

# ***Appendix II***

Final Report

Golden Hill Healthcare Center  
Cost Analysis

Ulster County

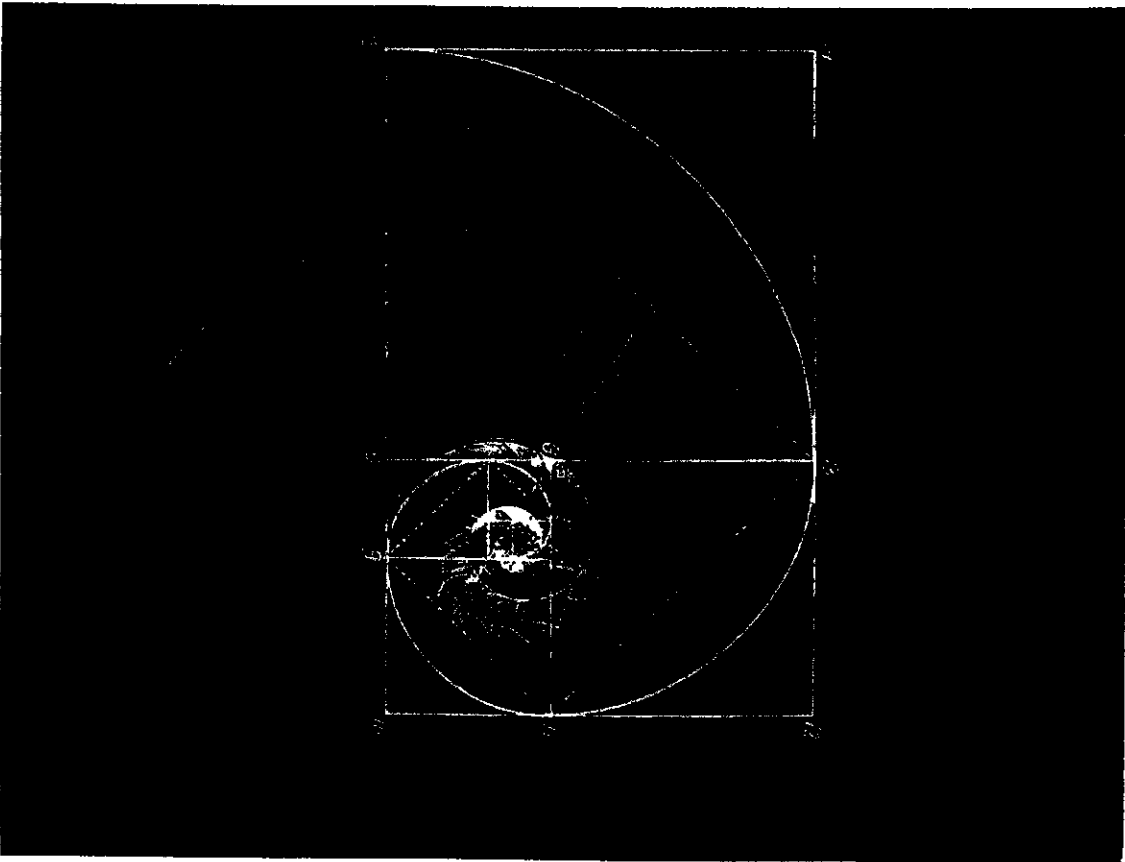
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## **Executive Summary**

### **Background**

SWBR Architects was contracted by Ulster County in the fall of 2004 to provide a second opinion on construction costs related to renovating the Golden Hill Healthcare Center. Ulster County had worked with J. Paul Vosburg, Architect, P.C. of Rhinebeck, New York over the past year to examine options for replacement, renovation, or sale of the Golden Hill Healthcare Center. This facility evaluation arose out of an investigation into the condition of sanitary piping and vent piping within the Healthcare Center. The corrosion and deterioration of these pipes has been an ongoing maintenance issue within the facility. It is apparent, based upon piping studies done, that significant renovations need to occur prior to a catastrophic failure of the plumbing systems within the building.

Mr. Vosburgh's construction cost estimates from his analysis range from \$81 million dollars to replace the Golden Hill Healthcare Center with a new 280-bed facility, to a \$24.4 million dollar construction cost to replace the plumbing piping only. The third option of an addition and limited renovations to the Golden Hill Healthcare Center was estimated at a \$43.9 million dollar construction cost. Given the level of capital costs and the range in costs of these options, Ulster County thought it prudent to obtain a second opinion on design options and project costs.

### **Scope of Services**

SWBR Architect's Scope of Services for this study consisted of the following tasks:

- Conceptual Design and Phasing Options
- Refine Renovation Scope of Work
- Review Cost Estimates and create a Second Opinion Cost Estimate

This report is a summary of our work on this cost study. Our conceptual design for additions and renovations is contained under the tab labeled Floor Plans. As part of our study, SWBR Architects looked at two distinct options for the location of additions and the extent of renovations. For the purposes of this study, we have priced out what we consider to be the more expensive option and the design that provides the highest quality of life to the residents upon completion of renovations.

Under the Scope of Work tab, SWBR Architects has indicated areas of the building that will be renovated and the extent of renovations. In this section of the report, we also provide a Building Systems Report of the major mechanical, electrical and plumbing (M/E/P) systems in the building. The Systems Report indicates the current M/E/P systems in the building, renovations that have occurred to those systems today, and the useful life expectancy of the systems. It also makes recommendations for renovation of the systems. These recommendations and their associated costs are reflected within the renovation scopes of work.

## **ULSTER COUNTY Golden Hill Healthcare Center Cost Study**

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The 3<sup>rd</sup> tab in this report is entitled Cost Estimate. It is within this section of the report that we have developed our facility cost model, based upon both the addition and renovation costs. Note that these costs within this report are total project costs, including both "bricks and mortar", construction cost and allowance for soft costs including contingencies, construction management and architect's fees, fixed equipment and an allowance for Owner's fees. This section also addresses construction-phasing costs, as the total project cost will be broken down in a number of phases over a 3-5 year period.

Construction phasing plans are further detailed under the 4<sup>th</sup> tab, and titled Phasing Plan. Within this section, we indicate how construction phasing will occur on building diagrams, and a estimated time line for completion of each phase and the total project.

The final tab of the report is an Appendix, which documents meeting minutes and support data for the report.

### **Project Need**

The immediate need to renovate the Golden Hill Healthcare Center arises from the condition of the sanitary piping and vent piping in the building. In 2002, the Healthcare Facility commissioned a study by Richard Stevens, consulting engineering. This study concluded that both the water supply and sanitary sewer piping had failed and that replacement was required. The copper vent piping has failed, due to chlorine gas within the sanitary sewer system. Unfortunately, given the construction of the facility and the routing of the piping, replacement of this piping will entail significant renovations to the ground floors of both the Infirmary Building and the Health Related Facility Building. Less extensive renovation will be needed at the piping chases on the upper floors of these buildings. The building construction type does not lend itself to easy demolition, as the majority of the walls are masonry, rather than drywall construction. The County is looking at an extensive capital cost merely to replace the plumbing system in the building.

The Infirmary was built in 1969 and the Health Related Facility was built in 1978. This makes the buildings 36 years old and 27 years old, respectively. The majority of the building systems within a nursing home need replacement between a useful life of 25-35 years. Typically, the mechanical, electrical and plumbing systems in a nursing home range from 30-35 percent of the total construction cost of a new nursing home, so replacement of mechanical, electrical and plumbing systems becomes a significant capital cost. As detailed in our Building Systems Report, there are numerous systems in the building that should be replaced; both from an maintenance standpoint and from an energy savings stand point.

A third reason to contemplate significant renovations to the Golden Hill Healthcare Center is to respond to the changing needs of the elderly population. Over the past 30 years since the Infirmary was built, the trend in nursing home residents is towards older residents, more frail residents, and less mobility of these residents. There has also been a significant increase in the acuity (sickness) of the residents within a typical nursing home. Very often, the nursing home residents now are sicker than residents in the past. They also tend to exhibit two, three, or more chronic illness at the same time, rather than one or two deficiencies that may have forced nursing home care.

The frailty of residents has led to more legislation on handicap accessibility. The result of this legislation is the need for greater maneuvering spaces in resident room toilets and at doorways and vestibules. The Golden Hill Healthcare Center, typical of nursing homes built in this era,

## **ULSTER COUNTY Golden Hill Healthcare Center Cost Study**

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does not provide the space and clearances required for a fully accessible environment, particularly for residents that are dependent on wheel chairs.

Another outcome of the increase in acuity of nursing home residents is the need for more staff, support spaces, and storage spaces, all of which are substandard in the Golden Hill Healthcare Center. Storage space for equipment for resident care including lifts, wheelchairs and shower chairs and geriatric chairs is typically lacking in these facilities. Staff has increased, not only for direct resident care, but also for Medicaid reimbursement and financial issues. We typically see a need for more administrative space within nursing homes of this era.

The final reason for considering renovation to the Golden Hill Healthcare Center is the changing attitudes and expectations of the market place for elderly care. County nursing homes are typically providers of last resort for poor and Medicaid dependent residents. They often see their mission as providing services to all county residency, regardless of income. Therefore, County Facilities had been somewhat insulated from the changing expectations of the marketplace. County homes tend to have greater financial backing than many private, for-profit nursing homes. Nursing home residents today and their families are demanding more home like environments, fully accessible facilities, and more private rooms. County run nursing homes need to respond to these changing trends at the same pace that the not-for-profit and for-profit nursing homes within their market area do in order to prevent decreases in occupancy and to defend the level of private pay residents within the facility.

### **Project Benefits**

There will be a number of benefits to the Golden Hill Healthcare Center and Ulster County through renovations and additions, as outlined in this report. The first set of benefits is related to operational efficiencies of the building. By replacing the system and utilities that are roughly thirty years old, the county will see the following benefits:

- Greater energy efficiency, particularly due to a decreased emphasis of electric heating
- Replacement of corroded plumbing systems
- More efficient lighting and electrical systems
- Full fire protection and sprinkler systems throughout the building
- Asbestos abatement will lead to less future liability for asbestos within the facility

More importantly, however, will be the benefits to the quality of life of the nursing home residents. Within our renovation schemes, we plan to create much better and larger social spaces with each nursing home unit, similar to a household concept.

Studies indicate that renovation from a medical model environment in a nursing home to a household or neighborhood environment may indeed lead to the following:

- Decreases in disruptive behavior among residents suffering from dementia and Alzheimer's
- Decreases in medication rates administrated
- Increases in socialization and interaction among residents and staff with corresponding decreases and indication symptoms of depression
- Greater staff satisfaction, higher morale and decreased staff turnover

### **Project Constraints**

During our concept design, SWBR Architects took the following items as givens in evaluating the project:

## **ULSTER COUNTY Golden Hill Healthcare Center Cost Study**

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- The current bed compliment of 280 beds is to remain stable during both construction and after construction.
- Given the political climate within New York State, a replacement nursing home facility is not a feasible solution.
- The County will continue to remain in the nursing home business. As a result, operational cost and energy efficiencies should be pursued within the renovations.
- Land acquisition is not a viable option, and that any proposed additions should be within the confines of the current site.
- The number of nursing units after renovation should remain at seven 40-bed units, rather than creating an 8<sup>th</sup> unit. Creation of an 8<sup>th</sup> unit would increase both staff costs and operational costs above and beyond the current base line that the county now incurs.

### **Cost Methodology**

In developing our cost model, SWBR looked at square footage costs for construction of a new nursing home addition and renovation of the existing facilities.

The square footage costs were based on a number of sources:

1. Bid results from recent county nursing home facilities
2. Cost databases proprietary to SWBR Architects
3. MEANS construction cost database, a national database
4. Review of square footage cost with local contractors

The square footage costs were then adjusted for both inflation over the past year and for construction occurring in Ulster County, through the use of a regional location factor.

Soft costs over and above construction costs were also taken into account in our cost study. For the definition of soft costs, we have maintained the same line items and percentages that the County would see on a Certificate of Need Project Cost Schedule.

### **Funding**

In terms of funding, the project approach has been to plan an initial phase of \$10 million dollars or less that would be submitted to New York State Department of Health for an Administrative Review Certificate of Need. The remaining project phases would each be Limited Review Certificates of Need that would fall under a total project cost threshold of \$3 million dollars. Whether Ulster County bonds for the total project cost at one time or authorizes a series of bonds over the phasing of the project remains to be determined. However, New York State will reimburse interest and depreciation costs based on Medicaid days to the County.

What has changed over the past year is that the Department of Health expects Ulster County to provide 25% equity in the project, rather than the 10% equity that was department policy in years past. This new policy of higher equity requirements is meant to disway nursing home projects within New York State for a certain time in the future. We believe that New York State wishes to reduce the number of long term care beds in the state, and higher equity requirements will delay or deny the replacement or renovation projects for nursing homes.

### **Cost Comparison**

**ULSTER COUNTY Golden Hill Healthcare Center Cost Study**

A final portion of our scope of work is to compare SWBR's cost model to Mr. Vosburgh's construction cost estimate as detailed in the reports shared with us. As part of this study, we have also examined Mr. Vosburgh's scope of work related to the addition and renovations. In the table below there is a summary of our costs, Mr. Vosburgh's costs, and the comment on scope of work. Greater detail for SWBR's cost is included within the cost estimate tab of this report.

**COMPARISON RENOVATION/CONSTRUCTION ITEMS FOR GHCC**

<b>Item / Quantity</b>	<b>J. Paul Vosburgh's Cost Estimate</b>	<b>SWBR Architect's Cost Estimate</b>
New Construction – Square Feet		
New Addition First Floor / Entrance	10,600 sf	4,840 sf (three floors)
New Addition 40 Bed Unit Second Floor	18,200 sf	18,324 sf (40 bed scheme only)
Addition to Ends of Units	4,800 sf Living Rooms	22,956 sf Resident Rooms
Addition at S2 Dining Room	3,800 sf	1,008 sf
<b>Total Square Footage Additions</b>	<b>37,400 sf</b>	<b>28,804 sf</b>
<b>Scope of Work Items:</b>		
New construction wall systems	Brick with block (CMU) backup	Brick with steel stud backup
Renovate building with: control joints, exterior doors, recaulk entire building	Yes	Yes
Relocation of South Wing roadway to back lot	Yes	Yes (if needed in 40 bed scheme)
Addition of 34 parking spaces	Yes	No
Relocation of transformer	Yes	Yes
Addition of Loading Dock – New Wing	Yes	No
Addition of Ambulance Entrance – New Wing	Yes	No
Addition of Boiler Room – New Wing	Yes	Assume reuse existing boiler room.
Addition of Walkway – around new wing	Yes	Yes
New Canopies	Yes	Renovate existing.
New Above Ground Oil Tanks –(2)	Yes	Yes
Water Line Modifications – Cut off Loop system to increase flow and Cl residual	Yes	Yes
Resurfacing of all asphalt parking/roadways	Yes	Yes
New Parking Lot lighting	Yes	Yes
O2 farm including pads and tanks	Yes	Yes
All new windows – thermally broken frames – high performance glass	Yes	Yes
New kitchen ceiling – Mylar	Yes	Yes
Tub and Shower rooms – all replaced	Yes	Yes
Heat Pumps replaced	Yes	Yes

**ULSTER COUNTY Golden Hill Healthcare Center Cost Study**

Rooftop Recovery units	Yes	Yes
Make up air system	Yes	Yes
DDC control system	Yes	Yes
Emergency Generators – upgrade/replace	Yes	Yes
Fire Alarm – replace	Yes	Yes
Total Plumbing	Yes	Yes
Lighting upgrade to energy efficient	Yes	Yes
Nurse Call System – upgrade	Yes	Yes
Elevators – all upgrade and one new	Yes	Yes
All new nurses stations	Yes	Yes
Replace acoustic ceiling	Yes	Yes
All new paint	Yes	Yes
All new VCT	Yes	Yes
All new carpet	Yes	Yes
<b>Costs:</b>		
Base Construction Cost	\$ 30.4 M	\$ 23.7 M
Furniture Costs	Unknown	\$ 0
Escalation Costs	\$ 4M	\$ 1.4 M
Design Contingency	Unknown	\$ 1.2 M
Construction Contingency	\$ 4.5M	\$ 2.4 M

**Conclusion**

SWBR Architects proposes that the County commit to a \$34 million dollars total project cost for additions and renovations to the Golden Hill Healthcare Center as outlined within this study. This assumes a project to be broken up into 10 separate phases, based upon the funding requirements imposed by New York State Department of Health. These phases should run concurrently, and should be designed and engineered at one time as a single set of bid documents. Further refinement of both design and the construction cost budget will need to occur during architectural design of the renovations. However, this report should provide a framework for both a design services Request for Proposal and future design efforts for renovating the Golden Hill Healthcare Center.

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