

Steel City High-Rise



TECHNICAL REPORT 2

Senior Thesis

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Project Location: Pittsburgh, PA

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EXECUTIVE SUMMARY

The following technical report relates to the construction of the Steel City High-Rise in Pittsburgh, Pennsylvania. The purpose of this project is to provide new opportunities for retail, businesses, and hotel stays within the heart of the city. The project is expected to help rejuvenate the city as it is estimated to annually bring in \$4 million in tax revenues. In addition to the benefits of the tax revenue, the Steel City High-Rise is predicted to create as many as 750 new jobs. While striving to achieve long-term benefits for the city, the project is on track to achieve a LEED Silver rating as they strive for sustainability.

Within this report is a detailed project schedule that displays the sequencing of the activity breakdown for the entire scope of the project. The schedule is 385 activities with a construction start date of January 9, 2014 and a substantial completion date of October 12, 2015. The 23-month schedule was developed using Primavera P6 scheduling software.

In addition to the schedule, a detailed structural estimate based upon RSMeans data is included. Due to the complexity and lack of repetition within the building, this report will focus on the structural estimate of the office levels rather than the entire structure. This portion of the structural system will include steel beams and columns, tube steel, concrete, metal decking, and welded wire fabric. The detailed estimate will then be compared to the square foot estimate that was included in technical report 1.

Accompanying the detailed structural are assemblies estimates for the Mechanical, Electrical, and Plumbing systems for the entire building, not just the office space. The assembly estimate values were also generated from RSMeans cost data and will also be compared to the values from the square foot estimate. Beyond the comparison of values, there will be an analysis of why the values may differ between the assemblies estimate and the square foot estimate.

Aiding both the assemblies estimate and the structural system estimate is a detailed general conditions estimate. The general conditions costs are primarily taken from Turner Construction's historical data; however, some of the line items required supplemental cost data from RSMeans. The general conditions estimate is based upon preconstruction lasting 10 months, a construction duration of 23 months, 2 months for close-out, and 24 months of total time on-site.

The jobsite is extremely congested with only 5' of egress allotted on three sides of the structure. Due to the congestion and the fast-tracked schedule, careful planning of the site logistics was essential. In this report you will find three site logistic plans that cover the pile cap and grade beam phase after the site was excavated, the site during the structural erection, and the site during the finishes stage of the project.

Lastly, this report contains a detailed LEED evaluation that compares the Penn State approach of the LEED Point System to LEED v4. This project in particular is currently on track to achieve a LEED rating of Silver.

DETAILED PROJECT SCHEDULE

The owners of the project had originally intended for the job to be complete by the end of December 2015; however, Turner Construction decided that a fast-tracked approach with a completion date in October would be possible and beneficial to many of the involved parties. This also gives the steel erectors and various trades an opportunity to meet the December deadline if Pittsburgh were to have a bad winter. The schedule is unique in that each floor is not completed sequentially, but rather the floors are divided according to the occupancy and the sequences are dependent on that building type of a particular floor. Additionally, the erection drawings have further sequenced the steel to complete 3 floors of a given region, prior to beginning the next phase. The schedule itself reflects the unique sequencing and an example is shown below in Figure 1.

Erect & Detail Steel - Level 7	8	26-Sep-14	06-Oct-14
Erect & Detail Steel - Level 8	8	08-Oct-14	20-Oct-14
Erect & Detail Steel - Level 9	8	17-Oct-14	27-Oct-14
Level 3 PT Slab	15	22-Oct-14	11-Nov-14
Temporary Decking at Level 9	5	29-Oct-14	04-Nov-14
Erect & Detail Steel - Level 10	8	29-Oct-14	05-Nov-14
Erect & Detail Steel - Level 11	8	07-Nov-14	20-Nov-14
Level 4 PT Slab	15	12-Nov-14	02-Dec-14

Figure 1: Example of 3 floor sequencing for project schedule

The full schedule is 385 line items and can be found in Appendix A. While much of the structural erection plan is repetitive, the components themselves are not. For this reason, the project isn't necessarily phased because there are too many unique circumstances and overlapping trades. One of the biggest constructability issues associated with the project was being able to keep the various trades staffed and working, while maintaining the schedule, ensuring the safety, and not over-congesting the site or a particular area at any given time. Additionally, the schedule shows that much of the steel erection for upper levels of the building will continue throughout the winter months. This could potentially cause some issues and delays down the road because Pittsburgh weather conditions in the winter are not typically ideal or safe for the erectors. This is why the previously mentioned fast-track schedule is a huge benefit to the team.

While the project is set to be completed in October of 2015, the Owner is still not anticipating occupancy until early January on the off chance that the early completion cannot be fulfilled. The hotel and two of the retail spaces are set to be open and operable for January of 2016. The two retail spaces will be two well-known restaurants on the ground floor: Burgatory and The Roost. Those retail spaces will be finished independent of the schedule for the rest of the structure as these tenants have their own teams that will be completing the interior work. Similarly, the office spaces are currently being negotiated with future tenants and are currently contracted to be core and shell at the completion date in October. There is an opportunity for the offices to begin their outfits sooner; however, they will be under a different contract and schedule than the rest of the structure.

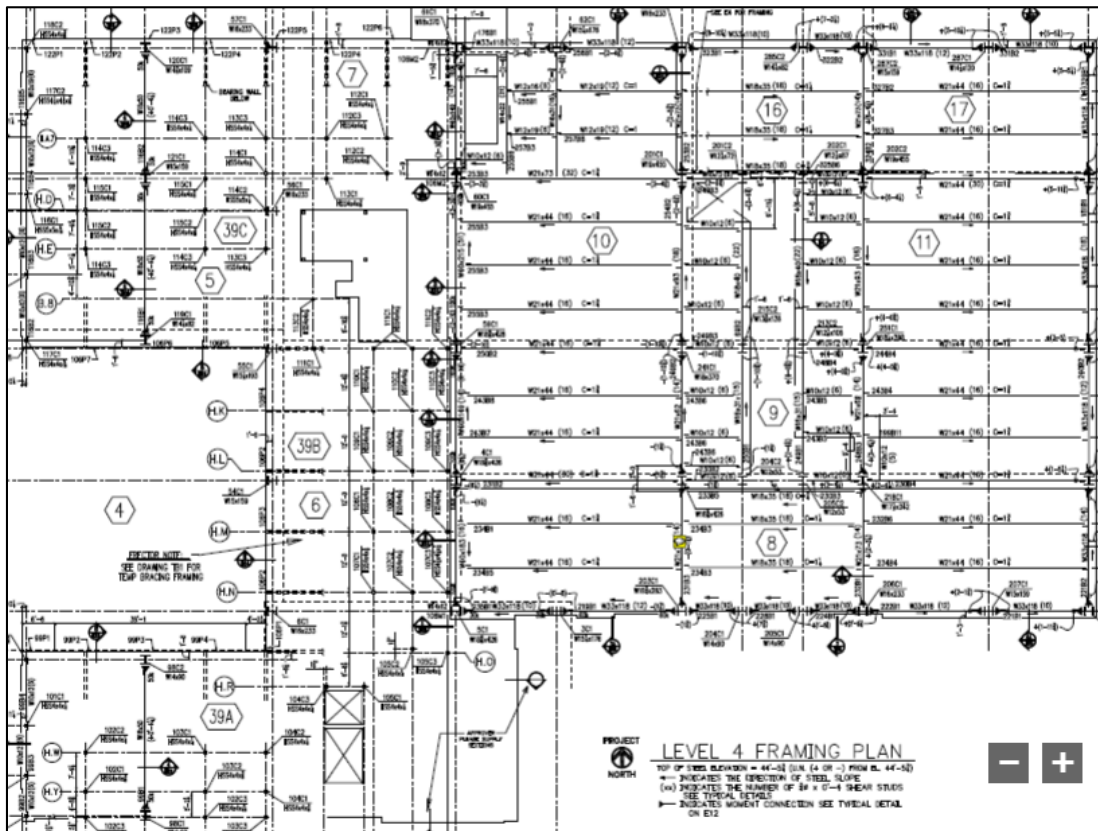
DETAILED STRUCTURAL ESTIMATE

The cost for the detailed structural system are very similar to what was forecasted in the square foot estimate. Figure 2 below shows that the total Square Foot cost for the office portion of the building would be \$28,250,000. When analyzing the breakdown of the various systems in the square foot estimate, the structural superstructure generally accounts for 9.4% of the total cost. This would mean that the structural package for the square foot estimate would amount to \$2,655,406. When compared to the \$2,561,248 (Appendix B) that I estimated based upon the drawings that is only 3.5% lower than the square foot estimate. The differences in cost could be a matter of the square foot estimate not accounting for the unique sequencing and the square foot estimate doesn't account for the fact that the office space starts on level 13 rather than on grade. The following page contains the detailed structural estimate (based upon RSMeans data) accompanied by an example of how the totals were calculated.

Building Parameters	
Model:	Office, 11-20 Story with Double Glazed Heat Absorbing Tinted Plate Glass Panels / Steel Frame
Location:	PITTSBURGH, PA
Stories (Ea.):	11
Story Height:	10
Floor Area:	260,000
Basement:	No
Additive Cost:	\$0.00
Cost per S.F.:	\$108.65
Building Cost	\$28,250,000.00



Figure 2: Office Space Square Foot Estimate



MECHANICAL, ELECTRICAL, AND PLUMBING ASSEMBLY ESTIMATES

The cost for the MEP assemblies estimate system totals to be \$8,240,826.48. The break down results in a mechanical system total of \$3,054,762.78, an electrical system total of \$3,003,254.20, a plumbing system total of \$1,905,913.50, and an equipment total of \$276,896.00. The mechanical package from Scalise Industries is approximately \$10,000,000. The \$1,795,173.52 difference between the two can be explained in many ways. One potential difference is due to the fact that this is a rough assemblies' estimate that does not account for specific manufacturers, products, or take-offs. Additionally, because Scalise is a separate prime contractor, they have their own fees and general conditions associated with a lot of their work. Additionally, much of the lighting within the electrical systems is LED lighting and LED lighting is not covered in RSMeans Assemblies. I made the simplification that LEDs would be about 3 times the average fluorescent and incandescent fixture pricing for materials and installation.

MEP Estimate Breakdown	
Mechanical System	\$3,054,762.78
Electrical System	\$3,003,254.20
Plumbing System	\$1,905,913.50
MEP Equipment	\$276,896.00
TOTAL MEP System	\$8,240,826.48

Figure 4: MEP Cost Breakdown

GENERAL CONDITIONS ESTIMATE

The general conditions estimate for this project is unique in that the temporary utilities are not contracted under Turner Construction. The temporary utilities are contracted under another prime contractor, Scalise Industries, who is in charge of the MEP scope of the project. Otherwise the general conditions estimate includes the typical scope for signage, staffing, job offices, safety, taxes, etc etc. I found the total cost of the general conditions to be \$4,235,621 based upon the historical data for Turner Construction Company. This would mean that the general conditions amounts to about 6% of the total cost of construction, which is lower than the generally accepted 10%. This estimate can be found in the attached Appendix D.

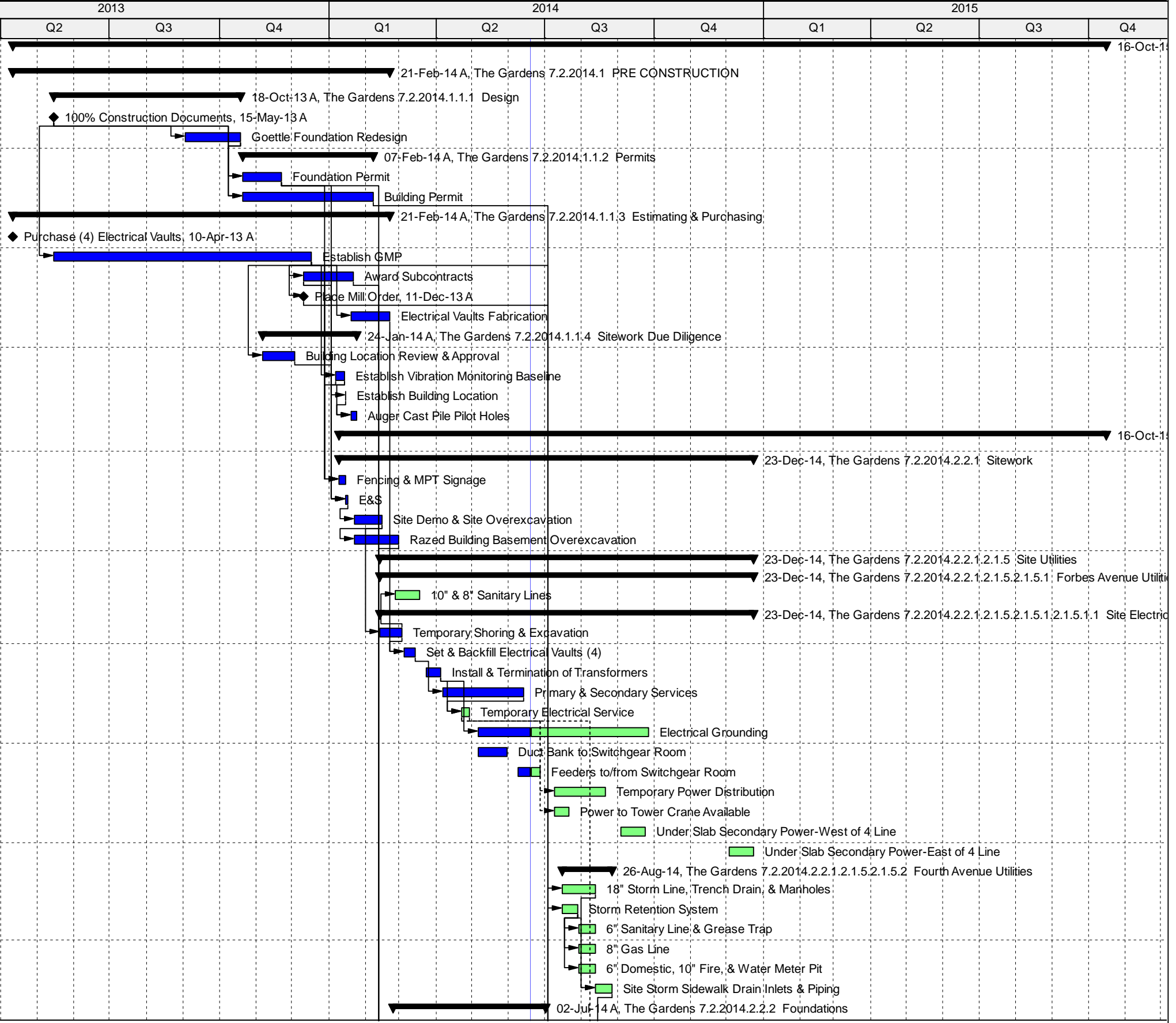
SITE LOGISTICS

As previously mentioned, the site is relatively congested from the moment that the foundations begin, and continues to become more congested as the project progresses due to the limitations of the footprint. In Appendix E, Figure E.1 shows the site during the grade beam and pile cap construction. At this point there are no large permanent pieces of equipment on site, but rather truck deliveries with the reinforcing and concrete as the work progresses. As the progress progresses, Figure E.2 shows the site during the steel erection phase with the introduction of a material hoist and tower crane, as well as routes to maneuver through the building and site. Figure E.3 then shows the site during the finishes, where much of the activity on site is now within the site and the tower crane has been removed. The material hoist will remain through the finishes of the building in order to aid in transporting necessary materials throughout construction.

LEED

The Steel City High-Rise is currently set to achieve a LEED Silver rating. Attached at the end of this document is a breakdown of the LEEDv4 project checklist. In this checklist, I have broken down the points into points that are anticipated to be earned, points that are being attempted, and points that are unattended. I am comparing those LEED requirements and points to The Pennsylvania State University LEED Rating System. Penn State has broken down all of the categories and subsections into what items are mandatory or not pursued, as well as other items that either require minimal effort or significant effort to achieve. For the most part The Pennsylvania State University standards complied well with what the project specifications and LEED plan are striving for; however, there are three items (outdoor air delivery monitoring, indoor chemical and pollutant source control, and optimize energy performance) that Penn State deems mandatory and the project does not anticipate meeting. Aside from those differences, my LEED analysis shows that the project is anticipated to earn 54 points classifying it as a LEED Silver building.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
The Gardens 7.2.2014 The					
	The Gardens 7.2.2014.1 Pf	218	10-Apr-13 A	21-Feb-14 A	0
	The Gardens 7.2.2014.1.1.1 De	113	15-May-13	18-Oct-13 A	
	3 100% Construction Documents	0	15-May-13		
	4 Goettle Foundation Redesign	35	02-Sep-13 A	18-Oct-13 A	
	The Gardens 7.2.2014.1.1.2 Pe	80	21-Oct-13 A	07-Feb-14 A	
	6 Foundation Permit	25	21-Oct-13 A	22-Nov-13 A	
	7 Building Permit	80	21-Oct-13 A	07-Feb-14 A	
	The Gardens 7.2.2014.1.1.3 Es	205	10-Apr-13 A	21-Feb-14 A	
	9 Purchase (4) Electrical Vaults	0	10-Apr-13 A		
	Establish GMP	155	15-May-13	17-Dec-13 A	
	Award Subcontracts	30	11-Dec-13 A	21-Jan-14 A	
	Place Mill Order	0	11-Dec-13 A		
	Electrical Vaults Fabrication	30	20-Jan-14 A	21-Feb-14 A	
	The Gardens 7.2.2014.1.1.4 Sit	53	06-Nov-13 A	24-Jan-14 A	
	Building Location Review & Appr	20	06-Nov-13 A	03-Dec-13 A	
	Establish Vibration Monitoring E	5	07-Jan-14 A	14-Jan-14 A	
	Establish Building Location	2	15-Jan-14 A	15-Jan-14 A	
	Auger Cast Pile Pilot Holes	5	20-Jan-14 A	24-Jan-14 A	
	The Gardens 7.2.2014.2 C	465	09-Jan-14 A	16-Oct-15	0
	The Gardens 7.2.2014.2.2.1 Sit	252	09-Jan-14 A	23-Dec-14	0
	Fencing & MPT Signage	10	09-Jan-14 A	15-Jan-14 A	
	E&S	5	15-Jan-14 A	16-Jan-14 A	
	Site Demo & Site Overexcavat	15	22-Jan-14 A	14-Feb-14 A	
	Razed Building Basement Ove	15	22-Jan-14 A	28-Feb-14 A	
	The Gardens 7.2.2014.2.2.1.2.1	227	13-Feb-14 A	23-Dec-14	0
	The Gardens 7.2.2014.2.2.1.5	227	13-Feb-14 A	23-Dec-14	0
	10" & 8" Sanitary Lines	15	26-Feb-14	18-Mar-14	
	The Gardens 7.2.2014.2.2	227	13-Feb-14 A	23-Dec-14	0
	Temporary Shoring & Excavati	17	13-Feb-14 A	03-Mar-14 A	
	Set & Backfill Electrical Vaults (10	05-Mar-14 A	14-Mar-14 A	
	Install & Termination of Transfo	10	24-Mar-14 A	04-Apr-14 A	
	Primary & Secondary Services	15	07-Apr-14 A	13-Jun-14 A	
	Temporary Electrical Service	5	22-Apr-14	29-Apr-14*	
	Electrical Grounding	104	06-May-14	26-Sep-14	
	Duct Bank to Switchgear Room	19	06-May-14	30-May-14	
	Feeders to/from Switchgear R	15	09-Jun-14 A	27-Jun-14	
	Temporary Power Distribution	32	09-Jul-14	21-Aug-14	
	Power to Tower Crane Availabl	9	09-Jul-14	21-Jul-14	
	Under Slab Secondary Power-	15	03-Sep-14*	23-Sep-14	
	Under Slab Secondary Power-l	15	03-Dec-14*	23-Dec-14	
	The Gardens 7.2.2014.2.2.1.5.2	30	16-Jul-14	26-Aug-14	0
	18" Storm Line, Trench Drain, &	20	16-Jul-14	12-Aug-14	
	Storm Retention System	10	16-Jul-14	29-Jul-14	
	6" Sanitary Line & Grease Trap	10	30-Jul-14	12-Aug-14	
	8" Gas Line	10	30-Jul-14	12-Aug-14	
	6" Domestic, 10" Fire, & Water	10	30-Jul-14	12-Aug-14	
	Site Storm Sidewalk Drain Inlet	10	13-Aug-14	26-Aug-14	
	The Gardens 7.2.2014.2.2.2 Fo	102	24-Feb-14 A	02-Jul-14 A	



█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone
█ Actual Work
 █ Critical Remaining Work
 ▶ summary

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2013												2014			2015					
						Q2			Q3			Q4			Q1			Q2			Q3			Q4		
						1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
The Gardens 7.2.2014.2.2.7.:	248	05-Nov-14	16-Oct-15	0																						
The Gardens 7.2.2014.2.2.7.:	221	28-Nov-14	02-Oct-15	0																						
The Gardens 7.2.2014.2.2.7.:	204	23-Dec-14	02-Oct-15	0																						
The Gardens 7.2.2014.2.2.7.:	177	15-Jan-15	18-Sep-15	0																						
The Gardens 7.2.2014.2.2.7.:	160	09-Feb-15	18-Sep-15	0																						
The Gardens 7.2.2014.2.2.7.:	133	04-Mar-15	04-Sep-15	0																						

█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone
█ Actual Work
 █ Critical Remaining Work
 ▼ summary

Line Number	Description	# of Pieces	Quantity	Unit	Crew	Material Unit Cost	Material Cost	Labor Unit Cost	Labor Cost	Equipment Unit Cost	Equipment Cost	Total Cost
Beams (Levels 13-19)												
Office Level Per 1 Floor (typical for office region of floors 12-18)												
051223754300	W21X50	1	26	LF	E-2	69	\$1,794.00	3.67	\$95.42	1.52	\$39.52	\$1,928.94
		1	32.6	LF	E-2	69	\$2,249.40	3.67	\$119.64	1.52	\$49.55	\$2,418.59
		1	25.6	LF	E-2	69	\$1,766.40	3.67	\$93.95	1.52	\$38.91	\$1,899.26
		1	26.1	LF	E-2	69	\$1,800.90	3.67	\$95.79	1.52	\$39.67	\$1,936.36
		2	38.25	LF	E-2	69	\$2,639.25	3.67	\$140.38	1.52	\$58.14	\$5,675.54
051223756100	W30X90	4	20	LF	E-2	136	\$2,720.00	3.25	\$65.00	1.35	\$27.00	\$11,248.00
		4	25	LF	E-2	136	\$3,400.00	3.25	\$81.25	1.35	\$33.75	\$14,060.00
		4	12	LF	E-2	136	\$1,632.00	3.25	\$39.00	1.35	\$16.20	\$6,748.80
		1	24	LF	E-2	136	\$3,264.00	3.25	\$78.00	1.35	\$32.40	\$3,374.40
		4	26	LF	E-2	136	\$3,536.00	3.25	\$84.50	1.35	\$35.10	\$14,622.40
		2	26.1	LF	E-2	136	\$3,549.60	3.25	\$84.83	1.35	\$35.24	\$7,339.32
		2	32.1	LF	E-2	136	\$4,365.60	3.25	\$104.33	1.35	\$43.34	\$9,026.52
051223753300	W18X35	12	38.25	LF	E-2	48	\$1,836.00	4.07	\$155.68	1.69	\$64.64	\$24,675.84
		4	36	LF	E-2	48	\$1,728.00	5.07	\$182.52	2.69	\$96.84	\$8,029.44
051223758494	W40X149	2	26	LF	E-2	247.2	\$6,427.20	4.008	\$104.21	1.656	\$43.06	\$13,148.93
		1	38.25	LF	E-2	247.2	\$9,455.40	4.008	\$153.31	1.656	\$63.34	\$9,672.05
		1	26.1	LF	E-2	267.8	\$6,989.58	4.342	\$113.33	1.794	\$46.82	\$7,149.73
051223754100	W21X44	24	45	LF	E-2	60.5	\$2,722.50	3.67	\$165.15	1.52	\$68.40	\$70,945.20
		1	36	LF	E-2	61.5	\$2,214.00	4.67	\$168.12	2.52	\$90.72	\$2,472.84
051223750600	W10X12	1	8.5	LF	E-2	16.5	\$140.25	4.5	\$38.25	2.49	\$21.17	\$199.67
		11	12	LF	E-2	17.5	\$210.00	5.5	\$66.00	3.49	\$41.88	\$3,496.68
051223754900	W24X55	2	36	LF	E-2	75.5	\$2,718.00	3.52	\$126.72	1.46	\$52.56	\$5,794.56
		1	26.1	LF	E-2	76.5	\$1,996.65	4.52	\$117.97	2.46	\$64.21	\$2,178.83
051223752700	W16x26	2	24	LF	E-2	36	\$864.00	2.7	\$64.80	1.5	\$36.00	\$1,929.60
051223751900	W14x22	2	25	LF	E-2	36	\$900.00	2.73	\$68.25	1.51	\$37.75	\$2,012.00
051223750300	W8x10	1	9.25	LF	E-2	13.75	\$127.19	4.5	\$41.63	2.49	\$23.03	\$191.85
051223755100	W24x62	2	26	LF	E-2	85.5	\$2,223.00	3.52	\$91.52	1.46	\$37.96	\$4,704.96
		1	38.25	LF	E-2	86.5	\$3,308.63	4.52	\$172.89	2.46	\$94.10	\$3,575.61
051223754550	HSS6x4x1/4	4	12	LF	E-2	340	\$4,080.00	50	\$600.00	27.5	\$330.00	\$20,040.00
Subtotals											\$260,495.91	
Office Total Adjusted for 6 Floors											\$1,562,975.43	
Roof (Level 19)												
051223755500	W24X78	12	45	LF	E-2	105	\$4,725.00	3.52	\$158.40	1.46	\$65.70	\$3,949.20
051223754900	W24X55	3	26	LF	E-2	75.5	\$1,963.00	3.52	\$91.52	1.46	\$37.96	\$614.94
		10	36.6	LF	E-2	76.5	\$2,799.90	4.52	\$165.43	2.46	\$90.04	\$3,319.68
		1	34	LF	E-2	77.5	\$2,635.00	5.52	\$187.68	3.46	\$117.64	\$382.82
		1	36	LF	E-2	78.5	\$2,826.00	6.52	\$234.72	4.46	\$160.56	\$473.78
051223757300	W36X135	3	34	LF	E-2	186	\$6,324.00	3.34	\$113.56	1.38	\$46.92	\$1,039.44
		5	26	LF	E-2	186	\$4,836.00	3.34	\$86.84	1.38	\$35.88	\$1,543.60
		5	26	LF	E-2	136	\$3,536.00	3.25	\$84.50	1.35	\$35.10	\$1,278.00

051223756100	W30X90	1	34	LF	E-2	136	\$4,624.00	3.25	\$110.50	1.35	\$45.90	\$292.40
		2	36	LF	E-2	136	\$4,896.00	3.25	\$117.00	1.35	\$48.60	\$603.20
		4	20	LF	E-2	136	\$2,720.00	3.25	\$65.00	1.35	\$27.00	\$912.00
		5	25	LF	E-2	136	\$3,400.00	3.25	\$81.25	1.35	\$33.75	\$1,255.00
		4	12	LF	E-2	136	\$1,632.00	3.25	\$39.00	1.35	\$16.20	\$764.80
051223750600	W10X12	41	9	LF	E-2	16.5	\$148.50	4.5	\$40.50	2.49	\$22.41	\$3,255.81
		6	12	LF	E-2	16.5	\$198.00	4.5	\$54.00	2.49	\$29.88	\$602.28
051223201000	L6X6X5/16	24	9	LF	E-4	19.15	\$172.35	6.4	\$57.60	0.49	\$4.41	\$1,947.84
051223754300	W21X50	5	36	LF	E-2	69	\$2,484.00	3.67	\$132.12	1.52	\$54.72	\$1,279.20
		2	26	LF	E-2	69	\$1,794.00	3.67	\$95.42	1.52	\$39.52	\$407.88
051223753300	W18X35	1	36	LF	E-2	48	\$1,728.00	4.07	\$146.52	1.69	\$60.84	\$255.36
051223755500	W24X76	4	45	LF	E-2	105	\$4,725.00	3.52	\$158.40	1.46	\$65.70	\$1,316.40
051223755800	W27X84	4	45	LF	E-2	116	\$5,220.00	3.28	\$147.60	1.36	\$61.20	\$1,299.20
051223754100	W21X44	2	45	LF	E-2	60.5	\$2,722.50	3.67	\$165.15	1.52	\$68.40	\$588.10
051223755300	W24X68	2	45	LF	E-2	93.5	\$4,207.50	3.52	\$158.40	1.46	\$65.70	\$635.20
051223751100	W12X14	1	9	LF	E-2	22	\$198.00	3.07	\$27.63	1.7	\$15.30	\$64.93
		3	12	LF	E-2	22	\$264.00	3.07	\$36.84	1.7	\$20.40	\$237.72
051223754550	HSS6x4x1/4	4	12	LF	E-2	340	\$4,080.00	50	\$600.00	27.5	\$330.00	\$5,080.00
051223751100	W12X16	1	10.1	LF	E-2	22	\$222.20	3.07	\$31.01	1.7	\$17.17	\$70.18
										Roof Total		\$33,468.96

Beam Total Office and Roof (Levels 13-19)

\$1,596,444.39

Columns (Levels 13-19)

051223177150	W12X40	2	36.75	LF	E-2	69	\$2,535.75	2.62	\$96.29	1.45	\$53.29	\$5,370.65
		2	40.75	LF	E-2	69	\$2,811.75	2.62	\$106.77	1.45	\$59.09	\$5,955.21
051223177400	W14X120	11	40.75	LF	E-2	165	\$6,723.75	2.82	\$114.92	1.56	\$63.57	\$75,924.59
051223177350	W14X68	3	40.75	LF	E-2	102	\$4,156.50	2.75	\$112.06	1.52	\$61.94	\$12,991.51
051223177350	W14X53	5	44.8	LF	E-2	102	\$4,569.60	2.75	\$123.20	1.52	\$68.10	\$23,804.48
051223177400	W14X109	3	40.75	LF	E-2	165	\$6,723.75	2.82	\$114.92	1.56	\$63.57	\$20,706.71
051223177450	W14X159	6	40.75	LF	E-2	242	\$9,861.50	2.96	\$120.62	1.64	\$66.83	\$60,293.70
051223177350	W14X82	7	40.75	LF	E-2	102	\$4,156.50	2.75	\$112.06	1.52	\$61.94	\$30,313.52
051223177350	W14X74	3	36.75	LF	E-2	102	\$3,748.50	2.75	\$101.06	1.52	\$55.86	\$11,716.27
		2	40.75	LF	E-2	102	\$4,156.50	2.75	\$112.06	1.52	\$61.94	\$8,661.01
		8	44.8	LF	E-2	102	\$4,569.60	2.75	\$123.20	1.52	\$68.10	\$38,087.17
051223177350	W14X61	10	44.8	LF	E-2	102	\$4,569.60	2.75	\$123.20	1.52	\$68.10	\$47,608.96
051223177400	W14X90	6	36.75	LF	E-2	165	\$6,063.75	2.82	\$103.64	1.56	\$57.33	\$37,348.29
										Column Total		\$378,782.04

Column Total Office and Roof (Levels 13-19)

\$378,782.04

Concrete Work (Levels 13-19)

<u>Concrete</u>											
033105250200/1	3500 psi Structural Concrete - LW	1,126.00	C.Y.	C-7	169.15	190,462.90	29.00	32,654.00	12.40	13,962.40	\$237,079.30
<u>Composite Metal Decking</u>											
053113505300	2" deep 20 gauge	112200	SF	E-40	1.83	205,326.00	0.44	49,368.00	0.03	3,366.00	\$258,060.00
<u>Wire Mesh</u>											
032205500300	6 x 6 - W2.9 x W2.9 21 lb. per C.S.F	1122	C.S.F.	2 Rodm	24	26,928.00	27	30,294.00	0	0.00	\$57,222.00
<u>Finishes</u>											
033529300350	Power Screed, bull float, machine float & trowel (ride on)	112200	S.F.	C10	0	0	0.24	26,928.00	0.06	6732	\$33,660.00
										Total	\$586,021.30

Concrete Work (Levels 13-19)

\$586,021.30

Structural System Total (Steel and Concrete)

\$2,561,247.73

MEP Systems											
Line Number	Description	Tons/CFM	Quantity	Unit	Material Unit Cost	Material Cost	Labor Unit Cost	Labor Cost	Equipment Unit Cost	Equipment Cost	Total Cost
Mechanical System											
D30501503960	Hotel Corrdior RTU	30/12000	9040	/SF	3.94	35617.6	4.57	41312.8	0	0	\$ 76,930.40
D30501502640	Office Lobby RTU	4/1600	450	/SF	9.6	4320	11.85	5332.5	0	0	\$ 9,652.50
D30501554000	Kitchen RTU	10/4000	1200	/SF	30	36000	13.75	16500	0	0	\$ 52,500.00
D30501554000	Laundry RTU	7.5/3600	1100	/SF	30	33000	13.75	15125	0	0	\$ 48,125.00
D30501701280	Split Air System Elevator Room	1/24000	200	/SF	2.75	550	2.58	516	0	0	\$ 1,066.00
Cook	Cook Downblast Centrifugal Exhaust Ventilator	NA/3500	28	Ea	1300	36400	87	2436	0	0	\$ 38,836.00
Lowes	Electrical Wall Heater	NA/100	3	Ea	1400	4200	95	285	0	0	\$ 4,485.00
237433107150	Packaged Rooftop Unit with Energy Recovery Wheel	125/ 50000	2	Ea	248500	497000	24800	49600	212500	425000	\$ 971,600.00
D30501501480	Duct for RTU	NA	21120	SF	2.65	55968	1.83	38649.6	0	0	\$ 94,617.60
LG	PTACS	11800	176	Ea	814	143264	332	58432	0	0	\$ 201,696.00
Greenheck	Kitchen Make Up Air Unit	4000	176	Ea	3500	616000	1682	296032	0	0	\$ 912,032.00
Greenheck	Kitchen Hood	5-10000	1	Ea	5750	5750	1324	1324	0	0	\$ 7,074.00
Trane	Air Handling Units - Fitness Center and Hotel Office/Lobby	1600-1700	3	Ea	1400	4200	687	2061	0	0	\$ 6,261.00
Trane	Air Cooled Condensing Units	48000	3	Ea	1137	3411	534	1602	0	0	\$ 5,013.00
D30201021120	Electric Unit Heater and Cabinet	350	16	Ea	5032.5	80520	1760	28160	0	0	\$ 108,680.00
D40103101740	Dry Pipe Sprinkler	NA	12,222	/SF	2.87	35077.14	2.87	35077.14	0	0	\$ 70,154.28
D40203101080	Wet Standpipe Risers 2 1/2"	NA	18	/FL	13545	243810	11235	202230	0	0	\$ 446,040.00
Mechanical Total										\$	3,054,762.78

Line Number	Description	Tons/CFM	Quantity	Unit	Material Unit Cost	Material Cost	Labor Unit Cost	Labor Cost	Equipment Unit Cost	Equipment Cost	Total Cost
Plumbing System											
D20103101840	1.6 GPF wall hung water closets	NA	220	Ea	1575	346500	740	162800	0	0	\$ 509,300.00
D20103102160	1.6 GPF wall hung water closets ADA height	NA	15	Ea	880	13200	820	12300	0	0	\$ 25,500.00
D20103102000	1.0 GPF wall hung urinals	NA	13	Ea	620	8060	825	10725	0	0	\$ 18,785.00
D20103102040	Wall hung lavs with ADA lever faucets	NA	230	Ea	960	220800	815	187450	0	0	\$ 408,250.00
D20105102040	Cast Iron Tub	NA	54	Ea	3525	190350	920	49680	0	0	\$ 240,030.00
D20107101960	Shower Drain Pan	NA	145	Ea	117	16965	320	46400	0	0	\$ 63,365.00
D20102101880	Wall hung China Lav	NA	4	Ea	820	3280	840	3360	0	0	\$ 6,640.00
D20103102240	Floor drain with trap primer	NA	12	Ea	265	3180	695	8340	0	0	\$ 11,520.00
D20104404260	24x24 mop basin	NA	7	Ea	2725	19075	1050	7350	0	0	\$ 26,425.00
D20108101920	ADA hi/lo electric water cooler	NA	8	Ea	1550	12400	485	3880	0	0	\$ 16,280.00
221123132030	Domestic Water Pressure Boosters 1	NA	2	Ea	56500	113000	2575	5150	0	0	\$ 118,150.00
221123132020	Domestic Water Pressure Boosters 2	NA	3	Ea	38900	116700	1850	5550	0	0	\$ 122,250.00
221123132020	Domestic Water Pressure Boosters 3	NA	3	Ea	38900	116700	1850	5550	0	0	\$ 122,250.00
D20202502260	Gas Fired Water Heater	NA	7	Ea	25000	175000	3975	27825	0	0	\$ 202,825.00
D20202401820	Electric Water Heater	NA	1	Ea	5375	5375	1200	1200	0	0	\$ 6,575.00
B&G	Hot Water Recirculating Pumps	NA	3	Ea	2400	7200	189.5	568.5	0	0	\$ 7,768.50
Plumbing Total										\$	1,905,913.50

Line Number	Description	Tons/CFM	Quantity	Unit	Material Unit Cost	Material Cost	Labor Unit Cost	Labor Cost	Equipment Unit Cost	Equipment Cost	Total Cost
Electrical System											
D5010250	100 A Panel 277/480V	NA	29	Ea	5125	148625	4925	142825	0	0	\$ 291,450.00
	225 A Panel 277/480V	NA	10	Ea	10900	109000	7800	78000	0	0	\$ 187,000.00
	400 A Panel 277/480V	NA	23	Ea	21700	499100	16000	368000	0	0	\$ 867,100.00
	1600 A Switchgear	NA	2	Ea	33500	67000	8700	17400	0	0	\$ 84,400.00
	2000 A Switchgear	NA	3	Ea	41000	123000	9600	28800	0	0	\$ 151,800.00
D50201100200	Office Receptacles	NA	155000	SF	0.39	60450	1.43	221650	0	0	\$ 282,100.00
D50201300280	Ground Level Receptacles	NA	23000	SF	0.44	10120	1.65	37950	0	0	\$ 48,070.00
D50201300360	Hotel Receptacles	NA	117000	SF	0.51	59670	1.96	229320	0	0	\$ 288,990.00
D50201300200	2nd Floor Receptacles	NA	49000	SF	0.39	19110	1.43	70070	0	0	\$ 89,180.00
D50201300240	Ground Level Switches	NA	23000	SF	0.06	1380	0.26	5980	0	0	\$ 7,360.00
D50201300360	Hotel Switches	NA	117000	SF	0.26	30420	0.99	115830	0	0	\$ 146,250.00
D50201300200	2nd Floor Switches	NA	49000	SF	0.06	2940	0.23	11270	0	0	\$ 14,210.00
D50201300200	Office Switches	NA	155000	SF	0.06	9300	0.23	35650	0	0	\$ 44,950.00
D50202141120	Floodlight LED	NA	30	SF	48.9	1467	63	1890	0	0	\$ 3,357.00
D50202140640	Downlight LED	NA	20	/400 SF	38.85	777	76.5	1530	0	0	\$ 2,307.00
D50202180200	Flourescent Wraparound	NA	1000	/1000 SF	1.54	1540	1.14	1140	0	0	\$ 2,680.00
D50202180200	Flourescent Elevator Light	NA	6	/1000 SF	3	18	4.53	27.18	0	0	\$ 45.18
D50202180200	LED Exit Light	NA	18	/1000 SF	8.94	160.92	13.44	241.92	0	0	\$ 402.84
D50202081240	Flourescent Recessed	NA	22	/400 SF	14.4	316.8	30.75	676.5	0	0	\$ 993.30
D50202360920	LED Garage Stem/Surface Lights	NA	117	/1800 SF	12.81	1498.77	17.85	2088.45	0	0	\$ 3,587.22
D50202180200	Flourescent Striplights	NA	32	/1000 SF	1.54	49.28	1.14	36.48	0	0	\$ 85.76
D50202140640	Recessed LED Downlight	NA	10	/400 SF	38.85	388.5	76.5	765	0	0	\$ 1,153.50
D50202140400	Recessed LED Linear	NA	8	/400 SF	38.85	310.8	76.5	612	0	0	\$ 922.80
D50202140640	LED Downlight	NA	56	/400 SF	38.85	2175.6	76.5	4284	0	0	\$ 6,459.60
D50102300520	1600A Feeder Wire	NA	1150	LF	238	273700	178	204700	0	0	\$ 478,400.00
										Total Electrical	\$ 3,003,254.20

Line Number	Description	Tons/CFM	Quantity	Unit	Material Unit Cost	Material Cost	Labor Unit Cost	Labor Cost	Equipment Unit Cost	Equipment Cost	Total Cost
MEP Equipment											
E10903500210	Range, restaurant type, hood included		2	Ea	42000	84000	1250	2500	0	0	\$ 86,500.00
E10903500130	Commercial Dish Washer automatic		1	Ea	34200	34200	4050	4050	0	0	\$ 38,250.00
E10903600110	Refridgerators, walk-in		1	Ea	174	174	20.5	20.5	0	0	\$ 194.50
E10903500210	Reach in cooler		5	Ea	3900	19500	209	1045	0	0	\$ 20,545.00
E10903502325	Stainless Steel shelving		9	Ea	2150	19350	75.5	679.5	0	0	\$ 20,029.50
E10903500170	Fryer		2	Ea	2650	5300	250	500	0	0	\$ 5,800.00
E10903501005	Randge induction cooker		4	Ea	2025	8100	272	1088	0	0	\$ 9,188.00
E10105100300	Glass Rack Dolly		2	Ea	14300	28600	425	850	0	0	\$ 29,450.00
E10105100240	Tables (flat, food prep, equipment stands, etc)		7	Ea	1500	10500	226	1582	0	0	\$ 12,082.00
E10903600160	Heat Lamp		2	Ea	724	1448	0	0	0	0	\$ 1,448.00
E10904100200	Disposer/Slicer/Processor		7	Ea	239	1673	133	931	0	0	\$ 2,604.00
E20202200330	Countertops - stainless steel		30	LF	1665	49950	28.5	855	0	0	\$ 50,805.00
										MEP Equipment Total	\$ 276,896.00

MEP System Total								\$8,240,826.48			
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Section	Conditions	Description	Unit	Duration	Amount	Other Cost	Material Cost	Labor Cost	Equipment Cost	Total Costs Per Amount	Total Cost	RS Means	RS Means #
Job Organization:	Superintendence	Turner Data (PM, Super, Hotel Super, Exterior Wall Super, Field Engineer, Intern)	/month	24	1	0	0	54,565	0	54565	\$1,309,560.00	-	-
	Preconstruction Staff	Turner Data (Operations Manager, PE, PM, Purchasing Manager and Agents, Estimators)	/month	24	1	0	0	11,743	0	11,743	\$281,832.00	-	-
	Engineering	Turner Data (Sr Engineer, Assistant Engineer, BIM Engineer)	/month	24	1	0	0	18,252	0	18,252	\$438,048.00	-	-
	Accounting and Direct Purchase Program	Turner Data (Accountant and Cost Engineer)	/month	24	1	0	0	7,658	0	7,658	\$183,792.00	-	-
	Safety	Turner Data (Director and Engineer)	/month	24	1	0	0	1,634	0	1,634	\$39,216.00	-	-
	Purchasing	Turner Data (Manager, Agent, Clerk)	/month	24	1	0	0	1,037	0	1,037	\$24,888.00	-	-
	Management	Turner Data (Operations and Project Executive)	/month	24	1	0	0	11823	0	11823	\$283,752.00	-	-
	IT & Onsite Field Secretary	Turner Data (IT Support, Insurance Coordinator, and Accounting)	/month	24	1	0	0	2668	0	2668	\$64,032.00	-	-
Engineering:	Blueprints and Copier	Renderings, color, matted, 20" x 30", eye level, 1 building, average	/month	24	1	0	2376	0	0	2376	\$57,024.00	01 11 31.75	0050
	Software	Blue Beam and Drop Box	/month	24	1	0	2808	0	0	2808	\$67,392.00	-	-
	Internet and Phone	Sprint plan, Office Phones, and Internet	/month	24	1	0	2252	0	0	2252	\$54,048.00	-	-
Field Offices:	Job Office	First Floor of Adjacent Building	/month	24	-	-	\$3,500	-	-	\$3,500	\$84,000.00	-	-
	Supplies and Tools for Staff		/month	24	-	-	\$421	-	-	\$421	\$10,104	-	-
Travel Expenses:	Living/Travel/Relocation	Turner Stipend	/month	24	1	-	832	0	0	832	\$19,968.00	-	-
Temporary Utilities:	Heat	Included in MEP Prime	/CSF Floor	-	-	-	-	-	-	-	\$0.00	-	-
	Power	Included in MEP Prime	/CSF Floor	-	-	-	-	-	-	-	\$0.00	-	-
	Water	Included in MEP Prime	/month	-	-	-	-	-	-	-	\$0.00	-	-
Winter Protection:	Snow Plowing	covers truck, plow, and labor	/hour	187.5	1	0	0	45	35	80	\$15,000.00	-	-
Signage and Barricades:	Temporary Fences and Signs	Included in Sub	/LF	-	-	-	-	-	-	-	\$0.00	01 56 26	0100
	Temporary Stairs, Ladders & Floors	Included in Sub	-	-	-	-	-	-	-	-	\$0.00	-	-
Photographs:	Imaging	Digital Camera	/job	-	1	0	100	0	0	100	\$100.00	-	-
Clean Up:	Dumpster	On-site Dumpsters	/month	24	2	125	0	0	0	125	\$6,000.00	-	-
Punch List:	Software	Same software used in Engineering Section (already paid for)	-	-	-	-	-	-	-	-	\$0.00	-	-
Insurance:	General Liability	Turner/Sub/SubGuard GLI/CCIP/WC	%	-	65140000	0.0115	0	0	0	0.0115	\$749,110.00	-	-
Safety	First Aid Kit & Refills	First Aid Equipment	each	-	2	400	-	-	-	400	\$800.00	-	-
	Fire Extinguishers	15lb	each	-	15	190	-	-	-	190	\$2,850.00	10 44 16.13	0180
	Safety Signage	Warning Signs to Students and Employees	/SF	-	250	2.5	-	-	-	2.5	\$625.00	01 58 13.50	0020
	Safety Training	Mandatory Safety Training For Employees	/hr	3	120	10	-	-	-	10	\$3,600.00	-	-
	PPE (for staff and visitors)	Protective Equipment	/unit	-	20	80	-	-	-	80	\$1,600.00	-	-
	Drug Testing/Clearances	Drug Testing for all Employees working on Campus	each	-	25	35	-	-	-	35	\$875.00	-	-
Taxes:	City Sales	Included In Each Bid Package	%	-	0	0.02	0	0	0	0.02	\$0.00	-	-
Bonds:	Payment and Performance	Turner Surety	%	-	65140000	0.00825	0	0	0	0.00825	\$537,405.00	-	-
Total:											\$4,235,621.00		

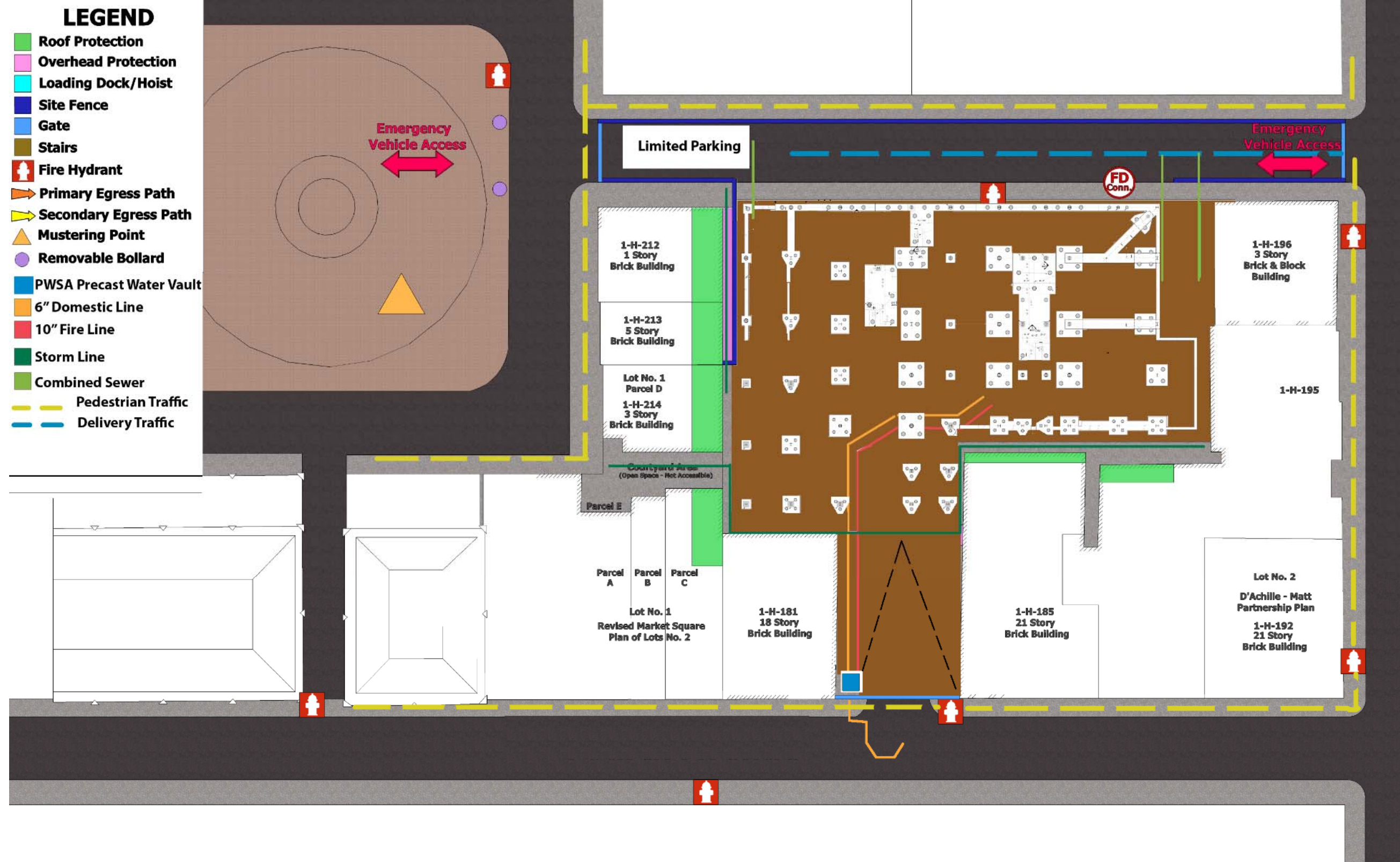


Figure E.1: Pile Cap and Grade Beam Site Logistics Plan

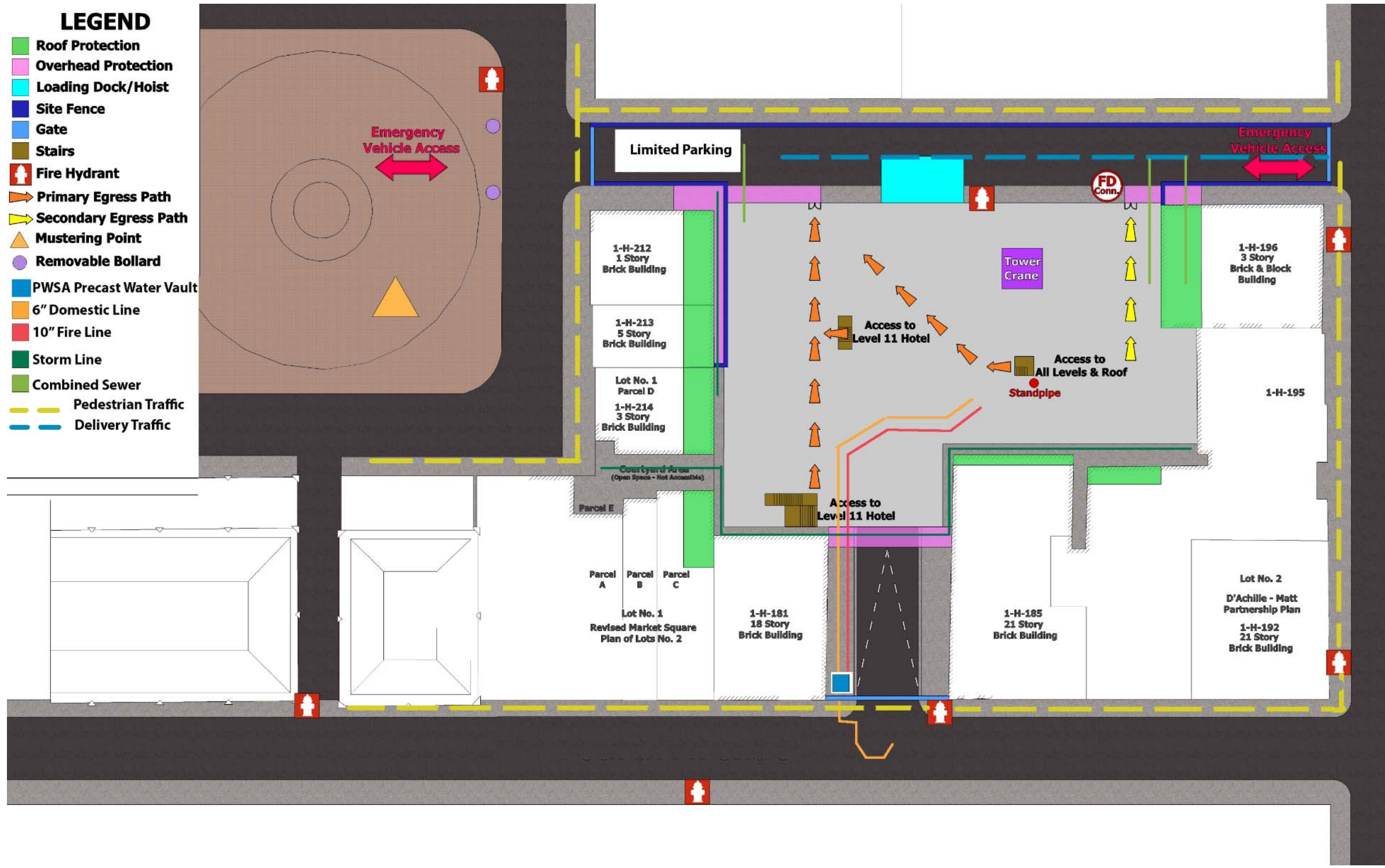


Figure E.2: Steel Erection Site Logistics Plan

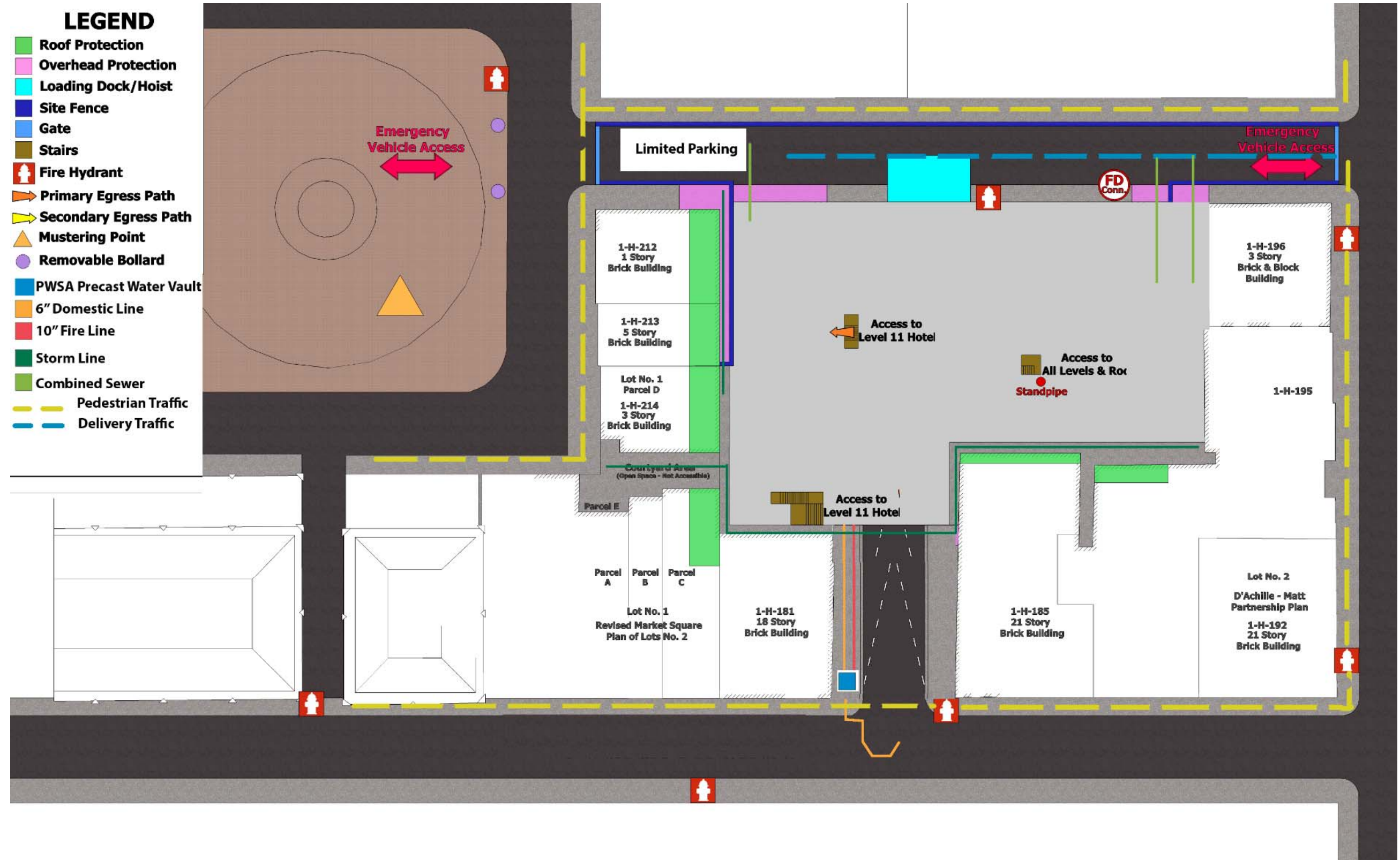


Figure E.3: Finishes Site Logistics Plan

LEEDv4 and PSU LEED Policy for New Construction and Major Renovations

Project Checklist

Sustainable Sites		Possible Points:	26	PSU Rating	Anticipated Points	Attempt Points	Unattempt Points
d/C							
C	Prereq 1	Construction Activity Pollution Prevention					
d	Credit 1	Site Selection		1	Minimal Effort	1	
d	Credit 2	Development Density and Community Connectivity		5	Minimal Effort	5	
d	Credit 3	Brownfield Redevelopment		1	Minimal Effort	1	
d	Credit 4.1	Alternative Transportation—Public Transportation Access		6	Minimal Effort	6	
d	Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms		1	Significant Effort	1	
d	Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles		3	Minimal Effort	3	
d	Credit 4.4	Alternative Transportation—Parking Capacity		2	Minimal Effort		2
C	Credit 5.1	Site Development—Protect or Restore Habitat		1	Minimal Effort		1
d	Credit 5.2	Site Development—Maximize Open Space		1	Significant Effort	1	
d	Credit 6.1	Stormwater Design—Quantity Control		1	Mandatory	1	
d	Credit 6.2	Stormwater Design—Quality Control		1	Significant Effort	1	
C	Credit 7.1	Heat Island Effect—Non-roof		1	Minimal Effort	1	
d	Credit 7.2	Heat Island Effect—Roof		1	Significant Effort	1	
d	Credit 8	Light Pollution Reduction		1	Not Pursued/Significant Effort		1
Water Efficiency		Possible Points:	10	PSU Rating	Anticipated Points	Attempt Points	Unattempt Points
d	Prereq 1	Water Use Reduction—20% Reduction					
d	Credit 1	Water Efficient Landscaping		2 to 4	Minimal Effort		
		Reduce by 50%		2		2	
		No Potable Water Use or Irrigation		4			2
d	Credit 2	Innovative Wastewater Technologies		2	Minimal Effort		2
d	Credit 3	Water Use Reduction		2 to 4			
		Reduce by 30%		2	Significant Effort	2	
		Reduce by 35%		3	Minimal Effort		
		Reduce by 40%		4	Minimal Effort		2

Energy and Atmosphere			Possible Points:	35	PSU Rating	Anticipated Points	Attempt Points	Unattempt Points
C	Prereq 1	Fundamental Commissioning of Building Energy Systems						
d	Prereq 2	Minimum Energy Performance						
d	Prereq 3	Fundamental Refrigerant Management						
d	Credit 1	Optimize Energy Performance		1 to 19				
			Improve by 12% for New Buildings or 8% for Existing Building Renovations	1	Mandatory			
			Improve by 14% for New Buildings or 10% for Existing Building Renovations	2	Mandatory			
			Improve by 16% for New Buildings or 12% for Existing Building Renovations	3	Mandatory			
			Improve by 18% for New Buildings or 14% for Existing Building Renovations	4	Mandatory			
			Improve by 20% for New Buildings or 16% for Existing Building Renovations	5	Mandatory			
			Improve by 22% for New Buildings or 18% for Existing Building Renovations	6	Mandatory			
			Improve by 24% for New Buildings or 20% for Existing Building Renovations	7	Mandatory			
			Improve by 26% for New Buildings or 22% for Existing Building Renovations	8	Mandatory			
			Improve by 28% for New Buildings or 24% for Existing Building Renovations	9	Mandatory			
			Improve by 30% for New Buildings or 26% for Existing Building Renovations	10	Mandatory			
			Improve by 32% for New Buildings or 28% for Existing Building Renovations	11	Minimal Effort			
			Improve by 34% for New Buildings or 30% for Existing Building Renovations	12	Minimal Effort			
			Improve by 36% for New Buildings or 32% for Existing Building Renovations	13	Minimal Effort			
			Improve by 38% for New Buildings or 34% for Existing Building Renovations	14	Minimal Effort			
			Improve by 40% for New Buildings or 36% for Existing Building Renovations	15	Minimal Effort			
			Improve by 42% for New Buildings or 38% for Existing Building Renovations	16	Minimal Effort			
			Improve by 44% for New Buildings or 40% for Existing Building Renovations	17	Minimal Effort			
			Improve by 46% for New Buildings or 42% for Existing Building Renovations	18	Minimal Effort			
			Improve by 48%+ for New Buildings or 44%+ for Existing Building Renovations	19	Minimal Effort			19
d	Credit 2	On-Site Renewable Energy		1 to 7				
			1% Renewable Energy	1	Significant Effort			
			3% Renewable Energy	2	Significant Effort			
			5% Renewable Energy	3	Significant Effort			
			7% Renewable Energy	4	Significant Effort			4
			9% Renewable Energy	5	Significant Effort			
			11% Renewable Energy	6	Significant Effort			
			13% Renewable Energy	7	Significant Effort			
C	Credit 3	Enhanced Commissioning		2	Mandatory	2		
d	Credit 4	Enhanced Refrigerant Management		2	Mandatory	2		
C	Credit 5	Measurement and Verification		3	Not Pursued	1		2
C	Credit 6	Green Power		2	Mandatory	2		

Materials and Resources			Possible Points:	14	PSU Rating	Anticipated Points	Attempt Points	Unattempt Points
d	Prereq 1	Storage and Collection of Recyclables						
c	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof		1 to 3				
		Reuse 55%		1	Minimal Effort			
		Reuse 75%		2	Minimal Effort			
		Reuse 95%		3	Minimal Effort			3
c	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements		1	Minimal Effort			
c	Credit 2	Construction Waste Management		1 to 2	Mandatory			
		50% Recycled or Salvaged		1				
		75% Recycled or Salvaged		2		2		
c	Credit 3	Materials Reuse		1 to 2	Minimal Effort			
		Reuse 5%		1				
		Reuse 10%		2				2
c	Credit 4	Recycled Content		1 to 2				
		10% of Content		1	Mandatory			
		20% of Content		2	Significant Effort	2		
c	Credit 5	Regional Materials		1 to 2	Mandatory			
		10% of Materials		1				
		20% of Materials		2		1	1	
c	Credit 6	Rapidly Renewable Materials		1	Minimal Effort	0		
c	Credit 7	Certified Wood		1	Mandatory	1		
Indoor Environmental Quality			Possible Points:	15	PSU Rating	Anticipated Points	Attempt Points	Unattempt Points
d	Prereq 1	Minimum Indoor Air Quality Performance						
d	Prereq 2	Environmental Tobacco Smoke (ETS) Control						
d	Credit 1	Outdoor Air Delivery Monitoring		1	Mandatory			1
d	Credit 2	Increased Ventilation		1	Not Pursued			1
c	Credit 3.1	Construction IAQ Management Plan—During Construction		1	Mandatory	1		
c	Credit 3.2	Construction IAQ Management Plan—Before Occupancy		1	Mandatory	1		
c	Credit 4.1	Low-Emitting Materials—Adhesives and Sealants		1	Mandatory	1		
c	Credit 4.2	Low-Emitting Materials—Paints and Coatings		1	Mandatory	1		
c	Credit 4.3	Low-Emitting Materials—Flooring Systems		1	Mandatory	1		
c	Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products		1	Mandatory	1		
d	Credit 5	Indoor Chemical and Pollutant Source Control		1	Mandatory			1
d	Credit 6.1	Controllability of Systems—Lighting		1	Mandatory	1		
d	Credit 6.2	Controllability of Systems—Thermal Comfort		1	Significant Effort	1		
d	Credit 7.1	Thermal Comfort—Design		1	Significant Effort	1		

d	Credit 7.2	Thermal Comfort—Verification		1	Mandatory	1		
d	Credit 8.1	Daylight and Views—Daylight		1	Significant Effort			1
d	Credit 8.2	Daylight and Views—Views		1	Minimal Effort		1	
	Innovation and Design Process		Possible Points:	6	PSU Rating	Anticipated Points	Attempt Points	Unattempt Points
d/C	Credit 1.1	Innovation in Design: Specific Title		1	Significant	1		
d/C	Credit 1.2	Innovation in Design: Specific Title		1	Significant	1		
d/C	Credit 1.3	Innovation in Design: Specific Title		1	Significant	1		
d/C	Credit 1.4	Innovation in Design: Specific Title		1	Significant	1		
d/C	Credit 1.5	Innovation in Design: Specific Title		1	Significant		1	
d/C	Credit 2	LEED Accredited Professional		1	Mandatory	1		
	Regional Priority Credits		Possible Points:	4	PSU Rating	Anticipated Points	Attempt Points	Unattempt Points
d/C	Credit 1.1	Regional Priority: Specific Credit		1	Minimal Effort	1		
d/C	Credit 1.2	Regional Priority: Specific Credit		1	Minimal Effort	1		
d/C	Credit 1.3	Regional Priority: Specific Credit		1	Minimal Effort	1		
d/C	Credit 1.4	Regional Priority: Specific Credit		1	Minimal Effort		1	
	Total		Possible Points:	110	PSU Rating	Anticipated Points	Attempt Points	Unattempt Points
	Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110							
						54	7	44
					Achieved Rating	Silver		