



Memorandum

TO: Common Council
From: Greg Keil, CDD *CK*
Date: November 3, 2011
RE: Fire Station #2 Update

I have had several conversations with representatives of the Pfefferle Companies, owners of the land parcels to the south of Fire Station #2. They are planning on razing the existing structures to clear the site for redevelopment. They are interested in incorporating the fire station site into the redevelopment area, and have expressed an interest in obtain an option to purchase the property from the city. I expect they will make this request of the city sometime later this month. I have also requested quotes for the demolition of Fire Station #2, and those will likewise be available later this month.

As you may recall, the building sustained substantial damage as a result of a windstorm in May. The cost to repair the damage has been estimated at around \$32,000. The Plan Commission has considered alternatives for the site and has recommended that the site should be cleared and that the lot should be marketed for an appropriate use.

A copy of the facilities assessment conducted on the building in 2002 by the architectural firm Bray and Associates is attached for your reference.

CITY OF MENASHA
FACILITIES ASSESSMENT
PROJECT NO. 2550
EXISTING BUILDING EVALUATION

FIRE STATION NO. 2

ARCHITECTURAL

1. The purpose of this report is to document the building condition and give a general assessment of the structure and building components both interior and exterior and to identify building code and ADA accessibility issues.
2. Building Type/Use
 - a. The Menasha Fire Station No. 2 is a single-story building with a basement, except under the apparatus room. The fire station has three (3) apparatus bays, an office area, eating and sleeping quarters, and toilet facilities on the first floor. The basement has an exercise area, recreation area, storage, and the mechanical room.
 - b. The building was constructed in 1963.
3. Site Description
 - a. The site is located on the corner of Appleton Road (State Highway 47) and Airport Road. The size of the site is 16,000 SF and the building footprint is 4,950 SF. The front of the building faces Airport Road with a setback of 45'.
 - b. There are five (5) paved parking stalls at the front of the building and a concrete drive to the apparatus bays.
4. Evaluation of Structure and Systems
 - a. There are no ADA compliant toilet facilities in the building.
 - b. There is evidence of exterior wall movement in the apparatus room at the northwest corner and at the west exit door.
 - c. There are two (2) stairways serving the basement. The stairway at the southeast corner is an open exterior stairway with no roof. It was noted that there are water leak issues at this location.
 - d. The interior walls and finishes are generally in good serviceable condition. There are areas in the apparatus room that are soiled from diesel exhaust.
5. Recommendations / Improvements
 - a. Provide ADA compliant toilet facilities.
 - b. Repair the areas of wall movement in the apparatus room.
 - c. Identify the water leak source at the southeast stairway and correct the condition.
 - d. Improve the energy efficiency of the exterior walls.
 - e. It was noted that the roof needs to be replaced.

PLUMBING

1. Barrier Free Requirements
 - a. None of the plumbing fixtures in the toilet rooms or locker rooms are accessible to the handicapped.
 - b. The electric water cooler in the lounge is not barrier free.
 - c. There are no handicapped accessible showers.

2. General Maintenance Condition
 - a. The condition of the plumbing fixtures was good. There were no indications of faucets dripping and leaks. The fixtures will require constant maintenance and replacement.
 - b. The present water distribution piping did not show signs of leaks and external corrosion. The piping was in good condition and was insulated.
 - c. The domestic hot water system was in good condition. However, there did appear to be corrosion. There were no insulating unions that separated piping of dissimilar metals.

3. Recommendations and Conclusions
 - a. Utilities
 - 1.) The present sanitary building sewer has capacity for expansion and a new sanitary building sewer would not be required.
 - 2.) The present water supply is not large enough for expansion. Any major additions would require a new water service.
 - 3.) Any major additions would require new storm building sewers. The storm sewer system will have to be re-worked through retention basins to avoid direct discharge to the site.
 - b. The plumbing fixtures do not comply with current Water Conservation Standards, but would be acceptable unless major renovations are planned.
 - c. We would recommend a uni-sex barrier free toilet room and a handicapped accessible shower in each locker room.
 - d. The present hot water systems is not energy efficient and does not have capacity for expansion. A new energy efficient hot water system would be required.
 - e. Any renovation to the present kitchen would require a grease separator.

HVAC SYSTEMS

1. Summary
 - a. If this facility is to continue to be used, improvements to the Apparatus Room ventilation system should be made.
 - b. Although the cast iron furnace itself will last indefinitely, the multizone system has some comfort issues (high summer humidity levels) that are inherent to this type of system. Rather than replacing major components, if they fail in the future, we would recommend replacing the system with individual furnaces.

2. Condition of Existing Systems
 - a. ASHRAE lists the life expectancy of air cooled condensing units and gas fired duct furnaces as being 15 years. This equipment is 37 years old and beyond its useful life expectancy.

- b. Little can go wrong with a cast iron furnace. Refractory tiles need to be replaced periodically and the cast iron heating sections need to have their joints caulked to prevent air leakage. The gas burner, a standard component, has an expected life of 15 years.

3. Code and Operational Issues

- a. A review of the original HVAC plans indicates that the systems were originally designed to provide airflow and outdoor air ventilation rates that will meet today's codes. A qualified Testing and Balancing Contractor should be hired to measure and adjust all systems to assure that code required outdoor air and exhaust ventilation rates are in fact being maintained.

4. Recommendations

- a. The present gravity ventilators that exhaust the Apparatus room should be converted to power exhaust.
- b. The gas fired make-up air units in the Apparatus room air presently being cycled from room thermostats. When the units are off, no make-up air is being brought in, regardless of CO levels. A carbon monoxide sensing system should be installed that will allow the system to function whenever CO levels rise.
- c. A vehicle exhaust system, similar to Plymovent, should be installed to directly exhaust diesel fumes from the apparatus tailpipes.
- d. Summer humidity is difficult to control with a multizone system. During the summer, the "hot deck" becomes a mixture of return air and humid outdoor air that bypasses the cooling coil. If the present condensing unit or gas burner were to fail, we would recommend investigating replacing the present system with four single zone high efficiency gas fired furnaces with air cooled condensing units.

ELECTRICAL

1. Wiring Devices

- a. Recommendations
 - 1.) Change standard receptacles in the apparatus area to be GFI type.
 - 2.) Provide GFI receptacles in the bathroom areas for cleaning purposes.
 - 3.) Provide six additional receptacles in the dayroom area to eliminate the use of power strips. Circuit these six receptacles among two 20 amp circuits.
 - 4.) Kitchen: Replace existing outlets with GFI protected outlets and also provide two additional receptacles connected to a 20 amp circuits due to the limited number of receptacles in the kitchen area.
 - 5.) Locker room receptacle: Change receptacle to be GFI protected.
 - 6.) Change standard receptacles in basement area to GFI type.

2. Panelboards

- a. Recommendations
 - 1.) The minimum of 3' of clearance in front of the panels is not obtained, since you have to stand on the cover of the sump pump to work on the electrical gear. This existing electrical gear should be relocated to accommodate the clearance as indicated in the NEC section 110-26.

3. Interior Lighting Fixtures

a. Recommendations:

- 1.) Replace the existing T12 fluorescent lighting with newer energy efficient T8 type.
- 2.) Provide wire guards on light fixtures in the apparatus bay.
- 3.) Map light: Provide a fluorescent light over this map to provide for brighter light quality.
- 4.) Replace the existing light fixtures in the sleeping area with new.
- 5.) The exit lights should be changed from incandescent and fluorescent type to more energy efficient LED type. Manufacturers indicate that the LED of this type of fixture will last 10-20 years.
- 6.) Exercise area: Change the incandescent lighting to fluorescent lighting.

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CITY OF MENASHA
FACILITIES ASSESSMENT
PROJECT NO. 2550
EXISTING BUILDING EVALUATION

DEPARTMENT INTERVIEWS - FIRE DEPARTMENT

Purpose: Develop a space needs program of square feet required for each department and each space within the department. Obtain general staff input and comments.

Representatives: Patrick O'Brien, Fire Chief
Steve DeLeeuw, Deputy Chief

Discussion / Notes:

- Issues at station #2:
 - Additional space is needed in the kitchen and dining/recreation areas.
 - The dormitory is larger than needed.
 - A conference room would be desirable; the office area is small.
 - The apparatus room should be expanded to the west.
- A new vehicle exhaust system is planned to be installed at each station.
- The department is responsible for their own building maintenance.
- It was suggested that property for a future station should be acquired as early as possible.
- The department does provide First Responders. The department does not provide EMS (Emergency Medical Service). This is provided by Gold Cross.

FACILITIES ASSESSMENT FOR
 CITY OF MENASHA
 MENASHA, WISCONSIN
 PROJECT NO. 2550

Bray Associates Architects, Inc.
 Sheboygan, Wisconsin

March 7, 2002 / Revised March 14, 2002

FIRE STATION #2 - Square Footage Assessment

Area	Existing SF	Proposed SF	Comments
First Floor			
Vestibule	65	65	
Office	160	160	
Toilet	20	80	
Kitchen	80	120	
Dining / Day Room	385	400	
Dormitory	715	600	
Lockers	390	390	
Toilet	100	100	
Shower	60	60	
Mud Shower	25	25	
Apparatus	2,385	2,385	
Subtotal	4,385	4,385	

Area	Existing SF	Proposed SF	Comments
Basement			
Storage / Exercise	570	570	
Boiler	390	390	
Recreation / Storage	805	805	
City Files	390	390	
Subtotal	2,155	2,155	

Total Net Square Feet 6,540 6,540

Existing Gross Square Feet 7,425 7,425

Grossing Factor for Proposed (1.15)

Note: Interior insulation was added in living areas.

Option #4 - Health Department

Remodel at Public Protection - Apparatus Room	Total \$	396,000.00
Fire Department Relocates		

Option #5 - Senior Center

Update / Remodel	\$	256,000.00
Addition		<u>252,000.00</u>
Total \$		508,000.00

Option #6 - Memorial Building

Update	\$	473,000.00
Addition		<u>326,000.00</u>
Total \$		799,000.00

Option #7 - Fire Station #2

Update / Remodel	Total \$	246,000.00
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Option #8 - Public Protection - Police / Fire

Update / Remodel	\$	1,378,000.00
Additions		<u>567,000.00</u>
Total \$		1,945,000.00

Option #9 - Public Protection - Police

Update / Remodel (less area for Health)	Total \$	1,375,000.00
Fire Department Relocates		

Option #10 - Public Protection - Police

Update / Remodel (less area for Health)	\$	958,000.00
Addition		<u>513,000.00</u>
Fire Department Relocates	Total \$	1,471,000.00
