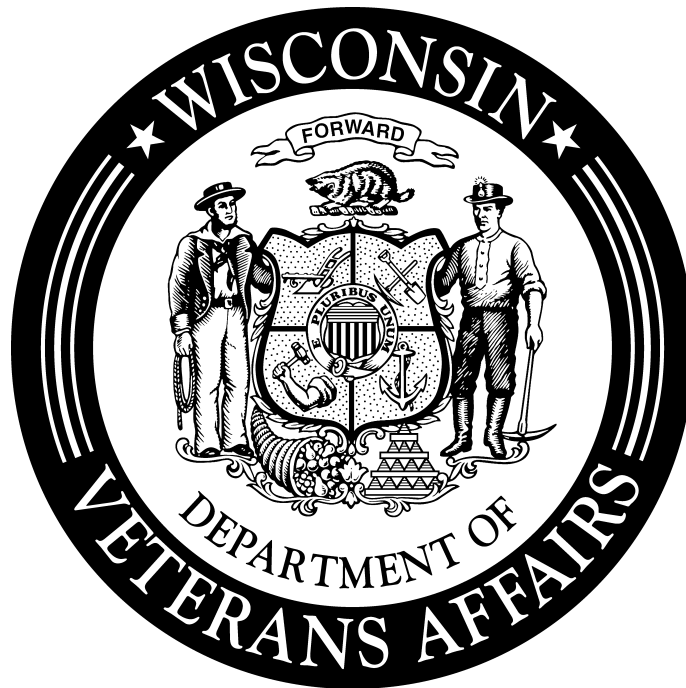


**DEPARTMENT OF VETERANS AFFAIRS
KING & UNION GROVE BUILDING EVALUATION**



EMPLOYEE DORM

Project No. 08F2B

Prepared by:
Berners-Schober Associates, Inc.
Architects/Engineers

January 2010

**DEPARTMENT OF VETERANS AFFAIRS
KING & UNION GROVE BUILDING EVALUATION**

Comm. No. 5175

January 2010

EMPLOYEE DORM**TABLE OF CONTENTS****ARCHITECTURAL**

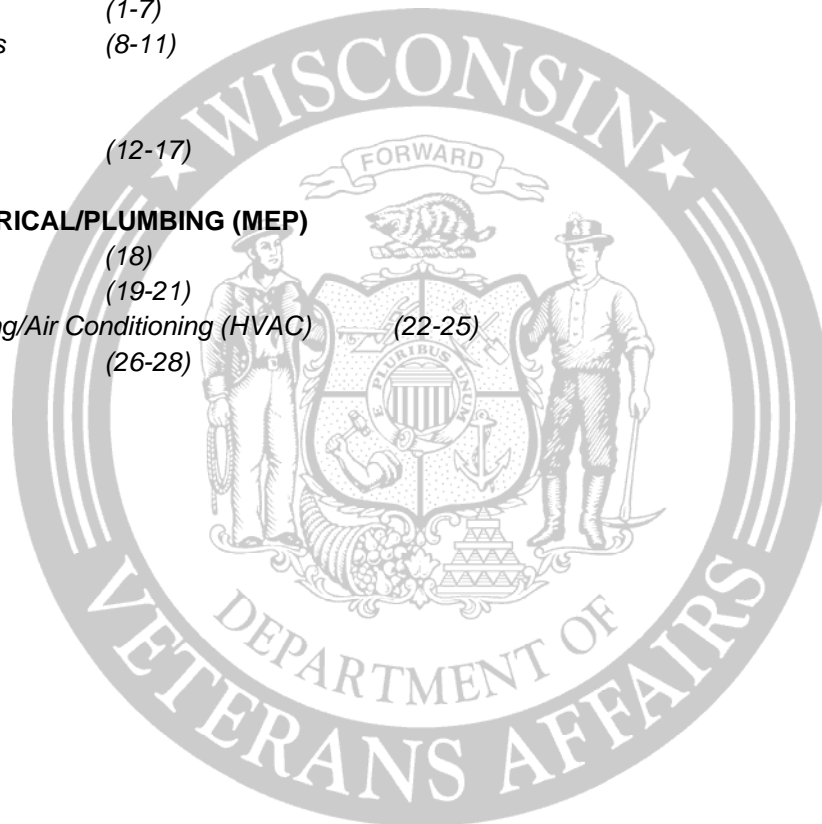
- *Architectural* (1-7)
- *Department Plans* (8-11)

STRUCTURAL

- *Structural* (12-17)

MECHANICAL/ELECTRICAL/PLUMBING (MEP)

- *Fire Protection* (18)
- *Plumbing* (19-21)
- *Heating/Ventilating/Air Conditioning (HVAC)* (22-25)
- *Electrical* (26-28)





**DEPARTMENT OF VETERANS AFFAIRS
KING & UNION GROVE BUILDING EVALUATION**

Comm. No. 5175

January 2010

EMPLOYEE DORM - ARCHITECTURAL

Summary:

The Employee Dorm, also known as the Nurses Quarters years ago, was built in 1968 and serves the King Veteran's Home as a resident hall for campus employees. The building contains approximately 12,621 GSF with a building footprint of approximately 4,150 SF (0.95 acre) on an approximate 1.28 acre lot within the King Veteran's Home campus. There is ample room for horizontal expansion to the west, north and east ends of the lot.

Ove's main entrance is on the west end of the building with a sidewalk and steps leading down to Mitchell Avenue. The sidewalk and steps suffer from numerous cracks and settlement (see Structural Report for more details). The building does not have its own adjacent parking lot. The nearest lot is at the rear of the Ove Center and the additional nearby lot to the east of Ove. The Employee Dorm has (2) exits at first floor and one at the basement level that leads into a stairwell with access up to grade level.

The Basement level is primarily mechanical and electrical space with some being used as additional storage space. The exit on this level is showing signs of slab settlement and water damage from the drain outside the door being clogged. This drain needs to be cleaned out to prevent any further water damage. Finish materials in the basement consist of concrete floors and exposed concrete structure at the ceilings. Doors at this level are metal with knob style hardware. Interior walls are concrete as well as the foundation walls.

First floor contains (8) resident rooms with one double room. There is also a community kitchen and lounge space. Each resident room has a closet and its own toilet room. The double room has its own small kitchen. Some rooms have been gutted and are missing flooring materials. Finish materials on first floor consist of primarily carpet in the corridor and resident rooms. The kitchen and lounge spaces contain vinyl composition tile (VCT) floors. All base materials are wood. Doors are wooden with knob style hardware. Interior wall partitions on both levels above grade are wood stud with gypsum board and plaster.

Second floor is mostly identical to first floor, except there is no lounge space and instead an additional resident room for a total of (9) single resident rooms and one double. Finish materials are identical to those of first floor. There is an outdoor covered balcony space at each end of the building on the east and west ends.

Exterior materials consist of wood stud walls with brick veneer. Windows are thermal break aluminum with 1" insulating glass. The brick on the exterior is showing signs of staining all around the building. The roof is constructed of 2x8 wood joists and wide flange steel beams, topped with plywood sheathing and rigid insulation with top membrane. The roof is showing signs of vegetation growth due to surrounding pine trees. The roof should be cleaned up and the integrity of the membrane should be assessed at that time.

Overall the building is in good to fair condition and structurally sound.



Original Aluminum Windows



Typical Staining of Brick found around the Building's Exterior



Drain at Bottom of Basement Exit Stair



Storage/Electrical Room in Basement Level



First Floor Corridor



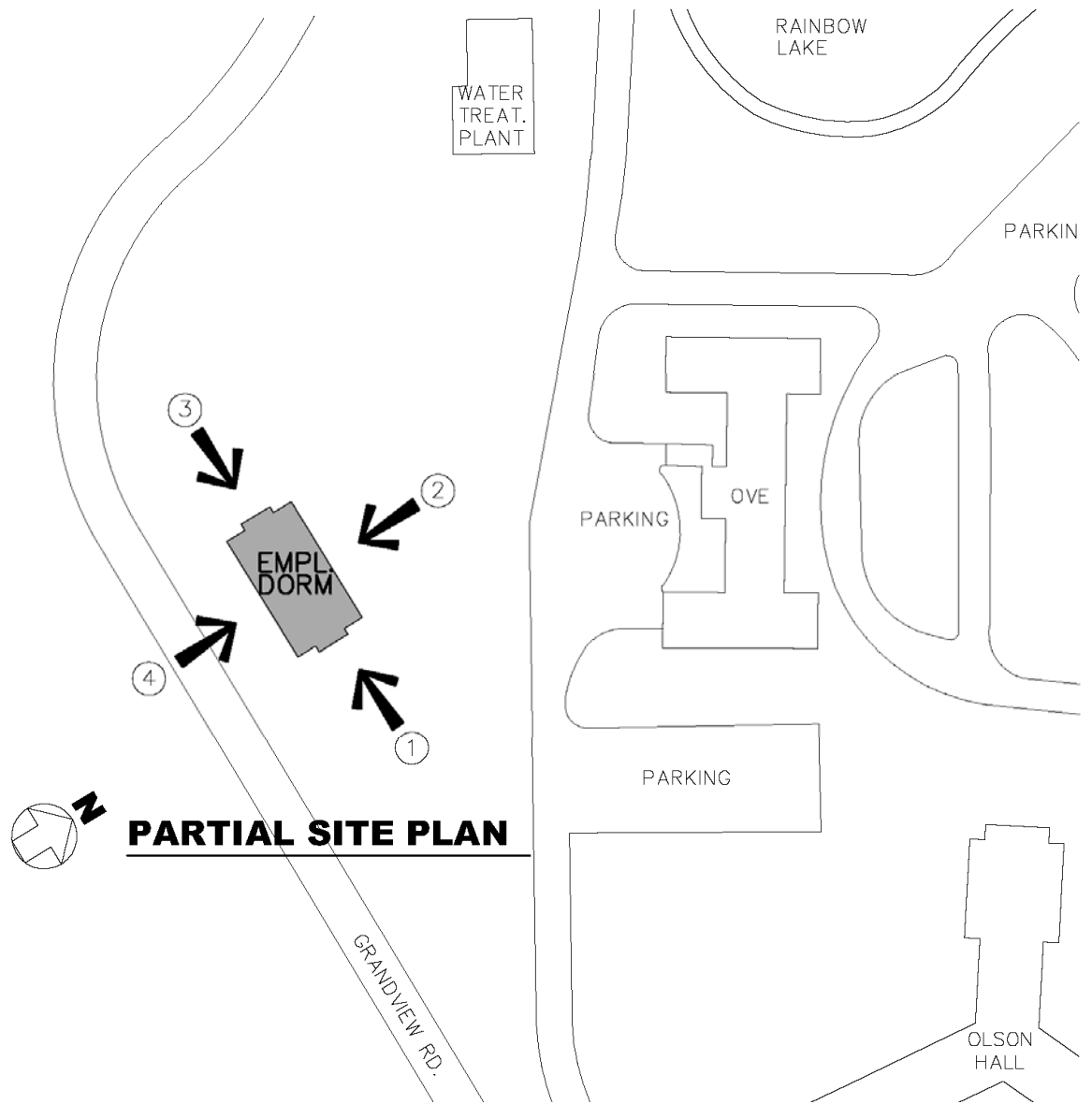
Resident Living Space



Resident Living Space



View of Roof and Vegetation Growth



①



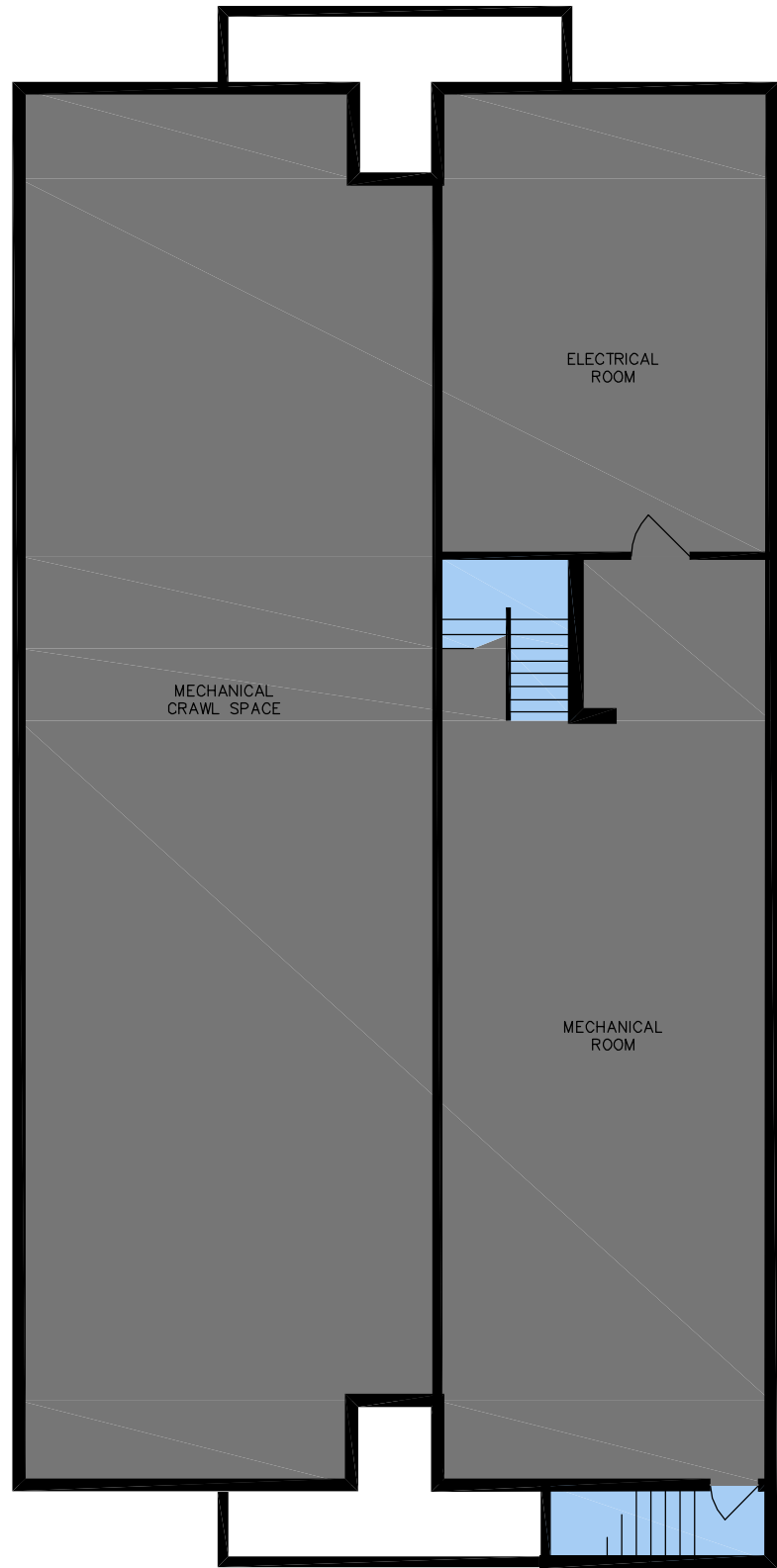
②



③







④



 **N BASEMENT FLOOR PLAN**

LEGEND

	RESIDENT AREA
	SUPPORT FUNCTIONS
	STORAGE / MECHANICAL
	VERTICAL EGRESS

**EMPLOYEE DORM
KING VETERAN'S HOME**







BSA_{INC}
 Berners-Schober Associates, Inc.
 Architects / Engineers
 ARCHITECTS BUILDING
 310 PINE STREET
 GREEN BAY, WI 54301
 (920) 432-4865

BASEMENT FLOOR PLAN



 **N FIRST FLOOR PLAN**

LEGEND

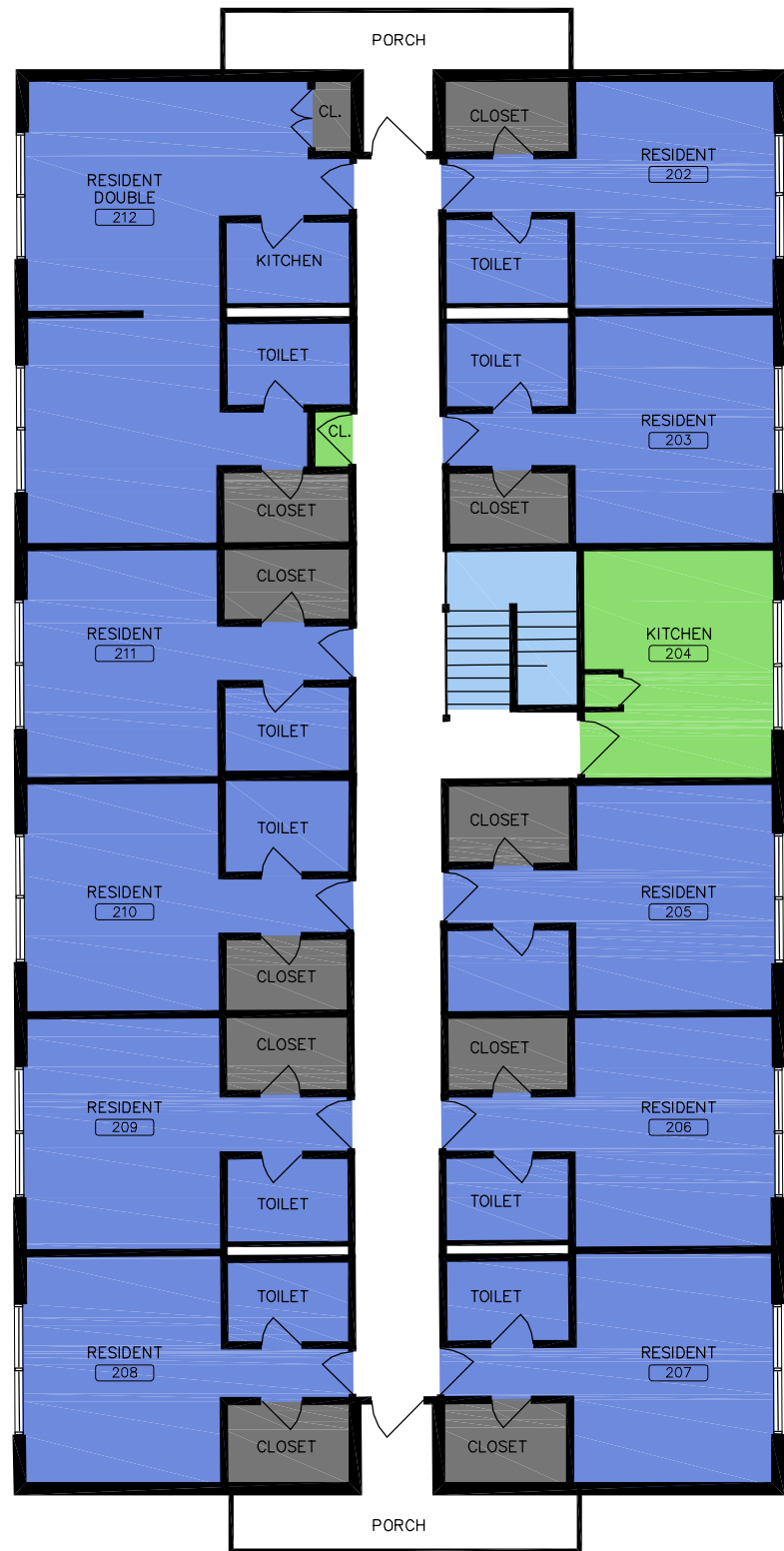
-  RESIDENT AREA
-  SUPPORT FUNCTIONS
-  STORAGE / MECHANICAL
-  VERTICAL EGRESS

**EMPLOYEE DORM
KING VETERAN'S HOME**



BSA_{INC}
 Berners-Schober Associates, Inc.
 Architects / Engineers
 ARCHITECTS BUILDING
 310 PINE STREET
 GREEN BAY, WI 54301
 (920) 432-4865

FIRST FLOOR PLAN

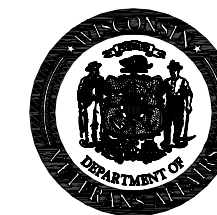


N SECOND FLOOR PLAN

LEGEND

- RESIDENT AREA
- SUPPORT FUNCTIONS
- STORAGE / MECHANICAL
- VERTICAL EGRESS

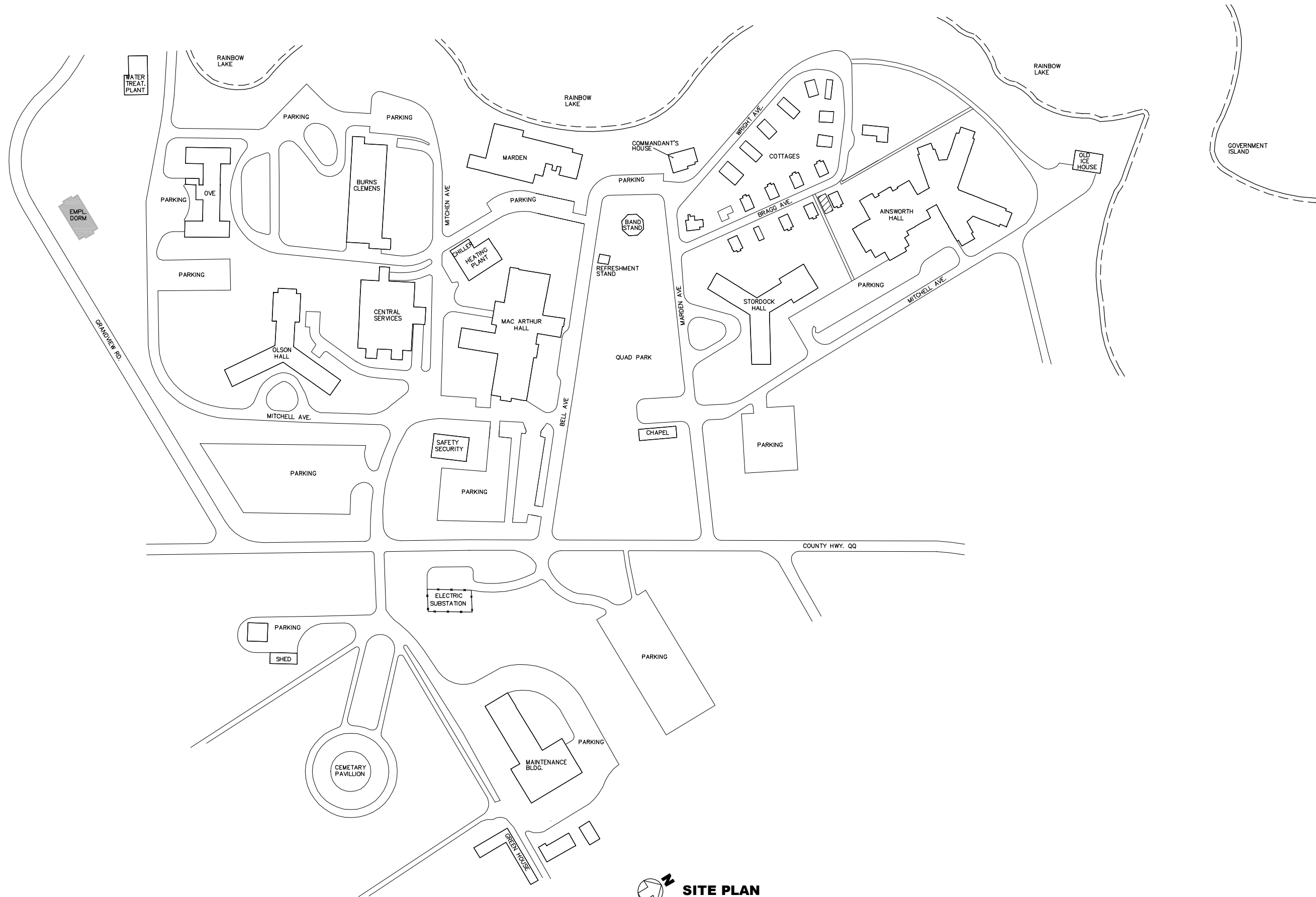
**EMPLOYEE DORM
KING VETERAN'S HOME**



BSA_{INC} ARCHITECTS BUILDING
310 PINE STREET
GREEN BAY, WI 54301

Berners-Schober Associates, Inc.
Architects / Engineers (920) 432-4865

SECOND FLOOR PLAN



 **SITE PLAN**

**EMPLOYEE DORM
KING VETERAN'S HOME**



BSA_{INC}
 Berners-Schober Associates, Inc.
 Architects / Engineers
 ARCHITECTS BUILDING
 310 PINE STREET
 GREEN BAY, WI 54301
 (920) 432-4865

SITE PLAN

**DEPARTMENT OF VETERANS AFFAIRS
KING & UNION GROVE BUILDING EVALUATION**

Comm. No. 5175

January 2010

EMPLOYEE DORM - STRUCTURAL

Year/Comm. No.	1970 / State of Wisconsin – Project No. 6903-5.
Structure Type	Roof: plywood sheathing, 2x8 wood joists at 16" o.c. and 2x8 wood built-up girders with exterior and interior 2x4 wood stud bearing walls. Floors: 3/4" plywood sheathing, 2x10 wood joists at 16" o.c. with exterior and interior 2x4 wood stud bearing walls. Mid-span steel support beams (12" deep wide-flange) and columns (3"x3" tubes) at basement in lieu of typical crawl space concrete foundation walls (at interior stud bearing wall locations). Crawl Space: soil fill. Basement: poured concrete slab on grade. Foundations: poured concrete foundation walls (10" wide) and footings. Exterior walls: 1/2" wood sheathing and 2x4 wood stud bearing walls with brick veneer.
Fire Rating	None. See Architectural Report, Table 601.
Expandability	Horizontal expansion is possible.
Typ. Floor to Floor Heights	Basement to 1 st : ? 1 st to 2 nd : ? 2 nd to Roof: ?
Typical Column Spacing	14'-6".

OVERALL STRUCTURAL CONDITION: Good to fair considering the age of the structure. Structurally sound considering some repairs and modifications are made in the near future.

ADEQUACY FOR CONTINUED USE: Satisfactory.

IDENTIFIED DEFICIENCIES (see photos below):

- Some cracks in concrete basement floor slabs and foundation walls.
- Soil backfill at crawl space appeared to be moist during site visit. Possible pipe leak(s).
- Severe water stains and possible rotting of floor joists above crawl space. Possible pipe leak(s).
- Deteriorating drywall in ceiling of basement. Possible pipe leak(s).
- Holes in floor joists are not in a suitable location from bottom edge of members and are close together.
- Roof drainage problem causing staining on brick veneer.
- Plant growth and standing water on roof.
- Cracks and deterioration at concrete stair and paint lifting off of steel railing.



Cracks in Basement Concrete Floor Slab at Exit Door



Cracks in Crawl Space Concrete Foundation Wall



Soil Backfill at Crawl Space Appeared to be Moist during Site Visit due to Possible Pipe Leak(s)



Severe Water Stains and Possible Rotting of Floor Joists above Crawl Space due to Possible Pipe Leak(s)



Deteriorating Drywall in Ceiling of Basement due to Possible Pipe Leak(s)



Holes in Floor Joists are not in a suitable Location from Bottom Edge of Members and are close Together



Same as above



Roof Drainage Problem causing Staining on Brick Veneer



Plant Growth and Standing Water on Roof



Cracks and deterioration at Concrete Stair and Paint lifting off of Steel Railing



Concrete Deterioration and Cracking are occurring at this Stair Step

RECOMMENDATIONS FOR CORRECTIVE ACTION (respective to above identified deficiencies):

- Repair cracks in concrete basement floor slabs and foundation walls.
- Further investigate moist soil backfill at crawl space and remediate.
- Further investigate root cause of water stained floor joists above crawl space and remediate.
- Further investigate root cause of deteriorating drywall in ceiling of basement and remediate. Then choose to or not to repair ceiling.
- Install bottom metal strap or 2x wood scabs on each side of members at holes that are less than 2" from edge.
- Further investigate root cause of roof drainage problem and remediate. Then clean brick veneer.
- Reroofing is suggested to eliminate plant growth, standing water, and any other roof drainage issues.
- Repair cracks and deterioration at concrete stair.
- Clean, prime, and repaint steel stair railing.

**DEPARTMENT OF VETERANS AFFAIRS
 KING & UNION GROVE BUILDING EVALUATION**

Comm. No. 5175

January 2010

EMPLOYEE DORM - FIRE PROTECTION SYSTEM

Summary:

The Employee Dorm has no fire protection system installed. It does have smoke detection and horn strobes located throughout the entire building. Each residence room also has smoke detection. If an automatic fire sprinkler system were to be installed a pump would most likely not be needed.

FIRE PROTECTION	EMPLOYEE DORM						
	BSMT	01	02				
Fire Pump	NA	NA	NA				
Piping							
Condition	NA	NA	NA				
Piping Arrangement	NA	NA	NA				
Sprinkler Heads							
Head Location	NA	NA	NA				
Head Condition	NA	NA	NA				

- LEGEND**
- N New < 5 Years
 - G Good
 - F Fair
 - P Poor
 - C Compliant
 - D Deficient
 - NA** Not Applicable
 - (#)** See Remarks





**DEPARTMENT OF VETERANS AFFAIRS
 KING & UNION GROVE BUILDING EVALUATION**

Comm. No. 5175

January 2010

EMPLOYEE DORM - PLUMBING SYSTEM

Summary:

The original building was constructed in 1970. The plumbing equipment, such as the hot water storage tank and steam heater, need to be replaced to be more energy efficient. Plumbing fixtures should be replaced to be more water conservative and visually appealing. Piping is leaking badly and the building is in need of a piping replacement.

PLUMBING EQUIPMENT	GRADE	COMMENTS	RECOMMENDATION
Hot Water Storage Tank	P	Original equipment	Needs to be replaced under any renovations
Instantaneous Heater	P	Original equipment	Needs to be replaced under any renovations
Water Softener W/ Brine Tank	P	Original equipment	Needs to be replaced under any renovations
Hot Water Recirculation Pump	P	Original equipment	Needs to be replaced under any renovations
BASEMENT			
Water piping (2)	P	Original / leaking	Needs to be replaced under any renovations
Sanitary and storm piping (3)	P	Original cast iron / galvanized	Needs to be replaced under any renovations
Plumbing fixtures (1)	P	Original fixtures	Needs to be replaced under any renovations
FIRST AND SECOND FLOOR(S)			
Water piping (2)	P	Original / leaking	Needs to be replaced under any renovations
Plumbing fixtures (1)	P	Original fixtures	Needs to be replaced under any renovations
Sanitary and storm piping (3)	P	Original cast iron / galvanized	Needs to be replaced under any renovations
ROOF			
Roof drain(s)	F		Should be inspected under any future renovations

Keyed Remarks

1. Plumbing fixtures are original and show physical wear. Replace with new tank type water closets, lavatory and kitchen sink fixtures with low flow capability.
2. Water piping is leaking in many areas. This is most apparent in the basement and first floor ceilings. The majority of the water system is not insulated, and the system needs early attention to stay in operation.
3. Piping is original and is showing wear. Piping needs to be replaced under any renovations and could be leaking in areas above first floor toilet rooms.

LEGEND

- N New < 5 Years
- G Good
- F Fair
- P Poor
- C Compliant
- D Deficient
- NA Not Applicable
- (#) See Remarks

EQUIPMENT LIFE CYCLE ANALYSIS

EQUIPMENT TYPE	LIFE CYCLE ANALYSIS
Hot Water Storage Tank	Tank is at the end of its life expectancy and needs to be replaced.
Water Softener	Softener is at the end of its life expectancy and needs to be replaced.
Hot Water Recirculation Pump	Pump is at the end of its life expectancy and needs to be replaced.



Hot Water Storage Tank in Basement



Piping in Basement Ceiling



First Floor Toilet Room



First Floor Toilet Room



Service Sink in Basement



Sanitary Piping in Crawl Space below First Floor



**DEPARTMENT OF VETERANS AFFAIRS
KING & UNION GROVE BUILDING EVALUATION**

Comm. No. 5175

January 2010

EMPLOYEE DORM - HVAC SYSTEM

Summary:

The building heating system is in poor condition. The steam piping and condensate pumps in the basement are leaking and in need of immediate replacement/repair. The room heating units utilize a Danfoss valve to control the radiation temperature.

Unit ventilators at the end of each corridor bring in fresh air and deliver to the corridor. The dorm room toilet exhaust creates a negative draw which transfers the air from the corridor into the dorm room. This is an unacceptable method of fresh air delivery. Fresh air should be delivered directly to the dorm rooms.

The toilet ventilation did not appear to be in good condition. The dorm rooms themselves have no ventilation other than the aforementioned transfer air from the corridor. Windows are utilized for natural ventilation and many rooms used window air conditioners to temper the occupied rooms.

There has been some control upgrades to the hot water pumping system. However the campus maintenance staff would benefit from the ability to monitor all of the building equipment, to a greater degree, from a central location.

The first floor has been abandoned and rooms have been gutted. The assessment of this buildings HVAC system is that it should be replaced in its entirety.

HVAC EQUIPMENT	GRADE	COMMENTS	RECOMMENDATION
Exhaust Fans	P (1)		Replace fans
Ductwork	P (1)		Replace ductwork
Mechanical Room Ventilation			
Basement Mechanical	P (2)	Ventilation consists of crawl space air discharge	Provide adequate ventilation
Basement Electrical Room	P (2)	Transfer grille from main mechanical room	Provide ventilation
Crawl Space	P (2)	Vents into mechanical room	Provide dedicated ventilation
Laundry Vents	F/D (3)	Residential dryers, ducted out wall. Below grade discharge in area way.	Raise discharge at least 12" above grade.
Steam to Water Heat Exchangers	F (4)	Entire system is in disrepair	Replace system
Circulating Pumps	F (4)	Systems are operable but aging	Replace pumps when heating system is upgraded
Piping Isolation Valves	P (4)		Replace when heating system is upgraded
Condensate Pump	P (4)	Older pumps	Replace when heating system is upgraded

Steam Pressure Regulating Valves	F	Appears to operate sufficiently	
Room Ventilation	P/D (5)	Fresh air delivered to corridor	Provide fresh air directly into dorm rooms.
Toilet Ventilation	P (5)	System operates poorly.	Replace/upgrade/balance system.
Radiation	P	Individual room heating control on the unit itself	Adequate but requires continual manual adjustment based on OA temperature. Provide automatic control
Temperature Controls	F (6)	Hot water system controlled automatically	Upgrade rooms/mechanical control. Monitor from central location

Keyed Remarks

1. The building exhaust system needs improvement to provide continual exhaust at code minimal levels.
2. The basement is extremely warm. This is mainly due to uninsulated and leaking steam piping. The ventilation consists of crawl space ventilation transferred through the basement mechanical room. Transfer grilles in the electric room door offer little to keep the electric gear cool. Louvers and fans with automatic temperature control should be added to each mechanical room.
3. The laundry dryers are vented to the outdoors adequately except the discharge is too low to the ground where be overcome by snow and debris. The discharge should be raised at least 12" above grade.
4. The heating system in general is poor. The room heating units are controlled by a manual valve which requires manual adjustment to control room temperature. The pumps, piping, and heat exchangers are in poor shape. Insulation is missing, pipes are leaking and the system as a whole should be replaced.
5. The exit corridor cannot be used as a supply plenum. Fresh air must be delivered directly to the dorm rooms. A new ventilation system is required.
6. When a new heating system is installed the building control system should be upgraded to allow monitoring of the system from a central campus location.

LEGEND

- N New < 5 Years
- G Good
- F Fair
- P Poor
- C Compliant
- D Deficient
- NA Not Applicable
- (#) See Remarks

EQUIPMENT LIFE CYCLE ANALYSIS

EQUIPMENT TYPE	LIFE CYCLE ANALYSIS (Based on ASHRAE 2007 service life estimates)
Exhaust Fans	Life expectancy of 25+ years. System not just fan needs upgrade/replacement.
Heating Pumps	Life expectancy of 20 years (base mounted), 10 years (in-line) depending upon maintenance, cycling, and general usage. These units should be replaced with heating system upgrade. One condensate pumps is in need of repair/replacement
Valves	Life expectancy of 25+ years depending upon preventative maintenance and exercise. The units should be replaced with heating system upgrade.
Steam to Water Heat Exchangers	Life expectancy of 25+ years depending upon preventative maintenance and water/steam quality. Unit appears to be nearing end of useful life.
Radiation	Life expectancy of 25+ years. Extended life possible with proper water treatment. These units are functional. Consider control upgrade.
Control system	Life expectancy of 20 years. Replace system with building improvements.



Condensate Pump



Water Radiation



Converter and Controls



Crawl Space Ventilation



Pump and Uninsulated Steam Piping



Uninsulated leaking Pipes



**DEPARTMENT OF VETERANS AFFAIRS
 KING & UNION GROVE BUILDING EVALUATION**

Comm. No. 5175

January 2010

EMPLOYEE DORM - ELECTRICAL SYSTEM

Summary:

Overall the Electrical service is of sufficient size for the current building's use and meets NFPA 70 (The National Electric Code) but the equipment is reaching the end of its useful life and should be upgraded in the near future. The majority of the interior lighting is incandescent with some integrally ballasted fluorescent and should be upgraded to all fluorescent lighting. The minimal Tele/Data needs of the building appears to be served well by what is currently there but if there is any significant change in use the system would need to be upgraded. The Fire Alarm system is newer but does not meet NFPA 72. More notification devices are required.

ELECTRICAL	GRADE	COMMENTS	RECOMMENDATION
Electrical Normal Power			
Service Entrance Capacity	G	Sufficient for the current building use.	
Substation Condition	NA	Fed from external pad mount transformer.	
Distribution Switchgear Condition	F	Older style panels but still serviceable.	
Branch Panel Condition	F	Older style panels but still serviceable.	
Electrical Emergency Power			
Generator(s)	NA		
Transfer Switches	NA		
Distribution Switchgear Condition	NA		
Branch Panel Condition	F	Older style panel but still serviceable.	
Distribution Branch Status			
Life Safety	G		
Other Branch	NA		
Lighting			
Interior Lighting	P	Mostly incandescent and some integrally ballasted fluorescent.	Replace with newer fluorescent lighting.
Exterior Lighting	P	The lights are old and some doors don't have lights.	Replace existing lighting with new and add lights at doors that don't have any.
Emergency Lighting/Exit Signs	G/D	Code required exterior egress lighting not installed.	Add egress lighting at exit doors per code.

Communications			
Telephone	G		
Nurse Call	NA		
Data	G		
Fire Alarm	G/D	System is newer but does not meet code.	Add some notification devices.
Security	NA		
Video	NA		
Clock System	NA		
PA System	NA		

Keyed Remarks

LEGEND

- N New < 5 Years
- G Good
- F Fair
- P Poor
- C Compliant
- D Deficient
- NA Not Applicable
- (#) See Remarks

EQUIPMENT LIFE CYCLE ANALYSIS

EQUIPMENT TYPE	LIFE CYCLE ANALYSIS
SWBD	50 years.... currently at 39 years
Panelboards	50 years.... currently at 39 years
Fire Alarm System	30 years.... currently at 15 years



Main Electrical Room