PLATTE COUNTY MEMORIAL NURSING HOME
FACILITY EVALUATION REPORT

PLATTE COUNTY
MEMORIAL NURSING HOME

JUNE 2011

NELSON
ARCHITECTS, LLC.
110 North 6th East . P.O. Box 1244
Riverton, WY 82501
307.856.6155 p.
nelsonarchitects@wyoming.com

NELSON
ARCHITECTS, LLC.

ARCHITECTURAL STATEMENT OF FEASIBILITY

I, Colleen J. Nelson of Nelson Architects, LLC., a licensed Architect, has reviewed the need and cost for the Platte County Memorial Nursing Home and Assisted Living and find that the project is necessary and feasible.

If you have any questions, please call our office at 307.856.6155.

Respectfully,

Colleen J. Nelson, AIA, LEED-AP

110 North 6th East ◻ P.O. Box 1244 ◻ Riverton, WY 82501 ◻ 307.856.6155 p. ◻ nelsonarchitects@wyoming.com

TABLE OF CONTENTS

Platte County Memorial Nursing Home
Facility Evaluation

EXECUTIVE SUMMARY

The Platte County Nursing Home has been well maintained and has performed well over the past 47 years with minimal modification or updating of infrastructure systems or the building. However, most of the infrastructure systems have reached the end of their life cycle. Current codes and guidelines for healthcare design that the state uses to review, license and certify facilities have changed since the facility was built. It is through the 'grandfather clause' as provided in the code, that the facility can maintain it's 'as is' status. Any modifications to the facility will require the entire facility to be brought up to the current code requirements. It is not only the requirement of meeting the code, but also the necessity of assuring that the nursing home facility is not the limiting factor in being able to provide a quality long-term care environment.

Costs for each item were developed through a combination of R.S. Means, manufacturer and sales information, regional experience and local contractor input. Some items are costed on a unit basis, while others are costed based upon square footage. Costs include labor at standard contractor's labor rates and do not include overhead, profit, permits or professional services. It is important to understand that these costs were developed for broad-based budgeting and are not intended as a hard cost.

As a small rural Wyoming community, the option of an assisted living facility may be the only way to preserve the elderly population within their community of origin. Once they depart from their home communities, they are unlikely to return for nursing home care. There is a clear loss financially for the community to lose its pre-nursing home aged population for lack of appropriate facilities. An assisted living facility adjoining the nursing home would stand to reduce operational expenses and will undoubtedly help increase and maintain the census at the nursing home.

After reviewing all five of the options presented in the Preliminary Architectural Assessment process, Option Four, which would be a 50 bed nursing home and 22 bed assisted living unit housed in a new facility on a new site, has been identified by the Platte County Hospital District as the preferred alternative. It has more opportunities to create a unique and specific building that conforms to the needs of the functional program. This is because the building would not have to be confined to the parameters of the existing site and the location of the hospital. There could also be enough area to allow for future development and on-site parking. This option could also very easily accommodate a phased approach, Option 4A, to the project with minimal impact to the residents and staff. Phase One could be a new nursing home and support spaces, sized to accommodate the addition of Phase Two which would be the 22 bed assisted living unit and Phase Three would encompass an adaptive re-use plan of the existing nursing home.

OPTION 4A

Option four would consist of a three phase approach for a 50 bed nursing home and 22 assisted living units housed in a new facility on a new site (to be determined) and an adaptive re-use of the existing nursing home facility.

Feasibility: This new site would have more opportunities to create a unique and specific building that conforms to the needs of the functional program because the building would not have to be confined to the parameters of the existing site and the location of the hospital. There could also be sufficient area to allow for future development and on-site parking.

Recommendation: This option averages $172/s.f. for all three phases, but has the additional cost of land acquisition. This option is a phased approach that would have minimal impact to the residents and staff. Phase One could be a new nursing home and support spaces, sized to accommodate the addition of Phase Two which would be the 22 bed assisted living unit and Phase Three would encompass the adaptive re-use plan of the existing nursing home. It would be recommended to place the 46,308 s.f. nursing home & assisted living facility on an approximate 76,230 s.f. or 1.75 acre site. This would allow 13,550 sf of on-site parking(1- 9'x19' parking space per bed &10% for driveways) and a balance of 21% or 16,372 sf of the site for future expansion and any setback requirements.

OPTION 4A
New Nursing Home & Assisted Living
At New Site – Phased Project
Conceptual Planning Costs

PHASE I: Nursing Home & Support Spaces

Site Work / Utilities				
*Site Acquisition	1	ea		-
Site Utilities (sewer, water, elec.)	1	LS	Allowance	$45,000
Excavation / Fill Removal	31,517	sf	$3.00	$94,551
Asphalt Parking(72) & Drives	13,550	sf	$5	$67,750
Walkways / Sidewalks	400	sy	$40	16,000
Landscape	1	@	Allowance	$100,000
Subtotal			***$***	***323,301***
New Construction				
Nursing Home	20,594	sf	$155.40	$3,200,308
Support Spaces	10,923	sf	$126.40	$1,380,667
Kitchen Equipment	1	@		$150,000
Subtotal				***$4,730,975***
		TOTAL		***$ 5,054,276***
Other				
Contingency	@		10%	$505,427
Inflation to Bid per year	@		5%	$277,985
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@		8%	$467,015
TOTAL PROBABLE PROJECT COSTS				**$6,304,703**

31,517 s.f. @ $200/s.f.

PHASE II: Assisted Living

Site Work / Utilities				
Excavation / Fill Removal	14,791	sf	$3.00	$44,373
Subtotal				***$ 44,373***
New Construction				
Assisted Living	13,526	sf	$144.60	$1,955,860
Support Spaces	1,265	sf	$126.40	$159,896
Subtotal				***$ 2,115,756***
		TOTAL		***$ 2,160,129***
Other				
Contingency		@	10%	$216,012
Inflation to Bid per year		@	5%	$118,807
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.		@	8%	$199,596
TOTAL PROBABLE PROJECT COSTS				**$2,694,544**

14,791 s.f. @ $182/s.f.

PHASE III: Adaptive Re-Use of Existing Nursing Home

Site Work / Utilities

Drywells	2	@		$10,000
Excavation / Grading	1	@		$15,000
Subtotal				***$ 25,000***

Remodel

Roof Demolition	12,442	sf	$2.00	$25,000
New Membrane Roof	12,442	sf	$12.00	$150,000
Asbestos Abatement	1	@	allowance	$67,875
All other remodeling	12,442	sf	$50.00	$622,100
*Interior Remodel/ADA	1	@		-
*HVAC	1	@		-
*Plumbing	1	@		-
*Electrical	1	@		-
Subtotal				***$ 864,975***

TOTAL $ 889,975

Other

Contingency - remodel	@	10%	$88,997
Inflation to Bid per year	@	5%	$48,949
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@	8%	$82,233

TOTAL PROBABLE PROJECT COSTS **$1,110,154**

12,442 s.f. @ $89/s.f.

Note:
*There is a place holder for site acquisition, but no cost associated with this line item until a piece of property is identified; there are also place holders for Interior remodle/ADA upgrade, HVAC, Plumbing & Electrical, but also no cost associated with these line items until a determination of the specific building use is identified. There is however, a $50/sf allowance for overall budgeting purposes only.

The indicated costs remain conceptual in nature. The “Contingency” is provided to allow for certain unknown factors at this time. Actual costs for special systems designs and life cycle expenditures (i.e., energy use, maintenance, and replacement costs) can be considerations that would affect the estimated costs during the design process. There are no furnishings in these costs.

The “Inflation to Bid” allowance is based on current known inflation factors for the state of Wyoming for a 12 month period.

INTRODUCTION & OVERVIEW

The intent of this building review and report is to evaluate the future of the Platte County Memorial Nursing Home. The Owner is considering several options to meet the region's needs for additional nursing facility units and assisted living units.

On December 6th & 7th, 2010, mechanical and electrical engineers from MKK Engineers and an architect from Nelson Architects were on site at the Platte County Memorial Nursing Home to evaluate the existing facility. This report is a summary of the findings of those inspections and the cost estimates associated with upgrading the existing facility. The engineers and architects have evaluated the existing facility based on the following codes that are applicable to a healthcare facility: 2006 Edition of 'NFPA 101: Life Safety Code'; 2005 Edition, 'NFPA 99: Standard for Health Care Facilities'; Wyoming Design and Construction Minimum Standards for Healthcare Facilities; 2006 Guidelines for Design and Construction of Health Care Facilities; 2006 International Building Code (IBC); National Electrical Code (NEC); American with Disabilities Act (ADA) and ICC/ANSI A117.1; 2006 International Mechanical Code; 2006 International Plumbing Code; 2006 International Fire Code and 2009 International Energy Conservation Code (IECC). In addition to documenting concerns and deficiencies, the evaluation includes recommendations and cost estimates to correct identified deficiencies.

The Platte County Memorial Nursing Home building along with the property upon which both the hospital and nursing home sit is owned by the county. Banner Health operates the hospital and the Platte County Hospital District operates the nursing home. The facility has been recently licensed as a 43 bed skilled nursing facility.

The nursing home facility has been well maintained for its age and use. With the exception of an addition, there has been little remodeling or major maintenance work done to date. The existing nursing home facility is about 12,442 square feet. The original building built in 1964 with approximately 7, 560 square feet consisted of 12 double occupancy rooms with every two rooms sharing one toilet room, nurse stations/administration offices, dining area, lounge, two bathing and shower rooms and support facilities such as laundry and clean and soiled utilities. It was attached to the hospital via a connecting corridor. In 1978 a wing was added to the east of the original nursing home. This wing added approximately 4,882 square feet and nine more double occupancy rooms along with a centralized nurse's station, large bathing room, storage, an activities room and additional clean and soiled utilities. The nursing home was built without a kitchen or full laundry facilities because originally the hospital and nursing home were attached through a connecting corridor, so the nursing home contracted with the hospital for these services. The nursing home is now a separate entity from the hospital, but due to the lack of a kitchen and laundry facilities, the nursing home still needs to contract with the hospital for these services. In addition, the nursing home shares utilities costs because the utilities come into the hospital, but split off into the nursing home.

ARCHITECTURAL EVALUATION

Site: The site is a square city block that creates a 'campus' with the hospital and nursing home situated in the center, creating an opportunity for the nursing home to have expansion potential to the south and southwest. When the 1978 addition to the nursing home was built, plans show that there was some site work to modify the slope around the new addition. The existing slope is such that the Owner has noted that when they get heavy rains, the water runs off the sloped banks and backs up against the foundation until it can drain away. The floor elevation of the building appears to be at the same level as the landscaping and sidewalks which allows the water to come in the south doors of the original building.

Shows the landscaping up against the building.

Recommendation:

The site on the south side of the entire nursing home facility should be re-graded so the landscaping is not at the same height as the finish floor of the building to minimize any water entering the facility. In addition to the removal and lowering of landscaping, a more pronounced swale should be created so that the water from the berm flows around the building.

Budget Estimate: **$15,000**

SUB-STRUCTURE

Foundation Walls: The facility is built with the standard continuous spread footers and an 8" wide x 4' high concrete wall. At this time we will presume that the foundation and footers are reinforced. The foundation appears to be in generally good condition with the exception of two cracks in the foundation wall on the 1978 wing of the building. The cracks appear to be near the location where the downspouts drain the water off the roof. The water does not drain away from the building so the freeze/thaw cycles may have caused the cracks in the foundation. The cracks are wide enough that moisture is migrating through the cracks and into the crawl space and the area near the cracks are wet. The cracks can only be seen from inside the crawl space because as noted above, the lawn/sidewalks appear to be at the same level as the finished floor elevation, therefore no foundation is showing on the exterior of the building. The rest of the crawl space is relatively dry.

Crack in the foundation with moisture seeping through.

Downspout draining near the building.

Recommendation:

This crack should be analyzed by a structural engineer. If the crack is not structural then the crack needs to be repaired to keep the moisture out of the crawl space.

Budget Estimate: **$2,500**

Recommendation:

The roof drains should be routed underground and drained into several drywells away from the foundation.

Budget Estimate: **$10,000**

THERMAL ENVELOPE

Roof System: The roof is comprised of four distinct areas with three of the areas being a modified built-up roof on the original 1964 portions of the building. The roof structure is of 2"x12" wood joists at 24" on center, spanning from the outside walls to bear on the corridor walls and 2"x6" wood joists at 24" on center spanning between the corridor walls. The roof on area 'A', which is the northeast roof over the activities area, was installed in 1987. Area 'B', which is the northwest roof over most of the dining area, was installed in 1992 and area 'C' was installed in 1992 and has some ongoing problems such as ponding and leaking. The original roof system on all three of these roofs was removed to the original insulation/plywood deck. At this time there is no knowledge if there is any insulation on roof areas 'A' & 'B', but it is thought that on area 'C' there remains the original 2" fiberglass matt. This roof is essentially flat. Presuming that the original intent was that any overflow water was to go over the edge of the roof, there are internal roof drains that drain into the storm sewer, but no overflow drains. However, the edge flashing appears to be approximately 3" above the roof edge, but it is a code requirement that there is to be no more than 2" in height between the roof drains and the overflows. As a temporary fix, it would be recommended to cut out areas at the edge flashing, because the height of edge flashing causes considerable ponding on the roof which may be contributing to the soft spots in the insulation. Due to the amount of water that could be on the roof, a structural engineer should evaluate the structure for this amount of loading.

The soft spots could potentially be saturated insulation. When the insulation is saturated, the minimal thermal resistance ('R' value) of the insulation is significantly compromised and the integrity of the plywood decking under the saturated insulation could unknowingly be deteriorating. On the 1978 addition, the area 'D' roof system is a built-up roof with 3 1/2" 'Fesco' foam insulation and 'Fesco' board over a 1-½" steel deck that bears on 16" open web steel joists, 4'-0" on center, bearing on the south side of the corridor wall. This roof was installed in 1998 and has had periodic maintenance. The roof drains are internal and drain to the outside of the building and the roof structure slops slightly towards the drains. There are no over flow drains on this section either so the excess water builds up on the roof before it drains down the main roof drains or flows over the edge. With the mansard roof, there is the same problem as the original roof in that the edge flashing is tall, potentially causing significant ponding on the roof if a roof drain is plugged or cannot drain an adequate amount of water.

The Owner repairs the leaks by using tar around the edges of a patch building up tar around the baskets to keep them from leaking. It was also

noted by the Owner that the wood roof joists that are butted up to the hospital wing on the north side of the facility are rotting and difficult to maintain. This roofing system provides only a small amount of thermal insulation as part of the thermal envelope. Areas 'A', 'B' and 'D' could be repaired, but this would only extend the life of the aging roof approximately 7 years while repairs on Area 'C' would only extend the life of the roof up to 5 more years. The age and condition of the existing roof system indicates roof replacement should be a top priority.

View from area 'D', ponding on area 'C'.

Typical roof drain.

Recommendation:

A forensic investigation of the existing roof system would be recommended before any remodeling takes place. The entire roof system beginning with the roof decking, should be replaced with a membrane and tapered insulation system with a vapor barrier and cover board. The increased insulation will help to reduce cooling and heating loads, lower energy costs and reduce pollution and carbon emissions. The minimum industry recommendation, ASHRAE STANDARD 90.1 zone 5, for above roof deck insulation for commercial buildings is R-value = 20: this standard would be met by approximately (2) layers of 2" polyiso rigid insulation. With the recommendation of a tapered roof system, the edge flashing and fascia would need to be replaced and added to in height. With the additional height to accommodate the tapered insulation, wall scuppers could be added as an overflow drain option.

Budget Estimate:

New membrane roof system:
12,442 s.f. @ $12/s.f. $150,000

Demolition of existing roof system:
12,442 s.f. @ $2.00/s.f. $ 25,000

Exterior Windows: The existing storefront units in the 1964 portion of the facility are single pane, clear glass with non-thermally broken aluminum frames which have a very poor performance for thermal resistance. The 1978 addition has metal clad, double paned wood windows that have the seals broken in them and therefore have an equally poor performance.

Single pane, clear glass

Broken seal between glass.

Recommendation:

Replacement of both the windows and aluminum storefont windows would significantly reduce heat gain/loss, air leakage and solar heating of the building. Ideally, the upgraded windows would be a multiple pane system that has thermal breaks, a low transmission of solar radiation and a high thermal resistance. Window performance recommendations are U-value = 0.45 and an SHGC = 0.40. Replace the aluminum storefront windows with a combination of insulated frame walls and a reduced amount of glazing for better thermal performance.

Budget Estimate:

Exterior Windows – Metal clad wood, double pane w/ Low-E

(24) 8'x3'-9"	**$55,000**
(4) 4'-1"x3'-9"	**$5,800**
(1) 12'-1"x6'-8"	**$4,750**

Exterior Aluminum storefronts – includes entry doors
952 s.f. @ $50/s.f. $48,000

Exterior Walls: The exterior walls consist of insulated 2x6 wood framing with brick veneer. The brick veneer appears to be in good condition. We could not examine the type of insulation or vapor barrier due to the invasive nature that type of review would require, however, keeping the age of the building in mind, the minimal thermal resistance (R-value) of the insulating materials installed in the wall cavity between the framing members may not meet with current guidelines which are a minimum of R-19. The exterior hollow metal doors which are an integral part of the above-grade building envelope walls, are original in both the 1964 and 1978 additions, and again, due to their age, may not meet current guidelines of U-0.70. Also, these doors should be tested for the maximum air leakage rate at 1.00 cfm/ft2 of door area in accordance with ASTME E 283.

Recommendation:

The hollow metal exterior doors should be replaced with steel insulated doors that meet current code recommendations of U-0.70. The door and frames should be sealed with caukling materials and new gasketing to reduce the air leakage around the doors.

Budget Estimate:

(1) 6'x7'-0"; (1) 3'x7'-0" $8,500

INTERIORS

Asbestos: Asbestos has been used for years in building products such as floor tiles and mastic up until the 1980's. Asbestos floor tiles may contain only a small percentage of asbestos and left intact and undisturbed, does not pose a health risk to people living and working in the building. Asbestos is hazardous when it is 'friable' which means when it is crumbled or broken it releases fibers into the air. Asbestos containing ceiling tiles, floor tiles, shingles, fire doors, etc. will not release asbestos fibers unless they are disturbed or damaged in some way such as in remodeling or demolition. It was noted that the corridors, sleeping rooms and common areas of the 1964 portion of the nursing home have 9"x9" floor tile. The floor tile and even the mastic have a high possibility of containing asbestos because of their distinguished size and the age of the building. At this time the corridors have new carpet covering these floor tiles. The hospital maintenance personnel mentioned that they believe that the mud fittings on the pipe insulation, in the crawl space, may also

contain asbestos and this becomes an immediate concern because much of the protective canvas covering and joint sealant has been removed or damaged. The crawl space is a confined space so the concentration of exposure to asbestos is greater. The floor of the crawl space is native sand and because the mud fittings are damaged or have not been removed carefully, asbestos containing material has fallen into the sand, thus contaminating the sand.

Recommendation:

The priority for the Owner should be to have a certified asbestos testing agency test the mud fittings on the pipe insulation and the sand for asbestos and to post a notice acknowledging the potential of the risk and that anyone entering the crawl space should take precautions as outlined by OSHA Personal Protection Equipment (PPE) requirement. It is also recommended that the Owner has a complete asbestos management plan in place so that any asbestos containing building materials are noted before any remodeling or demolition takes place and therefore can be abated by licensed asbestos abatement workers. NOTE: Without a complete asbestos management plan, the following budget estimate is not inclusive of any other source of asbestos containing materials than what is noted.

Budget Estimate:

Asbestos Abatement - 9"x9" floor tile – 1964 building:
7,560 s.f. @ $2.75/s.f. $21,000
Asbestos Abatement - mud fittings:
+/- 150 fittings @ $20each $3,000
Asbestos Abatement - excavate contaminated soil:
2,925 s.f. @ $15/cf $43,875

ADA: ANSI and ADAAG accessibility standards were developed with the intention of providing greater access for individuals with disabilities. The ANSI and ADAAG standards are based upon assumed stature and strength of the individual. Whereby dimensional and grab bar requirements are intended to facilitate wheelchair-to-toilet transfers by individuals with sufficient upper body strength and mobility to effect such a transfer. The typical nursing home resident is unlikely to have such capabilities, thus requiring the assistance of one or more staff. Insufficient clearance at the side of the toilet can restrict staff mobility and access. *Source: 2006 Guidelines for Design and Construction of Health Care Facilities.* When an ADA evaluation of the toilet rooms was done, it was noted that the facilities in the 1964 portion of the building do not meet the typical ADA requirements for toilet rooms. Some of the items not in compliance such as the height of the mirror, lack of ADA door levers, no

insulation on exposed pipes and dispenser heights can be simply rectified. However, there are larger issues that make these toilet facilities non-compliant. Because this is an existing facility, the Guidelines allow no more than four beds or two resident rooms in renovation projects, which this facility meets, however the *Guidelines* also state that the toilet room shall contain a water closet and hand-washing station. Due to the 6'-1"x 4' size of the toilet rooms, they do not comply with the necessary size for an accessible compartment which is 60" wide x 59" minimum depth for floor mounted water closets, let alone containing the required hand washing station. The only hand washing station is located in each resident room. The following is a list of some of the deficiencies in the resident room toilet rooms:

ADA requirement	1964 Existing Condition	1978 Existing Condition
- Height to toilet rim (17"-19"max)	ok	ok
- Centerline of toilet from wall(18")	23"	22.5"
- Grab bars:		
36" behind (33"-36" AFF)	none	none
42" side (33"-36" AFF)	ok	24" both sides
18" vertical (39"-41" bottom; 39"-41" from rear of wall)	none	none
- Toilet paper holder (7"-9" from front 14"-19" AFF)	17" & 27.5"	9" & 51"
- Toilet compartment size (60"w x 59"d clear floor space)	49"x48"	45"x92"
- Flush controls (36" AFF & on open side of WC)	44", yes	41", yes

In the 1978 addition, the toilet rooms do not meet the accessible or ambulatory toilet compartment requirements. With the toilet rooms sized at 45"w x 92"d, they are too narrow to comply with the 60"w x 59"d accessible compartment and they are too wide to meet the 36"w x 60" ambulatory compartment requirement. The toilet rooms do meet the *Guildelines* requirement of a hand wash sink in the room.

Any existing facility that undergoes major alteration or renovation after January 26, 1992 must be "readily accessible" and comply with the ADA Accessibility Guidelines unless the cost of compliance is disproportionate to the overall cost of the alterations. In nursing homes at least 50% of patient bedrooms and toilets and all public use and common use areas, are required to be designed and constructed to be accessible. When patient bedrooms are being added or altered as part of a planned renovation of an entire wing or department of an existing medical facility, 50% of the patient bedrooms that are being added or altered shall comply

with the ADA. *Source: Surviving with the ADA: environmental modification, Nursing Homes, 1992, by Peter Rauma.*
The public restrooms would need renovation to be compliant. Almost all of the toilet and sink fixtures are original to the building and could be upgraded to modern fixtures.

Typical resident room toilet

Recommendation:

In the 1964 portion of the building, extend the toilet room in both the width and length to accommodate a hand wash sink and ADA requirements. New resident storage would need to be replaced to accommodate this remodel. The toilet rooms in the 1978 wing would need to be widened and the entry door to the rooms moved to make room for the expansion. The public toilets near the entry of the building need to be enlarged to accommodate the ADA requirements and would likely encroach into the dining area or corridor/entry.

Budget Estimate:

Insulate exposed piping:	**$1,120**
New doors with ADA levers:	**$25,300**
Larger toilet rooms:	**$165,000**

SUPPORT AREAS FOR RESIDENTS: With two resident bathing facilities and one shower facility, the nursing home meets the *Guidelines* requirement of 'A minimum of one bathtub or shower shall be provided for every 20 residents (or major fraction thereof).' As there are 39 residents

with the facility licensed for 43 beds, two bathing facilities are required. The bathing facility in the 1978 wing is very spacious and meets the ADA standards and *Guidelines* with a shower and accessible tub in an individual room with space for private use of the bathing fixtures, drying, dressing and for access to a grooming location containing a hand washing station, mirror and shelf. However, the other bathing facility in the older portion of the building has been remodeled to accommodate an accessible tub, but does not meet with the *Guidelines* requirement of having a separate toilet within or directly accessible to the bathing facility without requiring entry into the general corridor. The resident shower, which is near the bathing facility, also falls short of meeting the same *Guidelines* requirement.

Bathing Facility

Shower Facility

Accessible Tub/Shower Facility

Recommendation:

The shower room does not meet ADA for a roll-in-type shower and does not have the space available to remodel it into compliance. However, it is located next to the tub facility and could be remodeled into an attached toilet room to the tub facility. This would provide a compliant bathing facility for the original wing of the nursing home.

Budget Estimate:

Remodel Shower into toilet room: $6,500

SERVICE AREAS: The administrative area is near the entrance of the nursing home and accommodates the administrator and a secretary. There are two offices near the nurse's station with two occupants each, and another office near the activities area. The administration area does not have the ability to monitor residents or visitors without someone stepping out of the office. There are no provisions within the administration area to accommodate any sort of private conversations or group meetings unless they take place either in the staff lounge or in the private dining room at the far end of the building. In addition to the cramped quarters that the support staff works in, there is very little storage for office equipment & supplies or medical & financial records. The original storage for these items was commandeered into a computer room. The building's original design offered no accommodations for a shipment receiving area for the nursing home because the nursing home was attached to the hospital and the shipments were unloaded at the hospital and distributed to the nursing home. Now that the nursing home is separate, this has created a difficult situation because there is no loading dock or breakout area for receiving medical supplies, equipment or furniture. The receiving area is the corridor to the activities and outdoor area and all of these shipments must come through the 3'-0" main entry door. This is a potential hazard to the residents, unsightly and inefficient, but there is no other area to use for this service.

The environmental services director uses the staff lounge as his office. He has no office due to the lack of space.

Corridor used as receiving area.

Recommendation:

An addition and reconfiguration of the north end of the facility to accommodate a receiving area, administration area, and offices sufficient to support the number of staff dedicated to the management of this facility.

Budget Estimate:

Remodel/Addition: $575,000

Health Insurance Portability and Accountability Act (HIPAA): HIPAA became a law in 1996. This act was created to provide protection for personal health information while providing needed information to healthcare providers. One aspect of the HIPAA regulations is to protect the privacy of patient information. All healthcare providers are required to comply with the privacy regulations. This law sets rules and limitations on who can view and receive personal information whether it is verbal, electronic or written. Healthcare providers can comply by taking steps to limit access to offices with medical files, allowing employees limited access to the minimum amount of information needed and have enclosed areas for private conversation or consultation.

The present layout of the nurses' station, which is centrally located between the resident wings and is convenient for the nursing staff to chart, dispense medicine and monitor the residents, is unable to provide any separation between the public corridor and private areas. Before going on duty, nurses usually meet there to receive daily assignments, review resident's charts and update the files, but with the limited space and lack of privacy, the HIPAA regulations cannot be adequately met.

Nurse's Station

Recommendation:

The nurse's station needs to be remodeled to integrate the necessary work environment to support the nursing staff with additional files and storage that lock. This could be accomplished by constructing several different work zones with transparent walls that would provide acoustical privacy and yet keep sight lines open so that resident rooms and visitors can be monitored.

Budget Estimate:

Remodel Nurse's Station: $45,000

MECHANICAL SYSTEM EVALUATION

Introduction & System Overview

The Owner is considering the impacts of renovating this facility, including an addition, or construction of an entirely new facility.

The Platte County Memorial Nursing Home is 12,442 square feet in size. The facility was originally constructed in 1964 with a substantial addition in 1978. The facility has always operated as a Nursing Home in conjunction with the Platte County Memorial Hospital (PCMH). This facility recently separated operations from the Hospital and obtained its Skilled Nursing License. The Nursing Home outsources life support patients and special care patients requiring significant nursing attention or observation in their current program.

PCMH provides most of the infrastructure to serve the Nursing Home including heating hot water, domestic hot water, fire alarm, natural gas, electricity, emergency power, phone, food service and laundry. Essentially the only utilities or services the Nursing Home uses independent of the Hospital are domestic water and internet.

All of the mechanical equipment is either nearing the end of its expected useful life or has passed its useful life expectancy. This means as the Nursing Home continues to operate the equipment, more effort and resources will be needed to maintain the equipment and keep it running.

Resident Unit HVAC: The resident units are heated, cooled and ventilated by stand alone package terminal air conditioning units (PTAC). In the 1964 building, the PTAC's cycle to meet the heating and cooling requirements of the space. In the 1978 Addition, the Nursing Home is in the process of replacing the radiant equipment with PTAC's. By the State adopted guidelines, these units cannot be used to provide ventilation air for the resident units. PTAC's are not capable of filtering the outdoor air to the minimum required levels.

In the 1978 addition, the staff turns off AHU-2 (the unit located in the basement that provides the ventilation air to that wing) when the weather turns colder. The heating coil is the original coil from when steam heating was used. The steam coil has been re-piped to for use as a hot water coil. When the temperatures outside drop below approximately 0° F, the staff turns AHU-2 off because the unit cannot heat the air stream high enough to provide comfortable discharge air into the occupied space.

Recommendation

Replace AHU-2 (located in the basement of the 1978 Addition) with new unit. Unit shall incorporate additional capacity for 1964 resident units. Evaluation of duct routing

up from the crawlspace in the 1964 building would need to occur during the design. The replacement will affect the louver and duct routing down to the basement level.

Budget Estimate **$60,000**

Recommendation

If due to budget constraints the existing system (AHU-2) is left to operate, the heating coil should be replaced to allow the unit to operate during the winter months.

Budget Estimate **$5,000**

Side Note:

Hospital does not have capacity in its infrastructure to power PTAC units on emergency power. During inclement weather, the Nursing Home will not be able to temper the Resident Units with the PTAC's. During extended periods of power outage, the Facility may be forced to close and evacuate residents to the Hospital or other emergency facilities.

Resident Unit Exhaust Fans: The occupants of the facility continually voice concerns about the sound levels of the ceiling exhaust fans for the individual restrooms. The fans are older and past their useful life expectancy.

Recommendation

Based upon their age and operating characteristics, the ceiling exhausts should be replaced. This can be on a case by case basis or on a total building approach. New fans can be selected with lights, or occupancy sensors to streamline occupant operation and have a significantly reduced sound level.

Budget Estimate **$500**
Per fan

Indoor Environmental Quality for Ancillary Spaces: Many common spaces, corridors and support areas require specific exhaust, ventilation, and air change-over rates to maintain proper indoor environmental quality and air contamination control. Additionally, all of these spaces require the ability to heat and cool to specific room temperatures. The systems installed in these spaces do not meet the requirements of the current State approved standards.

Recommendation

Install mechanical air systems to provide appropriate pressure, ventilation, exhaust and tempering to the corridors, supply closets, soiled linen rooms, work rooms and ancillary spaces. Pricing includes remodel, phasing, and occupied construction area increases for the mechanical and electrical components of construction.

Budget Estimate **$225,000**

Recommendation

If ductwork is to be reused for AHU-1 and AHU-2, the ductwork should be cleaned. With the air filtration at less than recommended levels and the age of the ductwork, this would be a prudent measure to limit the possibility of spreading airborne contaminants.

Budget Estimate **$7,500**

Dining Room Air Handling Equipment: The Dining Room air handling unit is located in the basement of the 1964 Building. The unit was replaced during the PCMH renovation. This unit is digitally controlled through PCMH's temperature control system. Unit does not provide filtration to meet current codes and the intake is essentially at the roof line.

Recommendation

Filtration will need to be added to the ductwork downstream of the duct mounted cooling coils. Pricing reflects duct mounted filter racks, however, during design feasibility and access of the filters will need to be carefully evaluated. If duct mounted filter racks cannot be installed cooling will need to be added to AHU-1.

Budget Estimate **$5,000**

Recommendation

Extend the outside air intake hood so the bottom of the intake is a minimum of three feet in height above the roof. Additionally two plumbing vents will need to be horizontally offset to obtain the required distance from the AHU-1 outside air intake.

Budget Estimate **$5,000**

Activity Room Air Handling Equipment: The Activity Room is located adjacent to the main dining room. The programming of the space lends itself to having a stand-alone air handling unit. The space is currently served by a packaged roof mounted air handing unit (RTU) which provides heating via a gas fired heat exchanger and cooling similar to direct expansion refrigerant systems in the PTAC units. The existing unit is light commercial class of RTU without air filtration requirements for a Nursing Home. Additionally, the unit is past its useful life expectancy.

Recommendation

Replace the existing RTU with a new unit that meets the all of the requirements spaces used by the Nursing Home occupants.

Budget Estimate **$32,000**

Administration Air Handling Equipment: The Administration Office air handling equipment is past its useful life expectancy. The codes will require the space to have mechanical equipment capable of pressurizing the space relative to the corridor. Air filtration is not required at the same level for administrative locations as resident occupied areas.

Recommendation

Install dedicated RTU to serve the Admin Office Area.

Budget Estimate **$10,000**

Crawlspace Ventilation: The sandy makeup of the ground the nursing home facility is constructed on, appears to percolate moisture up through the ground. The original building does not have crawlspace ventilation. The addition crawlspace has ventilation equipment installed. Due to the age and operation of the fans in the addition, the equipment should be replaced.

Recommendation

Install ventilation system in the original building. Update the controls and equipment for the addition. The system shall meet the current code requirements for ventilation rate and heating.

Budget Estimate **$6,000**

IT Closet Air Conditioning System: The computer networking infrastructure for the Nursing Home is located in a closet located off of the main corridor by the Administrative Office. The Staff has modified the doors to allow some airflow into the space and heat to migrate out of the closet. The staff commented that the server frequently reboots. The temperature in the space is normally elevated due to the heat rejection of the equipment housed in the closet.

Recommendation

Install a dedicated Supplemental Cooling Unit (SCU). This equipment would be similar to the cooling unit installed near the nurse's station.

Budget Estimate **$5,000**

Heating Plant: The boiler plant for the Hospital was upgraded within the last five years. According to the hospital facility staff, the plant has minimal capacity for future growth of the hospital, not including the anticipated additional area for the nursing home's growth.

Recommendation

The current estimate of building addition is approximately 30,000 square feet. With the physical space limitations to the hospital boiler room, a new heating plant should be located within the future addition to heat the addition and possibly backfeed the existing nursing home space (if the existing facility is to remain). This cost represents the new heating plant mechanical and electrical construction costs (excluding architectural impacts to layout). Equipment configuration shall allow duel fuel firing (natural gas and propane recommended for ease of operation and maintenance).

Budget Estimate **$125,000**

Domestic Hot Water Equipment: The domestic hot water for the facility is coupled to the Hospital boiler plant. According to the hospital facility staff, the ability to precisely provide domestic hot water to the nursing home is problematic. The water temperature regulation to the nursing home does not maintain lower temperatures required for use in the nursing home during periods of high demand. Due to the age of the nursing home's plumbing fixtures, anti-scald technology is probably not installed on most of the fixtures.

Recommendation

Separate the nursing home domestic hot water plant from the Hospital. Locate the new equipment and controls in the addition or new building. Water heaters to be duel listed for natural gas and propane firing.

Budget Estimate **$30,000**

Recommendation

Domestic hot water piping must have the ability to be thermally shocked to decontaminate piping from possible Legionella contamination. To allow this, a locking bypass valve and piping would be required in the Hospital Boiler Room. Additionally a period programmed maintenance item (PM) should be implemented to have higher temperature water flush the domestic hot water piping and faucets. HAZARD – during this PM, the residents need to be locked out from using the hot water as the temperature required may scald users in seconds.

Budget Estimate **$1,000**

Remote Access of Building Systems: The current building control system is pneumatic or electric without any computerized monitoring. The nursing home facility staff works a fairly traditional work week without employees on-site 24 hours per day. The ability for the limited staff to respond to emergencies (equipment shut-downs or failures) outside of their working hours requires manual notification (via phone) and their physical presence at the nursing home.

Recommendation

When systems are replaced or upgraded, a building management system should be included. Pricing for the individual items includes a computerized temperature control and building management system component. For utility analysis, remote alarm annunciation and remote access for monitor and control, a building control panel and software should be provided. It is assumed an internet connection would be available the building panel location.

Budget Estimate **$10,000**

Plumbing in the Crawlspace: The piping located in the crawlspace of the original building is in poor condition. The domestic cold water piping shows signs of failures, leaks and excessive scaling. In addition, several sections of the sanitary waste piping is cracked along the top of the piping. Also, several bell and spigot fittings are leaking. In the original building, any metallic material that does not have a protective coating (paint, epoxy, or galvanizing) has been aggressively damaged by rust (several loop pipe hanger supports are completely rusted through).

Recommendation

Replace all piping and hangers in the crawlspace under the original building.

Budget Estimate **$25,000**

Floor Drain Trap Seal Protection: In medical facilities, sewer gas traveling up through floor drains is detrimental to the health of occupants. Over the last several decades, devices called trap primers are required on all floor drains or traps that are not regularly kept full of water.

Recommendation

Installation of trap primers on all floor drains may be impractical without demolition of walls. A temporary alternative is the installation of sewer gas trap guards. These devices are installed in the throat of the floor drain (accessible from room). These devices have an actual life expectancy of two to three years before requiring replacement.

Budget Estimate **$2,000**

Roof Plumbing Vent: There is a plumbing vent located on the addition that is not code compliant. The vent is too small to appropriately vent the connected plumbing fixture(s).

Recommendation

Replace plumbing vent to meet code for size and freeze requirements.

Budget Estimate **$1,000**

Storm Drainage: The storm drainage for the 1964 building is directly piped into the town storm drain system. This approach normally is the best as there are no noticeable impacts in the 1964 building. In the 1978 addition, the two storm drains are routed down to grade and discharged outside the building via downspouts on the North and East sides of the addition. In the crawlspace directly below the downspouts discharges, the foundation for the building has cracked and weeps water into the crawlspace (as discussed elsewhere within this report).

Recommendation

Route piping from downspout discharge to dry wells away from building foundation.

Budget Estimate **$6,000**

Domestic Water Service Entrance: When the nursing home was split from the Hospital for management and operations, the nursing home had its own water entrance installed in the 1964 building's crawlspace. The water service entrance has the appropriate style of backflow prevention. The backflow preventer is required to be tested and checked yearly to stay in compliance with State requirements. The location may be considered a hazardous confined space due to asbestos containing materials (as discussed elsewhere within this report). By OSHA requirements, all work within confined spaces requires self contained breathing apparatus and specialized training.

Recommendation

Re-locate water entrance to basement of the new addition. This will allow for easier servicing and drainage from the backflow preventer.

Budget Estimate **$5,200**

Accessibility: The existing plumbing fixtures are in fair condition but do not provide full ADA accessibility. The architectural portion of the assessment covers ADA upgrades.

Recommendation

Replace fixtures as required to provide adequate ADA accessibility. See the architectural portion of the report for additional information. The costs below are for replacement of a single fixture.

Budget Estimate	**Water Closet**	**$1,500**
	Lavatory	**$1,000**
	Urinal	**$1,200**

Bathing Facilities: To meet current State Health Department requirements, the bathing facilities shall be adjacent to restroom facilities without the need to enter the main corridor. Neither the shower rooms nor the bathing room located within the original building have this capability. The Staff mentioned the desire to upgrade the bathing tub in the original building bathing room to an accessible door style unit.

Recommendation

Provide additional fixtures to meet the restroom access requirements. This will require architectural modification to the existing layout to accommodate code.

Budget Estimate	**Water Closet**	**$2,500**
	Lavatory	**$2,000**

Recommendation

Replace existing tub with an ADA walk-in style of bathtub in the bathing room located in the original building.

Budget Estimate	**Walk-inTub**	**$10,000**

Soiled Linen Plumbing Fixture: To meet current State Health Department requirements, the soiled linen rooms require a specialized clinical sink for cleaning soiled materials and bed pans.

Recommendation

Add a flushing rim clinical sink (similar to a water closet). Pricing includes modification for new fixture not architectural modification of the space layout.

Budget Estimate	**Water Closet**	**$3,500**

Fire Suppression System: The building has a fire suppression system. The original system utilizes the older metallic elements. Additionally, the original construction has a combustible roof structure with a concealed space that will require sprinklers to be installed above the ceiling to meet current codes.

Recommendation

Replace all sprinkler heads as heads are older style heads and will not function as quickly or appropriately as new heads.

Budget Estimate **$4,000**

Recommendation

Install sprinkler heads in all combustible concealed ceiling cavities.

Budget Estimate **$4,500**

ELECTRICAL SYSTEM EVALUATION

Introduction & System Overview

The intent of this electrical building review is to evaluate options and hindrances in the future development of Platte County Memorial Nursing Home facility. Originally constructed in 1964 with a substantial addition in 1978, the facility has always operated as a nursing home in conjunction the Platte County Memorial Hospital (PCMH). This facility recently separated from the Hospital for operation and obtained its Skilled Nursing License. PCMH provides the entire electrical infrastructure to serve the nursing home including fire alarm, phone and emergency power.

All of the electrical equipment is nearing the end of its expected useful life. Electrical panels from the early 1960's are difficult to obtain spare or new parts for and panels from the 1970's will soon have the same problem. In the 1960's and 70's it was common practice to utilize the conduit as the grounding means for the electrical system. Independent ground wires in the feeders and branch circuits were usually not installed. This is the case in the existing nursing facility. There are no grounds in any of the feeders or branch circuits in the 'old' portion (circa 1960), and spotty grounds in the areas constructed in the 1970's. We did not observe any ground wires in any branch circuit serving resident rooms throughout the facility.

Several Mechanical items have been identified as needed replacing or repair. Information following is in regard to electrical support of these specific mechanical items. Issues associated with upgrading or replacing the electrical system is addressed after the mechanical items.

Electrical Support to Resident Unit HVAC Modifications: As addressed in the mechanical report, the resident units are heated, cooled and ventilated by stand alone package terminal air conditioning units (PTAC). By the State adopted guidelines, these units cannot be used to provide ventilation air for the resident units.

Recommendation

Replace AHU-2 (located in the basement of the 1978 Addition) with new unit. Provide new feeders, circuit breaker (estimate 100amp) and disconnect to replacement unit.

Budget Estimate **$9,000**

Recommendation

Replace AHU-1 with new unit. Provide new feeders, circuit breaker (estimate 100amp) and disconnect to replacement unit.

Budget Estimate **$5,000**

Side Note:
Hospital does not have capacity in its infrastructure to power PTAC units on emergency power. During inclement weather, the Nursing Home will not be able to temper the Resident Units with the PTAC's. During extended periods of power outage, the Facility may be forced to close and evacuate residents to the Hospital or other emergency facility.

Electrical Motion Sensor Control and Added Lights to Resident Unit Exhaust Fans: The occupants of the facility continually voice concerns about the sound levels of the ceiling exhaust fans for the individual restrooms. The fans are older and past their useful life expectancy.

Recommendation

Based upon their age and operating characteristics, the ceiling exhausts should be replaced. Built in lighting in the new fan units should be controlled from ceiling mounted motion sensors to facilitate hands-off operation and control.

Budget Estimate **$300**
Per fan

Electrical Support to New Indoor Environmental Quality Responses for Ancillary Spaces: Many common spaces, corridors and support areas require specific exhaust, ventilation, and air change over rates to maintain proper indoor environmental quality and air contamination control. The systems installed in these spaces do not meet the requirements of the current State approved standards.

Recommendation

Electrical support to newly installed mechanical air systems. We anticipate that this will require new panels and panel feeders from the PCMH. Pricing includes remodel, phasing, and occupied construction area increases for the mechanical and electrical components of construction.

Budget Estimate **$27,000**

Electrical Support to Proposed Activity Room Air Handling Equipment: The existing Activity Room RTU unit is past its useful life expectancy and should be replaced. The existing electrical feeder will only support a "like-load" HVAC unit; any increase in load will require an up-sized electrical feeder. We assume here that an up-sized feeder is

more likely than not and therefore plan for the replacement of the existing feeder with a new one.

Recommendation

Replace existing feeders to existing RTU with new.

Budget Estimate **$3,400**

Electrical Support for the Proposed Administration Air Handling Equipment: The Administration Office air handling equipment is past its useful life expectancy and should be replaced. The existing electrical feeder will only support a "like-load" HVAC unit; any increase in load will require an up-sized electrical feeder. We assume here that an up-sized feeder is more likely than not and therefore plan for the replacement of the existing feeder with a new one.

Recommendation

Replace existing feeders to existing RTU with new

Budget Estimate **$3,900**

Electrical Support for Crawlspace Ventilation: The original building does not have crawlspace ventilation and the addition of ventilation equipment is recommended. New electrical branch circuiting will be required to serve new ventilation fans. New Conduits will be required for controls. New crawl space lighting and work receptacles will be required if the fans are mounted in the crawl space area.

Recommendation

Install ventilation system in the original building. Update the controls and equipment for the addition. Provide new circuits for fans, lights and receptacles from the new panels installed under new indoor environmental air quality measures above. Cost given is for anticipated branch circuit and equipment costs (switches, lights, connections to fans etc.)

Budget Estimate **$6,000**

Electrical Support for new IT Closet Air Conditioning System: The networking infrastructure for the Nursing Home is located in closet located off of the main corridor by the Administrative Office. The space is not conditioned and functions poorly for the application.

Recommendation

Install a dedicated Supplemental Cooling Unit (SCU). This equipment would be similar to the cooling unit installed near the Nurse's Station. We anticipate a 40 amp single phase load for the suggested system fed from the new afore mentioned panel. An exterior disconnect and receptacle will be required by code.

Budget Estimate **$4,600**

Electrical Support for new Proposed Heating Plant: If a new boiler plant is required, the anticipated electrical loads should not be that large; a few recirculation pumps of about 3-5 HP, boiler controls, misc. control panels, etc. However, the system should be on emergency backup power in case of prolonged power outage. The existing emergency distribution system is believed to have limited or insufficient capacity to safely handle the new load. Normal power if supplied from PCMH should be available without significant modifications. The power could come from the proposed new HVAC power panel; it will not, however, be generator backed.

Recommendation

The power could come from the proposed new HVAC power panel; it will not, however, be generator backed. Pricing is for anticipated branch circuits with no new load over about 5HP and the new HVAC panel centrally located to the new HVAC/Boiler room.

Budget Estimate **$5,600**

Replacement of Existing Panels, Feeders and Branch Circuits with New Grounded feeders: The existing panel boards "A" and "D" that serve the 1960's and 1970's respectively, and portions of the nursing home existing circuiting should be replaced with new panels with code required clearances and a fully grounded, feeder and branch circuit distribution systems. The current existing installation would not meet code if it were installed today. We observed no obvious deficiencies with the existing wiring, however, in order to pull new ground conductors though the existing conduit system, it will require that the old wiring be reomoved. We recommend new fully grounded receptacles be installed at this time. Tie in with the existing PCMH system will require partial shutdown of their electrical gear to bring a new HVAC panel over to the nursing home. Pricing for that panel is given above and is not repeated here.

Recommendation

Remove and replace the existing electrical feeders from the PCMH to the existing panel locations. Replace the feeders with new, including grounding conductors, and replace the panels with new 42 circuit panels. Remove and replace the existing branch circuit conductors with new conductors and grounds, replace the existing receptacles in the rooms.

Budget Estimate **$76,000**

PRELIMINARY SPACE PROGRAM

The space program is an accounting of the types of areas and the corresponding square footage needed for the project. This program was developed from input from the Administration, staff and results from the 'Long Term Care Market Analysis' by Community Builders, Inc. The following is a breakdown of the preliminary space program for the Platte County Memorial Nursing Home.

PLATTE COUNTY MEMORIAL NURSING HOME
Wheatland, Wyoming

PRELIMINARY SPACE ALLOCATION PROGRAM - Nursing Home & Assisted Living

ELEMENT		QUANTITY	ROOM SIZE (sf)	NET AREA (sf)	DEPARTMENT TOTALS (sf)	NOTES/COMMENTS
PUBLIC AREAS						
Waiting Area		2	200	400		
Public Toilets		4	180	720		2 Male and 2 Female
Reception Area		2	100	200		
Entry Foyer / Lobby		2	100	200		
Net to Gross Conversion	15%			1520	228	Circulation and partitions
Department Total					**1748**	
NURSING HOME						
Single Occupancy Room		30	300	9000		Includes toilet
Double Occupancy Room		10	345	3450		Includes toilet
Nurse Stations		2	250	500		
Bathing Facilities		3	300	900		
Medicine Prep Room		1	50	50		
Nourishment area		1	120	120		
Activities area		1	500	500		
Dining Room/Community Room		1	1000	1000		
Net to Gross Conversion	15%			15520	**2328**	Circulation and partitions
Department Total					**17848**	
ASSISTED LIVING						
Suite 'A'		7	416	2912		1 bedroom, single occupancy
Suite 'B'		15	320	4800		Studio, single occupancy
Dining Room/Community Room		1	750	750		
Private Dining/Multi-use Room		1	250	250		
Living Room		2	200	400		
Laundry		2	200	400		
Medicine Prep Room		1	50	50		
Net to Gross Conversion	15%			9562	1434	Circulation and partitions
Department Total					**10996**	
BUILDING SUPPORT SPACE						
Administration Office		1	500	500		
Offices		10	120	1200		
Kitchen		1	2000	2000		
Kitchen Storage		1	450	450		Cooler/Freezer, Janitor and Stor.
Beauty/Barber Shop		1	250	250		
Work area/IT		1	200	200		
Commercial Laundry		1	500	500		Linen services
Clean Utility		2	100	200		
Soiled utility		2	100	200		
Staff Toilets		4	40	160		2 Male & 2 Female
Staff Lounge		2	150	300		
Staff Storage		2	50	100		
Janitor Closet		3	90	270		
Receiving		1	625	625		
Conference Room/Private Dining		1	450	450		
Storage		2	350	700		2 Spaces
Mechanical/Electrical Equipment		1	1300	1300		
Boiler		1	600	600		
Net to Gross Conversion	15%			10005	1501	
Department Total					**11506**	
All Departments - Total					42098	
Building Circulation	10%				**4210**	Circulation and partitions
TOTAL PROPOSED BUILDING AREA					**46308 S.F.**	

PLATTE COUNTY MEMORIAL NURSING HOME
Wheatland, Wyoming

PRELIMINARY SPACE ALLOCATION PROGRAM - Nursing Home

ELEMENT		QUANTITY	ROOM SIZE (sf)	NET AREA (sf)	DEPARTMENT TOTALS (sf)	NOTES/COMMENTS
PUBLIC AREAS						
Waiting Area		1	200	200		
Public Toilets		2	180	360		1 Male and 1 Female
Reception Area		1	100	100		
Entry Foyer / Lobby		1	100	100		
Net to Gross Conversion	15%			760	114	Circulation and partitions
Department Total					**874**	
NURSING HOME						
Single Occupancy Room		30	300	9000		Includes toilet
Double Occupancy Room		10	345	3450		Includes toilet
Nurse Stations		2	250	500		
Bathing Facilities		3	300	900		
Medicine Prep Room		1	50	50		
Nourishment area		1	120	120		
Activities area		1	500	500		
Dining Room/Community Room		1	1000	1000		
Net to Gross Conversion	15%			15520	**2328**	Circulation and partitions
Department Total					**17848**	
BUILDING SUPPORT SPACE						
Administration Office		1	350	350		
Offices		10	120	1200		
Kitchen		1	2000	2000		
Kitchen Storage		1	450	450		Cooler/Freezer, Janitor and Stor.
Beauty/Barber Shop		1	250	250		
Work area/IT		1	200	200		
Commercial Laundry		1	500	500		Linen services
Clean Utility		2	100	200		
Soiled utility		2	100	200		
Staff Toilets		2	40	80		1 Male & 1 Female
Staff Lounge		1	150	150		
Staff Storage		1	50	50		
Janitor Closet		2	90	180		
Receiving		1	625	625		
Conference Room/Private Dining		1	450	450		
Storage		1	350	350		2 Spaces
Mechanical/Electrical Equipment		1	1000	1000		
Boiler		1	400	400		
Net to Gross Conversion	15%			8635	1295	
Department Total					**9930**	
All Departments - Total					28652	
Building Circulation	10%				**2865**	Circulation and partitions
TOTAL PROPOSED BUILDING AREA					**31517 S.F.**	

PROJECT OPTIONS AND FEASIBILITY

The 'Long Term Care Market Analysis' by Community Builders, Inc. has identified the need for seven additional nursing home beds for a total of 50 beds and 22 assisted living units to meet current and future demand. With this information and the 'Facility Evaluation' report, five options have resulted and are addressed below.

OPTION 1

Option one consists of expansion, as addressed in the facility review, and renovation of the existing nursing home facility to bring it into compliance and to give the staff the needed space to operate efficiently. The expansion does not accommodate a kitchen or laundry facilities so the nursing home needs to continue its relationship with the hospital for these services. This option does not address any future considerations such as additional nursing home beds, assisted living units, or memory care.

Feasibility: This option strictly addresses the costs to correct the deficiencies of the existing facility. However, even with this direct approach there are many issues with implementing renovation. The facility is licensed for 43 beds and currently has 39 of them occupied. Because the nursing home is almost at capacity, there is no room to relocate the residents while renovation takes place. Construction can create conditions that may be harmful to the residents and staff. Therefore, considerations of provisions for infection control, life safety and the protection of occupants must be initiated during renovation. For example, the areas of renovation shall be isolated from occupied areas based on Infection Control Risk Assessment Process. Phasing has been looked at to minimize disruption of the residents, but it still comes down to the fact that there is no additional space to move the residents or services to during construction even for a short period of time.

Recommendation: Due to modern code and life safety requirements as well as accessibility issues, rehabilitating the old facility, maintaining the 43 beds and adding 3,145 s.f., would be expensive at $160/s.f. The cost of this option could go up sharply when factoring in the difficulty of dealing with construction while the facility is near capacity and it still does not address any future needs of the facility. A new facility could be designed and built that would better suit the needs of the elderly residents.

OPTION 1
Expand & Remodel Existing Nursing Home
Conceptual Planning Costs

Site Work / Utilities

Drywells	2	@	$10,000
Excavation / Grading	1	@	$15,000
Subtotal			***$ 25,000***

Remodel

Roof Demolition	12,442	sf	$2.00	$25,000
Asbestos Abatement	1	@	Allowance	$67,875
Remodel(12,442 s.f.)	1	@		$517,470
Addition (3,145 s.f.)	1	@		$575,000
HVAC	1	@		$404,000
Plumbing	1	@		$111,700
Electrical	1	@		$145,000
Subtotal				***$1,846,045***

TOTAL ***$1,871,045***

Other

Contingency - remodel	@	15%	$280,657	
Inflation to Bid per year	@	5%	$107,585	
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@	10.5%	$237,225	
TOTAL PROBABLE PROJECT COSTS				**$2,496,512**

15,587 s.f. @ $160/s.f.

Note:
The indicated costs remain conceptual in nature. The “Contingency” is provided to allow for certain unknown factors at this time. Actual costs for special systems designs and life cycle expenditures (i.e., energy use, maintenance, and replacement costs) can be considerations that would affect the estimated costs during the design process.

The “Inflation to Bid” allowance is based on current known inflation factors for the state of Wyoming for a 12 month period.

OPTION 2

Option two consists of a phased approach to incorporate the recommended current and future demand as stated above. A preliminary assessment of the existing site that the Platte County Memorial Hospital and Nursing Home occupies, indicates that it is possible that there may be enough area for construction to be completed in phases, with Phase I impact consisting of a new 50 bed nursing home to the south of the existing facilities. Phase II could be the remodeling and addition of the existing nursing home facility into the assisted living facility. This option would include a kitchen and laundry facility which can give the nursing home the option to terminate its business contract with the hospital for these services.

Feasibility: This option has several benefits to recommend it. This new nursing home and assisted living facility would be 'stand alone' from the hospital and yet continue a long-term care 'campus' concept referenced in the 'Long-Term Care Market Analysis'. The Hospital Foundation already owns the land so there would be no land acquisition cost to incur.

Due to the sloping nature of the site, Phase 1 could be built as a two-story building with the building support spaces in a daylight basement and from the street side the building would be the one-story nursing home. The impact of moving the residents only once to their new rooms would be minimal and then free up the existing facility to begin Phase II. Phase II would consist of remodeling the existing nursing home and building the necessary additions to accommodate the new assisted living facility. An elevator would need to be incorporated into the design so that both facilities can share support spaces.

Recommendation: This option is at $172/s.f. and would help solve the dilemma of renovation during occupancy while maintaining the nursing home environment. It would also allow the entire new facility to be independent of the hospital and share support services with one another. There is a large cost associated with adding a kitchen and laundry facility to this option to become independent of the hospital. Due to the deficiencies noted in the Architectural, Mechanical and Electrical facility evaluation, only the shell of the building is able to be reused and with any existing facility there are constraints and limitations that need to be addressed during design. This option only notes 10 parking spaces due to the tight restriction of available site and therefore may not meet possible requirements of (1) 9'x19' parking space per bed.

OPTION 2
Phased with Existing facility
Conceptual Planning Costs

Phase I – New Nursing Home

Site Utilities (sewer, water, elec.)	1	LS	Allowance	$30,000
Excavation / Fill Removal	20,594	sf	$5.45	$112,237
Asphalt Parking(10) & Drives	3,500	sf	$5	$17,500
Walkways / Sidewalks	200	sy	$40	$8,000
Landscape	1	@	Allowance	$25,000
Nursing Home	20,594	sf	$160.00	$3,295,040
Support spaces for both Facilities	12,188	sf	$72	$877,536
Kitchen Equipment	1	@		$150,000
Subtotal				***$ 4,515,313***

Phase II - Remodel/Addition – Assisted Living

Roof Demolition - tearoff	12,442	sf	$2.00	$25,000
Asbestos Abatement	1	@		$67,875
Addition/Building Envelope Remodel (3,145 s.f.)	1	@		$575,000
Remodel interior for larger assisted living rooms	12,442	sf	$52	$646,984
Mechanical	12,442	@	$25	$311,050
Electrical	12,442	@	$25	$311,050
Demolition – Interior except corridor walls	12,442	sf	$10	$124,420
Subtotal				***$ 2,061,379***
		TOTAL		***$ 6,576,692***

Other

Contingency - remodel	@	10%	$657,669
Inflation to Bid	@	5%	$361,719
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@	9.5%	$721,628

TOTAL PROBABLE PROJECT COSTS **$8,317,708**

48,369 s.f. @ $172/s.f.

Note:

The indicated costs remain conceptual in nature. The “Contingency” is provided to allow for certain unknown factors at this time. Actual costs for special systems designs and life cycle expenditures (i.e., energy use, maintenance, and replacement costs) can be considerations that would affect the estimated costs during the design process. There are no furnishings in these costs. The “Inflation to Bid” allowance is based on current known inflation factors for the state of Wyoming for a 12 month period.

OPTION 3

Option three is similar to Option two in that it consists of a phased approach to incorporate the recommended current and future demand as stated previously. Phase I would be the same, but Phase II would be demolition of the existing nursing home and Phase III would be building a new assisted living facility in its stead.

Feasibility: This option also has several benefits to recommend it. As in Option two, this new facility would be a 'stand alone' from the hospital and yet continue a long-term care 'campus' concept referenced in the 'Long-Term Care Market Analysis'. The Hospital Foundation already owns the land so there would be no land acquisition cost to incur.

Due to the sloping nature of the site, Phase 1 could be built as a two-story building with the building support spaces in a daylight basement and from the street side the building would be the one-story nursing home. The impact of moving the residents only once to their new rooms would be minimal and then free up the existing facility to begin Phase II – demolition. Phase III would be to construct a new assisted living facility that would be a wing to the nursing home. An elevator would need to be incorporated into the design so that both facilities can share support spaces.

Recommendation: At $184/s.f. this option would also help solve the dilemma of renovation during occupancy while maintaining the nursing home environment. It would also allow the entire new facility to be independent of the hospital and share support services. After Phase III is complete, this would be a new facility, but even with this possible solution, there is the consideration that the site restrictions such as the size of the open area to the south and the location of the existing hospital will control the layout and possibly hamper any future development needs. This option only notes 10 parking spaces due to the tight restriction of available site and therefore may not meet possible requirements of (1) 9'x19' parking space per bed.

Option 3
Phased with Demolition
Conceptual Planning Costs

Phase I – New Nursing Home

Site Utilities (sewer, water, elec.)	1	LS	Allowance	$30,000
Excavation / Fill Removal	20,594	sf	$5.45	$112,237
Asphalt Parking(10) & Drives	3,500	sf	$5	$17,500
Walkways / Sidewalks	200	sy	$40	$8,000
Landscape	1	@	Allowance	$25,000
Nursing Home	20,594	sf	$160	$3,295,040
Support spaces for both Facilities	12,188	sf	$72	$877,536
Kitchen Equipment	1	@		$150,000
Subtotal				***$ 4,515,313***

Phase II - Demolition

Building Demolition	12,442	sf	$8.00	$99,536
Asbestos Abatement	1	@		$67,875
Subtotal				***$ 167,411***

New Construction

Assisted Living Building	13,526	sf	$152.60	$2,064,068
Subtotal				***$2,064,068***

TOTAL ***$6,746,792***

Other

Contingency - remodel	@	10%	$674,679
Inflation to Bid	@	5%	$371,074
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@	9.5%	$740,292

TOTAL PROBABLE PROJECT COSTS **$8,532,837**

46,308 s.f. @ $184/s.f.

Note:

The indicated costs remain conceptual in nature. The “Contingency” is provided to allow for certain unknown factors at this time. Actual costs for special systems designs and life cycle expenditures (i.e., energy use, maintenance, and replacement costs) can be considerations that would affect the estimated costs during the design process. There are no furnishings in these costs.

The “Inflation to Bid” allowance is based on current known inflation factors for the state of Wyoming for a 12 month period.

OPTION 4

Option four would be a new 50 bed nursing home and 22 assisted living units housed in a new facility on a new site (to be determined).

Feasibility: This new site would have more opportunities to create a unique and specific building that conforms to the needs of the functional program because the building would not have to be confined to the parameters of the existing site and the location of the hospital. There could also be enough area to allow for future development and on-site parking.

Recommendation: This option is $194/s.f., but has the additional cost of land acquisition. However, this option could also very easily accommodate a phased approach to the project with minimal impact to the residents and staff. Phase One could be a new nursing home and support spaces, sized to accommodate the addition of Phase Two which would be the 22 bed assisted living unit and Phase Three would encompass the adaptive re-use plan of the existing nursing home. It would be recommended to place the 46,308 s.f. nursing home & assisted living facility on an approximate 76,230 s.f. or 1.75 acre site. This would allow 13,550 sf of on-site parking(1- 9'x19' parking space per bed &10% for driveways) and a balance of 21% or 16,372 sf of the site for future expansion and any setback requirements.

OPTION 4
New Nursing Home & Assisted Living
At New Site – Total Project
Conceptual Planning Costs

Site Work / Utilities					
*Site Acquisition	1	ea		-	
Site Utilities (sewer, water, elec.)	1	LS	Allowance	$45,000	
Excavation / Fill Removal	46,308	sf	$3.00	$138,924	
Asphalt Parking(72) & Drives	13,550	sf	$5	$67,750	
Walkways / Sidewalks	400	sy	$40	16,000	
Landscape	1	@	Allowance	$100,000	
Subtotal				***$ 367,674***	
New Construction					
Nursing Home	20,594	sf	$155.40	$3,200,308	
Assisted Living	13,526	sf	$144.60	$1,955,860	
Support Spaces	12,188	sf	$126.40	$1,540,563	
Kitchen Equipment	1	@		$150,000	
Subtotal				***$ 6,846,731***	
	TOTAL			***$ 7,214,405***	
Other					
Contingency	@		10%	$721,440	
Inflation to Bid per year	@		5%	$396,792	
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@		8%	$666,610	
TOTAL PROBABLE PROJECT COSTS					**$8,999,247**

46,308 s.f. @ $194/s.f.

Note:
*There is a place holder for site acquisition, but no cost associated with this line item until a piece of property is identified.

The indicated costs remain conceptual in nature. The “Contingency” is provided to allow for certain unknown factors at this time. Actual costs for special systems designs and life cycle expenditures (i.e., energy use, maintenance, and replacement costs) can be considerations that would affect the estimated costs during the design process. There are no furnishings in these costs.
The “Inflation to Bid” allowance is based on current known inflation factors for the state of Wyoming for a 12 month period.

OPTION 4A

Option four would consist of a three phase approach for a 50 bed nursing home and 22 assisted living units housed in a new facility on a new site (to be determined) and an adaptive re-use of the existing nursing home facility.

Feasibility: This new site would have more opportunities to create a unique and specific building that conforms to the needs of the functional program because the building would not have to be confined to the parameters of the existing site and the location of the hospital. There could also be sufficient area to allow for future development and on-site parking.

Recommendation: This option averages $172/s.f. for all three phases, but has the additional cost of land acquisition. This option is a phased approach that would have minimal impact to the residents and staff. Phase One could be a new nursing home and support spaces, sized to accommodate the addition of Phase Two which would be the 22 bed assisted living unit and Phase Three would encompass the adaptive re-use plan of the existing nursing home. It would be recommended to place the 46,308 s.f. nursing home & assisted living facility on an approximate 76,230 s.f. or 1.75 acre site. This would allow 13,550 sf of on-site parking(1- 9'x19' parking space per bed &10% for driveways) and a balance of 21% or 16,372 sf of the site for future expansion and any setback requirements.

OPTION 4A
New Nursing Home & Assisted Living
At New Site – Phased Project
Conceptual Planning Costs

PHASE I: Nursing Home & Support Spaces

Site Work / Utilities				
*Site Acquisition	1	ea		-
Site Utilities (sewer, water, elec.)	1	LS	Allowance	$45,000
Excavation / Fill Removal	31,517	sf	$3.00	$94,551
Asphalt Parking(72) & Drives	13,550	sf	$5	$67,750
Walkways / Sidewalks	400	sy	$40	16,000
Landscape	1	@	Allowance	$100,000
Subtotal			***$***	***323,301***
New Construction				
Nursing Home	20,594	sf	$155.40	$3,200,308
Support Spaces	10,923	sf	$126.40	$1,380,667
Kitchen Equipment	1	@		$150,000
Subtotal				***$4,730,975***
		TOTAL		***$ 5,054,276***
Other				
Contingency	@		10%	$505,427
Inflation to Bid per year	@		5%	$277,985
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@		8%	$467,015
TOTAL PROBABLE PROJECT COSTS				**$6,304,703**

31,517 s.f. @ $200/s.f.

PHASE II: Assisted Living

Site Work / Utilities				
Excavation / Fill Removal	14,791	sf	$3.00	$44,373
Subtotal				***$ 44,373***
New Construction				
Assisted Living	13,526	sf	$144.60	$1,955,860
Support Spaces	1,265	sf	$126.40	$159,896
Subtotal				***$ 2,115,756***
		TOTAL		***$ 2,160,129***
Other				
Contingency		@	10%	$216,012
Inflation to Bid per year		@	5%	$118,807
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.		@	8%	$199,596
TOTAL PROBABLE PROJECT COSTS				**$2,694,544**

14,791 s.f. @ $182/s.f.

PHASE III: Adaptive Re-Use of Existing Nursing Home

Site Work / Utilities

Drywells	2	@		$10,000
Excavation / Grading	1	@		$15,000
Subtotal				***$ 25,000***

Remodel

Roof Demolition	12,442	sf	$2.00	$25,000
New Membrane Roof	12,442	sf	$12.00	$150,000
Asbestos Abatement	1	@	allowance	$67,875
All other remodeling	12,442	sf	$50.00	$622,100
*Interior Remodel/ADA	1	@		-
*HVAC	1	@		-
*Plumbing	1	@		-
*Electrical	1	@		-
Subtotal				***$ 864,975***

TOTAL $ 889,975

Other

Contingency - remodel	@	10%	$88,997
Inflation to Bid per year	@	5%	$48,949
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@	8%	$82,233

TOTAL PROBABLE PROJECT COSTS **$1,110,154**

12,442 s.f. @ $89/s.f.

Note:
*There is a place holder for site acquisition, but no cost associated with this line item until a piece of property is identified; there are also place holders for Interior remodle/ADA upgrade, HVAC, Plumbing & Electrical, but also no cost associated with these line items until a determination of the specific building use is identified. There is however, a $50/sf allowance for overall budgeting purposes only.

The indicated costs remain conceptual in nature. The “Contingency” is provided to allow for certain unknown factors at this time. Actual costs for special systems designs and life cycle expenditures (i.e., energy use, maintenance, and replacement costs) can be considerations that would affect the estimated costs during the design process. There are no furnishings in these costs.

The “Inflation to Bid” allowance is based on current known inflation factors for the state of Wyoming for a 12 month period.

OPTION 5

Option five would be a new 50 bed nursing home housed in a new facility on a new site (to be determined).

Feasibility: This option addresses only the nursing home needs and not the demand that has been recognized in the 'Long Term Care Market Analysis' for assisted living units. If the nursing home facility is designed with the future development of assisted living units in mind, the units could be phased in later with minimal disruption to the residents. This new site would have more opportunities to create a unique and specific building that conforms to the needs of the functional program because the building would not have to be confined to the parameters of the existing site and the location of the hospital.

Recommendation: This option at $199/s.f. (project cost) is initially expensive, but the upfront cost is offset with the phased future development that would be less because the support spaces are already built.

OPTION 5
New Nursing Home at New Site
Conceptual Planning Costs

Site Work / Utilities				
*Site Acquisition	1	ea		-
Site Utilities (sewer, water, elec.)	1	LS	Allowance	$45,000
Excavation / Fill Removal	31,517	sf	$3.00	$94,551
Asphalt Parking(50) & Drives	9,405	sf	$5	$47,025
Walkways / Sidewalks	300	sy	$40	12,000
Landscape	1	@	Allowance	$100,000
Subtotal				***$ 298,576***
New Construction				
Nursing Home	20,594	sf	$155.40	$3,200,308
Support Spaces	10,923	sf	$126.40	$1,380,667
Kitchen Equipment	1	@		$150,000
Subtotal				***$4,730,975***
	TOTAL			***$5,029,551***
Other				
Contingency	@	10%	$502,955	
Inflation to Bid per year	@	5%	$276,625	
A/E Fees/ Plan Review / Owner Expenses / Testing / Special Inspections, Etc.	@	8%	$464,730	
TOTAL PROBABLE PROJECT COSTS				**$6,273,861**

31,517 s.f. @ $199/s.f.

Note:
*There is a place holder for site acquisition, but no cost associated with this line item until a piece of property is identified.

The indicated costs remain conceptual in nature. The “Contingency” is provided to allow for certain unknown factors at this time. Actual costs for special systems designs and life cycle expenditures (i.e., energy use, maintenance, and replacement costs) can be considerations that would affect the estimated costs during the design process. There are no furnishings or commercial laundry equipment in these costs.

The “Inflation to Bid” allowance is based on current known inflation factors for the state of Wyoming for a 12 month period.