

FY16 Replacement Unit Cost Supporting Documentation.

Note: Replacement Unit Costs are not size adjusted. Reference size from source pricing guide is republished for end user calculation, if a reference size is available.

RUCs are calculated or adjusted to 1 October 2015.

RUCs sourced from USACE PAX Newsletters are inflated per compiled Appendix C, USACE PAX 3.2.2 at end of this table.

FAC 1111		Fixed-Wing Runway, Surfaced (Heavy)		Design Size 333333		UM = SY		Source PACES 1.1			
Assembly	Description			Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
G1030050510	Dry Roll Gravel, Steel Roller			1,227,603.21	SY	\$0.00	\$0.60	\$0.27	\$1,061,860.64	\$5,051,435.00	SY
G2010010101	Cement Stabilized Base			166,847.19	CY	\$40.99	\$6.37	\$4.13	\$8,590,701.82	\$13,476,285.00	CY
G2010010102	Gravel, Delivered & Dumped			340,560.89	CY	\$23.50	\$0.00	\$0.00	\$8,004,802.63	\$12,144,519.00	CY
G2010030310	Prime Coat			333,334.00	SY	\$0.64	\$0.02	\$0.01	\$225,627.98	\$344,989.00	SY
G2060010102	Jointed Concrete, Place & Finish, 330.20mm - 685.80mm (13" - 27")			333,334.00	SY	\$6.70	\$3.76	\$0.15	\$3,537,899.74	\$5,914,869.00	SY
G2060020501	Plastic Grooving (Transverse)			333,334.00	SY	\$0.00	\$2.90	\$4.21	\$2,371,183.69	\$4,020,820.00	SY
G2060020801	Field Mix Concrete			166,665.06	CY	\$96.96	\$0.00	\$0.00	\$16,159,368.03	\$24,455,689.00	CY
G2060020803	Haul Concrete To Paver			166,665.06	CY	\$0.00	\$0.45	\$1.01	\$242,744.14	\$400,597.00	CY
G2060030701	Construction Joint, 254.00mm (10")			143,333.62	LF	\$1.09	\$2.47	\$0.00	\$510,186.90	\$930,458.00	LF
G2060030702	Contraction Joint, 254.00mm (10")			140,000.28	LF	\$1.09	\$2.47	\$0.00	\$498,322.09	\$908,819.00	LF
G2060030703	Expansion Joint, 254.00mm (10")			33,333.40	LF	\$28.46	\$2.75	\$0.00	\$1,040,176.20	\$1,615,162.00	LF
G2060052740	Reflective White Paint			89,310.00	LF	\$0.82	\$0.17	\$0.14	\$101,011.15	\$159,613.00	LF
G2060052741	Reflective Yellow Paint			60,000.00	LF	\$0.82	\$0.17	\$0.14	\$67,861.03	\$107,231.00	LF
G2060052742	Non-Reflective Yellow Paint			100,800.00	LF	\$0.35	\$0.24	\$0.09	\$68,507.77	\$114,583.00	LF
G2060052743	Non-Reflective Black Paint			34,026.00	LF	\$0.35	\$0.24	\$0.09	\$23,125.45	\$38,678.00	LF
	Midpoint of Construction: 1 October 2015						Heavy Total		\$42,503,379.26	\$69,683,747.00	
							Heavy RUC			\$ 209.05	
FAC 1111		Fixed-Wing Runway, Surfaced (Medium)		Design Size 222222		UM = SY		Source PACES 1.1			
Assembly	Description			Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
G1030050510	Dry Roll Gravel, Steel Roller			927,673.78	SY	\$0.00	\$0.60	\$0.27	\$802,425.63	\$1,461,929.00	SY
G2010010101	Cement Stabilized Base			111,231.12	CY	\$40.99	\$6.37	\$4.13	\$5,727,117.04	\$8,984,162.00	CY
G2010010102	Gravel, Delivered & Dumped			257,354.66	CY	\$23.50	\$0.00	\$0.00	\$6,049,060.01	\$11,112,402.00	CY
G2010030310	Prime Coat			222,222.00	SY	\$0.64	\$0.02	\$0.01	\$150,418.20	\$229,992.00	SY
G2060010101	Jointed Concrete, Place & Finish, 101.60mm - 304.80mm (4" - 12")			177,778.00	SY	\$3.06	\$2.89	\$0.16	\$1,086,616.33	\$1,873,932.00	SY
G2060010102	Jointed Concrete, Place & Finish, 330.20mm - 685.80mm (13" - 27")			44,444.00	SY	\$6.70	\$3.76	\$0.15	\$471,714.31	\$788,640.00	SY
G2060020501	Plastic Grooving (Transverse)			222,222.00	SY	\$0.00	\$2.90	\$4.21	\$1,580,784.39	\$2,680,538.00	SY
G2060020801	Field Mix Concrete			74,998.77	CY	\$96.96	\$0.00	\$0.00	\$7,271,666.46	\$11,004,986.00	CY
G2060020803	Haul Concrete To Paver			74,998.77	CY	\$0.00	\$0.45	\$1.01	\$109,234.12	\$180,267.00	CY
G2060030701	Construction Joint, 254.00mm (10")			95,555.46	LF	\$1.09	\$2.47	\$0.00	\$340,123.58	\$620,303.00	LF
G2060030702	Contraction Joint, 254.00mm (10")			104,444.34	LF	\$1.09	\$2.47	\$0.00	\$371,762.98	\$678,006.00	LF
G2060030703	Expansion Joint, 254.00mm (10")			22,222.20	LF	\$28.46	\$2.75	\$0.00	\$693,448.72	\$1,076,772.00	LF
G2060052740	Reflective White Paint			89,310.00	LF	\$0.82	\$0.17	\$0.14	\$101,011.15	\$159,613.00	LF
G2060052741	Reflective Yellow Paint			60,000.00	LF	\$0.82	\$0.17	\$0.14	\$67,861.03	\$107,231.00	LF
G2060052742	Non-Reflective Yellow Paint			100,800.00	LF	\$0.35	\$0.24	\$0.09	\$68,507.77	\$114,583.00	LF
G2060052743	Non-Reflective Black Paint			34,026.00	LF	\$0.35	\$0.24	\$0.09	\$23,125.45	\$38,678.00	LF
	Midpoint of Construction: 1 October 2015						Medium Total		\$24,914,877.17	\$41,112,034.00	
							Medium RUC			\$ 185.00	
FAC 1111		Fixed-Wing Runway, Surfaced (Light)		Design Size 166667		UM = SY		Source PACES 1.1			
Assembly	Description			Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
G1030050510	Dry Roll Gravel, Steel Roller			360,957.26	SY	\$0.00	\$0.60	\$0.27	\$312,223.29	\$568,836.00	SY
G2010010101	Cement Stabilized Base			83,423.09	CY	\$40.99	\$6.37	\$4.13	\$4,295,324.91	\$6,738,102.00	CY

G2010010102	Gravel, Delivered & Dumped	100,136.53	CY	\$23.50	\$0.00	\$0.00	\$2,353,685.30	\$4,790,502.00	CY
G2010030310	Prime Coat	166,666.00	SY	\$0.64	\$0.02	\$0.01	\$112,813.31	\$172,493.00	SY
G2060010101	Jointed Concrete, Place & Finish, 101.60mm - 304.80mm (4" - 12")	166,666.00	SY	\$3.06	\$2.89	\$0.16	\$1,018,697.46	\$1,756,802.00	SY
G2060020501	Plastic Grooving (Transverse)	166,666.00	SY	\$0.00	\$2.90	\$4.21	\$1,185,584.73	\$2,010,398.00	SY
G2060020801	Field Mix Concrete	50,461.79	CY	\$96.96	\$0.00	\$0.00	\$4,892,630.98	\$7,404,539.00	CY
G2060020803	Haul Concrete To Paver	50,461.79	CY	\$0.00	\$0.45	\$1.01	\$73,496.53	\$121,290.00	CY
G2060030701	Construction Joint, 254.00mm (10")	71,666.38	LF	\$1.09	\$2.47	\$0.00	\$255,091.92	\$465,226.00	LF
G2060030702	Contraction Joint, 254.00mm (10")	83,333.02	LF	\$1.09	\$2.47	\$0.00	\$296,618.58	\$540,961.00	LF
G2060030703	Expansion Joint, 254.00mm (10")	16,666.60	LF	\$28.46	\$2.75	\$0.00	\$520,084.98	\$807,576.00	LF
G2060052740	Reflective White Paint	89,310.00	LF	\$0.82	\$0.17	\$0.14	\$101,011.15	\$159,613.00	LF
G2060052741	Reflective Yellow Paint	60,000.00	LF	\$0.82	\$0.17	\$0.14	\$67,861.03	\$107,231.00	LF
G2060052742	Non-Reflective Yellow Paint	100,800.00	LF	\$0.35	\$0.24	\$0.09	\$68,507.77	\$114,583.00	LF
G2060052743	Non-Reflective Black Paint	34,026.00	LF	\$0.35	\$0.24	\$0.09	\$23,125.45	\$38,678.00	LF
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015				Light Total		\$15,576,757.39	\$25,796,830.00	
			Fixed Wing Runway, Light	2015 RPAD % of Inventory			0.447	Light RUC	\$ 154.78
			Fixed Wing Runway, Medium	2015 RPAD % of Inventory			0.397	Medium RUC	\$ 185.00
			Fixed Wing Runway, Heavy	2015 RPAD % of Inventory			0.156	Heavy RUC	\$ 209.05
								Weighted RUC	\$ 175.24 SY

FAC 1113		Runway Overrun Area, Surfaced	UM = SY		Design Size 33,333		Source PACES 1.1			
Assembly	Description	Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP		
G1030050510	Dry Roll Gravel, Steel Roller	33,333.00	SY	\$0.00	\$0.60	\$0.27	\$28,832.61	\$53,098.00	SY	
G2010010101	Cement Stabilized Base	11,110.00	CY	\$40.99	\$6.37	\$4.13	\$572,036.59	\$907,061.00	CY	
G2010010102	Gravel, Delivered & Dumped	11,609.88	CY	\$23.50	\$0.00	\$0.00	\$272,887.47	\$422,714.00	SY	
G2010030310	Prime Coat	33,333.00	SY	\$0.64	\$0.02	\$0.01	\$22,562.53	\$34,872.00	SY	
G2010030312	Asphalt Wearing Course,1 Pass (Line Item Incl 5% Waste)	7,286.00	TON	\$69.93	\$4.47	\$1.96	\$556,304.53	\$865,717.00	SY	
G2060010101	Jointed Concrete, Place & Finish, 101.60mm - 304.80mm (4" - 12")	12,133.00	SY	\$3.06	\$2.89	\$0.16	\$74,159.43	\$129,275.00	CY	
G2060020801	Field Mix Concrete	2,864.68	CY	\$96.96	\$0.00	\$0.00	\$277,751.19	\$424,896.00	CY	
G2060020803	Haul Concrete To Paver	2,864.68	CY	\$0.00	\$0.45	\$1.01	\$4,172.35	\$6,960.00	LF	
G2060030703	Expansion Joint, 254.00mm (10")	2,865.00	LF	\$28.46	\$2.75	\$0.00	\$89,402.97	\$140,324.00	LF	
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015							\$2,984,917.00	Tot	
	2015 RPAD Inventory: 63.6% Asphalt, 36.4% Concrete						RUC	\$ 89.55	SY	

FAC 1114		Runway, Unsurfaced	UM = SY		RPAD Ave Size 48,807		Source PACES 1.1			
Assembly	Description	Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP		
G1030010103	Rough Grading, 0.0014 T (14G), 1 Pass	155,572.67	SY	\$0.00	\$0.37	\$0.35	\$112,483.26	\$197,799.00	SY	
G1030010108	Fine Grading, 0.013 T (130G), 2 Passes	109,816.00	SY	\$0.00	\$0.22	\$0.19	\$44,986.78	\$79,589.00	SY	
G1030020202	Ditch Excavation, Normal Soil, Haul off Spoil 1.61 km (1 Mile)	8,897.13	CY	\$0.00	\$3.42	\$4.22	\$68,002.72	\$117,409.00	CY	
G1030020203	Roadway Soil Excavation, W/Scraper, Load & Haul Spoil	40,672.59	CY	\$0.00	\$2.26	\$2.75	\$204,102.19	\$352,714.00	CY	
G1030050501	Compact Subgrade, 2 Lifts	25,928.78	CY	\$0.00	\$1.49	\$0.14	\$42,310.69	\$81,965.00	CY	
G2010010102	Gravel, Delivered & Dumped	16,269.00	CY	\$23.50	\$0.00	\$0.00	\$382,398.97	\$585,656.00	CY	
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015							\$1,415,132.00	SY	
							RUC	\$ 28.99	SY	

FAC 1121		Taxiway, Surfaced	UM = SY		Design Size 23,533		Source PACES 1.1			
Assembly	Description		Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
G1030050510	Dry Roll Gravel, Steel Roller		55,400.87	SY	\$0.00	\$0.60	\$0.27	\$47,921.02	\$88,407.00	SY
G2010010102	Gravel, Delivered & Dumped		15,369.27	CY	\$23.50	\$0.00	\$0.00	\$361,251.03	\$543,607.00	CY
G2010030310	Prime Coat		23,534.00	SY	\$0.64	\$0.02	\$0.01	\$15,929.75	\$24,664.00	SY
G2010030312	Asphalt Wearing Course, 1 Pass (Line Item Incl 5% Waste)		1,853.30	TON	\$69.93	\$4.47	\$1.96	\$141,504.14	\$220,596.00	SY
G2060010102	Jointed Concrete, Place & Finish, 330.20mm - 685.80mm (13" - 27")		11,767.00	SY	\$6.70	\$3.76	\$0.15	\$124,891.15	\$221,431.00	SY
G2060020501	Plastic Grooving (Transverse)		11,767.00	SY	\$0.00	\$2.90	\$4.21	\$83,704.99	\$143,727.00	CY
G2060020801	Field Mix Concrete		4,575.95	CY	\$96.96	\$0.00	\$0.00	\$443,671.04	\$679,913.00	CY
G2060020803	Haul Concrete To Paver		4,575.95	CY	\$0.00	\$0.45	\$1.01	\$6,664.77	\$11,137.00	LF
G2060030701	Construction Joint, 254.00mm (10")		5,059.81	LF	\$1.09	\$2.47	\$0.00	\$18,010.07	\$33,260.00	LF
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015								\$1,966,742.00	SY
								RUC	\$ 83.57	SY

FAC 1131		Aircraft Apron, Surfaced	UM = SY		Design Size 30,517		Source PACES 1.1			
Assembly	Description		Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
G1030050510	Dry Roll Gravel, Steel Roller		89,437.79	SY	0.00	\$0.60	\$0.27	\$77,362.51	\$142,721.00	SY
G2010010102	Gravel, Delivered & Dumped		24,811.77	CY	23.50	\$0.00	\$0.00	\$583,194.75	\$893,729.00	CY
G2010030310	Prime Coat		33,523.00	SY	0.64	\$0.02	\$0.01	\$22,691.13	\$35,132.00	SY
G2060010101	Jointed Concrete, Place & Finish, 101.60mm - 304.80mm (4" - 12")		33,523.00	SY	3.06	\$2.89	\$0.16	\$204,899.59	\$357,813.00	SY
G2060020501	Plastic Grooving (Transverse)		33,523.00	SY	0.00	\$2.90	\$4.21	\$238,467.10	\$409,463.00	SY
G2060020801	Field Mix Concrete		10,708.59	CY	96.96	\$0.00	\$0.00	\$1,038,274.29	\$1,591,126.00	CY
G2060020803	Haul Concrete To Paver		10,708.59	CY	0.00	\$0.45	\$1.01	\$15,596.83	\$26,063.00	CY
									\$3,456,047.00	SY
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015							RUC	\$ 113.25	SY

FAC 1162		Missile Launching Pad, Surfaced	UM = SY		RPAD Ave Size 1,483		Source PACES 1.1			
Assembly	Description		Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
G1030050510	Dry Roll Gravel, Steel Roller		3,919.22	SY	\$0.00	\$0.60	\$0.27	\$3,390.07	\$6,205.00	SY
G2010010102	Gravel, Delivered & Dumped		1,087.27	CY	\$23.50	\$0.00	\$0.00	\$25,556.02	\$38,855.00	CY
G2010030310	Prime Coat		1,469.00	SY	\$0.64	\$0.02	\$0.01	\$994.34	\$1,527.00	SY
G2060010102	Jointed Concrete, Place & Finish, 330.20mm - 685.80mm (13" - 27")		1,469.00	SY	\$6.70	\$3.76	\$0.15	\$15,591.49	\$26,187.00	SY
G2060020501	Plastic Grooving (Transverse)		1,469.00	SY	\$0.00	\$2.90	\$4.21	\$10,449.79	\$17,802.00	SY
G2060020801	Field Mix Concrete		571.26	CY	\$96.96	\$0.00	\$0.00	\$55,387.74	\$84,211.00	CY
G2060020803	Haul Concrete To Paver		571.26	CY	\$0.00	\$0.45	\$1.01	\$832.03	\$1,379.00	CY
									\$176,166.00	Tot
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015							RUC	\$ 118.79	SY

FAC 1311		Communications Building	UM = SF		RPAD Ave Size 4,387		USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Reference Size	Unit Cost			Inflation Adjustment by MCP Index		Unit Cost	
13120	Communications Center		14,000	\$ 376.00			0.9614		\$361.50	SF
								RUC	\$361.50	SF

FAC	1312	Satellite Communications Building	UM =	SF	RPAD Ave Size	3,422	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Reference Size	Unit Cost			Inflation Adjustment by MCP Index	Unit Cost	
13181	Satellite Terminal Communications Facility		26,000	\$ 369.00			0.9614	\$354.77	SF
							RUC	\$354.77	SF

FAC	1321	Communications Facility	UM =	EA			Marshall and Swift Valuation; October 2015		
SECTION	Description		Unit Cost	UoM	Area Adjustment		Current Cost Multiplier	Adjusted Cost	
67/6	Self Supporting Tower, 100 ft; lo cost		\$ 45,300.00	EA	1.08		1.03	\$50,391.72	EA
67/6	Self Supporting Tower, 100 ft; hi cost		\$ 66,250.00	EA	1.08		1.03	\$73,696.50	EA
					Average		RUC	\$62,044.11	EA

FAC	1331	Aircraft Navigation Building	UM =	SF			Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM			October 2015 Unit Cost		
	Satellite Communications Center		23,000	SF			\$312.00		SF
							RUC	\$312.00	SF

FAC	1341	Aircraft Navigation Facility	UM =	EA			Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curmt Cost Mult	Area Adjustnt	Cost
14/22	Armory, D, Excellent (similar in construction to utility bldg)		\$ 145.31	SF	100 SF to EA		1.04	1.05	\$ 15,867.85
	Multiple Category Codes; Assume 10 x 10 ft								
							RUC		\$ 15,867.85

FAC	1351	Communications Lines	UM =	MI			Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curmt Cost Mult	Area Adjustnt	Cost
66/1	Telephone lateral, underground		\$ 10.93	FT	5280 FT to MI		1.04	1.08	\$ 64,820.32
66/1	Trench only, lin. ft.		\$ 7.63	FT	5280 FT to MI		1.04	1.08	\$ 45,249.68
66/1	Conduit only, lin. ft.		\$ 6.74	FT	5280 FT to MI		1.04	1.08	\$ 39,971.54
					Average Trench and Conduit				\$ 42,610.61
								SUM	\$ 107,430.94
							RUC		\$ 107,430.94

FAC	1361	Airfield Pavement Lighting	UM =	LF	Design Size	10,000	PACES 1.1		
Assembly	Description		Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP
G2060042613	Runway Edge Lights		20.00	KLF	\$55,969.71	\$13,599.47	\$1,024.87	\$1,411,881.00	\$2,286,727.78
G2060042614	Runway Centerline Lights		10.00	KLF	\$70,677.53	\$12,334.23	\$878.46	\$838,902.21	\$1,341,399.44
									\$3,628,127.22
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015							RUC	\$ 362.81

FAC	1362	Airfield Pavement Lighting	UM =	EA	Design Size	10,000	Source	PACES 1.1		
Assembly	Description		Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
G2060042612	Touchdown Zone lighting		2	EA	\$289,402.38	\$35,286.17	\$2,196.16	\$653,769.43	\$1,033,695.75	EA
G2060042620	Taxiway Edge Lights		560	EA	\$79,555.18	\$10,005.66	\$805.26	\$2,530,250.77	\$4,003,838.84	EA
G2060042621	Taxiway Centerline Lights		280	EA	\$60,834.91	\$10,766.89	\$658.85	\$1,011,649.06	\$1,618,339.49	EA
G2060042630	Aircraft Parking Area Perimeter Lighting, Elevated, Quartz, 200W		92	EA	\$34,350.73	\$7,524.65	\$439.23	\$389,294.37	\$627,832.51	EA
	Total Lights		934	EA					\$7,283,706.59	EA
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015							RUC	\$ 7,798.40	EA

FAC	1381	Ship Navigation Facility	UM =	EA			Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
67/6	Self Supporting Tower, 50 ft; Average cost		\$ 18,350.00	EA			1.03	1.08	\$ 20,412.54	EA
								RUC	\$ 20,412.54	EA

FAC	1404	Satellite Communications Building	UM =	SF	RPAD Ave Size	3,422	Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Reference Size	Unit Cost			Inflation Adjustment by MCP Index	Adjusted Cost		
14162	Emergency Operations Center / SCIF		3,250	\$ 424.00			0.9614	\$407.65	SF	
								RUC	\$407.65	SF

FAC		1411	Airfield Fire And Rescue Station		UM = SF				Source			Guidance Unit Cost, May 2016	
	Description		Reference Size		UoM				October 2015 Unit Cost				
	Airfield Fire And Rescue Station		24,000		SF				\$312.00			SF	
								RUC	\$312.00		SF		

FAC		1412	Aviation Operations Building		UM = SF				Source		Guidance Unit Cost, May 2016	
	Description		Reference Size	UoM				October 2015 Unit Cost				
	Aircraft Ops Facility without tower		32,000	SF				\$230.00		SF		
								RUC	\$230.00	SF		

FAC	1413	Air Control Tower	UM =	SF			Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Reference Size	Unit Cost			Inflation Adjustment by MCP Index	Adjusted Cost		
13310	Air Traffic/ Flight Control Tower		7,600	\$ 756.00			0.9614	\$726.84	SF	
								RUC	\$726.84	SF

FAC 1421		Helium Production/Storage Building	UM = SF				USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Reference Size	Unit Cost			Inflation Adjustment by MCP Index		Adjusted Cost	
44220	Gen Purpose (GP) Warehouse, Installation, Low-Bay		37,000	\$ 141.00			0.9614		\$135.56	SF
21470	Hazardous Waste Storage Bldg - TEMF		650	\$ 181.00			0.9614		\$174.02	SF
	Average Size		18,825				Weighted Average		\$136.23	SF
								RUC	\$136.23	SF

FAC	1422	Helium Storage Facility	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
61/8	Welded Steel Pressure Tank, 9,000 gallons		\$ 76,000.00	EA			1.02	1.08	\$ 83,721.60	EA
61/8	Welded Steel Pressure Tank, 15,000 gallons		\$ 114,000.00	EA			1.02	1.08	\$ 125,582.40	EA
								Ave	\$ 104,652.00	EA
								RUC	\$ 104,652.00	EA

FAC	1431	Ship Operations Building	UM =	SF	RPAD Ave Size	10337	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/40	Miscellaneous Building (Telephone) A & B		\$ 190.00	SF			1.06	1.10	\$ 221.54	SF
14/36	Elevator, 4 story, Average		\$ 83,000.00	EA	10337 SF Conversn		1.06	1.10	\$ 9.36	SF
14/37	Sprinkler, 10000 SF, dry, excellent		\$ 5.60	SF			1.06	1.10	\$ 6.53	SF
								SUM	\$ 237.43	SF
								RUC	\$ 237.43	SF

FAC	1441	Photo/TV Production Building	UM =	SF	RPAD Ave Size	5317	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/19	Broadcast Facility, C, Good		\$ 170.09	SF			1.05	1.08	\$ 192.88	SF
14/37	Sprinkler, 5000 SF, Wet, Excl		\$ 4.81	SF			1.05	1.08	\$ 5.45	SF
								SUM	\$ 198.34	SF
								RUC	\$ 198.34	SF

FAC	1442	Operations Support Lab	UM =	SF	RPAD Ave Size	9295	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/17	Laboratory Building, C, Good		\$ 218.65	SF			1.05	1.08	\$ 247.95	SF
14/37	Sprinkler, 5000 SF, Dry, Excl		\$ 6.37	SF			1.05	1.08	\$ 7.22	SF
								SUM	\$ 255.17	SF
								RUC	\$ 255.17	SF

FAC	1443	Operations Supply Building	UM =	SF	RPAD Ave Size	8253	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/23	Transit Warehouse, C good		\$ 91.34	SF			1.05	1.08	\$ 103.58	SF
14/37	Sprinkler, 10000 SF, dry, excellent		\$ 5.60	SF			1.05	1.08	\$ 6.35	SF
								SUM	\$ 109.93	SF
								RUC	\$ 109.93	SF

FAC	1444	Miscellaneous Operations Support Building	UM =	SF	RPAD Ave Size	4,645	Source	USACE PAX Newsletter 3.2.2 Dated 2 May 2013		
CATCODE	Description		Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost		
17122	Operations/Storage Bld - Large		\$ 235.00	1,800			1.0000	\$235.00	SF	
								RUC	\$235.00	SF

FAC	1445	Working Animal Support Building	UM =	SF	RPAD Ave Size	3,171	Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Reference Size	Unit Cost			Inflation Adjustment by MCP Index	Adjusted Cost		
14126	Kennel Facilities		8,450	\$ 309.30			0.9614	\$297.37	SF	
								RUC	\$297.37	SF

FAC		1446		Security Force Building		UM =		SF		RPAD Ave Size		12023		Source Marshall and Swift Valuation; October 2015									
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost							
15/33		Police Station, C. good				\$		174.04		SF				1.07		1.08		\$		201.12		SF	
15/37		Sprinkler, 15000 sf, wet, good				\$		3.91		SF				1.07		1.08		\$		4.52		SF	
																SUM		\$		205.64		SF	
																RUC		\$		205.64		SF	

FAC 1458		Mechanical Security Barricade	UM = EA				Source USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description	Reference Size	Unit Cost			Inflation Adjustment by MCP Index		Adjusted Cost	
88040	Concrete Planter, 36"	NA	\$870.00			0.9614		\$836.45	EA
88040	Concrete Planter, 96"	NA	\$1,150.00			0.9614		\$1,105.65	EA
88040	Concrete Planter, 84" dia	NA	\$1,735.00			0.9614		\$1,668.08	EA
88040	Concrete Planter, decorative geometric design	NA	\$1,800.00			0.9614		\$1,730.58	EA
88040	GFRC, 10' section, decorative impaler	NA	\$3,240.00			0.9614		\$3,115.04	EA
88040	GFRC, 12' section, decorative impaler	NA	\$3,775.00			0.9614		\$3,629.40	EA
88040	GFRC Jersey Barrier	NA	\$1,630.00			0.9614		\$1,567.13	EA
88040	painted pipe bollard, 8" diameter	NA	\$1,225.00			0.9614		\$1,177.75	EA
88040	Crash Barrier 20' wide	NA	\$79,000.00			0.9614		\$75,953.09	EA
88040	Crash Barrier 24' wide	NA	\$105,600.00			0.9614		\$101,527.17	EA
88040	Crash Barrier 12'w with portable wedge crash	NA	\$132,600.00			0.9614		\$127,485.82	EA
88040	Crash Barrier with sliding roller crash barrier	NA	\$242,250.00			0.9614		\$232,906.79	EA
88040	Crash Barrier, 20' sliding cantilever	NA	\$242,250.00			0.9614		\$232,906.79	EA
88040	10' wide raised bollard	NA	\$47,750.00			0.9614		\$45,908.36	EA
88040	12' wide raised bollard crash	NA	\$54,550.00			0.9614		\$52,446.09	EA
88040	10' wide raised bollard, solar power	NA	\$58,150.00			0.9614		\$55,907.24	EA
88040	12' wide raised bollard, solar power	NA	\$64,750.00			0.9614		\$62,252.69	EA
88040	Inground tire shredder	NA	\$50,900.00			0.9614		\$48,936.87	EA
			Average				RUC	\$58,392.28	EA

FAC 1459		Overhead Cover	UM = SF				USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Reference Size	Unit Cost			Inflation Adjustment by MCP Index		Adjusted Cost	
14179	Canopy for Covered Hardstand, Large >6000+ SF		6,100	\$ 53.50			0.9614		\$51.44	SF
								RUC	\$51.44	SF

FAC 1461		Aircraft Arresting System		UM = EA		Design Size 10,000		Source PACES 1.1			
Assembly	Description	Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP			
G2060902721	Arresting System - Bak12/Bak14 B/G (Below Ground)	2	EA	\$710,534.82	\$8,277.86	\$3,549.69	\$1,444,724.73	\$2,376,139.34	EA		
G2060902723	Arresting System - Bak12/61QS2 B/G (Below Ground)	2	EA	\$642,468.94	\$8,277.86	\$3,549.69	\$1,308,592.99	\$2,152,998.34	EA		
	Total Systems	4	EA					\$4,529,137.68	EA		
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015						RUC	\$ 1.132.284.42	EA		

FAC	1464	Aircraft Blast Deflector	UM = EA		Design Size 10,000		Source PACES 1.1			
Assembly	Description		Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
G2060902710	Blast Deflector, U - Shaped		1	EA	\$2,725.57	\$1,943.89	\$95.66	\$1,160,784.16	\$1,989,603.75	EA
	Total Systems		1	EA					\$1,989,603.75	EA
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015							RUC	\$ 1,989,603.75	EA

FAC	1491	Nuclear Weapons Support Facility	UM = EA		Assumed Size 5000		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/15	Industrials, Heavy Manufacturing, C, Average		\$ 108.99	SF	5000 SF to EA		1.05	1.08	\$ 617,973.30	EA
58/6	Bridge Crane, 20' span, 5 T		\$ 82,250.00	EA			1.05	1.08	\$ 93,271.50	EA
58/6	Craneway per LF, assume 50' length		\$ 5,950.00	EA			1.05	1.08	\$ 6,747.30	EA
14/37	Sprinkler, 5000 SF, dry, excellent		\$ 6.37	SF	5000 SF to EA		1.05	1.08	\$ 36,117.90	EA
	No inventory in 2015 RPAD							SUM	\$ 754,110.00	EA
								RUC	\$ 754,110.00	EA

FAC	1492	Explosives Holding/Transfer Area	UM = SY				Source USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Unit Cost	UM	Conversion		Inflation Adjustment by MCP Index		Adjusted Cost	
93410	Backfill and Compaction, Dozer Backfill, 12" lifts		\$ 7.60	CY	3	CY/SY	0.9614		\$2.44	SY
85110	Base course, crushed stone, 12"		\$ 17.00	SY			0.9614		\$16.34	SY
85110	concrete surface, 8", reinforced		\$ 54.00	SY			0.9614		\$51.92	SY
	Note: Lightning protection and fence calculated separately at stand alone assets							RUC	\$70.70	SY

FAC	1493	Explosives Railway Holding Yard	UM = EA		Design Size 1		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/3	Rail Spur, 130# rail, assume 1000 LF		\$ 147.50	LF	1000 LF Total		1.04	1.08	\$ 165,672.00	EA
66/3	Rail Turnout, Assume 2		\$ 47,200.00	EA	2 Total		1.04	1.08	\$ 106,030.08	EA
17/29	Quonset Building, D, Good Assume 4 EA		\$ 26.19	SF	1250 SF Total		1.02	1.05	\$ 140,247.45	EA
51/3	Concrete foundation walls around Quonset, 12": 4 x 125 LF X 10' high = 6000 SF. Assume reinforced		\$ 17.55	LF	6000 LF Total		1.06	1.04	\$ 116,082.72	EA
51/2	Berm = bulk excavation = medium earth, placed around Quonset, parabolic section (2/3 bh) 60 ft long, 10 ft high 8 each = 3216 CF		\$ 6.12	CY	3216 CF		1.03	1.08	\$ 2,432.69	EA
								SUM	\$ 530,464.94	EA
								RUC	\$ 530,464.94	EA

FAC	1494	Explosives Holding/Transfer Facility	UM = EA		Design Size 1		Source USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Unit Cost	UM	Conversion		Inflation Adjustment by MCP Index		Adjusted Cost	
93410	Backfill and Compaction, Dozer Backfill, 12" lifts		\$ 7.60	CY	3	CY/SY	0.9614		\$2.44	SY
85110	Base course, crushed stone, 12"		\$ 17.00	SY			0.9614		\$16.34	SY
85110	concrete surface, 8", reinforced		\$ 54.00	SY			0.9614		\$51.92	SY
								Sum	\$70.70	SY
	Assumed Facility Size 140 SY								\$9,897.62	EA
	Note: Lightning protection and fence calculated separately at stand alone assets							RUC	\$9,897.62	EA

FAC	1495	Revetment	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost			
51/2	Backfill and compaction, confined area, medium earth	\$ 29.25	CY	177 CY to EA	1.03	1.08	\$5,759.17			EA
51/2	Haul and Fill, 5CY Truck, 3 miles	\$ 11.40	CY	177 CY to EA	1.03	1.08	\$2,244.60			EA
51/2	Gabions filled with stone	\$ 160.00	SY	133 SY to EA	1.03	1.08	\$23,671.87			EA
51/2	Geotextile fabric	\$ 2.53	SY	133 SY to EA	1.03	1.08	\$374.31			EA
	Assume 150 LF, 8 ft High x 4 ft wide = 4800 cf= 177 cy = 133 sy side									
								SUM	\$32,049.96	EA
								RUC	\$32,049.96	EA

FAC	1496	Central Vehicle Wash Facility	UM =	EA	Design Size	1	Source	PAX Newsletter 3.2.2, Dated 5 May 2013		
CATCODE	Description	Reference Size	Unit Cost				Inflation Adjustment by MCP Index	Adjusted Cost		
14962	Central Wash Facility, 16 Stations	NA	\$ 8,603,800.00				1.0000	\$8,603,800.00		SF
								RUC	\$8,603,800.00	SF

FAC	1498	Security Support Building	UM =	SF	RPAD Ave Size	344	Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description	Unit Cost	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost				
14113	Search Office/ Sentry Building	\$ 551.00	520		0.9614	\$529.75				SF
14113	Gatehouse, Average Size 515 SF	\$ 1,020.00	525		0.9614	\$980.66				SF
14113	Guardbooth, Average Size 100 SF	\$ 923.00	120		0.9614	\$887.40				SF
			388.3	Average				RUC	\$799.27	SF

FAC	1513	Pier/Wharf Access Trestle	UM =	SY	RPAD Ave Size	5049	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost			
67/6	Ship & Boat Dock, Heavy Construction,	\$ 94.00	SF	9 SF to SY	1.03	1.08	\$ 941.09			SY
	Heavy wood girders, including railing, utilities, fenders									
								RUC	\$ 941.09	SY

FAC	1531	Marine Cargo Staging Area	UM =	SY			Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description	Unit Cost	UM	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost				
93210	ROUGH GRADING, NO COMPACTION	\$ 2.55	SY		0.9614	\$2.45				SY
93210	FINE GRADING, W/ DOZER, 6" LIFTS	\$ 2.16	SY		0.9614	\$2.08				SY
85110	1-1/2" CRUSHED STONE BASE TO 6" DEEP	\$ 9.00	SY		0.9614	\$8.65				SY
85110	8" THK, REINF CONC PVTMT, 4500 PSI	\$ 54.00	SY		0.9614	\$51.92				SY
							SUM	\$65.10		SY
	Note: Lightning protection and fence calculated separately at stand alone assets							RUC	\$65.10	SY

FAC	1541	Shore Erosion Prevention Facility	UM =	LF	RPAD Ave Size	2757	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost			
51/4	Seawall concrete, precast, 5" - 6" including ties or piling	\$ 697.50	LF	Commercial 50% Reduction	1.03	1.08	\$ 387.95			LF
								RUC	\$ 387.95	LF

FAC 1551		Small Craft Berthing		UM = FB		RPAD Ave Size 329		Marshall and Swift Valuation; October 2015			
Section	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
67/6	ship and boat docks, medium, 4" decking. Average piling, incl fenders, railings, utilities			\$ 61.13	SF	30 SF/BL		1.03	1.08	\$ 2,040.03	FB
	Convert SF to FB: Width of pier or wharf = 40 ft. assume 1/2 pier, 1/2 wharf. Average of {40 SF/2 FB + 40SF/1 FB} =										
									RUC	\$ 2,040.03	FB

FAC		1552		Small Craft Building		UM =		SF		RPAD Ave Size		4934		Source				Marshall and Swift Valuation; October 2015					
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost							
17/18		Boat Storage Shed, S, Good, metal on steel frame				\$		30.71		SF				1.01		1.06		\$		32.88		SF	
																RUC		\$		32.88		SF	

FAC 1591		Miscellaneous Waterfront Facility		UM = EA		Design Size 2,500		Source Marshall and Swift Valuation; October 2015			
Section	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/1	Grading and Surplus disposal, High Cost			\$ 0.55	SF	2,500 SF to EA		1.04	1.08	\$ 1,544.40	EA
66/2	Concrete, 8" bar reinforced			\$ 8.58	SF	2,500 SF to EA		1.04	1.08	\$ 24,092.64	EA
67/6	ship and boat docks, medium, 4" decking, Average piling, incl fenders, railings, utilities, Assume 500 SF			\$ 61.13	SF	500 SF to EA		1.03	1.08	\$ 34,000.51	EA
	Assumed Size of Boat/Seaplane Ramp = 2500 SF								SUM	\$ 59,637.55	EA
									RUC	\$ 59,637.55	EA

FAC		1711	General Purpose Instruction Building		UM = SF				Source		Guidance Unit Cost, May 2016	
	Description		Reference Size		UoM				October 2015 Unit Cost			
	General Instruction Academic Building		43,000		SF				\$272.00		SF	
									RUC	\$272.00	SF	

FAC	1712	Applied Instruction Building	UM = SF			Source			Guidance Unit Cost, May 2016	
	Description		Reference Size	UoM		October 2015 Unit Cost				
	Applied Instruction Academic Building		35,000	SF		\$235.00			SF	
							RUC	\$235.00	SF	

FAC		1714	Reserve Training Facility		UM =		SF	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description			Reference Size	Unit Cost			Inflation Adjustment by MCP Index		Adjusted Cost	
17140	Training Bldg- Army Reserve			33,500	\$ 223.00			0.9614		\$214.40	SF
									RUC	\$214.40	SF

FAC	1715	Physical Education Building	UM = SF		Source Guidance Unit Cost, May 2016			
	Description	Reference Size	UoM		October 2015 Unit Cost			
	Community Support Facilities, Physical Fitness Training Center	62,000	SF		\$235.00			SF
						RUC	\$235.00	SF

FAC 1717		Organizational Classroom	UM = SF				USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description	Reference Size	Unit Cost			Inflation Adjustment by MCP Index		Adjusted Cost	
17120	General Instruction Bldg (GIB) - Not for Range	64,300	\$ 199.00			0.9614		\$191.32	SF
							RUC	\$191.32	SF

FAC	1718	Indoor Firing Range and Supporting Facility	UM =	SF		Source	Guidance Unit Cost, May 2016	
	Description	Reference Size	UoM				October 2015 Unit Cost	
	Indoor Firing Range	31,000	SF				\$277.00	SF
						RUC	\$277.00	SF

FAC	1721	Flight Simulator Facility	UM =	SF		Source	Guidance Unit Cost, May 2016	
	Description	Reference Size	UoM				October 2015 Unit Cost	
	High Bay with Simulation Training - Large	30,000	SF				\$294.00	SF
						RUC	\$294.00	SF

FAC	1722	Physiological Training Facility	UM =	SF		Source	Guidance Unit Cost, May 2016	
	Description	Reference Size	UoM				October 2015 Unit Cost	
	Community Support Facilities, Physical Fitness Training Center	62,000	SF				\$235.00	SF
						RUC	\$235.00	SF

FAC	1723	Gas Training Facility	UM =	SF		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015	
CATCODE	Description	Unit Cost	Reference Size			Inflation Adjustment by MCP Index	Adjusted Cost	
17123	Range Classroom Building	\$ 320.00	800			0.9614	\$307.66	SF
14129	Training Aid/Support Center (TSC)	\$ 159.00	42,000			0.9614	\$152.87	SF
					Average	RUC	\$230.26	SF

FAC	1724	General Purpose Simulator Facility	UM =	SF		Source	Guidance Unit Cost, May 2016	
	Description	Reference Size	UoM				October 2015 Unit Cost	
	High Bay with Simulation Training - Small	10,000	SF				\$360.00	SF
						RUC	\$360.00	SF

FAC	1731	Range Support Building	UM =	SF		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015	
CATCODE	Description	Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
17122	Ammunition Breakdown Bldg	\$ 524.00	190			0.9614	\$503.79	SF
17122	Operations/Storage Bldg Small	\$ 294.00	800			0.9614	\$282.66	SF
17123	Range Classroom Bldg	\$ 320.00	800			0.9614	\$307.66	SF
17123	After Action Review Bldg - small	\$ 300.00	1,018			0.9614	\$288.43	SF
14129	Training Support Center	\$ 159.00	42,000			0.9614	\$152.87	SF
17139	Covered Mess - range	\$ 150.00	800			0.9614	\$144.21	SF
						RUC	\$279.94	SF

FAC	1732	Training Aids Support Building	UM =	SF		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015	
CATCODE	Description	Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
14129	Training Support Center	\$ 159.00	42,000			0.9614	\$152.87	SF
						RUC	\$152.87	SF

FAC	1733	Training Support Structure	UM =	SF		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
75061	Covered Bleacher (Bleacher Enclosure) - EACH		\$ 126,693.00	726	726	EA/SF	0.9614	\$167.78	SF
17139	Covered Mess - range		\$ 150.00	800			0.9614	\$144.21	SF
				763	Average			RUC	\$156.00 SF

FAC	1734	Observation Tower/Bunker	UM =	EA		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
17971	Control Tower - open observation deck		\$ 301,762.00	NA			0.9614	\$290,123.51	EA
								RUC	\$290,123.51 EA

FAC	1745	Parade and Drill Field	UM =	AC	RPAD Ave Size	4.7	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/8	Soil preparation, fine grading		\$ 0.26	SF	43560	SF to AC	1.04	1.08	\$12,720.91	AC
66/8	hydroseeding		\$ 0.16	SF	43560	SF to AC	1.04	1.08	\$7,828.25	AC
66/8	Lawn sprinklers, large area		\$ 0.48	SF	43560	SF to AC	1.04	1.08	\$23,484.76	AC
								SUM	\$44,033.93	AC
								RUC	\$ 44,033.93	AC

FAC	1750	General Purpose Small Arms Range	UM =	FP	Standard Size	32	Source	Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 7 per FP		\$7.93	SF	434	SF per FP	1.04	1.08	\$ 3,865.63	FP
54/1	Service Switchgear, 100 Amps, Light Commercial		\$435.00	EA	7	EA per FP	1.00	1.08	\$ 3,288.60	FP
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps		\$312.50	EA	7	EA per FP	1.00	1.08	\$ 2,362.50	FP
54/3	Outlet, Rigid Conduit, Good, 4 per SIT		\$160.00	EA	28	EA per FP	1.00	1.08	\$ 4,838.40	FP
54/2	Underground Wiring, 2", plastic duct, 574 ft Ave Distance		\$16.95	LF	2653	LF per FP	1.00	1.08	\$ 48,565.82	FP
66/1	Foxhole w/Drain (36" reinforced Concrete Culvert. 4' deep)		\$470.82	EA			1.04	1.08	\$ 528.83	FP
93410	Berm, 522m x 2m x 5m = 6,828 cu yds / Backfill & compaction		\$7.60	CY	213.4	CY per FP	0.9614		\$ 1,559.11	FP
93210	Bank run gravel, Spread, 409 cubic yards per berm		\$41.50	CY	12.8	CY per FP	0.9614		\$ 509.96	FP
								SUM	\$ 65,518.84	FP
								RUC	\$ 65,518.84	FP

FAC	1751	Zero Range	UM =	FP	TC 25-8 Standard Size / Basic 10M- 25M Firing Range (Zero)	32	Source	Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/1	Foxhole w/Drain (36" reinforced Concrete Culvert. 4' deep)		\$470.82	EA			1.04	1.08	\$ 528.83	FP
51/3	Target Boots / 4 per FP Concrete footing		\$15.35	EA	4	EA to FP	1.00	1.08	\$ 66.31	FP
54/2	Underground Wiring, 2", plastic duct,		\$16.95	LF	224	LF per FP	1.00	1.08	\$ 4,100.54	FP
93410	Berm, 148m x 2m x 5m = 1,936 cu yds / Backfill & compaction		\$7.60	CY	60.5	CY per FP	0.9614		\$ 442.07	FP
93210	Bank run gravel, Spread, 387 cubic yards per berm		\$41.50	CY	12.1	CY per FP	0.9614		\$ 482.53	FP
								SUM	\$ 5,620.28	FP
								RUC	\$ 5,620.28	FP

FAC		1752	Field Fire Range	UM = FP		TC 25-8 Standard Size / Automated Field Fire Range	32	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 3 per FP			\$7.93	SF	186	SF per FP	1.04	1.08	\$ 1,656.70
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	3	EA per FP	1.00	1.08	\$ 1,409.40
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	3	EA per FP	1.00	1.08	\$ 1,012.50
54/3	Outlet, Rigid Conduit, Good, 4 per SIT			\$160.00	EA	12	EA per FP	1.00	1.08	\$ 2,073.60
54/2	Underground Wiring, 2", plastic duct, 574 ft Ave Distance			\$16.95	LF	2653	LF per FP	1.00	1.08	\$ 48,565.82
66/1	Foxhole w/Drain (36" reinforced Concrete Culvert. 4' deep)			\$470.82	EA			1.04	1.08	\$ 528.83
93410	Berm, 522m x 2m x 5m = 6,827 cu yds / Backfill & compaction			\$7.60	CY	277.9	CY per FP	0.9614		\$ 2,030.86
93210	Bank run gravel, Spread, 1044 cubic yards per berm			\$41.50	CY	32.6	CY per FP	0.9614		\$ 1,301.72
									SUM	\$ 58,579.41
									RUC	\$ 58,579.41

FAC		1753	Record Fire Range	UM = FP		TC 25-8 Standard Size / Automated Record Fire Range	16	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 7 per FP			\$7.93	SF	434	SF per FP	1.04	1.08	\$ 3,865.63
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	7	EA per FP	1.00	1.08	\$ 3,288.60
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	7	EA per FP	1.00	1.08	\$ 2,362.50
54/3	Outlet, Rigid Conduit, Good, 4 per SIT			\$160.00	EA	28	EA per FP	1.00	1.08	\$ 4,838.40
54/2	Underground Wiring, 2", plastic duct, 574 ft Ave Distance			\$16.95	LF	4018	LF per FP	1.00	1.08	\$ 73,553.51
66/1	Foxhole w/Drain (36" reinforced Concrete Culvert. 4' deep)			\$470.82	EA			1.04	1.08	\$ 528.83
93410	Berm, 340m x 2m x 5m = 4,447 cu yds / Backfill & compaction			\$7.60	CY	277.9	CY per FP	0.9614		\$ 2,030.86
93210	Bank run gravel, Spread, 445 cubic yards per berm			\$41.50	CY	27.8	CY per FP	0.9614		\$ 1,109.70
									SUM	\$ 91,578.02
									RUC	\$ 91,578.02

FAC		1754	Night Fire Range	UM = FP		Standard Size	32	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 2 per FP			\$7.93	SF	124	SF per FP	1.04	1.08	\$ 1,104.47
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	2	EA per FP	1.00	1.08	\$ 675.00
54/3	Outlet, Rigid Conduit, Good, 4 per SIT			\$160.00	EA	4	EA per FP	1.00	1.08	\$ 691.20
54/2	Underground Wiring, 2", plastic duct, 164 ft Ave Distance			\$16.95	LF	82	LF per FP	1.00	1.08	\$ 1,501.09
66/1	Foxhole w/Drain (36" reinforced Concrete Culvert. 4' deep)			\$470.82	EA			1.04	1.08	\$ 528.83
93410	Berm, 522m x 2m x 3m = 4096 cu yds / Backfill & compaction			\$7.60	CY	128.0	CY per FP	0.9614		\$ 935.28
93210	Bank run gravel, Spread, 409 cubic yards per berm			\$41.50	CY	12.8	CY per FP	0.9614		\$ 509.96
									SUM	\$ 5,945.83
									RUC	\$ 5,945.83

FAC		1755		Known Distance Range		UM =		FP		TC 25-8 Standard Size / Known Distance Range		32		Source		Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost			
54/1		CircuitBreaker, 240-480 Volts, 20-60 Amps				\$312.50		EA		1 EA per FP		1.00		1.08		\$ 337.50		FP	
54/3		Outlet, Rigid Conduit, Good, 4 per SIT				\$160.00		EA		2 EA per FP		1.00		1.08		\$ 345.60		FP	
54/2		Rigid Conduit and Wiring, 1", 525 ft ave distance				\$14.40		LF		525 LF per FP		1.00		1.08		\$ 8,164.80		FP	
93410		Berm, 340m x 4m x 5m = 8,894 cu yds / Backfill & compaction				\$7.60		CY		277.9 CY per FP		0.9614				\$ 2,030.86		FP	
														SUM		\$ 10,878.76		FP	
														RUC		\$ 10,878.76		FP	

FAC 1756		Sniper Range		UM = FP		TC 25-8 Standard Size / Automated Sniper Field Fire Range		4		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost			
	Sniper range = 4 SITs/6MITs/8 Iron Maiden Pads per FP												
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 4 per FP			\$7.93	SF	248	SF per FP	1.04	1.08	\$ 2,208.93	FP		
51/3	MIT Emplacement 15M (15m x .5m=7.5 sqm) 12" concrete wall			\$17.55	SF	484.2	SF per FP	1.03	1.08	\$ 9,452.85	FP		
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	10	EA per FP	1.00	1.08	\$ 4,698.00	FP		
58/6	Trolleyway, 1 Ton, 50 ft / MIT			\$17.00	LF	300	LF per FP	1.02	1.08	\$ 5,618.16	FP		
58/6	Trolley, Motorized, .5 ton 1 per MIT			\$2,657.50	EA	6	EA to FP	1.02	1.08	\$ 17,565.01	FP		
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	10	EA per FP	1.00	1.08	\$ 3,375.00	FP		
54/3	Outlet, Rigid Conduit, Good, 4 per SIT 4 per MIT			\$160.00	EA	40	EA per FP	1.00	1.08	\$ 6,912.00	FP		
54/2	Underground Wiring, 2", plastic duct, 1,640 ft Ave Distance			\$16.95	LF	6412	LF per FP	1.00	1.08	\$ 117,378.07	FP		
66/1	Concrete Pad 4ft x 8 ft (1 per Firing Pad / 1 per Iron Maiden Pad)			\$4.60	SF	288	SF per FP	1.03	1.08	\$ 1,473.71	FP		
93410	Berm, 80m x 2m x 5m = 1,046 cu yds / Backfill & compaction			\$7.60	CY	261.5	CY per FP	0.9614		\$ 1,910.75	FP		
									SUM	\$ 170,592.48	FP		
									RUC	\$ 170,592.48	FP		

FAC		1757		Pistol Range		UM =		FP		TC 25-8 Standard Size / Automated Combat Pistol Range		15		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015					
Section/ CATCODE		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost			
66/2		SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 8 per FP				\$7.93		SF		496 SF per FP		1.04		1.08		\$ 4,417.86		FP	
54/1		Service Switchgear, 100 Amps, Light Commercial				\$435.00		EA		8 EA per FP		1.00		1.08		\$ 3,758.40		FP	
54/1		CircuitBreaker, 240-480 Volts, 20-60 Amps				\$312.50		EA		8 EA per FP		1.00		1.08		\$ 2,700.00		FP	
54/3		Outlet, Rigid Conduit, Good, 4 per SIT				\$160.00		EA		32 EA per FP		1.00		1.08		\$ 5,529.60		FP	
54/2		Underground Wiring, 2", plastic duct, 101 ft Ave Distance				\$16.95		LF		808 LF per FP		1.00		1.08		\$ 14,791.25		FP	
93210		Bank run gravel, Spread, 445 cubic yards per range				\$41.50		CY		27.8 CY per FP		0.9614				\$ 1,109.70		FP	
93410		Berm, 8 EA per FP 1m x 1m x 2m = 20.9 cu yds / Backfill & compctn				\$7.60		CY		20.9 CY per FP		0.9614				\$ 152.57		FP	
														SUM		\$ 32,459.38		FP	
														RUC		\$ 32,459.38		FP	

FAC 1758		Machinegun Range	UM = FP		TC 25-8 Standard Size / Automated Multipurpose Machinegun	10	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	MPMG = 3 SITs/5 WSITs/2MITs/2 SATs/8 Iron Maiden Pads per FP								
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 3 per FP		\$7.93	SF	186	SF per FP	1.04	1.08	\$ 1,656.70
66/2	WSIT Emplacement (94 sf concrete x 8" thick w/Rebar) 5 per FP		\$7.93	SF	470	SF per FP	1.04	1.08	\$ 4,186.28
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 2 per FP		\$9.83	SF	936	SF per FP	1.04	1.08	\$ 10,334.43
51/3	MIT Emplacement 15M (15m x .5m=7.5 sqm) 12" concrete wall		\$17.55	SF	161.4	SF per FP	1.03	1.08	\$ 3,150.95
54/1	Service Switchgear, 200 Amps, Light Commercial		\$795.00	EA	12	EA per FP	1.00	1.08	\$ 10,303.20
58/6	Trolleyway, 1 Ton, 50 ft / MIT		\$17.00	LF	100	LF per FP	1.02	1.08	\$ 1,872.72
58/6	Trolley, Motorized, .5 ton 1 per MIT		\$2,657.50	EA	2	EA to FP	1.02	1.08	\$ 5,855.00
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps		\$1,375.00	EA	12	EA per FP	1.00	1.08	\$ 17,820.00
54/3	Outlet, Rigid Conduit, Good, 4 per SIT/4 per MIT/6 per WSIT / 5 per SAT		\$160.00	EA	60	EA per FP	1.00	1.08	\$ 10,368.00
54/2	Underground Wiring, 2", plastic duct, 1,640 ft Ave Distance		\$16.95	LF	2961	LF per FP	1.00	1.08	\$ 54,204.07
66/1	Concrete Pad 4ft x 8 ft (1 per Firing Pad / 1 per Iron Maiden Pad)		\$4.60	SF	288	SF per FP	1.03	1.08	\$ 1,473.71
93410	Berm, 30m x 2m x 5m = 392 cu yds / Backfill & compaction		\$7.60	CY	39.2	CY per FP	0.9614		\$ 286.43
93210	Bank run gravel, Spread, 39 cubic yards per range		\$41.50	CY	3.9	CY per FP	0.9614		\$ 155.61
								SUM	\$ 121,511.48
								RUC	\$ 121,511.48

FAC 1760		General Purpose Direct Fire Range	UM = FP		Standard Size	4	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
66/2	Vehicle Battle Position - Defilade (481 sf concrete x 12" thick w/Rebar)		\$9.83	SF	481	SF per FP	1.04	1.08	\$ 5,310.75
93410	Berm, 148m x 2m x 5m = 1,936 cu yds / Backfill & compaction		\$7.60	CY	484.0	CY per FP	0.9614		\$ 3,536.53
93210	Bank run gravel, Spread, 327 cubic yards per range		\$41.50	CY	81.8	CY per FP	0.9614		\$ 3,261.78
								SUM	\$ 8,847.28
								RUC	\$ 8,847.28

FAC 1761		Grenade Launcher Range	UM = FP		TC 25-8 Standard Size / Grenade Launcher Range	4	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
66/1	Target Bunker (36" reinforced Concrete Culvert. 4' deep)		\$470.82	EA			1.04	1.08	\$ 528.83
93410	Target Berm, 1m x 1m x 2m x 4 targets/lane = 2.6 cu yds / Backfill & compaction		\$7.60	CY	10.4	CY per FP	0.9614		\$ 75.99
93410	Berm, 40m x 1m x 2m = 104 cu yds / Backfill & compaction		\$7.60	CY	26.0	CY per FP	0.9614		\$ 189.98
93210	Bank run gravel, Spread, 104 cubic yards per berm		\$41.50	CY	26.0	CY per FP	0.9614		\$ 1,037.38
								SUM	\$ 1,832.18
								RUC	\$ 1,832.18

FAC	1762	Grenade Machinegun Range	UM = LN	Standard Size	2	Marshall & Swift Valuation; October 2015 FM 3-22.27 MK-19, 40mm Grenade Machine Gun; November 2003 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
66/2	Vehicle Firing Point (128 sf concrete x 8" thick w/Rebar)		\$7.93	SF	128	SF per LN	1.04	1.08	\$ 1,140.09 LN
93410	Berm, 20m x 2m x 1m = 52 cu yds / Backfill & compaction		\$7.60	CY	52.0	CY per LN	0.9614		\$ 379.96 LN
93210	Bank run gravel, Spread, 20 cubic yards per LN		\$41.50	CY	20.0	CY per LN	0.9614		\$ 797.99 LN
								SUM	\$ 2,318.04 LN
								RUC	\$ 2,318.04 LN

FAC	1763	Light Antiarmor Weapon Range	UM = FP	TC 25-8 Standard Size / Light Antiarmor Range, Subcal	1	Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	LAW/AT-4 = 2 MG Bunkers/ 9 SATs / 2 MATs per FP								
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 9 per FP		\$9.83	SF	4212	SF per FP	1.04	1.08	\$ 46,504.93 FP
51/3	MAT Emplacement 200M (200m x 1m= 2153 sf) 12" concrete wall 2 per FP		\$17.55	SF	4306	SF per FP	1.03	1.08	\$ 84,064.40 FP
54/1	Service Switchgear, 200 Amps, Light Commercial		\$795.00	EA	11	EA per FP	1.00	1.08	\$ 9,444.60 FP
58/6	Trolleyway, 1 Ton, 656 ft / MAT		\$17.00	LF	1312	LF per FP	1.02	1.08	\$ 24,570.09 FP
58/6	Trolley, Motorized, .5 ton 1 per MAT		\$2,657.50	EA	2	EA to FP	1.02	1.08	\$ 5,855.00 FP
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps		\$1,375.00	EA	11	EA per FP	1.00	1.08	\$ 16,335.00 FP
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT		\$160.00	EA	53	EA per FP	1.00	1.08	\$ 9,158.40 FP
54/2	Underground Wiring, 2", plastic duct, 984 ft Ave Distance		\$16.95	LF	20825	LF per FP	1.00	1.08	\$ 381,222.45 FP
66/2	Concrete Bunker 4ft x4 ft = 96 sf of 12" concrete		\$17.55	SF	192	SF per FP	1.03	1.08	\$ 3,748.34 FP
93410	Berm, 400m x 1m x 1m = 392 cu yds / Backfill & compaction		\$7.60	CY	523.0	CY per FP	0.9614		\$ 3,821.50 FP
								SUM	\$ 584,724.71 FP
								RUC	\$ 584,724.71 FP

FAC		1764	Heavy Antiarmor Weapon Range	UM = LN		TC 25-8 Standard Size / AntiArmor Tracking and Live Fire	1	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	HAWR = 12 SATs / 5 MATs / 1 Counrse Road per LN									
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 12 per LN			\$9.83	SF	5616	SF per LN	1.04	1.08	\$ 62,006.57 LN
51/3	MAT Emplacement 350M (350m x 1m= 3767 sf) 12" concrete wall			\$17.55	SF	18835	SF per LN	1.03	1.08	\$ 367,708.55 LN
54/1	Service Switchgear, 200 Amps, Light Commercial			\$795.00	EA	17	EA per LN	1.00	1.08	\$ 14,596.20 LN
58/6	Trolleyway, 1 Ton, 1148 ft / MAT			\$17.00	LF	5740	LF per LN	1.02	1.08	\$ 107,494.13 LN
58/6	Trolley, Motorized, .5 ton 1 per MAT			\$2,657.50	EA	5	EA per LN	1.02	1.08	\$ 14,637.51 LN
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps			\$1,375.00	EA	17	EA per LN	1.00	1.08	\$ 25,245.00 LN
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT			\$160.00	EA	80	EA per LN	1.00	1.08	\$ 13,824.00 LN
54/2	Underground Wiring, 2", plastic duct, 6761 ft Ave Distance			\$16.95	LF	114937	LF per LN	1.00	1.08	\$ 2,104,036.72 LN
93410	Trail Grading, Fine Grading for Roadways, Base Course 11,525 sy			\$1.05	SY	11525	SY per LN	0.9614		\$ 11,634.52 LN
66/2	Vehicle Battle Position 6ea - Defilade (481 sf concrete x 12" thick w/Rebar)			\$9.83	SF	2886	SF per LN	1.04	1.08	\$ 31,864.49 LN
93410	Berm, 1800m x 2m x 1m = 4709 cu yds / Backfill & compaction			\$7.60	CY	4709.0	CY per LN	0.9614		\$ 34,408.10 LN
93210	Bank run gravel, Spread, 1063 cubic yards per LN			\$41.50	CY	1063.0	CY per LN	0.9614		\$ 42,413.07 LN
									SUM	\$ 2,829,868.86 LN
									RUC	\$ 2,829,868.86 LN

FAC		1765	Artillery Direct Fire Range	UM = EA		Design Size	1	Source Marshall & Swift Valuation; October 2015 FM 6-50 December 1996 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	ADFR = 18 SATs / 6 Firing Positions per Range									
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 6 per rng			\$9.83	SF	2808	SF per Range	1.04	1.08	\$ 31,003.29 EA
54/1	Service Switchgear, 200 Amps, Light Commercial			\$795.00	EA	6	EA per Range	1.00	1.08	\$ 5,151.60 EA
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps			\$1,375.00	EA	6	EA per Range	1.00	1.08	\$ 8,910.00 EA
54/3	Outlet, Rigid Conduit, Good, 5 per SAT			\$160.00	EA	30	EA per Range	1.00	1.08	\$ 5,184.00 EA
54/2	Underground Wiring, 2", plastic duct, 2560 ft Ave Distance			\$16.95	LF	46080	LF per Rnge	1.00	1.08	\$ 843,540.48 EA
93410	Trail Grading, Fine Grading for Roadways, Base Course 11,525 sy			\$1.05	SY	10763	SY per Rnge	0.9614		\$ 10,865.28 EA
66/2	Vehicle Battle Position 6ea - Defilade (481 sf concrete x 12" thick w/Rebar)			\$9.83	SF	2886	SF per Rnge	1.04	1.08	\$ 31,864.49 EA
93410	Berm, 117m x 2m x 1m = 279 cu yds / Backfill & compaction			\$7.60	CY	279.0	CY per Rnge	0.9614		\$ 2,038.62 EA
93210	Bank run gravel, Spread, 215 cubic yards per range			\$41.50	CY	215.0	CY per Rnge	0.9614		\$ 8,578.37 EA
									SUM	\$ 947,136.13 EA
									RUC	\$ 947,136.13 EA

FAC		1766		Tank Stationary Gunnery Range		UM = EA		TC 25-8 Standard Size / Tank Stationary Gunnery Range		1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE	TASK					Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost			
	TSGR = 25 SATs / 4 MATs / 42 SITS / 7 MITS per Range														
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 42 per Range					\$7.93	SF	2604	SF per Rng	1.04	1.08	\$ 23,193.77	EA		
54/1	Service Switchgear, 100 Amps, Light Commercial					\$435.00	EA	42	EA per Rng	1.00	1.08	\$ 19,731.60	EA		
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps					\$312.50	EA	42	EA per Rng	1.00	1.08	\$ 14,175.00	EA		
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 25 per rng					\$9.83	SF	11700	SF per Rng	1.04	1.08	\$ 129,180.36	EA		
51/3	MAT Emplacement 200M (200m x 1m= 2152 sf) 12" concrete wall					\$17.55	SF	8608	SF per Rng	1.03	1.08	\$ 168,050.71	EA		
51/3	MIT Emplacement 15M (15m x .5m=80.7 sqf) 12" concrete wall					\$17.55	SF	564.9	SF per Rng	1.03	1.08	\$ 11,028.33	EA		
54/1	Service Switchgear, 200 Amps, Light Commercial					\$795.00	EA	36	EA per Rng	1.00	1.08	\$ 30,909.60	EA		
58/6	Trolleyway, 1 Ton, 656 ft / MAT 49 ft /MIT					\$17.00	LF	2967	LF per Rng	1.02	1.08	\$ 55,563.60	EA		
58/6	Trolley, Motorized, .5 ton 1 per MAT					\$2,657.50	EA	11	EA per Rng	1.02	1.08	\$ 32,202.52	EA		
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps					\$1,375.00	EA	36	EA per Rng	1.00	1.08	\$ 53,460.00	EA		
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT					\$160.00	EA	337	EA per Rng	1.00	1.08	\$ 58,233.60	EA		
54/2	Underground Wiring, 2", plastic duct, 5105 ft Ave Distance					\$16.95	LF	398190	LF per Rng	1.00	1.08	\$ 7,289,266.14	EA		
93410	Trail Grading, Fine Grading for Roadways, Base Course 2488 sy					\$1.05	SY	2488	SY per Rng	0.9614		\$ 2,511.64	EA		
66/2	Vehicle Battle Position 2ea - Defilade (481 sf concrete x 12" thick w/Rebar)					\$9.83	SF	962	SF per Rng	1.04	1.08	\$ 10,621.50	EA		
66/2	Vehicle Firing Point x 10 (128 sf concrete x 8" thick w/Rebar)					\$7.93	SF	1280	SF per Rng	1.04	1.08	\$ 11,400.93	EA		
93410	Berm, 1400m x 2m x 1m = 3662 cu yds / Backfill & compaction					\$7.60	CY	4709.0	CY per Rng	0.9614		\$ 34,408.10	EA		
93210	Bank run gravel, Spread, 1063 cubic yards per Range					\$41.50	CY	1063.0	CY per Rng	0.9614		\$ 42,413.07	EA		
											SUM	\$ 7,929,250.10	EA		
											RUC	\$ 7,929,250.10	EA		

FAC 1768		Scaled Indirect Fire Range		UM = EA		Design Size 1		Source FM 6-50 December 1996 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
CATCODE	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjusstnt	Cost	
	ADFR = 6 Hasty Firing Positions per Range										
93410	Berm, 117m x 2m x 1m = 279 cu yds / Backfill & compaction			\$7.60	CY	279.0 CY per Rnge		0.9614		\$ 2,038.62	EA
93210	Bank run gravel, Spread, 215 cubic yards per range			\$41.50	CY	215.0 CY per Rnge		0.9614		\$ 8,578.37	EA
									SUM	\$ 10,616.99	EA
									RUC	\$ 10,616.99	EA

FAC		1769	Scaled Gunnery Range	UM = EA		TC 25-8 Standard Size / Tank/FV Scaled Gunnery Range	1	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
	Scaled Range = 16 SITS / 8 MITS per Range									
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 16 per range		\$7.93	SF	992	SF per Rng	1.04	1.08	\$ 8,835.72	EA
54/1	Service Switchgear, 100 Amps, Light Commercial		\$435.00	EA	16	EA per Rng	1.00	1.08	\$ 7,516.80	EA
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps		\$312.50	EA	16	EA per Rng	1.00	1.08	\$ 5,400.00	EA
51/3	MIT Emplacement 15M (15m x .5m=80.7 sqf) 12" concrete wall		\$17.55	SF	645.6	SF per Rng	1.03	1.08	\$ 12,603.80	EA
54/1	Service Switchgear, 200 Amps, Light Commercial		\$795.00	EA	8	EA per Rng	1.00	1.08	\$ 6,868.80	EA
58/6	Trolleyway, 1 Ton, 49 ft /MIT		\$17.00	LF	392	LF per Rng	1.02	1.08	\$ 7,341.06	EA
58/6	Trolley, Motorized, .5 ton 1 per MAT		\$2,657.50	EA	8	EA per Rng	1.02	1.08	\$ 23,420.02	EA
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps		\$1,375.00	EA	8	EA per Rng	1.00	1.08	\$ 11,880.00	EA
54/3	Outlet, Rigid Conduit, Good, 4 per MIT, SIT		\$160.00	EA	96	EA per Rng	1.00	1.08	\$ 16,588.80	EA
54/2	Underground Wiring, 2", plastic duct, 356 ft Ave Distance		\$16.95	LF	4272	LF per Rng	1.00	1.08	\$ 78,203.23	EA
93410	Trail Grading, Fine Grading for Roadways, Base Course 478 sy		\$1.05	SY	478	SY per Rng	0.9614		\$ 482.54	EA
66/2	Vehicle Battle Position 2ea - Defilade (481 sf concrete x 12" thick w/Rebar)		\$9.83	SF	962	SF per Rng	1.04	1.08	\$ 10,621.50	EA
66/2	Vehicle Firing Point x 2 (128 sf concrete x 8" thick w/Rebar)		\$7.93	SF	256	SF per Rng	1.04	1.08	\$ 2,280.19	EA
93410	Berm, 220m x 2m x 1m = 575 cu yds / Backfill & compaction		\$7.60	CY	575.0	CY per Rng	0.9614		\$ 4,201.46	EA
93210	Bank run gravel, Spread, 156 cubic yards per Range		\$41.50	CY	156.0	CY per Rng	0.9614		\$ 6,224.31	EA
								SUM	\$ 202,468.22	EA
								RUC	\$ 202,468.22	EA

FAC		1771	Armor Vehicle Crew Training Range	UM = LN		TC 25-8 Standard Size / DPMTR	1	Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
	DMPTR= 30 SATs / 6 MATs / 146 SITS / 4 MITS									
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 146 per Ln		\$7.93	SF	9052	SF per LN	1.04	1.08	\$ 80,625.95	LN
54/1	Service Switchgear, 100 Amps, Light Commercial		\$435.00	EA	146	EA per LN	1.00	1.08	\$ 68,590.80	LN
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps		\$312.50	EA	146	EA per LN	1.00	1.08	\$ 49,275.00	LN
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 30 per LN		\$9.83	SF	14040	SF per LN	1.04	1.08	\$ 155,016.43	LN
51/3	MAT Emplacement 200M (200m x 1m= 2152 sf) 12" concrete wall		\$17.55	SF	12912	SF per LN	1.03	1.08	\$ 252,076.07	LN
51/3	MIT Emplacement 15M (15m x .5m=80.7 sqft) 12" concrete wall		\$17.55	SF	322.8	SF per LN	1.03	1.08	\$ 6,301.90	LN
54/1	Service Switchgear, 200 Amps, Light Commercial		\$795.00	EA	40	EA per LN	1.00	1.08	\$ 34,344.00	LN
58/6	Trolleyway, 1 Ton, 656 ft / MAT 49 ft /MIT		\$17.00	LF	4132	LF per LN	1.02	1.08	\$ 77,380.79	LN
58/6	Trolley, Motorized, .5 ton 1 per MAT / MIT		\$2,657.50	EA	10	EA per LN	1.02	1.08	\$ 29,275.02	LN
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps		\$1,375.00	EA	40	EA per LN	1.00	1.08	\$ 59,400.00	LN
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT		\$160.00	EA	1208	EA per LN	1.00	1.08	\$ 208,742.40	LN
54/2	Underground Wiring, 2", plastic duct, 5105 ft Ave Distance		\$16.95	LF	165233	LF per LN	1.00	1.08	\$ 3,024,755.30	LN
93410	Trail Grading, Fine Grading for Roadways, Base Course 2488 sy		\$1.05	SY	2488	SY per LN	0.9614		\$ 2,511.64	LN
66/2	Vehicle Battle Position 8 ea - Defilade (481 sf concrete x 12" thick w/Rebar)		\$9.83	SF	3848	SF per LN	1.04	1.08	\$ 42,485.98	LN
93410	Total Berm, 2184m x 2m x 1m = 5713 cu yds / Backfill & compaction		\$7.60	CY	5713.0	CY per LN	0.9614		\$ 41,744.20	LN
66/1	Target Bunker (36" reinforced Concrete Culvert. 4' deep) x 2		\$470.82	EA	2	EA per LN	1.04	1.08	\$ 1,057.65	LN
93210	Bank run gravel, Spread, 7850 cubic yards per Range		\$41.50	CY	7850.0	CY per LN	0.9614		\$ 313,210.36	LN
17/31	Urban Cluster / Bank Barn, 2 Story (20' x 20') ,D Low Cost x 7 Buildings		\$17.77	SF	2800.0	SF per LN	1.02	1.05	\$ 53,288.68	LN
								SUM	\$ 4,500,082.17	LN
								RUC	\$ 4,500,082.17	LN

FAC		1772	Armor Vehicle Unit Training Range	UM = EA		TC 25-8 Standard Size / DMPRC	1	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	DMPRC= 80 SATs / 12 MATs / 306 SITS / 45 MITS									
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 306 per range			\$7.93	SF	18972	SF per Rng	1.04	1.08	\$ 168,983.15
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	306	EA per Rng	1.00	1.08	\$ 143,758.80
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	306	EA per Rng	1.00	1.08	\$ 103,275.00
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 80 per Range			\$9.83	SF	37440	SF per Rng	1.04	1.08	\$ 413,377.14
51/3	MAT Emplacement 200M (200m x 1m= 2152 sf) 12" concrete wall			\$17.55	SF	25824	SF per Rng	1.03	1.08	\$ 504,152.14
51/3	MIT Emplacement 15M (15m x .5m=80.7 sqft) 12" concrete wall			\$17.55	SF	3631.5	SF per Rng	1.03	1.08	\$ 70,896.39
54/1	Service Switchgear, 200 Amps, Light Commercial			\$795.00	EA	137	EA per Rng	1.00	1.08	\$ 117,628.20
58/6	Trolleyway, 1 Ton, 656 ft / MAT 49 ft /MIT			\$17.00	LF	4132	LF per Rng	1.02	1.08	\$ 77,380.79
58/6	Trolley, Motorized, .5 ton 1 per MAT / MIT			\$2,657.50	EA	10	EA per Rng	1.02	1.08	\$ 29,275.02
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps			\$1,375.00	EA	137	EA per Rng	1.00	1.08	\$ 203,445.00
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT			\$160.00	EA	1852	EA per Rng	1.00	1.08	\$ 320,025.60
54/2	Underground Wiring, 2", plastic duct, 5105 ft Ave Distance			\$16.95	LF	1145514.5	LF per Rng	1.00	1.08	\$ 20,969,788.44
93410	Trail Grading, Fine Grading for Roadways, Base Course 7464 sy			\$1.05	SY	7464	SY per Rng	0.9614		\$ 7,534.93
66/2	Vehicle Battle Position 30 ea - Defilade (481 sf concrete x 12" thick w/Rebar)			\$9.83	SF	14430	SF per Rng	1.04	1.08	\$ 159,322.44
93410	Total Berm, 6552m x 2m x 1m = 17139 cu yds / Backfill & compaction			\$7.60	CY	17139.0	CY per Rng	0.9614		\$ 125,232.61
66/2	Machine gun bunker (144 sf concrete x 8" w/rebar) 4 per Range			\$7.93	SF	576	SF per Rng	1.04	1.08	\$ 5,130.42
93210	Bank run gravel, Spread, 44650 cubic yards per Range			\$41.50	CY	44650.0	CY per Rng	0.9614		\$ 1,781,508.63
17/31	Urban Cluster / Bank Barn, 2 Story (20' x 20') ,D Low Cost x 12 Buildings			\$17.77	SF	4800.0	SF per Rng	1.02	1.05	\$ 91,352.02
									SUM	\$ 25,292,066.71
									RUC	\$ 25,292,066.71

FAC		1773	Fire and Movement Range	UM = LN		TC 25-8 Standard Size / Fire and Movement Range	4	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	DMPRC= 6 SITS / lane									
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 6 per ln			\$7.93	SF	372	SF per LN	1.04	1.08	\$ 3,313.40
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	6	EA per LN	1.00	1.08	\$ 2,818.80
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	6	EA per LN	1.00	1.08	\$ 2,025.00
54/3	Outlet, Rigid Conduit, Good, 4 per SIT			\$160.00	EA	24	EA per LN	1.00	1.08	\$ 4,147.20
54/2	Underground Wiring, 2", plastic duct, 346 ft Ave Distance			\$16.95	LF	2076	LF per LN	1.00	1.08	\$ 38,003.26
93410	Berm, 150m x 3m x 4m = 2,354 cu yds / Backfill & compaction			\$7.60	CY	4708.0	CY per LN	0.9614		\$ 34,400.79
93210	Bank run gravel, Spread, 39 cubic yards per lane			\$41.50	CY	39.0	CY per LN	0.9614		\$ 1,556.08
									SUM	\$ 86,264.52
									RUC	\$ 86,264.52

FAC		1774	Squad Defense Range	UM = EA		TC 25-8 Standard Size / Squad Defense Range	1	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	SDR= 31 SITS									
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 31 per range			\$7.93	SF	1922	SF per Rng	1.04	1.08	\$ 17,119.21 EA
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	31	EA per Rng	1.00	1.08	\$ 14,563.80 EA
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	31	EA per Rng	1.00	1.08	\$ 10,462.50 EA
54/3	Outlet, Rigid Conduit, Good, 4 per SIT			\$160.00	EA	124	EA per Rng	1.00	1.08	\$ 21,427.20 EA
54/2	Underground Wiring, 2", plastic duct, 574 ft Ave Distance			\$16.95	LF	8152	LF per Rng	1.00	1.08	\$ 149,230.51 EA
66/2	2 man fighting position (104 sf concrete x 8" w/rebar) 5 per range			\$7.93	SF	520	EA per Rng	1.04	1.08	\$ 4,631.63 EA
93410	Berm, 300m x 2m x 1m = 785 cu yds / Backfill & compaction			\$7.60	CY	785.0	CY per FP	0.9614		\$ 5,735.90 EA
93210	Bank run gravel, Spread, 353 cubic yards per berm			\$41.50	CY	353.0	CY per FP	0.9614		\$ 14,084.49 EA
									SUM	\$ 237,255.24 EA
									RUC	\$ 237,255.24 EA

FAC		1775	Infantry Battle Course	UM = EA		TC 25-8 Standard Size / Infantry Squad Battle Course	1	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015		
Section/ CATCODE	TASK			Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	ISBC= 6 SATs / 1 MATs / 20 SITS / 6 MITS									
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 20 per range			\$7.93	SF	1240	SF per Rng	1.04	1.08	\$ 11,044.65 EA
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	20	EA per Rng	1.00	1.08	\$ 9,396.00 EA
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	20	EA per Rng	1.00	1.08	\$ 6,750.00 EA
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 6 per Range			\$9.83	SF	2808	SF per Rng	1.04	1.08	\$ 31,003.29 EA
51/3	MAT Emplacement 200M (200m x 1m= 2152 sf) 12" concrete wall			\$17.55	SF	2152	SF per Rng	1.03	1.08	\$ 42,012.68 EA
51/3	MIT Emplacement 15M (15m x .5m=80.7 sqft) 12" concrete wall			\$17.55	SF	484.2	SF per Rng	1.03	1.08	\$ 9,452.85 EA
54/1	Service Switchgear, 200 Amps, Light Commercial			\$795.00	EA	13	EA per Rng	1.00	1.08	\$ 11,161.80 EA
58/6	Trolleyway, 1 Ton, 656 ft / MAT 49 ft/MIT			\$17.00	LF	950	LF per Rng	1.02	1.08	\$ 17,790.84 EA
58/6	Trolley, Motorized, .5 ton 1 per MAT / MIT			\$2,657.50	EA	7	EA per Rng	1.02	1.08	\$ 20,492.51 EA
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps			\$1,375.00	EA	13	EA per Rng	1.00	1.08	\$ 19,305.00 EA
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT			\$160.00	EA	138	EA per Rng	1.00	1.08	\$ 23,846.40 EA
54/2	Underground Wiring, 2", plastic duct, 5105 ft Ave Distance			\$16.95	LF	111520	LF per Rng	1.00	1.08	\$ 2,041,485.12 EA
93410	Trail Grading, Fine Grading for Roadways, Base Course 2392 sy			\$1.05	SY	2392	SY per Rng	0.9614		\$ 2,414.73 EA
93210	Bank run gravel, Spread, 9225 cubic yards per Range			\$41.50	CY	9225.0	CY per Rng	0.9614		\$ 368,072.05 EA
66/2	Machine gun bunker (144 sf concrete x 8" w/rebar) 5 per range			\$7.93	SF	720	SF per Rng	1.04	1.08	\$ 6,413.02 EA
									SUM	\$ 2,620,640.95 EA
									RUC	\$ 2,620,640.95 EA

FAC		1776		Urban Combat Training Range		UM = EA		TC 25-8 Standard Size / Urban Assault Course		1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost					
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 26 per range			\$7.93	SF	1612	SF per Rng	1.04	1.08	\$ 14,358.05	EA				
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	26	EA per Rng	1.00	1.08	\$ 12,214.80	EA				
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	26	EA per Rng	1.00	1.08	\$ 8,775.00	EA				
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT			\$160.00	EA	104	EA per Rng	1.00	1.08	\$ 17,971.20	EA				
54/2	Underground Wiring, 2", plastic duct,			\$16.95	LF	8105	LF per Rng	1.00	1.08	\$ 148,370.13	EA				
85110	8" Thick Reinforced Concr Roadway 2,200 syds			\$54.00	SY	897	SY per Rng	0.9614		\$ 46,569.82	EA				
85110	Road, Asphalt, 3" thick			\$17.00	SY	1435	SY per Rng	0.9614		\$ 23,454.12	EA				
14/22	Shoothouse, Reinforced concrete(Armory, CDS) 12 ea, 600 sf			\$43.33	SF	7200	SF per Rng	1.04	1.06	\$ 343,922.34	EA				
93410	Total Berm, 500m x 2m x 3m = 3923 cu yds / Backfill & compaction			\$7.60	CY	3923.0	CY per Rng	0.9614		\$ 28,664.89	EA				
66/2	Machine gun bunker (144 sf concrete x 8" w/rebar) 4 per Range			\$7.93	SF	576	SF per Rng	1.04	1.08	\$ 5,130.42	EA				
93210	Bank run gravel, Spread, 4622 cubic yards per UAC			\$41.50	CY	4622.0	CY per Rng	0.9614		\$ 184,415.07	EA				
17/31	Urban Cluster / Bank Barn, 2 Story (20' x 20') ,D Low Cost x 3 Buildings			\$17.77	SF	4800.0	SF per Rng	1.02	1.05	\$ 91,352.02	EA				
										SUM	\$ 925,197.86	EA			
										RUC	\$ 925,197.86	EA			

FAC		1777		Convoy Live Fire Range		UM = FP		TC 25-8 Standard Size / Convoy Live Fire Range		1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost					
	FP for CLFR= 2 SATs / 2 MATs / 9 SITS / 1 MITS														
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 9 per FP			\$7.93	SF	558	SF per FP	1.04	1.08	\$ 4,970.09	FP				
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	9	EA per FP	1.00	1.08	\$ 4,228.20	FP				
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	9	EA per FP	1.00	1.08	\$ 3,037.50	FP				
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 2 per FP			\$9.83	SF	936	SF per FP	1.04	1.08	\$ 10,334.43	FP				
51/3	MAT Emplacement 200M (200m x 1m= 2152 sf) 12" concrete wall			\$17.55	SF	4304	SF per FP	1.03	1.08	\$ 84,025.36	FP				
51/3	MIT Emplacement 15M (15m x .5m=80.7 sqf) 12" concrete wall			\$17.55	SF	80.7	SF per FP	1.03	1.08	\$ 1,575.48	FP				
54/1	Service Switchgear, 200 Amps, Light Commercial			\$795.00	EA	5	EA per FP	1.00	1.08	\$ 4,293.00	FP				
58/6	Trolleyway, 1 Ton, 656 ft / MAT 49 ft /MIT			\$17.00	LF	1361	LF per FP	1.02	1.08	\$ 25,487.72	FP				
58/6	Trolley, Motorized, .5 ton 1 per MAT / MIT			\$2,657.50	EA	3	EA per FP	1.02	1.08	\$ 8,782.51	FP				
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps			\$1,375.00	EA	5	EA per FP	1.00	1.08	\$ 7,425.00	FP				
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT			\$160.00	EA	46	EA per FP	1.00	1.08	\$ 7,948.80	FP				
54/2	Underground Wiring, 2", plastic duct,			\$16.95	LF	13582	LF per FP	1.00	1.08	\$ 248,632.09	FP				
93410	Trail Grading, Fine Grading for Roadways, Base Course 1435 sy			\$1.05	SY	1435	SY per FP	0.9614		\$ 1,448.64	FP				
93410	Total Berm, 6552m x 2m x 1m = 17139 cu yds / Backfill & compaction			\$7.60	CY	17139.0	CY per FP	0.9614		\$ 125,232.61	FP				
93210	Bank run gravel, Spread, 431 cubic yards per Range			\$41.50	CY	431.0	CY per FP	0.9614		\$ 17,196.65	FP				
17/31	Urban Cluster / Bank Barn, 2 Story (20' x 20') ,D Low Cost x 2 Buildings			\$17.77	SF	4800.0	SF per FP	1.02	1.05	\$ 91,352.02	FP				
									SUM	\$ 645,970.08	FP				
									RUC	\$ 645,970.08	FP				

FAC		1781		Live Hand Grenade Range		UM =		FP		TC 25-8 Standard Size / Hand Grenade Familiarization Range		1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015							
Section/ CATCODE		TASK				Given		Units		Conversion				Curnt Cost Mult		Area Adjustnt		Cost			
93210		Bank run gravel, Spread, 205 cubic yards per FP				\$41.50		CY		205.0		CY per FP		0.9614				\$ 8,179.38		FP	
66/2		Throwing Bay (160 sf concrete x 8" w/rebar)				\$7.93		SF		160		SF per FP		1.04		1.08		\$ 1,425.12		FP	
66/2		Blast Wall 50M (50m x 3m= 1614 sf) 12" concrete wall				\$9.83		SF		1614		SF per FP		1.04		1.08		\$ 17,820.26		FP	
93410		Total Berm, 60m x 3m x 1m = 235 cu yds / Backfill & compaction				\$7.60		CY		235.0		CY per FP		0.9614				\$ 1,717.12		FP	
																SUM		\$ 27,424.76		FP	
																RUC		\$ 27,424.76		FP	

FAC		1782		Engineer Qualification Range		UM =		FP		RCPS Standard Size		10		Source		Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost			
		FP for EQR= 2 SATs / 9 SITS																	
66/2		SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 9 per FP				\$7.93		SF		558 SF per FP		1.04		1.08		\$ 4,970.09		FP	
54/1		Service Switchgear, 100 Amps, Light Commercial				\$435.00		EA		9 EA per FP		1.00		1.08		\$ 4,228.20		FP	
54/1		CircuitBreaker, 240-480 Volts, 20-60 Amps				\$312.50		EA		9 EA per FP		1.00		1.08		\$ 3,037.50		FP	
66/2		SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 2 Per FP				\$9.83		SF		936 SF per FP		1.04		1.08		\$ 10,334.43		FP	
51/3		MIT Emplacement 15M (15m x .5m=80.7 sqf) 12" concrete wall				\$17.55		SF		80.7 SF per FP		1.03		1.08		\$ 1,575.48		FP	
54/1		Service Switchgear, 200 Amps, Light Commercial				\$795.00		EA		2 EA per FP		1.00		1.08		\$ 1,717.20		FP	
54/1		CircuitBreaker, 240-480 Volts, 125 - 250 Amps				\$1,375.00		EA		2 EA per FP		1.00		1.08		\$ 2,970.00		FP	
54/3		Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT				\$160.00		EA		55 EA per FP		1.00		1.08		\$ 9,504.00		FP	
54/2		Underground Wiring, 2", plastic duct,				\$16.95		LF		2753 LF per FP		1.00		1.08		\$ 50,396.42		FP	
93410		Trail Grading, Fine Grading for Roadways, Base Course 1435 sy				\$1.05		SY		1435 SY per FP		0.9614				\$ 1,448.64		FP	
93410		Total Berm, 6552m x 2m x 1m = 17139 cu yds / Backfill & compaction				\$7.60		CY		17139.0 CY per FP		0.9614				\$ 125,232.61		FP	
93210		Bank run gravel, Spread, 431 cubic yards per Range				\$41.50		CY		431.0 CY per FP		0.9614				\$ 17,196.65		FP	
17/31		Urban Cluster / Bank Barn, 2 Story (20' x 20') ,D Low Cost x 2 Buildings				\$17.77		SF		4800.0 SF per FP		1.02		1.05		\$ 91,352.02		FP	
66/2		Machine gun bunker (144 sf concrete x 8" w/rebar) 4 per FP				\$7.93		SF		576 SF per FP		1.04		1.08		\$ 5,130.42		FP	
66/2		Blast Wall 100M (50m x 2m x 2 ea= 1614 sf) 12" concrete wall				\$9.83		SF		1614 SF per FP		1.04		1.08		\$ 17,820.26		FP	
														SUM		\$ 323,963.23		FP	
															RUC		\$ 323,963.23	FP	

FAC		1783		Light Demolition and Flame Training Range		UM =		FP		TC 25-8 Standard Size / Light Demolition Range		1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015							
Section/ CATCODE		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost					
66/2		Missile Proof Shelter (2896 sf concrete x 8" w/rebar)				\$7.93		SF		2896		SF per FP		1.04		1.08		\$ 25,794.60		FP	
66/2		Blast Wall 50M (100m x 3m= 3229 sf) 12" concrete wall				\$9.83		SF		3229		SF per FP		1.04		1.08		\$ 35,651.57		FP	
66/2		Steel / Timber Cutting Chamber x 2 (40ft x 40ft x 5 ft) 12" concrete				\$9.83		SF		1640		SF per FP		1.04		1.08		\$ 18,107.33		FP	
93410		Total Berm, 260m x 3m x 2m / Backfill & compaction				\$7.60		CY		2040.0		CY per FP		0.9614				\$ 14,906.03		FP	
																SUM		\$ 61,446.17		FP	
																RUC		\$ 61,446.17		FP	

FAC 1790		Miscellaneous Training Facility		UM = EA		RCPS Standard Size 1		Source Marshall & Swift Valuation; October 2015 PAX Newsletter 3.2.2, Dated 30 Sept 2015	
Section/ CATCODE	TASK	Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 6 per rng	\$7.93	SF	372	SF per Rng	1.04	1.08	\$ 3,313.40	EA
54/1	Service Switchgear, 100 Amps, Light Commercial	\$435.00	EA	6	EA per Rng	1.00	1.08	\$ 2,818.80	EA
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps	\$312.50	EA	6	EA per Rng	1.00	1.08	\$ 2,025.00	EA
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 2 per Range	\$9.83	SF	936	SF per Rng	1.04	1.08	\$ 10,334.43	EA
54/1	Service Switchgear, 200 Amps, Light Commercial	\$795.00	EA	2	EA per Rng	1.00	1.08	\$ 1,717.20	EA
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps	\$1,375.00	EA	2	EA per Rng	1.00	1.08	\$ 2,970.00	EA
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT	\$160.00	EA	48	EA per Rng	1.00	1.08	\$ 8,294.40	EA
54/2	Underground Wiring, 2", plastic duct,	\$16.95	LF	905	LF per Rng	1.00	1.08	\$ 16,566.93	EA
93410	Trail Grading, Fine Grading for Roadways, Base Course 1913 sy	\$1.05	SY	1913	SY per Rng	0.9614		\$ 1,931.18	EA
93410	Total Berm, 400m x 2m x 1m = 1046 cu yds / Backfill & compaction	\$7.60	CY	1046	CY per Rng	0.9614		\$ 7,643.00	EA
93210	Bank run gravel, Spread, 628 cubic yards per Range	\$41.50	CY	628.0	CY per Rng	0.9614		\$ 25,056.83	EA
17/31	Urban Cluster / Bank Barn, 2 Story (20' x 20'), D Low Cost x 2 Buildings	\$17.77	SF	800	SF per Rng	1.02	1.05	\$ 15,225.34	EA
66/2	Machine gun bunker (144 sf concrete x 8" w/rebar) 2 per Range	\$7.93	SF	288	SF per Rng	1.04	1.08	\$ 2,565.21	EA
							SUM	\$ 100,461.70	EA
							RUC	\$ 100,461.70	EA

FAC 1791		Aircraft Weapons Calibration Range		UM = EA		TC 25-8 Standard Size / Boresight, Screening and Harmonization Range 1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015	
Section/ CATCODE	TASK	Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
	BSHR= 8 SATs / 8 SITS								
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 8 per range	\$7.93	SF	496	SF per Rng	1.04	1.08	\$ 4,417.86	EA
54/1	Service Switchgear, 100 Amps, Light Commercial	\$435.00	EA	8	EA per Rng	1.00	1.08	\$ 3,758.40	EA
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps	\$312.50	EA	8	EA per Rng	1.00	1.08	\$ 2,700.00	EA
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 8 per Range	\$9.83	SF	3744	SF per Rng	1.04	1.08	\$ 41,337.71	EA
54/1	Service Switchgear, 200 Amps, Light Commercial	\$795.00	EA	8	EA per Rng	1.00	1.08	\$ 6,868.80	EA
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps	\$1,375.00	EA	8	EA per Rng	1.00	1.08	\$ 11,880.00	EA
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT	\$160.00	EA	72	EA per Rng	1.00	1.08	\$ 12,441.60	EA
54/2	Underground Wiring, 2", plastic duct,	\$16.95	LF	4248	LF per Rng	1.00	1.08	\$ 77,763.89	EA
93410	Trail Grading, Fine Grading for Roadways, Base Course 1913 sy	\$1.05	SY	1913	SY per Rng	0.9614		\$ 1,931.18	EA
85110	Concrete Pad, 40ft x 40 ft, 8" reinforced	\$54.00	SY	177	SY per Rng	0.9614		\$ 9,189.36	EA
							SUM	\$ 172,288.80	EA
							RUC	\$ 172,288.80	EA

FAC		1792		Attack Helicopter Weapons Range		UM = EA		TC 25-8 Standard Size / Aerial Gunnery Range		1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015			
Section/ CATCODE	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost					
	ARG= 50 SATs / 8 MATs / 246 SITS / 35 MITS														
66/2	SIT Emplacement (62 sf concrete x 8" thick w/Rebar) 246 per range			\$7.93	SF	15252	SF per Rng	1.04	1.08	\$ 135,849.20	EA				
54/1	Service Switchgear, 100 Amps, Light Commercial			\$435.00	EA	246	EA per Rng	1.00	1.08	\$ 115,570.80	EA				
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps			\$312.50	EA	246	EA per Rng	1.00	1.08	\$ 83,025.00	EA				
66/2	SAT Emplacement (468 sf concrete x 12" thick w/Rebar) 50 per range			\$9.83	SF	23400	SF per Rng	1.04	1.08	\$ 258,360.71	EA				
51/3	MAT Emplacement 200M (200m x 1m= 2152 sf) 12" concrete wall			\$17.55	SF	17216	SF per Rng	1.03	1.08	\$ 336,101.43	EA				
51/3	MIT Emplacement 15M (15m x .5m=80.7 sqf) 12" concrete wall			\$17.55	SF	2824.5	SF per Rng	1.03	1.08	\$ 55,141.64	EA				
54/1	Service Switchgear, 200 Amps, Light Commercial			\$795.00	EA	93	EA per Rng	1.00	1.08	\$ 79,849.80	EA				
58/6	Trolleyway, 1 Ton, 656 ft / MAT 49 ft /MIT			\$17.00	LF	6963	LF per Rng	1.02	1.08	\$ 130,397.49	EA				
58/6	Trolley, Motorized, .5 ton 1 per MAT / MIT			\$2,657.50	EA	43	EA per Rng	1.02	1.08	\$ 125,882.59	EA				
54/1	CircuitBreaker, 240-480 Volts, 125 - 250 Amps			\$1,375.00	EA	93	EA per Rng	1.00	1.08	\$ 138,105.00	EA				
54/3	Outlet, Rigid Conduit, Good, 5 per SAT / 4 per MAT, MIT, SIT			\$160.00	EA	1406	EA per Rng	1.00	1.08	\$ 242,956.80	EA				
54/2	Underground Wiring, 2", plastic duct			\$16.95	LF	29527	LF per Rng	1.00	1.08	\$ 540,521.26	EA				
93410	Trail Grading, Fine Grading for Roadways, Base Course 10525 sy			\$1.05	SY	10525	SY per Rng	0.9614		\$ 10,625.02	EA				
93410	Total Berm, 2540m x 2m x 1m = 6644 cu yds / Backfill & compaction			\$7.60	CY	6644.0	CY per Rng	0.9614		\$ 48,546.91	EA				
93210	Bank run gravel, Spread, 1569 cubic yards per Range			\$41.50	CY	1569.0	CY per Rng	0.9614		\$ 62,602.17	EA				
17/31	Urban Cluster / Bank Barn, 2 Story (20' x 20') ,D Low Cost x 13 Buildings			\$17.77	SF	5200.0	SF per Rng	1.02	1.05	\$ 98,964.68	EA				
									SUM	\$ 2,462,500.50	EA				
									RUC	\$ 2,462,500.50	EA				

FAC		1794		Air Defense Range		UM =		FP		TC 25-8 Standard Size / Air Defense Firing Range		1	Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015								
Section/ CATCODE		TASK				Given		Units		Conversion			Curnt Cost Mult		Area Adjustnt		Cost				
66/2		Vehicle Battle Position - Defilade (481 sf concrete x 12" thick w/Rebar)				\$9.83		SF		481		SF per FP		1.04		1.08		\$ 5,310.75		FP	
93410		Berm, 90m x 2m x 3m = 706 cu yds / Backfill & compaction				\$7.60		CY		706.0		CY per FP		0.9614				\$ 5,158.66		FP	
93210		Bank run gravel, Spread, 327 cubic yards per range				\$41.50		CY		81.8		CY per FP		0.9614				\$ 3,261.78		FP	
																SUM		\$ 10,469.41		FP	
																RUC		\$ 10,469.41		FP	

FAC 1795		Fire And Rescue Training Facility		UM = EA		Design Size 1		Source Marshall and Swift Valuation; October 2015			
Section	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
15/29	Fire Training Tower			\$ 13.26	CU FT	170,903 CF to EA		1.07	1.08	\$ 2,618,790.42	EA
15/37	Sprinkler, 10,000 SF, wet, low			\$ 3.07	SF	7,957 SF to EA		1.07	1.08	\$ 28,228.99	EA
	RPAD Average Size CU FT per facility			170,903					SUM	\$ 2,647,019.41	EA
									RUC	\$ 2,647,019.41	EA

FAC 1796		Urban Combat Training Area, Non-Fire		UM = SF		RPAD Ave Size 19600		Source Marshall & Swift Valuation; October 2015 PAX Newsletter 3.2.2, Dated 30 Sept 2015	
Section/ CATCODE	TASK	Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
17/31	Urban Cluster / Bank Barn, 2 Story (30' x 30') ,D Low Cost x 4 Buildings	\$17.77	SF			1.02	1.05	\$ 19.03	SF
51/3	Slab on Grade, 6" reinforced	\$4.60	SF			1.03	1.08	\$ 5.12	SF
14/22	Structure, Reinforced concrete(Armory, CDS) 12 ea, 1800 sf	\$43.33	SF			1.04	1.06	\$ 47.77	SF
						Weighted Average		\$ 41.07	SF
54/1	Service Switchgear, 100 Amps, Light Commercial	\$435.00	EA	0.025	EA per SF	1.00	1.08	\$ 11.75	SF
54/1	CircuitBreaker, 240-480 Volts, 20-60 Amps	\$312.50	EA	0.025	EA per SF	1.00	1.08	\$ 8.44	SF
54/2	Underground Wiring, 2", plastic duct, 2400 LF total	\$16.95	LF	0.12	LF per SF	1.00	1.08	\$ 2.24	SF
85110	8" Thick Reinforced Concrct Roadway 2,200 syds	\$54.00	SY	1.01	SY per SF	0.9614		\$ 52.44	SF
85110	Road, Asphalt, 3" thick 1500 sy	\$17.00	SY	0.69	SY per SF	0.9614		\$ 11.28	SF
51/2	Utility tunnel, 3"-5" wall, medium soil, 5'x7' x-sctn, 504 lf	\$26.50	CF	0.90	CF to SF	1.03	1.08	\$26.53	SF
66/2	Machine gun bunker (144 sf concrete x 8" w/rebar). 4 ea	\$7.93	SF	0.22	EA per SF	1.04	1.08	\$ 1.96	SF
93210	Bank run gravel, Spread, 4622 cubic yards per Range	\$41.50	CY	0.22	CY per SF	0.9614		\$ 8.66	SF
93410	Backfill & compaction, 2020 cy	\$7.60	CY	0.10	CY per SF	0.9614		\$ 0.75	SF
							SUM	\$ 165.11	SF
							RUC	\$ 165.11	SF

FAC 1797		Hand Grenade Range, Non-Firing		UM = FP		TC 25-8 Standard Size / Hand Grenade Qualification Course 1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015	
Section/ CATCODE	TASK	Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/2	2 man fighting position (104 sf concrete x 8" w/rebar)	\$7.93	SF	104	SF per FP	1.04	1.08	\$ 926.33	FP
66/2	Machine gun bunker (144 sf concrete x 8" w/rebar) 2 per FP	\$7.93	SF	288	SF per FP	1.04	1.08	\$ 2,565.21	FP
93410	Target Berm, 1m x 1m x 2m x 4 targets/lane = 2.6 cu yds / Backfill & compaction	\$7.60	CY	10.4	CY per FP	0.9614		\$ 75.99	FP
93410	Berm, 40m x 1m x 2m = 104 cu yds / Backfill & compaction	\$7.60	CY	26.0	CY per FP	0.9614		\$ 189.98	FP
93210	Bank run gravel, Spread, 104 cubic yards per berm	\$41.50	CY	26.0	CY per FP	0.9614		\$ 1,037.38	FP
							SUM	\$ 4,794.89	FP
							RUC	\$ 4,794.89	FP

FAC 1798		Infiltration Course, Live Fire		UM = EA		TC 25-8 Standard Size / Infiltration Course 1		Source Marshall & Swift Valuation; October 2015 TC 25-8 Training Ranges; 20 May 2010 USACE Ranges and Training Land Program; 8 December 2014 PAX Newsletter 3.2.2, Dated 30 Sept 2015	
Section/ CATCODE	TASK	Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/2	Blast Wall 360M (360m x 2m= 7750 sf) 12" concrete wall	\$9.83	SF	7750	SF per Rng	1.04	1.08	\$ 85,568.18	EA
66/2	Machine gun bunker (144 sf concrete x 8" w/rebar) 3 per Range	\$7.93	SF	432	SF per Rng	1.04	1.08	\$ 3,847.81	EA
93410	Total Berm, 360m x 2m x 2m = 1722 cu yds / Backfill & compaction	\$7.60	CY	1722	CY per Rng	0.9614		\$ 12,582.45	EA
93210	Bank run gravel, Spread, 205 cubic yards per Rng	\$41.50	CY	205.0	CY per Rng	0.9614		\$ 8,179.38	EA
							SUM	\$ 110,177.82	EA
							RUC	\$ 110,177.82	EA

FAC	2111	Aircraft Maintenance Hangar	UM =	SF		Source	Guidance Unit Cost, May 2016	
		Description	Reference Size	UoM			October 2015 Unit Cost	
		Maintenance Hangar, GP, Low-Mid Bay	61,000	SF			\$279.00	SF
						RUC	\$279.00	SF

FAC	2112	Aircraft Maintenance Shop	UM =	SF	RPAD Ave Size	10987	Source	Marshall and Swift Valuation; October 2015	
Section		TASK	Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
14/14		Industrial, Light Mfr, C, good	\$ 67.33	SF			1.05	1.08	\$ 76.35
14/16		Industrial, Engineering Bldg, A, Excellent	\$ 175.16	SF			1.02	1.08	\$ 192.96
14/29		Maintenance Hangar, C, Excellent	\$ 110.89	SF			1.03	1.10	\$ 125.64
14/37		Sprinkler, 15,000 SF, wet, excellent	\$ 3.98	SF			1.05	1.08	\$ 4.51
							Average of three Building types		\$ 131.65
								SUM	\$ 136.16
							RUC		\$ 136.16

FAC	2113	Aircraft Corrosion Control Hangar	UM =	SF		Source	Guidance Unit Cost, March 2013	
		Description	Reference Size	UoM			October 2012 Unit Cost	
		Aircraft Corrosion Control Maintenance Hangar	36,000	SF			\$342.00	SF
			DoD SPI Inflation per UFC 3-701-1 Table 4-2				1.1214	
						RUC	\$ 383.53	SF

FAC	2114	Aircraft Engine Test Building	UM =	SF		Source	USACE PAX Newsletter 3.2.2 Dated 15 Sep 2010	
CATCODE		Description	Reference Size	Unit Cost	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost
62010		Underground Administrative Facility	13,000	\$ 231.00			1.0561	\$243.96
						RUC		\$243.96

FAC	2115	Aircraft Maintenance Hangar, Depot	UM =	SF		Source	Guidance Unit Cost, May 2016	
		Description	Reference Size	UoM			October 2015 Unit Cost	
		Maintenance Hangar, High Bay	70,000	SF			\$240.00	SF
						RUC	\$240.00	SF

FAC	2116	Aircraft Maintenance Shop, Depot	UM =	SF		Source	USACE PAX Newsletter 3.2.2 Dated 24 July 2014	
CATCODE		Description	Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost
21120		Aircraft Component Repair Shop (Machine Shop)	\$ 267.67	32,000			0.9805	\$262.45
						RUC		\$262.45

FAC	2118	Aircraft Engine Test Facility	UM =	EA	RPAD Ave Size	11,404	Source	USACE PAX Newsletter 3.2.2 Dated 4 January 2011	
CATCODE		Description	Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
21140		Aircraft Engine Test facility	\$ 229.00	26,000			1.0375	\$2,709,473.62	EA
		Average size extracted from 2015 RPAD Facility Table					RUC	\$2,709,473.62	EA

FAC		2121		Missile Maintenance/Assembly Building		UM =		SF		RPAD Ave Size		11137		Source				Marshall and Swift Valuation; October 2015					
Section		TASK				Given		Units		Conversion				Curnt Cost Mult		Area Adjustnt		Cost					
14/15		Industrial, Heavy B Good				\$		182.20		SF				1.06		1.10		\$		212.45		SF	
14/37		Sprinkler, 15,000 SF, dry, excellent				\$		5.20		SF				1.06		1.10		\$		6.06		SF	
58/6		Bridge Crane, 25T, 2 ea, Span = 75 ft				\$		221,000.00		EA		11137 SF Convers		1.02		1.08		\$		43.72		SF	
58/6		Craneway, 25T, 200LF				\$		286.50		LF		200 LF Convers		1.02		1.08		\$		5.67		SF	
14/36		Heating, radiant floor or ceiling				\$		7.85		SF				1.06		1.10		\$		9.15		SF	
																SUM		\$		277.05		SF	
																RUC		\$		277.05		SF	

FAC		2124	Missile Test Tower		UM = EA		Design Footprint 14400		Source Marshall and Swift Valuation; October 2015			
Section		TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
67/6		100' Tower, Self Supporting, High Cost			\$ 66,250.00	EA			1.03	1.08	\$ 73,696.50	EA
66/2		Concrete, 12" bar reinforced			\$ 9.43	SF	14,400 SF to EA		1.04	1.08	\$ 152,521.57	EA
58/6		Trollyway, 7.5 Tons, High Cost; Assume 100' track			\$ 114.00	LF	100 LF to EA		1.02	1.08	\$ 11,629.08	EA
58/6		Trolly, Geared, 7.5 Tons			\$ 2,800.00	EA			1.02	1.08	\$ 3,084.48	EA
		100' Tower Height based on 2015 RPAD								Sum	\$ 240,931.63	EA
										RUC	\$ 240,931.63	EA

FAC		2134		Marine Maintenance Support Facility		UM =		SF		RPAD Ave Size		14648		Source		Marshall and Swift Valuation; October 2015									
Section		TASK				Given		Units		Conversion		Currt Cost Mu		Area Adjustnt		Cost									
14/14		Maintenance Hangar, C, Good				\$		67.33		SF						1.05		1.08		\$		76.35		SF	
58/6		Bridge Crane, 25T, 1 ea, Span = 75 ft				\$		221,000.00		EA		14648		SF Conversion		1.02		1.08		\$		16.62		SF	
58/6		Craneway, 25T, 100LF				\$		286.50		LF		100		LF Conversion		1.02		1.08		\$		2.15		SF	
14/37		Sprinkler, dry, 15,000 SF, excellent				\$		5.20		SF						1.05		1.08		\$		5.90		SF	
																		SUM		\$		101.02		SF	
																		RUC		\$		101.02		SF	

FAC	2142	Vehicle Maintenance Shop, Depot	UM =	SF		Source	Guidance Unit Cost, May 2016		
	Description	Reference Size	UoM			October 2015 Unit Cost			
	Military Vehicle Maintenance, Large	58,000	SF			\$190.00			SF
						RUC	\$190.00	SF	

FAC		2144	Vehicle Maintenance Shop, Reserve		UM = SF		RPAD Ave Size 7,263		USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015						
CATCODE		Description			Unit Cost		Reference Size		Conversion		Inflation Adjustment by MCP Index		Adjusted Cost		
21409		Organizational Maint Shop, Small <10,000 SF			\$ 273.00		8,700				0.9614		\$262.47		SF
											RUC	\$262.47		SF	

FAC 2145		Vehicle Maintenance Facility	UM = EA		RPAD Ave Size		USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index		Adjusted Cost	
14955	Wash Rack / Platform		\$ 116,256.00	1,600	EA		0.9614		\$111,772.19	EA
14960	Grease Rack (USACE PAX dated 4 Jan 2011)		\$ 62,680.00		EA		1.0375		\$65,030.21	EA
			Average				RUC		\$88,401.20	EA

FAC	2147	Vehicle Maintenance Shed	UM =	SF	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index	Adjusted Cost	
21470	POL Storage Bldg - TEMF reference size = 520 sf		\$ 193.00	620	SF		0.9614	\$185.56	SF
21470	Hazardous Waste Storage Bldg - TEMF Ref. size = 500 sf		\$ 181.00	650	SF		0.9614	\$174.02	SF
			635		SF	Average		RUC	\$179.79 SF

FAC	2152	Weapon Maintenance Shop, Depot	UM =	SF	RPAD Ave Size	10200	Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/15	Industrial Building,C, Average		\$ 108.99	SF			1.05	1.08	\$ 123.59	SF
58/6	Bridge Crane, 20' span, 5T capacity, EA, 2 EA		\$ 85,000.00	2 EA	10200	SF Conversion	1.02	1.08	\$ 18.36	SF
58/6	Craneway, 5T, 100LF		\$ 225.00	LF	100	LF Conversion	1.02	1.08	\$ 2.43	SF
14/37	Sprinkler, 10k sf, wet, good		\$ 4.28	SF			1.05	1.08	\$ 4.85	SF
								Sum	\$ 149.24	SF
								RUC	\$ 149.24	SF

FAC	2154	Weapon Maintenance Facility Depot	UM =	SF	RPAD Ave Size	11272	Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/15	Industrial Building,C, Average		\$ 108.99	SF			1.05	1.08	\$ 123.59	SF
58/6	Bridge Crane, 20' span, 5T capacity, EA, 1 EA		\$ 85,000.00	1 EA	11272	SF Conversion	1.02	1.08	\$ 8.31	SF
58/6	Craneway, 5T, 75 LF		\$ 225.00	LF	75	LF Conversion	1.02	1.08	\$ 1.65	SF
14/37	Sprinkler, 10k sf, wet, good		\$ 4.28	SF			1.05	1.08	\$ 4.85	SF
								Sum	\$ 138.40	SF
								RUC	\$ 138.40	SF

FAC	2172	Electronic and Communication Maintenance Shop, Depot	UM =	SF	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 24 July 2014			
CATCODE	Description		Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index	Adjusted Cost	
21710	Electronics Maint Shop - Depot Level		\$ 152.35	17,000	SF		0.9805	\$149.38	SF
								RUC	\$149.38 SF

FAC	2173	Electronic and Communication Maintenance Facility	UM =	EA	Design Size	1	Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
67/6	Triangular Guyed Tower, 54" Master TV systems, high cost		\$ 925.00	FT	100	FT to EA	1.03	1.08	\$ 102,897.00	EA
	24 active assets in inventory, all antenna / collimation towers									
								RUC	\$ 102,897.00	EA

FAC	2182	Installation Support Equipment Maintenance Shop	UM =	SF			Guidance Unit Cost, May 2016			
	Description		Reference Size	UoM			October 2015 Unit Cost			
	Installation Maintenance Shop, GP		6,000	SF			\$437.00			
								RUC	\$437.00	SF

FAC	2184	Parachute And Dingy Maintenance Shop	UM =	SF			Guidance Unit Cost, March 2013			
	Description		Reference Size	UoM			October 2012 Unit Cost			
	Parachute And Dingy Maintenance Shop		6,600	SF			\$198.00			
			DoD SPI Inflation per UFC 3-701-1 Table 4-2				1.1214			
								RUC	\$ 222.04	SF

FAC	2185	Installation Support Equipment Maintenance Shed	UM =	SF	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost	Reference Size	UoM	Inflation Adjustment by MCP Index	Adjusted Cost	
44224	Organizational Storage Bldg		\$ 126.00	7,690	SF	0.9614	\$121.14	SF
						RUC	\$121.14	SF

FAC	2191	Facility Engineer Maintenance Shop	UM =	SF	RPAD Ave Size	5584	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
14/14	Industrial Building, Light, C, Good		\$ 67.33	SF			1.05	1.08	\$ 76.35
14/37	Sprinkler, 5k sf, wet, good		\$ 4.81	SF			1.05	1.08	\$ 5.45
14/36	Heating/Cooling, office area		\$ 17.80	SF	33%	office Area	1.05	1.08	\$ 6.66
14/36	Space Heaters only in storage/shops		\$ 2.05	SF	67%	Shop Area	1.05	1.08	\$ 1.56
								Sum	\$ 85.05
							RUC	\$ 85.05	SF

FAC	2192	Facility Engineer Maintenance Facility	UM =	EA	RPAD Ave Size	5584	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mu	Area Adjustnt	Cost
14/14	Industrial Building, D, Pole, Good		\$ 55.37	SF	5584	SF to EA	1.04	1.05	\$ 337,631.20
14/37	Sprinkler, 5k sf, wet, average		\$ 3.31	SF	5584	SF to EA	1.04	1.05	\$ 20,183.48
	Average Size taken from FAC 2191							Sum	\$ 357,814.68
							RUC	\$ 357,814.68	EA

FAC	2211	Aircraft Production Plant	UM =	SF	RPAD Ave Size	86399	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mu	Area Adjustnt	Cost
14/15	Industrials, Heavy, C good		\$ 145.76	SF			1.05	1.08	\$ 165.29
58/6	Bridge Crane, 25T, 2 ea, Span = 100 ft		\$ 264,000.00	2 EA	86399	SF Conversion	1.02	1.08	\$ 6.73
58/6	Craneway, 25T, 400LF		\$ 286.50	LF	400	LF Conversion	1.02	1.08	\$ 1.46
14/37	Sprinkler, dry, 100,000 SF, excellent		\$ 3.64	SF			1.05	1.08	\$ 4.13
								Sum	\$ 177.61
							RUC	\$ 177.61	SF

FAC	2221	Missile Production Plant	UM =	SF	RPAD Ave Size	12843	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
14/15	Industrials, Heavy, C, good		\$ 145.76	SF			1.05	1.08	\$ 165.29
58/6	Bridge Crane, 10T, 1 ea, Span = 50 ft		\$ 129,000.00	1 EA	14405	SF Conversion	1.02	1.08	\$ 9.87
58/6	Craneway, 25T, 100 LF		\$ 286.50	LF	100	LF Conversion	1.02	1.08	\$ 2.19
14/37	Sprinkler, dry, 15,000 SF, excellent		\$ 5.20	SF			1.05	1.08	\$ 5.90
								Sum	\$ 183.24
							RUC	\$ 183.24	SF

FAC	2231	Ship Production Plant	UM =	SF	RPAD Ave Size	28242	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/15	Industrials, Heavy, C, good		\$ 145.76	SF			1.05	1.08	\$ 165.29	SF
58/6	Bridge Crane, 25T, 1 ea, Span = 50 ft		\$ 185,000.00	1 EA	28242	SF Conversion	1.02	1.08	\$ 7.22	SF
58/6	Craneway, 25T, 200LF		\$ 286.50	LF	200	LF Conversion	1.02	1.08	\$ 2.24	SF
14/37	Sprinkler, dry, 30,000 SF, excellent		\$ 4.56	SF			1.05	1.08	\$ 5.17	SF
								Sum	\$ 179.91	SF
								RUC	\$ 179.91	SF

FAC	2241	Tank/Automotive Production Plant	UM =	SF	RPAD Ave Size	53159	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/15	Industrials, Heavy, C, good		\$ 145.76	SF			1.05	1.08	\$ 165.29	SF
58/6	Bridge Crane, 25T, 2 ea, Span =100 ft		\$ 264,000.00	EA	53159	SF Conversion	1.02	1.08	\$ 10.94	SF
58/6	Craneway, 25T, 400LF		\$ 286.50	LF	400	LF Conversion	1.02	1.08	\$ 2.37	SF
14/37	Sprinkler, dry, 60,000 SF, excellent		\$ 3.98	SF			1.05	1.08	\$ 4.51	SF
								Sum	\$ 183.12	SF
								RUC	\$ 183.12	SF

FAC	2242	Tank/Automotive Production Facility	UM =	SF	RPAD Ave Size	1576	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/15	Industrials, C Mill, good		\$ 92.97	SF			1.05	1.08	\$ 105.43	SF
14/37	Sprinkler, wet, 2,500 SF, excellent		\$ 5.43	SF			1.05	1.08	\$ 6.16	SF
								Sum	\$ 111.59	SF
								RUC	\$ 111.59	SF

FAC	2251	Weapon Production Plant	UM =	SF	RPAD Ave Size	46323	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/15	Industrials, Heavy, C, good		\$ 145.76	SF			1.05	1.08	\$ 165.29	SF
58/6	Bridge Crane, 10T capacity, 50' span 2 EA		\$ 129,000.00	EA	46323	SF Conversion	1.02	1.08	\$ 6.14	SF
58/6	Craneway, 25T, 200LF		\$ 286.50	LF	200	LF Conversion	1.02	1.08	\$ 1.36	SF
14/37	Sprinkler, dry, 50,000 SF, excellent		\$ 4.14	SF			1.05	1.08	\$ 4.69	SF
								Sum	\$ 177.48	SF
								RUC	\$ 177.48	SF

FAC	2261	Ammunition Production Plant	UM =	SF	RPAD Ave Size	5467	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/15	Industrials, Heavy, B, excellent		\$ 226.66	SF			1.06	1.10	\$ 264.29	SF
58/6	Bridge Crane, 5T capacity, 30' span 1 EA		\$ 93,750.00	EA	5467	SF Conversion	1.02	1.08	\$ 18.89	SF
58/6	Craneway, 5T, Assume 100 ft building length		\$ 215.00	LF	100	LF Conversion	1.02	1.08	\$ 4.33	SF
14/37	Sprinkler, dry, 5,000 SF, excellent		\$ 6.37	SF			1.06	1.10	\$ 7.43	SF
								Sum	\$ 294.94	SF
								RUC	\$ 294.94	SF

FAC	2262	Ammunition Production Facility		UM =	SF	RPAD Ave Size		2957	Source Marshall and Swift Valuation; October 2015		
Section	TASK			Given	Units	Conversion			Currt Cost Mult	Area Adjustnt	Cost
14/15	Industrials, C Mill, good			\$ 92.97	SF				1.05	1.08	\$ 105.43 SF
14/37	Sprinkler, wet, 2,500 SF, excellent			\$ 5.43	SF				1.05	1.08	\$ 6.16 SF
										Sum	\$ 111.59 SF
										RUC	\$ 111.59 SF

FAC	2264	Ammunition Demilitarization Plant		UM =	SF	RPAD Ave Size		Source USACE PAX Newsletter 3.2.2 Dated 20 Mar 2009		
CATCODE	Description			Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index	Adjusted Cost	
21630	Ammunition DEMIL Facility			\$ 1,064.00	82,500	SF		1.0741	\$1,142.89	SF
									RUC	\$1,142.89 SF

FAC	2265	Ammunition Demilitarization Facility		UM =	EA	Design Size		1	Source Marshall and Swift Valuation; October 2015		
Section	TASK			Given	Units	Conversion			Currt Cost Mult	Area Adjustnt	Cost
51/2	Cut and Fill and compact, medium earth			\$ 6.12	CY	9,910 CY to EA			1.03	1.08	\$67,469.20 EA
51/2	Haul and Fill, 5CY Truck, 3 miles			\$ 11.40	CY	9,910 CY to EA			1.03	1.08	\$125,677.91 EA
51/2	Gabions filled with stone			\$ 160.00	SY	298 SY to EA			1.03	1.08	\$53,039.23 EA
51/2	Geotextile fabric			\$ 2.53	SY	298 SY to EA			1.03	1.08	\$838.68 EA
	Average size extracted from RPAD Facility Table			9,910	SY						
	Burn pad/holding pad perimeter = 298 Yards			298	SY					SUM	\$247,025.02 EA
										RUC	\$247,025.02 EA

FAC	2271	Electronic and Communication Production Plant		UM =	SF	2015 RPAD Ave Size		65085	Source Marshall and Swift Valuation; October 2015		
Section	TASK			Given	Units	Conversion			Currt Cost Mult	Area Adjustnt	Cost
14/14	Industrials, light manufacturing, B, Average			\$ 71.84	SF				1.06	1.10	\$ 83.77 SF
14/37	Sprinkler, dry 60,000 SF, excellent			\$ 3.98	SF				1.06	1.10	\$ 4.64 SF
										Sum	\$ 88.41 SF
										RUC	\$ 88.41 SF

FAC	2281	Miscellaneous Support Production Plant		UM =	SF	2015 RPAD Ave Size		10089	Source Marshall and Swift Valuation; October 2015		
Section	TASK			Given	Units	Conversion			Currt Cost Mult	Area Adjustnt	Cost
14/14	Industrials, light manufacturing, B, Average			\$ 71.84	SF				1.06	1.10	\$ 83.77 SF
58/6	Bridge Crane, 10T capacity, 50' span 2 EA			\$ 129,000.00	EA	10089 SF Conversion			1.02	1.08	\$ 28.17 SF
58/6	Craneway, 10T, 100LF			\$ 232.50	LF	100 LF Conversion			1.02	1.08	\$ 2.54 SF
14/37	Sprinkler, dry, 10,000 SF, good			\$ 4.68	SF				1.06	1.10	\$ 5.46 SF
										Sum	\$ 119.93 SF
										RUC	\$ 119.93 SF

FAC	2291	Construction Material Production Plant		UM =	EA	Design Size		1	Source Marshall and Swift Valuation; October 2015		
Section	TASK			Given	Units	Conversion			Currt Cost Mult	Area Adjustnt	Cost
14/41	Asphalt Plant, assume 180 tons / hour production rate			\$ 8,725.00	t/hr	180 tons / hour			1.05	1.08	\$ 1,780,947.00 EA
										Sum	\$ 1,780,947.00 EA
										RUC	\$ 1,780,947.00 EA

FAC	3101	RDT&E Laboratory	UM =	SF	RPAD Ave Size	15424	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/17	Lab, C, Excellent, with complete HVAC		\$ 281.98	SF			1.05	1.08	\$ 319.77	SF
14/16	Elevators - included with Lab, C, excellent		-						-	
14/37	Sprinkler, dry, 15,000 SF, excellent		\$ 5.20	SF			1.05	1.08	\$ 5.90	SF
								Sum	\$ 325.66	SF
								RUC	\$ 325.66	SF

FAC	3102	Medical Research Laboratory	UM =	SF	RPAD Ave Size	43287	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/17	Lab, A, Good		\$ 285.06	SF			1.03	1.10	\$ 322.97	SF
14/16	Elevators - included with Lab, A, good		-						-	
14/17	HVAC for Labs		\$ 43.85	SF			1.03	1.10	\$ 49.68	SF
14/37	Sprinkler, dry, 40,000 SF, excellent		\$ 4.31	SF			1.03	1.10	\$ 4.88	SF
								Sum	\$ 377.54	SF
								RUC	\$ 377.54	SF

FAC	3103	Biosafety Level 3 Laboratory	UM =	SF	RPAD Ave Size	7693	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/17	Lab, A, Good, with complete HVAC		\$ 285.06	SF			1.03	1.10	\$ 322.97	SF
14/16	Elevators - included with Lab, A, good		-						-	
14/17	HVAC for Labs		\$ 43.85	SF			1.03	1.10	\$ 49.68	SF
52/6	Clean Room, 100-10 microns, hardwall, 400 sf. Assume 6 clean rooms		\$ 152,000.00	EA	7693 SF Conversion		1.02	1.10	\$ 133.01	SF
14/37	Sprinkler, dry, 10,000 SF, excellent		\$ 5.60	SF			1.03	1.10	\$ 6.34	SF
								Sum	\$ 512.01	SF
								RUC	\$ 512.01	SF

FAC	3104	Biosafety Level 4 Laboratory	UM =	SF	RPAD Ave Size	270	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/17	Lab, A, Good, with complete HVAC		\$ 285.06	SF			1.03	1.10	\$ 322.97	SF
14/16	Elevators - included with Lab, A, good		-						-	
14/17	HVAC for Labs		\$ 43.85	SF			1.03	1.10	\$ 49.68	SF
52/6	Clean Room, 100-10 microns, hardwall, 300 sf. Assume 1 clean room		\$ 108,000.00	EA	270 SF Conversion		1.02	1.10	\$ 448.80	SF
14/37	Sprinkler, dry, 10,000 SF, excellent		\$ 5.60	SF			1.03	1.10	\$ 6.34	SF
								Sum	\$ 827.80	SF
								RUC	\$ 827.80	SF

FAC	3111	Aircraft RDT&E Facility	UM =	SF	RPAD Ave Size		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015, & 20 Mar 2009		
CATCODE	Description		Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index	Adjusted Cost		
31010	Chemistry Lab (USACE PAX Dated 20 Mar 2009)		\$ 247.00	9,000	SF		1.0741	\$265.31	SF	
21110	Aircraft Maintenance Hanger, General Purpose		\$ 276.00	64,000	SF		0.9614	\$265.36	SF	
21120	Aircraft Component Repair Shop (USACE PAX Dated 24 July 2014)		\$ 267.67	32,000	SF		0.9805	\$262.45	SF	
21140	Aircraft Engine Test Facility (USACE PAX Dated 4 Jan 2011)		\$ 229.00	26,000	SF		1.0375	\$237.59	SF	
				32,750				RUC	\$257.68	SF

FAC 3121		Missile and Space RDT&E Facility	UM = SF		RPAD Ave Size		USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015, & 20 Mar 2009			
CATCODE	Description		Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index		Adjusted Cost	
31010	Chemistry Lab (USACE PAX Dated 20 Mar 2009)		\$ 247.00	9,000	SF		1.0741		\$265.31	SF
21110	Aircraft Maintenance Hanger, General Purpose		\$ 276.00	64,000	SF		0.9614		\$265.36	SF
21120	Aircraft Component Repair Shop (USACE PAX Dated 24 July 2014)		\$ 267.67	32,000	SF		0.9805		\$262.45	SF
21210	Missile Maintenance Facility (USACE PAX Dated 20 Mar 2009)		\$ 208.00	10,300	SF		1.0741		\$223.42	SF
			28,825					RUC	\$254.14	SF

FAC	3131	Ship and Marine RDT&E Facility	UM =	SF	RPAD Ave Size	Source	Marshall and Swift Valuation; October 2015	
Section	TASK	Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost	
14/17	Lab, C, Excellent, with complete HVAC	\$ 281.98	SF		1.05	1.08	\$ 319.77	SF
58/6	Bridge Crane, 25T, 1 ea, Span = 50 ft	\$ 185,000.00	EA	23566 SF Conversion	1.02	1.08	\$ 8.65	SF
58/6	Craneway, 25T, 50 LF	\$ 286.50	LF	50 LF Conversion	1.02	1.08	\$ 0.67	SF
14/37	Sprinkler, dry, 15,000 SF, excellent	\$ 5.20	SF		1.05	1.08	\$ 5.90	SF
						Sum	\$ 334.98	SF
						RUC	\$ 334.98	SF

FAC	3181	Propulsion RDT&E Facility	UM =	SF	RPAD Ave Size	Source	Marshall and Swift Valuation; October 2015	
Section	TASK	Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost	
14/17	Lab, C, Excellent, with complete HVAC	\$ 281.98	SF		1.05	1.08	\$ 319.77	SF
58/6	Jib Crane, 2 EA, 4 ton, 20' reach	\$ 13,800.00	EA	10199 SF Conver	1.02	1.08	\$ 2.98	SF
14/37	Sprinkler, dry, 10,000 SF, excellent	\$ 5.60	SF		1.05	1.08	\$ 6.35	SF
						Sum	\$ 329.10	SF
						RUC	\$ 329.10	SF

FAC		3711	RDT&E Range Building		UM = SF		RPAD Ave Size		USACE PAX Newsletter 3.2.2 Dated 4 Jan 2011			
CATCODE	Description				Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index		Adjusted Cost	
17123	Combined ROC/AAR-Digital Range				\$ 207.00	4,176	SF		1.0375		\$214.76	SF
					4,176					RUC	\$214.76	SF

FAC		3712	RDT&E Range Facility	UM = EA		Design Size		1		USACE PAX Newsletter 3.2.2 and Marshall and Swift; Oct 2015				Source		
CATCODE		Description		Unit Cost		Reference Size		UoM		Inflation Adjustment by MCP Index			Adjusted Cost			
62010		Underground Administrative Facility (USACE Pax Dated 20 Mar 2009)		\$ 235.00		230		SF				1.0741		\$58,057.59		EA
17971		Control Tower - open observation deck (USACE Pax Dated 30 Sep 2015)		\$ 301,762.00				EA				0.9614		\$290,123.51		EA
FAC 1321		Communications Facility (Marshall and Swift / October 2015)						EA						\$62,044.11		EA
												RUC		\$410,225.21		EA

FAC 3713		RDT&E Range Complex	UM = EA		Design Size 1		USACE PAX Newsletter 3.2.2 and Marshall and Swift; Oct 2015		
CATCODE	Description	Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index		Adjusted Cost	
17123	Combined ROC/AAR-Digital Range (USACE Pax Dated 4 Jan 2011)	\$ 207.00	2,576	SF		1.0375		\$553,225.70	EA
62010	Underground Administrative Facility (USACE Pax Dated 20 Mar 2009)	\$ 235.00	230	SF		1.0741		\$58,057.59	EA
17971	Control Tower - open observation deck (USACE Pax Dated 30 Sep 2015)	\$ 301,762.00		EA		0.9614		\$290,123.51	EA
85110	8" Thick Reinforced Concrtr Pavmt 4500 PSI 12' pass	\$54.00	240	SY		0.9614		\$12,460.15	EA
FAC 1321	Communications Facility (Marshall and Swift / October 2015)			EA		NA		\$62,044.11	EA
	Reference Sizes Extracted from RPAD						RUC	\$975,911.06	EA

FAC		4114	Small Bulk Storage		UM =		GA		RPAD Ave Size		13945		Source				Marshall and Swift Valuation; October 2015					
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost							
61/6		Above Ground Fuel Storage, 1000 GA, double walled			\$		12,900.00		EA		1000		EA to GA		1.02		1.08		\$14.21		GA	
61/6		Horizontal Bulk Storage, 1,500 GA			\$		4,625.00		EA		1500		EA to GA		1.02		1.08		\$3.40		GA	
																	Average		\$8.80		GA	
51/2		Backfill and Compaction, confined, medium earth			\$		29.25		CY		0.0076		CY to GA		1.03		1.08		\$0.25		GA	
53/10		Water Well, w/o pump, 130' deep, 5" casing assume 2 monitoring wells			\$		34.00		FT		0.0093		FT to GA		1.02		1.08		\$0.70		GA	
51/2		Geotextile Fabric			\$		2.53		SY		0.0688		SY to GA		1.03		1.08		\$0.19		GA	
		Containment berm assume 60' x 6' x 8' = 2880 cf = 106 cy = 960 sy															Sum		\$9.94		GA	
																	RUC		\$9.94		GA	

FAC 4121		Bulk Liquid Storage, Other Than Fuel	UM = GA		RPAD Ave Size 2,699		USACE PAX Newsletter 3.2.2 Dated 4 Jan 2011			
CATCODE	Description		Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index		Adjusted Cost	
41150	Liquid Fuel Storage Tank - Bulk		\$ 91.00	2,500	42	GA/BL	1.0375		\$2.25	GA
	PAX Unit Cost in Barrels (42 GA per BL)						RUC	\$2.25	GA	

FAC 4211		Ammunition Storage, Depot and Arsenal	UM = SF			Source Guidance Unit Cost, May 2016		
	Description	Reference Size	UoM		October 2015 Unit Cost			
	Gen Purpose Magazine without crane	2,000	SF		\$323.00			SF
						RUC	\$323.00	SF

FAC		4212	Intercontinental Ballistic Missile Storage Facility		UM =		SF	RPAD Ave Size		3057	Source				Marshall and Swift Valuation; October 2015									
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost									
14/15		Industrials, Heavy Manufacturing, A, excellent			\$		237.14		SF						1.03		1.10		\$		268.68		SF	
58/6		Bridge Crane, 25T, 1 ea, Span = 40 ft			\$		173,000.00		EA		3057		SF Conversion		1.02		1.10		\$		63.50		SF	
58/6		Craneway, 25T, 50 LF			\$		286.50		LF		50		LF Conversion		1.02		1.10		\$		5.26		SF	
58/6		Hoist, Electrical, 30 T			\$		31,100.00		EA						1.02		1.10		\$		11.41		SF	
14/37		Sprinkler, dry, 5,000 SF, excellent			\$		6.37		SF						1.03		1.10		\$		7.22		SF	
																	Sum		\$		356.06		SF	
																	RUC		\$		356.06		SF	

FAC 4221		Ammunition Storage, Installation	UM = SF			Source Guidance Unit Cost, May 2016		
	Description	Reference Size	UoM		October 2015 Unit Cost			
	Gen Purpose Magazine without crane	2,000	SF		\$323.00			SF
						RUC	\$323.00	SF

FAC		4222	Ammunition Storage Shed, Installation		UM = SF		RPAD Ave Size		USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015						
CATCODE		Description			Unit Cost		Reference Size		UoM		Inflation Adjustment by MCP Index		Adjusted Cost		
44222		Storage Shed (Covered, not Enclosed)			\$ 123.00		2,800		SF		0.9614		\$118.26		SF
												RUC		\$118.26	SF

FAC 4231		Liquid Propellant Storage, Ammunition Related		UM = GA		RPAD Ave Size 14722		Source Marshall and Swift Valuation; October 2015			
Section	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
61/8	Welded Steel Pressure Tank, 15,000 gallons			\$ 114,000.00	EA	14722	GA Conversn	1.02	1.08	\$ 8.53	GA
									RUC	\$ 8.53	GA

FAC	4241	Battery Storage, Weapon Related	UM = SF	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 20 Mar 2009			
CATCODE	Description		Unit Cost	Reference Size	UoM	Inflation Adjustment by MCP Index	Adjusted Cost	
43211	Cold Storage Warehouse w/processing		\$ 176.00	11,000	SF	1.0741	\$189.05	SF
						RUC	\$189.05	SF

FAC 4251		Open Ammunition Storage	UM = SY		RPAD Ave Size 2637		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/1	Aggregate Base, 4"		\$ 0.69	SF	9	SF / SY	1.04	1.08	\$ 6.98	SY
66/1	4" asphalt		\$ 2.05	SF	9	SF / SY	1.04	1.08	\$ 20.72	SY
66/1	Paving, 6" concrete		\$ 3.64	SF	9	SF / SY	1.04	1.08	\$ 36.80	SY
							Average Asphalt and Concrete		\$ 28.76	SY
								Sum	\$ 35.73	SY
							RUC		\$ 35.73	SY

FAC	4311	Cold Storage, Depot	UM = SF	RPAD Ave Size	51085	Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost	
14/24	Cold Storage Facility, C Excellent		\$ 123.83	SF		1.05	1.08	\$ 140.42	SF
14/24	Complete HVAC, Good, Extreme Climate		\$ 12.85	SF		1.05	1.08	\$ 14.57	SF
14/37	Sprinkler, dry, 50,000 SF, excellent		\$ 4.14	SF		1.05	1.08	\$ 4.69	SF
							Sum	\$ 159.69	SF
							RUC	\$ 159.69	SF

FAC	4321	Cold Storage, Installation	UM = SF	RPAD Ave Size	31031	Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost	
14/24	Cold Storage Facility, S Good		\$ 84.21	SF		1.04	1.06	\$ 92.83	SF
14/37	Sprinkler, dry, 30,000 SF, excellent		\$ 4.55	SF		1.04	1.06	\$ 5.02	SF
							Sum	\$ 97.85	SF
							RUC	\$ 97.85	SF

FAC	4411	Covered Storage Building, Depot	UM = SF			Source Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM		October 2015 Unit Cost		
	Warehouse, GP, Large, Low Bay		24,000	SF		\$136.00		SF
						RUC	\$136.00	SF

FAC	4412	Covered Storage Shed, Depot	UM = SF	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Unit Cost	Reference Size	UoM	Inflation Adjustment by MCP Index	Adjusted Cost	
44222	Storage Shed (Covered, not Enclosed)		\$ 123.00	2,800	SF	0.9614	\$118.26	SF
						RUC	\$118.26	SF

FAC	4413	Hazardous Materials Storage, Depot	UM = SF			Source Guidance Unit Cost, March 2013		
	Description		Reference Size	UoM		October 2012 Unit Cost		
	Hazardous / Flammable Storage > 1,000 SF		4,300	SF		\$367.00		SF
			DoD SPI Inflation per UFC 3-701-1 Table 4-2			1.1214		
						RUC	\$ 411.57	SF

FAC	4414	Controlled Humidity Storage, Depot	UM =	SF	RPAD Ave Size	118914	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/24	Cold Storage Facility, C Excellent		\$ 123.83	SF			1.05	1.08	\$ 140.42	SF
14/24	Controlled Atmosphere, vegetables, precise humidity, extreme		\$ 52.00	SF			1.05	1.08	\$ 58.97	SF
14/37	Sprinkler, dry, 125,000 SF, excellent		\$ 3.48	SF			1.05	1.08	\$ 3.95	SF
								Sum	\$ 203.34	SF
								RUC	\$ 203.34	SF

FAC	4421	Covered Storage Building, Installation	UM =	SF		Source	Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM			October 2015 Unit Cost		
	Warehouse, GP, Small, Low Bay		6,000	SF			\$145.00		
							RUC	\$145.00	SF

FAC	4423	Hazardous Materials Storage, Installation	UM =	SF		Source	Guidance Unit Cost, March 2015		
	Description		Reference Size	UoM			October 2014 Unit Cost		
	Hazardous / Flammable Storage < 1,000 SF		530	SF			\$237.00		
			DoD SPI Inflation per UFC 3-701-1 Table 4-2					1.0407	
							RUC	\$ 246.64	SF

FAC	4424	Controlled Humidity Storage, Installation	UM =	SF	RPAD Ave Size	50977	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/24	Cold Storage Facility, C Excellent		\$ 123.83	SF			1.05	1.08	\$ 140.42	SF
14/24	Controlled Atmosphere , fruits, conditioned air		\$ 26.75	SF			1.05	1.08	\$ 30.33	SF
14/37	Sprinkler, dry, 50,000 SF, good		\$ 3.50	SF			1.05	1.08	\$ 3.97	SF
								Sum	\$ 174.73	SF
								RUC	\$ 174.73	SF

FAC	4425	Vehicle Storage, Covered	UM =	SF	RPAD Ave Size	7674	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/34	Storage Garage, D, Average		\$ 48.18	SF			1.04	1.05	\$ 52.61	SF
14/37	Sprinkler, wet, 10,000 SF, good		\$ 3.57	SF			1.04	1.05	\$ 3.90	SF
								Sum	\$ 56.51	SF
								RUC	\$ 56.51	SF

FAC	4426	Storage Silo, Loose Material	UM =	SF	RPAD Ave Size	12903	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
17/16	Material Storage Building, D, Very Good		\$ 39.28	SF			1.02	1.05	\$ 42.07	SF
								RUC	\$ 42.07	SF

FAC	4427	Small Arms Storage, Installation	UM =	SF		Source	Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM			October 2015 Unit Cost		
	Armory / Weapons Storage Facility		19,000	SF			\$214.00		
							RUC	\$214.00	SF

FAC	4428	Storage and Customer Issue	UM =	SF	RPAD Ave Size	138620	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
13/28	Warehouse Discount Store, C, Good		\$ 64.70	SF			1.05	1.08	\$ 73.37	SF
13/40	Sprinkler, wet, 150,000 SF, good		\$ 2.42	SF			1.05	1.08	\$ 2.74	SF
								Sum	\$ 76.11	SF
								RUC	\$ 76.11	SF

FAC	5100	Hospital	UM =	SF	RPAD Ave Size		Source	USACE PAX Newsletter 3.2.2 Dated 24 July 2014		
CATCODE	Description		Unit Cost	Reference Size	UoM		Inflation Adjustment by MCP Index	Adjusted Cost		
51010	Inpatient Hospital/Medical Center		\$ 458.11	varies	SF		0.9805	\$449.18		SF
								RUC	\$449.18	SF

FAC	5302	Medical Laboratory	UM =	SF	RPAD Ave Size	8408	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
14/17	Laboratory Bldg, C, Excellent		\$ 281.98	SF			1.05	1.08	\$ 319.77	SF
14/37	Sprinkler, dry, 10,000 SF, excellent		\$ 5.60	SF			1.05	1.08	\$ 6.35	SF
								Sum	\$ 326.12	SF
								RUC	\$ 326.12	SF

FAC	5303	Morgue	UM =	SF	RPAD Ave Size	5844	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
11/32	Mortuary, A-B, Average		\$ 166.40	SF			1.05	1.10	\$ 192.19	SF
11/35	Sprinkler, wet, 5,000 SF Good		\$ 4.40	SF			1.05	1.10	\$ 5.08	SF
								Sum	\$ 197.27	SF
								RUC	\$ 197.27	SF

FAC	5304	Veterinary Facility	UM =	SF	RPAD Ave Size	2837	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
15/28	Veterinary Hospital, C, Good		\$ 167.89	SF			1.07	1.08	\$ 194.01	SF
15/37	Sprinkler, wet, 5,000 SF Good		\$ 4.72	SF			1.07	1.08	\$ 5.45	SF
								Sum	\$ 199.47	SF
								RUC	\$ 199.47	SF

FAC	5306	Medical Warehouse	UM =	SF	RPAD Ave Size	23661	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
14/24	Cold Storage Facility, A-B, Good		\$ 107.80	SF			1.03	1.10	\$ 122.14	SF
14/24	HVAC, for Controlled Atmosphere Buildings, Moderate Climate		\$ 21.65				1.03	1.10	\$ 24.53	
14/37	Sprinkler, dry, 20,000 SF Average		\$ 3.45	SF			1.03	1.10	\$ 3.91	SF
								Sum	\$ 150.58	SF
								RUC	\$ 150.58	SF

FAC	5307	Ambulance Shelter	UM =	SF	RPAD Ave Size	1302	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/34	Storage Garage A-B Average		\$ 70.72	SF			1.03	1.10	\$ 80.13	SF
14/37	Sprinkler, wet 2,500 SF Average		\$ 3.70	SF			1.03	1.10	\$ 4.19	SF
								Sum	\$ 84.32	SF
								RUC	\$ 84.32	SF

FAC	5400	Dental Facility	UM =	SF		Source	Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM			October 2015 Unit Cost		
	Dental Clinic		17,000	SF			\$525.00		
							RUC	\$525.00	SF

FAC	5500	Dispensary And Clinic	UM = SF		RPAD Ave Size	10,014	Source			Guidance Unit Cost, May 2016
	Description		Reference Size	UoM			October 2015 Unit Cost			
	Medical Clinic, Small, Free Standing		34,000	SF					\$273.00	SF
								RUC	\$273.00	SF

FAC		5501	Ambulatory Care Clinic		UM = SF			Source			Guidance Unit Cost, May 2016	
	Description				Reference Size	UoM		October 2015 Unit Cost				
	Medical Clinic, Large, Free Standing				100,000	SF		\$335.00				SF
									RUC	\$335.00	SF	

FAC		6100	General Administrative Building		UM = SF				Source			Guidance Unit Cost, May 2016	
	Description		Reference Size		UoM				October 2015 Unit Cost				
	Multi-purpose Admin		58,000		SF				\$258.00			SF	
								RUC	\$258.00		SF		

FAC		6101	Small Unit Headquarters Building		UM = SF				Source		Guidance Unit Cost, May 2016	
	Description		Reference Size		UoM						October 2015 Unit Cost	
	HQ/Operations Building, Company Level		35,000		SF						\$201.00	SF
								RUC		\$201.00		SF

FAC	6102	Large Unit Headquarters Building	UM = SF			Source Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM		October 2015 Unit Cost		
	HQ/Ops Building, Brigade/Division/Wing HQ		50,000	SF		\$336.00		SF
						RUC	\$336.00	SF

FAC	6103	Printing And Reproduction Plant	UM =	SF	RPAD Ave Size	7076	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/14	Industrial, Light Manufacturing, B, Average		\$ 71.84	SF			1.06	1.10	\$ 83.77	SF
14/37	Sprinkler, wet 10,000 SF Good		\$ 3.57	SF			1.06	1.10	\$ 4.16	SF
								Sum	\$ 87.93	SF
								RUC	\$ 87.93	SF

FAC	6104	Automated Data Processing Center	UM =	SF		Source	Guidance Unit Cost, May 2016	
	Description	Reference Size	UoM				October 2015 Unit Cost	
	Admin Facility, Data Processing Area Facility	26,000	SF				\$294.00	SF
						RUC	\$294.00	SF

FAC	6106	Remote Delivery Facility	UM =	SF	RPAD Ave Size	Source	USACE PAX Newsletter 3.2.2 Dated 4 Jan 2011	
CATCODE	Description	Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
89111	Power Plant Building	\$ 171.00	NA			1.0375	\$177.41	GA
						RUC	\$177.41	GA

FAC	6200	Administrative Structure, Underground	UM =	SF		Source	USACE PAX Newsletter 3.2.2 Dated 20 March 2009	
CATCODE	Description	Reference Size	Unit Cost	Inflation Source	Inflation Adjustment		Adjusted Cost	
62010	Underground Administrative Facility	6,000	\$ 235.00	MCP Index	1.0741		\$252.42	SF
						RUC	\$252.42	SF

FAC 6201		Alternate Joint Communications Center		UM = SF		RPAD Ave Size 5,153		Source		Guidance Unit Cost, May 2016 & USACE PAX Newsletter 3.2.2 Dated 20 March 2009			
CATCODE	Description			Reference Size		Unit Cost		Inflation Source	Inflation Adjustment			Adjusted Cost	
GUC	Communications Facility			23,000		\$ 312.00		NA	NA			\$ 312.00	SF
62010	Underground Administrative Facility			6,000		\$ 235.00		MCP Index	1.0741			\$252.42	SF
			Average	14,500							Average	\$ 282.21	SF
											RUC	\$ 282.21	SF

FAC	6900	Administrative Structure, Other Than Buildings	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015	
Section	TASK	Given	Units	Conversion			Currt Cost Mult	Area Adjustnt	Cost
66/3	Flagpole, 50'	\$ 6,800.00	EA				1.04	1.08	\$ 7,637.76
66/5	Scoreboard, Outdoor, 75 sq ft	\$ 7,875.00	EA				1.04	1.08	\$ 8,845.20
								Average	\$ 8,241.48
							RUC	\$ 8,241.48	EA

FAC	7110	Family Housing Dwelling	UM =	SF	RPAD Ave Size	Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015	
CATCODE	Description	Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
71111	General Officer, Grade O7	\$ 165.00	3,330			0.9614	\$158.64	SF
71112	Warrant Officer, Grade W4&5	\$ 160.00	2,010			0.9614	\$153.83	SF
71113	Lt. Colonel & Major, Grade O4&O5	\$ 160.00	2,020			0.9614	\$153.83	SF
71114	CO Grade, Officer, O1-O3	\$ 146.00	1,860			0.9614	\$140.37	SF
71115	Senior NCO, E9	\$ 161.00	2,020			0.9614	\$154.79	SF
71115	Senior NCO, E7&E8	\$ 146.00	1,860			0.9614	\$140.37	SF
71116	Junior NCO/Enlisted E1-E6	\$ 147.00	1,950			0.9614	\$141.33	SF
			2,150	Average		RUC	\$149.02	SF

FAC	7120	Family Housing Trailer/Relocatable	UM =	SF	RPAD Ave Size	366	Source	Marshall and Swift Valuation; October 2015	
Section	TASK	Given	Units	Conversion			Currt Cost Mult	Area Adjustnt	Cost
63/8	Manufactured home, ave, 14 x 28	\$ 53.92	SF				1.01	1.08	\$ 58.82
								Sum	\$ 58.82
							RUC	\$ 58.82	SF

FAC		7130	Family Housing Individual Trailer Site		UM =		SY	Design Size		356	Source Marshall and Swift Valuation; October 2015										
Section		TASK			Given		Units		Conversion		Currt Cost Mult		Area Adjusnt		Cost						
63/3		Manufactured home space, ave, incl utilities, grading, engineering			\$		10,965.00		EA		356		EA to SY		1.00		1.08		\$	33.26	SY
		M&S Design size for a Mnfr Housing Park site = 3,200 sf = 356 sy							EA										\$	33.26	SY
															RUC				\$	33.26	SY

FAC		7141	Family Housing Garage		UM =		SF	RPAD Ave Size		417	Source				Marshall and Swift Valuation; October 2015									
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost									
12/35		Residential Garage, detached, 600 SF, C, Average			\$		33.31		SF						1.03		1.08		\$		37.05		SF	
													RUC		\$		37.05				SF			

FAC		7142	Family Housing Storage Facility		UM =		SF	RPAD Ave Size		254	Source				Marshall and Swift Valuation; October 2015							
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost							
63/10		Storage Shed Building, Aluminum			\$		17.60		SF				1.01		1.08		\$		19.20		SF	
63/10		Concrete Slab, unreinforced			\$		7.32		SF				1.01		1.08		\$		7.98		SF	
															Sum		\$		27.18		SF	
															RUC		\$		27.18		SF	

FAC		7143		Miscellaneous Family Housing Support Facility		UM =		SF		RPAD Ave Size		872		Source				Marshall and Swift Valuation; October 2015							
Section		TASK				Given		Units		Conversion				Curnt Cost Mult		Area Adjustnt		Cost							
17/12		Light Commercial Utility Bldg, C, Good				\$		35.44		SF						1.04		1.08		\$		39.81		SF	
14/37		Sprinkler, 2500 SF, Wet, Good				\$		4.49		SF						1.04		1.08		\$		5.04		SF	
																Sum		\$		44.85		SF			
																RUC		\$		44.85		SF			

FAC		7145		Trailer Court Support Facility		UM =		SF		RPAD Ave Size		2501		Source				Marshall and Swift Valuation; October 2015							
Section		TASK				Given		Units		Conversion				Curnt Cost Mult		Area Adjustnt		Cost							
15/17		Office Building, D, Good				\$		141.33		SF						1.05		1.05		\$		155.82		SF	
15/37		Sprinkler, 3000 SF, Wet, Average				\$		4.35		SF						1.05		1.05		\$		4.80		SF	
																		Sum		\$		160.61		SF	
																		RUC		\$		160.61		SF	

FAC		7147		Family Housing Carport		UM =		SF		RPAD Ave Size		400		Source				Marshall and Swift Valuation; October 2015							
Section		TASK				Given		Units		Conversion				Curnt Cost Mult		Area Adjustnt		Cost							
12/35		Residential Garage, Detached, D, Pole, 400 sf				\$		19.90		SF						1.04		1.05		\$		21.73		SF	
																		Sum		\$		21.73		SF	
																		RUC		\$		21.73		SF	

FAC 7210		Enlisted Unaccompanied Personnel Housing	UM = SF		Reference Size 113,000	Source Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM		October 2015 Unit Cost		
	Unaccompanied Personnel Housing, Barracks, Dormitory		113,000	SF		\$206.00		SF
							RUC \$206.00	SF

FAC	7212, 13, 14	Enlisted Unaccompanied Personnel Housing, Transient, Student, AT/Mob	UM =	SF	Reference Size	141,000	Source	Guidance Unit Cost, May 2016	
	Description	Reference Size		UoM				October 2015 Unit Cost	
	Unaccompanied Personnel Housing, Barracks, Dormitory	141,000		SF				\$196.00	SF
							RUC	\$196.00	SF

FAC	7215	Unaccompanied Housing for Wounded Warriors	UM =	SF	RPAD Ave Size	27453	Source	Marshall and Swift Valuation; October 2015	
Section	TASK	Given		Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost
15/26	Convalescent Hospital, B, Good incl elev	\$ 242.47		SF			1.04	1.10	\$ 277.39
15/37	Sprinkler, 30,000 SF, Wet, Excl	\$ 4.04		SF			1.04	1.10	\$ 4.62
								Sum	\$ 282.01
							RUC	\$ 282.01	SF

FAC	7218	Recruit/Trainee Barracks	UM =	SF			Source	Guidance Unit Cost, May 2016	
	Description	Reference Size		UoM				October 2015 Unit Cost	
	Unaccompanied Personnel Housing, Barracks, Open Bay Training	160,000		SF				\$192.00	SF
							RUC	\$192.00	SF

FAC	7220	Dining Facility	UM =	SF			Source	Guidance Unit Cost, May 2016	
	Description	Reference Size		UoM				October 2015 Unit Cost	
	Dining Facility, Enlisted Dining 15,000 SF - 39,999 SF	24,000		SF				\$373.00	SF
							RUC	\$373.00	SF

FAC	7231	Miscellaneous UPH Support Building	UM =	SF	RPAD Ave Size	2687	Source	Marshall and Swift Valuation; October 2015	
Section	TASK	Given		Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost
13/25	Laundromat, S, Average	\$ 70.07		SF			1.05	1.06	\$ 77.99
13/40	Sprinkler, 3,000 SF, Wet, Ave	\$ 3.99		SF			1.05	1.06	\$ 4.44
								Sum	\$ 82.43
							RUC	\$ 82.43	SF

FAC	7232	Unaccompanied Personnel Housing Garage	UM =	SF	RPAD Ave Size	1666	Source	Marshall and Swift Valuation; October 2015	
Section	TASK	Given		Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost
14/34	Storage Garage, C Mill	\$ 62.70		SF			1.05	1.08	\$ 71.10
14/37	Sprinkler, wet (2,500 SF), good	\$ 4.49		SF			1.05	1.08	\$ 5.09
								Sum	\$ 76.19
							RUC	\$ 76.19	SF

FAC	7233	Dining Support Facility	UM =	SF	RPAD Ave Size	5398	Source	Marshall and Swift Valuation; October 2015	
Section	TASK	Given		Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost
13/15	Cafeteria, C, Good	\$ 152.84		SF			1.05	1.08	\$ 173.32
13/40	Sprinkler, wet, 5,000 SF, good	\$ 4.31		SF			1.05	1.08	\$ 4.89
								Sum	\$ 178.21
							RUC	\$ 178.21	SF

FAC	7234	Latrine/Shower Facility	UM =	SF	RPAD Ave Size	641	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
18/22	Shower Room Building, C Average		\$ 132.32	SF			1.02	1.08	\$ 145.76	SF
18/36	Sprinkler, 3,000 SF, Wet, Low		\$ 3.79	SF			1.02	1.08	\$ 4.18	SF
								Sum	\$ 149.94	SF
								RUC	\$ 149.94	SF

FAC	7235	Miscellaneous UPH Support Facility	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
64/4	Car Wash Canopy, CDS Grade, Average		\$ 38.56	SF	128	SF to EA	1.05	1.08	\$ 5,597.06	EA
	Assumed Size 16ft x 8 ft									
								RUC	\$ 5,597.06	EA

FAC	7240	Officer Unaccompanied Personnel Housing	UM =	SF		Source	Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM		October 2015 Unit Cost			
	UPH, Officers Quarters		79,000	SF		\$257.00			SF
							RUC	\$257.00	SF

FAC	7241	Officer UPH, Transient	UM =	SF	RPAD Ave Size	7055	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
12/9	Motel, C, Excellent		\$ 160.29	SF			1.03	1.08	\$ 178.31	SF
12/39	Sprinkler, 10,000 SF, Wet, Good		\$ 3.40	SF			1.03	1.08	\$ 3.78	SF
								Sum	\$ 182.09	SF
								RUC	\$ 182.09	SF

FAC	7242	Service Academy Unaccompanied Personnel Housing	UM =	SF	RPAD Ave Size	131733	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
11/14	Dormitory, B, Very Good		\$ 212.49	SF			1.06	1.10	\$ 247.76	SF
11/35	Elevator, 4 EA, good		\$ 58,250.00	EA	131733	EA to SF	1.06	1.10	\$ 2.06	SF
11/35	Elevator Stop, 3 Story		\$ 7,900.00	EA	131733	EA to SF	1.06	1.10	\$ 0.28	SF
11/35	Sprinkler, wet, 125,000 SF, good		\$ 2.57	SF			1.06	1.10	\$ 3.00	SF
								Sum	\$ 253.10	SF
								RUC	\$ 253.10	SF

FAC	7250	Emergency Unaccompanied Personnel Housing	UM =	SF	RPAD Ave Size	1376	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
12/16	Multiple Residence, D, Ave		\$ 70.56	SF			1.04	1.05	\$ 77.05	SF
12/39	Sprinkler, 1,500 SF, Wet, Good		\$ 4.66	SF			1.04	1.05	\$ 5.09	SF
								Sum	\$ 82.14	SF
								RUC	\$ 82.14	SF

FAC	7251	EUPH Tent Pad	UM =	SF	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description		Unit Cost	UoM	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
93210	ROUGH GRADING, NO COMPACTION		\$ 2.55	SF	9	SF/SY	0.9614	\$0.27	SF
93210	FINE GRADING, W/ DOZER, 6" LIFTS		\$ 2.16	SF	9	SF/SY	0.9614	\$0.23	SF
85110	1-1/2" CRUSHED STONE BASE TO 6" DEEP		\$ 9.00	SF	9	SF/SY	0.9614	\$0.96	SF
85110	8" THK, UN-REINF CONC PVMT, 4500 PSI		\$ 40.00	SF	9	SF/SY	0.9614	\$4.27	SF
			Sum					RUC	\$5.74 SF

FAC	7311	Fire Station Facility	UM = SF			Source Guidance Unit Cost, March 2015			
	Description		Reference Size	UoM		October 2014 Unit Cost			
	Fire Station, Community		19,000	SF		\$355.00			SF
			DoD SPI Inflation per UFC 3-701-1 Table 4-2					1.0407	
							RUC	\$ 369.44	SF

FAC	7312	Prison/Confinement Facility	UM =	SF	RPAD Ave Size	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost
15/33	Correctional Facility, C, Good		\$ 246.21	SF			1.07	1.08	\$ 284.52
15/37	Sprinkler, 10,000 SF, Wet, Excellent		\$ 4.93	SF			1.07	1.08	\$ 5.70
								Sum	\$ 290.22
								RUC	\$ 290.22 SF

FAC	7313	Police Station	UM =	SF	RPAD Ave Size	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost
15/33	Police Station, C, good		\$ 174.04	SF			1.07	1.08	\$ 201.12
12/39	Sprinkler, 5,000 SF, Wet, Good		\$ 4.72	SF			1.07	1.08	\$ 5.45
								Sum	\$ 206.58
								RUC	\$ 206.58 SF

FAC	7314	Drug and Alcohol Abuse Center	UM =	SF	RPAD Ave Size	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost
15/22	Medical Office Building, C, good		\$ 175.29	SF			1.07	1.08	\$ 202.57
15/37	Sprinkler, 5,000 SF, Wet, Good		\$ 4.72	SF			1.07	1.08	\$ 5.45
								Sum	\$ 208.02
								RUC	\$ 208.02 SF

FAC	7321	Bread/Pastry Kitchen	UM =	SF	RPAD Ave Size	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost
14/40	Bakery Plant, C,D, S Class		\$ 81.50	SF			1.05	1.08	\$ 92.42
14/37	Sprinkler, 60,000 SF, Wet, Good		\$ 2.63	SF			1.05	1.08	\$ 2.98
								Sum	\$ 95.40
								RUC	\$ 95.40 SF

FAC		7322		Ice/Dairy Products Plant		UM = SF		RPAD Ave Size		1,646		Source Marshall and Swift Valuation; October 2015						
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost		
17/38		Dairy, D, Excellent				\$ 67.73		SF				1.02		1.05		\$ 72.54		SF
17/20		Chiller/Freezer, Moderate Climate				\$ 12.25		SF				1.02		1.05		\$ 13.12		SF
14/37		Sprinkler, 2,500 SF, Wet, Good				\$ 4.49		SF				1.02		1.05		\$ 4.81		SF
														Sum		\$ 90.47		SF
														RUC		\$ 90.47		SF

FAC		7323		Greenhouse		UM =		SF		RPAD Ave Size		1,726		Source Marshall and Swift Valuation; October 2015											
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost									
17/22		Greenhouse, S, Very Good				\$		25.45		SF						1.01		1.06		\$		27.25		SF	
																RUC		\$		27.25		SF			

FAC		7331		Exchange Eating Facility		UM =		SF		RPAD Ave Size		3,025		Source Marshall and Swift Valuation; October 2015							
Section		TASK				Given		Units		Conversion		Curnt Cost		Mult		Area Adjustnt		Cost			
13/17		Fast Food Restaurant, C, good				\$		166.36		SF				1.05		1.08		\$		188.65 SF	
13/40		Sprinkler, 3,000 SF wet, good				\$		4.69		SF				1.05		1.08		\$		5.32 SF	
																Sum		\$		193.97 SF	
																RUC		\$		193.97 SF	

FAC		7333		Open Mess and Club Facility		UM =		SF		RPAD Ave Size		11,054		Source Marshall and Swift Valuation; October 2015											
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost									
11/31		Country Club C, good				\$		173.41		SF				1.04		1.08		\$		194.77		SF			
11/35		Sprinkler, 10,000 SF wet, good				\$		3.93		SF						1.04		1.08		\$		4.41		SF	
																Sum		\$		199.19		SF			
																RUC		\$		199.19		SF			

FAC		7340		Thrift Shop		UM =		SF		RPAD Ave Size		4,913		Source Marshall and Swift Valuation; October 2015									
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost							
13/26		Retail Store, C Average				\$		78.82		SF				1.05		1.08		\$		89.38		SF	
13/40		Sprinkler, 5,000 SF wet, good				\$		4.31		SF				1.05		1.08		\$		4.89		SF	
																Sum		\$		94.27		SF	
																RUC		\$		94.27		SF	

FAC		7341		Bus Station		UM =		SF		RPAD Ave Size		694		Source Marshall and Swift Valuation; October 2015									
Section		TASK				Given		Units		Conversion		Curnt Cost Mu		Area Adjustnt		Cost							
14/20		Passenger Terminal D Fair				\$		80.40		SF				1.04		1.05		\$		87.80		SF	
14/37		Sprinkler, 2,500 SF wet, Average				\$		3.70		SF				1.04		1.05		\$		4.04		SF	
																		\$		91.84		SF	
																RUC		\$		91.84		SF	

FAC	7342	Laundry/Dry Cleaning Facility	UM =	SF	RPAD Ave Size	4883	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost			
14/40	Central laundry and dry cleaning plant, upper limit	\$ 110.00	SF		1.05	1.08	\$ 124.74	SF		
14/27	Loading Dock, Assume 15x30', steel piers	\$ 22.10	SF		1.05	1.08	\$ 25.06	SF		
14/27	Loading Dock roof, with lighting and finished soffit, Assume 15x30'	\$ 14.00	SF		1.05	1.08	\$ 15.88	SF		
14/37	Sprinkler, 5,000 SF dry, good	\$ 5.29	SF		1.05	1.08	\$ 6.00	SF		
						SUM	\$ 171.68	SF		
						RUC	\$ 171.68	SF		

FAC	7344	Postal Facility	UM =	SF	RPAD Ave Size	3,887	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost			
14/21	Main Post Office, S Average	\$ 120.81	SF		1.04	1.06	\$ 133.18	SF		
14/37	Sprinkler, 5,000 SF wet, good	\$ 3.99	SF		1.04	1.06	\$ 4.40	SF		
							\$ 137.58	SF		
						RUC	\$ 137.58	SF		

FAC	7345	Exchange Automobile Facility	UM =	SF	RPAD Ave Size	3212	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost			
64/1	Station with Service Bay, S-C, Average	\$ 118.00	SF		1.05	1.08	\$ 133.81	SF		
14/37	Sprinkler, 5,000 SF dry, good	\$ 5.29	SF		1.05	1.08	\$ 6.00	SF		
							\$ 139.81	SF		
						RUC	\$ 139.81	SF		

FAC	7346	Exchange Sales Facility	UM =	SF	RPAD Ave Size	13,180	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost			
13/27	Department Store, B, Good	\$ 156.24	SF		1.04	1.10	\$ 178.74	SF		
13/40	Sprinkler, 15,000 SF wet, good	\$ 3.56	SF		1.04	1.10	\$ 4.07	SF		
							\$ 182.81	SF		
						RUC	\$ 182.81	SF		

FAC	7347	Bank and Credit Union	UM =	SF	RPAD Ave Size	2,264	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost			
15/21	Bank, Branch, C Average	\$ 158.93	SF		1.07	1.08	\$ 183.66	SF		
15/37	Sprinkler, 2,000 SF wet, good	\$ 5.52	SF		1.07	1.08	\$ 6.38	SF		
							\$ 190.04	SF		
						RUC	\$ 190.04	SF		

FAC	7348	Car Wash Facility	UM =	SF	RPAD Ave Size	1,219	Source	Marshall and Swift Valuation; October 2015		
Section	TASK	Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost			
64/5	Self Serve Car Wash, D, Average	\$ 64.96	SF		1.05	1.08	\$ 73.66	SF		
							\$ 73.66	SF		
						RUC	\$ 73.66	SF		

FAC	7349	Commissary	UM =	SF	RPAD Ave Size	57,070	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
13/20	Supermarket, C, Excellent		\$ 119.31	SF			1.05	1.08	\$ 135.30	SF
13/40	Sprinkler, 50,000 SF wet, good		\$ 2.92	SF			1.05	1.08	\$ 3.31	SF
13/39	HVAC, H&CW, Zoned, moderate climate		\$ 17.35	SF			1.05	1.08	\$ 19.67	SF
								RUC	\$ 158.28	SF

FAC	7351	Education Center	UM =	SF	RPAD Ave Size	11,254	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
18/26	College, B, Good		\$ 247.23	SF			1.05	1.10	\$ 285.55	SF
18/36	Sprinkler, 10,000 SF wet, good		\$ 4.31	SF			1.05	1.10	\$ 4.98	SF
									\$ 290.53	SF
								RUC	\$ 290.53	SF

FAC	7352	Dependent School	UM =	SF		Source	Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM	2015 Inventory	Ratio of 2015 Inventory	Unit Cost		
	Elementary School, CONUS		111,000	SF	3,098,855	0.307	\$267.00		SF
	Elementary School, OCONUS		118,000	SF	5,534,689	0.549	\$272.00		SF
	High School		142,000	SF	1,446,906	0.144	\$246.00		SF
	Weighted Average		119,293	SF				RUC	\$ 266.73 SF

FAC	7353	Dependent School Support Facility	UM =	SF	RPAD Ave Size	Source	USACE PAX Newsletter 3.2.2 Dated 15 Sep 2010		
CATCODE	Description		Unit Cost	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost		
74010	Auditorium, General Purpose		\$ 168.00	4,000		1.0561	\$177.43		SF
								RUC	\$177.43 SF

FAC	7354	School Playgrounds	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/8	park bench 6' (3 each)		\$ 1,570.00	EA	3 per PG		1.04	1.08	\$ 5,290.27	EA
66/9	horizontal ladder		\$ 1,147.50	EA			1.04	1.08	\$ 1,288.87	EA
66/9	parallel bars		\$ 525.00	EA			1.04	1.08	\$ 589.68	EA
66/9	Climber, Dome		\$ 2,430.00	EA			1.04	1.08	\$ 2,729.38	EA
66/9	slide, oval tube		\$ 5,212.50	EA			1.04	1.08	\$ 5,854.68	EA
66/9	swing, 6 units		\$ 485.00	EA	6 per PG		1.04	1.08	\$ 3,268.51	EA
66/9	modular play system, per sf of playground		\$ 43.00	SF	2500 SF of systm		1.04	1.08	\$ 120,744.00	EA
66/9	Scramble ramp, ADA, 2 EA		\$ 1,315.00	EA	2 per PG		1.04	1.08	\$ 2,954.02	EA
67/3	synthetic surface, applied cost, 6000 sf		\$ 9.06	SF	6000 SF of PG		1.04	1.08	\$ 61,057.15	EA
								RUC	\$ 203,776.56	EA

FAC	7361	Chapel Facility	UM =	SF		Source	Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM			October 2015 Unit Cost		
	Chapel Center		23,000	SF			\$324.00		
								RUC	\$324.00 SF

FAC	7362	Religious Education Facility	UM =	SF	RPAD Ave Size	5,537	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
18/14	Classroom, C, Average		\$ 118.80	SF			1.02	1.08	\$ 130.87	SF
18/36	Sprinkler, 5,000 SF wet, good		\$ 4.84	SF			1.02	1.08	\$ 5.33	SF
									\$ 136.20	SF
								RUC	\$ 136.20	SF

FAC	7372	Family Service Center	UM =	SF	RPAD Ave Size	7,181	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
15/31	Community Service Building, C, Excellent		\$ 209.27	SF			1.07	1.08	\$ 241.83	SF
15/37	Sprinkler, 5,000 SF wet, good		\$ 4.72	SF			1.07	1.08	\$ 5.45	SF
								SUM	\$ 247.29	SF
								RUC	\$ 247.29	SF

FAC		7371	Nursery and Child Care Facility		UM = SF				Source		Guidance Unit Cost, May 2016	
	Description		Reference Size		UoM				October 2015 Unit Cost			
	Family Support Facilities, CDC		23,000		SF				\$227.00		SF	
								RUC		\$227.00	SF	

FAC	7381	Forestry Guard Station	UM =	SF	RPAD Ave Size	260	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
17/15	Guard House, C, Good		\$ 105.61	SF			1.04	1.08	\$ 118.62	SF
								RUC	\$ 118.62	SF

FAC	7382	Locker Room	UM =	SF	RPAD Ave Size	3,588	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
18/22	Shower Room Bldg, C, Average		\$ 132.32	SF			1.03	1.07	\$ 145.83	SF
18/36	Sprinkler, 3,000 SF wet, ave		\$ 4.47	SF			1.07	1.07	\$ 5.12	SF
								RUC	\$ 150.95	SF

FAC	7384	Miscellaneous Personnel Shelter	UM =	SF	RPAD Ave Size	312	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/2	Picnic shelter		\$ 29.30	SF			1.04	1.05	\$ 32.00	SF
14/20	Passenger Terminal (Bus Stop), D-Pole Low Cost		\$ 59.43	SF			1.04	1.05	\$ 64.90	SF
								Ave	\$ 48.45	SF
								RUC	\$ 48.45	SF

FAC	7385	Public Restroom/Shower	UM =	SF	RPAD Ave Size	637	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
18/21	Restroom Building, C, Average		\$ 145.12	SF			1.02	1.08	\$ 159.86	SF
18/36	Sprinkler, 3,000 SF wet, low		\$ 3.79	SF			1.02	1.08	\$ 4.18	SF
								RUC	\$ 164.04	SF

FAC		7386	Ceremonial Hall		UM =		SF	RPAD Ave Size		23,802	Source				Marshall and Swift Valuation; October 2015									
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjstnt		Cost									
18/23		Fieldhouse, C Average			\$		96.15		SF				1.07		1.07		\$		110.08		SF			
18/36		Sprinkler, 20,000 SF wet, good			\$		3.81		SF						1.07		1.07		\$		4.36		SF	
															RUC			\$	114.44		SF			

FAC		7387		Exchange Support Facility		UM =		SF		RPAD Ave Size		6,346		Source				Marshall and Swift Valuation; October 2015					
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost							
13/26		Retail Store, B, Good				\$		124.41		SF				1.04		1.10		\$		142.33		SF	
14/23		Distribution Warehouse, A, Good				\$		101.62		SF				1.03		1.10		\$		115.14		SF	
15/17		Office Building, C, Good				\$		148.70		SF				1.05		1.08		\$		168.63		SF	
14/32		Service Garage C, Excellent				\$		104.72		SF				1.05		1.08		\$		118.75		SF	
																Average		\$		136.21		SF	
14/37		Sprinkler, 5,000 SF, wet, good				\$		3.99		SF				1.03		1.04		\$		4.27		SF	
																SUM		\$		140.48		SF	
																RUC		\$		140.48		SF	

FAC		7388	Exchange Warehouse		UM = SF		RPAD Ave Size		USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015						
CATCODE		Description			Unit Cost		Reference Size		Conversion		Inflation Adjustment by MCP Index		Adjusted Cost		
44220		Gen Purpose (GP) Warehouse, Installation, Lo-Bay			\$ 141.00		37,000				0.9614		\$135.56		SF
												RUC	\$135.56		SF

FAC		7389	Private Vehicle Inspection Facility		UM = SF		RPAD Ave Size		USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015			
CATCODE	Description				Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index		Adjusted Cost	
44222	Storage Shed (Covered, not Enclosed)				\$ 123.00	2,800			0.9614		\$118.26	SF
										RUC	\$118.26	SF

FAC		7411	Hobby And Craft Center		UM =		SF	RPAD Ave Size		7,405	Source				Marshall and Swift Valuation; October 2015				
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost				
15/31		Community Service Building, C, Average			\$		113.81		SF				1.07		1.08		\$	131.52	SF
15/37		Sprinkler, 5,000 SF wet, good			\$		4.72		SF				1.07		1.08		\$	5.45	SF
													RUC		\$		136.97	SF	

FAC		7412	Automobile Craft Center		UM =		SF	RPAD Ave Size		5,170	Source				Marshall and Swift Valuation; October 2015			
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost			
14/32		Service / Repair Garage, C, Average			\$		53.35		SF				1.05		1.08		\$ 60.50 SF	
14/37		Sprinkler, 5,000 SF wet, good			\$		3.99		SF				1.05		1.08		\$ 4.52 SF	
													RUC		\$ 65.02		SF	

FAC 7413		Golf Club House and Sales		UM = SF		RPAD Ave Size 4,090		Source Marshall and Swift Valuation; October 2015			
Section	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
11/30	Clubhouse, C, good			\$ 133.51	SF			1.04	1.08	\$ 149.96	SF
11/35	Sprinkler, 5,000 SF wet, good			\$ 4.40	SF			1.04	1.08	\$ 4.94	SF
									RUC	\$ 154.90	SF

FAC	7414	Club and Organization Building	UM =	SF	RPAD Ave Size	3,238	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
15/31	Community Service Building, C, excellent		\$ 209.27	SF			1.07	1.08	\$ 241.83	SF
15/37	Sprinkler, 3,000 SF wet, good		\$ 5.15	SF			1.07	1.08	\$ 5.95	SF
								RUC	\$ 247.78	SF

FAC	7415	Bowling Center	UM =	SF	RPAD Ave Size	13,060	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
16/22	Bowling Center, C, Good		\$ 99.93	SF			1.03	1.08	\$ 111.16	SF
16/25	Sprinkler, 15,000 SF wet, good		\$ 3.96	SF			1.03	1.08	\$ 4.41	SF
								RUC	\$ 115.57	SF

FAC	7416	Library, General Use	UM =	SF	RPAD Ave Size	9,879	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
15/32	Library, C, good		\$ 175.94	SF			1.07	1.08	\$ 203.32	SF
15/37	Sprinkler, 10,000 SF wet, good		\$ 4.21	SF			1.07	1.08	\$ 4.87	SF
								RUC	\$ 208.18	SF

FAC	7417	Recreation Center	UM =	SF	RPAD Ave Size	7,398	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
16/18	Community Recreation Center D, Excellent		\$ 210.51	SF			1.06	1.04	\$ 232.07	SF
16/25	Sprinkler, 10,000 SF wet, good		\$ 4.26	SF			1.06	1.04	\$ 4.70	SF
								RUC	\$ 236.76	SF

FAC	7418	Indoor Skating Rink	UM =	SF	RPAD Ave Size	22,653	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
16/20	Ice Skating Rink, C Good		\$ 127.05	SF			1.03	1.08	\$ 141.33	SF
16/25	Sprinkler, 20,000 SF wet, Good		\$ 3.78	SF			1.03	1.08	\$ 4.20	SF
								RUC	\$ 145.54	SF

FAC	7421	Indoor Physical Fitness Facility	UM = SF			Source Guidance Unit Cost, May 2016			
	Description		Reference Size	UoM		October 2015 Unit Cost			
	Community Support Facilities, Physical Fitness Training Center		62,000	SF		\$235.00			SF
							RUC	\$235.00	SF

FAC	7422	Indoor Swimming Pool	UM =	SF	RPAD Ave Size	8,070	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
18/22	Natatorium, A-B, Average		\$ 158.01	SF			1.05	1.10	\$ 182.50	SF
18/36	Sprinkler, 10,000 SF wet, good		\$ 4.31	SF			1.05	1.10	\$ 4.98	SF
								RUC	\$ 187.48	SF

FAC	7431	Auditorium and Theater Facility	UM =	SF	RPAD Ave Size	7,036	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
16/13	Theater, Cinema, B Average		\$ 160.61	SF			1.02	1.10	\$ 180.20	SF
16/25	Sprinkler, 5,000 SF wet, good		\$ 4.78	SF			1.02	1.10	\$ 5.36	SF
								RUC	\$ 185.57	SF

FAC	7441	Transient Lodging	UM =	SF		Source	USACE PAX Newsletter 3.2.2 Dated 24 Jul 2014		
CATCODE	Description		Unit Cost	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost		
72412	Transient Training Officers Quarters		\$ 235.93	34,000		0.9805	\$231.33	SF	
						RUC	\$231.33	SF	

FAC	7442	Recreational Lodging	UM =	SF	RPAD Ave Size	2,024	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
12/12	Shell, Extended Stay, C, Average		\$ 49.52	SF			1.05	1.08	\$ 56.16	SF
12/12	Interior Build Out, Average		\$ 32.11	SF			1.05	1.08	\$ 36.41	SF
							RUC		\$ 92.57	SF

FAC	7443	Transient And Recreational Lodging Support Facility	UM =	SF	RPAD Ave Size	1,896	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
17/12	Light Commercial Utility Bldg, C Average		\$ 25.43	SF			1.04	1.08	\$ 28.56	SF
							RUC		\$ 28.56	SF

FAC	7444	Stable	UM =	SF	RPAD Ave Size	1,603	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
17/36	Stable, C, Average Cost		\$ 33.51	SF			1.04	1.08	\$ 37.64	SF
							RUC		\$ 37.64	SF

FAC	7445	Boathouse	UM =	SF	RPAD Ave Size	2,833	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
17/18	Boat Storage Building, D, Average		\$ 30.16	SF			1.02	1.05	\$ 32.30	SF
							RUC		\$ 32.30	SF

FAC	7446	Miscellaneous MWR Facility	UM =	SF	RPAD Ave Size	5,503	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
15/31	Community Service Building, C, Good		\$ 154.34	SF			1.07	1.08	\$ 178.36	SF
15/37	Sprinkler, 5,000 SF wet, good		\$ 4.72	SF			1.07	1.08	\$ 5.45	SF
							RUC		\$ 183.81	SF

FAC	7447	Miscellaneous MWR Support	UM =	SF	RPAD Ave Size		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost		
44220	Storage Bldg - Small, Unheated		\$ 103.00	3,900			0.9614	\$99.03	SF	
44222	Gen Purpose (GP) Warehouse, Installation, Lo-Bay		\$ 141.00	37,000			0.9614	\$135.56	SF	
21885	General Purpose Maint Shop (PAX Dated 15 Sep 2010)		\$ 163.00	31,000			1.0561	\$172.15	SF	
				23,967	Average		RUC	\$135.58	SF	

FAC	7511	Playground	UM =	EA	RPAD Ave Size	8,500	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost (SF)	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost	
75018	Playground for Preschool Children, Small		\$ 19.50	8,500	SF/EA		0.9614	\$159,357.28	EA
75018	Playground for Preschool Children, Medium		\$ 15.25	8,500	SF/EA		0.9614	\$124,625.56	EA
75018	Playground for Preschool Children, Large		\$ 13.00	8,500	SF/EA		0.9614	\$106,238.19	EA
75018	Playground for School Age Children, Small		\$ 11.00	8,500	SF/EA		0.9614	\$89,893.85	EA
75018	Playground for Youth Center		\$ 8.20	8,500	SF/EA		0.9614	\$67,011.78	EA
			Average					RUC	\$109,425.33 EA

FAC	7512	Outdoor Swimming Pool	UM =	EA	Design Size	1	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	Pour Conc Pool, 25 x 50 m = 13,455 SF Surface Area								
66/7	Pour Conc Pool, 13455 SF		\$67.00	SF	13455	SF/EA	1.04	1.08	\$1,012,547.95 EA
	Deduct 20% for gunnite								\$810,038.36 EA
66/2	Decking, 11238 SF, unreinforced		\$5.33	SF	11238	SF/EA	1.04	1.08	\$67,278.04 EA
66/2	add for mesh reinforcing		\$0.70	SF	11238	SF/EA	1.04	1.08	\$8,835.77 EA
66/4	fence, 6', #9 wire, per LF (198 m) w/rails		\$15.85	LF	650	LF/EA	1.04	1.08	\$11,571.77 EA
								SUM	\$1,910,271.89 EA
								RUC	\$1,910,271.89 EA

FAC	7513	Golf Course	UM =	EA	Design Size	1	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	Average of								
67/1	Class III, Typical Private Club, 18 holes, per hole		\$ 179,500.00	Hole	18	Holes/EA	1.03	1.08	\$ 3,594,164.40 EA
67/1	Class III, Typical Private Club, 9 holes, per hole		\$ 179,500.00	Hole	9	Holes/EA	1.03	1.08	\$ 1,797,082.20 EA
								Average	\$ 2,695,623.30 EA
								RUC	\$ 2,695,623.30 EA

FAC	7514	Golf Driving Range	UM =	EA	Design Size	1	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
67/2	Lighted driving range, assume 20 stations		\$ 8,375.00	Station	20	Stations/EA	1.03	1.08	\$ 186,327.00 EA
								RUC	\$ 186,327.00 EA

FAC	7515	Golf Pitch and Putt Course	UM =	EA	Design Size	1	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
67/2	Pitch and putt course., Average, assume 9 hoes		\$ 44,975.00	Hole	9	Holes/EA	1.03	1.08	\$ 450,271.71 EA
								RUC	\$ 450,271.71 EA

FAC	7517	Recreational Pier	UM =	EA	Design Size	1	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
	Assumed size 8' wide, 30' long								
67/6	Ship and boat dock, Light construction, 2" deck, light posts		\$ 33.75	SF	240	SF/EA	1.03	1.08	\$ 9,010.44 EA
								RUC	\$ 9,010.44 EA

FAC	7518	Marina	UM =	EA	Design Size	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Currt Cost Mult	Area Adjstnt	Cost	
	Assumed # slips = 90 (from review of military websites)								
67/6	Small Boat Marina, Average cost		\$ 8,625.00	SF	90 Slips/EA	1.03	1.08	\$ 863,500.50	EA
							RUC	\$ 863,500.50	EA

FAC	7521	Outdoor Playing Court		UM = EA		Design Size 1		Source Marshall and Swift Valuation; October 2015			
Section	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
	Average of Tennis Court and 2 x Basketball courts										
67/7	Tennis Court, 7200 sf (with apron)			\$41,550.00	EA			1.03	1.08	\$46,220.22	EA
67/7	Lighting (Assume 50% lighting)			\$12,350.00	EA	50%		1.03	1.08	\$6,869.07	EA
67/7	Fencing			\$11,050.00	EA			1.03	1.08	\$12,292.02	EA
	Subtotal									\$65,381.31	EA
66/7	Asphalt Basketball Ct (94' x 50' + 10 ft apron)			\$4.96	SF	7980 SF/EA		1.03	1.08	\$44,029.68	EA
67/7	Basketball Backstop, with pole			\$2,140.00	EA	2 per court		1.03	1.08	\$4,761.07	EA
67/7	Striping (per court)			\$377.50	EA			1.03	1.08	\$419.93	EA
	Assume 2 basketball courts / 5% deduction for multiple courts									\$93,500.30	
									Average	\$79,440.81	EA
									RUC	\$79,440.81	EA

FAC	7522	Athletic Field	UM =	EA	RPAD Ave Size	Source USACE PAX Newsletter 3.2.2 Dated 5 May 2013
CATCODE	Description	Unit Cost	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost
75022	Multipurpose Athletics Field (360' x 160')	\$ 165,540.00	NA		1.0000	\$165,540.00
					RUC	\$165,540.00

FAC		7524		Stadium		UM = EA		Design Size		1		Source Marshall and Swift Valuation; October 2015							
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost			
		Assume 10,000 seats. Priced per seat																	
67/4		grandstand, open steel frame, school/fairground				\$ 141.00		seat		10,000 seats/EA		1.03		1.08		\$ 1,568,484.00		EA	
67/4		conc/steel bleachers, stadium type, closed deck				\$ 282.50		seat		10,000 seats/EA		1.03		1.08		\$ 3,142,530.00		EA	
67/4		Bleachers with built-in training rooms, restrooms, snack bar, college or small municipal stadium type				\$ 377.50		seat		10,000 seats/EA		1.03		1.08		\$ 4,199,310.00		EA	
														Average		\$ 2,970,108.00		EA	
														RUC		\$ 2,970,108.00		EA	

FAC 7531		Pavilion	UM = SF		RPAD Ave Size 779	Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost	
16/23	Pavilion, D, Fair		\$ 62.42	SF		1.02	1.05	\$ 66.85	SF
							RUC	\$ 66.85	SF

FAC		7532	Outdoor Theater		UM =		EA	Design Size		1	Source				Marshall and Swift Valuation; October 2015									
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost									
67/5		Drive-In theater, Good (priced per car)			\$		2,290.00		Car		75		Cars / EA		1.03		1.10		\$		194,592.75		EA	
		Assume 75 Cars																						
															RUC		\$		194,592.75		EA			

FAC 7541		Recreational Camp and Trailer Park	UM = EA		Design Size 1	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost	
63/3	Housing Park, Average, per space, Assume 40 Spaces		\$ 10,965.00	pad	40 Pads/EA	1.00	1.08	\$ 473,688.00	EA
	Less Engineering (\$875) and less Additional Buildings (\$2460)				\$ 3,335.00 per pad	1.00	1.08	\$ 329,616.00	EA
	Number of Spaces Modifier; 1.10				1.10 40 pads			\$ 362,577.60	EA
							RUC	\$ 362,577.60	EA

FAC 7542		Miscellaneous Outdoor Recreation Facility	UM = EA		Design Size 1	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost	
67/7	Tennis Court, 7200 sf (with apron)		\$41,550.00	EA		1.03	1.08	\$46,220.22	EA
67/2	Miniature Golf Course, 18 Holes, Average Course		\$13,500.00	Hole	18 Hole to EA	1.03	1.08	\$270,313.20	EA
67/7	Portable bleachers, steel frame, 600 seats		\$58.00	Seat	600 Seat to EA	1.03	1.08	\$38,711.52	EA
66/8	Jogging Trail; Soil preparation, fine grading		\$ 0.26	SF	63360 SF to EA	1.04	1.08	\$18,503.15	EA
66/8	Jogging Trail; Mulching		\$ 0.40	SF	63360 SF to EA	1.04	1.08	\$28,466.38	EA
66/8	Jogging Trail; Edging, redwood (2 edges per trail)		\$ 3.21	LF	21120 LF to EA	1.04	1.08	\$76,147.57	EA
	Total for Jogging Trail							\$123,117.10	EA
16/23	Pavilion, D, Fair (assume 200sf)		\$ 62.42	SF	200 SF to EA	1.02	1.05	\$13,370.36	EA
							Average	\$98,346.48	EA
	Jogging Trail Design size 10560 ft x 6 ft						RUC	\$98,346.48	EA

FAC 7601		Museum	UM = SF		RPAD Ave Size 8,825	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost	
16/19	Museum, D, Average		\$ 131.09	SF		1.02	1.05	\$ 140.40	SF
16/25	Sprinkler, 5,000 SF wet, good		\$ 4.26	SF		1.02	1.05	\$ 4.56	SF
							RUC	\$ 144.96	SF

FAC 7604		Columbarium	UM = CF		RPAD Ave Size 209	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost	
11/32	Mausoleum, Niche, Good		\$ 185.00	Niche	1 Niche / CF	1.04	1.08	\$ 207.79	CF
							RUC	\$ 207.79	CF

FAC 8111		Electrical Power Source	UM = KW		RPAD Ave Size 1,134	Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost	
54/3	Standby power, complete with controls, 1000 KW, Diesel Drive		\$ 365.00	KW		1.00	1.08	\$ 394.20	KW
							RUC	\$ 394.20	KW

FAC	8112	Stand-By/Emergency Power	UM =	KW	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost (EA)	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost	
81160	Standby Generator, Diesel, 3 Ph / 4 Wire		\$ 36,720.00	75	75 KW/EA	0.9614	\$470.72	KW
81160	Standby Generator, Diesel, 3 Ph / 4 Wire		\$ 43,146.00	125	125 KW/EA	0.9614	\$331.86	KW
81160	Standby Generator, Diesel, 3 Ph / 4 Wire		\$ 54,000.00	200	200 KW/EA	0.9614	\$259.59	KW
81160	Standby Generator, Diesel, 3 Ph / 4 Wire		\$ 68,850.00	300	300 KW/EA	0.9614	\$220.65	KW
81160	Standby Generator, Diesel, 3 Ph / 4 Wire		\$ 93,350.00	400	400 KW/EA	0.9614	\$224.37	KW
81160	Standby Generator, Diesel, 3 Ph / 4 Wire		\$ 115,770.00	500	500 KW/EA	0.9614	\$222.61	KW
81160	Standby Generator, Diesel, 3 Ph / 4 Wire		\$ 180,030.00	750	750 KW/EA	0.9614	\$230.78	KW
81160	Standby Generator, Diesel, 3 Ph / 4 Wire		\$ 226,440.00	1,000	1000 KW/EA	0.9614	\$217.71	KW
				419	Average		RUC	\$272.28 KW

FAC	8121	Electrical Power Distribution Line, Overhead	UM =	LF	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost (1000 LF)	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost	
81241	H Frame Distribution, 15-69 kv		\$ 45,700.00	1,000	1000 to LF	0.9614	\$43.94	LF
81241	Overhead Lines below 15kv w/cross arms & insulators		\$ 42,940.00	1,000	1000 to LF	0.9614	\$41.28	LF
				1,000	Average		RUC	\$42.61 LF

FAC	8122	Exterior Lighting, Pole	UM =	EA	Design Size	1	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost
66/1	Street light, underground wiring, 200' o.c.		\$ 2,800.00	EA			1.04	1.08	\$ 3,144.96 EA
								RUC	\$ 3,144.96 EA

FAC	8123	Electrical Power Distribution Line, Underground	UM =	LF	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description: UGND ELECTRIC DUCTBANKS - INCL Cost of EXCAV, CIP CONC & BACKFILL to 3' DEEP		Unit Cost (LF)	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost	
81242	Direct Burial, 1/0, 600 Volts SEU Copper Conductor		\$ 18.35	NA		0.9614	\$17.64	LF
81242	Direct Burial, 4/0 600 Volts SEU Copper Conductor		\$ 27.00	NA		0.9614	\$25.96	LF
81242	UG Duct, 1 Way, 4"		\$ 19.00	NA		0.9614	\$18.27	LF
81242	UG Duct, 2 Way, 4"		\$ 33.00	NA		0.9614	\$31.73	LF
81242	UG Duct, 4 Way, 4"		\$ 57.00	NA		0.9614	\$54.80	LF
81242	UG Duct, 6 Way, 6"		\$ 132.00	NA		0.9614	\$126.91	LF
					Average		RUC	\$45.88 LF

FAC	8133	Electrical Power Transformers	UM =	KV	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost (EA)	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost	
81360	500 kVA, OIL FILLED, 15 KV W/ TAPS, 480 V SECONDARY 3 Ph		\$ 25,400.00	500	500 EA/KV	0.9614	\$48.84	LF
81360	1,000 kVA, OIL FILLED, 15 KV W/ TAPS, 480 V SECONDARY 3 Ph		\$ 46,100.00	1,000	1000 EA/KV	0.9614	\$44.32	LF
					Average		RUC	\$46.58 LF

FAC	8211	Heat Source	UM =	MB	RPAD Ave Size	109	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
	Average Inventory = 109 MB = 3,254 HP									
62/1	High capacity Boiler, 1,000 HP		\$ 465.00	HP	29.85	HP to MB	1.05	1.08	\$ 15,740.60	MB
62/1	High capacity Boiler, 6,000 HP		\$ 345.00	HP	29.85	HP to MB	1.05	1.08	\$ 11,678.51	MB
								Average	\$ 13,709.55	MB
								RUC	\$ 13,709.55	MB

FAC	8221	Heat Distribution Line	UM =	LF	RPAD Ave Size		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost (LF)	Reference Size	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost		
82210	Steam and Condensate Lines - Underground									
	Common 12-3/4"		\$ 515.00	NA			0.9614	\$495.14	LF	
	Common 10-3/4" w/stm 1-1/2"; rtn 1-1/2"		\$ 510.00	NA			0.9614	\$490.33	LF	
	Common 10 -3/4" w/stm 1-1/4"; rtn 1-1/2"		\$ 510.00	NA			0.9614	\$490.33	LF	
	Single 12-3/4, 1.25" pipe		\$ 316.00	NA			0.9614	\$303.81	LF	
	Single 12-3/4, 1.5" pipe		\$ 316.00	NA			0.9614	\$303.81	LF	
	Single 12-3/4, 2" pipe		\$ 332.00	NA			0.9614	\$319.20	LF	
	Single 12-3/4, 2.5" pipe		\$ 352.00	NA			0.9614	\$338.42	LF	
	Single 14", 3" pipe		\$ 352.00	NA			0.9614	\$338.42	LF	
	Single 14", 4" pipe		\$ 383.00	NA			0.9614	\$368.23	LF	
	Single 18", 6" pipe		\$ 475.00	NA			0.9614	\$456.68	LF	
82220	Hot Water Lines High Temp - Common Conduit									
	10 - 3/4, 1" RET		\$ 377.00	NA			0.9614	\$362.46	LF	
	10 - 3/4, 1-1/2 RET		\$ 377.00	NA			0.9614	\$362.46	LF	
	10 - 3/4, 2" RET		\$ 383.00	NA			0.9614	\$368.23	LF	
	16", 3" HW; 3" rtn		\$ 434.00	NA			0.9614	\$417.26	LF	
	10", 4"HW; 4" rtn		\$ 571.00	NA			0.9614	\$548.98	LF	
						Average		RUC	\$397.58	LF

FAC	8231	Heat Gas Production Plant	UM =	MB	RPAD Ave Size	86	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
	Average size in inventory = 150 sf									
14/22	Armory, D, Excellent (similar in construction to utility bldg)		\$ 145.31	SF	0.570	SF to MB	1.04	1.05	\$ 90.45	MB
14/27	Loading Dock, Assume 15x30', steel piers		\$ 22.10	SF	0.570	SF to MB	1.04	1.05	\$ 13.76	MB
64/3	Compressor, 20 HP		\$ 10,275.00	EA	86	EA to MB	1.05	1.08	\$ 136.28	MB
61/8	Welded Steel Pressure Tank, 45,000 GA		\$ 286,000.00	EA	86	EA to MB	1.02	1.08	\$ 3,684.88	MB
								SUM	\$ 3,925.37	MB
								RUC	\$ 3,925.37	MB

FAC	8232	Heat Gas Storage	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
61/8	Welded Stl Pressure Tank, complete installation, 12,000 gal		\$ 93,500.00	EA			1.02	1.08	\$ 102,999.60	EA
								RUC	\$ 102,999.60	EA

FAC 8241		Heat Gas Distribution Line	UM = LF		RPAD Ave Size 9,745		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/1	Gas Main, 4" plastic		\$ 17.86	LF			1.04	1.08	\$ 20.06	LF
66/1	Gas Main, 3" Steel		\$ 17.65	LF			1.04	1.08	\$ 19.82	LF
								Average	\$ 19.94	LF
								RUC	\$ 19.94	LF

FAC 8261		Refrigeration and Air Conditioning Source	UM = TR		RPAD Ave Size 260		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
53/5	Engineered System, installation, power, connections, and all ancillary items. 200 TR		\$ 4,500.00	TR			1.01	1.08	\$ 4,908.60	TR
53/5	Engineered System, installation, power, connections, and all ancillary items. 300 TR		\$ 4,350.00	TR			1.01	1.08	\$ 4,744.98	TR
									\$ 4,826.79	TR
								RUC	\$ 4,826.79	TR

FAC 8271		Chilled Water and Refrigerant Distribution Line	UM = LF		RPAD Ave Size 4,994		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
62/3	Utility Piping, pressure pipe, 6", steel, buried		\$ 47.88	LF			1.05	1.08	\$ 54.30	LF
	Return Line								\$ 54.30	LF
62/2	Valve, EA, per 316 ft Block		\$ 2,932.50	EA	316	Valve to LF	1.05	1.08	\$ 10.52	LF
								SUM	\$ 119.12	LF
								RUC	\$ 119.12	LF

FAC 8311		Sewage Treatment	UM = KG		RPAD Ave Size 1,031		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
14/41	Sewage Treatment Plant, Large, Municipal, 1M-5M GPD		\$ 6.17	gal	1000	gal to KG	1.05	1.08	\$ 6,996.78	KG
								RUC	\$ 6,996.78	KG

FAC 8312		Industrial Waste Treatment	UM = KG		RPAD Ave Size 255		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
14/41	Sewage Tmnt Plant, Medium, steel or concrete, 15K – 500K GPD		\$ 6.73	gal	1000	gal to KG	1.05	1.08	\$ 7,631.82	KG
								RUC	\$ 7,631.82	KG

FAC 8314		Septic Tank and Drain Field	UM = GA		RPAD Ave Size 12,289		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
53/10	Septic tank, installed, connected, 10,000 GA		\$ 16,750.00	EA	10,000	EA to GA	1.02	1.08	\$ 1.85	GA
53/10	Drainfield factor 1.25 x tank cost		\$ 20,937.50	EA	10,000	EA to GA	1.02	1.08	\$ 2.31	GA
53/10	Grinder pump system		\$ 8,825.00	EA	10,000	EA to GA	1.02	1.08	\$ 0.97	GA
								SUM	\$ 5.12	GA
								RUC	\$ 5.12	GA

FAC 8315		Septic Lagoon and Settlement Ponds	UM = GA		RPAD Ave Size 844,528		Source Marshall and Swift Valuation; October 2015			
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
17/43	Lagoon, Open pit, Concrete		\$ 1.90	CF	7.48	CF to gal	1.04	1.08	\$ 0.29	GA
17/43	Agitator & pump		\$ 18,075.00	EA	844,528	EA to gal	1.04	1.08	\$ 0.02	GA
								SUM	\$ 0.31	GA
								RUC	\$ 0.31	GA

FAC	8316	Sewage Lift Stations	UM =	EA	RPAD Ave Size	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost (EA)	Reference Size	Conversion	Inflation Adjustment by MCP Index	Adjusted Cost	
83150	Sewage Lift Station, 200,000 GPD		\$ 314,700.00	NA		0.9614	\$302,562.51	EA
83150	Sewage Lift Station, 100 GPM		\$ 268,800.00	NA		0.9614	\$258,432.80	EA
83150	Sewage Lift Station, 200 GPM		\$ 351,900.00	NA		0.9614	\$338,327.76	EA
			Average				RUC	\$299,774.36 EA

FAC	8321	Sewer and Industrial Waste Line	UM =	LF	Average Size RPAD Ave Size 16,903	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost
66/1	Sewer main, 9' Average depth. 8" plastic pipe		\$ 18.96	LF		1.04	1.08	\$ 21.30 LF
66/1	Sewer clean outs, 60' o.c.,		\$ 24.37	LF		1.04	1.08	\$ 27.37 LF
66/1	Sewer manholes, 400' o.c., each		\$ 6.83	LF		1.04	1.08	\$ 7.67 LF
							SUM	\$ 56.34 LF
							RUC	\$ 56.34 LF

FAC	8331	Refuse Collection and Recycling Facility	UM =	EA	Design Size 1	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost
14/40	Waste transfer and recycling buildings with tipping floor and small office, excluding equipment.		\$ 63.00	SF	4,000 SF to EA	1.05	1.08	\$ 285,768.00 EA
	Assume bldg size of 40 x 100 = 4000 sf							
							RUC	\$ 285,768.00 EA

FAC	8332	Incinerator	UM =	TH	RPAD Ave Size 5.2	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost
62/6	Incinerator, 2000 lb/hr extrapolated		\$223,000.00	TH		1.05	1.08	\$252,882.00 TH
62/6	Feeder		\$ 15,950.00	EA	5.2 EA to TH	1.05	1.08	\$3,478.33 TH
62/5	Chimney, 12" round, per foot, assume 50 ft		\$ 127.50	FT	10 FT to EA	1.04	1.08	\$1,377.00 TH
54/1	Service entrance, 3 Ph, 400 A		\$ 6,350.00	EA	5.2 EA to TH	1.00	1.08	\$1,318.85 TH
54/1	Safety switch, 400 A		\$ 2,417.50	EA	5.2 EA to TH	1.00	1.08	\$502.10 TH
54/1	Switchgear, 400 A, Commercial		\$ 6,475.00	EA	5.2 EA to TH	1.00	1.08	\$1,344.81 TH
54/1	Circuit breakers, 400-600 A, 2 EA, 480v		\$ 2,442.50	EA	5.2 EA to TH	1.00	1.08	\$1,014.58 TH
							SUM	\$261,917.65 TH
							RUC	\$ 261,917.65 TH

FAC	8412	Water Treatment Facility	UM =	KG	RPAD Ave Size 1,642	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion	Currt Cost Mult	Area Adjustnt	Cost
14/41	Water Treatment Plant, Large, per GA/Day		\$ 2.28	GPD	1,000 Gal to KG	1.05	1.08	\$ 2,585.52 KG
							RUC	\$ 2,585.52 KG

FAC	8413	Water Storage, Potable	UM =	GA	RPAD Ave Size 311,746	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	TASK		Given	Units	Conversion	Inflation Adjustment by MCP Index	Cost	
84620	Reservoir, Potable water, steel storage tank, 250,000 gallons		\$ 424,500.00	EA	250,000 EA to GA	0.9614	\$ 1.63	GA
84620	Reservoir, Potable water, steel storage tank, 500,000 gallons		\$ 600,500.00	EA	500,000 EA to GA	0.9614	\$ 1.15	GA
							Average	\$ 1.39 GA
							RUC	\$ 1.39 GA

FAC	8414	Water Well, Potable	UM =	KG	RPAD Ave Size	540	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
53/10	9" casing, 200 ft, \$51/ft		\$ 10,200.00	EA	540 EA to KG		1.02	1.08	\$ 20.81	KG
17/57	Pump, vertical turbine, 600 gpm, 10 hp		\$ 13,800.00	EA	648 gpm to KG		1.04	1.08	\$ 23.92	KG
	600 GPM = 864 KG assume service factor of 75% (conversion factor = 684)							SUM	\$ 44.73	KG
								RUC	\$ 44.73	KG

FAC	8421	Water Distribution Line, Potable	UM =	LF	RPAD Ave Size	24,630	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/1	Water main, 6" plastic		\$ 24.88	LF			1.04	1.08	\$ 27.95	LF
66/1	Fire hydrants, 300' o.c., each		\$ 10.22	LF	0.75 Urban		1.04	1.08	\$ 8.61	LF
	Assume 75% of system is in residential/built up area							SUM	\$ 36.55	LF
								RUC	\$ 36.55	LF

FAC	8422	Water Pump Facility, Potable	UM =	KG	RPAD Ave Size		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost (EA)	Reference Size (GPM)	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost		
84472	Water Pump, Non-Potable, 1,000 GPM, DSL Pump		\$ 53,550.00	1,000	2026		0.9614	\$25.41	KG	
84472	Water Pump, Non-Potable, 2,000 GPM, DSL Pump		\$ 70,400.00	2,000	2026		0.9614	\$33.41	KG	
84472	Water Pump, 1,000 GPM, Elect Pump		\$ 34,100.00	1,000	2026		0.9614	\$16.18	KG	
					Average			RUC	\$25.00	KG

FAC	8431	Water Source, Fire Protection	UM =	GM	RPAD Ave Size		Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	Description		Unit Cost (EA)	Reference Size (GPM)	Conversion		Inflation Adjustment by MCP Index	Adjusted Cost		
84472	500 GPM - 4" DSL PUMP, 125 PSI, 78 HP, INCL CONTROLLER, FTGS, & PRV, NO PUMP STN BLD		\$ 54,100.00	500	500		0.9614	\$104.03	GM	
84472	1000 GPM - 4" DSL PUMP, 100 PSI, 89 HP, INCL CONTROLLER, FTGS, & PRV, NO PUMP STN BLD		\$ 53,550.00	1,000	1,000		0.9614	\$51.48	GM	
84472	2000 GPM - 6" DSL PUMP, 100 PSI, 167 HP, INCL CONTROLLER, FTGS, & PRV, NO PUMP STN BLD		\$ 70,400.00	2,000	2,000		0.9614	\$33.84	GM	
84472	2500 GPM - 8" DSL PUMP, 150 PSI, 365 HP, INCL CONTROLLER, FTGS, & PRV, NO PUMP STN BLD		\$ 96,400.00	2,500	2,500		0.9614	\$37.07	GM	
84472	1000 GPM- 5" ELECT PUMP, 100 PSI, 86 HP, 3500 RPM, INCL CONTRLR, FTGS, & PRV, NO PUMP STN BLD		\$ 34,100.00	1,000	1,000		0.9614	\$32.78	GM	
					Average			RUC	\$51.84	GM

FAC	8432	Water Distribution Line, Fire Protection	UM =	LF	RPAD Ave Size	6,471	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/1	Water main, 6" plastic		\$ 24.88	LF			1.04	1.08	\$ 27.95	LF
66/1	Water main, 6" steel		\$ 40.10	LF			1.04	1.08	\$ 45.04	LF
								Ave	\$ 36.49	LF
66/1	Fire hydrants, 300' o.c., each		\$ 10.22	LF			1.04	1.08	\$ 11.48	LF
	Assume 100% of system has hydrants							SUM	\$ 47.97	LF
								RUC	\$ 47.97	LF

FAC	8441	Water Source, Non-Potable	UM =	KG	RPAD Ave Size	626	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
53/10	9" casing, 200 ft, \$51/ft		\$ 10,200.00	EA	432 gpm to KG		1.04	1.08	\$ 26.52	KG
17/57	Pump, vertical turbine, 600 gpm, 10 hp		\$ 13,800.00	EA	432 gpm to KG		1.04	1.08	\$ 35.88	KG
	600 GPM = 864 KG assume service factor of 50% (conversion factor = 432)							SUM	\$ 62.40	KG
								RUC	\$ 62.40	KG

FAC		8442		Water Storage, Non Potable		UM =		GA		RPAD Ave Size		936,639		Source				Marshall and Swift Valuation; October 2015			
Section		TASK				Given		Units		Conversion				Curnt Cost Mult		Area Adjustnt		Cost			
61/3		Welded steel, surface reservoir, 750K GA				\$ 708,000.00		EA		750,000 EA to GA				1.02		1.08		\$ 1.04		GA	
61/3		Welded steel, surface reservoir, 1000K GA				\$ 819,000.00		EA		1,000,000 EA to GA				1.02		1.08		\$ 0.90		GA	
61/3		Tank, Elevated, High Stress, 1000k GA				\$ 2,743,000.00		EA		1,000,000 EA to GA				1.02		1.08		\$ 3.02		GA	
																Average		\$ 1.65		GA	
																RUC		\$ 1.65		GA	

FAC		8512	Road, Unsurfaced		UM = SY		RPAD Ave Size		USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015							
CATCODE		Description			Unit Cost		UoM		Conversion		Inflation Adjustment by MCP Index		Adjusted Cost			
93210		ROUGH GRADING, DUMPED MATERIAL SPREAD BY DOZER, NO COMPACTION			\$ 2.55		SY				0.9614		\$2.45		GM	
93210		FINE GRADING, GRANULAR SUBBASE FOR PAVING, +/- 1" COMPACTION, 3 PASSES W/ DOZER, 6" LIFTS			\$ 2.16		SY				0.9614		\$2.08		GM	
85110		1-1/2" CRUSHED STONE BASE 6" DEEP, COMPACTED, w/o ERTHWRK			\$ 9.00		SY				0.9614		\$8.65		GM	
									Sum			RUC		\$13.18		GM

FAC		8513	Vehicle Bridge		UM =		SY	RPAD Ave Size		236		Source				Marshall and Swift Valuation; October 2015								
Section		TASK			Given		Units		Conversion				Curnt Cost Mult		Area Adjustnt		Cost							
66/3		Bridge, highway, concrete median per sf			\$		130.50		SF		9		SF to SY		1.04		1.08		\$		1,319.20		SY	
																	SUM		\$		1,319.20		SY	
																	RUC		\$		1,319.20		SY	

FAC		8514	Vehicular Tunnel		UM =		LF	RPAD Ave Size		1,115	Source Marshall and Swift Valuation; October 2015													
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost									
		Assume 2 lanes wide plus shoulder: 30 ' x 20' high																						
15/31		Underground walkway, per SF including HVAC and lighting			\$		493.26		SF		30		SF to LF		1.07		1.08		\$		17,100.34		LF	
													RUC		\$		17,100.34		LF					

FAC		8521	Vehicle Parking, Surfaced		UM =		SY	RPAD Ave Size		13,238	Source				Marshall and Swift Valuation; October 2015								
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost								
66/3		Grading - rough and finished			\$		79.00		p.Space		35		Space to SY		1.04		1.08		\$2.54		SY		
66/3		drainage			\$		160.00		p.Space		35		Space to SY		1.04		1.08		\$5.13		SY		
66/3		paving - spaces and drives			\$		695.00		p.Space		35		Space to SY		1.04		1.08		\$22.30		SY		
66/3		pavement marking, striping, bumpers			\$		19.00		p.Space		35		Space to SY		1.04		1.08		\$0.61		SY		
66/3		Electrical – lighting and wiring			\$		175.00		p.Space		35		Space to SY		1.04		1.08		\$5.62		SY		
		Planning Factor = 315 sf per space															SUM		\$36.20		SY		
																RUC		\$		36.20		SY	

FAC		8522		Vehicle Parking and Staging Area, Unsurfaced		UM =		SY		RPAD Ave Size		10,118		Source		Marshall and Swift Valuation; October 2015							
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost							
66/3		Grading - rough and finished				\$		79.00		p.Space		35		Space to SY		1.04		1.08		\$2.54		SY	
66/3		drainage				\$		160.00		p.Space		35		Space to SY		1.04		1.08		\$5.13		SY	
66/3		Electrical – lighting and wiring				\$		175.00		p.Space		35		Space to SY		1.04		1.08		\$5.62		SY	
		Planning Factor = 315 sf per space																SUM		\$13.29		SY	
																RUC		\$		13.29		SY	

FAC	8523	Vehicle Staging Area, Surfaced	UM =	SY	RPAD Ave Size	14,193	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/3	Grading - rough and finished		\$ 79.00	p.Space	35	Space to SY	1.04	1.08	\$2.54	SY
66/3	drainage		\$ 160.00	p.Space	35	Space to SY	1.04	1.08	\$5.13	SY
66/3	paving - spaces and drives		\$ 695.00	p.Space	35	Space to SY	1.04	1.08	\$22.30	SY
	Planning Factor = 315 sf per space							SUM	\$29.97	SY
								RUC	\$ 29.97	SY

FAC	8524	Sidewalk and Walkway	UM =	SY	RPAD Ave Size	5,956	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/1	Sidewalk, Concrete		\$ 4.20	SF	9	SF to SY	1.04	1.08	\$ 42.46	SY
								RUC	\$ 42.46	SY

FAC	8525	Pedestrian Bridge	UM =	SY	RPAD Ave Size	89.4	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/3	Pedestrian bridge, steel, median		\$ 232.00	SF	9	SF to SY	1.04	1.08	\$ 2,345.24	SY
								RUC	\$ 2,345.24	SY

FAC	8526	Miscellaneous Paved Area	UM =	SY	RPAD Ave Size	1,373	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/3	Grading - rough and finished		\$ 79.00	p.Space	35	Space to SY	1.04	1.08	\$2.54	SY
66/3	drainage		\$ 160.00	p.Space	35	Space to SY	1.04	1.08	\$5.13	SY
66/3	paving - spaces and drives		\$ 695.00	p.Space	35	Space to SY	1.04	1.08	\$22.30	SY
	Planning Factor = 315 sf per space							SUM	\$29.97	SY
								RUC	\$29.97	SY

FAC	8531	Parking Garage/Building	UM =	SF			Source	Guidance Unit Cost, May 2016		
	Description		Reference Size	UoM				October 2015 Unit Cost		
	Parking Garage/Building		162,000	SF					\$52.00	SF
								RUC	\$52.00	SF

FAC	8601	Railroad Track	UM =	MI	RPAD Ave Size	73.7	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
66/3	Railroad Spur, 115# rail, per foot of track		\$ 135.00	LF	5,280	LF to Mile	1.04	1.08	\$ 800,616.96	MI
	25% deduction for rail over 500 ft								\$ 600,462.72	MI
								RUC	\$ 600,462.72	MI

FAC	8612	Miscellaneous Railroad Facility	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
17/55	RR Track Scales, 200T, w/reinforced concrete pit and platform		\$ 119,000.00	EA			1.04	1.08	\$ 133,660.80	EA
								RUC	\$ 133,660.80	EA

FAC	8711	Storm Drainage	UM =	LF	RPAD Ave Size	11,838	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
	Average of:									
66/11	Pipe, Drainage System, 10", Average Cost		\$ 15.68	LF			1.03	1.08	\$17.44	LF
66/11	Pipe, Drainage System, 12", Average Cost		\$ 18.03	LF			1.03	1.08	\$20.06	LF
								Ave	\$18.75	LF
66/1	Storm Manhole, 400' oc		\$ 6.44	LF			1.04	1.08	\$7.23	LF
								Sum	\$25.98	LF
								RUC	\$ 25.98	LF

FAC	8712	Retaining Structure	UM =	LF	RPAD Ave Size	1,020	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
51/3	Concrete Foundation Wall, 6", reinforced, sf		\$ 13.90	SF	8 SF to LF		1.03	1.08	\$ 123.70	LF
	Hillside retaining wall add 100%								\$ 247.40	LF
	Assume height = 8 ft									
								RUC	\$ 247.40	LF

FAC	8713	Grounds Drainage Dams	UM =	EA	Design Size	1	Source	PACES 1.1		
Assembly	Description		Qty	UoM	Material	Labor	Equip	Bare	Tot w/OP	
A1030050601	Drainage		943	LF	\$6.61	\$4.98	\$0.53	\$11,434.96	\$19,614.60	EA
G1020070101	General Area Cleanup		2.25	ACRE	\$0.00	\$306.14	\$42.48	\$784.38	\$1,511.02	EA
G1030010105	Fine Grading, Hand		4,351.69	SY	\$0.00	\$4.93	\$0.00	\$21,467.63	\$42,536.35	EA
G1030020212	Hand Excavation, Sand/Gravel		1,183.91	CY	\$0.00	\$55.38	\$0.00	\$65,568.99	\$129,919.61	EA
G1030020298	0.38m3 (1/2 CY) Crawler Mounted, Hydraulic Excavator		23,678.18	CY	\$0.00	\$0.98	\$0.46	\$34,088.51	\$62,616.79	EA
G1030040405	950, 2.29m3 (3 CY), Delivered & Dumped, Backfill W/Sand		23,678.18	CY	\$35.75	\$2.40	\$3.56	\$987,574.96	\$1,536,416.21	EA
G1030050511	Compact Soil W/Vibrating Plate		2,367.82	CY	\$0.00	\$1.31	\$0.12	\$3,380.57	\$6,569.46	EA
G1030050514	Compact Soil By Machine W/Roller		21,310.36	CY	\$0.00	\$0.49	\$0.64	\$23,897.31	\$41,232.11	EA
G2050020201	Sediment Fence, Temporary		1,199.00	LF	\$2.80	\$2.95	\$1.04	\$8,142.15	\$14,054.45	EA
G2050030301	Topsoil, 152.40mm (6") Lifts, Off-Site		2,367.82	CY	\$32.81	\$3.36	\$1.83	\$89,969.00	\$141,222.08	EA
G2050040401	Seeding, .67 Level & .33 Slope, Hydr Spread		2.25	ACRE	\$338.59	\$109.99	\$83.55	\$1,197.28	\$1,943.34	EA
	Average size 50,340 CY extracted from RPAD								\$1,997,636.02	EA
	Project Location = Ft Meyer, VA (ACF= 1) Midpoint of Construction: 1 October 2015							RUC	\$ 1,997,636.02	EA

FAC	8714	Levees and Dikes for Grounds Drainage	UM =	LF	RPAD Ave Size	445	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
51/2	Bulk Excavation, medium earth		\$ 7.56	CY	2.37 CY to LF		1.03	1.08	\$ 19.93	LF
51/2	Backfill and compaction, unconfined, hard earth		\$ 21.70	CY	7.33 CY to LF		1.03	1.08	\$ 176.94	LF
51/2	Synthetic matting		\$ 13.22	SY	1.67 SY to LF		1.03	1.08	\$ 24.56	LF
51/2	Riprap		\$ 94.00	SY	1.67 SY to LF		1.03	1.08	\$ 174.62	LF
51/2	Gabions filled with stone, high cost		\$ 240.00	SY	1.67 SY to LF		1.03	1.08	\$ 445.85	LF
66/8	Hydroseeding		\$ 0.16	SF	25 SF to LF		1.04	1.08	\$ 4.49	LF
	Assume dyke is a trapezoid; 10' top, 15 foot sides, 34' base. 1 side exposed to water. 198 CU FT / LF							Sum	\$ 846.40	LF
								RUC	\$ 846.40	LF

FAC	8715	Storm Water Ponds	UM =	MG	RPAD Ave Size	0.89	Source	USACE PAX Newsletter 3.2.2 Dated 30 Sep 2015		
CATCODE	TASK		Given	Units	Conversion		Inflation Adjustment by MCP Index		Cost	
83210	SW Drainage Ponds, includes fence, seeding slopes, partial liner and excavation; 1/8 acre, 5' deep		\$ 22,500.00	EA	0.204	EA to MG	0.9614		\$106,040.24	MG
83210	SW Drainage Ponds, includes fence, seeding slopes, partial liner and excavation; 1/4 acre, 5' deep		\$ 45,100.00	EA	0.407	EA to MG	0.9614		\$106,537.01	MG
83210	SW Drainage Ponds, includes fence, seeding slopes, partial liner and excavation; 3/8 acre, 5' deep		\$ 67,800.00	EA	0.611	EA to MG	0.9614		\$106,685.86	MG
83210	SW Drainage Ponds, includes fence, seeding slopes, partial liner and excavation; 1/2 acre, 5' deep		\$ 90,270.00	EA	0.814	EA to MG	0.9614		\$106,619.69	MG
								Ave	\$106,470.70	MG
								RUC	\$ 106,470.70	MG

FAC	8721	Boundary Fence and Wall	UM =	LF	RPAD Ave Size	9,700	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/4	Chain Link Fence #9 wire, 8', per LF, posts 2" round, 10' o.c.		\$ 20.85	LF			1.04	1.08	\$23.42	LF
66/4	Add for 3-strand barbed wire		\$ 3.04	LF			1.04	1.08	\$3.41	LF
66/4	Add 25' wide gate, 1 per 1000 LF		\$ 1,490.00	EA	1000	EA to LF	1.04	1.08	\$1.67	LF
66/4	Add pedestal type turnstile, 1 per 1,000 LF + 30% electric op		\$ 3,718.00	EA	1000	EA to LF	1.04	1.08	\$4.18	LF
66/4	add security micro-mesh, 1.07/sf = 8.56/LF		\$ 8.56	LF			1.04	1.08	\$9.61	LF
								SUM	\$42.30	LF
								RUC	\$ 42.30	LF

FAC	8722	Security Fence	UM =	LF	RPAD Ave Size	6,721	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
66/4	Chain Link Fence #7 wire, 12', per LF, posts 2" round, 10' o.c.		\$ 35.00	LF			1.04	1.08	\$39.31	LF
66/4	Add for 3-strand barbed wire		\$ 3.04	LF			1.04	1.08	\$3.41	LF
66/4	Add for barbed coils		\$ 11.05	LF			1.04	1.08	\$12.41	LF
66/4	Add 25' wide gate, 1 per 1000 LF		\$ 1,490.00	EA	1000	EA to LF	1.04	1.08	\$1.67	LF
66/4	Add turn-style stainless steel, 1 per 1,000 LF + 30% electric operat		\$ 10,825.00	EA	1000	EA to LF	1.04	1.08	\$12.16	LF
66/4	add security micro-mesh, 1.07/sf = 12.84/LF		\$ 12.84	LF			1.04	1.08	\$14.42	LF
								SUM	\$83.39	LF
								RUC	\$ 83.39	LF

FAC	8813	Navigation Revetments	UM =	LF	RPAD Ave Size		Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
51/2	Soil Stabilization, lime		\$ 7.80	SY	1	SY to LF	1.03	1.08	\$8.68	LF
51/2	Gabions filled with stone		\$ 160.00	SY	1	SY to LF	1.03	1.08	\$177.98	LF
51/2	Rip rap		\$ 94.00	SY	1	SY to LF	1.03	1.08	\$104.57	LF
51/2	Geotextile fabric		\$ 2.53	SY	1	SY to LF	1.03	1.08	\$2.81	LF
51/2	Synthetic matting		\$ 13.22	SY	1	SY to LF	1.03	1.08	\$14.71	LF
	Assume SY = 1 LF x 9 FT from shore to water									
								Average	\$61.75	LF
								RUC	\$ 61.75	LF

FAC	8910	Utility Building	UM =	SF	RPAD Ave Size	1,362	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/22	Armory, C, Good (similar in construction to utility bldg)		\$ 116.87	SF			1.05	1.08	\$ 132.53	SF
14/27	Loading Dock, Assume 15x30', steel piers		\$ 22.10	SF			1.05	1.08	\$ 25.06	SF
								Sum	\$ 157.59	SF
								RUC	\$ 157.59	SF

FAC	8921	Installation Gas Production Plant	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
	Average size in inventory = 1086 SF									
14/22	Armory, D, Excellent (similar in construction to utility bldg)		\$ 145.31	SF	1086 SF to EA		1.04	1.05	\$ 172,324.87	EA
14/27	Loading Dock, Assume 15x30', steel piers		\$ 22.10	SF	1086 SF to EA		1.04	1.05	\$ 26,208.66	EA
64/3	Compressor, 20 HP		\$ 10,275.00	EA			1.05	1.08	\$ 11,651.85	EA
61/8	Welded Steel Pressure Tank, 15,000 GA		\$ 114,000.00	EA			1.02	1.08	\$ 125,582.40	EA
								SUM	\$ 335,767.78	EA
								RUC	\$ 335,767.78	EA

FAC	8922	Installation Gas Storage	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
61/8	Weld Steel Pressure Tank, 9,000 GA		\$ 76,000.00				1.02	1.08	\$ 83,721.60	EA
								RUC	\$ 83,721.60	EA

FAC	8923	Vehicle Scales	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
17/55	Truck scales, fixed 50T, S		\$ 50,750.00	EA			1.04	1.08	\$ 57,002.40	EA
								RUC	\$ 57,002.40	EA

FAC	8924	Miscellaneous Pump Station	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
CATCODE	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
62/1	Industrial Pump, 8" suction x 6" discharge 60hp		\$ 12,700.00	EA			1.05	1.08	\$ 14,401.80	EA
51/2	Utility Vault / Utility Tunnel, Medium Soil, 5'-7" wall, CF		\$ 26.50	CF	64 CF to EA		1.03	1.08	\$ 29.48	EA
								Sum	\$ 14,431.28	EA
								RUC	\$ 14,431.28	EA

FAC	8926	Hazardous Waste Storage Or Disposal Facility	UM =	EA	Design Size	1	Source	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion		Currt Cost Mult	Area Adjustnt	Cost	
14/40	Recycling Facility		\$ 63.00	SF	5000 SF to EA		1.05	1.08	\$357,210.00	EA
	Assume 5000 SF (100' x 50')									
65/12	Hazardous Material Drum Storage System; 2,000 lbs. pneumatic hoist, and drum lift, 78- to 156-drum cap		\$ 875.00	Drum	117 Drum to EA		1.03	1.08	\$113,881.95	EA
								SUM	\$471,091.95	EA
								RUC	\$ 471,091.95	EA

FAC		8927		Utility Vaults		UM =		EA		Design Size		1		Source				Marshall and Swift Valuation; October 2015					
Section		TASK				Given		Units		Conversion				Curnt Cost Mult		Area Adjustnt		Cost					
51/2		Utility Tunnel, Medium Soil, 5"-7" wall, CF				\$		26.50		CF		900		CF to EA		1.03		1.08		\$26,530.74		EA	
		Assumed Size, 9' high, 10' x 10'																					
																SUM		\$26,530.74		EA			
																RUC		\$		26,530.74		EA	

FAC	8928	Loading Platform/Ramp	UM =	EA	Design Size	1	Marshall and Swift Valuation; October 2015		
Section	TASK		Given	Units	Conversion	Curnt Cost Mult	Area Adjustnt	Cost	
14/27	Loading ramp, per sf, steel railing, forklift		\$ 48.00	SF	360 SF to EA	1.05	1.08	\$19,595.52	EA
	assume EA = 12 wide x 30 ft long								
							RUC	\$19,595.52	EA

FAC		8929		Miscellaneous Utility Facility		UM = EA		Design Size		1		Source Marshall and Swift Valuation; October 2015						
Section		TASK				Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost		
53/12		Hydrant, 2-way siamese, 6 inch				\$ 1,550.00		EA				1.02		1.08		\$1,707.48		EA
53/12		2 1/2" gate valve				\$ 515.00		EA				1.02		1.08		\$567.32		EA
														Sub-Total		\$2,274.80		EA
53/10		Water Well, w/o pump, 130' deep, 5" casing \$34/ft				\$ 34.00		FT		130 FT to EA		1.02		1.08		\$4,869.07		EA
17/12		Toolshed, D, Good, 8' x 10'				\$ 20.63		SF		80 SF to EA		1.02		1.05		\$1,767.58		EA
66/2		Concrete pad 6", unreinforced 8' x 12'				\$ 6.28		SF		96 SF to EA		1.04		1.08		\$677.15		EA
														Average		\$2,397.15		EA
														RUC		\$ 2,397.15	EA	

FAC		8930	Installation Gas Distribution Line		UM =		LF	RPAD Ave Size		3,694	Source				Marshall and Swift Valuation; October 2015					
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost					
66/1		Gas main, 4" plastic			\$		17.86		LF				1.04		1.08		\$20.06		LF	
66/1		Gas main, 3" steel			\$		17.65		LF				1.04		1.08		\$19.82		LF	
															Average		\$19.94		LF	
															RUC		\$		19.94	LF

FAC		8931	Utility Tunnel		UM =		LF	RPAD Ave Size		6,384	Source				Marshall and Swift Valuation; October 2015								
Section		TASK			Given		Units		Conversion		Curnt Cost Mult		Area Adjustnt		Cost								
51/2		Utility tunnel, 3"-5" wall, medium soil, 5'x7' x-sctn			\$		22.15		CF		35		CF to LF		1.03		1.08		\$862.39		LF		
51/2		Utility tunnel, 3"-5" wall, medium soil, 1'x2' x-sctn			\$		22.15		CF		2		CF to LF		1.03		1.08		\$49.28		LF		
		Assume larger Tunnel = 12% of inventory															Scaled Average		\$73.43		LF		
																RUC		\$		73.43		LF	

FAC 8932		Utility Channels		UM = LF		RPAD Ave Size 10,739		Source Marshall and Swift Valuation; October 2015			
Section	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
51/2	Utility tunnel, 3"-5" wall, light soil 2'x2' x-sctn			\$ 20.15	CF	4 CF to LF		1.03	1.08	\$89.66	LF
51/2	Utility tunnel, 5"-7" wall, light soil, 2'x4' x-sctn			\$ 23.55	CF	8 CF to LF		1.03	1.08	\$209.58	LF
									AVE	\$149.62	LF
									RUC	\$149.62	LF

FAC 8951		Miscellaneous Storage Tank and Basin		UM = GA		RPAD Ave Size 372,401		Source Marshall and Swift Valuation; October 2015			
Section	TASK			Given	Units	Conversion		Curnt Cost Mult	Area Adjustnt	Cost	
61/3	Bolted Steel Water Tank, 300,000 GA			\$ 216,000.00	EA	300000 EA to GA		1.02	1.08	\$0.79	GA
61/3	Cut and fill reservoir with concrete linings and steel roof			\$ 0.92	GA			1.02	1.08	\$1.01	GA
									Average	\$0.90	GA
									RUC	\$ 0.90	GA

USACE PAX Military Construction Program (MCP) Inflation Guide

USACE PAX sourced RUCs are inflated using Appendix C of PAX Newsletter 3.2.2. As multiple PAX Newsletters are used to source RUCs, below is a table of inflation factors, and original source publication. Midpoint of construction for FY16 RUCs is set to 1 October 2015; Index 2767

SOURCE	FISCAL YEAR	DATE	INDEX	Reference PAX for escalation calculation	Escalation Rate for FY16 RUCs
PAX Newsletter 24 July 2014	2012	1-Oct-11	2576	PAX Newsletter 20 Mar 2009	1.0741
PAX Newsletter 24 July 2014	2013	1-Oct-12	2620	PAX Newsletter 15 Sep 2010	1.0561
PAX Newsletter 30 Sep 2015	2014	1-Oct-13	2667	PAX Newsletter 4 Jan 2011	1.0375
PAX Newsletter 30 Sep 2015	2015	1-Oct-14	2715	PAX Newsletter 28 Mar 2012	1.0192
PAX Newsletter 30 Sep 2015	2016	1-Oct-15	2767	PAX Newsletter 5 May 2013	1.0000
PAX Newsletter 30 Sep 2015	2017	1-Oct-16	2882	PAX Newsletter 24 July 2014	0.9601
PAX Newsletter 30 Sep 2015	2018	1-Oct-17	2878	PAX Newsletter 30 Sep 2015	0.9614