	\$126.31
Unclog 4" - 12" diameter PVC main drain per L.F.	10	1.00 L.F.	\$3.99	\$5.00	4.0000	4	4	\$20.00	\$20.00
Replace pipe, 4" pipe and fittings, PVC	30	8.00 L.F.	\$663.54	\$819.02	1.3333	1	1	\$819.02	\$819.02
General maintenance & repair drain: roof, scupper, area	1	8.00 Ea.	\$313.44	\$392.38	40.0000	40	40	\$15,695.02	\$15,695.02
Replace drain: roof, scupper, area	40	8.00 Ea.	\$9,042.99	\$10,430.80	1.0000	1	1	\$10,430.80	\$10,430.80
Replace 10' of buried 4" diam steel pipe/M.L.F. natural gas	12	1.00 Ea.	\$917.35	\$1,119.74	3.3333	3	3	\$3,359.22	\$3,359.22
Repair boiler, gas, 2000 MBH	7	1.00 Ea.	\$5,734.80	\$6,685.15	5.7143	5	5	\$33,425.73	\$33,425.73
Replace boiler, gas, 2000 MBH	30	1.00 Ea.	\$40,588.94	\$47,558.43	1.3333	1	1	\$47,558.43	\$47,558.43
Replace metal flue, all fuel SS, 6" diameter metal flue / chimney	15	1.00 L.F.	\$165.38	\$190.91	2.6667	2	2	\$381.83	\$381.83
Repair cooling tower, 100 ton	10	1.00 Ea.	\$5,646.97	\$6,664.64	4.0000	4	3	\$26,658.54	\$19,993.91
Replace cooling tower, 100 ton	15	1.00 Ea.	\$24,486.39	\$28,184.88	2.6667	2	2	\$56,369.76	\$56,369.76
Repair water cooled chiller, 100 ton, reciprocating	10	1.00 Ea.	\$70,524.04	\$82,271.09	4.0000	4	2	\$329,084.37	\$164,542.19
Replace chiller, water cooled, 100 ton, reciprocating	20	1.00 Ea.	\$94,785.78	\$110,236.45	2.0000	2	2	\$220,472.89	\$220,472.89
Repair fan coil unit, 3 ton	10	8.00 Ea.	\$4,588.27	\$5,430.10	4.0000	4	3	\$21,720.41	\$16,290.31
Replace fan coil unit, 3 ton	15	8.00 Ea.	\$26,693.86	\$30,794.01	2.6667	2	2	\$61,588.01	\$61,588.01

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Replace fan coil, DX 10 ton, with heat	10	3.00 Ea.	\$16,984.08	\$19,938.52	4.0000	4	4	\$79,754.07	\$79,754.07
Repair circulator pump, 1 H.P.	5	1.00 Ea.	\$103.70	\$122.33	8.0000	8	6	\$978.67	\$734.00
Replace circulator. pump, 1 H.P.	15	1.00 Ea.	\$5,632.83	\$6,463.28	2.6667	2	2	\$12,926.56	\$12,926.56
Replace expansion tank, 60 gal capacity	50	1.00 Ea.	\$2,917.58	\$3,347.03	0.8000	0	0	\$0.00	\$0.00
Maintenance and repair explosionproof industrial heater	2	4.00 Ea.	\$849.47	\$992.68	20.0000	20	19	\$19,853.57	\$18,860.89
Maintenance and inspection explosionproof industrial heater	0.5	4.00 Ea.	\$329.27	\$412.53	80.0000	80	80	\$33,002.62	\$33,002.62
Replace heater explosionproof industrial heater	15	12.00 Ea.	\$74,121.38	\$84,693.61	2.6667	2	2	\$169,387.22	\$169,387.22
Repair terminal reheat, 36" x 36" coil	10	12.00 Ea.	\$2,060.99	\$2,580.00	4.0000	4	4	\$10,320.02	\$10,320.02
Replace terminal reheat, 36" x 36" coil	15	12.00 Ea.	\$46,486.66	\$53,951.64	2.6667	2	2	\$107,903.29	\$107,903.29
Repair central station A.H.U., 16,000 CFM	10	2.00 Ea.	\$4,489.05	\$5,182.50	4.0000	4	3	\$20,730.01	\$15,547.50
Replace central station A.H.U., 16,000 CFM	15	2.00 Ea.	\$149,283.91	\$171,710.66	2.6667	2	2	\$343,421.32	\$343,421.32
Inspect sprinkler system	1	1.00 Ea.	\$36.17	\$45.28	40.0000	40	40	\$1,811.38	\$1,811.38
Replace sprinkler head	20	276.00 Ea.	\$24,190.81	\$29,849.92	2.0000	2	2	\$59,699.84	\$59,699.84
Rebuild double check 4" backflow preventer sprinkler system	1	1.00 Ea.	\$799.69	\$961.23	40.0000	40	40	\$38,449.16	\$38,449.16
Rebuild double check 6" backflow preventer sprinkler system	1	1.00 Ea.	\$914.79	\$1,097.60	40.0000	40	40	\$43,903.91	\$43,903.91
Replace fire pump / electric motor assembly 100 H.P.	25	1.00 Ea.	\$48,011.97	\$55,351.32	1.6000	1	1	\$55,351.32	\$55,351.32
Replace switchgear 1200 A mainframe	20	1.00 Ea.	\$4,250.93	\$5,127.30	2.0000	2	2	\$10,254.60	\$10,254.60
Repair switchgear, - (5% of total C.B.), indoor, less than 600 V	10	1.00 Ea.	\$778.47	\$899.93	4.0000	4	4	\$3,599.73	\$3,599.73
Maintenance and inspection switchgear, indoor, less than 600 V	3	1.00 Ea.	\$42.34	\$53.05	13.3333	13	13	\$689.66	\$689.66
Replace switchgear, 225 A	30	1.00 Ea.	\$2,044.58	\$2,496.54	1.3333	1	1	\$2,496.54	\$2,496.54
Maintenance and repair inverter	1	4.00 Ea.	\$3,175.47	\$3,805.80	40.0000	40	40	\$152,231.82	\$152,231.82
Maintenance and inspection inverter	0.25	4.00 Ea.	\$546.05	\$684.12	160.0000	160	160	\$109,459.54	\$109,459.54
Replace 1 KVA inverter	20	4.00 Ea.	\$15,532.43	\$17,733.83	2.0000	2	2	\$35,467.65	\$35,467.65
Maintenance and repair motor starter, up to 600 V	5	6.00 Ea.	\$1,576.92	\$1,916.96	8.0000	8	8	\$15,335.72	\$15,335.72
Maintenance and inspection motor starter, up to 600 V	0.5	6.00 Ea.	\$341.28	\$427.58	80.0000	80	80	\$34,206.11	\$34,206.11
Replace starter motor starter, up to 600 V	18	6.00 Ea.	\$5,046.13	\$6,004.48	2.2222	2	2	\$12,008.96	\$12,008.96
Maintenance and repair secondary transformer, dry	10	1.00 Ea.	\$254.10	\$303.63	4.0000	4	4	\$1,214.50	\$1,214.50
Maintenance and inspection secondary transformer, dry	0.5	2.00 Ea.	\$170.64	\$213.79	80.0000	80	80	\$17,103.05	\$17,103.05
Maintenance and inspection lighting panel, indoor	3	10.00 Ea.	\$423.44	\$530.51	13.3333	13	13	\$6,896.65	\$6,896.65
Maintenance and repair breaker, enclosed, 240 V, 1 pole	25	8.00 Ea.	\$606.72	\$760.14	1.6000	1	1	\$760.14	\$760.14
Maintenance and inspection circuit breaker, enclosed, 240 V, 1 pole	1	8.00 Ea.	\$273.03	\$342.06	40.0000	40	40	\$13,682.44	\$13,682.44

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Replace circuit breaker enclosed, 240 V, 1 pole circuit breaker	50	45.00 Ea.	\$22,009.24	\$26,248.78	0.8000	0	0	\$0.00	\$0.00
Replace safety switch, heavy duty 30 A	25	4.00 Ea.	\$2,706.51	\$3,224.94	1.6000	1	1	\$3,224.94	\$3,224.94
Maintenance and repair receptacles and plugs	20	48.00 Ea.	\$2,114.07	\$2,639.13	2.0000	2	2	\$5,278.26	\$5,278.26
Replace receptacle/plug receptacles and plugs	20	48.00 Ea.	\$3,591.87	\$4,428.84	2.0000	2	2	\$8,857.68	\$8,857.68
Maintenance and repair wiring devices, switches	10	44.00 Ea.	\$1,937.90	\$2,419.20	4.0000	4	4	\$9,676.80	\$9,676.80
Replace wiring devices, switches	15	44.00 Ea.	\$2,933.97	\$3,652.30	2.6667	2	2	\$7,304.60	\$7,304.60
Maintenance and repair incandescent lighting fixtures	10	20.00 Ea.	\$1,346.68	\$1,608.95	4.0000	4	2	\$6,435.80	\$3,217.90
Replace incandescent lighting fixture lamp	5	20.00 Ea.	\$256.80	\$309.07	8.0000	8	8	\$2,472.60	\$2,472.60
Replace incandescent lighting fixture	20	20.00 Ea.	\$2,794.26	\$3,389.19	2.0000	2	2	\$6,778.37	\$6,778.37
Replace fluorescent light fixture ballast, 80 W	10	76.00 Ea.	\$7,950.07	\$9,803.30	4.0000	4	2	\$39,213.20	\$19,606.60
Replace lamps (2 lamps), 4', 34 W energy saver	10	76.00 Ea.	\$2,012.91	\$2,520.84	4.0000	4	4	\$10,083.35	\$10,083.35
Replace fluorescent fixture, lay-in, recess mtd, 2' x 4', two 40 W	20	76.00 Ea.	\$18,819.43	\$22,904.63	2.0000	2	2	\$45,809.26	\$45,809.26
Replace high pressure sodium ballast, 250 W	10	24.00 Ea.	\$5,309.18	\$6,276.05	4.0000	4	2	\$25,104.19	\$12,552.09
Replace high pressure sodium fixture lamp, 250 W	10	24.00 Ea.	\$1,518.49	\$1,836.17	4.0000	4	4	\$7,344.69	\$7,344.69
Replace high pressure sodium fixture, 250 W	20	24.00 Ea.	\$27,469.11	\$32,067.38	2.0000	2	2	\$64,134.75	\$64,134.75
Maintenance and repair TV cable outlet	10	44.00 Ea.	\$2,390.22	\$2,985.03	4.0000	4	4	\$11,940.12	\$11,940.12
Repair smoke detector	10	55.00 Ea.	\$3,190.56	\$3,950.79	4.0000	4	3	\$15,803.16	\$11,852.37
Check operation smoke detector	1	55.00 Ea.	\$935.05	\$1,171.48	40.0000	40	40	\$46,859.20	\$46,859.20
Replace smoke detector	15	55.00 Ea.	\$16,640.38	\$19,867.01	2.6667	2	2	\$39,734.03	\$39,734.03
Check and repair manual pull station	10	6.00 Ea.	\$539.30	\$664.48	4.0000	4	3	\$2,657.92	\$1,993.44
Replace manual pull station	15	6.00 Ea.	\$1,252.55	\$1,510.58	2.6667	2	2	\$3,021.15	\$3,021.15
Minor repairs to fire alarm control panel	5	1.00 Ea.	\$149.42	\$182.60	8.0000	8	8	\$1,460.76	\$1,460.76
Maintenance and inspection fire alarm control panel	0.5	1.00 Ea.	\$45.50	\$57.01	80.0000	80	80	\$4,560.81	\$4,560.81
Replace fire alarm control panel	15	1.00 Ea.	\$2,196.12	\$2,675.47	2.6667	2	2	\$5,350.95	\$5,350.95
Minor repairs to annunciation panel	5	2.00 Ea.	\$298.83	\$365.19	8.0000	8	8	\$2,921.53	\$2,921.53
Maintenance and inspection annunciation panel	0.5	2.00 Ea.	\$91.01	\$114.02	80.0000	80	80	\$9,121.63	\$9,121.63
Replace annunciation panel	15	2.00 Ea.	\$2,250.50	\$2,714.84	2.6667	2	2	\$5,429.67	\$5,429.67
Replace fire alarm bell, 6"	20	8.00 Ea.	\$1,444.85	\$1,758.17	2.0000	2	2	\$3,516.35	\$3,516.35
Maintenance and repair of general wiring lightning protection system	1	1.00 M.L.F.	\$109.50	\$134.89	40.0000	40	40	\$5,395.47	\$5,395.47
Replace lightning protection general wiring system	25	1.00 M.L.F.	\$12,548.36	\$14,875.43	1.6000	1	1	\$14,875.43	\$14,875.43
Maintenance and repair lightning ground rod	1	1.00 Ea.	\$92.28	\$115.32	40.0000	40	39	\$4,612.86	\$4,497.54
Replace lightning ground rod	25	1.00 Ea.	\$245.60	\$303.67	1.6000	1	1	\$303.67	\$303.67

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost	
Maintenance and repair special ground system	4	1.00 Ea.	\$22.69	\$28.43	10.0000	10	10	\$284.26	\$284.26	
Replace special ground system	50	1.00 M.L.F.	\$2,425.55	\$2,923.14	0.8000	0	0	\$0.00	\$0.00	
Maintenance and repair voice/data outlet	10	14.00 Ea.	\$760.52	\$949.78	4.0000	4	4	\$3,799.13	\$3,799.13	
Maintenance and inspection patch panel	0.5	2.00 Ea.	\$182.02	\$228.04	80.0000	80	80	\$18,243.26	\$18,243.26	
			\$1,879,941.17	\$2,208,926.43				MR Subtotal	\$4,344,783.04	
									MR Per Year	\$108,452.45
									PM Total	\$20,959.78
									Subtotal	\$129,412.23
									Total Per Unit	\$4.46

FAC 2111 AIRCRAFT MAINTENANCE HANGAR

SUC \$4.46

Release 2023 Qtr 4

UM SF

Zip Code Prefix 222

Design Life 40

Type PM

Average Size 29046.0

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Hanger doors, sliding, annualized	8.00	18.06	\$236.66	\$795.17	\$0.00	\$1,031.83	\$1,294.05	\$1,568.10
Door, emergency egress, swinging, annualized	4.00	1.04	\$67.05	\$45.93	\$0.00	\$112.99	\$133.47	\$157.31
Fire doors, swinging, annualized	4.00	1.57	\$62.66	\$61.82	\$0.00	\$124.49	\$149.30	\$177.25
Urinals, annualized	8.00	1.82	\$53.03	\$97.32	\$0.00	\$150.34	\$184.84	\$221.99
Toilet (vacuum breaker type), annualized	12.00	2.12	\$106.26	\$113.53	\$0.00	\$219.79	\$264.48	\$314.48
Lavatories, annualized	14.00	4.87	\$109.09	\$305.20	\$0.00	\$414.29	\$516.76	\$624.69
Showers, annualized	8.00	1.82	\$108.08	\$114.76	\$0.00	\$222.84	\$268.07	\$318.71
Drink fountain, annualized	3.00	1.86	\$112.33	\$99.41	\$0.00	\$211.74	\$252.80	\$299.47
Water heater, gas, to 120 gal., annualized	1.00	1.72	\$102.21	\$91.56	\$0.00	\$193.77	\$231.46	\$274.26
Boiler, hot water, oil, gas, or comb. fired, over 1000 MBH, annualized	1.00	19.70	\$88.55	\$1,242.60	\$0.00	\$1,331.15	\$1,712.78	\$2,098.85
Chiller, centrif., water cooled, up to 100 tons, annualized	1.00	26.77	\$122.45	\$1,700.40	\$0.00	\$1,822.85	\$2,345.22	\$2,873.71
Air handling unit, 3 thru 24 tons, annualized	1.00	2.06	\$159.90	\$109.87	\$0.00	\$269.77	\$318.72	\$375.67
Centrifugal, over 1 HP, annualized	2.00	2.39	\$16.60	\$128.18	\$0.00	\$144.78	\$184.90	\$225.84
Backflow prevention device, up to 4", annualized	1.00	0.33	\$14.02	\$20.93	\$0.00	\$34.94	\$42.62	\$51.01
Extinguishing system, deluge / preaction, annualized	2.00	23.17	\$99.18	\$1,456.24	\$0.00	\$1,555.42	\$2,002.21	\$2,453.95
Fire pump, electric motor driven, annualized	1.00	47.75	\$37.44	\$2,986.60	\$0.00	\$3,024.04	\$3,923.77	\$4,825.37
Extinguishing system, dry pipe, annualized	1.00	13.02	\$104.24	\$819.68	\$0.00	\$923.92	\$1,180.24	\$1,441.78
Switchboard, with air circuit breaker, annualized	1.00	13.32	\$15.98	\$927.90	\$0.00	\$943.88	\$1,223.85	\$1,504.62
Switch, interrupt, high voltage, fused air, annualized	4.00	1.46	\$55.32	\$101.04	\$0.00	\$156.35	\$192.20	\$230.81
Motor control center, over 400 A, annualized	1.00	0.39	\$22.00	\$26.81	\$0.00	\$48.81	\$59.05	\$70.39
Security, intrusion alarm system, annualized	1.00	3.83	\$149.07	\$241.25	\$0.00	\$390.32	\$477.61	\$572.34
Emergency diesel or gas generator, up to 15 KVA, annually	1.00	1.49	\$103.27	\$93.82	\$0.00	\$197.09	\$235.56	\$279.20
						\$13,525.42	\$17,193.96	\$20,959.78

FAC 2111 AIRCRAFT MAINTENANCE HANGAR

Modeled Component List CostWorks Release 2023 Qtr 4

B20 Exterior Enclosure		
Aluminum Siding, 1st floor	23.3 C.S.F.	
Aluminum Siding, 2nd floor	23.3 C.S.F.	
Aluminum Siding, 3rd floor	23.3 C.S.F.	
Aluminum Window, Fixed, 1st floor	84.0 Ea.	
Steel, Painted	6.0 Ea.	
Steel Double, Roll-Up	2.0 Ea.	
Electric Bifolding Hangar Door Motor	6.0 Ea.	
B30 Roofing		
Metal Steep Roofing	290.0 Sq.	
C10 Interior Construction		
Steel Painted Interior Doors	10.0 Ea.	
Solid Core Interior Doors	8.0 Ea.	
Fire Doors, Swinging, annualized	4.0 Each	
C30 Interior Finishes		
Vinyl Wall Covering	5.24 C.S.F.	
Drywall	5199.0 S.F.	
Concrete, Finished	146.0 C.S.F.	
Vinyl Sheet	143.77 S.Y.	
Carpet	192.0 S.Y.	
Gypsum Wall Board	48.53 C.S.F.	
D20 Plumbing		
Tankless Water Closet	12.0 Ea.	
Urinal	8.0 Ea.	
Lavatory, Vitreous China	14.0 Ea.	
Service/Utility Sink	1.0 Ea.	
Drinking Fountain	3.0 Ea.	
Emergency Eye Wash	4.0 Ea.	
Water Heater, Gas / Oil, 70 Gallon	1.0 Ea.	
Storage Tank, Domestic Hot Water	1.0 Ea.	
Circulation Pump, 1/12 HP	1.0 Ea.	
Drain: Roof, Scupper, Area	8.0 Ea.	
D30 HVAC		
Boiler, Gas, 2000 MBH	1.0 Ea.	
Metal Flue / Chimney, 6" diameter	1.0 L.F.	
Cooling Tower, 100 ton	1.0 Ea.	
Chiller, Water Cooled, Reciprocating, 100 ton	1.0 Ea.	
Fan Coil, 3 ton	8.0 Ea.	
Fan Coil, DX Air Conditioner W/ Heat, 10 ton	3.0 Ea.	
Circulator Pump, 1 H.P.	1.0 Ea.	
Expansion Tank	1.0 Ea.	
Explosionproof Industrial Heater	12.0 Ea.	
Terminal Reheat Coil, 36" x 36"	12.0 Ea.	
Central Station Air Conditioning Air Handling Unit, 16,000 CFM	2.0 Ea.	
D40 Fire Protection		
Sprinkler System, Fire Suppression, sprinkler head	276.0 Ea.	
Sprinkler System, Fire Suppression, 6" backflow preventer	1.0 Ea.	
Fire Pump Electric Motor	1.0 Ea.	
Fire Pump, Electric, annualized	1.0 Each	
Extinguishing system, dry pipe, annualized	1.0 Each	
D50 Electrical		
Switchgear, Mainframe	1.0 Ea.	

Switchgear, Indoor, Less Than 600 V	1.0 Ea.
Inverter	4.0 Ea.
Motor Starter, Up To 600 V	6.0 Ea.
Load Center, 100 A, maintenance & inspection	10.0 Ea.
Circuit Breaker, molded case, 240 V, 1 pole	45.0 Ea.
Safety Switch, Heavy Duty	4.0 Ea.
Incandescent Lighting Fixtures	20.0 Ea.
Fluorescent Lighting Fixture	76.0 Ea.
H.P. Sodium Fixture, 250 W	24.0 Ea.
Smoke Detector	55.0 Ea.
Manual Pull Station	6.0 Ea.
Fire Alarm Control Panel	1.0 Ea.
Annunciation Panel	2.0 Ea.
Fire Alarm Bell	8.0 Ea.
Lightning Protection System	1.0 M.L.F.
Lightning Ground Rod	1.0 Ea.
Special Ground System	1.0 M.L.F.

FAC 2111 AIRCRAFT MAINTENANCE HANGAR
Sustainment by Year
CostWorks Release 2023 Qtr 4

