

Garfield County Public Hospital District - Facilities Planning Analysis & Recommendations

Introduction

Garfield County Memorial Hospital and Long term Care is in need of repair. The hospital facilities include two buildings that are co-located on the same campus and licensed together as a hospital with a long term care sub-part. Due to the age of its building the hospital does not meet many of the current facilities standards required of hospital grade construction. Likewise the long term care building has some physical plant issues that must be addressed as equipment, boilers, heating and ventilation systems reach the end of its useful life.

Background

Public Hospital District Number 1, Garfield County, Washington (District) owns and operates Garfield County Memorial Hospital and Long term Care. The original hospital was built in 1948 and the long term care was added in 1976. Hospitals measure the age of their buildings by a financial ratio called "average age of physical plant." At last calculation, according to this measure, Garfield County has the most aged hospital in the state, over double that of any other hospital, 23 years compared to a state average of 9 years.

In 2008 the community passed a \$198,000 special levy to repair or replace several critical operating systems including; telephone, fire alarm, nurse call and emergency generator. In 2009 an additional levy of \$70,000 was approved to paint the exterior of the building and repair portions of the roof.

In 2009 the hospital was approached by the Washington State Department of Labor & Industries Electrical Inspector with a concern of potential non-compliance specifically related to the installation of a cooling unit for the hospital server room and past installation of radiology equipment. It appears that achieving compliance with these two areas would necessitate bringing the entire hospital building (circa 1948) into compliance with the current electrical code requirements. To accomplish this would require rewiring the entire facility at a cost approaching \$1M.

Also in 2009 the long term care suffered a failure of the Heating Ventilation and Air Conditioning (HVAC) system. This compressor failure was corrected by installing a used compressor unit with the hope that the system would remain operable until a more permanent repair or replacement could be completed. In October of 2009 the compressor failed again, this failure was the third failure over a four year span of time. The hospital staff began to discuss the permanent replacement of this unit with the facilities architect and engineer at this time. This discussion concluded that the best alternative was to replace the HVAC unit with a comparable system that provides capacity to manage future compliance with hospital facility licensing regulations.

The district has to move quickly to replace the HVAC unit before the hot summer season and also begin to develop a strategy to address the electrical non-compliance issues with the aged hospital facility.

Analysis

The most immediate physical plant issues that the district has to consider fall into three major classifications; Air Handling System (HVAC), Electrical Compliance, and Other Improvements (roof & paint). All three issues are somewhat interrelated and potentially impact the greater long range facilities planning process. Compliance with hospital licensing code requirements is a priority as is the potential impact on reimbursement. As a critical access hospital any changes to the physical plant and use of space has Medicare cost reporting and reimbursement implications that must be taken into consideration as part of the decision process.

Air Handling Unit

The unit to be replaced was originally a Trane brand 34 ton air conditioner with electric heat. Installed in 1976, the unit provides heating and cooling to approximately 7,000 SF of common area; including living room, hallways, nursing station and physical therapy all located in the Long term care facility. In about 1999 modifications were done to the unit in an attempt to increase the capacity of the unit. These modifications included the addition of a separate and larger condensing unit and a larger compressor. At some point in 2005 the unit's compressor failed and a rebuilt one was installed by Guardian Heating and Air Conditioning. In 2007 another compressor failed and again it was replaced. In 2008 a third compressor failure occurred and again another was supplied. That compressor failed at the end of the cooling season in 2009.

The approximate cost of a rebuilt compressor unit is \$12,000 installed. These particular compressors are no longer available due to the age of the equipment. The service life of an air conditioner of this type is typically 20 years; this unit is 34 years old. We believe that the modified state of the unit combined with its age is the cause of the failures we are seeing. An additional concern is that the unit has been subject to multiple Freon leaks due to the age of its piping. Parts, including another compressor are no longer available except possibly the used market.

With the assistance of the facility architect, John McClean, the district engaged a qualified general contractor to conduct an energy audit of the Long term Care facility. The objective of the audit was to determine if the facility would qualify for assistance from the state sponsored ESCO financing program. If qualified the facility would be able to pay back the cost of upgrades to the HVAC and other energy improvements with the savings realized from those improvements. The facility did not qualify for the ESCO program due to the expense of the project and the longer projected payback from the improvements.

With the ESCO option off the table the facility staff began to focus on the alternatives for replacement. The major objectives to consider is the most cost effective, rapid and compliant alternatives for replacement.

Cost is a major concern for this project. The district does not have sufficient reserves to fund the replacement of this system. The initial estimates range from \$100,000 to \$150,000 for the entire project. The district does expect some surplus funding to remain from a USDA grant the facility received last year. With the approval of the USDA perhaps some of these funds can assist with the cost of the project. It is anticipated that the surplus may be about \$100,000. Other alternatives include a lease of the equipment, tax anticipation warrants, special levy funds or a combination of these sources.

The project must be completed rapidly. The weather patterns for the area suggest that by mid May the facility must be prepared to provide temperature control to the residents of the long term care. The options on the table require a lead time of no less than 10 to 12 weeks to fully implement. This timeline creates a critical need to expedite the entire project.

The system that is installed must be compliant with facilities licensing standards for long term care but would preferably meet the more stringent requirements for hospital licensure. The benefit of a replacement meeting the capacity of the hospital standards is the flexibility this affords the facility to use the space in the future. Modification of the nursing home to accommodate other hospital services will most likely require the air handling system to comply with the hospital licensing standards.

Electrical Compliance

The hospital electrical system is a two phase system with the entire load of the facility wired back to the emergency generator. If the facility experiences a power failure the entire hospital building is powered by the generator. Current licensing standards require the power to meet a three phase standard. With three phase power only vital equipment is powered by the emergency generator when there is a power failure.

There were two projects completed by the hospital in the past twelve years that required an electrical permit. These two projects included the addition of a cooling unit for the hospital computer server room and the upgrade of the radiology equipment. In both cases an electrical permit was never pulled. In order to correct this issue the Department of Labor and Industries (L&I) is now requiring the facility to submit an application for the correct permits. Failure to comply with the departments expectations will result in fines until the situation is corrected.

With the assistance of our architect and electrical engineer the district has confirmed that the application process would require the facility to submit a document called a single line drawing of the electrical system. The district believes that this single line drawing will indicate that the two phase power system is not in compliance and will likely result in a demand from L&I to make modifications to the facility to bring it into compliance.

If the facility is forced to meet the current standards for hospital electrical systems the cost will likely approach \$1M. Clearly the district does not have the resources to fund these improvements.

The facility is working with the districts electrical engineer and architect to file a request for variance with the department. If successful in this effort the variance will likely only buy the district some time while a number of alternatives are explored. Some of the options that may be considered include; a request for a permanent variance, the relocation of the services in question (radiology and computer servers), a change in the occupancy classification of the facility, relocation of all hospital services into the long term care facility or the construction of the proposed addition to the hospital.

Other Improvements

The most immediate other improvements planned for the facilities include the repair of the roof on both buildings and painting of the exterior surfaces. Both of these projects were approved by voters in the 2009 General Election. The district remains committed to completing these projects

and will likely consider the timing of this work in light of the other facility improvements that present the most urgent need.

Other improvements to the hospital and long term care were proposed in a \$3.5M bond proposition presented to the community in the 2006 General Election. These projects are on hold indefinitely because the proposition flailed by just fewer than 2% of the vote. If passed by voters the bond would have funded the construction of a 6,600 SF addition to the existing facility to accommodate acute care and emergency services, some electrical repairs, improvements to physical therapy, and cosmetic improvements to the long term care facility. It is believed that the construction of the addition to the present facility would have resolved a number of the physical plant concerns that the district now faces. The fact may remain, in spite of any new addition the electrical issues with the hospital would have eventually surfaced as a concern.

Conclusion

The district must develop and execute on a plan that substantially addresses the immediate and long range physical plant needs of the organization. This will require a range of options to be developed and presented to the board of commissioners and potentially the community for consideration. The most emergent concern is the replacement of the long term care HVAC unit. Following a parallel process the district must approach L&I with a proposal to address the electrical issues and minimally seek a variance until compliance can be achieved.

Recommendation

The executive team of the district is prepared to recommend the commissioners proceed with the emergency purchase and installation of the replacement HVAC unit for the long term care building. Of the alternatives presented staff recommends Option 2; removal and replace with an upgraded unit. This alternative would provide for potential future uses of the space and provide a permanent versus temporary fix.

The commissioners will discuss the facility needs in the regular meeting April 7 at 6:00 p.m. and continue this discussion at a retreat scheduled for the following day from 10:00 a.m. until 2:00 p.m. Representatives from the districts CPA firm and architecture company will join the commissioners for this discussion, consider the alternatives, and develop an action plan. It is recommended that the following alternatives be considered and prioritized with the intent of seeking a variance from L&I.

1. Seek a permanent variance from the department of Labor and Industries
2. Seek a temporary variance from the department of Labor and Industries presented together with plan for compliance
3. Seek approval to disconnect and relocate the services that are out of compliance essentially placing the facility in a "grandfathered" state that existed prior to the unauthorized improvements.
4. Reconfigure the long term care and perform the necessary modifications to accommodate some or all of the existing hospital services and re-designate the existing hospital space to an acceptable occupancy classification
5. Construct a replacement for the existing hospital either on the present footprint of the building or as an addition to the facility.



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March 29th 2010

Blue Room Architecture & Design, PS
108 N Washington #412
Spokane, WA. 99201

Attn: John Mclean

Re: GCPHD Emergency Mechanical Repairs Proposal

Option #1 Remove & Replace Existing Unit (Like for Like)

Proposal Includes:

- Remove and disposal of existing RTU and remote condenser
- Install new 36" roof curb with final filter, including necessary roofing work
- Necessary ductwork modifications between existing duct and proposed unit.
- Provide and install (1) packaged RTU with DX cooling & electric heat to match existing capacities.
- Provide electrical work necessary to disconnect existing unit and connect proposed unit.
- Start-up and testing
- One year parts and labor warranty

Clarifications/Exclusions:

- Unit to be similar weight so proposal does not include any allowance for structural engineering or modifications.
- Excludes any unforeseen modifications required by DOH review
- Excludes costs for engineering and design if required
- Unit to be constant volume single zone
- Proposed unit to be controlled by averaging temperature sensors in 3 locations
- Allow 8 weeks for production and an additional week for transport.
- Excludes cost for temporary cooling equipment.
- Excludes WSST

Total Proposed Price...\$75,000.00

Respectfully Submitted,

Dale Hollandsworth
Commercial HVAC
Division Manager
Apollo Sheet Metal



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Spokane, WA. 99201

Attn: John Mclean

Re: GCPHD Emergency Mechanical Repairs Proposal

Option #2 Remove & Replace Existing Unit w/ Upgraded Unit

Proposal Includes:

- Remove and disposal of existing RTU and remote condenser
- Install new 36" CSI roof curb with final filter; including necessary roofing work
- Necessary ductwork modifications between existing duct and proposed unit.
- Provide and install (1) 50 Ton Variable Volume packaged RTU with DX cooling & electric heat
Provide electrical work necessary to disconnect existing unit and connect proposed unit.
- Start-up and testing
- One year parts and labor warranty

Clarifications/Exclusions:

- Proposed unit is slightly heavier (approximately 3,000 lbs)
- Proposal does not include any allowance for structural engineering or modifications
- Excludes any unforeseen modifications required by DOH review
- Excludes costs for engineering and design if required
- Unit to be capable of with use of future VAV terminal units
- Proposed unit to be controlled by averaging temperature sensors in 3 locations
- Allow 10 weeks for production and an additional week for transport.
- Excludes cost for temporary cooling equipment.
- Excludes WSST

Total Proposed Price...\$105,000.00

Respectfully Submitted,

Dale Hollandsworth
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March 29th 2010

Blue Room Architecture & Design, PS
505 S First St.
Hermiston OR. 97838-2399

Attn: John Mclean

Re: GCPHD Temporary Rental Unit Proposal

Proposal Includes:

- Provide (1) 35 ton DX unit (208V) mounted on flatbed trailer with 2 supply & 2 return connections.
- Provide and install flex duct (approx 100') between proposed rental unit and existing ductwork.
- Provide and install (approx 100') electrical cables between rental unit and existing unit disconnect.
- Roundtrip Freight
- Pricing is based on a 2 month duration

Total Proposed Price...\$16,500.00

Respectfully Submitted,

Dale Hollandsworth
Commercial HVAC
Division Manager
Apollo Sheet Metal

GCPHD - LTC Air Handler Replacement
MARCH 2010
PROJECT PROBABLE COST ASSESSMENT
(In-House Construction)

ESTIMATE PHASE: Predesign			
CONSTRUCTION (HARD) COSTS			
General Construction HVAC Unit Replacement		\$	105,000.00
Roof Repairs			TBD
Electrical		\$	2,500.00
SUBTOTAL		\$	107,500.00
CONSTRUCTION CONTINGENCY (20%)		\$	21,500.00
SUBTOTAL		\$	129,000.00
WSST @	7.5%	\$	9,675.00
CONSTRUCTION (HARD) COST SUBTOTAL			\$ 138,675.00
PROJECT (SOFT) COSTS			
Architectural/Engineering Fees (10% of Construction Cost)		\$	12,900.00
Design Contingency	10%	\$	1,290.00
<u>Permit and Review Fees</u>			
DOH Plan Review		\$	1,535.00
L&I Plan Review			TBD
City Plan Review		\$	700.00
Impact Fees			N/A
Hazardous Materials			N/A
<u>Additional Estimated Project Costs</u>			
Owner's Furniture & Equipment			TBD
Parking Permits			N/A
Insurance Costs			N/A
Legal, Insurances, Titles, Lender Fees			N/A
Special Inspections			N/A
PROJECT (SOFT) COST SUBTOTAL			\$ 16,425.00
TOTAL ESTIMATED PROJECT COST			\$ 155,100.00