

**Town of Needham  
DPW Central Avenue Storage Building  
Budget Total Project Cost**

2/5/2018

<b>CENTRAL AVENUE STORAGE BUILDING</b>			
Area	Size (SF)		Cost
<b><u>New Construction</u></b>			
Enclosed / Heated Storage Garage	11,586		\$ 2,654,791
Canopy	4,106		\$ 685,806
Added Cost for Unisex Toilet & Septic System			\$ 75,000
<b>Renovation Subtotal:</b>	<b>15,692</b>		<b>\$ 3,415,597</b>
	Building Cost per SF: 218		
Industrial Equipment - Storage Shelving / Benches / Racks	\$ 45,000	x	\$ 45,000
		Place a "x" here if included	
<b>Industrial Equipment Subtotal:</b>			<b>\$ 45,000</b>
<b>Building &amp; Equipment Total:</b>			<b>\$ 3,460,597</b>
Site Development - Storage Building Site (See Detailed Backup)	1	\$2,004,702	\$ 2,004,702
<b>Total Construction (2019):</b>			<b>\$ 5,465,299</b>

<b><u>Owner's Soft Costs</u></b>			
<b>A&amp;E Fees (design, bid, const.)</b>	\$ 650,000		
		\$ 455,000 Design	
		\$ 20,000 Bidding	
		\$ 175,000 Const. Admin	
<b>OPM Design Fees</b>	\$ 50,000		allowance
<b>OPM CA Fees</b>	\$ 100,000		allowance
<b>Traffic Study</b>	\$ 20,000		allowance
<b>Furnishings (FFE)</b>	\$ 30,000		allowance
<b>Communic. / Low Voltage System</b>	\$ 50,000		allowance
<b>Printing Cost - Advertisement</b>	\$ 5,000		allowance
<b>Legal Costs</b>	\$ 20,000		allowance
<b>Chapter 17 Test &amp; Inspections</b>	\$ 20,000		allowance
<b>Moving Costs</b>	\$ 10,000		allowance
<b>Owner's Contingency (10%)</b>	\$ 546,530		allowance
<b>Construction Contingency (12%)</b>	\$ 648,171		allowance
<b>Total Soft Costs:</b>			<b>\$ 2,149,701</b>
<b>TOTAL PROJECT COST CENTRAL AVE STORAGE BUILDING</b>			<b>\$ 7,615,000</b>

## **Schematic Design Estimate**

### **DPW Seasonal Storage Facility**

Town of Needham

1407 Central Ave

Needham, Ma

Prepared by:



165 Middlesex Turnpike

Suite 106

Bedford, MA 01730

phone 781-275-5511

[www.tortoraconsulting.com](http://www.tortoraconsulting.com)

Prepared for:

**Weston and Sampson**

February 1, 2018

# DPW Seasonal Storage Facility

Town of Needham  
1407 Central Ave



01-Feb-18

## Schematic Design Estimate

### MAIN CONSTRUCTION COST SUMMARY

	Floor Area	\$/sf	Estimated Construction Cost
SITWORK			\$2,004,702
VEHICLE AND EQUIPMENT STORAGE BUILDING	11,586	\$229.14	\$2,654,791
OPEN CANOPY STORAGE	4,106	\$167.03	\$685,806
<b>TOTAL ESTIMATED SD CONSTRUCTION COSTS</b>	<b>15,692</b>	<b>\$340.64</b>	<b>\$5,345,299</b>

#### Add Alternates:

Add one Unisex toilet room, all utilities and septic system

\$60K - \$75k

#### QUALIFICATIONS

This Schematic Design cost estimate was produced from drawings and other documentation prepared by Weston and Sampson and their design team dated January 22, 2018. Design and engineering changes occurring subsequent to the issue of these documents have not been incorporated in this estimate.

This estimate includes all direct construction costs, general contractor's overhead and profit and design contingency. Cost escalation assumes 2019 1st quarter start with a 14 month schedule.

Bidding conditions are expected to be public bidding to pre-qualified general contractors, and pre-qualified sub-contractors, open specifications for materials and manufactures.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

#### ITEMS NOT CONSIDERED IN THIS ESTIMATE

All professional fees and insurance

All Furnishings, Fixture, Equipment, Tele-data and Security devices & wiring

Items identified in the design as Not In Contract (NIC)

Hazardous material or soil abatement

Special foundations (unless indicated by design engineers)

Utility company back charges, including work required off-site

Work to City streets and sidewalks, (except as noted in this estimate)

Construction or occupancy phasing or off hours' work, (except as noted in this estimate)

Radiant slab heat

Antenna and Utility building foundation, structures and associated utilities

Industrial equipment and cranes

Security, tel-data and AV equipment, devices and wiring

Sales Tax

Schematic Design Estimate

CONSTRUCTION COST SUMMARY IN CSI FORMAT					15,692	GSF
	* Filed Sub-Bids	SITWORK	VEHICLE AND EQUIPMENT STORAGE BUILDING	OPEN CANOPY STORAGE	TOTAL	\$/SF
* FSB amounts include contingency and escalation						
<b>DIV. 2 DEMOLITION</b>					\$0	\$0.00
020500 Demolition		\$0	\$0	\$0		
<b>DIV. 3 CONCRETE</b>					\$447,143	\$28.49
033000 Cast-in-Place Concrete		\$26,200	\$301,202	\$119,741		
<b>DIV. 4 MASONRY</b>					\$7,700	\$0.49
042000 Unit Masonry		\$0	\$7,700	\$0		
<b>DIV. 5 METALS</b>					\$59,927	\$3.82
050001 Miscellaneous and Ornamental Iron - FSB	\$68,916					
051200 Structural Steel Framing		\$0	\$0	\$0		
053100 Steel Decking		\$0	\$0	\$0		
055000 Metal Fabrications (part of 050001 FSB)		\$0	\$49,215	\$10,712		
055100 Metal Stairs and Railings (part of 050001 FSB)		\$0	\$0	\$0		
<b>DIV. 6 WOODS &amp; PLASTICS</b>					\$9,420	\$0.60
061000 Rough Carpentry		\$0	\$8,520	\$900		
064020 Interior Architectural Woodwork		\$0	\$0	\$0		
<b>DIV. 7 THERMAL &amp; MOISTURE PROTECTION</b>					\$107,069	\$6.82
070001 Waterproofing, Dampproofing and Caulking - FSB	\$35,744					
071300 Dampproofing and Waterproofing (part of 070001 FSB)		\$0	\$20,520	\$7,926		
071600 Polymer Modified Cement Waterproofing (part of 070001 FSB)		\$0	\$0	\$0		
072100 Thermal Insulation		\$0	\$58,613	\$17,374		
072700 Air Barriers (part of 070001 FSB)		\$0	\$0	\$0		
074600 Panel Systems and Trim		\$0	\$0	\$0		
075400 Membrane and Flashing (part of 070002 FSB)		\$0	\$0	\$0		
076200 Asphalt Roofing System (part of 070002 FSB)		\$0	\$0	\$0		
077200 Roof Accessories		\$0	\$0	\$0		
078410 Penetration Firestopping		\$0	\$0	\$0		
079200 Joint Sealants (part of 070001 FSB)		\$0	\$2,636	\$0		
<b>DIV. 8 DOORS &amp; WINDOWS</b>					\$152,485	\$9.72
081110 Hollow Metal Doors and Frames		\$0	\$8,785	\$0		
081400 Flush Wood Doors		\$0	\$0	\$0		
083110 Access Doors and Frames		\$0	\$0	\$0		
083310 Overhead Coiling Doors		\$0	\$87,360	\$12,740		
084110 Translucent Window System		\$0	\$38,250	\$0		
087100 Door Hardware		\$0	\$3,750	\$0		
088000 Glazing (part of 080002 FSB)		\$0	\$1,600	\$0		
089000 Louvers and Vents		\$0	\$0	\$0		
<b>DIV. 9 FINISHES</b>					\$65,931	\$4.20
092110 Gypsum Board Assemblies		\$0	\$47,100	\$0		
093000 Tiling		\$0	\$0	\$0		
095100 Acoustical Ceilings		\$0	\$0	\$0		
096510 Resilient Flooring and Accessories		\$0	\$0	\$0		
096550 Carpet		\$0	\$0	\$0		
097300 Resinous flooring and base		\$0	\$0	\$0		
099000 Painting and Coating		\$0	\$18,831	\$0		
<b>DIV. 10 SPECIALTIES</b>					\$3,200	\$0.20
101400 Signage		\$0	\$1,200	\$500		
102800 Toilet Accessories		\$0	\$0	\$0		
104400 Fire Protection Specialties		\$0	\$1,000	\$500		
106500 Toilet Partitions		\$0	\$0	\$0		
108500 Lockers		\$0	\$0	\$0		
<b>DIV. 11 EQUIPMENT</b>					\$0	\$0.00
113100 Appliances		\$0	\$0	\$0		
118100 Industrial Equipment		\$0	\$0	\$0		
<b>DIV. 12 FURNISHINGS</b>					\$0	\$0.00
122110 Horizontal Louver Blinds		\$0	\$0	\$0		
124810 Entrance Floor Mats and Frames		\$0	\$0	\$0		
<b>DIV. 13 SPECIAL CONSTRUCTION</b>					\$655,904	\$41.80
13100 Pre-fabricated Metal Building		\$0	\$484,900	\$171,004		
<b>DIV. 14 CONVEYING SYSTEMS</b>					\$0	\$0.00
140001 Elevators - FSB						
142100 Electric Traction Elevators (part of 140001 FSB)		\$0	\$0	\$0		

Schematic Design Estimate

CONSTRUCTION COST SUMMARY IN CSI FORMAT					15,692	GSF
	* Filed Sub-Bids	SITWORK	VEHICLE AND EQUIPMENT STORAGE BUILDING	OPEN CANOPY STORAGE	TOTAL	\$/SF
<b>DIV. 21 FIRE SUPPRESSION</b>						
210000 Fire Suppression - FSB	\$128,237	\$0	\$75,025	\$36,485	\$111,510	\$7.11
<b>DIV. 22 PLUMBING</b>					\$97,344	\$6.20
220000 Plumbing - FSB	\$111,946	\$0	\$97,344	\$0		
<b>DIV. 23 HVAC</b>					\$231,720	\$14.77
220000 HVAC - FSB	\$266,478	\$0	\$231,720	\$0		
<b>DIV. 26 ELECTRICAL</b>					\$370,315	\$23.60
260000 Electrical - FSB	\$425,862	\$73,990	\$220,775	\$75,550		
<b>DIV. 31 EARTHWORK</b>					\$1,097,052	\$69.91
311000 Site Clearing		\$112,255	\$0	\$0		
312000 Earthwork		\$886,021	\$65,963	\$19,827		
312500 Erosion and Sedimentation Controls		\$12,986	\$0	\$0		
315000 Excavation Support and Protection		\$0	\$0	\$0		
<b>DIV. 32 EXTERIOR IMPROVEMENTS</b>					\$150,570	\$9.60
321216 Asphalt Paving		\$86,630	\$0	\$0		
321213 Portland Cement Concrete Paving		\$4,000	\$0	\$0		
321613 Curbs and Gutters		\$12,000	\$0	\$0		
323100 Site Improvements		\$32,940	\$0	\$0		
329000 Landscaping		\$15,000	\$0	\$0		
<b>DIV. 33 UTILITIES</b>					\$121,375	\$7.73
331000 Site Water Distribution		\$35,350	\$0	\$0		
333000 Sanitary Sewerage Utilities		\$25,000	\$0	\$0		
334000 Storm Drainage		\$61,025	\$0	\$0		
<b>SUBTOTAL DIRECT (TRADE) COST</b>		<b>\$1,383,397</b>	<b>\$1,832,009</b>	<b>\$473,259</b>	<b>\$3,688,665</b>	<b>\$235.07</b>
GENERAL CONDITIONS & REQUIREMENTS - 14 months	15.0%	\$207,510	\$274,801	\$70,989	\$553,300	
GL INSURANCE	1.14%	\$15,771	\$20,885	\$5,395	\$42,051	
BONDS	1.85%	\$25,593	\$33,892	\$8,755	\$68,240	
BUILDING PERMIT	1.5%	\$20,751	\$27,480	\$7,099	\$55,330	
OVERHEAD AND PROFIT	5.0%	\$82,651	\$109,453	\$28,275	\$220,379	
DESIGN AND PRICING CONTINGENCY	10.0%	\$173,567	\$229,852	\$59,377	\$462,796	
ESCALATION - 1 YEAR	5.0%	\$95,462	\$126,419	\$32,657	\$254,538	
<b>TOTAL ESTIMATED SD CONSTRUCTION COSTS</b>		<b>\$2,004,702</b>	<b>\$2,654,791</b>	<b>\$685,806</b>	<b>\$5,345,299</b>	<b>\$340.64</b>

**DPW Seasonal Storage Facility**

Town of Needham  
1407 Central Ave



01-Feb-18

**Schematic Design Estimate**

<i>CONSTRUCTION COST SUMMARY IN BUILDING SYSTEM</i>		<i>SITWORK</i>	<i>VEHICLE AND EQUIPMENT STORAGE BUILDING</i>	<i>OPEN CANOPY STORAGE</i>	<i>15,692 TOTAL</i>	<i>GSF \$/SF</i>
A10	BUILDING FOUNDATIONS		\$342,715	\$125,280	\$467,995	\$29.82
B10	SUPERSTRUCTURE		\$508,655	\$171,740	\$680,395	\$43.36
B20	EXTERIOR CLOSURE		\$175,882	\$26,501	\$202,383	\$12.90
B30	ROOFING		\$21,460	\$14,976	\$36,436	\$2.32
C10	INTERIOR CONSTRUCTION		\$68,304	\$2,900	\$71,204	\$4.54
C20	STAIRCASES		\$0	\$0	\$0	\$0.00
C30	INTERIOR FINISHES		\$24,166	\$0	\$24,166	\$1.54
D10	CONVEYING SYSTEMS		\$0	\$0	\$0	\$0.00
D20	PLUMBING		\$97,344	\$0	\$97,344	\$6.20
D30	HVAC		\$231,720	\$0	\$231,720	\$14.77
D40	FIRE PROTECTION		\$75,025	\$36,485	\$111,510	\$7.11
D50	ELECTRICAL	\$73,990	\$220,775	\$75,550	\$370,315	\$23.60
E20	FURNISHINGS		\$0	\$0	\$0	\$0.00
F10	INDUSTRIAL EQUIPMENT		\$0	\$0	\$0	\$0.00
F20	FUEL ISLAND		\$0	\$0	\$0	\$0.00
G10	SITWORK	\$1,309,407	\$65,963	\$19,827	\$1,395,197	\$88.91
G40	CUSTOM SALT SHED		\$0	\$0	\$0	\$0.00
<b>TOTAL DIRECT COST (Trade Costs)</b>		<b>\$1,383,397</b>	<b>\$1,832,009</b>	<b>\$473,259</b>	<b>\$3,688,665</b>	<b>\$235.07</b>

*See CSI summary for mark-ups*

Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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SITework

**A ELECTRICAL**

	<u>Power</u>						
260000	Ductbanks to structures, conduit and wire	330	lf	145.00	47,850		
260000	Street connection	1	ea	5,000.00	5,000		
260000	Generator, feeders and ATS					NIC	
	<u>Site Lighting</u>						
260000	Light poles, conduit and wiring	4	ea	3,800.00	15,200		
	<u>Communication</u>						
260000	Communication conduits	330	lf	18.00	5,940		
	SUBTOTAL					73,990	
<b>TOTAL - ELECTRICAL</b>							<b>73,990</b>

**D SITEWORK**

	<u>Site Contractor general conditions</u>						
311000	Field Engineering	10	dy	1,375.00	13,750		
311000	Trench Plates Trench Safety	1	ls	5,000.00	5,000		
311000	Site Supervision	3	mo	7,800.00	23,400		
311000	Mobilization	1	ea	6,500.00	6,500		
311000	Site fencing, protection, barricades	1	ls	10,000.00	10,000		
	<u>Site Demo and prep</u>						
311000	Tree and shrub removal	1.62	acre	6,855.00	11,105		
311000	Clear, grub and topsoil removals	10	cd	4,250.00	42,500		
312500	Straw waddle	1,150	lf	11.00	12,650		
312500	Infiltration Filters at CB	2	ea	168.00	336		
	<u>Earthwork</u>						
312000	Site Cuts	6,759	cy	8.00	54,072		
312000	Site Fills	8,333	cy	8.00	66,664		
312000	Import structural fill	3,704	cy	45.00	166,680		
312000	Export unsuitables	3,055	cy	35.00	106,925		
312000	Ledge removal - open	3,200	cy	85.00	272,000		
312000	Ledge removal - foundation and utility trenches	950	cy	110.00	104,500		
312000	Shape & Compact Subgrade for new grades and basins	10	dy	3,000.00	30,000		
312000	Dewatering allowance	3	mnth	7,500.00	22,500		
	<u>Structural excavation and backfill</u>						
312000	Included with each bldg estimate						
	<u>Slab Prep</u>						
312000	Included with each bldg estimate						
	<u>Paving and walks prep</u>						
312000	Bitum. Paving 12" Dense Grade	907	cy	40.00	36,280		

Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
<b>SITEWORK</b>							
<u>Paving and curbing</u>							
321216	New pavement	2,721	sy	30.00	81,630		
321613	HMA Berm	600	lf	20.00	12,000		
321216	Patch pavement at street	1	ls	5,000.00	5,000		
<u>Utilities</u>							
<u>Storm</u>							
334000	Storm - OSC	1	ea	10,500.00	10,500		
334000	Storm piping, various sizes tbd	200	lf	45.00	9,000		
334000	Storm - rip rap flared end	1	ea	3,500.00	3,500		
334000	Storm - 6" roof drain piping	625	lf	25.00	15,625		
334000	Storm - basin	2,800	sf	8.00	22,400		
<u>Water</u>							
331000	Main piping	330	lf	85.00	28,050		
331000	6" FP water	40	lf	75.00	3,000		
331000	2" Domestic water	40	lf	45.00	1,800		
331000	Water CTE at street	1	ls	2,500.00	2,500		
<u>Gas</u>							
312000	Gas piping E&B	330	lf	35.00	11,550		
<u>Tight tank</u>							
333000	2000 gal tight tank and piping	1	ls	25,000.00	25,000		
<u>Sanitary</u>							
333000	San septic tank and fields						NIC
<u>Site Improvements</u>							
321213	Concrete walks	500	sf	8.00	4,000		
323100	HC signs	1	ea	200.00	200		
323100	Parking space lines/symbols	12	ea	45.00	540		
323100	Entry automatic gate	1	ea	20,000.00	20,000		
323100	Bollards	12	ea	600.00	7,200		
323100	Misc site improvements, Signs and misc	1	ls	5,000.00	5,000		
<u>Landscaping</u>							
329000	Loam, seed and plantings	1	ls	15,000.00	15,000		
<u>Ductbanks and pole bases</u>							
03300	Transformer Pad	1	ea	5,000.00	5,000		
312000	E&B Elec/communication duct banks	330	lf	45.00	14,850		
03300	Encase duct banks in concrete	98	cy	200.00	19,600		
03300	L.Pole Base	4	ea	400.00	1,600		
03300	Light bollard base						NIC
	SUBTOTAL					1,309,407	
<b>TOTAL - SITE DEVELOPMENT</b>							<b>1,309,407</b>



Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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VEHICLE AND EQUIPMENT STORAGE BUILDING

**GROSS FLOOR AREA CALCULATION**

Small Equipment Storage	5,745
Large Vehicle Storage	5,841

<b>TOTAL GROSS FLOOR AREA (GFA)</b>	<b>11,586 sf</b>
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**A10 FOUNDATIONS**

**A1010 STANDARD FOUNDATIONS**

	<u>Strip footings to exterior walls</u>						
03300	Formwork	950	sf	15.00	14,250		
03300	Re-bar	998	lbs	2.00	1,996		
03300	Concrete material	55	cy	160.00	8,800		
03300	Placing concrete	55	cy	40.00	2,200		
	<u>Foundation walls</u>						
03300	Formwork	3,800	sf	15.00	57,000		
03300	Re-bar	4,180	lbs	2.00	8,360		
03300	Concrete material	98	cy	160.00	15,680		
03300	Placing concrete	98	cy	40.00	3,920		
07130	Damproofing foundation wall and footing	2,280	sf	5.00	11,400		
07210	Rigid insulation on inside face	2,280	sf	4.00	9,120		
	<u>Stem wall behind CMU to 3'</u>						
03300	Formwork	2,280	sf	15.00	34,200		
03300	Re-bar	4,180	lbs	2.00	8,360		
03300	Concrete material	59	cy	160.00	9,440		
03300	Placing concrete	59	cy	40.00	2,360		
	<u>Column footings</u>						
03300	Formwork	360	sf	15.00	5,400		
03300	Re-bar	481	lbs	2.00	962		
03300	Concrete material	18	cy	160.00	2,880		
03300	Placing concrete	18	cy	40.00	720		
	<u>Miscellaneous</u>						
03300	Form key in footing	475	lf	4.00	1,900		
	<u>Piers</u>						
03300	Formwork	288	sf	15.00	4,320		
03300	Re-bar	1,620	lbs	2.00	3,240		
03300	Concrete material	6	cy	160.00	960		
03300	Placing concrete	6	cy	40.00	240		
	SUBTOTAL					207,708	

Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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VEHICLE AND EQUIPMENT STORAGE BUILDING

A1030	LOWEST FLOOR CONSTRUCTION						
	<u>Slab on grade</u>						
07210	Vapor barrier	11,586	sf	0.50	5,793		
03300	Rebar reinforcing	13,324	sf	2.00	26,648		
03300	Concrete - 8" thick	306	cy	160.00	48,960		
03300	Placing concrete	306	cy	35.00	10,710		
03300	Finishing and curing concrete	11,586	sf	1.50	17,379		
03300	Control joints - saw cut	11,586	sf	0.20	2,317		
07210	Rigid insulation under slab perimeter	3,800	sf	4.00	15,200		
	<u>Miscellaneous</u>						
03300	Thickened slabs	15	cy	200.00	3,000		
03300	Misc pads and curbs	1	ls	5,000.00	5,000		
	SUBTOTAL					135,007	
<b>TOTAL - FOUNDATIONS</b>							<b>\$342,715</b>

**B10 SUPERSTRUCTURE**

<b>B1020</b>	<b>ROOF CONSTRUCTION</b>						
	<u>Pre-fabricated Structure (includes steel, 4" insulated metal panels walls and roof) :</u>						
13100	Insulated prefabricated metal building package	11,586	sf	40.00	463,440		
	<u>Miscellaneous</u>						
05500	Overhead door frames	5	ea	1,750.00	8,750		
05500	Translucent window	1	ea	7,500.00	7,500		
05500	Misc metals throughout	11,586	sf	2.50	28,965		
	SUBTOTAL					508,655	
<b>TOTAL - SUPERSTRUCTURE</b>							<b>\$508,655</b>

**B20 EXTERIOR CLOSURE**

<b>B2010</b>	<b>EXTERIOR WALLS</b>						
	<u>Exterior skin</u>						
07130	Air barrier	1,140	sf	8.00	9,120		
07210	Concrete faced insulation panel	1,140	sf	25.00	28,500		
05500	Metal Panel system with Prefabricated metal building package						
	SUBTOTAL					37,620	
<b>B2020</b>	<b>WINDOWS</b>						
	<b>Curtainwall and Aluminum windows</b>						
84110	Translucent windows	510	sf	75.00	38,250		
07920	Backer rod & double sealant	270	lf	8.00	2,160		
06100	Wood blocking at openings	270	lf	6.00	1,620		
	SUBTOTAL					42,030	

Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
<b>VEHICLE AND EQUIPMENT STORAGE BUILDING</b>							
<b>B2030 EXTERIOR DOORS</b>							
<i>OH Doors</i>							
08331	OHD - 20'	3	ea	18,200.00	54,600		
08331	OHD - 14'	1	ea	12,740.00	12,740		
08331	OHD - 22'	1	ea	20,020.00	20,020		
<i>HM Frames</i>							
08111	HMF-1 single	4	ea	350.00	1,400		
<i>HM Doors</i>							
08111	HM-4 door w/ lights	4	ea	650.00	2,600		
<i>Hardware</i>							
08710	Hardware	4	lvs	600.00	2,400		
<i>Misc</i>							
08111	Install	4	lvs	255.00	1,020		
08800	Glass	2	ea	400.00	800		
09900	Paint HM frames	4	ea	95.00	380		
07920	Sealants & caulking	4	ea	68.00	272		
	SUBTOTAL					96,232	
<b>TOTAL - EXTERIOR CLOSURE</b>							<b>\$175,882</b>
<b>B30 ROOFING</b>							
<b>B3010 ROOF COVERINGS</b>							
13100	Snow guards	335	lf	28.00	9,380		
13100	Gutters	170	lf	24.00	4,080		
13100	Down spouts	10	ea	800.00	8,000		
	SUBTOTAL					21,460	
<b>B3020 ROOF OPENINGS</b>							
	N/A						
	SUBTOTAL						\$0
<b>TOTAL - ROOFING</b>							<b>\$21,460</b>
<b>C10 INTERIOR CONSTRUCTION</b>							
<b>C1010 PARTITIONS</b>							
04200	Interior 1 course of CMU at Mech/Elec/FP rooms	150	sf	35.00	5,250		
04200	Interior 1 course of CMU at wall between Equip and Vehicle stor	70	sf	35.00	2,450		
09211	Interior GWB wall between Equip and Vehicle stor	1,340	sf	15.00	20,100		
09211	Interior GWB partition at Mech/Elec/FP rooms	1,800	sf	15.00	27,000		
	SUBTOTAL					54,800	
<b>C1020 INTERIOR DOORS</b>							
<i>HM Frames</i>							
08111	HMF-1 single	3	ea	350.00	1,050		
<i>HM Doors</i>							
08111	HM-4 door w/ lights	3	ea	650.00	1,950		
<i>Hardware</i>							
08710	Hardware	3	lvs	450.00	1,350		
<i>Misc</i>							
08111	Install	3	lvs	255.00	765		
08800	Glass	2	ea	400.00	800		
09900	Paint HM frames	3	ea	95.00	285		
07920	Sealants & caulking	3	ea	68.00	204		
	N/A						
	SUBTOTAL					6,404	

Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
<b>VEHICLE AND EQUIPMENT STORAGE BUILDING</b>							
<b>C1030 SPECIALTIES / MILLWORK</b>							
06100	Backer panels in electrical /tele/data closets	1	ls	900.00	900		
10440	Fire extinguisher cabinets	4	ea	250.00	1,000		
05500	Interior bollards	8	ea	500.00	4,000		
10140	Signage	1	ls	1,200.00	1,200		
	SUBTOTAL					7,100	
<b>TOTAL - INTERIOR CONSTRUCTION</b>							<b>\$68,304</b>
<b>C30 INTERIOR FINISHES</b>							
<b>C3010 WALL FINISHES</b>							
09900	Paint to interior walls	6,580	sf	1.00	6,580		
	SUBTOTAL						\$6,580
<b>C3020 FLOOR FINISHES</b>							
09900	Sealed concrete	11,586	sf	1.00	11,586		
	SUBTOTAL						11,586
<b>C3030 CEILING FINISHES</b>							
06100	Plywood sloped ceiling at interior mech/ele/FP rooms)	600	sf	10.00	6,000		
	Exposed prefab metal bldg package						
	SUBTOTAL						\$6,000
<b>TOTAL - INTERIOR FINISHES</b>							<b>\$24,166</b>
<b>D20 PLUMBING</b>							
<b>D20 PLUMBING</b>							
220000	Sub slab vent system				NIC		
220000	Floor drains & piping	6	ea	4,500.00	27,000		
220000	Plumbing Gas Piping to HVAC equip	400	lf	45.00	18,000		
220000	Misc plumbing	11,586	sf	4.00	46,344		
220000	Seismic restraints	1	ls	3,500.00	3,500		
220000	Testing and sterilization	1	ls	2,500.00	2,500		
	SUBTOTAL						97,344
<b>TOTAL - PLUMBING</b>							<b>\$97,344</b>
<b>D30 HVAC</b>							
<b>D30 HVAC</b>							
230000	Unit Heaters, and wall mounted propeller fan with fresh air intake louver ventilation system allowance	11,586	sf	20.00	231,720		
	SUBTOTAL						\$231,720
<b>TOTAL - HVAC</b>							<b>\$231,720</b>
<b>D40 FIRE PROTECTION</b>							
<b>D40 FIRE PROTECTION</b>							
210000	Sprinkler heads	105	ea	165.00	17,325		
210000	Branch sprinkler piping with fittings & hangers	1,050	lf	24.00	25,200		
210000	Main sprinkler piping with fittings & hangers	250	lf	30.00	7,500		
210000	Valve, compressor and dry system equipment	1	ls	8,500.00	8,500		
210000	Service equipment	1	ls	10,000.00	10,000		
210000	Hydraulic calculations	1	ls	6,500.00	6,500		
	SUBTOTAL						\$75,025
<b>TOTAL - FIRE PROTECTION</b>							<b>\$75,025</b>

Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
<b>VEHICLE AND EQUIPMENT STORAGE BUILDING</b>							
<b>D50 ELECTRICAL</b>							
<i>Power Equipment</i>							
260000	Electrical Power and circuitry - Cost portion of switchboard, panels and misc equipment (located in central location)	11,586	sf	8.00	92,688		
	SUBTOTAL					\$92,688	
<b>D5020 LIGHTING &amp; POWER</b>							
<i>Lighting &amp; Branch Power</i>							
260000	Lighting and branch circuitry	11,586	sf	6.00	69,516		
260000	Misc power	11,586	sf	1.50	17,379		
	SUBTOTAL					86,895	
<b>D5030 COMMUNICATION &amp; SECURITY SYSTEMS</b>							
<i>Telecommunications System</i>							
260000	Rough in allowance	6	drps	300.00	1,800		
<i>Fire Alarm</i>							
260000	Fire alarm system	11,586	sf	2.50	28,965		
<i>Security System</i>							
260000	Security roughin allowance	11,586	sf	0.50	5,793		
<i>PA/Sound System</i>							
260000	PA system				NIC		
	SUBTOTAL					\$36,558	
<b>D5040 OTHER ELECTRICAL SYSTEMS</b>							
<i>Lightning protection</i>							
260000	UL Master label lightning protection				NIC		
<i>Miscellaneous</i>							
260000	Temp services	11,586	sf	0.40	4,634		
	SUBTOTAL					4,634	
<b>TOTAL - ELECTRICAL</b>						<b>\$220,775</b>	
<b>G SITEWORK</b>							
<i>Structural Excavation and backfill</i>							
312000	Foundation Perimeter and footings	475	lf	65.00	30,875		
312000	6" ADS Perf Perimeter Drain				w/ site		
<i>Underslab piping</i>							
312000	E&B Trench	400	lf	18.00	7,200		
<i>Slab Prep</i>							
312000	Slab Prep 9" Stone	429	cy	38.00	16,302		
312000	Fine Grade & Compact	11,586	sf	1.00	11,586		
	SUBTOTAL					65,963	
<b>TOTAL - SITE DEVELOPMENT</b>						<b>65,963</b>	

Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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OPEN CANOPY STORAGE

**GROSS FLOOR AREA CALCULATION**

Open Canopy 4,106

<b>TOTAL GROSS FLOOR AREA (GFA)</b>	<b>4,106 sf</b>
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**A10 FOUNDATIONS**

**A1010 STANDARD FOUNDATIONS**

Strip footings to exterior walls

03300	Formwork	306	sf	15.00	4,590		
03300	Re-bar	321	lbs	2.00	642		
03300	Concrete material	18	cy	160.00	2,880		
03300	Placing concrete	18	cy	40.00	720		

Foundation walls

03300	Formwork	1,530	sf	15.00	22,950		
03300	Re-bar	1,683	lbs	2.00	3,366		
03300	Concrete material	40	cy	160.00	6,400		
03300	Placing concrete	40	cy	40.00	1,600		
07130	Damproofing foundation wall and footing	918	sf	5.00	4,590		

Stem wall behind CMU to 3'

03300	Formwork	834	sf	15.00	12,510		
03300	Re-bar	1,529	lbs	2.00	3,058		
03300	Concrete material	22	cy	160.00	3,520		
03300	Placing concrete	22	cy	40.00	880		

Column footings

03300	Formwork	200	sf	15.00	3,000		
03300	Re-bar	267	lbs	2.00	534		
03300	Concrete material	10	cy	160.00	1,600		
03300	Placing concrete	10	cy	40.00	400		

Miscellaneous

03300	Form key in footing	153	lf	4.00	612		
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Piers

03300	Formwork	160	sf	15.00	2,400		
03300	Re-bar	900	lbs	2.00	1,800		
03300	Concrete material	3	cy	160.00	480		
03300	Placing concrete	3	cy	40.00	120		

SUBTOTAL

78,652

**A1030 LOWEST FLOOR CONSTRUCTION**

Slab on grade

07210	Vapor barrier	4,106	sf	0.50	2,053		
03300	Rebar reinforcing	4,722	sf	2.00	9,444		
03300	Concrete - 8" thick	109	cy	160.00	17,440		
03300	Placing concrete	109	cy	35.00	3,815		
03300	Finishing and curing concrete	4,106	sf	1.50	6,159		
03300	Control joints - saw cut	4,106	sf	0.20	821		
07210	Rigid insulation under slab perimeter	1,224	sf	4.00	4,896		

Miscellaneous

03300	Thickened slabs	10	cy	200.00	2,000		
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SUBTOTAL

46,628

<b>TOTAL - FOUNDATIONS</b>						<b>\$125,280</b>
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Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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**OPEN CANOPY STORAGE**

**B10 SUPERSTRUCTURE**

**B1020 ROOF CONSTRUCTION**

Pre-fabricated Structure (includes 3 sided steel, 4" insulated metal panels walls and roof) :

13100	Prefabricated metal building package	4,106	sf	38.00	156,028		
	<u>Miscellaneous</u>						
03300	Encase columns in concrete at open end	5	ea	1,200.00	6,000		
05500	Overhead door frames	1	ea	1,500.00	1,500		
05500	Misc metals throughout	4,106	sf	2.00	8,212		
	SUBTOTAL					171,740	

<b>TOTAL - SUPERSTRUCTURE</b>						<b>\$171,740</b>	
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**B20 EXTERIOR CLOSURE**

**B2010 EXTERIOR WALLS**

Exterior skin

07130	Air barrier	417	sf	8.00	3,336		
07210	Concrete faced insulation panel	417	sf	25.00	10,425		
	Metal Panel system with Prefabricated metal building package						
	SUBTOTAL					13,761	

**B2020 WINDOWS**

Curtainwall and Aluminum windows

N/A

SUBTOTAL

-

**B2030 EXTERIOR DOORS**

OH Doors

08331	OHD - 14'	1	ea	12,740.00	12,740		
	SUBTOTAL					12,740	

<b>TOTAL - EXTERIOR CLOSURE</b>						<b>\$26,501</b>	
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**B30 ROOFING**

**B3010 ROOF COVERINGS**

13100	Snow guards	232	lf	28.00	6,496		
13100	Gutters	120	lf	24.00	2,880		
13100	Down spouts	7	ea	800.00	5,600		
	SUBTOTAL					14,976	

**B3020 ROOF OPENINGS**

N/A

SUBTOTAL

\$0

<b>TOTAL - ROOFING</b>						<b>\$14,976</b>	
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Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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**OPEN CANOPY STORAGE**

**C10 INTERIOR CONSTRUCTION**

**C1010 PARTITIONS**

N/A

SUBTOTAL

-

**C1020 INTERIOR DOORS**

N/A

SUBTOTAL

-

**C1030 SPECIALTIES / MILLWORK**

06100 Backer panels in electrical /tele/data closets

1

ls

900.00

900

10440 Fire extinguisher cabinets

2

ea

250.00

500

05500 Interior bollards

2

ea

500.00

1,000

10140 Signage

1

ls

500.00

500

SUBTOTAL

2,900

<b>TOTAL - INTERIOR CONSTRUCTION</b>						<b>\$2,900</b>
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**C30 INTERIOR FINISHES**

**C3010 WALL FINISHES**

N/A

SUBTOTAL

\$0

**C3020 FLOOR FINISHES**

N/A

SUBTOTAL

-

**C3030 CEILING FINISHES**

Exposed prefab metal bldg package

SUBTOTAL

\$0

<b>TOTAL - INTERIOR FINISHES</b>						<b>\$0</b>
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**D20 PLUMBING**

**D20 PLUMBING**

N/A

SUBTOTAL

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<b>TOTAL - PLUMBING</b>						<b>\$0</b>
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**D30 HVAC**

**D30 HVAC**

N/A

SUBTOTAL

\$0

230000

<b>TOTAL - HVAC</b>						<b>\$0</b>
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**D40 FIRE PROTECTION**

**D40 FIRE PROTECTION**

210000 Sprinkler heads

37

ea

165.00

6,105

210000 Branch sprinkler piping with fittings & hangers

370

lf

24.00

8,880

210000 Main sprinkler piping with fittings & hangers

250

lf

30.00

7,500

210000 Valve, compressor and dry system equipment

1

ls

7,500.00

7,500

210000 Hydraulic calculations

1

ls

6,500.00

6,500

SUBTOTAL

\$36,485

<b>TOTAL - FIRE PROTECTION</b>						<b>\$36,485</b>
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Schematic Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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**OPEN CANOPY STORAGE**

**D50 ELECTRICAL**

**Power Equipment**

260000	Electrical Power and circuitry - Cost portion of switchboard, panels and misc equipment (located in central location)	4,106	sf	8.00	32,848		
	<b>SUBTOTAL</b>					\$32,848	

**D5020 LIGHTING & POWER**

**Lighting & Branch Power**

260000	Lighting and branch circuitry	4,106	sf	6.00	24,636		
260000	Misc power - exterior recep	4,106	sf	1.50	6,159		
	<b>SUBTOTAL</b>					30,795	

**D5030 COMMUNICATION & SECURITY SYSTEMS**

**Telecommunications System**

260000	N/A						
	<b>Fire Alarm</b>						
260000	Fire alarm system	4,106	sf	2.50	10,265		
	<b>Security System</b>						
260000	N/A						
260000	<b>PA/Sound System</b>						
260000	N/A						
	<b>SUBTOTAL</b>					\$10,265	

**D5040 OTHER ELECTRICAL SYSTEMS**

**Lightning protection**

260000	UL Master label lightning protection					NIC	
	<b>Miscellaneous</b>						
260000	Temp services	4,106	sf	0.40	1,642		
	<b>SUBTOTAL</b>					1,642	

<b>TOTAL - ELECTRICAL</b>						<b>\$75,550</b>	
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**G SITEWORK**

Structural Excavation and backfill

312000	Foundation Perimeter and footings	153	lf	65.00	9,945		
312000	6" ADS Perf Perimeter Drain					w/ site	
	<u>Slab Prep</u>						
312000	Slab Prep 9" Stone	152	cy	38.00	5,776		
312000	Fine Grade & Compact	4,106	sf	1.00	4,106		
	<b>SUBTOTAL</b>					19,827	

<b>TOTAL - SITE DEVELOPMENT</b>						<b>19,827</b>	
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