

Meyer Building Remodel

A. General – Meyer Building Remodel

1. Remodel as required to accomplish the following:
 - a. Replace Ceilings
 - b. Provide mechanical enclosure casework
 - c. Paint all rooms
 - d. Replace 97 windows
 - e. Electrical system upgrade
 - f. Heating system upgrade
 - g. Add fire sprinkler system

2. Meyer Building will be converted for use as a housing unit for the SPTP Program.

B. Meyer Building – Existing

The Meyer Building was constructed in 1950 on the grounds of Larned State Hospital. The original architecture and concrete structural frame have been maintained with various program changes and remodels through the years. The facility has 21,728 SF, a basement of 553 SF and a crawl space below the main floor.

C. Proposed Remodel Area Finishes

Floors:	Replace only as required by the MEP upgrade
Walls:	Repaint all rooms Provide casework to house new mechanical units
Ceilings:	Replace all ceilings as required by the MEP upgrade

D. Plumbing

The plumbing systems including plumbing fixtures, piping systems and domestic water heaters that exist within the building shall remain. No plumbing work is anticipated except plumbing modifications required to accommodate the mechanical system modifications.

E. Mechanical

Low pressure steam enters the building via the existing utility tunnel that connects to the building's crawl space at the south end of the building's east wing. The steam main extends to the basement mechanical room located at the north end of the east wing.

Control valves are installed in the major branch lines. These control valves are located in the basement mechanical room at the north end of the east wing and are used to isolate supply to the respective branch line.

Steam condensate is collected in a condensate receiver located in the basement mechanical room located at the north end of the east wing of the building. The steam condensate is pumped back to the main power plant via the existing tunnel system.

The existing building mechanical, heating, ventilating and air conditioning (HVAC) system consists of individual single zone air handling units each of which supplies conditioned air to the rooms on a respective building exposure. Each of the air handling units is provided with a steam heating coil and a

direct expansion (DX) cooling coil. An individual condensing unit is associated with each air handling unit. The condensing units are located on the perimeter of the building with refrigerant piping, routed through the crawl space, connecting the respective condensing unit to its DX cooling coil. In a number of the perimeter staff offices steam radiators are installed to provide the required heating of the perimeter wall.

Due to the structural conditions of the building, much of the existing ductwork is exposed below the ceilings in the corridors. The corridors are used as return air plenums.

Much of the existing equipment that makes up the HVAC system is old and nearing the end of its useful life. One new air handling unit was installed as a part of a recent building renovation project that was completed in 2004.

As a part of the anticipated building renovation, the HVAC system throughout the entire building will be replaced. The new system shall comply, as much as is practicable, with the energy conservation requirements of the State of Kansas and as such shall conform with the requirements of ASHRAE 90. In addition, the requirement of ASHRAE 62, 'Ventilation for Acceptable Indoor Air Quality' shall be adhered to.

Consideration shall be given to alternatives that will eliminate the need for exposed ductwork. The crawlspace should be strongly considered for routing of ductwork from the individual air handling units to the spaces served. The exterior wall could be furred out and supply air ducted from the crawlspace up to supply air registers installed in a new sill at the base of the respective window. This furred space will also provide for installation of additional electrical receptacle, data and telephone drops and cable television jacks.

A drop ceiling should be installed in the corridors which will provide a return plenum as well as space for running sprinkler mains.

All equipment associated with the HVAC systems that are exposed to the buildings population must be sensitively chosen so that safety and security of the residents and staff are maintained.

It is not necessary to provide individual room control for resident housing areas. The HVAC system shall be zoned as appropriate to maintain reasonable space comfort. In staff areas, rooms with similar occupancy, exposure and internal loads shall be combined into common zones of control.

Toilet rooms shall be heated and ventilated. Radiant steam heat shall be utilized for heating. Cooling is not a requirement in these toilet rooms. Suitable exhaust shall be provided in toilet and shower rooms to limit transfer of objectionable odors and/or moisture to adjacent spaces.

Stand-alone unitary type cooling only units will be provided to condition each respective telecommunications and data room and each security room.

A direct digital automatic temperature control system shall be provided for total automation of the mechanical system. These controls shall interface with those currently in use in other parts of the existing Larned State Hospital. Software to provide a control work station in the offices of the Larned State Hospital physical plant supervisor will be required.

Windows will not be operable and will not allow for fire fighter access during a fire. Therefore, a smoke management system to protect the buildings occupants in the case of a fire will be required throughout the building.

F. Electrical

The existing electrical power distribution system in the building consists of a 208 volt, 3 phase, 4 wire distribution system except that some of the older existing single phase panels continue to be utilized as a 120/208 volt single phase 3 wire system.

A load center consisting of a dry type transformer with circuit breaker distribution panel is located in the mechanical room at the north end of the west wing. The building electrical service was reworked as a part of a previous primary electrical distribution project. The remainder of the panels within the building is old and replacement circuit breakers are difficult to obtain.

The lighting throughout the building was replaced as part of a recent project that was completed in 2004. If ceilings in the corridors are reworked, new lighting in these corridors will be required.

The existing power distribution system is backed up by stand-by generators located in the main power plant.

Due to the age of the existing electrical system and the renovation requirements of the Meyer Building program statement, the electrical distribution system downstream of previously replaced main distribution equipment will be replaced in its entirety. New branch convenience circuits will be provided and existing branch convenience circuits will be replaced. Existing branch circuit conduit will be utilized as much as is practicable.

New branch circuit panel boards shall be installed throughout the building to allow protection of branch circuits and access by facility maintenance personnel. Adequate spare capacity shall be provided to allow future additions of equipment requiring electrical connection.

The new electrical system shall conform with all applicable State and local code requirements. New convenience receptacles in housing areas shall be 20 amp rated tamper proof grounding type with circuits protected by 'Arch Fault' circuit breakers.

Due to the configuration of the existing generators in the main power plant as providing 'stand-by' electrical power, all emergency life safety electrical requirements shall be backed up using local batteries.

G. Fire Suppression and Fire Alarm

The existing building is protected by a series of fire hose stand pipes. This is a wet system and is connected to the facility's domestic water piping system.

A new wet fire protection sprinkler system, meeting the requirements of NDFPA 13, will be provided as a part of this current project. Sprinkler heads located in resident rooms and areas where residents have easy access to the respective sprinkler head shall be of the security design.

A new sprinkler riser connected to the existing local site water distribution system shall be provided. The fire protection water supply system will be protected with the appropriate back flow prevention devices.

A new fire alarm system was provided as a part of a recent renovation. This system shall be utilized with new devices, conduit and conductors provided as required by the renovation. Any air handling unit that supplies more than 2000 CFM shall be provided with in-duct smoke detectors. New smoke detectors shall be provided in each resident room or in the return duct serving each resident room. In addition, water flow to the wet fire suppression system shall initiate an alarm.

The existing fire alarm system is manufactured by Simplex/Grinnell. Note that existing negotiated procurement contracts shall be utilized for any required modifications to the existing fire alarm system.

H. Emergency Power

Emergency power is provided by remote generators that are located in the Larned State Hospital main power plant. During times normal power is interrupted and generators are operating to provide stand-by electrical power to the building, the mechanical cooling system shall be disconnected.

I. Telephone and Data System

Inside plant shall consist of Category 5E voice and data, and Series 6 CATV horizontal cabling runs from various outlet locations to the respective telecommunications closets. The telecommunications closets will have the capacity to accommodate a data rack, voice riser, and CATV cabinet filled with associated equipment.

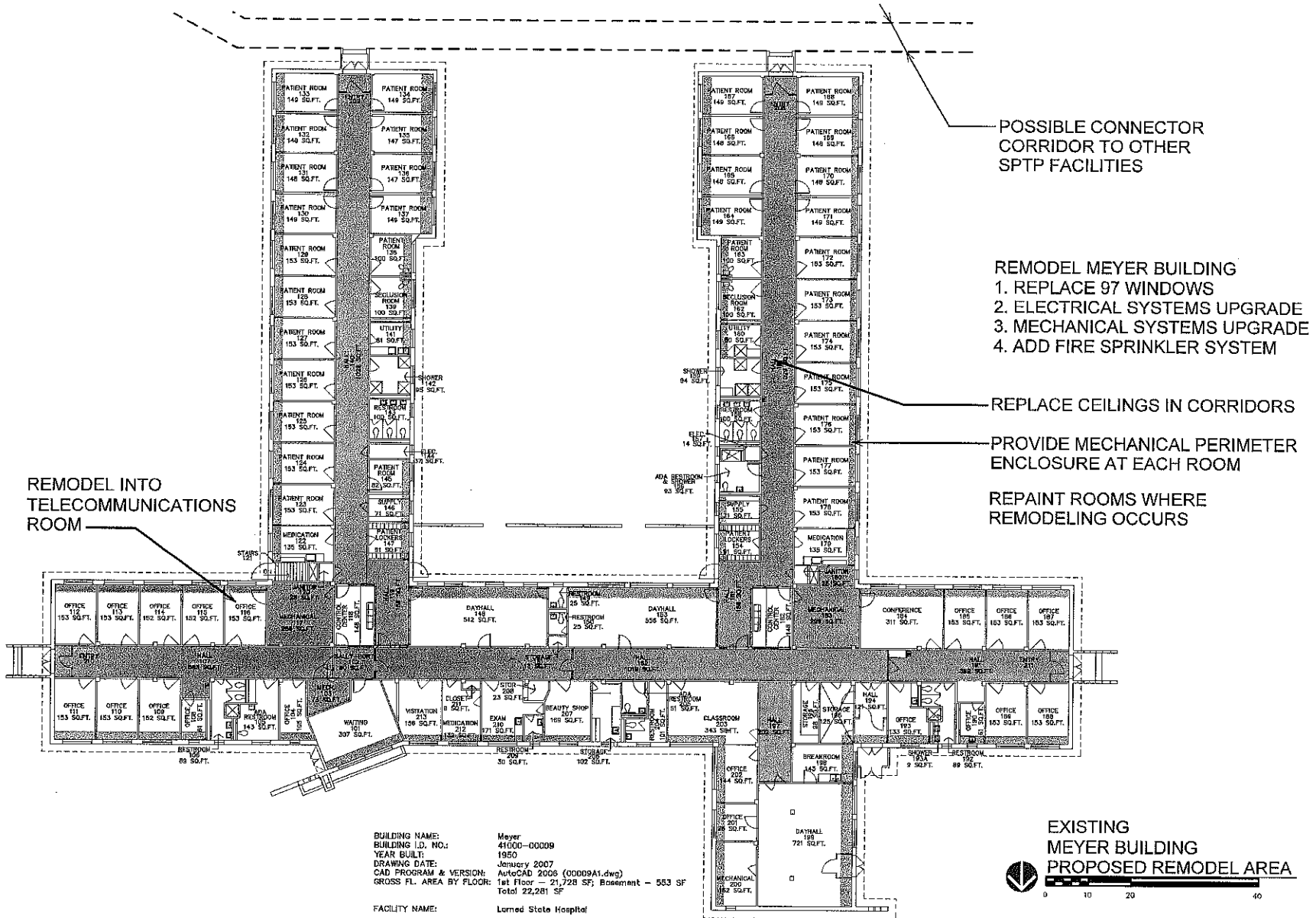
Paging shall be provided in a zone for the supporting spaces with connection to the mass notifications system in the Administration Building.

The network electronics for this particular building will be furnished and installed by Larned State Hospital IT. The costs associated with this equipment are included in the program budget.

Outside plant shall consist of routing inner-ducts with single-mode fiber and multi-pair copper cabling from this facility to the Administration Building through the tunnels. Service Provisioning at both end points, including the building entrance terminals, patch cords, cross-connects, copper terminations and fiber terminations shall also be included. The telecommunications main closet should be located so that it can have access to the tunnels for the infrastructure required.

J. Security System

The security system will need to be coordinated to function with the Hospital main system. The closet housing this equipment should be located so that it can have access to the tunnels for the infrastructure required.



POSSIBLE CONNECTOR
CORRIDOR TO OTHER
SPTP FACILITIES

- REMODEL MEYER BUILDING
1. REPLACE 97 WINDOWS
 2. ELECTRICAL SYSTEMS UPGRADE
 3. MECHANICAL SYSTEMS UPGRADE
 4. ADD FIRE SPRINKLER SYSTEM

REPLACE CEILING IN CORRIDORS

PROVIDE MECHANICAL PERIMETER
ENCLOSURE AT EACH ROOM

REPAINT ROOMS WHERE
REMODELING OCCURS

REMODEL INTO
TELECOMMUNICATIONS
ROOM

BUILDING NAME: Meyer
 BUILDING I.D. NO.: 41000-00009
 YEAR BUILT: 1960
 DRAWING DATE: January 2007
 CAD PROGRAM & VERSION: AutoCAD 2006 (00009A1.dwg)
 GROSS FL. AREA BY FLOOR: 1st Floor - 21,728 SF, Basement - 553 SF
 Total 22,281 SF

FACILITY NAME: Lamed State Hospital

EXISTING
MEYER BUILDING
PROPOSED REMODEL AREA

0 10 20 40