



June 25, 2019

Site Visit Notes

Re: **Wadleigh Memorial Library**
49 Nashua Street
Milford, New Hampshire
Site Visit Notes of June 25, 2019
WVA Project No. 18223

During our March 5, 2019 site visit to the Wadleigh Library in Milford, New Hampshire we observed the following existing conditions:

Fire Protection

- There is no existing sprinkler system or coverage in the building. A new sprinkler service will be required to provide NFPA 13 wet and dry coverage.

Plumbing

- Existing 1-1/2" domestic cold water service located in the basement electrical room with a 1-1/4" metered building service and 1-1/4" metered irrigation service.
- Existing domestic hot water provided by an electric 12 gallon storage water heater located in the basement. Existing tank appears to be in adequate condition for reuse. Additional water heater(s) will be required to serve any added plumbing fixtures.
- Existing 4" sanitary exit located under slab in the basement electrical room. It was reported the sanitary service can backup into the building from the municipal connection at the street.

Mechanical

- Building is heated by a single gas fired Buderus G334x-92 hot water boiler, 378,000 btu/hr output at 83% efficiency, located in the basement mechanical room. The boiler has been recently replaced and appeared to be in adequate condition.
- Building is cooled by a single Carrier air cooled chiller located on the roof. Equipment name tags were faded, and model number was unreadable. The chiller uses outlawed R-22 refrigerant and appears to be at the end of its useful life.
- There are two inline style circulator pumps located in the basement mechanical room. The pumps are piped in an online/standby configuration and are set for constant volume pumping.

- The hot and cold water is circulated through a two pipe change over style system. This type of system circulates hot water or chilled water through the building upon manual valve settings. The heating or cooling mode is based upon outside weather and can be difficult to maintain occupant comfort.
- Ducted fan coil units provide heating, ventilation and air conditioning throughout the building. The fan coil units are either exposed in room, in attics or above drop ceilings. Ventilation air is ducted directly to the fan coil units.
- There are several barometric relief air dampers that are required to relieve the ventilation air brought into the building through the fan coil units. These dampers are reported to be drafty, have been fixed closed and are partially weather sealed.
- The existing ventilation system does not appear to meet current code and is contributing to building comfort issues.
- Supplemental perimeter heat is provided through converted steam radiators or fin tube radiation.
- Building mechanical controls appear to be limited to manual valve manipulation and local thermostats.

Electrical

- Electric service is 400 amp, 120/208 volt, 3-phase, 4-wire that comes into the basement electric room underground from a utility pole at the street.
- There are five electric panels located throughout the building. Four panels are older Federal Pacific brand and one newer Square D brand. Federal Pacific panels are no longer manufactured and replacement breakers may not be available.
- Electrical branch wiring appears to be a mix of MC cable and non-metallic (i.e., Romex).
- Emergency lighting appears to be provided by battery powered remote heads wired from a battery system located on the second floor. The emergency lighting batteries appear to have been replaced and tested on 07/29/16. The amount of emergency lighting does not appear to meet current code lighting levels.
- Fire alarm panel is a Mircom FA-1000 Series. Existing device coverage does not appear to meet current code.
- Exterior emergency egress lighting does not appear to be to Code.
- Exterior lighting, both pole mounted and building mounted, appears to be mostly older, metal halide type.

- Interior lights are a mixture of pendant wraps and baffle style lights, recessed cans, surface mounted drum lights, recessed parabolic, and globe lights most are fluorescent.
- Communications wiring is a mixture of types is generally secured to ceiling structure with tie wraps, or lying on grid.

END

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