

TOWN OF SHREWSBURY
FACILITIES CONDITION ASSESSMENT OF
TOWN BUILDINGS

FINAL REPORT

June 01, 2016

**Shrewsbury
Senior Center**

G | R | L | A

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Executive Summary

Gorman Richardson Lewis Architects and our consultants were retained by the Town of Shrewsbury to provide a comprehensive study of 10 Town-owned buildings with the goal to provide key information for each building outlining the condition of:

- Site and Landscape Elements
- Architectural Elements / Building Envelope Elements
- Structural Components
- Mechanical, Plumbing, Electrical and Fire Protection Systems / HAZMAT

This Final Report includes summaries of each building for the disciplines noted above, prioritization of the recommended repairs or replacement of any element or system and estimated costs for each on a 1-year, 3-year and 10-year basis to assist the town in its planning for capital improvements.

The architectural/ engineering team consists of:

- Waterman Associates – Site / Landscape
- Gorman Richardson Lewis Architects – Architecture and Building Envelope
- Structures North – Structural (as applicable)
- Weston and Sampson - Mechanical, Plumbing, Electrical and Fire Protection Systems / HAZMAT

The town-owned buildings addressed in the Report include:

	Building	Location	Size	Year	Additions	Renovations
1	Shrewsbury High School	64 Holden Street	296,000 sf	2002		
2	Oak Middle School	45 Oak Street	182,101 sf	1957	1981	2004
3	Floral Street Elem. School	57 Floral Street	94,000 sf	1997		
4	Spring Street Elem. School	123 Spring Street	37,200 sf	1967	1995 & 2000: 6 Modular Class Rooms	
5	Calvin Coolidge Elem. School	1 Florence Street	48,600 sf	1927	1940, 1969, & 1995: 4 Modular Class Rooms	1985

6	Walter J. Paton School	58 Grafton Street	39,103 sf	1950	2000: 3 Modular Class Rooms	
7	Shrewsbury Town Hall	100 Maple Avenue	36,319 sf	1966	1997	
8	Shrewsbury Senior Center	98 Maple Avenue	11,400 sf	2000		
9	Shrewsbury Fire Headquarters	11 Church Road	16,304 sf	2007		
10	Shrewsbury Police Station	106 Maple Avenue	17,485 sf	1971	1996	1996

Condition Assessment Matrix / Methodology

The objective of the Condition Assessment Matrix included in each section of the Report, is to provide a detailed summary of each condition/ deficiency observed regarding the aforementioned disciplines for each building, a level of priority as to when the condition should be addressed, a time-range relating to the remaining service life of the item, a commentary describing action (if any) to be taken, an approximate quantity and an estimate of cost to implement the recommended action:

- **Issue #:** Each observed condition is assigned an issue number relating to the floor level where it is located (*eg: 1F-17 = First Floor – Item 17*)
- **Discipline:** one of the 6 primary areas of concentration:
 - Architecture (Arch)
 - Building Envelope (Envelope)
 - Site/ Civil
 - Structural
 - Mechanical-Electrical-Plumbing-Fire Protection (MEP/FP)
 - Hazardous Materials (HazMat)
- **Location:** Specific room or area where the item is located in the building floor plan
- **System:** one of the 12 categories describing the type of building component being addressed (wall, ceiling, flooring, etc.)
- **Description:** detailed description of each observation
- **Photo #:** address of photo pertaining to the specific issue (as applicable)
- **PlanGrid Report #:** number of the PlanGrid Report included on the flashdrive at the back of the binder, typically containing a photo of the item

- **Priority:** Low/ Medium/ High: a level of priority for addressing each condition
- **Service Life:** anticipated remaining service life of the component observed
- **Commentary:** Recommended action to be taken (if any)
- **Quantity:** quantity of the component/ system to be addressed and acted upon (*eg: 7,500 sf, 1 LS (Lump Sum), etc.*), used as a basis for the cost estimate
- **Cost Estimate:** estimate of anticipated construction cost to implement the recommended action within the timeframe relating to the level of priority and service life (including Contractors' General Conditions, fees, etc. and escalation factors relative to 2016 dollars).

GRLA and our consultants want to thank Bob Cox and the Town of Shrewsbury for the opportunity to work with you on this Facilities Condition Assessment. After having reviewed the information and findings herein, please contact us with any questions or follow-up information required.

Sincerely,

GORMAN RICHARDSON LEWIS ARCHITECTS, INC.



Scott Richardson, AIA, LEED AP

Principal

1. Building Summary / Narratives

a. Waterman Design Associates

i. Site & Landscape

b. Gorman Richardson Lewis Architects (GRLA)

i. Architecture - Interior

ii. Building Envelope

c. Weston & Sampson

i. MEP/FP/Hazmat

2. Cost Matrices Summary

a. Waterman Design Associates

i. Site & Landscape

b. Gorman Richardson Lewis Architects (GRLA)

i. Architecture - Interior

ii. Building Envelope

c. Weston & Sampson

i. MEP/FP/Hazmat

Appendix A: Floor Plans

Appendix B: Plan Grid Reference

Overview:

In this section of the Facilities Condition Assessment Report, Waterman Design Associates presents a summary of observations regarding the condition of Senior Center site, including commentary and recommendations for action to be taken. The observations are organized according to the following “categories” in order to address the various components comprising the existing condition of the Senior Center site:

1. General Site Conditions
2. Vehicular Entrances and Circulation
3. Parking Location, Arrangement, and Quantity
4. Pedestrian Circulation
5. Pedestrian Accessibility and MAAB Compliance
6. Courtyards and Other Exterior Congregation Areas
7. Site Lighting For Building, Vehicular and Pedestrian Areas
8. Site Furnishings
9. Site Vegetation

General Site Conditions:

1. Observations:

- i. The Senior Center is located on Maple Avenue and shares a site with the Shrewsbury Town Hall and the Shrewsbury Police Station. The site is adjacent to undeveloped woodland to the north and west and single-family neighborhoods to the south and east. The residential properties are all buffered by undeveloped woodlands. The portion of the site populated by the existing building is relatively flat, not showing any perceivable topographic relief. The site contains the Municipal buildings, along with the associated vehicular and pedestrian circulation systems.

Vehicular Entrances and Circulation:

B.

1. Observations:

- i. There are two main vehicular access routes along Maple Ave. The Police Station's access and egress drive is shared by both the Town Hall and the Senior Center. Vehicles approaching the Senior Center may enter from the southernmost access drive. The drive passes directly in front of the main entrance to the building, and continues into a parking area to the west of the existing building.

2. Commentary:

- i. The simple circulation route does not create any foreseeable traffic conflicts.
- ii. The pavement condition of the vehicular entrances and interior circulation system ranges from good to fair throughout the site.

3. Recommendation:

- i. Implement a program of replacing damaged or worn pavement throughout the site.



SSC E1

Parking Location, Arrangement, and Quantity:

C.

1. Observations:

- i. Existing parking for staff and visitors is located on the west side of the building. There is also a lot to the southwest of the Senior Center that is also shared with the Town Hall. There exists approximately 15 striped spaces in the western lot, 30 shared spaces, and 5 accessible parking spaces.

2. Commentary:

- i. The accessible parking spaces in the parking area north of the drop off drive do not appear to comply with current MAAB standards (see “Pedestrian Accessibility and MAAB Compliance” for further detail).
- ii. The pavement condition of the parking areas mirrors that of the vehicular entrances, ranging from good to fair throughout the site, with little evidence of recent repairs.

3. Recommendations:

- i. Implement a program to bring accessible parking spaces throughout the site into compliance with current MAAB standards.
- ii. Implement a program of replacing damaged or worn pavement throughout the site.



SSC E2

Pedestrian Circulation:

D.

1. Observations:

- i. A paved bituminous sidewalk runs along the entirety of the frontage of the property along Maple Ave. This sidewalk directly connects to an internal bituminous sidewalk on the northernmost access drive. This walk, however, ends before arriving at the Senior Center, forcing pedestrians to walk within vehicular travel lanes. There is a Portland cement concrete walkway running along the entire west and south sides of the building.



SSC E3

2. Commentary:

- i. The condition of the pavement on the site ranges from good to fair throughout.
- ii. There are no crosswalks both within the site, and leading to the site, that would indicate where pedestrians are to safely cross vehicular travel lanes.

3. Recommendation:

- i. Implement a program of replacing damaged or worn pavement throughout the site.
- ii. Implement a program to review accessible pedestrian routes throughout the site for compliance with current MAAB standards.



SSC E4

Pedestrian Accessibility and MAAB Compliance:

E.

1. Observations:

- i. A total of four (4) accessible parking spaces were identified within the property, directly adjacent to the main building entrance.

2. Commentary:

- i. The existing parking spaces, signage, access aisle appear to be in compliance, however there is no van accessible parking space.
- ii. Four (4) accessible spaces, access aisles and an accessible route immediately in front of the main entrance of the building appear to comply with current MAAB standards.
- iii. The accessible route to the building is not easily discernible for pedestrians

3. Recommendation:

- i. Implement a program to bring accessible parking spaces throughout the site into compliance with current MAAB standards.



SSC E5

Courtyards and Other Exterior Congregation Areas:

F.



SSC E6

1. Observations:

- i. There exists one (1) brick paved courtyard with patio furniture adjacent to the south east corner of the building. To the north of the building exist several game courts, and small garden area.

2. Commentary:

- i. The brick pavement surfacing and game court surfacing are in good condition.

3. Recommendation:

- i. Maintain condition of the courtyard and game court areas.



SSC E7

Site Lighting for Building, Vehicular and Pedestrian Areas:

G.

1. Observations:

- i. Exterior wall-mounted or overhead-mounted lighting exists at most entrance doors to the building. The parking areas are predominantly illuminated by pole mounted LED light fixtures.

2. Commentary:

- i. Exterior lighting appears to sufficiently illuminate the site and building entrances to meet minimum safety requirements.

3. Recommendations:

- i. Implement a program of continued maintenance for the site lighting.

Site Furnishings:

H.

1. Observations:

- i. Few site furnishings exist within the vicinity of the building. There is a wooden building identification sign along the access drive, in close proximity to the building. There is a flagpole located in a lawn area adjacent to the main building entrance.

2. Commentary:

- i. The sign appears to be in good condition, but is not visible from Maple Ave.



SSC E8

- ii. The flagpole does not appear to be in compliance with current MAAB standards.

3. Recommendations:

- i. Develop a signage identity program for the campus to increase visibility from Maple Street.
- ii. Construct an MAAB compliant accessible route to the flagpole.

Site Vegetation:

I.

1. Observations:

- i. There exists very little vegetation throughout the site. Several shrubs adorn the main entrance at the front of the building, the building identification sign, and the courtyard. The majority of the mature vegetation exists around the perimeter of the site, buffering the Senior Center from Maple Avenue, and surrounding residential properties.

2. Commentary:

- i. The condition of the site vegetation ranges from good (deciduous and evergreen trees) to fair (shrub plantings).

3. Recommendations:

- i. Implement a maintenance program for plant materials that includes regular trimming, watering, and soil testing.

Facilities Condition Assessment

Building Summary

Shrewsbury Senior Center

Address: 100 Maple Ave., Shrewsbury, MA 01545
 Constructed: 1999
 Additions:
 Renovations:
 2015 Assessed Value: \$1,267,092
 (Building Only)

Building Characteristics

Gross Floor Area:
 First Floor: 11,400 gsf
 Total Building Area: 11,400 gsf

780 CMR Mass. Building Code:

Use Group Classification: B (Business); A-3 (Meeting Hall)
 Construction Type: V-B (To be verified)

Building Envelope: (see Building Envelope Section for more detailed information)

Exterior Wall Assembly: Veneer with stud back up wall (structural steel system)
 Windows: Aluminum Insulating (operable);
 Roofing: Sloped Asphalt Shingle / Black Flat Membrane

HVAC: (see MEP/FP Section for more detailed information)
 Heating Fuel: Natural gas

Fire Protection: 100% automatic sprinkler system (assume NFPA 13)



Architecture - Interior

Overview:

In this section of the Facilities Condition Assessment Report, GRLA presents a summary of observations regarding the condition of the interior architecture of the Shrewsbury Senior Center, including commentary and recommendations for action to be taken. The observations are organized according to the following “categories” in order to address the various components, systems and issues comprising the existing condition of the Senior Center Interior:

1. Walls
2. Ceilings
3. Flooring
4. Doors
5. Windows/ Glazing
6. Casework/ Furnishings
7. Equipment
8. Mechanical Fixtures
9. Electrical/ Lighting Fixtures
10. Plumbing Fixtures
11. Code Issues
12. General

The Shrewsbury Senior Center contains one level (First Floor). Various program areas (meeting halls, conference rooms, restrooms, and mechanical spaces) are located throughout the space organized in a linear and perpendicular fashion. The main entrance on the south side and the side entrance on the west side provides accessible access to the main lobby from the parking lots/drop-off area. Additional entrances from the east and north are provided, but are noted in the assessment matrix to be deficient in their accessibility compliance.

Built in 1999, Shrewsbury Senior Center has been in service for 16 years and is reasonably well maintained. Most areas of the interior portion of the building are in good condition with a few areas and building categories having visible signs of wear and tear as noted in the assessment matrix. Due to the public nature of the building’s program, most visible wear is applicable to normal use, with stained ceiling tiles being one of the few exceptions. In general, the interior of the building is functioning as intended with reasonable deterioration of finishes appropriate with this type of public use.

It is understood that the building permit for Shrewsbury Senior Center was issued after February 28, 1997 (*effective date of 780 CMR 6th Edition*), and therefore, the building design and construction reflect the requirements of the State Building Code 780 CMR 6th Edition. Nonetheless, only a few deficiencies regarding the requirements of the current Massachusetts Architectural Access Board code (521 CMR) were observed and noted in the “ADA Issues” category of this assessment report. Although allowed at the time the building was permitted and constructed, they are included in the assessment report for information purposes and may require corrective action triggered by future renovation projects or if deemed by the Authority Having Jurisdiction (typically the building official or fire department official) to pose a hazard to occupants or the public. In addition, any deficiencies regarding handicap accessibility and conformance with the Americans with Disabilities Act (ADA) may require immediate action.

The issues addressed in each Narrative category below are further itemized in the attached Condition Assessment Matrix with priority level, remaining service life (1 year/ 5 years/ 10 years) and associated costs for repair or replacement included for each issue. At the bottom of each matrix is a summary of the costs-- by building-- for each of the service life time periods, providing a summary of anticipated costs—by building—for capital planning purposes for the next 10 fiscal years: 2017 through 2026.

Methodology:

During the summer and fall of 2015, GRLA visited the Shrewsbury Senior Center on multiple occasions and made visual observations of the condition of the interior architecture of the building, including walls, ceilings, flooring, doors, windows/glazing, casework/furnishings, miscellaneous equipment, mechanical-electrical-plumbing finish components and fixtures, as well as code issues regarding building code and accessibility code. Being among the newer town-owned buildings, a full structural assessment of the Shrewsbury Senior Center was not required and only commented if any significant structural issues or deficiencies were noted during the observation effort.

PlanGrid:

Information gathering, field notes and photography for this section of the Conditions Assessment Report were accomplished using PlanGrid, a web-based “punch-list” tool utilizing an iPad. Floor plans (pdf format) of each level were uploaded to the PlanGrid program. Symbols representing observations of existing conditions by each of the twelve categories noted above were located on each floor plan. A “pop-up” page associated with each symbol provided a means to describe each observation, identify its location within the floor plan and include multiple photos. The “pop-up” pages could then be retrieved and sorted by category into individual PlanGrid Reports, providing detailed information for each observation. The PlanGrid Reports for each building, by category, are included on the flash drive included in the back of the Report binder. In addition, the number of the PlanGrid Report associated with each observation is noted in the “PlanGrid” column of the Conditions Assessment Matrix.

This section addressing the condition of the Architecture Interior is followed by sections addressing:

- Building Envelope
- Site/ Civil
- Mechanical, Electrical, Plumbing and Fire Protection (MEP/FP)
- Hazardous Materials

Conclusion

The **Architecture-Interior** of the Senior Center building is primarily functioning as intended. Specific deficiencies and end-of-service-life issues are addressed in detail within the Condition Assessment Matrix.

Among the more notable issues of concern are included:

- Deficiencies regarding conformance to requirements for handicap accessibility
- Deficiencies regarding carpet and wall staining and wear

Building Enclosure

Overview:

In this section of the Facilities Condition Assessment Report, GRLA Building Envelope Sciences presents a summary of observations regarding the condition of the building envelope systems at the Shrewsbury Senior Center, including commentary and recommendations for action to be taken. The observations are organized according to the following “categories” in order to address the various components, systems and issues comprising the existing condition of the structure:

1. Roofs
2. Exterior Walls
3. Windows
4. Grounds

Methodology:

GRLA visited the Shrewsbury Senior Center on September 8 and September 10, 2015, and made visual observations of the condition of the building envelope systems. GRLA made observations from the ground using binoculars and from accessible roof areas. GRLA also made observations of representative interior areas.

ROOFS

1. Observations:

- i. The Shrewsbury Senior Center has low slope roofs with adhered EPDM membrane over mechanically attached insulation, as well as a steep slope asphalt shingle mansard roof around the perimeter of the building.
- ii. There are several areas with broken asphalt shingles, exposed nails, and face nailed shingles.
- iii. Shingles have map cracking, granule loss, and blisters.
- iv. There are isolated areas of open seams in the EPDM roof membrane.
- v. There are several areas where the EPDM roof membrane has become detached, and insulation flexes when walked on.
- vi. EPDM membrane extends too far into drain bowl.
- vii. There is a section of damaged metal gutter.

2. Commentary:

- i. The shingles are weathered and showing signs of aging, but typically appear functional.
- ii. Isolated damage (e.g. broken shingles, gaps in roofing materials) may present a leakage risk in the short term.

3. Recommendations:

- i. Repair isolated damage as soon as possible. Implement a program of annual inspections.
- ii. Cut back EPDM such that it extends only slightly into drain bowl
- iii. Plan to replace 100% of roofing (EPDM and asphalt shingles) between 2022 and 2026.

EXTERIOR WALLS

1. Observations:

- i. The exterior walls are brick veneer with painted wood trim.
- ii. Sealants at wall transitions, penetrations, and expansion joints are failed in isolated locations.
- iii. Isolated mortar joints are deteriorated.
- iv. Masonry is stained and mortar is deteriorated at a soffit-to-wall transition, under a gutter.
- v. Isolated areas of peeling paint and open wood trim joints.

2. Commentary:

- i. Sealants require frequent replacement and should be considered an ongoing maintenance item.

3. Recommendations:

Facilities Condition Assessment Narrative

- i. Replace failed sealants; plan ongoing replacement approximately every 5-10 years.
- ii. Reslope and reseal gutter to limit overflow onto wall.
- iii. Repair and repaint areas of peeling paint to prevent further deterioration.
- iv. Repaint deteriorated trim in 2017; plan to repaint 100% of trim in 2022-2026.

WINDOWS

- 1. **Observations:**
 - i. Windows are predominantly double hung aluminum-clad wood windows.
 - ii. Sealant at window perimeters is typically failed.
- 2. **Commentary:**
 - i. Sealants require frequent replacement and should be considered an ongoing maintenance item.
- 3. **Recommendations:**
 - i. Replace failed sealants; plan ongoing replacement approximately every 5-10 years.

GROUNDS

- 1. **Observations:**
 - i. Mulch blocks brick weeps and covers bottom of wood trim.
 - ii. Fence is falling down.
- 2. **Commentary:**
 - i. Blocked weeps inhibit the wall assembly’s ability to drain and traps moisture against the wood trim.
- 3. **Recommendation:**
 - i. Rake mulch away from base of wall.
 - ii. Repair fence.

Refer to the GRLA Building Enclosure Conditions Assessment Matrix for additional detail regarding observations and recommended repairs.

Shrewsbury Senior Center
Representative Existing Conditions Photographs



South Elevation, overall view



South Elevation at Southwest Corner, brick cavity wall weeps blocked by mulch



North Elevation, partial view



North Elevation, soffit vents

Shrewsbury Senior Center
Representative Existing Conditions Photographs



South Elevation, damaged gutter



South Elevation, peeling paint and open joints at wood trim



South Elevation, window jamb sealant deteriorated and failing



South Elevation, missing sill sealant

Shrewsbury Senior Center
Representative Existing Conditions Photographs



South Elevation, stained masonry and deteriorated mortar; trim paint is deteriorated



East Elevation, stained masonry and deteriorated mortar; deteriorated sealant at soffit-to-wall joint



Southeast Corner, spalled concrete at foundation



East Elevation, crack at concrete foundation wall

Shrewsbury Senior Center
Representative Existing Conditions Photographs



North Elevation at Northeast Corner, deteriorated mortar at base of brick



North Elevation at Northeast Corner, deteriorated and failing door perimeter sealant



East Elevation, broken receptacle cover



North Elevation at Northeast Corner, failed perimeter sealant at sidelight

Shrewsbury Senior Center
Representative Existing Conditions Photographs



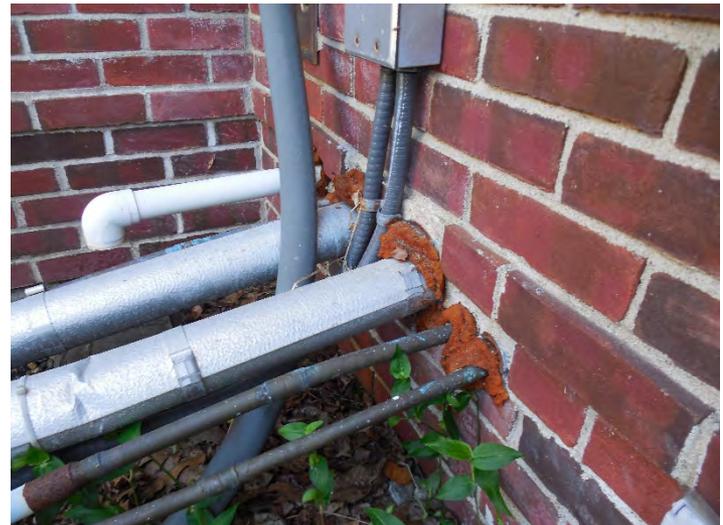
North Elevation, failing sealant at a control joint



North Elevation, open joint at windowsill; crack in mortar joint



West Elevation, open pipe penetrations



North Elevation, exposed insulation at pipe penetrations and conduit

Shrewsbury Senior Center
Representative Existing Conditions Photographs



North Elevation, rust at door and frame



North Elevation, failed sealant at louver perimeter



North Elevation, failed sealant at door perimeter



West Elevation, cracked mortar at a windowsill

Shrewsbury Senior Center
Representative Existing Conditions Photographs



North Elevation, leaning fence



West Elevation, mulch covering portions of wood trim and weeps in brick



Low-slope roof, partial view of ponding water



Low-slope roof, partial view of ponding water

Shrewsbury Senior Center
Representative Existing Conditions Photographs



Low-slope roof, partial view of ponding water



Low-slope roof, partial view of ponding water



Shingled roof at West entrance, partial view



Shingled roof, blistered shingles and granule loss

Shrewsbury Senior Center
Representative Existing Conditions Photographs



Shingle-to-EPDM transition, open EPDM seam



Shingled roof, exposed fasteners



Low-slope roof drain, EPDM extends too far into the drain bowl



Shingled roof, granule loss at shingle edges

Shrewsbury Senior Center
Representative Existing Conditions Photographs



Shingled roof at entryway, broken shingle



Shingled roof, granule loss and crack in shingle



Main low-slope roof, walk pad is peeling up, and EPDM under is not adhered



Main low-slope roof, open seam. There is also flex in the insulation for approx. 5 sf around this area

Overview:

In this section of the Facilities Condition Assessment Report, Weston & Sampson presents a summary of observations regarding the condition of Senior Center site, including commentary and recommendations for action to be taken. The observations are organized according to the following “categories” in order to address the various components comprising the existing condition of the Senior Center site:

1. Electrical
2. HVAC
3. Plumbing
4. Fire Protection
5. Hazardous Materials

Electrical

1. Observations:

- i. Main service is 600A at 120/208V, 3-phase, 4-wire

- ii. Lighting is predominantly fluorescent throughout the building

- iii. Lighting controls is via wall mounted switches.



- iv. Emergency lighting is wall mounted battery units



Emergency Lighting Battery Unit

- v. Fire alarm is a Simplex addressable system



Main Fire Alarm Control Panel

- vi. Site lighting is predominantly LED pole mounted fixtures with some building mounted wall packs.

2. Commentary:

i. Main Electrical Service

The building is served by a single electrical service rated 600 amperes, 120/208volts, 3-phase, 4-wire and is located in the main electrical room. The service equipment consists of utility company pad mounted transformer and an underground feed to utility meter and a 600amp main circuit breaker within the main distribution panel. The main distribution panel is a Siemens S4 style panel and feeds other panels. All of these are located within the existing main electrical room. The electrical equipment is in good condition.

ii. Lighting

The lighting throughout the facility consists of recessed compact fluorescent and recessed 2' x 4' 3-lamp T8 and biax lamps. All lighting throughout the facility is controlled with manual wall switches. The lighting throughout the facility appears to be in good condition. The light levels appear to be within recommended levels.

Site lighting is accomplished via building mounted metal halide wall packs and a number of pole mounted LED flood lights. The LED pole mounted lights appear to be in good condition while the wall mounted lighting appears to be in fair condition.

Life safety emergency lighting is provided via wall mounted battery units and remote emergency heads. The emergency light fixtures appear to be in good condition.

Battery powered exit lighting is installed throughout the facility, and is in good condition.

iii. Fire Alarm

The fire alarm system is a Simplex addressable system. There are manual fire alarm pull stations and horn/strobes located throughout the building. Heat and smoke detectors are present throughout the facility. The fire alarm system appears to be in good condition.

3. Recommendations:

- i. Replace all existing lighting with new LED fixtures.
- ii. Replace lighting controls with Automatic Lighting controls throughout the facility via a lighting control panel and local motion sensors with manual wall mounted override switches.
- iii. Replace broken weatherproof receptacle cover located on the exterior wall near the side patio area.

HVAC

1. Observations:

- i. The Senior Center's heating and cooling systems consist of a single gas fired hot water boiler and two split system air handling units (AHU-1 & AHU-2). Both AHU's have a dedicated return fan.
- i. Heating hot water is circulated by two (2) constant volume inline pumps (P-1 & P-2) to VAV reheat coils, cabinet unit heaters and unit heaters. The AHU's and VAV heating coils have 3-way control valves.
- ii. Exhaust for the toilet rooms is provided by roof mounted constant volume exhaust fans.
- iii. Supply air is distributed to the building by VAV boxes with hot water reheat coils for AHU-1 only. AHU-2 is a constant volume unit.
- iv. The air cooled condensing units (ACCU-1 & ACCU-2) for the air handling units are located outside on grade.

2. Commentary:

- i. All the existing HVAC equipment is original to the 1998 construction.
- ii. Heating Equipment
 - Boilers: The existing gas fired boiler is a Raypack model W3-0824 with an output of 676 MBH. It is a natural draft boiler. Visual inspection revealed an unusual ash around the base of the boiler on all sides. Other than the ash, the burners appear to be fair condition.
 - Hot water Pumps: The existing inline constant volume hot water pumps are manufactured by TACO. Upon visual inspection of the pumps they appear to be good condition.



Facilities Condition Assessment

- AHU's (AHU-1 & AHU-2): The existing AHU's are manufactured by York. The units consist of filter mixing section, hot water preheat coil, DX cooling coil and a supply fan. Upon visual inspection of the interior of the units it appears they are in good condition but both of the condensate drain pans are rusting. Both units have dedicated freeze protection pumps, the pump serving AHU-1 is leaking water. AHU-1 serves the majority of the building and is a VAV style unit. AHU-2 is a constant volume unit and is dedicated to the Main Hall and kitchen areas.
- iii. Cooling Equipment
- ACCU's: (**SSC M3**) The matching air cooled condensing units for AHU-1 and AHU-2 are both manufactured by York. ACCU-1 is a model H3CE240. It is a nominal 20 Ton unit and has R-22 as its refrigerant. ACCU-2 is a model H3CE180. It is a nominal 15 Ton unit and also has R-22 as its refrigerant. They both appear to be in fair condition but is showing signs of rust on both the casing and condenser fan guards.
- iv. Building Management System
- The existing control system is a Johnson Metasys system (DX9100). Due to the age of the BMS it is problematic and expensive to get new parts as components start to fail.



SSC M3 – Air Cooled Condensing Units



SSC M4 – BMS

3. Recommendations:

- i. Check boiler for proper combustion as soon as possible.
- ii. Replace existing boiler with high efficiency condensing boiler.
- iii. Repair leaking at freeze protection pump serving AHU-1.
- iv. Replace ACCU-1 and ACCU-2.
- v. Replace existing BMS system.

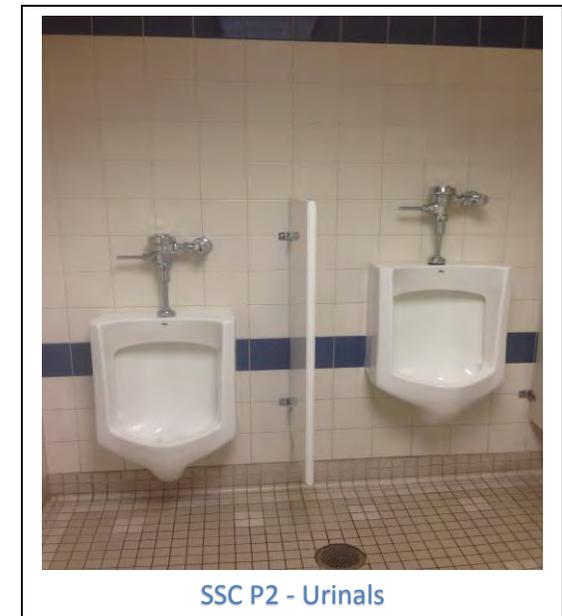
Plumbing

1. Observations:

- i. Domestic Water Service: The building is served by a 2" domestic water service.
- ii. Domestic Hot Water Service: The building's domestic hot water service is generated by (1) one 70 gallon gas fired hot water heater
- iii. Natural Gas: The building is served by a 2-1/2" natural gas line.
- iv. Sanitary: the building is served with a 4" sanitary water line with a grease interceptor. There is also a special waste line and 6" rain water line
- v. Fixtures:
 - Water closets are wall mounted; manual flush valve, vitreous china.
 - Urinals are wall mounted vitreous china with manual valves.
 - Lavatories are wall hung vitreous china, single push style faucets.
 - Drinking fountains are 2 tiered surface mounted stainless steel units. Most appear to be ADA compliant, and are in good condition.



SSC P1 – Water Closet



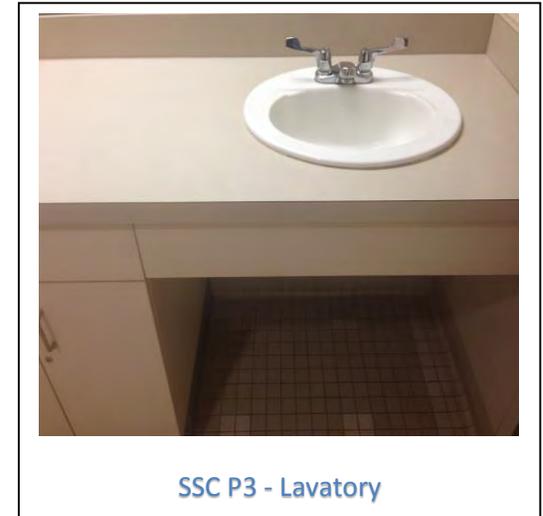
SSC P2 - Urinals

2. Commentary:

- i. All the plumbing fixtures are original to the 1999 construction and are in good condition.
- ii. The existing domestic Hot water heater is an AO Smith model FCG 75 300. It was installed in 2014 and is in good condition.

3. Recommendations:

- i. Replace existing water closets flush valves with automatic flush valves.
- ii. Replace existing urinals flush valves with automatic flush valves.
- iii. Replace existing lavatories faucets with automatic faucets



Fire Protection

- 1. Observations:**
 - i. There is full fire protection coverage for the building. The dedicated 6” FP service enters the building in a storage room and includes a double check valve assembly.

- 2. Commentary:**
 - i. The fire Protection system is in good condition.

- 3. Recommendations:**
 - i. None

Hazardous Materials

1. Observations:

i. Asbestos-Containing Materials

Numerous suspect asbestos-containing materials were observed within the building, including but not limited to: carpet mastic, roofing materials, gypsum board, floor tile, resilient flooring, acoustical ceiling tile, molded cove base, duct sealant, caulk, etc. All materials were observed to be in generally good condition.

ii. Other Hazardous Materials

Fluorescent light fixtures are present throughout the building. Other materials present include hydraulic door closers and exit lights. All materials were observed to be in generally good condition.

2. Commentary:

i. Asbestos-Containing Materials

The building was constructed in 2000, well past the date for asbestos-containing materials to typically be utilized during construction.

ii. Other Hazardous Materials

Fluorescent light fixtures contain small amounts of mercury. Fluorescent light ballasts often contain polychlorinated biphenyls (PCBs) or Diethylhexyl Phthalate or Di (2-ethylhexyl) phthalate (DEHP). Hydraulic door closers often contain oils. Exit lights historically contained batteries. None of these materials typically present hazards unless they are damaged.

3. Recommendations:

i. Asbestos-Containing Materials

Despite the age of the building, the Massachusetts Department of Environmental Protection (DEP) revised asbestos regulation, effective June 20, 2014, requires that any Suspect Asbestos-Containing Material be sampled by a Massachusetts Department of Labor Standards (DLS)-certified asbestos inspector prior such materials being impacted by renovation or demolition. Alternatively, materials may be assumed to contain asbestos. We recommend that any suspect asbestos-containing materials expected to be impacted by renovation or demolition be sampled prior to disturbance. The following is a list of potential asbestos-containing materials found at the building.

Material	Location	Approximate Quantity	Condition
Floor tile/carpet and associated mastics	Throughout	13,000 SF	Good
Façade damp-proofing	Exterior	4,600 SF	Good
Door caulk	Exterior	140 LF	Good
Window caulking and glazing	Exterior	550 LF	Good
Roof caulk	Exterior – roof at penetrations/transitions	200 LF	Good
Roofing materials	Exterior – roof	13,000 SF	Good
Gypsum board	Throughout	9,400 SF	Good

ii. Other Hazardous Materials

The fluorescent light fixtures and ballasts, door closers and exit lights may require special handling and disposal should they require removal from the building. The following is a summary of such materials found at the building.

Material	Approximate Quantity
Fluorescent light bulbs	450
Fluorescent light ballasts	225
Hydraulic door closers	30
Exit light batteries	25

Shrewsbury Senior Center - Total Estimated Costs

Consultant	Discipline		Cost Estimate		
			1 yr	5 yr	10 yr
Waterman Design Associates	Site & Landscape			\$202,958	\$336,110
Gorman Richardson Lewis Architects	Architecture		\$32,186	\$174,725	\$226,313
Gorman Richardson Lewis Architects	Building Envelope		\$47,766	\$9,310	\$878,790
Weston & Sampson	MEP/FP/Hazmat		\$45,220	\$148,588	\$433,417
		Totals	\$125,172	\$535,581	\$1,874,630

Condition Assessment Matrix

BUILDING:		SHREWSBURY SENIOR CENTER															
AREA:		Site/Landscape															
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
SL1	Site/Landscape	Varies	Vehicular Entrances and Circulation	The pavement condition of the vehicular entrances and interior circulation system ranges from good to fair throughout the site.			X					X Phased	Implement a program of replacing damaged or worn pavement throughout the site. (assumes 2500 sf for each period)	5,000 S.F.		\$32,585	\$38,570
SL2	Site/Landscape	Varies	Parking Location, Arrangement, and Quantity	The pavement condition of the parking areas mirrors that of the vehicular entrances, ranging from good to fair throughout the site.			X					X Phased	Implement a program of replacing damaged or worn pavement throughout the site. (assumes 2500 sf for each period)	5,000 S.F.		\$32,585	\$38,570
SL3	Site/Landscape	Varies	Pedestrian Circulation	The condition of the bituminous and Portland cement concrete pavement throughout the site ranges from fair to poor throughout.			X					X Phased	Implement a program of replacing damaged or worn pavement throughout the site. (assumes 750 sf for each period)	1,500 S.F.		\$9,776	\$115,710
SL4	Site/Landscape	Varies	Pedestrian Circulation	There are no crosswalks both within the site, and leading to the site, that would indicate where pedestrians are to safely cross vehicular travel lanes.			X					X Phased	Implement a program to review accessible pedestrian routes throughout the site for safety and compliance with current MAAB standards.	1 L.S.		\$18,620	\$22,040
SL5	Site/Landscape	Varies	Pedestrian Accessibility and MAAB Compliance	Five (5) accessible spaces in the visitor parking area lot do not appear to conform to current MAAB standards as there lacks a van accessible parking space located on site.			X					X Phased	Implement a program to bring accessible parking spaces throughout the site into compliance with current MAAB standards. (assumes 5 spaces per phase)	1 L.S.		\$69,825	\$82,650

Condition Assessment Matrix

BUILDING:		SHREWSBURY SENIOR CENTER															
AREA:		Site/Landscape															
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
SL6	Site/Landscape	Varies	Site Lighting for Building, Vehicular and Pedestrian Areas	Exterior lighting appears to sufficiently illuminate the site and building entrances to meet minimum safety requirements.			X					X Phased	Implement a program of continued maintenance for the site lighting. (assumes 10 lights per phase)	1 L.S.		\$9,310	\$11,020
SL7	Site/Landscape	Varies	Site Furnishings	The flagpole does not appear to have an MAAB compliant accessible route.			X					X Phased	Construct an MAAB compliant accessible route to the flagpole. (assume 30' path)	1 L.S.		\$6,983	
SL8	Site/Landscape	Varies	Site Furnishings	The site signage is in good condition, but is not visible from Maple Ave.			X					X Phased	Develop a signage identity program for the campus to increase visibility from Maple Street.	1 L.S.		\$9,310	\$11,020
SL9	Site/Landscape	Varies	Site Vegetation	The condition of the site vegetation ranges from good to fair for all canopy tree and shrub plantings.			X					X Phased	Implement a maintenance program for plant materials that includes regular trimming, watering, and soil testing	1 L.S.		\$13,965	\$16,530
															1 yr	5 yr	10 yr
													Site/Landscape Cost Total		\$0	\$202,958	\$336,110

Condition Assessment Matrix

BUILDING:		SHREWSBURY SENIOR CENTER															
AREA:		Site/Landscape															
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
SL1	Site/Landscape	Varies	Vehicular Entrances and Circulation	The pavement condition of the vehicular entrances and interior circulation system ranges from good to fair throughout the site.			X					X Phased	Implement a program of replacing damaged or worn pavement throughout the site. (assumes 2500 sf for each period)	5,000 S.F.		\$32,585	\$38,570
SL2	Site/Landscape	Varies	Parking Location, Arrangement, and Quantity	The pavement condition of the parking areas mirrors that of the vehicular entrances, ranging from good to fair throughout the site.			X					X Phased	Implement a program of replacing damaged or worn pavement throughout the site. (assumes 2500 sf for each period)	5,000 S.F.		\$32,585	\$38,570
SL3	Site/Landscape	Varies	Pedestrian Circulation	The condition of the bituminous and Portland cement concrete pavement throughout the site ranges from fair to poor throughout.			X					X Phased	Implement a program of replacing damaged or worn pavement throughout the site. (assumes 750 sf for each period)	1,500 S.F.		\$9,776	\$115,710
SL4	Site/Landscape	Varies	Pedestrian Circulation	There are no crosswalks both within the site, and leading to the site, that would indicate where pedestrians are to safely cross vehicular travel lanes.			X					X Phased	Implement a program to review accessible pedestrian routes throughout the site for safety and compliance with current MAAB standards.	1 L.S.		\$18,620	\$22,040
SL5	Site/Landscape	Varies	Pedestrian Accessibility and MAAB Compliance	Five (5) accessible spaces in the visitor parking area lot do not appear to conform to current MAAB standards as there lacks a van accessible parking space located on site.			X					X Phased	Implement a program to bring accessible parking spaces throughout the site into compliance with current MAAB standards. (assumes 5 spaces per phase)	1 L.S.		\$69,825	\$82,650

Condition Assessment Matrix

BUILDING:		SHREWSBURY SENIOR CENTER																
AREA:		Site/Landscape																
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate			
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr	
SL6	Site/Landscape	Varies	Site Lighting for Building, Vehicular and Pedestrian Areas	Exterior lighting appears to sufficiently illuminate the site and building entrances to meet minimum safety requirements.			X					X Phased	Implement a program of continued maintenance for the site lighting. (assumes 10 lights per phase)	1 L.S.		\$9,310	\$11,020	
SL7	Site/Landscape	Varies	Site Furnishings	The flagpole does not appear to have an MAAB compliant accessible route.			X					X Phased	Construct an MAAB compliant accessible route to the flagpole. (assume 30' path)	1 L.S.		\$6,983		
SL8	Site/Landscape	Varies	Site Furnishings	The site signage is in good condition, but is not visible from Maple Ave.			X					X Phased	Develop a signage identity program for the campus to increase visibility from Maple Street.	1 L.S.		\$9,310	\$11,020	
SL9	Site/Landscape	Varies	Site Vegetation	The condition of the site vegetation ranges from good to fair for all canopy tree and shrub plantings.			X					X Phased	Implement a maintenance program for plant materials that includes regular trimming, watering, and soil testing	1 L.S.		\$13,965	\$16,530	
																1 yr	5 yr	10 yr
																\$0	\$202,958	\$336,110
																Site/Landscape Cost Total		

Condition Assessment Matrix

		BUILDING:		SHREWSBURY SENIOR CENTER													
		AREA:		FIRST FLOOR													
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
1F-1	Arch	First Floor	Walls	Minor surface cracks.abrasions in GWB; scuffed and damaged paint finish due to abrasion of adjacent furnishings against the walls.		252 258	X				X Phased	Implement a program of repainting of painted walls, wood trim and interior door frame surfaces, including repair of damaged GWB (gypsum wallboard) and vinyl wall base. Repainting program may be divided into primary areas of the building spread over a 5- to 7-year period such that finish surfaces are refreshed every 5 to 7 years.	6941sf (2/3 of total floor square footage)		\$25,848	\$30,596	

Condition Assessment Matrix

		BUILDING:		SHREWSBURY SENIOR CENTER													
		AREA:		FIRST FLOOR													
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
1F-2	Arch	First Floor	Ceiling	Various areas of ACT ceiling on first floor have worn and stain ACT tiles from water leaks, air diffusers and maintenance handling.		253	X				X Phased	Implement a program of replacing soiled and damaged ceiling tiles to maintain high quality appearance of spaces. Consider use of cleanable tiles near HVAC diffusers to allow for cleaning of dust/ dirt buildup within the supply air coming through the diffusers.	6941sf (2/3 of total floor square footage)		\$25,848	\$30,596	
1F-3	Arch	First Floor	Flooring	Floor carpeting is stained and has signs of wear at high traffic areas throughout.		254	X				X Phased	Implement program to replace carpeting at end of service life	3091sf (total area of carpet)		\$14,389	\$17,031	
1F-4	Arch	First Floor	Flooring	VCT is chipped, stained and worn areas.		Refer to Photos	X				X Phased	Remove and replace areas of VCT where chipping and cracks have occurred. Refinish remaining areas of VCT..	1769sf (1/3 of 5361 sf of VCT area)		\$16,471	\$38,992	
1F-5	Arch	108	Doors	Door missing closer		255		X		X		Install new closer.	See 1F-6				

Condition Assessment Matrix

		BUILDING:		SHREWSBURY SENIOR CENTER													
		AREA:		FIRST FLOOR													
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
1F-6	Arch	First Floor	Doors	Various doors missing misc. hardware for proper operations. Some exterior doors have corrosion while interior doors have minor scrapes and slight wear on finish.		255	X					X Phased	Implement a program of refinishing and hardware servicing of doors and frames. Repainting program may be divided into primary areas of the building spread over a 5- to 7-year period such that finish surfaces are refreshed every 5 to 7 years.	18		\$50,274	\$59,508
1F-7	Arch	First Floor	Doors	Northwest Egress door with emergency exit device leads to concrete landing. No clear access to public way is provided.	5327	255			X	X			Provide code compliant cementitious/ bituminous pathway to public way / parking lot.	1000sf	\$13,680		

Condition Assessment Matrix

		BUILDING:		SHREWSBURY SENIOR CENTER													
		AREA:		FIRST FLOOR													
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
1F-8	Arch	First Floor	Window	Exterior screen on window has signs of wear and punctures. Exterior window missing divided light.		256	X			X			Replace screen assembly as required and repair window divided light. Imprement window inspection program and replace screens and hardware as service life is exceeded. Expect to replace window units in next 7-10 years as I.G.U.s begin to exceed service life.	45sf	\$8,892		
1F-9	Arch	First Floor	Casework	Some casework shows sign of wear. Various doors require adjustment. Work counters have evidence of staining.		257	X				X Phased		Refurbish casework over next 5-7 years with hardware replacement and adjustment. Maintain hardware settings so to extend life of hardware and associated cabinetry. Replace counters in phased manner over next 7-10 years.	90lf		\$41,895	\$49,590
1F-10	Arch	Main Entry	Paint	Entry bollard actuator has heavy corrosion at base.		258			X	X			Remove rust and loose paint. Apply inhibitor and applicable primer. Refinish to match existing.	1	\$760		

Condition Assessment Matrix

		BUILDING:		SHREWSBURY SENIOR CENTER													
		AREA:		FIRST FLOOR													
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
1F-11	Arch	111	ADA	Threshold at exterior door exceeds 1/2" allowable height allowed by ADAAG and MAAB. Transition height is 1" plus high from exterior landing surface.		259			X	X			Allowances are provided for in the ADAAG for abrupt transitions. Install ADA compliant aluminum or similar ramped threshold transition at exterior door. Basis of design: Pemko R1.2F or sim.	3lf	\$798		
1F-12	Arch	122	ADA	Sink rim height is at 34 1/2" above finished floor which exceeds the maximum 34" per ADAAG and MAAB 521 CMR. 1/2" tolerance is allowed by ADAAG.		259							With projects over 30% of fair cash building value, the counter will be required to be brought into compliance of 521 CMR. No further action required.				
1F-13	Arch	112	ADA	Paper towel dispenser is too far from sink in accordance with ADAAG. Towel dispenser is required to be within sink reach range.		259			X	X			Relocate paper towel dispenser to within ADA reach range at accessible lavatory sink.	1	\$304		

Condition Assessment Matrix

		BUILDING:		SHREWSBURY SENIOR CENTER													
		AREA:		FIRST FLOOR													
Issue #	Discipline	Locat'n	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
1F-14	Arch	121	ADA	Egress door landing not accessible in accordance with ADAAG.		259			X	X			Install cementitious ramp and edge protection for accessible egress to public way.	6'long x 4' wide concrete ramp	\$7,752		
															1 yr	5 yr	10 yr
													Architectural First Floor Cost Total		\$32,186	\$174,725	\$226,313

Condition Assessment Matrix

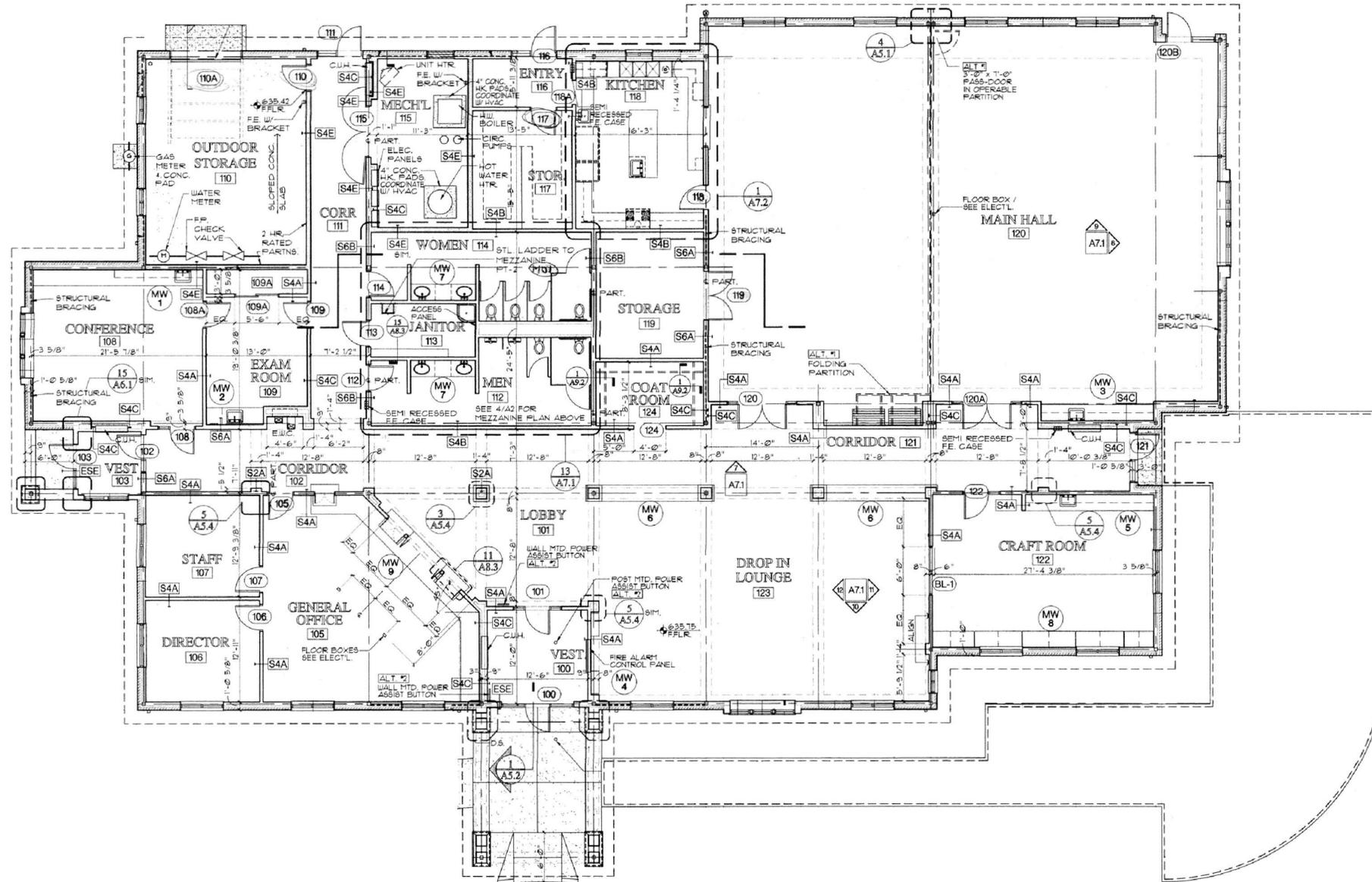
BUILDING:		SHREWSBURY SENIOR CENTER														
AREA:		Building Envelope														
Issue #	Discipline	Location	System	Description	Photo #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
						Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
E1	Envelope	West Elevation	Grounds	Mulch blocks brick weeps, covers bottom of wood trim				X	X			Rake mulch away from foundation.	175 lf	\$1,330		
E2	Envelope	South Elevation	Roof	Damaged metal gutter		X					X	Repair metal gutter.	3 lf			\$496
E3	Envelope	Typical	Walls/Windows	Failed sealants at wall transitions, penetrations, expansion joints, and window perimeters			X		X			Replace failed sealants; plan for regular sealant maintenance including replacement approximately every 5-10 years.	100% = ± 700 lf	\$26,600		
E4	Envelope	South Elevation	Walls	Isolated peeling paint and open joints at wood trim		X			X		X	Repair isolated areas of peeling paint in 2017. Plan on 100% painting in 2022-2026.	15 lf (100% = ± 1,000 lf)	\$114		\$11,020
E5	Envelope	East Elevation	Walls	Stained brick masonry, deteriorated mortar, and deteriorated sealant at soffit-to-wall transition			X		X			Reslope and reseal gutter to limit overflow onto wall. Point deteriorated mortar joints and clean masonry.	1 location	\$1,900		
E6	Envelope	South Elevation	Walls	Stained brick masonry below hosebib.		X				X		Repair hosebib to provide watertight connection to hoses to limit overspray onto wall. Clean masonry.	1 location		\$9,310	
E7	Envelope	Typical	Walls	Isolated deteriorated mortar joints		X			X			Rout and point mortar joints. Assume 5% pointing within 3-5 years. Assume 100% pointing after 2026.	5% = ± 260 sf 100% = ± 5,200 sf	\$11,856		\$343,824
E8	Envelope	North Elevation	Grounds	Leaning fence				X	X			Repair fence.	1 location	\$2,280		
E9	Envelope	Typical	Roof	Shingles have granule loss, cracking, and blisters			X				X	Granule loss, blisters, and cracking are signs of age, however shingles are functional currently. Plan for 100% replacement in 2022 to 2026.	7,500 sf			\$247,950
E10	Envelope	Various	Roof	Isolated open seams in EPDM roofing				X	X			Provide EPDM patches at split seams. Plan to replace roof in approximately 10 years.	Repair = 5 sf 100% replace = 5,000 sf	\$190		\$275,500
E11	Envelope	Typical	Roof	EPDM membrane extends too far into drain bowl		X			X			Cut back EPDM such that it extends only slightly into drain bowl.	5 locations	\$2,584		
E12	Envelope	Various	Roof	Exposed nails, face nailed shingles				X	X			Replace face-nailed shingles.	10 sf	\$304		

Condition Assessment Matrix

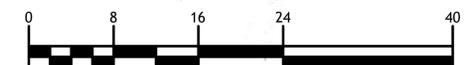
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		AREA:		Building Envelope												
Issue #	Discipline	Location	System	Description	Photo #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
						Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
E13	Envelope	Various	Roof	Isolated areas of EPDM roofing are not adhered, and areas of insulation flex when walked on			X		X			Remove roofing at areas not adhered or with flexing insulation. Replace wet or deteriorated materials, properly secure new materials to roof deck, provide EPDM patch at repaired area.	20 sf	\$608		
													1 yr	5 yr	10 yr	
												Envelope Cost Total	\$47,766	\$9,310	\$878,790	



Project North



GRAPHIC SCALE



(IN FEET)

1 INCH = 8 FEET

