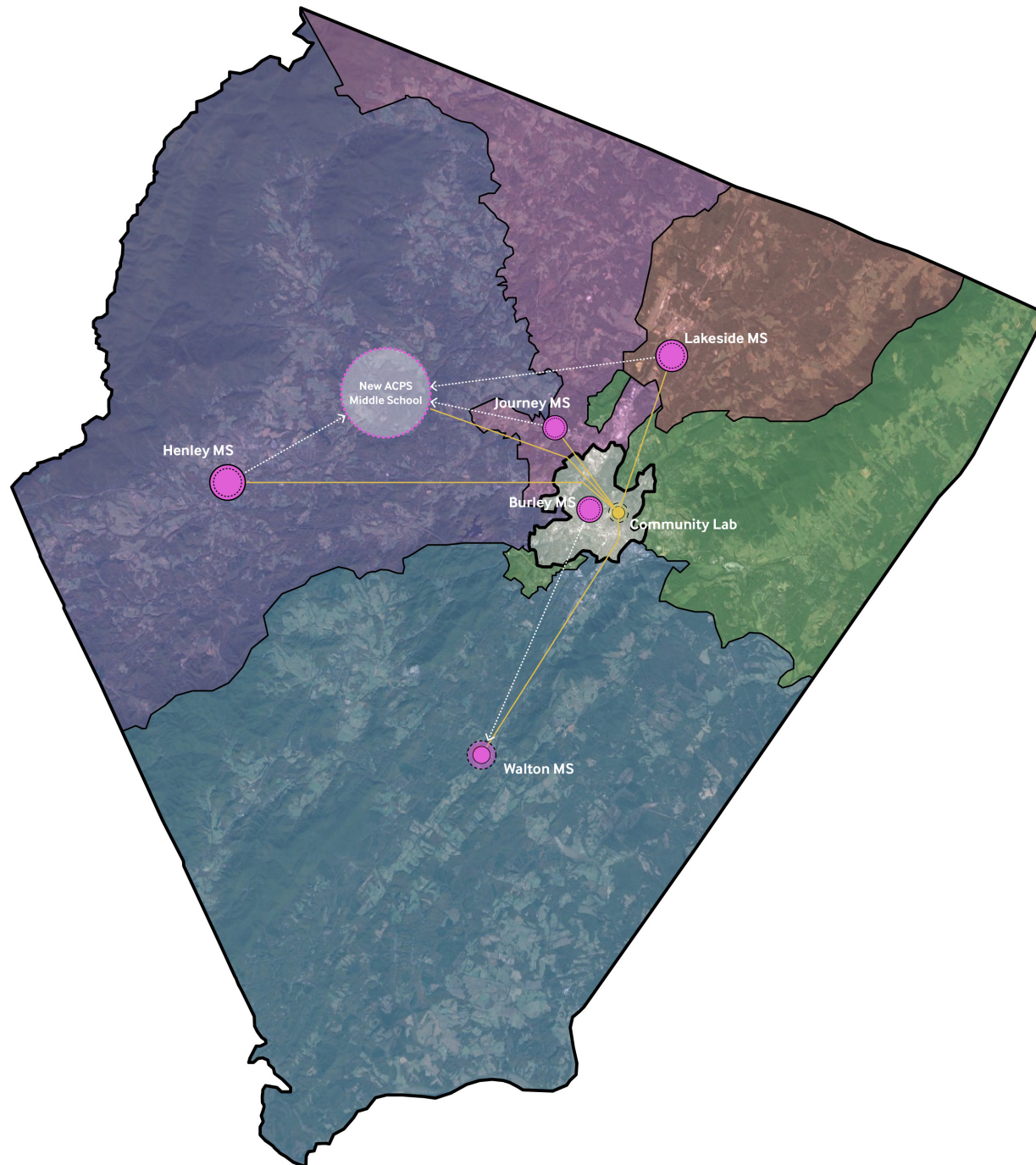


Middle School Facilities Assessment



Albemarle County
Public Schools





FACILITIES ASSESSMENT

1. Burley Middle School
2. Henley Middle School
3. Lakeside Middle School
4. Walton Middle School
5. Community Lab

FACILITIES ASSESSMENT REPORT

Albemarle County Public Schools has six existing middle school facilities built between 1951 and 1994. Burley MS is housed in a historic black high school in the City of Charlottesville. The smallest of the facilities, the Community Lab is a conversion of an existing elementary school into a facility for alternative program for middle and high school students. Built between 1965 and 1972, Henley MS, Journey MS, and Walton MS are based on a prototype design that has been adapted through renovations and additions to accommodate changes in student populations and programs. Built in 1994, Lakeside MS is the newest facility, though at the time of this report, it has been in service for nearly 30 years.

All of the existing buildings have been well maintained. As might be expected, the newer facilities are generally in better condition than the older facilities. Over the years, additions and renovations have been made in a somewhat unplanned or “as needed” manner to address short-term needs. The various ages of the facilities combined with additions and renovations have resulted in a variety of sizes, capacities, and qualities of learning environments across the district. This assessment looks at the existing middle school facilities as a whole, evaluating the condition and educational adequacy of each facility and laying out a plan to both extend the useful life building and provide a consistent and equitable learning experience for middle school students across the district.

VMDO’s recommendations for these buildings...



FACILITY ASSESSMENT REPORT

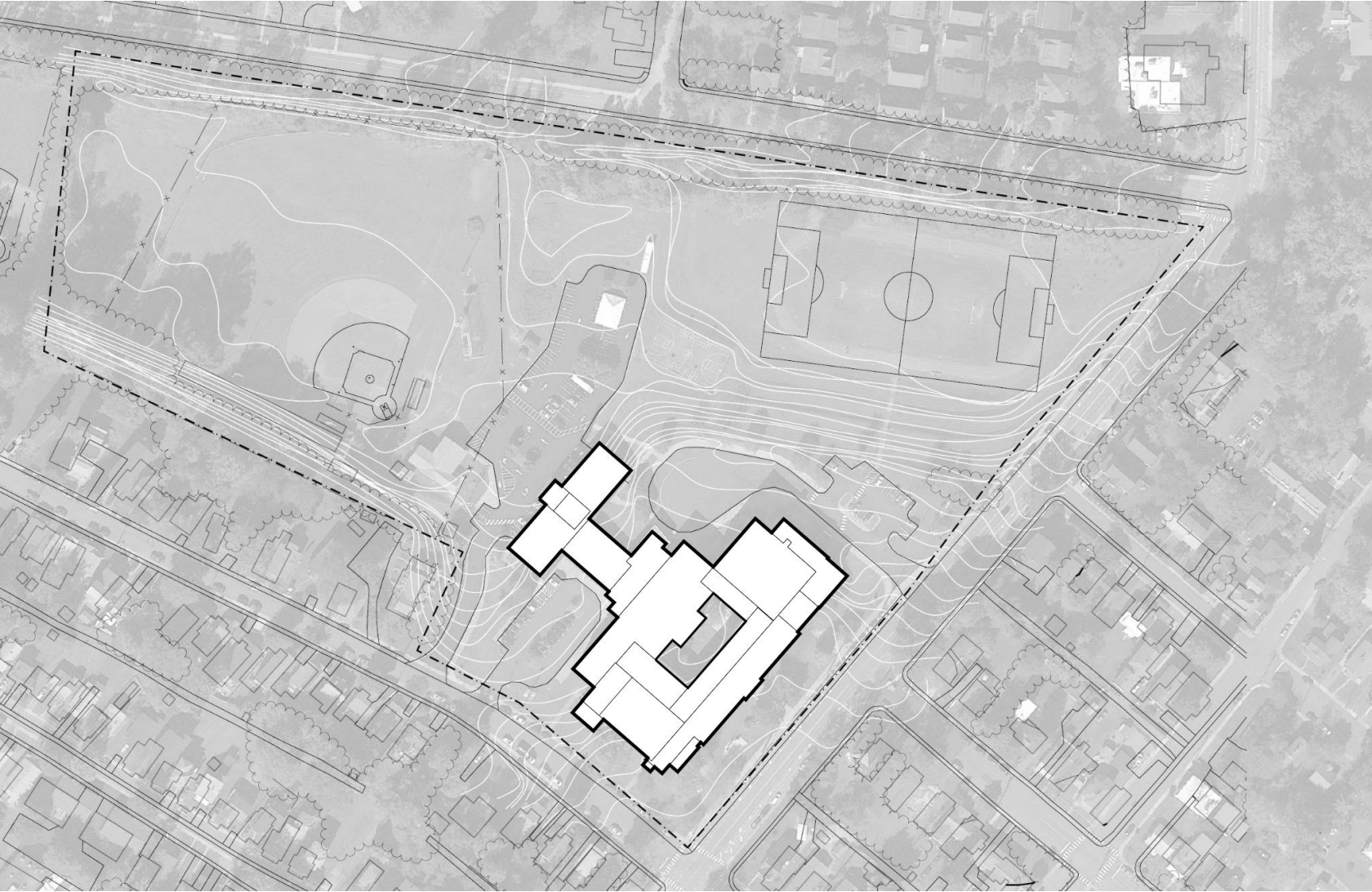
Burley Middle School

Building Information	
Gross Building Area	123,626 SF
Acres	15
Initial Construction Date	1951
2022-2023 Enrollment	585
Number of Classrooms	52
SF / Student	211
Site Amenities	Baseball & Soccer Fields, Basketball Court
MEP Grade	

Located in downtown Charlottesville, Burley Middle School is a multi-story, 123,626 SF building on a 15-acre site originally constructed in 1951. Additions and renovations in 2001 connected the original school and the Annex building and included heavy renovation of portions of the existing school. Light renovations to the Annex building were completed in 1987, with heavy renovation in 2001. Renovations to the administrative wing occurred in 2003. The Auditorium and Gym underwent light renovations and systems replacements in 1991. Among all the ACPS middle schools, Burley is unique in that it is a multi-story building and site with considerable grade elevation change that require interior stairs and ramps, creating challenging navigational and wayfinding conditions throughout the school.

The following are observations and recommended scopes for repairs or improvements. Refer to Appendix XX for “Tier 1 Improvement Scopes” for additional recommendations

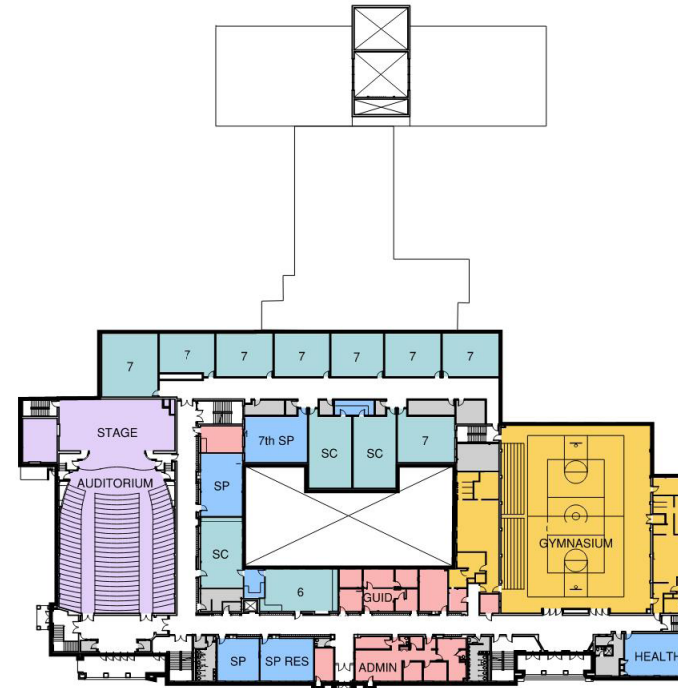
Building Exterior / Neighborhood / Aerial



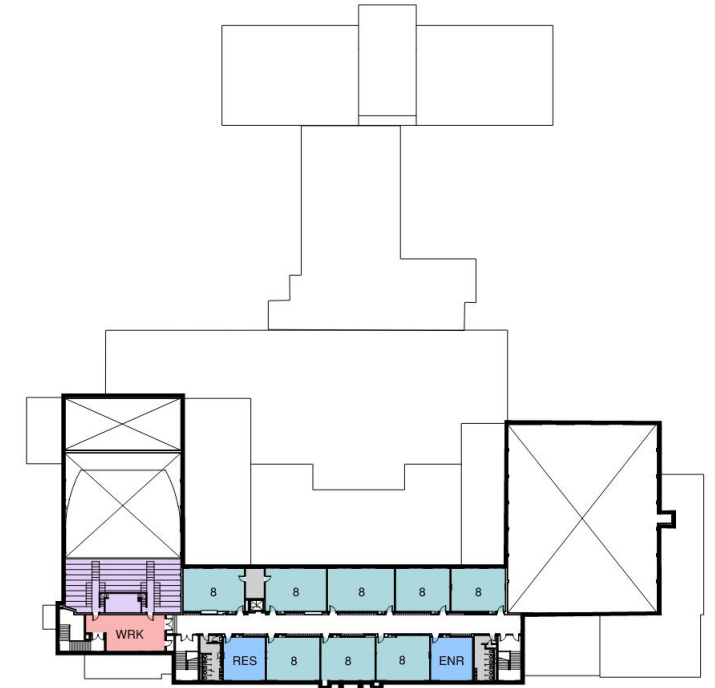
Site Plan



LEVEL 1 - FLOOR PLAN



LEVEL 2 - FLOOR PLAN



LEVEL 3 - FLOOR PLAN

BUILDING ASSESSMENT REPORT: CIVIL

Burley Middle School

General Site Analysis

Burley Middle School is located at 901 Rose Hill Dr, Charlottesville, VA 22903 within the City of Charlottesville. The school site is located on a 17.66 acre property with Parcel ID is 360001000. In the rear the property abuts to Booker T. Washington Park owned by the City of Charlottesville. The site has multiple access points of disconnected parking and building entrances making for a unique and potentially confusing visitor experience. Access to the small bus loop and a small parking lot exists off Rose Hill Dr. There are two additional access points along Henry Ave to a small parking lot and a larger parking lot between the fields and school which appears to also potentially serve as an additional bus loop. Based on the current Albemarle County Zoning Ordinance, the school site is Zoned R-1S (“small lot” low-density residential) and has the dimensional requirements for the property as indicated below:

- Special Use Permit – It is assumed either a special use permit exists or the parcel is grandfathered for the school use as elementary, high schools, college, and universities in the R-1S zone require a special use permit. Middle schools are undefined in the Zoning Ordinance of Charlottesville
- Front Yard – 25’ min from existing public roads
- Side Yard – 50’
- Rear Yard – 50’
- Maximum Building Height – 35’

Site Vehicular/Pedestrian Accesss and Transportation

The site has three separate vehicular entrances which do not interconnect on site creating a potentially confusing visitor experience. There appears to be some separation of bus and cars with access off Rose Hill Dr predominantly for the small bus loop. Two entrances off Henry Ave serve parking lots at two different elevations. The higher/middle parking lot with access closer to Rose Hill serves car parking only and seems to have a good entry location into the school. The lower lot, also the largest on site, appears to serve predominantly for the athletic fields as access into the building from the lower lot is limited. The two parking lot entrances along Henry Ave are very close in proximity to one another which does raise some concern for conflict in turning movements with the two entrances. In total the site has approximately 102 standard parking spaces, including ADA parking spaced throughout the site. There are concerns for compliance of the existing ADA spaces and routes into the building. Given the significant grade change across the site access between the discrete parking areas is limited to stair and non-ADA compliant routes. Keeping a balanced allocation of accessible parking around the site is recommended. The small bus loop appears to have parking for approximately 6 busses which adjoins the poorly defined loading area which may create conflicts.

Pedestrian connectivity on site is accessed from perimeter sidewalks along the public roads and from the three parking areas on site. Movement between different areas on site often mean traversing a noticeable grade change by steep walkways or stairs. Site mobility considerations may be integral to the building for movement between levels of the site with future improvements. Asphalt conditions on site range from good to fair. The parking lot between the school and baseball field accessed off Henry Ave has asphalt in good condition. The parking lot access off Henry Ave in the middle of the site and the bus loop and small lot access off Rose Hill are in a fair condition. There are large areas of aging concrete flatwork and stairs on site in need of repair.

Athletic Facilities on Site

Recommended by VDOE (600 capacity)

- Multiuse hard surface 2 @ 100X120 ft (24,000sf total)
- Fitness Development equipment area – 100X150ft (15,000 sf)
- Field Game Areas 3 @ 200X400ft (240,000 sf or 5.51 Ac)

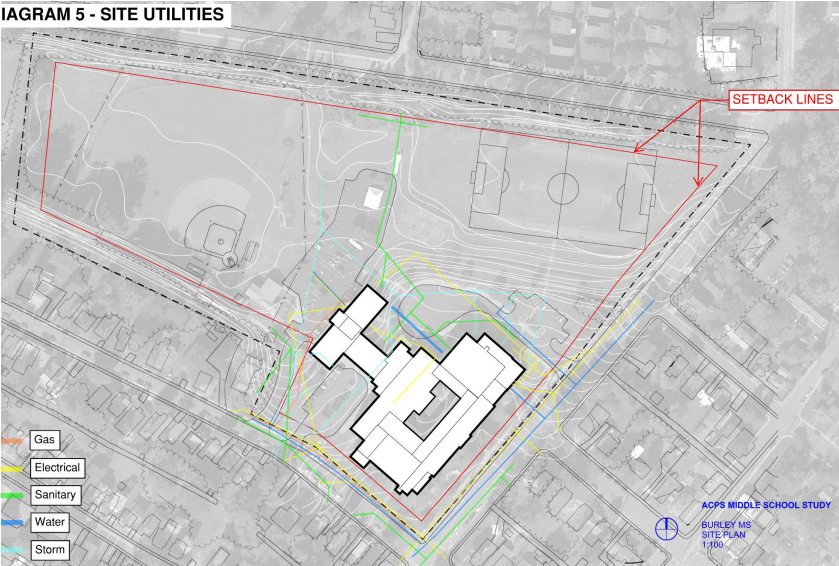
Existing on site

- One multiuse hard surface area – total 5,500 sf
- 1. One multiuse basketball court in poor condition
- Fitness Development equipment area – does not appear to be in existence on site
- Two Field Game Areas – total 222,000sf or 5.1 AC
- One large multipurpose field in fair to poor condition with significant grade change terraced into lawn seating area (likely much more than needed)
- 1. Asphalt 6 lane track in good condition
- 2. One baseball field in good condition, however viewing infrastructure in poor condition. Donation based project underway to improve portions for the viewing infrastructure.
- 3. Flex play grass areas adjacent to each primary field included in total area above
- lawn flex space adjacent to lower parking and multipurpose field/track
- Abuts with pedestrian path connection to Booker T Washington Park

Recommended Additions on Site

It is recommended to increase the multipurpose hard surface area on site to be more in alignment with VDOE recommendations. While the field game areas are less than the recommendation from VDOE in quantity the total area is not far from the recommendation. Given the capacity is expected to be 600 it is not recommended to increase fields at this time unless capacity is to exceed 600 in the future. There is also concern on this site for ADA access to the play areas on site. It appears the main access to the lower multipurpose field is via stairs only. Consult with school staff for operations regarding outdoor fitness development equipment area to determine necessity. Space

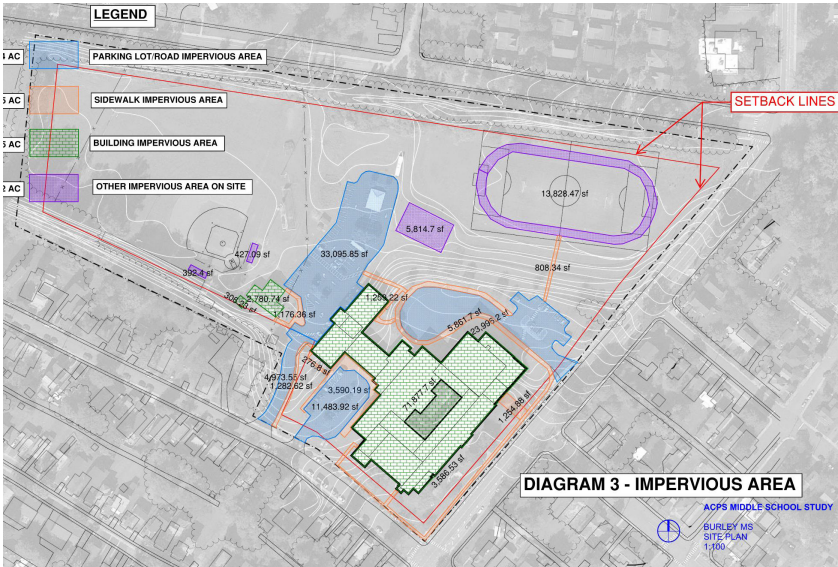
Burley Existing Site Utilities



Burley Critical Slopes



Burley Existing Impervious Site Area



Burley Soils Map



is limited and improvements to provide this space are only recommended if viewed to be vital by school staff

Site Utilities

There is existing public sanitary sewer and public water connections available and in place servicing the building. There are also existing telecom and power services to the site and existing building. Any future expansions would warrant an evaluation of the capacity of each utility for adequacy. Around the perimeter of the building, generally good drainage exists with positive relief away from the building. Two storage containers by the baseball field were noted on site. The site lighting appears to be LED and adequate coverage, however this is based on visual inspection only and is not an evaluation of photometrics levels.

Site Topography, Environmental Images, and Vegetation

The site has a significant amount of grade change across it with this used in an advantageous way with multiple stories of the building. The topography of the site will drive many decisions regarding future improvements on the site and should be carefully considered with building additions and with vehicular and pedestrian improvements. The topography and existing infrastructure leave limited opportunities for readily developable land on the site without significant development costs in earthwork or infrastructure relocations. Critical slopes also play an important role with disturbance limitations (see graphic below for red – lot regulations and blue- subdivision ordinance critical slopes). The red critical slopes are harder to disturb than the blue critical slopes by nature of the ordinance regulation differences between them. The blue areas of critical slopes can likely be disturbed if no subdivision of the land occurs with the development. Disturbance of the red critical slopes requires a modification or waiver reviewed by Planning Commission and ultimately approved or denied by City Council. No FEMA floodplain exists on the property and no known wetlands exist; however, Schenks Branch does flow west to east along the north property line and is identified as a Riverine habitat in the National Wetlands Inventory. Avoidance of this stream is recommended and should future development of an accessory building be placed in the general proximity of the north property line, a floodplain study is recommended as flooding may exist although not regulated by FEMA. Generally, the vegetation and land cover across the site is in a fair to poor condition with areas of bare earth present. Thin linear wooded areas exist along the north, west, and south edges of the property, excluding the Henry Ave frontage.

Storm Drainage and Stormwater Management

Existing stormwater management on the site appears to be nonexistent which is likely due to the 1951 construction preceding stormwater regulations. It should be assumed that any development on the site will be required to provide stormwater management practices to serve the areas of land disturbed with the project. Site drainage is generally good with positive relieve away from the building around the perimeter primarily due to the considerable grade change across the site.

Site Soils

The soils on site are a mixture of 91-Urban Land (55%) and 88-Udorthents (45%). Generally, the Urban Land is in areas of prior development on site and the Udorthents is in the lower lying areas on site (baseball & multipurpose field). It is recommended a geotechnical investigation be performed in support of any future development requiring significant foundations, earthwork, or paving.

BUILDING ASSESSMENT REPORT: STRUCTURAL

Burley Middle School

April 10, 2023

Springpoint Structural observed the exterior and the interior of the middle school buildings on March 31, 2023, along with the architectural, MEP, and Civil team members. The original high school building documents are dated 1949 and the addition’s documents are dated 2001. Both sets were available for use and review. For purposes of this structural report, the main entrance elevation faces plan east.

EXISTING STRUCTURE

Original High School - 1949

The foundation systems are conventional strip and spread footings with a slab-on-grade. The 3-story structure consists of load-bearing masonry walls supporting steel bar joists for the floor and roofs. The slabs 2.5” concrete over a lath deck. The roof is a single ply roof.

Addition - 2001

The foundations are conventional strip and spread footings with a slab-on-grade. The 2-story structure consists of structural steel frame supporting the steel bar joist floor and roof. The suspend concrete slab is 3.5” thick over metal deck and the roof deck is 1.5” metal deck. The roof is a built-up roof. The author designed this addition.

INVESTIGATIONS

For this report, the exterior perimeter was observed, the interior hallways and main rooms were observed, and the roofs were walked. No destructive testing was conducted.

OBSERVATIONS

EXTERIOR – Original Building

- Rusting lintels are causing the mortar joints at the bearing ends to spall. Some locations
- are above previously infilled windows.
- A few locations of vertical and diagonal brick cracks occur.

- Some isolated locations have brick faces spalling due to freezing. The north face of the
- auditorium is the major location.
- The southwest corner of the 2
- nd floor has a missing downspout that is applying too much
- water to the wall below and the bricks and mortar joints are deteriorating.
- The main entry sidewalk has open joints next to the building allowing water penetration
- below the sidewalk.
- The northeast entry has some significant mortar joint damage at the stone bases.
- Vines are growing up the brick at the southeast corner.
- The old loading dock has slab and brick gaps.
- Two locations of the old shop building have failing soffits

EXTERIOR – Addition 2001

- The sealant in the vertical expansion joints (EJ) are nearing the end of their effective life.
- The sealant at the precast cast column bases at the entries are open and need
- replacement.

INTERIOR – Original Building

- Each floor had numerous cracks in the floor slabs that translated up through the floor
- finish.
- Very few vertical wall cracks were seen. The most significant one is in the gym near the southwest corner.

INTERIOR – Addition 2001

- Three cracks were translating up through the first-floor slab.
- The south entry has two high vertical masonry cracks.

ROOFS

- No notable signs of distress were seen on the roof.

CONCLUSIONS

In general, the original building is in moderately good shape considering its age. The addition is in good shape with just a few items that need maintenance.



BUILDING ASSESSMENT REPORT: ARCHITECTURE

Burley Middle School

EXTERIOR

ROOFING

- ACPS anticipates membrane roof replacements every 20-30 years, budgeting in the 10-year CIP plan at or around the 15-year mark. The membrane roof of the original building was replaced in 2017, is in good condition, and will need to be replaced in again around FY2042. The 1995 and 2002 SIPLAST roofs are nearing their end of life and need replacement (FY2023-2027). The 2004 EPDM roof will need to be replaced around FY2029. It is recommended that membrane roof replacements include removing existing roof assemblies down to the structural deck and replacing them with a new roof assembly with increased roof insulation to improve envelope performance. Pre-finished metal conductors and downspouts of the 2001 addition at Burley appear to be in good condition.

EXTERIOR SKIN

- The exterior skin is mainly brick veneer on CMU or CIP concrete back up, with 1 ½” rigid insulation in the cavity. The wall assembly of the original building does not meet current energy codes. The exterior windows have cast stone sills, and window bays of the 1951 original building are surrounded by limestone trim. See structural narrative for additional exterior finish observations and recommendations.
- Limestone and greenstone panels at the entry façade are in need of cleaning. Portions of the limestone were replaced in 1987 renovations.

WINDOWS AND DOORS

- Exterior windows were replaced in 1987. Classroom windows include operating “hopper” style sections. Their condition is generally good. Entry doors match windows and are in generally good condition.

OTHER EXTERIOR

- The exterior includes some historical plaques and sculpture.

INTERIOR

FLOOR FINISHES

- Existing floors in the school consist mostly of resilient tile. Some resilient floors throughout the school are from the original construction. Throughout the 1951 areas, resilient floors are 12”x12” resilient tile. Despite their age, these floors are generally in good condition in the classrooms, but corridor floors in some areas show signs of heavy traffic and are in fair condition. The later additions and renovations were constructed with 12”x12” VCT flooring and are generally in good condition. While the typical life expectancy of VCT flooring is about 20 years, VCT at Burley should continue to be maintained with ongoing assessment to determine future replacement needs. All asbestos tile floors will need abatement if replaced.
- Carpet is used in select areas of the school – administrative spaces, media center,

auditorium, and some classroom support spaces. Conditions are generally good.

- The gym flooring and stage floors show signs of age and wear.
- Bathrooms and locker rooms have ceramic floor tile. Condition is fair-good. Recommend replacement of floor tile in some cases.
- Kitchens have original 4x4 quarry floor tile. Condition is poor-fair. A fair amount of wearing, cracking, and patching has occurred. Recommend flooring replacement in future renovations.

CEILING FINISHES

- Most of the building features suspended ACT ceilings with recessed fluorescent lighting. ACT ceilings throughout the school are fairly dated, most are in fair-good condition, and it is recommended that generally all ACT ceilings be replaced. See electrical narrative for lighting observations and recommendations
- Drop gypsum ceilings in the bathrooms and locker rooms are generally in good condition

WALL FINISHES

- Typical interior corridor walls are painted CMU block walls and are generally in very good condition. Other interior walls include plaster and gypsum wallboard that are generally in good condition. Glazed tile wainscotting in the corridors (in the 1951 areas) are generally in good condition.
- Toilet rooms and locker rooms have painted CMU block walls, generally in good condition. Some toilet rooms have plaster wall and glazed tile wainscotting finishes that are in need of patching and repairing.

DOORS AND TRIM

- Most interior doors are stained solid wood doors in hollow metal knock-down frames and stainless steel hardware. Condition is fair to good.

CASEWORK

- Existing casework is a mix of solid wood, wood veneer, and plastic laminate, and have generally been well-maintained. Existing built-in casework and cabinetry in the 1951 classroom areas are painted solid wood and glass storage cabinets and shelving and are in fair condition. Some doors and drawers stick or don’t fully close properly but with maintenance upkeep could continue to adequately function.
- Science rooms feature solid surface countertops and wood veneer cabinets and are in fair-good condition. These cabinets can continue to remain in place and function well with continued maintenance of hardware.
- Office and lounge cabinetry feature solid surface and laminate countertops, with laminate upper and lower cabinets, and are in good condition. Laminate casework in the 2001 renovated labs is in good condition.
- Wood instrument storage bins in the music rooms show signs of wearing from years of use, but otherwise function ok for their use. Wood and glass display cases are dated but are in good condition and function well for their intended use.
- Burley has phenolic bathroom partitions, which have been recently installed and

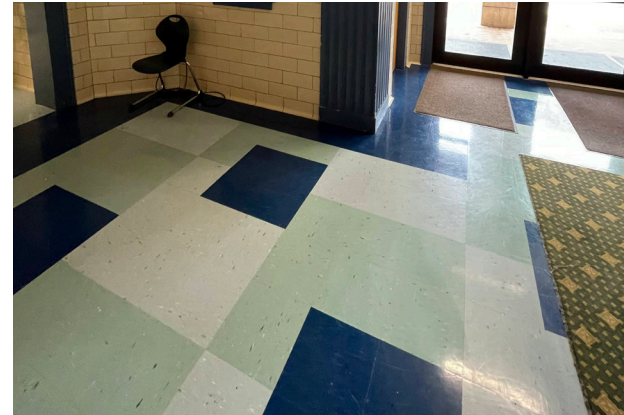
are in good condition.

FURNITURE

- Classroom desks and chairs are dated and are in fair condition, in some cases showing signs of cracking and more severe damage from years of use. While the existing furniture could remain in place and continue to function, it is recommended that classroom desks and furniture be replaced with modernized, flexible furniture that supports the needs of 21st century learning and instruction.
- New modernized worktables, desks, and chairs have been provided in the 2001 renovated lab spaces and are in good condition.
- Administrative and teacher work desks are a mix of wood, metal, and laminate furniture, and include a variety of different chair types. Except for new furniture in renovated spaces, most all this furniture is dated and showing signs of being worn and scratching from use. Furniture replacement is recommended as budgets allow.
- Wood and laminate shelving in the media center is in good condition.
- Gym bleachers have numerous broken and missing seats – recommend manufacture repair or replacement as budgets allow.

OTHER INTERIOR OBSERVATIONS

- Students lockers are located throughout the public corridors, and appear to be in good condition.
- Cafeteria items are currently stored in the stairwell, which is a fire code violation.
- A classroom expansion has been added on the lower level, restricting the main corridor to 4’. This could cause a bottleneck point in the case of an emergency evacuation.
- Stairs and ramps
 - Stairs are rubber treads and risers on concrete metal pan supported by painted steel stringers.
 - The elevator cab is in fair-poor condition, and it is recommended that the finished be addressed.
 - Interior ramps and stairs are located throughout the building at floor level elevation transitions, restricting the corridor and making it difficult to navigate.
 - The auditorium mezzanine and control booth is not ADA accessible.



BUILDING ASSESSMENT REPORT: MEP

Burley Middle School

GENERAL OVERVIEW

Burley Middle is an 123,626-sf school that accommodates roughly 700 students. The following MEP assessment refers to the existing conditions of the school as they are found at this time. While the original school structure was built in the 1949 there have been many renovations and additions since that time. The mechanical, electrical, and plumbing infrastructure have been fully replaced most recently in a 2001 addition & renovation or later. Most of the observed systems and equipment were from this era or have been added since then. Overall, the building and it’s MEP systems were noticed to be in generally poor but serviceable condition.

HEATING, VENTILATING & AIR CONDITIONING (HVAC) SYSTEMS

CENTRAL PLANT COMMENTS

- Two natural gas boilers are located in the annex building’s mechanical room on the far north side of the site. These are condensing type high efficiency boilers that were installed in 2014 most recently. These boilers appear to be in good condition, though they are closer to the end of their useful life than not.
- The central chiller for the school sits outside of the largest mechanical room in a mechanical yard adjacent to the building. This chiller was replaced in 2017 and appears to be in excellent condition with more than half of it’s expected life remaining.
- The central pumps for heating and cooling water are located adjacent to the central equipment the most directly serve. This puts the chilled water pumps in the pumphouse adjacent to the new chiller. These pumps were replaced in 2017 along with the chiller and are in excellent condition. The heating water pumps are located in the mechanical room below the annex. They were replaced in 2014 at the same time as the boilers. They are in decent condition for their age.

RECOMMENDATIONS

- The boilers are more than halfway past their end of life and replacement is generally suggested within 5-10 years.
- The chillers is almost new and in great condition. The chiller should remain for the next 15-20 years.
- The associated pumps should be replaced whenever the boilers or chillers are replaced.

CONTROLS COMMENTS

- The building is controlled by a central Siemens control system that is the standard for the entire county. The HVAC equipment is mostly operated by Siemens VFDs, with some older ABB units still in operation for some of the older pumps. Many of the local thermostats do not appear to have humidity control or local temperature setpoint control. The annex building also has some

thermostats that still operate via pneumatic controls. The air compressors for these systems is located in the annex basement.

RECOMMENDATIONS

- Upgrade controls systems whenever the local units are replaced or potentially as part of a singular project in order to help efficiency and local comfort of the occupants. Any pneumatic systems still in use should be replaced as soon as possible.

AIR HANDLERS AND TERMINAL BOX COMMENTS

- The majority of the school is served by distributed air handlers with VAV reheat. These units are located in mechanical rooms throughout the building. Most of them are from the 2001 HVAC renovation. The units vary from generally decent to poor condition. They are all at the end of their useful life and will require replacement before long. The VAV terminals providing local control and reheat are similarly aged and in generally poor condition.
- Two large spaces served by independent large air handlers. The auditorium is served by an air handler located under the stage that is also from 2001 and at the end of it’s expected life. The gym is served by two air handlers located high in the space with no regular access.

RECOMMENDATIONS

- The air handlers are near or past the end of their life, though are still in fair condition. The air handlers should remain until the next major renovation occurs, only being replaced in kind as necessary.

ANNEX BUILDING COMMENTS

- The annex building is served two centralized air handlers in the basement. One appears to be from a renovation that occurred in 2011. This unit is split DX cooling with condensers outside the mechanical room. The other unit appears to be remaining from some 1987 work and is connected to the central heating and cooling loop. The older air handler appears to be in poor condition and should be replaced during the next renovation project.

RECOMMENDATIONS

- The 1987 air handler should be replaced at the earliest feasible time. The pneumatic system controlling this unit and the spaces should also be replaced.
- The split air handler serving the rest of the building can remain until the next major renovation occurs.

SPECIALTY SPACES COMMENTS

- The building has two spaces that would be considered specialty instruction type spaces. These spaces include the art classroom and the fabrication shop. Many other middle schools in the county also have a science classroom with fume hood, however we did not observe a hood at Burley while walking the site nor a

dedicated exhaust system for such a hood.

- The art classroom does not appear to be equipped with a dedicated exhaust fan and it is suspected that the space might be under ventilated. The room is served by VAV terminal units with reheat similar to the other classroom spaces.
- The fabrication shop is not equipped with a ducted dust collection system, but rather a portable system can be moved to whichever piece of machinery requires it at any given time. It does not appear that the space is generally exhausted either. Suggest added general exhaust to the space in order to meet code and improve indoor air quality.

RECOMMENDATIONS

- Suggest providing new dedicated exhaust for all specialty spaces as required by code. The dust collection system appears to be in good condition and should remain.

PLUMBING SYSTEMS

DOMESTIC & STORMWATER COMMENTS

- Burley Middle Schools is served by a centralized water heating system located basement mechanical room under the annex building. Two natural gas fired water heaters provide hot water for the entire school. These units appear to be fairly new and in good condition.
- The fixtures in Burley appear to be mostly from the 2001 with some of the fixtures being older or replaced after that time as needed. The lavatories for the restrooms are a mixture of manual faucets and metered fixtures. A mixture of drinking fountains noticed throughout the building as well, with only a portion of them being equipped with bottle fillers.
- The flush fixtures throughout the building appear to be in good condition. They also mostly are from the 2001 HVAC renovation with some being older or replaced since that time. All water closets are floor mounted. The flush valves are primarily low flow type fixtures for water savings.
- The stormwater drainage for the roof is primarily internal drains down through the building’s core. The system does incorporate internal overflow drains here, which is an improvement over many of the other schools. Some areas, such as the roof of the older annex building, do not have overflow drains and do simply spill over the roof edge. This could lead to water retention issues on the roof and potential for leaks.

RECOMMENDATIONS

- Suggest replacing the electric boiler type heater with an air-source heat pump and storage tanks or water storage.
- Lavatory and flush fixtures should all be replaced with low-flow fixtures anywhere they are not already installed.



BUILDING ASSESSMENT REPORT: MEP

Burley Middle School

FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM COMMENTS

- The building is only equipped with a small sprinkler system serving one zone. The service entry is on site in a vault that was not accessible during our visit, while the zone valve is in one of the distributed mechanical rooms. This fire protection system only serves the newest portion of the building that connects the original main building and the previously separate annex on the north side of the site. The rest of the building does not have a fire protection system of any type.

RECOMMENDATIONS

- It is suggested that the building be maintained with the current fire protection service until the next major renovation. At that time, the fire service should be expanded to encompass the rest of the building for full sprinkler coverage.

ELECTRICAL DISTRIBUTION ASSESSMENT

ELECTRICAL DISTRIBUTION COMMENTS

- The building electrical service is 3-phase 277/480V. There are two main services, one at the chiller yard and one at the annex building. The chiller yard has an 800A Square-D I-Line Distribution panelboard. The annex main service equipment is a 2,000A switchboard with one main section, and one distribution section. The main services were both manufactured by Square-D and were installed around 2002. Both services are in good working order and have been maintained well.
- Electrical panels are located throughout the building. Panelboards manufacturers vary and conditions vary as well. Some panelboards are in dedicated closets which were locked, but others were in the corridor. Most branch panelboards are in good condition.

RECOMMENDATIONS

- Most of the electrical equipment is in good condition and does not need to be replaced. However, some older branch panelboards remain and are past their expected useful life and should be replaced at the next opportunity. It is also recommended to explore combining the two services into one during the next major renovation to help consolidate utility bills and reduce demand charges. Any panelboards in corridors should be locked to prevent access by students or other unauthorized personnel

LIGHTING SYSTEMS COMMENTS

- Lighting throughout the building is primarily accomplished with 2x4 recessed LED troffers in the corridors and classrooms. Most of the building has been upgraded to LED, but some fluorescent fixtures remain in back of house spaces. Lighting levels are mostly appropriate for the space being lit. Lighting color temperatures are consistent throughout the school. Individual lighting zone

control is achieved using line voltage toggle switches, or low-voltage dimmer switches, and motion sensors. Exterior lighting has also been upgraded to LED; however, some lighting was on during the day, color temperatures were inconsistent, fixtures were not dark sky compliant, and fixtures did not meet the AMA recommendations for color temperature..

RECOMMENDATIONS

- Replace existing fluorescent light fixtures with LED and ensure energy code requirements are met in all spaces. Tie-in all exterior lighting to a centralized control system to ensure all lighting only comes on when required. Where possible replace non-dark sky compliant fixtures with compliant fixtures.

LIFE SAFETY SYSTEMS COMMENTS

- The building features an addressable fire alarm system. The main control panel is a Siemens MXL, as of 2018 Siemens is no longer manufacturing replacement parts for this system. The main fire alarm panel is in the main office area.
- Exit signs were illuminated throughout the building. The exit signs are provided with battery backup.
- Egress lighting is present throughout the building and battery backup is provided.

RECOMMENDATIONS

- Ensure fire alarm testing records and preventative maintenance logs are up to date. System should be replaced in the next few years as replacement parts will be more difficult to come by.

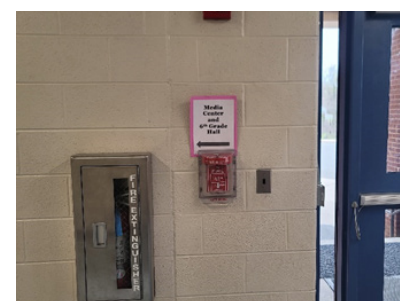
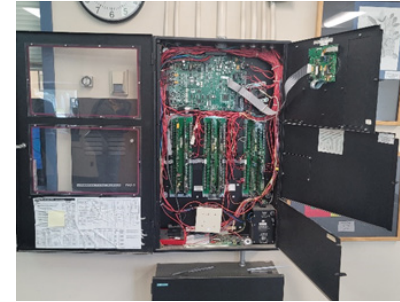
LOW-VOLTAGE SYSTEMS COMMENTS

- The building features an addressable public address system, an intrusion detection system, security management system, and video management system. The public address system speakers seem to be outdated. All other systems seem to be in functional order and in good condition. Low-voltage wiring closets are located throughout the building; but dedicated closets with cooling/heating are not provided.

RECOMMENDATIONS

- Ensure all systems are compliant with current county standards and evaluate for replacement/expansion during the next major renovation. Establish dedicated IT closets with cooling/heating to meet BICSI standards.





BUILDING ASSESSMENT REPORT

Henley Middle School

Building Information	
Gross Building Area	120,419 SF
Acres	30
Initial Construction Date	1966
2022-2023 Enrollment	805
Number of Classrooms	64
SF / Student	150
Site Amenities	Baseball & Soccer Fields, Basketball Court
MEP Grade	

Henley Middle School is the western-most ACPS middle school located along Rockfish Gap Turnpike near downtown Crozet. Henley shares a campus site with Brownsville Elementary School. The existing facility is a single-story 120,419 SF building on a 30-acre site originally constructed in 1966. Henley was built at the same time as Journey, and the two schools have almost identical floor plans. Additions in 1998 and 2004 to Henley included new classrooms to the north in an east-west orientation. Renovations to the media center occurred in 1998, and renovations in 2004 included a reconfigured music room and some academic classrooms. An addition in 2015 included new fitness spaces and gym storage were added to the north of the existing gym. A secure vestibule and administration addition consisting of glass and metal panel was completed in 2018, along with renovations to some offices and extensive reconfiguration of spaces to provide (2) new state-of-the-art labs.

The following are observations and recommended scopes for repairs or improvements. Refer to Appendix XX for “Tier 1 Improvement Scopes” for additional recommendations.

Building Exterior / Neighborhood / Aerial



Site Plan

Henley MS 1"=100'



BUILDING ASSESSMENT REPORT: CIVIL

Henley Middle School

General Site Analysis

Henley Middle School is located at 5880 Rockfish Gap Turnpike, Crozet, VA 22932 within the White Hall district of Albemarle County. The school site is 50 acres on a shared parcel with Brownsville Elementary School, Parcel ID 05600-00-00-017A0. The two schools share the same signalized entrance along Rockfish Gap. Based on the current Albemarle County Zoning Ordinance, the school site is Zoned R-1 (Residential) and has the dimensional requirements for the property as indicated below:

- By right – “Public uses and buildingssuch as schools”
- Front Setback – 5’ min from ROW or sidewalk outside of ROW
- Side Setback – 5’ (plus 5’ for each foot of building height over 35’)
- Rear Setback – 20’
- Maximum Building Height – 35’
- Entrance Corridor Overlay

Site Vehicular/Pedestrian Accesss and Transportation

The site has a good access with a full access signalized entrance off Rockfish Gap Turnpike (Route 250) shared with Brownsville elementary school. The bus loop and parking lot are separated which helps to reduce conflicts and increase efficiency with pick up and drop off. The site has approximately 118 standard parking spaces and 39 bus parking spaces. The bus loop on the back side of the school is functional in it’s location, however is not the most aesthetically pleasing entrance with a lot of above ground infrastructure visible adjacent to the entrance. Loading is poorly defined on site with a delivery witnessed parking along the bus loop edge. Pedestrian access is provide from Route 250 at the south west corner with an asphalt path connecting to the bus loop area. In the front of the school the pedestrian access from the parking lot is good with the exception of the ADA parking spaces and route which appear to be non-compliant. The asphalt on site is generally in fair condition with mild alligator cracking.

Athletic Facilities on Site

Recommended by VDOE (600 capacity)

- Multiuse hard surface 2 (Q 100X120 ft (24,000sf total)
- Fitness Development equipment area – 100X150ft (15,000 sf)
- Field Game Areas 3 (Q 200X400ft (240,000 sf or 5.51 Ac)

Existing on site

- Multiuse hard surface 2 (Q 100X120 ft (24,000sf total)
- Fitness Development equipment area – 100X150ft (15,000 sf)
- 1. Field Game Areas 3 (Q 200X400ft (240,000 sf or 5.51 Ac.

- Pedestrian pathways extend into rear of site and appear to connect to a stream valley trail network.

Recommended Additions on Site

Recommend the addition of one multiuse hard surface for play in line with VDOE recommendations. Given the joint campus and target capacity of 600 whereas the VDOE requirements increase by one field at 600 pupil capacity, the third field is not recommended at this time. Should capacity be desired in the future beyond 600 then an additional field should be considered.

Site Utilities

There is existing public sanitary sewer and public water connections available and in place servicing the building. The sanitary sewer service for the building connects to the public sewer line for treatment as the site is within the Albemarle County Service Authority service area and has been confirmed by ACSA all sewage effluent connects to ACSA and RWSA sewer. However, there also appears to be a sewage disposal pond on site from the original construction. The status of this disposal pond is unknown at this time and warrants further investigation. It is recommend a study be commissioned to discover the status of the sewage disposal pond and proper abandonment. The sewage pond appears to have algae blooms which creates the interest to confirm proper disconnection and abandonment. There are also existing telecom and power services to the site and existing building. Any future expansions would warrant an evaluation of the capacity of each utility for adequacy. Several sheds were noted spaced around the site. The site lighting appears to be LED and adequate coverage, however this is based on visual inspection only and is not an evaluation of photometrics levels.

Site Topography, Environmental Images, and Vegetation

The site is generally fairly flat in the areas of previous development. The forested areas (approximately 30% of site area) to the north and east have steep topography generally not conducive for development without substantial site work costs. There appears to be some opportunity to develop approximately 1.5 acres of forested area north of the central multipurpose filed where topography in the forested area is flatter. There are preserved and managed slopes on the site shown in the graphic below (green – preserved, yellow – managed). The preserved slopes are more difficult to impact and may require an application to and approval by the Board of Supervisors. The managed slopes can generally be impacted by development during the site plan process with proper justification. The land cover on the site is fair to poor with large areas of bare earth. Generally, the building has good positive drainage away however some areas with

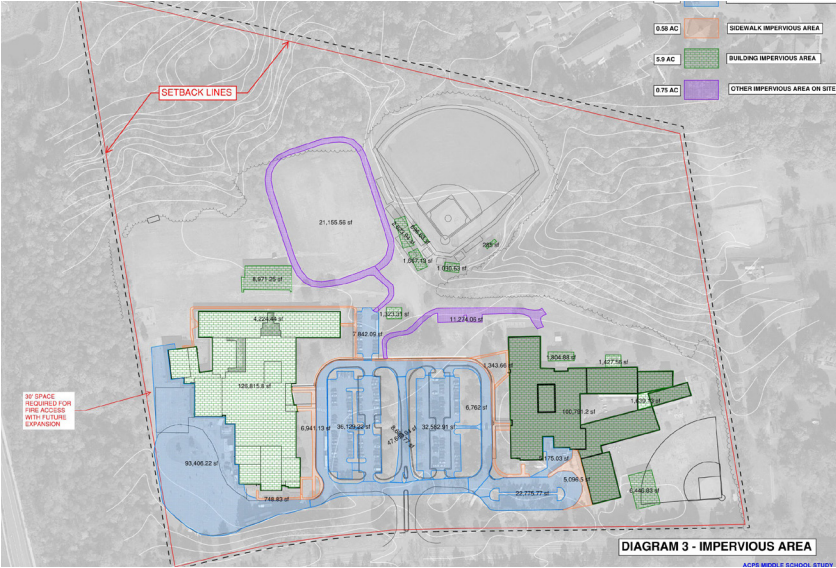
Henley Existing Site Utilities



Henley Critical Slopes



Henley Existing Impervious Site Area



Henley Soils Map



evident of ponding were noted around the northeast corner of the building. Floodplain does exist on the property to the north associated with Slabtown Branch, however no impacts to existing building are expected given the lower elevation of the stream from the average site grade. Future development on the site is not anticipated to impact Slabtown Branch, however, should grading encroach into the regulated floodplain a study may be warranted. Lastly there appears to be a sewage treatment lagoon on site with and unknown status/condition showing algae blooms.

Storm Drainage and Stormwater Management

Existing stormwater management on the site appears to be sparse which is likely due to the 1966 construction preceding stormwater regulations. It should be assumed that any development on the site will be required to provide stormwater management practices to serve the areas of land disturbed with the project. Site drainage is generally good with positive relieve away from the building with the only exception noted in the northeast corner. The site does have one existing dry pond providing a small amount of detention. The system appears to be stressed with downstream channel erosion and frequent overtopping of the small dam of the pond. Future development on the site should consider this apparent inadequacy. The storm drainage off of the site is distributed with two discrete outfall points and sheet/shallow concentrated flows. This existing pond appears to have approximately half of the site drain through it.

Site Soils

The soils on site are a mixture of 91-Urban Land (68%), 37C3-Haysville Clay (11%), 7B-Braddock Loam (11%), and 4D/4E – Ashe Loam (10%). Generally, the Urban Land is in areas of prior development on site and the remaining soil types are within the forested areas and baseball field. It is recommended a geotechnical investigation be performed in support of any future development requiring significant foundations, earthwork, or paving.

BUILDING ASSESSMENT REPORT: STRUCTURAL

Henley Middle School

Springpoint Structural observed the exterior and the interior of the middle school buildings on March 17, 2023 along with the architectural, MEP, and civil team members.

Most of the buildings had construction documents available for use and review. The original documents for the middle school are dated 1965. The first addition’s documents are dated 1998. The second addition’s documents are dated 2004. The activity addition added in 2015 does not have structural documentation available for review.

For purposes of this structural report, the main entrance elevation faces plan south.

EXISTING STRUCTURE

ORIGINAL MIDDLE SCHOOL – 1965

The foundation systems are conventional strip and spread footings with a slab-on-grade. The single-story structure consists of load-bearing CMU walls together with structural steel columns supporting the steel bar joist roof. The roof deck is 1.5” metal deck supporting a single-ply roof membrane.

ADDITIONS – 1998 AND 2004

The foundations are conventional strip and spread footings with a slab-on-grade. The single-story structure consists of load-bearing CMU walls supporting the steel bar joist roof. The roof deck is 1.5” metal deck supporting a single-ply roof membrane.

ADDITION – 2015

No documentation was available for review for the foundations, but they are probably the same as previous foundations. The single-story structure consists of load-bearing CMU walls and structural steel supporting the steel bar joist roof. The roof deck is 1.5” metal deck supporting a single ply roof membrane.

INVESTIGATIONS

For this report, the exterior perimeter was observed, the interior hallways and main rooms were observed, and the roof was observed. No destructive testing was conducted.

OBSERVATIONS

EXTERIOR

- Brick weeps were not seen in all the walls of the original building.
- Most vertical expansion joints (EJ) have failed sealant due to age.
- The cast stone sills under the windows have failed sealant head joints due to age.
- A few brick lintels are rusting.

INTERIOR

- A few vertical CMU cracks occur at isolated locations.
- The interior CMU control joints in the gym need new sealant.
- Around the interior of the Gym, there were about (3) high diagonal cracks in the CMU.
- No major settlement or cracking were seen in the floor slabs or in the walls.

ROOFS

- No notable signs of distress were seen on the roof.
- A few of the roofs of the additions had PV panels.

CONCLUSIONS

In general, the buildings are in very good shape for their different ages.



BUILDING ASSESSMENT REPORT: ARCHITECTURE

Henley Middle School

EXTERIOR

ROOFING

- Except for a few edge conditions where overlapping membranes have started to separate, the overall roof at Henley is in good condition. ACPS anticipates membrane roof replacements every 20-30 years, budgeting in the 10-year CIP plan at or around the 15-year mark. The majority of Henley’s membrane roofs were replaced in 2018 and 2021, and anticipated replacements of these roofs should occur around FY2043-46. It is recommended that membrane roof replacements include removing existing roof assemblies down to the structural deck and replacing them with a new roof assembly with increased roof insulation to improve envelope performance.

EXTERIOR SKIN / WALL ASSEMBLY

- The exterior skin is a mix of brick veneer, metal panel, and storefront and unit windows. The wall assemblies of the original building and 1998 addition do not meet current energy codes, but newer additions in 2004, 2015 and 2018 do meet current energy codes. Masonry repairs were performed in 1993. See structural narrative for additional exterior finish observations and recommendations.

WINDOWS AND DOORS

- Original windows are metal with single-pane glass and operable panels in the classrooms and are generally in fair-good condition but could be replaced to improve air-tightness and overall building energy performance. Windows in 1998 are metal, with operable panels, and generally are in good condition. Unit windows and storefronts associated with the 2004, 2015, and 2018 additions are aluminum-framed, with “hopper” style sections in the classrooms to match the original window styles. Their condition is generally good. Storefront entry doors match windows and are generally in good condition.

OTHER EXTERIOR

- Modular trailers include (8) classrooms on the site
- Henley features (2) open-air courtyards accessed internally from the school.
- Henley is the only ACPS Middle School to feature a greenhouse, which faces one of the internal courtyards.

INTERIOR

FLOOR FINISHES

- Original floors in the school consist mostly of asphalt tile, with terrazzo in the corridors and vinyl asbestos tile in the lobby, corridors, cafeteria, and some storage spaces. Despite their age, these floors are generally in good condition. The newer additions and renovations were constructed with 12”x12” VCT flooring and carpet, and are generally in good condition. While the typical life expectancy

of VCT flooring is about 20 years, VCT at Henley should continue to be maintained with ongoing assessment to determine future replacement needs. All asbestos tile floors will need abatement if replaced.

- Carpet is used in select areas of the school – administrative spaces, media center, music classrooms, and some classroom support spaces. Carpet conditions are generally good, but in some cases, it is recommended carpet be replaced where wear and tear has occurred.
- Flooring in the gym, fitness rooms, and stage are wood. The gym and stage floors show signs of age and wear. The fitness flooring from the 2015 addition is in very good condition.
- Bathrooms and locker rooms have ceramic floor tile. Conditions are fair-good. Recommend replacement of floor tile in some cases.
- Kitchens have original 4x4 quarry floor tile. Conditions are generally good, but some areas are showing signs of cracking. Recommend flooring tile be replaced in future renovations.

CEILING FINISHES / LIGHTING

- The majority of lighting is LED. Some back of house spaces remain Fluorescent.
- Most of the building features suspended ACT ceilings with recessed LED lighting. Some back of house spaces remain fluorescent lighting. ACT ceilings throughout the school are fairly dated, most are in fair-good condition, and it is recommended that generally all ACT ceilings be replaced in future renovations. See electrical narrative for lighting observations and recommendations.
- Drop gypsum ceilings in the bathrooms and locker rooms are generally in good condition.

WALL FINISHES

- Typical interior corridor walls are painted CMU block walls and are generally in good condition. Other interior walls include plaster and gypsum wallboard that are generally in good condition. Glazed tile wainscoting in the corridors, although dated, are generally in good condition.
- Toilet rooms and locker rooms have CMU block and/or ceramic wall tile, generally in good condition.

DOORS AND TRIM

- Most interior doors are stained solid wood doors in hollow metal knock-down frames and stainless-steel hardware. Some doors show signs of their age - conditions are fair-good. Henley has phenolic bathroom partitions, which have been recently installed and are in good condition.

CASEWORK

- Existing casework is a mix of solid wood, wood veneer, and plastic laminate, and has generally been well-maintained but in some cases are in fair condition and need replacement.
- Science rooms feature solid surface countertops and wood veneer and glass

cabinets and are in fair-good condition. These cabinets can continue to remain in place and function well with continued maintenance of hardware.

- Office and lounge cabinetry feature solid surface and laminate countertops, with wood or laminate upper and lower cabinets, and are in fair-good condition.
- The cabinets in the art room are in fair condition and should be replaced.
- Wood instrument storage bins in the music rooms show signs of wearing from years of use, but otherwise function ok for their use.
- Laminate casework in the 2018 renovated labs is in good condition.

FURNITURE

- Classroom desks and chairs are date, but mostly in good condition with few exceptions. While the existing furniture could remain in place and continue to function, it is recommended that classroom desks and furniture be replaced with modernized, flexible furniture that supports the needs of 21st century learning and instruction. Some classroom and lab furniture is equipped with new furniture in good condition.
- Administrative and teacher work desks are a mix of wood, metal, and laminate furniture, and include a variety of different chair types. Except for new furniture in renovated spaces, most all this furniture is dated and showing signs of wearing and scratching from use. Furniture replacement is recommended as budgets allow
- Wood and laminate shelving in the media center is in good condition.

OTHER INTERIOR OBSERVATIONS

- Student lockers are located throughout the public corridors and appear to be in good condition



BUILDING ASSESSMENT REPORT: MEP

Henley Middle School

GENERAL OVERVIEW

Henley Middle is an 120,419x-sf school that accommodates roughly 900 students. The following MEP assessment refer to the existing conditions of the school as they are found at this time. While the original school structure was built in the 1960's, the mechanical, electrical, and plumbing infrastructure have been fully replaced since that time. While a number of upgrades and renovations were performed throughout the years the most recent complete building renovation was completed in 2004. Most of the observed systems and equipment were from this era or have been added or replaced since then.

HEATING, VENTILATING & AIR CONDITIONING (HVAC) SYSTEMS

CENTRAL PLANT COMMENTS

- Henley Middle Schools is served by a number of HVAC systems. While some areas are served by completely independent systems the building is primarily heated and cooled via a central plant providing chilled water for cooling and hot water for heating purposes. Two boilers are located in this mechanical room that appear to be from the latest full renovation in 2004. These boilers are fuel oil based units that are expensive to operate and are also not as efficient as newer options. The fuel oil system appears to be antiquated and the entire storage and pumping system poses a danger for leaks and environmental concerns. The boilers appear to be in working order, but they are past their useful life.
- The central chiller for the school sits outside of the main mechanical room in a mechanical yard. This chiller was replaced in 2012 and is therefore over 10 years old. This means that the chiller is more than half-way through its useful life. The chiller does appear to be in good condition currently with the only visible aging being on the fan guards.
- Adjacent to the boilers are the central pumps for the entire heating and cooling loops of the building. The heating water pumps appear to be from the 2004 renovation, while the chilled water pumps were replaced in 2012 along with the chiller. The pumps are all showing wear appropriate with their age and some evidence was seen that some of these pumps have been rebuilt or had motor replacements in the past ~20 years of service. The associated piping, insulation, and valves are also showing age and wear along with some signs of leaks in the past.

RECOMMENDATIONS

- Replacement of the current boilers with an air-source heat pump would electrify the school in an efficient way and remove fuel oil from the site.
- The chiller is in good condition and has roughly half it's expected life left. Replacement is expected in 10 years or more.
- The central pumps should be replaced whenever the associated pumps or boilers

replaced.

CONTROLS COMMENTS

- The building is controlled by a central Siemens control system that is the standard for the entire county. The pumps are mostly operated by Siemens VFDs, with some older ABB units still in operation for some of the older pumps. Many of the local thermostats do not appear to have humidity control or local temperature setpoint control. These systems should be upgraded whenever the local units are replaced.

RECOMMENDATIONS

- Upgrade controls systems whenever the local units are replaced or potentially as part of a singular project in order to help efficiency and local comfort of the occupants.

KITCHEN COMMENTS

- The kitchen is served by a packaged rooftop heat pump unit that was installed in 2017. This unit is a standalone packaged unit that is not tied to the overall building central water loops for heating or cooling of the space. This means that the kitchen space can be treated separately during a potential renovation scope. The kitchen hood and makeup air unit were also replaced in 2017 along with the rooftop unit and freezer/cooler condensing system. All of these systems appear to be in good condition and are only 5 years into their expected useful life.

RECOMMENDATIONS

- Kitchen systems should remain as their current independent systems. The equipment is near new and in excellent condition.

LARGER AIR HANDLERS COMMENTS

- The cafeteria and stage are served by a central air handler located on a mechanical mezzanine opposite the stage. This indoor unit appears to be in good condition generally, especially for it's age. The unit was installed as part of the 2004 design. The ventilation for this brought in through a packaged unit on the roof. This unit appears to operate as a preconditioner for the air handler in the mezzanine. The unit and associated exterior ductwork are most likely from the 2004 renovation or from sometime shortly after. The unit and ductwork show significant age and degradation.
- The gymnasium is served by two packaged rooftop air handlers located on the roof. These units were replaced in 2009 and operate independently from the rest of the school as a whole. The units appear to be in good condition and are roughly halfway through their expected useful life.
- Alongside the gym sits the most recent addition to the school that is the turf room and fitness area. This area was design and installed in 2015-16. The space is served by packaged rooftop air handlers that operate the space independently from the rest of the school's central heating and cooling systems. These rooftop



units provide both conditioning and ventilation to the space. The units are some of the newest in the building and appear to be in excellent condition.

RECOMMENDATIONS

- Replacement of the cafeteria and stage unit is suggested at the earliest convenience. The rooftop unit in particular is in poor condition, while the indoor unit is in good condition and could remain for some time.
- The gymnasium units appear to be in fair condition and should be replaced in approximately 5-10 years time. These units are independent of the rest of the system and can be replaced as necessary until the next major renovation.
- The turf and fitness units are in excellent condition and should remain as independent systems until the next major renovation is needed for this space. Units are expected to have roughly 10-15 years more life.

PACKAGED AND SPLIT DX COMMENTS

- There are many administration spaces scattered throughout the building that do not converge on a single central core. Because of this there are a number of systems that serve these spaces. Some spaces are served by split DX systems that have remote condensers on the roof. It was not clear when all of these systems were installed, but due to the various manufacturers and conditions it is expected that they were installed piecemeal as required due to the needs of the spaces served. Many of these units show signs of hale damage and the insulation on their refrigerant lines shows signs of degradation and age.
- Some of these admin spaces are also served by packaged rooftop units that appear to have been installed within the last 5 years or so. These units appear to be in decent condition and not quite halfway through their expected useful life.

RECOMMENDATIONS

- Maintain the packaged DX air handlers and split DX units in current condition until the next major renovation takes place. These units can be replaced in kind as necessary.

DOAS AND TERMINAL UNITS COMMENTS

- The main portion of the building is classroom spaces served by two primary system types. The first system last renovated in 2004 is the 4-pipe system utilizing local floor or ceiling mounted fan-coils to provide local conditioning with rooftop mounted air handlers for space ventilation. These rooftop units appear to all be from that original renovation. These units are packaged DX type units that can heat and cool the incoming ventilation air independently from the central boiler and chiller system. Many of them appear to be in generally decent and serviceable condition but are definitely past the end of their useful life. The fan-coil units are similarly aged and near or past the end of their useful life.
- The second classroom system serving the north portion of the building utilizes similar rooftop air handlers for ventilation. Space conditioning is provided to these classrooms by the local fan powered terminal boxes with hot water reheat.

The terminal boxes appear to be in decent condition, however the rooftop unit appears to show more age. These units are expected to be past their useful life due to their apparent condition.

RECOMMENDATIONS

- Replacement of fan-coil units and rooftop DOAS units are suggested as soon as feasible. These units are past their expected life and show considerable age and wear.

SPECIALTY SPACES COMMENTS

- The building has three spaces that would be considered specialty instruction type spaces. These spaces include the science classroom, art classroom, and the woodshop. The science classroom is equipped with a fume hood in the space which is exhaust via a utility fan on the roof equipped with a stack. The hood appears little used; however, the utility fan and associated ductwork appear to be in generally poor condition. The art classroom does not appear to be equipped with a dedicated exhaust fan and it is suspected that the space might be under ventilated.
- Finally, the woodshop is equipped with a local dust collection system interior to the space. This system appear sot be fairly recent and in good serviceable condition. Further investigation would be required to determine if the system meets all NFPA requirements of the space. Suggest replacement of science exhaust system and determination if true science hood with dedicated exhaust is required, also add space exhaust for the science classroom
- .

RECOMMENDATIONS

- Maintain the packaged DX air handlers and split DX units in current condition until the next major renovation takes place. These units can be replaced in kind as necessary.

PLUMBING SYSTEMS

DOMESTIC & STORMWATER COMMENTS

- Henley Middle Schools is served by a centralized water heating system located in the primary mechanical room along with the central boilers, chiller, pumping equipment, and central water service entrance. Hot water is provided via two fuel oil fired water heaters. These units appear to be fairly new, being manufactured in 2016. In addition to the fuel oil heaters, there is a solar thermal system that was installed in 2011. This system appears to be in good condition for it's age and was producing 117°F hot water at 8:30 am in the morning. The panels on the roof are showing some slight signs of aging, but are generally. The hot water piping itself is showing sign of age with a small leak being noticed near the water heaters themselves.



BUILDING ASSESSMENT REPORT: MEP

Henley Middle School

- The fixtures in Henley appear to be mostly from the 2004 renovation at the oldest with some potentially being replaced since that time. The lavatories for the restrooms are a mixture of manual faucets and are mostly push-type metered faucets. No faucets with electronic sensors or eyes were observed in the building.
- The flush fixtures throughout the building appear to be in good condition generally. Their appears leads to belief that these fixtures were potentially replaced sometime since the 2004 replacement. All water closets are floor mounted type with low-flow valves and all urinals are similarly equipped with low-flow fixtures. The showers in the locker rooms were replaced in a 2007 renovation of the area. These shower fixtures appear to be in good condition and are similarly low-flow type. The science classrooms appear to be plumbing utilizing acid resistant piping that leads to an acid neutralization tank on site.
- The stormwater drainage for the roof is provided primarily via internal drains down through the building’s core. Most of the original building does not have scuppers or internal overflow drains. This means that the overflow is spilled off the side of the building directly. Some spaces added more recently do show overflow drains and scuppers, however. The higher roofs generally drain down via gutter systems to the lower roofs below, adding to the potential overflow of water over the roofs edge. This could lead to water retention issues on the roof and potential for leaks.

RECOMMENDATIONS

- Suggest replacing the fuel oil boiler type heater with an air-source heat pump and storage tanks or water storage. This will remove fuel oil from the site and improve efficiency.
- The solar water heating system should remain in place for as long as the system if serviceable.
- Lavatory and flush fixtures should all be replaced with low-flow fixtures anywhere they are not already installed.

FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM COMMENTS

- The building is not equipped with a sprinkler system at this time outside of the main mechanical room. That space is treated as a single zone fire protection system with heads and a incoming service, however no sprinkler heads were noticed throughout the rest of the school. It is suggested that a new fire protection service be installed at the time of the next major renovation for at least partial coverage of the school. The system should be sized to cover the entire school at time of installation or sized for future expansion into additional spaces to be renovated at a later date.

RECOMMENDATIONS

- It is suggested that the building be maintained without a fire protection service until the next major renovation. At that time, a new fire protection service should be installed for at least partial coverage of the school. The system should be sized to cover the entire school at time of installation or sized for future expansion into additional spaces to be renovated at a later date

ELECTRICAL DISTRIBUTION ASSESSMENT

ELECTRICAL DISTRIBUTION COMMENTS

- The building electrical service is 3-phase 277/480V. The main service equipment is a 2,500A switchboard with one utility section, one main section, and two distribution sections. The electrical switchboard is manufactured by Siemens and was installed in 2018. It is in good working order and has been maintained well. The main switchboard is in the main electrical room on the first floor.
- Electrical panels are located throughout the building. Most panelboards are manufactured by Siemens and are in good condition with panel schedules. Some panelboards are in dedicated rooms that were locked, and others are located in the corridor. Some branch panelboards from 1993 are present throughout the school.

RECOMMENDATIONS

- Most of the electrical equipment is in good condition and not in need of replacement. Select branch panelboards are nearing the end of their useful life and should be replaced at the next opportunity. Any panelboards in corridors should be locked to prevent access by students or other unauthorized personnel.

EMERGENCY STANDBY SYSTEMS COMMENTS

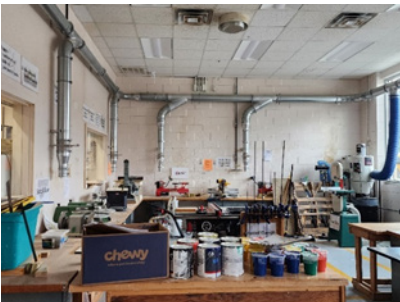
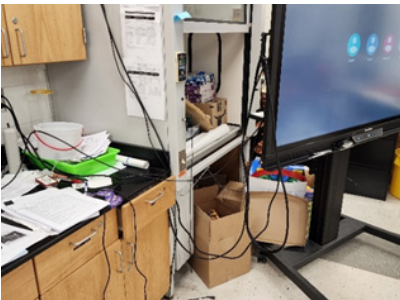
- Emergency power is provided by an 100kW diesel emergency generator manufactured by Kohler. The generator was installed in 2020. Two automatic transfer switches transfer power from the normal source to the emergency source at a loss of normal power. The automatic transfer switches provide emergency power to life safety, emergency systems such as, elevators, fire alarm, and egress lighting, and optional standby systems such as IT loads, convenience outlets, etc..

RECOMMENDATIONS

- The emergency electrical distribution system is in good working order. Ensure all preventative maintenance and testing is up to date.

LIGHTING SYSTEMS COMMENTS

- Lighting throughout the building is primarily accomplished with 2x4 recessed LED troffers in the corridors and classrooms. Most of the building has been upgraded to LED, but some fluorescent fixtures remain in back of house spaces



and a few sections of the corridor. Lighting levels are mostly appropriate for the space being lit. Lighting color temperatures are consistent throughout the school. Individual lighting zone control is achieved using line voltage toggle switches, or low-voltage dimmer switches, and motion sensors. Exterior lighting has also been upgraded to LED; however, some lighting was on during the day, color temperatures were inconsistent, fixtures were not dark sky compliant, and fixtures did not meet AMA recommendations for color temperature.

RECOMMENDATIONS

- Replace existing fluorescent light fixtures with LED and ensure energy code requirements are met in all spaces. Tie-in all exterior lighting to a centralized control system to ensure all lighting only comes on when required. Where possible replace non-dark sky compliant fixtures with compliant fixtures.

LIFE SAFETY SYSTEMS COMMENTS

- The building features an addressable fire alarm system. The main control panel is manufactured by Siemens. The main fire alarm panel is in an electrical room near the main office.
- Exit signs were illuminated throughout the building. The exit lights are connected to life-safety emergency power panels.
- Egress lighting is present throughout the building and connected to emergency power panels.

RECOMMENDATIONS

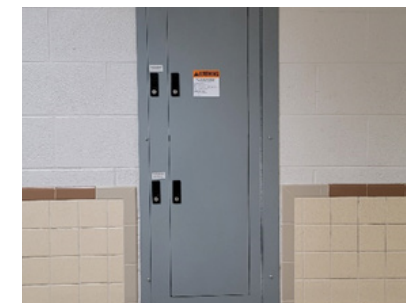
- Ensure fire alarm testing records and preventative maintenance logs are up to date.

LOW-VOLTAGE SYSTEMS COMMENTS

- The building features an addressable public address system manufactured by Telecor, an intrusion detection system, security management system, and video management system. Systems all seem to be in functional order and in good condition. Low-voltage wiring closets are located throughout the building; but dedicated closets with cooling/heating are not provided.

RECOMMENDATIONS

- Ensure all systems are compliant with current county standards and evaluate for replacement/expansion during the next major renovation. Establish dedicated IT closets with cooling/heating to meet BICSI standards.



BUILDING ASSESSMENT REPORT

Journey Middle School

Building Information	
Gross Building Area	95,350 SF
Acres	20
Initial Construction Date	1966
2022-2023 Enrollment	631
Number of Classrooms	53
SF / Student	151
Site Amenities	Baseball & Soccer Fields, Basketball & Tennis Courts, Shared campus parking
MEP Grade	

Journey Middle School is located just north of Charlottesville between Hydraulic Road to the east and Ivy Creek to the west. Journey shares a campus site with Greer Elementary School and Albemarle High School. The existing facility is a single-story 95,350 SF building on a 216-acre site originally constructed in 1966. Journey was built at the same time as Henley, and the two schools have almost identical floor plans. An addition to Journey in 2003 added new classrooms to the north in an east-west orientation, and renovations included administrative offices, Media Center, toilets, and a few classroom conversions. Renovations to the science rooms and locker rooms occurred in 2007. 2017 renovations included the addition of modernized science labs to support 21st century learning. A secure vestibule and administration addition was completed in 2018.

The following are observations and recommended scopes for repairs or improvements. Refer to Appendix XX for “Tier 1 Improvement Scopes” for additional recommendations.

Building Exterior / Neighborhood / Aerial



Site Plan

Journey MS 1"=100'



LEVEL 1 - FLOOR PLAN

BUILDING ASSESSMENT REPORT: CIVIL

Journey Middle School

General Site Analysis

Journey Middle School is located at 210 Lambs Lane, Charlottesville, VA 22901 within the Jack Jouett district of Albemarle County. The school site is collocated on a 216 acre property shared between Journey, Greer, Albemarle HS, Ivy Creek, Piedmont Regional Education, and the recently constructed Boys & Girls Club. The shared Parcel ID is 06000-00-00-078A0 of which Journey Middle School and associated infrastructure and fields occupies approximately 17.5 acres. Immediately adjacent to the occupied 17.5 acres are approximately 34 acres of wooded area. All schools on the parcel are access off of Lambs Lane which ultimately connects to Hydraulic Road at a stoplight. Based on the current Albemarle County Zoning Ordinance, the school site is Zoned Rural Areas and has the dimensional requirements for the property as indicated below:

- By right – “Public uses”
- Front Setback – 75’ min from existing public roads
- Front Setback – 25’ min from internal public or private road
- Side Setback – 25’
- Rear Setback – 35’
- Maximum Building Height – 35’
- Entrance Corridor Overlay

Site Vehicular/Pedestrian Accesss and Transportation

Site access for Journey Middle School is provided off Lambs Lane which also serves two other schools, and a newly constructed Boys and Girls club. Lambs Lane connects to Hydraulic Road at a signalized intersection. The shared access with Greer Elementary and Albemarle High does not seem problematic given the staggered bell schedules of the different school levels. The parking areas and bus loop are separated which helps to reduce conflicts and increase efficiency for pick up and drop off. The site has approximately 185 parking spaces (plus an additional +/- 50 in a gravel overflow area) and 28 bus parking spaces. ADA parking and accessible routes appear to be compliant from a visual inspection. Loading area is not well defined and is potentially hard to find for deliveries and could become congested with the rear parking area access. In the front of the school the asphalt is generally in a good to fair condition with mild cracking. The rear parking lot is in poor condition with the surface beginning to break down. Pedestrian access from a public right of way is not provided as Lambs Lane does not have sidewalks.

Athletic Facilities on Site

Recommended by VDOE (600 capacity)

- Multiuse hard surface 2 @ 100X120 ft (24,000sf total)

- Fitness Development equipment area – 100X150ft (15,000 sf)
- Field Game Areas 3 @ 200X400ft (240,000 sf or 5.51 Ac)

Existing on site

- Four Multiuse hard surface areas – total 32,400 sf
- 1. Eight pickle ball courts in good condition
- 2. One tennis court in fair condition
- 3. Two separate basketball courts in fair condition
- Fitness Development equipment area – level grass area adjacent to gym, 11,500sf
- Four Field Game Areas – total 305,000sf or 7 AC
- 1. Two or more lacrosse fields in rear of site. This is unique as no other school had lacrosse fields. Also, additional lacrosse field on the same parcel across Lambs Ln. Not clear if associated to Journey or Albemarle HS. Fields in good condition
- 2. Two baseball fields in good condition
- 3. Stone running track around the two rear fields
- Nature trail system on site connect to pathways adjacent to fields in rear of school
- Multiple port-a-john’s noticed in rear of school which appear to be supporting the field uses

Recommended Additions on Site

No recommended additional athletic facilities at this time as the site appears to be generally compliant with a surplus of athletic facilities.

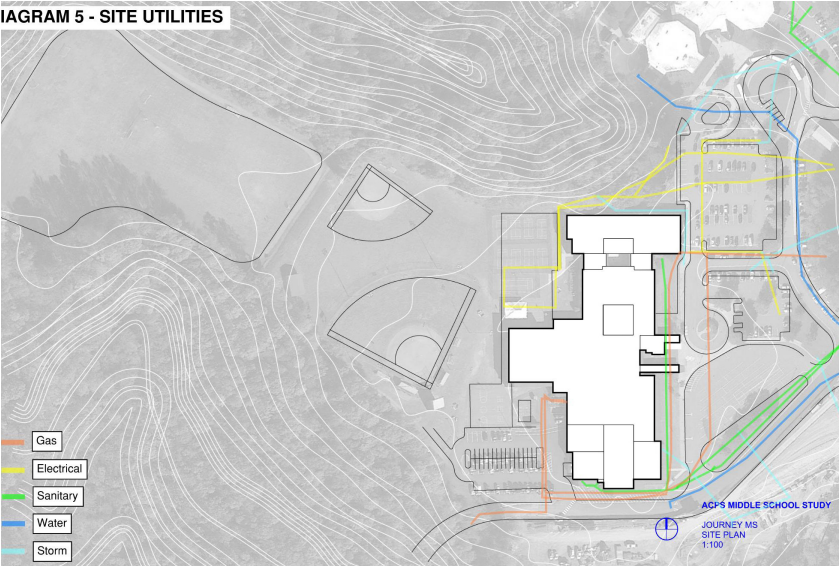
Site Utilities

There is existing sanitary sewer and public water connections available and in place servicing the building. The sanitary sewer flows into a newly constructed pump station built with the Boys and Girls Club and maintained by ACPS. There are also existing telecom and power services to the site and existing building. Any future expansions would warrant an evaluation of the capacity of each utility for adequacy. Around the perimeter of the building, generally good drainage exists with positive relief away from the building. Several sheds were noted spaced around the site. The site lighting appears to be LED and adequate coverage, however this is based on visual inspection only and is not an evaluation of photometrics levels.

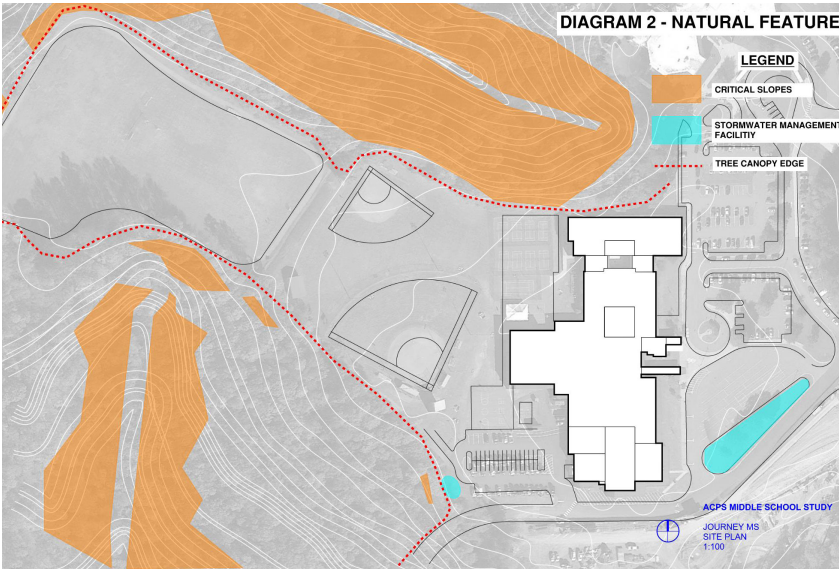
Site Topography, Environmental Images, and Vegetation

The site is generally fairly flat in the areas of previous development with some grade “steps” between fields. The developed school area is surrounded by forested areas to the north, west and south with mostly steep topography generally not conducive for development without substantial site work costs. There appears to be some opportunity

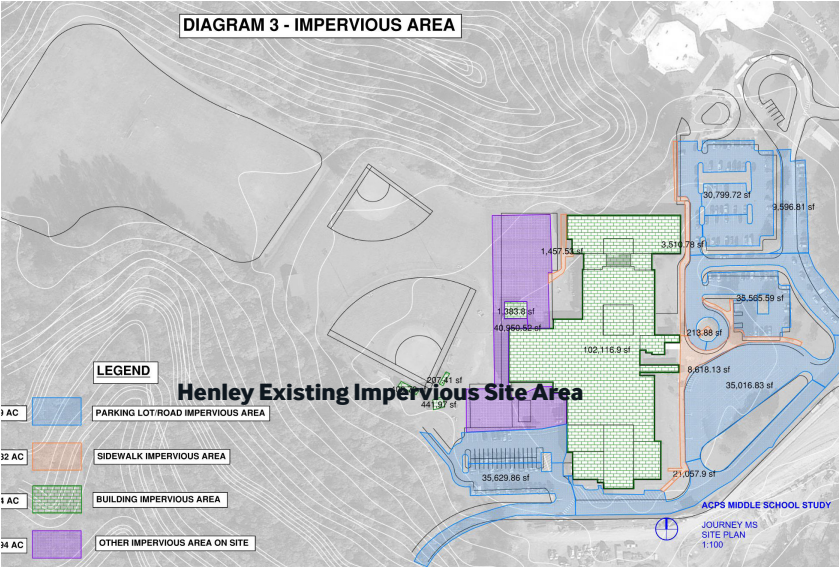
Burley Existing Site Utilities



Burley Critical Slopes



Burley Existing Impervious Site Area



to develop approximately 3.5 acres of forested area in two separate pockets south of the baseball and lacrosse fields where topography in the forested area is flatter. There are critical slopes on the site shown in gold on the graphic below. Disturbance of critical slopes requires a waiver and Board of Supervisors approval of the request. The land cover on the site is generally good with few and isolated areas of bare earth. Generally, the building has good positive drainage away and no Floodplain present on site. Lastly it should be noted the site is within a leaking tank 2000 ft buffer which appears to be identified as the on site ACPS owned fuel station.

Storm Drainage and Stormwater Management

Existing stormwater management on the site appears to be sparse which is likely due to the 1966 construction preceding stormwater regulations. It should be assumed that any development on the site will be required to provide stormwater management practices to serve the areas of land disturbed with the project. Site drainage is generally good with positive relieve away from the building with the only exception noted in the northeast corner. The site does have two bioretention facilities located in the island south of the bus parking and west of the rear parking lot. Both bioretention systems appear to be in good function and health with ample vegetated cover.

Burley Soils Map



Site Soils

The soils on site are a mixture of 88-Udorthents (39%), 39D/39E-Hazel Loam (36%), 48B- Philmont Sandy Loam (10%), 21B/21D – Culpepper Fine (11%), and 4E- Ashe Loam (4%). Generally, the Udorthents is in areas of prior development on site and the remaining soil types are within the forested areas. It is recommended a geotechnical investigation be performed in support of any future development requiring significant foundations, earthwork, or paving.

BUILDING ASSESSMENT REPORT: STRUCTURAL

Journey Middle School

Springpoint Structural observed the exterior and the interior of the middle school buildings on March 17, 2023 along with the architectural and MEP team members.

The original documents for the middle school are dated 1965. The school is a sister school with Henley using the same set of documents. The first addition’s documents are dated 2003 and were done by this report’s author. The second addition’s documents are dated 2016.

For purposes of this structural report, the main entrance elevation faces plan south.

EXISTING STRUCTURE

ORIGINAL MIDDLE SCHOOL – 1965

The foundation systems are conventional strip and spread footings with a slab-on-grade. The single-story structure consists of load-bearing CMU walls together with structural steel columns supporting the steel bar joist roof. The roof deck is 1.5” metal deck supporting a single-ply roof membrane.

ADDITIONS – 2003

The foundations are conventional strip and spread footings with a slab-on-grade. The single-story structure consists of load-bearing CMU walls supporting the steel bar joist roof. The roof deck is 1.5” metal deck supporting a single-ply roof membrane.

ADDITION – 2013

The foundations are conventional strip and spread footings with a slab-on-grade. The single-story structure consists of load-bearing CMU walls and structural steel supporting the steel bar joist roof. The roof deck is 1.5” metal deck supporting a single-ply roof membrane.

INVESTIGATIONS

For this report, the exterior perimeter was observed, the interior hallways and main rooms were observed, and the roof was observed. No destructive testing was conducted.

OBSERVATIONS

EXTERIOR

- Brick chord weeps were seen in all the walls of the original building.
- Most vertical expansion joints (EJ) have failed sealant due to age.
- A lot of cast stone sills under the windows have failed sealant head joints due to age.
- Around the original building, a lot of joint reinforcing is rusting and spalling the face of the horizontal bed joints. This occurs on the west elevation, the NW corner, and the three sides of the gym.

INTERIOR

- The high interior CMU control joints in the gym need new sealant.
- No major settlement or cracking were seen in the floor slabs or in the walls

ROOFS

- No notable signs of distress were seen on the roof.

CONCLUSIONS

In general, the building is not aging as well as her sister since the joint reinforcement is starting to rust and spall the horizontal mortar joints.



BUILDING ASSESSMENT REPORT: ARCHITECTURE

Journey Middle School

EXTERIOR

ROOFING

- ACPS anticipates membrane roof replacements every 20-30 years, budgeting in the 10-year CIP plan at or around the 15-year mark. Most roof replacements at Journey occurred in 2018. The 2003 addition roof was replaced in the summer of 2023. Future roof replacements at Journey should be budgeted around FY2033-38, with anticipated replacements around FY2043-48. It is recommended that membrane roof replacements include removing existing roof assemblies down to the structural deck and replacing them with a new roof assembly with increased roof insulation to improve envelope performance.

EXTERIOR SKIN / WALL ASSEMBLY

- The exterior skin is brick veneer, storefront and unit windows with metal panel infill. The wall assemblies of the original 1965 building do not meet current energy codes. As improvement budgets allow, future envelope improvements, including adding insulation to the interior wall side (or exterior wall side if exterior skin is replaced), and sealing at windows, doors, and other openings would significantly improve energy performance.
- Masonry repairs were performed in 2013. Recommend cleaning brick and pre-cast sills where visible stains and efflorescence has occurred. See structural narrative for additional exterior finish observations and recommendations.

WINDOWS AND DOORS

- Original windows are metal with single-pane glass and operable panels in the classrooms, and are generally in fair-good condition but could be replaced to improve air-tightness and overall building energy performance. Unit windows, storefronts, and curtainwall associated with the 2003 addition are aluminum-framed, with “hopper” style sections in the classrooms to match the original window styles. Their condition is generally good. Storefront entry doors match windows and are generally in good condition.
- Replace door threshold at 2003 addition.

OTHER EXTERIOR

- Journey features an open-air courtyard accessed internally from the school. Benches made of pressure-treated wood at the outdoor amphitheater are showing signs of wear and may need selective replacement over time.

INTERIOR

FLOOR FINISHES

- Original floors in the school consist mostly of asphalt tile, with terrazzo in the corridors and vinyl asbestos tile in the classrooms, cafeteria, and some storage spaces. Floor finishes in the 2003 addition were constructed with 12”x12” VCT

flooring and carpet, and are generally in good condition, however there are several instances where VCT flooring is visibly cracking. These areas should be investigated to determine the cause and remedy for repair. While the typical life expectancy of VCT flooring is about 20 years, VCT at Journey should continue to be maintained with ongoing assessment to determine future replacement needs. All asbestos tile floors will need abatement if replaced.

- Carpet tile in administrative spaces, media center, music classrooms, and some classroom support spaces are generally in good condition. Replace carpet tile where wear and tear has occurred.
- Wood flooring in the gym is showing signs of age and wear.
- Bathrooms and locker rooms have ceramic floor tile. Condition is generally good. Recommend replacement of floor tile in some cases.
- Kitchens have original 4x4 quarry floor tile. Condition is generally good.

CEILING FINISHES / LIGHTING

- Most of the building features suspended ACT ceilings with recessed LED lighting. Some back of house spaces remain fluorescent lighting. Recommend upgrading all fluorescent lighting to LED lighting. See electrical narrative for further lighting observations and recommendations. ACT ceilings throughout the school are fairly dated, most are in fair-good condition, but it is recommended that all ACT ceilings be replaced with new APC (Acoustic Panel Ceilings) in future renovations.
- Visible water damage to ceiling tiles in two classrooms could indicate a water pipe or roof leak. These conditions need immediate investigation to determine the source and remedy.
- Dropped gypsum ceilings in the bathrooms and locker rooms are generally in good condition.

WALL FINISHES

- Typical interior corridor walls are painted CMU block walls and are generally in good condition. Other interior walls include plaster and gypsum wallboard that are generally in good condition. Glazed tile wainscoting in the corridors, although dated, are generally in good condition.
- Toilet rooms and locker rooms have CMU block and/or ceramic wall tile, generally in good condition.

DOORS AND TRIM

- Most interior doors are stained solid wood doors in hollow metal knock-down frames and stainless-steel hardware. Some doors show signs of their age - condition is fair to good. Journey has phenolic bathroom partitions, which have been recently installed and are in good condition.

CASEWORK

- Existing casework is a mix of solid wood, wood veneer, and plastic laminate, and has generally been well-maintained but in some cases are in fair condition and need replacement.

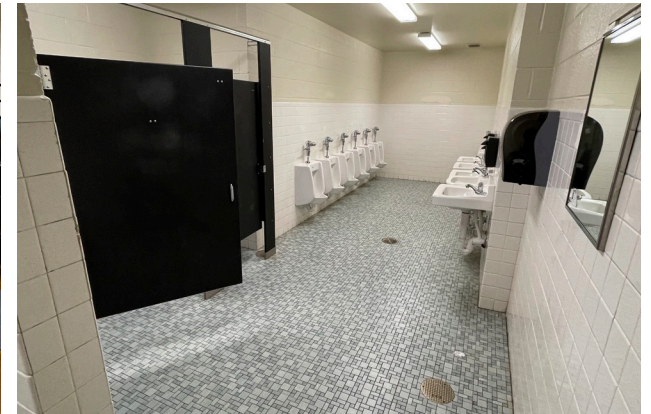
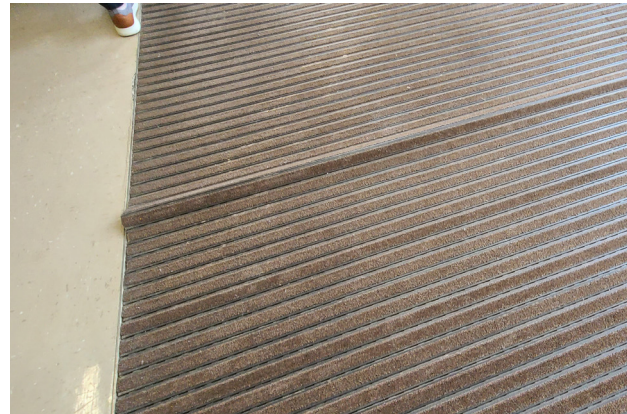
- Science and art rooms feature solid surface countertops and solid wood cabinets and are in fair-good condition. These cabinets can continue to remain in place and function well with continued maintenance of hardware, but it is recommended they be replaced in renovations.
- Office and lounge cabinetry feature solid surface and laminate countertops, with wood or laminate upper and lower cabinets, and are generally in good condition.
- Wood instrument storage bins in the music rooms show signs of wearing from years of use, but otherwise function ok for their use.

FURNITURE

- Classroom desks and chairs are dated, but mostly in good condition with few exceptions. While the existing furniture could remain in place and continue to function, it is recommended that classroom desks and furniture be replaced with modernized, flexible furniture that supports the needs of 21st century learning and instruction. Some classrooms and labs are equipped with new furniture and are in good condition.
- Administrative and teacher work desks are a mix of wood, metal, and laminate furniture, and include a variety of different chair types. Except for new furniture in renovated spaces, most all of this furniture is dated and showing signs of wearing and scratching from use. Furniture replacement is recommended as budgets allow.
- Wood and laminate shelving in the media center is in good condition.

OTHER INTERIOR OBSERVATIONS

- Student lockers are located throughout the public corridors and appear to be in good condition



BUILDING ASSESSMENT REPORT: MEP

Journey Middle School

GENERAL OVERVIEW

Journey Middle is an 97,236-sf school that accommodates roughly 690 students. The following MEP assessment refer to the existing conditions of the school as they are found at this time. While the original school structure was built in the 1960's, the mechanical, electrical, and plumbing infrastructure have been fully replaced since that time. A number of upgrades and renovations were performed throughout the years with the most recent complete building renovation being completed in 2005-2006. Most of the observed systems and equipment were from this era or have been added or replaced since then.

HEATING, VENTILATING & AIR CONDITIONING (HVAC) SYSTEMS

CENTRAL PLANT COMMENTS

- Five boilers are located in this mechanical room that appear to be of 2011 vintage. These boilers are natural gas fed high performance condensing type with ability for modular turndown. These boilers appear to be in good condition but are roughly 2/3rds of the way through their useful life.
- The central air cooled chiller for the school sits outside of the main mechanical room in a mechanical yard. This chiller was replaced in 2013 and is therefore over 10 years old. This means that the chiller is more than half-way through its useful life. The chiller does appear to be in good condition. The outdoor chilled water piping appears to be well protected and in good condition currently as well.
- Adjacent to the boilers are the central pumps for the entire heating and cooling loops of the building. The heating water pumps appear to be from the 2004 renovation, while the chilled water pumps were replaced in 2013 along with the chiller. The pumps are all showing wear appropriate with their age.

RECOMMENDATIONS

- The boilers are nearing their end of life and replacement is generally suggested within 5-10 years. The chillers is roughly halfway through it's life, this unit should be replaced in 10 years or more. The associated pumps should be replaced whenever the boilers or chillers are replaced.

CONTROLS COMMENTS

- The building is controlled by a central Siemens control system that is the standard for the entire county. The pumps are mostly operated by Siemens VFDs, with some older ABB units still in operation for some of the older pumps. Many of the local thermostats do not appear to have humidity control or local temperature setpoint control. There are also some spaces with older pneumatic type thermostats in the space. It's assumed that these sensors are abandoned in place and are not in use currently.

RECOMMENDATIONS

- Upgrade controls systems whenever the local units are replaced or potentially as part of a singular project in order to help efficiency and local comfort of the occupants. Any pneumatic systems still in use should be replaced as soon as possible.

KITCHEN COMMENTS

- The kitchen is served by a packaged rooftop heat pump unit that was installed as part of the 2013 HVAC renovation. This unit is a standalone packaged unit that is not tied to the overall building central water loops for heating or cooling of the space. This means that the kitchen space can be treated separately during a potential renovation scope. The kitchen hood and makeup air unit were also replaced in the 2013 work along with the rooftop unit and freezer/cooler condensing system. All of these systems appear to be in good condition, though they are 10 years into their expected useful life.

RECOMMENDATIONS

- Kitchen systems should remain as their current independent systems. Though replacement is expected in approximately 10 years.

LARGER AIR HANDLERS COMMENTS

- The cafeteria and stage are served by a central air handler located on a mechanical mezzanine opposite the stage. This indoor unit appears to be in good condition generally, especially for its age. The unit was installed as part of the 2004 design and does not appear to have been updated since. The ventilation for this brought in through a packaged unit on the roof. This unit appears to operate as a preconditioner for the air handler in the mezzanine. The unit and associated exterior ductwork are most likely from the 2004 renovation or from sometime shortly after. The unit and ductwork show significant age and degradation.
- The gymnasium is served by two packaged rooftop air handlers located adjacent lower roof. These units were replaced in 2009 and operate independently from the rest of the school as a whole. The units appear to be in good condition and are roughly halfway through their expected useful life. Suggest keeping these units online and replace at a later time with a larger overhaul or as they age out.

RECOMMENDATIONS

- Replacement of the cafeteria and stage unit is suggested at the earliest convenience. The rooftop unit in particular is in poor condition, while the indoor unit is in good condition and could remain for some time.
- The gymnasium units appear to be in fair condition and should be replaced in approximately 10 years time.

PACKAGED AND SPLIT DX COMMENTS

- There are many administration spaces scattered throughout the building that



do not converge on a single central core. Because of this there are a number of systems that serve these spaces. Some spaces are served by split DX systems that have remote condensers on the roof. It was not clear when all of these systems were installed, but due to the various manufacturers and conditions it is expected that they were installed piecemeal as required due to the needs of the spaces served. Some of these spaces are also served by packaged heat pump units located on the roof. Many of these units show signs of hale damage and the insulation on their refrigerant lines shows signs of degradation and age. Most of these units are expected to be nearer the end of their expected useful life and are potentially near time for replacement.

RECOMMENDATIONS

- Maintain the packaged DX air handlers and split DX units in current condition until the next major renovation takes place. These units can be replaced in kind as necessary.

DOAS AND TERMINAL UNITS COMMENTS

- The main portion of the building is classroom spaces served by two primary system types. The first system originally installed in 2005 is the 4-pipe system utilizing local floor or ceiling mounted fan-coils to provide local conditioning with rooftop mounted air handlers for space ventilation. These units are packaged DX type units that can heat and cool the incoming ventilation air independently from the central boiler and chiller system. Many of them appear to be in generally serviceable condition but are past the end of their useful life. The fan-coil units are similarly aged at near or past the end of their useful life. Many of these units show age and wear from years of abuse in the space. Some of these fan-coil units also provide fresh air to the space through wall louvers while simultaneously heating and cooling the space. This strategy can sometimes result in poor humidity control which raises indoor air quality concerns of the space.
- The second classroom system serving the north portion of the building utilizes similar rooftop air handlers for ventilation. Space conditioning is provided to these classrooms by the local fan powered terminal boxes with hot water reheat. The terminal boxes appear to be in decent condition; however the rooftop unit appears to show significant age. These units are expected to be past their useful life due to their apparent condition. Suggest replacement of these unit along with the other classroom spaces during a core building HVAC renovation.

RECOMMENDATIONS

- Replacement of fan-coil units and rooftop DOAS units are suggested at this time. These units are past their expected life and show considerable age and wear.

SPECIALTY SPACES COMMENTS

- The building has three spaces that would be considered specialty instruction type spaces. These spaces include the science classroom, art classroom, and the

woodshop. The science classroom is equipped with a fume hood in the space which is exhausted to the roof. No specialized stack exhaust was noticed, so this is expected to be exhaust via a typical upblast hood. The hood appears little used and in good condition, however the science room does not appear to be supplied with general exhaust for the overall space. The art classroom similarly does not appear to be equipped with a dedicated exhaust fan and it is suspected that the space might be under ventilated.

- Finally, the woodshop is equipped with a local dust collection system interior to the space. This system appears to be fairly recent and in good serviceable condition. Further investigation would be required to determine if the system meets all NFPA requirements of the space.

RECOMMENDATIONS

- Suggest replacement providing new dedicated exhaust for all specialty spaces as required by code. The dust collection system appears to be in good condition and should remain.

PLUMBING SYSTEMS

DOMESTIC & STORMWATER COMMENTS

- Journey Middle Schools is served by a centralized water heating system located in the primary mechanical room along with the central boilers, chiller, pumping equipment, and central water service entrance. Hot water is provided via two natural gas fired water heaters. These units appear to be fairly new, with one of 2012 vintage and the other apparently from 2017. The hot water piping itself is showing sign of age with a small leak being noticed near the water heaters themselves.
- The fixtures in Henley appear to be mostly from the 2004 renovation at the oldest with some potentially being replaced since that time. The lavatories for the restrooms are a mixture of manual faucets and are mostly push-type metered faucets. No faucets with electronic sensors or eyes were observed in the building.
- The flush fixtures throughout the building appear to be in good condition generally as well. Their appearance leads to belief that these fixtures were potentially replaced sometime since the 2004 replacement. All water closets are floor mounted type with low-flow valves and all urinals are similarly equipped with low-flow fixtures. These shower fixtures in the locker rooms appear to be in good condition and are similarly low-flow type. The science classrooms plumbing utilize acid resistant piping that leads to an acid neutralization tank on site.
- The stormwater drainage for the roof is provided primarily via internal drains down through the building's core. Most of the original building does not have scuppers or internal overflow drains. This means that the overflow is spilled off the side of the building directly. The higher roofs generally drain down via gutter systems to the lower roofs below, adding to the potential overflow of water



BUILDING ASSESSMENT REPORT: MEP

Journey Middle School

over the roofs edge. This could lead to water retention issues on the roof and potential for leaks.

RECOMMENDATIONS

- Suggest replacing the electric boiler type heater with an air-source heat pump and storage tanks or water storage.
- Lavatory and flush fixtures should all be replaced with low-flow fixtures anywhere they are not already installed.

FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM COMMENTS

- The building is not equipped with a sprinkler system at this time outside of the main mechanical room. That space is treated as a single zone fire protection system with heads and an incoming service, however no sprinkler heads were noticed throughout the rest of the school.

RECOMMENDATIONS

- It is suggested that the building be maintained without a fire protection service until the next major renovation. At that time, a new fire protection service should be installed for at least partial coverage of the school. The system should be sized to cover the entire school at time of installation or sized for future expansion into additional spaces to be renovated at a later date.

ELECTRICAL DISTRIBUTION ASSESSMENT

ELECTRICAL DISTRIBUTION COMMENTS

- The building electrical service is 3-phase 277/480V. The main service equipment is a 2,000A switchboard with one utility section, one main section, and two distribution sections. The electrical switchboard is manufactured by GE and was installed in 2019. It is in good working order and has been maintained well. The main switchboard is in the main electrical room on the first floor.
- Electrical panels are located throughout the building. Most panelboards are manufactured by Siemens and are in good condition with panel schedules. Some panelboards are in dedicated locked rooms, but others are in corridors. Some branch panelboards remain from earlier renovations and are nearing the end of their useful life.

RECOMMENDATIONS

- Most of the existing electrical equipment is in good condition and requires no work. However, the branch panelboards that are approaching the end of their expected useful life should be replaced during the next available opportunity prevent future issues. Any panelboards in corridors should be locked to prevent

access by students or other unauthorized personnel.

EMERGENCY STANDBY SYSTEMS COMMENTS

- Emergency power is provided by an 150kW natural gas emergency generator manufactured by Kohler. The generator was installed in 2022. Two automatic transfer switches transfer power from the normal power source to the emergency power source at a loss of normal power. The automatic transfer switches provide emergency power to life safety and emergency systems such as, elevators, fire alarm, egress lighting as well as optional standby loads such as IT power, and convenience outlets.

RECOMMENDATIONS

- The emergency electrical distribution system is in good working order. Ensure all preventative maintenance and testing is up to date.

LIGHTING SYSTEMS COMMENTS

- Lighting throughout the building is primarily accomplished with 2x4 recessed LED troffers in the corridors and classrooms. Most of the building has been upgraded to LED, but some fluorescent fixtures remain in back of house spaces and a few sections of the corridor. Lighting levels are mostly appropriate for the space being lit. Lighting color temperatures are consistent throughout the school. Individual lighting zone control is achieved using line voltage toggle switches, or low-voltage dimmer switches, and motion sensors. Exterior lighting has also been upgraded to LED; however, some lighting came on earlier than required, color temperatures were inconsistent, fixtures were not dark sky compliant, and fixtures did not meet AMA recommendations for color temperature.

RECOMMENDATIONS

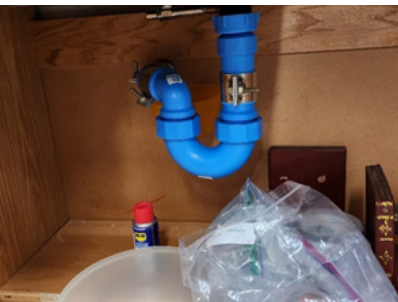
- Replace existing fluorescent light fixtures with LED and ensure energy code requirements are met in all spaces. Tie-in all exterior lighting to a centralized control system to ensure all lighting only comes on when required. Where possible replace non-dark sky compliant fixtures with compliant fixtures.

LIFE SAFETY SYSTEMS COMMENTS

- The building features an addressable fire alarm system. The main control panel is a Siemens MXL-IQ. main fire alarm panel is in the main office area. Some pull stations are installed above ADA height.
- Exit signs were illuminated throughout the building. The exit lights are connected to life-safety emergency power panels.
- Egress lighting is present throughout the building and connected to emergency power panels.

RECOMMENDATIONS

- Lower fire alarm pull station to meet ADA standards. Ensure fire alarm testing



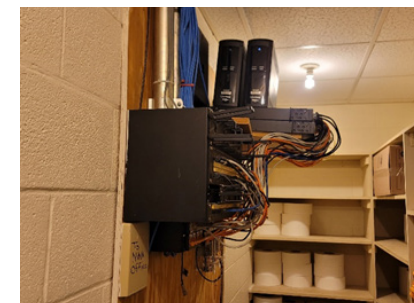
records and preventative maintenance logs are up to date.

LOW-VOLTAGE SYSTEMS COMMENTS

- The building features an addressable public address system manufactured by Telecor, an intrusion detection system, security management system, and video management system. Systems all seem to be in functional order and in good condition. Low-voltage wiring closets are located throughout the building; but dedicated closets with cooling/heating are not provided.

RECOMMENDATIONS

- Ensure all systems are compliant with current county standards and evaluate for replacement/expansion during the next major renovation. Establish dedicated IT closets with cooling/heating to meet BICSI standards.



BUILDING ASSESSMENT REPORT

Lakeside Middle School

Building Information	
Gross Building Area	94,440 SF
Acres	21
Initial Construction Date	1994
2022-2023 Enrollment	513
Number of Classrooms	45
SF / Student	184
Site Amenities	Baseball & Soccer Fields, Basketball & Tennis Courts, Shared campus parking
MEP Grade	

Lakeside Middle School is in the Forest Lakes subdivision of Albemarle County on a shared site with Hollymead Elementary School. The existing facility is a single-story 94,440 SF building on a 41-acre site constructed in 1994. The newest middle school to be constructed for Albemarle County Schools, Lakeside introduced a modernized middle school building typology with classrooms organized in distinct learning communities dedicated to each grade-level. Renovations in 2018 expanded science and art rooms and replaced the chiller. Lakeside is the most well-maintained facility of all ACPS middle schools.

The following are observations and recommended scopes for repairs or improvements. Refer to Appendix XX for “Tier 1 Improvement Scopes” for additional recommendations.

Building Exterior / Neighborhood / Aerial



Site Plan



LEVEL 1 - FLOOR PLAN

BUILDING ASSESSMENT REPORT: CIVIL

Lakeside Middle School

General Site Analysis

Lakeside Middle School is located at 2801 Powell Creek Dr, Charlottesville, VA 22911 within the Rivanna district of Albemarle County. The school site is 41.07 acres on a shared parcel with Hollymead Elementary School, Parcel ID 046B1-01-00-00100. The two schools share the same unsignalized entrance along Powell Creek Dr. Based on the current Albemarle County Zoning Ordinance, the school site is Zoned Planned Unit Development and has the dimensional requirements for the property as indicated below:

- By right – Public Uses
- Front Setback – 45’ (closest average for buildings within 500 feet of property)
- Side Setback – 10’
- Rear Setback – 20’
- Maximum Building Height – 65’
- Airport Impact Area Overlay

Site Vehicular/Pedestrian Accesss and Transportation

Site access is drawn off Powell Creek Drive which is a low-speed local road a little removed from an arterial/collector roadway. This site access route feels longer but safer upon arriving at the school location nestled in a residential area. The drive entrance shares access with Hollymead Elementary School. The parking and bus loop configuration is combined which may lead to more conflicts and reduced efficiency. Further the bus loop is the only bus parking on the middle school site with space to park approximately 5 busses in parallel along the curb line. A bus driver parked on site expressed concern for the bus parking and loop length as prior to Covid the school operated 15 buses and is not down to 5 temporarily. The site has approximately 115 standard parking spaces with asphalt on site generally in fair condition with mild to moderate cracking. The existing ADA parking spaces appear to be non-compliant from visual inspection. The loading area on the south side of the school is well defined. Pedestrian access is provided to the school site from an asphalt trail along Powell Creek Dr.

Athletic Facilities on Site

Recommended by VDOE (600 capacity)

- Multiuse hard surface 2 @ 100X120 ft (24,000sf total)
- Fitness Development equipment area – 100X150ft (15,000 sf)
- Field Game Areas 3 @ 200X400ft (240,000 sf or 5.51 Ac)

Existing on site

- Two Multiuse hard surface areas – total 30,000 sf
- 1. Two tennis courts in good condition

- 2. Three full basketball courts in good condition
- Fitness Development equipment area – adequate area for 15,000 sf is available between the hard surface play and fields in close proximity to the gym
- Two Field Game Areas – total 283,000+sf or 6.5 AC
- 1. Three baseball fields of varying size in good condition
- 2. 100 meter track in good condition
- 3. One soccer field in good condition

Recommended Additions on Site

No recommended additional athletic facilities at this time.

Site Utilities

There is existing public sanitary sewer and public water connections available and in place servicing the building. There are also existing telecom and power services to the site and existing building. Any future expansions would warrant an evaluation of the capacity of each utility for adequacy. Around the perimeter of the building, generally good drainage exists with positive relief away from the building. Several sheds were noted on site, dispersed primarily in the field/recreation areas. The site lighting appears to be LED and adequate coverage, however this is based on visual inspection only and is not an evaluation of photometrics levels.

Site Topography, Environmental Images, and Vegetation

The site is generally fairly flat in the areas of previous development. The forested areas (approximately 5% of site area) to the north and east have steep topography and are the areas of managed slopes. There appears to very limited additional development area on the site with the thin forested perimeter. There are managed slopes on the site shown in the graphic below shown in yellow. The managed slopes can generally be impacted by development during the site plan process with proper justification. The land cover on the site is generally good with limited and isolated areas of bare earth. Generally, the building has good positive drainage away with roof drainage conveyance underground. No Floodplain exists on the property.

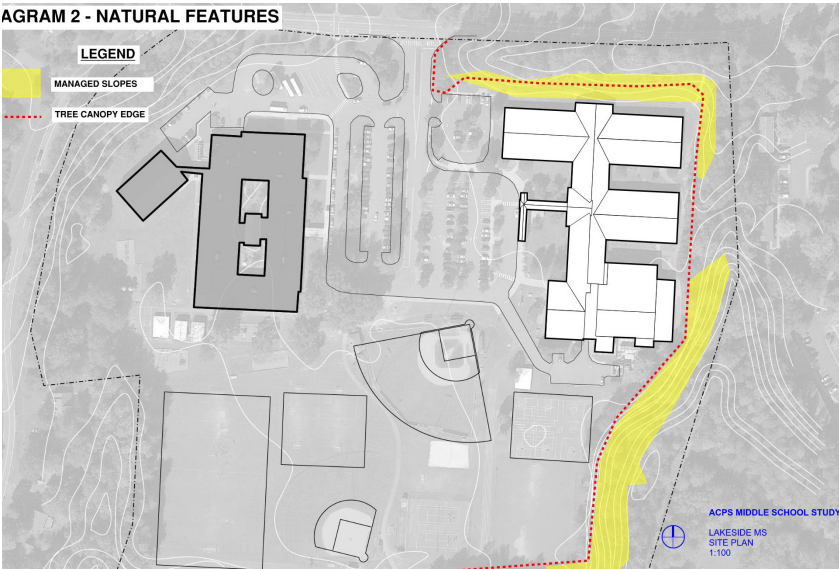
Storm Drainage and Stormwater Management

Existing stormwater management on the site appears to be nonexistent which is likely due to the 1966 construction preceding stormwater regulations. It should be assumed that any development on the site will be required to provide stormwater management

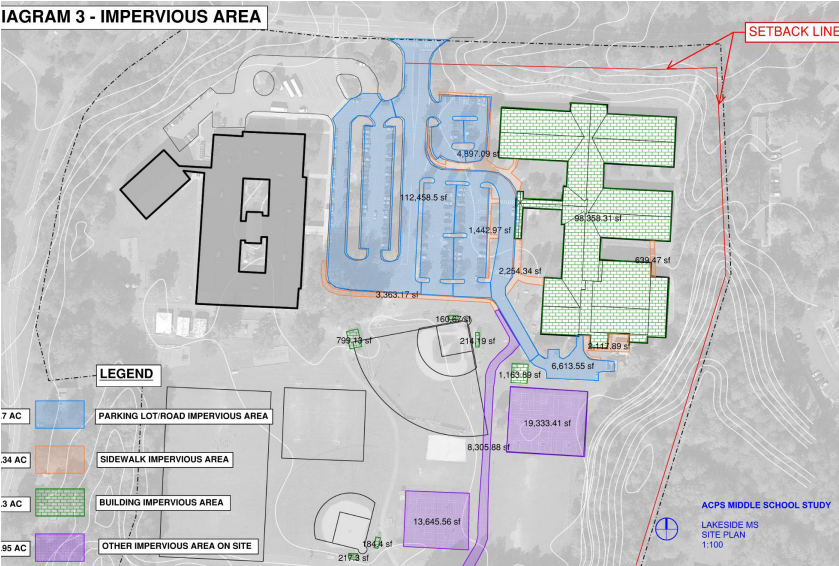
Lakeside Existing Site Utilities



Lakeside Critical Slopes



Lakeside Existing Impervious Site Area



practices to serve the areas of land disturbed with the project. Site drainage is generally good with positive relieve away from the building around the perimeter with roof drains undergrounded.

Site Soils

The soils on site are a mixture of 88-Udorthents (38%), 34C-Glenelg Loam(23%), 39D-Hazel Loam (20%), and 27B/27C – Elioak Laom (19%). These soil types are distributed throughout the site as illustrated in Figure 3 below. It is recommended a geotechnical investigation be performed in support of any future development requiring significant foundations, earthwork, or paving.

Lakeside Soils Map



BUILDING ASSESSMENT REPORT: STRUCTURAL

Lakeside Middle School

Springpoint Structural observed the exterior and the interior of the middle school building on March 17, 2023 along with the architectural and MEP team members.

The building documents are date 1994 and were available for use and review. No major additions have been added.

For purposes of this structural report, the main entrance elevation faces plan south.

EXISTING STRUCTURE

ORIGINAL MIDDLE SCHOOL – 1994

The foundation systems are conventional strip and spread footings with a slab-on-grade. The single-story structure consists of load-bearing CMU walls supporting either a wood trussed roof for the academic areas or steel bar joists at and around the gym. Wood shear walls were placed above the CMU walls at gables in the academic areas. The roof deck is plywood at the wood roof trusses and metal deck at the steel bar joists. The roof is sloping seamed metal at all areas

INVESTIGATIONS

For this report, the exterior perimeter was observed, the interior hallways and main rooms were observed, but the roof was not walked due to the slope. No destructive testing was conducted

OBSERVATIONS

EXTERIOR

- Brick chord weeps were seen in all the walls of the building.
- Many vertical expansion joints (EJ) have failed sealant due to age.
- A few locations of vertical brick cracks occur.
- The grade next to the building at many locations is reversed and brings water back to pool against the building face. This is causing lichen, mold, and mildew to grow on the bricks and foundation CMU.
- Numerous locations around the building have exposed roof drain lines and cleanouts and their soil support undermined

INTERIOR

- No major settlement or cracking were seen in the floor slabs or in the walls

ROOFS

- Four building wings have PV panels installed over the metal roofing.

CONCLUSIONS

In general, the building is in very good shape except for the need to address the grading issue.



BUILDING ASSESSMENT REPORT: ARCHITECTURE

Lakeside Middle School

EXTERIOR

ROOFING

- The original 1994 standing seam metal roof is in good condition. Recommend replacing after another minimum 15 years (FY2038) after ongoing assessment of its condition

EXTERIOR SKIN / WALL ASSEMBLY

- The exterior skin is brick veneer, storefront and unit windows with metal panel infill. The wall assemblies of the original 1965 building do not meet current energy codes. As improvement budgets allow, future envelope improvements, including adding insulation to the interior wall side (or exterior wall side if exterior skin is replaced), and sealing at windows, doors, and other openings would significantly improve energy performance.
- Masonry repairs were performed in 2013. Recommend cleaning brick and pre-cast sills where visible stains and efflorescence has occurred. See structural narrative for additional exterior finish observations and recommendations.

WINDOWS AND DOORS

- Original windows are painted storefront with operable panels in the classrooms and are generally in good condition.

OTHER EXTERIOR

- Lakeside features an open-air courtyards between classroom wings that could be improved to encourage outdoor learning. The Benches made of pressure-treated wood at the outdoor amphitheater are showing signs of wear and may need selective replacement over time.

INTERIOR

FLOOR FINISHES

- Original floors in the school consist mostly of 12”x12” VCT and are generally in good condition. While the typical life expectancy of VCT flooring is about 20 years, VCT at Burley should continue to be maintained with ongoing assessment to determine future replacement needs.
- Carpet tile and sheeting in administrative spaces, media center, music classrooms, and some classroom support spaces are generally in good condition. Replace carpet where wear and tear has occurred.
- Wood flooring in the gym is in good condition.
- Bathrooms and locker rooms have ceramic floor tile. Conditions are generally good. Recommend replacement of floor tile in some cases.
- Kitchens have original 4x4 quarry floor tile. Conditions are generally good.

CEILING FINISHES / LIGHTING

- Most of the building features suspended ACT ceilings with recessed LED lighting. Some back of house spaces remain fluorescent lighting. Recommend upgrading all fluorescent lighting to LED lighting. See electrical narrative for further lighting observations and recommendations. Some ACT ceilings throughout the school are fairly dated, most have been replaced and are in fair-good condition, but it is recommended that all ACT ceilings be replaced with new APC (Acoustic Panel Ceilings) in future renovations.
- Dropped gypsum ceilings in the bathrooms and locker rooms are generally in good condition.

WALL FINISHES

- Typical interior corridor walls are painted CMU block and are generally in good condition. Other interior walls are gypsum wallboard that are generally in good condition. Toilet rooms and locker rooms have CMU block and/or ceramic wall tile, generally in good condition.

DOORS AND TRIM

- Most interior doors are stained or painted solid wood doors in hollow metal knock-down frames and stainless-steel hardware. Some doors show signs of their age - condition is fair to good. Lakeside has phenolic bathroom partitions, which have been recently installed and are in good condition.

CASEWORK

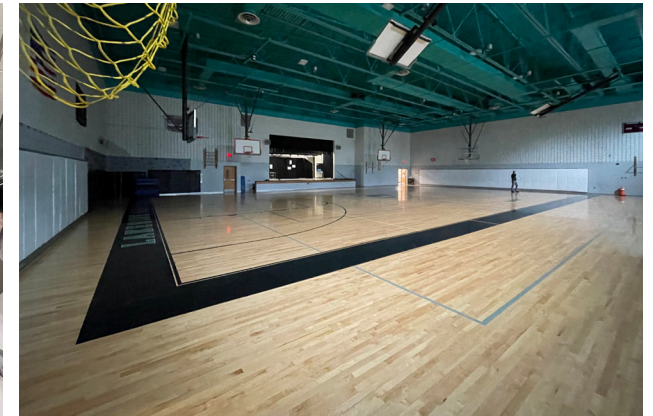
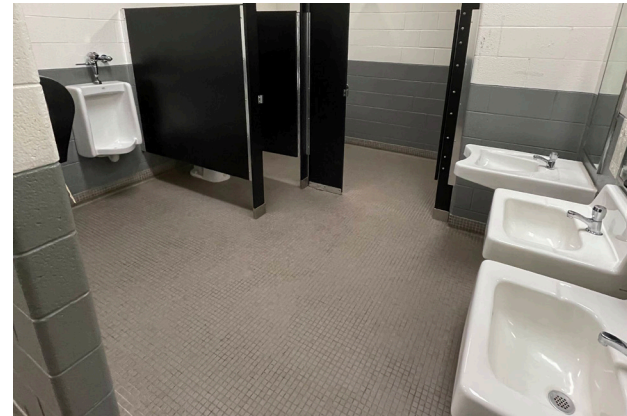
- Existing casework is a mix of solid wood, wood veneer, and plastic laminate, and has generally been well-maintained. Art rooms feature solid surface countertops and solid wood cabinets and are generally in good condition.
- Office and lounge cabinetry feature solid surface and laminate countertops, with wood or laminate upper and lower cabinets, and are generally in good condition.
- Wooden instrument storage bins in the music rooms are dated but otherwise function ok for their use. Recommend replacing them with new modern equipment storage during renovations.

FURNITURE

- Classroom desks and chairs are mostly in good condition with few exceptions. The existing furniture could remain in place and continue to function, it is recommended that classroom desks and furniture be replaced with modernized, flexible furniture that supports the needs of 21st century learning and instruction. Some classrooms and labs are equipped with new furniture and are in good condition.
- Administrative and teacher work desks are a mix of wood, metal, and laminate furniture, and include a variety of different chair types and are generally in good condition. It is recommended that these be replaced with modernized, flexible furniture as budgets allow.
- Wood and laminate shelving in the media center is in good condition.

OTHER INTERIOR OBSERVATIONS

- Student lockers are located throughout the public corridors and appear to be in good condition.



BUILDING ASSESSMENT REPORT: MEP

Lakeside Middle School

GENERAL OVERVIEW

Lakeside Middle is an 94,440x-sf school that accommodates roughly 650 students. The following MEP assessment refer to the existing conditions of the school as they are found at this time. The original school structure was built in the 1990's and have not had a major MEP system overhaul since. Overall, the building and it's MEP systems were noticed to be aged past their expected serviceable life, but where in generally good condition.

HEATING, VENTILATING & AIR CONDITIONING (HVAC) SYSTEMS

CENTRAL PLANT COMMENTS

- Lakeside Middle School's HVAC system is served by central heating and cooling elements with distributed air handlers and terminal units for local thermal control and ventilation. The central source of cooling for the school is the air cooled chiller located in the mechanical yard outside of the main mechanical room. This chiller was installed in 2018 as a replacement for the original chiller with thermal storage system. This chiller is only five years old and appears to be in excellent condition. The chilled water pumps were also replaced in 2018 along with this new chiller. These pumps appear to be in good condition, but they are housed deep in a mechanical room with almost no access for maintenance.
- Four boilers in the main mechanical room provide heating source for the entire building. These units were replaced in 2016 along with the hot water pumps. These newer boilers are high efficiency type with modulating turndown. The boilers appear to be in good condition, while the hot water pumps show more age and wear than expected for pumps less than 10 years of age.

RECOMMENDATIONS

- The existing chiller is in great condition and should remain until the end of it's expected life, typically 20 years an air-cooled chiller. The boilers are also in good condition and have at least 10 years of expected life left. Maintain current boilers and chillier until the next major renovation occurs.

CONTROLS COMMENTS

- The equipment is mostly operated by Siemens VFDs, with some older ABB units still in operation for some of the older pieces of equipment. The building is controlled by a central pneumatic control system that is original to the building. Many of the local thermostats do not appear to have humidity control or local temperature setpoint control. These pneumatic systems are also less accurate and adjustable than newer DDC systems.

RECOMMENDATIONS

- Upgrade controls systems whenever the local units are replaced or potentially as part of a singular project in order to help efficiency and local comfort of the

occupants.

AIR HANDLERS AND TERMINAL UNITS COMMENTS

- Most spaces throughout the school are served by similar systems that tie back to the central heating and cooling loop. The ventilation and main cooling these zones are provided via 4-pipe air handlers located in a nearby mechanical room. Numerous fan-powered terminal boxes provide filtration and local thermal comfort to the spaces via hot water reheat coils. These air handlers, the terminal boxes, along with associated ductwork and piping all appear to be original installations to the building and are therefore 25 years old. This places these units past their expected useful life. The units show their age but are in general good working condition.
- The gymnasium is similarly served by a central air handler in the mechanical room and a number of fan-boxes for local thermostat control and modular operation. The gym air handler is located in the main mechanical room. The fan-boxes are hung high in the gymnasium itself. These units appear in decent condition, with the air handler appearing to show the most age on the system.

RECOMMENDATIONS

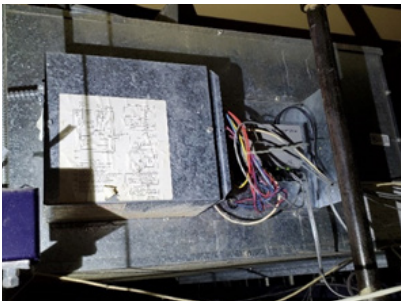
- Maintain current systems as they are until the next major renovation. Systems appear in good general condition, and an as-is replacement would be costly while leaving valuable energy efficiency savings on the table.

SPECIALTY SPACES COMMENTS

- The building has three spaces that would be considered specialty instruction type spaces. These spaces include the science classroom, art classroom, and the woodshop. The science classroom is shown with a fume hood in the provided documents, though no hood was noticed while on site. The science and art classrooms are both equipped with inline exhaust fans that exhaust air to the exterior via sidewall louvers along the building's outside wall. The woodshop is located towards the central core of the building and is therefore not suspected to be exhaust directly outside. The space does utilize both a dust collection system and a circulating air filtration system. These systems appear to be added fairly recently and are in good condition. Further investigation would be required to determine if the system meets all NFPA requirements of the space.

RECOMMENDATIONS

- Suggest replacement of science exhaust system and determination if true science hood with dedicated exhaust is required, also add space exhaust for the science classroom. Add space exhaust for the art classroom. Determine if dust collection system meets NFPA requirements, if so leave in place as it seems to serve the space needs.



PLUMBING SYSTEMS

DOMESTIC & STORMWATER COMMENTS

- Lakeside Middle School is served by a centralized water heating system located in the primary mechanical room along with the central boilers, chiller, pumping equipment, and domestic water service entrance. Hot water is provided via a single natural gas fired water heaters This unit appears in good condition, being replaced in 2016. The hot water piping in the mechanical room appears to be in serviceable condition, however, there is a significant leak in the mechanical room that is visible on the floor. The insulation on this piping appears to be in very poor condition.
- Fixtures throughout appear to be original from the 1994 construction with some potentially being replaced since that time. The lavatories for the restrooms are a mixture of metered faucets in the public restrooms and manual faucets in the private rooms. No faucets with electronic sensors or eyes were observed in the building. All fixtures appear to be generally in good condition for their age.
- flush fixtures appear to be in good condition and all provided with low-flow fixtures. The science classrooms appear to be plumbing utilizing acid resistant piping that leads to an acid neutralization tank on site.
- Stormwater is drained away from the building via sloped roof with gutters and downspouts.

RECOMMENDATIONS

- Suggest addressing leaks in the piping and connections of the main mechanical room and fixing bad insulation. Replace fixtures throughout the building with low-flow type fixtures for water savings.

FIRE PROTECTION SYSTEMS

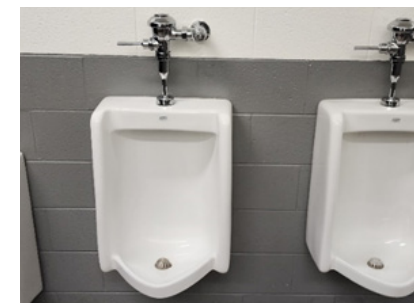
FIRE PROTECTION SYSTEM COMMENTS

- Lakeside Middle school is fully sprinkled throughout. The fire protection assembly valve is located in the main mechanical room and appears in decent condition. The attic space is protected by a compressed air dry pipe system. The air compressor for the dry pipe system was not found on site, but the dry system valve was located in one of the distributed mechanical rooms. This system appears to be in good condition overall for its age.

RECOMMENDATIONS

- Maintain the current fire protection system, including the dry-pipe system that covers the attic, as-is until the next major renovation occurs.

ELECTRICAL DISTRIBUTION ASSESSMENT



BUILDING ASSESSMENT REPORT: MEP

Lakeside Middle School

ELECTRICAL DISTRIBUTION COMMENTS

- The building electrical service is 3-phase 277/480V. The main service equipment is a 2,000A switchboard with one utility section, one main section, and one distribution section. The electrical switchboard is manufactured by Square-D and was installed in 1994. It is in good working order and has been maintained well. The main switchboard is in the main electrical room on the first floor.
- Electrical panels are located throughout the building, with one main electrical room located in each classroom wing. All panelboards are manufactured by Square-D and are in good condition with panel schedules. Panelboards are in dedicated closets which were locked.

RECOMMENDATIONS

- The existing electrical equipment is approaching the end of its expected useful life and while the equipment is in good shape it should be replaced during the next major renovation of the school to prevent future issues.

EMERGENCY STANDBY SYSTEMS ASSESSMENT

EMERGENCY STANDBY SYSTEMS COMMENTS

- Emergency power is provided by an 80kW diesel emergency generator manufactured by Kohler. The generator was installed in 1994. A single automatic transfer switch transfers power from the normal power source to the emergency power source at a loss of normal power. The automatic transfer switch provides emergency power to life safety and emergency systems such as, elevators, fire alarm, egress lighting. Emergency power systems do not have proper separation as fans, IT loads, and plug loads are currently connected to the emergency transfer switch.
- The generator enclosure is rusting and showing major signs of deterioration.

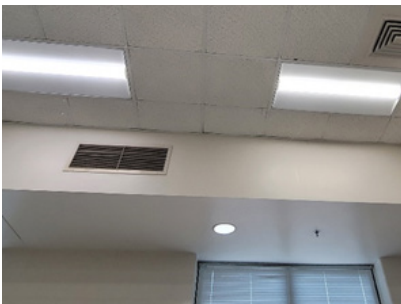
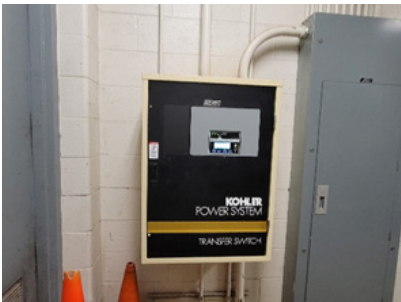
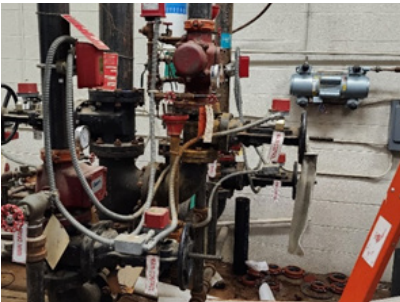
RECOMMENDATIONS

- The existing emergency electrical distribution system is approaching the expected end of its useful life and should be evaluated for replacement soon.

LIGHTING SYSTEMS ASSESSMENT

LIGHTING SYSTEMS COMMENTS

- Lighting throughout the building is primarily accomplished with 2x4 recessed LED troffers in the corridors and classrooms. Most of the building has been upgraded to LED, but some fluorescent fixtures remain in back of house spaces and a few sections of the corridor. Lighting levels are mostly appropriate for the space being lit. Lighting color temperatures are consistent throughout the school. Individual lighting zone control is achieved using line voltage toggle



switches, or low-voltage dimmer switches, and motion sensors. Exterior lighting has also been upgraded to LED; however, some lighting was on during the day, color temperatures were inconsistent, fixtures were not dark sky compliant, and fixtures did not meet the AMA recommendations for color temperature.

RECOMMENDATIONS

- Replace existing fluorescent light fixtures with LED and ensure energy code requirements are met in all spaces. Tie-in all exterior lighting to a centralized control system to ensure all lighting only comes on when required. Where possible replace non-dark sky compliant fixtures with compliant fixtures.

LIFE SAFETY SYSTEMS ASSESSMENT

LIFE SAFETY SYSTEMS COMMENTS

- The building features an addressable fire alarm system that was installed in 1994. The main control panel is a Siemens MXL, as of 2018 Siemens is no longer manufacturing replacement parts for this system. The main fire alarm panel is in the main office area. Some pull stations were installed too high and are not compliant with ADA requirements.
- Exit signs were illuminated throughout the building. The exit lights are connected to life-safety emergency power panels.
- Egress lighting is present throughout the building and connected to emergency power panels.

RECOMMENDATIONS

- Ensure fire alarm testing records and preventative maintenance logs are up to date. System should be replaced in the next few years as replacement parts will be more difficult to come by. All new pull station should be installed at ADA compliant heights.

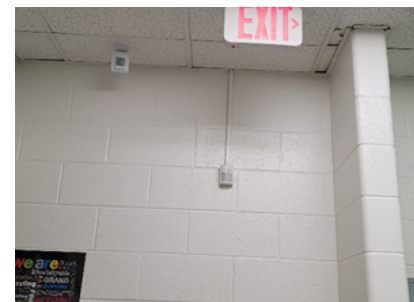
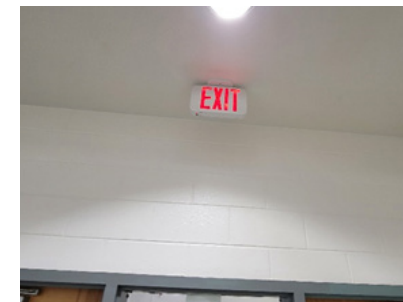
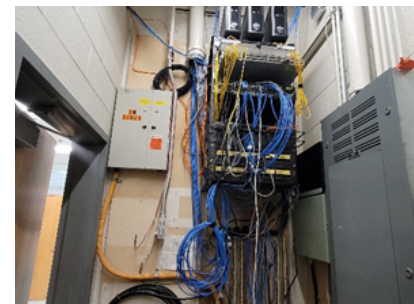
LOW-VOLTAGE SYSTEMS ASSESSMENT

LOW-VOLTAGE SYSTEMS COMMENTS

- The building features an addressable public address system manufactured by Telecor, an intrusion detection system, security management system, and video management system. Systems all seem to be in functional order and in good condition. Low-voltage wiring closets are located throughout the building; but dedicated closets with cooling/heating are not provided.

RECOMMENDATIONS

- Ensure all systems are compliant with current county standards and evaluate for replacement/expansion during the next major renovation. Establish dedicated IT closets with cooling/heating to meet BICSI standards



BUILDING ASSESSMENT REPORT

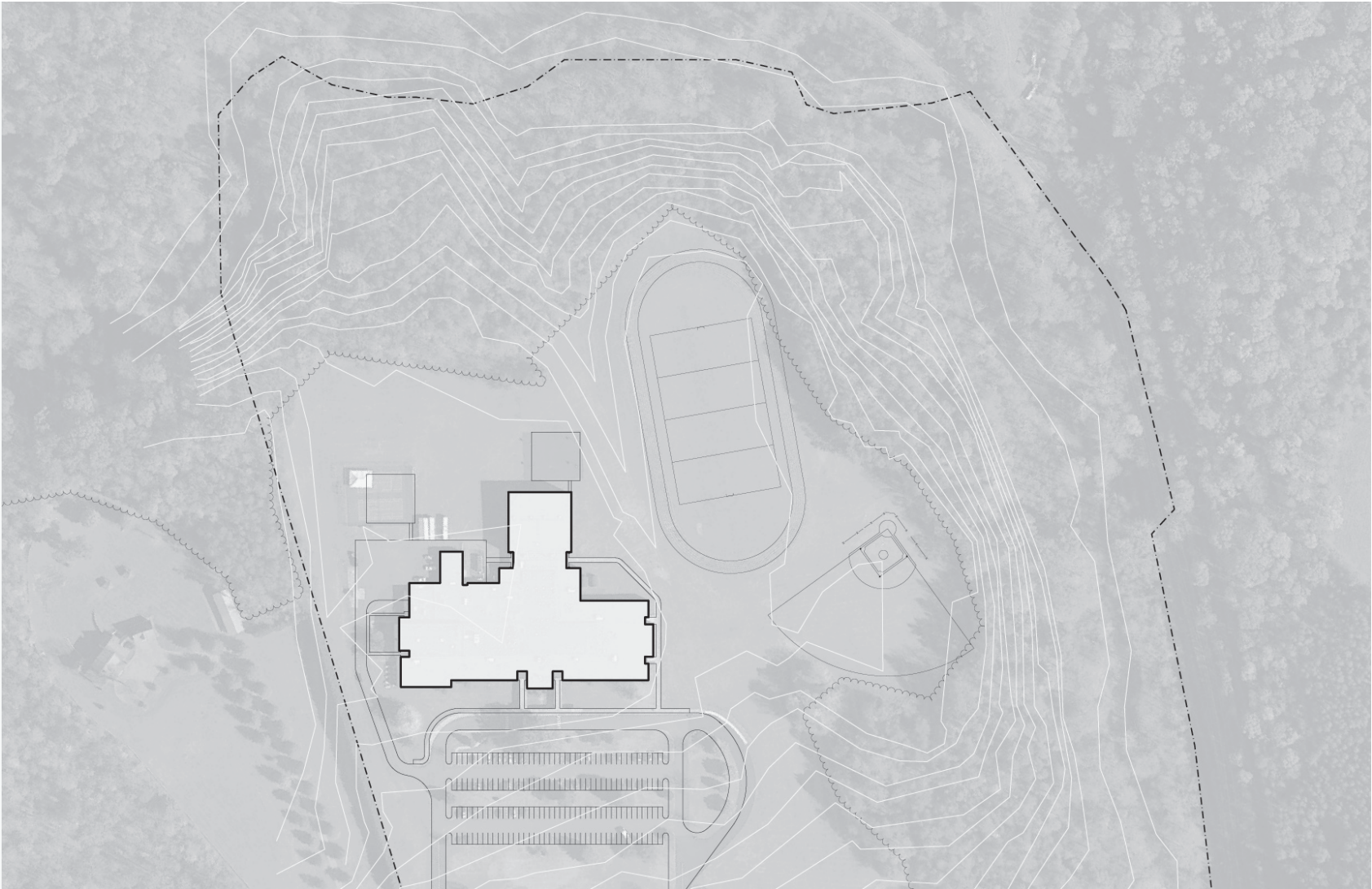
Walton Middle School

Building Information	
Gross Building Area	98,340 SF
Acres	50
Initial Construction Date	1974
2022-2023 Enrollment	335
Number of Classrooms	37
SF / Student	294
Site Amenities	Track/Field, Tennis Courts
MEP Grade	

Walton Middle School is in the southern feeder pattern of Albemarle County Public Schools. The existing facility is a single-story 98,340 SF building on a 50-acre site originally constructed in 1974. Walton’s floor plan was designed after Henley and Journey when it was built as Albemarle County’s third new elementary school. Except for a very modest addition in 1997 that included a new TV studio and classroom, Walton has not undergone the extent of additions that the Journey and Henley facilities have received over the years, as the school’s current and projected enrollments remain well below its current capacity of 500 students. Minor renovations have included new administrative offices and general finishes upgrades in 2004, and locker rooms in 2007, but otherwise recent investments in facilities improvements to Walton have been mostly operational and maintenance oriented. 2017 renovations included the addition of modernized science labs to support 21st century learning. Walton is the only ACPS middle school that does not have a secure vestibule.

The following are observations and recommended scopes for repairs or improvements. Refer to Appendix XX for “Tier 1 Improvement Scopes” for additional recommendations.

Building Exterior / Neighborhood / Aerial



Site Plan



LEVEL 1 - FLOOR PLAN

BUILDING ASSESSMENT REPORT: CIVIL

Walton Middle School

General Site Analysis

Walton Middle School is located at 4217 Red Hill Rd, Charlottesville, VA 22903 within the Samuel Miller district of Albemarle County. The school site is located on a 50 acre property with Parcel ID is 101000-00-00-056A0. Immediately adjacent to the occupied 17.5 acres are approximately 34 acres of wooded area. Dual access with unsignalized full access entrances off Red Hill Rd provide good access and circulation opportunities for drop off.

Based on the current Albemarle County Zoning Ordinance, the school site is Zoned Rural Areas and has the dimensional requirements for the property as indicated below:

- By right – “Public uses”
- Front Setback – 75’ min from existing public roads
- Front Setback – 25’ min from internal public or private road
- Side Setback – 25’
- Rear Setback – 35’
- Maximum Building Height – 35’
- Entrance Corridor Overlay

Site Vehicular/Pedestrian Accesss and Transportation

The site has two full access entrances off Red Hill Rd into the parking and bus loop of the school. The separation of the bus loop and parking lot is good for reduced conflicts and greater efficiency with drop off and pick up. There is a significant grade difference between the school entrance and the parking lot. The site has approximately 160 parking spaces and an estimated 17-20 undefined bus parking spaces along the bus loop. The original ADA parking spaces do not appear compliant, and it appears there was a more recent project to add new accessible spaces in the northwest corner of the parking lot with a new route that appears compliant. The loading area in the rear of the school is large, well defined, and separate from all other traffic with ample space for parking and turning movements. The asphalt in the loading area is in a fair to poor condition. The asphalt in the parking lot is in fair condition and appears to have been overlaid without milling first, evident in the lip at the curb. Newer paving in portions of the bus loop is in good condition. Pedestrian access to the site is not available as Red Hill Rd does not have sidewalks. Sidewalks on site are discolored from the soils on site. It is recommended to have the concrete in the front entrance area cleaned and power washed to remove the stains from the red clay soils and the black stains from the entry roof downspouts.

Athletic Facilities on Site

Recommended by VDOE (599 capacity)

- Multiuse hard surface 2 (Q 100X120 ft (24,000sf total)
- Fitness Development equipment area – 100X150ft (15,000 sf)
- Field Game Areas 2 (Q 200X400ft (160,000 sf or 3.67 Ac)

Existing on site

- Two Multiuse hard surface areas – total 22,200 sf
- 1. Two tennis courts in fair condition
- 2. Two basketball courts in good condition (rear)
- Fitness Development equipment area – level grass area adjacent to gym, 28,000+sf
- Two Field Game Areas – total 326,000+sf or 7.5 AC
- 1. One large multipurpose field in good condition
- 2. Asphalt 6 lane track in good condition
- 3. One baseball field in fair condition that appears to be abandoned/unused located where the septic fields are
- Basketball hoops in front parking lot
- Ample lawn flex space in rear of school around tennis court area (reseeding needed)
- Nature trail system on site connect to pathways adjacent to fields in rear of the school

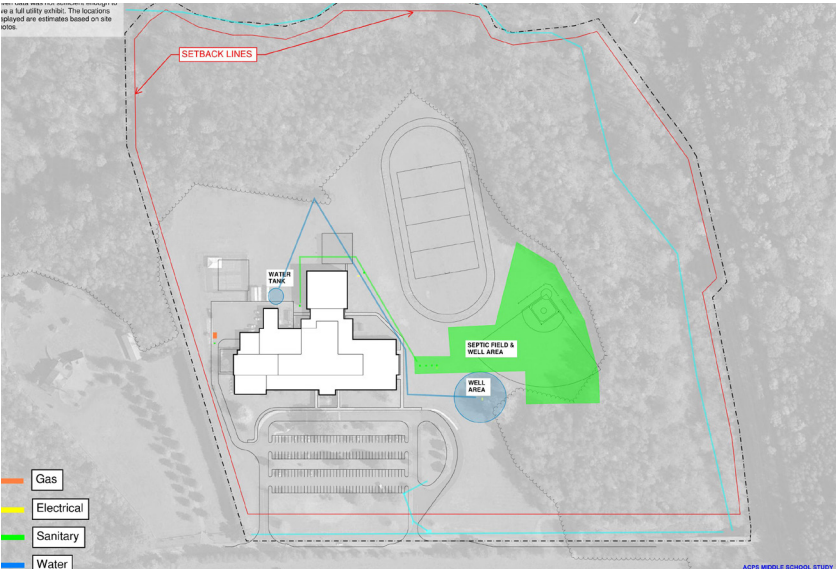
Recommended Additions on Site

No recommended additional athletic facilities at this time as the site appears to be in alignment with VDOE recommendations.

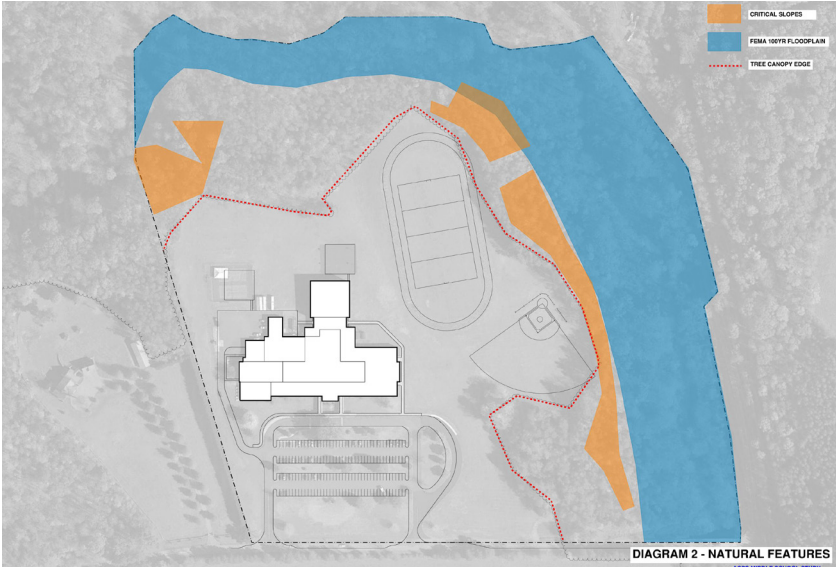
Site Utilities

There is existing sanitary sewer and water available on site servicing the existing building. The sanitary sewer service for the building is a septic field to the east of the school under the large grass areas and south of the multipurpose field and track. This septic field appears to be original to the school construction (1972) with a recent/current project to replace the septic tanks. It is assumed with that project the drain fields were assessed and found to be in good function and condition. Given the typical lifespan of septic is 20-40 years it is recommended a budget is carried in future years for potential drain field replacement/rehabilitation given the age of the system is already beyond the typical useful life. The water for the school is provided by an onsite well in the small grove of trees east of the school which gets pumped around the back and into the water tank by the loading area. The water and sewer facilities are critical infrastructure which should be avoided. Relocation of the gravity sewer lines to the septic tanks may be possible and similarly the water lines from well/pump to tank could be relocated if impacted with future development. There are also existing telecom and power services to the site and existing building. Any future expansions would warrant an evaluation of the capacity of each utility for adequacy. Two large storage sheds were noted on

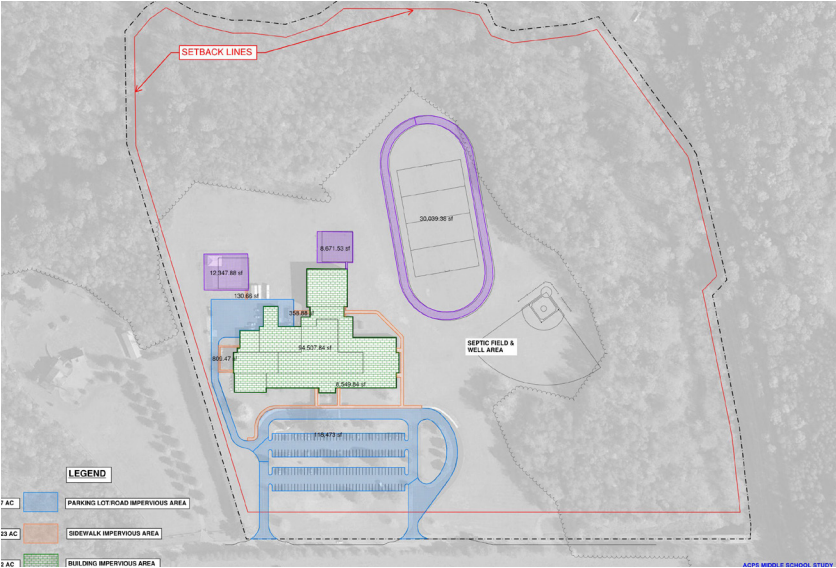
Walton Existing Site Utilities



Walton Critical Slopes



Henley Existing Impervious Site Area



Henley Soils Map



site. The site lighting appears to be LED and adequate coverage, however this is based on visual inspection only and is not an evaluation of photometrics levels. Lastly, there is a communication tower and infrastructure that exists on the property, far removed from the school activities. The communications tower infrastructure is not expected to conflict with potential future development on the site given the tower location along Red Hill Dr to the east.

Site Topography, Environmental Images, and Vegetation

The site is generally rolling in the areas of previous development with the school sited at the highest point on the property. There are considerable grade differences from the school to the parking lot and multipurpose field. The forested areas (approximately 48% of site area) to the north and east have steep topography generally not conducive for development without substantial site work costs. There appears to be some opportunity to develop approximately 2.3 acres of forested area north of the school where topography in the forested area is flatter. There are critical slopes on the site shown in the graphic below in gold. Disturbance of critical slopes requires a waiver and Board of Supervisors approval of the request. The land cover on the site ranges from good to poor with some large areas of bare earth in the rear/north of the school and good vegetated cover elsewhere on site. Generally, the building has good positive drainage away perched at the high point of the site. A FEMA regulated Zoe A floodplain (blue area in figure below) does exist on the property along the north and east property lines associated with North Fork Hardware River, however no impacts to existing building are expected given the lower elevation of the stream from the average site grade. Future development on the site is not anticipated to impact North Fork Hardware River, however, should grading encroach into the regulated floodplain a study may be warranted. The restrictions of the critical slopes on site are expected to negligible due to their proximity relative to the school building and septic field. It does appear there are underground fuel tanks in the rear loading area of the site with no indication in GIS of a known leak.

Storm Drainage and Stormwater Management

Existing stormwater management on the site appears to be nonexistent which is likely due to the 1972 construction preceding stormwater regulations. It should be assumed that any development on the site will be required to provide stormwater management practices to serve the areas of land disturbed with the project. Site drainage is generally good with positive relieve away from the building and it is assumed roof drains are internal as none are visible around the perimeter. Given the site's proximity along North Fork Hardware River, flood protection (10yr) detention may not be a requirement for future development on this site depending on the scale of the improvements. However, energy balance detention (1yr) would be required. Below is a graphic of the existing

impervious areas on site.

Site Soils

The soils on site are a mixture of 71 B,C,D,B3,C3-Rabun Clay (46%), 41B-Yadkin Loam (34%), 10- Ronda Loamy Sand (16%), 83 – Colvard Fine Sandy Loam (2.5%), and 13E-Catoctin Silt (1.5%). Generally, the Rabun Clay and Yadkin Loam are in areas of prior development on site and the remaining soil types predominantly within the forested areas. It is recommended a geotechnical investigation be performed in support of any future development requiring significant foundations, earthwork, or paving.

BUILDING ASSESSMENT REPORT: STRUCTURAL

Walton Middle School

Springpoint Structural observed the exterior and the interior of the middle school building on March 31, 2023, along with the architectural, MEP, and civil team members.

The building has not had additions added to it, but interior and HVAC renovations have occurred. The original documents for the middle school are dated 1972 and the construction documents were available for use and review. The building is very similar to the 1965 schools of Journey and Henley, but differ mostly in the entry, the center core, and the bigger gym.

For purposes of this structural report, the main entrance elevation faces plan south.

EXISTING STRUCTURE

ORIGINAL MIDDLE SCHOOL – 1972

The foundation systems are conventional strip and spread footings with a slab-on-grade. The single-story structure consists of load-bearing CMU walls together with structural steel columns supporting the steel bar joist roof. The roof deck is 1.5” metal deck supporting a single-ply roof membrane.

INVESTIGATIONS

For this report, the exterior perimeter was observed, the interior hallways and main rooms were observed, and the roof was observed. No destructive testing was conducted.

OBSERVATIONS

EXTERIOR

- Brick chord weeps were seen in the walls of the building.
- Most vertical expansion joints (EJ) have failed sealant due to age.
- Only a few isolated locations of spalled mortar joints due to rusting masonry joint reinforcement occur scattered around the elevations of the building.
- On the south elevation, 3 bays of high mortar joints have decayed probably to due roof water overflow.
- The northeast classroom wing’s elevation shows water staining and lichen

- growth at the base due to too much water and lack of proper slope.
- The cast stone sills under the windows have failed sealant head joints due to age.
- A few brick lintels are rusting but most just need cleaning and painting

INTERIOR

- No significant vertical CMU cracks were noted.
- No major settlement or cracking were seen in the floor slabs or in the walls

ROOFS

- No notable signs of distress were seen on the roof.

CONCLUSIONS

In general, the building is in good shape for its age.



BUILDING ASSESSMENT REPORT: ARCHITECTURE

Walton Middle School

EXTERIOR

ROOFING

- ACPS anticipates membrane roof replacements every 20-30 years, budgeting in the 10-year CIP plan at or around the 15-year mark. Roof replacements at Walton occurred in 2020 and 2022. Future roof replacements at Walton should be budgeted around FY2035-37, with anticipated replacements around FY2045-47. It is recommended that roof replacements include removing existing roof assemblies down to the structural deck and replacing them with a new roof assembly with increased roof insulation to improve envelope performance.

EXTERIOR SKIN / WALL ASSEMBLY

- The exterior skin is brick veneer with a scored block fascia, and storefront and unit windows with stucco infill. The wall assemblies of the original 1972 building do not meet current energy codes. As budgets allow, future envelope improvements, including adding insulation to the interior wall side (or exterior wall side if exterior skin is replaced), and sealing at windows, doors, and other openings would significantly improve energy performance.
- Masonry repairs were performed in 2013. Recommend cleaning brick and pre-cast sills where visible stains and efflorescence has occurred. See structural narrative for additional exterior finish observations and recommendations. The front canopy and concrete support piers are in fair condition and in need of repair.

WINDOWS AND DOORS

- Original windows are metal with single-pane glass and operable panels in the classrooms and are generally in fair-good condition but could be replaced to improve airtightness and overall building energy performance.

INTERIOR

FLOOR FINISHES

- Original floors in the school consist mostly of terrazzo in the corridors and vinyl asbestos tile in the classrooms, cafeteria, and some storage spaces. Other floor finishes include 12"x12" VCT flooring and carpet, and are generally in good condition, however there are several instances where VCT flooring is visibly cracking. These areas should be investigated to determine the cause and remedies for repair. While the typical life expectancy of VCT flooring is about 20 years, VCT at Walton should continue to be maintained with ongoing assessment to determine future replacement needs. All asbestos tile floors will need abatement if replaced. Linoleum floors in the 2017 renovated lab spaces are in very good condition.
- Carpet tile in administrative spaces, media center, music classrooms, and some classroom support spaces are generally in good condition. Replace carpet tile where wear and tear has occurred.
- Wood flooring in the gym and stage is showing signs of age and wear.

- Bathrooms and locker rooms have ceramic floor tile. Conditions are generally good. Recommend replacement of floor tile in some cases.
- Kitchens have original 4x4 quarry floor tile. Conditions are generally good.

CEILING FINISHES / LIGHTING

- Most of the building features suspended ACT ceilings with recessed LED lighting. Some back of house spaces remain fluorescent lighting. Recommend upgrading all fluorescent lighting to LED lighting. See electrical narrative for further lighting observations and recommendations. ACT ceilings throughout the school are fairly dated, most have been replaced and are in fair-good condition, but it is recommended that all ACT ceilings be replaced with new APC (Acoustic Panel Ceilings) in future renovations.
- Dropped gypsum ceilings in the bathrooms and locker rooms are generally in good condition.

WALL FINISHES

- Typical interior corridor walls are painted CMU block walls and are generally in good condition. Glazed tile wainscoting in the corridors, although dated, are generally in good condition. Other interior walls include plaster and gypsum wallboard that are generally in good condition.
- Toilet rooms and locker rooms have CMU block and/or ceramic wall tile, generally in good condition.

DOORS AND TRIM

- Most interior doors are stained or painted solid wood doors in hollow metal knock-down frames and stainless-steel hardware. Some doors show signs of their age - condition is fair to good. Walton has phenolic bathroom partitions, which have been recently installed and are in good condition. The roof access enclosure is missing bolts and hardware and is unsafe. A wooden threshold is in place at the music room entry door that is not ADA compliant and a trip hazard.

CASEWORK

- Existing casework is a mix of solid wood, wood veneer, and plastic laminate, and has generally been well-maintained but in some cases is in poor-fair condition and in need of replacement.
- Art rooms feature solid surface countertops and solid wood cabinets. Millwork in the art rooms is in poor condition and in some cases have doors that are inoperable. Recommend new hardware as a temporary repair and replacing these cabinets in major renovations.
- Casework and cabinets in the 2017 addition are in good condition.
- Office and lounge cabinetry feature solid surface and laminate countertops, with wood or laminate upper and lower cabinets, and are generally in good condition.
- Wooden instrument storage bins in the music rooms show signs of being worn from years of use, but otherwise function ok for their use. Recommend replacing them with new modern equipment storage during renovations.

FURNITURE

- Classroom desks and chairs are dated, but mostly in good condition with few exceptions. While the existing furniture could remain in place and continue to function, it is recommended that classroom desks and furniture be replaced with modernized, flexible furniture that supports the needs of 21st century learning and instruction. Some classrooms and labs are equipped with new furniture and are in good condition.
- Administrative and teacher work desks are a mix of wood, metal, and laminate furniture, and include a variety of different chair types. Except for new furniture in renovated spaces, some furniture is dated and showing signs of wearing and scratching from use. Furniture replacement is recommended as budgets allow.
- Wood and laminate shelving in the media center is in good condition.

OTHER INTERIOR OBSERVATIONS

- Student lockers are located throughout the public corridors and appear to be in good condition.



BUILDING ASSESSMENT REPORT: MEP

Walton Middle School

GENERAL OVERVIEW

Walton Middle is an 93,260-sf school that accommodates roughly 500 students. The following MEP assessment refer to the existing conditions of the school as they are found at this time. While the original school structure was built in the 1972, the mechanical, electrical, and plumbing infrastructure have been fully replaced since that time. While a number of upgrades and renovations were performed throughout the years the most recent complete building renovation was completed in 2004. Most of the observed systems and equipment were from this era or have been added or replaced since then. Overall, the building and it's MEP systems were noticed to be in poor but serviceable condition.

HEATING, VENTILATING & AIR CONDITIONING (HVAC) SYSTEMS

CENTRAL PLANT COMMENTS

- Walton Middle Schools is served by a few HVAC systems. While some areas are served by completely independent systems, the building is primarily heated and cooled via a central plant providing chilled water and hot water. A single electric boiler is located in this mechanical room that appears to be from 2009. These boilers are electric resistance units that are expensive to operate and maintain. The boilers appear to be in working order, but they near the end of their useful life.
- The central chiller for the school sits outside of the main mechanical room in a mechanical yard. This chiller appears to have been replaced as recently as 2020. This means that the chiller is new and in great condition.
- In the main mechanical room is also the central pumps for the entire heating and cooling loops of the building. The heating water pumps appear to be from the 2004 renovation, while the chilled water pumps were replaced more recently. Likely in 2020 along with the chiller. The pumps are all showing wear appropriate with their age and some evidence was seen that some of these pumps have been rebuilt or had motor replacements in the past ~20 years of service. The associated piping, insulation, and valves are also showing age and wear and should be replaced soon.

RECOMMENDATIONS

- Boiler is in good condition, but at end of useful life. Replacement with an air-source heat pump could be more energy efficient. Chiller is in excellent condition and is near new.

CONTROLS COMMENTS

- The building is controlled by a central Siemens control system that is the standard for the entire county. The pumps are mostly operated by Siemens VFDs, with some older ABB units still in operation for some of the older pumps.

Many of the local thermostats do not appear to have humidity control or local temperature setpoint control. These systems should be upgraded whenever the local units are replaced.

RECOMMENDATIONS

- Upgrade controls systems whenever the local units are replaced or potentially as part of a singular project in order to help efficiency and local comfort of the occupants.

KITCHEN COMMENTS

- The kitchen is served by a packaged rooftop heat pump unit that was installed in 2018. This unit is a standalone packaged unit that is not tied to the overall building central water loops for heating or cooling of the space. This means that the kitchen space can be treated separately during a potential renovation scope. The kitchen hood and makeup air unit were also replaced in 2018 along with the rooftop unit and freezer/cooler condensing system. All of these systems appear to be in good condition and are only 5 years into their expected useful life.

RECOMMENDATIONS

- Kitchen systems should remain as their current independent systems. The equipment is near new and in excellent condition.

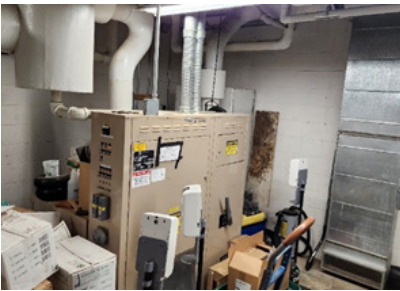
LARGER AIR HANDLERS COMMENTS

- The cafeteria and stage are served by a central air handler located on a mechanical mezzanine opposite the stage. This indoor unit appears to be in good condition generally, especially for it's age. The unit was installed as part of the 2004 design. The ventilation for this brought in through a packaged unit on the roof. This unit appears to operate as a preconditioner for the air handler in the mezzanine. The unit and associated exterior ductwork are most likely from the 2004 renovation or from sometime shortly after. The unit and ductwork show significant age and degradation.
- The gymnasium is served by two packaged DX rooftop air handlers located on a mechanical mezzanine with condensers located on the adjacent rooftop. These units were replaced in 2009 and operate independently from the rest of the school as a whole. The units appear to be in good condition and are roughly halfway through their expected useful life.

RECOMMENDATIONS

- Replacement of the cafeteria and stage unit is suggested at the earliest convenience. The rooftop unit in particular is in poor condition, while the indoor unit is in good condition and could remain for some time.
- The gymnasium units appear to be in fair condition and should be replaced in approximately 10 years time.

DOAS AND TERMINAL UNITS COMMENTS



- The main portion of the building is classroom spaces served by two primary system types. The first system last renovated in 2004 is the 4-pipe system utilizing local floor or ceiling mounted fan-coils to provide local conditioning with rooftop mounted air handlers for space ventilation. These rooftop units appear to all be from that original renovation and are packaged DX type units that can heat and cool the incoming ventilation air independently from the central boiler and chiller system. While some units show significant wear on the casing and coils, many of them appear to be in generally decent and serviceable condition but are definitely past the end of their useful life. The fan-coil units are similarly aged and near or past the end of their useful life.
- There are also a few indoor air handling units serving the music and instrument storage spaces. These units appear to be in good condition for their age. The presence of a dehumidification system in these spaces indicates that the units are undersized to serve their purpose or otherwise do not have capability to maintain desired space temp and humidity levels.

RECOMMENDATIONS

- Replacement of fan-coil units and rooftop DOAS units are suggested at this time. These units are past their expected life and show considerable age and wear.
- The indoor air handler serving music and instrument storage can remain until the next major renovation.

SPECIALTY SPACES COMMENTS

- The main administration office at the front of the building is served by a central VRF system with condenser located on the roof. This system provides local control of the individual offices while running independently of the central heating and cooling plant. The system appears to have been installed fairly recently and is in good condition.
- The building has two spaces that would be considered specialty instruction type spaces. These spaces include the art classroom and the woodshop. Typically, the school in the county also have a science classroom with fume hood, however a hood was not observed at Walton while walking the site nor a dedicated exhaust system for such a hood. The art classroom does not appear to be equipped with a dedicated exhaust fan and it is suspected that the space might be under ventilated. The room is served by hung fan coil units and likely has inadequate filtration due to this. A kiln hood was noted in the art space to remove heat from the kiln when in use.
- Finally, the woodshop is equipped with a local dust collection system on exterior to the space. This system appears to be in very poor condition and much past it's expected useful life. The interior ductwork appears to be generally in good condition for it's age, but a full new system would likely require new ductwork completely. Suggest fully replacing this system with a new dust collection system that meets all NFPA requirements.

RECOMMENDATIONS

- Maintain system in it's current condition until the next major renovation. Replacement may need to occur in 5-10 years.
- Suggest replacement providing new dedicated exhaust for all specialty spaces as required by code. A new dust collection system will also serve the woodshop well. A local point of use system inside of the shop could potentially be used in this smaller shop with limited use

PLUMBING SYSTEMS

DOMESTIC & STORMWATER COMMENTS

- Walton Middle Schools is unique, in that it is not connected to a municipal service for domestic water. The building is served by a ground source well located on the southeast side of the site. This well pumps water up to the surface for use in the building. The water is treated in the building for potable use and is stored on site in a large tank for use when needed. The pump, piping, storage tank, and water treatment system all appear fairly new and in good condition.
- The domestic hot water is provided by a centralized water heating system located in the primary mechanical room along with the central boiler, chiller, and pumping equipment. Hot water is provided via a single electric resistance water heater with combined storage. This unit appears to be manufactured in 2009 and is in decent condition. It was noted that a thermal tempering valve was not found in the central hot water piping. This means that the water circulating through the building is at 120°F. This means that the hot water is not stored at 140°F which is typical and has potential for bacterial growth.
- Fixtures throughout appear to be original from the 2004 construction with some potentially being replaced since that time. The lavatories for the restrooms are a mixture of metered faucets in the public restrooms and manual faucets in the private rooms. All fixtures appear to be generally in good condition for their age, though not many were observed to be low-flow type fixtures.
- flush fixtures appear to be in good condition and all provided with low-flow fixtures. The science classrooms appear to be plumbing utilizing acid resistant piping that leads to an acid neutralization tank
- The stormwater drainage for the roof is provided primarily via internal drains down through the building's core. Most of the original building does not have scuppers or internal overflow drains. This means that the overflow is spilled off the side of the building directly. Some spaces added more recently do show overflow drains and scuppers however. The higher roofs generally drain down via gutter systems to the lower roofs below, adding to the potential overflow of water over the roofs edge. This could lead to water retention issues on the roof and potential for leaks.

RECOMMENDATIONS

- Suggest replacing the electric boiler type heater with an air-source heat pump and storage tanks or water storage.



BUILDING ASSESSMENT REPORT: MEP

Walton Middle School

- Suggest adding a new central tempering valve and storing the hot water generated at 140°F for safety purposes.
- Lavatory and flush fixtures should all be replaced with low-flow fixtures anywhere they are not already installed.

FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM COMMENTS

- The building is not equipped with a sprinkler system at all. This is most likely due to the restriction of not having an incoming water service outside of the well on site.

RECOMMENDATIONS

- It is suggested that the building be maintained without a fire protection service until the next major renovation. At that time, a new fire protection service should be installed for at least partial coverage of the school. The system should be sized to cover the entire school at time of installation or sized for future expansion into additional spaces to be renovated at a later date. Fire pump and additional on-site storage are expected to be necessary for the system to operate correctly.

ELECTRICAL DISTRIBUTION ASSESSMENT

ELECTRICAL DISTRIBUTION COMMENTS

- The building electrical service is 3-phase 277/480V. The main service equipment is a 4,000A switchboard with one utility section, one main section, and two distribution sections. The electrical switchboard is manufactured by Siemens and was installed in 2019. It is in good working order and has been maintained well. The main switchboard is in the main electrical room on the first floor.
- Electrical panels are located throughout the building. Most branch panelboards are manufactured by Siemens and are in good condition with panel schedules. However, some older branch panelboards manufactured by Square-D and GE remain from older renovations. Panelboards are primarily in dedicated rooms which were locked; however, some are in the corridors. There are existing distribution transformers on the roof that are rusting and showing signs of deterioration.

RECOMMENDATIONS

- Most of the existing electrical equipment is in good condition and requires no work. However, the branch panelboards that are approaching the end of their expected useful life should be replaced during the next available opportunity prevent future issues. Any panelboards in corridors should be locked to prevent access by students or other unauthorized personnel. Transformers located on

the roof should be replaced and new interior locations should be provided.

EMERGENCY STANDBY SYSTEMS COMMENTS

- Emergency power is provided by an 100kW diesel emergency generator manufactured by Cummins. The generator was installed in 1993. A single automatic transfer switch transfers power from the normal power source to the emergency power source at a loss of normal power. The automatic transfer switch provides emergency power to life safety and emergency systems such as, elevators, fire alarm, egress lighting. Emergency power systems do not have proper separation as fans, IT loads, and plug loads are currently connected to the emergency transfer switch.
- The generator enclosure is starting to rust and is showing signs of deterioration.

RECOMMENDATIONS

- The existing emergency electrical distribution system is approaching the expected end of its useful life and should be evaluated for replacement soon.

LIGHTING SYSTEMS COMMENTS

- Lighting throughout the building is primarily accomplished with 2x4 recessed LED troffers in the corridors and classrooms. Most of the building has been upgraded to LED, but some fluorescent fixtures remain in back of house spaces. Lighting levels are mostly appropriate for the space being lit. Lighting color temperatures are consistent throughout the school. Individual lighting zone control is achieved using line voltage toggle switches, or low-voltage dimmer switches, and motion sensors. Exterior lighting has also been upgraded to LED; however, color temperatures were inconsistent, fixtures were not dark sky compliant, and fixtures did not meet the AMA recommendations for color temperature.

RECOMMENDATIONS

- Replace existing fluorescent light fixtures with LED and ensure energy code requirements are met in all spaces. Where possible replace non-dark sky compliant fixtures with compliant fixtures.

LIFE SAFETY SYSTEMS COMMENTS

- The building features an addressable fire alarm system. The main control panel is manufactured by Siemens. The main fire alarm panel is in the main office area. Some pull stations were installed too high and are not compliant with ADA requirements.
- Exit signs were illuminated throughout the building. The exit lights are connected to life-safety emergency power panels.
- Egress lighting is present throughout the building and connected to emergency power panels.

RECOMMENDATIONS



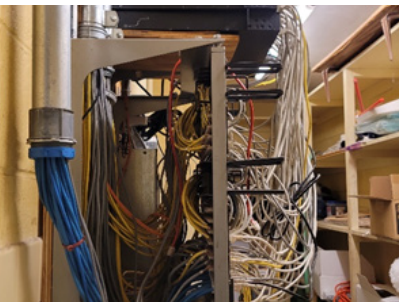
- Ensure fire alarm testing records and preventative maintenance logs are up to date. All new pull station should be installed at ADA compliant heights. Existing pull stations should be lowered to ADA compliant heights were possible.

LOW-VOLTAGE SYSTEMS COMMENTS

- The building features an addressable public address system manufactured by Telecor, an intrusion detection system, security management system, and video management system. Systems all seem to be in functional order and in good condition. Low-voltage wiring closets are located throughout the building; but dedicated closets with cooling/heating are not provided.

RECOMMENDATIONS

- Ensure all systems are compliant with current county standards and evaluate for replacement/expansion during the next major renovation. Establish dedicated IT closets with cooling/heating to meet BICSI standards.



BUILDING ASSESSMENT REPORT

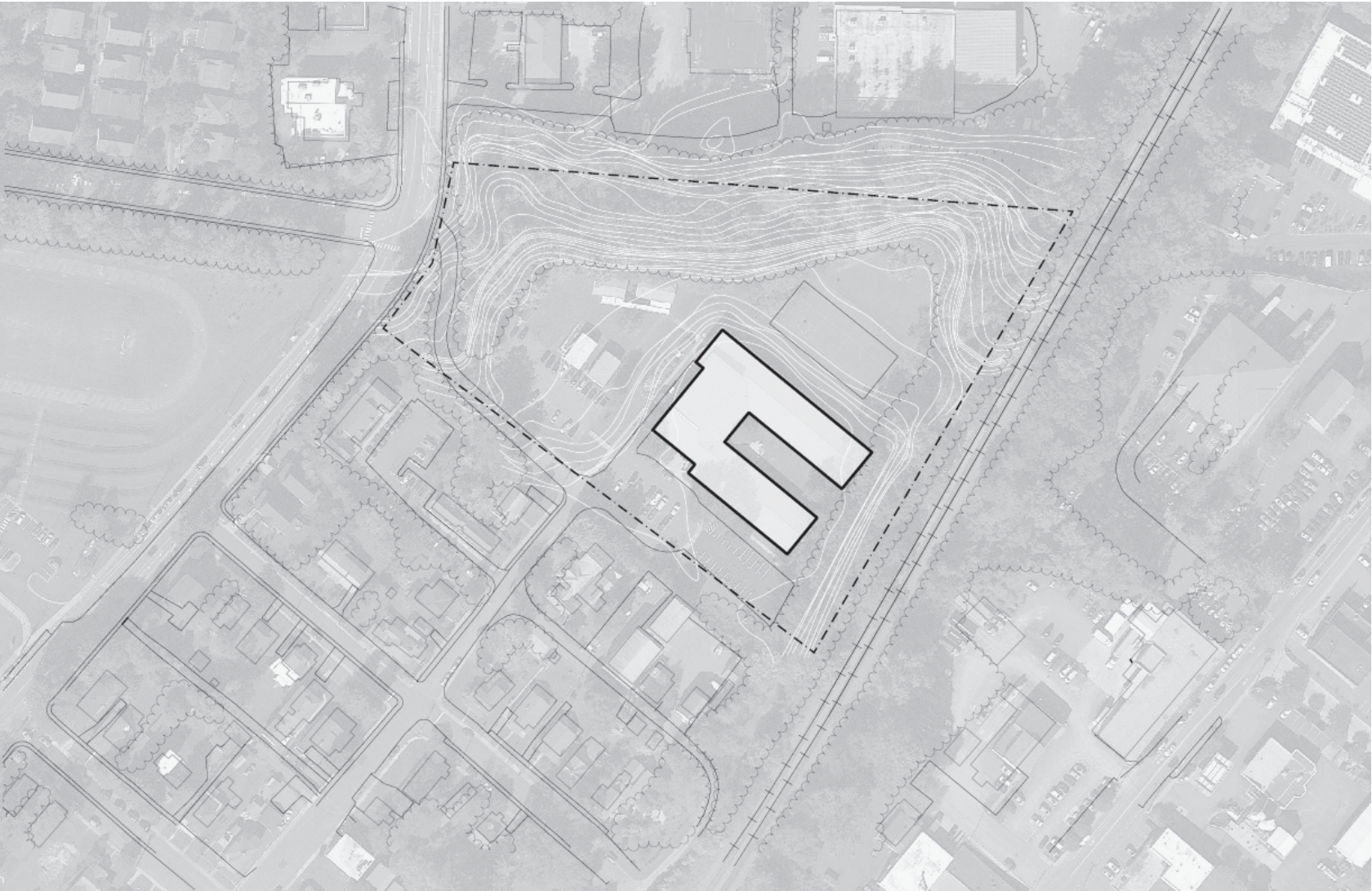
Community Lab

Building Information	
Gross Building Area	30,915 SF
Acres	7
Initial Construction Date	1959
2022-2023 Enrollment	92
Number of Classrooms	11
SF / Student	336
Site Amenities	Basketball Court
MEP Grade	

The Community Lab School is a charter school that offers an alternate student-centered learning curriculum serving ACPS middle and high school students. Located in downtown Charlottesville, the existing facility is a single-story 30,915 SF building on a 2.7-acre site originally constructed in 1959 for Murray High School. The “school of choice” program is in high demand, but the facility is in dire need of improvement both in its physical condition as well as its educational adequacy to support educational program needs. Alterations in 1993 and 1994 included a new metal roof and interior renovations to improve toilet rooms and provide basketball goals for the gym. Ongoing renovations in 2004, 2005, and improved administrative and academic support spaces. Renovations in 2013 improved the south wing of the academic classrooms, and a security vestibule was added in 2018.

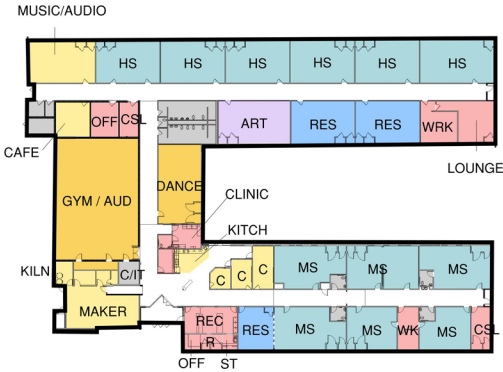
The following are observations and recommended scopes for repairs or improvements. Refer to Appendix XX for “Tier 1 Improvement Scopes” for additional recommendations.

Building Exterior / Neighborhood / Aerial



Site Plan

Community Lab 1”=100’



LEVEL 1 - FLOOR PLAN

BUILDING ASSESSMENT REPORT: CIVIL

Community Lab

General Site Analysis

Community Lab School is located at 1200 Forest St, Charlottesville, VA 22903 within the City of Charlottesville. The school site is located on a 6.33 acre property with Parcel ID is 350001000. The site abuts to an active rail road line. The site has two access points from Rose Hill Rd and Forest St. Based on the current City of Charlottesville Zoning Ordinance, the school site is Zoned B-1 Business District and has the dimensional requirements for the property as indicated below:

- By Right – Elementary and High School uses are by right and with Middle schools not specifically listed in the Zoning Ordinance of Charlottesville thus it is assumed the use is by-right
- Front Yard – 20’
- Side Yard – none
- Rear Yard – none
- Maximum Building Height – 45’

Site Vehicular/Pedestrian Access and Transportation

The site has two separate access points via Rivanna Ave (off Rose Hill Dr) and Forest Street which creates for a potential cut through for traffic. The drop off loop is integrated into the parking area at the entrance which given the size and use of this school seems to be a logical use of spaces. Conflicts between cars, busses, and pedestrians is expected to be minimal given the relatively low volumes of each on site. Pedestrian access is available only from Forest Street as the Rivanna Ave entrance is steep, narrow and has no sidewalks. The site has three parking areas with a primary lot in front of the main entrance, overflow area adjacent to the east (appears unused with picnic seating present during visit), and a lower parking area adjacent to the existing trailers. All together the site has approximately 65 standard parking spaces and no bus parking areas evident. ADA parking spaces and routes appear to be compliant from visual inspection. The loading area service the site is very small but does have good access for turn around movements to utilize the space. The condition of the asphalt parking areas on site ranges from good to poor. The apparently unused overflow parking area east of the main entrance appears to be in good condition with the primary parking area at the terminus of Forest Street in fair condition. Areas of the lower parking area adjacent to the trailer’s range from fair to poor condition. The site topography could present a challenge or opportunity depending on the future use of this property/ building. The grade is limiting to expand to the north or west with a one level expansion, however if lower levels were added grade could work to an advantage. Expansion to the south overtop the existing overflow parking is the most advantageous from a grade perspective with a one level floor plan.

Athletic Facilities on Site

Recommended by VDOE (400 capacity)

- Multiuse hard surface 1 (Q 100X120 ft (12,000sf total)
- Fitness Development equipment area – 100X150ft (15,000 sf)
- Field Game Areas 2 (Q 200X400ft (160,000 sf or 3.67 Ac)

Existing on site

- One Multiuse hard surface areas – total 9,000 sf
- 1. Multipurpose asphalt court in fair to poor condition
- Fitness Development equipment area – trailers & associated area 18,000 sf
- No Field Game Areas on site – 18,000sf flex space
- 1. Flex grass play area north of multipurpose court – 11,000sf
- 2. Internal courtyard area – 7,000sf
- 3. Swing set (condition unknown)
- 4. Stone dust path in good condition

Recommended Additions on Site

No recommended additional athletic facilities at this time given the specialized use of this facility. Given the limited gym space and targeted use of this facility the deficit seen in field game areas and fitness development areas is not seen as a vital resource missing on this small site in the broader picture of the master planning efforts to increase capacity.

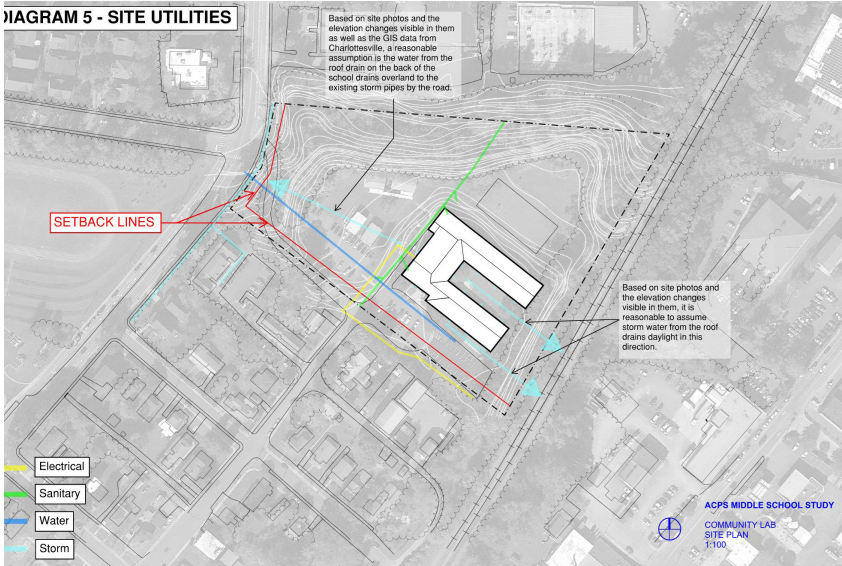
Site Utilities

There is existing public sanitary sewer and public water connections available and in place servicing the building. There are also existing telecom and power services to the site and existing building. Any future expansions would warrant an evaluation of the capacity of each utility for adequacy. Around the perimeter of the building, generally good drainage exists with positive relief away from the building. The one exception to this observation is the interior courtyard which appears to have little overland relief, however no signs of trapped water were present. Multiple sheds and trailers are present on site occupying potentially developable land. No site lighting present other than sparce public street lights.

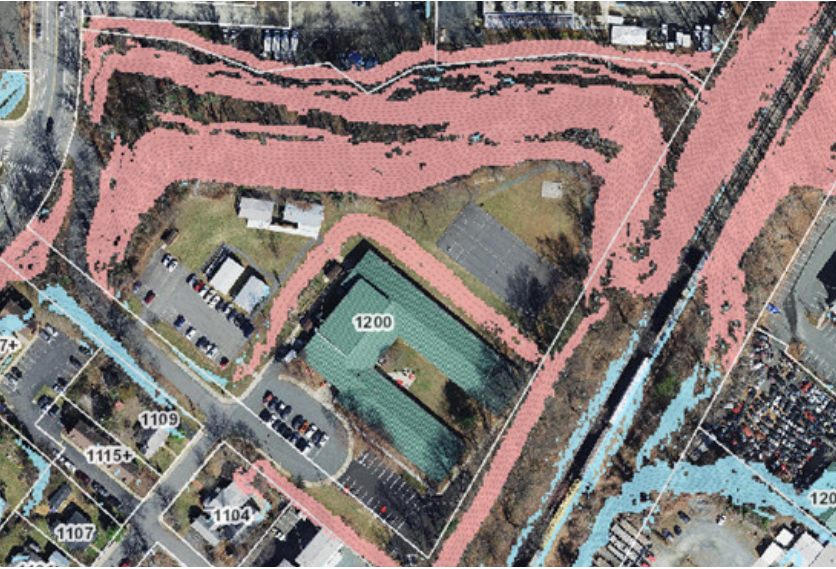
Site Topography, Environmental Images, and Vegetation

The site topography could be a limiting factor on this site for building additions and accessibility goals. Critical slopes on the north and west of the existing building are

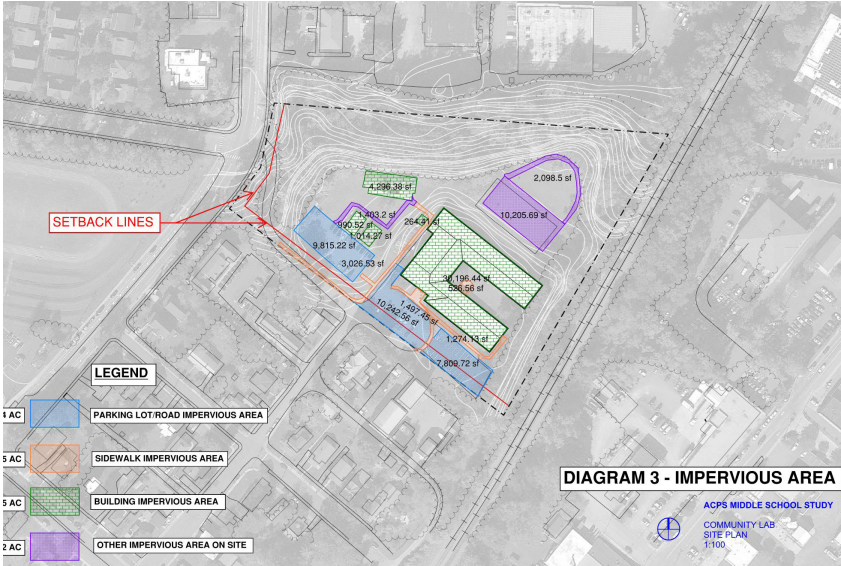
Community Lab Existing Site Utilities



Community Lab Critical Slopes



Community Lab Existing Impervious Site Area



Community lab Soils Map



present (see graphic below for red — lot regulation critical slopes) which are more difficult to disturb in the City of Charlottesville. Disturbance of the red critical slopes requires a modification or waiver reviewed by Planning Commission and ultimately approved by City Council. Areas outside of the previously developed spaces on the site are predominantly steeply sloping and forested terrain with little to no value for future development.

No FEMA floodplain exists on the property and no known wetlands exist; however, Schenks Branch does flow west to east along the north property line and is identified as a Riverine habitat in the National Wetlands Inventory. Avoidance of this stream is recommended and future development on the site is not anticipated to impact Schenks Branch. Existing improvements are not expected to be impacted by the flow of the stream given the significantly higher grade of the developed areas on site relative to the lower stream elevation. Generally, the vegetation and land cover across the site is in a fair to poor condition with areas of bare earth present. Wooded areas exist along the north, west, and east edges of the property.

Storm Drainage and Stormwater Management

Existing stormwater management on the site appears to be nonexistent which is likely due to the 1959 construction preceding stormwater regulations. It should be assumed that any development on the site will be required to provide stormwater management practices to serve the areas of land disturbed with the project. Site drainage is generally good with positive relieve away from the building around the perimeter primarily due to the considerable grade change across the site.

Site Soils

The soils on site are a mixture of 91-Urban Land (95%) and 88-Udorthents (5%). Generally, the Urban Land is in areas of prior development on site and the Udorthents is a small strip along the east property line adjacent to the railroad tracks. It is recommended a geotechnical investigation be performed in support of any future development requiring significant foundations, earthwork, or paving.

BUILDING ASSESSMENT REPORT: STRUCTURAL

Community Lab

Springpoint Structural observed the exterior and the interior of the school building on March 31, 2023, along with the architectural, MEP, and civil team members.

The original documents for the then grade school are dated 1958. The metal roof was added in 1993.

For purposes of this structural report, the main entrance elevation faces plan south

INTERIOR

- No major settlement or cracking were seen in the floor slabs or in the walls

CONCLUSIONS

In general, the building’s structure is in good shape, but a few of the exterior finishes and members need maintenance.

EXISTING STRUCTURE

ORIGINAL MIDDLE SCHOOL – 1958

The foundation systems are conventional strip and spread footings with a slab-on-grade. The single-story structure consists of load-bearing CMU walls together with structural steel columns supporting the steel bar joist roof. The roof deck is 0.5” formboard with a 2” gypsum topping. The original roof was flat. In 1993, a cold formed metal framed super structure was added above the existing roof to allow for the pitched metal roofing.

INVESTIGATIONS

For this report, the exterior perimeter was observed, the interior hallways and main rooms were observed, but the roof was not observed due to the slope. No destructive testing was conducted

OBSERVATIONS

EXTERIOR

- Numerous elevations have grade with back slopes to the building.
- A disconnected downspout occurs on the east end of the south elevation causing water to pool next to the foundation.
- The west elevation has numerous rusting lintels and a few others occur around the rest of the building.
- The window infill panels that occur on all classroom elevations are not constructed of long-life materials



BUILDING ASSESSMENT REPORT: ARCHITECTURE

Community Lab

EXTERIOR

ROOFING

- The 1994 metal roof and fascia system is in good condition and will continue to last another minimum of 15 years but recommend replacing it during future additions and renovations as budgets allow.

WINDOWS AND DOORS

- The original windows were replaced in the 1994 alterations scope with new insulated storefronts with operable sections and are in good.

INTERIOR

FLOOR FINISHES

- Original floors in the school consist of terrazzo and plastic tile. Newer floor finishes include 12"x12" VCT flooring and carpet, and are generally in good condition, however there are several instances where VCT flooring is visibly cracking. These areas should be investigated to determine the cause and remedies for repair. While the typical life expectancy of VCT flooring is about 20 years, VCT at Community Lab should continue to be maintained with ongoing assessment to determine future replacement needs. All asbestos tile floors will need abatement if replaced.
- Carpet tile in administrative spaces, media center, music classrooms, and some classroom support spaces are generally in good condition. Replace carpet tile where wear and tear has occurred.
- Wood flooring in the dance room is in fair-good condition but showing signs of age and wear. Continue to maintain assess future replacement needs.
- Bathrooms have ceramic floor tile that was recently replaced. Conditions are generally fair-good.

CEILING FINISHES / LIGHTING

- Most of the building features suspended ACT ceilings with recessed LED lighting. Some back of house spaces remain fluorescent lighting. Recommend upgrading all fluorescent lighting to LED lighting. See electrical narrative for further lighting observations and recommendations. ACT ceilings throughout the school are fairly dated, most have been replaced and are in fair-good condition, but it is recommended that all ACT ceilings be replaced with new APC (Acoustic Panel Ceilings) in future renovations.
- Dropped gypsum ceilings in the bathrooms and locker rooms are generally in good condition.

WALL FINISHES

- Typical interior corridor walls are painted plaster walls with glazed tile wainscotting generally in good condition. Other interior walls include plaster and gypsum wallboard that are generally in good condition.

- Toilet rooms and locker rooms have CMU block and/or ceramic wall tile, generally in good condition.

DOORS AND TRIM

- Most interior doors are stained or painted solid wood doors in hollow metal knock-down frames and stainless-steel hardware. Some doors show signs of their age - condition is fair to good. Walton has phenolic bathroom partitions, which have been recently installed and are in good condition.

CASEWORK

- Existing casework is a mix of solid wood, wood veneer, and plastic laminate, and has generally been well-maintained but in some cases is in poor-fair condition and in need of replacement.
- Millwork in the art room includes built-in solid wood cabinets, shelves, and countertops, and is in good condition. The cabinetry in the Maker Room is showing signs of wear. Recommend new hardware as a temporary repair and replacing these cabinets in major renovations.
- Classroom and office/lounge cabinetry feature solid surface and laminate countertops, with wood or laminate upper and lower cabinets, and are generally in good condition.

FURNITURE

- Classroom desks and chairs are dated, but mostly in good condition with few exceptions. While the existing furniture could remain in place and continue to function, it is recommended that classroom desks and furniture be replaced with modernized, flexible furniture that supports the needs of 21st century learning and instruction. Some classrooms are equipped with new furniture and are in good condition.
- Administrative and teacher work desks are a mix of wood, metal, and laminate furniture, and include a variety of different chair types. Except for new furniture in renovated spaces, some furniture is dated and showing signs of wearing and scratching from use. Furniture replacement is recommended as budgets allow.
- Wood and laminate book shelves are in good condition.



BUILDING ASSESSMENT REPORT: MEP

Community Lab

GENERAL OVERVIEW

Community Tech Lab School is an 30,915-sf school that accommodates roughly 240 students. The following MEP assessment refer to the existing conditions of the school as they are found at this time. While the original school structure was built in the 1950’s, the mechanical, electrical, and plumbing infrastructure have been fully replaced since that time. While a number of upgrades and renovations were performed throughout the years the most recent complete building renovation was completed in 2004-2005. Most of the observed systems and equipment were from this era or have been added or replaced in kind since then. Overall, the building and it’s MEP systems were noticed to be in decently serviceable condition.

HEATING, VENTILATING & AIR CONDITIONING (HVAC) SYSTEMS

CENTRAL PLANT COMMENTS

- Community Lab School is served primarily by independent terminal units in each classroom space. These PACUs (Packaged Air Conditioning Unit) are located in small closets serviced from the classroom. These units provide individual DX cooling to each space, while heat is provided by a central heating water loop. These units provide thermal comfort to the spaces, while also providing all of the necessary fresh air for ventilation. These units appear to be in decent condition but are at the end of their expected life. Each of these units has a dedicated thermostat in the space from Siemen’s for local control. No central BAS system was noticed on site during our visit, though it may be present at some level.

RECOMMENDATIONS

- These units are at the end of their life but are in good condition and can be maintained. Suggest maintaining the systems in kind until the next major renovation can take place. Each unit can be independently replaced in kind if necessary.

SPLIT DX COMMENTS

- The administration rooms, central commons, offices, warming kitchen, and some other small spaces are served by individual split DX units. These units provide no ventilation to the space and are meant for heating and cooling only. With no central air handler, these spaces may therefore by under ventilated. All of these units have dedicated thermostats and controls that are proprietary to them and likely do not connect back to any central BAS. Many of these units show their age visibly and are either at or near their expected life.

RECOMMENDATIONS

- These systems can be maintained in their current condition until the next

major renovation can occur. Each unit can be independently replaced in kind if necessary.

BOILER COMMENTS

- The heating water loop is serviced by two high efficiency condensing boilers located in the small mechanical room along the exterior of the building. These units are natural gas fed and are the primary source of heat for the entire building. They were most recently replaced in 2017 and appear to be in excellent condition.

RECOMMENDATIONS

- The boilers are in good condition with more than half their expected life remaining. These units can remain until the next major renovation or their end of life occurs.

GYM AIR HANDLER PLANT COMMENTS

- The gymnasium is served by a central air handler unit located on a mechanical mezzanine. The unit is difficult to access as the mezzanine is above a lay-in ceiling over the offices and warming kitchen. The unit is a split DX unit with outdoor condensers and hot water heating. This unit is from the 2005 renovation and is near the end of it’s expected life. The unit is in good condition for it’s age and appears in good working order.

RECOMMENDATIONS

- The gymnasium air handler should be replaced soon if a major renovation is not imminent.

SPECIALTY SPACES COMMENTS

- There are two specialty classrooms in the Tech Lab that normally require exhaust and extra ventilation. These consist of the lab and the art classroom. The art classroom was not noted to have dedicated exhaust and is therefore expected to be under ventilated. The lab space similarly was not noted to have dedicated exhaust for the classroom. There was a fume hood noted in the space, though it appeared disused. The hood is expected to be ventilated to the roof above, but no vent hood was noted at the time of the visit.

RECOMMENDATIONS

- Suggest providing new dedicated exhaust for all specialty spaces as required by code.

PLUMBING SYSTEMS

DOMESTIC & STORMWATER COMMENTS

- The Community Tech Lab school is provided hot water by a centralized system



located on the mechanical mezzanine behind the gym. The water is heated via a single electric resistance heater in the space. This heater appears to be from the 2005 renovation and is at the end of its useful life.

- The fixtures in the Tech Lab appear to be mostly from the 2005 renovation at the oldest with some potentially being replaced since that time. The lavatories for the restrooms appear to be all manual fixtures. The flush valves are all low flow type fixtures with floor mounted water closets.
- The stormwater drainage for the roof is provided primarily by external gutters and downspouts. The roof assembly is all sloped standing seam type roof and therefore no internal drainage is required.

RECOMMENDATIONS

- A new air-source water heater with storage tank will provide hot water in an energy efficient manner.
- All fixtures should be replaced with low-flow type fixtures for reduced water use.

FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM COMMENTS

- The building is not equipped with a sprinkler system at this time. It is suggested that a new fire protection service be installed at the time of the next major renovation for at least partial coverage of the school. The system should be sized to cover the entire school at time of installation or sized for future expansion into additional spaces to be renovated at a later date.

RECOMMENDATIONS

- It is suggested that the building be maintained without a fire protection service until the next major renovation. At that time, a new fire protection service should be installed for at least partial coverage of the school. The system should be sized to cover the entire school at time of installation or sized for future expansion into additional spaces to be renovated at a later date.

ELECTRICAL DISTRIBUTION ASSESSMENT

ELECTRICAL DISTRIBUTION COMMENTS

- The building electrical service is 3-phase 120/208V. The main service equipment is a 1,200A distribution panelboard. The electrical distribution panelboard was installed in 2004. It is in good working order and has been maintained well. The main distribution panelboard is in an enclosure on the building exterior.
- Electrical panels are located throughout the building. Panelboard manufacturers vary and most panelboards are in good condition with panel schedules. Some panelboards are in locked rooms, but others are in the corridors.



BUILDING ASSESSMENT REPORT: MEP

Community Lab

RECOMMENDATIONS

- Most of the electrical equipment is in good shape and does not need to be replaced. However, some branch panelboards are past their expected useful life and should be replaced soon. Any panelboards in corridors should be locked to prevent access by students or other unauthorized personnel.

EMERGENCY STANDBY SYSTEMS COMMENTS

- Emergency power is provided by an 50kW diesel emergency generator manufactured by Kohler. The generator was installed in 2013. Two automatic transfer switches transfer power from the normal power source to the emergency power source at a loss of normal power. The automatic transfer switches provide emergency power to life safety and emergency systems such as, elevators, fire alarm, and egress lighting, as well as optional standby systems such as IT loads, and convenience outlets.

RECOMMENDATIONS

- The existing emergency electrical distribution system is in good working condition and not in need of any work.

LIGHTING SYSTEMS COMMENTS

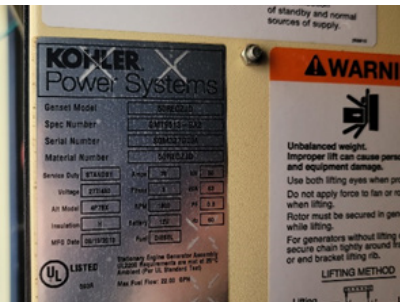
- Lighting throughout the building is primarily accomplished LED troffers in the corridors and classrooms. Most of the building has been upgraded to LED, but some fluorescent fixtures remain in back of house spaces and a few sections of the corridor. Lighting levels are mostly appropriate for the space being lit. Lighting color temperatures are consistent throughout the school. Individual lighting zone control is achieved using line voltage toggle switches, or low-voltage dimmer switches, and motion sensors. Exterior lighting has also been upgraded to LED; however, some lighting was on during the day, color temperatures were inconsistent, fixtures were not dark sky compliant, and fixtures did not meet the AMA recommendations for color temperature.

RECOMMENDATIONS

- Replace existing fluorescent light fixtures with LED and ensure energy code requirements are met in all spaces. Tie-in all exterior lighting to a centralized control system to ensure all lighting only comes on when required. Where possible replace non-dark sky compliant fixtures with compliant fixtures.

LIFE SAFETY SYSTEMS COMMENTS

- The building features an addressable fire alarm system. The main control panel is manufactured by Siemens. The main fire alarm panel is in the entry vestibule. Some pull stations were installed too high and are not compliant with ADA requirements.
- Exit signs were illuminated throughout the building. The exit lights are connected to life-safety emergency power panels.



- Egress lighting is present throughout the building and connected to emergency power panels.

RECOMMENDATIONS

- Ensure fire alarm testing records and preventative maintenance logs are up to date.

LOW-VOLTAGE SYSTEMS COMMENTS

- The building features an addressable public address system manufactured by Telecor, an intrusion detection system, security management system, and video management system. Systems all seem to be in functional order and in good condition. Low-voltage wiring closets are located throughout the building; but dedicated closets with cooling/heating are not provided.

RECOMMENDATIONS

- Ensure all systems are compliant with current county standards and evaluate for replacement/expansion during the next major renovation. Establish dedicated IT closets with cooling/heating to meet BICSI standards.

