Project Background

A. Client Information

The owner of this project is Lancaster General Hospital, a non-profit hospital with multiple facilities throughout the Lancaster region. This project is part of their pre-planned growth, using existing shell space within the hospital. This project is one of several currently in progress within the hospital and the second shell space fit-out that Benchmark Construction Company Inc. has worked on in the last year. The first of which was a fit-out of a 30,000 ft^2 shell space on the 1^{st} floor.

Since LGH is a non-profit hospital, the cost of projects is very important to them. Once a budget for a given project is created and is approved the construction costs must not exceed that budget. This can be difficult in a very-high tech project such as this, with high quality standards and tight schedule restrictions. Quality of finishes and equipment are very important to the hospital due to the manner of work that will take place in this space once completed. They hold strict requirements on flooring finishes and wall protection due to the near constant rolling of beds and medical equipment throughout the hospital. Schedules are fast paced and face stoppages due to emergency situations that may arise at the hospital as well as by the helicopters landing on the landing pad located on the roof adjacent to the shell space and cardiac elevator sites. These are coordinated via radio with hospital staff and Lancaster County Communications. However on-time completion of work is still expected and penalties can be

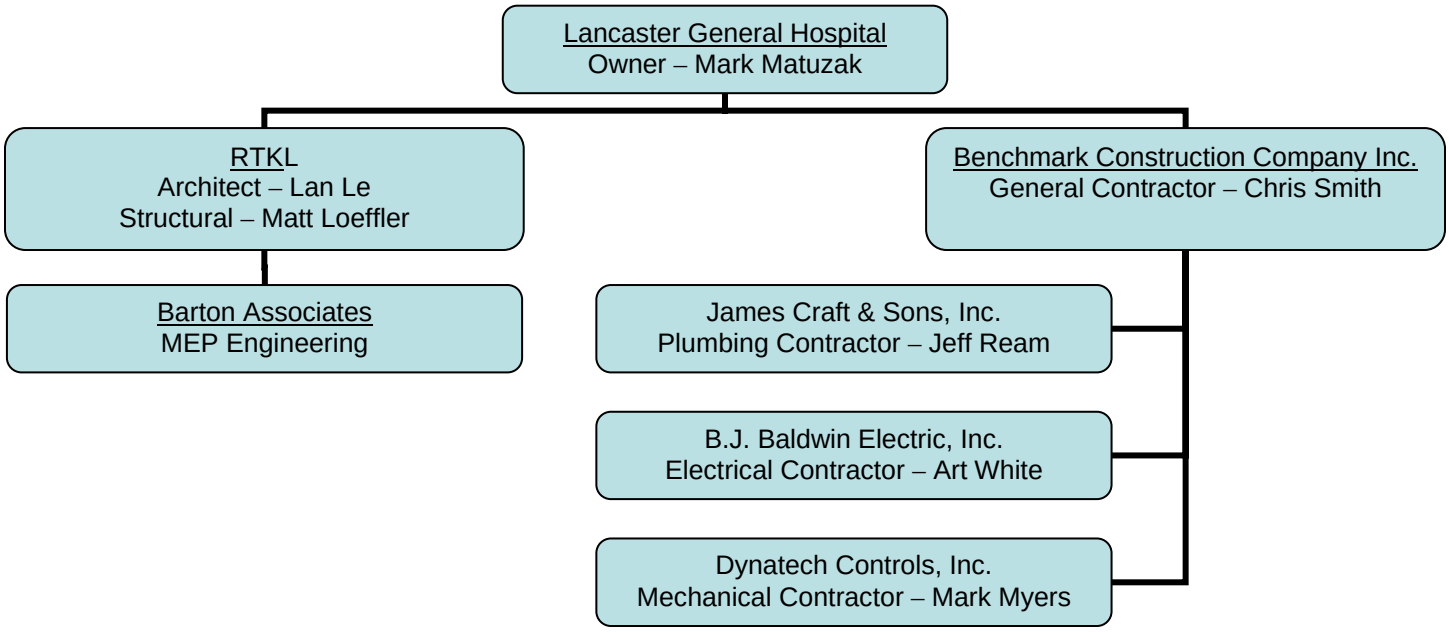
applied for late finishes as per the contract. Safety expectations are extremely high when working in the hospital. Safety concerns not only apply to the construction workers on site but also to the patients and staff that are often in close proximity to construction sites. These safety requirements are monitored by hospital safety staff as well has Department of Health safety inspections. Some requirements include Infection Control Risk Assessment (ICRA) partitions creating a barrier between construction space and occupied space. As well as creating negative pressure in construction spaces so that no dust or possible air born contaminants are pushed out into the occupied spaces. This is done by using negative air machines inside the construction space equipped with hepa filters that draw air from the space and force it outside.

This project is being completed inside an occupied, active hospital leading to the fact that there are dual occupancy requirements throughout the entire project. This is further complicated by the fact that there are occupied patient rooms directly below the 5th floor making through slab electrical and mechanical tie-ins even more complicated. Having this dual occupancy leads to restrictions of noise and vibration that would disturb patients or doctors and the sensitive equipment that they use. The hospital also restricts construction personnel traffic from entering the occupied corridors whenever possible. It is the hospitals wishes to make it appear that there is no construction going on at the hospital whenever possible.

The keys to completing this project to the owner's satisfaction go along with their expectations discussed in the previous paragraph. They expect the highest quality facility that can be created in a short period of time within the given budget. This is a common expectation of most owners' but is complicated by high-technology requirements. There are outside agencies that are involved in the construction process of healthcare facilities and they must also be satisfied in order for this project to be considered a success.

B. Project Delivery System

This project is being delivered through a design-bid-build method, utilizing a general contractor that works with the internal project managers from the hospital. This approach is used due to the experience of the owner in construction and the budget, schedule and quality constraints. Benchmark Construction Company Inc. was the only GC to bid the job due to their longtime experience and relationship with the owner; however it was competitively bid to subcontract/vendor marketplace.



The architect was hired by the owner for design and engineering services and held a contract directly with the owner. The architect utilized an in house engineer to complete the small amount of structural design for the project; however they subcontracted out the design of the MEP systems to Barton Associates. The

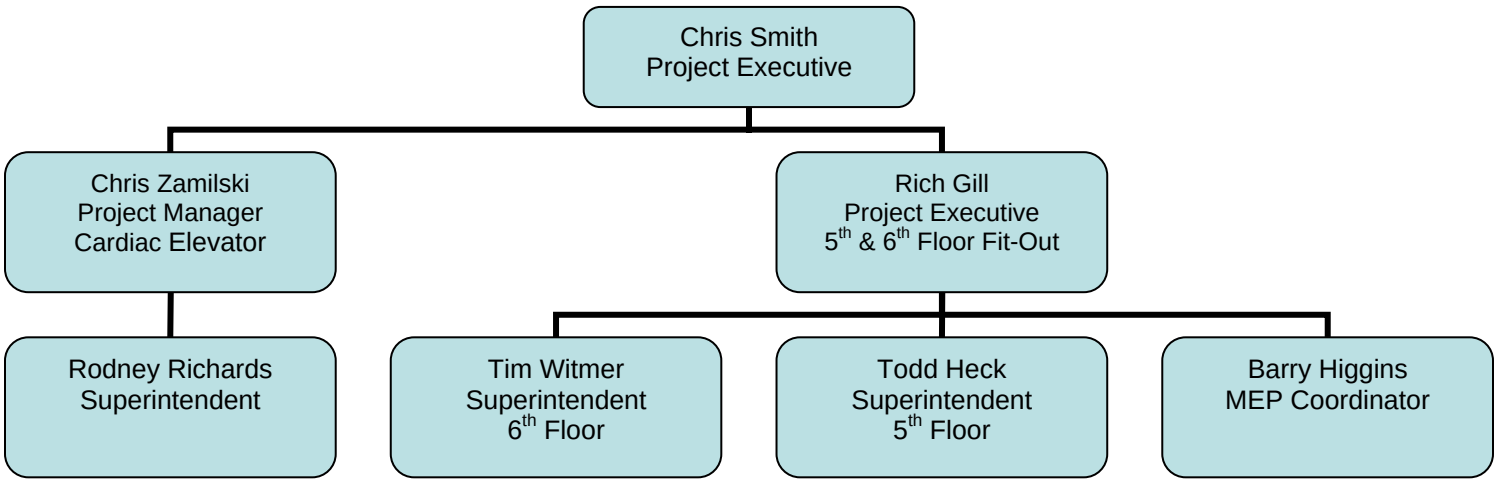
general contractor was selected due to their experience and relationship with work for the owner through a negotiated bid. They hold a guaranteed maximum price (GMP) contract (AIA A121) and (AIA A201) with the owner. The general contractor competitively bid the subcontractor/vendor marketplace. The subcontractors and vendors selected hold a typical AIA 111 contract directly with the general contractor.

There are no bonds required by the owner for this project. Insurance requirements are as follows contractor's liability insurance including workers compensation, comprehensive or commercial general liability, contractual liability, personal injury, business auto liability and umbrella excess liability. Owner's liability insurance including bodily injury, property damage and personal injury. All insurance coverage's shall be provided by insurance companies having policy holder ratings of no lower than "A" and financial ratings not lower than "XII" in the Best's Insurance Guide, latest edition in effect as of the date of the contract.

These contract types seem to be appropriate for this project allowing for less risk to be taken by the general contractor with a GMP contract meaning that there will be less contingency built into the price. This type of contract also allows for any savings on the project to go to the owner at which time he can decide who if anyone to share them with. A design-bid-build delivery method also benefits the owner in this type of high-technology high quality project, allowing for competitive bidding on a nearly complete design package.

C. Staffing Plan

The organizational structure for the general contractor starts with Chris Smith a project executive who oversees all projects with Lancaster General Hospital allowing for a strong working relationship to be developed. The two projects, 5th and 6th floor fit-out and cardiac elevator, are then split with Chris Zamilski a project manager running the cardiac elevator project and Rich Gill a project executive running the 5th and 6th floor fit-out project. Under Chris Zamilski is Rodney Richards who is a superintendent and will be responsible for any laborers and subcontractors on-site. Rich Gill has two superintendents under him one for each of the two floors as well as Barry Higgins who is the on-site MEP coordinator for Benchmark.



D. Local Conditions

The preferred method of construction in the region for commercial construction is steel structure with cast in place concrete slab on composite metal deck. This is the method of choice on the existing building containing the shell space that will be fit-out during this project as well as the rest of the hospital. This method fits into the local preferences for construction and also allows for open floor plans that are required for a hospital setting. Layout of the space can be easily changed by moving partition walls as the requirements of the hospital change allowing them to adapt to current needs.

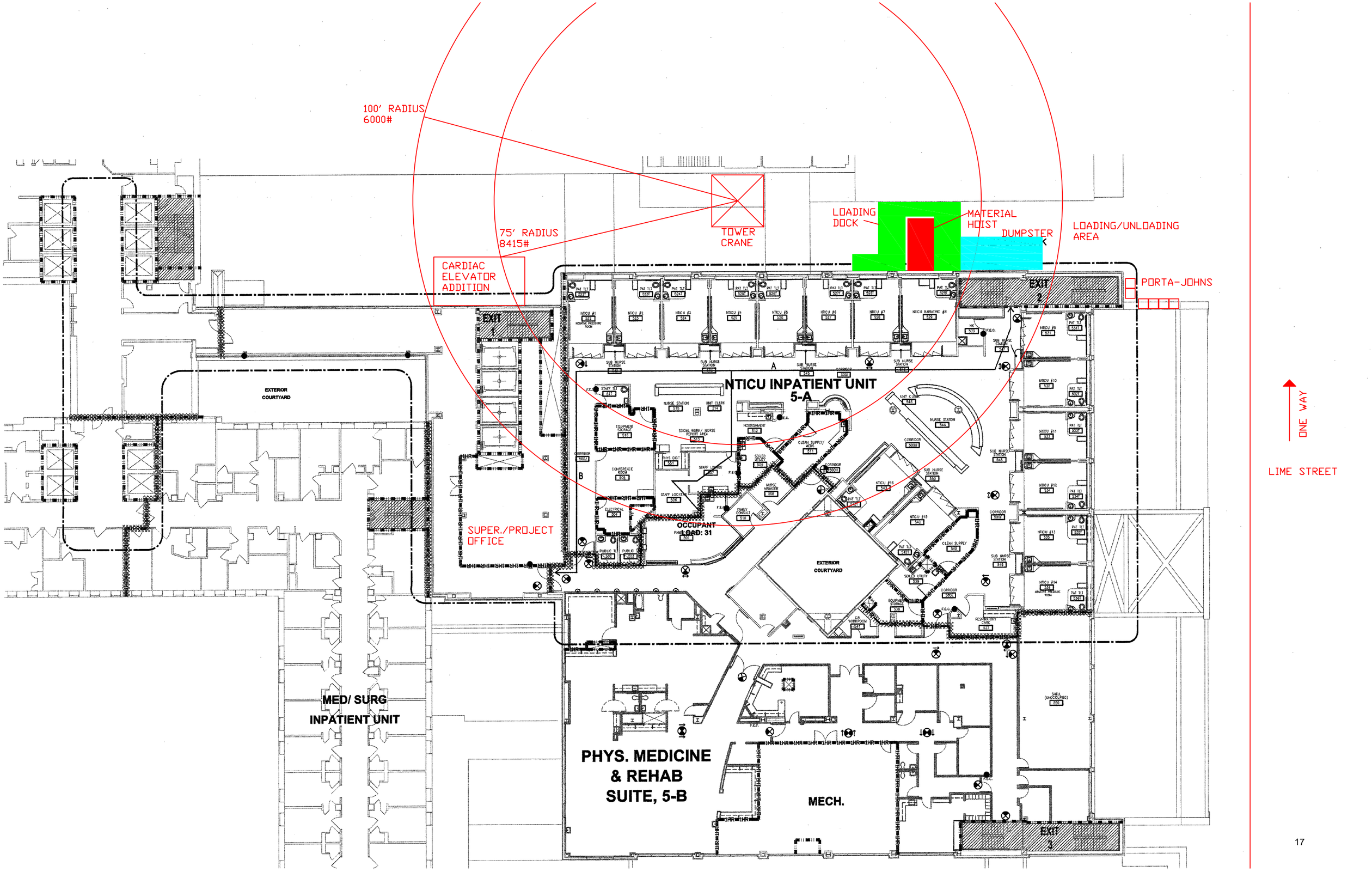
Construction parking is not readily available in this urban site that is surrounded on three sides by tightly grouped residential row homes. Offsite parking has been acquired several blocks away at a local business and construction personnel are bused in using a construction van furnished by the general contractor. There are several parking garages on-site including one on the ground floor below the project site, however these spaces are reserved for hospital staff and no construction vehicle are allowed.

Trash and recycled materials are placed in dumpsters located at ground level below the material hoist. This allows for the waste to be removed directly from the project site without having to travel through the occupied space of the hospital. Since eliminating the spread of dust and construction debris to occupied areas is extremely important to the hospital and its patients this means of waste removal is crucial to owner satisfaction.

The only phase of this project that does not take place in an existing shell space is the construction of the cardiac elevator. Due to this, soil and subsurface water conditions only apply to this phase. The soil that will be excavated for the concrete footing that will support the elevated elevator shaft is clean fill that was backfilled against the existing building. Ground water levels are located below the excavation depth and will have no impact in this project. The only concern during this excavation would be underground utilities and sanitary lines that run to and from the existing building, however, these concerns were alleviated by plant engineering documents from the hospital and by the local municipality identifying no existing obstructions.

E. Site Layout Planning

The map above shows a large scale layout of the project location and surrounding areas including the off site construction parking lot that will be used for the duration of the project. Located below on ***page 17*** is a scaled site plan drawing. This view allows the location of the material hoist, dumpsters, loading/unloading zone, tower crane and cardiac elevator to be shown in relation to the 5th and 6th floor fit-out. As you can see the site is surrounded by streets and existing buildings hindering maneuverability. Deliveries are further complicated because Lime Street runs directly in front of the project site is a one way street.


100' RADIUS
6000#
75' RADIUS
8415#
TOWER
CRANE
LOADING
DOCK
MATERIAL
HOIST
DUMPSTER
LOADING/UNLOADING
AREA
PORTA-JOHNS
CARDIAC
ELEVATOR
ADDITION
EXIT
1
EXIT
2
EXIT
3
NTICU INPATIENT UNIT
5-A
EXTERIOR
COURTYARD
SUPER./PROJECT
OFFICE
OCCUPANT
LOAD: 31
MED/ SURG
INPATIENT UNIT
PHYS. MEDICINE
& REHAB
SUITE, 5-B
MECH.
SHELL
(UNOCCUPIED)
ONE WAY
LIME STREET

The site for this project is condensed to the small area between two existing buildings with access to the loading/unloading area coming from a one way street. Another complicating factor is the location of the helicopter landing pad for the hospital on one of the adjacent rooftop which can be seen in Figure 1.

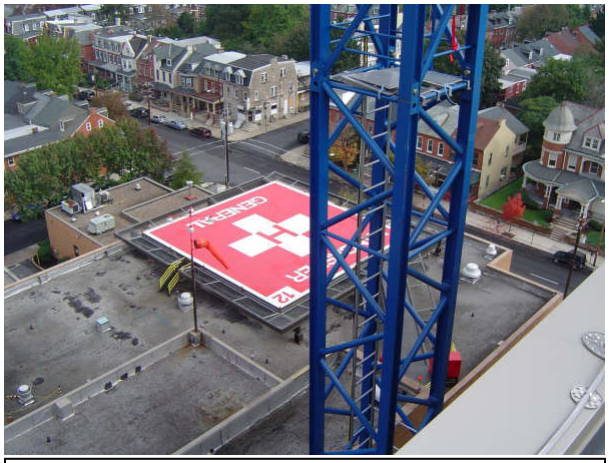


Figure 1 - Tower Crane w/ Helicopter Pad

Site Layout:

Because construction personnel and material are prohibited from using the occupied areas of the hospital a material hoist is utilized for access to the spaces on the 5th and 6th floor. This makes transporting labor and materials easier but takes up valuable space in this restricted site. In Figure 2 you can see the placement of the material hoist and loading dock as well as some material storage behind the material hoist. Because the hoist traveled past occupied patient rooms on its way to the project floors hours of operation were restricted to 7am – 7pm.

Figure 2 - Material Hoist/Loading Dock

Due to the lack of space on site and since the general contractor does a large amount of work at the hospital they are allocated a large room in the basement of the hospital that has been split into a conference room and two small offices for on site personnel. For superintendent office space the mechanical rooms on the 5th and 6th floors are utilized due to their close proximity to the project space.

Figure 3 - Loading/Unloading Zone (1)

Figure 4 - Loading/Unloading Zone (2)

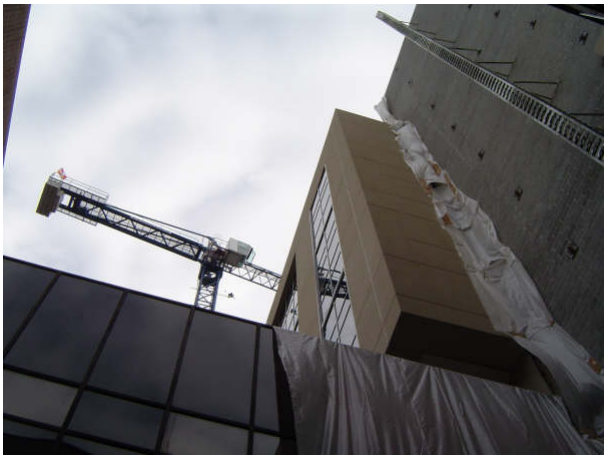


Figure 5 - Cardiac Elevator Addition Site

In Figures 3 & 4 you can see the loading/unloading zone that is set up just off of Lime St. which is a one way street. This tight space is made smaller by the placement of the dumpster just off the loading dock. Figure 4 shows a drywall delivery being made using a boom truck to set the drywall on the loading dock. Deliveries must be coordinated so that there is no more than one large truck making a delivery at any time because there is no staging area available.

Figures 5 & 6 show the location of the cardiac elevator addition behind the loading dock area with several elevated walkways, one on either side of the elevator. Figure 5 is a picture shows were the façade of the existing building has been removed in preparation of the elevator construction. Figure 6 shows the self climbing scaffold that was used to remove the façade. The scaffold will need to be removed for the structural phase of the elevator addition but will be brought back in for the placement of the EIFS panels.

Figure 7 shows the location of the porta-johns that are used by all construction personnel on site. The use of these facilities requires workers to travel

down the material hoist taking excess time. This is not an optimum set up but do to the restricted site options for placement was limited as well as the inability to use the facilities located in the hospital caused this to be the only option available.

Figure 6 - Self Climbing Scaffold

Figure 8 and Table 1 shoe the tower crane and crane load chart respectively. The tower crane will be used for construction of the elevator as well as placement of air handling units. The tower crane stands 146' tall and has a swing that travels over the helicopter landing pad.

Figure 7 - Porta-Johns

Coordination for helicopter landings is conducted via radio with the communications center advising when the crane needs to be moved out of the way and shut down for landings. This happens on average of 2-3 times a week with only one or two of those happening during normal working hours. To protect against issues at night the crane is secured to the roof of the adjacent building to stop the crane from swinging over the helicopter pad. The limited occurrence will have limited impact on the overall project schedule so minimal time was figured into the schedule for these delays. If it were a more common situation time would need to be figured in for delays.

Figure 8 – Tower Crane

CRANE OPERATION LOAD CHART	
Distance Trolly (Ft.)	Hook Radius (Ft.)
	123.0
45.9	11023 lbs.
49.2	11023 lbs.
52.4	11024 lbs.
55.7	11025 lbs.
59.0	11026 lbs.
62.3	10438 lbs.
65.6	9854 lbs.
68.8	9325 lbs.
72.1	8840 lbs.
75.4	8410 lbs.
78.7	8013 lbs.
82.0	7638 lbs.
85.2	7309 lbs.
88.5	6988 lbs.
91.8	6701 lbs.
95.1	6437 lbs.
98.4	6183 lbs.
101.6	5952 lbs.
104.9	5731 lbs.
108.2	5522 lbs.
111.5	5335 lbs.
114.8	5147lbs.
118.0	4982 lbs.
121.3	4817 lbs.
123.0	4739 lbs.

Table 1 – Crane Load Chart

F. Detailed Project Schedule

The detailed project schedule for this project is made up of six major parts general items, 5th floor, 6th floor, connecting corridors 5 & 6, cardiac elevator and site work. All of these parts are being conducted simultaneously but are broken down into separate schedules for clarity. Please find a detailed schedule attached below on ***pages 27, 28, 29, and 30***.

Key Project Dates:

Start 5th & 6th Floor	August 11, 2006
Start Cardiac Elevator	September 5, 2006
Tower Crane Erection	September 20, 2006
Corridor Connection 5th & 6th Floor	September 5, 2006
DOH Life Safety Inspection	December 29, 2006
DOH Licensure Inspection	January 15, 2007

Structural Steel Frame:

All structural steel frames shall be securely braced until all floor slabs, roof decks and shear walls have been installed and become capable of stabilizing the frames. Bracing used is steel angle welded to columns and floor beams. Composite metal decking shall be used for all elevated floor slabs. A tower crane will be utilized for all steel erection. Crane will be located between the two elevated walkways directly adjacent to the elevator shaft. Crane swing is above helicopter pad for the hospital and will have to be shut down and boom swung out of the way whenever use of the pad is required. Coordination for this is done through radio contact with the hospital and Lancaster County Communications.

Cast in Place Concrete:

Cast-in-place concrete will be placed on composite metal decking in the cardiac elevator project. No formwork is required due to the metal decking. Edge stops will be permanently placed continuous bent plates 3/8”x4”x5-1/2” welded to

the top of the steel floor beam with a ¼ 3@12 fillet weld. Concrete slab on deck will be 4" in depth light weight 4000psi (110 PCF Maximum). Other concrete to be used for foundation will be placed in footing excavation requiring no other formwork. This concrete shall be 3000psi normal weight concrete.

Mechanical System:

Mechanical rooms are located on the 4th and 5th floor of the hospital directly outside the shell space on the 5th floor with the 4th floor mechanical room located directly underneath. Air handling units are forced air systems with distribution through ductwork utilizing smoke and fire dampers wherever a fire or smoke rated wall is penetrated. All areas of the hospital are fully sprinkled and the sprinkler system in the shell space are existing however drops will have to be added and main lines relocated to match floor plan layout. Sprinklers for the new elevator lobbies will be run by tapping into the main branch lines running down the corridor being tied into.

Electrical System:

Electrical service comes from 4-480V 75KVA transformers serving 8-120/208V panel's normal branch. 3-480V 75KVA transformers serving 6-120/208V panel's critical branch and 2-480V 15KVA transformers serving 2-120/208V panel's life safety branch. Also the floors are supplied with nurse call systems, alarm systems and emergency lock down systems.

Masonry:

Masonry system will be a brick veneer located on the base of the elevator shaft. Adjustable masonry ties to be attached to 6" metal stud wall. Climbing scaffold will be utilized for the masonry work and EFIS system installation.

Shell Space:

The 5th and 6th floor fit-out project is part of hospital expansion utilizing existing space inside the hospital that was previously used as storage space. Because they will be utilizing existing shell space no structural work will be required for this part of the project, which means that work on these two floors began with floor layout and MEP rough-in. In Figure 9 you can see the open layout of the 6th floor shell space with the orange lines designating hollow metal frame wall layout. In the picture you can also see that the sprinkler lines have already been run in a standard layout that will have to be revised after the floor layout is complete.

Figure 9 – 6th Floor Shell Space

Figure 10 – 5th Floor MEP Rough-in

Figure 11 – 5th Floor MEP

MEP Rough-in:

MEP rough-in on the 5th and 6th floor consisted of tying into existing piping and ductwork in the adjacent corridor as well as to new units in the mechanical room located directly outside the shell space. As can be seen in Figures 10 and 11 once floor layout and hollow metal framing is complete MEP rough-in begins with ductwork, piping and electrical conduit being placed. In figure 11 you can also see that there were some coordination issues with existing

sprinkler piping and the ductwork that was being installed. These issues were resolved when sprinkler pipe relocation occurred. A very sensitive part of the MEP rough-in occurs when tie-ins are being made to systems located in the 4th floor ceiling plenum space because the 4th floor is occupied with patient rooms. This requires coordination with the hospital to move patients around during tie-in operations as well as cleaning rooms after work is completed so that patients can be moved back in.

Figure 12 – 5th Floor Patient Room Finishes

Finishes:

Finishes for all projects at the hospital are high end and are designed to tie into existing finishes in adjacent spaces. In Figure 12 you can see the wall paneling that is being placed in the patient rooms on the 5th and 6th floors. This is a honey oak finish that has been selected and will be continued throughout the space and adjoining corridors. Figure 13 shows a rendering of a finished patient room and in the background you can see the finishes carrying over into the corridor with the nurse's station. This rendering also shows the VCT flooring pattern that is being utilized in the project. The high qualities of the finishes require longer schedule durations for these phases of

Figure 13– 5th Floor Patient Room Rendering

the project. As long as this is realized up front there should not be any negative effects on the overall project completion. This is one of the many things that should be looked at during all project schedule developments because if not identified could cause problems later in the project.

Project Schedule
Technical Assignment 2
Lancaster General Hopsital
5th & 6th Floor Fit-Out, Cardiac Elevator

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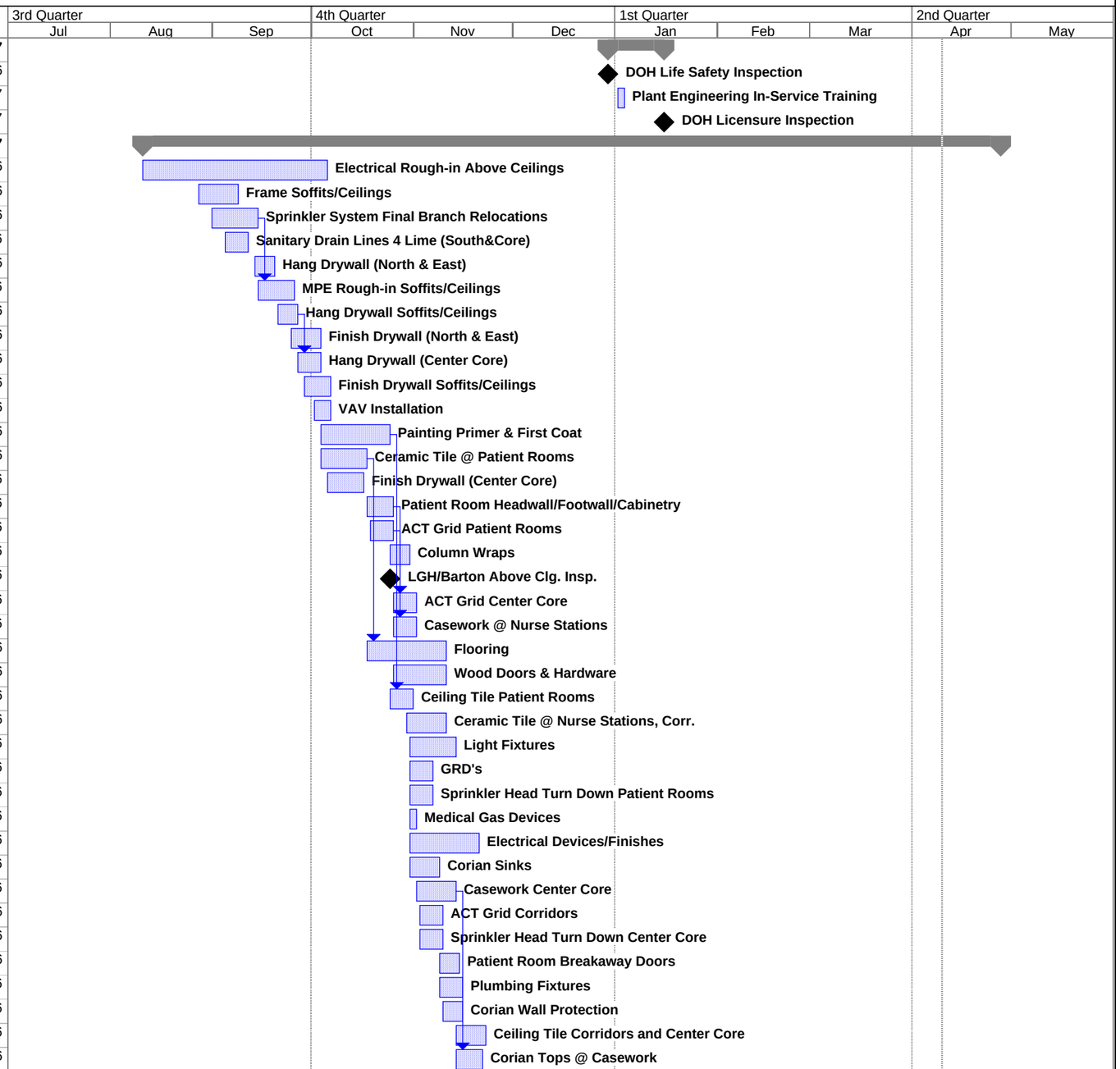
Construction Management

ID	Task Name	Duration	Start	Finish
1	**General Items**	**11 days**	**Fri 12/29/06**	**Mon 1/15/07**
1	DOH Life Safety Inspection	0 days	Fri 12/29/06	Fri 12/29/06
2	Plant Engineering In-Service Training	2 days	Tue 1/2/07	Wed 1/3/07
3	DOH Licensure Inspection	0 days	Mon 1/15/07	Mon 1/15/07
2	**5th Floor**	**186 days**	**Fri 8/11/06**	**Fri 4/27/07**
1	Electrical Rough-in Above Ceilings	40 days	Fri 8/11/06	Thu 10/5/06
2	Frame Soffits/Ceilings	10 days	Mon 8/28/06	Fri 9/8/06
3	Sprinkler System Final Branch Relocations	10 days	Fri 9/1/06	Thu 9/14/06
4	Sanitary Drain Lines 4 Lime (South&Core)	5 days	Tue 9/5/06	Mon 9/11/06
5	Hang Drywall (North & East)	4 days	Thu 9/14/06	Tue 9/19/06
6	MPE Rough-in Soffits/Ceilings	7 days	Fri 9/15/06	Mon 9/25/06
7	Hang Drywall Soffits/Ceilings	4 days	Thu 9/21/06	Tue 9/26/06
8	Finish Drywall (North & East)	7 days	Mon 9/25/06	Tue 10/3/06
9	Hang Drywall (Center Core)	5 days	Wed 9/27/06	Tue 10/3/06
10	Finish Drywall Soffits/Ceilings	6 days	Fri 9/29/06	Fri 10/6/06
11	VAV Installation	5 days	Mon 10/2/06	Fri 10/6/06
12	Painting Primer & First Coat	15 days	Wed 10/4/06	Tue 10/24/06
13	Ceramic Tile @ Patient Rooms	10 days	Wed 10/4/06	Tue 10/17/06
14	Finish Drywall (Center Core)	7 days	Fri 10/6/06	Mon 10/16/06
15	Patient Room Headwall/Footwall/Cabinetry	6 days	Wed 10/18/06	Wed 10/25/06
16	ACT Grid Patient Rooms	5 days	Thu 10/19/06	Wed 10/25/06
17	Column Wraps	4 days	Wed 10/25/06	Mon 10/30/06
18	LGH/Barton Above Clg. Insp.	0 days	Wed 10/25/06	Wed 10/25/06
19	ACT Grid Center Core	5 days	Thu 10/26/06	Wed 11/1/06
20	Casework @ Nurse Stations	5 days	Thu 10/26/06	Wed 11/1/06
21	Flooring	18 days	Wed 10/18/06	Fri 11/10/06
22	Wood Doors & Hardware	12 days	Thu 10/26/06	Fri 11/10/06
23	Ceiling Tile Patient Rooms	5 days	Wed 10/25/06	Tue 10/31/06
24	Ceramic Tile @ Nurse Stations, Corr.	10 days	Mon 10/30/06	Fri 11/10/06
25	Light Fixtures	10 days	Tue 10/31/06	Mon 11/13/06
26	GRD's	5 days	Tue 10/31/06	Mon 11/6/06
27	Sprinkler Head Turn Down Patient Rooms	5 days	Tue 10/31/06	Mon 11/6/06
28	Medical Gas Devices	2 days	Tue 10/31/06	Wed 11/1/06
29	Electrical Devices/Finishes	15 days	Tue 10/31/06	Mon 11/20/06
30	Corian Sinks	7 days	Tue 10/31/06	Wed 11/8/06
31	Casework Center Core	8 days	Thu 11/2/06	Mon 11/13/06
32	ACT Grid Corridors	5 days	Fri 11/3/06	Thu 11/9/06
33	Sprinkler Head Turn Down Center Core	5 days	Fri 11/3/06	Thu 11/9/06
34	Patient Room Breakaway Doors	4 days	Thu 11/9/06	Tue 11/14/06
35	Plumbing Fixtures	5 days	Thu 11/9/06	Wed 11/15/06
36	Corian Wall Protection	4 days	Fri 11/10/06	Wed 11/15/06
37	Ceiling Tile Corridors and Center Core	7 days	Tue 11/14/06	Wed 11/22/06
38	Corian Tops @ Casework	6 days	Tue 11/14/06	Tue 11/21/06



Project: Project Schedule.mpp
Date: Tue 4/10/07

Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | Group By Summary
Progress | Summary | Rolled Up Milestone | Split | Project Summary | Deadline

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Construction Management

ID	Task Name	Duration	Start	Finish
39	Art Glass in Corridors	5 days	Tue 11/14/06	Mon 11/20/06
40	HVAC Test & Balance	5 days	Wed 11/15/06	Tue 11/21/06
41	Painting Final Coat Cut & Roll	5 days	Wed 11/15/06	Tue 11/21/06
42	Toilet Accessories/Corner Guards	6 days	Thu 11/16/06	Thu 11/23/06
43	Lockers	3 days	Tue 11/21/06	Thu 11/23/06
44	Decorative Corridor Panels	5 days	Tue 11/21/06	Mon 11/27/06
45	Final Cleaning	6 days	Fri 11/24/06	Fri 12/1/06
46	Latitude Boom Installation	10 days	Mon 11/27/06	Fri 12/8/06
47	Latitude Final Connections	6 days	Thu 11/30/06	Thu 12/7/06
48	RTKL Punchlist Inspection 5th Floor	1 day	Mon 12/4/06	Mon 12/4/06
49	Punchlist Rework 5th Floor	5 days	Tue 12/5/06	Mon 12/11/06
50	**6th Floor**	**186 days**	**Fri 8/11/06**	**Fri 4/27/07**
1	Electrical Rough-in Above Ceiling	40 days	Fri 8/11/06	Thu 10/5/06
2	H. M. Frames	5 days	Mon 8/28/06	Fri 9/1/06
3	Metal Stud Walls (South)	15 days	Mon 8/28/06	Fri 9/15/06
4	Sprinkler System Branch Relocations	15 days	Wed 8/30/06	Tue 9/19/06
5	Medical Gas Mains (North)	5 days	Mon 9/4/06	Fri 9/8/06
6	Ductwork Return & Exhaust (East)	5 days	Mon 9/11/06	Fri 9/15/06
7	Heating Piping (North)	4 days	Mon 9/11/06	Thu 9/14/06
8	MPE Wall Rough-in (North)	10 days	Fri 9/15/06	Thu 9/28/06
9	Sanitary Drain Lines (South)	10 days	Wed 9/20/06	Tue 10/3/06
10	Ductwork Mains (Center Core)	10 days	Wed 9/20/06	Tue 10/3/06
11	Frame W-2 Windows	2 days	Wed 9/20/06	Thu 9/21/06
12	Medical Gas Mains (East)	5 days	Fri 9/22/06	Thu 9/28/06
13	Heating Pipe (East)	4 days	Mon 9/25/06	Thu 9/28/06
14	Heating Pipe (Center Core)	10 days	Mon 9/25/06	Fri 10/6/06
15	Sprinkler System Final Branch Relocations	10 days	Tue 9/26/06	Mon 10/9/06
16	Medical Gas Mains (South)	10 days	Fri 9/29/06	Thu 10/12/06
17	Hang Drywall (North)	12 days	Fri 9/29/06	Mon 10/16/06
18	Frame Soffits/Ceilings	15 days	Wed 10/4/06	Tue 10/24/06
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28	Finish Drywall Soffits/Ceilings	10 days	Wed 10/25/06	Tue 11/7/06
29	LGH/Barton Above Clg. Insp.	0 days	Thu 10/26/06	Thu 10/26/06
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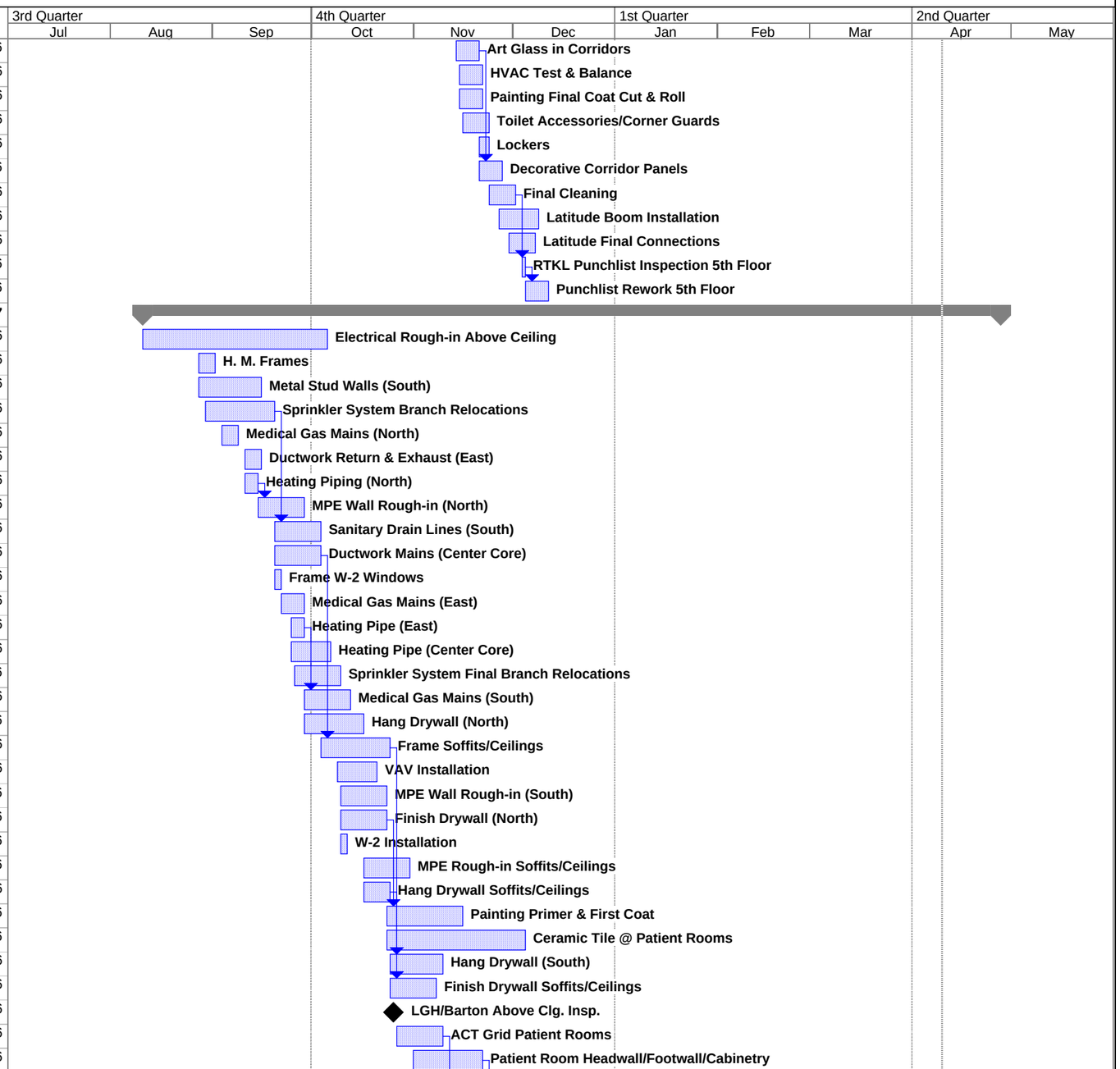

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Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | Group By Summary
Progress | Summary | Rolled Up Milestone | Split | Project Summary | Deadline

Project Schedule
Technical Assignment 2
Lancaster General Hopsital
5th & 6th Floor Fit-Out, Cardiac Elevator

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Construction Management

ID	Task Name	Duration	Start	Finish
32	Casework @ Nurse Stations	20 days	Tue 11/7/06	Mon 12/4/06
33	Flooring	30 days	Tue 11/7/06	Mon 12/18/06
34	Ceramic Tile @ Nurse Stations, Corr.	15 days	Thu 11/9/06	Wed 11/29/06
35	Finish Drywall (South)	15 days	Fri 11/10/06	Thu 11/30/06
36	ACT Grid (Center Core)	10 days	Fri 11/10/06	Thu 11/23/06
37	Light Fixtures	20 days	Fri 11/10/06	Thu 12/7/06
38	GRD's	10 days	Fri 11/10/06	Thu 11/23/06
39	Sprinkler Head Turn Down Patient Rooms	10 days	Fri 11/10/06	Thu 11/23/06
40	Decorative Corridor Panels	10 days	Tue 11/14/06	Mon 11/27/06
41	Art Glass in Corridors	10 days	Thu 11/16/06	Wed 11/29/06
42	Casework (Center Core)	15 days	Thu 11/16/06	Wed 12/6/06
43	Electrical Devices/Finishes	30 days	Thu 11/16/06	Wed 12/27/06
44	Corian Sinks	6 days	Thu 11/16/06	Thu 11/23/06
45	Patient Room Breakaway Doors	20 days	Tue 11/21/06	Mon 12/18/06
46	Ceiling Tile Patient Rooms	15 days	Wed 11/22/06	Tue 12/12/06
47	Medical Gas Devices	20 days	Wed 11/22/06	Tue 12/19/06
48	ACT Grid Corridors	15 days	Fri 11/24/06	Thu 12/14/06
49	Sprinkler head Turn Down (Center Core)	10 days	Fri 11/24/06	Thu 12/7/06
50	Plumbing Fixtures	12 days	Fri 11/24/06	Mon 12/11/06
51	Painting Final Coat Cut & Roll	10 days	Mon 11/27/06	Fri 12/8/06
52	Column Wraps	6 days	Fri 12/1/06	Fri 12/8/06
53	Wood Doors & Hardware	20 days	Fri 12/1/06	Thu 12/28/06
54	Corian Tops @ Casework	10 days	Thu 12/7/06	Wed 12/20/06
55	Ceiling Tile (Corridors and Center Core)	12 days	Fri 12/8/06	Mon 12/25/06
56	Toilet Accessories/Corner Guards	10 days	Tue 12/12/06	Mon 12/25/06
57	Corian Wall Protection	10 days	Fri 12/15/06	Thu 12/28/06
58	Final Cleaning	6 days	Fri 12/15/06	Fri 12/22/06
59	Lockers	6 days	Tue 12/19/06	Tue 12/26/06
60	HVAC Test & Balance	8 days	Tue 12/19/06	Thu 12/28/06
61	RTKL Punchlist Inspection 6th Floor	1 day	Tue 12/26/06	Tue 12/26/06
62	Punchlist Rework 6th Floor	5 days	Wed 12/27/06	Tue 1/2/07
63	**Connecting Corridors 5 & 6**	**169 days**	**Tue 9/5/06**	**Fri 4/27/07**
1	Demolition	5 days	Mon 10/16/06	Fri 10/20/06
2	Flooring	7 days	Mon 10/23/06	Tue 10/31/06
3	Casework	10 days	Wed 11/1/06	Tue 11/14/06
4	Wall Patching	4 days	Wed 11/1/06	Mon 11/6/06
5	Ceiling Grid	4 days	Wed 11/15/06	Mon 11/20/06
6	MPE Devices	7 days	Tue 11/21/06	Wed 11/29/06
7	Vynil Wallcovering	10 days	Tue 11/21/06	Mon 12/4/06
8	Handrail/Wall Protection	6 days	Tue 12/5/06	Tue 12/12/06
9	Ceiling Tile	4 days	Wed 12/13/06	Mon 12/18/06
10	**Cardiac Elevator**	**169 days**	**Tue 9/5/06**	**Fri 4/27/07**
1	Close Off Work Area	4 days	Tue 9/5/06	Fri 9/8/06

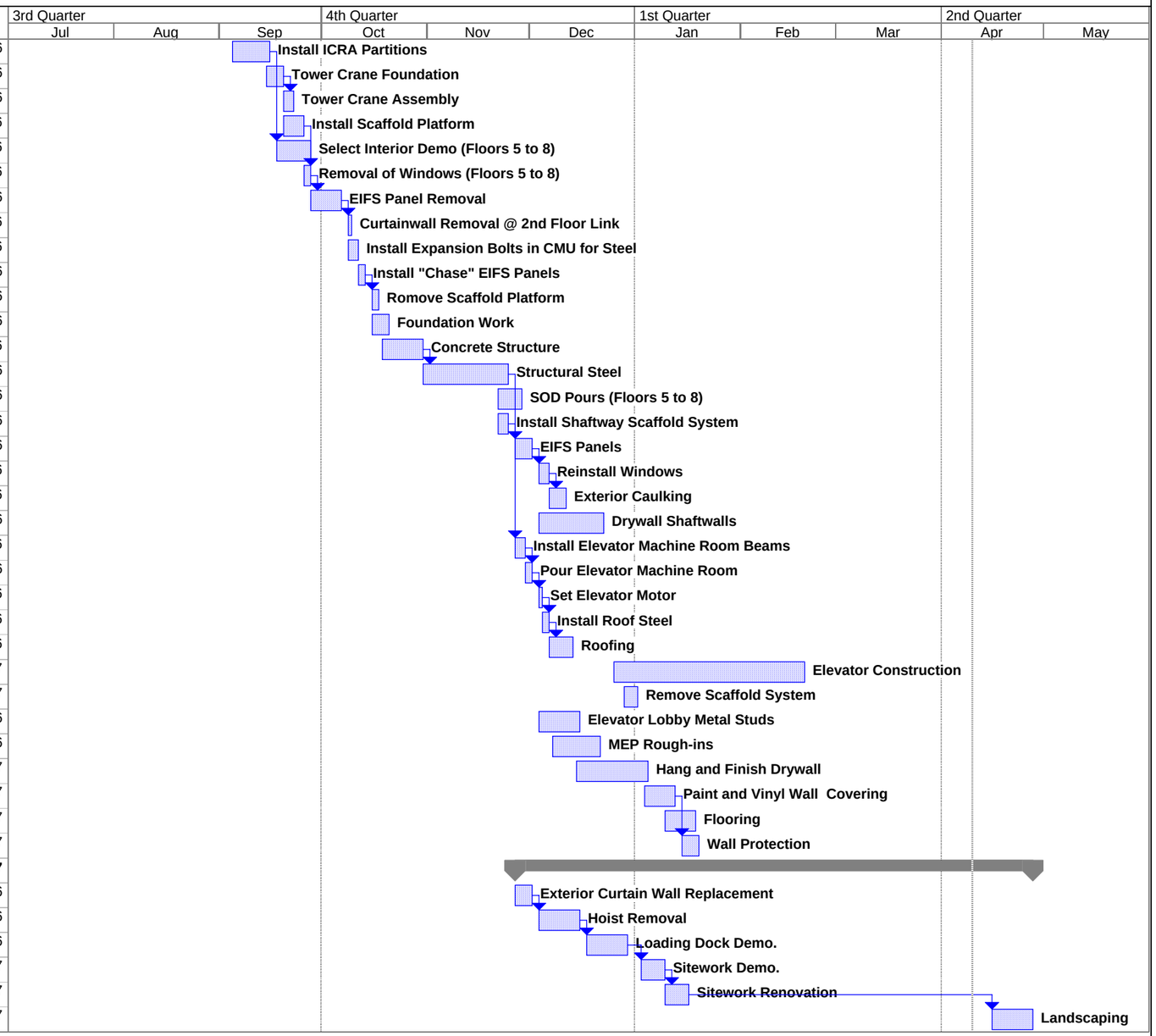
Project: Project Schedule.mpp
Date: Tue 4/10/07

Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | Group By Summary
Progress | Summary | Rolled Up Milestone | Split | Project Summary | Deadline

Project Schedule
Technical Assignment 2
Lancaster General Hopsital
5th & 6th Floor Fit-Out, Cardiac Elevator

Devin Learn
Construction Management

ID	Task Name	Duration	Start	Finish
2	Install ICRA Partitions	9 days	Tue 9/5/06	Fri 9/15/06
3	Tower Crane Foundation	3 days	Fri 9/15/06	Tue 9/19/06
4	Tower Crane Assembly	3 days	Wed 9/20/06	Fri 9/22/06
5	Install Scaffold Platform	4 days	Wed 9/20/06	Mon 9/25/06
6	Select Interior Demo (Floors 5 to 8)	8 days	Mon 9/18/06	Wed 9/27/06
7	Removal of Windows (Floors 5 to 8)	2 days	Tue 9/26/06	Wed 9/27/06
8	EIFS Panel Removal	7 days	Thu 9/28/06	Fri 10/6/06
9	Curtainwall Removal @ 2nd Floor Link	1 day	Mon 10/9/06	Mon 10/9/06
10	Install Expansion Bolts in CMU for Steel	3 days	Mon 10/9/06	Wed 10/11/06
11	Install "Chase" EIFS Panels	2 days	Thu 10/12/06	Fri 10/13/06
12	Romove Scaffold Platform	2 days	Mon 10/16/06	Tue 10/17/06
13	Foundation Work	5 days	Mon 10/16/06	Fri 10/20/06
14	Concrete Structure	8 days	Thu 10/19/06	Mon 10/30/06
15	Structural Steel	19 days	Tue 10/31/06	Fri 11/24/06
16	SOD Pours (Floors 5 to 8)	5 days	Wed 11/22/06	Tue 11/28/06
17	Install Shaftway Scaffold System	3 days	Wed 11/22/06	Fri 11/24/06
18	EIFS Panels	5 days	Mon 11/27/06	Fri 12/1/06
19	Reinstall Windows	3 days	Mon 12/4/06	Wed 12/6/06
20	Exterior Caulking	3 days	Thu 12/7/06	Mon 12/11/06
21	Drywall Shaftwalls	15 days	Mon 12/4/06	Fri 12/22/06
22	Install Elevator Machine Room Beams	3 days	Mon 11/27/06	Wed 11/29/06
23	Pour Elevator Machine Room	2 days	Thu 11/30/06	Fri 12/1/06
24	Set Elevator Motor	1 day	Mon 12/4/06	Mon 12/4/06
25	Install Roof Steel	2 days	Tue 12/5/06	Wed 12/6/06
26	Roofing	5 days	Thu 12/7/06	Wed 12/13/06
27	Elevator Construction	40 days	Tue 12/26/06	Mon 2/19/07
28	Remove Scaffold System	2 days	Fri 12/29/06	Mon 1/1/07
29	Elevator Lobby Metal Studs	10 days	Mon 12/4/06	Fri 12/15/06
30	MEP Rough-ins	10 days	Fri 12/8/06	Thu 12/21/06
31	Hang and Finish Drywall	15 days	Fri 12/15/06	Thu 1/4/07
32	Paint and Vinyl Wall Covering	7 days	Thu 1/4/07	Fri 1/12/07
33	Flooring	7 days	Wed 1/10/07	Thu 1/18/07
34	Wall Protection	5 days	Mon 1/15/07	Fri 1/19/07
35	**Sitework**	**110 days**	**Mon 11/27/06**	**Fri 4/27/07**
1	Exterior Curtain Wall Replacement	5 days	Mon 11/27/06	Fri 12/1/06
2	Hoist Removal	10 days	Mon 12/4/06	Fri 12/15/06
3	Loading Dock Demo.	10 days	Mon 12/18/06	Fri 12/29/06
4	Sitework Demo.	5 days	Wed 1/3/07	Tue 1/9/07
5	Sitework Renovation	5 days	Wed 1/10/07	Tue 1/16/07
6	Landscaping	10 days	Mon 4/16/07	Fri 4/27/07



Project: Project Schedule.mpp
Date: Tue 4/10/07

Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | Group By Summary
Progress | Summary | Rolled Up Milestone | Split | Project Summary | Deadline

G. Project Cost Summary

Since this project takes place inside an existing building the construction costs are the same as the total project costs with no land costs, or site work included. However the project is broken down into two separate parts with the cost of the fit-out and cardiac elevator being separate. The construction costs for the 5th and 6th Floor Lime Street Fit-Out are $9,720,090 for 48,592 ft^2 leading to a cost per square foot of $200.04. The construction costs for the Cardiac Elevator Addition are $1,998,973 for 1,600 ft^2 leading to a cost per square foot of $1,249.36.

Lancaster General Hospital 5th and 6th Floor Fit-Out	
Description	Cost
General Conditions	$650,881.00
Demolition/Landscaping	$82,448.00
Concrete	$25,549.00
Steel	$48,496.00
Carpentry	$1,101,130.00
Thermal/Moisture	$39,252.00
Doors & Windows	$768,344.00
Finishes	$1,526,672.00
Specialties	$123,140.00
Equipment	$51,862.00
Furnishings	$28,400.00
Conveying/Hoisting	$61,566.00
MEP	$5,000,100.00
Contingency and Fee	$212,250.00
Total	$9,720,090.00

Lancaster General Hospital Cardiac Elevator	
Description	Cost
General Conditions	$167,519.00
Demolition/Landscaping	$154,765.00
Concrete	$87,174.00
Masonry	$17,827.00
Steel	$527,297.00
Carpentry	$8,782.00
Thermal/Moisture	$284,954.00
Doors & Windows	$8,954.00
Finishes	$183,653.00
Specialties	$11,696.00
Furnishings	$1,141.00
Conveying/Hoisting	$433,698.00
MEP	$75,520.00
Contingency and Fee	$35,993.00
Total	$1,998,973.00

H. General Conditions Estimate

The general conditions estimate shows all project and staffing costs associated with the coordination and running of the 5th and 6th floor fit-out and cardiac elevator addition projects. These projects are Guaranteed Maximum Price, negotiated contracts. The costs shown in the estimate do not include home office overhead. General conditions costs are meant only to show the costs directly associated with the project.

Estimate Break Down:

This break down shows the categories of the general conditions estimate that can be found below on ***page 33***.

- Project Coordination
- Building Layout
- Regulatory Requirements
- Progress Schedules
- Temporary Utilities
- Temporary Construction
- Construction Aids
- Temporary Controls
- Traffic Regulation
- Contract Closeout

GENERAL CONDITIONS ESTIMATE LGH 5th & 6th FLOOR FIT-OUT								
Phase	Description	Takeoff Quantity	Material Amount	Labor Amount	Sub Amount	Euip. Amount	Total Cost/Unit	Total Amount
1000.400	Project Coordination	6 - Months		$292,000.00		$2,763.00	$49,129.20 /Month	**$294,763.00**
1000.540	Building Layout	6 - Months	$3,895.00	$42,952.00		$1,000.00	$7,974.50 /Month	**$47,847.00**
1000.600	Regulatory Requirements	6 - Months			$55,210.00		$9,201.67 /Month	**$55,210.00**
1300.100	Progress Schedules	6 - Months	$5,895.00				$982.5 /Month	**$5,895.00**
1500.100	Temporary Utilities	6 - Months	$650.00	$6,420.00	$3,450.00	$6,500.00	$2,836.67 /Month	**$17,020.00**
1500.200	Temporary Construction	6 - Months	$190.00	$670.00		$3,450.00	$718.33 /Month	**$4,310.00**
1500.250	Construction Aids	6 - Months	$2,400.00	$33,600.00	$16,300.00	$39,600.00	$15,316.70 /Month	**$91,900.00**
1500.600	Temporary Controls	6 - Months	$7,050.00	$17,530.00	$32,000.00		$9,430 /Month	**$56,580.00**
1500.700	Traffic Regulation	6 - Months		$42,000.00	$13,000.00		$9,166.67 /Month	**$55,000.00**
1700.100	Contract Closeout	48,592 Sq.Ft.	$300.00	$10,250.00	$12,600.00		$.48 /Sq.Ft.	**$23,150.00**
	GENERAL CONDITIONS		**$20,380.00**	**$445,422.00**	**$132,560.00**	**$53,313.00**	**$108,613 /Month**	**$651,675.00**

GENERAL CONDITIONS ESTIMATE LGH CARDIAC ELEVATOR								
Phase	Description	Takeoff Quantity	Material Amount	Labor Amount	Sub Amount	Euip. Amount	Total Cost/Unit	Total Amount
1000.400	Project Coordination	5 - Months		$75,250.00			$15,150 /Month	**$75,250.00**
1300.100	Progress Schedules	5 - Months	$2,680.00				$536 /Month	**$2,680.00**
1400.100	Testing & Inspections	5 - Months	$25.00	$1,310.00	$2,135.00	$842.00	$862.40 /Month	**$4,312.00**
1500.100	Temporary Utilities	5 - Months		$11,413.00		$4,267.00	$3,136 /Month	**$15,680.00**
1500.250	Construction Aids	5 - Months			$31,215.00	$725.00	$6,388 /Month	**$31,940.00**
1500.300	Barriers & Enclosures	5 - Months	$1,246.00	$3,812.00		$417.00	$1,095 /Month	**$5,475.00**
1500.400	Security	5 - Months	$3,768.00	$645.00			$882.60 /Month	**$4,413.00**
1500.600	Temporary Controls	5 - Months	$2,422.00	$7,800.00	$9,770.00	$300.00	$4,58.40 /Month	**$20,292.00**
1500.700	Traffic Regulations	5 - Months			$180.00		$36 /Month	**$180.00**
1700.100	Contract Closeout	1,600 Sq.Ft.	$600.00	$6,354.00	$2,555.00		$5.94 /Sq.Ft.	**$9,509.00**
	GENERAL CONDITIONS	**5.00 Months**	**$10,741.00**	**$106,584.00**	**$45,855.00**	**$6,551.00**	**$33,946.20 /Month**	**$169,731.00**

I. Assemblies Estimate

The assemblies' estimate that was developed for this section is for the building enclosure system for the cardiac elevator addition. The estimate was created using R.S. Means 2005 data. Location factors had to be taken into account in order to give an accurate depiction of costs for the region of construction. Location factors for Lancaster, Pennsylvania are .95 for materials, .88 for labor and .92 total cost. Equipment costs were taken at a direct rate from R.S. Means with the major equipment cost for this phase coming from the self climbing scaffolding shown earlier in Figure 6. A 27% O&P factor was used in calculating the total cost.

Assembly:

The assembly was broken down into the following sections.

- Exterior Insulation Finish System (EIFS)
- Fireproofing
- Single Ply Membrane Roofing
- Sheet Metal Flashing/Trim

ASSEMBLY ESTIMATE - BUILDING ENCLOSURE
LGH CARDIAC ELEVATOR ADDITION - PREPARED BY: DEVIN LEARN

Phase	Description	Takeoff Qty.	Material Cost	Labor Cost	Equip. Cost	$ Per Unit w/.92 Location Factor	27% O&P	Total Cost
7240.100	Exterior Ins./Finish System	25,000 Sq.Ft.	$64,600.00	$118,800.00	$11,750.00	$7.90 Sq.Ft.	$10.03	$250,750
7250.255	Fireproofing	9,500 Sq.Ft.	$5,595.50	$4,514.40	$855.00	$1.15 Sq.Ft.	$1.48	$14,060
7500.300	Single Ply Membrane Roofing	5.4 Sq.	$630.00	$194.83	$30.51	$156.08 Sq.	$195.04	$1,053
7600.200	Sheet Metal Flashing/Trim	1,800 Sq.Ft.	$3,146.40	$2,566.08	$0.00	$3.18 Sq.Ft.	$4.41	$7,938
Total			$73,971.90	$126,075.31	$12,635.51	$13.79 Sq.Ft.		$273,801

J. Detailed Structural Estimate

The detailed structural systems estimate for this section was completed using the structural system for the cardiac elevator addition because the 5th and 6th floor fit-out project is inside an existing shell space requiring no structural work. The structural system estimate required a structural member takeoff that can be found along with the detailed structural systems estimate blow on ***pages 36 and 37***. The costs for the estimate were based on a price per unit basis.

Structural Systems Estimate Summary:

Below is a structural systems estimate summary to compliment the attached detailed structural systems estimate.

PROPOSED STRUCTURAL ESTIMATE - SUMMARY LGH CARDIAC ELEVATOR							
Description	Takeoff Quantity	Material Amount	Labor Amount	Sub Amount	Euip. Amount	Total Cost/Unit	Total Amount
CONCRETE FORMWORK							
	1,249.00 Sq.Ft.	$4,940.00	$11,795.00	$0.00	$0.00	$13.40 /Month	$16,735.00
REINFORCING BAR							
	4.24 Ton	$5,965.00	$7,540.00	$0.00	$0.00	$3,185.14 /Ton	$13,505.00
REINFORCING WIRE MESH							
	1,996.00 Sq.Ft.	$530.00	$415.00	$0.00	$0.00	$.47 /Sq.Ft.	$945.00
CONCRETE ACCESSORIES							
		$1,905.00	$2,735.00	$0.00	$0.00		$4,640.00
CAST IN PLACE CONCRETE							
	210.60 Cu.Yd.	$29,015.00	$7,820.00	$7,030.00	$7,500.00	$243.90 /Cu.Yd	$51,365.00
MASONRY							
	535.00 Sq. Ft.	$0.00	$0.00	$17,850.00	$0.00	$33.36 /Sq.Ft.	$17,850.00
STRUCTURAL STEEL							
	1600.00 Sq.Ft.	$0.00	$0.00	$522,600.00	$0.00	$326.63 /Sq.Ft.	$522,600.00

STRUCTURAL STEEL TAKEOFF LGH CARDIAC ELEVATOR			
Wide Flange Columns	Qty.	Length	Weight
W14 x 132	1	52'	6864#
W14 x 90	1	38'	3420#
W14 x 90	1	44'	3960#
W12 x 87	1	52'	4524#
W12 x 87	1	38'	3306#
W12 x 87	1	44'	3828#
Total	6	268'	25,902#
Wide Flange Beams	Qty.	Length	Weight
W24 x 55	1	14'	770#
W21 x 44	1	15'	660#
W16 x 26	2	15'	780#
W16 x 26	1	6'	156#
W10 x 12	9	15'	1620#
W10 x 12	4	4'	192#
W12 x 16	8	16'	2048#
W12 x 16	11	15'	2640#
W24 x 68	4	16'	4352#
W24 x 68	4	14'	3808#
W14 x 22	1	16'	352#
W14 x 22	5	15'	1650#
W14 x 22	1	12'	264#
W27 x 84	1	16'	1344#
W27 x 84	1	15'	1260#
W16 x 50	1	16'	800#
W16 x 50	1	14'	700#
Total	56	793'	23,396#
Tube Steel Beams	Qty.	Length	Weight
HSS12 x 6 x 3/8	9	15'	
HSS12 x 6 x 3/8	3	14'	
HSS12 x 6 x 3/8	2	6'	
Total	14	189'	
Steel Joists	Qty.	Length	Weight
12K1	2	16'	
10K1	1	16'	
10K1	3	14'	
Total	6	90'	
Metal Floor Decking		Area	Weight
2"-20GA. Comp. Steel Deck		1320 Sq.Ft.	3036#
1-1/2"-20GA. Galv. St. Roof Deck		360 Sq.Ft.	792#
Total		1680 Sq.Ft.	3828#

STRUCTURAL ESTIMATE LGH CARDIAC ELEVATOR								
Phase	Description	Takeoff Quantity	Material Amount	Labor Amount	Sub Amount	Euip. Amount	Total Cost/Unit	Total Amount
CONCRETE FORMWORK								
3100.010	Strip Footer Formwork	142.00 Sq.Ft.	$160.00	$600.00			$5.35 /Sq.Ft.	**$760.00**
3100.050	Peir Cap Formwork	336.00 Sq.Ft.	$540.00	$1,700.00			$6.67 /Sq.Ft.	**$2,240.00**
3100.080	Foundation Pier Formwork	171.00 Sq.Ft.	$270.00	$1,350.00			$9.47 /Sq.Ft.	**$1,620.00**
3100.120	Elevator Wall Formwork	708.00 Sq.Ft.	$1,200.00	$3,000.00			$5.93 /Sq.Ft.	**$4,200.00**
3100.240	Elevated Slab Formwork	746.00 Sq.Ft.	$2,680.00	$4,870.00			$10.12 /Sq.Ft.	**$7,550.00**
3100.390	Frost Wall Formwork	69.00 Sq.Ft.	$90.00	$275.00			$5.29 /Sq.Ft.	**$365.00**
	CONCRETE FORMWORK	**1,249.00 Sq.Ft.**	**$4,940.00**	**$11,795.00**	**$0.00**	**$0.00**	**$13.40 /Month**	**$16,735.00**
REINFORCING BAR								
3210.010	Strip Footer Re-Bar	1.00 Ton	$1,400.00	$1,500.00			$2,900 /Ton	**$2,900.00**
3210.050	Peir Cap Re-Bar	2.50 Ton	$3,600.00	$4,700.00			$3,320 /Ton	**$8,300.00**
3210.080	Foundation Pier Re-Bar	0.32 Ton	$475.00	$750.00			$3,828 /Ton	**$1,225.00**
3210.240	Flat Plate Re-Bar	0.34 Ton	$390.00	$450.00			$2,470 /Ton	**$840.00**
3210.390	Frost Wall Re-Bar	0.08 Ton	$100.00	$140.00			$3,000 /Ton	**$240.00**
	REINFORCING BAR	**4.24 Ton**	**$5,965.00**	**$7,540.00**	**$0.00**	**$0.00**	**$3,185.14 /Ton**	**$13,505.00**
REINFORCING WIRE MESH								
3220.230	Slab on Deck Wire Mesh	1,700.00 Sq.Ft.	$450.00	$340.00			$.46 /Sq.Ft.	**$790.00**
3220.330	Stoop/Pad Wire Mesh	126.00 Sq.Ft.	$35.00	$40.00			$.59 /Sq.Ft.	**$75.00**
3220.530	Sidewalk Wire Mesh	170.00 Sq.Ft.	$45.00	$35.00			$.47 /Sq.Ft.	**$80.00**
	REINFORCING WIRE MESH	**1,996.00 Sq.Ft.**	**$530.00**	**$415.00**	**$0.00**	**$0.00**	**$.47 /Sq.Ft.**	**$945.00**
CONCRETE ACCESSORIES								
3250.080	Foundation Pier Accessories		$190.00	$140.00				**$330.00**
3250.135	Misc. Concrete Accessories		$1,050.00	$1,600.00				**$2,650.00**
3250.230	Slab on Deck Accessories		$580.00	$820.00				**$1,400.00**
3250.240	Plate Slab Accessories		$5.00	$15.00				**$20.00**
3250.330	Stoop/Pad Accessories		$10.00	$30.00				**$40.00**
3250.530	Sidewalk Accessories		$70.00	$130.00				**$200.00**
	CONCRETE ACCESSORIES		**$1,905.00**	**$2,735.00**	**$0.00**	**$0.00**		**$4,640.00**
CAST IN PLACE CONCRETE								
3300.005	Concrete Bulk				$1,375.00			**$1,375.00**
3300.010	Strip Footers	11.00 Cu.Yd.	$1,300.00	$500.00			$163.63 /Cu.Yd.	**$1,800.00**
3300.080	Pier Foundation	68.00 Cu.Yd.	$8,350.00	$4,140.00	$15.00	$1,250.00	$202.28 /Cu.Yd.	**$13,755.00**
3300.120	Elevator Wall	16.00 Cu.Yd.	$2,175.00	$750.00			$182.81 /Cu.Yd.	**$2,925.00**
3300.135	Misc. Concrete	85.00 Cu.Yd.	$10,920.00	$1,925.00		$1,250.00	$165.82 /Cu.Yd.	**$14,095.00**
3300.215	Elevator Slab					$1,250.00		**$1,250.00**
3300.230	Slab on Deck	24.00 Cu.Yd.	$3,940.00		$4,725.00	$2,500.00	$465.21 /Cu.Yd.	**$11,165.00**
3300.240	Flat Plate Slabs		$875.00	$385.00	$150.00	$1,250.00		**$2,660.00**
3300.330	Stoops/Pads	2.00 Cu.Yd.	$525.00		$290.00		$407.50 /Cu.Yd.	**$815.00**
3300.390	Frost Wall	2.50 Cu.Yd.	$280.00	$120.00			$160 /Cu.Yd.	**$400.00**
3300.510	Curb		$10.00					**$10.00**
3300.530	Sidewalk	2.10 Cu.Yd.	$640.00		$475.00		$530.95 /Cu.Yd.	**$1,115.00**
	CAST IN PLACE CONCRETE	**210.60 Cu.Yd.**	**$29,015.00**	**$7,820.00**	**$7,030.00**	**$7,500.00**	**$243.90 /Cu.Yd**	**$51,365.00**
MASONRY								
4200.100	Masonry Accessories	535.00 Sq.Ft.			$17,850.00		$33.36 /Sq.Ft.	**$17,850.00**
4200.110	Brick	535.00 Sq.Ft.						**$0.00**
4200.130	Precast Copings & Sills							**$0.00**
4200.210	Foundation Block	535.00 Sq.Ft.						**$0.00**
	MASONRY	**535.00 Sq. Ft.**	**$0.00**	**$0.00**	**$17,850.00**	**$0.00**	**$33.36 /Sq.Ft.**	**$17,850.00**
STRUCTURAL STEEL								
5100.100	Steel Fab. & Erection	47 Ton			$470,000.00		$10,000.00 /Ton	**$470,000.00**
5100.110	Wide Flange Columns							**$0.00**
5100.210	Wide Flange Beams							**$0.00**
5100.220	Tube Steel Beams				$52,600.00			**$52,600.00**
5100.315	Standard Angles							**$0.00**
5200.210	Steel Joists							**$0.00**
5300.210	Metal Floor Decking							**$0.00**
	STRUCTURAL STEEL	**1600.00 Sq.Ft.**	**$0.00**	**$0.00**	**$522,600.00**	**$0.00**	**$326.63 /Sq.Ft.**	**$522,600.00**