
Building: Fire Station
11 Sunapee Street
Newport, New Hampshire

| Condition | |
|---|---|
| 1 | Fully operational, new, recently replaced |
| 2 | Fully operational, 0-25% of life expectancy used, no issues, no concerns, |
| 3 | Fully operational, 25-50% life expectancy used, periodic problems |
| 4 | Operational, 50-75% life expectancy used, occasional problems, frequent repairs needed |
| 5 | Operational only with constant attention, 100% life expectancy used, failure imminent |

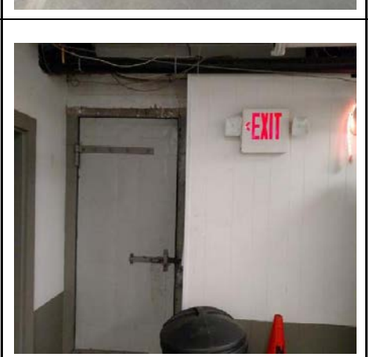
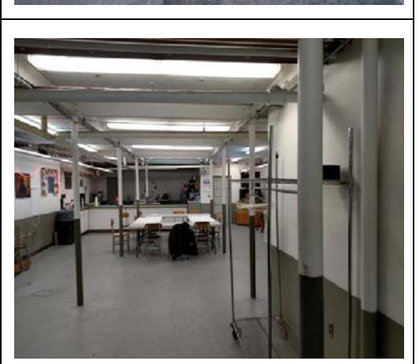
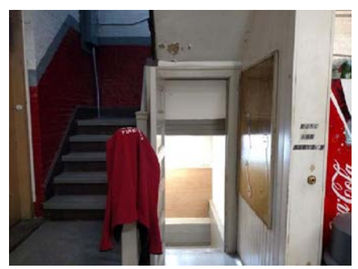
Priority is scaled 1-10 with 1 being urgent

## Architectural

A two story with basement brick building with a one story brick addition. The building is small for staff, apparatus and has numerous serious code violations. Some maintenance has occurred with the installation of new windows on the second floor and recently epoxy painted apparatus floor. There is a lot of work and money to make this facility meet code and space needs of the unit. The street is very congested with traffic frequently backed up from the common interchange making emergency access difficult. Eventually it will be difficult to purchase new equipment that will fit in the limitations of doors and bay sizes. The apparatus bay slab is showing crack , no one should be in this space during an earthquake and in general, it does not appear to meet current code for sizing.

| Equipment | Condition | Est. Remaining Service Life | Priority | Cost Estimate | Remarks & Recommendations | Photos |
|---|---|---|---|---|---|---|

# Town of Newport, Building Assessment July 31,2017

| | equipment | condition | Est remaining Service life | priority | cost | remarks &recommendations | | |
|---|---|---|---|---|---|---|---|---|
| | 739,Rubber Roof | 3 | 5 | 3 | $18<br>1,200 sq.ft<br>$21,600 | No apparent issues with this roof but age ,difficulty of access and replacement of upper warrants replacement |  | |
| | 738,Rubber Roof | 5 | 1 | 3 | $18<br>2,400sq.ft<br>$43,200 | While newer than the lower roof, multiple repairs have been done to this roof. |  |  |
| | 737,Code Issue: | 5 | | 1 | $60,000 | Basement is accessed by non-compliant fire stair which is not rated. It has open doors and exits into the apparatus bay, with a second egress up a few steps and out an alley. All at the same end of the hall. This is not a good situation for the staff and there should be no public meetings in this hall. |  |  |
| | | | | | | |  | |

| | equipment | condition | Est remaining Service life | priority | cost | remarks &recommendations | | |
|---|---|---|---|---|---|---|---|---|
| | 735,General Comment: | | | | | EXTREMELY TIGHT clearances everywhere, eventually may not be able to special order apparatus that will fit in ceiling height. Additionally, expensive equipment is in the open with exposure to damage.<br>While they have made the most of limited space, in a fire, the lack of space must hinder response time. |  |  |
| | | | | | | |  |  |
| | 734,Code Issue: | | | 1 | $40,000 | Could not see any evidence of exhaust collection, such as plymo vent. | | |
| | 733,Paint Surface | 1 | 10 | 10 | $6.00 sq.ft. | Concrete floor was recently refinished. | | |

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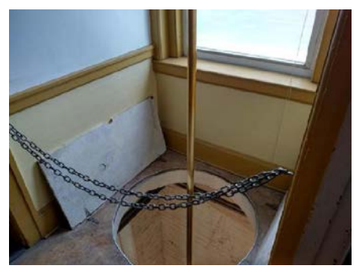
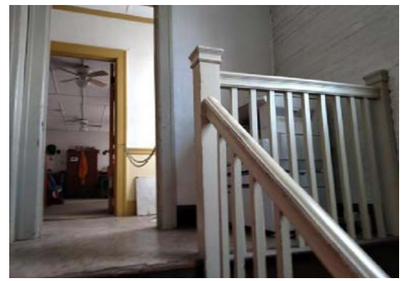
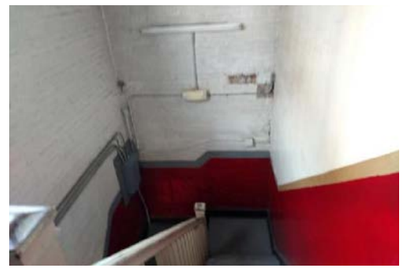
|---|---|---|---|---|---|---|---|---|
| | 732,ADA | | | | | Main entrance and quickest exit from stair does not meet ADA requirements. Only ADA entrance is thru the apparatus apron and then there are no toilets or vertical transport to the second floor. |  |  |
| | | | | | | |  | |
| | ADA | | | | $15,000 | Toilet not ADA. |  | |
| | 872,Code Issue: | | | | | Fire pole should be upgraded with safety features. |  | |

| | equipment | condition | Est remaining Service life | priority | cost | remarks &recommendations | | |
|---|---|---|---|---|---|---|---|---|
| | 736,Window | 4 | 5+ | 8 | $ 1,000 per opening | Second floor has newer vinyl windows. Schedule replacement of main floor windows sills should be corrected at the same time |  | |
| | 729,Flooring | 4 | 1-5 | 6 | $3-6 sq.ft | Corridor flooring should be replaced, especially at stairs to prevent tripping. And surfaces in general upgraded |  |  |
| | 728, Code Issue: | | | 1 | $85,000 | One non-rated, non-enclosed stair from the second floor: offices, dormitory and meeting room. |  |  |
| | Loose insulation | 5 | 0 | 8 | | Should close up gaps in insulation; replace with new would be best. |  | |

## Structural

| | equipment | condition | Est remaining Service life | priority | cost | remarks &recommendations | | |
|---|---|---|---|---|---|---|---|---|

Structural Description: The original, 1912 vintage building is two stories, plus a full basement. The main floor is a two-lane apparatus bay for emergency vehicles, with overhead doors at the north end of the building. The upper floor includes crew living quarters, an assembly room, and office spaces. The basement is accessed by a stairway at the south end of the building and is comprised of one large function/assembly room. The building has a flat roof. The roof and the upper floor framing are similar, consisting of timber decking supported by structural steel beams. The steel beams are spaced at 10 feet on centers, spanning the 27' clear width of the original building.

The apparatus bay floor is comprised of a 7" thick cast-in-place concrete slab, supported on structural steel framing. This floor framing, including the two lines of interior columns that support this floor, are visible in the basement assembly room. A thorough structural analysis should be made of the slab and structure as it appears to be designed with no safety factor.

The exterior walls of the 1912 building are 12" thick, load-bearing brick masonry. This facility has a one-story addition on the east side of the original building, consisting of a one-lane apparatus bay. The date of construction for this addition is unknown, but is estimated to be circa 1970. The addition has a flat roof, approximately coincident in elevation with the second floor of the original building. The addition has no basement, and the apparatus bay has a grade-supported concrete floor slab. The roof structure of this addition is largely concealed from view by foil-faced batt insulation, but the primary roof framing is comprised of transverse (i.e., east-west spanning) structural steel beams. The roof beams of the addition bear on the east wall of the original building and on the east exterior wall of the addition. The east wall of the addition retains an exterior grade elevation that is 4 to 5 feet higher than the interior apparatus bay floor. The exterior walls of the addition are of concrete masonry construction, with an exterior brick veneer.

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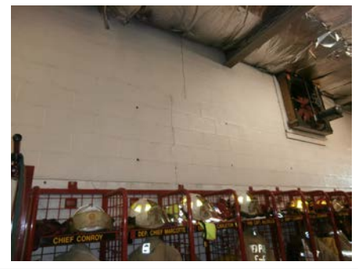
|---|---|---|---|---|---|---|---|
| 596,Foundation | | | | | Horizontal crack in concrete foundation, long side wall, near man door. Foundation not designed to retain earth. CMU above foundation restrained by the building corner, but foundation below has rotated inward to cause the crack. |  |  |
| Slab on Grade | | | | | Building addition has a grade supported slab (no basement) in this apparatus bay - used for ladder truck. | | |
| 210,Bearing Wall | | | | | 8" CMU bearing wall - can't determine if this wall is reinforced. Vertical crack midway down the CMU wall, due to lack of control joints in this long side wall. | |  |

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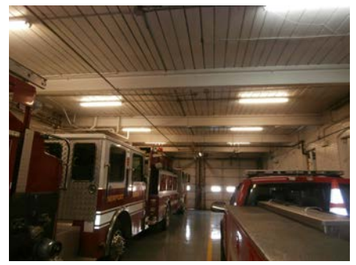
|---|---|---|---|---|---|---|---|---|
| | 208,Seismic Vulnerability | | | | | Unreinforced masonry building predates seismic design standards. Inherent vulnerability due to seismic forces due to apparatus bay doors at one end. | |  |
| | 207,Bearing Wall | | | | | Bearing walls of original building 12" thick multi-wythe brick masonry, unreinforced. | | |
| | 206,Load Condition | | | | | Further review of slab and framing is recommended. Framing appears undersized for the vehicular loads of the apparatus bay and the floor was probably designed to support lighter equipment. | | |
| | 205,Floor Framing | | | | | Main Floor (Apparatus Bay), original building: 7" cast in place concrete slab on structural steel framing, supported by steel pipe columns. 3 bays in transverse direction (two interior lines of columns) typical bay is approx. 8'-8"' x 10'-4". Steel beams are typically 10" deep in both directions. Numerous misaligned bolt holes in the framing connections (beam-to beam and beam-to-column) – many connections were welded as a result, and in two cases, additional columns were added to compensate for poor connection fit up. |  |   |

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|---|---|---|---|---|---|---|---|---|

## Mechanical

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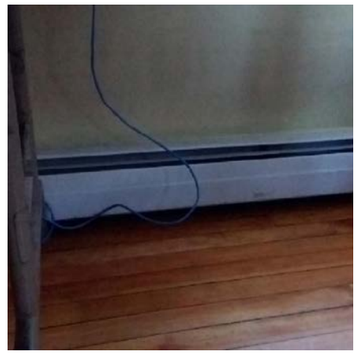
|---|---|---|---|---|---|---|---|
| 53,Bathroom w/shower, urinal, toilet and lavatory | 3 Fully operational, 25-50% life expectancy used, periodic problems | 10 Years | 10 | $1,000 per fixture | Fixtures are not water conserving type, |  |  |
| 48,Hot Water Fin Tube Radiation | 3 Fully operational, 25-50% life expectancy used, periodic problems | 10 Years | 10 | $150 per foot | Fintube is controlled by wall-mounted thermostats. Typical throughout second level. |  | |

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|---|---|---|---|---|---|---|---|---|
| | 40,Water Entrance | 2 | 15 | 1 | $800 | Three-quarter inch copper water entrance with remote meter read.<br><br>There is also an unmetered two inch water entrance piped to the apparatus bay to fill fire apparatus.<br><br>Maintained by water dept. |  | |
| | 38,Sewer Ejector pump | 2<br>Fully operational, 0-25% life expectancy used, no issues, no concerns | 15 Years | 10 | | Floor mounted sewage pump for lower-level kitchen is pumped to town sewer.<br><br>Exposed waste and vent piping in lower level is PVC. |  |  |
| | 36, 389,000 BTU Oil Fired Boiler<br><br>Model: Kingsley SC-08 | 3<br>Fully operational, 25-50% life expectancy used, periodic problems | 10 Years | 10 | $7,500 | Produces steam to heating terminals and domestic hot water throughout building.<br><br>Domestic hot water is circulated by 2 - TACO circulator pumps.<br><br>Boiler is atmospherically vented two adjacent chimneys.<br><br>Recommend continue annual cleaning. |  |  |

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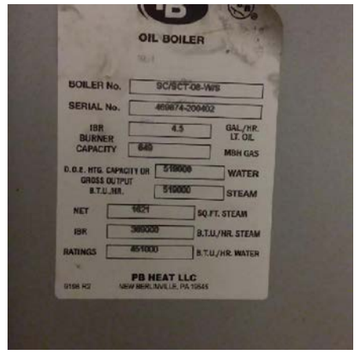
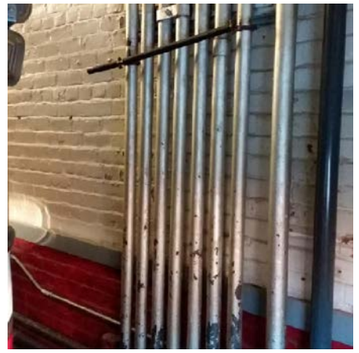
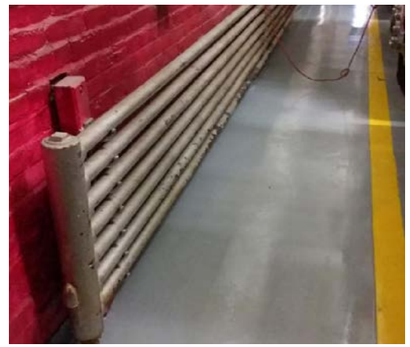
| | | | | | | |  | |
| | 44, Exposed Steam Pipe Radiation | | | | | Recommend protection from scalding pipes. |  |  |
| | 43,Sidewall Prop Fan | 3<br>Fully operational, 25-50% life expectancy used, periodic problems | 10 Years | 10 | $3,500 | Exhausts the smaller bay.<br><br>Fan is a source of heat loss during the colder Months. |  |  |

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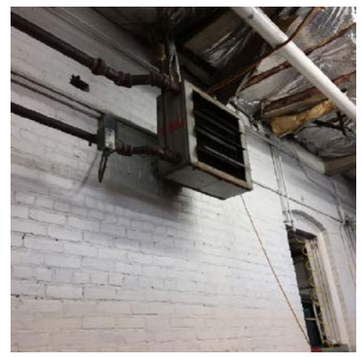
|---|---|---|---|---|---|---|---|---|
| | 41, Steam Unit Heater UH-1 | 3 Fully operational, 25-50% life expectancy used, periodic problems | 5 to 10 Years | 6 | $5,000 | Ceiling hung fan powered. |  |  |
| | 42,Steam Unit Heater UH-2 | 3 Fully operational, 25-50% life expectancy used, periodic problems | 5 to 10 Years | 6 | $5,000 | Ceiling hung fan powered. |  | |

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|---|---|---|---|---|---|---|---|---|

## Electrical

| Equipment | Condition | Est. Remaining Service Life | Priority | Cost Estimate | Remarks & Recommendations | | |
|---|---|---|---|---|---|---|---|
| 593,Ceiling mounted smoke detector | 1<br>Fully operational, new, recently replaced | 20 Years | 10 | $250 | Detectors in the sleeping and common areas are hard wired to fire alarm cabinet on first level.<br><br>Fire alarm cabinet dispatches to the police station which is the Central Dispatch Center. | | |
| 37, 200 – AMP 240 volt surface mount panelboard | 2<br>Fully operational, 0-25% life expectancy used, no issues, no concerns | 15 Years | 10 | $3000 | This panel is fed from a 200 - AMP breaker from the MDP panel located in town office building. |  | |
| 58,Fire Alarm Game Well Pullstation<br><br>Box 911 | 2<br>Fully operational, 0-25% life expectancy used, no issues, no concerns | 15 Years | 10 | $10,000 | |  | |

| | equipment | condition | Est remaining Service life | priority | cost | remarks &recommendations | | |
|---|---|---|---|---|---|---|---|---|
| | 54, Fire Alarm Cabinet | 1<br>Fully operational, new, recently replaced | 20 Years | 10 | $5000 | |  | |
| | 47,Electrical Panelboard | 3<br>Fully operational, 25-50% life expectancy used, periodic problems | 10 Years | 10 | $600 | Surface mount panelboard fed from 50 - AMP breaker in main panelboard. |  | |

## Site

Pavement at the fire station is in fair condition. Overly pavement is breaking up in some areas as seen in the photo, but no significant cracking indicative of pavement failure was observed.

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|---|---|---|---|---|---|---|---|
| Pavement | 5 | 2 | 3 | PT $2.80 sq.ft 3870 sq.ft. **$10,836** Cracks **$500** | Cracks should be cleaned and filled and a new overlay installed. |  | |