

# TECHNICAL ASSIGNMENT TWO

PENN STATE SENIOR AE THESIS



New York Police Academy  
College Point, New York

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Construction Management  
Dr. Robert Leicht



## *Table of Contents*

Executive Summary.....	3
Detailed Project Schedule.....	4
Site Layout Planning.....	5
Detailed Structural Estimate.....	8
General Conditions Estimate.....	11
Critical Industry Issues.....	13
Appendix A – Detailed Project Schedule.....	15
Appendix B – Site Layout Plans.....	21
Appendix C –Detailed Structural Estimate.....	24
Appendix D – General Conditions Estimate.....	54



### *Executive Summary:*

Technical Assignment Two is intended to analyze the key features and parameters that influence project execution of the New York Police Academy. This project includes the construction of two structures that houses the central utility plant, physical training, administration and academics totaling 720,000 SF; with plans for renovations and additions in the future. At the moment, there are no major challenges that wait for the project team due to size and location of the site.

Information regarding the phasing milestones is shown within this report and a detailed project schedule is included to help aid in the description of trade sequencing through the entire life of the project. The Foundation / Superstructure and MEP / Interior Finishes were identified as the two key phases during the construction. Site layouts for both phases are included and were based off a basic layout provided by the contractor; they were modified to include items that were not given and reasoning is explained during the critique section. A detailed, take-off estimate was performed on the entire structural system due to inconsistent framing and bay design per individual floors. This estimate produced over 300,000 CY of concrete, 130,000 LF of structural steel, 600 TONS of reinforcing steel, 4,400 CSF of welded wire fabric, and 440,000 SF of metal decking; the total was approximately \$27,000,000. A general conditions estimate is included to represent costs for supervision / supervision, construction facilities, excess equipment, temporary utilities, and permits / miscellaneous costs resulting in a cost of approximately \$28,000,000.

After analyzing and researching the information obtained with this report and the conclusions from Technical Assignment One, a major focus for upcoming thesis research will be directed towards schedule re-sequencing and possible schedule acceleration to meet an earlier turnover date for the New York Police Department and New York City Department of Design and Construction. Upon the attending the PACE Roundtable session after the due date for this report, details to strengthen this research idea or revealing of other research ideas is possible.



## *Detailed Project Schedule*

### *\*See APPENDIX A for the Detailed Project Schedule*

New York's current police academy is currently spread throughout the five boroughs of New York City. Noted in Technical Assignment One, Design Documents were completed in April of 2010 with the Construction Documents to be completed in December of 2010; with the start of construction to undergo in October of 2010, a modified fast-track delivery method was implemented. Constructing and testing the piles is the key start of the project and relates to the starting activity in the schedule provided in APPENDIX A.

Construction for New York Police Academy will occur over the next four years and achieve substantial completion reports in December of 2013 according to information provided in Technical Assignment One. However, delays must have occurred during the first month of construction due to the identification of several activities not ending until January of 2014. During research for this report, it was noted that the critical path will follow along piles, foundations, structural steel, structural concrete, curtain wall and finally mechanical HVAC.

For ease of organization, the schedule was split into three sections, Campus Fundamentals, East Campus, and West Campus. Campus Fundamentals details all activities that were stated as "Entire Campus" while West Campus consists of all activities relating to either the central utility plant or physical training, and East Campus was any activity that relates to administration and academic. Activities in Campus Fundamentals section consist of items such as demolition, curtain wall, underground utilities, and many more; while the West and East Campus activities consist of foundation, structure and interior finishes. Most of the structural components start early in the East Campus and move over to the West Campus while interior finishes is reverse and starts in the West Campus prior to the East Campus.

The schedule aid provided for this report was consisted of a summary by trades for New York Police Academy. During the organization of tasks based on a time frame, several errors were noted. These errors consist of mostly of tasks being out of sequence based on the start day provided. One key example is that task sixteen (Window Washing) of Campus Fundamentals starts approximately one and a half months before task sixteen (Storefronts / Exterior Glass and Glazing). Task thirty-seven (Ornamental Metal and Glazing) of West Campus is out of sequence as well.

After analyzing the schedule for key phases of construction several errors with task sequencing arose. With further analysis and research on the project schedule, these errors could be corrected. This item will provide an excellent research topic for Thesis Research as part of the Spring Semester.



## Site Layout Planning

*\*See APPENDIX B for Site Layout Plans*



*Figure One: Bing Map of New York Police Academy Site and Surrounding Area*

The site for New York Police Academy is located on the former NYPD College Point Tow Pound in College Point, New York. As shown in Figure One above, construction will flow down College Point Boulevard into the primary entrance to the project site which lies on the west perimeter; two additional entrances run along Ulmer Street to the East, these will primarily be used for smaller traffic and deliveries for the East Campus construction. College Point Boulevard will be the primary road for all construction traffic due to the surrounding properties being under a light industrial zoning, and therefore receives little traffic during day hours. There are also several secondary gates surrounding the jobsite that will be used for additional egress and entrance into the site in case of emergencies. Due to thirty-five acre project site, on-site parking is available and will be located on the west side near the trailers. Based on the schedule, the project will consist of two major phases: Foundation / Superstructure and MEP / Interior Finishes.



## **Foundation / Superstructure Site Layout**

***\*Note: At the time of this report, the majority of trade contracts are still out to bid. Their trailers are included with the Subcontractor Trailers displayed on the site layout plan with their storage area included in the staging area.***

This phase of construction will feature the completion of the pile caps, mat slabs, and structural steel system. Three pile rigs will drive the piles in three separate regions, denoted as Pile Rig #1, #2, and #3, with three separate regions for pile driving. Pile Rig #1 will move from South to North; Pile Rig #2 will move from South to North; Pile Rig #3 will move from West to East and will be accompanied by Pile Rig #1 once it finishes its area. As the pile rigs move along their respective paths, concrete subcontractors will move in and start placing concrete for the pile caps. After all pile caps are finished, the structural mat slab will be placed separated between East and West Campus. To ease the process of placing concrete for both pile caps and slab, a concrete pump truck

At least two cranes will be used to erect the steel skeleton of the project. Crane #1 will be located on the West Side of West Campus and will move from South to North, while Crane #2 will be located on the South Side of East Campus and will move from West to East. It is unknown on what size crane will be used, but a simple 125 ton crane will be efficient since there are no beams over the weight capacity. However, with the size of East Campus, eight stories plus one mechanical, a larger crane will have to be used in order to reach the upper floors; a crane around a 200 ton capacity should have a long enough arm to succeed this challenge. Refer to APPENDIX B for the Foundation / Superstructure Phase Site Plan.

## **MEP / Interior Finishes**

The change from Foundation / Superstructure to MEP / Interior Finishes is present with the reduction of exterior staging areas as well as the removal of the two cranes with their last job consisting of lifting all large mechanical equipment into place. During this phase of construction, the material storage is within the building with denoted staging areas for larger materials. Construction workflow will flow from the North to South via several hoist complexes along the southern side of the buildings as the primary entrances. Refer to APPENDIX B for the MEP / Interior Finishes Phase Site Plan.





## **Contractor Layout Critique**

Turner Construction Company and SVT provided three site plans to aid this report; one being the location of the gates and fencing, pile rig movement and location, and hoist complex locations with trailer location. Items such as staging areas, crane locations, dumpsters, and other items were not identified.

With a basic education on site logistics and the known location of the site trailers, cranes were placed in the most logical spots to service the project. After this process, dumpsters and temporary toilets were placed out of range from the cranes to improve the safety of the site and to attempt in the reduction of incidents. Finally, staging areas were zoned to allow for cranes to have easy access to materials. Both site layouts are provided in APPENDIX B help illustrate the ideas described above in order to finish the planning of the site organization.



## ***Detailed Structural Estimate***

***\*See APPENDIX C for the complete Structural System Estimate***

New York Police Academy uses a complete structural steel frame for its superstructure with pile caps and structural mat slabs for the substructure. Detailed construction drawings were provided but due to inconsistent bay and framing design per floor, a complete detailed estimate was used in place of a typical modular technique.

Due to confidentiality, actual prices for the structure were not released. R.S. Means provides national averages for all types of construction costs, and lists that the structural system of a building will be 12 – 18 % of the construction cost for the project. Twelve percent was used during the structural takeoff which is approximately \$70,800,000.

Structural steel members, structural metal decking, concrete, welded wire fabric, and rebar were analyzed in their respective unit. Once this step was completed, R.S. Means CostWorks software was used in identifying the material, labor, and equipment cost for each item, APPENDIX C contains a complete list of all take-off values for the project. The overall cost obtained from the construction drawing take-offs is approximately \$27,000,000. Table One shows the comparison between the “ideal” actual and the estimated cost for the entire structural system.

	<b>Total Cost</b>	<b>Cost / SF</b>
<b>Actual</b>	\$70,800,000	\$983.33
<b>Estimated</b>	\$27,000,000	\$37.50

*Table One: Actual versus Estimated Cost Comparison*

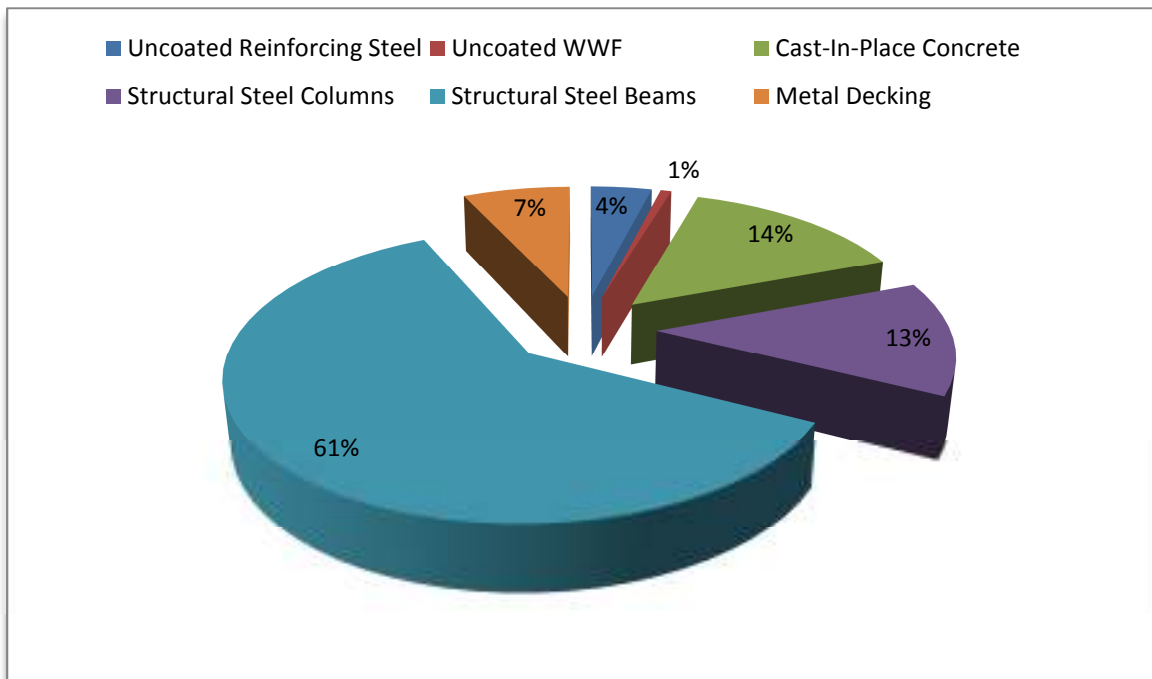




Table Two summarizes the cost and quantity for each division of the CSI Masterformat that was included in the estimate; while Figure Two represents a percentage breakdown of the respective structural systems.

Component	Quantity	Unit	Unit Cost	Total Cost
<b>032110 – Uncoated Reinforcing Steel</b>	598.19	TONS	\$1,595.84	\$954,616.50
<b>032205 Uncoated WWF</b>	4,417.16	C.S.F	\$37.93	\$167,526.18
<b>033053 – Cast-In-Place Concrete</b>	315,178.17	CY	\$11.13	\$3,508,667.71
<b>051223.17 – Structural Steel Columns</b>	20,747	LF	\$152.49	\$3,163,635.50
<b>051223.75 – Structural Steel Beams</b>	111,453.5	LF	\$130.89	\$14,587,845.75
<b>053113.50 – Metal Decking</b>	441,716.3	S.F.	\$3.80	\$1,677,132.96
<b>Total:</b>				<b>\$27,233,424.85</b>

*Table Two: Estimate Summary by CSI Masterformat Divisions*



*Figure 2: New York Police Academy - Structural System Component Percentages*

While using R.S. Means CostWorks, several factors and assumptions were incorporated throughout the estimate in order to provide an accurate estimate. A time modification was used to balance the cost of materials, labor, and equipment due to inflation from 2009 to 2010,



however the location was able to be set as Queens, New York to provide an accurate location factor for the unit prices.

Due to the difficulty in calculating the amount of rebar in cast-in-place concrete, a 5% factor was configured to allow for any rebar ties or anchors that were not shown in the construction drawings; a 5% factor was also employed for the welded wire fabric to allow for overlapping and ties. Another 5% was added to rebar and welded wire fabric to allow for construction waste while 10% was added to the concrete. All concrete was assumed to be placed with the aid of a pump truck and chute.

As mentioned earlier, the structure cost of the building was considered confidential and was not released for use; this left several variables unanswered, leading to a 61.86% error with the overall cost. Without knowing exactly what was included in the scope of the structural system caused the error that arose during the take-off estimate analysis for this report. Even though R.S. Means CostWorks software provided a vast array of knowledge, an accurate estimate could not be obtained due to the secrecy of the overall cost.

R.S. Means CostWorks did not provide pricing data for several structural steel beams specified in the construction drawings for New York Police Academy. Roughly 75% of the members listed had pricing available, while the other members had to use the next size up, if possible. In some instances, the larger members could not be accurately priced, and therefore the biggest member available was used. This process that was performed is the second key reason that the structural cost was inaccurate. An example of this would be using the pricing of a W36 x 230 for a W40 x 211.



## ***General Conditions Estimate***

The general conditions cost was not released for this report due to confidentiality, however it was stated that the general conditions should be around 15% of the construction cost of the project which is approximately \$88,500,000. Due to the high level of variables and unknowns, the estimated general conditions resulted in a total of approximately \$28,000,000.

Table Three summarizes the total costs of each subdivision within the general conditions estimate that was performed. All values came from either R.S. Means CostWorks, colleagues, or past school assignments and do reflect on the actual costs provided by either The Turner Construction Company or SVT.

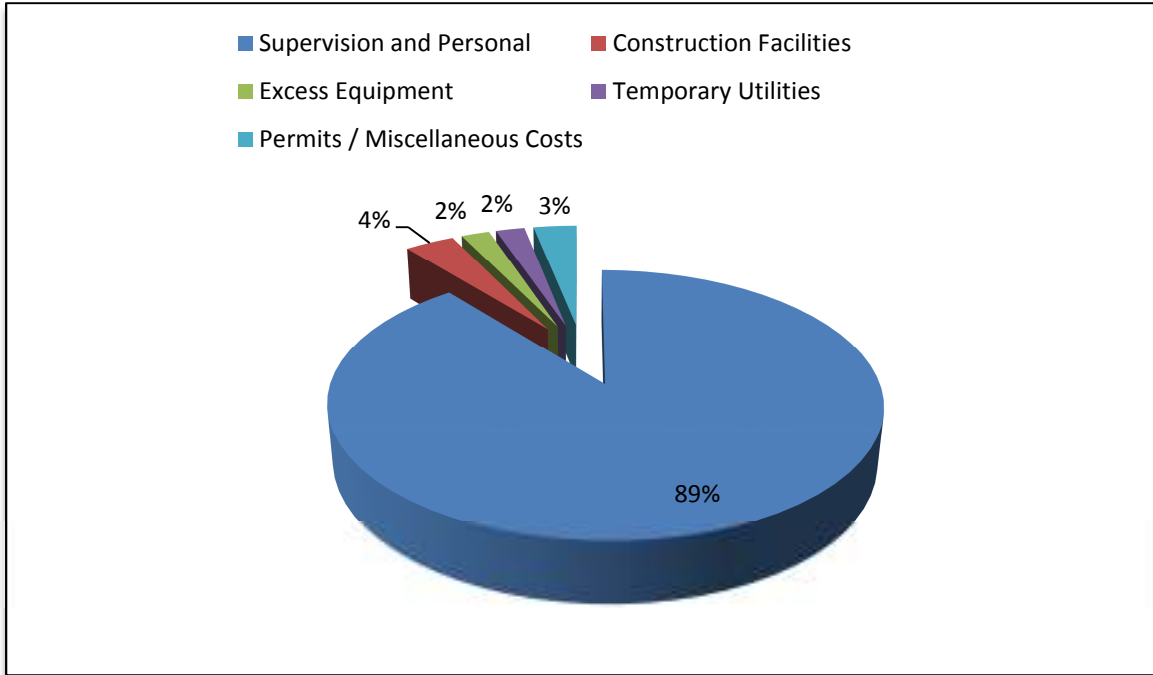
<b>Item</b>	<b>Unit</b>	<b>Quantity</b>	<b>Cost / Unit</b>	<b>Total</b>
<b>Supervision and Personal</b>	Month	48.00	\$519,883.33	\$24,954,400.00
<b>Construction Facilities</b>	Month	48.00	\$20,743.75	\$995,700.00
<b>Excess Equipment</b>	Month	48.00	\$11,850.00	\$568,800.00
<b>Temporary Utilities</b>	Month	48.00	\$12,118.75	\$581,700.00
<b>Permits / Miscellaneous Costs</b>	Month	48.00	\$11,895.83	\$571,000.00
<b>Total</b>				\$27,671,600.00

*Table Three: General Conditions Estimate Summary*

The overall estimate was broken into five subcategories: Supervision and Personal, Construction Facilities, Excess Equipment, Temporary Utilities, and Permits/Miscellaneous Costs. Supervision and Personal is consisted of the entire management and support staff for New York Police Academy. A rather large staff was designed due to the mass size of the project and is consisted of a Project Executive, Project Managers, Field Support, and Miscellaneous Team Support. Construction Facilities is consisted of all field trailers, storage trailers, dumpsters, construction fence, office equipment, and office support. Excess Equipment includes the gang boxes, tools, signage, temporary toilets, fall protection, personal protection equipment, fire extinguishers, and medical supplies. Temporary Utilities consist of the connections for power and information technology as well as the usage of power and water and sanitation. Estimating the temporary utilities proved to be not too challenging due the project being all new construction and requiring at least temporary power in order to operate and construct the project. Permits and Miscellaneous Costs is a combination of all permits that are generally required and other services such as progression photos, delivery and shipping expenses, document production, and travel expenses.



Figure Three displays the percentages of the subcategories used within the general conditions estimate. Supervision and personal consist of 89% of the general conditions costs which is typical for many projects in the field.



*Figure Three: General Conditions Component Percentages*

Similar to the structural system described in the last section, the general conditions estimate is inaccurate due to the same reasons. Every company compiles different items within their general conditions, this makes generating an estimate rather difficult when the items in question are unknown. Therefore, R.S. Means and past projects could not prepare a proper general conditions estimate for New York Police Academy due to the overall cost and contents being confidential.



## ***Critical Industry Issues***

The 19<sup>th</sup> Annual PACE Roundtable was held at The Pennsylvania State University on October 27 – 28, 2009, with an overall theme of “Building a Collaboration Culture”. With the attraction of a large amount of both students and industry leaders, several discussion panels were held covering three main break-out issues.

- **Sustainability / Green Building**
- **Technology Applications**
- **Process Innovation**

With Sustainability / Green Building and Technology Applications being two increasingly major issues within the construction industry, Process Innovation is growing more rapidly in producing a more efficient project for the owner. A good portion of students attended the Sustainability / Green Building and Technology Applications while more industry professionals attended the Process Innovation sessions.

During the morning session of Technology Applications, the topic of discussion was “Transformation: What are the innovations that will transform our industry”. This session focused around the new and innovative technology on the field as well as in the office. Some topics that were discussed by industry leaders and students were technology for LEED, façade solar panels, wireless sensors, laser scanning, BIM phasing, and wind turbines. Some examples of these topics are as follows:

- **Robots in the Field** – Allows them to travel along course of the project, scanning work to date to help aid with future layout.
- **Prefabrication** – Allows for the reducing of field labor. Can rapidly install repetitive items such as patient rooms, bathrooms, and corridor MEP.
- **Virtual Simulation** – Employs game-engine technology to simulate movement throughout the facility and allows the owner to save money by performing virtual mock-ups instead of infield mock-ups.

In the afternoon session of Process Innovation, the topic of discussion was “Operations and Maintenance: Process integration in new and retrofit projects. This session focused around industry professionals discussing the challenges of turning over a building to an owner. Some of the topics that were discussed were turning over building documents to the owner, operations and management, and how BIM can benefit the owner. Some examples of these topics are as follows:

- **Building Documents** – Identifying what is usable to the owner? Provide technical information on systems such as the mechanical and electrical. Bring



subcontractors, consultants, and facility personal on early to identify any future problems with future operations.

- **Operations and Management** – How to improve the efficiency of maintenance personnel. Need to make the personnel care for the overall performance of the building because the envelope and systems can be good but the occupants can influence major problems.
- **Building Information Modeling** – Find ways to allow models of the building and systems to benefit the owner more than being primary visual aids.

All of the industry professionals provided knowledge on many issues pertaining to the current construction industry. Some of the attendees that participated in the break-out sessions were Trey Hooper from DPR Construction, John Bechtel from Office of the Physical Plant, Jim Salvino from Clark Construction Group, and many others. This seminar provided many contacts through different company sizes and market types to help provide information in pursuing research on the topics covered.

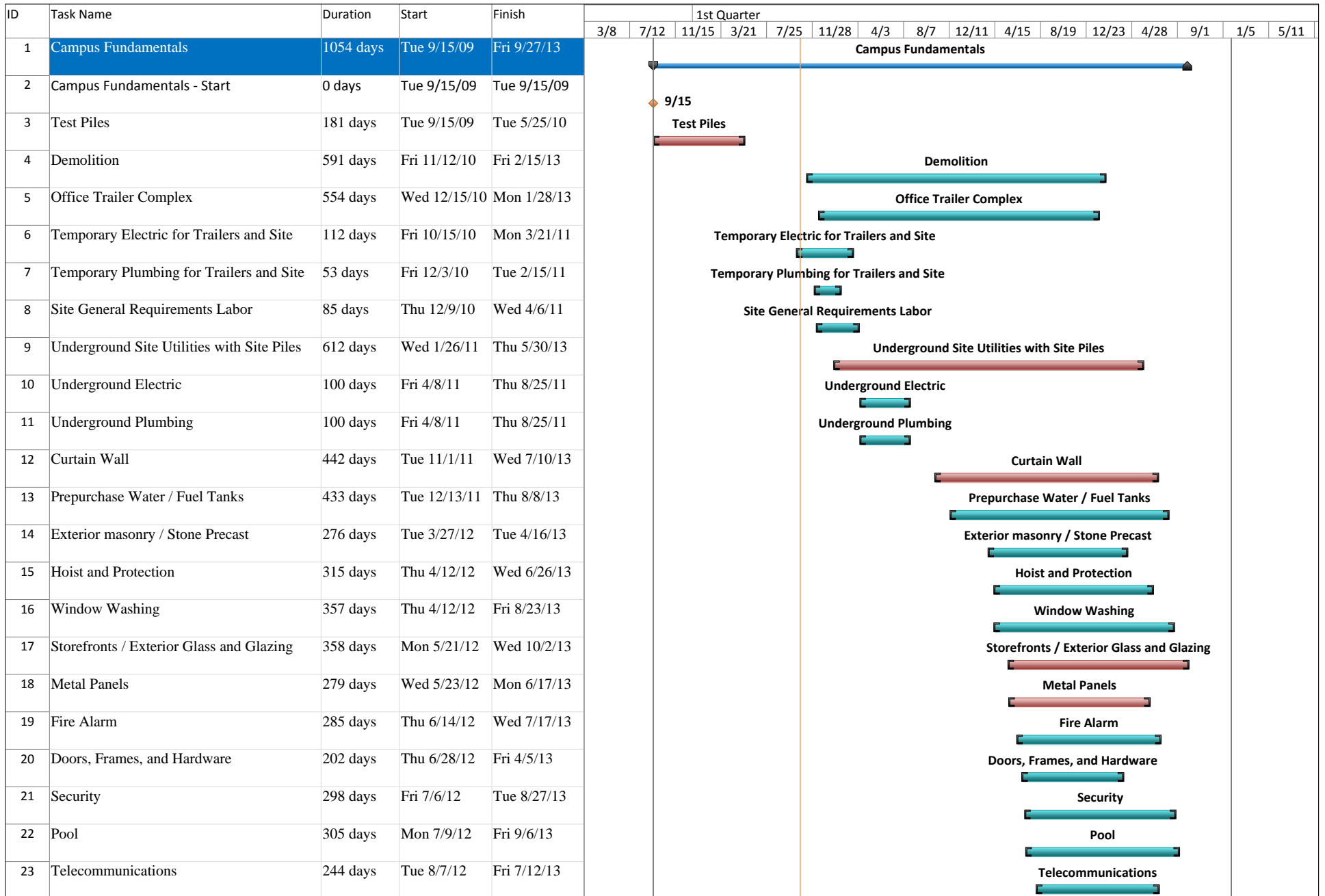
The primary reason for the initial redesign of New York Police Academy was funding. Through the research on topics such as prefabrication and coordination with BIM or virtual simulation, the overall cost of the project may be reduce in cost, allowing for the addition of items that were cut from the program. With the use of prefabrication, one is eliminated high field labor time; this can be used to help accelerate the schedule resulting in an early project for the owner. Due to the complex MEP system that will be installed, a focus on operations and management to make the system more maintainable could be researched as well.

Overall, the experience and knowledge shared by industry professionals, Penn State AE faculty, and fellow students has aided in the research for construction topics that will benefit the proposal report as well as the spring semester.

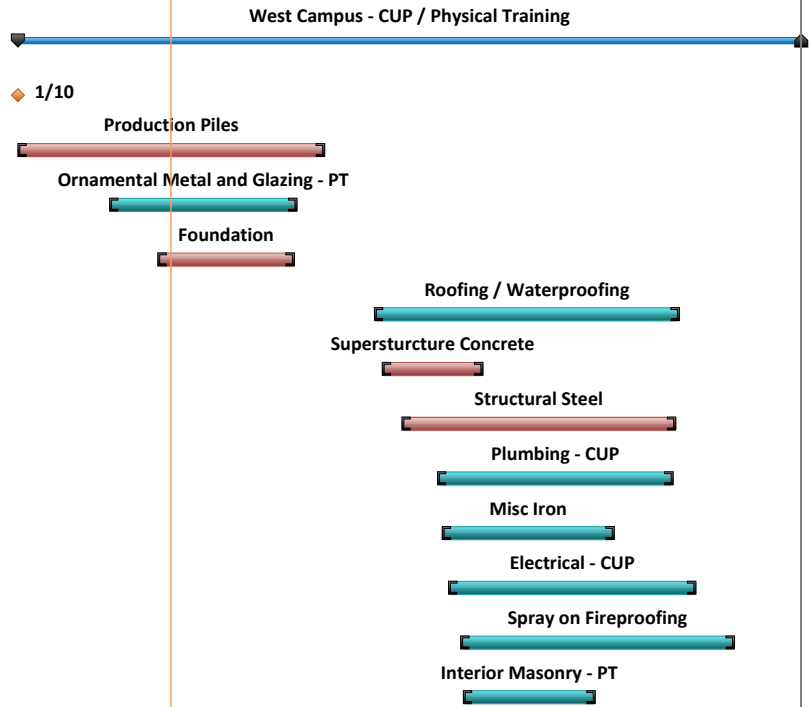
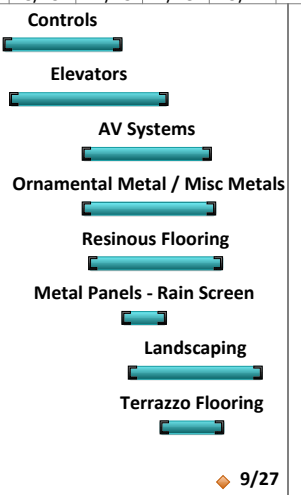


*APPENDIX A – Detailed Project Schedule*





ID	Task Name	Duration	Start	Finish	1st Quarter																	
					3/8	7/12	11/15	3/21	7/25	11/28	4/3	8/7	12/11	4/15	8/19	12/23	4/28	9/1	1/5	5/11		
24	Controls	160 days	Wed 8/8/12	Tue 3/19/13																		
25	Elevators	215 days	Mon 8/20/12	Fri 6/14/13																		
26	AV Systems	174 days	Fri 1/4/13	Wed 9/4/13																		
27	Ornamental Metal / Misc Metals	180 days	Fri 1/4/13	Thu 9/12/13																		
28	Resinous Flooring	181 days	Wed 1/16/13	Wed 9/25/13																		
29	Metal Panels - Rain Screen	60 days	Wed 3/20/13	Tue 6/11/13																		
30	Landscaping	181 days	Mon 4/1/13	Mon 12/9/13																		
31	Terrazzo Flooring	86 days	Fri 5/31/13	Fri 9/27/13																		
32	Campus Fundamentals - Completion	0 days	Fri 9/27/13	Fri 9/27/13																		
33																						
34	West Campus - CUP / Physical Training	1057 days	Sun 1/10/10	Mon 1/27/14																		
35	West Campus - Start	0 days	Sun 1/10/10	Sun 1/10/10																		
36	Production Piles	415 days	Sun 1/10/10	Thu 8/11/11																		
37	Ornamental Metal and Glazing - PT	252 days	Fri 7/2/10	Mon 6/20/11																		
38	Foundation	184 days	Fri 10/1/10	Wed 6/15/11																		
39	Roofing / Waterproofing	412 days	Mon 11/14/11	Tue 6/11/13																		
40	Superstructure Concrete	136 days	Tue 11/29/11	Tue 6/5/12																		
41	Structural Steel	369 days	Thu 1/5/12	Tue 6/4/13																		
42	Plumbing - CUP	319 days	Mon 3/12/12	Thu 5/30/13																		
43	Misc Iron	233 days	Wed 3/21/12	Fri 2/8/13																		
44	Electrical - CUP	335 days	Mon 4/2/12	Fri 7/12/13																		
45	Spray on Fireproofing	369 days	Wed 4/25/12	Mon 9/23/13																		
46	Interior Masonry - PT	179 days	Mon 4/30/12	Thu 1/3/13																		



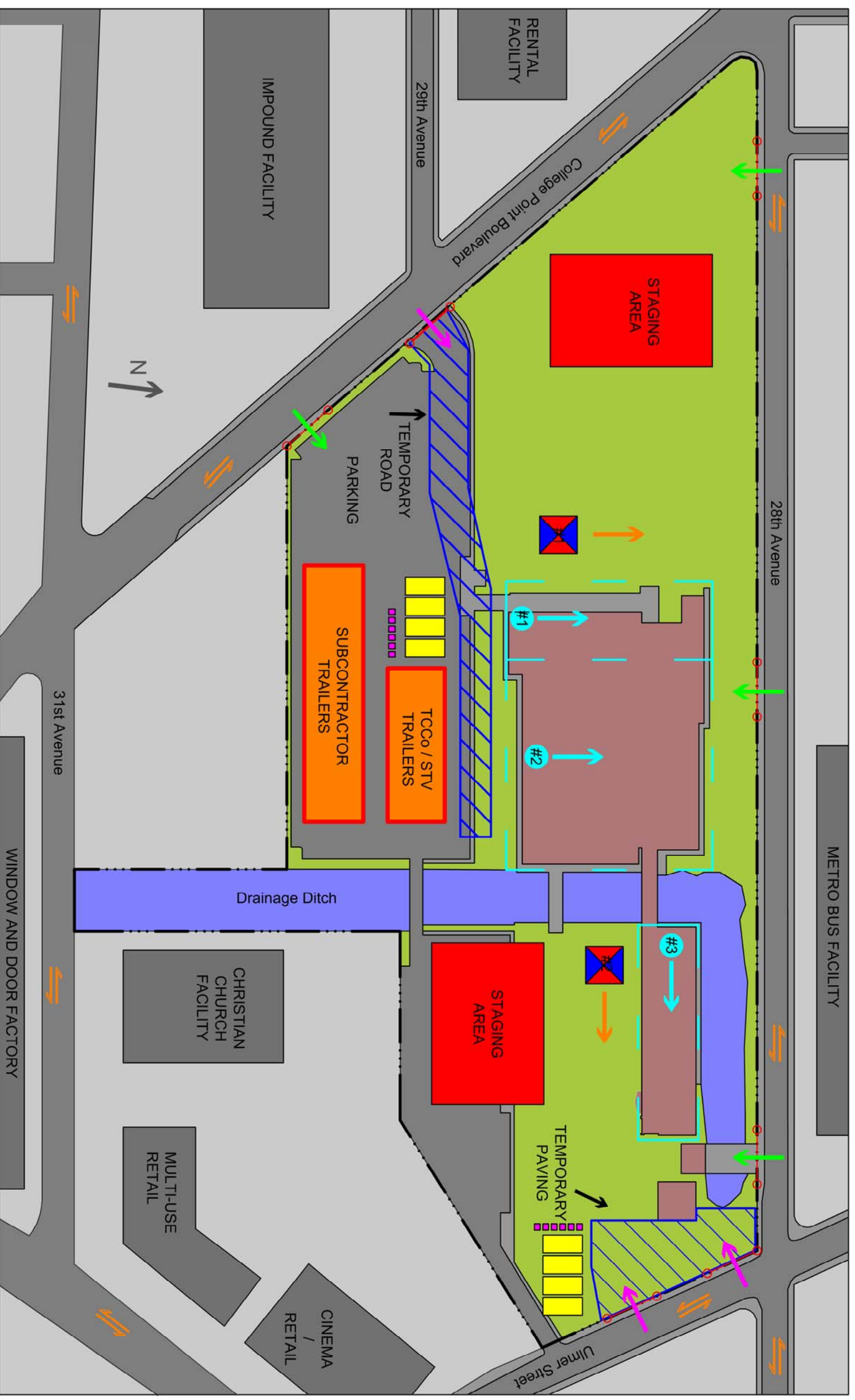
ID	Task Name	Duration	Start	Finish	1st Quarter																
					3/8	7/12	11/15	3/21	7/25	11/28	4/3	8/7	12/11	4/15	8/19	12/23	4/28	9/1	1/5	5/11	
47	HVAC Air Side - PT	372 days	Wed 5/2/12	Thu 10/3/13																HVAC Air Side - PT	
48	Plumbing - PT	344 days	Wed 5/2/12	Mon 8/26/13																Plumbing - PT	
49	HVAC Wet Side - PT	270 days	Wed 5/16/12	Tue 5/28/13																HVAC Wet Side - PT	
50	Electrical - PT	362 days	Wed 5/16/12	Thu 10/3/13																Electrical - PT	
51	Fire Protection - PT	237 days	Wed 5/16/12	Thu 4/11/13																Fire Protection - PT	
52	HVAC Wet Side - CUP	188 days	Wed 5/23/12	Fri 2/8/13																HVAC Wet Side - CUP	
53	Drywall - CUP	343 days	Wed 5/23/12	Fri 9/13/13																Drywall - CUP	
54	HVAC Air Side - CUP	228 days	Thu 6/7/12	Mon 4/22/13																HVAC Air Side - CUP	
55	Fire Protection - CUP	183 days	Thu 6/7/12	Mon 2/18/13																Fire Protection - CUP	
56	Interior Masonry - CUP	136 days	Sun 6/10/12	Fri 12/14/12																Interior Masonry - CUP	
57	Painting and Wall Covering - PT	266 days	Thu 6/28/12	Thu 7/4/13																Painting and Wall Covering - PT	
58	Specialities - PT	273 days	Fri 6/29/12	Tue 7/16/13																Specialities - PT	
59	Drywall - PT	371 days	Fri 7/13/12	Fri 12/13/13																Drywall - PT	
60	Specialities - CUP	223 days	Fri 8/3/12	Tue 6/11/13																Specialities - CUP	
61	Sitework	280 days	Tue 11/20/12	Mon 12/16/13																Sitework	
62	Ceramic Tile and Stone - CUP	45 days	Fri 12/14/12	Thu 2/14/13																Ceramic Tile and Stone - CUP	
63	Painting and Wall Covering - CUP	292 days	Fri 12/14/12	Mon 1/27/14																Painting and Wall Covering - CUP	
64	Ceramic Tile and Stone - PT	118 days	Mon 12/17/12	Wed 5/29/13																Ceramic Tile and Stone - PT	
65	Millwork - PT	130 days	Wed 2/20/13	Tue 8/20/13																Millwork - PT	
66	Ornamental Metal and Glazing - CUP	10 days	Thu 2/21/13	Wed 3/6/13																Ornamental Metal and Glazing - CUP	
67	Interior Signage - PT	187 days	Fri 4/5/13	Mon 12/23/13																Interior Signage - PT	
68	Resilient Flooring and Carpet - CUP	30 days	Thu 4/11/13	Wed 5/22/13																Resilient Flooring and Carpet - CUP	
69	Equipment - CUP	20 days	Thu 4/11/13	Wed 5/8/13																Equipment - CUP	



ID	Task Name	Duration	Start	Finish	1st Quarter												
					3/8	7/12	11/15	3/21	7/25	11/28	4/3	8/7	12/11	4/15	8/19	12/23	4/28
93	Ornamental Metal and Glazing	351 days	Wed 5/16/12	Wed 9/18/13													
94	Ceramic Tile and Stone	242 days	Wed 8/22/12	Thu 7/25/13													
95	Painting and Wall Covering	266 days	Mon 9/10/12	Mon 9/16/13													
96	Sitework	270 days	Tue 11/20/12	Mon 12/2/13													
97	Specialties	182 days	Tue 1/15/13	Wed 9/25/13													
98	Interior Signage	233 days	Wed 2/13/13	Fri 1/3/14													
99	Resilient Flooring and Carpet	122 days	Wed 3/27/13	Thu 9/12/13													
100	Millwork	105 days	Fri 4/12/13	Thu 9/5/13													
101	Casework	85 days	Fri 4/12/13	Thu 8/8/13													
102	Equipment	23 days	Wed 7/31/13	Fri 8/30/13													
103	East Campus - Completion	0 days	Fri 1/3/14	Fri 1/3/14	◆ 1/3												



*APPENDIX B – Site Layout Plans*



# FOUNDATION / SUPERSTRUCTURE SITE LAYOUT

New York Police Academy

College Point, New York

October 27, 2010

Shawn Sidelinger - CM

## Legend:

Fence: — ··· — ··· — ··· —

Gate: ○ — ○ —

Dumpster: □

Vehicular Traffic: ⇨ ⇩ ⇪

Crane Location: ⊠

Pile Rig: ● Movement: ⇨

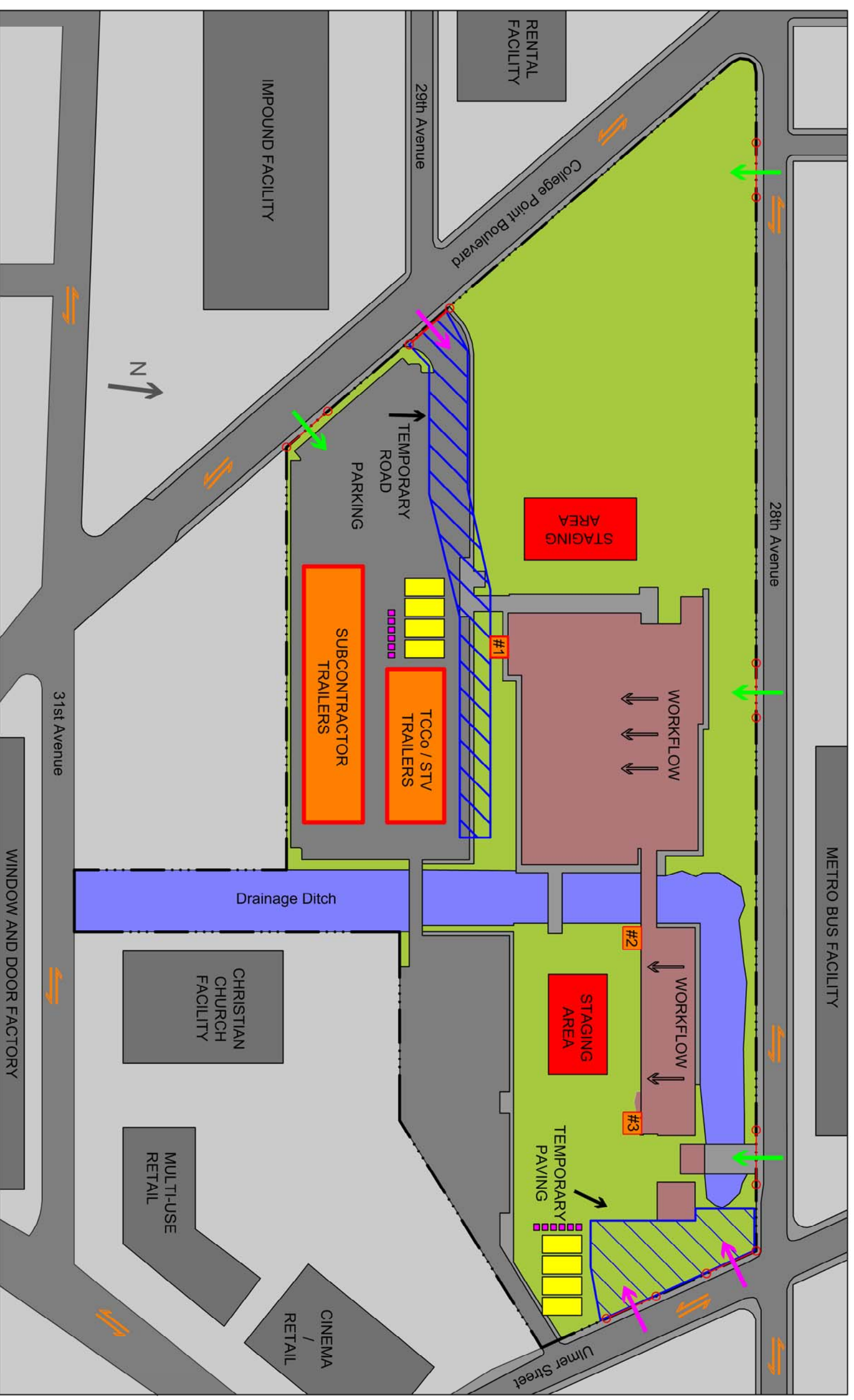
Temporary Toilets: □

Primary Site Entrance: ⇨

Secondary Site Entrance: ⇨

SCALE 1" = 225'





### MEP / INTERIOR FINISHES SITE LAYOUT

New York Police Academy  
 College Point, New York  
 October 27, 2010  
 Shawn Sidelinger - CM

#### Legend:

- Fence: — · — · — · — · — · — · —
- Gate: ○ — ○ —
- Dumpster: □
- Vehicular Traffic: ⇨ ⇨ ⇨

- Hoist Complex: □
- Temporary Toilets: □
- Primary Site Entrance: ⇨
- Secondary Site Entrance: ⇨

SCALE 1" = 225'



*APPENDIX C – Detailed Structural Estimate*



Academic / Administration Beam Statistics							
Location	Member Size	Unit	Quantity	Material Cost	Labor Cost	Equipment Cost	Total Cost
Second Floor	W14 x 30	LF	580	\$36.50	\$2.60	\$1.74	\$23,687.20
	W18 x 50	LF	2780	\$60.50	\$3.72	\$1.86	\$183,702.40
	W18 x 76	LF	270	\$92.00	\$3.77	\$1.89	\$26,368.20
	W18 x 86	LF	60	\$104.00	\$3.77	\$1.89	\$6,579.60
	W18 x 97	LF	36	\$128.00	\$3.77	\$1.89	\$4,811.76
	W18 x 106	LF	36	\$128.00	\$3.77	\$1.89	\$4,811.76
	W24 x 55	LF	925	\$66.50	\$3.06	\$1.53	\$65,758.25
	W24 x 62	LF	50	\$75.00	\$3.06	\$1.53	\$3,979.50
	W24 x 68	LF	75	\$82.50	\$3.06	\$1.53	\$6,531.75
	W24 x 76	LF	289	\$92.00	\$3.06	\$1.53	\$27,914.51
	W24 x 84	LF	15	\$102.00	\$3.14	\$1.57	\$1,600.65
	W24 x 94	LF	378	\$114.00	\$3.14	\$1.57	\$44,872.38
	W24 x 103	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 x 104	LF	270	\$126.00	\$3.23	\$1.62	\$35,329.50
	W24 x 117	LF	45	\$142.00	\$3.23	\$1.62	\$6,608.25
	W24 x 146	LF	60	\$177.00	\$3.23	\$1.62	\$10,911.00
	W30 x 90	LF	74	\$120.00	\$2.83	\$1.42	\$9,194.50
	W33 x 141	LF	550	\$171.00	\$2.99	\$1.50	\$96,519.50
W36 x 135	LF	150	\$163.00	\$2.90	\$1.45	\$25,102.50	
Third Floor	W14 x 30	LF	620	\$36.50	\$2.60	\$1.74	\$25,320.80
	W18 x 50	LF	4500	\$60.50	\$3.72	\$1.86	\$297,360.00
	W18 x 65	LF	30	\$78.50	\$3.77	\$1.89	\$2,524.80
	W18 x 71	LF	330	\$92.00	\$3.77	\$1.89	\$32,227.80
	W18 x 106	LF	36	\$128.00	\$3.77	\$1.89	\$4,811.76
	W24 x 55	LF	295	\$66.50	\$3.06	\$1.53	\$20,971.55
	W24 x 62	LF	25	\$75.00	\$3.06	\$1.53	\$1,989.75
	W24 x 68	LF	120	\$82.50	\$3.06	\$1.53	\$10,450.80
	W24 x 76	LF	360	\$92.00	\$3.06	\$1.53	\$34,772.40
	W24 x 84	LF	180	\$102.00	\$3.14	\$1.57	\$19,207.80
	W24 x 94	LF	36	\$114.00	\$3.14	\$1.57	\$4,273.56
	W24 x 103	LF	396	\$126.00	\$3.23	\$1.62	\$51,816.60
	W24 x 104	LF	225	\$126.00	\$3.23	\$1.62	\$29,441.25
	W24 x 131	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W30 x 90	LF	30	\$120.00	\$2.83	\$1.42	\$3,727.50
	W30 x 116	LF	90	\$140.00	\$2.93	\$1.46	\$12,995.10
	W30 x 124	LF	150	\$160.00	\$2.93	\$1.46	\$24,658.50
	W30 x 191	LF	270	\$231.00	\$3.03	\$1.52	\$63,598.50
W30 x 211	LF	90	\$231.00	\$3.03	\$1.52	\$21,199.50	
W30 x 326	LF	90	\$231.00	\$3.03	\$1.52	\$21,199.50	



	W30 x 357	LF	45	\$231.00	\$3.03	\$1.52	\$10,599.75
	W33 x 141	LF	360	\$171.00	\$2.99	\$1.50	\$63,176.40
	W36 x 135	LF	180	\$163.00	\$2.90	\$1.45	\$30,123.00
	HSS 5x5x1/4	LF	500	\$405.00	\$45.00	\$32.00	\$241,000.00
Fourth Floor	W14 x 30	LF	610	\$36.50	\$2.60	\$1.74	\$24,912.40
	W18 x 50	LF	3750	\$60.50	\$3.72	\$1.86	\$247,800.00
	W18 x 106	LF	36	\$128.00	\$3.77	\$1.89	\$4,811.76
	W24 x 55	LF	315	\$66.50	\$3.06	\$1.53	\$22,393.35
	W24 x 62	LF	120	\$75.00	\$3.06	\$1.53	\$9,550.80
	W24 x 68	LF	120	\$82.50	\$3.06	\$1.53	\$10,450.80
	W24 x 76	LF	120	\$92.00	\$3.06	\$1.53	\$11,590.80
	W24 x 84	LF	270	\$102.00	\$3.14	\$1.57	\$28,811.70
	W24 x 94	LF	150	\$114.00	\$3.14	\$1.57	\$17,806.50
	W24 x 104	LF	330	\$126.00	\$3.23	\$1.62	\$43,180.50
	W24 x 131	LF	36	\$177.00	\$3.23	\$1.62	\$6,546.60
	W24 x 162	LF	60	\$117.00	\$3.23	\$1.62	\$7,311.00
Fifth Floor	W14 x 30	LF	549	\$36.50	\$2.60	\$1.74	\$22,421.16
	W18 x 50	LF	3702	\$60.50	\$3.72	\$1.86	\$244,628.16
	W18 x 76	LF	36	\$92.00	\$3.77	\$1.89	\$3,515.76
	W18 x 106	LF	36	\$128.00	\$3.77	\$1.89	\$4,811.76
	W24 x 55	LF	295	\$66.50	\$3.06	\$1.53	\$20,971.55
	W24 x 62	LF	25	\$75.00	\$3.06	\$1.53	\$1,989.75
	W24 x 68	LF	90	\$82.50	\$3.06	\$1.53	\$7,838.10
	W24 x 76	LF	540	\$92.00	\$3.06	\$1.53	\$52,158.60
	W24 x 84	LF	303	\$102.00	\$3.14	\$1.57	\$32,333.13
	W24 x 94	LF	67	\$114.00	\$3.14	\$1.57	\$7,953.57
	W24 x 103	LF	36	\$126.00	\$3.23	\$1.62	\$4,710.60
	W30 x 19	LF	60	\$120.00	\$2.83	\$1.42	\$7,455.00
	W30 x 21	LF	30	\$120.00	\$2.83	\$1.42	\$3,727.50
	W30 x 90	LF	60	\$120.00	\$2.83	\$1.42	\$7,455.00
	W30 x 116	LF	120	\$140.00	\$2.93	\$1.46	\$17,326.80
	W30 x 132	LF	30	\$160.00	\$2.93	\$1.46	\$4,931.70
	W30 x 148	LF	30	\$179.00	\$2.93	\$1.46	\$5,501.70
	W30 x 191	LF	210	\$231.00	\$3.03	\$1.52	\$49,465.50
	W30 x 357	LF	30	\$231.00	\$3.03	\$1.52	\$7,066.50
	W33 x 141	LF	315	\$171.00	\$2.99	\$1.50	\$55,279.35
W36 x 135	LF	60	\$163.00	\$2.90	\$1.45	\$10,041.00	
Sixth Floor	W14 x 30	LF	772	\$36.50	\$2.60	\$1.74	\$31,528.48
	W18 x 50	LF	3646	\$60.50	\$3.72	\$1.86	\$240,927.68
	W18 x 76	LF	36	\$92.00	\$3.77	\$1.89	\$3,515.76
	W18 x 119	LF	36	\$128.00	\$3.77	\$1.89	\$4,811.76



	W24 x 55	LF	257	\$66.50	\$3.06	\$1.53	\$18,270.13
	W24 x 62	LF	100	\$75.00	\$3.06	\$1.53	\$7,959.00
	W24 x 68	LF	300	\$82.50	\$3.06	\$1.53	\$26,127.00
	W24 x 76	LF	680	\$92.00	\$3.06	\$1.53	\$65,681.20
	W24 x 84	LF	300	\$102.00	\$3.14	\$1.57	\$32,013.00
	W24 x 86	LF	36	\$114.00	\$3.10	\$1.57	\$4,272.12
	W24 x 94	LF	97	\$314.00	\$3.10	\$1.57	\$30,910.99
	W24 x 103	LF	36	\$126.00	\$3.23	\$1.62	\$4,710.60
	W24 x 104	LF	25	\$126.00	\$3.23	\$1.62	\$3,271.25
	W24 x 131	LF	90	\$177.00	\$3.23	\$1.62	\$16,366.50
	W24 x 176	LF	90	\$177.00	\$3.23	\$1.62	\$16,366.50
Seventh Floor	W14 x 30	LF	944	\$36.50	\$2.60	\$1.74	\$38,552.96
	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
	W14 x 68	LF	90	\$89.50	\$308.00	\$2.06	\$35,960.40
	W18 x 50	LF	3932	\$60.50	\$3.72	\$1.86	\$259,826.56
	W18 x 86	LF	36	\$104.00	\$3.77	\$1.89	\$3,947.76
	W18 x 119	LF	36	\$145.00	\$3.26	\$2.18	\$5,415.84
	W24 x 55	LF	387	\$66.50	\$3.06	\$1.53	\$27,511.83
	W24 x 62	LF	100	\$75.00	\$3.06	\$1.53	\$7,959.00
	W24 x 68	LF	223	\$82.50	\$3.06	\$1.53	\$19,421.07
	W24 x 76	LF	480	\$92.00	\$3.06	\$1.53	\$46,363.20
	W24 x 84	LF	246	\$102.00	\$3.14	\$1.57	\$26,250.66
	W24 x 94	LF	157	\$114.00	\$3.14	\$1.57	\$18,637.47
	W24 x 103	LF	216	\$126.00	\$3.23	\$1.62	\$28,263.60
	W24 x 104	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 x 117	LF	60	\$142.00	\$3.23	\$1.62	\$8,811.00
	W24 x 131	LF	60	\$177.00	\$3.23	\$1.62	\$10,911.00
	W24 x 146	LF	120	\$177.00	\$3.23	\$1.62	\$21,822.00
	W30 x 108	LF	45	\$131.00	\$2.83	\$1.41	\$6,085.80
	W30 x 116	LF	45	\$140.00	\$2.93	\$1.46	\$6,497.55
	W33 x 130	LF	135	\$157.00	\$2.99	\$1.50	\$21,801.15
	W33 x 141	LF	135	\$171.00	\$2.99	\$1.50	\$23,691.15
W33 x 221	LF	45	\$243.00	\$3.08	\$1.54	\$11,142.90	
W33 x 232	LF	60	\$243.00	\$3.08	\$1.54	\$14,857.20	
Eighth Floor	W14 x 30	LF	443	\$36.50	\$2.60	\$1.74	\$18,092.12
	W14 x 48	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 x 61	LF	20	\$89.50	\$3.08	\$2.06	\$1,892.80
	W14 x 90	LF	90	\$109.00	\$3.17	\$2.12	\$10,286.10
	W18 x 50	LF	3090	\$60.50	\$3.72	\$1.86	\$204,187.20
	W18 x 76	LF	36	\$92.00	\$3.77	\$1.89	\$3,515.76
	W18 x 119	LF	66	\$128.00	\$3.77	\$1.89	\$8,821.56



	W24 x 55	LF	176	\$66.50	\$3.06	\$1.53	\$12,511.84
	W24 x 62	LF	30	\$75.00	\$3.06	\$1.53	\$2,387.70
	W24 x 68	LF	145	\$82.50	\$3.06	\$1.53	\$12,628.05
	W24 x 76	LF	530	\$92.00	\$3.06	\$1.53	\$51,192.70
	W24 x 84	LF	343	\$102.00	\$3.14	\$1.57	\$36,601.53
	W24 x 94	LF	60	\$114.00	\$3.14	\$1.57	\$7,122.60
	W24 x 104	LF	120	\$126.00	\$3.23	\$1.62	\$15,702.00
	W24 x 117	LF	193	\$142.00	\$3.23	\$1.62	\$28,342.05
	W24 x 131	LF	60	\$177.00	\$3.23	\$1.62	\$10,911.00
	W24 x 146	LF	90	\$177.00	\$3.23	\$1.62	\$16,366.50
	W24 x 162	LF	260	\$177.00	\$3.23	\$1.62	\$47,281.00
Mechanical Level	W14 x 30	LF	546	\$36.50	\$2.60	\$1.74	\$22,298.64
	W14 x 43	LF	30	\$52.00	\$2.89	\$1.93	\$1,704.60
	W14 x 61	LF	90	\$89.50	\$3.08	\$2.06	\$8,517.60
	W14 x 68	LF	150	\$89.50	\$3.08	\$2.06	\$14,196.00
	W18 x 50	LF	4103	\$60.50	\$3.72	\$1.86	\$271,126.24
	W18 x 86	LF	30	\$109.00	\$3.17	\$2.12	\$3,428.70
	W18 x 97	LF	36	\$145.00	\$3.26	\$2.18	\$5,415.84
	W24 x 55	LF	445	\$66.50	\$3.06	\$1.53	\$31,635.05
	W24 x 62	LF	73	\$75.00	\$3.06	\$1.53	\$5,810.07
	W24 x 68	LF	385	\$82.50	\$3.06	\$1.53	\$33,529.65
	W24 x 76	LF	510	\$92.00	\$3.06	\$1.53	\$49,260.90
	W24 x 84	LF	150	\$102.00	\$3.14	\$1.57	\$16,006.50
	W24 x 94	LF	163	\$114.00	\$3.14	\$1.57	\$19,349.73
	W24 x 104	LF	40	\$126.00	\$3.23	\$1.62	\$5,234.00
	W24 x 117	LF	105	\$142.00	\$3.23	\$1.62	\$15,419.25
	W24 x 176	LF	90	\$177.00	\$3.23	\$1.62	\$16,366.50
	W24 x 207	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
Roof	W14 x 30	LF	120	\$36.50	\$2.60	\$1.74	\$4,900.80
	W14 x 68	LF	60	\$89.50	\$3.08	\$2.06	\$5,678.40
	W14 x 82	LF	134	\$109.00	\$3.17	\$2.12	\$15,314.86
	W14 x 233	LF	90	\$109.00	\$3.17	\$2.12	\$10,286.10
	W18 x 50	LF	2000	\$60.50	\$3.72	\$1.86	\$132,160.00
	W18 x 90	LF	30	\$128.00	\$3.77	\$1.89	\$4,009.80
	W24 x 55	LF	167	\$66.50	\$3.06	\$1.53	\$11,872.03
	W24 x 76	LF	94	\$92.00	\$3.06	\$1.53	\$9,079.46
	W24 x 117	LF	76	\$142.00	\$3.23	\$1.62	\$11,160.60
	W27 x 84	LF	60	\$102.00	\$2.85	\$1.43	\$6,376.80
	W30 x 132	LF	124	\$160.00	\$2.93	\$1.46	\$20,384.36
Central Utility Plant / Physical Plant Beam Statistics							
Location	Member Size	Unit	Quantity	Material Cost	Labor Cost	Equipment Cost	Total Cost





Second Floor	W8 x 10	LF	17	\$12.10	\$3.91	\$2.61	\$316.54
	W10 x 19	LF	17	\$26.50	\$3.91	\$2.61	\$561.34
	W10 x 112	LF	30	\$59.50	\$4.26	\$2.85	\$1,998.30
	W12 x 19	LF	755	\$26.50	\$2.66	\$1.78	\$23,359.70
	W12 x 22	LF	230	\$26.50	\$2.66	\$1.78	\$7,116.20
	W12 x 26	LF	236	\$31.50	\$2.66	\$1.78	\$8,481.84
	W14 x 22	LF	75	\$31.50	\$2.37	\$1.58	\$2,658.75
	W14 x 26	LF	35	\$31.50	\$2.37	\$1.58	\$1,240.75
	W14 x 34	LF	230	\$41.00	\$2.89	\$1.93	\$10,538.60
	W14 x 53	LF	20	\$64.00	\$2.93	\$1.96	\$1,377.80
	W16 x 26	LF	525.5	\$31.50	\$2.34	\$1.57	\$18,607.96
	W16 x 36	LF	125	\$48.50	\$2.93	\$1.96	\$6,673.75
	W16 x 77	LF	30	\$81.00	\$3.08	\$2.06	\$2,584.20
	W18 x 50	LF	30	\$60.50	\$3.72	\$1.86	\$1,982.40
	W18 x 55	LF	980	\$66.50	\$3.72	\$1.86	\$70,638.40
	W21 x 44	LF	3380	\$53.00	\$3.19	\$1.60	\$195,330.20
	W21 x 50	LF	395	\$60.50	\$3.19	\$1.60	\$25,789.55
	W21 x 55	LF	205	\$75.00	\$3.27	\$1.64	\$16,381.55
	W24 x 55	LF	1030	\$66.50	\$3.06	\$1.53	\$73,222.70
	W24 x 62	LF	340	\$75.00	\$3.06	\$1.53	\$27,060.60
	W24 x 68	LF	1260	\$82.50	\$3.06	\$1.53	\$109,733.40
	W24 x 76	LF	355	\$92.00	\$3.06	\$1.53	\$34,289.45
	W24 x 84	LF	180	\$102.00	\$3.14	\$1.57	\$19,207.80
	W24 x 94	LF	60	\$114.00	\$3.14	\$1.57	\$7,122.60
	W24 x 103	LF	26	\$126.00	\$3.23	\$1.62	\$3,402.10
	W24 x 117	LF	58	\$142.00	\$3.23	\$1.62	\$8,517.30
	W24 x 131	LF	58	\$177.00	\$3.23	\$1.62	\$10,547.30
	W27 x 84	LF	655	\$102.00	\$2.85	\$1.43	\$69,613.40
	W27 x 94	LF	60	\$114.00	\$2.85	\$1.43	\$7,096.80
	W27 x 102	LF	60	\$138.00	\$2.95	\$1.48	\$8,545.80
	W27 x 114	LF	60	\$138.00	\$2.95	\$1.48	\$8,545.80
	W27 x 146	LF	180	\$177.00	\$2.95	\$1.48	\$32,657.40
	W30 x 90	LF	25	\$120.00	\$2.83	\$1.42	\$3,106.25
	W30 x 116	LF	105	\$140.00	\$2.93	\$1.46	\$15,160.95
W36 x 150	LF	70	\$182.00	\$2.90	\$1.45	\$13,044.50	
W40 x 167	LF	1420	\$206.00	\$2.95	\$1.48	\$298,810.60	
W44 x 230	LF	60	\$278.00	\$3.02	\$1.51	\$16,951.80	
W44 x 262	LF	300	\$315.00	\$3.28	\$1.64	\$95,976.00	
W44 x 290	LF	60	\$365.00	\$3.28	\$1.64	\$22,195.20	
LB60 x 199	LF	5400	\$556.00	\$6.04	\$3.02	\$3,051,324.00	
Second Floor	W10 x 19	LF	65	\$26.50	\$3.91	\$2.61	\$2,146.30





Mezzanine	W10 x 30	LF	20	\$40.00	\$4.26	\$2.85	\$942.20
	W12 x 19	LF	421	\$26.50	\$2.66	\$1.78	\$13,025.74
	W12 x 22	LF	228	\$26.50	\$2.66	\$1.78	\$7,054.32
	W12 x 35	LF	12	\$42.50	\$2.89	\$1.93	\$567.84
	W14 x 22	LF	392	\$31.50	\$2.37	\$1.58	\$13,896.40
	W14 x 53	LF	125	\$64.00	\$2.93	\$1.96	\$8,611.25
	W16 x 26	LF	410	\$31.50	\$2.34	\$1.57	\$14,518.10
	W16 x 31	LF	279	\$37.50	\$2.60	\$1.74	\$11,673.36
	W18 x 35	LF	747	\$42.50	\$3.53	\$1.77	\$35,706.60
	W18 x 40	LF	72	\$48.50	\$3.53	\$1.77	\$3,873.60
	W21 x 44	LF	1479	\$53.00	\$3.19	\$1.60	\$85,471.41
	W21 x 50	LF	90	\$60.50	\$3.19	\$1.60	\$5,876.10
	W21 x 55	LF	300	\$75.00	\$3.27	\$1.64	\$23,973.00
	W24 x 55	LF	865	\$66.50	\$3.06	\$1.53	\$61,492.85
	W24 x 62	LF	425	\$75.00	\$3.06	\$1.53	\$33,825.75
	W24 x 68	LF	295	\$82.50	\$3.06	\$1.53	\$25,691.55
	W24 x 76	LF	20	\$92.00	\$3.06	\$1.53	\$1,931.80
	W24 x 84	LF	90	\$102.00	\$3.14	\$1.57	\$9,603.90
	W27 x 84	LF	1147	\$102.00	\$2.85	\$1.43	\$121,903.16
	W27 x 94	LF	20	\$114.00	\$2.85	\$1.43	\$2,365.60
	W27 x 129	LF	35	\$177.00	\$2.95	\$1.48	\$6,350.05
	W30 x 90	LF	655	\$120.00	\$2.83	\$1.42	\$81,383.75
	W30 x 99	LF	89	\$120.00	\$2.83	\$1.42	\$11,058.25
	W30 x 108	LF	25	\$131.00	\$2.83	\$1.42	\$3,381.25
	W30 x 116	LF	65	\$140.00	\$2.93	\$1.46	\$9,385.35
	W33 x 118	LF	99	\$143.00	\$2.89	\$2.45	\$14,685.66
W36 x 135	LF	264	\$163.00	\$2.90	\$1.45	\$44,180.40	
W40 x 149	LF	35	\$182.00	\$2.90	\$1.45	\$6,522.25	
Cooling Tower Roof Framing	W12 x 19	LF	145	\$26.50	\$2.66	\$1.78	\$4,486.30
	W12 x 22	LF	186	\$26.50	\$2.66	\$1.78	\$5,754.84
	W12 x 26	LF	230	\$31.50	\$2.66	\$1.78	\$8,266.20
	W14 x 22	LF	220	\$31.50	\$2.37	\$1.58	\$7,799.00
	W16 x 26	LF	20	\$31.50	\$2.34	\$1.57	\$708.20
	W16 x 31	LF	70	\$37.50	\$2.60	\$1.74	\$2,928.80
	W18 x 35	LF	50	\$42.50	\$3.53	\$1.77	\$2,390.00
	W18 x 40	LF	30	\$48.50	\$3.53	\$1.77	\$1,614.00
	W21 x 44	LF	350	\$53.00	\$3.19	\$1.60	\$20,226.50
	W21 x 50	LF	48	\$60.50	\$3.19	\$1.60	\$3,133.92
	W21 x 55	LF	48	\$75.00	\$3.27	\$1.64	\$3,835.68
	W24 x 55	LF	494	\$66.50	\$3.06	\$1.53	\$35,118.46
W24 x 68	LF	500	\$82.50	\$3.06	\$1.53	\$43,545.00	



	W27 x 84	LF	65	\$102.00	\$2.85	\$1.43	\$6,908.20
Low Equipment Bulkhead	W12 x 19	LF	40	\$26.50	\$2.66	\$1.78	\$1,237.60
	W12 x 22	LF	318	\$26.50	\$2.66	\$1.78	\$9,838.92
	W12 x 26	LF	229	\$31.50	\$2.66	\$1.78	\$8,230.26
	W14 x 22	LF	327	\$31.50	\$2.37	\$1.58	\$11,592.15
	W16 x 26	LF	40	\$31.50	\$2.34	\$1.57	\$1,416.40
	W18 x 35	LF	422	\$42.50	\$3.53	\$1.77	\$20,171.60
	W18 x 40	LF	101	\$48.50	\$3.53	\$1.77	\$5,433.80
	W21 x 44	LF	350	\$53.00	\$3.19	\$1.60	\$20,226.50
	W21 x 50	LF	30	\$60.50	\$3.19	\$1.60	\$1,958.70
	W24 x 55	LF	841	\$66.50	\$3.06	\$1.53	\$59,786.69
	W24 x 62	LF	270	\$75.00	\$3.06	\$1.53	\$21,489.30
	W24 x 68	LF	203	\$82.50	\$3.06	\$1.53	\$17,679.27
	W24 x 76	LF	40	\$92.00	\$3.06	\$1.53	\$3,863.60
	W27 x 84	LF	600	\$102.00	\$3.14	\$1.57	\$64,026.00
	W27 x 114	LF	25	\$138.00	\$2.95	\$1.48	\$3,560.75
	W30 x 90	LF	90	\$120.00	\$2.83	\$1.42	\$11,182.50
	W30 x 99	LF	80	\$120.00	\$2.83	\$1.42	\$9,940.00
	W30 x 108	LF	35	\$131.00	\$2.83	\$1.42	\$4,733.75
	W30 x 116	LF	75	\$140.00	\$2.93	\$1.46	\$10,829.25
	W30 x 191	LF	35	\$231.00	\$3.03	\$1.52	\$8,244.25
	W33 x 130	LF	27	\$157.00	\$2.99	\$1.50	\$4,360.23
	W33 x 141	LF	80	\$171.00	\$2.99	\$1.50	\$14,039.20
	W36 x 135	LF	35	\$163.00	\$2.90	\$1.45	\$5,857.25
	W36 x 150	LF	27	\$182.00	\$2.90	\$1.45	\$5,031.45
	W40 x 149	LF	62	\$182.00	\$2.90	\$1.45	\$11,553.70
	W40 x 167	LF	40	\$206.00	\$2.95	\$1.48	\$8,417.20
	W40 x 183	LF	40	\$235.00	\$3.02	\$1.51	\$9,581.20
	W40 x 431	LF	40	\$365.00	\$3.28	\$1.64	\$14,796.80
	W44 x 230	LF	120	\$278.00	\$3.02	\$1.51	\$33,903.60
	W44 x 262	LF	205	\$315.00	\$3.28	\$1.64	\$65,583.60
	W44 x 290	LF	90	\$365.00	\$3.28	\$1.64	\$33,292.80
	W44 x 335	LF	40	\$365.00	\$3.28	\$1.64	\$14,796.80
C8 x 11.5	LF	80	\$66.50	\$3.06	\$1.53	\$5,687.20	
High Equipment Bulkhead	W10 x 19	LF	120	\$26.50	\$3.91	\$2.61	\$3,962.40
	W12 x 16	LF	13	\$26.50	\$2.66	\$1.78	\$402.22
	W12 x 19	LF	10	\$26.50	\$2.66	\$1.78	\$309.40
	W12 x 22	LF	238.5	\$26.50	\$2.66	\$1.78	\$7,379.19
	W14 x 22	LF	35	\$31.50	\$2.37	\$1.58	\$1,240.75
	W14 x 26	LF	33	\$31.50	\$2.37	\$1.58	\$1,169.85
	W16 x 26	LF	119	\$31.50	\$2.34	\$1.57	\$4,213.79



	W16 x 33	LF	122	\$48.50	\$2.93	\$1.96	\$6,513.58
	W18 x 35	LF	116	\$42.50	\$3.53	\$1.77	\$5,544.80
	W18 x 40	LF	132	\$48.50	\$3.53	\$1.77	\$7,101.60
	W21 x 44	LF	172	\$53.00	\$3.19	\$1.60	\$9,939.88
	W21 x 48	LF	6.5	\$60.50	\$3.19	\$1.60	\$424.39
	W24 x 55	LF	194	\$66.50	\$3.06	\$1.53	\$13,791.46
	W24 x 62	LF	234	\$75.00	\$3.06	\$1.53	\$18,624.06
	W24 x 68	LF	125	\$82.50	\$3.06	\$1.53	\$10,886.25
	W24 x 76	LF	15	\$92.00	\$3.06	\$1.53	\$1,448.85
	W30 x 90	LF	15	\$131.00	\$2.83	\$1.42	\$2,028.75
	W40 x 149	LF	40	\$182.00	\$2.90	\$1.45	\$7,454.00
	W40 x 199	LF	40	\$235.00	\$3.02	\$1.51	\$9,581.20
	W40 x 211	LF	60	\$278.00	\$3.02	\$1.51	\$16,951.80
Roof	W8 x 28	LF	160	\$34.00	\$4.26	\$2.85	\$6,577.60
	W10 x 19	LF	240	\$26.50	\$3.91	\$2.61	\$7,924.80
	W12 x 19	LF	930	\$26.50	\$2.66	\$1.78	\$28,774.20
	W12 x 22	LF	808	\$26.50	\$2.66	\$1.78	\$24,999.52
	W12 x 26	LF	290	\$31.50	\$2.66	\$1.78	\$10,422.60
	W14 x 22	LF	535	\$31.50	\$2.37	\$1.58	\$18,965.75
	W14 x 30	LF	1380	\$36.50	\$2.60	\$1.74	\$56,359.20
	W14 x 43	LF	160	\$52.00	\$2.89	\$1.93	\$9,091.20
	W14 x 53	LF	20	\$64.00	\$2.93	\$1.96	\$1,377.80
	W16 x 26	LF	270	\$31.50	\$2.34	\$1.57	\$9,560.70
	W16 x 31	LF	260	\$37.50	\$2.60	\$1.74	\$10,878.40
	W18 x 35	LF	3335	\$42.50	\$3.53	\$1.77	\$159,413.00
	W18 x 46	LF	685	\$48.50	\$3.53	\$1.77	\$36,853.00
	W21 x 44	LF	895	\$53.00	\$3.19	\$1.60	\$51,722.05
	W21 x 57	LF	145	\$75.00	\$3.27	\$1.64	\$11,586.95
	W24 x 55	LF	450	\$66.50	\$3.06	\$1.53	\$31,990.50
	W24 x 68	LF	390	\$82.50	\$3.06	\$1.53	\$33,965.10
	W24 x 76	LF	30	\$92.00	\$3.06	\$1.53	\$2,897.70
	W24 x 84	LF	90	\$102.00	\$3.14	\$1.57	\$9,603.90
	W27 x 84	LF	112	\$102.00	\$2.85	\$1.43	\$11,903.36
	W30 x 90	LF	67	\$120.00	\$2.83	\$1.42	\$8,324.75
	W30 x 108	LF	120	\$131.00	\$2.83	\$1.42	\$16,230.00
W30 x 116	LF	130	\$140.00	\$2.93	\$1.46	\$18,770.70	
W40 x 167	LF	530	\$206.00	\$2.95	\$1.48	\$111,527.90	
LB66 x 290	LF	4160	\$730.00	\$6.56	\$3.28	\$3,077,734.40	
Total Beam Cost - Entire Project							\$14,587,845.75



Academic / Administration Column Statistics							
Location	Member Size	Unit	Quantity	Material Cost	Labor Cost	Equipment Cost	Total Cost
A0.1-0.AA	W14 x 68	LF	24	\$89.50	\$3.08	\$2.06	\$2,271.36
A1-0AA	W24 x 146	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 131	LF	38	\$177.00	\$3.23	\$1.62	\$6,910.30
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 55	LF	26	\$66.50	\$3.06	\$1.53	\$1,848.34
A2-0.AA	W24 x 131	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 62	LF	28	\$75.00	\$3.06	\$1.53	\$2,228.52
	W24 x 55	LF	26	\$66.50	\$3.06	\$1.53	\$1,848.34
A3-0.AA	W24 x 146	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 146	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 131	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
A4-0.AA	W24 x 141	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 76	LF	28	\$92.00	\$3.06	\$1.53	\$2,704.52
	W24 x 55	LF	26	\$66.50	\$3.06	\$1.53	\$1,848.34
A0.1-AB	W14 x 90	LF	25	\$114.00	\$3.14	\$1.57	\$2,967.75
A0.1-AC	W14 x 43	LF	23	\$52.00	\$2.89	\$1.93	\$1,306.86
A0.1-AF	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AF.7	W14 x 43	LF	13	\$52.00	\$2.89	\$1.93	\$738.66
A0.1-AG	W14 x 120	LF	24	\$145.00	\$3.26	\$2.18	\$3,610.56
A0.1-AH	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AJ	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AK	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AL	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AM	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AN	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AP	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AQ	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AR	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AS	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A0.1-AT	W14 x 43	LF	24	\$52.00	\$2.89	\$1.93	\$1,363.68
A1-AB	W24 x 146	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 84	LF	28	\$102.00	\$3.14	\$1.57	\$2,987.88
	W24 x 68	LF	26	\$82.50	\$3.06	\$1.53	\$2,264.34
A1-AB.5	W30 x 108	LF	18	\$131.00	\$2.83	\$1.42	\$2,434.50
A1-AC	W24 x 229	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 229	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80



	W24 x 146	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 103	LF	26	\$126.00	\$3.23	\$1.62	\$3,402.10
A1-AC.5	W30 x 325	LF	29	\$23.00	\$3.15	\$1.72	\$808.23
A1-AD	W24 x 207	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 117	LF	30	\$142.00	\$3.23	\$1.62	\$4,405.50
	W24 x 117	LF	26	\$142.00	\$3.23	\$1.62	\$3,818.10
A1-AD.5	W24 x 94	LF	30	\$114.00	\$3.14	\$1.57	\$3,561.30
A1-AF	W24 x 229	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 229	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 146	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 103	LF	26	\$126.00	\$3.23	\$1.62	\$3,402.10
A1-AF.5	W30 x 90	LF	15	\$120.00	\$2.83	\$1.42	\$1,863.75
A1-AG	W24 x 176	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 162	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 103	LF	28	\$126.00	\$3.23	\$1.62	\$3,663.80
	W24 x 76	LF	26	\$92.00	\$3.06	\$1.53	\$2,511.34
A1-AH	W24 x 146	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 131	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 62	LF	26	\$75.00	\$3.06	\$1.53	\$2,069.34
A1-AH.5	W24 x 76	LF	12	\$92.00	\$3.06	\$1.53	\$1,159.08
A1-AJ	W24 x 131	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 104	LF	28	\$126.00	\$3.23	\$1.62	\$3,663.80
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 76	LF	26	\$929.00	\$3.06	\$1.53	\$24,273.34
A1-AJ.5	W24 x 131	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 103	LF	28	\$126.00	\$3.23	\$1.62	\$3,663.80
	W24 x 84	LF	28	\$102.00	\$3.14	\$1.57	\$2,987.88
	W24 x 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A1-AK	W24 x 104	LF	34	\$126.00	\$3.23	\$1.57	\$4,447.20
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 68	LF	25	\$82.50	\$3.06	\$1.53	\$2,177.25
A1-AK.5	W24 x 103	LF	12	\$126.00	\$3.23	\$1.62	\$1,570.20
A1-AL	W24 x 131	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 103	LF	28	\$126.00	\$3.23	\$1.62	\$3,663.80
	W24 x 76	LF	25	\$91.00	\$3.06	\$1.53	\$2,389.75
A1-AL.5	W24 x 103	LF	12	\$126.00	\$3.23	\$1.62	\$1,570.20
A1-AM	W24 x 117	LF	34	\$142.00	\$3.23	\$1.62	\$4,992.90
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 68	LF	26	\$82.50	\$3.06	\$1.53	\$2,264.34
A1-AM.5	W24 x 103	LF	12	\$126.00	\$3.23	\$1.62	\$1,570.20



A1-AN	W24 x 117	LF	34	\$142.00	\$3.23	\$1.62	\$4,992.90
	W24 x 103	LF	28	\$126.00	\$3.23	\$1.62	\$3,663.80
	W24 x 68	LF	26	\$82.50	\$3.06	\$1.53	\$2,264.34
A1-AN.5	W24 x 131	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 103	LF	28	\$126.00	\$3.23	\$1.62	\$3,663.80
	W24 x 94	LF	28	\$114.00	\$3.14	\$1.57	\$3,323.88
	W24 x 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A1-AP	W24 x 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 162	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 103	LF	28	\$126.00	\$3.23	\$1.62	\$3,663.80
	W24 x 68	LF	26	\$82.50	\$3.06	\$1.53	\$2,264.34
A1-AP.5	W24 x 192	LF	12	\$177.00	\$3.23	\$1.62	\$2,182.20
A1-AQ	W24 x 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 162	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 117	LF	28	\$142.00	\$3.23	\$1.62	\$4,111.80
	W24 x 117	LF	26	\$142.00	\$3.23	\$1.62	\$3,818.10
A1-AQ.5	W24 x 94	LF	12	\$114.00	\$3.14	\$1.57	\$1,424.52
A1-AR	W24 x 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 146	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 117	LF	28	\$142.00	\$3.23	\$1.62	\$4,111.80
	W24 x 94	LF	26	\$114.00	\$3.14	\$1.57	\$3,086.46
A1-AR.5	W24 x 146	LF	12	\$177.00	\$3.23	\$1.62	\$2,182.20
A1-AS	W24 x 162	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 131	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 84	LF	28	\$102.00	\$3.14	\$1.57	\$2,987.88
	W24 x 76	LF	30	\$92.00	\$3.06	\$1.53	\$2,897.70
	W24 x 55	LF	11	\$66.50	\$3.06	\$1.53	\$781.99
A1-AT	W24 x 103	LF	34	\$126.00	\$3.23	\$1.62	\$4,448.90
	W24 x 84	LF	28	\$102.00	\$3.14	\$1.57	\$2,987.88
	W24 x 76	LF	28	\$92.00	\$3.06	\$1.53	\$2,704.52
	W24 x 76	LF	30	\$92.00	\$3.06	\$1.53	\$2,897.70
	W24 x 68	LF	11	\$82.50	\$3.06	\$1.53	\$957.99
A1.3-AA.5	W14 x 43	LF	25	\$52.00	\$2.89	\$1.93	\$1,420.50
A1.3-AB	W14 x 48	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A1.3-AC	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A1.3-AD	W14 x 61	LF	25	\$89.50	\$3.08	\$2.06	\$2,366.00
A1.3-AE	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A1.3-AF	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A1.3-AG	W14 x 48	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A1.3-AG.4	W14 x 61	LF	34	\$89.50	\$3.08	\$2.06	\$3,217.76
	W14 x 53	LF	28	\$64.00	\$2.93	\$1.96	\$1,928.92



	W14 x 53	LF	28	\$64.00	\$2.93	\$1.96	\$1,928.92
	W14 x 43	LF	30	\$52.00	\$2.89	\$1.93	\$1,704.60
	W14 x 43	LF	11	\$52.00	\$2.89	\$1.93	\$625.02
A2-AA-5	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A2-AB	W24 x 207	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 146	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 117	LF	28	\$142.00	\$3.23	\$1.62	\$4,111.80
	W24 x 103	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 x 103	LF	11	\$126.00	\$3.23	\$1.62	\$1,439.35
A-AB.5	W24 x 94	LF	15	\$114.00	\$3.14	\$1.57	\$1,780.65
A2-AC	W24 x 370	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 370	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 146	LF	28	\$177.00	\$3.23	\$1.62	\$5,091.80
	W24 x 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A2-AC.5	W24 X 431	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
A2-AD	W24 X 306	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 207	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A2-AD.5	W24 X 94	LF	32	\$114.00	\$3.14	\$1.57	\$3,798.72
A2-AE	W24 X 306	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 207	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A2-AE.5	W40 X 431	LF	32	\$365.00	\$3.28	\$1.64	\$11,837.44
A2-AF	W24 X 370	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 370	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 146	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A2-AF.5	W24 X 94	LF	15	\$114.00	\$3.14	\$1.57	\$1,780.65
A2-AG	W24 X 146	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 94	LF	30	\$114.00	\$3.14	\$1.57	\$3,561.30
	W24 X 84	LF	30	\$102.00	\$3.14	\$1.57	\$3,201.30
	W24 X 76	LF	30	\$92.00	\$3.06	\$1.53	\$2,897.70
	W24 X 76	LF	21	\$92.00	\$3.06	\$1.53	\$2,028.39
A2-AS	W14 X 132	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W14 X 82	LF	30	\$102.00	\$3.14	\$1.57	\$3,201.30
	W14 x 68	LF	30	\$82.50	\$3.06	\$1.53	\$2,612.70
	W14 x 53	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 x 53	LF	11	\$64.00	\$2.93	\$1.96	\$757.79
A2-AT	W14 x 82	LF	34	\$109.00	\$3.17	\$2.12	\$3,885.86
	W14 x 74	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 68	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20





	W14 x 53	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 x 48	LF	11	\$64.00	\$2.93	\$1.96	\$757.79
A2.1-AG.4	W14 x 61	LF	34	\$89.50	\$3.08	\$2.06	\$3,217.76
	W14 x 53	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 x 53	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
A3-AA.5	W14 x 43	LF	25	\$52.00	\$2.89	\$1.93	\$1,420.50
A3-AB	W24 x 25	LF	25	\$66.50	\$3.06	\$1.53	\$1,777.25
A3-AC	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A3-AD	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A3-AE	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A3-AF	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A3-AG	W24 x 162	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 146	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 131	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 76	LF	30	\$92.00	\$3.06	\$1.53	\$2,897.70
	W24 x 55	LF	21	\$66.50	\$1.53	\$1.09	\$2,921.52
A3-AG.4	W14 x 90	LF	34	\$109.00	\$3.17	\$2.12	\$3,885.86
	W14 x 90	LF	30	\$109.00	\$3.17	\$2.12	\$3,428.70
	W14 x 61	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 48	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 x 43	LF	21	\$64.00	\$2.93	\$1.96	\$1,446.69
A3-AH	W14 x 145	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
	W14 x 132	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W24 x 82	LF	30	\$102.00	\$3.14	\$1.57	\$3,201.30
	W24 x 68	LF	26	\$82.50	\$3.06	\$1.53	\$2,264.34
A3-AJ	W14 x 283	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
	W14 x 233	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 211	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 211	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 211	LF	21	\$213.00	\$2.57	\$1.72	\$4,563.17
A3-AJ.5	W14 x 159	LF	25	\$213.00	\$2.57	\$1.72	\$5,432.35
A3-AK	W14 x 109	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
	W14 x 90	LF	30	\$109.00	\$3.17	\$2.12	\$3,428.70
	W14 x 61	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 132	LF	25	\$213.00	\$2.57	\$1.72	\$5,432.35
A3-AK.5	W14 x 132	LF	25	\$213.00	\$2.57	\$1.72	\$5,432.35
A3-AL	W14 x 145	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
	W14 x 132	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 68	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 53	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A3-AL.5	W14 x 48	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25



A3-AM	W14 x 109	LF	34	\$145.00	\$3.26	\$2.18	\$5,114.96
	W14 x 90	LF	30	\$109.00	\$3.17	\$2.12	\$3,428.70
	W14 x 61	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 50	LF	25	\$64.00	\$2.93	\$1.96	\$1,722.25
A3-AM.5	W14 x 132	LF	25	\$213.00	\$2.57	\$1.72	\$5,432.35
A3-AN	W14 x 109	LF	34	\$145.00	\$3.26	\$2.18	\$5,114.96
	W14 x 90	LF	30	\$109.00	\$3.17	\$2.12	\$3,428.70
	W14 x 61	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 68	LF	25	\$89.50	\$3.08	\$2.06	\$2,366.00
A3-AN.5	W14 x 154	LF	25	\$213.00	\$2.57	\$1.72	\$5,432.35
A3-AP	W14 x 283	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
	W14 x 233	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 211	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 211	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 211	LF	21	\$213.00	\$2.57	\$1.72	\$4,563.17
A3-AQ	W14 x 145	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
	W14 x 120	LF	30	\$145.00	\$3.26	\$2.18	\$4,513.20
	W14 x 99	LF	30	\$145.00	\$3.26	\$2.18	\$4,513.20
	W14 x 182	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
A3-AR	W14 x 159	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
	W14 x 132	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 99	LF	30	\$145.00	\$3.26	\$2.18	\$4,513.20
	W14 x 90	LF	34	\$109.00	\$3.17	\$2.12	\$3,885.86
A3-AS	W14 x 145	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
	W14 x 132	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 72	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 53	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 x 48	LF	11	\$64.00	\$2.93	\$1.96	\$757.79
A3-AT	W14 x 68	LF	34	\$89.50	\$3.08	\$2.06	\$3,217.76
	W14 x 68	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 48	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 x 38	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 x 38	LF	4	\$64.00	\$2.93	\$1.96	\$275.56
A4-AA.4	W24 x 146	LF	15	\$177.00	\$3.23	\$1.62	\$2,727.75
A4-AB	W24 x 207	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 146	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 104	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 x 68	LF	26	\$82.50	\$3.06	\$1.53	\$2,264.34
A4-AB.4	W24 x 94	LF	15	\$114.00	\$3.14	\$1.57	\$1,780.65
A4-AC	W24 x 370	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W2 4x 370	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50



	W24 x 131	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A4-AC.4	W40 x 397	LF	30	\$365.00	\$3.28	\$1.64	\$11,097.60
A4-AD	W24 x 366	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 229	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A4-AD.4	W24 x 94	LF	30	\$114.00	\$3.14	\$1.57	\$3,561.30
A4-AE	W24 x 306	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 229	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A4-AE.4	W40 x 397	LF	30	\$365.00	\$3.28	\$1.64	\$11,097.60
A4-AF	W24 x 370	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 370	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 131	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 84	LF	26	\$102.00	\$3.14	\$1.57	\$2,774.46
A4-AG	W24 x 229	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 146	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 103	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 x 76	LF	26	\$92.00	\$3.06	\$1.53	\$2,511.34
A4-AG.4	W14 x 43	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
A4-AH	W24 x 176	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W14 x 132	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W14 x 68	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W24 x 53	LF	25	\$66.50	\$3.06	\$1.53	\$1,777.25
A4-AJ	W24 x 335	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 x 283	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 257	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 342	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 x 132	LF	19	\$177.00	\$3.23	\$1.62	\$3,455.15
A4-AK	W24 x 117	LF	34	\$142.00	\$3.23	\$1.62	\$4,992.90
	W14 x 109	LF	30	\$145.00	\$3.26	\$2.18	\$4,513.20
	W14 x 68	LF	35	\$89.50	\$3.08	\$2.06	\$3,312.40
A4-AL	W24 x 117	LF	34	\$142.00	\$3.23	\$1.62	\$4,992.90
	W14 x 109	LF	30	\$145.00	\$3.26	\$2.18	\$4,513.20
	W14 x 68	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 342	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
A4-AM	W24 x 117	LF	34	\$142.00	\$3.23	\$1.62	\$4,992.90
	W14 x 109	LF	30	\$145.00	\$3.26	\$2.18	\$4,513.20
	W14 x 68	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 342	LF	30	\$291.00	\$5.12	\$4.45	\$9,017.10
A4-AN	W24 x 117	LF	34	\$142.00	\$3.23	\$1.62	\$4,992.90



	W14 x 109	LF	30	\$145.00	\$3.26	\$2.18	\$4,513.20
	W14 x 68	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 x 342	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
A4-AP	W24 x 335	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W14 x 283	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 257	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 342	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 x 132	LF	21	\$213.00	\$2.57	\$1.72	\$4,563.17
A4-AQ	W24 X 131	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 120	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W14 X 90	LF	30	\$109.00	\$3.17	\$2.12	\$3,428.70
	W14 X 68	LF	34	\$89.50	\$3.08	\$2.06	\$3,217.76
A4-AR	W24 X 131	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 120	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W14 X 74	LF	30	\$89.50	\$3.08	\$2.06	\$2,839.20
	W14 X 68	LF	34	\$89.50	\$3.08	\$2.06	\$3,217.76
A4-AS	W24 X 146	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W14 X 132	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W14 X 82	LF	30	\$109.00	\$3.17	\$2.12	\$3,428.70
	W14 X 53	LF	34	\$64.00	\$2.93	\$1.96	\$2,342.26
	W14 X 48	LF	11	\$64.00	\$2.93	\$1.96	\$757.79
A4-AT	W14 X 84	LF	34	\$109.00	\$3.17	\$2.12	\$3,885.86
	W14 X 53	LF	30	\$64.00	\$2.93	\$1.96	\$2,066.70
	W14 X 38	LF	30	\$52.00	\$2.89	\$1.93	\$1,704.60
	W14 X 38	LF	34	\$52.00	\$2.89	\$1.93	\$1,931.88
	W14 X48	LF	11	\$64.00	\$2.93	\$1.96	\$757.79
A5-AA	W24 X 207	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 94	LF	30	\$114.00	\$3.14	\$1.57	\$3,561.30
	W24 X 84	LF	30	\$102.00	\$3.14	\$1.57	\$3,201.30
	W24 X 62	LF	24	\$75.00	\$3.06	\$1.53	\$1,910.16
A5-AA.5	W30 X 94	LF	32	\$120.00	\$2.83	\$1.42	\$3,976.00
A5-AB	W24 X 336	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 250	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 94	LF	30	\$114.00	\$3.14	\$1.57	\$3,561.30
	W24 X 68	LF	24	\$82.50	\$3.06	\$1.53	\$2,090.16
A5-AB.5	W30 X 357	LF	32	\$231.00	\$3.03	\$1.52	\$7,537.60
A5-AC	W24 X 370	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 250	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 162	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 94	LF	24	\$114.00	\$3.14	\$1.57	\$2,849.04
A5-AC.5	W24 X 94	LF	32	\$114.00	\$3.14	\$1.57	\$3,798.72



A5-AD	W24 X 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 117	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 104	LF	24	\$126.00	\$3.23	\$1.62	\$3,140.40
A5-AD.5	W24 X 94	LF	32	\$114.00	\$3.14	\$1.57	\$3,798.72
A5-AE	W24 X 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W14 X 117	LF	30	\$213.00	\$2.57	\$1.72	\$6,518.82
	W24 X 104	LF	24	\$126.00	\$3.23	\$1.62	\$3,140.40
A5-AE.5	W30 X 235	LF	32	\$231.00	\$3.03	\$1.52	\$7,537.60
A5-AF	W24 X 370	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 250	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 162	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 131	LF	24	\$177.00	\$3.23	\$1.62	\$4,364.40
A5-AF.5	W30 X 357	LF	34	\$231.00	\$3.03	\$1.52	\$8,008.70
A5-AG	W24 X 335	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 250	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 94	LF	30	\$114.00	\$3.14	\$1.57	\$3,561.30
	W24 X 76	LF	24	\$92.00	\$3.06	\$1.53	\$2,318.16
A5-AH	W24 X 229	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 131	LF	30	\$177.00	\$3.23	\$1.62	\$5,455.50
	W24 X 94	LF	30	\$114.00	\$3.14	\$1.57	\$3,561.30
	W24 X 62	LF	24	\$75.00	\$3.06	\$1.53	\$1,910.16
A5-AJ	W24 X 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 103	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 X 76	LF	30	\$92.00	\$3.06	\$1.53	\$2,897.70
	W24 X 68	LF	24	\$82.50	\$3.06	\$1.53	\$2,090.16
A5-AJ.5	W24 X 117	LF	4	\$142.00	\$3.23	\$1.62	\$587.40
A5-AK	W24 X 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 117	LF	30	\$142.00	\$3.23	\$1.62	\$4,405.50
	W24 X 68	LF	30	\$82.50	\$3.06	\$1.53	\$2,612.70
	W24 X 68	LF	24	\$82.50	\$3.06	\$1.53	\$2,090.16
A5-AK.5	W24 X 103	LF	11	\$126.00	\$3.23	\$1.62	\$1,439.35
A5-AL	W24 X 176	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 103	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 X 68	LF	30	\$82.50	\$3.06	\$1.53	\$2,612.70
	W24 X 62	LF	26	\$75.00	\$3.06	\$1.53	\$2,069.34
A5-AL.5	W24 X 103	LF	11	\$126.00	\$3.23	\$1.62	\$1,439.35
A5-AM	W24 X 176	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 103	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 X 68	LF	30	\$82.50	\$3.06	\$1.53	\$2,612.70
	W24 X 62	LF	26	\$75.00	\$3.06	\$1.53	\$2,069.34
A5-AM5	W24 X 103	LF	11	\$126.00	\$3.23	\$1.62	\$1,439.35



A5-AN	W24 X 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 103	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 X 68	LF	30	\$82.50	\$3.06	\$1.52	\$2,612.40
	W24 X 68	LF	26	\$82.50	\$3.06	\$1.52	\$2,264.08
A5-AN.5	W24 X 103	LF	4	\$126.00	\$3.23	\$1.62	\$523.40
A5-AP	W24 X 192	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 103	LF	30	\$126.00	\$3.23	\$1.62	\$3,925.50
	W24 X 68	LF	30	\$82.50	\$3.06	\$1.53	\$2,612.70
	W24 X 62	LF	26	\$77.00	\$3.06	\$1.53	\$2,121.34
A5-AP.5	W24 X 117	LF	11	\$142.00	\$3.23	\$1.62	\$1,615.35
A5-AQ	W24 X 207	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 117	LF	30	\$142.00	\$3.23	\$1.62	\$4,405.50
	W224 X 76	LF	30	\$92.00	\$3.06	\$1.53	\$2,897.70
	W24 X 62	LF	24	\$75.00	\$3.06	\$1.53	\$1,910.16
A5-AQ.5	W24 X 117	LF	11	\$142.00	\$3.23	\$1.62	\$1,615.35
A5-AR	W24 X 207	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 117	LF	30	\$142.00	\$3.23	\$1.62	\$4,405.50
	W24 X 84	LF	30	\$102.00	\$3.14	\$1.57	\$3,201.30
	W24 X 68	LF	24	\$82.50	\$3.06	\$1.53	\$2,090.16
A5-AR.5	W24 X 104	LF	11	\$126.00	\$3.23	\$1.62	\$1,439.35
A5-AS	W24 X 162	LF	34	\$177.00	\$3.23	\$1.62	\$6,182.90
	W24 X 117	LF	30	\$142.00	\$3.23	\$1.62	\$4,405.50
	W24 X 94	LF	30	\$114.00	\$3.14	\$1.57	\$3,561.30
	W24 X 62	LF	24	\$75.00	\$3.06	\$1.53	\$1,910.16

Central Plant / Physical Plant Column Statistics

Location	Member Size	Unit	Quantity	Material Cost	Labor Cost	Equipment Cost	Total Cost
E1-EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E1-EA.1	W14 X 90	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E1-EA.2	W14 X 43	LF	24	\$89.50	\$2.38	\$1.59	\$2,243.28
E1-EB	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	26	\$213.00	\$2.57	\$1.72	\$5,649.64
E1-EB.2	W14 X 43	LF	20	\$89.50	\$2.38	\$1.59	\$1,869.40
E1-EC	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 176	LF	26	\$213.00	\$2.57	\$1.72	\$5,649.64
	W14 X 90	LF	15	\$145.00	\$2.44	\$1.63	\$2,236.05
E1-ED	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 176	LF	41	\$213.00	\$2.57	\$1.72	\$8,909.05
E1.2-ED	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 176	LF	41	\$213.00	\$2.57	\$1.72	\$8,909.05
E1.2-EE	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 176	LF	41	\$213.00	\$2.57	\$1.72	\$8,909.05



E1.4-EA.2	W14 X 43	LF	24	\$89.50	\$2.38	\$1.59	\$2,243.28
E1.4-EB	W14 X 43	LF	10	\$89.50	\$2.38	\$1.59	\$934.70
E1.4-EB2	W14 X 43	LF	21	\$89.50	\$2.38	\$1.59	\$1,962.87
E2EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E2-EA.1	W14 X 90	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E2-EB	W14 X 120	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 90	LF	21	\$145.00	\$2.44	\$1.63	\$3,130.47
E2-EC	W14 X 159	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W24 X 132	LF	22	\$117.00	\$3.23	\$1.62	\$2,680.70
E2-EC.2	W10 X 33	LF	15	\$136.00	\$2.44	\$1.63	\$2,101.05
E2-ED	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	22	\$213.00	\$2.57	\$1.72	\$4,780.47
E2-ED.4	W10X 33	LF	20	\$136.00	\$2.44	\$1.63	\$2,801.40
E2-EE	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	28	\$213.00	\$2.57	\$1.72	\$6,084.23
E3-EB	W14 X 90	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	42	\$145.00	\$2.44	\$1.63	\$6,260.94
E3-EB.2	W14 S 43	LF	21	\$89.50	\$2.38	\$1.59	\$1,962.87
E3-EC	W14 X 90	LF	34	\$145.00	\$2.44	\$1.63	\$5,068.38
E3-EC.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E3-ED	W14 X 193	LF	36	\$213.00	\$2.57	\$1.72	\$7,822.58
E3-ED.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E3-EE	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	29	\$213.00	\$2.57	\$1.72	\$6,301.53
E4-EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E4-EA.1	W14 X 176	LF	33	\$213.00	\$2.57	\$1.72	\$7,170.70
E4-EB	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 90	LF	24	\$89.50	\$2.38	\$1.59	\$2,243.28
E4-EC	W14 X 145	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 120	LF	22	\$213.00	\$2.57	\$1.72	\$4,780.47
E4-EC.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
ED-ED	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	22	\$213.00	\$2.57	\$1.72	\$4,780.47
ED-ED.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E4-EE	W14 X 193	LF	40	\$213.00	\$2.57	\$1.72	\$8,691.76
	W14 X 176	LF	29	\$213.00	\$2.57	\$1.72	\$6,301.53
E5-EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E5-EA.1	W14 X 90	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E5-EB	W14 X 90	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	24	\$145.00	\$2.44	\$1.63	\$3,577.68
E5-EC	W14 X 132	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17





	W14 X 90	LF	22	\$145.00	\$2.44	\$1.63	\$3,279.54
E5-EC.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E5-ED	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 90	LF	22	\$145.00	\$2.44	\$1.63	\$3,279.54
E5-ED.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E5-EE	W14 X 193	LF	40	\$213.00	\$2.57	\$1.72	\$8,691.76
	W14 X 176	LF	29	\$213.00	\$2.57	\$1.72	\$6,301.53
E5.8-EC.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E5.8-ED.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E6-EB	W14 X 90	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	8	\$145.00	\$2.44	\$1.63	\$1,192.56
E6-EC	W14 X 120	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	22	\$145.00	\$2.44	\$1.63	\$3,279.54
E6-ED	W14 X 120	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E6-EE	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 90	LF	29	\$145.00	\$2.44	\$1.63	\$4,323.03
E6.2-EC.4	W14 X 53	LF	31	\$89.50	\$2.38	\$1.59	\$2,897.57
E6.2-ED.4	W14 X 53	LF	20	\$89.50	\$2.38	\$1.59	\$1,869.40
E7-EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E7-EA.1	W14 X 90	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E7-EB	W14 X 90	LF	46	\$145.00	\$2.44	\$1.63	\$6,857.22
E7-EC	W14 X 120	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	22	\$145.00	\$2.44	\$1.63	\$3,279.54
E7-ED	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	22	\$145.00	\$2.44	\$1.63	\$3,279.54
E7-ED.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E7-EE	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 176	LF	29	\$213.00	\$2.57	\$1.72	\$6,301.53
E8-EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E8-EA.1	W14 X 90	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E8-EB	W14 X 90	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	24	\$145.00	\$2.44	\$1.63	\$3,577.68
E8-EB.6	W10 X 49	LF	30	\$136.00	\$2.44	\$1.63	\$4,202.10
E8-EC	W14 X 120	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 90	LF	21	\$145.00	\$2.44	\$1.63	\$3,130.47
E8-EC.4	W10 X 49	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E8-ED	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 90	LF	21	\$145.00	\$2.44	\$1.63	\$3,130.47
E8-ED.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E8-EE	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 159	LF	29	\$213.00	\$2.57	\$1.72	\$6,301.53



E9-EB	W14 X 90	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	24	\$145.00	\$2.44	\$1.63	\$3,577.68
E9-EC	W14 X 120	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	21	\$145.00	\$2.44	\$1.63	\$3,130.47
E9-EC.6	W10 X 33	LF	15	\$136.00	\$2.44	\$1.63	\$2,101.05
E9-ED	W14 X 193	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
E9-ED.4	W10 X 33	LF	19	\$136.00	\$2.44	\$1.63	\$2,661.33
E9-EE	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 90	LF	29	\$145.00	\$2.44	\$1.63	\$4,323.03
E10-EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E10-EA.1	W14 X 90	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E10-EB	W14 X 90	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	21	\$145.00	\$2.44	\$1.63	\$3,130.47
E10-EB.2	W14 X 43	LF	21	\$89.50	\$2.38	\$1.59	\$1,962.87
E11-EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E11-EA.1	W14 X 90	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E11-EB	W14 X 99	LF	38	\$145.00	\$2.44	\$1.63	\$5,664.66
	W14 X 90	LF	21	\$145.00	\$2.44	\$1.63	\$3,130.47
E11-EC	W10 X 49	LF	23	\$136.00	\$2.44	\$1.63	\$3,221.61
	W14 X 90	LF	11	\$145.00	\$2.44	\$1.63	\$1,639.77
E11-ED	W14 X 193	LF	34	\$213.00	\$2.57	\$1.72	\$7,388.00
E11-EE	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 176	LF	41	\$213.00	\$2.57	\$1.72	\$8,909.05
E11.6-EA.2	W14 X 43	LF	24	\$89.50	\$2.38	\$1.59	\$2,243.28
E11.6-EB	W14 X 43	LF	9	\$89.50	\$2.38	\$1.59	\$841.23
E11.6-EB.2	W14 X 43	LF	21	\$89.50	\$2.38	\$1.59	\$1,962.87
	W14 X 43	LF	21	\$89.50	\$2.38	\$1.59	\$1,962.87
E11.8-ED	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	26	\$213.00	\$2.57	\$1.72	\$5,649.64
	W10 X 33	LF	15	\$136.00	\$2.44	\$1.63	\$2,101.05
E11.8-EE	W14 X 193	LF	39	\$213.00	\$2.57	\$1.72	\$8,474.47
	W14 X 176	LF	26	\$213.00	\$2.57	\$1.72	\$5,649.64
	W14 X 99	LF	15	\$145.00	\$2.44	\$1.63	\$2,236.05
E12-EA	W14 X 193	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
E12-EA.1	W14 X 90	LF	33	\$145.00	\$2.44	\$1.63	\$4,919.31
E12-EA.2	W14 X 43	LF	24	\$89.50	\$2.38	\$1.59	\$2,243.28
E12-EB	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	21	\$213.00	\$2.57	\$1.72	\$4,563.17
E12-EB.2	W14 X 43	LF	20	\$89.50	\$2.38	\$1.59	\$1,869.40
E12-EC	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	26	\$213.00	\$2.57	\$1.72	\$5,649.64



	W14 X 99	LF	15	\$145.00	\$2.44	\$1.63	\$2,236.05
E12-ED	W14 X 193	LF	38	\$213.00	\$2.57	\$1.72	\$8,257.17
	W14 X 176	LF	26	\$213.00	\$2.57	\$1.72	\$5,649.64
	W10 X 33	LF	15	\$136.00	\$2.44	\$1.63	\$2,101.05
	F1-FC	W14 X 53	LF	32	\$89.50	\$2.38	\$1.59
F1-FD	W14 X 90	LF	32	\$145.00	\$2.44	\$1.63	\$4,770.24
F1.2-FA	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
F1/2-FB	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
F2-FA	W14 X 90	LF	46	\$145.00	\$2.44	\$1.63	\$6,857.22
F2-FB	W14 X 90	LF	46	\$145.00	\$2.44	\$1.63	\$6,857.22
F2-FC	W14 X 53	LF	31	\$89.50	\$2.38	\$1.59	\$2,897.57
F2-FD	W14 X 90	LF	32	\$145.00	\$2.44	\$1.63	\$4,770.24
F3-FA	W14 X 61	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
F3-FB	W14 X 145	LF	45	\$213.00	\$2.57	\$1.72	\$9,778.23
F3-FC	W14 X 61	LF	31	\$89.50	\$2.38	\$1.59	\$2,897.57
F3-FD	W14 X 90	LF	31	\$145.00	\$2.44	\$1.63	\$4,621.17
F4-FA	W14 X 61	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
F4-FB	W14 X 109	LF	45	\$145.00	\$2.44	\$1.63	\$6,708.15
F4-FC	W14 X 61	LF	31	\$89.50	\$2.38	\$1.59	\$2,897.57
F4-FD	W14 X 90	LF	31	\$145.00	\$2.44	\$1.63	\$4,621.17
DO.5-DK	W14 X 53	LF	12	\$89.50	\$2.38	\$1.59	\$1,121.64
DO.5-DL	W14 X 53	LF	12	\$89.50	\$2.38	\$1.59	\$1,121.64
DO.5-DM	W14 X 53	LF	12	\$89.50	\$2.38	\$1.59	\$1,121.64
DO.5-DN	W14 X 53	LF	12	\$89.50	\$2.38	\$1.59	\$1,121.64
D1-CH	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DC	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DD	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DE	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DF	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DG	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DH	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DJ	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DK	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DL	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DM	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DM	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D1-DN	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D2-CH	W14 X 74	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D2-DC	W14 X 68	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D2-DD	W14 X 68	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D2-DE	W14 X 74	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15



D2-DF	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D2-DG	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D2-DH	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D2-DJ	W14 X 68	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D2-DK	W14 X 74	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D2-DL	W14 X 74	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D2-DM	W14 X 90	LF	47	\$145.00	\$2.44	\$1.63	\$7,006.29
D2-DN	W14 X 1232	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D3-CH	W14 X 211	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D3-DC	W14 X 211	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D3-DD	W14 X 211	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D3-DE	W14 X 211	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D3-DF	W14 X 211	LF	45	\$213.00	\$2.57	\$1.72	\$9,778.23
D3-DG	W14 X 211	LF	45	\$213.00	\$2.57	\$1.72	\$9,778.23
D3-DH	W14 X 211	LF	45	\$213.00	\$2.57	\$1.72	\$9,778.23
D3-DJ	W14 X 211	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D3-DK	W14 X 211	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D3-DL	W14 X 211	LF	47	\$213.00	\$2.57	\$1.72	\$10,212.82
D3-DM	W14 X 211	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D3-DN	W14 X 211	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D4-CH	W14 X 43	LF	33	\$89.50	\$2.38	\$1.59	\$3,084.51
D4-DC	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D4-DD	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D4-DE	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D4-DG	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D4-DH	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D4-DJ	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D4-DK	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D4-DL	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D4-DM	W14 X 61	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D4-DN	W14 X 48	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D4.5-CH	W14 X 43	LF	33	\$89.50	\$2.38	\$1.59	\$3,084.51
D4.5-DA	W14 X 43	LF	16	\$89.50	\$2.38	\$1.59	\$1,495.52
D5-DA	W14 X 61	LF	16	\$89.50	\$2.38	\$1.59	\$1,495.52
D5-DB	W14 X 43	LF	17	\$89.50	\$2.38	\$1.59	\$1,588.99
D5-DC	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5-DD	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5-DE	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5-DF	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5-DG	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5-DH	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52



D5-DJ	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5-DK	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5-DL	W14 X 132	LF	45	\$213.00	\$2.57	\$1.72	\$9,778.23
D5-DM	W14 X 132	LF	45	\$213.00	\$2.57	\$1.72	\$9,778.23
D5-DN	W14 X 182	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5.5-DA	W14 X 182	LF	16	\$213.00	\$2.57	\$1.72	\$3,476.70
D5.5-DB	W14 X 43	LF	17	\$89.50	\$2.38	\$1.59	\$1,588.99
D5.5-DC	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D5.5-DD	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D6-DA	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D6-DB	W14 X 99	LF	16	\$145.00	\$2.44	\$1.63	\$2,385.12
D6-DC	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D6-DD	W14 X 99	LF	45	\$145.00	\$2.44	\$1.63	\$6,708.15
D6-DE	W14 X 99	LF	46	\$145.00	\$2.44	\$1.63	\$6,857.22
D6-DF	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D6-DG	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D6-DH	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D6-DJ	W14 X 99	LF	18	\$145.00	\$2.44	\$1.63	\$2,683.26
D6-DK	W14 X 99	LF	19	\$145.00	\$2.44	\$1.63	\$2,832.33
D6-DL	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D6-DM	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D6-DN	W14 X 68	LF	17	\$89.50	\$2.38	\$1.59	\$1,588.99
D6.5-DA	W14 X 68	LF	45	\$82.50	\$2.38	\$1.59	\$3,891.15
D6.5-DB	W14 X 43	LF	16	\$89.50	\$2.38	\$1.59	\$1,495.52
D6.5-DC	W14 X 90	LF	15	\$145.00	\$2.44	\$1.63	\$2,236.05
D6.5-DD	W14 X 68	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D6.5-EA	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D7-DA	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D7-DB	W14 X 43	LF	16	\$89.50	\$2.38	\$1.59	\$1,495.52
D7-DC	W14 X 90	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D7-DD	W14 X 132	LF	45	\$213.00	\$2.57	\$1.72	\$9,778.23
D7-DE	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D7-DF	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D7-DG	W14 X 99	LF	17	\$145.00	\$2.44	\$1.63	\$2,534.19
D7-DH	W14 X 99	LF	19	\$145.00	\$2.44	\$1.63	\$2,832.33
D7-DJ	W14 X 99	LF	19	\$145.00	\$2.44	\$1.63	\$2,832.33
D7-DK	W14 X 99	LF	19	\$145.00	\$2.44	\$1.63	\$2,832.33
D7-DL	W14 X 99	LF	19	\$145.00	\$2.44	\$1.63	\$2,832.33
D7-DM	W14 X 99	LF	19	\$145.00	\$2.44	\$1.63	\$2,832.33
D7-DN	W14 X 68	LF	47	\$89.50	\$2.38	\$1.59	\$4,393.09
D7.5-DA	W14 X 68	LF	16	\$89.50	\$2.38	\$1.59	\$1,495.52



D7.5-DB	W14 X 43	LF	17	\$89.50	\$2.38	\$1.59	\$1,588.99
D7.5-DC	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D7.5-DD	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D7.5-EA	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D8-DA	W14 X 61	LF	16	\$89.50	\$2.38	\$1.59	\$1,495.52
D8-DB	W14 X 43	LF	17	\$89.50	\$2.38	\$1.59	\$1,588.99
D8-DC	W14 X 132	LF	46	\$213.00	\$2.57	\$1.72	\$9,995.52
D8-DD	W14 X 90	LF	45	\$145.00	\$2.44	\$1.63	\$6,708.15
D8-DE	W14 X 120	LF	45	\$145.00	\$2.44	\$1.63	\$6,708.15
D8-DF	W14 X 120	LF	45	\$145.00	\$2.44	\$1.63	\$6,708.15
D9-DG	W14 X 120	LF	45	\$145.00	\$2.44	\$1.63	\$6,708.15
D8-DH	W14 X 120	LF	45	\$145.00	\$2.44	\$1.63	\$6,708.15
D8-DJ	W14 X 120	LF	47	\$145.00	\$2.44	\$1.63	\$7,006.29
D8-DK	W14 X 120	LF	47	\$145.00	\$2.44	\$1.63	\$7,006.29
D8-DL	W14 X 132	LF	47	\$213.00	\$2.57	\$1.72	\$10,212.82
D8-DM	W14 X 120	LF	47	\$145.00	\$2.44	\$1.63	\$7,006.29
D8-DN	W14 X 132	LF	16	\$213.00	\$2.57	\$1.72	\$3,476.70
D9-DA	W14 X 43	LF	34	\$89.50	\$2.38	\$1.59	\$3,177.98
D9-DB	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D9-DC	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D9-DD	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D9-DE	W14 X 53	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D9-DF	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D9-DG	W14 X 53	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D9-DH	W14 X 68	LF	46	\$89.50	\$2.38	\$1.59	\$4,299.62
D9-DJ	W14 X 68	LF	45	\$89.50	\$2.38	\$1.59	\$4,206.15
D9-DK	W14 X 43	LF	47	\$89.50	\$2.38	\$1.59	\$4,393.09
D9-DL	W14 X 48	LF	47	\$89.50	\$2.38	\$1.59	\$4,393.09
D9-DM	W14 X 43	LF	47	\$89.50	\$2.38	\$1.59	\$4,393.09
D9-DN	W14 X 68	LF	47	\$89.50	\$2.38	\$1.59	\$4,393.09
Total Column Cost							\$3,163,635.50



Academic / Administration - Pile Cap Statistics

Pile Cap ID	Quantity	Width	Length	Depth	Concrete Used, CY	Rebar	Rebar Weight, Tons
1	17	3.5	3.5	3	23.14	5 #6 Vert / 5 #6 Hor	0.45
2	50	3.5	7.5	3.58	174.03	8 #5 Vert / 5 #9 Hor	3.05
3	9	7	7.5	3.5	61.25	5 #10 Vert / 5 # 10 Hor	1.40
4	4	6	6	2.83	15.09	9 #7 Vert / 9 #7 Hor	0.44
5	10	9.17	9.17	3.58	111.50	11 #9 Vert / 11 #9 Hor	3.43
6	18	7.5	11.5	4	230.00	12 #9 Vert / 10 #10 Hor	7.13
7	10	10.5	11.5	4.58	204.83	10 #10 Vert / 10 #10 Hor	4.73
8	6	10.5	11.5	4.17	111.90	16 #9 Vert / 11 #10 Hor	3.37
9	3	11.5	11.5	4.75	69.80	14 #10 Vert / 14 #10 Hor	2.08
11	1	10.5	15.5	4.25	25.62	21 #10 Vert / 21 #10 Hor	1.17
15	1	15.5	17.5	5	50.23	26 #10 Vert / 20 #11 Hor	1.80
16	4	15.5	15.5	5.5	195.76	24 # 10 Vert / 24 #10 Hor	6.40
18	2	15.5	17.5	5	100.46	25 #11 Vert / 25 #11 Hor	4.38
19	1	15.5	18.5	5.08	53.95	27 #11 Vert / 27 #11 Hor	2.44
21	2	18.5	18.5	6	152.11	28 #11 Vert / 27 #11 Hor	5.41

Central Utility Plant / Physical Plant - Pile Cap Statistics

Pile Cap ID	Quantity	Width	Length	Depth	Concrete Used, CY	Rebar	Rebar Weight, Tons
1	60	3.5	3.5	3	81.67	5 #6 Vert / 5 #6 Hor	1.58
2	19	3.5	7.5	3.58	66.13	8 #5 Vert / 5 #9 Hor	1.16
3	40	7	7.5	3.5	272.22	5 #10 Vert / 5 # 10 Hor	6.24
4	39	6	6	2.83	147.16	9 #7 Vert / 9 #7 Hor	4.30
5	27	9.17	9.17	3.58	301.04	11 #9 Vert / 11 #9 Hor	9.26
6	32	7.5	11.5	4	408.89	12 #9 Vert / 10 #10 Vert	12.67
7	13	10.5	11.5	4.58	266.28	10 #10 Vert / 10 #10 Hor	6.15
8	10	10.5	11.5	4.17	186.49	16 #9 Vert / 11 #10 Hor	5.61
9	14	11.5	11.5	4.75	325.73	14 #10 Vert / 14 #10 Hor	9.70
10	6	10.5	15.5	4.17	150.82	18 #10 Vert / 18 #10 Hor	6.04
11	1	10.5	15.5	4.25	25.62	21 #10 Vert / 21 #10 Hor	1.17
12	2	11.5	15.5	4.75	62.72	23 #10 Vert / 23 #10 Hor	2.67
13	5	11.5	17.5	5	186.34	28 #8 Vert / 21 #11 Hor	6.48
17	2	17.5	15.5	5	100.46	22 #11 Vert / 22 #11 Hor	3.86
18	1	15.5	17.5	5	50.23	25 #11 Vert / 25 #11 Hor	2.19
Total Concrete					4211.45	Total Rebar Weight	126.78





Item	Unit	Quantity	Material Cost	Labor Cost	Equip Cost	Total Cost
Concrete - 4000 psi	CY	4211.45	\$176.00	\$54.50	\$0.33	\$1,069,341.98
Rebar	TONS	126.78	\$840.00	\$380.00		\$170,139.89
Piles, 14" Diameter Hollow	EA	1862.00	\$1,600.00	\$55.00	\$38.00	\$3,152,366.00
Concrete - 4000 psi, Piles	EA	5308.00	\$176.00	\$54.50	\$0.33	\$1,347,770.20
Total Pile Cap Cost						\$5,739,618.07

Academic / Administration - Slab on Grade

Item	Unit	Quantity	Rebar Weight, ton	Material Cost	Labor Cost	Equip Cost	Total Cost
Concrete - 4000 psi, 14"	CY	2266.00		\$5.05	\$1.01	\$0.01	\$15,130.08
#8 Rebar @ 16" o.c.	LF	104856.00	139.98	\$890.00	\$600.00		\$229,431.74
#12 Rebar @ 12" o.c.	LF	52104.00	166.73	\$890.00	\$600.00		\$273,275.06

Central Utility Plant / Physical Plant - Slab on Grade

Item	Unit	Quantity	Rebar Weight, ton	Material Cost	Labor Cost	Equip Cost	Total Cost
Concrete - 4000 psi, 14"	CY	7200.27		\$5.05	\$1.01	\$0.01	\$48,076.22
#8 Rebar @ 16" o.c.	LF	27459.00	36.66	\$890.00	\$600.00		\$60,082.08
#12 Rebar @ 12" o.c.	LF	40012.00	128.04	\$890.00	\$600.00		\$209,854.94

Central Utility Plant / Physical Plant - High Equipment Bulkhead Cast in Place Slab

Item	Unit	Quantity	Rebar Weight, ton	Material Cost	Labor Cost	Equip Cost	Total Cost
Concrete - 4000 psi, 12"	CY	3520.00		\$4.02	\$1.46	\$0.56	\$23,386.88
#5 Rebar @ 12" o.c.	LF	14080.00	7.34	\$990.00	\$475.00		\$11,832.79

Total Reinforced Concrete Slab Cost

\$871,069.79



Academic / Administration - Metal Deck System Statistics

Location	Item	Unit	Quantity	Material Cost	Labor Cost	Equip Cost	Total Cost
Second Floor	Metal Deck - 3", 18 GA	SF	36666.00	\$2.39	\$0.39	\$0.04	\$103,398.12
	Concrete - 4000 psi, 3 1/4"	CY	396.08	\$0.73	\$0.28	\$2.37	\$1,472.64
	WWF - 6x6 1.4 x 1.4	CSF	366.66	\$13.25	\$19.65	\$0.00	\$13,269.43
Third Floor	Metal Deck - 3", 18 GA	SF	41175.00	\$2.39	\$0.39	\$0.04	\$116,113.50
	Concrete - 4000 psi, 3 1/4"	CY	444.79	\$0.73	\$0.28	\$2.37	\$1,653.74
	WWF - 6x6 1.4 x 1.4	CSF	411.75	\$13.25	\$19.65	\$0.00	\$14,901.23
Fourth Floor	Metal Deck - 3", 18 GA	SF	34026.00	\$2.39	\$0.39	\$0.04	\$95,953.32
	Concrete - 4000 psi, 3 1/4"	CY	367.56	\$0.73	\$0.28	\$2.37	\$1,366.61
	WWF - 6x6 1.4 x 1.4	CSF	340.26	\$13.25	\$19.65	\$0.00	\$12,314.01
Fifth Floor	Metal Deck - 3", 18 GA	SF	41241.00	\$2.39	\$0.39	\$0.04	\$116,299.62
	Concrete - 4000 psi, 3 1/4"	CY	445.50	\$0.73	\$0.28	\$2.37	\$1,656.39
	WWF - 6x6 1.4 x 1.4	CSF	412.41	\$13.25	\$19.65	\$0.00	\$14,925.12
Sixth Floor	Metal Deck - 3", 18 GA	SF	40676.00	\$2.39	\$0.39	\$0.04	\$114,706.32
	Concrete - 4000 psi, 3 1/4"	CY	439.40	\$0.73	\$0.28	\$2.37	\$1,559.43
	WWF - 6x6 1.4 x 1.4	CSF	406.76	\$13.25	\$19.65	\$0.00	\$14,051.52
Seventh Floor	Metal Deck - 3", 18 GA	SF	43186.00	\$2.39	\$0.39	\$0.04	\$121,784.52
	Concrete - 4000 psi, 3 1/4"	CY	466.52	\$0.73	\$0.28	\$2.37	\$1,734.50
	WWF - 6x6 1.4 x 1.4	CSF	431.86	\$13.25	\$19.65	\$0.00	\$15,629.01
Eight Floor	Metal Deck - 3", 18 GA	SF	26700.00	\$2.39	\$0.39	\$0.04	\$75,294.00
	Concrete - 4000 psi, 3 1/4"	CY	288.43	\$0.73	\$0.28	\$2.37	\$1,072.37
	WWF - 6x6 1.4 x 1.4	CSF	26.70	\$13.25	\$19.65	\$0.00	\$966.27
Mechanical Floor	Metal Deck - 3", 18 GA	SF	31395.00	\$2.39	\$0.39	\$0.04	\$88,533.90
	Concrete - 4000 psi, 3 1/4"	CY	339.14	\$0.73	\$0.28	\$2.37	\$1,260.94
	WWF - 6x6 1.4 x 1.4	CSF	313.95	\$13.25	\$19.65	\$0.00	\$11,361.85
Roof	Metal Deck - 3", 18 GA	SF	12230.00	\$2.39	\$0.39	\$0.04	\$34,488.60
	Concrete - 4000 psi, 3 1/4"	CY	132.11	\$0.73	\$0.28	\$2.37	\$491.20
	WWF - 6x6 1.4 x 1.4	CSF	122.30	\$13.25	\$19.65	\$0.00	\$4,426.04

Central Utility Plant / Physical Plant - Metal Deck System Statistics

Location	Item	Unit	Quantity	Material Cost	Labor Cost	Equip Cost	Total Cost
Second Floor	Metal Deck - 3", 18 GA	SF	116918.00	\$2.39	\$0.39	\$0.04	\$329,708.76
	Concrete - 4000 psi, 3 1/4"	CY	43558.00	\$0.73	\$0.28	\$2.37	\$161,948.64
	Concrete - 4000 psi, 4 1/2"	CY	25300.00	\$2.20	\$0.73	\$0.28	\$89,334.30
	Concrete - 4000 psi, 5"	CY	47700.00	\$2.20	\$0.73	\$0.28	\$168,428.70
	WWF - 6x6 1.4 x 1.4	CSF	116.92	\$13.25	\$19.65	\$0.00	\$4,231.26
Second Floor	Metal Deck - 3", 18 GA	SF	51675.00	\$2.39	\$0.39	\$0.04	\$145,723.50
	Concrete - 4000 psi, 3 1/4"	CY	26375.00	\$0.73	\$0.28	\$2.37	\$98,062.25



Mezzanine	Concrete - 4000 psi, 4 1/2"	CY	25300.00	\$2.20	\$0.73	\$0.28	\$89,334.30
	WWF - 6x6 1.4 x 1.4	CSF	516.75	\$13.25	\$19.65	\$0.00	\$18,701.18
Cooling Tower Roofing Frame	Metal Deck - 3", 18 GA	SF	13200.00	\$2.39	\$0.39	\$0.04	\$37,224.00
	Concrete - 4000 psi, 4 1/2"	CY	13200.00	\$2.20	\$0.73	\$0.28	\$46,609.20
	WWF - 6x6 1.4 x 1.4	CSF	132.00	\$13.25	\$19.65	\$0.00	\$4,777.08
Low Equipment Bulkhead	Metal Deck - 3", 18 GA	SF	23040.00	\$2.39	\$0.39	\$0.04	\$64,972.80
	Concrete - 4000 psi, 4 1/2"	CY	23040.00	\$2.20	\$0.73	\$0.28	\$81,354.24
	WWF - 6x6 1.4 x 1.4	CSF	230.40	\$13.25	\$19.65	\$0.00	\$8,338.18
High Equipment Bulkhead	Metal Deck - 3", 18 GA	SF	795.00	\$2.39	\$0.39	\$0.04	\$2,241.90
	Concrete - 4000 psi, 4 1/2"	CY	795.00	\$2.20	\$0.73	\$0.28	\$2,807.15
	WWF - 6x6 1.4 x 1.4	CSF	0.80	\$13.25	\$19.65	\$0.00	\$28.77
Roof	Metal Deck - 3", 18 GA	SF	81805.00	\$2.39	\$0.39	\$0.04	\$230,690.10
	Concrete - 4000 psi, 3 1/4"	CY	72605.00	\$0.73	\$0.28	\$2.37	\$269,945.39
	Concrete - 4000 psi, 4 1/2"	CY	11480.00	\$2.20	\$0.73	\$0.28	\$40,535.88
	WWF - 6x6 1.4 x 1.4	CSF	818.05	\$13.25	\$19.65	\$0.00	\$29,605.23
Total Metal Deck System Cost							\$2,871,255.74

Summary	
Item	Cost
Beams	\$14,587,845.75
Columns	\$3,163,635.50
Pile Caps	\$5,739,618.07
Concrete Slabs	\$871,069.79
Composite Metal Decks	\$2,871,255.74
Total	\$27,233,424.85



*APPENDIX D – General Conditions Estimate*



Supervision and Personal				
Item	Unit	Quantity	Cost / Unit	Total
Project Executive	Week	576.00	\$2,250.00	\$1,296,000.00
Senior Superintendent	Week	576.00	\$1,950.00	\$1,123,200.00
Senior Superintendent	Week	576.00	\$1,950.00	\$1,123,200.00
Superintendent	Week	576.00	\$1,750.00	\$1,008,000.00
Superintendent	Week	576.00	\$1,750.00	\$1,008,000.00
Superintendent	Week	576.00	\$1,750.00	\$1,008,000.00
Assistant Superintendent	Week	576.00	\$1,550.00	\$892,800.00
Assistant Superintendent	Week	576.00	\$1,550.00	\$892,800.00
Assistant Superintendent	Week	576.00	\$1,550.00	\$892,800.00
Assistant Superintendent	Week	576.00	\$1,550.00	\$892,800.00
Assistant Superintendent	Week	576.00	\$1,550.00	\$892,800.00
Senior Project Manager	Week	576.00	\$2,100.00	\$1,209,600.00
Senior Project Manager	Week	576.00	\$2,100.00	\$1,209,600.00
Project Manager	Week	576.00	\$1,800.00	\$1,036,800.00
Project Manager	Week	576.00	\$1,800.00	\$1,036,800.00
Project Manager	Week	576.00	\$1,800.00	\$1,036,800.00
Assistant Project Manager	Week	576.00	\$1,600.00	\$921,600.00
Assistant Project Manager	Week	576.00	\$1,600.00	\$921,600.00
Assistant Project Manager	Week	576.00	\$1,600.00	\$921,600.00
Assistant Project Manager	Week	576.00	\$1,600.00	\$921,600.00
Assistant Project Manager	Week	576.00	\$1,600.00	\$921,600.00
Field Engineer	Week	576.00	\$1,125.00	\$648,000.00
Field Engineer	Week	576.00	\$1,125.00	\$648,000.00
Field Engineer	Week	576.00	\$1,125.00	\$648,000.00
Field Engineer	Week	576.00	\$1,125.00	\$648,000.00
Field Engineer	Week	576.00	\$1,125.00	\$648,000.00
Field Engineer	Week	576.00	\$1,125.00	\$648,000.00
Safety Manager	Week	576.00	\$900.00	\$518,400.00
Assistant Safety Manager	Week	576.00	\$750.00	\$432,000.00
Assistant Safety Manager	Week	576.00	\$750.00	\$432,000.00
Project Scheduler	Week	576.00	\$725.00	\$417,600.00
Project Scheduler	Week	576.00	\$725.00	\$417,600.00
Estimating Costs	LS	1.00	\$100,000.00	\$100,000.00
Total				\$24,954,400.00
Construction Facilities				
Item	Unit	Quantity	Cost / Unit	Total
Field Trailer – Set Up	Lump Sum	1.00	\$2,000.00	\$2,000.00
Field Trailer – Rental	Month	48.00	\$2,500.00	\$120,000.00
Field Trailer – Tear Down	Lump Sum	1.00	\$2,500.00	\$2,500.00
Office Equipment – Rental	Month	48.00	\$3,250.00	\$156,000.00
Local Area Network	Month	48.00	\$2,750.00	\$132,000.00
Office Supplies	Month	48.00	\$1,000.00	\$48,000.00
Telephone	Month	48.00	\$500.00	\$24,000.00



Lights & HVAC	Month	48.00	\$550.00	\$26,400.00
Storage Trailers	Month	48.00	\$350.00	\$16,800.00
Construction Fence	Month	48.00	\$750.00	\$36,000.00
Dumpsters	Week	576.00	\$750.00	\$432,000.00
Total			\$995,700.00	
<b>Excess Equipment</b>				
Item	Unit	Quantity	Cost / Unit	Total
Gang Box	Month	48.00	\$700.00	\$33,600.00
Tools – Equipment	Month	48.00	\$750.00	\$36,000.00
Signage	Month	48.00	\$175.00	\$8,400.00
Material Hoist, 3 Total	Month	30.00	\$11,000.00	\$330,000.00
Surveying	Month	48.00	\$900.00	\$43,200.00
Temp Toilets	Month	48.00	\$900.00	\$43,200.00
Personal Protection Equipment	Month	48.00	\$250.00	\$12,000.00
Fall Protection	Month	48.00	\$700.00	\$33,600.00
Fire Extinguishers	Month	48.00	\$300.00	\$14,400.00
First Aid Kit / Medical Supplies	Month	48.00	\$300.00	\$14,400.00
Total			\$568,800.00	
<b>Temporarily Utilities</b>				
Item	Unit	Quantity	Cost / Unit	Total
IT / Phone Connection	LS	1.00	\$10,000.00	\$10,000.00
Temporary Power Installation	LS	1.00	\$12,500.00	\$12,500.00
Temporary Power Usage	Month	24.00	\$22,500.00	\$540,000.00
Temporary Water / Sanitation	Month	48.00	\$400.00	\$19,200.00
Total			\$581,700.00	
<b>Permits / Misc. Costs</b>				
Item	Unit	Quantity	Cost / Unit	Total
Building Permit	LS	1.00	\$2,500.00	\$2,500.00
Occupancy Permit	LS	1.00	\$2,500.00	\$2,500.00
Trade Permits	LS	1.00	\$2,000.00	\$2,000.00
Progression Photos	Month	48.00	\$750.00	\$36,000.00
Document Production	Month	48.00	\$1,500.00	\$72,000.00
Delivery / Shipping Expenses	Month	48.00	\$750.00	\$36,000.00
Travel Expenses (Staff)	Month	48.00	\$5,000.00	\$240,000.00
Clean Up Expenses	Month	40.00	\$1,500.00	\$60,000.00
Misc. Expenses	Month	48.00	\$2,500.00	\$120,000.00
Total			\$571,000.00	
<b>Total General Conditions Estimate</b>			<b>\$27,671,600.00</b>	