

# Technical Report 2

October 28, 2009

**Emily Couric Clinical Cancer Center** 

## Charlottesville, VA

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Construction Management

Dr. Riley



## **EXECUTIVE SUMMARY**

In this technical report, there are a few different topics discussed. A detailed project schedule is provided that was derived from a schedule provided to me over the summer. The schedule is around 190 activities not counting the headings. There are three different site layouts for different stages during construction. The first site plan is for construction during demolition of the existing parking garage. The second site plan is for construction during the steel placement. The third site plan is for the rest of construction after the steel is completed.

A detailed structural system estimate is provided with all of the details in the appendix and a summary discussed in the actual report. The schedule shows that the building will be constructed from East to West and floor by floor. The general conditions estimate is also provided with a discussion about what was included. The final topic discussed in this report was the PACE Roundtable that took place on October 14<sup>th</sup> and 15<sup>th</sup> at the Penn Stater Conference Center Hotel. This section gives an overview of the event and highlights some of the topics I thought were interesting and what I enjoyed about the event.

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### **DETAILED PROJECT SCHEDULE**

A detailed project schedule, derived from a much more detailed schedule last updated in February 2009, is shown below. This schedule expands upon the project schedule summary in the previous technical assignment. This project has been in the planning stages since 2005 and finally broke ground on April 12, 2008. They mobilized the site in June of 2008 as the garage demolition was finishing. They had to demolish an existing parking garage before they could start building the cancer center. The building is separated into three different sections by column lines F-K, C-F, and Z-C for the construction of the exterior walls. The steel is split into 17 sequences and will top out on May 28, 2009. It is being constructed from the east to the west, floor by floor and will be substantially complete on December 29, 2010.



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06         11         Pull Wire         22 days         Fri 12/11/09         Mon           7         Main Electrical Room         280 days         Mon 1/5/09         Thu           8         Main Electrical Room         280 days         Mon 1/5/09         Thu           9         Main Electrical Room         280 days         Mon 1/5/09         Thu           9         Main Electrical Room         280 days         Mon 1/5/09         Thu           10         Main Electrical Room         280 days         Mon 1/1/2/09         Wed           11         May         Ught Fixures         20 days         Thu 1/1/2/09         Wed           12         May         Casework         21 days         Fri 5/7/10         Fri           13         May         Casework         21 days         Mon 5/31/10         Fri           13         May         Mass         20 days         Mon 5/31/10         Fri           13         May         Mass         21 days         Fri 5/7/10         Fri           14         May         Mass         21 days         Fri 5/7/10         Fri           15         Mass         Mon 5/31/10         Mon 5/31/10         Fri           16	9 Mon 1/1/1/0 9 Thu 1/14/10 9 Thu 1/14/10 9 Wed 3/10/10 0 Wed 3/1/10 0 Wed 3/1/10 0 Fri 6/2/10 0 Fri 6/2/10 0 Thu 9/30/10 9 Fri 7/24/09 9 Fri 7/24/09 9 Fri 7/24/09
NT         Main Electrical Room         269 days         Mon 1/5/09         Thu           8         m         Main Electrical Room         269 days         Mon 1/5/09         Thu           0         m         Main Electrical Room         269 days         Mon 1/5/09         Thu           10         m         Finishes         231 days         Thu 1/1/2/09         Thu           11         m         Ught Fixures         20 days         Thu 3/4/10         Ved           12         m         Ught Fixures         20 days         Thu 3/4/10         Fri           13         m         Casework         21 days         Fri 5/7/10         Fri           13         m         Plumbing Fixures         20 days         Mon 6/28/10         Mon           14         m         Moscanie/Sub Basement Mechani         23 days         Thu 5/21/09         Fri           16         m         Moscanie/Sub Basement Mechani         23 days         Thu 5/21/09         Fri           17         m         Moscanie/Sub Basement Mechani         27 days         Thu 5/21/09         Fri           16         m         Moscanie/Sub Basement Mechani         27 days         Thu 5/21/09         Fri           1	9 Thu 1/14/10 9 Thu 1/14/10 9 Wead 3/10/10 0 Wead 3/10/10 0 Fri 6/25/10 0 Thu 9/30/10 0 Thu 9/30/10 9 Fri 7/24/09 9 Fri 7/24/09 9 Fri 7/24/09
88         Tag         Main Electrical Room         269 days         Mon 1/5/09         Thu           90         Enishes         231 days         Thu 11/12/09         Thu           10         Enishes         231 days         Thu 11/12/09         Thu           11         Tag         Partitions/Celings/Soffits/Fi         86 days         Thu 11/12/09         Thu           11         Tag         Light Fixtures         20 days         Thu 31/12/10         Frid           13         Tag         Casework         21 days         Fri 5/7/10         Fri           13         Tag         Casework         20 days         Mon 5/3/10         Fri           14         Tag         Nisc. Finishes         26 days         Mon 6/28/10         Mon           16         Meczanine/Sub Basement Mechani         3 days         Tue 9/28/10         Fri           17         Tag         Meczanine/Sub Basement Mechani         27 days         Thu 5/21/09         Fri           17         Mecchanical Equipment/Sprinkler         36 days         Fri 6/19/09         Fri         Thu           17         Mecchanical Equipment/Sprinkler         26 days         Tue 9/28/10         Fri         Tue         1/10         Thu     <	9 Thu 1/14/10 9 Thu 1/14/10 9 Wed 3/10/10 0 Wed 3/3/110 0 Fri 6/25/10 0 Mon 9/27/10 0 Mon 9/27/10 9 Fri 7/2-009 9 Fri 7/2-009 9 Fri 7/2-009 9 Fri 7/2-009
00         Finishes         231 days         Thu 11/12/09         Thu           10         Im         Partitions/Ceilings/Soffits/Fi         85 days         Thu 11/12/09         Wed           11         Im         Partitions/Ceilings/Soffits/Fi         85 days         Thu 11/12/09         Wed           11         Im         Partitions/Ceilings/Soffits/Fi         85 days         Thu 11/12/09         Wed           11         Im         Plumbing Fixtures         20 days         Mon 5/3/10         Fi           12         Im         Plumbing Fixtures         20 days         Mon 6/3/10         Fi           13         Im         Misc. Finishes         86 days         Mon 6/28/10         Mon           14         Im         Misc. Finishes         3 days         Tue 9/28/10         Thu           16         Mechanical Equipment/Sprinkler         3 days         Tue 9/21/09         Fi           17         Im         Mechanical Equipment/Sprinkler         3 days         Fi 6/19/09         Fi           17         Im         Hectorical Rough-In         26 days         Mon 7/13/09         Fi         Fi           17         Im         Hectorical Conduit Feeder/Equipment/Sprinkler         3 days         Fi 6/19/09<	9 Thu 9/30/10 9 Wed 3/10/10 0 Fei 6/3/110 0 Fri 6/3/110 0 Fri 6/3/110 0 Mon 9/27/10 9 Fri 7/10/09 9 Fri 7/24/09 9 Fri 7/24/09 9 Fri 7/24/09
0         1         Evartitions/Ceilings/Soffits/Fi         85 days         Thu 11/12/09         Ved           1         1         1         1         1         3         3         3         3         4         1         Wed           2         1         1         1         1         3         3         1         3         4         1         3         4         1         4         1         3         4         1	9 Wed 3/10/10 0 Wed 3/31/10 0 Fri 6/4/10 0 Mon 9/27/10 0 Thu 9/30/10 9 Fri 7/24/09 9 Fri 7/24/09 9 Fri 9/4/09
11         11         12         Light Fixtures         20 days         Thu 3/4/10         Wed           12         11         12         11         21 days         Fri 5/7/10         Fri           13         11         Casework         21 days         Fri 5/7/10         Fri           13         11         Casework         21 days         Fri 5/7/10         Fri           14         11         Misc. Finishes         20 days         Mon 5/31/10         Fri           15         11         Misc. Finishes         68 days         Mon 5/21/10         Fri           16         Mezzanine/Sub Basement Mechani         237 days         Tue 9/28/10         Thu           16         Mezzanine/Sub Basement Mechani         237 days         Thu 5/21/09         Fri           17         11         Mezzanics/Sub Basement Mechani         237 days         Thu 5/21/09         Fri           18         11         Mezzanics/Subinkler         37 days         Thu 5/21/09         Fri           19         11         S6 days         Fri 6/19/09         Fri         Fri         Fri           10         11         56 days         7 days         Tru 5/21/09         Fri         Fri  <	0 Wed 3/31/10 0 Fri 6/4/10 0 Fri 6/25/10 0 Mon 9/22/10 0 Thu 9/30/10 9 Fri 7/24/09 9 Fri 7/24/09 9 Fri 9/4/09
12         13         14         15         Casework         21 days         Fri 5/7/10         Fri           13         13         13         13         13         13         14         17 </td <td>0 Fri6/25/10 0 Fri6/25/10 0 Mon 9/27/10 0 Thu 9/30/10 9 Fri7/24/09 9 Fri7/24/09 9 Fri9/4/09</td>	0 Fri6/25/10 0 Fri6/25/10 0 Mon 9/27/10 0 Thu 9/30/10 9 Fri7/24/09 9 Fri7/24/09 9 Fri9/4/09
13         13         14         15         Plumbing Fixtures         20 days         Mon 5/31/10         Fri           14         11	0 Fri 6/25/10 0 Mon 9/27/10 0 Thu 9/30/10 9 Fri 4/16/10 9 Fri 7/24/09 9 Fri 7/24/09
I         Image         Milsc. Finishes         66 days         Mon 6/28/10         Mon           Ib         Image         TAB         TaB         3 days         Tue 9/28/10         Thu           Io         TAB         TAB         3 days         Tue 9/28/10         Thu           Io         Mechanical Equipment/Sprinkler         3 days         Tue 9/28/10         Fri           Io         Mechanical Equipment/Sprinkler         37 days         Thu 5/21/09         Fri           Io         Mechanical Equipment/Sprinkler         36 days         Fri 6/19/09         Fri           Io         Electrical Rough-In         28 days         Fri 6/19/09         Fri         Fri 6/19/09         Fri           Io         Im         Electrical Conduit Feeder/Equipr         27 days         Mon 7/13/09         Tue	0 Mon 9/27/10 0 Thu 9/30/10 9 Fri 4/16/10 9 Fri 7/10/09 9 Fri 7/24/09 9 Fri 9/4/09
Image: second	0 Thu 9/3/1/0 9 Fri 4/16/10 9 Fri 7/10/09 9 Fri 7/24/09 9 Fri 9/4/09
Mezzanine/Sub Basement Mechani         237 days         Thu 5/21/09         Fri           7         Im         Mechanical Equipment/Sprinkler         237 days         Thu 5/21/09         Fri           7         Im         Mechanical Equipment/Sprinkler         237 days         Thu 5/21/09         Fri           8         Im         HVAC Piping         26 days         Fri 6/19/09         Fri           9         Im         Electrical Rough-in         56 days         Fri 6/19/09         Fri           20         Im         Electrical Rough-in         27 days         Mon 7/13/09         Fri	9 Fri 4/16/10 9 Fri 7/10/09 9 Fri 7/24/09 9 Fri 9/4/09
No.         Metadimentou basement meutam         27 days         110 32 1/09         711           11         11         11         37 days         110 32 1/09         711           18         11         27 days         711 45/10/09         711           19         11         56 days         Fri 6/19/09         Fri           10         11         56 days         Fri 6/19/09         Fri           10         11         56 days         71 3/09         Fri           10         11         27 days         Mon 7/13/09         Fri	9 Fri 7/10/09 9 Fri 7/24/09 9 Fri 9/4/09
(1) 111 111 111 111 111 111 111 111	е Fri 7/24/09 9 Fri 9/4/09 9 Fri 9/4/09
I8         III         HVAC Priping         26 days         Fn 6/19/09         Fn           19         III         Electrical Rough-in         56 days         Fn 6/19/09         Fn           20         III         Electrical Conduit Feeder/Equipr         27 days         Mon 7/13/09         Tue	9 Fri 9/4/09 9 Fri 9/4/09
20 The Electrical Kough-In 20 days Fri 6/19/09 Fri 6/19/09 Tue	8 FII 8/4/08
20 1 Electrical Conduit Feeder/Equipr 2/ days Mon 7/13/09 Tue	
	9 Tue 8/18/09
21 Frame Walls 4 days Thu 7/30/09 Tu	9 Tue 8/4/09
22 Im Inspections 1 day Tue 9/8/09 Tu	9 Tue 9/8/09
23 📰 Pull Wire 10 days Thu 11/12/09 Wed 1	9 Wed 11/25/09
24 📷 Hang/Finish Drywall 13 days Thu 11/12/09 Mon 1	9 Mon 11/30/09
25 Tue Pneumatic Tube Equipment 10 days Tue 12/1/09 Mon 1	9 Mon 12/14/09
26 Test Electrical Equipment 3 days Fri 12/4/09 Tue	9 Tue 12/8/09
27 Paint Paint 4 days Tue 12/15/09 Fri 1	9 Fri 12/18/09
28 a days Mon 12/21/09 Wed 1	9 Wed 12/23/09
29 Misc. Finishes 9 days Tue 3/23/10 Fi	0 Fri 4/2/10
30 TAB 10 davs Mon 4/5/10 Fri	0 Fri 4/16/10
31 1st Floor East 161 davs Thu 4/30/09 Thu 1	9 Thu 12/10/09
32 Thu 4/30/09 Wet	9 Wed 8/5/09
33 T 2 Avenue 20 dave Trie 5/12/00 Med	a Wed 6/10/00
33 Imm Electrical Conduit Feeder/Equipring ad adys 1 nu 6/1 1/09 1 nu	a IIII //30/08
Task	Milestone
ject: Detailed Thesis Project Sched	
te: Tue 10/27/09	
Progress	Project Summary

0         0         Image: second seco	0         (a)         (b)         (b)         (c)														
19     2     Duch Bernersken, Kingler     5 app.     100 (5)     5 app.     100 (5) </th <th>13     13     13     13     13     13     13     13       13     14     14     14     14     14     14     14       13     14     14     14     14     14     14     14       13     14     14     14     14     14     14     14       14     14     14     14     14     14     14     14       14     14     14     14     14     14     14     14       14     14     14     14     14     14     14     14       14     14     14     14     14     14     14     14       15     14     14     14     14     14     14     14       15     14     14     14     14     14     14     14       15     14     14     14     14     14     14     14       16     14     14     14     14     14     14     14       16     14     14     14     14     14     14     14       16     14     14     14     14     14     14     14       16     14</th> <th>0 0</th> <th>Task Name</th> <th></th> <th>Duration</th> <th>Start</th> <th>Finish [</th> <th>2005 24 Q1 Q2 Q3 Q4 (</th> <th>2006 21   02   03   04   (</th> <th>2007 Q1 Q2 Q3 Q</th> <th>2008 4 Q1 Q2 Q3</th> <th>2009 Q4 Q1 Q2 0</th> <th>Q3 Q4 Q1 Q</th> <th>2 03 04 C</th> <th>011 21   Q2  </th>	13     13     13     13     13     13     13     13       13     14     14     14     14     14     14     14       13     14     14     14     14     14     14     14       13     14     14     14     14     14     14     14       14     14     14     14     14     14     14     14       14     14     14     14     14     14     14     14       14     14     14     14     14     14     14     14       14     14     14     14     14     14     14     14       15     14     14     14     14     14     14     14       15     14     14     14     14     14     14     14       15     14     14     14     14     14     14     14       16     14     14     14     14     14     14     14       16     14     14     14     14     14     14     14       16     14     14     14     14     14     14     14       16     14	0 0	Task Name		Duration	Start	Finish [	2005 24 Q1 Q2 Q3 Q4 (	2006 21   02   03   04   (	2007 Q1 Q2 Q3 Q	2008 4 Q1 Q2 Q3	2009 Q4 Q1 Q2 0	Q3 Q4 Q1 Q	2 03 04 C	011 21   Q2
(1)         (2) <td>101         2         Production is state         Control         Control</td> <td>136 📰</td> <td>Duct Branches</td> <td>s/Mech. Equip. Shi</td> <td>39 days</td> <td>Tue 6/23/09</td> <td>Fri 8/14/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	101         2         Production is state         Control	136 📰	Duct Branches	s/Mech. Equip. Shi	39 days	Tue 6/23/09	Fri 8/14/09								
Bit is a finite faith         State         Montal Number         Finite N	1000         1000 <th< td=""><td>137 🎫</td><td>Medical Gas R</td><td>kough-in</td><td>5 days</td><td>Thu 8/6/09</td><td>Wed 8/12/09</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	137 🎫	Medical Gas R	kough-in	5 days	Thu 8/6/09	Wed 8/12/09								
100         100 <td>100         100<td>138</td><td>Elevator Shaft</td><td>s</td><td>5 days</td><td>Mon 8/17/09</td><td>Fri 8/21/09</td><td></td><td></td><td></td><td></td><td></td><td>jemą.</td><td></td><td></td></td>	100         100 <td>138</td> <td>Elevator Shaft</td> <td>s</td> <td>5 days</td> <td>Mon 8/17/09</td> <td>Fri 8/21/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>jemą.</td> <td></td> <td></td>	138	Elevator Shaft	s	5 days	Mon 8/17/09	Fri 8/21/09						jemą.		
10.     1     Prencincia     2 days     Markoli M	101         2         Parteciona         2         2         Control         2         Control         Contro <th< td=""><td>139</td><td>Plumbing Roug</td><td>gh-in</td><td>20 days</td><td>Thu 8/6/09</td><td>Wed 9/2/09</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	139	Plumbing Roug	gh-in	20 days	Thu 8/6/09	Wed 9/2/09								
11     1 </td <td>(1)         2         10,100.6         6 day         10,100.6         10,100.0           (1)         2         10,100.6         2 day         10,100.6         10,100.0           (1)         2         10,000.6         10,000.0         10,000.0         10,000.0           (1)         2         10,000.6         10,000.0         10,000.0         10,000.0           (1)         2         10,000.0         10,000.0         10,000.0         10,000.0         10,000.0           (1)         2         10,000.0         10,0</td> <td>140</td> <td>Inspections</td> <td></td> <td>2 days</td> <td>Mon 9/28/09</td> <td>Tue 9/29/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>щ</td> <td></td> <td></td>	(1)         2         10,100.6         6 day         10,100.6         10,100.0           (1)         2         10,100.6         2 day         10,100.6         10,100.0           (1)         2         10,000.6         10,000.0         10,000.0         10,000.0           (1)         2         10,000.6         10,000.0         10,000.0         10,000.0           (1)         2         10,000.0         10,000.0         10,000.0         10,000.0         10,000.0           (1)         2         10,000.0         10,0	140	Inspections		2 days	Mon 9/28/09	Tue 9/29/09						щ		
1         1         1         0	IX         Table Writeri         60 app         Lesson         Multicle	141	Pull Wire		21 days	Thu 11/12/09	Thu 12/10/09								
13. 3     Friedom     6.00     Friedom     6.00     Friedom     Friedom       13. 1     Friedom     8.00     Friedom     8.00     Friedom     Friedom       13. 1     Friedom     2.00     Friedom     8.00     Friedom     Friedom       13. 1     Friedom     2.00     Friedom     10.00     10.00       13. 1     Friedom     2.00     Friedom     10.00       13. 1     Friedom     10.00     10.00     10.00       13. 1     Friedom     10.00     10.00 <t< td=""><td>13         1         Processing         6 application         6 a</td><td>142</td><td>1st Floor West</td><td></td><td>160 days</td><td>Tue 6/2/09</td><td>Mon 1/11/10</td><td></td><td></td><td></td><td></td><td>B</td><td>P</td><td></td><td></td></t<>	13         1         Processing         6 application         6 a	142	1st Floor West		160 days	Tue 6/2/09	Mon 1/11/10					B	P		
14         14<	14         1	143	Frame Walls		69 days	Tue 6/2/09	Fri 9/4/09					U			
13         Electrical Conditive Result (Augulan)         84 style         F(1/200)         Num 602/60           13         Electrical Conditive Result (Augulan)         3 days         F(1/200)         Num 602/60           13         Electrical Conditive Result (Augulan)         3 days         F(1/200)         Num 602/60           14         Electrical Conditive Result (Augulan)         3 days         F(1/200)         Num 602/60           15         Electrical Conditive Result (Augulan)         2 days         F(1/200)         Num 602/60           15         Electrical Conditive Result (Augulan)         2 days         F(1/200)         Num 602/60           16         Electrical Conditive Result (Augulan)         2 days         F(1/200)         Num 701/60           16         Electrical Conditive Result (Augulan)         2 days         F(1/200)         Num 701/60           16         Electrical Conditive Result (Augulan)         2 days         F(1/200)         Num 701/60           16         Electrical Conditive Result (Augulan)         2 days         F(1/200)         Num 701/60           16         Electrical Conditive Result (Augulan)         2 days         Num 7000         Num 7000           16         Electrical Conditive Result (Augulan)         2 days         Num 7000         Num 70	16         1	144	HVAC/Plumbir	ng Piping	46 days	Fri 6/12/09	Fri 8/14/09								
10/10         Description         3 days         Th/7000         Mon0100           10/10         2         Description         3 days         Th/7000         Mon0100           10/10         2         Description         2 days         Weed 02800         Mon114/010           10/10         2         Description         2 days         Weed 02800         Mon114/010           10/10         2         Description         2 days         Mon01700         F101/100           10/10         2         Description         2 days         Mon01700         F101/100           10/10         Description         2 days         Mon01700         F101/100         F101/100           10/10         Description         2 days         Mon01700         F101/100         F101/100           10/10         Description         2 days         Mon01700         F101/100         F101/100           10/10         Description         2 days         Mon017000         F101/100         F101/100           10/10         Description         2 days         Mon017000         F101/100         F101/100           10/10         Description         2 days         Mon017000         F101/100         F101/100           1	10/10         Control France Structure         20 any         Thy 7100         Month 20 and           10/10         10	145	Electrical Rouc	gh-in	98 days	Fri 6/12/09	Tue 10/27/09					U			
13         3         Outflemente, Teine, Sh. (3 days)         16 days         10 days </td <td>1         1         0</td> <td>146</td> <td>Electrical Conc</td> <td>duit Feeder/Equipr</td> <td>33 days</td> <td>Thu 7/16/09</td> <td>Mon 8/31/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td></td>	1         1         0	146	Electrical Conc	duit Feeder/Equipr	33 days	Thu 7/16/09	Mon 8/31/09						0		
(4)         (4) <td>141       The method set fourphine       2 days       Vare 8600       MM 1000       MM 1000</td> <td>147</td> <td>Duct Branches</td> <td>s/Mech. Equip. Shi</td> <td>50 days</td> <td>Fri 7/24/09</td> <td>Thu 10/1/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	141       The method set fourphine       2 days       Vare 8600       MM 1000	147	Duct Branches	s/Mech. Equip. Shi	50 days	Fri 7/24/09	Thu 10/1/09								
13         13         14         13         14         15         14         15         14         15         14         15         14         15         14         15         14         15         14         15         14         15<	10         Temperiori         2.00%         Teres600         Montosis         2.00%         Teres600         Montosis         2.00%         Montosis         Montosis <td>148</td> <td>Medical Gas R</td> <td>Cough-in</td> <td>5 days</td> <td>Tue 9/8/09</td> <td>Mon 9/14/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td>	148	Medical Gas R	Cough-in	5 days	Tue 9/8/09	Mon 9/14/09						-		
10.         11. <td>10.0         Tabletons         2 stays         Ter 2010000         Tu 102500         Tu 102500         Tu 102500           20         L00V         Ed. Stay         Tu 20110         Ed. Stay<!--</td--><td>149</td><td>Plumbing Rouc</td><td>gh-in</td><td>20 days</td><td>Tue 9/8/09</td><td>Mon 10/5/09</td><td></td><td></td><td></td><td></td><td></td><td>. 🕒</td><td></td><td></td></td>	10.0         Tabletons         2 stays         Ter 2010000         Tu 102500         Tu 102500         Tu 102500           20         L00V         Ed. Stay         Tu 20110         Ed. Stay </td <td>149</td> <td>Plumbing Rouc</td> <td>gh-in</td> <td>20 days</td> <td>Tue 9/8/09</td> <td>Mon 10/5/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>. 🕒</td> <td></td> <td></td>	149	Plumbing Rouc	gh-in	20 days	Tue 9/8/09	Mon 10/5/09						. 🕒		
15         Dep Null Mole         2 days         Fit 21109         Mon /1110           15         Loby         No         11110         Fit 20100         Mon /1110           15         Dep No         No         121100         Fit 20100         Mon /1110           15         Dep No         No         121100         Fit 20100         Mon /1110           15         Dep No         Fit 20100         Mon /2100         Fit 20100         Mon /2100           15         Dep No         Fit 20100         Mon /2100         Mon /2100         Mon /2100           16         Dep No         Fit 2000         Mon /2100         Mon /2100         Mon /2100           16         Dep No         Fit 2000         Mon /2100         Mon /2100         Mon /2100           17         Dep No         Mon /2100         Mon /2100         Mon /2100         Mon /2100           16         Dep No         Mon /2100         Mon /2100         Mon /2100         Mon /2100           18         Dep No         Mon /2100         Mon /2100         Mon /2100         Mon /2100           18         Dep No         Mon /2100         Mon /2100         Mon /2100         Mon /2100         Mon /2100         Mon /2100	1         Loby         Lo	150	Inspections		2 days	Wed 10/28/09	Thu 10/29/09								
(5)         100%         (67 days         7 m. 21110         F1 00110           (5)         100%         (67 days         7 m. 21110         F1 00110           (5)         2 molecular         (7 days         7 m. 51 dags         6 m. 51 dags         7 m. 51 dags         6 m. 61 dags </td <td>1000         <th< td=""><td>151 🏢</td><td>Pull Wire</td><td></td><td>22 days</td><td>Fri 12/11/09</td><td>Mon 1/11/10</td><td></td><td></td><td></td><td></td><td></td><td>-01</td><td></td><td></td></th<></td>	1000         1000 <th< td=""><td>151 🏢</td><td>Pull Wire</td><td></td><td>22 days</td><td>Fri 12/11/09</td><td>Mon 1/11/10</td><td></td><td></td><td></td><td></td><td></td><td>-01</td><td></td><td></td></th<>	151 🏢	Pull Wire		22 days	Fri 12/11/09	Mon 1/11/10						-01		
1         2         Cubby         Fund Multiplier	15.         16.         10.         10.01/L         10.01/L <td>152</td> <td>Lobby</td> <td></td> <td>167 days</td> <td>Thu 2/11/10</td> <td>Fri 10/1/10</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ľ</td> <td>P</td> <td></td>	152	Lobby		167 days	Thu 2/11/10	Fri 10/1/10						ľ	P	
All Floor East         Tot days?         Wei Ard00         Month 11/10           161         All Floor East         101 style         104 style         Month 11/10           163         Hv/Ac/Fluming Pling         46 styr?         Wei Ar2000         Mon 11/10           163         Hv/Ac/Fluming Pling         46 styr?         Wei Ar2000         Mon 11/10           163         Hv/Ac/Fluming Pling         46 styr?         Wei Ar2000         Mon 21/00         Floor Floor           163         Hv/Ac/Fluming Pling         26 styr?         Wei Ar2000         Mon 22/00         Floor Floor         Eastron           160         Hv/Ac/Fluming Pling         26 styr?         Wei Ar2000         Mon 22/00         Floor Floor         Eastron           160         Hv/Ac/Fluming Pling         26 styr?         Wei Ar2000         Mon 22/00         Floor Floor         Eastron           161         Hv/Ac/Fluming Pling         26 styr?         Floor Weit         Tot 45 store         Eastron         Eas	Idea         Zal Flore Est         13 days?         Nu 51400         Mon 11110           150         Intervaluation         Entro Valis         13 days?         Nu 51400         Mon 11110           150         Intervaluation         Entro Valis         6 days?         Nu 51700         Mon 11100           150         Intervaluation         Entro Valis         6 days?         Nu 51700         Mon 11100           150         Intervaluation         Entro Valis         6 days?         Nu 51700         Fil 2000           150         Intervaluation         Entro Valis         6 days?         Nu 51700         Fil 2000           151         Intervaluation         Entro Valis         6 days?         Nu 51700         Fil 2000           151         Intervaluation         Edustry?         Nu 51700         Fil 2000         Fil 2000           151         Punching Reagenin         2 days?         Nu 51700         Nu 51700         Fil 2000           151         Punching Reagenin         2 days?         Nu 51700         Nu 51700         Nu 51700           152         Punching Reagenin         2 days?         Nu 51700         Nu 51700         Nu 51700           152         Punching Reagenin         1 days?         Nu 51700<	153	Lobby		167 days	Thu 2/11/10	Fri 10/1/10						U		
1         Hann Wills         Advance         Multicity         Endention         Edition         Multicity         Edition         Fit (100)	150         Term (AC)Punching Pano         66 days?         The 5/1400         Mon 6/1700         Mon 8/1700         Mon	154	2nd Floor East		173 days?	Thu 5/14/09	Mon 1/11/10					ŀ	<b>P</b>		
(6)         (7) <td>150         Imter HAC/Planning Ping         6 days         Num 5500         Num 5500</td> <td>155 📰</td> <td>Frame Walls</td> <td></td> <td>68 days?</td> <td>Thu 5/14/09</td> <td>Mon 8/17/09</td> <td></td> <td></td> <td></td> <td></td> <td>U</td> <td></td> <td></td> <td></td>	150         Imter HAC/Planning Ping         6 days         Num 5500	155 📰	Frame Walls		68 days?	Thu 5/14/09	Mon 8/17/09					U			
15       Telescriste Merch       2 days       The 1109 Fin 1000 Fin 1000 Fin 1000 Fin 1000 Fin 0000 Fin 02700 Fin 2000 Fin 02700	157       Texteral Rugulation       27 days 7 the 61/100 fm 10000         156       Texteral Rugulation       27 days 7 the 61/100 fm 10000         156       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         156       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         156       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         156       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         156       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         156       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         156       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         156       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         157       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         158       Texteral Rugulation       27 days 7 the 61/00 fm 102/100         159       Texteral Rugulation       27 days 7 the 62/00 fm 102/100         151       Texteral Rugulation       27 days 7 the 62/00 fm 102/100         151       Texteral Rugulation       27 days 7 the 62/00 fm 102/100         151       Texteral Rugulation       27 days 7 the 62/00 fm 102/100         151       Texteral Rugulation       27 days 7 the 62/00 fm 102/200	156 📰	HVAC/Plumbir	ng Piping	46 days?	Wed 5/27/09	Wed 7/29/09					U	<u> </u>		
10         10<	156         Technological constraint         Stays (Nor 77000 Fri 22700)           156         Technological constraint         Stays (Nor 7600 Fri 2210)           157         Technological constraint         Stays (Nor 7600 Fri 2210)           158         Promoling Roughin         Stays (Nor 7200 Fri 2210)           158         Promoling Roughin         Stays (Nor 7200 Fri 2210)           158         Promoling Roughin         Stays (Nor 2210)           158         Promoling Roughin         Stays (Nor 2210)           158         Promoling Roughin         Stays (Nor 2210)           159         Promoling Roughin         Stays (Pri 12200)           151         Promoling Roughin         Stays (Pri 12200)           151         Technological Philog         Stays (Pri 12200)           152         Promoling Philog         Stays (Pri 12200)           152         Promoling Philog         Stays (Pri 12200)           152         Promoling Roughin         Stays (Pri 11200)	157 🏢	Electrical Roug	gh-in	87 days?	Thu 6/11/09	Fri 10/9/09					U	Î		
150         Tar         Duct Branches/Mech. Equip. Skin 95 (days?         Non 76000         Fri 82100           161         Tar         Validal (Gas Rouphin)         5 (days?         Tex 8/1000         Mon 3/2400         Fri 8/2800           162         Tar         Pumiling Rouphini         2 (days?         Tex 8/1000         Mon 3/2400         Fri 8/2800           163         Tar         Pumiling Rouphini         2 (days?         Fri 12/1100         Mon 11/170           163         Tar         Pumiling Rouphini         2 (days?         Fri 12/1100         Mon 11/170           163         Tar         France         17 (days?         Tex 8/1500         Fri 8/2800           163         Tar         Fri 2/1100         Mon 11/1700         Mon 11/1700         Mon 11/1700           163         Tar         Fri 2/1000         Mon 2/200         Fri 2/2000         Fri 2/2000           163         Tar         Fri 2/2000         Fri 2/2000         Tex 8/2000         Mon 11/1/200           170         Tar 8/2000         Mon 11/1/200         Tex 8/100         Mon 11/1/200         Mon 11/1/200           171         Tar 8/2000         Mon 11/1/200         Tex 8/100         Mon 11/1/200         Mon 11/1/200           171	1000000000000000000000000000000000000	158	Electrical Conc	duit Feeder/Equipr	52 days?	Wed 6/17/09	Thu 8/27/09					U			
100         100         100         2 days         Ine 8/1000         6.405         Ine 8/1000         Ine 8/11000         Ine 8/11000         Ine 8/11000 <td>16:0         3         Headral Gas Roughin         5 days?         Tue 8/2000         Hon 8/2400         Fee 8/2600         Fee 8/2600</td> <td>159</td> <td>Duct Branches</td> <td>s/Mech. Equip. Shi</td> <td>35 days?</td> <td>Mon 7/6/09</td> <td>Fri 8/21/09</td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td><b>n</b></td> <td></td> <td></td>	16:0         3         Headral Gas Roughin         5 days?         Tue 8/2000         Hon 8/2400         Fee 8/2600	159	Duct Branches	s/Mech. Equip. Shi	35 days?	Mon 7/6/09	Fri 8/21/09					•	<b>n</b>		
[6] (1)       Eventor Shafts       5 days? The 8/1000       Tee 8/1500         [6] (2)       Eventor Shafts       5 days? The 8/1500       Non 1/1/100         [6] (3)       Eventor Shafts       2 days? The 8/1500       Non 1/1/100         [6] (4)       Eventor Shafts       2 days? The 8/1500       Non 1/1/100         [6] (5)       Eventor Shafts       2 days? The 8/1500       Non 1/1/100         [6] (5)       Eventor Shafts       2 days? The 8/1500       Non 1/1/100         [6] (5)       Eventor Shafts       2 days? The 8/1500       Non 1/1/100         [6] (5)       Eventor Shafts       2 days? The 8/1500       Non 1/1/100         [6] (6)       Handrowells       2 days? The 8/1500       Non 1/1/100         [6] (7)       Eventor Shafts       2 days? The 8/1500       Non 1/1/100         [6] (7)       Eventor Shafts       2 days? The 8/1000       Non 1/1/100         [6] (7)       Eventor Shaft       2 days? The 1/1/100       Non 2/1/100         [7] (7)       Eventor Statt       2 days? The 1/1/100       Non 2/1/100         [7] (7)       Eventor Statt       Non 2/1/100       Non 2/1/100         [7] (7)       Eventor Statt       Non 2/1/100       Non 2/1/100         [7] (7)       Eventor Statt <td>161         Enerotion Statis         5 days? Mon 82400         F 82800           163         Enerotion Statis         5 days? Tue 8/1000         Tue 8/1000           163         Enerotion Statis         2 days? Tue 8/1000         Tue 8/1000           163         Enerotion Statis         2 days? Tue 8/1000         Tue 8/1000           164         Enerotion Statis         2 days? Tue 8/1000         Mon 1/1/10           165         Enerotion Statis         10 days? Tue 8/1000         Mon 1/1/10           168         Enerotion Statis         8 days? Tue 8/1000         Mon 1/1/10           168         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 1/1/100         Mon 1/1/100         Mon 1/1/100           171         Medical Gas Roughin         5 days? Tue 1/1/100         Mon 1/1/100         Mon 1/1/100           171</td> <td>160</td> <td>Medical Gas R</td> <td>kough-in</td> <td>5 days?</td> <td>Tue 8/18/09</td> <td>Mon 8/24/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	161         Enerotion Statis         5 days? Mon 82400         F 82800           163         Enerotion Statis         5 days? Tue 8/1000         Tue 8/1000           163         Enerotion Statis         2 days? Tue 8/1000         Tue 8/1000           163         Enerotion Statis         2 days? Tue 8/1000         Tue 8/1000           164         Enerotion Statis         2 days? Tue 8/1000         Mon 1/1/10           165         Enerotion Statis         10 days? Tue 8/1000         Mon 1/1/10           168         Enerotion Statis         8 days? Tue 8/1000         Mon 1/1/10           168         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 8/1000         Mon 1/1/10           169         Electrical conduit         5 days? Tue 1/1/100         Mon 1/1/100         Mon 1/1/100           171         Medical Gas Roughin         5 days? Tue 1/1/100         Mon 1/1/100         Mon 1/1/100           171	160	Medical Gas R	kough-in	5 days?	Tue 8/18/09	Mon 8/24/09								
Image in the State of the State State         The State State State         The State State State         The State	(62         Turbing Rough-In         21 days?         Turb (1012)         Let B (1000)         Turb (1013)         Let B (1013) <thlet (1013)<="" b="" th="">         Let B (1013)</thlet>	161	Elevator Shaft	S	5 days?	Mon 8/24/09	Fri 8/28/09								
13       Tespections       2 days       Man 101/200       Tespections       2 days       Man 101/200         164       Tentworket       170 days       Tee (1600       Man 111/10       Man 111/10         165       Tentworket       170 days       Tee (1600       Man 111/10         166       Tentworket       170 days       Tee (1600       Man 211/100         168       Tentworket       170 days       Tee (1600       Man 211/100         169       Tentworken       170 days       Twe (1600       Man 11/100         169       Tentworken       3 days       Tentworken       Electrical Rough-in       2 days       Tentworken         170       Tentworken       2 days       Tentworken       2 days       Tentworken       Electrical Rough-in         171       Tentworken       2 days       Tentvice       2 days       Tentvice       Tentvice         171       Tentworken       2 days       Tentvice       2 days       Tentvice       Tentvice         171       Tentworken       2 days       Tentvice       Man 22410       Man 22410         171       Tentworken       2 days       Tentvice       Man 22410       Man 22410         171       Tentworken <td>163       The inspections       2 days       fm 1/1/10       m 1/1/100       m 1/1/100</td> <td>162</td> <td>Plumbing Rouc</td> <td>gh-in</td> <td>21 days?</td> <td>Tue 8/18/09</td> <td>Tue 9/15/09</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	163       The inspections       2 days       fm 1/1/10       m 1/1/100	162	Plumbing Rouc	gh-in	21 days?	Tue 8/18/09	Tue 9/15/09								
R4         The Pull Wite         2.2 days?         F n2 (11/10)         Mon 1/1/10         Mon 1/1/1/10         Mon 1/1/1	R5         Pull Wite         2 days7         Fin 201100         Mon 111/10           R5         And Four Weals         100 days7         Ted 201100         Mon 111/10           R6         And Four Weals         6 days7         Ted 6/500         The 8/100           R6         Element Walls         6 days7         Ted 6/2600         Ted 8/200         Ted 8/200           R6         Element Walls         6 days7         Ted 6/2600         Ted 8/200         Ted 8/200           R10         Element Walls         6 days7         Ted 8/200         Ted 8/200         Ted 8/200           R10         Element Walls         6 days7         Ted 8/200         Ted 8/200         Ted 8/200           R11         Element Walls         6 days7         Ted 8/200         Ted 8/200         Ted 8/200           R12         Element Walls         2 days7         Ted 8/200         The 9/2000         Ted 8/200           R12         Element Walls         2 days7         Ted 8/11/100         The 9/2000         Ted 8/2100           R12         Pulmiting Roughtin         2 days7         Ted 8/2100         Mon 8/2210         Mon 8/2210           R13         Doby         2 days7         Tue 8/11/200         Mon 8/2210         Mon 8/2210	163	Inspections		2 days?	Mon 10/12/09	Tue 10/13/09						H		
Bits         Zud Floor West         170 days7         Tue 6/1600         Mon. 28/10           66         Termen Walts         6 days7         Tue 6/1600         Mon. 28/10           67         HMXCP/Inhing Pping         6 days7         Tre 6/1600         Mon. 28/10           68         HXCP/Inhing Pping         6 days7         Tre 6/1600         Lex 1/1000           68         HXCP/Inhing Pping         6 days7         Tre 6/1600         Lex 1/1000           69         HXCP/Inhing Pping         6 days7         Tre 6/1600         Lex 1/1000           710         Electrical Rough-In         2 days7         Tre 1/1/1000         Lex 1/1/1000           713         Electrical Rough-In         2 days7         Tre 1/1/1000         Lex 1/1/1000           713         Electrical Rough-In         2 days7         Tre 1/1/1000         Lex 1/1/1000           717         Pluribing Rough-In         2 days7         Tre 1/1/1/200         Mon 2/2/100           717         Electrical Rough-In         2 days7         Tre 1/1/1/200         Mon 2/2/100           717         Afloor Electrical Rough-In         2 days7         Tre 1/1/1/200         Mon 2/2/100           717         Afloor Electrical Rough-In         2 days7         Tre 6/1/200 <td< td=""><td>166         Dard Floer West         17 days         Tue 6/1609         Mon. 28/10           167         H-Kame Nunder Hame Nunder         66 days         Fie 6/200         Fin 22000         Fin 22000           168         H-Kame Nunder         86 days         Fie 6/200         Fin 22000         Fin 22000           168         H-Kame Nunder         86 days         Fie 6/200         Fin 22000         Fin 22000           169         H-Kame Nunder         86 days         Fie 6/200         Fin 1/1000         Fie 0/1000           170         Hexterial Conduit Feeder/Equip. Sht         74 days         Fie 0/200         Fie 0/2000         Fie 0/2000           171         Homolog Rough-in         5 days         Fie 1/1/1000         Fie 0/2000         Fie 0/2000           171         Homolog Rough-in         5 days         Fie 1/1/100         Fie 0/1000         Fie 0/1000           173         Homolog Rough-in         2 days         Fie 1/1/1/100         Fie 0/1000         Fie 0/1000           174         Homolog Rough-in         2 days         Fie 1/1/1/100         Fie 0/1000         Fie 0/1000           175         Homolog Rough-in         2 days         Fie 1/1/1/100         Fie 0/1000         Fie 0/1000           175         Bo</td><td>164</td><td>Pull Wire</td><td></td><td>22 days?</td><td>Fri 12/11/09</td><td>Mon 1/11/10</td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td></td<>	166         Dard Floer West         17 days         Tue 6/1609         Mon. 28/10           167         H-Kame Nunder Hame Nunder         66 days         Fie 6/200         Fin 22000         Fin 22000           168         H-Kame Nunder         86 days         Fie 6/200         Fin 22000         Fin 22000           168         H-Kame Nunder         86 days         Fie 6/200         Fin 22000         Fin 22000           169         H-Kame Nunder         86 days         Fie 6/200         Fin 1/1000         Fie 0/1000           170         Hexterial Conduit Feeder/Equip. Sht         74 days         Fie 0/200         Fie 0/2000         Fie 0/2000           171         Homolog Rough-in         5 days         Fie 1/1/1000         Fie 0/2000         Fie 0/2000           171         Homolog Rough-in         5 days         Fie 1/1/100         Fie 0/1000         Fie 0/1000           173         Homolog Rough-in         2 days         Fie 1/1/1/100         Fie 0/1000         Fie 0/1000           174         Homolog Rough-in         2 days         Fie 1/1/1/100         Fie 0/1000         Fie 0/1000           175         Homolog Rough-in         2 days         Fie 1/1/1/100         Fie 0/1000         Fie 0/1000           175         Bo	164	Pull Wire		22 days?	Fri 12/11/09	Mon 1/11/10						-		
Image: Frame Wratis         66 days7         7 te 6/16/03         Thu 9/17/03           15         T         HVACIPMINIS         86 days7         16 6/36/30         Fi 8/28/03           168         T         HVACIPMINIS         86 days7         16 6/36/30         Thu 9/17/03           169         T         HVACIPMINIS         86 days7         16 6/36/30         Thu 10/8/03           170         T         Electrical Rough-in         86 days7         16 6/36/30         Thu 10/8/03           171         T         Medical Conduit Freederfcyupi         36 days7         17 9/18/03         Thu 11/1/209           173         T         Multion         20 days7         16 9/18/03         Thu 11/1/209           173         T         Pumbing Rough-in         20 days7         10 6/11/1/109         Thu 11/1/209           173         T         Pumbing Rough-in         20 days7         Tu 6/1/2/109         Thu 11/1/209           174         Duli Wrie         20 days7         Tu 6/2/2/109         Tu 11/1/209         Mon 28/10           175         Hull Wrie         20 days7         Tu 6/2/2/109         Tu 11/1/209         Mon 28/10           177         Station         Hull Wrie         20 days7         Tu 6/2/2/109	16         Frame Walls         68 days?         Tue 6/100         Tue 9/100         File 000	165	2nd Floor West		170 days?	Tue 6/16/09	Mon 2/8/10					B	<b>P</b> 		
International Print         HAAC/Plumbing Piprig         46 days?         Fin 6/2609         Ten 8/2809           170         Image: Strate	Text         HVAC/Plumbing Plong         46 days?         Fin 6/2609         Ten 11/1000           168         Electrical Roughin         46 days?         Fin 6/2609         Tu 11/1000           170         Electrical Conduit Feeder/Equip         3 days?         Fin 9/1300         Tu 9/1300           171         Electrical Conduit Feeder/Equip         3 days?         Fin 9/1300         Tu 9/1300           172         Electrical Conduit Feeder/Equip         3 days?         Fin 9/1300         Tu 9/1300           173         Electrical Conduit Feeder/Equip         2 days?         Fin 11/1200           173         Electrical Conduit Feeder/Equip         2 days?         Fin 11/1200           173         Electrical Conduit Feeder/Equip         2 days?         Fin 11/1200           174         Electrical Conduit Feeder/Equip         2 days?         Fin 11/1200           175         Lubby         20 days?         Tu e 11/1200           176         Lubby         20 days?         Tu e 6/200         Tu 11/1200           177         Staf Four Lubby         2 days?         Tu e 6/200         Tu 11/1200           177         Staf Staf         Tu e 6/200         Tu 11/1200         Tu e 11/1200           176         Lubby         Zo days? </td <td>166</td> <td>Frame Walls</td> <td></td> <td>68 days?</td> <td>Tue 6/16/09</td> <td>Thu 9/17/09</td> <td></td> <td></td> <td></td> <td></td> <td>U</td> <td></td> <td></td> <td></td>	166	Frame Walls		68 days?	Tue 6/16/09	Thu 9/17/09					U			
Image: Image in the contract of the con	Total         Electrical Rough-In         8 days?         Fin 6/200         Uler 11/1004           TO         Electrical Rough-In         5 days?         Fin 9/1300         Thu 9/1300         Thu 9/1300           T1         Electrical Condit Feder/Equip Sht         47 days?         Thi 9/1300         Thu 9/1300           T12         Electrical Condit Feder/Equip Sht         47 days?         Thi 9/1300         Thu 9/1300           T12         Electrical Condit Feder/Equip Sht         5 days?         Fin 9/1800         Thu 10/1800           T12         Electrical Condit Feder/Equip Sht         2 days?         The 1/12/100         Thu 11/12/09           T12         Electrical Condit Feder/Equip Sht         2 days?         The 1/12/100         Mon 2/8/10           T17         Electrical Store         2 days?         The 1/12/100         Mon 2/8/10           T16         Lobby         203 days?         Thu 11/12/09         Mon 2/8/10           T17         3 days?         Thu 11/12/09         Mon 2/8/10         Lue 8/2/10           T17         3 days?         Thu 11/12/09         Mon 2/8/10         Lue 8/2/10           T17         3 days?         Thu 11/12/09         Mon 2/8/10         Lue 8/2/10           T17         3 days?         Thu 8	167	HVAC/Plumbir	gridid Br	46 days?	Fri 6/26/09	Fri 8/28/09						<b>^</b>		
Indext         Indext         Indext         Indext         Indext         Ind	Top     Table     Understandensexmedn. Equip. Snit     47 days     Wead 85009     Thu 10/0609       171     Table     Understandones/medn. Equip. Snit     47 days     File 91/8009     Thu 10/15(09)       173     Table     Neelecinal Conductin Federic Figure     5 days?     File 91/8009     Thu 11/12(09)       173     Table     Nembing Rough-in     2 days?     File 91/8009     Thu 11/12(09)       174     Table     Pull Wire     2 days?     Tue 11/12(09)     Men 8/23/10       175     Duby     2 days?     Tue 11/12(09)     Men 8/23/10       176     Duby     20 days?     Tue 6/2109     Mon 8/23/10       177     Bart     Lobby     20 days?     Tue 6/2109     Mon 8/23/10       178     Table     180 days?     Tue 6/2109     Mon 8/23/10       179     Table     Frame Walls     5 days?     Tue 6/2109       170     Table     180 days?     Tue 6/2109     Mon 28/10       177     Stadys?     Tue 6/2109     Mon 28/10     Tue 8/210       178     Frame Walls     5 days?     Tue 6/2109     Mon 28/10       179     Table     Tue 6/2109     Mon 28/10     Tue 8/210       178     Frame Walls     5 days?     Tue 6/2109     Tue 8/210<	168	Electrical Rouc	gh-in	98 days?	Fri 6/26/09	Tue 11/10/09								
17         11<	10         Heatmat condutreeeencupty         4 days         inu anana         Ine anana           17         Heatmat condutreeeencupty         4 days         in 9/1600         hue 9/2400           17         Heatmat condutreeeencupty         4 days         in 9/1600         hue 9/2400           17         Heatmat condutreeeencupty         2 days         Ned 11/11/0         hu 11/1200           17         Heatmat condutreeeencupty         2 days         Numbring Rough-in         2 days           17         Heat         Pull Nire         2 days         Nu 11/1200         Nun 11/1200           175         Lobby         2 days         Nu 11/1200         Non 22/10         Non 22/10           176         Lobby         2 20 days         Tu 11/1200         Non 22/10         Non 22/10           177         Jart Flor         2 20 days         Tu 11/12/10         Non 22/10         Non 22/10           177         Jart Flor         2 20 days         Tu 11/12/10         Non 22/10         Non 22/10           178         Hand Flor         2 days         Tu 11/12/10         Non 22/10         Non 22/10           178         Hane Walls         3 days         Tu 11/12/10         Non 22/10         Non 22/10	Fol.	Duct Branches	s/Mecn. Equip. Sn	4/ days?	VVed 8/2/09	10/8/01 nul								
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Wednesday, October 28, 2009

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181		Electrical Conc	duit Feeder/Equipr	52 days?	Thu 7/16/09	Fri 9/25/09							
182		Duct Branches	s/Mech. Equip. Shi	32 days?	Thu 7/16/09	Fri 8/28/09						0	
183		Medical Gas R	Rough-in	5 days?	Fri 8/28/09	Thu 9/3/09						<b></b> ;	
184		Elevator Shaft	S	5 days?	Mon 8/31/09	Fri 9/4/09						-	
185		Plumbing Roug	gh-in	21 days?	Fri 8/28/09	Fri 9/25/09							
186		Inspections		2 days?	Mon 11/9/09	Tue 11/10/09							
187		Pull Wire		20 days?	Tue 1/12/10	Mon 2/8/10							
188		3rd Floor West		178 days?	Thu 7/2/09	Mon 3/8/10							
189		Frame Walls		64 days?	Thu 7/2/09	Tue 9/29/09							
190		HVAC/Plumbir	ng Piping	46 days?	Fri 7/10/09	Fri 9/11/09						0	
191		Electrical Roug	gh-in	109 days?	Fri 7/10/09	Wed 12/9/09							
192		Duct Branches	s/Mech. Equip. Shi	44 days?	Mon 8/17/09	Thu 10/15/09						0	
193		Electrical Conc	duit Feeder/Equipr	33 days?	Fri 9/11/09	Tue 10/27/09							
194		Medical Gas R	Rough-in	5 days?	Wed 9/30/09	Tue 10/6/09						, <b>1</b>	
195		Plumbing Rouc	gh-in	20 days?	Wed 9/30/09	Tue 10/27/09							
196		Inspections		2 days?	Thu 12/10/09	Fri 12/11/09						H	
197		Pull Wire		20 days?	Tue 2/9/10	Mon 3/8/10							
198		Lobby		168 days	Mon 12/14/09	Wed 8/4/10							
199		Lobby		168 days	Mon 12/14/09	Wed 8/4/10							
200		4th Floor East		182 days?	Fri 6/12/09	Mon 2/22/10					•		
201	Ħ	Frame Walls		52 days?	Fri 6/12/09	Mon 8/24/09							
202		HVAC/Plumbin	ng Piping	46 days?	Tue 6/30/09	Tue 9/1/09							
203		Electrical Roug	gh-in	93 days?	Wed 6/24/09	Fri 10/30/09						1	
204		Electrical Conc	duit Feeder/Equipr	20 days?	Mon 9/28/09	Fri 10/23/09							
205		Duct Branches	s/Mech. Equip. Shi	29 days?	Tue 7/28/09	Fri 9/4/09							
206		Elevator Shafts		5 days?	Tue 9/8/09	Mon 9/14/09						1	
207		Plumbing Roug	gh-in	5 days?	Tue 8/25/09	Mon 8/31/09						•	
208		Inspections		2 davs?	Mon 11/2/09	Tue 11/3/09						<del> </del>	
209		Pull Wire		10 days?	Tue 2/9/10	Mon 2/22/10						-	
210		4th Floor West		179 dave?	Wed 7/15/09	Mon 3/22/10							
211	B	Frame Walls		52 davs?	Wed 7/15/09	Thu 9/24/09							
212		HVAC/Plumhin	Dining Dr	46 dave?	PU/22/00	Mon 9/28/09						] (	
213		Electrical Roug	gh-in	93 days?	Mon 7/27/09	Wed 12/2/09							
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215		Electrical Cond	duit Feeder/Equipr	20 days?	Wed 10/28/09	Tue 11/24/09							
216		Plumbing Roug	gh-in	5 days?	Fri 9/25/09	Thu 10/1/09						I	
217		Inspections		2 days?	Thu 12/3/09	Fri 12/4/09						,	
218		Pull Wire		10 days?	Tue 3/9/10	Mon 3/22/10						-	
219		Roof Garden		240 days	Fri 5/29/09	Thu 4/29/10					•		
220		Roof Garden		240 days	Fri 5/29/09	Thu 4/29/10					<b>U</b>		
221		Penthouse		253 days?	Tue 6/30/09	Thu 6/17/10					~		
222		AHU's/Mechan	nical Equipment	123 days?	Tue 6/30/09	Thu 12/17/09							
223		Rough-in Elect	trical/Pull Wire	72 days?	Thu 11/19/09	Fri 2/26/10							
224	Ħ	Duct/piping/spi	vrinkler	62 days?	Fri 11/27/09	Mon 2/22/10						-0	
225		Plumbing Rou	gh-in	4 days?	Mon 2/15/10	Thu 2/18/10						<b></b>	
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## SITE LAYOUT PLANNING

I have drawn 3 different site plans for different stages in construction which are located in appendix C. The first site layout plan is for demolition of the existing parking garage. There is access to the site from two different streets, Jefferson and Lee, therefore; the dumpsters are located along one street for easy access for the garbage trucks. There are no trailers on site because the site is too small to accommodate them therefore; they are located nearby off site. Two demolition machines were used to demolish the garage and place debris in the dumpsters. The fence is located around the entire site to prevent pedestrians from entering the construction area.

The second site layout plan is for the superstructure construction. The fence has been moved in closer to the building to allow normal traffic to flow more easily around the site. One dumpster was removed because there is less construction waste on the site during this phase. A soil pile is located on the site from the foundation construction and will be reused to backfill or it will be taken off site in dump trucks. A mobile crane is located on site to easily move around the building and construction the frame of the building. There is also a material layout area where materials can be organized and stored for ease of construction.

The third site layout plan is for the rest of the construction phases. It will be able to stay the same throughout because the crane is no longer necessary after the steel is in place and the mechanical equipment is set. There is more material storage on the site because more contractors have mobilized and need somewhere to store their tools and materials. The soil pile is also gone because it has either been put back in place or removed from the site.

## **DETAILED STRUCTURAL SYSTEMS ESTIMATE**

The following detailed estimate is an estimate based on a hand takeoff I performed of the structural system on the Emily Couric Clinical Cancer Center. A summary is provided below and the details, including the takeoff is in appendix A. The foundation is precast caissons under each column. The columns are steel columns with composite metal deck and lightweight concrete placed on the decking.

I performed this estimate by taking off each piece of steel by type and length. I tabulated them in an excel spreadsheet and sorted them to get a final quantity and input the data into a Cost Works estimating program using RSMeans. After the steel was counted for, I went through and found that there are 12 different types of concrete floor. I measured the areas of each type in order to most accurately calculate the cost of each. The estimate also includes the cost to move earthwork for the foundations as the foundations are also included in the concrete for the structural system.

## Detailed Structural Estimate Summary

	\$5,197,688.28	\$7,983,570.00
Steel	\$3,412,913.20	4,234,143
Concrete	\$1,644,053.03	3,749,427
Earthwork	\$140,722.05	
	My Estimate	Gilbane

Compared to the estimate given to me by the Gilbane Building Company my estimate was about 3 million dollars less than the Gilbane estimate. The steel was only about \$800,000 which is likely due to the price of miscellaneous metals not included in my estimate but they are included in the Gilbane estimate. The stairs are also included in the Gilbane total and not in mine. The metal for my estimate was based on simple construction and there are a few complex member sizes installed on this job such as one member that is on a 45 degree angle and slanted. These complex items cannot be accounted for based on my experience level. Additionally, bolts and other unique connections and welds are not accounted for.

The concrete estimate is largely different from the Gilbane estimate due to a number of reasons, some of which can be explained. One of the largest differences has to be involved with the linear accelerator rooms. It is very difficult to estimate based on the fact that the formwork is unique for these spaces, volume is not a typical shape and most likely the concrete has additives and other traits that make it more costly to install. RSMeans also does a poor job of providing information for estimating caissons and drilled piers for foundations. Also note that general floor slabs, in some cases, are unusually shaped and decreased the accuracy of the takeoff and some concrete may have been omitted.

## GENERAL CONDITIONS ESTIMATE

The general conditions estimate is shown in Appendix C with the details. The estimate includes items such as site trailers, temporary site utilities, insurance, testing, staffing, tools and safety equipment, and other equipment to be used on site. The calculated duration of the project is 32 months or 136 weeks for these items. The total estimated general conditions are \$6,784,880.

The project has 2 trailers located off site but near enough to walk to. These trailers house the staff which includes a project exutive, 2 project managers, a field engineer, 2 superintendants, and the administrative assistant. The trailer includes items such as office supplies, air conditioning, heating, internet, phone and toilets.

The equipment on the site includes a mobile crane for the duration of the steel construction. Additionally, there is a forklift, material hoist, and boom man lift. The superintendants each have a pickup truck charged to the job.

The major portion of general conditions has to do with insurance and bonding. The job includes liability, auto, workers compensation, and other applicable insurances. A performance bond was also added to the estimate.

## **CRITICAL INDUSTRY ISSUES**

The PACE Roundtable took place on Wednesday, October 14<sup>th</sup> and Thursday, October 15<sup>th</sup> at the Penn Stater Conference Center hotel. On Wednesday there was a short introduction of what to expect at the Roundtable followed by a delicious dinner with the industry members and students having time to get to know each other. This was a great time to relax and talk to professionals about their current projects and make contacts for future references.

On Thursday, the roundtable opened up with a short welcome from Dr. Chimay Anumba, the department head of Architectural Engineering, followed by the industry panel. The industry panel consisted of five industry members discussing how their companies are coping with the economic situation and how they are moving forward. Each company had different strategies to deal with it and they all said the competition was getting more difficult. There are more firms bidding on the same projects that typically there would only be 3 or 4 bidders and now there are 15 to 20 bidders. They have recognized that they have to differentiate themselves more to stand out and keep the advantage over the other bidders.

There were three different breakout sessions to discuss different topics such as Energy and the Construction Industry, Business and Networking, and BIM Execution Planning. I chose to go to the Energy and the Construction Industry session because I thought maybe I could get a few ideas for my thesis since it is an outpatient clinic for cancer patients and is trying to achieve a LEED Silver rating. The first half of the session was to identify current problems or issues with energy in the construction industry. We had 5 industry members in this session that helped with input on what is going on in the industry now. The students help to identify problems, too.

The second half of the session was devoted to what we can do about the issues and the new systems that are more energy efficient. A lot of students would discuss their building and ask the industry members if they had any suggestions or if they thought they were on the right track with changing the system. There were a lot of talk about solar panels and different technologies that they are coming out with. A lot of ideas were discussed for multiple different types of buildings that were very helpful for the 5<sup>th</sup> year student thesis projects.

After lunch, each of the facilitators gave a brief overview of what was discussed in each session which was nice to hear about what everyone else had discussed. A student panel followed this session which was a group of students that discussed what technologies we use and what is acceptable to use for business purposes. I was on the panel and was the only one that does not text and have the internet on my phone. I thought this session was very interesting and had a lot of beneficial information for both the student and the industry members. It was interesting to see how many industry members have blackberry's and are texting the whole time.

Personally, I think technology is very beneficial to the construction industry but there needs to be limits on what to use and when to use it. I think it is good because you can transfer information very quickly and get things accomplished a lot faster than you used to be able to. On the other hand, I have seen how people are losing their ability to communicate effectively because they cannot write a proper e-mail or letter. I think that there needs to be a lecture in a class or two about proper use of technology. As far as checking personal e-mails at work, I think that there needs to be self-control and you should know when it is ok and when it is not. If you have a slower day then I think there is no problem to check your e-mail but if there is work that needs to get done then I would not be taking time out of my day to check personal e-mails when I could do it at home and get the work done in a timely manner.

I think both parties learned from this discussion and helped to get a better understanding where each person is coming from. We, the students, like to have the information at our fingertips at all times. The industry members don't think it is necessary to have it all of the time. I think it is a personal thing and you need to decide what you want to use and what you don't want to use.

The final session was on what is the role of continuing education in construction? Mostly, this involved industry members discussing what worked for them and their companies. Some people agreed that webinars worked best because they could do them from their trailer or office and didn't have to take time to go somewhere to learn about something. Others said they prefer to have an entire day where they go and have a day of educational events or training sessions. They said it was easier to block out an entire day than to take half a day or an hour or two to learn about something. This also came down to personal preference on which you liked better. There are benefits to both and I think that you need to find what works best for you to learn the most that you can while maintaining your busy life.

The chart below is a list of contacts that I met at the roundtable and their companies. I may need to ask them a few questions about my thesis or could possibly be working with them in the future.

Name	Company
Chris Taylor	Southland Industries, Inc.
Chuck Tomasco	Truland Systems, Inc.
Jeremy Sibert	Henzel Phelps Construction
Dan Kerr	McClure Company
Alyssa Adams	McClure Company

## **APPENDIX A: STRUCTURAL SYSTEMS ESTIMATE**

#### **Unit Detail Report**

#### **Cost Estimate Report** CostWorks'

\$1,037.62

\$24,470.16

\$293.90

\$86,684.19

\$16,250.10

\$83,557.89

\$22,810.88

\$94,521.92

Year 2009

LineNumber

032110502700

032113100150

032205500200

032205500300

032205500300

033053404500

033053404820

033053404900

033105350411

Structural Estimate Date: 28-Oct-09 Unit Total Incl. Ext. Total Incl. Description Quantity O&P O&P **Division 03 Concrete** Reinforcing steel, shop size extra, #7 to 19.34 Ton \$53.64 #11 bar, A615, grade 40, material only, included in delivered price \$1,265.00 Galvanized coating, for reinforcing steel, 19.34 Ton add to fabricated & delivered price of uncoated reinforcing Welded wire fabric, sheets, 6 x 6 - W2.1 5.25 C.S.F. \$55.98 x W2.1 (8 x 8) 30 lb. per C.S.F., A185 Welded wire fabric, sheets, 6 x 6 - W2.9 1,337.10 C.S.F. \$64.83 x W2.9 (6 x 6) 42 lb. per C.S.F., A185 Welded wire fabric, sheets, 6 x 6 - W2.9 273.07 C.S.F. \$59.51 x W2.9 (6 x 6) 42 lb. per C.S.F., A185 \$782,581.97 Structural concrete, in place, 1,949.00 C.Y. \$401.53 free-standing wall, 15" thick x 18' high, includes forms(4 uses), reinforcing steel, and finishing Structural concrete, in place, slab on 27,306.50 S.F. \$3.06 grade, over 10000 S.F., 6" thick, includes finishing only Structural concrete, in place, slab on 4,016.00 S.F. \$5.68 grade, over 10000 S.F., 12" thick, includes finishing only 632.00 C.Y. \$149.56 Structural concrete, ready mix, normal weight, 6000 PSI, includes local aggregate, sand, Portland cement and water, delivered, excludes all additives

	and treatments				
033105701500	Structural concrete, placing, elevated	2,187.00	C.Y.	\$16.69	\$36,501.03
	vibrating excludes material				
033105703900	Structural concrete, placing, pile caps,	632.00	C.Y.	\$13.33	\$8,424.56
	pumped, 6 C.Y. to 10 C.Y., includes				
	vibrating, excludes material				
033116100780	Structural concrete, ready mix,	2,187.00	C.Y.	\$171.08	\$374,151.96
	lightweight, 110 #/C.F., 3500 psi,				
	includes lightweight aggregate, sand,				
	portland cement and water, excludes all				
033529300200	Concrete finishing, floors, manual	178 995 00	SF	\$0.63	\$112 766 85
0000200200	screed, bull float, manual float, manual	170,555.00	5.1 .	00002	\$112,700,00
	steel trowel				
Division 03 Subtotal					\$1,644,053.03
Division 05 Metals					
051223174550	Column, structural tubing, 6" x 6" x 1/4"	12.00	Ea.	\$529.53	\$6,354.36
	x 12'-0", incl shop primer, cap & base				
	plate, bolts				
051223174550	Column, structural tubing, 6" x 6" x 1/4"	39.00	Ea.	\$529.53	\$20,651.67
	x 12'-0", incl shop primer, cap & base				
	plate, bolts		-	<b>11 02 1</b> 07	611 oo 4 o 4
051223174600	Column, structural tubing, 8" x 8" x 3/8"	11.00	Ea.	\$1,034.96	\$11,384.56
	x 14 -0°, mei snop primer, cap & base				

plate, bolts

LineNumber	Description	Quantity	Unit	Total Incl.	Ext. Total Incl.
				O&P	O&P
051223174600	Column, structural tubing, 8" x 8" x 3/8" x 14'-0", incl shop primer, cap & base	108.00	Ea.	\$1,034.96	\$111,775.68
051223174650	plate, bolts Column, structural tubing, 10" x 10" x 1/2" x 16'-0", incl shop primer, cap &	5.00	Ea.	\$1,837.01	\$9,185.05
051223174650	base plate, bolts Column, structural tubing, 10" x 10" x 1/2" x 16'-0", incl shop primer, cap & hear plate, belts	45.00	Ea.	\$1,837.01	\$82,665.45
051223177000	Column, structural, 2-tier, W10x45, A992 steel, incl shop primer, splice	384.00	L.F.	\$83.31	\$31,991.04
051223177000	Column, structural, 2-tier, W10x45, A992 steel, incl shop primer, splice plates holts	240.00	L.F.	\$83.31	\$19,994.40
051223177050	Column, structural, 2-tier, W10x68, A992 steel, incl shop primer, splice plates bolts	188.00	L.F.	\$123.22	\$23,165.36
051223177150	Column, structural, 2-tier, W12x50, A992 steel, incl shop primer, splice plates holts	204.00	L.F.	\$92.39	\$18,847.56
051223177200	Column, structural, 2-tier, W12x87, A992 steel, incl shop primer, splice plates bolts	138.00	L.F.	\$156.64	\$21,616.32
051223177200	Column, structural, 2-tier, W12x87, A992 steel, incl shop primer, splice plates bolts	56.00	L.F.	\$156.64	\$8,771.84
051223177200	Column, structural, 2-tier, W12x87, A992 steel, incl shop primer, splice plates bolts	326.00	L.F.	\$156.64	\$51,064.64
051223177350	Column, structural, 2-tier, W14x74, A992 steel, incl shop primer, splice plates, bolts	940.00	L.F.	\$133.72	\$125,696.80
051223177400	Column, structural, 2-tier, W14x120, A992 steel, incl shop primer, splice plates bolts	246.00	L.F.	\$214.08	\$52,663.68
051223177400	Column, structural, 2-tier, W14x120, A992 steel, incl shop primer, splice plates, bolts	312.00	L.F.	\$214.08	\$66,792.96
051223177450	Column, structural, 2-tier, W14x176, A992 steel, incl shop primer, splice plates bolts	208.00	L.F.	\$311.80	\$64,854.40
051223177450	Column, structural, 2-tier, W14x176, A992 steel, incl shop primer, splice plates bolts	428.00	L.F.	\$311.80	\$133,450.40
051223750100	Structural steel member, 100-ton project, 1 to 2 story building, W6x9, A992 steel, shop fabricated, incl shop primer, bolted	107.00	L.F.	\$25.04	\$2,679.28
051223750120	Structural steel member, 100-ton project, 1 to 2 story building, W6x15, A992 steel, shop fabricated, incl shop primer, bolted	55.00	L.F.	\$35.22	\$1,937.10
051223750140	Structural steel member, 100-ton project, 1 to 2 story building, W6x20, A992 steel, shop fabricated, incl shop primer, bolted	47.00	L.F.	\$44.29	\$2,081.63
051223750300	Structural steel member, 100-ton project, 1 to 2 story building, W8x10, A992 steel, shop fabricated, incl shop primer, bolted connections	2,011.00	L.F.	\$26.76	\$53,814.36
051223750320	Structural steel member, 100-ton project, 1 to 2 story building, W8x15, A992 steel, shop fabricated, incl shop primer, bolted connections	91.00	L.F.	\$35.22	\$3,205.02

LineNumber	Description	Quantity	Unit	Total Incl. O&P	Ext. Total Incl. O&P
051223750350	Structural steel member, 100-ton project, 1 to 2 story building, W8x21, A992 steel, shop fabricated, incl shop primer, bolted connections	30.00	L.F.	\$45.72	\$1,371.60
051223750360	Structural steel member, 100-ton project, 1 to 2 story building, W8x24, A992 steel, shop fabricated, incl shop primer, bolted	20.00	L.F.	\$51.83	\$1,036.60
051223750600	Structural steel member, 100-ton project, 1 to 2 story building, W10x12, A992 steel, shop fabricated, incl shop primer, bolted connections	480.33	L.F.	\$30.44	\$14,621.35
051223750620	Structural steel member, 100-ton project, 1 to 2 story building, W10x15, A992 steel, shop fabricated, incl shop primer, bolted connections	149.00	L.F.	\$35.22	\$5,247.78
051223750620	Structural steel member, 100-ton project, 1 to 2 story building, W10x15, A992 steel, shop fabricated, incl shop primer, bolted connections	299.00	L.F.	\$35.22	\$10,530.78
051223750700	Structural steel member, 100-ton project, 1 to 2 story building, W10x22, A992 steel, shop fabricated, incl shop primer, bolted connections	814.00	L.F.	\$47.63	\$38,770.82
051223750700	Structural steel member, 100-ton project, 1 to 2 story building, W10x22, A992 steel, shop fabricated, incl shop primer, bolted connections	440.00	L.F.	\$47.63	\$20,957.20
051223750720	Structural steel member, 100-ton project, 1 to 2 story building, W10x26, A992 steel, shop fabricated, incl shop primer, balted connections	792.00	L.F.	\$54.32	\$43,021.44
051223750740	Structural steel member, 100-ton project, 1 to 2 story building, W10x33, A992 steel, shop fabricated, incl shop primer, balted connections	54.00	L.F.	\$67.59	\$3,649.86
051223750900	Structural steel member, 100-ton project, 1 to 2 story building, W10x49, A992 steel, shop fabricated, incl shop primer, bolted connections	164.00	L.F.	\$95.29	\$15,627.56
051223751100	Structural steel member, 100-ton project, 1 to 2 story building, W12x16, A992 steel, shop fabricated, incl shop primer, bolted connections	293.00	L.F.	\$34.13	\$10,000.09
051223751100	Structural steel member, 100-ton project, 1 to 2 story building, W12x16, A992 steel, shop fabricated, incl shop primer, bolted connections	519.50	L.F.	\$34.13	\$17,730.54
051223751300	Structural steel member, 100-ton project, 1 to 2 story building, W12x22, A992 steel, shop fabricated, incl shop primer, bolted connections	659.00	L.F.	\$44.63	\$29,411.17
051223751500	Structural steel member, 100-ton project, 1 to 2 story building, W12x26, A992 steel, shop fabricated, incl shop primer, balted connections	105.00	L.F.	\$51.32	\$5,388.60
051223751520	Structural steel member, 100-ton project, 1 to 2 story building, W12x35, A992 steel, shop fabricated, incl shop primer, balted connections	20.00	L.F.	\$67.62	\$1,352.40
051223751900	Structural steel member, 100-ton project, 1 to 2 story building, W14x26, A992 steel, shop fabricated, incl shop primer, bolted connections	1,782.00	L.F.	\$50.59	\$90,151.38

LineNumber	Description	Quantity	Unit	Total Incl. O&P	Ext. Total Incl. O&P
051223752300	Structural steel member, 100-ton project, 1 to 2 story building, W14x34, A992 steel, shop fabricated, incl shop primer,	185.00	L.F.	\$65.71	\$12,156.35
051223752320	bolted connections Structural steel member, 100-ton project, 1 to 2 story building, W14x43, A992 steel, shop fabricated, incl shop primer,	123.00	L.F.	\$81.47	\$10,020.81
051223752360	bolted connections Structural steel member, 100-ton project, 1 to 2 story building, W14x74, A992 steel, shop fabricated, incl shop primer, h. building staticated and shop primer,	264.00	L.F.	\$135.43	\$35,753.52
051223752700	Structural steel member, 100-ton project, 1 to 2 story building, W16x26, A992 steel, shop fabricated, incl shop primer, boltad connections	2,497.00	L.F.	\$50.55	\$126,223.35
051223752900	Structural steel member, 100-ton project, 1 to 2 story building, W16x31, A992 steel, shop fabricated, incl shop primer, bolted connections	4,545.00	L.F.	\$60.24	\$273,790.80
051223753100	Structural steel member, 100-ton project, 1 to 2 story building, W16x40, A992 steel, shop fabricated, incl shop primer, bolted connections	69.00	L.F.	\$76.29	\$5,264.01
051223753100	Structural steel member, 100-ton project, 1 to 2 story building, W16x40, A992 steel, shop fabricated, incl shop primer, holted connections	85.00	L.F.	\$76.29	\$6,484.65
051223753140	Structural steel member, 100-ton project, 1 to 2 story building, W16x67, A992 steel, shop fabricated, incl shop primer,	23.00	L.F.	\$123.97	\$2,851.31
051223753140	Structural steel member, 100-ton project, 1 to 2 story building, W16x67, A992 steel, shop fabricated, incl shop primer,	150.00	L.F.	\$123.97	\$18,595.50
051223753300	Structural steel member, 100-ton project, 1 to 2 story building, W18x35, A992 steel, shop fabricated, incl shop primer,	932.00	L.F.	\$68.43	\$63,776.76
051223753500	Structural steel member, 100-ton project, 1 to 2 story building, W18x40, A992 steel, shop fabricated, incl shop primer,	1,510.00	L.F.	\$77.03	\$116,315.30
051223753520	Structural steel member, 100-ton project, 1 to 2 story building, W18x46, A992 steel, shop fabricated, incl shop primer,	468.00	L.F.	\$87.53	\$40,964.04
051223753700	bolited connections Structural steel member, 100-ton project, 1 to 2 story building, W18x50, A992 steel, shop fabricated, incl shop primer,	245.00	L.F.	\$95.13	\$23,306.85
051223753900	bolited connections Structural steel member, 100-ton project, 1 to 2 story building, W18x55, A992 steel, shop fabricated, incl shop primer,	64.00	L.F.	\$103.72	\$6,638.08
051223753920	borred connections Structural steel member, 100-ton project, 1 to 2 story building, W18x65, A992 steel, shop fabricated, incl shop primer,	148.00	L.F.	\$121.03	\$17,912.44
051223753940	Structural steel member, 100-ton project, 1 to 2 story building, W18x76, A992 steel, shop fabricated, incl shop primer, bolted connections	60.00	L.F.	\$140.13	\$8,407.80

LineNumber	Description	Quantity	Unit	Total Incl. O&P	Ext. Total Incl. O&P
051223753960	Structural steel member, 100-ton project, 1 to 2 story building, W18x86, A992 steel, shop fabricated, incl shop primer,	30.00	L.F.	\$157.32	\$4,719.60
051223754100	bolted connections Structural steel member, 100-ton project, 1 to 2 story building, W21x44, A992 steel, shop fabricated, incl shop primer,	657.00	L.F.	\$83.45	\$54,826.65
051223754300	bolted connections Structural steel member, 100-ton project, 1 to 2 story building, W21x50, A992 steel, shop fabricated, incl shop primer,	1,459.00	L.F.	\$93.96	\$137,087.64
051223754500	bolied connections Structural steel member, 100-ton project, 1 to 2 story building, W21x62, A992 steel, shop fabricated, incl shop primer, bolted connections	59.00	L.F.	\$115.16	\$6,794.44
051223754740	Structural steel member, 100-ton project, 1 to 2 story building, W21x93, A992 steel, shop fabricated, incl shop primer, bolted connections	35.00	L.F.	\$168.89	\$5,911.15
051223754760	Structural steel member, 100-ton project, 1 to 2 story building, W21x101, A992 steel, shop fabricated, incl shop primer, bolted connections	17.00	L.F.	\$182.26	\$3,098.42
051223754780	Structural steel member, 100-ton project, 1 to 2 story building, W21x122, A992 steel, shop fabricated, incl shop primer,	30.00	L.F.	\$218.55	\$6,556.50
051223754900	Structural steel member, 100-ton project, 1 to 2 story building, W24x55, A992 steel, shop fabricated, incl shop primer,	992.00	L.F.	\$102.26	\$101,441.92
051223755100	Structural steel member, 100-ton project, 1 to 2 story building, W24x62, A992 steel, shop fabricated, incl shop primer,	249.00	L.F.	\$114.68	\$28,555.32
051223755300	Structural steel member, 100-ton project, 1 to 2 story building, W24x68, A992 steel, shop fabricated, incl shop primer, helted ecceneric inter	219.00	L.F.	\$124.23	\$27,206.37
051223755500	Structural steel member, 100-ton project, 1 to 2 story building, W24x76, A992 steel, shop fabricated, incl shop primer,	30.00	L.F.	\$138.55	\$4,156.50
051223755700	Structural steel member, 100-ton project, 1 to 2 story building, W24x84, A992 steel, shop fabricated, incl shop primer,	67.00	L.F.	\$152.10	\$10,190.70
051223755740	bolled connections Structural steel member, 100-ton project, 1 to 2 story building, W24x104, A992 steel, shop fabricated, incl shop primer,	61.00	L.F.	\$187.62	\$11,444.82
051223756100	bolied connections Structural steel member, 100-ton project, 1 to 2 story building, W30x99, A992 steel, shop fabricated, incl shop primer,	93.00	L.F.	\$178.16	\$16,568.88
051223756300	bolfed connections Structural steel member, 100-ton project, 1 to 2 story building, W30x108, A992 steel, shop fabricated, incl shop primer,	60.00	L.F.	\$193.44	\$11,606.40
051223756500	bolted connections Structural steel member, 100-ton project, 1 to 2 story building, W30x116, A992 steel, shop fabricated, incl shop primer, bolted connections	60.00	L.F.	\$207.96	\$12,477.60

LineNumber	Description	Quantity	Unit	Total Incl. O&P	Ext. Total Incl. O&P
051223756520	Structural steel member, 100-ton project, 1 to 2 story building, W30x132, A992 steel, shop fabricated, incl shop primer, bolted connections	30.00	L.F.	\$235.65	\$7,069.50
051223756580	Structural steel member, 100-ton project, 1 to 2 story building, W30x191, A992 steel, shop fabricated, incl shop primer, bolted connections	88.00	L.F.	\$336.17	\$29,582.96
051223756700	Structural steel member, 100-ton project, 1 to 2 story building, W33x118, A992 steel, shop fabricated, incl shop primer, bolted connections	60.00	L.F.	\$210.74	\$12,644.40
051223756900	Structural steel member, 100-ton project, 1 to 2 story building, W33x130, A992 steel, shop fabricated, incl shop primer, bolted connections	119.00	L.F.	\$232.01	\$27,609.19
051223757300	Structural steel member, 100-ton project, 1 to 2 story building, W36x135, A992 steel, shop fabricated, incl shop primer, bolted connections	65.00	L.F.	\$240.36	\$15,623.40
051223757500	Structural steel member, 100-ton project, 1 to 2 story building, W36x150, A992 steel, shop fabricated, incl shop primer, bolted connections	105.00	L.F.	\$266.14	\$27,944.70
053113503560	Metal decking, steel, open type, wide rib, galvanized, over 500 Sq, 3" D, 16 ga	133,710.00	S.F.	\$6.04	\$807,608.40
053123502700	Metal decking, steel, open type, wide rib, galvanized, over 500 Sq, 1-1/2" D, 20 ga	13,963.00	S.F.	\$2.88	\$40,213.44
Division 05 Subtotal					\$3,412,913.20
Division 31 Earthwork	:				
316326161500	Concrete caissons for marine construction, cased shafts, 140 to 175 tons capacity, 19" diameter, 40' depth, includes mobilization and demobilization up to 50 miles	2,415.00	V.L.F.	\$58.27	\$140,722.05

Division 31 Subtotal

\$140,722.05

## **APPENDIX B: STRUCTURAL SYSTEMS TAKEOFF**

Type	Description	Floor	Area	Volume	Volume
Type	9" normal weight	1 1001	Alta	volunic	Volume
1 5 1	structural slab	GROUND 1	2088		
L01	9" normal weight	GROUND I	2000		
1.52	structural slab	GROUND 2	1020 75		
102	12" normal weight	GROUND 2	1020.75		
LP1	structural slab	GROUND 3	231		
	9" normal weight	SILCOLLE 5	231		
LS4	structural slab	GROUND 4	675 75	4015.5	
6" SOG	6" normal weight	GROUND 5	27306.5	1010.0	
	3.5" LW CONC.: 1.5 18				
	gage galv. Composite				
	deck with WWF 6x6				
S1	w2.0xw2.0	MEZZANINE 1	525		6.886574074
	1.75x3/16" galv. Steel bar				
	grading with cross bars at				
G	4" max	MEZZANINE 2	704		
	3.5" LW CONC.; 3" 18				
	gage galv. Composite				
	deck with WWF 6x6				
S2	w2.9xw2.9	FIRST	26239		404.9228395
	3.5" LW CONC.; 3" 18				
	gage galv. Composite				
	deck with WWF 6x6				
S2	w2.9xw2.9	SECOND	27230		420.2160494
	3.5" LW CONC.; 3" 18				
	gage galv. Composite				
	deck with WWF 6x6				
S2	w2.9xw2.9	THIRD	27230		420.2160494
	3.5" LW CONC.; 3" 18				
	gage galv. Composite				
	deck with WWF 6x6				
S2	w2.9xw2.9	FOURTH	25891		399.5524691
	3" LW CONC.; 3" 18				
	gage galv. Composite				
	deck with WWF 6x6				
S3	w2.9xw2.9	ROOF 1	11867		183.132716
	6.5" LW CONC.; 3" 18				
	gage galv. Composite				
	deck with WWF 6x6				
S4	w2.9xw2.9	ROOF 2	13214		326.2716049
	9" LW CONC.; 3" 18				
	gage galv. Composite				
	deck with WWF 6x6				
S5	w2.9xw2.10	ROOF 3	810	133710	26.25
	1.5" 20 gage galvanized				
R	roof deck	PENTHOUSE	13963		
		Totals.	178995		2187 448302

Plan         Type         Weight         Length         Count         Total Length         fotal Length of Type           \$401         HSS10X10X1/2         21         2         40         82           \$401         HSS10X10X1/2         21         2         42         82           \$401         HSS10X10X3/8         20.5         4         82         82           \$401         HSS10X10X3/8         27         1         17         1           \$401         HSS10X10X3/8         20         2         40         83           \$401         HSS10X10X3/8         20         2         40         84           \$401         HSS10X10X3/8         21         2         42         343           \$401         HSS10X10X3/8         26         1         16         16           \$401         HSS10X10X5/8         26         1         26         42           \$411 <hss10x10x5 8<="" td="">         26         1         26         42           \$4510X13X5/16         12         2         24         72           \$401         HSS10X13X5/16         12         2         24         72           \$401         HSS10X13X5/16         11</hss10x10x5>	Structural	Framing Schedule					
S401       HSS10X10X1/2       20       2       40       40         S401       HSS10X10X1/2       21       2       42       82         S401       HSS10X10X3/8       33       1       33       33         S401       HSS10X10X3/8       20.5       4       82         S401       HSS10X10X3/8       17       1       17         S401       HSS10X10X3/8       20       2       40         S401       HSS10X10X3/8       20       2       40         S401       HSS10X10X3/8       31       2       62         S401       HSS10X10X3/8       31       2       62         S401       HSS10X10X3/8       26       1       26         S401       HSS10X10X3/8       26       1       26       42         HSS10X10X3/8       16       12       2       24       72         S401       HSS10X10X3/8       26       1       26       66         S202       HSS4x41/4       11       2       22       22       22         S204       HSS4x41/4       11       2       22       22       22       22       22       22       22 <th>Plan</th> <th>Туре</th> <th>Weight</th> <th>Length</th> <th>Count</th> <th><b>Total Length</b></th> <th>Total Lenth of Type</th>	Plan	Туре	Weight	Length	Count	<b>Total Length</b>	Total Lenth of Type
S401         HSS10X10X1/2         21         2         42         82           S401         HSS10X10X3/8         33         1         33         33           S401         HSS10X10X3/8         20.5         4         82           S401         HSS10X10X3/8         27         1         27           S401         HSS10X10X3/8         20         2         40           S401         HSS10X10X3/8         20         2         40           S401         HSS10X10X3/8         20         2         40           S401         HSS10X10X3/8         21         2         42         343           S401         HSS10X10X3/8         26         1         26         42           HSS10X10X5/8         16         1         16         1         16           HSS10X10X5/8         16         12         2         24         72           S401         HSS10X10X5/16         12         2         24         72           S401         HSS10X10X5/16         11         2         22         18           S202         HSS4x4X1/4         64         2         128         166           S202         H	S401	HSS10X10X1/2		20	2	40	
SA01         HSS10X10X3/8         33         1         33           S401         HSS10X10X3/8         20.5         4         82           S401         HSS10X10X3/8         17         1         17           S401         HSS10X10X3/8         20         2         40           S401         HSS10X10X3/8         20         2         40           S401         HSS10X10X3/8         20         2         40           S401         HSS10X10X3/8         21         2         42         343           S401         HSS10X10X3/8         26         1         26         42           HSS10X10X5/8         26         1         26         42         118S10X10X5/8         266         66           S202         HSS10X35/16         12         2         24         72         5401           HSS10X35/16         12         2         24         72         5401         18510X15/5/16         11         2         22         5202         1855/5/5/16         11         2         22         5202         1855/5/5/16         11         2         22         5202         HSS5/5/5/16         11         2         22         5202         <	S401	HSS10X10X1/2		21	2	42	82
S401         HSSI0X10X3/8         20.5         4         82           S401         HISS10X10X3/8         17         1         17           S401         HISS10X10X3/8         27         1         27           S401         HISS10X10X3/8         20         2         40           S401         HISS10X10X3/8         20         2         40           S401         HISS10X10X3/8         21         2         42         343           S401         HISS10X10X3/8         21         2         42         343           S401         HISS10X10X5/8         16         1         16         343           S401         HISS10X10X5/8         26         1         26         42           HSS10X3X5/16         12         2         24         72           S401         HISS10X3X5/16         11         2         22         5202           S4301         HISS10X3X5/16         11         2         22         5202           S44x1/4         64         2         123         168         5202           S202         HISS5x5x5/16         114         4         56         138           S202         HIS	S401	HSS10X10X3/8		33	1	33	
S401         HSSIOX10X3/8         17         1         17           S401         HSSI0X10X3/8         27         1         27           S401         HSSI0X10X3/8         20         2         40           S401         HSSI0X10X3/8         20         2         40           S401         HSSI0X10X3/8         31         2         62           S401         HSSI0X10X3/8         21         2         42         343           S401         HSSI0X10X5/8         16         1         16         1           HSSI0X10X5/8         26         1         26         42         42           HSSI0X3X5/16         12         2         24         72         5401         HSSI2X12X1/2         33         2         66         66         66         5202         HSSA4X1/4         64         2         128         168         5202         HSS5X5X5/16         11         2         22         520         HSS5X5X5/16         15         4         60         5202         HSS5X5X5/16         14         4         56         138         5202         HSS6x6x.25         32         1         32         5202         HSS6x6x.25         37         1	S401	HSS10X10X3/8		20.5	4	82	
S401         HSSIOX10X3/8         27         1         27           S401         HSSI0X10X3/8         20         2         40           S401         HSSI0X10X3/8         20         2         40           S401         HSSI0X10X3/8         21         2         42         343           S401         HSSI0X10X3/8         21         2         42         343           S401         HSSI0X10X5/8         16         1         16         1           S401         HSSI0X10X5/8         26         1         26         42           HSSI0X35/16         12         2         24         72           S401         HSSI0X35/16         12         2         4         72           S401         HSSI0X35/16         11         2         22         5         50           S202         HSS5x5x5/16         11         2         22         5         5         20         18         5         5         20         138         5         5         22         18         5         5         22         138         5         5         2         18         5         5         2         18         5	S401	HSS10X10X3/8		17	1	17	
S401         HSSIOXIOX3/8         20         2         40           S401         HSSIOXIOX3/8         20         2         40           S401         HSSIOXIOX3/8         31         2         62           S401         HSSIOXIOX3/8         21         2         42         343           S401         HSSIOXIOX5/8         16         1         16         1           S401         HSSIOXIOX5/8         26         1         26         42           HISSIOXIOX5/8         26         1         2         24         -           S205         HSSIOXIX5/16         12         2         24         -           S202         HSS4x4x1/4         9         2         18         5           S202         HSS4x4x1/4         664         2         128         168           S202         HSS5x5x5/16         11         2         22         -           S202         HSS5x5x5/16         14         4         56         138           S202         HSS6x6x.25         9         2         18         -           S202         HSS6x6x.25         32         1         32         - <td< td=""><td>S401</td><td>HSS10X10X3/8</td><td></td><td>27</td><td>1</td><td>27</td><td></td></td<>	S401	HSS10X10X3/8		27	1	27	
S401         HSS10X10X3/8         20         2         40           S401         HSS10X10X3/8         31         2         62           S401         HSS10X10X3/8         21         2         42         343           S401         HSS10X10X5/8         16         1         16         142         242         343           S401         HSS10X10X5/8         26         1         26         42         145           S401         HSS10X10X5/8         26         1         26         42         145           S401         HSS10X10X5/8         26         1         26         42         142           S10X10X3/8/16         12         2         24         72         540         16         12         2         24         72           S401         HSS10X10X5/8         11         2         22         5202         HSS4x4x1/4         11         2         22         5202         HSS5x5x5/16         11         2         22         5202         HSS5x5x5/16         114         4         56         138         5202         HSS6x6x,25         9         2         18         5202         HSS6x6x,25         9         2 <td< td=""><td>S401</td><td>HSS10X10X3/8</td><td></td><td>20</td><td>2</td><td>40</td><td></td></td<>	S401	HSS10X10X3/8		20	2	40	
S401         HSS10X10X3/8         31         2         62           S401         HSS10X10X5/8         21         2         42         343           S401         HSS10X10X5/8         16         1         16	S401	HSS10X10X3/8		20	2	40	
S401         HSS10X10X5/8         21         2         42         343           S401         HSS10X10X5/8         16         1         16	S401	HSS10X10X3/8		31	2	62	
S401         ISSI0X10X5/8         16         1         16         1           S401         HSSI0X10X5/8         26         1         26         42           HSSI0X3X5/16         12         2         24         1           HSSI0X3X5/16         12         2         24         1           S205         HSS10X3X5/16         12         2         24         72           S401         HISS12X12/12         33         2         66         66           S202         HSS4x4x1/4         9         2         18         1           S202         HSS5x5x5/16         11         2         22         168           S202         HSS5x5x5/16         15         4         60         1           S202         HSS5x5x5/16         14         4         56         138           S202         HSS6x6x.25         8         1         8         94           S202         HSS6x6x.25         8         1         8         94           S202         HSS6x6x.625         37         1         37         69           S202         HSS8x6x.625         37         1         37         69 <tr< td=""><td>S401</td><td>HSS10X10X3/8</td><td></td><td>21</td><td>2</td><td>42</td><td>343</td></tr<>	S401	HSS10X10X3/8		21	2	42	343
S401         HSS10X10X5/8         26         1         26         42           HSS10X3X5/16         12         2         24           HSS10X3X5/16         12         2         24           S205         HSS10X3X5/16         12         2         24           S201         HSS10X3X5/16         12         2         24           S202         HSS4X4X1/4         9         2         18           S202         HSS4X4X1/4         11         2         22           S204         HSS5X5X5/16         11         2         22           S202         HSS5X5X5/16         14         4         56         138           S202         HSS5X5X5/16         14         4         56         138           S202         HSS6x4x.25         6         6         36         22           S202         HSS6x6x.25         9         2         18         202         18           S202         HSS8x6x6.25         32         1         32         32         32         32         32         32         32         32         32         33         33         2         66         36         36         33	S401	HSS10X10X5/8		16	1	16	
HSS10x3x5/16         12         2         24           HSS10x3x5/16         12         2         24         72           S401         HSS10x3x5/16         12         2         24         72           S401         HSS10x3x5/16         12         2         24         72           S401         HSS10x3x5/16         11         2         24         72           S202         HSS4x4x1/4         9         2         18         520           S202         HSS5x5x5/16         11         2         22         520           S202         HSS5x5x5/16         14         4         56         138           S202         HSS6x6x.25         6         6         36         520           S202         HSS6x6x.25         9         2         18         520           S202         HSS6x6x.25         8         1         8         94           S202         HSS6x6x.25         32         1         32         520           S202         HSS6x6x.25         37         1         37         69           S204         HSS8x6x.625         37         1         37         69	S401	HSS10X10X5/8		26	1	26	42
HSS10x3x5/16         12         2         24           S205         HSS10x3x5/16         12         2         24         72           S205         HSS12X12X1/2         33         2         66         66           S202         HSS4x4x1/4         9         2         18         5202           HSS4x4x1/4         11         2         22         5202         5202         1555x5x5/16         11         2         22         5202           S202         HSS5x5x5/16         11         2         22         5202         1555x5x5/16         14         4         56         138           S202         HSS5x5x5/16         14         4         4         56         138           S202         HSS6x6x.25         9         2         18         5202         1555x5x16         14         4         4         56         138         5202         1556x6x.25         9         2         18         5202         1858x6x6.25         32         1         32         5202         1558x8x1/4         30         10         300         440         5206         1558x8x1/4         30         10         300         440         5206         11558x8x3/8		HSS10x3x5/16		12	2	24	
S205         HSS10x3x5/16         12         2         24         72           S401         HSS10x3x5/16         12         2         24         72           S401         HSS14x41/14         9         2         18         18           S202         HSS4x4x1/4         64         2         128         168           S202         HSS5x5x5/16         11         2         22         18           S202         HSS5x5x5/16         11         2         22         18           S202         HSS5x5x5/16         14         4         56         138           S202         HSS6x6x.25         6         6         36         138           S202         HSS6x6x.25         9         2         18         18           S202         HSS6x6x.25         8         1         8         94           S202         HSS8x6x.625         37         1         37         69           S204         HSS8x8x1/4         30         10         300         440           S206         HSS8x8x1/4         35         4         140         140           S206         HSS8x8x3/8         17         6         <		HSS10x3x5/16		12	2	24	
S401         HSS12X12X1/2         33         2         66         66           S202         HSS4x4x1/4         9         2         18           s206         HSS4x4x1/4         11         2         22           s206         HSS4x4x1/4         64         2         128         168           S202         HSS5x5x5/16         11         2         22         520           S202         HSS5x5x5/16         14         4         56         138           S202         HSS6x6x.25         6         6         36         5202           HSS6x6x.25         9         2         18         5202         HSS6x6x.25         9         2         18           S202         HSS6x6x.25         9         2         18         5202         HSS6x6x.25         9         2         18         5202           S202         HSS8x6x6.25         37         1         37         69         5206         18         14         0         5206         HSS8x8x1/4         30         10         300         440         5401         HSS8x8x3/8         18         2         36         5401         140         5401         558x8x3/8         20.5<	S205	HSS10x3x5/16		12	2	24	72
S202       HSS4x4x1/4       9       2       18         S202       HSS4x4x1/4       11       2       22         S206       HSS4x4x1/4       64       2       128       168         S202       HSS5x5x5/16       11       2       22       22         S202       HSS5x5x5/16       15       4       60       36         S202       HSS5x5x5/16       14       4       56       138         S202       HSS6x6x.25       6       6       36       32         S202       HSS6x6x.25       9       2       18       4         S202       HSS6x6x.25       9       2       18       4         S202       HSS6x6x.25       32       1       32       5       5         S202       HSS8x6x.625       37       1       37       69       5         s204       HSS8x8x1/4       30       10       300       440       5         s206       HSS8x8x1/4       30       10       300       440       5         s401       HSS8x8x3/8       20       2       40       5       440       5         s401       HSS8x8x3/8	S401	HSS12X12X1/2		33	2	66	66
S202       HSS4x4x1/4       11       2       22         s206       HSS4x4x1/4       64       2       128       168         s202       HSS5x5x5/16       11       2       22         S202       HSS5x5x5/16       15       4       60         S202       HSS5x5x5/16       14       4       56       138         S202       HSS6x6x.25       6       6       36       36         S202       HSS6x6x.25       9       2       18       36         S202       HSS6x6x.25       8       1       32       32         S202       HSS6x6x.625       32       1       32       32       32         S202       HSS8x6x.625       37       1       37       69         s206       HSS8x8x1/4       30       10       300       440         S401       HSS8x8x3/8       17       6       102       440         S401       HSS8x8x3/8       18       2       66       5401         S401       HSS8x8x3/8       33       2       66       5401         S401       HSS8x8x3/8       20       2       40       340	S202	HSS4x4x1/4		9	2	18	
s206       HSS4x4x1/4       64       2       128       168         S202       HSS5x5x5/16       11       2       22       108         S202       HSS5x5x5/16       15       4       60       60         S202       HSS5x5x5/16       14       4       56       138         S202       HSS6x6x.25       6       6       36       118         S202       HSS6x6x.25       9       2       18       18         S202       HSS6x6x.25       9       2       18       18         S202       HSS6x6x.25       32       1       32       132         S202       HSS8x6x.625       37       1       37       69         S204       HSS8x6x.625       37       1       37       69         S206       HSS8x8x.1/4       30       10       300       440         S401       HSS8x8x3/8       20       2       40         S401       HSS8x8x3/8       31       2       66         S401       HSS8x8x3/8       31       2       62         S401       HSS8x8x3/8       25       1       25         S401       HSS8x8x3/8 <td>S202</td> <td>HSS4x4x1/4</td> <td></td> <td>11</td> <td>2</td> <td>22</td> <td></td>	S202	HSS4x4x1/4		11	2	22	
S202       HSS5x5x5/16       11       2       22         S202       HSS5x5x5/16       15       4       60         S202       HSS5x5x5/16       14       4       56       138         S202       HSS6x4x.25       6       6       36       14       4       56       138         S202       HSS6x6x.25       9       2       18       18       18       18       18         S202       HSS6x6x.25       8       1       8       94       132       132       132       132       132       132       132       144       140 </td <td>s206</td> <td>HSS4x4x1/4</td> <td></td> <td>64</td> <td>2</td> <td>128</td> <td>168</td>	s206	HSS4x4x1/4		64	2	128	168
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	S202	HSS5x5x5/16		11	2	22	
S202       HSS5x5x5/16       14       4       56       138         S202       HSS6x4x.25       6       6       36	S202	HSS5x5x5/16		15	4	60	
S202       HSS6x4x.25       6       6       36         S202       HSS6x6x.25       16       2       32         S202       HSS6x6x.25       9       2       18         S202       HSS6x6x.25       8       1       8       94         S202       HSS8x6x.625       32       1       32       69         S202       HSS8x6x.625       37       1       37       69         s206       HSS8x8x1/4       35       4       140         s206       HSS8x8x1/4       30       10       300       440         s401       HSS8X8X3/8       20       2       40       40         s401       HSS8X8X3/8       17       6       102       54         s401       HSS8X8X3/8       20.5       2       41       5401         S401       HSS8X8X3/8       20.5       2       41       5401         S401       HSS8X8X3/8       20       2       40       5401         S401       HSS8X8X3/8       20       2       40       5401         S401       HSS8X8X3/8       22       1       22       52         S401       HSS8X8X3/8<	S202	HSS5x5x5/16		14	4	56	138
S202       HSS6x6x.25       9       2       32         S202       HSS6x6x.25       9       2       18         S202       HSS6x6x.625       32       1       32         S202       HSS8x6x.625       32       1       32         S202       HSS8x6x.625       37       1       37       69         s206       HSS8x8x.1/4       30       10       300       440         s206       HSS8x8x.1/4       30       10       300       440         s401       HSS8X8X.3/8       20       2       40         S401       HSS8X8X.3/8       18       2       36         S401       HSS8X8X.3/8       18       2       36         S401       HSS8X8X.3/8       31       2       62         S401       HSS8X8X.3/8       33       2       66         S401       HSS8X8X.3/8       21       2       40         S401       HSS8X8X.3/8       22       1       22         S401       HSS8X8X.3/8       22       1       22       55         S401       HSS8X8X.3/8       22       1       22       53         S401 <t< td=""><td>S202</td><td>HSS6x4x.25</td><td></td><td>6</td><td>6</td><td>36</td><td></td></t<>	S202	HSS6x4x.25		6	6	36	
S202       HSS6x6x.25       9       2       18         S202       HSS8x6x.625       32       1       32         S202       HSS8x6x.625       32       1       32         S202       HSS8x6x.625       37       1       37       69         s202       HSS8x6x.625       37       1       37       69         s202       HSS8x6x.625       37       1       37       69         s204       HSS8x6x.625       37       1       37       69         s206       HSS8x6x.625       37       1       37       69         s206       HSS8x8x1/4       30       10       300       440         s401       HSS8X8X3/8       20       2       40       40         S401       HSS8X8X3/8       20.5       2       41       41         S401       HSS8X8X3/8       31       2       66       440         S401       HSS8X8X3/8       20       2       40       40       42         S401       HSS8X8X3/8       22       1       22       55       5       5       5       5       5       5       5       5       5	S202	HSS6x6x.25		16	2	32	
S202       HSS6x6x.25       8       1       8       94         S202       HSS8x6x.625       32       1       32       32       32       32       33       32       33       33       33       33       33       33       33       33       33       33       33       34       30       10       300       440	S202	HSS6x6x.25		9	2	18	
S202       HSS8x6x.625       32       1       32         S204       HSS8x6x.625       37       1       37       69         S206       HSS8x8x1/4       35       4       140       40         S206       HSS8x8x1/4       30       10       300       440         S401       HSS8x8x3/8       20       2       40       440         S401       HSS8x8x3/8       17       6       102       541         S401       HSS8x8x3/8       20.5       2       41       541         S401       HSS8x8x3/8       31       2       66       5401         S401       HSS8x8x3/8       31       2       66       5401         S401       HSS8x8x3/8       20       2       40       42         S401       HSS8x8x3/8       21       2       42       5401         S401       HSS8x8x3/8       22       1       22       525         S401       HSS8x8x3/8       25       1       25       5401         S401       HSS8x8x3/8       22       1       22       523         S401       HSS8x8x3/8       22       1       22       523 <td>S202</td> <td>HSS6x6x.25</td> <td></td> <td>8</td> <td>1</td> <td>8</td> <td>94</td>	S202	HSS6x6x.25		8	1	8	94
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	S202	HSS8x6x.625		32	1	32	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	S202	HSS8x6x.625		37	1	37	69
s206HSS8x8x1/43010300440S401HSS8x8X3/820240S401HSS8x8X3/8176102S401HSS8x8X3/818236S401HSS8x8X3/820.5241S401HSS8x8X3/831262S401HSS8x8X3/833266S401HSS8x8X3/820240S401HSS8x8X3/820240S401HSS8x8X3/821242S401HSS8x8X3/821242S401HSS8x8X3/825125S401HSS8x8X3/822125S401HSS8x8X3/822125S401HSS8x8X3/822125S401HSS8x8X3/822125S401HSS8x8X3/822125S401HSS8x8X3/822125S401HSS8x8X3/822125S401HSS8x8X5/16236138S314HSS8x8X5/16216126S201w10x121217117S201w10x12121216232S201w10x121216232S201w10x121219119S201w10x121219119S201w10x121217117	s206	HSS8x8x1/4		35	4	140	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	s206	HSS8x8x1/4		30	10	300	440
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	S401	HSS8X8X3/8		20	2	40	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	S401	HSS8X8X3/8		17	6	102	
S401       HSS8X8X3/8       20.5       2       41         S401       HSS8X8X3/8       31       2       62         S401       HSS8X8X3/8       33       2       66         S401       HSS8X8X3/8       20       2       40         S401       HSS8X8X3/8       20       2       40         S401       HSS8X8X3/8       21       2       42         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X3/8       22       1       22       523         S414       HSS8X8X5/16       21       6       138       1         S201       w10x12       12       17.3333       1       17.3333         S201       w10x1	S401	HSS8X8X3/8		18	2	36	
S401       HSS8X8X3/8       31       2       62         S401       HSS8X8X3/8       33       2       66         S401       HSS8X8X3/8       20       2       40         S401       HSS8X8X3/8       21       2       42         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X5/16       23       6       138       33         S201       w10x12       12       17.3333       1       17.3333         S201       w10x12       12       7       2       14         S201       w10x12       12       7       2       14	S401	HSS8X8X3/8		20.5	2	41	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	S401	HSS8X8X3/8		31	2	62	
S401       HSS8X8X3/8       20       2       40         S401       HSS8X8X3/8       21       2       42         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X5/16       23       6       138       5314         HSS8X8X5/16       21       6       126       264         S201       w10x12       12       17.3333       1       17.3333         S201       w10x12       12       10       1       10         S201       w10x12       12       7       2       14         S201       w10x12       12       16       2       32         S201       w10x12       12       18       1       18         S201 </td <td>S401</td> <td>HSS8X8X3/8</td> <td></td> <td>33</td> <td>2</td> <td>66</td> <td></td>	S401	HSS8X8X3/8		33	2	66	
S401       HSS8X8X3/8       21       2       42         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X3/8       22       1       22       523         S314       HSS8X8X5/16       23       6       138	S401	HSS8X8X3/8		20	2	40	
S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X3/8       22       1       22       523         s314       HSS8X8X5/16       23       6       138       14         S8X8X5/16       21       6       126       264         S201       w10x12       12       17.3333       1       17.3333         S201       w10x12       12       10       1       10         S201       w10x12       12       7       2       14         S201       w10x12       12       7       2       14         S201       w10x12       12       16       2       32         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S201       w10x12       12       19<	S401	HSS8X8X3/8		21	2	42	
S401       HSS8X8X3/8       22       1       22         S401       HSS8X8X3/8       25       1       25         S401       HSS8X8X3/8       22       1       22       523         S401       HSS8X8X3/8       22       1       22       523         S314       HSS8X8X5/16       23       6       138	S401	HSS8X8X3/8		25	1	25	
\$401HS\$8X8X3/825125\$401HS\$8X8X3/822122523\$314HS\$8X8X5/16236138\$314HS\$8X8X5/16216126264\$201w10x121217.3333117.3333\$201w10x121220120\$201w10x121210110\$201w10x12127214\$201w10x121216232\$201w10x121216119\$201w10x121219119\$201w10x121217117\$201w10x12121919\$201w10x121217117\$202w10x12121919	S401	HSS8X8X3/8		22	1	22	
S401HSS8X8X3/822122523s314HSS8X8X5/16236138s314HSS8X8X5/16216126264S201w10x121217.3333117.3333S201w10x121220120S201w10x121210110S201w10x12127214S201w10x121216232S201w10x121216119S201w10x121219119S201w10x121217117S201w10x12121919	S401	HSS8X8X3/8		25	1	25	
s314       HSS8X8X5/16       23       6       138         s314       HSS8X8X5/16       21       6       126       264         S201       w10x12       12       17.3333       1       17.3333         S201       w10x12       12       20       1       20         S201       w10x12       12       10       1       10         S201       w10x12       12       7       2       14         S201       w10x12       12       16       2       32         S201       w10x12       12       16       2       32         S201       w10x12       12       18       1       18         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S201       w10x12       12       17       1       17         S201       w10x12       12       9       1       9       1	S401	HSS8X8X3/8		22	1	22	523
s314       HSS8X8X5/16       21       6       126       264         S201       w10x12       12       17.3333       1       17.3333         S201       w10x12       12       20       1       20         S201       w10x12       12       10       1       10         S201       w10x12       12       10       1       10         S201       w10x12       12       7       2       14         S201       w10x12       12       16       2       32         S201       w10x12       12       18       1       18         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S201       w10x12       12       9       1       9	s314	HSS8X8X5/16		23	6	138	
S201       w10x12       12       17.3333       1       17.3333         S201       w10x12       12       20       1       20         S201       w10x12       12       10       1       10         S201       w10x12       12       7       2       14         S201       w10x12       12       16       2       32         S201       w10x12       12       18       1       18         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S202       w10x12       12       9       1       9	s314	HSS8X8X5/16		21	6	126	264
S201       w10x12       12       20       1       20         S201       w10x12       12       10       1       10         S201       w10x12       12       7       2       14         S201       w10x12       12       16       2       32         S201       w10x12       12       16       2       32         S201       w10x12       12       18       1       18         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S202       w10x12       12       9       1       9	S201	w10x12	12	17.3333	1	17.3333	
S201       w10x12       12       10       1       10         S201       w10x12       12       7       2       14         S201       w10x12       12       16       2       32         S201       w10x12       12       16       2       32         S201       w10x12       12       18       1       18         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S202       w10x12       12       9       1       9	S201	w10x12	12	20	1	20	
S201       w10x12       12       7       2       14         S201       w10x12       12       16       2       32         S201       w10x12       12       18       1       18         S201       w10x12       12       19       1       19         S201       w10x12       12       17       1       17         S201       w10x12       12       9       1       9	S201	w10x12	12	10	1	10	
S201     w10x12     12     16     2     32       S201     w10x12     12     18     1     18       S201     w10x12     12     19     1     19       S201     w10x12     12     17     1     17       S202     w10x12     12     9     1     9	S201	w10x12	12	7	2	14	
S201     w10x12     12     18     1     18       S201     w10x12     12     19     1     19       S201     w10x12     12     17     1     17       S202     w10x12     12     9     1     9	S201	w10x12	12	16	2	32	
S201         w10x12         12         19         1         19           S201         w10x12         12         17         1         17           S202         w10x12         12         9         1         9	S201	w10x12	12	18	1	18	
S201         w10x12         12         17         1         17           S202         w10x12         12         9         1         9	S201	w10x12	12	19	1	19	
S202 w10x12 12 9 1 9	S201	w10x12	12	17	1	17	
	S202	w10x12	12	9	1	9	

Structural	Framing Schedule					
S202	w10x12	12	7	2	14	
S202	w10x12	12	15	2	30	
S202	w10x12	12	20	1	20	
S203	w10x12	12	7	1	7	
S203	w10x12	12	4	1	4	
S203	w10x12	12	15	4	60	
S203	w10x12	12	9	1	9	
S204approx	w10x12	12	7	1	7	
S204approx	w10x12	12	4	1	4	
S204approx	w10x12	12	15	4	60	
S204approx	w10x12	12	9	1	9	
S205	w10x12	12	7	1	7	
S205	w10x12	12	10	1	10	
S205	w10x12	12	7	2	14	
S205	w10x12	12	25	1	25	
S205	w10x12	12	9	1	9	
S205	w10x12	12	20	1	20	
S205	w10x12	12	15	1	15	480.3333
S201	w10x15	15	16	1	16	
S201	w10x15	15	19	1	19	
S202	w10x15	15	19	2	38	
S203	W10X15	15	19	2	38	
S204approx	W10X15	15	19	2	38	149
S201	w10x17	17	16	1	16	
S201	w10x17	17	19	5	95	
S205	w10x17	17	19	2	38	
s206	w10x17	17	30	5	150	299
	w10x19	19	8	1	8	
	w10x19	19	16	1	16	
	w10x19	19	15	2	30	
S201	w10x19	19	19	1	19	
S202	w10x19	19	19	12	228	
S203	W10X19	19	19	12	228	
S204approx	W10X19	19	19	12	228	
S205	w10x19	19	19	3	57	814
S201	w10x22	22	19	3	57	
S205	w10x22	22	19	7	133	
S205	w10x22	22	15	2	30	
s206	w10x22	22	35	2	70	
s206	w10x22	22	30	5	150	440
	w10x26	26	17	3	51	
S201	w10x26	26	19	3	57	
S202	w10x26	26	19	9	171	
S203	W10X26	26	19	9	171	
S204approx	W10X26	26	19	9	171	
S205	w10x26	26	19	9	171	792
s206	w10x30	30	35	1	35	35
S205	w10x33	33	19	1	19	19
S201	w10x45	45	18	1	18	
S201	w10x45	45	16	1	16	
S205	w10x45	45	19	1	19	53
S201	w10x49	49	19	2	38	
s206	w10x49	49	35	1	35	73
S201	w10x60	60	19	2	38	38

Structural	Framing Schedule					
S201	w12x14	14	17.333	3	51.999	
S201	w12x14	14	20	1	20	
S202	w12x14	14	9	1	9	
S203	w12x14	14	10	1	10	
S204approx	w12x14	14	10	1	10	
S205	w12x14	14	14	1	14	
S205	w12x14	14	14	1	14	
S205	w12x14	14	24	1	24	
s206	w12x14	14	30	4	120	
s206	w12x14	14	20	1	20	292.999
S201	w12x16	16	21	1	21	
S201	w12x16	16	21	1	21	
S201	w12x16	16	9.5	1	9.5	
S201	w12x16	16	16	1	16	
S202	w12x16	16	20	1	20	
S202	w12x16	16	22	1	22	
S203	w12x16	16	20	1	20	
S203	W12X16	16	20	1	20	
S204approx	w12x16	16	20	1	20	
S204approx	W12X16	16	20	1	20	
S205	w12x16	16	20	1	20	
S205	w12x16	16	20	1	20	
s206	w12x16	16	30	9	270	
s206	w12x16	16	20	1	20	519.5
S201	w12x19	19	17.333	6	103.998	
S201	w12x19	19	21	1	21	
S201	w12x19	29	14	1	14	
S205	w12x19	19	20	1	20	
s206	w12x19	19	30	14	420	
s206	w12x19	19	20	4	80	658.998
S202	w12x26	26	11	5	55	
s206	w12x26	26	30	1	30	
s206	w12x26	26	20	1	20	105
s206	w12x35	35	20	1	20	20
S201	w14x22	22	20	1	20	
S201	w14x22	22	21	2	42	
S201	w14x22	22	20	1	20	
S201	w14x22	22	14	1	14	
S202	w14x22	22	19	1	19	
S202	w14x22	22	22	3	66	
S202	w14x22	22	21	2	42	
S202	w14x22	22	30	2	60	
S203	w14x22	22	8	1	8	
S203	w14x22	22	16	3	48	
S203	W14X22	22	23	5	115	
S203	W14X22	22	20	2	40	
S203	w14x22	22	24	2	48	
S204approx	w14x22	22	8	1	8	
S204approx	w14x22	22	16	3	48	
S204approx	W14X22	22	23	5	115	
S204approx	W14X22	22	20	2	40	
S204approx	w14x22	22	24	2	48	
S205	w14x22	22	11	2	22	
S205	w14x22	22	24	1	24	

Structural	Framing Schedule					
S205	w14x22	22	23	1	23	
S205	w14x22	22	20	1	20	
S205	w14x22	22	30	1	30	
S205	w14x22	22	24	2	48	
S205	w14x22	22	22	2	44	
S205	w14x22	22	30	6	180	
s206	w14x22	22	35	10	350	
s206	w14x22	22	30	8	240	1782
	w14x34	34	30	1	30	
s206	w14x34	35	35	1	35	
s206	w14x34	34	30	4	120	185
s206	w14x43	43	35	1	35	
s206	w14x43	43	44	2	88	123
s206	w14x61	61	44	3	132	132
s206	w14x68	68	44	3	132	132
S201	w16x26	26	20	1	20	
S201	w16x26	26	23	1	23	
S201	w16x26	26	27	5	135	
S201	w16x26	26	30	2	60	
S201	w16x26	26	30	2	60	
S201	w16x26	26	14	2	28	
S201	w16x26	26	24	2	48	
S201	w16x26	26	30	2	60	
S201	w16x26	26	24	2	48	
S202	w16x26	26	21	1	21	
S202	w16x26	26	22	1	22	
S202	w16x26	26	22	1	22	
S202	w16x26	26	21	1	21	
S202	w16x26	26	30	11	330	
S202	w16x26	26	21	1	21	
S202	w16x26	26	23	1	23	
S203	w16x26	26	30	1	30	
S203	w16x26	26	20	1	20	
S203	w16x26	26	30	1	30	
S203	W16X26	26	23	2	46	
S203	W16X26	26	30	12	360	
S204approx	w16x26	26	30	1	30	
S204approx	w16x26	26	20	1	20	
S204approx	w16x26	26	30	1	30	
S204approx	W16X26	26	23	2	46	
S204approx	W16X26	26	30	12	360	
S205	w16x26	26	30	1	30	
S205	w16x26	26	20	1	20	
S205	w16x26	26	11	1	11	
S205	w16x26	26	23	2	46	
S205	w16x26	26	21	3	63	
S205	w16x26	26	20	1	20	
S205	w16x26	26	19	1	19	
S205	w16x26	26	27	2	54	
S205	w16x26	26	30	6	180	
s206	w16x26	26	35	4	140	2497
S201	w16x31	31	20	1	20	
S201	w16x31	31	30	5	150	
S201	w16x31	31	24	1	24	

Structural	Framing Schedule					
S201	w16x31	31	18	1	18	
S201	w16x31	31	18	1	18	
S201	w16x31	31	30	1	30	
S201	w16x31	31	30	12	360	
S202	w16x31	31	19	4	76	
S202	w16x31	31	22	1	22	
S202	w16x31	31	30	32	960	
S203	w16x31	31	15	1	15	
S203	w16x31	31	20	1	20	
S203	W16X31	31	20	5	100	
S203	W16X31	31	30	34	1020	
S204approx	w16x31	31	15	1	15	
S204approx	w16x31	31	20	1	20	
S204approx	W16X31	31	20	5	100	
S204approx	W16X31	31	30	34	1020	
S205	w16x31	31	9	1	9	
S205	w16x31	31	30	1	30	
S205	w16x31	31	20	5	100	
S205	w16x31	31	28	1	28	
S205	w16x31	31	30	13	390	4545
S201	w16x36	36	25	1	25	10 10
S205	w16x36	36	14	1	14	
S205	w16x36	36	30	1	30	69
S203	w16x40	40	23	3	69	07
S201	w16x40	40	16	1	16	85
S201	w16x67	40 67	23	1	23	23
S201	w18x130	130	30	5	150	150
S205	w18x24	24	10	1	10	10
S203	w18x35	35	20	1	20	10
S201	w18x35	35	20	1	20	
S201	w18x35	35	27	1	27	
S201	w18x35	35	20	1	20	
S201	w18x35	35	19	1	19	
S201	w18x35	35	11	4	44	
S201	w18x35	35	20	3	60	
S201	w18x35	35	35	1	35	
S201	w18x35	35	30	1	30	
S202	w18x35	35	19	1	19	
S202	w18x35	35	19	1	19	
S202	w18x35	35	35	1	35	
S202	w18x35	35	30	4	120	
S202	w18x35	35	35	1	35	
S202	w18x35	35	33	1	33	
\$203	W18X35	35	20	1	20	
S203	W18X35	35	19	1	19	
\$203	W18X35	35	25	1	25	
S203	W18X35	35	35	1	35	
S203	w18x35	35	33	1	33	
S204approx	W18X35	35	20	1	20	
S204approv	W18X35	35	10	1	10	
S204approx	W18X35	35	25	1	25	
S204approv	W18X35	35	35	1	35	
\$20+app10x	w18x35	35	30	1	30	
\$205	w10x33	25	10	1	10	
5205	WIOXJJ	33	19	1	17	

Structural	Framing Schedule					
S205	w18x35	35	27	3	81	
S205	w18x35	35	22	1	22	922
S201	w18x40	40	20	1	20	,
S201	w18x40	40	22	2	44	
S201	w18x40	40	30	1	30	
S201	w18x40	40	35	1	35	
S201	w18x40	40	33	1	33	
S202	w18x40	40	23	1	23	
S202	w18x40	40	19	1	19	
S202	w18x40	40	23	1	23	
S202	w18x40	40	30	4	120	
S202	w18x40	40	24	1	24	
S202	w18x40	40	35	1	35	
S202	w18x40	40	23	1	23	
S203	w18x40	40	35	1	35	
S203	W18X40	40	23	1	23	
S203	W18X40	40	19	1	19	
S203	W18X40	40	25	1	25	
S203	W18X40	40	30	<u>і</u> Л	120	
S203	W18X40	40	24	4	24	
5205 \$204approv	w10A40	40	24	1	24	
S204approx	w10X40	40	25	1	25	
S204approx	W18X40	40	33	1	33	
S204approx	W18X40	40	10	1	23	
S204approx	W18A40	40	19	1	19	
S204approx	W18X40	40	25	1	25	
S204approx	W18X40	40	30	4	120	
S204approx	W18X40	40	24	1	24	
S205	W18X40	40	31	1	31	
S205	W18X40	40	15	1	15	
S205	W18X40	40	24	1	24	
S205	w18x40	40	24	1	24	
S205	w18x40	40	22	1	22	1510
S205	w18x40	40	30	15	450	1510
S202	w18x46	46	30	3	<u>90</u>	
S202	W18X46	46	35	2	/0	
S203	W18X46	46	30	2	60	
S203	W18X46	46	24	1	24	
S203	W18X46	46	35	2	70	
S204approx	W18X46	46	30	2	60	
S204approx	W18X46	46	24	1	24	1.00
S204approx	W18X46	46	35	2	70	468
S201	w18x50	50	30	1	30	
S201	w18x50	50	30	1	30	
S202	w18x50	50	19	1	19	
S202	w18x50	50	30	1	30	
S203	w18x50	50	38	1	38	
S203	W18X50	50	30	1	30	
S204approx	w18x50	50	38	1	38	
S204approx	W18X50	50	30	1	30	245
S202	w18x55	55	29	1	29	
S205	w18x55	55	35	1	35	64
S203	w18x60	60	40	1	40	
S203	w18x60	60	34	1	34	
S204approx	w18x60	60	40	1	40	

Structural	Framing Schedule					
S204approx	w18x60	60	34	1	34	148
S203	W18X71	71	30	1	30	
S204approx	W18X71	71	30	1	30	60
S205	w18x86	86	27	1	27	27
S201	w21x101	101	17	1	17	17
S205	w21x122	122	30	1	30	30
S201	w21x40	40	20	1	20	
S201	w21x44	44	30	1	30	
S201	w21x44	44	30	1	30	
S201	w21x44	44	30	2	60	
S201	w21x44	44	22	1	22	
S201	w21x44	44	35	1	35	
S201	w21x44	44	37	1	37	
S202	w21x44	44	29	2	58	
S202	w21x44	44	23	1	23	
S203	W21X44	44	30	2	60	
S203	W21X44	44	25	1	25	
S204approx	W21X44	44	30	2	60	
S204approx	W21X44	44	25	1	25	
S205	w21x44	44	22	1	22	
S205	w21x44	44	30	5	150	657
S201	w21x50	50	21	1	21	
S201	w21x50	50	30	2	60	
S201	w21x50	50	40	1	40	
S202	w21x50	50	29	5	145	
S202	w21x50	50	10	1	10	
S202	w21x50	50	23	1	23	
S202	w21x50	50	30	5	150	
S202	w21x50	50	30	2	60	
S203	W21X50	50	30	7	210	
S203	W21X50	50	25	1	25	
S203	W21X50	50	30	5	150	
S203	W21X50	50	30	2	60	
S204approx	W21X50	50	30	7	210	
S204approx	W21X50	50	25	1	25	
S204approx	W21X50	50	30	5	150	
S204approx	W21X50	50	30	2	60	
S205	w21x50	50	30	2	60	1459
S201	w21x55	55	35	1	35	35
S201	w21x62	62	24	1	24	24
S205	w21x93	93	35	1	35	35
S201	w24x103	103	32	1	32	
S201	w24x103	103	29	1	29	61
S201	w24x55	55	30	1	30	
S201	w24x55	55	29	1	29	
S201	w24x55	55	12	1	12	
S201	w24x55	55	27	1	27	
S201	w24x55	55	30	1	30	
S201	w24x55	55	30	1	30	
S202	w24x55	55	29	5	145	
S202	w24x55	55	23	1	23	
S202	w24x55	55	35	1	35	
S202	w24x55	55	30	1	30	
S202	w24x55	55	8	1	8	

Structural	Framing Schedule					
S203	w24x55	55	35	1	35	
S203	W24X55	55	30	3	90	
S203	W24X55	55	25	1	25	
S203	W24X55	55	30	2	60	
S204approx	w24x55	55	35	1	35	
S204approx	W24X55	55	30	3	90	
S204approx	W24X55	55	25	1	25	
S204approx	W24X55	55	30	2	60	
S205	w24x55	55	23	1	23	
S205	w24x55	55	30	5	150	992
S202	w24x62	62	29	1	29	
S205	w24x62	62	35	2	70	
S205	w24x62	62	30	5	150	249
S202	w24x68	68	29	1	29	
S202	w24x68	68	40	1	40	
S203	W24X68	68	30	2	60	
S204approx	W24X68	68	30	2	60	
S205	w24x68	68	30	1	30	219
S202	w24x76	76	30	1	30	30
S201	w27x84	84	22	2	44	
S202	w27x84	84	23	1	23	67
S205	w30x108	108	30	1	30	
S205	w30x108	108	30	1	30	60
S203	W30X116	116	30	1	30	
S204approx	W30X116	116	30	1	30	60
S201	w30x124	124	30	1	30	30
S201	w30x191	191	28	1	28	
S201	w30x191	191	30	1	30	
S201	w30x191	191	30	1	30	88
S201	w30x90	90	28	1	28	28
S202	w30x99	99	30	1	30	
S205	w30x99	99	35	1	35	65
S203	W33X118	118	30	1	30	
S204approx	W33X118	118	30	1	30	60
S202	w33x130	130	29	1	29	
S203	W33X130	130	30	1	30	
S204approx	W33X130	130	30	1	30	
S205	w33x130	130	30	1	30	119
S202	w36x135	135	30	1	30	
S205	w36x135	135	35	1	35	65
S202	w40x149	149	35	1	35	
S203	W40X149	149	35	1	35	
S204approx	W40X149	149	35	1	35	105
	w6x12	12	6	1	6	
	w6x12	12	11	3	33	39
	w6x15	15	8	2	16	16
	w6x20	20	12	2	24	
	w6x20	20	13	1	13	
	w6x20	20	10	1	10	47
	w6x9	9	3	1	3	
	w6x9	9	9	4	36	
	w6x9	9	8	2	16	
	w6x9	9	7	4	28	
	w6x9	9	6	4	24	107

Structura	Framing Schedule					
S201	w8x10	10	5.5	2	11	
S201	w8x10	10	6.5	1	6.5	
S201	w8x10	10	13	1	13	
S201	w8x10	10	7	1	7	
S201	w8x10	10	8	3	24	
S201	w8x10	10	6	6	36	
S201	w8x10	10	8	7	56	
S201	w8x10	10	10	2	20	
S201	w8x10	10	9.5	1	9.5	
S201	w8x10	10	4	1	4	
S201	w8x10	10	10	2	20	
S201	w8x10	10	4.5	2	9	
S201	w8x10	10	14	1	14	
S201	w8x10	10	6	7	42	
S201	w8x10	10	10.5	3	31.5	
S201	w8x10	10	7	2	14	
S201	w8x10	10	5	4	20	
S201	w8x10	10	10	1	10	
S201	w8x10	10	8	2	16	
S201	w8x10	10	6	1	6	
S201	w8x10	10	7	3	21	
S201	w8x10	10	13	1	13	
S201	w8x10	10	12	1	12	
S201	w8x10	10	17	1	17	
S201	w8x10	10	10	1	10	
S201	w8x10	10	7	1	7	
S201	w8x10	10	16	1	16	
S201	w8x10	10	11	2	22	
S201	w8x10	10	10	1	10	
S201	w8x10	10	12	3	36	
S201	w8x10	10	10	2	20	
S201	w8x10	10	6	1	6	
S201	w8x10	10	7	1	7	
S201	w8x10	10	5	2	10	
S202	w8x10	10	11	1	11	
S202	w8x10	10	8	1	8	
S202	w8x10	10	7	1	7	
S202	w8x10	10	11	2	22	
S202	w8x10	10	12	3	36	
S202	w8x10	10	4	1	4	
S202	w8x10	10	7	2	14	
S202	w8x10	10	10	1	10	
S202	w8x10	10	11	1	11	
S202	w8x10	10	5	3	15	
S202	w8x10	10	10	1	10	
S202	w8x10	10	6	1	6	
S202	w8x10	10	15	1	15	
S202	w8x10	10	3	3	9	
S202	w8x10	10	14	1	14	
S202	w8x10	10	2.5	1	2.5	
S202	w8x10	10	10	2	20	
S202	w8x10	10	4	1	4	
S202	w8x10	10	15	1	15	
8202	w8x10	10	10	1	10	

Structural	Framing Schedule					
S202	w8x10	10	16	1	16	
S202	w8x10	10	7	1	7	
S202	w8x10	10	8	2	16	
S202	w8x10	10	9	1	9	
S203	w8x10	10	8	1	8	
S203	w8x10	10	4	2	8	
S203	w8x10	10	5	3	15	
S203	w8x10	10	7	1	7	
S203	w8x10	10	16	1	16	
S203	w8x10	10	8	1	8	
S203	w8x10	10	12	3	36	
S203	w8x10	10	11	2	22	
S203	w8x10	10	10	1	10	
S203	w8x10	10	7	1	7	
S203	w8x10	10	17	1	17	
S203	w8x10	10	10	1	10	
S203	w8x10	10	10	2	30	
S203	w8x10	10	13	1	11	
S203	wox10 w8x10	10	0	1	11	
S203	wox10 w8x10	10	9	2	10	
S203	wox10 w8x10	10	0	1	0	
S205	wox10	10	4	4	20	
S203	W8X10	10	10	2	20	
S203	W8X10	10	/	3	21	
S203	W8X10	10	1/	1	17	
S203	W8X10	10	5	3	15	
S203	W8X10	10	0	1	0	
S203	W8X10	10	10	1	10	
S203	W8X10	10	12	1	12	
S203	W8X10	10	19	1	19	
S204approx	w8x10	10	8	1	8	
S204approx	w8x10	10	4	2	8	
S204approx	w8x10	10	5	3	15	
S204approx	w8x10	10	1	1	1	
S204approx	w8x10	10	16	l	16	
S204approx	w8x10	10	8	1	8	
S204approx	w8x10	10	12	1	12	
S204approx	w8x10	10	11	2	22	
S204approx	w8x10	10	10	1	10	
S204approx	w8x10	10	7	1	7	
S204approx	w8x10	10	17	1	17	
S204approx	w8x10	10	10	1	10	
S204approx	w8x10	10	15	2	30	
S204approx	w8x10	10	11	1	11	
S204approx	w8x10	10	9	2	18	
S204approx	w8x10	10	8	1	8	
S204approx	w8x10	10	4	4	16	
S204approx	w8x10	10	10	2	20	
S204approx	w8x10	10	7	3	21	
S204approx	w8x10	10	17	1	17	
S204approx	w8x10	10	5	3	15	
S204approx	w8x10	10	6	1	6	
S204approx	W8X10	10	10	1	10	
S204approx	W8X10	10	12	1	12	
S204approx	W8X10	10	19	1	19	

Structural	Framing Schedule					
S205	w8x10	10	10	1	10	
S205	w8x10	10	13	1	13	
S205	w8x10	10	10	8	80	
S205	w8x10	10	8	5	40	
S205	w8x10	10	6	2	12	
S205	w8x10	10	9	1	9	
S205	w8x10	10	4	2	8	
S205	w8x10	10	7	4	28	
S205	w8x10	10	17	1	17	
S205	w8x10	10	12	1	12	
S205	w8x10	10	7	1	7	
S205	w8x10	10	11	1	11	
S205	w8x10	10	2	1	2	
S205	w8x10	10	14	1	14	
S205	w8x10	10	5	1	5	
S205	w8x10	10	11	1	11	
S205	w8x10	10	5	1	5	
S205	w8x10	10	8	2	16	
S205	w8x10	10	4	2	8	
S205	w8x10	10	2	1	2	
S205	w8x10	10	15	1	15	
s206	w8x10	10	3	24	72	
s206	w8x10	10	5	6	30	
s206	w8x10	10	6	1	6	2011
S201	w8x15	15	8	4	32	
S201	w8x15	15	10	2	20	
S205	w8x15	15	6	3	18	
S205	w8x15	15	11	1	11	
S205	w8x15	15	10	1	10	91
	w8x21	21	15	2	30	30
S203	w8x24	24	10	1	10	
S204approx	w8x24	24	10	1	10	20

Struct	tructural Column Schedule					
Plan	Туре	Weight	Length	Count	Total Length	Total Lenth of Type
	HSS10X10X1/4		9	6	54	54
S310	HSS6X6X1/2		34	1	34	34
S310	HSS6X6X1/4		42	1	42	66
S310	HSS6X6X1/4		24	1	24	
	HSS6X6X3/16		42	1	42	42
	HSS7X7X1/4		2	6	12	12
S310	HSS8X8X1/4		16	1	16	16
	HSS8X8X3/8		42	1	42	42
	HSS8X8X5/16		42	1	42	42
S310	W10X33	33	24	1	24	384
S310	W10X33	33	18	1	18	
	W10X33	33	38	2	76	
	W10X33	33	18	3	54	
	W10X33	33	20	1	20	
	W10X33	33	24	7	168	
	W10X33	33	12	2	24	
S310	W10X49	49	34	1	34	240
	W10X49	49	38	1	38	
	W10X49	49	50	1	50	
	W10X49	49	16	1	16	
	W10X49	49	34	3	102	
	W10X54	54	16	1	16	16
S310	W10X68	68	52	2	104	172
	W10x68	68	34	2	68	
S310	W12X40	40	24	1	24	160
	W12X40	40	18	3	54	
	W12X40	40	34	1	34	
	W12X40	40	24	2	48	
	W12X45	45	24	1	24	24
	W12X50	50	24	5	120	120
	W12X53	53	24	2	48	48
S310	W12X65	65	52	1	52	90
	W12X65	65	38	1	38	
S310	W12X72	72	18	1	18	18
	W12X79	79	38	1	38	326
	W12X79	79	50	1	50	
	W12X79	79	34	7	238	
	W12X87	87	38	1	38	38
S310	W14X109	109	52	4	208	246
	W14X109	109	38	1	38	
S310	W14X124	124	52	1	52	52
S310	W14X132	132	52	5	260	260
S310	W14X145	145	52	1	52	52
S310	W14X159	159	52	2	104	104
\$310	W14X176	176	52	1	52	52
\$310	W14X43	43	24	1	24	108
	W14X43	43	18	2	36	
	W14X43	43	24	2	48	
	W14X48	48	24	1	24	24
	W14X53	53	24	2	48	48
\$310	W14X61	61	38	1	38	386
	W14X61	61	24	4	96	
	W14X61	61	42	5	210	
	W14X61	61	42	1	42	
	W14X63	63	38	1	38	38
	W14X68	68	42	4	168	168
	W14X74	74	42	2	84	84
	W14X82	82	42	2	84	84
\$310	W14X90	90	52	3	156	324
	W14X90	90	38	2	76	
1	W14X90	90	50	1	50	
	W14x90	90	42	1	42	
\$310	W14X99	99	52	2	104	104

Raduis	Area	Depth	CY
3	7.068583	35	9.162979
3	7.068583	40	10 47198
	7.068583	35	9 162979
	7.068583	35	9 162979
	7.068583	35	9.162979
	7.000303	45	9.102979
	7.000303	43	0.162070
3	7.008383	55	9.102979
3	7.068583	52.5	13./444/
3	7.068583	40	10.4/198
3	7.068583	35	9.162979
3	7.068583	35	9.162979
3	7.068583	35	9.162979
3	7.068583	55	14.39897
3	7.068583	55	14.39897
3	7.068583	40	10.47198
3	7.068583	35	9.162979
3	7.068583	40	10.47198
3	7.068583	35	9.162979
3	7.068583	45	11.78097
3	7.068583	50	13.08997
3	7.068583	52.5	13.74447
3	7.068583	50	13.08997
3	7.068583	50	13.08997
3	7.068583	35	9.162979
3	7.068583	45	11,78097
3	7.068583	50	13 08997
1	7.068583	50	13 08997
	7.068583	50	13 08997
1	7.068583	50	13.08997
3	7.068583	35	9 162979
	7.068583	45	11 78007
	7.068583	50	13 08007
2	7.068582	50	12.08007
	7.000303	50	12.08007
2	7.000303	50	12.08007
	7.008383	30	11.78007
3	7.008383	43	11.78097
1	7.008383	45	12.0007
	7.008583	50	13.0899/
3	7.008583	50	13.0899/
	7.068583	50	13.08997
3	7.068583	50	13.08997
3	7.068583	45	11.78097
3	7.068583	50	13.08997
3	7.068583	55	14.39897
3	7.068583	50	13.08997
3	7.068583	50	13.08997
3	7.068583	30	7.853982
3	7.068583	30	7.853982
3	7.068583	30	7.853982
3	7.068583	35	9.162979
3	7.068583	45	11.78097
3	7.068583	45	11.78097
3	7.068583	35	9.162979
3	7.068583	35	9.162979
3	7.068583	35	9.162979
3	7.068583	30	7.853982
	TOTAL	2415	632 2455
	LUINL	2413	052.2455

Tons of rebar 19.3442





Wednesday, October 28, 2009



Wednesday, October 28, 2009