

TOWN OF SHREWSBURY
FACILITIES CONDITION ASSESSMENT OF
TOWN BUILDINGS

FINAL REPORT

June 01, 2016

**Shrewsbury
High School**

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, 5-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 flash drive at the back of the binder, typically containing a photo of the item

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- **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.

A handwritten signature in blue ink that reads "Scott Richardson". The signature is written in a cursive style and is followed by a horizontal line that extends to the right.

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 High School 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 High School 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. Loading Docks and Service Areas
7. Courtyards and Other Exterior Student Congregation Areas
8. Site Lighting For Building, Vehicular and Pedestrian Areas
9. Site Furnishings
10. Site Vegetation

General Site Conditions:

1. Observations:

- i. The Shrewsbury High School is located off Holden Street, adjacent to undeveloped woodlands to the north and east, single family neighborhoods to the west, and athletic facilities to the south, with I-290 beyond the property to the south. The north portion of the site, which is populated by the existing building, gently slopes away from the main entrance in all directions, with the rear and sides of the building exiting one floor below the main entrance. The site contains the school building, along with the associated vehicular and pedestrian circulation systems, and outdoor gathering areas in the rear.

Vehicular Entrances and Circulation:

B.

1. Observations:

- i. Traveling east along Holden Street, there are four (4) access points to the site. There is one (1) Vehicular entrance to the rear of the site from Holden Street, which also provides access to faculty/ staff parking. This route also provides access to a small parking area at the head of the athletic facilities. Cars and trucks navigate around the school in a counter-clockwise direction, exiting further east onto Holden Street. The second access drive from Holden Street towards the building is for buses and student drop off. This drive, as well as the third access drive, provides access to visitor parking areas located in front of the main entrance to the school. The fourth access drive from Holden Street leads into the student parking area.

2. Commentary:

- i. The pavement condition of the vehicular entrances and interior circulation system ranges from good to fair throughout the site.
- ii. There does not appear to be sufficient signage denoting the entrances and one-way egress points onto Holden Street.

3. Recommendation:

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



SHS E1



SHS E2

- ii. Develop an improved wayfinding and signage program for the campus.

Parking Location, Arrangement, and Quantity:

C.

1. Observations:

- i. Existing parking for faculty and staff is located in one main area- a lot to the west of the existing building. There exist approximately 212 striped spaces in the faculty lot (6 accessible). The small athletic facilities parking lot has 19 striped spaces (2 accessible). Parking for visitors is located directly in front (north) of the main entrance to the school, in two main areas. Along the student drop off drive area there are approximately 27 striped spaces (4 accessible). In a separate area to the north there are an additional 17 striped spaces (2 accessible). The student parking is located to the east of the building, with approximately 377 striped spaces (6 accessible) and additional cars parked outside of the striped areas.



SHS E3

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 accessible parking spaces in the student parking area do not appear to comply with current MAAB standards.



SHS E4

- iii. 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.

Pedestrian Circulation:

D.

1. Observations:

- i. There exists a wide bituminous concrete sidewalk that runs the entire length of Holden Street on the west side of the street, with a series of crosswalks and a combination of bituminous concrete walks leading pedestrians towards the building. A combination of bituminous concrete and Portland cement concrete walks loop around the entire perimeter of the building, leading pedestrians to the rear of the building and athletic facilities. Connections are made to and from the student parking area by a series of crosswalks and bituminous concrete walkways, leading students to the main entrance and east entrance of the building.

2. Commentary:

- i. The condition of the bituminous and Portland cement concrete pavement throughout the site ranges from good to fair.
- ii. Accessible route(s) from Holden Street should be reviewed for MAAB compliance.

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.



SHS E5

Pedestrian Accessibility and MAAB Compliance:

E.

1. Observations:

- i. A total of twenty (20) accessible parking spaces are located on site. There is no accessible route to or from the play area at the rear of the school, or to the school's garden.

2. Commentary:

- i. Six (6) parking spaces, signage, access aisles and an accessible route from the faculty lot appear to comply with current MAAB standards.
- 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. Two (2) spaces in the northernmost visitor lot do not appear to conform to current MAAB standards.
- iv. Two (2) accessible parking spaces located closest to the athletic facilities appear to comply with current MAAB standards.
- v. Six (6) accessible spaces in the student parking lot do not appear to conform to current MAAB standards.

3. Recommendation:

- i. Implement a program to bring accessible parking spaces throughout the site into compliance with current MAAB standards.
- ii. Construct an MAAB compliant accessible route from an accessible building entrance to the play area and school garden at the rear of the school.

Loading Docks and Service Areas:

F.

1. Observations:

- i. There is one (1) loading dock associated with the building- at the rear of the academic wing. The loading dock is in good condition, and leads to a double swing door. Its overall size appears sufficient for large deliveries, and it features a compliant ramp from ground level up to the doorway.



SHS E6



SHS E7



SHS E8

2. Commentary:

- i. Confirm that loading dock meets current needs of the building.

3. Recommendations:

- i. Maintain condition of loading dock and accessible ramp.

Courtyards and Other Exterior Student Congregation Areas:**G.****1. Observations:**

- i. There exists two (2) exterior courtyards for formal student congregation. The larger one is located on the south side of the building, between the two “wings” of the building, accessed from the site by the south drive and from the building by doors from the interior hallway space. The courtyard contains a concrete paved area, with concentrically arranged metal benches. Another smaller courtyard exists between the two easternmost wings of the school, with a play area and community garden.

2. Commentary:

- i. The concrete pavement and furnishings in the large courtyard are in good to fair condition.
- ii. The rubber tile surfacing of the play area in the smaller courtyard does not appear to meet fall zone drop height requirements.

3. Recommendation:

- i. Implement a program of replacing damaged or worn pavement throughout the site.
- ii. Replace the existing rubber tile surfacing at the play area with a compliant surface that meets current fall zone height requirements.



SHS E9



SHS E10

Site Lighting for Building, Vehicular and

Pedestrian Areas:

- H.
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.



SHS E11

Site Furnishings:

- I.
1. **Observations:**
 - i. Few site furnishings exist within the vicinity of the school building. There is a flagpole located in the island for the bus circulation across from the main building entrance. There is no formal site signage for the school. No bicycle racks, benches, tables or trash receptacles were observed around the perimeter of the building, other than in the courtyard location.
 2. **Commentary:**
 - i. The flagpole does not appear to have an MAAB compliant accessible route.
 - ii. There is no formal site signage for the school.
 - iii. No bicycle racks, benches, tables or trash receptacles were observed around the perimeter of the building.
 3. **Recommendations:**
 - i. Construct an MAAB compliant accessible route to the flagpole.
 - ii. Develop a signage identity program for the campus.
 - iii. Install site furnishing as necessary throughout the site to better develop exterior congregation areas, and to allow students safe and convenient access to bicycle facilities.

Site Vegetation:

J.

1. Observations:

- i. Site vegetation includes mature deciduous trees throughout the parking and vehicular circulation areas at the front (north) and east sides of the building. Significant shrub plantings are found in the north entrance area. There also exist formal lawn areas to the south and within the school wing areas.

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.

Building Summary

Shrewsbury High School

Address: 64 Holden Street, Shrewsbury, MA 01545
Constructed: 2002
Additions:
Renovations:
2015 Assessed Value: \$44,524,600
(Building Only)

Building Characteristics

Gross Floor Area:
Lower Level Floor: 49,913 gsf
First Floor: 127,280 gsf
Second Floor: 55,662 gsf
Third Floor: 51,806 gsf
Total Building Area: 284,661 gsf



780 CMR Mass. Building Code:

Use Group Classification: E (Education); A-1 (Auditorium); A-3 (Gymnasium)
Construction Type: II-B (To be verified)

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

Exterior Wall Assembly: Brick masonry veneer/ Aluminum Metal Panel
Windows: Aluminum insulating (operable); Aluminum Curtain Wall
Roofing: 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)

Facilities Condition Assessment

Architecture - Interior

Overview:

In this section of the Facilities Condition Assessment Report, Gorman Richardson Lewis Architects (GRLA) presents a summary of observations regarding the condition of the interior architecture of the Shrewsbury High School, 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 Shrewsbury High School 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 High School contains four distinct levels (Lower Level, First Floor, Second Floor and Third Floor) and the various program areas (Classrooms, Cafeteria/ Kitchen, Auditorium, Administration, Athletics and Mechanical) are located in distinct sections of the building organized across the primary curved corridor (Main Street). The information presented below is organized according to floor level and includes a brief description of the primary functions contained in each floor level.

Built in 2002, Shrewsbury High School has been in service for 13 years and appears well maintained. As a high school with over 1,600 students as well as approximately 100 faculty and facility personnel, the school building is heavily used for 10 months of the year. The areas of the building constantly used by the student body—main corridors, classrooms/ labs, restrooms, cafeteria (Commons)/ Kitchen, Gymnasium, Gymnastics, Locker Rooms and the Auditorium—show significantly more wear and tear than the Administration and Mechanical areas of the building. Although the wear and tear observed during our field survey is in keeping with the service period of the building, there are particular areas—flooring and doors-- where finishes and components are more heavily deteriorated or

Facilities Condition Assessment

damaged. In particular, problems with the underlying concrete slab below the resilient flooring tile system for the main corridors, including Main Street and the Commons, have caused severe cracking due to stress cracks in the concrete slab telegraphing through the resilient tile. In addition, the edges of the tile are discolored, exaggerating the grid pattern of the tile, which has caused the overall floor to have a worn appearance. From conversations with Town personnel, as well as visual observation by GRLA, it appears control joints were not formed or cut into the original concrete slab. As a result stress cracks have formed on their own and have telegraphed through the resilient tile. A very severe crack has formed across the track area of the Field House, which may become a tripping hazard as it spans the running lanes of the track.

As noted in this Narrative section, as well as in the Conditions Assessment Matrix of this report, due to the extent of the flooring issue, additional investigation is required to determine the causes of these issues and whether on-going movement in the slab is occurring and the presence of vapor drive from moisture below the slab. Once these issues have been clarified and addressed, a new flooring system can be installed.

The Lower Level is limited to the Field House wing of the High School at the west end of the building and houses all indoor athletic functions and support spaces:

- Running track
- Basketball courts
- Gymnastic court
- Fitness Center (weight training)
- Boy's Locker/ Team Rooms

The First Floor is comprised of the main building entrances, primary academic functions (classroom, and performing arts), dining (cafeteria, kitchen and server), administration, and Girl's Locker/ Team rooms at the Field House wing:

- Main Entrance/ Lobby (north)
- East Entrance
- Classroom Wing A
- Classroom Wing B
- Administration Offices
- Auditorium/ Theater & Lecture Amphitheater
- Main Street Corridor and Commons (cafeteria)
- Kitchen/ Served
- Mechanical Space and Workshop
- Girl's Locker/ Team Rooms/ Health Department

Facilities Condition Assessment

The Second Floor is limited to academic and guidance functions at the east end of the building:

- Classroom Wing A
- Classroom Wing B
- Media Center
- Guidance Department

The Third Floor is limited to academic and fine art functions at the east end of the building:

- Classroom Wing A
- Classroom Wing B
- Art Studios
- Special Education

The roof level consists of differentiated areas of low-slope EPDM roof systems, accessible by authorized personnel only, providing locations for roof-top mechanical units and ventilation equipment.

It is understood that the building permit for Shrewsbury High School was issued after February 28, 1997 (*effective date of 780 CMR 6th Edition*), and therefore, the building design and construction reflect the requirements of that edition. Nonetheless, a there appear to be a few deficiencies regarding the requirements of the current Massachusetts State Building Code (780 CMR-8th Edition) and Massachusetts Architectural Access Board code (521 CMR) were observed and noted in the “Code Issues” and “ADA” categories 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 documented and itemized in the following matrix section, as stated in the table of contents, 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.

Facilities Condition Assessment

Methodology:

During the summer and fall of 2015, GRLA visited the Shrewsbury High School 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 more recently constructed school buildings in the town inventory, a full structural assessment of the Shrewsbury High School was not required and was limited to any significant structural issues or deficiencies 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.

Conclusion

The **Architecture-Interior** of the Shrewsbury High School 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 condition of interior doors, frames and associated hardware
- Deficiencies regarding fire rated door assemblies and egress door swing for large occupancies
- Deficiencies regarding concrete slab cracks and deterioration of floor finishes
- Deficiencies regarding deterioration of classroom casework
- Deficiencies regarding conformance to requirements for handicap accessibility
- Deficiencies regarding active roof leak in gymnasium

Building Envelope

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 High School, 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

Methodology:

GRLA visited the Shrewsbury High School on August 12, August 13, and August 14, 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 High School has predominantly low slope roofs with adhered EPDM membrane over mechanically attached insulation; several smaller roofs have ballasted EPDM membrane.
- ii. There is evidence of water ponding at roof edges along the metal coping.
- iii. There are isolated sections of damaged and incomplete metal roof edge coping.
- iv. Sealant at metal roof coping flashing corners typically does not cover joints at outside corners.
- v. There are several areas of unadhered EPDM, and/or unsupported EPDM membrane over an uneven substrate.
- vi. There are several areas of blisters at roofing seams, holes and cuts in the membrane, open seams, and aged pitch pocket sealant.
- vii. EPDM membrane extends too far into drain bowls.
- viii. Lightning protection cables are not attached at isolated drains and other terminals.
- ix. There are several instances of damaged conduits at mechanical units.
- x. Loose objects such as ladders are being stored on the roof.

2. Commentary:

- i. Damage such as holes and gaps in roofing materials and damaged or incomplete flashings may present a leakage risk in the short term.
- ii. Ponding water at roof edges increases leakage risk at these locations.
- iii. Loose items stored on the roof present a safety risk, particularly during high-wind events.

3. Recommendations:

- i. Inspect the roof and repair damage as soon as possible. Implement a program of annual inspections.
- ii. Where water ponds at roof edges, re-slope the substrate to direct water to drains.
- iii. At metal roof coping flashing, provide backer rod and sufficient sealant to fill the joint and cover gaps at coping joints.
- iv. Where EPDM is unadhered or unsupported, replace or refasten substrate materials to provide a consistent substrate for the roofing membrane.
- v. Consult with a lightning protection specialist and make appropriate repairs to lightning protection system. Plan for regular inspections.
- vi. Remove loose items from the roof, and do not store loose items on the roof in the future.
- vii. Plan to replace the gymnasium roof in 2018-2021.

EXTERIOR WALLS

1. Observations:

- i. The exterior walls have brick veneer and metal panel cladding.
- ii. Sealants at wall transitions, penetrations, metal panel joints, and expansion joints are typically failed.
- iii. Isolated mortar joints are deteriorated.
- iv. Isolated damage to metal wall panels. Metal wall panels at the auditorium are buckled, and seams have come apart.
- v. There are wasp nests in louvers and wall cavities in a few locations.
- vi. There is staining on brick masonry and metal wall panels in many locations.

2. Commentary:

- i. Sealants require frequent replacement and should be considered an ongoing maintenance item.
- ii. Damage to metal panels in most areas may be simply aesthetic if there is a reliable weather resistive barrier (WRB) behind the panels. A lack of reliable WRB could result in leakage risk at damaged panels. Damaged/displaced panels at auditorium may be due to improper attachment to the backup wall and/or a lack of expansion joints in the wall assembly.

3. Recommendations:

- i. Replace failed sealants; plan ongoing replacement approximately every 5-10 years.
- ii. Rout and point deteriorated mortar joints.
- iii. Investigate cracked and displaced masonry to determine the cause of cracking and movement. Remove any loose masonry as an interim measure. Repair cracks by routing and sealing (moving cracks) or pointing (static cracks). Secure masonry to backup structure with restoration anchors as required.
- iv. Investigate to determine if there is a WRB behind metal wall panels. At the auditorium metal panel cladding, investigate to determine appropriate repairs and implement as needed. Additional expansion joints may be required.
- v. Plan for ongoing treatment of wasp infestation.
- vi. Investigate to determine source of staining, address source, and clean masonry.

WINDOWS

1. Observations:

- i. Windows are predominantly aluminum framed with both operable and fixed sashes.
- ii. Sealants at window perimeters are failed in many locations.
- iii. There are several fogged insulating glass units (IGUs), and at least one location of broken window glass (coordinate with GRLA Architectural Conditions Assessment Matrix).

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.
- ii. Replace fogged and broken glazing units (coordinate with GRLA Architectural Conditions Assessment Matrix).

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

Shrewsbury High School
Representative Existing Conditions Photographs



North Elevation, partial view



North Elevation, staining on masonry below windows



North Elevation, staining on masonry and deteriorated mortar;
moss growth in mortar joint



North Elevation, staining on masonry below metal panel joints

Shrewsbury High School
Representative Existing Conditions Photographs



North Elevation, no sealant at column-to-metal panel juncture; staining/damage to column wrap



North Elevation, failed sealant at curtain wall jamb



North Elevation, brick overhang at concrete foundation



North Elevation, cracks in mortar joints above brick overhang

Shrewsbury High School
Representative Existing Conditions Photographs



North Elevation, unsealed wire penetration and crack in concrete foundation



North Elevation, failed sealant at column cover-to-walkway juncture



North Elevation, failed sealant at base of wall-to-walkway juncture



North Elevation, staining on metal panel below a window

Shrewsbury High School
Representative Existing Conditions Photographs



North Elevation, failed sealant along base of wall-to-walkway juncture



North Elevation, cracked mortar joints at a window corner



North Elevation, crack at mortar joint



North Elevation, unsealed conduit penetration through EIFS

Shrewsbury High School
Representative Existing Conditions Photographs



North Elevation, crack in concrete foundation



North Elevation, dented third floor window frame



'A' Wing, East Elevation, overall view



'A' Wing, East Elevation, failed door perimeter sealant

Shrewsbury High School
Representative Existing Conditions Photographs



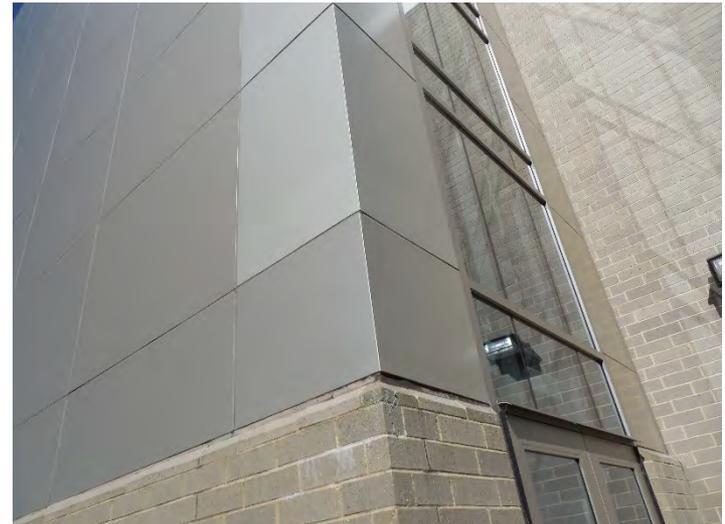
'A' Wing, East Elevation, deteriorated and cracked mortar joints;
failed metal panel-to-masonry-sealant joint



'A' Wing, East Elevation, wasp nest in louver



'A' Wing, South Elevation, overall view



'A' Wing, South Elevation, crack in sealant joint at metal panel-to-
masonry juncture; staining on masonry

Shrewsbury High School
Representative Existing Conditions Photographs



'A' Wing, South Elevation, deteriorated mortar joints



'A' Wing, West Elevation, overall view



'A' Wing, West Elevation, mortar deterioration below windowsill; sealant failure at window perimeter



'A' Wing, West Elevation, efflorescence below a window

Shrewsbury High School
Representative Existing Conditions Photographs



'A' Wing, West Elevation, failed sealant at a louver jamb



'A' Wing, West Elevation, fogged insulated glazing unit (second floor)



'M' Wing, South Elevation, overall view

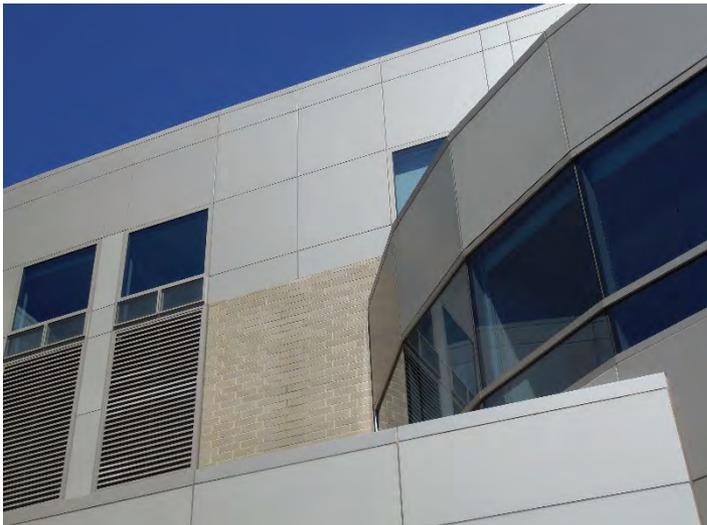


'M' Wing, South Elevation, window perimeter sealant

Shrewsbury High School
Representative Existing Conditions Photographs



'M' Wing, South Elevation, sealant failure at metal panel-to-masonry juncture



'M' Wing, South Elevation, staining on brick below a metal panel joint



'M' Wing, South Elevation, mortar deterioration and efflorescence

Shrewsbury High School
Representative Existing Conditions Photographs



'M' Wing, ballasted roof at South Elevation, partial view



'M' Wing, South Elevation parapet wall, sealant failure at coping joint



'B' Wing, East Elevation, mortar deterioration below a window



'B' Wing, East Elevation, partial view

Shrewsbury High School

Representative Existing Conditions Photographs



'B' Wing, East Elevation, staining on masonry below metal panel joints



'B' Wing, East Elevation, deteriorated mortar and efflorescence below a windowsill; moss growth in mortar joint



'B' Wing, East Elevation, broken glass at a second floor window



'B' Wing, South Elevation, overall view

Shrewsbury High School
Representative Existing Conditions Photographs



'B' Wing, South Elevation, displaced metal panel; missing sealant in metal panel joints



'B' Wing, West Elevation, partial view



'B' Wing, West Elevation, sealant failure at an expansion joint



'B' Wing, West Elevation, crack through brick and mortar from windowsill to grade; deteriorated and cracked mortar joints

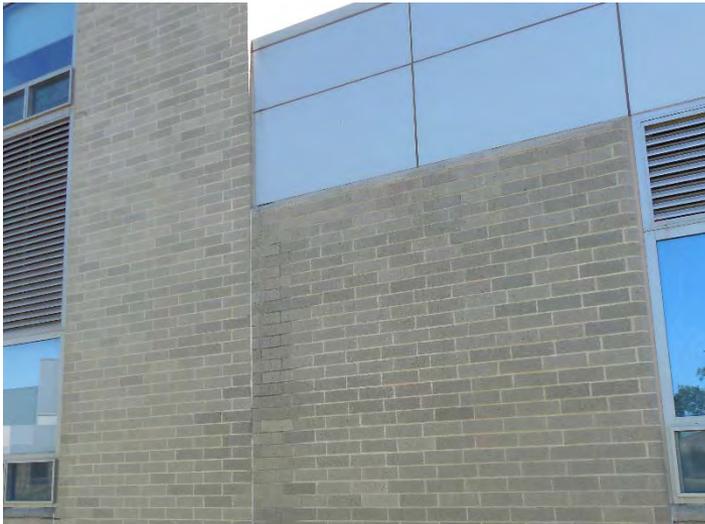
Shrewsbury High School
Representative Existing Conditions Photographs



'B' Wing, West Elevation, cracked and deteriorated mortar and sealant joints below a window



'B' Wing, West Elevation, staining on brick masonry and deteriorated mortar joints



'B' Wing, West Elevation, staining on brick masonry and metal panels



'B' Wing, West Elevation, crack in concrete foundation

Shrewsbury High School
Representative Existing Conditions Photographs



South Elevation at Lobby, overall view



South Elevation at Lobby, displaced glazing gasket



South Elevation at Lobby, failed sealant joint at metal panel-to-walkway juncture



South Elevation at Lobby, dent or hole in metal panel

Shrewsbury High School
Representative Existing Conditions Photographs



South Elevation at Lobby, wrinkled and displaced sealant at metal panel-to-brick juncture



Auditorium Wing, East Elevation, partial view

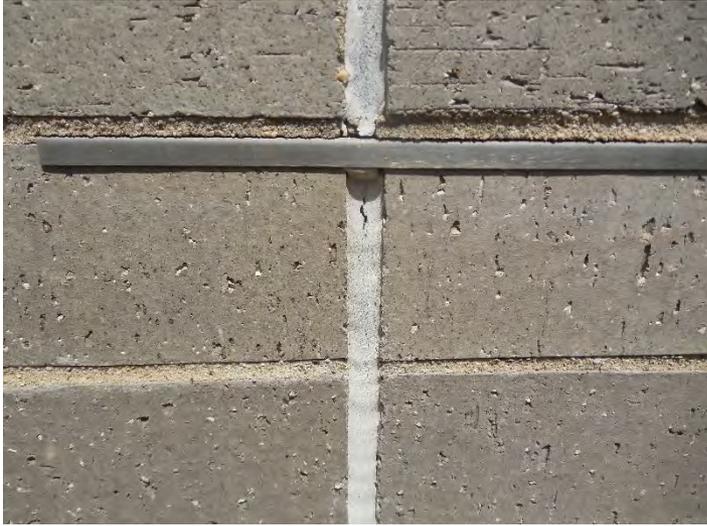


Auditorium Wing, East Elevation, failed sealant joints at curved portion of wall



Auditorium Wing, South Elevation, partial view

Shrewsbury High School
Representative Existing Conditions Photographs



Auditorium Wing, South Elevation, failed sealant at an expansion joint



Auditorium Wing, South Elevation, failed sealant at a metal panel joint



Auditorium Wing, South Elevation, unsealed cable penetration



Auditorium Wing, South Elevation, crack in foundation wall

Shrewsbury High School
Representative Existing Conditions Photographs



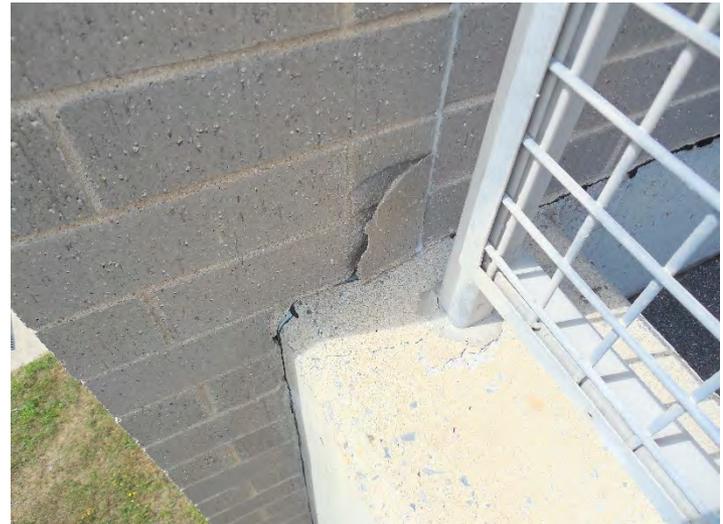
Auditorium Wing, South Elevation, partial view



Loading Dock, South Elevation, staining on brick masonry



Loading Dock, South Elevation, cracks and spalled concrete



Loading Dock, spalled brick and cracks in concrete and sealant joints

Shrewsbury High School
Representative Existing Conditions Photographs



Gymnasium Wing, South Elevation, partial view



Gymnasium Wing, South Elevation, dented metal panels



Gymnasium Wing, South Elevation, spalled brick and concrete



Gymnasium Wing, West Elevation, efflorescence on brick masonry, mortar deterioration at top course, and spalled bricks

Shrewsbury High School

Representative Existing Conditions Photographs



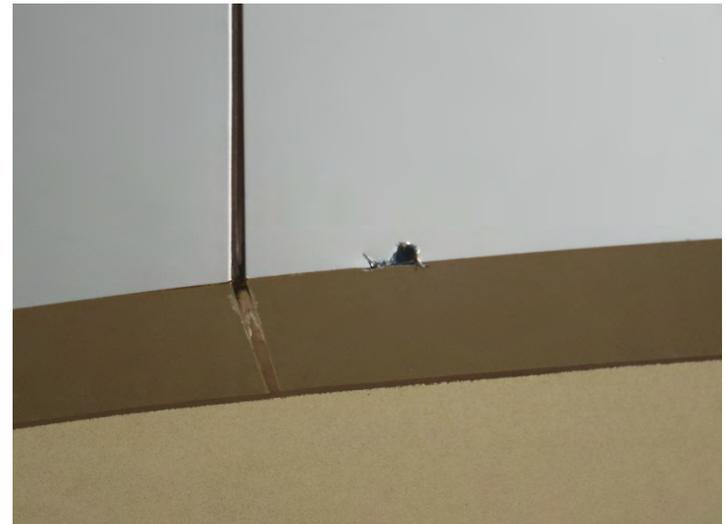
Gymnasium Wing, West Elevation, efflorescence on brick masonry, mortar deterioration, and spalled bricks



Gymnasium Wing, West Elevation, partial view



Gymnasium Wing, West Elevation, staining on brick masonry



Gymnasium Wing, West Elevation, damaged metal panel and sealant failure at entrance canopy

Shrewsbury High School
Representative Existing Conditions Photographs



Gymnasium Wing, West Elevation, failed door perimeter sealant



Gymnasium Wing, West Elevation, open mortar joints and cracked bricks



Gymnasium Wing, West Elevation, efflorescence and mortar and sealant deterioration



Gymnasium Wing, West Elevation, bulged and wrinkled sealant at metal panel joints

Shrewsbury High School
Representative Existing Conditions Photographs



'A' Wing roof, partial view



'A' Wing roof, partial view



'A' Wing roof, sealant failure at a coping joint



'A' Wing roof, ponded water

Shrewsbury High School
Representative Existing Conditions Photographs



'A' Wing roof, view looking down at third floor window head with sealant failure



'A' Wing roof, water staining on metal coping



'A' Wing roof, bubble in EPDM membrane at a seam



'A' Wing roof, hole in EPDM for drain is smaller than drain bowl

Shrewsbury High School
Representative Existing Conditions Photographs



'A' Wing roof, hole repaired with a bead of sealant



'A' Wing roof, object below EPDM not yet protruding through



'A' Wing roof, height of scupper prevents water from draining



'M' Wing roof, sealant failure at a dormer

Shrewsbury High School
Representative Existing Conditions Photographs



'M' Wing roof, hole in EPDM at a mechanical vent curb



'A' Wing roof, loose hose clamp at conduit



'A' Wing roof, unadhered flashing at a mechanical penetration



'A' Wing roof, sealant does not cover pinholes at coping outside corners

Shrewsbury High School
Representative Existing Conditions Photographs



'M' Wing roof, partial view



'B' Wing roof, flashing seams and lap seal starting to fail



'B' Wing roof, partial view



'M' Wing roof, blister in EPDM patch

Shrewsbury High School
Representative Existing Conditions Photographs



Auditorium wing roof



Auditorium wing roof, ponded water



Auditorium wing parapet, incomplete flashing with exposed plywood sheathing



Auditorium wing roof, missing roof drain dome

Shrewsbury High School
Representative Existing Conditions Photographs



Auditorium wing roof, pitch pocket sealant is hardened and cracked



Auditorium wing roof, EPDM damaged at insulation fastener



Auditorium wing roof, loose pipe on roof



Auditorium wing roof, open seam in EPDM flashing

Shrewsbury High School
Representative Existing Conditions Photographs



Auditorium wing roof, lightning protection cable not attached at drain



Auditorium wall, metal panels are buckled/bowed



Auditorium wall, open pipe penetration



Auditorium wing roof, damaged conduit

Shrewsbury High School
Representative Existing Conditions Photographs



Auditorium wing curved parapet, failed sealant at coping joints



Auditorium wing roof, hole in EPDM with deteriorated cover board beneath



Auditorium wing roof, mechanical unit flashing has open seams



Auditorium wing parapet, damaged coping attachment strip

Shrewsbury High School
Representative Existing Conditions Photographs



Auditorium roof, evidence of ponding, and wrinkles in the EPDM



Auditorium roof, damage to EPDM from insulation fasteners



Auditorium parapet, debonded base flashing



Gymnasium roof, open seam in EPDM

Shrewsbury High School
Representative Existing Conditions Photographs



Gymnasium roof, ponded water and evidence of ponding around perimeter



Gymnasium roof, unsupported EPDM over uneven insulation



Gymnasium parapet, debonded EPDM base flashing



Gymnasium wall, failed sealant at metal panel joints

Shrewsbury High School
Representative Existing Conditions Photographs



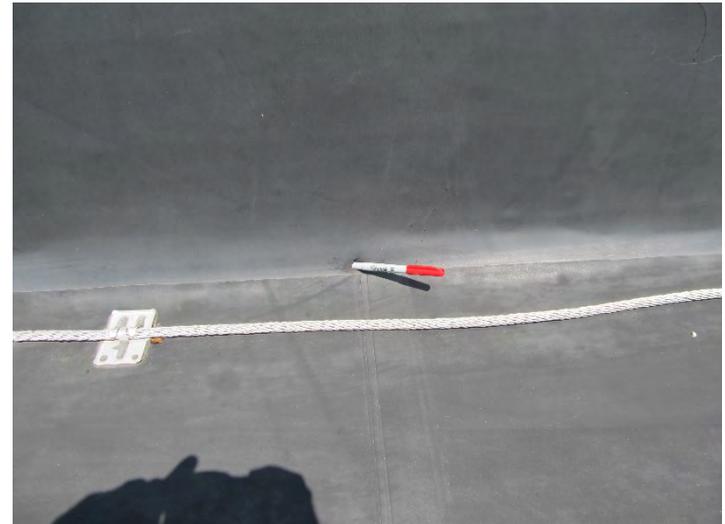
Main Entrance roof, partial view facing Northeast



Main Entrance roof, unadhered EPDM base flashing



Main Entrance roof, unadhered EPDM patch



Main Entrance roof, hole in EPDM

Shrewsbury High School
Representative Existing Conditions Photographs



Main Entrance parapet, failed sealant at coping joint



Main Entrance parapet, broken section of metal coping



Ballasted roof at North 'B' Wing, ballast stones in a scupper adhered to roofing



Ballasted roof at North 'A' Wing, open EPDM lap seam

Shrewsbury High School
Representative Existing Conditions Photographs



Ballasted roof at North 'B' Wing, exposed self-adhering membrane

Overview:

In this section of the Facilities Condition Assessment Report, Weston & Sampson presents a summary of observations regarding the condition of High School 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 High School site:

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

Electrical

1. Observations:

- i. Main service is 5000A at 480/277V, 3-phase, 4-wire]



Electric Service Switchboard

- ii. Emergency generator is a 300KW diesel generator in an outdoor walk-in enclosure



Exterior Emergency Generator

- iii. Lighting is predominantly fluorescent throughout the school
- iv. Lighting controls are via motion sensors and wall mounted switches.



- v. Lighting in the Gym is pendant mounted HID fixtures.



vi. Emergency lighting is fed from the generator.

vii. Fire alarm is a Simplex addressable system



Main Fire Alarm control Panel

viii. There is a lightning Protection System installed on the roof



Lightning Protection System

- ix. 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 5000 amperes, 480Y/277volts, 3-phase, 4-wire and is located in the main electrical room. The service equipment consists of an exterior utility company pad mounted transformer and an underground feed to utility metering equipment and a 5000amp main disconnect switch within the main switchboard. All electrical distribution equipment is manufactured by G.E. The predominance of the main distribution equipment is in good condition. The main switchboard feeds additional distribution switchboards located throughout the facility.

There are a number of electrical panels located throughout the facility that are fed from the distribution switchboards. The panel boards appear to have spare circuit breakers available for new circuits to be added, or include the space to add new circuit breakers. The panelboards are in good condition.

ii. Emergency System

There is an onsite 300kw diesel emergency/standby generator manufactured by Caterpillar. The generator feeds four automatic transfer switches, for emergency life safety and for stand-by equipment that back-up a portion of the facility. The generator, transfer switches and emergency/standby panelboards all appear to be in good condition.

iii. Lighting

The lighting throughout the facility consists of surface mounted 2 lamp, 1x4 fluorescent T8 32w strip fixtures in all mechanical and electrical type spaces, lighting in the corridors consists of 2' x 4', 3-lamp fluorescent acrylic lens troffers, lighting in classrooms consists of 1'x4', 2-lamp fluorescent direct/indirect pendant mounted fixtures. All lighting throughout the facility is controlled with motion sensors and manual override switches. The lighting throughout the facility appears to be in good condition. The light levels appear to be within recommended levels.

Gym Lighting is via 54 HID pendant mounted fixtures controlled via a lighting control panel and wall mounted override switches.

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

Life safety emergency lighting is provided via the generator and emergency life safety panelboards. The emergency light fixtures appear to be in good condition.

Battery powered exit lighting is installed throughout the facility and is connected to the life safety panels, and is in good condition.

iv. Fire Alarm

The fire alarm system is a Simplex 4100 addressable voice evacuation system. There are manual fire alarm pull stations and speaker strobes located throughout the building. Heat and smoke detectors are present throughout the facility. The fire alarm system appears to be in good condition.

v. Clock System

The existing clock system is in good condition and there have been no reported problems to date.

vi. Paging System

The existing paging system is in good condition and there have been no reported problems to date.

vii. Security System

The existing Brivo security system is in good condition and there have been no reported problems to date.

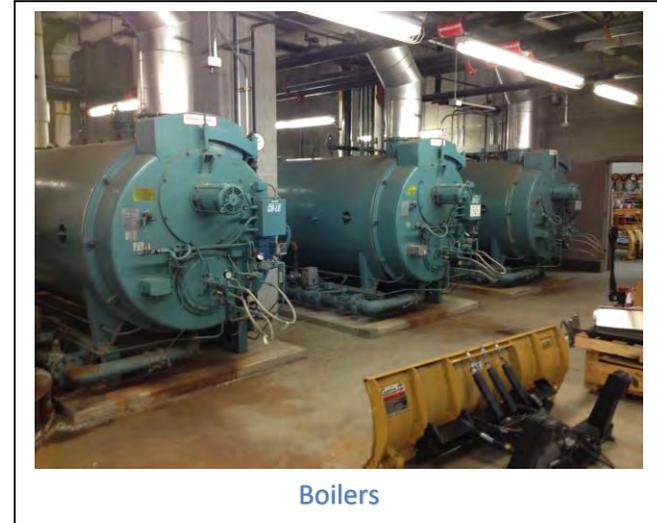
3. Recommendations:

- i. Replace all existing GYM lighting with new Fluorescent T5 6-lamp high bay fixtures.
- ii. Replace all fluorescent fixtures with new LED fixtures for energy savings.

HVAC

1. Observations:

- iii. The High School's heating system consist of three (3) dual fired (gas/oil) hot water boilers (B-1, B-2 & B-3), multiple rooftop air handling units (AHU's), VAV boxes with hot water reheat coils, fan powered terminals (FPT's) with hot water reheat coils, unit heaters, cabinet unit heaters, finned tube radiation, convectors and unit ventilators. There is also some electric unit heaters scattered throughout the building.
- iv. Heating hot water is circulated by a combination of pumps set up in a primary/secondary piping arrangement. There are two secondary loops. The first secondary loop consists of two end suction pumps (P-1 & P-2) that are on VFD's and serve the gym wing of the building. The second secondary loop consists of two end suction pumps (P-3 & P-4) that are on VFD's and serve the classroom wing of the building. Both of the loops provide hot water to the rooftop units, finned tube radiation, classroom unit ventilators, VAV and FPT reheat coils and unit heaters. The heating systems primary pumps consist of three (3) end suction pumps (P-9, P-10 & P-11) each pump is dedicated to a single boiler.
- v. The High School's cooling system consist of a 180 Ton water cooled chiller (CHW-1) , a closed circuit cooling tower(CT-1), multiple rooftop air handling units (AHU's), and split system air handlers. Chilled water is provided only to the AHU's serving the admin wing, the TV studio and media center.
- vi. Chilled water is circulated by two (2) base mounted constant volume end suction pumps (P-5 & P-6). Condenser water is



Boilers



Typical Pumps

Facilities Condition Assessment

- circulated by two (2) base mounted constant volume end suction pumps (P-7 & P-8).
- vii. Exhaust for the building is done by numerous roof mounted and inline exhaust fans. There is no Energy Recovery systems on the exhaust.
 - viii. There are two (2) 10,000 gallon underground fuel oil storage tanks.
 - ix. Building Management System: The existing control system is a Johnson Control system.

2. Commentary:

- i. Most of the HVAC equipment is original to the 2002 construction.
- ii. Heating Equipment
 - Boilers: The existing boilers (B-1, B-2 & B-3) are Cleaver Brooks Model CB-200-200-125 with an output of 6,695 MBH each, even though they are dual fired the boilers have not run off the fuel oil system since construction. Upon visual inspection the boilers appear to be in good condition. It was observed that even though there was low load (spring school vacation week) in the building all three boilers appeared to be cycling to maintain water temperature.
 - Hot Water Pumps:
 - P-1 & P-2 are both Taco model FE300. Upon visual inspection of both P-1 & P-2 both are in fair condition but P-2 is showing signs of corrosion. It was also observed that there were piles of rust underneath the pumps shafts.



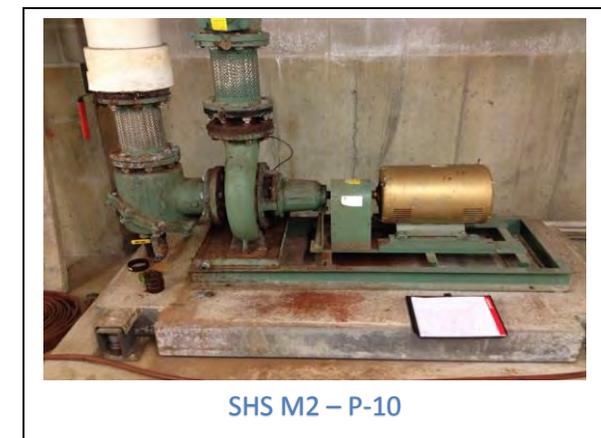
Typical Rooftop Air Handling Unit



SHS M1 - Fuel Oil Pumps

Facilities Condition Assessment

- P-3 & P-4 are both Taco model FE600. Upon visual inspection of both P-3 & P-4 both are in good condition.
- P-9, P-10 & P-11 are Taco model FE500. Upon visual inspection of the pumps the following was observed:
 - P-9 was leaking water and had significant corrosion overall it is in poor condition it was noticed that the pump seal was replaced in May of 2011
 - P-10 had significant corrosion and overall it is in poor condition. There is also signs of possible past leaking as indicating by the rust in the drip pan. Also while running the pump was vibrating.
 - P-11 had corrosion and overall it is in fair condition. There is also signs of possible

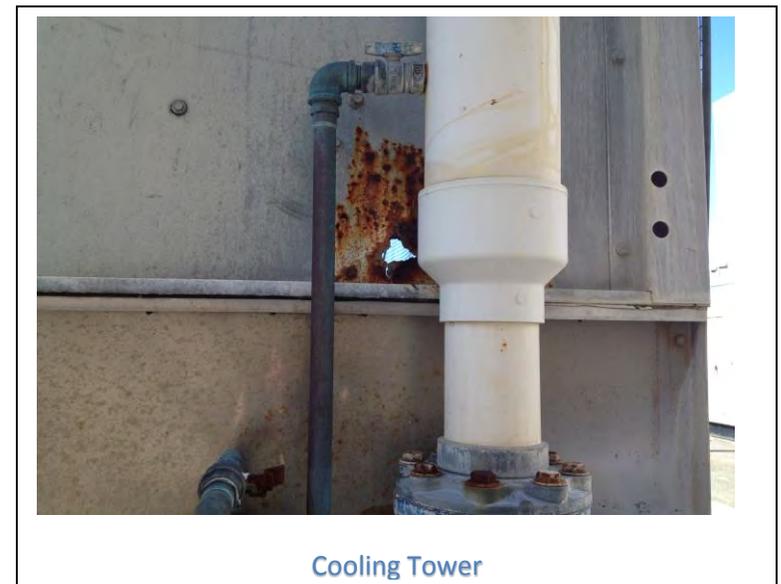


past leaking as indicating by the rust in the

drip pan. Also while running the pump was vibrating. It appears that the shaft seal was also replaced.

iii. Cooling Equipment

- Chiller: The chiller is a Trane model RTHC. It is a single circuit machine and has R-134A as its refrigerant. Upon visual inspection it appears to be in good condition. Also it was noticed the chiller has shut off since September of 2015.
- Cooling Tower: The Cooling tower is a Baltimore Aircoil model FXV-L644-LMW. Upon visual inspection it is showing signs of corrosion on the casing and the vibration isolators have significant rust but the inside and the basin are in good condition.
- Chilled Water Pumps:
 - P-5 & P-6 are both Taco model FE. Upon visual inspection of both P-7 & P-8 both are in fair condition
- Condenser Water Pumps:
 - P-7 & P-8 are both Taco model FE401. Upon visual inspection of both P-7 & P-8 both are in good condition.
- Unit Ventilators: The High School has a mix of Horizontal and Vertical Unit ventilators all at various sizes. All are manufactured by Trane. Most of the UV's appear to be in good condition.



Cooling Tower

Facilities Condition Assessment

- Rooftop Units: There are twenty RTU', all are Trane Modular Climate Changers at various size. Overall the majority of the units are in good condition but generally the units had the following issues:
 - Coils were dirty
 - Outer casing showing signs of rust
 - Interior of the units were dirty
 - It was also noticed that on some of the units (AHU-6 for example) even though the fans was not running and the temperature outside was in the 50's the unit's hot water coil was hot indicating hot water was running thru the coil.
- Exhaust fans: There are approximately sixty roof mounted exhaust fans. Upon visual most appear to be in good condition although most were off at the time.
- Fuel Oil Pump: Fuel Oil pumps appear to be in poor condition and are longer used.

iv. Building Management System:

- The existing control system is by Johnson. There has been numerous controls issues and replacement parts are becoming scarcer and more expensive to find. As parts become more difficult and more expensive upgrade may become necessary.

3. Recommendations:

- i. Remove existing underground fuel Oil storage tanks.
- ii. Remove existing Duplex fuel oil pumps,
- iii. Replace existing BMS system.



SHS M3 – AHU-13



SHS M3 – AHU-14

- iv. Install chilled water coils and connect to chilled water system the AHU's serving the Auditorium.
- v. Replace Hot water pumps P-9, P-10 & P-11.

Facilities Condition Assessment

Plumbing**1. Observations:**

- i. Domestic Water Service: The building is served by a 4" domestic water service.
- ii. Domestic Hot Water Service: The building's domestic hot water service is generated by (2) two 100 gallon gas fired hot water heaters. There are also electric domestic water heaters located throughout the school.
- iii. Natural Gas: The building has a 4" natural gas service.
- iv. Sanitary: the building is served with a two 6" sanitary water lines, a 4" kitchen waste and a 6" rain water line
- v. Fixtures:
 - Water closets are wall mounted vitreous china with manual flush valves.
 - Urinals are wall mounted vitreous china with manual flush valves.
 - Lavatories are wall hung vitreous china with single push button faucets.
 - Drinking fountains are wall mounted stainless steel units.

2. Commentary:

- i. The plumbing fixtures are original to the 2002 construction and appear to be 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.



SHS P1 – Water Closets



SHS P2 – Urinals

Facilities Condition Assessment

- iii. Replace existing lavatories faucets with automatic faucets



SHS P3 – Lavatories

Fire Protection

B.

1. Observations:

- i. There is full fire protection coverage for the building. The dedicated 8" FP service enters the building in a storage room and includes a double check valve assembly. The building is divided into three (3) wet sprinkler zones.

2. Commentary:

- i. The fire Protection system is in good condition.

3. Recommendations:

- i. None

Hazardous Materials

C.

1. Observations:

- i. Asbestos-Containing Materials
 - Numerous suspect asbestos-containing materials were observed within the building, including but not limited to: 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 2002, well past the date for asbestos-containing materials to typically be utilized during construction. Additionally, the architect of record, Lamoureux Pagano and Associates, provided a letter dated June 3, 2010 that to the best of their knowledge none of the materials supplied or installed in the building contained asbestos.
- 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 and the architects' letter, 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. Also, the building falls under the EPA Asbestos Hazard Emergency Response Act (AHERA) that requires school districts to inspect their schools for asbestos-containing building material and prepare management plans and to take action to prevent or reduce asbestos hazards. The AHERA plan should be consulted prior to renovation as it may contain laboratory analytical results. The following is a list of potential asbestos-containing materials found at the building.

Material	Location	Approximate Quantity	Condition
Floor tile and associated mastics	Throughout	100,000 SF	Good
Foundation damp-proofing	Exterior below grade	2500 SF	Good
Door caulk	Exterior	1,200 LF	Good
Window caulking and glazing	Exterior	3,200 LF	Good
Roof caulk	Exterior – roof at penetrations/transitions	800 LF	Good
Roofing materials	Exterior – roof	145,500 SF	Good
Gypsum board	Throughout	60,000 SSF	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	2,300
Fluorescent light ballasts	1,100
Hydraulic door closers	170
Exit light batteries	90

Shrewsbury High School - Total Estimated Costs

Consultant	Discipline	Cost Estimate		
		1 yr	5 yr	10 yr
Waterman Design Associates	Site & Landscape		\$566,979	\$662,853
Gorman Richardson Lewis Architects	Architecture	\$2,966,556	\$14,102,952	\$5,030,851
Gorman Richardson Lewis Architects	Building Envelope	\$1,804,620	\$1,155,683	\$363,660
Weston & Sampson	MEP/FP/Hazmat	\$201,400	\$3,612,038	\$5,682,793
	Totals	\$4,972,576	\$19,437,652	\$11,740,157

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Site/Landscape															
Issue #	Discipline	Loc	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
SL-1	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 5000 sf for each period)	10,000 S.F.		\$65,170	\$77,140
SL-2	Site/Landscape	Varies	Vehicular Entrances and Circulation	There does not appear to be sufficient signage denoting the entrances and one-way egress points onto Holden Street.			X					X Phased	Develop an improved wayfinding and signage program for the campus.	1 L.S.		\$9,310	\$11,020
SL-3	Site/Landscape	Varies	Parking Location, Arrangement, and Quantity	The accessible parking spaces in the parking area north of the drop off drive do not appear to comply with current MAAB standards.			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
SL-4	Site/Landscape	Varies	Parking Location, Arrangement, and Quantity	The accessible parking spaces in the student parking area do not appear to comply with current MAAB standards.			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
SL-5	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, with little evidence of recent repairs.			X					X Phased	Implement a program of replacing damaged or worn pavement throughout the site. (assumes 5000 sf for each period)	10,000 S.F.		\$65,170	\$77,140
SL-6	Site/Landscape	Varies	Pedestrian Circulation	The condition of the bituminous and Portland cement concrete pavement throughout the site ranges from good to fair.			X					X Phased	Implement a program of replacing damaged or worn pavement throughout the site. (assumes 1500 sf for each period)	3,000 S.F.		\$19,551	\$23,142
SL-7	Site/Landscape	Varies	Pedestrian Circulation	Accessible route(s) from Holden Street should be reviewed for MAAB compliance.			X					X Phased	Implement a program to review accessible pedestrian routes throughout the site for compliance with current MAAB standards.	1 L.S.		\$18,620	\$22,040

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Site/Landscape															
Issue #	Discipline	Loc	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
SL-8	Site/Landscape	Varies	Pedestrian Accessibility and MAAB Compliance	Two (2) accessible spaces in the northernmost visitor lot do not appear to conform to current MAAB standards.			X					X Phased	Implement a program to bring accessible parking spaces throughout the site into compliance with current MAAB standards.	1 L.S.		\$27,930	\$33,060
SL-9	Site/Landscape	Varies	Pedestrian Accessibility and MAAB Compliance	Six (6) accessible spaces in the student parking lot do not appear to conform to current MAAB standards.			X					X Phased	Implement a program to bring accessible parking spaces throughout the site into compliance with current MAAB standards	1 L.S.		\$83,790	\$99,180
SL-10	Site/Landscape	Varies	Pedestrian Accessibility and MAAB Compliance	There is no accessible route to or from the play area at the rear of the school, or to the school's garden.			X					X Phased	Construct an MAAB compliant accessible route from an accessible building entrance to the play area and school garden at the rear of the school.	1 L.S.		\$18,620	\$22,040
SL-11	Site/Landscape	Varies	Loading Docks and Service Areas	Confirm that loading dock meets current needs of the building.			X					X Phased	Maintain condition of loading dock and accessible ramp.	1 L.S.		\$13,965	\$16,530
SL-12	Site/Landscape	Varies	Courtyards and Other Exterior Student Congregation Areas	The rubber tile surfacing of the play area in the smaller courtyard does not appear to meet fall zone drop height requirements.			X					X Phased	Replace the existing rubber tile surfacing at the play area with a compliant surface that meets current fall zone height requirements.	500 S.F.		\$11,638	\$13,775

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																	
AREA:		Lower Level: Field House Track & Court/ Gymnastics/ Boy's Locker Rooms																	
Issue #	Discipline	Loc	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		
LF-1	Arch	Lower Level	Wall	Gypsum wall board assemblies: gouges in wallboard, corner bead damage and damaged paint finishes observed throughout the Lower Level		#16	X					X Phased	Implement a program of repair of damaged wall surfaces throughout the building to maintain integrity of the visible walls surfaces and reinforce an attitude of care for the high school by all users. Phase work over 8-year period (assume 50% of GSF per phase)	44,913 gsf (total floor area)				\$ 167,256	\$ 197,977
LF-2	Arch	Lower Level	Wall	Concrete Masonry (CMU) assemblies: chipped corners, cracked mortar joints and damaged paint finish observed at areas with CMU wall assemblies.		#16	X					X	Implement a program of repair of damaged wall surfaces throughout the building to maintain integrity of the visible walls surfaces and reinforce an attitude of care for the high school by all users. Phase work over 3-year period (assume 50% of GSF per phase)	5,000 gsf (total floor area)				\$ 93,100	\$ 110,200

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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Issue #	Discipline	Loc	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
LF-3	Arch	Lower Level	Wall	Missing corner guards and wall protection at weight training and exercise areas contribute to wall damage		#16		X			X		Replace/ install corner guards and wall railguard to prtect wall from weight and machine damage	(28) 48" high guards		\$ 6,517	
LF-4	Arch	Lower Level	Ceiling	Acoustical ceiling tiles (ACT) typically soiled near HVAC diffusers		#1	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. (assume 50% of GSF per phase)	14,914 sf		\$ 69,425	\$ 82,176

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																
AREA:		Lower Level: Field House Track & Court/ Gymnastics/ Boy's Locker Rooms																
Issue #	Discipline	Loc	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	
LF-5	Arch	Lower Level Corridors	Floor	Cracks and joints in floor slab telegraphing through finish floor tiles; this condition is severe and extensive throughout the Lower Level. Finish floor tiles worn and discolored throughout the Lower Level;		#8	X					X Phased	1. Develop program to remove all existing resilient flooring down to concrete substrate; 2. Test existing slab for moisture content, vapor drive, pH (alkaline) content; 3. If vapor drive is determined to be present and on-going, install Moisture Vapor Reduction System such as KOSTER American's VAP I; 4. Monitor existing cracks to determine	3,168 sf			\$ 73,735	\$ 87,278

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																
AREA:		Lower Level: Field House Track & Court/ Gymnastics/ Boy's Locker Rooms																
Issue #	Discipline	Loc	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	
LF-6	Arch	Fitness Center	Floor	1. Cushioned matting raised at joints between sections 2. Matting discolored in areas throughout Weight Room		#8			X			X		2,585 sf			\$ 48,133	\$ 56,973

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Lower Level: Field House Track & Court/ Gymnastics/ Boy's Locker Rooms															
Issue #	Discipline	Loc	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
													b. Perform testing of underlying concrete slab at various test areas of the Track and Court Areas to determine if moisture/ vapor drive is present. i. If vapor drive is present and on-going, remove existing overlying floor finish systems in areas determined to have active vapor drive and install Moisture Vapor Reduction System such as KOSTER	20,908 sf	\$ 1,500,001		
LF-8	Arch	Gymnas tics	Floor	1. Existing wood flooring finish is worn.				X			X		1. Strip existing wood flooring surface finish; replace damaged wood strip flooring sections; prepare wood surface and install new wood finish system.	11,947 sf			\$ 667,359

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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Issue #	Discipline	Loc	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
LF-9	Arch	Locker Trainer Rooms	Floor	1. 2x2 ceramic floor tiles are stained at various areas throughout these areas. 2. Grout joints badly stained throughout these areas. 3. Ceramic base cracked at numerous outside corners throughout these areas. 4. Buckling of ceramic floor tile at various areas.			X				X		1. Crack Repair: a. Remove existing ceramic tile at areas of cracking and spalling; b. Test moisture/ vapor drive at the substrate areas at these locations as well as monitor movement to determine if movement is ongoing or ceased. c. Determine if moisture migration is from concrete floor slab or through base of wall assembly.	5,018 sf			\$ 327,023

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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Issue #	Discipline	Loc	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
LF-10	Arch	Utility/ Electrical Rooms	Floor	1. Miscellaneous cracks in floor slab 2. Worn flooring finish coating.		#8	X				X		1. Remove loose concrete from edges of cracks and saw-cut cracks to provide a suitable substrate for crack repair filler; 2. Clean existing coated floor surface, prepare surface for application of new coating system; install new coating system.	2,781 sf			\$ 155,347

Condition Assessment Matrix

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							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr	
LF-11	Arch	Lower Level	Doors	i. At multiple double door units, one leaf binds against the other preventing full closure. ii. At multiple single door units, door leaf binds against frame preventing full closure. iii. Paint finish damage on doors and frames requiring repainting of entire assembly for appropriate long-lasting finish. iv. At multiple locations, closer units leaking fluid causing malfunction and slamming.		#8			X			X Phased	i. Develop program for in-depth evaluation of each door assembly and repair/ replacement of components as required. ii. This report includes comments on a representative sampling of the existing doors. Based upon the years of service and the level of usage, a full repair/ replacement program for all doors is recommended.	22 single 14 double 11 storefront				\$ 373,331

Condition Assessment Matrix

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							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr	
				vii. At multiple locations, door slab is cracked at latch side. viii. Exit device hardware finish is worn and discolored; multiple units with missing parts; handle units loose. ix. Coiling overhead door grinds during operation. x. At double door units, astragal brush weatherstripping is worn. xi. Smoke gasketing on rated doors is worn or missing.														
LF-12	Arch	Gym Lobby	Windows Glazing	Missing sealant at butt joint of display glass at Gym Lobby.		#11	X				X		Install missing sealant.	15 lf			\$ 698	

Condition Assessment Matrix

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Issue #	Discipline	Loc	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			
LF-13	Arch	Lower Level	Windows Glazing	Wired glass used in egress door vision panels and in glazed wall assemblies has been found to present a significant hazard to occupants in instances where an occupant collides with the wired glass assembly, glass is broken and the exposed, broken ends of embedded wire can cause significant injury. This is of particular concern in areas of high levels of activity such as a gymnasium.		#11		X				X		Replace all wired glass panels with non-wired safety glazing with appropriate fire-rating as required. (assumes 32 SF per phase)	64 sf				\$ 3,426	\$ 4,055
LF-14	Arch	Trainers Room M004 Boy's Toilet Room A011	Casework	i. Wall cabinetry hardware missing in some units ii. Broken components and missing stall door at Boy's Toilet Room A011.		#3	X					X		i. Replace all missing toilet room partition doors and hardware. ii. Replace all missing/ broken hardware at Boy's Toilet Room.	3 stalls				\$ 8,379	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
LF-15	Arch	Boy's Locker Room	Casework	iii. Lockers have visible rust .		#3	X				X		Clean all metal lockers and repaint components showing signs of rust. 1. Alternative: Replace existing lockers with new locker units; this alternative may be more cost effective and result in a longer service life and better in appearance than a refurbished unit.	180 lockers		\$ 67,032	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
LF-16	Arch	Team Rooms	Casework	Delamination/ broken laminate of plastic laminate finish at cabinets.		#3		X			X		Refurbish Team Storage units with damage to plastic laminate finish to re-clad units with new plastic laminate finish. Alternative: Replace existing Team Storage units with new units; This alternative may be more cost effective and result in a longer service life and better in appearance than a refurbished unit.	129 LF		\$ 54,045	
LF-17	Arch	Lower Level	Mechanical Fixtures	i. Ceiling registers are dirty ii. Missing ceiling diffusers and access panels at a number of locations.		#13	X				X Phased Annually		i. Implement annual cleaning of all ceiling diffusers. ii. Replace filters within supply air delivery system. (assumes 7,450 SF per phase)	14,914 sf		\$ 69,425	\$ 82,176
LF-18	Arch	Team Room A033	Electrical/ Lighting Fixtures	Damaged Exit sign		#7 & #12	X			X			Replace damaged exit sign with new illuminated exit sign	1	\$ 931		

Condition Assessment Matrix

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Issue #	Discipline	Loc	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
LF-19	Arch	Lower Level	Electrical/ Lighting Fixtures	i. Cracked lens at (10) 2x4 light fixtures in Boy's Locker Room A026. ii. Debris visible on top-side of lensed fixtures. iii. A027 Vestibule to Boy's Locker Room: stained gwb ceiling and stained light fixtures.		#7 & #12		X			X		Implement a program for cleaning of light fixture lenses and replacement of cracked lenses and replacement of inoperable lamps. Metal Hailde (MH) fixtures at Field House and Gymnastics Area are high up (16 - 20ft above finish floor)	2x4: 106; Rec. Down: 20; Linear (8ft): 29; Linear (4 ft): 28; MH Pendant: 66		\$ 7,327	
LF-20	Arch	Lower Level	Electrical/ Lighting Fixtures	Missing faceplates at a number of data wall locations		#7 & #12	X				X		Replace missing faceplates	100		\$ 1,862	
LF-21	Arch	Fitness Center	Electrical/ Lighting Fixtures	Missing horn/ strobes in Fitness Room area		#7 & #12			X	X			Install horn/ strobes per code and integrate with existing fire alarm system	4	\$ 3,040		
LF-22	Arch	Boy's Locker Room	Plumbing Fixtures	Missing hand held shower head in Boy's Locker Room Shower		#14		X			X		Implement evaluation program for all faucet assemblies and replace all faucets near or at the end of service life.	85		\$ 15,827	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
LF-23	Arch	Electrical Room E002	Code Issues	Stored items in Electrical Room interrupt required 3'-0" min. clearance in front of electrical panels.		#5			X	X			Remove all obstructions within 3'-0" in front of all electrical panels; limit storage of items inside room to avoid obstructions to safe egress, especially in an emergency situation.	0			
LF-24	Arch	Boy's Toilets A028	Code Issues	Towel dispensers at toilet rooms not within required reach distances per 521 CMR and ADA		#5			X	X			Relocate paper towel dispensers within Toilet Rooms to be in conformance with 521 CMR.	22	\$	1,170	
LF-25	Arch	Stair E Lower Level	Code Issues	Missing handrail section at bottom of stairs.		#5			X	X			Install missing portion of handrail as noted above to be in conformance with 521 CMR 27.4.3(b).	13 lf	\$	2,766	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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Issue #	Discipline	Loc	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
LF-26	Arch	Storage Room M003B	Code Issues	Entry door: active door lever does not allow egress once inside and door has closed. Lever will not operate from inside. Storeroom lockset function appears to have been installed backwards, creating a dangerous egress obstruction.		#5			X	X			Replace existing lockset with a new storeroom function lockset (keyed opening from outside; level handle inside always unlocked).	1	\$ 1,824		
LF-27	Arch	Fitness Center M006	Code Issues	Installed glass at entry wall and doors does not appear to be marked as tempered/ safety glass.		#5			X	X			Verify requirements for fire-rated assembly between Fitness Center M006 and M003 Field House track/ court area: 1. Confirm adequacy of fire-rated of existing glazed wall and door assemblies to provide fire rating required; a. If existing glazing does not meet requirements of fire rating at the time the assembly was installed, replace	72 sf	\$ 12,586		

Condition Assessment Matrix

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Issue #	Discipline	Loc	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
													a. If existing glazing is not safety glazing, replace existing glazing with certified safety glazing or install a protective bar 1 ½ inches (38 mm) or more in height, capable of withstanding a horizontal load of 50 pounds plf (730 N/m) without contacting the glass, is installed on the accessible sides of the glazing 34 inches to 38 inches (864 mm to 965 mm)				

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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Issue #	Discipline	Loc	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
LF-28	Arch	Field House	General Issues	Significant water infiltration issue from roof at indoor track area.		#10			X	X			Perform water testing of existing building envelope assemblies (roof and exterior wall) for possible sources of water infiltration; repair sources of infiltration; evaluate damage to interior finishes and assemblies caused by water infiltration and repair/ replace all damaged assemblies. 1. Investigate other possible sources of water infiltration	1 LS	\$ 30,400		

Condition Assessment Matrix

		BUILDING:	SHREWSBURY HIGH SCHOOL														
		AREA:	Lower Level: Field House Track & Court/ Gymnastics/ Boy's Locker Rooms														
Issue #	Discipline	Loc	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
													Architectural Lower Level Cost Total		\$ 1,564,158	\$ 2,215,763	\$ 620,836

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		First Floor: Lobby-Commons-Main Street Corridor/ Administration Offices/ Classroom Wing A/ Classroom Wing B/ Pre-School-Special Ed-IT Lab/ Auditorium Wing/ Kitchen-															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-1	Arch	First Floor	Walls	Surface cracks in GWB wall finish especially at corner bead locations but also near door frames; typically observed in classroom, prep room and other individual spaces off the main circulation corridors. Damaged paint finish due to abrasion of adjacent furnishings against the walls; typically observed in classroom, prep room and other individual spaces off the main circulation corridors.		#67	X					X Phased	Implement a program of repainting of painted wall 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. (assume 50% SF each phase)	120,388 gsf		\$448,325	\$530,670
1F-2	Arch	First Floor	Walls	Areas of damaged GWB at exterior walls show signs of wicking moisture.		#67			X	X			At areas of wall damage due to water infiltration, investigate and remediate source of water infiltration prior to repair of wall surface. 1. Note: Water infiltration is particularly susceptible at wall surfaces of exterior walls where problems in the building envelope may cause water infiltration and damage to interior wall surfaces. See Building Envelope Section of this Report to identify observed problem conditions in the building envelope.	Allowance	\$53,200		

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		First Floor: Lobby-Commons-Main Street Corridor/ Administration Offices/ Classroom Wing A/ Classroom Wing B/ Pre-School-Special Ed-IT Lab/ Auditorium Wing/ Kitchen-															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-3	Arch	Practice Room C108 Band & Orchestra C121	Walls	Loose acoustical wall panels		#67	X				X		Implement a program for repair of acoustical wall panels at all spaces fitted with acoustical wall panels.	5,260 sf acoustical wall panel		\$244,853	
1F-4	Arch	Director Office C109	Walls	Peeling, bubbled paint finish at wall surface opposite the mop sink in the adjacent Custodian Room (C111).		#67			X	X			Remediate source of water leak leading to deterioration of gypsum wallboard and repair damaged gypsum wallboard.	1 LS	\$38,000		
1F-5	Arch	First Floor	Ceilings	Acoustical ceiling tiles (ACT) typically soiled near HVAC diffusers		#68	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.	81,105 sf ACT		\$377,544	\$446,889
1F-6	Arch	D108 Kitchen and Area	Ceilings	ACT ceiling is extensively stained throughout.		#68		X		X			Stained, rather than simply soiled, ceiling tiles may indicate a more serious issue; Invstigate and remediate cause of staining; replace all stained ceiling tiles	Included in 1F-5			
1F-7	Arch	E108 Girl's Locker Room	Ceilings	ACT ceiling tiles are badly stained near diffusers		#68		X		X			Stained, rather than simply soiled, ceiling tiles may indicate a more serious issue; Invstigate and remediate cause of staining; replace all stained ceiling tiles	Included in 1F-5			

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		First Floor: Lobby-Commons-Main Street Corridor/ Administration Offices/ Classroom Wing A/ Classroom Wing B/ Pre-School-Special Ed-IT Lab/ Auditorium Wing/ Kitchen-															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-8	Arch	B113 Automotive Shop	Ceilings	ACT ceiling tiles badly stained near stem of light fixture; Stain appears to be water stain from above.		#68			X	X			Stained, rather than simply soiled, ceiling tiles may indicate a more serious issue; Investigate and remediate cause of staining; replace all stained ceiling tiles	Included in 1F-5			
1F-9	Arch	First Floor Main Street and Corridors	Flooring	Cracks and joints in floor slab telegraphing through finish floor tiles; this condition is severe and extensive throughout the First Floor. Finish floor tiles worn and discolored throughout the First Floor.		#69	X				X Phased		1. Develop program to remove all existing resilient flooring down to concrete substrate; 2. Test existing slab for moisture content, vapor drive, pH (alkaline) content; 3. If vapor drive is determined to be present and on-going, install Moisture Vapor Reduction System such as KOSTER American's VAP I; 4. Monitor existing cracks to determine if movement is on-going or static. 5. Install saw-cut joints as needed in areas of on-going movement with appropriate flexible sealant . 6. Install new floor finish system which may include: a. New resilient flooring system b. New thin set epoxy terrazzo system c. New porcelain tile system	34,192 sf		\$763,986	\$904,310

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-10	Arch	First Floor Classrooms	Flooring	Cracks and joints in floor slab telegraphing through VCT floor tiles in a number of locations; VCT flooring in classroom in generally good condition. Some cracked or missing tiles.		#69	X					X Phased	1. Develop program to remove all existing VCT flooring down to concrete substrate; 2. Test existing slab for moisture content, vapor drive, pH (alkaline) content; 3. If vapor drive is determined to be present and on-going, install Moisture Vapor Reduction System such as KOSTER American's VAP I; 4. Monitor existing cracks to determine if movement is on-going or static. 5. Install saw-cut joints as needed in areas of on-going movement with appropriate flexible sealant . 6. Install new VCT flooring	43,214 sf		\$321,858	\$380,975
1F-11	Arch	First Floor	Flooring	Vinyl wall base loose in many locations throughout the First Floor		#69	X					X Phased	Develop program to re-adhere vinyl wall base at all locations where pulling away from wall	Included in 1F-10			
1F-12	Arch	Stair A	Flooring	Floor tiles heavily stained and discolored		#69	X					X Phased	Replace as part of overall flooring replacement program noted in Item 9 above	Included in 1F-9			
1F-13	Arch	C Corridor	Flooring	Floor finished highly scuffed		#69		X				X	Refinish Flooring annually as part of annual maintenance; Replace at end of service life	Included in 1F-9			
1F-14	Arch	Vestibule at Door C103	Flooring	Carpet worn between door and steps		#69	X				X		Replace walk-off mat within 5 years	373 sf		\$31,254	
1F-15	Arch	C103 Bent Room	Flooring	Flooring finish scuffed and worn		#69	X					X	Refinish Flooring annually as part of annual maintenance; Replace at end of service life	Included in 1F-9			

Condition Assessment Matrix

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
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1F-16	Arch	C115 Boy's Dressing Rm	Flooring	Crack in underslab telgraphing through VCT flooring in Dressing Room and in ceramic tile flooring in Toilet Room		#69	X					X	Replace as part of overall flooring replacement program; Replace ceramic tile flooring at end of service life	Included in 1F-10			
1F-17	Arch	D102 Storage	Flooring	VCT flooring badly stained and chipped		#69	X					X	Replace as part of overall flooring replacement program noted in Item 10 above;	Included in 1F-10			
1F-18	Arch	Backstage	Flooring	Flooring heavily marked and scuffed		#69		X			X		Refinish black stage floor finish	2,770 sf		\$30,946	
1F-19	Arch	Stage	Flooring	Wood flooring heavily worn and marred		#69		X			X		Refinish wood stage flooring	495 sf		\$5,530	
1F-20	Arch	M113 Auditorium	Flooring	Carpet heavily worn and torn		#69			X	X			Replace damaged carpet; at end of service life	4,625 sf	\$43,059		
1F-21	Arch	M113 Seating Aisle	Flooring	Cracks in concrete slab at aisles		#69	X				X		Implement program to repair cracks in all areas of exposed concrete flooring	10,163 sf		\$56,771	
1F-22	Arch	M117A Control Booth Support	Flooring	VCT flooring scuffed and dirty		#69			X	X			Refinish flooring as part of annual maintenance	Included in 1F-10			
1F-23	Arch	M117 Control Booth	Flooring	Flooring dirty and pitted		#69	X					X	Replace as part of overall flooring replacement program noted in Item 9 above	Included in 1F-10			
1F-24	Arch	M115 Storage	Flooring	Flooring is scuffed and dirty		#69			X	X			Refinish flooring as part of annual maintenance	Included in 1F-10			
1F-25	Arch	M119 Servery	Flooring	Resilient tile flooring worn and faded		#69		X				X	Replace as part of phased flooring program noted in Issue 9 above	Included in 1F-9			
1F-26	Arch	D112 Custodial Services	Flooring	Cracks in exposed concrete slab		#69	X				X		Repair cracks	Included in 1F-21			

Condition Assessment Matrix

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
27	Arch	D112 Custodial Services	Flooring	Existing coating scratched and faded		#69	X				X		Repaint concrete floor slab at entire mechanical area				
28	Arch	D110 Trash/Recycle	Flooring	Stained grout at existing 6x6 quarry tile flooring		#69	X				X		Clean and seal grout joints				
1F-27	Arch	Locker Trainer Rooms	Flooring	1. 2x2 ceramic floor tiles are stained at various areas throughout these areas. 2. Grout joints badly stained throughout these areas. 3. Ceramic base cracked at numerous outside corners throughout these areas. 4. Buckling of ceramic floor tile at various areas.			X				X		1. Crack Repair: a. Remove existing ceramic tile at areas of cracking and spalling; b. Test moisture/ vapor drive at the substrate areas at these locations as well as monitor movement to determine if movement is ongoing or ceased. c. Determine if moisture migration is from concrete floor slab or through base of wall assembly. d. If vapor drive is present and on-going, remove existing overlying floor finish systems in areas determined to have active vapor drive and install Moisture Vapor Reduction System such as KOSTER American's VAP I;	6,549 sf		\$304,856	

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							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
													e. If moisture/ vapor drive is through back-up wall assembly, determine source of vapor drive and provide mitigation to eliminate moisture/ vapor drive; repair back up wall assembly in preparation for new ceramic tile finish system. 2. Refurbish Ceramic Tile Floor Finish Assembly: a. Grind out existing grout and install new grout throughout ceramic tile flooring system. b. Replace broken/ missing tiles within field of flooring. c. Clean entire ceramic tile flooring system.				
1F-28	Arch	First Floor	Doors	i. At multiple double door units, one leaf binds against the other preventing full closure. ii. At multiple single door units, door leaf binds against frame preventing full closure. iii. Paint finish damage on doors and frames requiring repainting of entire assembly for appropriate long-lasting finish. iv. At multiple locations, closer units leaking fluid causing		#70			X			X Phased	i. Develop program for in-depth evaluation of each door assembly and repair/ replacement of components as required. ii. This report includes comments on a representative sampling of the existing doors. Based upon the years of service and the level of usage, a full repair/ replacement program for all doors is recommended. ii.: Coiling Fire Shutters: 15ft (w) x 10ft(h) NOTE: Particular concern for doors that are part of a required means of egress. HIGH PRIORITY	Single: 210 Double: 37 Storefront: 31 Coiling: 2	\$1,272,677		

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate			
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr	
				v. At most door assemblies, silencers are severely worn or missing. vi. At multiple door assemblies, handle hardware finish is worn with base metal showing through. vii. At multiple locations, door slab is cracked at latch side. viii. Exit device hardware finish is worn and discolored; multiple units with missing parts; handle units loose. ix. Coiling overhead door grinds during operation. x. At double door units, astragal brush weatherstripping is worn. xi. Smoke gasketing on rated doors is worn or missing. xii. Steel door slabs at multiple locations are heavily dented. xiii. At multiple door units, hinge pins are loose.														

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1F-29	Arch	First Floor	Windows	Failed seals with condensation at insulating glass (IG) units of awning windows		#71		X			X		Replace insulating glass units with failed seals	34		\$6,331	
1F-30	Arch	First Floor	Windows	Interior sealant bead at window perimeter is deteriorated in a number of locations		#71	X				X		Replace sealant at interior perimeter of window systems	2,728 lf	\$15,239		
1F-31	Arch	First Floor	Windows	Window shades frayed and pull chain corroded at a number of locations.		#71	X				X		Implement program of replacing widow shades (assumes 62 shades per phase)	124 shades		\$13,853	\$16,398
1F-32	Arch	B111	Windows	Plastic laminate window sill has delaminated		#71		X			X		Replace laminated sill with new	10 lf		\$372	
1F-33	Arch	A101 Science Classroom	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	137 lf of cabinet		\$57,396	
1F-34	Arch	A101 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 8 integrated sinks	428 sf		\$239,081	
1F-33	Arch	A101A Prep Room	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	30 lf of cabinet		\$12,569	
1F-34	Arch	A101A Prep Room	Casework	Existing black epoxy countertops showing wear & tear		#72		X			X		Replace countertops with 1 integrated sink	75 sf		\$41,895	
1F-33	Arch	A102 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	143 lf of cabinet		\$59,910	
1F-34	Arch	A102 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 7 integrated sinks	325 sf		\$181,545	

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-35	Arch	A102A Prep Room	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	25 lf of cabinet		\$10,474	
1F-36	Arch	A102A Prep Room	Casework	Existing black epoxy countertops showing wear & tear		#72		X			X		Replace countertops with integrated 1 sink	63 lf		\$70,384	
1F-37	Arch	A105 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	81 lf of cabinet		\$33,935	
1F-38	Arch	A105 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 7 integrated sinks	290 sf		\$161,994	
1F-39	Arch	A106 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	148 lf of cabinet		\$62,005	
1F-40	Arch	A106 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 8 integrated sinks	337 sf		\$188,248	
1F-41	Arch	A107 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	81 lf of cabinet		\$33,935	
1F-42	Arch	A107 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 8 integrated sinks	290 sf		\$161,994	
1F-43	Arch	A107A Prep Room	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	30 lf of cabinet		\$12,569	
1F-44	Arch	A107A Prep Room	Casework	Existing black epoxy countertops showing wear & tear		#72		X			X		Replace countertops with 1 integrated sink	75 sf		\$41,895	
1F-45	Arch	A111 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	81 lf of cabinet		\$33,935	

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							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-46	Arch	A111 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 8 integrated sinks	290 sf		\$161,994	
1F-47	Arch	A116 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	148 lf of cabinet		\$62,005	
1F-48	Arch	A116 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 8 integrated sinks	337 sf		\$188,248	
1F-49	Arch	A116A Prep Room	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	25 lf of cabinet		\$10,474	
1F-50	Arch	A116A Prep Room	Casework	Existing black epoxy countertops showing wear & tear		#72		X			X		Replace countertops with 1 integrated sink	63 sf		\$35,192	
1F-51	Arch	A120 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	148 lf of cabinet		\$62,005	
1F-52	Arch	A120 ScienceLab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 8 integrated sinks	337 sf		\$188,248	
1F-53	Arch	A113 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	81 lf of cabinet		\$33,935	
1F-54	Arch	A113 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X			X		Replace workbench countertops with 8 integrated sinks	290 sf		\$161,994	
1F-55	Arch	A113A Prep Room	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	30 lf of cabinet		\$12,569	
1F-56	Arch	A113A Prep Room	Casework	Existing black epoxy countertops showing wear & tear		#72		X			X		Replace countertops with 1 integrated sinks	75 sf		\$41,895	

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate			
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr	
1F-57	Arch	A117 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	81 lf of cabinet		\$33,935	
1F-58	Arch	A117 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X				X		Replace workbench countertops with 8 integrated sinks	290 sf		\$161,994	
1F-59	Arch	B102 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	149 lf of cabinet		\$62,424	
1F-60	Arch	B102 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X				X		Replace workbench countertops with 8 integrated sinks	340 sf		\$189,924	
1F-61	Arch	B102A Prep Room	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	30 lf of cabinet		\$12,569	
1F-62	Arch	B102A Prep Room	Casework	Existing black epoxy countertops showing wear & tear		#72		X				X		Replace countertops with 1 integrated sink	75 sf		\$41,895	
1F-63	Arch	B106 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	83 lf of cabinet		\$34,773	
1F-64	Arch	B106 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X				X		Replace workbench countertops with 8 integrated sinks	295 sf		\$164,787	
1F-65	Arch	B108 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	83 lf of cabinet		\$34,773	
1F-66	Arch	B108 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X				X		Replace workbench countertops with 8 integrated sinks	295 sf		\$164,787	
1F-67	Arch	B108A Prep Room	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	30 lf of cabinet		\$12,569	

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate			
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr	
1F-68	Arch	B108A Prep Room	Casework	Existing black epoxy countertops showing wear & tear		#72		X				X		Replace countertops with 1 integrated sink	75 sf		\$41,895	
1F-69	Arch	B112 Science Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	83 lf of cabinet		\$34,773	
1F-70	Arch	B112 Science Lab	Casework	Existing black epoxy workbench countertops showing wear & tear		#72		X				X		Replace workbench countertops with 8 integrated sinks	295 sf		\$164,787	
1F-71	Arch	B101 Food Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	110 lf of cabinet		\$46,085	
1F-72	Arch	B101 Food Lab	Casework	Existing plastic laminate countertops showing wear & tear		#72		X				X		Replace plastic laminate countertops and add 5 new sink/faucets	228 sf		\$127,361	
1F-73	Arch	B101A Prep Room	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	36 lf of cabinet		\$15,082	
1F-74	Arch	B101A Prep Room	Casework	Existing plastic laminate countertops showing wear & tear		#72		X				X		Replace plastic laminate countertops and add 1 new sink/faucet	75 sf		\$41,895	
1F-75	Arch	B107 Food Lab	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	110 lf of cabinet		\$46,085	
1F-76	Arch	B1007 Food Lab	Casework	Existing plastic laminate countertops showing wear & tear		#72		X				X		Replace plastic laminate countertops and add 5 new sink/faucets	228 sf		\$127,361	
1F-77	Arch	M109 Little Colonials	Casework	Existing wood veneer cabinets showing wear & tear		#72		X				X		Replace cabinet doors and drawers in Science Classrooms	47 lf of cabinet		\$19,691	

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-78	Arch	M109 Little Colonials	Casework	Existing plastic laminate countertops showing wear & tear		#72		X			X		Replace plastic laminate countertops and add 3 new sink/faucets	98 sf		\$54,743	
1F-79	Arch	M101 Life Skills Classroom	Casework	Existing wood veneer cabinets showing wear & tear		#72		X			X		Replace cabinet doors and drawers in Science Classrooms	10 lf of cabinet		\$4,190	
1F-80	Arch	M101 Life Skills Classroom	Casework	Existing plastic laminate countertops showing wear & tear		#72		X			X		Replace plastic laminate countertops and add 1 new sink/faucet	21 sf		\$11,731	
1F-81	Arch	C103 Bent Presentation	Casework	Delamination of palstic laminate finish on prentation wall casework		#72		X			X		Repair damaged laminate finish on prentation wall casework	1 LS		\$9,310	
1F-82	Arch	C119 Choral; C121 Band; C125 Ed Tel	Casework	Cabinet doors out of alignment		#72		X			X		Adjust cabinet doors to provide smooth operation	14 pair		\$1,303	
1F-83	Arch	M113 Auditorium	Casework	Damaged laminate finish at stage face and edging		#72		X			X		Replace solid surface edge banding (16" wide) along stage edge	30 LF		\$1,117	
1F-84	Arch	D102 General Office	Casework	Plastic laminate finish of Reception Desk is chipped and delaminated				X			X		Repalce existing Reception Desk with new	30 Ft Curve		\$33,516	
1F-85	Arch	C101 Faculty Dining	Casework	Existing wood veneer cabinets showing wear & tear				X			X		Replace cabinet doors and drawers in Science Classrooms	16 LF		\$6,703	
1F-86	Arch	C101 Faculty Dining	Casework	Existing plastic laminate countertops showing wear & tear				X			X		Replace plastic laminate countertops and add new sink/aucet	16 LF		\$17,875	

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate			
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr	
1F-87	Arch	M128 Main St Classroom	Casework	Existing plastic laminate cabinets showing wear & tear				X				X		Replace cabinet doors and drawers in Science Classrooms	22 LF		\$9,217	
1F-88	Arch	M128 Main St Classroom	Casework	Existing plastic laminate countertops showing wear & tear				X				X		Replace plastic laminate countertops and add new sink/aucet	22 LF		\$24,578	
1F-89	Arch	C103 Bent Presentatio n	Furnish.	Seating upholstery showing wear and tear		#73		X				X		Reupholster seating	191		\$7,113	
1F-90	Arch	C103 Bent Presentatio n	Furnish.	Broken spring and/ or loose arm rest		#73		X				X		Repair broken seat components	57		\$5,307	
1F-91	Arch	M113 Auditorium	Furnish.	Seating upholstery showing wear and tear		#73		X				X		Reupholster seating	520		\$19,365	
1F-92	Arch	M113 Auditorium	Furnish.	Broken spring and/ or loose arm rest		#73		X				X		Repair broken seat components	156		\$14,524	
1F-93	Arch	First Floor	Equip.	Fire Extinguishers expired		#74			X	X				Re-charge all fire extinguishers	20		\$1,862	
1F-94	Arch	B101 Food Lab	Equip.	Kitchen Appliances nearing end of service life		#74		X				X		Replace Kitchen Appliances: -range: 3 -cooktop: 2 -wall oven: 3 -microwave: 6	as noted		\$21,785	
1F-95	Arch	B107 Food Lab	Equip.	Kitchen Appliances nearing end of service life		#74		X				X		Replace Kitchen Appliances: -range: 3 -cooktop: 2 -wall oven: 3 -microwave: 6	as noted		\$21,785	
1F-96	Arch	B101A Prep Room	Equip.	Kitchen Appliances nearing end of service life		#74		X				X		Replace Appliances: -Commercial Refrig: 1 -Commercial Freezer: 1 -Commercial Dishwasher: 1	as noted		\$16,758	

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Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-97	Arch	M109 Little Colonials	Equip.	Kitchen Appliances nearing end of service life		#74		X			X		Replace Kitchen Appliances: -range: 1 -wall oven: 1 -microwave: 1 -refrig/freezer: 1 -dishwasher: 1	as noted		\$7,262	
1F-98	Arch	M101 Life Skills Classroom	Equip.	Kitchen Appliances nearing end of service life		#74		X			X		Replace Kitchen Appliances: -range: 1 -wall oven: 1 -microwave: 1 -refrig/freezer: 1 -dishwasher: 1	as noted		\$7,262	
1F-99	Arch	First Floor	Mech. Fixtures	Ceiling and wall diffusers are typically dirty from supply air		#75	X				X		Implement a program of cleaning all ceiling and wall diffusers throughout the first floor (assumes 50% per phase)	81,105 sf ACT		\$37,754	\$44,689
1F-100	Arch	Stair A F100	Mech. Fixtures	Stainless steel enclosures at pedestal radiant heaters are misaligned		#75	X				X		Reset existing stainless steel pedestal heater enclosures to be aligned and secured.	15 LF		\$978	
1F-101	Arch	M109 Little Colonials	Mech. Fixtures	Stainless steel enclosures at pedestal radiant heaters are misaligned		#75	X				X		Reset existing stainless steel pedestal heater enclosures to be aligned and secured.	30 LF		\$1,955	
1F-102	Arch	Commons	Mech. Fixtures	Stainless steel enclosures at pedestal radiant heaters are misaligned		#75	X				X		Reset existing stainless steel pedestal heater enclosures to be aligned and secured.	174 LF		\$11,340	
1F-103	Arch	Lobby	Mech. Fixtures	Stainless steel enclosures at pedestal radiant heaters are misaligned		#75	X				X		Reset existing stainless steel pedestal heater enclosures to be aligned and secured.	60 LF		\$3,910	

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AREA:		First Floor: Lobby-Commons-Main Street Corridor/ Administration Offices/ Classroom Wing A/ Classroom Wing B/ Pre-School-Special Ed-IT Lab/ Auditorium Wing/ Kitchen-															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-104	Arch	B114 Technology Lab	Elec. Fixtures	Disconnect push button not labeled		#76		X			X		Impelment program to label all emergency electrical controls	25		\$698	
1F-105	Arch	M105 IT Lab	Elec. Fixtures	Missing faceplate at data port		#76		X			X		Implement program to install/ reset missing/ loose facepaltes at data and power outlets	50		\$2,328	
1F-106	Arch	First Floor	Elec. Fixtures	Inoperable light fixtures		#76			X		X		Implement program to relamp or replace inoperbale light fixtures. Total Fixture count: 2x4: 621 Rec. Down: 246 4' Linear: 25 8' Pendant: 22 4' Utility: 25 8' Utility: 39 12' pendant: 122 4' recessed: 120	2x4: 621 Rec. Down: 246 4' Linear: 25 8' Pendant: 22 4' Utility: 25 8' Utility: 39 12' pendant: 122 4' recessed: 120	\$257,230		
1F-107	Arch	First Floor	Plumbing Fixtures	Missing eschutcheon s at sprinkler heads		#77			X		X		Implement program to install missing or loose eschutcheons at sprinkler heads (Based on total floor area of 120,484 sf)	120,484 sf x 15%	\$45,784		
1F-108	Arch	D108 Kitchen	Plumbing Fixtures	On-going leak at dishwasher		#77		X		X			Service dishwasher to repair cause of leak	1 LS	\$912		

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		First Floor: Lobby-Commons-Main Street Corridor/ Administration Offices/ Classroom Wing A/ Classroom Wing B/ Pre-School-Special Ed-IT Lab/ Auditorium Wing/ Kitchen-															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-109	Arch	First Floor Electrical Rooms	Code Issues	Electrical Rooms often used for storage and violating clearance requirements in front of electrical panels (3 ft)		#78			X	X			Implement program to clear all Eletrical Rooms form unnecessary storage items and provide 3 ft min clearance in front of all electrical panels	7 Rooms	\$2,128		
1F-110	Arch	Stair A, Stair B, Vestibule at South End of B Wing, Door C175, Stair E,	Code Issues	Exterior concrete pad does not provide accessibility to a public way		#78			X	X			Provide accessible walkway from exit discahrges to public way	5 locations	\$16,720		
1F-111	Arch	First Floor	Code Issues	Non-firestopped floor/ ceiling penetrations observed in various locations		#78			X	X			Implement program to review all floor/ ceiling penetrations and install code required firestopping systems	200 locations	\$30,400		
1F-112	Arch	M117 Control Booth		Access to chairlift blocked		#78			X	X			Remove items stored in front of chairleift to provide access to lift	1 location	\$2,280		
1F-113	Arch	A107A Prep Room	General Note	Mice dropping observed inside base cabinets		#79			X	X			Implement extermination program throughout facility: - Lower Level: 45,819 sf - First Floor: 120,484 sf -Second Floor: 53,446 sf - Third Floor: 49,066 sf	Lower level First Floor Second Floor Third Floor	\$61,290		

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		First Floor: Lobby-Commons-Main Street Corridor/ Administration Offices/ Classroom Wing A/ Classroom Wing B/ Pre-School-Special Ed-IT Lab/ Auditorium Wing/ Kitchen-															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
1F-114	Arch	Corridor D200	General Note	Metal lockers in Corridor: damaged interior shelves; missing locks; some doors stick and are difficult to open		#24#29	X	X			X Phased		Implement program to replace missing locks and damaged shelves and adjust doors to operate smoothly	491 Lockers		\$182,848	
5															1 yr	5 yr	10 yr
Architectural First Floor Cost Total														\$566,241	\$8,360,033	\$2,323,930	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																
AREA:		Second Floor: Media Center/ Corridor/ Guidance Offices/ Classroom Wing A/ Classroom Wing B																
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate			
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr	
2F-1	Arch	Second Floor	Walls	Surface cracks in GWB wall finish especially at corner bead locations but also near door frames; typically observed in classroom, prep room and other individual spaces off the main circulation corridors. Damaged paint finish due to abrasion of adjacent furnishings against the walls; typically observed in classroom, prep room and other individual spaces off the main circulation corridors.		#39 & #44	X						X Phased	Implement a program of repainting of painted wall 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.	53,446 sf		\$199,405	\$236,031
2F-2	Arch	Second Floor	Ceilings	Acoustical ceiling tiles (ACT) typically soiled near HVAC diffusers		#23	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. (50% complete before YR5 and 50% complete before Y10)	53,446 sf		\$249,257	\$295,038
2F-3	Arch	Second Floor	Ceilings	ACT ceiling is stained at various locations throughout.		#40		X		X				Stained, rather than simply soiled, ceiling tiles may indicate a more serious issue; Investigate and remediate cause of staining; replace all stained ceiling tiles	Included in 2F-2			
2F-4	Arch	Second Floor	Flooring	Cracks and joints in floor slab telegraphing through finish floor tiles; this condition is severe and extensive throughout the Lower Level. Finish floor tiles worn and discolored throughout the Lower Level;		#30		X					X Phased	1. Develop program to remove all existing resilient flooring down to concrete substrate; 2. Being a structured slab above grade, vapor drive not anticipated; 3. Monitor existing cracks to determine if movement is on-going or static. 4. Install saw-cut joints as needed in areas of on-going movement with appropriate flexible sealant . 5. Install new resilient floor finish system	12,048 sf		\$179,467	\$212,430

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Second Floor: Media Center/ Corridor/ Guidance Offices/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
2F-5	Arch	B213 Lang. Lab	Flooring	Carpet at ramp not secured		#30			X	X			Replace carpet at ramp to avoid tripping hazard	100 sf	\$760		
2F-6	Arch	Utility/ Electrical Rooms	Flooring	1. Miscellaneous cracks in floor slab		#30	X					X Phased	1. Remove loose concrete from edges of cracks and saw-cut cracks to provide a suitable substrate for crack repair filler; 2. Clean existing coated floor surface, prepare surface for application of new coating system; install new coating system.	1,109 sf		\$11,357	\$13,443
2F-7	Arch	Auditorium- Upper Balcony Seating	Flooring	1. Miscellaneous cracks in floor slab		#30	X					X Phased	1. Remove loose concrete from edges of cracks and saw-cut cracks to provide a suitable substrate for crack repair filler; 2. Clean existing coated floor surface, prepare surface for application of new coating system; install new coating system.	Included in 2F-6			
2F-8	Arch	Guidance Area M203	Flooring	Carpet is worn		#30		X				X Phased	Replace carpet throughout Guidance Area	12,588 sf		\$117,194	
2F-9	Arch	Second Floor	Doors	i. At multiple double door units, one leaf binds against the other preventing full closure. ii. At multiple single door units, door leaf binds against frame preventing full closure. iii. Paint finish damage on doors and frames requiring repainting of entire assembly for appropriate long-lasting finish. iv. At multiple locations, closer units leaking fluid causing malfunction and slamming. v. At most door assemblies, silencers are severely worn or missing. vi. At multiple door assemblies, handle hardware finish is worn with base metal showing through. vii. At multiple locations, door slab is		#27						X X	i. Develop program for in-depth evaluation of each door assembly and repair/ replacement of components as required. ii. This report includes comments on a representative sampling of the existing doors. Based upon the years of service and the level of usage, a full repair/ replacement program for all doors is recommended. NOTE: Particular concern for doors that are part of a required means of egress. HIGH PRIORITY	Single: 83 Double: 11			\$302,480

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Second Floor: Media Center/ Corridor/ Guidance Offices/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
2F-10	Arch	B213 Lang. Lab	Window Glazing	Interior glass unit pane of window is cracked		#33			X	X			Replace insulated glass unit in window	1	\$1,049		
2F-11	Arch	A204 Classroom	Window Glazing	Awning windowinsulating glass unit gasket compromised. Condensation present in between panes.		#38		X			X		Replace insulated glass unit in window	24		\$30,835	
2F-12	Arch	A204A	Window Glazing	Fixed window leaking from head		#38			X	X			Investigate source of leak and remediate	1	\$8,360		
2F-13	Arch	A204A	Window Glazing	Failed sealant at interior window perimeter		#38		X			X	Phased	Implement replacement of perimeter sealant at all windows.	1,892 lf		\$10,569	\$12,510
2F-14	Arch	A204A	Window Glazing	Window shade frayed along edge		#38	X					X	Implement survey of all window shades and replace frayed shades	86 shades			\$22,745
2F-15	Arch	Class Wing A&B	Case work	Plastic laminate countertops and window sills in Classrooms indicate progressive delamination		#24		X			X		Replace plastic laminate countertops and window stools with solid surface countertops: -Total Countertop area: 795 sf - Total Window Stool area: 86 units x 3sf ea = 258 sf	as noted		\$109,385	
2F-16	Arch	Class Wing A&B	Case work	Base cabinets doors out of adjustment		#24		X			X		Adjust door hardware to align doors	431 lf of cabinet		\$80,252	
2F-17	Arch	M210 Media Center	Case work	Delamination and damage at reception desk		#24		X			X		Replace existing curved plastic laminate reception desk with new: 120 sf solid surface countertop; 42 ft outer arc length	as noted		\$7,038	
2F-18	Arch	M212 Conf. Rm.	Case work	Delamination at plastic laminate countertop		#24		X			X		Replace plastic laminate countertops with solid surface countertops	120 sf		\$15,641	
2F-19	Arch	M203 Guid.	Case work	Delamination and damage at reception desk		#24		X			X		Replace existing curved plastic laminate reception desk with new: 120 sf countertop; 42 ft outer arc length	as noted		\$7,038	
2F-20	Arch	M203L Work Rm.	Case work	Wood veneer of cabinet doors and drawer fronts wearing out		#24		X			X		Replace doors and drawer fronts	20 lf of cabinet		\$11,172	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Second Floor: Media Center/ Guidance Offices/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
2F-21	Arch	Corridor D200	Case work	Metal lockers in Corridor: damaged interior shelves; missing locks; some doors stick and are difficult to open		#24 #29		X				X Phased	Implement program to replace missing locks and damaged shelves and adjust doors to operate smoothly (assumes 50% of lockers per phase)	471 Lockers		\$87,700	\$103,808
2F-22	Arch	Boy's Toilet Room D239	Case work	Missing toilet stall door		#24			X	X			Replace missing toilet stall door	1	\$1,140		
2F-23	Arch	Girl's Toilet Room D222	Case work	Latch missing on toilet stall door		#29			X	X			Install missing latch	1	\$532		
2F-24	Arch	M113 Balcony	Furnish	Chair spring at Balcony seating is inoperable		#31		X			X		Service seating mechanism	10		\$1,397	
2F-25	Arch	210 Classrm.	Equip	Mini refrigerator has broken handle		#29	X				X		Replace broken handle	1	\$931		
2F-26	Arch	Second Floor	Mech Fixt	HVAC ceiling registers dirty		#35		X			X		Impelemt program to clean all ceiling and wall registers	100		\$9,310	
2F-27	Arch	M203D Counsel.	Mech Fixt	HVAC equipment very nosy in this room		#35		X			X		Investigate source of noise and remediate high noise elevel	1		\$10,241	
2F-28	Arch	A202 IT Lab	Mech Fixt	AC is set too high		#35		X			X		Adjust HVAC controls	1		\$17,689	
2F-29	Arch	Second Floor	Elec Lights	Missing cover plates at switches and oitlets		#28			X	X			Install missing coverplates	15	\$228		
2F-30	Arch	Second Floor	Elec Lights	Loose and unattached electrical outlets		#28			X	X			Evaluate loose and unattached power and data outlets and fully install in wall	15	\$2,280		
2F-31	Arch	Second Floor Classrms.	Elec Lights	Linear pendant lights: debris on top side of lens; lamping color is irregular		#34		X			X		Implement program to clean debris from top side of linear pendant fixtures; re-lamp with building standard lamps ((12) T-8 per 24-ft fixture)	12ft: 150 8ft: 37 4ft: 2		\$5,968	
2F-32	Arch	Second Floor Corridors	Elec Lights	2x4 trough lights: debris on top side of lens; lamping color is irregular		#34		X			X		Implement program to clean debris from top side of 2x4 fixtures; re-lamp with building standard lamps ((2) T-8 per fixture)	182		\$8,472	
2F-33	Arch	Second Floor Offices	Elec Lights	2x4 trough lights: debris on top side of lens; lamping color is irregular		#34		X			X		Implement program to clean debris from top side of 2x4 fixtures; re-lamp with building standard lamps ((3) T-8 per fixture)	Included in 2F-32			

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Second Floor: Media Center/ Corridor/ Guidance Offices/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
2F-34	Arch	Second Floor	Elec Lights	Recessed downlights appear to be burned out		#34			X	X			Evaluate existing fixtures for functionality and relamp: - above Main Lobby @ 20 ft high: 79 fixtures - 10 ft ceiling height: 62 fixtures	as noted	\$16,805		
2F-35	Arch	Boy's Toilet Room D239	Plumb	Chicago Manual Push Faucets nearing end of service life		NA		X			X		Implement program to replace existing faucets with new Sloan hands-free faucets	3		\$1,117	
2F-36	Arch	Boy's Toilet Room D239	Plumb	Undersink pipe insulation damaged and dislodging in some locations		#36		X			X		Replace damaged undersink pipe insulation where damaged and loose	2		\$1,303	
2F-37	Arch	Girl's Toilet Room D222	Plumb	Chicago Manual Push Faucets nearing end of service life		NA		X			X		Implement program to replace existing faucets with new Sloan hands-free faucets	3		\$1,397	
2F-38	Arch	Girl's Toilet Room D222	Plumb	Undersink pipe insulation damaged and dislodging in some locations		#36		X			X		Replace damaged undersink pipe insulation where damaged and loose	2		\$1,303	
2F-39	Arch	Second Floor Single Use Toilet Rms	Plumb	Chicago Manual Push Faucets nearing end of service life		NA		X			X		Implement program to replace existing faucets with new Sloan hands-free faucets	6		\$2,793	
2F-40	Arch	Second Floor Single Use Toilet Rms	Plumb	Undersink pipe insulation damaged and dislodging in some locations		#36		X			X		Replace damaged undersink pipe insulation where damaged and loose	2		\$1,303	
2F-41	Arch	Corridor D200	Plumb	High drinking fountain outside Boy's D239 has corrosion and finish is worn		#29		X			X		Replace drinking fountain	1		\$4,283	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Second Floor: Media Center/ Corridor/ Guidance Offices/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
2F-42	Arch	B213 Lang Lab	Code	Per 780 CMR (6th Edition) 1017.4.2 All doors equipped with latching devices in occupancies in Use Groups A and E or portions of buildings occupied for assembly or educational purposes and serving rooms or spaces with an occupant load greater than 100, shall be equipped with approved panic hardware.		#26			X	X			Under 780 CMR (6th Edition in effect 1997- 2009) Large Rooms such as the B213 Language Lab were limited to a total occupancy of 100 when doors are fitted with level handle locksets. If occupancy exceeds 100, the lever handle locksets on both doors must be changed to panic hardware devices	2	\$3,648		
2F-43	Arch	Stair A Doors	Code	Per 780 CMR (6th Edition in effect 1997-2009) 1014.11, Interior exit stairways ...in occupancies in Use Group A, B, E, F, H-4, I, M, R or S which connect less than four stories shall be enclosed with fire separation assemblies having a fireresistance rating of not less than one hour.. Per 780 CMR (6th Edition in effect 1997-2009) Table 716.1, Shaft, exit enclosure and exit passageway walls required to have a 1-hr fire rating shall have MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours) of 1 hour.		#26			X	X			Double doors leading into Stair A Door frame is not gasketed and no astragal. Door has a 3/4 hr fire rated label, but should have a 1 hr rated label. Left and right door leaf cracked on hinge side. Change door and frame to have 1 hour labeling.	3	\$20,520		

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Second Floor: Media Center/ Corridor/ Guidance Offices/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr
2F-44	Arch	Stair B Doors	Code	Per 780 CMR (6th Edition in effect 1997-2009) 1014.11, Interior exit stairways ...in occupancies in Use Group A, B, E, F, H-4, I, M, R or S which connect less than four stories shall be enclosed with fire separation assemblies having a fire resistance rating of not less than one hour.. Per 780 CMR (6th Edition in effect 1997-2009) Table 716.1, Shaft, exit enclosure and exit passageway walls required to have a 1-hr fire rating shall have MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours) of 1 hour.		#26			X	X			Double doors leading into Stair A Door frame is not gasketed and no astragal. Door has a 3/4 hr fire rated label, but should have a 1 hr rated label. Left and right door leaf cracked on hinge side. Change door and frame to have 1 hour labeling.	3	\$20,520		
2F-45	Arch	B211A I.D.F.	Code	I.D.F. Closet used for storage		#26			X	X			Remove stored items from I.D.F. closet	1	\$1,824		
2F-46	Arch	Corridor D200	Code	FE cabinet missing view window leaving sharp edges of opening exposed.		#26			X	X			Install tempered safety glass in view window	1	\$1,049		
2F-47	Arch	Women's Staff Toilet Room	Code	Per 521 CMR, 30.12, towel dispenser is too far from sink		#26			X	X			Relocate paper towel dispenser within reach of a person using the sink	1	\$76		
2F-48	Arch	Men's Staff Toilet Room	Code	Per 521 CMR, 30.12, towel dispenser is too far from sink		#26			X	X			Relocate paper towel dispenser within reach of a person using the sink	1	\$76		
2F-49	Arch	Boy's Toilet Room D239	Code	Per 521 CMR, 30.12, towel dispenser is too far from sink		#26			X	X			Relocate paper towel dispenser within reach of a person using the sink	1	\$76		
2F-50	Arch	Girl's Toilet Room D222	Code	Per 521 CMR, 30.12, towel dispenser is too far from sink		#26			X	X			Relocate paper towel dispenser within reach of a person using the sink	1	\$76		

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																
AREA:		Second Floor: Media Center/ Corridor/ Guidance Offices/ Classroom Wing A/ Classroom Wing B																
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate			
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr	
2F-51	Arch	Girl's Toilet Room D222	Code	Per 521 CMR 30.6.1, door to accessible toilet stall is not self-closing		#26			X	X				Repalce hinge hardware to be self-closing	1	\$988		
2F-52	Arch	M203F Career Center	Code	Per 780 CMR (6th Edition in effect 1997-2009), 1017.4, All doors shall swing in the direction of egress where serving an occupant load of 50 or more persons or where serving a high-hazard occupancy. Lever handle does not unlock (storeroom function); incorrect hardware for this door		#26			X	X				If occupancy of Room M203F exceeds 50, replace door with new door swingout out in direction of egress.	1	\$3,040		
2F-53	Arch	M206 Elec	Code	Room being used for storage		#26	X				X			Maintain 3-foot clearance in front of all electrical panels	1		\$4,655	
2F-54	Arch	M203 Guid.	Code	Per 780 CMR (6th Edition in effect 1997-2009), 1017.4, All doors shall swing in the direction of egress where serving an occupant load of 50 or more persons or where serving a high-hazard occupancy.		#26			X	X				If occupancy load being served by the door from Corridor D200 to M203 exceeds 50, doors must swing in direction of egress and install panic hardware (780 CMR 8th Edition requires panic hardware for doors serving an occupancy greater than 50). If so, reconfigure glazed wall assembly to provide recessed area and replace door to swing in direction of egress.	Glazed wall: 12ft Double Door: 1	\$27,816		
2F-55	Arch	Door D202 Media Center to Conf. Rm	Code	Door has a 1 1/2 hr label, but no gasketing and vision panel is not stamped as tempered safety glazing		#26			X	X				Provide smoke gasketing and replace vision glass with stamped tempered safety glazing	1	\$1,049		
2F-56	Arch	M113A Control Booth	Code	Per 780 CMR (^th Edition effective 1997-2009), 1014.7, Stairways shall have continuous guards and handrails on both sides (when more than 2 risers)		#26			X	X				Install handrails on both sides of steps (assumes 100 LF per stairway)	2	\$85,120		

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																	
AREA:		Second Floor: Media Center/ Guidance Offices/ Classroom Wing A/ Classroom Wing B																	
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate				
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	3 yr	10 yr		
2F-57	Arch	M113A Control Booth	Code	Floor penetrations are not fire-stopped		#26			X	X			Install UL approved firestop system at peentration of pipes through floor	4"(w)x 24"(L)	\$608				
2F-58	Arch	A200 Corrdior	General	Floor tile showing mild wear and discoloration; Floor sealer worn in various areas		#32	X					X	Continued maintenance to extend service life; replacement in next 7-10 years	Included in 2F-4					
2F-59	Arch	B200 Corridor	General	Floor tile showing mild wear and discoloration; Floor sealer worn in various areas;		#32	X					X	Continued maintenance to extend service life; replacement in next 7-10 years	Included in 2F-4					
2F-60	Arch	D200 Corridor	General	Floor tile showing mild wear and discoloration; Floor sealer worn in various areas;		#32	X					X	Continued maintenance to extend service life; replacement in next 7-10 years;	Included in 2F-4					
2F-61	Arch	B212 Classrm	General	Very loud hum in room		#32			X	X			Investigate source of hum and remediate	1	\$2,280				
2F-62	Arch	D200 Corridor Overlook Lobby	General	Sealant between section of stone guardrail cap are missing		#32		X				X	Install backer rod and new sealant at all joints of stone cap	68 joints @ 16lf/joint = 90 lf		\$1,005			
2F-63	Arch	Boy's Toilet Room D239	General	Base covers of vertical toilet partition floor supports broken at various locations		#32	X					X	Replalce broken base covers	7		\$2,607			
2F-64	Arch	Computer Area D233	General	Wall and door between M203F Career Center and D233 Computer Area not shown on floor plan		#32	X					X	Update Record Floor Plan	1		\$2,234			
2F-65	Arch	Second Floor	Equip.	Fire Extinguishers expired		#26	X			X			Re-charge all fire extinguishers	10	\$1,520				
2F-66	Arch	Dimmer Room C20	General	Guardrail missing from opening		#32			X	X			Install guardrail	36"	\$7,661				
															1 yr	5 yr	10 yr		
														Architectural Second Floor Cost Total			\$511,580	\$1,194,319	\$896,006

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																	
AREA:		Third Floor: Art Department & Studios/ Corridor/ IT Labs/ Classroom Wing A/ Classroom Wing B																	
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate				
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr		
3F-1	Arch	Third Floor	Walls	Surface cracks in GWB wall finish especially at corner bead locations but also near door frames; typically observed in classroom, prep room and other individual spaces off the main circulation corridors. Damaged paint finish due to abrasion of adjacent furnishings against the walls; typically observed in classroom, prep room and other individual spaces off the main circulation corridor.		#58 & #60	X					X Phased	Implement a program of repainting of painted wall 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. (assumes 50% SF per phase)	49,066 sf				\$ 182,722	\$ 216,283
3F-2	Arch	Third Floor	Ceilings	Acoustical ceiling tiles (ACT) typically soiled near HVAC diffusers		#45	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. (assumes 50% SF per phase)	49,066 sf				\$ 1,142,011	\$ 270,354
3F-3	Arch	Third Floor	Ceilings	ACT ceiling is stained at various locations throughout.		#45		X		X			Stained, rather than simply soiled, ceiling tiles may indicate a more serious issue; Invstigate and remediate cause of staining; replace all stained ceiling tiles	Include d in 3F-2					

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																	
AREA:		Third Floor: Art Department & Studios/ Corridor/ IT Labs/ Classroom Wing A/ Classroom Wing B																	
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate				
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr		
3F-4	Arch	Third Floor Corridor	Flooring	Cracks and joints in floor slab telegraphing through finish floor tiles; this condition is severe and extensive throughout the Lower Level. Finish floor tiles worn and discolored throughout the Lower Level;		#53		X			X	Phased	1. Develop program to remove all existing resilient flooring down to concrete substrate; 2. Being a structured slab above grade, vapor drive not anticipated; 3. Monitor existing cracks to determine if movement is on-going or static. 4. Install saw-cut joints as needed in areas of on-going movement with appropriate flexible sealant . 5. Install new resilient floor finish system	10,738 sf				\$ 79,977	\$ 94,666
3F-5	Arch	Utility / Electrical Rooms	Flooring	1. Miscellaneous cracks in floor slab		#53	X				X	Phased	1. Remove loose concrete from edges of cracks and saw-cut cracks to provide a suitable substrate for crack repair filler; 2. Clean existing coated floor surface, prepare surface for application of new coating system; install new coating system.	678 sf				\$ 13,887	
3F-6	Arch	Art & Classrooms	Flooring	VCT flooring finish is worn.		#53		X			X	Phased	Refinish VCT flooring; (assumes 50% SF per phase)	36,524 sf				\$ 348,539	\$ 412,557
3F-7	Arch	Art & Classrooms	Flooring	VCT flooring tiles lifting in some areas		#53		X			X	Phased	Replace damaged and lifting tiles: Total VCT area x 15%	5,478 sf				\$ 52,275	\$ 61,877

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Third Floor: Art Department & Studios/ Corridor/ IT Labs/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
3F-8	Arch	Third Floor	Doors	i. At multiple double door units, one leaf binds against the other preventing full closure. ii. At multiple single door units, door leaf binds against frame preventing full closure. iii. Paint finish damage on doors and frames requiring repainting of entire assembly for appropriate long-lasting finish. iv. At multiple locations, closer units leaking fluid causing malfunction and slamming. v. At most door assemblies, silencers are severely worn or missing.		#50			X	X			i. Develop program for in-depth evaluation of each door assembly and repair/ replacement of components as required. ii. This report includes comments on a representative sampling of the existing doors. Based upon the years of service and the level of usage, a full repair/ replacement program for all doors is recommended. NOTE: Particular concern for doors that are part of a required means of egress. HIGH PRIORITY	Single: 79 Double: 6	\$ 267,520		
				vi. At multiple door assemblies, handle hardware finish is worn with base metal showing through. vii. At multiple locations, door slab is cracked at latch side. viii. Exit device hardware finish is worn and discolored; multiple units with missing parts; handle units loose. ix. At double door units, astragal brush weatherstripping is worn. x. Smoke gasketing on rated doors is worn or missing. xi. At multiple door units, hinge pins are loose.													

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Third Floor: Art Department & Studios/ Corridor/ IT Labs/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
3F-9	Arch	Third Floor	Window Glazing	Awning windowinsulating glass unit gasket compromised. Condensation present in between panes.		#59		X			X		Replace insulated glass unit in window	38			\$ 48,822
3F-10	Arch	Third Floor	Window Glazing	Failed sealant at interior window perimeter		#59		X			X Phased		Implement replacement of perimeter sealant at all windows.	1,958 lf		\$ 10,937	\$ 12,946
3F-11	Arch	Third Floor	Window Glazing	Window shade frayed along edge		#59	X				X		Implement survey of all window shades and replace frayed shades	89 shades			\$ 23,539
3F-12	Arch	Class Wings A&B	Case work	Plastic laminate countertops in Classrooms indicate progressive delamination		#24		X			X		Replace plastic laminate countertops and window stools with solid surface countertops: -Total Countertop area: 795 sf	795 sf			\$ 103,620
3F-13	Arch	Class Wings A&B	Case work	Base cabinets doors out of adjustment		#47		X			X		Adjust door hardware to align doors (allows for minimal hardware replacement)	431 lf of cabinet		\$ 80,252	
3F-14	Arch	Art Dept.	Case work	Delamination at plastic laminate countertops at cabinets throughtout the 3rd Floor Art Studios		#47		X			X		Replace plastic laminate countertops with solid surface countertops; 25 separate sections	873 sf			\$ 113,787
3F-15	Arch	Third Floor	Case work	6-inch wide Laminate window stools delaminating at a number of locations		#47		X			X		Implement a program to replace plastic laminate window stools with solid surface stools - Total Window Stool area: 89 units x 3sf ea = 267 sf	267 sf			\$ 34,801
3F-16	Arch	Third Floor	Case work	Metal lockers in Corridor: damaged interior shelves; missing locks; some doors stick and are difficult to open		#47		X			X Phased		Implement program to replace missing locks and damaged shelves and adjust doors to operate smoothly (assumes 50% of lockers per phase)	444 Lockers		\$ 82,673	\$ 97,858
3F-17	Arch	A318 Classroom	Equip	Broken T-Stat cover		#52	X				X		Replace broken T-Stat cover	1			\$ 372
3F-18	Arch	M310 Art Studio	Equip	Missing T-Stat cover		#52	X				X		Replace missing T-Stat cover	1			\$ 372

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Third Floor: Art Department & Studios/ Corridor/ IT Labs/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
3F-19	Arch	Classrooms	Equip.	Wall-mounted projector screens pulling away from wall		#52	X				X		Implement program to check and re-anchor projection screens in classrooms	36		\$ 372	
3F-20	Arch	Third Floor	Equip.	Fire Extinguishers expired		#49	X			X			Re-charge all fire extinguishers	10	\$ 1,520		
3F-21	Arch	Third Floor	Equip.	Vision panel glass missing from fire extinguisher cabinets leaving sharp edges		#49	X			X			Install 6"x 6" vision panel glass	10	\$ 437		
3F-22	Arch	Third Floor	Mech Fixt	HVAC ceiling registers dirty		#56		X			X		Impelemt program to clean all ceiling and wall registers	100		\$ 9,310	
3F-23	Arch	Corridor	Mech Fixt	Above-ceiling equipment at Corridor near elevator is noisy		#63		X			X		Investigate above ceiling equipemnt and service/ repalce as required	1 LS		\$ 6,517	
3F-24	Arch	Third Floor	Elec Lights	Missing cover plates at switches and outlets		#51			X	X			Install missing coverplates	15	\$ 228		
3F-25	Arch	Third Floor Classrms.	Elec Lights	Linear pendant lights: debris on top side of lens; lamping color is irregular		#64		X			X		Implement program to clean debris from top side of linear pendant fixtures; re-lamp with building standard lamps ((12) T-8 per 24-ft fixture)	166		\$ 4,636	
3F-26	Arch	Third Floor Corridors	Elec Lights	2x4 trough lights: debris on top side of lens; lamping color is irregular		#64		X			X		Implement program to clean debris from top side of 2x4 fixtures; re-lamp with building standard lamps ((2) T-8 per fixture)	111		\$ 3,100	
3F-27	Arch	Third Floor Offices	Elec Lights	2x4 trough lights: debris on top side of lens; lamping color is irregular		#64		X			X		Implement program to clean debris from top side of 2x4 fixtures; re-lamp with building standard lamps ((3) T-8 per fixture)	56		\$ 1,564	
3F-28	Arch	Boy's Toilet Room D327	Plumb	Chicago Manual Push Faucets nearing end of service life		NA		X			X		Implement program to replace existing faucets with new Sloan hands-free faucets	3		\$ 1,117	
3F-29	Arch	Boy's Toilet Room D327	Plumb	Undersink pipe insulation damaged and dislodging in some locations		#57		X			X		Replace damaged undersink pipe insualtion where damaged and loose	3		\$ 1,955	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL															
AREA:		Third Floor: Art Department & Studios/ Corridor/ IT Labs/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
3F-30	Arch	Girl's Toilet Room D319	Plumb	Chicago Manual Push Faucets nearing end of service life		NA		X			X		Implement program to replace existing faucets with new Sloan hands-free faucets	3		\$ 1,117	
3F-31	Arch	Girl's Toilet Room D319	Plumb	Undersink pipe insulation damaged and dislodging in some locations		#57		X			X		Replace damaged undersink pipe insulation where damaged and loose	3		\$ 1,955	
3F-32	Arch	Third Floor Single Use Toilet Rms	Plumb	Chicago Manual Push Faucets nearing end of service life		NA		X			X		Implement program to replace existing faucets with new Sloan hands-free faucets	6		\$ 2,234	
3F-33	Arch	Third Floor Single Use Toilet Rms	Plumb	Undersink pipe insulation damaged and dislodging in some locations		#57		X			X		Replace damaged undersink pipe insulation where damaged and loose	6		\$ 3,910	
3F-34	Arch	Stair B	Code	Wall-mounted handrail coming loose from wall		#49	X			X			Provide new blocking and mounting hardware and secure handrail to wall.	2 Locations	\$ 3,648		
3F-35	Arch	Roof at end of Wing B	Code	Missing roof edge safety railings at roof-top equipment within 10-feet of roof edge		#49	X			X			Install safety railings at roof edge at service area of roof-top equipment within 10-feet of roof edge	30 LF	\$ 6,384		
3F-36	Arch	Boy's Toilet Room D327	Code	Door to HC accessible stall does not self-close		#49	X			X			Install hinge hardware to provide self-closing feature	1	\$ 1,064		
3F-37	Arch	Girl's Toilet Room D319	Code	Door to HC accessible stall does not self-close		#49	X			X			Install hinge hardware to provide self-closing feature	1	\$ 1,064		

Condition Assessment Matrix

		BUILDING: SHREWSBURY HIGH SCHOOL															
		AREA: Third Floor: Art Department & Studios/ Corridor/ IT Labs/ Classroom Wing A/ Classroom Wing B															
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate		
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
3F-38	Arch	M310 Art Studio	Code	Space postd as allowing 65 occupants, but there is only a single egress door swinging into the room; Per 780 CMR (6th Edition) Table 1017.4.2 Spaces with One Means of Egress, spaces with greater than an occupant load of 50 require more than one means of egress. M310 should have a second means of egress		#49	X			X			Install 5' x 3' vestibule into room and install 3' door swinging out to provide 2nd means of egress	1	\$ 5,320		
3F-39	Arch	M320 Art Studio	Code	Space postd as allowing 65 occupants, but there is only a single egress door swinging into the room; Per 780 CMR (6th Edition) Table 1017.4.2 Spaces with One Means of Egress, spaces with greater than an occupant load of 50 require more than one means of egress. M320 should have a second means of egress		#49	X			X			Install 5' x 3' vestibule into room and install 3' door swinging out to provide 2nd means of egress	1	\$ 11,400		
3F-40	Arch	Elec D312	Code	Electrical Room used for storage		#49	X			X			Remove storage items to provide required 3-foot clearance in front of electrical panels	1	\$ 5,320		
3F-41	Arch	Boy's Toilet Room D327	Code	Per 521 CMR, 30.12, towel dispenser is too far from sink		#49			X	X			Relocate paper towel dispenser within reach of a person using the sink	1	\$ 76		
3F-42	Arch	Girl's Toilet Room D319	Code	Per 521 CMR, 30.12, towel dispenser is too far from sink		#49			X	X			Relocate paper towel dispenser within reach of a person using the sink	1	\$ 76		

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL																
AREA:		Third Floor: Art Department & Studios/ Corridor/ IT Labs/ Classroom Wing A/ Classroom Wing B																
Issue #	Discipline	Loc	System	Description	Photo #	PlanGrid Report #	Priority			Service Life			Commentary	Qty	Cost Estimate			
							Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr	
3F-43	Arch	M203 F Career Center	Code	Per 780 CMR (6th Edition in effect 1997-2009), 1017.4, All doors shall swing in the direction of egress where serving an occupant load of 50 or more persons or where serving a high-hazard occupancy. Lever handle does not unlock (storeroom function); incorrect hardware for this door		#26			X	X			If occupancy of Room M203F exceeds 50, replace door with new door swingout out in direction of egress.	1	\$ 3,800			
3F-44	Arch	A302 IT Lab	General	Strong odor of oil or other fluid from HVAC equipment		#54	X			X			Investigate source of odor and implement corrective action as required	1 LS	\$ 8,360			
3F-45	Arch	B316 Classroom	General	Loud buzzing sound in room possibly from HVAC equipment		#54	X			X			Investigate source of noise and implement corrective action as required	1 LS	\$ 8,360			
																1 yr	5 yr	10 yr
Architectural Third Floor Cost Total															\$ 324,577	\$ 2,332,837	\$ 1,190,079	

Condition Assessment Matrix

BUILDING:		SHREWSBURY HIGH SCHOOL														
AREA:		Building Envelope														
Issue #	Discipline	Loc	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	Typical	Walls	Failed sealants at wall transitions, penetrations, expansion joints, metal panel joints, roof coping joints, and window perimeters	INDEX B PHOTO FOLDER			X	X			Replace failed sealants; plan for regular sealant maintenance including replacement approximately every 5-10 years.	100% = ± 50000 l.f.	\$1,140,000		
E2	Envelope	Various	Walls	Cracked and broken brick masonry			X			X		Investigate cracked masonry to determine the cause of cracking. Repair cracks by routing and sealing (moving cracks) or pointing (static cracks). Remove loose pieces of masonry and replace broken units as required.	500 s.f.	\$34,200		
E3	Envelope	North Elevation @ Northwest corner; Wing A, West Elevation	Walls	Areas of bulged brick masonry.			X		X		X	Perform arms-length inspection of masonry to confirm masonry is stable (2017). If stable, monitor for changes. If evidence of instability, secure masonry veneer to backup structure with restoration anchors.	2,000 s.f.	\$76,000		\$110,200
E4	Envelope	Typical	Walls	Deteriorated mortar joints			X			X		Rout and point mortar joints. Assume 5% pointing. New pointing expected lifespan approximately 50 years.	10% = ± 6,000 s.f.	\$558,600		

Condition Assessment Matrix

		BUILDING:		SHREWSBURY HIGH SCHOOL													
		AREA:		Building Envelope													
Issue #	Discipline	Loc	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	
E5	Envelope	Various	Walls	Isolated damage to metal wall panels.	SEE APPE	X					X	Likely an aesthetic issue (if weather resistive barrier, WRB, is present behind metal panels). Replace panels if desired for improved appearance, or if no WRB is present behind (higher priority in such case).	100 s.f.			\$22,040	
E6	Envelope	Various	Walls	Wasps in louvers and wall cavities.				X	X			Treatment to remove nests was in progress during GRLA site visits. Ongoing treatment likely required.					
E7	Envelope	Typical	Walls	Staining on brick masonry and metal wall panels		X					X	Investigate to determine source of staining, address source and clean masonry.	50% of total wall area = ± 50,000 s.f.			\$231,420	
E8	Envelope	Auditorium Wall	Walls	Metal wall panels are buckled and seams have come apart.	FOLDER			X	X			Panels are not properly attached to the backup wall due to the buckling. Additional expansion joints may be required. Investigate to determine appropriate repairs and implement.	10,000 s.f.	\$304,000			
E9	Envelope	B Wing, East Elevation	Windows	Broken window glass				X	X			Reglaze broken window.	1 location	\$3,800			
E10	Envelope	Various	Windows	Fogged insulating glass units.		X			X			Replace fogged units.	Refer to Architectural				
E11	Envelope	Various	Roof	Blisters at EPDM roofing seams.			X			X		Cut and flatten blisters. Provide EPDM patches.	20 lf		\$1,117		

Condition Assessment Matrix

		BUILDING:		SHREWSBURY HIGH SCHOOL												
		AREA:		Building Envelope												
Issue #	Discipline	Loc	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
E12	Envelope	Typical	Roof	EPDM membrane extends too far into drain bowl	SEE APPENDIX B PHOTO	X			X			Cut back EPDM such that it extends only slightly into drain bowl.	50 locations	\$38,000		
E13	Envelope	Typical	Roof	Holes and cuts in EPDM roofing, objects below roofing membrane, open seams, incomplete flashing (exposed substrate, missing/loose hose clamps), missing drain domes, aged pitch pocket sealant.				X	X	X		Inspect roof and repair damaged areas in 2017. Implement program of annual roof inspections and maintenance. Plan to replace gymnasium roof in 2018-2021.	5% of total roof area = ± 8,000 s.f.; 100% of gym roof = ± 30,000 s.f.	\$121,600	\$558,600	
E14	Envelope	Various	Roof	Isolated areas of unadhered EPDM roofing membrane, and unsupported EPDM roofing membrane over uneven substrate.				X	X			Cut out and replace unadhered and unsupported areas. Replace or refasten substrate materials as required to provide consistent substrate for roofing membrane.	750 s.f.	\$22,800		
E15	Envelope	Typical	Roof	Sealant at metal roof coping flashing corners does not cover metal joints at outside corners, leaving pinholes.				X	X			Replace sealant at metal roof coping flashing. Provide backer rod and sufficient sealant to fill the joint and cover gaps in coping at joints.	100% of roof edge = ± 3,000 l.f.	\$91,200		
E16	Envelope	Various	Roof	Loose objects such as pipes and ladders stored on the roof.				X	X			Do not store loose items on the roof.				
E17	Envelope	Various	Roof	Lightning protection cables not attached to drains and other terminals.				X	X			Consult with lightning protection specialist to inspect system regularly and make appropriate repairs.				

Condition Assessment Matrix

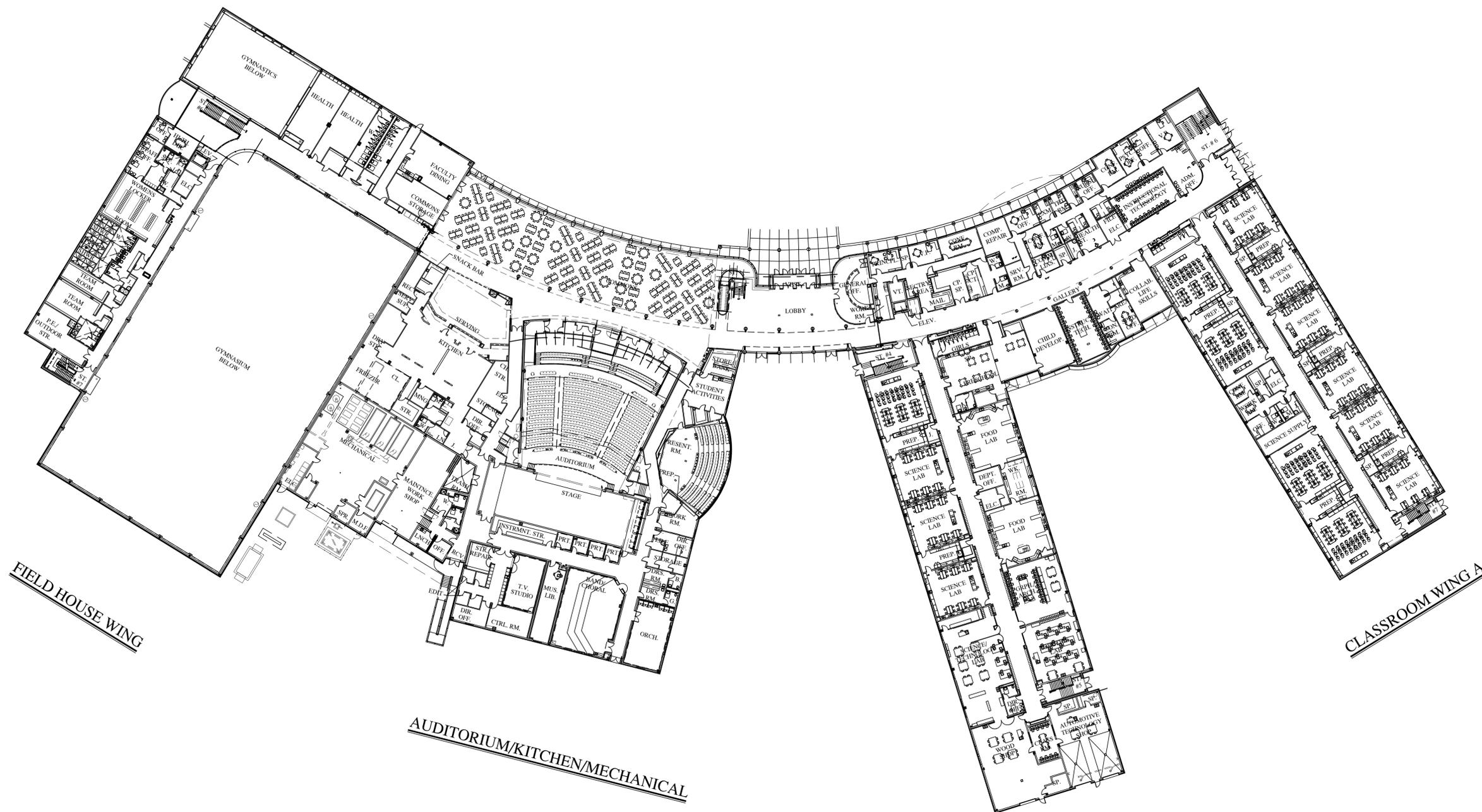
		BUILDING:		SHREWSBURY HIGH SCHOOL												
		AREA:		Building Envelope												
Issue #	Discipline	Loc	System	Description	Photo #	Priority			Service Life			Commentary	Quantity	Cost Estimate		
						Low	Med	High	2017	2018 to 2021	2022 to 2026			1 yr	5 yr	10 yr
E18	Envelope	Main Entrance Parapet	Roof	Broken metal coping				X	X			Replace broken section of coping.	1 location	\$2,280		
E19	Envelope	Auditorium Wing	Roof	Damaged coping attachment strip	SEE APPENDIX B PHOTO FOLDER			X	X			Replace broken section of coping and attachment strip.	1 location	\$2,280		
E20	Envelope	Auditorium Wing	Roof	Water ponds at edge of roof along metal coping.		X				X		Ponding water at the roof edge increases leakage risk at this location. Reslope substrate to direct water to drains.	30 lf		\$3,165	
E21	Envelope	Typical	Roof	Damaged conduits at mechanical units.				X	X			Replace damaged conduits.	5 locations	\$2,660		
												1 yr	5 yr	10 yr		
Envelope Cost Total													\$1,804,620	\$1,155,683	\$363,660	

Condition Assessment Matrix

BUILDING:				HIGH SCHOOL													
AREA: 296,000 sf																	
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	
EL1	Electrical		Lighting	Provide all new LED lighting throughout the school	SHS E1	X						X	See Electrical Narrative	296,000 Square Feet			\$5,219,072
EL2	Electrical	Gym	Lighting	Provide new 6-lamp T5 high bay fluorescent fixtures	SHS E2	X						X	See Electrical Narrative	54			\$47,606
H1	HVAC		HVAC	Remove existing 10,000 Gallon underground Fuel Oil storage tanks And associated pumps				X	X				See HVAC Narrative	2	\$186,200		
H2	HVAC		HVAC	Remove existing fuel oil pumps				X	X				See HVAC Narrative		\$15,200		
H3	HVAC		ATC	Replace BMS system			X			X			See HVAC Narrative	296,000 sf		\$3,582,488	
H4	HVAC		HVAC	Install chilled water coils and connect to chilled water system the AHU's serving the Auditorium		X						X	See HVAC Narrative	2			\$286,520
H5	HVAC		Hot Water	Replace pumps P-9, P-10 & P-11			X			X			See HVAC Narrative	3		\$29,550	
P1	Plumbing		Plumbing	Replace existing urinals flush valves with automatic flush valves	SHS P1	X						X	See Plumbing Narrative	12			\$17,191
P2	Plumbing		Plumbing	Replace existing water closets flush valves with automatic flush valves	SHS P2	X						X	See Plumbing Narrative	68			\$112,404
FP1	Fire Protection		Sprinklers	No action required									See Fire Protection Narrative	N/A			
HZ1	HAZMAT			No action required									See Hazardous Materials Narrative	N/A			
														1 yr	5 yr	10 yr	
												MEP/FP Building Cost Total			\$201,400	\$3,612,038	\$5,682,793



Project North



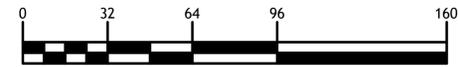
FIELD HOUSE WING

AUDITORIUM/KITCHEN/MECHANICAL

CLASSROOM WING B

CLASSROOM WING A

GRAPHIC SCALE



(IN FEET)

1 INCH = 32 FEET



Project North

