

FAC 2261 AMMUNITION PRODUCTION PLANT

FY22 SUC:	\$5.72 / SF
Source:	Calculated using R.S. Means CostWorks 2021 Qtr 3 component prices

FAC 2261 AMMUNITION PRODUCTION PLANT

Release 2021 Qtr 3
Zip Code Prefix 222
Type MR

UM SF
Design Life 55
Average Size 5933.0

SUC \$5.72

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
Replace EMS, Mech, BTU, 3 Meters, 3 Duct Sensors, 3 Space Sensors	20	1.00 Ea.	\$17,137.72	\$20,030.68	2.7500	2	2	\$40,061.35	\$40,061.35
Replace EMS, Three Phase, 5 Meters	15	1.00 Ea.	\$15,802.46	\$18,399.79	3.6667	3	3	\$55,199.37	\$55,199.37
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
Replace central station A.H.U., 16,000 CFM	15	2.00 Ea.	\$133,879.30	\$154,090.16	3.6667	3	3	\$462,270.47	\$462,270.47
Place new BUR membrane over existing	20	60.00 Sq.	\$29,099.57	\$34,307.38	2.7500	2	2	\$68,614.77	\$68,614.77
Total BUR roof replacement	28	60.00 Sq.	\$46,779.00	\$55,318.94	1.9643	1	1	\$55,318.94	\$55,318.94
Minor BUR membrane replacement, 25% of roof area	15	15.70 Sq.	\$12,635.18	\$14,998.42	3.6667	3	3	\$44,995.26	\$44,995.26
Minor BUR membrane repairs, 2% of roof area	1	1.20 Sq.	\$580.96	\$689.41	55.0000	55	55	\$37,917.69	\$37,917.69
Maintenance and inspection motor starter, up to 600 V	0.5	1.00 Ea.	\$53.98	\$67.63	110.0000	110	110	\$7,439.31	\$7,439.31
Debris removal and visual inspection of built-up roofing	0.5	6.00 M.S.F.	\$225.96	\$275.60	110.0000	110	110	\$30,316.10	\$30,316.10
Replace smoke detector	15	16.00 Ea.	\$4,547.80	\$5,431.39	3.6667	3	3	\$16,294.17	\$16,294.17
Check operation smoke detector	1	16.00 Ea.	\$259.11	\$324.62	55.0000	55	55	\$17,854.34	\$17,854.34
Replace lamp emergency lighting fixture	2	10.00 Ea.	\$546.89	\$658.76	27.5000	27	27	\$17,786.43	\$17,786.43
Repair boiler, gas, 250 MBH	7	1.00 Ea.	\$2,031.05	\$2,390.45	7.8571	7	7	\$16,733.15	\$16,733.15
Replace fountain drinking fountain	10	2.00 Ea.	\$2,562.31	\$3,029.12	5.5000	5	5	\$15,145.59	\$15,145.59
Repair 3'-9" x 5'-5" steel frame window - 1st floor.	20	16.00 Ea.	\$4,772.86	\$5,606.69	2.7500	2	2	\$11,213.38	\$11,213.38
Clean out strainer and P trap lavatory, vitreous china	2	12.00 Ea.	\$418.43	\$523.29	27.5000	27	27	\$14,128.96	\$14,128.96
Replace circulator pump, 1/12 - 3/4 H.P.	15	1.00 Ea.	\$3,822.30	\$4,402.23	3.6667	3	3	\$13,206.68	\$13,206.68
Maintenance and repair motor starter, up to 600 V	5	2.00 Ea.	\$559.28	\$675.20	11.0000	11	11	\$7,427.16	\$7,427.16
Replace faucets lavatory, vitreous china	10	6.00 Ea.	\$1,090.36	\$1,312.53	5.5000	5	5	\$6,562.66	\$6,562.66
Repair 12' x 12' steel roll-up door	10	2.00 Ea.	\$1,351.79	\$1,604.43	5.5000	5	5	\$8,022.17	\$8,022.17
Replace wax ring gasket for tankless water closet	5	6.00 Ea.	\$849.12	\$1,060.96	11.0000	11	11	\$11,670.55	\$11,670.55
Replace boiler, gas, 250 MBH	30	1.00 Ea.	\$9,398.04	\$11,210.13	1.8333	1	1	\$11,210.13	\$11,210.13
Replace lavatory, vitreous china	35	12.00 Ea.	\$8,070.89	\$9,698.65	1.5714	1	1	\$9,698.65	\$9,698.65
Replace starter motor starter, up to 600 V	18	4.00 Ea.	\$3,221.24	\$3,832.30	3.0556	3	3	\$11,496.89	\$11,496.89
Replace roof mounted exhaust fan, 8500 CFM exhaust fan	20	1.00 Ea.	\$3,939.83	\$4,573.41	2.7500	2	2	\$9,146.83	\$9,146.83
Repair clay brick wall, 1st floor	25	50.00 S.F.	\$2,148.83	\$2,637.22	2.2000	2	2	\$5,274.45	\$5,274.45
Replace acoustic tile ceiling, fire-rated	20	8.00 C.S.F.	\$4,193.83	\$4,943.09	2.7500	2	2	\$9,886.18	\$9,886.18
Replace 12' x 12' steel roll-up door	35	2.00 Ea.	\$5,407.17	\$6,417.73	1.5714	1	1	\$6,417.73	\$6,417.73
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

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Non-destructive moisture inspection of built-up roofing	5	6.00 M.S.F.	\$701.13	\$855.17	11.0000	11	11	\$9,406.91	\$9,406.91
Repair central station A.H.U., 16,000 CFM	10	1.00 Ea.	\$1,502.82	\$1,746.04	5.5000	5	4	\$8,730.18	\$6,984.14
Repair smoke detector	10	22.00 Ea.	\$1,240.53	\$1,533.71	5.5000	5	4	\$7,668.55	\$6,134.84
Check / minor repairs drinking fountain	1	2.00 Ea.	\$97.76	\$122.27	55.0000	55	55	\$6,724.58	\$6,724.58
Replace tankless water closet	35	6.00 Ea.	\$7,717.33	\$8,930.97	1.5714	1	1	\$8,930.97	\$8,930.97
Unplug line urinal	5	3.00 Ea.	\$435.22	\$544.28	11.0000	11	11	\$5,987.12	\$5,987.12
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 vinyl tile flooring	18	27.10 S.Y.	\$1,338.83	\$1,644.16	3.0556	3	3	\$4,932.47	\$4,932.47
Repair steel, painted, door	14	2.00 Ea.	\$1,250.15	\$1,488.01	3.9286	3	3	\$4,464.03	\$4,464.03
Refinish 12' x 12' steel roll-up door	5	2.00 Ea.	\$406.90	\$498.38	11.0000	11	11	\$5,482.16	\$5,482.16
Repair solid core wood door, interior	11	4.00 Ea.	\$1,173.81	\$1,366.26	5.0000	5	5	\$6,831.28	\$6,831.28
Replace washer in faucet lavatory, vitreous china	2	12.00 Ea.	\$154.62	\$192.62	27.5000	27	27	\$5,200.79	\$5,200.79
General maintenance & repair drain: roof, scupper, area	1	2.00 Ea.	\$73.98	\$92.51	55.0000	55	55	\$5,088.27	\$5,088.27
Replace terminal reheat, 12" x 24" coil	15	1.00 Ea.	\$1,757.46	\$2,016.85	3.6667	3	3	\$6,050.54	\$6,050.54
Replace tankless flush valve	25	6.00 Ea.	\$1,513.29	\$1,776.66	2.2000	2	2	\$3,553.33	\$3,553.33
Replace wall-hung urinal	35	3.00 Ea.	\$2,906.59	\$3,507.32	1.5714	1	1	\$3,507.32	\$3,507.32
Replace sprinkler head	20	15.00 Ea.	\$1,282.84	\$1,577.84	2.7500	2	2	\$3,155.69	\$3,155.69
Refinish 3'-0" x 7'-0" solid core wood door, interior	4	4.00 Ea.	\$173.46	\$213.00	13.7500	13	12	\$2,768.98	\$2,555.98
Correct water pressure drinking fountain	2	2.00 Ea.	\$83.64	\$104.60	27.5000	27	27	\$2,824.33	\$2,824.33
Rebuild flush valve tankless water closet	20	6.00 Ea.	\$1,082.60	\$1,304.74	2.7500	2	2	\$2,609.49	\$2,609.49
Maintenance and inspection safety switch, 3 pole, heavy duty	1	1.00 Ea.	\$40.64	\$50.92	55.0000	55	55	\$2,800.68	\$2,800.68
Replace glass - 1st floor (1% of glass) - steel frame window	1	3.24 S.F.	\$39.07	\$45.92	55.0000	55	55	\$2,525.38	\$2,525.38
Replace glass - 1st floor (1% of glass) - alum. window fixed	1	3.20 S.F.	\$38.58	\$45.35	55.0000	55	55	\$2,494.20	\$2,494.20
Replace eye wash station, emergency eye wash	25	1.00 Ea.	\$1,114.34	\$1,325.00	2.2000	2	2	\$2,649.99	\$2,649.99
Drain and flush water heater, electric, 120 gallon	7	1.00 Ea.	\$294.38	\$368.15	7.8571	7	7	\$2,577.08	\$2,577.08
Repair 8" concrete block wall - (2% of walls) painted	25	0.90 C.S.F.	\$980.69	\$1,177.52	2.2000	2	2	\$2,355.04	\$2,355.04
Replace lamp exit light	5	10.00 Ea.	\$168.47	\$199.63	11.0000	11	11	\$2,195.98	\$2,195.98
Replace 3'-0" x 7'-0" solid core wood door, interior	40	4.00 Ea.	\$1,957.71	\$2,263.24	1.3750	1	1	\$2,263.24	\$2,263.24
Replace shower emergency shower station	25	1.00 Ea.	\$941.97	\$1,129.12	2.2000	2	2	\$2,258.23	\$2,258.23
Inspect sprinkler system	1	1.00 Ea.	\$34.33	\$42.93	55.0000	55	55	\$2,361.08	\$2,361.08
Replace gypsum board ceiling, up to 12' high	40	4.20 C.S.F.	\$1,559.46	\$1,915.01	1.3750	1	1	\$1,915.01	\$1,915.01
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
Refinish 3'-0" x 7'-0" steel painted interior door	4	2.00 Ea.	\$105.17	\$129.57	13.7500	13	13	\$1,684.44	\$1,684.44

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Replace safety switch, heavy duty 30 A	25	1.00 Ea.	\$576.35	\$690.44	2.2000	2	2	\$1,380.88	\$1,380.88
Replace 3'-0" x 7'-0" steel, painted, door	45	2.00 Ea.	\$1,410.13	\$1,639.46	1.2222	1	1	\$1,639.46	\$1,639.46
Replace refrigerant drinking fountain	2	2.00 Ea.	\$65.37	\$76.54	27.5000	27	27	\$2,066.54	\$2,066.54
Replace washer in spud connection lavatory, vitreous china	7	12.00 Ea.	\$197.55	\$240.96	7.8571	7	7	\$1,686.72	\$1,686.72
Replace manual pull station	15	2.00 Ea.	\$406.94	\$489.88	3.6667	3	3	\$1,469.65	\$1,469.65
Repair steel painted interior door	14	2.00 Ea.	\$586.90	\$683.13	3.9286	3	3	\$2,049.38	\$2,049.38
Repair internal leaks drinking fountain	4	2.00 Ea.	\$90.16	\$112.76	13.7500	13	13	\$1,465.82	\$1,465.82
Replace drain: roof, scupper, area	40	2.00 Ea.	\$1,573.86	\$1,824.72	1.3750	1	1	\$1,824.72	\$1,824.72
Unstop sink, iron enamel	2	1.00 Ea.	\$41.82	\$52.30	27.5000	27	27	\$1,412.16	\$1,412.16
Rebuild flush valve for a urinal	20	3.00 Ea.	\$541.30	\$652.37	2.7500	2	2	\$1,304.74	\$1,304.74
Repair circulator pump, 1/12 - 3/4 H.P.	5	1.00 Ea.	\$98.13	\$115.73	11.0000	11	8	\$1,273.04	\$925.85
Maintenance and repair exit light	20	10.00 Ea.	\$372.02	\$460.03	2.7500	2	2	\$920.06	\$920.06
Refinish 3'-0" x 7'-0" steel, painted, door	4	2.00 Ea.	\$82.80	\$101.73	13.7500	13	13	\$1,322.52	\$1,322.52
Repair drain leak drinking fountain	4	2.00 Ea.	\$67.83	\$81.07	13.7500	13	11	\$1,053.90	\$891.76
Check and repair manual pull station	10	2.00 Ea.	\$175.39	\$215.66	5.5000	5	4	\$1,078.30	\$862.64
Inspect and clean shower head emergency shower station	3	1.00 Ea.	\$49.39	\$61.77	18.3333	18	18	\$1,111.88	\$1,111.88
Inspect and clean spray heads, emergency eye wash	3	1.00 Ea.	\$49.39	\$61.77	18.3333	18	18	\$1,111.88	\$1,111.88
Replace flush valve diaphragm tankless water closet	10	6.00 Ea.	\$157.32	\$195.22	5.5000	5	5	\$976.08	\$976.08
Replace faucets sink, iron enamel	10	1.00 Ea.	\$181.73	\$218.76	5.5000	5	5	\$1,093.78	\$1,093.78
Maintenance and inspection lighting panel, indoor	3	1.00 Ea.	\$40.64	\$50.92	18.3333	18	18	\$916.59	\$916.59
Replace sink, P.E.C.I. sink, iron enamel kitchen	35	1.00 Ea.	\$636.70	\$757.51	1.5714	1	1	\$757.51	\$757.51
Replace flush valve diaphragm for a urinal	7	3.00 Ea.	\$78.66	\$97.61	7.8571	7	7	\$683.25	\$683.25
Repair terminal reheat, 12" x 24" coil	10	1.00 Ea.	\$89.07	\$111.40	5.5000	5	4	\$556.99	\$445.59
BUR flashing repairs, 2 S.F. per sq. repaired	1	2.50 S.F.	\$8.75	\$10.62	55.0000	55	55	\$584.22	\$584.22
Replace faucet washer sink, iron enamel	2	1.00 Ea.	\$12.78	\$15.92	27.5000	27	27	\$429.73	\$429.73
Acoustic tile repairs - (2% of ceilings)	9	0.10 C.S.F.	\$90.77	\$105.49	6.1111	6	6	\$632.95	\$632.95
Maintenance and repair safety switch, 3 pole safety switch, heavy duty	8	1.00 Ea.	\$40.64	\$50.92	6.8750	6	6	\$305.53	\$305.53
Clean trap sink, iron enamel	3	1.00 Ea.	\$8.57	\$10.72	18.3333	18	18	\$192.93	\$192.93
Unclog floor drain, PVC	20	1.00 Ea.	\$47.80	\$59.77	2.7500	2	2	\$119.55	\$119.55
Repair 5/8" drywall - (2% of walls)	20	24.40 S.F.	\$40.88	\$49.74	2.7500	2	2	\$99.48	\$99.48
Repair gypsum board ceiling - (2% of ceilings)	20	0.10 C.S.F.	\$36.22	\$44.46	2.7500	2	2	\$88.92	\$88.92
Check operation water heater, electric, 120 gallon	3	1.00 Ea.	\$2.59	\$3.23	18.3333	18	18	\$58.20	\$58.20

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost			
Replace 3'-0" x 7'-0" steel painted interior door	60	2.00 Ea.	\$2,436.07	\$2,824.17	0.9167	0	0	\$0.00	\$0.00			
			\$458,734.49	\$535,722.12					MR Subtotal	\$1,593,027.94		
											MR Per Year	\$28,920.68
											PM Total	\$5,032.06
											Subtotal	\$33,952.74
											Total Per Unit	\$5.72

FAC 2261 AMMUNITION PRODUCTION PLANT

Release 2021 Qtr 3

UM SF

Zip Code Prefix 222

Design Life 55

Type PM

Average Size 5933.0

SUC \$5.72

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Controls, central system, electro/pneumatic, annually	1.00	1.92	\$70.77	\$115.41	\$0.00	\$186.18	\$227.88	\$273.12
Door, emergencyegress, swinging, annualized	2.00	0.52	\$29.18	\$21.50	\$0.00	\$50.68	\$60.05	\$70.88
Fire doors, swinging, annualized	6.00	2.35	\$85.93	\$87.34	\$0.00	\$173.27	\$208.07	\$247.16
Urinals, annualized	3.00	0.68	\$18.96	\$34.36	\$0.00	\$53.32	\$65.52	\$78.67
Toilet (vacuum breaker type), annualized	6.00	1.06	\$50.65	\$53.39	\$0.00	\$104.04	\$125.12	\$148.74
Lavatories, annualized	12.00	4.18	\$71.58	\$248.44	\$0.00	\$320.02	\$401.71	\$486.98
Drink fountain, annualized	2.00	1.24	\$41.45	\$62.55	\$0.00	\$104.00	\$126.91	\$151.90
Boiler, hot water, oil, gas, or comb. fired, 120 - 500 MBH, annualized	1.00	15.88	\$77.34	\$947.08	\$0.00	\$1,024.42	\$1,316.27	\$1,612.00
Air handling unit, 3 thru 24 tons, annualized	1.00	2.06	\$224.44	\$103.96	\$0.00	\$328.40	\$382.03	\$446.89
Fan, axial, over 10,000 CFM, annualized	1.00	1.39	\$35.89	\$69.60	\$0.00	\$105.49	\$129.96	\$156.22
Package unit, air cooled, 3 thru 24 ton, annualized	2.00	4.79	\$353.85	\$288.97	\$0.00	\$642.82	\$764.89	\$904.66
Panelboard, 225 A and above, annualized	1.00	0.44	\$23.20	\$29.01	\$0.00	\$52.21	\$63.23	\$75.41
Crane, electric bridge, up to 5 ton, annualized	1.00	2.92	\$171.90	\$102.86	\$0.00	\$274.76	\$322.80	\$379.44
						\$3,419.60	\$4,194.45	\$5,032.06

FAC 2261 AMMUNITION PRODUCTION PLANT

Modeled Component List CostWorks Release 2021 Qtr 3

D30 HVAC

Single Zone Air Conditioner, 25 ton	1.0 Ea.
Central Station Air Conditioning Air Handling Unit, 16,000 CFM	2.0 Ea.
Circulator Pump, 1/12 - 3/4 H.P.	1.0 Ea.
Boiler, Gas, 250 MBH	1.0 Ea.
Exhaust Fan, roof mounted exhaust fan, 8500 CFM exhaust	1.0 Ea.
Terminal Reheat Coil, 12" x 24"	1.0 Ea.

B30 Roofing

Built-Up Roofing	60.0 Sq.
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D50 Electrical

Smoke Detector	16.0 Ea.
Motor Starter, Up To 600 V	4.0 Ea.
Fire Alarm Control Panel	1.0 Ea.
Safety Switch, Heavy Duty	1.0 Ea.
Manual Pull Station	2.0 Ea.
Load Center, 100 A, maintenance & inspection	1.0 Ea.

D20 Plumbing

Drinking Fountain	2.0 Ea.
Lavatory, Vitreous China	12.0 Ea.
Tankless Water Closet	6.0 Ea.
Urinal	3.0 Ea.
Emergency Eye Wash	1.0 Ea.
Emergency Shower Station	1.0 Ea.
Drain: Roof, Scupper, Area	2.0 Ea.
Sink, Iron Enamel	1.0 Ea.

C30 Interior Finishes

Acoustic Tile, fire-rated	8.0 C.S.F.
Vinyl	27.1 S.Y.
Gypsum Wall Board	4.2 C.S.F.

B20 Exterior Enclosure

Steel Single, Roll-Up	2.0 Ea.
Steel, Painted	2.0 Ea.

D40 Fire Protection

Sprinkler System, Fire Suppression, sprinkler head	15.0 Ea.
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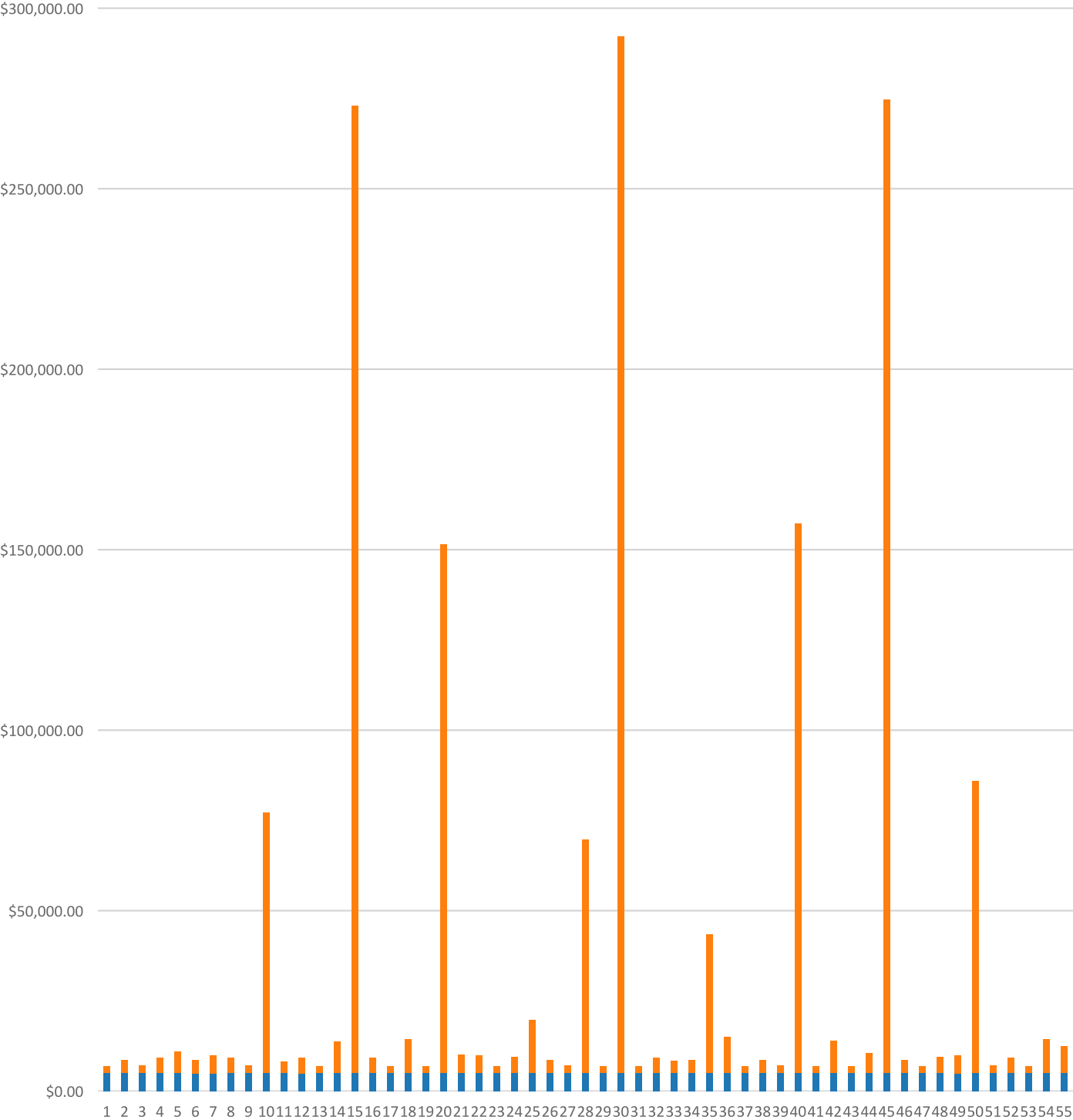
C10 Interior Construction

Solid Core Interior Doors	4.0 Ea.
Steel Painted Interior Doors	2.0 Ea.
Fire Doors, Swinging, annualized	6.0 Each

E10 Equipment

Crane, Electric, up to 5 ton, annualized	1.0 Each
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FAC 2261 AMMUNITION PRODUCTION PLANT
Sustainment by Year
CostWorks Release 2021 Qtr 3



PM Cost
MR Cost