

**FAC 6107 GENERAL ADMINISTRATIVE BUILDING, HIGH-RISE**

FY22 SUC: \$4.04 / SF  
Source: Calculated using R.S. Means CostWorks 2021 Qtr 3 component prices

FAC 6107 GENERAL ADMINISTRATIVE BUILDING, HIGH-RISE  
Release 2021 Qtr 3  
Zip Code Prefix 222  
Type MR

UM SF Design Life 55  
Average Size 466680.0

SUC \$4.04

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
Repair concrete stairs	30	5,920.00 S.F.	\$195,385.73	\$225,940.77	1.8333	1	1	\$225,940.77	\$225,940.77
Replace precast concrete coping, 12" wide	50	896.00 L.F.	\$80,270.52	\$96,659.04	1.1000	1	1	\$96,659.04	\$96,659.04
Repair clay brick wall, 1st floor	25	8,960.00 S.F.	\$385,070.46	\$472,590.42	2.2000	2	2	\$945,180.83	\$945,180.83
Point clay brick wall, 1st floor	25	8,960.00 C.S.F.	\$7,240,702.95	\$8,934,797.38	2.2000	2	2	\$17,869,594.77	\$17,869,594.77
Point clay brick wall, 2nd floor	25	8,960.00 C.S.F.	\$7,592,590.46	\$9,370,790.63	2.2000	2	2	\$18,741,581.25	\$18,741,581.25
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	4.80 S.F.	\$57.88	\$68.02	55.0000	55	55	\$3,741.31	\$3,741.31
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	80.00 Ea.	\$11,578.93	\$13,808.72	2.7500	2	2	\$27,617.43	\$27,617.43
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	80.00 Ea.	\$39,050.53	\$46,281.94	1.1000	1	1	\$46,281.94	\$46,281.94
Replace glass - 2nd floor (1% of glass) - alum. window fixed	1	4.80 S.F.	\$509.73	\$629.14	55.0000	55	55	\$34,602.63	\$34,602.63
Repair 2'-0" x 3'-0" aluminum window - 2nd floor	20	80.00 Ea.	\$15,305.55	\$18,436.47	2.7500	2	2	\$36,872.94	\$36,872.94
Replace 2'-0" x 3'-0" aluminum window - 2nd floor	50	80.00 Ea.	\$42,777.15	\$50,909.69	1.1000	1	1	\$50,909.69	\$50,909.69
Replace glass - 3rd floor (1% of glass) - alum. window fixed	1	20.00 S.F.	\$503.18	\$608.82	55.0000	55	55	\$33,485.16	\$33,485.16
Repair 2'-0" x 3'-0" aluminum window - 3rd floor	20	640.00 Ea.	\$152,878.50	\$185,285.07	2.7500	2	2	\$370,570.13	\$370,570.13
Replace 2'-0" x 3'-0" aluminum window - 3rd floor	50	640.00 Ea.	\$372,651.28	\$445,070.85	1.1000	1	1	\$445,070.85	\$445,070.85
Repair aluminum storefront door	12	10.00 Ea.	\$4,634.19	\$5,545.15	4.5833	4	4	\$22,180.58	\$22,180.58
Replace 3'-0" x 7'-0" aluminum storefront doors	50	10.00 Ea.	\$20,457.65	\$24,191.00	1.1000	1	1	\$24,191.00	\$24,191.00
Replace insulating glass - (3% of glass) aluminum storefront door	1	0.21 S.F.	\$10.90	\$12.75	55.0000	55	55	\$701.07	\$701.07
Repair steel, painted, door	14	23.00 Ea.	\$14,376.71	\$17,112.13	3.9286	3	3	\$51,336.39	\$51,336.39
Refinish 3'-0" x 7'-0" steel, painted, door	4	6.00 Ea.	\$248.40	\$305.20	13.7500	13	13	\$3,967.57	\$3,967.57
Replace 3'-0" x 7'-0" steel, painted, door	45	6.00 Ea.	\$4,230.38	\$4,918.39	1.2222	1	1	\$4,918.39	\$4,918.39
Debris removal by hand & visual inspection,modified bitum/thermoplastc	1	40.00 M.S.F.	\$1,506.38	\$1,837.34	55.0000	55	55	\$101,053.68	\$101,053.68
Non-destructive moisture inspection, modified bituminous/thermoplastic	5	45.00 M.S.F.	\$5,258.50	\$6,413.80	11.0000	11	11	\$70,551.81	\$70,551.81
Minor thermoplastic membrane repairs, 2% of roof area	1	9.00 Sq.	\$2,919.96	\$3,474.43	55.0000	55	55	\$191,093.69	\$191,093.69
Flashing repairs, 2 S.F. per sq. repaired, modified bitumen/thermoplastic	1	18.00 S.F.	\$69.36	\$83.01	55.0000	55	55	\$4,565.41	\$4,565.41
Membrane replacement-(25% of roof area),modified bitum/thermoplastic	20	110.00 Sq.	\$86,192.32	\$102,927.75	2.7500	2	2	\$205,855.50	\$205,855.50
Total roof replacement, modified bituminous / thermoplastic	25	450.00 Sq.	\$285,177.99	\$338,431.32	2.2000	2	2	\$676,862.63	\$676,862.63
Repair steel painted interior door	14	6.00 Ea.	\$1,760.71	\$2,049.38	3.9286	3	3	\$6,148.15	\$6,148.15

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Repair solid core wood door, interior	11	870.00 Ea.	\$255,303.47	\$297,160.70	5.0000	5	5	\$1,485,803.49	\$1,485,803.49
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	870.00 Ea.	\$37,727.33	\$46,327.21	13.7500	13	12	\$602,253.77	\$555,926.55
Replace 3'-0" x 7'-0" solid core wood door, interior	40	870.00 Ea.	\$425,801.75	\$492,254.83	1.3750	1	1	\$492,254.83	\$492,254.83
Replace toilet partitions, painted metal-overhead braced, per stall	20	35.00 Ea.	\$21,975.85	\$25,861.83	2.7500	2	2	\$51,723.66	\$51,723.66
Replace toilet partitions, stainless steel-ceiling hung, per stall	30	78.00 Ea.	\$97,414.63	\$112,878.10	1.8333	1	1	\$112,878.10	\$112,878.10
Replace urinal screen, stainless steel	30	81.00 Ea.	\$59,619.74	\$69,031.99	1.8333	1	1	\$69,031.99	\$69,031.99
Repair concrete steps	15	300.00 S.F.	\$6,855.02	\$7,935.20	3.6667	3	3	\$23,805.60	\$23,805.60
Replace concrete steps	100	300.00 S.F.	\$16,037.65	\$19,557.66	0.5500	0	0	\$0.00	\$0.00
Refinish metal stair railing, interior	7	1,200.00 S.F.	\$1,753.83	\$2,162.44	7.8571	7	7	\$15,137.09	\$15,137.09
Replace metal stair railing, interior	45	1,200.00 L.F.	\$51,546.86	\$60,335.83	1.2222	1	1	\$60,335.83	\$60,335.83
Repair 5/8" drywall - (2% of walls)	20	12,500.00 S.F.	\$20,941.74	\$25,481.09	2.7500	2	2	\$50,962.17	\$50,962.17
Refinish drywall	4	600,000.00 S.F.	\$372,588.88	\$458,346.10	13.7500	13	13	\$5,958,499.25	\$5,958,499.25
Office painting, 10' x 12', 10' high walls	5	1,340.00 Ea.	\$296,121.49	\$363,224.61	11.0000	11	11	\$3,995,470.76	\$3,995,470.76
Repair 4" x 4" thin set ceramic tile - (2% of walls)	10	1.40 C.S.F.	\$1,149.32	\$1,384.96	5.5000	5	5	\$6,924.82	\$6,924.82
Replace 4" x 4" thin set ceramic tile	75	8.50 C.S.F.	\$7,542.15	\$9,112.66	0.7333	0	0	\$0.00	\$0.00
Repair plywood paneling - (2% of walls)	10	2.80 C.S.F.	\$1,181.19	\$1,421.12	5.5000	5	5	\$7,105.60	\$7,105.60
Refinish plywood paneling	10	134.00 C.S.F.	\$13,766.88	\$16,992.39	5.5000	5	5	\$84,961.97	\$84,961.97
Replace plywood paneling	30	134.00 C.S.F.	\$65,642.50	\$79,328.63	1.8333	1	1	\$79,328.63	\$79,328.63
Refinish concrete floor finished	25	500.00 C.S.F.	\$210,913.65	\$253,340.13	2.2000	2	2	\$506,680.26	\$506,680.26
Ceramic tile floor repairs - (2% of floors)	15	14.80 C.S.F.	\$9,365.59	\$11,677.28	3.6667	3	3	\$35,031.85	\$35,031.85
Replace 2" x 2" thin set ceramic tile floor	50	46.50 C.S.F.	\$56,899.41	\$68,684.84	1.1000	1	1	\$68,684.84	\$68,684.84
Terrazzo floor repairs - (2% of floors)	15	1.84 S.F.	\$29.93	\$35.84	3.6667	3	3	\$107.51	\$107.51
Replace carpet	8	45,000.00 S.Y.	\$2,475,735.40	\$2,859,160.61	6.8750	6	6	\$17,154,963.66	\$17,154,963.66
Acoustic tile repairs - (2% of ceilings)	9	1.68 C.S.F.	\$1,524.94	\$1,772.27	6.1111	6	6	\$10,633.61	\$10,633.61
Replace acoustic tile ceiling, fire-rated	20	4,666.80 C.S.F.	\$2,446,469.98	\$2,883,550.78	2.7500	2	2	\$5,767,101.55	\$5,767,101.55
Replace flush valve diaphragm tankless water closet	10	78.00 Ea.	\$2,045.18	\$2,537.80	5.5000	5	5	\$12,688.99	\$12,688.99
Rebuild flush valve tankless water closet	20	78.00 Ea.	\$14,073.84	\$16,961.66	2.7500	2	2	\$33,923.32	\$33,923.32
Unplug clogged line tankless water closet	5	78.00 Ea.	\$17,034.82	\$21,303.89	11.0000	11	11	\$234,342.82	\$234,342.82
Replace tankless flush valve	25	78.00 Ea.	\$19,672.78	\$23,096.62	2.2000	2	2	\$46,193.24	\$46,193.24
Replace wax ring gasket for tankless water closet	5	78.00 Ea.	\$11,038.51	\$13,792.46	11.0000	11	11	\$151,717.09	\$151,717.09
Replace flush valve diaphragm for a urinal	7	81.00 Ea.	\$2,123.84	\$2,635.40	7.8571	7	7	\$18,447.83	\$18,447.83
Rebuild flush valve for a urinal	20	81.00 Ea.	\$14,615.14	\$17,614.03	2.7500	2	2	\$35,228.06	\$35,228.06
Unplug line urinal	5	81.00 Ea.	\$11,750.81	\$14,695.66	11.0000	11	11	\$161,652.30	\$161,652.30

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Replace washer in spud connection lavatory, vitreous china	7	85.00 Ea.	\$1,399.32	\$1,706.80	7.8571	7	7	\$11,947.62	\$11,947.62
Replace washer in faucet lavatory, vitreous china	2	85.00 Ea.	\$1,095.22	\$1,364.40	27.5000	27	27	\$36,838.93	\$36,838.93
Replace faucets lavatory, vitreous china	10	85.00 Ea.	\$15,446.70	\$18,594.21	5.5000	5	5	\$92,971.04	\$92,971.04
Clean out strainer and P trap lavatory, vitreous china	2	85.00 Ea.	\$2,963.90	\$3,706.67	27.5000	27	27	\$100,080.16	\$100,080.16
Replace faucet washer sink, iron enamel	2	8.00 Ea.	\$102.21	\$127.33	27.5000	27	27	\$3,437.85	\$3,437.85
Clean trap sink, iron enamel	3	8.00 Ea.	\$68.57	\$85.75	18.3333	18	18	\$1,543.48	\$1,543.48
Replace faucets sink, iron enamel	10	8.00 Ea.	\$1,453.81	\$1,750.04	5.5000	5	5	\$8,750.22	\$8,750.22
Unstop sink, iron enamel	2	8.00 Ea.	\$334.57	\$418.42	27.5000	27	27	\$11,297.30	\$11,297.30
Replace sink, P.E.C.I. sink, iron enamel kitchen	10	8.00 Ea.	\$5,093.59	\$6,060.08	5.5000	5	5	\$30,300.41	\$30,300.41
Inspect / clean shower head	3	25.00 Ea.	\$1,234.82	\$1,544.28	18.3333	18	18	\$27,796.99	\$27,796.99
Replace mixing valve barrel shower, miscellaneous	2	25.00 Ea.	\$7,064.76	\$8,307.98	27.5000	27	27	\$224,315.58	\$224,315.58
Replace mixing valve shower, miscellaneous	10	25.00 Ea.	\$6,897.05	\$8,388.88	5.5000	5	5	\$41,944.40	\$41,944.40
Replace shower and fittings, aluminum	25	25.00 Ea.	\$24,165.96	\$28,903.99	2.2000	2	2	\$57,807.98	\$57,807.98
Replace shower head with water conserving head	10	25.00 Ea.	\$3,749.63	\$4,392.33	5.5000	5	5	\$21,961.65	\$21,961.65
Check / minor repairs drinking fountain	1	20.00 Ea.	\$977.65	\$1,222.65	55.0000	55	55	\$67,245.85	\$67,245.85
Correct water pressure drinking fountain	2	20.00 Ea.	\$836.43	\$1,046.05	27.5000	27	27	\$28,243.26	\$28,243.26
Replace refrigerant drinking fountain	2	20.00 Ea.	\$653.66	\$765.38	27.5000	27	27	\$20,665.39	\$20,665.39
Repair drain leak drinking fountain	4	20.00 Ea.	\$678.31	\$810.69	13.7500	13	11	\$10,539.00	\$8,917.62
Replace fountain drinking fountain	10	20.00 Ea.	\$25,623.12	\$30,291.18	5.5000	5	5	\$151,455.89	\$151,455.89
Resolder joint pipe & fittings, copper	10	25.00 Ea.	\$1,114.83	\$1,381.99	5.5000	5	5	\$6,909.93	\$6,909.93
Replace pipe and fittings, copper 1"	25	300.00 L.F.	\$9,141.01	\$10,966.81	2.2000	2	2	\$21,933.62	\$21,933.62
Replace pipe and fittings, copper 2"	25	900.00 L.F.	\$55,336.10	\$65,830.57	2.2000	2	2	\$131,661.14	\$131,661.14
Replace pipe and fittings, copper 4"	25	125.00 L.F.	\$21,968.73	\$25,743.19	2.2000	2	2	\$51,486.39	\$51,486.39
Overhaul water heater, gas / oil, 70 gallon	5	7.00 Ea.	\$1,145.91	\$1,433.08	11.0000	11	11	\$15,763.92	\$15,763.92
Clean & service water heater, gas / oil, 70 gallon	1	7.00 Ea.	\$1,376.31	\$1,721.22	55.0000	55	55	\$94,667.21	\$94,667.21
Replace water heater, gas / oil, 70 gallon	12	7.00 Ea.	\$23,206.17	\$26,931.83	4.5833	4	4	\$107,727.33	\$107,727.33
Drain and flush water heater, electric, 120 gallon	7	3.00 Ea.	\$883.14	\$1,104.46	7.8571	7	7	\$7,731.23	\$7,731.23
Check operation water heater, electric, 120 gallon	3	3.00 Ea.	\$7.76	\$9.70	18.3333	18	18	\$174.59	\$174.59
Replace water heater, electric, 120 gallon	15	3.00 Ea.	\$43,897.73	\$50,210.67	3.6667	3	3	\$150,632.01	\$150,632.01
Inspect / check pump / motor operation, lubricate circulation pump, 1/12 HP	0.5	1.00 Ea.	\$8.03	\$10.04	110.0000	110	110	\$1,104.33	\$1,104.33

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Replace pump / motor assembly circulation pump, 1/12 HP	10	1.00 Ea.	\$1,100.58	\$1,290.00	5.5000	5	5	\$6,449.98	\$6,449.98
Insp/chk pump/mtr oper, lub, chk align circulation pump, CI 1-1/2 HP	0.5	4.00 Ea.	\$47.80	\$59.77	110.0000	110	110	\$6,575.15	\$6,575.15
Replace pump / motor assembly circulation pump, CI 1-1/2 HP	20	4.00 Ea.	\$12,620.18	\$14,575.91	2.7500	2	2	\$29,151.82	\$29,151.82
Replace water softener	15	10.00 Ea.	\$15,333.46	\$18,077.16	3.6667	3	3	\$54,231.47	\$54,231.47
Unclog main drain pipe & fittings, cast iron	10	1.00 Ea.	\$46.17	\$57.74	5.5000	5	5	\$288.68	\$288.68
Replace pipe & fittings, cast iron, 4"	40	125.00 L.F.	\$8,368.38	\$10,044.71	1.3750	1	1	\$10,044.71	\$10,044.71
Unclog floor drain, PVC	20	50.00 Ea.	\$2,389.80	\$2,988.70	2.7500	2	2	\$5,977.41	\$5,977.41
Unclog 4" - 12" diameter PVC main drain per L.F.	10	3.50 L.F.	\$13.27	\$16.59	5.5000	5	5	\$82.97	\$82.97
Replace pipe, 2" pipe and fittings, PVC	30	2,000.00 L.F.	\$128,865.25	\$159,927.54	1.8333	1	1	\$159,927.54	\$159,927.54
Replace pipe, 4" pipe and fittings, PVC	30	3,600.00 L.F.	\$293,720.30	\$361,383.02	1.8333	1	1	\$361,383.02	\$361,383.02
General maintenance & repair distribution: gutters, pipe	1	0.28 M.L.F.	\$84.57	\$105.76	55.0000	55	55	\$5,817.06	\$5,817.06
Replace pipe or gutter distribution	20	0.28 L.F.	\$12.55	\$15.44	2.7500	2	2	\$30.87	\$30.87
Insp/chk pump/mtr oper, lub, chk align, rainwater sump pump	1	2.00 Ea.	\$23.90	\$29.89	55.0000	55	55	\$1,643.79	\$1,643.79
Replace rainwater sump pump / motor assembly	20	2.00 Ea.	\$1,264.86	\$1,494.18	2.7500	2	2	\$2,988.36	\$2,988.36
Repair boiler, oil, 10,000 MBH	7	4.00 Ea.	\$8,500.32	\$10,053.35	7.8571	7	7	\$70,373.48	\$70,373.48
Replace boiler, oil, 10,000 MBH	30	4.00 Ea.	\$945,754.16	\$1,103,641.60	1.8333	1	1	\$1,103,641.60	\$1,103,641.60
Clean separator strainer	10	2.00 Ea.	\$1,488.19	\$1,861.15	5.5000	5	5	\$9,305.74	\$9,305.74
Replace separator	20	2.00 Ea.	\$164,531.10	\$188,002.16	2.7500	2	2	\$376,004.31	\$376,004.31
Repair water cooled chiller, 50 ton, reciprocating	10	1.00 Ea.	\$45,520.89	\$52,632.05	5.5000	5	5	\$263,160.26	\$263,160.26
Replace chiller, water cooled 50 ton, reciprocating	20	1.00 Ea.	\$52,675.18	\$61,378.40	2.7500	2	2	\$122,756.80	\$122,756.80
Replace fan coil, DX 2-1/2 ton, with heat	15	80.00 Ea.	\$153,262.60	\$180,287.66	3.6667	3	3	\$540,862.98	\$540,862.98
Repair fan, induced draft, 6700 CFM	10	10.00 Ea.	\$3,027.44	\$3,695.30	5.5000	5	5	\$18,476.51	\$18,476.51
Replace fan, induced draft, 6700 CFM	20	10.00 Ea.	\$52,178.80	\$60,280.76	2.7500	2	2	\$120,561.52	\$120,561.52
Repair computer room A/C, chilled water, 10 ton	10	1.00 Ea.	\$7,957.59	\$9,314.37	5.5000	5	5	\$46,571.87	\$46,571.87
Replace computer room A/C, chilled water, 10 ton	20	1.00 Ea.	\$27,095.51	\$31,141.56	2.7500	2	2	\$62,283.12	\$62,283.12
Repair computer room A/C, chilled water, 15 ton	10	1.00 Ea.	\$8,268.26	\$9,668.21	5.5000	5	5	\$48,341.04	\$48,341.04
Replace computer room A/C, chilled water, 15 ton	20	1.00 Ea.	\$31,391.11	\$36,196.05	2.7500	2	2	\$72,392.09	\$72,392.09
Repair computer room A/C, chilled water, 20 ton	10	1.00 Ea.	\$19,409.99	\$22,496.81	5.5000	5	5	\$112,484.05	\$112,484.05
Replace computer room A/C, chilled water, 20 ton	20	1.00 Ea.	\$34,552.89	\$39,959.61	2.7500	2	2	\$79,919.22	\$79,919.22
Repair single zone rooftop unit, 25 ton	10	1.00 Ea.	\$47,397.42	\$54,623.55	5.5000	5	4	\$273,117.75	\$218,494.20
Replace single zone rooftop unit, 25 ton	15	1.00 Ea.	\$51,343.17	\$59,585.52	3.6667	3	3	\$178,756.56	\$178,756.56
Inspect sprinkler system	1	10.00 Ea.	\$343.26	\$429.29	55.0000	55	55	\$23,610.76	\$23,610.76
Replace sprinkler head	20	2,500.00 Ea.	\$213,807.00	\$262,973.76	2.7500	2	2	\$525,947.52	\$525,947.52

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Rebuild double check 3" backflow preventer sprinkler system	1	10.00 Ea.	\$7,104.12	\$8,510.94	55.0000	55	55	\$468,101.54	\$468,101.54
Replace fire pump / electric motor assembly 100 H.P.	25	2.00 Ea.	\$88,278.17	\$101,820.68	2.2000	2	2	\$203,641.36	\$203,641.36
Maintenance and repair motor starter, up to 600 V	5	10.00 Ea.	\$2,796.39	\$3,375.98	11.0000	11	11	\$37,135.78	\$37,135.78
Maintenance and inspection motor starter, up to 600 V	0.5	10.00 Ea.	\$539.81	\$676.30	110.0000	110	110	\$74,393.09	\$74,393.09
Replace starter motor starter, up to 600 V	18	1.00 Ea.	\$805.31	\$958.07	3.0556	3	3	\$2,874.22	\$2,874.22
Maintenance and inspection secondary transformer, dry	0.5	100.00 Ea.	\$8,065.36	\$10,104.73	110.0000	110	110	\$1,111,520.26	\$1,111,520.26
Maintenance and inspection lighting panel, indoor	3	100.00 Ea.	\$4,064.44	\$5,092.15	18.3333	18	18	\$91,658.65	\$91,658.65
Replace load center, 100 A	20	100.00 Ea.	\$109,416.42	\$133,687.60	2.7500	2	2	\$267,375.20	\$267,375.20
Replace receptacle/plug receptacles and plugs	20	2,250.00 Ea.	\$161,900.03	\$199,567.44	2.7500	2	2	\$399,134.89	\$399,134.89
Maintenance and repair wiring devices, switches	10	44.00 Ea.	\$1,858.71	\$2,320.50	5.5000	5	5	\$11,602.49	\$11,602.49
Maintenance and repair incandescent lighting fixtures	10	1,000.00 Ea.	\$68,865.68	\$81,985.03	5.5000	5	3	\$409,925.17	\$245,955.10
Replace incandescent lighting fixture lamp	5	1,000.00 Ea.	\$11,482.23	\$13,867.68	11.0000	11	11	\$152,544.48	\$152,544.48
Replace incandescent lighting fixture	20	1,000.00 Ea.	\$140,459.43	\$169,765.98	2.7500	2	2	\$339,531.96	\$339,531.96
Replace lamps (2 lamps), 4', 34 W energy saver	10	1,675.00 Ea.	\$42,233.48	\$52,894.72	5.5000	5	5	\$264,473.58	\$264,473.58
Replace fluorescent fixture, lay-in, recess mtd, 2' x 4', two 40 W	20	1,675.00 Ea.	\$380,957.03	\$464,670.39	2.7500	2	2	\$929,340.78	\$929,340.78
Maintenance and repair master clock control	10	1.00 Ea.	\$191.92	\$230.28	5.5000	5	5	\$1,151.38	\$1,151.38
Check operation master clock control	1	1.00 Ea.	\$43.18	\$54.10	55.0000	55	55	\$2,975.72	\$2,975.72
Replace time control clock master clock	15	1.00 Ea.	\$303.15	\$359.86	3.6667	3	3	\$1,079.57	\$1,079.57
Maintenance and repair TV cable outlet	10	40.00 Ea.	\$2,051.73	\$2,562.32	5.5000	5	5	\$12,811.62	\$12,811.62
Replace TV cable outlet	20	40.00 Ea.	\$2,848.74	\$3,543.48	2.7500	2	2	\$7,086.97	\$7,086.97
Repair smoke detector	10	200.00 Ea.	\$11,277.52	\$13,942.81	5.5000	5	4	\$69,714.07	\$55,771.25
Check operation smoke detector	1	200.00 Ea.	\$3,238.85	\$4,057.80	55.0000	55	55	\$223,179.26	\$223,179.26
Replace smoke detector	15	200.00 Ea.	\$56,847.47	\$67,892.38	3.6667	3	3	\$203,677.15	\$203,677.15
Repair heat detector	10	160.00 Ea.	\$9,820.42	\$12,061.53	5.5000	5	5	\$60,307.65	\$60,307.65
Check operation heat detector	1	160.00 Ea.	\$2,591.08	\$3,246.24	55.0000	55	55	\$178,543.41	\$178,543.41
Replace heat detector	15	160.00 Ea.	\$27,354.25	\$33,446.52	3.6667	3	3	\$100,339.57	\$100,339.57
Check and repair manual pull station	10	120.00 Ea.	\$10,523.62	\$12,939.63	5.5000	5	4	\$64,698.17	\$51,758.54
Replace manual pull station	15	120.00 Ea.	\$24,416.13	\$29,392.93	3.6667	3	3	\$88,178.78	\$88,178.78
Minor repairs to fire alarm control panel	5	1.00 Ea.	\$149.71	\$182.27	11.0000	11	11	\$2,005.02	\$2,005.02
Maintenance and inspection fire alarm control panel	0.5	1.00 Ea.	\$43.18	\$54.10	110.0000	110	110	\$5,951.45	\$5,951.45
Replace fire alarm control panel	15	1.00 Ea.	\$1,953.46	\$2,391.92	3.6667	3	3	\$7,175.76	\$7,175.76
Minor repairs to annunciation panel	5	1.00 Ea.	\$149.71	\$182.27	11.0000	11	11	\$2,005.02	\$2,005.02
Maintenance and inspection annunciation panel	0.5	1.00 Ea.	\$43.18	\$54.10	110.0000	110	110	\$5,951.45	\$5,951.45
Replace annunciation panel	15	1.00 Ea.	\$1,126.52	\$1,354.55	3.6667	3	3	\$4,063.66	\$4,063.66

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost	
Replace fire alarm bell, 6"	20	20.00 Ea.	\$3,899.24	\$4,705.51	2.7500	2	2	\$9,411.02	\$9,411.02	
Replace EMS, Three Phase, 5 Meters	15	10.00 Ea.	\$158,024.61	\$183,997.90	3.6667	3	3	\$551,993.70	\$551,993.70	
Replace EMS, Mech, BTU, 3 Meters, 3 Duct Sensors, 3 Space Sensors	20	10.00 Ea.	\$171,377.19	\$200,306.76	2.7500	2	2	\$400,613.52	\$400,613.52	
Maintenance and repair of general wiring lightning protection system	1	2.00 M.L.F.	\$193.45	\$239.65	55.0000	55	55	\$13,180.92	\$13,180.92	
Replace lightning protection general wiring system	25	2.00 M.L.F.	\$22,018.24	\$26,191.98	2.2000	2	2	\$52,383.96	\$52,383.96	
Maintenance and repair lightning ground rod	1	4.00 Ea.	\$351.56	\$439.15	55.0000	55	53	\$24,153.17	\$23,274.88	
Replace lightning ground rod	25	4.00 Ea.	\$904.36	\$1,121.16	2.2000	2	2	\$2,242.32	\$2,242.32	
Maintenance and repair computer ground system	4	1.00 Ea.	\$21.59	\$27.05	13.7500	13	13	\$351.68	\$351.68	
Replace computer ground system	50	3.00 M.L.F.	\$5,597.42	\$6,836.54	1.1000	1	1	\$6,836.54	\$6,836.54	
Replace lamp emergency lighting fixture	2	8.00 Ea.	\$437.52	\$527.01	27.5000	27	27	\$14,229.14	\$14,229.14	
Replace emergency lighting fixture	20	8.00 Ea.	\$4,818.94	\$5,678.09	2.7500	2	2	\$11,356.18	\$11,356.18	
Maintenance and repair exit light	20	8.00 Ea.	\$297.61	\$368.03	2.7500	2	2	\$736.05	\$736.05	
Replace lamp exit light	5	8.00 Ea.	\$134.77	\$159.71	11.0000	11	11	\$1,756.79	\$1,756.79	
Replace lighting fixture exit light	20	8.00 Ea.	\$1,528.28	\$1,838.09	2.7500	2	2	\$3,676.17	\$3,676.17	
			\$27,746,166.53	\$33,581,637.46				MR Subtotal	\$90,460,271.23	
									MR Per Year	\$1,644,732.20
									PM Total	\$242,848.30
									Subtotal	\$1,887,580.50
									Total Per Unit	\$4.04

**FAC 6107 GENERAL ADMINISTRATIVE BUILDING, HIGH-RISE**

SUC \$4.04

Release 2021 Qtr 3

UM None

Zip Code Prefix 222

Design Life 55

Type PM

Average Size 466680.0

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Door, emergency egress, swinging, annualized	6.00	1.56	\$87.55	\$64.50	\$0.00	\$152.05	\$180.15	\$212.63
Fire doors, swinging, annualized	24.00	9.41	\$343.71	\$349.38	\$0.00	\$693.09	\$832.28	\$988.65
Elevator, cable, electric, passenger / freight, annualized	14.00	670.53	\$56,956.20	\$56,493.15	\$0.00	\$113,449.35	\$136,092.91	\$161,584.29
Urinals, annualized	26.00	5.93	\$164.29	\$297.78	\$0.00	\$462.07	\$567.83	\$681.80
Toilet (vacuum breaker type), annualized	75.00	13.27	\$633.14	\$667.36	\$0.00	\$1,300.50	\$1,564.02	\$1,859.20
Lavatories, annualized	78.00	27.14	\$465.26	\$1,614.87	\$0.00	\$2,080.14	\$2,611.12	\$3,165.37
Showers, annualized	6.00	1.37	\$77.34	\$81.67	\$0.00	\$159.01	\$191.24	\$227.35
Drink fountain, annualized	18.00	11.16	\$373.06	\$562.96	\$0.00	\$936.02	\$1,142.21	\$1,367.06
Water heater, gas, to 120 gal., annualized	3.00	5.16	\$175.91	\$260.34	\$0.00	\$436.25	\$531.94	\$636.43
Boiler, hot water, oil, gas, or comb. fired, over 1000 MBH, annualized	3.00	59.09	\$232.02	\$3,568.05	\$0.00	\$3,800.07	\$4,893.69	\$5,998.91
Chiller, screw, water cooled, over 100 tons, annualized	2.00	33.44	\$299.26	\$2,026.30	\$0.00	\$2,325.56	\$2,963.37	\$3,616.15
Air handling unit, over 50 tons, annualized	2.00	6.55	\$798.69	\$329.49	\$0.00	\$1,128.18	\$1,306.90	\$1,525.55
Air handling unit, computer room, annualized	3.00	10.25	\$382.16	\$515.38	\$0.00	\$897.54	\$1,090.37	\$1,302.31
VAV Boxes, annualized	90.00	84.06	\$864.40	\$5,074.56	\$0.00	\$5,938.97	\$7,547.77	\$9,199.80
Fan, centrifugal, over 10,000 CFM, annualized	2.00	2.37	\$71.78	\$118.94	\$0.00	\$190.72	\$233.57	\$280.02
Controls, central system, electro/pneumatic, annually	36.00	69.16	\$2,547.72	\$4,154.80	\$0.00	\$6,702.52	\$8,203.73	\$9,832.32
Controls, central system, electro/pneumatic, annualized	1.00	1.92	\$70.77	\$115.41	\$0.00	\$186.18	\$227.88	\$273.12
Backflow prevention device, over 4", annualized	4.00	1.97	\$53.58	\$118.05	\$0.00	\$171.64	\$212.41	\$255.87
Extinguishing system, wet pipe, annualized	10.00	113.42	\$682.42	\$6,783.70	\$0.00	\$7,466.13	\$9,569.48	\$11,706.95
Fire pump, electric motor driven, annualized	2.00	95.50	\$106.15	\$5,682.45	\$0.00	\$5,788.60	\$7,503.96	\$9,224.61
Switch, interrupt, high voltage, fused air, annualized	14.00	5.10	\$212.18	\$333.59	\$0.00	\$545.77	\$667.07	\$798.97
Panelboard, 225 A and above, annualized	25.00	11.03	\$579.94	\$725.20	\$0.00	\$1,305.14	\$1,580.69	\$1,885.24
Motor control center, over 400 A, annualized	2.00	0.78	\$46.39	\$51.80	\$0.00	\$98.19	\$118.37	\$140.87
Fire alarm annunciator system, annualized	2.00	22.10	\$358.79	\$1,305.36	\$0.00	\$1,664.15	\$2,091.63	\$2,537.06
Uninterrupted power system, up to 200 KVA, annually	25.00	75.25	\$4,923.02	\$4,454.80	\$0.00	\$9,377.83	\$11,206.57	\$13,281.46
Light, emergency, hardwired system, annualized	8.00	2.00	\$61.86	\$118.10	\$0.00	\$179.96	\$221.58	\$266.29
						\$167,435.61	\$203,352.77	\$242,848.30





# FAC 6107 GENERAL ADMINISTRATIVE BUILDING, HIGH-RISE

## Modeled Component List CostWorks Release 2021 Qtr 3

B20 Exterior Enclosure	
Aluminum Window, Fixed, 1st floor	80.0 Ea.
Aluminum Window, Fixed, 2nd floor	80.0 Ea.
Aluminum Window, Fixed, 3rd floor	640.0 Ea.
Glazed Aluminum	10.0 Ea.
Steel, Painted	6.0 Ea.
B30 Roofing	
Modified Bituminous / Thermoplastic	450.0 Sq.
C10 Interior Construction	
Solid Core Interior Doors	870.0 Ea.
Toilet Partitions, painted metal	35.0 Ea.
Urinal Screen	81.0 Ea.
Fire Doors, Swinging, annualized	24.0 Each
C20 Stairs	
Concrete Steps	300.0 S.F.
Metal Interior Stair Railing	1200.0 L.F.
C30 Interior Finishes	
Tile	8.5 C.S.F.
Plywood Paneling	134.0 C.S.F.
Concrete, Finished	500.0 C.S.F.
Carpet	45000.0 S.Y.
Acoustic Tile, fire-rated	4666.8 C.S.F.
D20 Plumbing	
Sink, Iron Enamel	8.0 Ea.
Drinking Fountain	20.0 Ea.
Water Heater, Gas / Oil, 70 Gallon	7.0 Ea.
Water Heater, Electric, 120 Gallon	3.0 Ea.
Circulation Pump, 1/12 HP	1.0 Ea.
Circulation Pump, C.I. 1-1/2 HP	4.0 Ea.
Rainwater Sump Pump	2.0 Ea.
D30 HVAC	
Chiller, Water Cooled, Reciprocating, 50 ton	1.0 Ea.
Draft Fan, 6700 CFM	10.0 Ea.
Computer Room A/C Units, Chilled Water, 20 ton	1.0 Ea.
Single Zone Air Conditioner, 25 ton	1.0 Ea.
VAV Box	90.0 Each
D40 Fire Protection	
Sprinkler System, Fire Supression, sprinkler head	2500.0 Ea.
Sprinkler System, Fire Supression , 3" backflow preventer	10.0 Ea.
Fire Pump Electric Motor	2.0 Ea.
Fire Pump, Electric, annualized	2.0 Each
D50 Electrical	
Motor Starter, Up To 600 V	1.0 Ea.
Load Center, 100 A, maintenance & inspection	100.0 Ea.
Load Center, 100 A, replacement	100.0 Ea.
Incandescent Lighting Fixtures	1000.0 Ea.
Fluorescent Lighting Fixture	1675.0 Ea.
Master Clock Control	1.0 Ea.
TV Cable Outlet	40.0 Ea.
Smoke Detector	200.0 Ea.
Heat Detector	160.0 Ea.
Manual Pull Station	120.0 Ea.

Fire Alarm Control Panel	1.0 Ea.
Annunciation Panel	1.0 Ea.
Fire Alarm Bell	20.0 Ea.
Lightning Protection System	2.0 M.L.F.
Lightning Ground Rod	4.0 Ea.
Computer Ground System	3.0 M.L.F.
Emergency Lighting Fixture	8.0 Ea.
Exit Light	8.0 Ea.
D10 Conveying	
Elevator, cable annualized	14.0 Each

FAC 6107 GENERAL ADMINISTRATIVE BUILDING, HIGH-RISE  
Sustainment by Year  
CostWorks Release 2021 Qtr 3

