3.0 CONSTRUCTION OVERVIEW

3.1 Project Delivery System

The Baltimore Washington Medical Center: Women's Center and Inpatient Tower is being delivered as a Construction Manager at Risk with a Guaranteed Maximum Price contract with the owner. The building cost is around $59.4 million while the overall project cost is about $68 million. Whiting-Turner was awarded the contract for the construction phase of this project based on the previous relationship held between the owner, University of Maryland Medical System, and Whiting-Turner. The contract for the preconstruction services was awarded to another construction manager at the beginning of the design phase for this project. Even though the contract was only for the preconstruction services, it was understood that if this construction manager could give the owner a reasonable budget at the end of the design, they would be awarded the construction phase of the project. However, at the end of the design, the previous construction manager was unable to lower their budget to the owner's satisfaction, and was not awarded the contract for the construction phase of the project. At this point, the owner turned to Whiting-Turner to complete the construction phase. In the past, Whiting-Turner had completed projects for this owner and was able to maintain a good relationship with them. Whiting-Turner was able to negotiate with the owner to lower the cost of the project, and was therefore given the contract. When the Construction Documents were 50% complete, the project was turned over to Whiting-Turner.

The process for selecting subcontractors for the project varied depending on the scopes of work for these trades. For many of the larger scopes of work such as MEP, concrete, and steel, Whiting-Turner negotiated with large, well-known subcontractors early on in the project. For some of the smaller scopes of work, the work was competitively bid. During this process, Whiting-Turner reviewed many of the lowest bids. To ensure that the lowest bid was actually the best bid, Whiting-Turner held meetings with the subcontractors to discuss the scopes of work and also to get familiar with each of the subcontractors. With this process, Whiting-Turner was able to select the best bid, which was not necessarily the lowest bid. Although most of the work is being performed by subcontractors, Whiting-Turner is self-performing the steel framing and precast concrete planks for the project. The contract held between Whiting-Turner and each of the subcontractors is a Lump Sum Contract. For this project, the owner does not require Whiting-Turner to purchase any bonds. For subcontractors, Whiting-Turner does not require any bid bonds; however, any subcontractor performing over $100,000 of work is required to have payment and performance bonds. Figure 6 shows an image of the organization chart of the primary project team for the project. Also a list of the primary project team and their corresponding websites are listed below the organization chart.

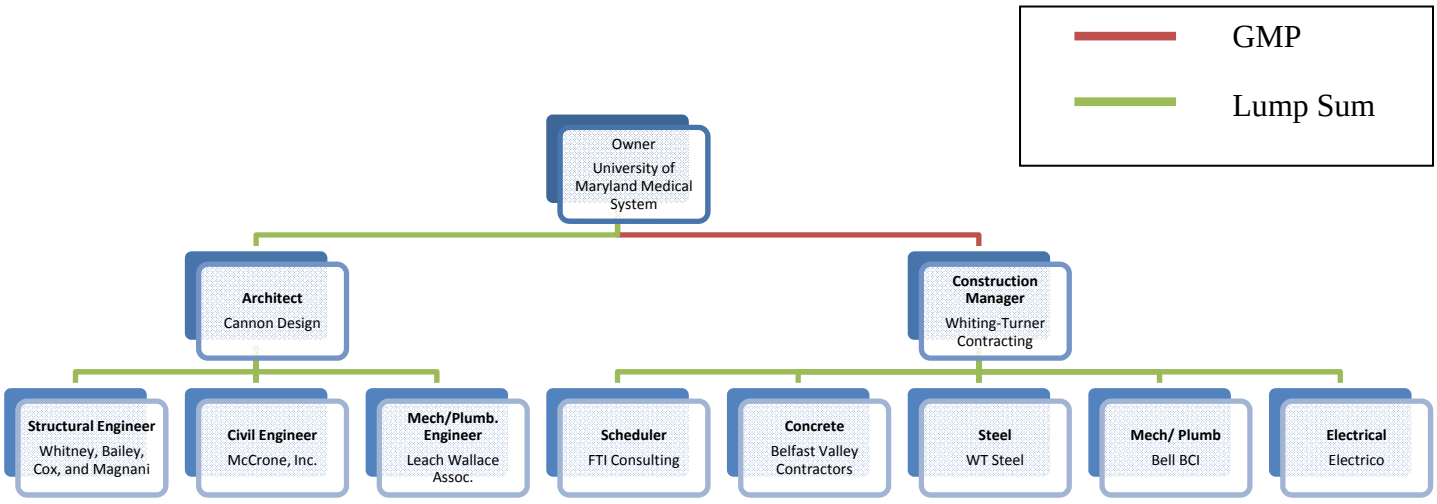

Figure 6: BWMC Project Team Organizational Chart

Primary Project Team:

Owner: University of Maryland Medical System
http://www.umms.org/

Construction Manager: Whiting-Turner Contracting
http://www.whiting-turner.com/

Architect: Cannon Design / CCG Facilities Integration
http://cannondesign.com /
http://www.ccgfacilities.com/capabilities.html

Structural Engineer: Whitney, Bailey, Cox & Magnani
http://www.wbcm.com/

Mechanical / Plumbing Engineer: Leach Wallace Associates, Inc.
http://www.leachwallace.com/

Civil Engineer: McCrone, Inc
http://www.mccrone-inc.com/

Geotechnical Engineer: Marshall Engineering
http://www.marshalleng.com/

3.2 Whiting Turner Staffing

At the beginning of the project, Whiting-Turner had a rather large project team consisting of a project executive, a project manager, an assistant project manager, a superintendent, an assistant superintendent, a MEP coordinator, a MEP engineer, and four project engineers. See Figure 7 for the organizational chart of the Whiting-Turner team.

Bruce DeLawder is the Project Executive for the project. He oversees all of the operations for the project. Due to the young staff and the complexity of the project, Bruce spends the majority of his time in his trailer office located on-site. Albert Marquardt, who was originally the Assistant Project Manager, was recently promoted to Project Manager where he replaced the resigned project manager. Because Albert is new to the project management role, Bruce assists him with many of the management tasks. As the Project Manager, Albert is responsible for managing the project costs and owner invoices. He also tracks overall processes for RFI's, purchase orders, submittals, etc. Along with these tasks, Albert is responsible for a few of the subcontractors where he manages the submittal processes and RFI's for these trades. Below Albert, there are three project engineers: Jason Verhey, Michael Reilly, and Dave Woessner. These project engineers are responsible for a majority of the subcontractors. Each project engineer manages the submittal processes, RFI's, and supplements for their corresponding trades. Ritchie Javier is the MEP Coordinator. He oversees all of the MEP work for the project, and is also responsible for the MEP subcontractors where he manages the submittal process and RFI's for these trades. John Stavros is the Superintendent for this project. Below John, is the Assistant Superintendent, Dan Schindler. John and Dan oversee all work that takes place in the field.

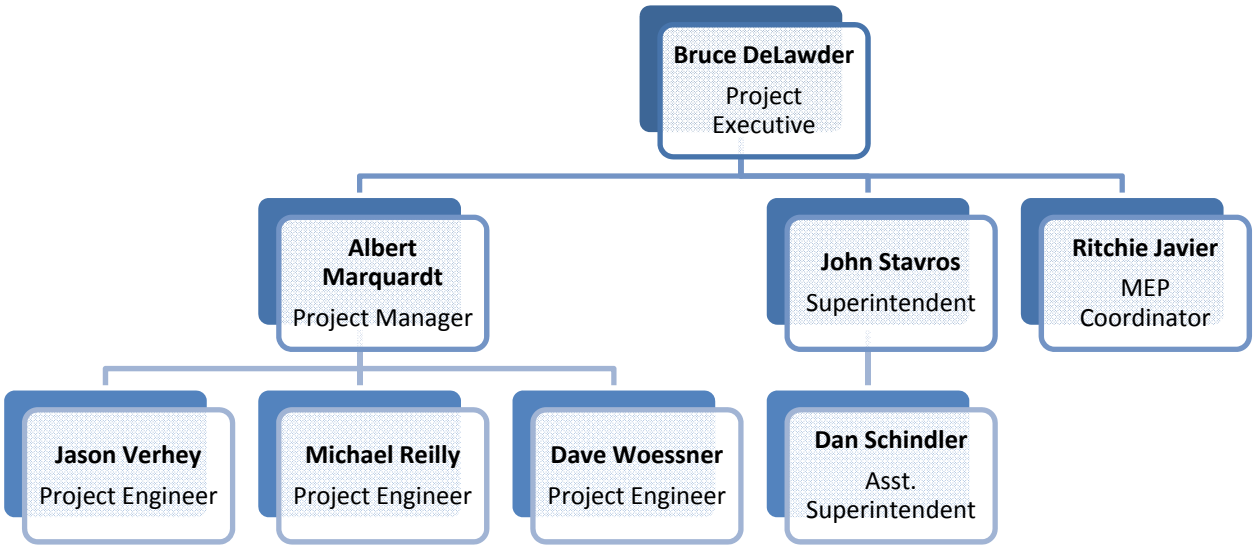

Figure 7: Whiting-Turner's Staffing Plan

3.3 Client Information

The Baltimore Washington Medical Center (BWMC) - Women's Center and Inpatient Tower is owned by the University of Maryland Medical System (UMMS). UMMS recently purchased the existing hospital structure and changed the name from North Arundel Hospital to Baltimore Washington Medical Center. The hospital still remains under the same management; however, the hospital is now corporately owned. The construction for this project is being managed by an owner's representative.

The keys to completing the project to the owner's satisfaction include a high quality project that is on budget and on schedule. The owner holds each of these elements to a very high standard. From the beginning of the project, the owner has held a very stringent budget. In fact, the construction manager who performed the preconstruction services for the project was not awarded the construction phase of the project because they could not lower the budget to the owner's satisfaction. Whiting-Turner was able to present a budget that the owner was satisfied with, and therefore was awarded the construction phase of the project. To ensure that the quality of work is above standards, Whiting-Turner has an incentive program for completing quality control reports. Each employee is required to complete three quality control reports and two safety checklists each week. These quality control items vary each week depending on the activities occurring in the field. For each additional quality control report submitted, the employee receives a chance to win a gift that is awarded at the end of each quarter. The owner is always concerned with the schedule of the project. Owner meetings are held every other Tuesday to discuss whether or not the project is on schedule. For these meetings, the superintendents review the two-week look-ahead schedule to keep the owner up to date with the track of the project. Throughout the project, Whiting-Turner has managed to keep the project on schedule. Safety is always an important issue for the both the owner and Whiting-Turner. In fact, safety is one of Whiting-Turner's biggest priorities. For this project, Whiting-Turner joined in a partnership with MOSH (Maryland Occupational Safety and Health) to ensure a safe environment for all employees on-site.

Because the new Patient Tower will tie into the existing hospital, there are a number of sequencing issues that are of interest to the owner. Whiting-Turner's scope of work includes both new construction and also renovation of the existing hospital. The areas to be renovated exist on the lower level and level three of the existing hospital. In order to renovate these areas, there must be a space within the new Patient Tower where employees can relocate. In order to provide spaces during the renovation, the patient tower has been split into two phases. The first phase consists of the lower level through level three; therefore, the sequencing of the project is concentrated mostly on these levels. Once this phase is completed and turned over, the renovation can begin in the existing hospital. Before the first phase can be turned over for occupancy, all life safety measures will need to be in place for the entire tower. These safety items include the elevators, fire alarm systems, and sprinkler systems.

3.4 Existing Conditions and Site Plan

*Please see Appendix A for Existing Site Plan

The Baltimore Washington Medical Center is located just south of Baltimore in Glen Burnie, Maryland. The Baltimore Washington Medical Center site consists of an existing hospital, formerly known as the North Arundel Hospital. It also includes the Tate Cancer Center, two parking garages, and a few parking lots. Figure 8 is an image of the BWMC site before the Patient Tower is constructed.

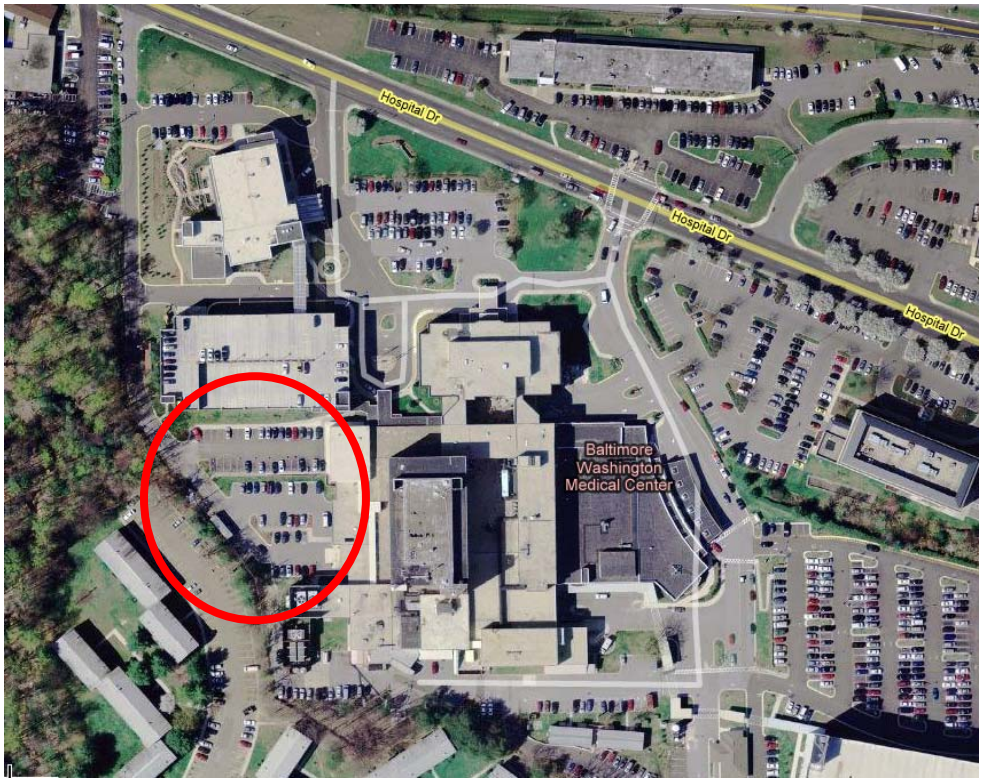

Figure 8: BWMC Site before Patient Tower Construction

On the site, there are currently two new additions to the existing hospital. Along with the addition of the patient tower, the emergency department is also currently under construction. With the large amount of construction currently going on, there is a demand for worker's parking on-site. To accommodate for this demand, the hospital has allocated a section of the back parking garage for construction workers parking. The parking allotted for the workers is sufficient at this time; however, as more trades begin to start up on site, there will need to be more parking available for these extra workers to park. Due to the large volume of construction, there are also a lot of waste products that accumulate on site; therefore, a number of dumpsters have been placed around the entire Baltimore Washington

Medical Center site. The tipping fee for the waste is currently $350/ dumpster. This fee accounts for a certain weight, and for anything that is overweight, there is an additional fee.

The site where the new patient tower is being constructed is a very congested site due to the existing structures that surrounds the construction site. Because the new tower is being built on a busy site where there are many people moving around the area, it is very important to monitor all activities on the construction site. To monitor the area, there are four job trailers located around the site. Most of the project team along with the owner's representative is located in the three of the job trailers set up behind the existing hospital. These trailers were placed in this area to supervise who enters the site and also to check in any new subcontractors entering the site. The fourth trailer is located at the north end of the construction site in order to monitor all material deliveries being made to site.

3.5 Site Logistics

The construction began in July 2006 with the drilling of helical piers below the existing structure and the start of the foundation system. The construction process for the structure started at the south end and moved towards the north end. The concrete structure was poured by floors with 4 phases per floor. The concrete was placed using a combination of two concrete pumps and crane and bucket. However, the majority of concrete was placed using two concrete pumps that run up through the building. The concrete was formed using horizontal and vertical formwork. The horizontal formwork used for the slabs, beams, and drop panels was the conventional metal systems. This system consists of aluminum shores supporting aluminum stringers and joists with plywood sheathing. The vertical formwork used for the columns and stairwells was ganged forms. This system consists of panels that are joined together and supported with steel frames. As the concrete structure was going up, the steel and precast planks were also being erected above the existing mechanical room. Two cranes were used to erect the steel framing and precast panels. Most of the steel was erected using the 150 ton hydraulic truck crane, which is located at the front of the west lobby area. The remaining steel along with the precast planks were erected using the flat top tower crane with a boom length of 246 feet and a capacity of 17,460 lbs, which is located on the west edge of the patient tower. Two material hoists were also used to transport materials. The two material hoists, which are located at the north end of the building, run from the lower level to level six. Because the elevators have not been installed yet, these hoists are critical in the transportation of materials to each level. The construction of the Patient Tower is shown in Figure 9.

Figure 9: Construction of Patient Tower

The following two images in Figures 10 and 11 show different views of the site model developed for the BWMC Women's Center and Inpatient Tower. There are two sections of the new tower. They consist of the Patient Tower and West Lobby Area. As you can see from the model, the site for this new expansion is congested due to the existing hospital and parking garage that surround the construction site.

The site model was designed for the superstructure phase of the building; therefore, it shows the tower crane, mobile crane, concrete pumps and pump trucks, material staging areas, and a material hoist. There are a number of dumpsters and sanitary facilities located around the site. Construction fences also surround the construction areas in order to keep out people around the area

The tower crane is located along the west edge of the Patient Tower. It is placed in the middle area of the tower in order to reach all areas of the Patient Tower. Because the tower crane cannot reach the West Lobby, a hydraulic truck crane is located in front of the West Lobby. Concrete pumps and pump trucks were used to place the concrete structure. One pump truck is usually located at the West Lobby Area. For the Patient Tower, two concrete pumps ran up through the building. A concrete pump truck was also used along the north side of the tower for areas that were often hard to reach by the

pumps. As the concrete structure started, a material hoist was erected in the area between the Patient Tower and West Lobby.

In order to avoid people around the area, the material delivery entrance is located on the west edge of the Baltimore Washington Medical Center site. The delivery road to the site, which connects to the main road, Hospital Drive, is used as both an entrance and exit for the delivery trucks.

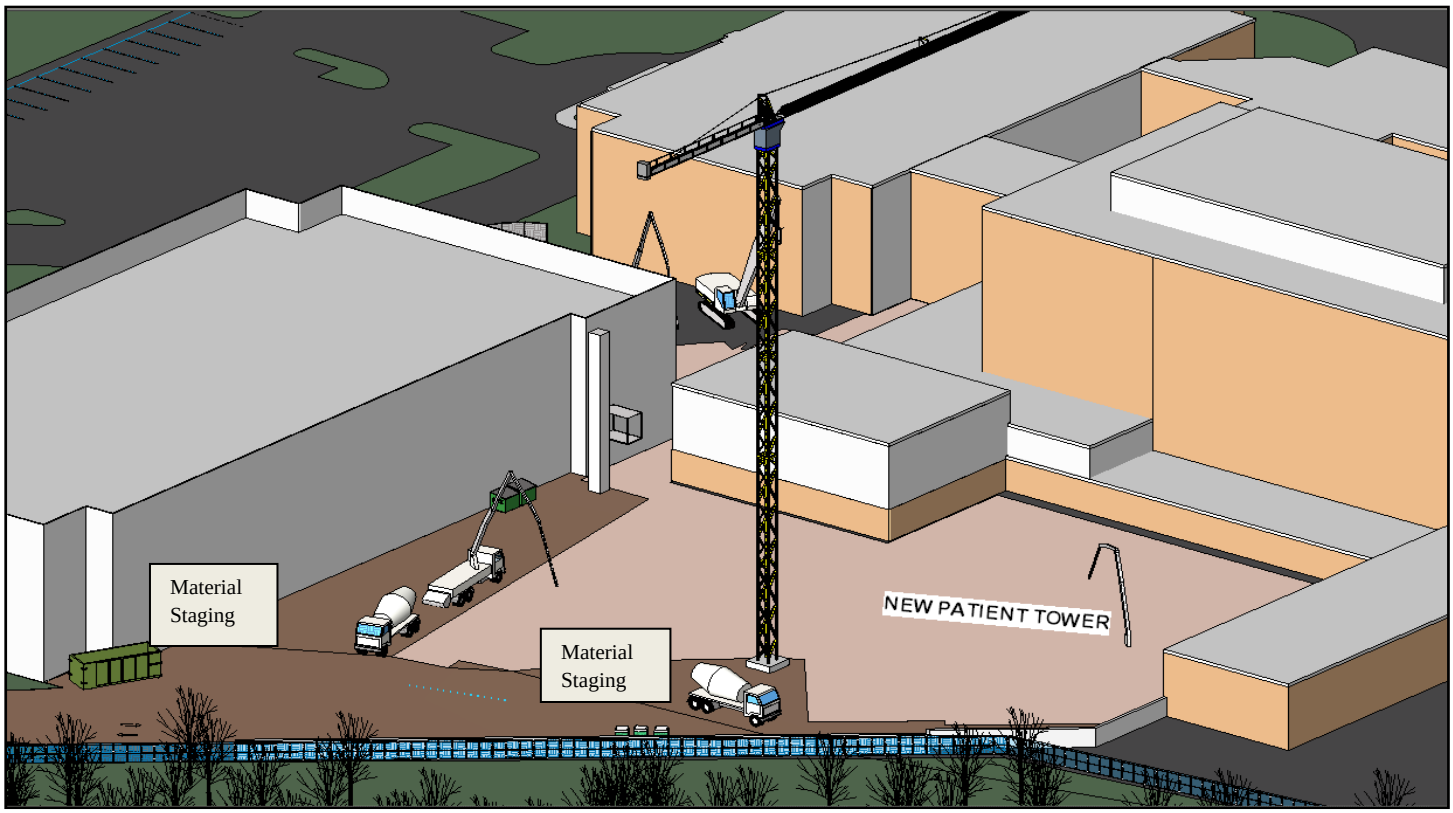

Figure 10: Site Logistics for project- Patient Tower Area

Figure 11: Site Logistics for project- West Lobby Area

3.6 Project Schedule Summary

The design for the BWMC Women's Center and Inpatient Tower Project began in early 2005. Early in the design phase of the project, a construction manager was brought on the project to perform the preconstruction services for the project. This construction manager had a contract with the owner for the preconstruction services only. When the Construction Documents were 50% complete in January 2006, Whiting-Turner was awarded the contract for the construction phase of the project. Whiting-Turner moved onto site in May 2006 and began the subcontractor bidding phase in June 2006. The subcontractor's bids were awarded in mid September 2006, and the final GMP was executed on September 22, 2006. Because the new patient tower was designed to tie into the existing hospital, part of the existing hospital needed to be either demolished or gutted before construction for the new tower could begin.

The construction process for the new tower always moved from south to north. The building construction began with the drilling of helical piers below the existing structure and the start of the foundation system. The concrete structure was poured by floors with 4 phases per floor. The three phases for the Patient Tower began at the south end and moved to the north end. The fourth phase is the West Lobby Area, which is attached to the north-east end of the Patient Tower. The steel truss, which is located above the existing mechanical room, was erected in three sections. Each section was erected

before the concrete structure was placed for those levels. The hollow-core precast planks were placed by level after the steel truss was erected. Once the concrete structure topped out, the penthouse structure was erected.

The MEP equipment was installed at various times depending on the location of the equipment. Once level three of the concrete structure was placed, the MEP rough-ins began on the lower level and worked up the levels as the concrete structure was still being placed. The interior fit-out and finishes followed behind the MEP rough-ins.

The MEP rough-in sequence:

- Plumbing Mains and Branches
- HVAC Mains and Branches
- Ductwork
- Primary Electrical Feeders
- Plumbing Fixture Carriers
- Plumbing In-Wall Rough-In
- Electrical In-Wall Rough-In
- Duct VAV Boxes
- Medical Gas Rough-In
- Sprinkler Mains and Branches
- Electrical Systems Cable Tray
- HVAC Rough-In
- Plumbing Insulation
- Fire Alarm System Rough-In
- Duct Insulation
- HVAC Insulation
- In-Wall Inspection

The interior fit-out/ finishes sequence:

- Layout Top and Bottom Track and Door Frames
- Interior Wall Framing
- Interior Drywall
- Tape and Mud Drywall
- Prime and 1st Coat Paint
- Ceiling Grid
- Flooring
- Ceramic Tile
- Doors and Hardware
- Millwork/Casework/Cabinetry
- Light Fixtures
- Toilet Accessories
- Miscellaneous Specialties
- Ceiling Tile
- Final Paint

As the concrete structure was finishing, the exterior wall framing and sheathing was started on level 1. The Patient Tower is planned to be turned over in two phases. The first phase consists of the lower level through level two, and the second phase is levels three through six. See Figure 12 for the project summary schedule created in Microsoft Project.

ID	Task Name	Duration	Start	Finish
1	Schematic Design	44 days	Thu 3/17/05	Tue 5/17/05
2	Design Development	132 days?	Wed 5/18/05	Thu 11/17/05
3	50%CDs / WT Awarded Project	0 days	Tue 1/24/06	Tue 1/24/06
5	Subcontractor Bid/Award	69 days?	Thu 6/8/06	Tue 9/12/06
7	Utilites Relocation	20 days?	Mon 7/10/06	Fri 8/4/06
6	Sitework Begins	0 days	Mon 7/10/06	Mon 7/10/06
8	Demolition / Excavation	30 days?	Mon 7/31/06	Fri 9/8/06
28	Upgrade Existing Utility Plant	268 days?	Tue 8/29/06	Thu 9/6/07
4	100% Construction Documents	1 day?	Fri 9/8/06	Fri 9/8/06
14	Building Construction Begins/ Final GMP	0 days	Fri 9/22/06	Fri 9/22/06
9	Drilling Helical Piers	15 days?	Mon 9/25/06	Fri 10/13/06
10	Foundations	85 days?	Mon 9/25/06	Fri 1/19/07
11	Concrete Structure	225 days?	Wed 10/4/06	Tue 8/14/07
12	Steel Truss Erection	160 days?	Mon 10/23/06	Fri 6/1/07
22	MEP Equipment Installation	206 days?	Mon 2/26/07	Mon 12/10/07
20	Roofing	201 days?	Thu 3/1/07	Thu 12/6/07
18	MEP Rough-ins	418 days?	Fri 3/2/07	Tue 10/7/08
16	North and South Bridge Structures	115 days?	Mon 4/23/07	Fri 9/28/07
15	Precast Concrete Erection	36 days?	Fri 6/15/07	Fri 8/3/07
23	Building Enclosure	205 days?	Mon 6/18/07	Fri 3/28/08
13	Topping Out	0 days	Fri 7/27/07	Fri 7/27/07
21	Elevator Installation / Re-certification	191 days?	Tue 8/7/07	Tue 4/29/08
17	Penthouse Structure and Fitout	45 days?	Mon 8/13/07	Fri 10/12/07
19	Interior Fitout and Finishes LL- L6	324 days	Wed 10/24/07	Mon 1/19/09
24	C of O- Lower- Level 3	0 days	Fri 9/19/08	Fri 9/19/08
26	Commissioning and Punch List	20 days?	Tue 1/20/09	Mon 2/16/09
25	C of O- Level 4- 6	0 days	Mon 2/23/09	Mon 2/23/09
27	Substantial Completion	0 days	Mon 2/23/09	Mon 2/23/09

Figure 12: Project Summary Schedule

3.7 Project Cost Estimates

3.7.1 Square Foot Cost Evaluation

R.S. Means Square Foot Estimate

The square foot estimate was completed using the R.S. Means reference listed above. The reference used for the square foot estimate was listed under the Commercial/ Industrial/ Institutional Section. The type of building is a 4-8 Story Hospital with the model number M.340. The Exterior Wall was a combination of the Face Brick with Concrete Block Back-up (Reinforced Concrete Frame) and the Precast Concrete Panels with Exposed Aggregate (Steel Frame). Because the S.F. Area of the new patient tower fell between two values, the cost/ square foot was found by interpolating between the S.F. Area values 225,000 SF and 250,000 SF. The building perimeter was also found by interpolating between the L.F. Perimeter values 950 LF and 1033 LF. The Face Brick System makes up about 30% of the Exterior Wall System, and the Precast Concrete System makes up about 70% of the Exterior Wall System. The cost needed to be adjusted for the perimeter, and the basement cost was also added into estimate. To develop a more accurate cost estimate, some of the common additives such as cabinets, closed circuit TVs, nurse call stations, sound system speakers, and sterilizers were included within the estimate.

Square Foot Building Estimate for the BWMC Women's Center and Inpatient Tower

Building Area (SF): 239,088 SF (excluding basement area)

Building Perimeter (LF): 1200 LF

Cost / Square Foot:

- Face Brick with Concrete Block Back-up (Reinforced Concrete Frame): $231.99 / square foot
- Precast Concrete Panels with Exposed Aggregate (Steel Frame): $224.07 / square foot

Base Cost / Square Foot:

- Face Brick: 30% of $231.99 / square foot
- Precast Concrete Panels: 70% of $224.07 / square foot
- Total Base Cost / Square Foot: $ 226.45 / square foot

Cost Adjustment Type:

- Actual Perimeter: 1200 LF
- Interpolated Perimeter: 995 LF
- Adjusted Cost / Square Foot: + $2.05 / square foot
- Adjusted Base Cost / Square Foot: $228.50 / square foot

Building Cost:

- Base Building Cost: $54,631,608
- Basement Cost: $925,230
- Total Cost: $55,556,838

Additions:

- Nurse Call Station (Single Bedside): $42,624
- Nurse Call Station (Emergency Call Station): $49,350
- Nurse Call Station (Duty Station): $9,000
- Nurse Call Station (Master Control Station): $16,650
- Sound System (Speakers): $49,590
- Sterilizers (Single Door, Steam): $161,500
- Closed Circuit TV (station camera and monitor): $61,975
- Cabinets (Base, Door Units): $76,752
- Cabinets (Base, Drawer Units): $50,600
- Cabinets (Wall, Doors): $186,050
- Cabinets (Tall, Storage): $8,100
- Total Cost of Additions: $712,196

Total Cost with Additions: $56,269,029

Multiplier Type:

- Location Multiplier (Baltimore, MD-Commercial): .93

Total Square Foot Estimate for Building: $52,330,200

3.7.2 Building Systems Cost Evaluation

Building Construction Cost:

- Cost: $66,455,588
- Cost/SF: $191.39
  - Note: Building Construction Cost does not include land costs, sitework, permitting, etc.
  - Note: Building Construction Cost does not include the upgrade of the existing utility plant.

Total Project Cost:

- Cost: $75,460,380
- Cost/SF: $219.71

- Note: The sitework for this project is considered to be a separate contract, which includes the sitework for both the new Patient Tower and also for the Emergency Department Expansion; the majority of the sitework is not calculated in this total project cost.

Building Systems Cost:

- See Table 1 for Building Systems Costs

Table 1: Building Systems Costs

Building Systems	Cost	Cost / Square Feet
General Conditions	**$1,386,061**	**$4.47**
Structural System	**$1,2698,671**	**$106.73**
Concrete	$10,329,977	$33.62
Structural Steel	$2,368,694	$73.11
Masonry	**$1,154,148**	**$3.72**
Mechanical System	**$20,486,507**	**$57.62**
Patient Tower	$17,879,997	$57.62
Existing Utility Plant Upgrade	$2,606,510	$0
Electrical System	**$11,151,517**	**$21.56**
Patient Tower	$6,688,641	$21.56
Existing Utility Plant Upgrade	$4,462,876	$0

3.7.3 General Conditions Cost Evaluation

A General Conditions Estimate was developed for the BWMC Women's Center and Inpatient Tower. Table 2 shows the grouping of all the items included for the estimate. For this estimate, both the 2007 R.S. Means Facilities Construction Cost Data and Whiting-Turner's Cost Data were used as cost references. The estimate was performed using the same items listed in Whiting-Turner's General Conditions Budget so that the estimate and budget could be compared. Many of the items listed in the estimate are calculated based on monthly costs. For these items, the project duration is assumed to be thirty-three months (June 2006-Febuary 2009). For the project team, various durations were used for each employee depending on the estimated time that each employee will spend on the job site. The construction fee for this project is assumed to be 1.5% due to the large size of this project. The estimate cost is approximately $2,834,700. The actual budget is $1,541,270. One of the main reasons for the difference in cost could be the project staff estimate. The unit costs were taken from R.S. Means rather than from Whiting-Turner's data. The costs for the employees depend on the company and to some extent, can be difficult to estimate.

Table 2: General Conditions Estimate

General Conditions Estimate									
Item	Unit	Quantity	Mat'l Unit Cost	Mat'l Cost	Labor Unit Cost	Labor Cost	Equipment Unit Cost	Equipment Cost	Total Cost
Project Staff									
(2) Project Engineers	Month	31			1085	134540			$134,540
(1) Assistant Project Manager	Month	31			1250	155000			$155,000
(1) Assistant Superintendent	Month	34			1500	204000			$204,000
(1) Project Manager	Month	33			1550	204600			$204,600
(1) Superintendent	Month	35			1650	231000			$231,000
(1) Senior Project Manager	Month	34			2025	275400			$275,400
(1) MEP Project Manager	Month	34			1775	241400			$241,400
(1) General Laborer	Month	30			1150	138000			$138,000
Project Documentation									
Drawings and Specifications	Sets	120	$700.00	$84,000					$84,000
Engineering Services									
As-Built Surveys	Acres	2.16	$1,160.00	$2,506	$300.00	$648	$20.00	$43	$3,197
Topographic Surveys	Acres	2.16	$17.00	$37	$294.00	$635	$17.60	$38	$710
Temporary Facilities									
50'x10' Job Trailers (Rented/ Month)	Each	2	$330.00	$660					$660
Sanitary Facilities	Each	135	$110.00	$14,850					$14,850
Project Signs	SF	30	$16.55	$497					$497
Field Office Expenses									
Office Equipment	Month	33	$150.00	$4,950					$4,950
Office Supplies	Month	33	$95.00	$3,135					$3,135
Telephone bill	Month	33	$210.00	$6,930					$6,930
Field Office Lights and HVAC	Month	33	$110.00	$3,630					$3,630
Temporary Utilites									
Heat	CSF	3556	$10.35	$36,805	$3.04	$10,810			$47,615
Lighting	CSF	3556	$4.00	$14,224	$15.00	$53,340			$67,564
Power for Lighting	CSF	3556							$5,334
Power for Job Duration	CSF	3556							$266,700
Water Bill	Month	33	$62.00	$2,046					$2,046
Temporary Barricades									
5' Ht. Temporary Fencing	LF.	50	$6.00	$300	$1.15	$58			$358
Guardrail	LF.	6230	$1.14	$7,102	$2.94	$18,316			$25,418
Clean-Up									
Daily Clean-Up	MSF	356	$1.70	$605	$32.50	$11,570	$2.21	$787	$12,962
Final Clean-Up	MSF	450	$2.71	$1,220	$45.00	$20,250	$3.07	$1,382	$22,851
Dumpsters	Pulls	500	$345.00	$172,500					$172,500
Equipment									
Material Hoist	Each	1	$350,000.00	$350,000					$350,000
Small Tools	Total	1	$50,000.00	$50,000					$50,000
								Total Costs:	**$2,729,846**
Insurance									
Builder's Risk Insurance	0.50%								$13,649
Worker's Compensation	18.39%								$50,200
Construction Manager Fee	1.5%								$41,000
								Total Project General Conditions	**$2,834,695**