

# **MOUNTAIN VIEW ELEMENTARY SCHOOL**

## **ARCHITECTURAL**

Mountain View Elementary School was originally built in 1958 and was renovated in 1962, 1967 and 1969. The main front entrance access addition and renovation was completed in 2004. The 2004 renovation provided a new main front entrance addition with standing seam metal roof and aluminum curtain wall, which brought total facility square footage to 44,250 SF. Finishes in the additions are similar to those found in the original building. The building security entrance was completed in 2014 by RCPS. The 2014 renovation provided an accessible entrance with security controlled by the Administration Office. The 2004 addition and renovation provided handicap accessible toilet rooms; however, the building is not equipped with an automatic sprinkler system.

### **Exterior Finishes**

#### Exterior Cladding:

Exterior wall material is brick, metal and some wood finishes. Cracks are present in several locations. Most cracks, particularly vertical cracks at building corners, are indicative of no provisions for expansion (control joints) built into the brick walls and can be repaired.

Other exterior materials include metal gravel stops, flashings and brick rowlock window sills.

#### Roof:

Building was re-roofed in 2004. None of the existing roof is more than 20 years old. All flat roof areas are a single ply (Carlisle 60 Mil) EPDM system that has an average useful life of 20 years. If renovations and additions are done, a totally new roof system should be installed. This should include additional insulation to obtain a more efficient building envelope. The 2004 addition and renovation added a sloping standing seam metal roof over a portion of the building such as the main entrance, library, and mainly the front of the building. The existing membrane roofing has large amount of debris to be removed and therefore maintenance is very imperative.

#### Windows:

The Windows have been replaced at some point during the past renovations. The newest windows are aluminum storefront window systems. These windows have glazing consists of tinted, insulated glass, and translucent, insulated panels. These windows are generally in good condition. The gymnasium has the original building steel windows. These painted steel windows have non-insulated glass and are in poor

condition. They are not energy efficient, and allow significant air infiltration. Replacing these windows is highly recommended.

#### Exterior Doors:

Exterior doors are aluminum with aluminum frames. The Door hardware is in good-poor condition and has mostly been replaced since the buildings were built and renovated. The existing aluminum exterior doors and frame will required new weather seal kits. The door hardware replacement is recommended during renovations throughout the building.

### **Interior Finishes, Fixtures & Equipment**

(See assessment tabulations for interior finish conditions).

Vinyl Composition Tile, Quarry Tile and Ceramic Tile are the predominant floor finishes at Mountain View Elementary. Other floor finishes include carpet, painted and unpainted concrete, and parquet wood flooring. Carpet is present in limited locations.

Interior wall finishes are generally painted concrete block and painted Gypsum wallboard. Walls would be patched and painted during renovations.

Ceilings are generally 2'x4' suspended acoustical tile (lay-in) with some gypsum wall board ceilings. Exposed painted tectum roof decking is present in the gymnasium area and exposed metal deck in Media room. New suspended acoustical tile ceilings are recommended as part of renovations. The acoustical tile ceilings help reduce noise and hide new HVAC, electrical, and data work.

Most interior doors are wood and are original to their respective construction periods. Most doors exhibit wear and do not have handicap accessible door hardware. All interior doors and door hardware would be replaced during a substantial renovation. Some door frames would be replaced to achieve handicap accessibility, or because of reconfigured spaces. Other door frames may be salvaged, patched, and painted.

Marker boards, chalk boards and tack boards are present in classrooms. Most are in poor condition. All would be replaced during renovations.

Built-in wooden storage units are present in the original building. All are in poor condition and many would be displaced during renovations because of the need to enlarge and reconfigure spaces.

Casework (cabinets) is generally in good-poor condition. Most casework is not handicap accessible. Student storage is accomplished by hooks on the classroom walls. This provides no separation of belongings. General casework storage is not sufficient in most classrooms. Classrooms would benefit from new casework with individual student

cubbies, sink with bubbler, and storage to accommodate large format paper, books, manipulatives, etc. All casework should be replaced during any substantial renovation.

Loose furnishings are a mixture of tables and desks of varying ages. The flexibility required of 21<sup>st</sup> Century classrooms is enabled by flexible, movable furnishings. All furniture and equipment should be replaced during a substantial renovation to provide a uniform appearance, enhance student comfort, and to provide flexibility. Furnishings, fixtures, and equipment design should occur in tandem with building design to achieve proper coordination between building utilities and furniture types and locations. This includes library shelving and furnishings.

Kitchen (food service) equipment is a mixture of equipment original to the building and equipment purchased as the building aged. To ensure maximum efficiency in terms of function and energy, new food service equipment should be provided during a substantial renovation. Significant energy savings can be achieved through more efficient kitchen hoods with energy recovery capabilities, and other equipment. The kitchen should be enlarged and rearranged to increase efficiency of function and serving capacity.

Custodial storage shelving is mostly original to the building. Custodial storage is scattered throughout the building. Consolidated, larger custodial storage is important for efficiency and proper space utilization. Smaller custodial closets throughout the building are also important to efficient custodial function. New metal shelving would be provided in consolidated custodial storage spaces during renovations. Proper floor sink size and locations would be provided during renovations to sufficiently accommodate modern floor machines.

General school storage is scattered throughout the building and consumes spaces intended for other functions. The addition of casework in classrooms will alleviate some of this. But, as part of renovation plans, general school storage should be planned in several strategic areas serving administration, faculty, and staff. Metal shelving units would be provided in dedicated general storage rooms.

### **Accessibility**

At several exterior doors, there are steps up into the building, which are not handicap accessible. Paved play areas, play fields, and play equipment are not handicap accessible. As part of any substantial renovation, all elements of the site and building entrances would be renovated to be handicap accessible. Obtaining handicap accessibility to areas behind the school will be difficult because of the grade that must be negotiated by ramps and walks. Handicap accessible play areas would be required as part of any substantial renovation and addition project.

Within the building, few components are handicap accessible simply because of their age. All restrooms are not handicap accessible to the latest ADA standard and will require substantial renovations to achieve full handicap accessibility. The stage is

currently not handicap accessible without special accommodation. The ramps in the main corridors are not handicap accessible. Some doors lack clearances required to be handicap accessible. Handicap accessibility throughout the building would be achieved during any substantial renovation.

### **Safety and Security**

This section addresses passive security measures, such as how entrances function, visibility within the building, etc.

Recent renovation work, undertaken by RCPS in 2014, involved the installation of secure entry vestibules at all schools. The vestibule at Mountain View Elementary provides visibility from the office and control over main entry. Door position sensors and locks are provided at all other exterior doors. Entry at these points is limited to staff members with appropriate keys/cards.

The administration area is the first line of defense in passive school security. Visibility to the exterior and interior of the building are critical to early threat identification and intervention. The administration area at Mountain View Elementary School has almost no visibility to the interior of the building. It does have good visibility of the visitor parking area and front drive, but no visibility to the playgrounds and additional parking are located. A more transparent administration area should be considered as part of renovations and additions.

Mountain View Elementary School does have a simple circulation network of main corridors that have relatively long sight lines, which are critical to threat identification. Sight lines are partially interrupted by the change in elevation as one progresses from the front side of the building toward the back through the main corridors containing ramps and stairs. Renovations and additions should enhance long sight lines as a passive security measure.

*End of Mountain View Elementary School Architectural Narrative*

## **PLUMBING/FIRE PROTECTION**

### **Plumbing Fixtures:**

Water Closets: Water closets observed were floor mounted vitreous china with manual type flush valves. There were some water closets that were ADA compliant. The newer classroom wing had ADA compliant water closets within the classroom toilets. There was one up-flush tank type water closet noted in the classroom wing. The condition of the water closets ranged from good to very good in accordance to their age.

Urinals: Urinals observed were wall mounted vitreous china with manual type flush valves. There were some ADA compliant urinals observed. The condition of the urinals and flush valves was good to very good in accordance to their age.

Lavatories: Lavatories observed were wall mounted vitreous china or enamel cast iron with manual type faucets or solid surface multi-user type with sensor controls which are ADA compliant. Condition of the lavatories ranged from good to very good.

Sinks: Sinks observed were stainless steel with gooseneck faucets or kitchen type faucets with swing spouts. Most classroom sinks had bubblers. The condition of the sinks varied from good to very good in accordance to their age.

Showers: No showers were observed.

Laboratory Fixtures: No laboratory fixtures observed.

Emergency Fixtures: No emergency fixtures observed.

Electric Water Coolers: There were a couple different styles of water coolers noted within building. There were several ADA compliant high/low models. The condition of the water coolers ranged from good to very good.

### **Water Heaters:**

The majority of the domestic hot water is generated through the gas-fired boilers and heat exchanger in a 300 gallon storage tank. There was a 20 gallon electric water heater noted in the 2004 six classroom addition and some point of use, electric water heaters located in cabinets under some classroom sinks.

### **Piping:**

Water: Copper

Sanitary Piping: Cast iron and PVC

Storm Piping: Cast iron and PVC

Gas Piping: Black steel

**Pipe Insulation:**

Hot water, cold water, hot water return and horizontal storm drain piping is insulated with fiberglass insulation.

**Water Entrance:**

The building is served by a 4" cold water line that is assumed to be from a municipal system. There is a RPZ type backflow preventer observed within the building.

**Kitchen:**

Kitchen appears to have been updated at some point. It has indirect waste connections and floor sinks. The grease interceptor is the large type located outside the building with manhole access (assume 1000 gallon concrete type). All kitchen equipment is electric with no gas-fired equipment.

**Sprinklers:**

The building is not sprinkled.

**Recommendations:**

This school appears to be in good condition as far as plumbing issues go. No immediate repairs or replacement needs were detected.

*End of Mountain View Elementary School Plumbing/Fire Protection Narrative*

## **MECHANICAL (HVAC)**

### **Heating:**

Three gas fired boilers provide heat to the building through a hot water circulation system. Each boiler has an associated boiler circulation pump. Hot water is circulated to the building's heating coils with two base mounted pumps. Coils are in rooftop air handler units and in terminal units. It is believed that most of the heating equipment was installed in 2004. The boilers and pumps seemed to be in good, working condition for their respective ages. The boilers are 12 years old and are expected to have a useful life expectancy of 30 years. The pumps are 12 years old and are expected to have a useful life expectancy of 25 years.

### **Ventilation:**

Ventilation is provided to the building by rooftop air handling units. The kitchen hood and dishwasher have dedicated exhaust fans on the roof.

### **Air Conditioning:**

The building is primarily cooled by an air-cooled chiller located on grade. Chilled water is then pumped to cooling coils located in rooftop air handler units with two base mounted pumps. The chiller and chilled water pumps seemed to be in good condition for their respective ages. The chiller is 12 years old and is expected to have a useful life expectancy of 20 years. The pumps are 12 years old and are expected to have a useful life expectancy of 25 years. Rooftop units, air handlers, and terminal units are 12 years old. There is one packaged DX type rooftop unit serving the gym. The gym unit is 12 years old and has a useful life expectancy of 20 years.

### **Piping:**

There is hot water and chilled water piping, black steel, insulated. The piping is 12 years old and should have a useful life expectancy of 30 years.

**Controls:** The building automation controls are digital type (DDC) by Johnson Controls.

### **Recommendations:**

Based on conversations with the school staff, there seems to be temperature control problems with some of the classrooms in the building. Sporadic temperature swings have been reported. It is recommended that zoning and controls be examined when the air handler units are replaced.

*End of Mountain View Elementary School Mechanical Narrative*

## **ELECTRICAL**

### **Main Switch Gear:**

Main Switchboard: The main switchboard is a 2000 Amp, 3 phase, 4 wire, 480Y/277 volt GE Spectra, service entrance rated switchboard. The existing switchboard is new to the building with the 2004 major addition/renovation and has space and spares available.

Recommendation: In the event of a substantial renovation or addition, existing switchboard can be reused and expanded as necessary.

### **Transformers:**

Transformers: The main 480/277V to 208/120V 500kVA transformer was added with the 2004 renovation and switchboard and is currently in good working condition; however, over time transformers become less energy efficient.

Recommendation: If renovations and additions are pursued, maintain the existing transformer, if possible.

### **Panelboards:**

Distribution and Branch Circuit Panelboards: All of the panels are newer Square D that were added or replaced with the 2004 renovation. The panels have space and spares available. Many of the branch circuit panelboards are flush mounted within the corridors.

Recommendation: If renovations and additions occur, reuse the existing panelboards and space available. Expand as necessary to accommodate new or modified spaces and locate any new panels in areas to minimize student access and to meet National Electrical Code working clearances.

### **Cabling:**

Cabling: Most of the building wiring is newer with the 2004 renovation. All visible wiring appears to be in conduit. Classrooms in older sections of the building have had original outlets capped off and are now providing power through all new cabling in surface raceway.

Recommendation: If renovations and additions occur, inspect and reuse existing wiring as appropriate. Remove and replace any wiring identifiable as having exceeded its useful lifespan.



### **Conduit/Raceway:**

Conduit/Raceway: The conduit and raceway above ceiling is still in good condition. Classrooms in older sections of the building have had original outlets capped off and are now provided power and data through surface raceway.

Recommendation: All surface raceway should be evaluated regularly and securely reattached to the wall if it becomes loose. All raceway would be reused if the building were renovated. Conduit would be salvaged where practical.

### **Light Fixtures:**

Light Fixtures: The light fixtures consist of primarily 2x4 flat lens fixtures with T8 lamps, 1x4 fixtures with T8 lamps, fluorescent can lighting, and some decorative fluorescent pendants. The T8 lamps are current technology, and meet the current needs of the school. Various emergency wall pack light fixtures are also utilized. The majority of the fixtures are new to the 2004 renovation.

Recommendation: To accommodate a new addition or renovation, provide a new lighting design and reuse existing fixtures. Consider LED fixtures where practical.

### **Lighting Controls:**

Lighting Controls: Lighting controls throughout the building consist of toggle switches controlling fixtures within an area, most classrooms have zoned switching. Corridor lighting is controlled through switch bank in the front office.

Recommendation: In the event of a renovation or addition, add automatic lighting controls to each room to comply with building energy codes.

### **Public Address System:**

Public Address System: The public address system is currently a Valcom headend system with speakers located throughout the school. Each classroom has a PA speaker and an unused push-to-talk button. Teachers and staff use the Cisco phone system to call in to the PA for most communications and announcements.

Recommendation: The PA system is current technology. In the event of a renovation or addition, the system could be reused and expanded as necessary.

### **Security System:**

Security System: Security system consists of electronic locks and motion sensors at exterior doors, keypads, and AI phone/Lobbyguard system at entrance. The current system meets the needs of the school and utilizes current technology.

Recommendation: Upgrade, expand, and reconfigure zones of the system as necessary if renovations and additions are pursued.

### **Camera System:**

Camera System: A building wide IP based camera system is installed. It is current technology that meets the current needs of the school.

Recommendation: In renovations and additions, provide additional cameras and Digital video recorders as required for additional areas with desired coverage.

### **Data System:**

Data System: The Data system consists of newer Category 6 and 5e cable. The building is equipped with wireless internet through Cisco access points throughout. Teacher and student computers are provided with access to a local area network.

Recommendation: The current system meets the needs of the building and switches and patch panels could be reused in any renovation or new construction

### **Fire Alarm System:**

Fire Alarm System: The fire alarm control panel is a Simplex 4100U fire alarm system that was added during the 2004 renovations. The current system consists of limited area manual pull stations, smoke detectors, and horn/strobe alarms. However, there are no alarm devices located in classrooms.

Recommendation: If renovations and additions are pursued, expand existing fire alarm system with audible and visual notification devices throughout the school and in classrooms. Reconfigure the existing system as necessary for renovations.

### **Generator:**

Generator: No generator is installed to serve this building. Emergency lighting is provided by emergency battery units in the corridors, large rooms, and at exits.

Recommendation: For any renovations or addition, a new generator should be considered, sized to provide power for life safety features and other equipment that the school would like to operate.

### **Site Lighting:**

Site Lighting: The site lighting consists of pole mounted lights for parking areas, wall packs around the building, and wall sconce lighting at exterior doors. The fixtures appear to be new to the 2004 renovation and the front of the building and parking area

is well covered. Staff recommendation would be to add additional fixtures towards the back of the building around the ball fields.

Recommendation: To accommodate a new addition or renovations, maintain existing lighting fixtures around exit doors or lighting areas of egress. Connect these lights to an emergency circuit. Provide new general site lighting to maximize energy efficiency and minimize light contamination on neighboring properties and to the sky.

### **Classroom Media (TV, Projector, ETC):**

Classroom Media: Classroom media typically consists of an Activeboard with attached projector, a teacher computer, printer, and a wall mounted phone. Laptop and iPad carts are also in use. Most classrooms also contain an older CRT TV that appears to be unused; the Activeboard can be used for most media requirements.

Recommendation: Periodic upgrade of equipment will maintain a strong inventory of new equipment and keep students aware of current technology.

### **Phone System:**

Phone System: The phone system consists of a new Cisco IP phone system. Phones are provided in all offices and classrooms as required to access outside lines. Push-to-talk buttons with the PA system are included in all classrooms, but the phone system is used for communication with the front office. The system is operational and meets the current needs of the school.

Recommendation: It is possible to retain and expand the existing phone system through additions and renovations.

*End of Mountain View Elementary School Electrical Narrative*

## **CIVIL**

### **Traffic Circulation**

Buses: School is served by 8 regular buses, 3 special needs buses, and 3-4 daycare vans. There are two dedicated bus loops, one on the west side of the school and one on the south side of the school.

Morning: Buses utilize the bus loop for drop off. There is adequate stacking space for buses to drop off without causing backups. Special needs buses and daycare vans use the second bus loop.

Afternoon: Buses utilize the bus loop for pick up. Buses enter the loop and park to load students. There is enough stacking room for all of the buses required.

Cars: Cars utilize the parking area and circle on the south side of the school for drop off / pick up.

Morning: Cars enter the site through the combined entrance, and pass the bus loops to the rear of the parking area and loop through to drop their students off.

Afternoon: Parents park wherever possible to walk in and sign their student out. Staff indicates no issues.

Parking: 73 striped parking spaces are provided with 4 designated ADA spaces. Day to day parking is inadequate for faculty / staff / visitors. Parking quantities meet Roanoke County requirements and State recommendations. Event parking is an issue with parents parking wherever possible. The bus loop is occasionally used as overflow parking.

Service: The service area on the south side of the school has adequate maneuvering area for all deliveries.

Fire Access: Fire apparatus have adequate access around the building.

Separation: Although a common entrance is used. There is adequate separation with a dedicated bus loop and service area shared with faculty parking.

Adjacent Roadways: The adjacent roadways are subdivision streets which have light traffic. Sight distance is good.

Pedestrian: Generally there are not many pedestrians who access the school. There are no sidewalks adjacent to the school.

## **ADA Accessibility**

Parking: There are 4 spaces designated as ADA parking with 2 designated as van accessible. The spaces designated as van accessible are not correctly sized.

Recommendation: Restripe ADA parking to allow for proper aisle size for van accessibility.

Signage: Signs are faded, do not have penalty displayed.

Recommendation: Replace signs with code compliant signage.

Ramps: Curb ramps are appropriately located and in good condition.

Access to all areas: There is ADA access to all areas and activities on site.

## **Parking Areas, Driveways, and Sidewalks**

Asphalt Pavement: Asphalt is in fair condition. Striping is faded.

Recommendation: Mill, overlay, and re-stripe asphalt parking.

Asphalt Walks: Asphalt path to play area on the east side is very poor and doesn't connect to the adjacent concrete walk. Asphalt track at the front (west) side is in fair condition with minor cracking and grass encroaching on the edges.

Recommendation: Replace the path to the play area and extend to connect to the adjacent concrete walk. At asphalt track, remove grass from cracks, fill and seal cracks. Trim grass back from edges.

Concrete Pavement: Concrete at dumpsters is aged but functional

Concrete Walks: Some older sidewalk sections are severely cracked, and settled causing potential tripping hazards.

Recommendation: Remove and replace hazardous sections which have settled. Replace other sections as necessary when cracking and deterioration become hazardous.

Stairs, Ramps, and Railings: Concrete stairs are aged but functional. Curb ramps are aged but functional. Stairs at loading dock do not have railings. Paint on railings is faded and chipping.

Recommendation: Provide code compliant railings at loading dock. Sand, prime, and paint existing railings.

Concrete Curb and Gutter: Some older curbs are broken and deteriorated.

Recommendation: Replace sections as necessary when cracking and deterioration become hazardous.

Fire Lane: Paint on curbs and asphalt is faded. Some fire lane signs are faded and illegible. Some signs are leaning and damaged. Fire lane signs are not turned toward oncoming traffic.

Recommendation: Re-paint curbs and asphalt at fire lanes. Replace fire lane signs and provide additional signs as necessary. Ensure that fire lane signs are turned toward oncoming traffic.

## **Utilities**

Fire Lines and Hydrants: Poor fire hydrant coverage with no spacing. The only fire hydrant located near the school property is across the street. No paved fire lane around building, but fire truck access is present. No fire department connection or post indicator valve.

Recommendation: Consider planning for adding a hydrant for fire protection coverage.

Domestic Water System: The water system is in fair condition. Staff indicates when building sits for extended period of time, water runs brown and cloudy which could indicate rusty pipes. Water meter is located at the entrance to the school in manhole.

Recommendation: Water quality should be tested and monitored regularly.

Sewer System: The sanitary sewer system consists of old brick manholes and deteriorated pipes in fair condition, but functional. Staff indicated no issues with stoppages, but observations show stagnant waste.

Recommendation: Sewer system should be flushed to clear and prevent blockages.

Natural Gas System: Gas meter is located towards the rear of the school beyond the loading dock area and protected with bollards. The meter is in fair condition, but functional and shows signs of deterioration and rust.

Recommendation: Contact gas company to inspect condition of meter.

Electric: Electric service provided via overhead poles to school property. Service is taken underground to a transformer in the loading dock area and then into the building. The meter is mounted on the building wall beside the transformer. Transformer is not protected from loading/unloading traffic and is in good condition.

Recommendation: Install bollards to protect transformer from vehicular traffic.

Site Lighting: Site lights illuminate school parking lots and bus loop. No lighting for sidewalks at rear of school. Lighting is sufficient for safety and security.

### **Grading and Drainage**

Storm Water System: Roof drains and downspouts are piped underground into school storm water network. Runoff from the parking lot and yard areas are collected in curb and drop inlets and conveyed to the detention pond at the rear of the school property and outlets to the east. Inlets, manholes and pipes are in good condition, but a few downspouts appear clogged causing drainage issues.

Recommendation: Underground piping system should be flushed and pipe outlets should be cleaned out and inspected for sediment. Unclog downspouts at rear of school causing ponding of storm water.

Detention pond: Detention pond is in good shape with necessary outlet protection and no signs of scoured earth. Perimeter of pond is fenced to ensure safety of children, but outflow structure does not have a trash grate.

Recommendation: Provide trash grate for outflow structure.

Slopes, Ponding, and other Drainage Issues: Minor ponding at rear of building due to clogged downspout boots. Sheet flow from parking lot has eroded a channel at the south eastern edge of the faculty parking lot and parent loop.

Recommendation: Unclog downspout boots.

### **Site Features**

Vegetative Landscaping: Vegetation, including trees and shrubs, are healthy.

Recommendation: Continue general maintenance of pruning and mulching. Provide remediation with mulch and shrubs to planter bed on north side of school.

Lawns: Generally in good condition. Minor areas in need of repair.

Recommendation: Repair and reseed bare areas

Fencing and Gates: Limited chain link fence site fencing. Good condition.

Signage: ADA signage is not to code compliant. Other signage beginning to show age or is damaged. Many poles are leaning or lack foundations.

Recommendation: Repair or replace damaged or leaning signs. Future signs should utilize 2"x2" square posts in sleeves with concrete foundations. Provide parking blocks

at parking spaces without curbing to prevent vehicular damage to posts. Provide directional signage.

Flagpoles: Excellent condition.

Site Furnishings: Site furnishings limited to benches at play areas. Generally in fair condition.

Accessory Structures: Three storage structures with wood framing and vinyl coating in fair to good condition.

### **Play Areas and Physical Education**

Playgrounds / Stationary Play Equipment: PreK-1 and year 2-5 equipment is grouped together. A fitness course is provided at the back of the school. All equipment is in good to excellent condition. Mulch is in excellent condition.

Paved Play Areas: Two paved asphalt areas in good condition. Backboards and rims on smaller paved area require repairs.

Recommendation: Repair or replace basketball goals.

Play / PE Fields: Backstop provided for multipurpose games field. No skinned infield provided. Overall size of play area meets recommended guidelines. Turf in good condition.

*End of Mountain View Elementary School Civil Narrative*



<b>Project Name: RCPS Facilities Assessment</b>		<b>Comm. #: 1637</b>
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**General:**

Mountain View Elementary School is a single story brick structure. The original building was constructed in 1958 and was renovated in 1962, 1967 and 1969. The main front entrance access addition and renovation was in 2004. This update provided adequate accessibility and Security to the Main Entrance. The overall facility has EPDM flat roof, a sloping Standing Seam Metal roof. The newest main entrance addition has Handicap accessible toilet rooms with Ceramic Tile Flooring, Painted CMU Walls and SATC Ceilings.

**Entry Vestibule:**

Vinyl Composition Tile (VCT) and Base  
 Brick Veneer Walls and CMU Walls  
 Exposed Ceiling Structure  
 Entrance Doors and Windows are Aluminum Storefront with Thermal Break Insulated Glazing

**Main Office:**

Vinyl Composition Tile (VCT) and Base and Carpeting  
 Brick Veneer Walls, Painted CMU Walls and GWB Walls  
 Exposed Ceiling Structure and Suspended Acoustical Tile Ceiling (SATC)  
 Office is equipped with a Small Toilet Room with floor mounted flush valve toilet, wall mounted lavatory. The room has Ceramic Tile Flooring, Painted CMU Walls and SATC Ceiling. The Conference Room is Handicap Accessible with Plastic Laminate Casework, Countertop.

**Corridor:**

The flooring is VCT.  
 The Walls are Painted CMU  
 The ceiling is 24"x24" SATC.  
 The door frames are painted Hollow Metal  
 The doors are wood.  
 Exterior Corridor Doors are Updated Aluminum Doors and Frames  
 (Exterior Doors need new Seal Kits)  
 Corridor off of the Cafeteria 300 has VCT flooring with Terrazzo Steps slip resistant strips and a Ramp with Slip Resistant Rubber Floor Covering (Ramp has Painted Pipe Railing). The Ramp Floor Covering needs Replacing and the Railing needs painting.



ARCHITECTS AND ENGINEERS

## Notes

### **Cafeteria RM 300:**

- VCT Flooring
- Painted CMU Walls and Glazed Tile Wainscot (Top of Wainscot 5'-4")
- SATC
- Wood Doors with painted HM Frames (The old door hardware needs replacing)
- Aluminum Windows with Insulated Glazing
- Handicap Accessible Drinking Fountain (HI/LO)

### **Kitchen:**

- Vinyl Flooring
- Painted CMU Walls and Glazed Tile Wainscot (Top of Wainscot 5'-4")
- SATC (Needs Replacement)
- Wood Doors with painted HM Frames (Knob Hardware Old Door Hardware needs replacing)
- Kitchen Storage Flooring is Painted Concrete (Need to be repainted)

### **Toilet:**

- Quarry Tile
- Painted CMU Walls
- SATC
- Floor MTD Water Closet, Flush Valve and Wall MTD Sink
- Wood Door with Louver and Painted HM Frame (Need to be refinished)

### **Mechanical Room:**

- Concrete Flooring
- CMU Walls
- Exposed Ceiling Structure
- Access from Exterior with Aluminum Door and Frame (Mech near the Cafeteria 300 and Mech Room off Outdoor Courtyard across from Gym)

### **Gymnasium:**

- Parquet Wood Flooring with wood Base
- Painted CMU Walls (No Acoustic Panels)
- Exposed Tectum Ceiling and Structure
- Steel Windows
- Stage Flooring is wood (Need to be refinished)
- HM Exterior Doors with HM Frames (Need painted and new Seal Kits)
- Interior Doors are Wood Doors and Painted HM Frames (all doors need to be refinished and new hardware)



ARCHITECTS AND ENGINEERS

*Notes*

**New Addition Classroom:**

- VCT flooring
- Painted CMU Walls
- SATC
- Wood Door with Lever Handle
- Painted HM Frames with sidelights (sidelights has wire glass)
- Classrooms have Video Board, Television, Marker Boards and Bulletin Board
- Plastic Laminate Casework and Sink

**New Addition Toilet Room:**

- Handicap Accessible Toilet Room
- Painted CMU Walls
- Ceramic Tile Flooring
- Gypsum Wallboard Ceiling
- Dispensers, Grab Bars, etc are in good shape

**Boys Restroom in New Addition:**

- Handicap Accessible
- Ceramic Tile Flooring
- Painted CMU Walls
- SATC
- 1-Floor MTD Water Closet, 2-Urinals, One unit multi-sink (Bradley Unit)

**Server Room:**

- VCT Flooring
- Painted CMU and GWB Walls
- SATC
- (Water Leak Has Occurred. Flooring and Ceiling Tiles have stain damage)
- Dehumidifier was running in the room during our field investigation

**Media Room:**

- Sloped Exposed Ceiling at Clerestory and SATC at other areas
- Aluminum Storefront leading out into the Courtyard
- Aluminum Frame leading to the Corridor
- Carpeted flooring
- Painted CMU and GWB walls
- Media Room Work Rooms has VCT flooring and SATC Ceilings

**Classroom 204 and 206:**

- VCT Flooring
- Painted CMU Walls
- SATC Ceiling
- Restroom has Tank Water Closet/Grinder
- Wood Casework with sink and a Plastic Laminate Countertop



ARCHITECTS AND ENGINEERS

## Notes

### Roof:

Flat EPDM Roof (Carlyle 60 Mil Membrane)

Roof access from Storage Room between Restrooms and Classroom 235

Sloped roofing is standing seam metal roof with snow guards, gutters and downspouts.

Roof appears to be in good shape just need some maintenance work.

The following are maintenance items on the roof that needs to be address:

- a. Roof drain Baskets need to be put back on.
- b. Remove all pieces of concrete debris
- c. Trim back vegetation near roof and roof edges
- d. Vent piping needs to be extended in some cases

### Exterior:

Brick, Metal and Wood Finishes

The oldest part of the building needs some trim and soffit painting.

The fascia is peeling and needs to be painted.

### Conclusion:

The facility is in good shape and the main entrance meet accessibility and security requirements; however some maintenance work is needed. Main items need work are the following:

- a. Refinish Wood Doors and Replace the Hardware to meet today ADA requirements
- b. Hollow Metal Frames and Hollow Metal Doors to be repainted. Replace the Hardware on all Exterior HM Doors to meet ADA Requirements.
- c. Gym and Stage flooring need Refinishing.
- d. Kitchen and Cafeteria need updating
- e. Roof need Maintenance Work
- f. New floor covering and painted railing at Handicap Ramp
- g. All Exterior Doors need new Seal Kits
- h. All interior signage shall be replaced with ADA compliant Signage

**Mountain View Elementary School Architectural Condition Assessment**  
Reference Building Owners and Managers Association International (BOMA)  
Preventative Maintenance Guidebook

System/Components	Condition Category	Expected Useful Life	Current Age	Expected Life Remaining	Notes
<b>Architectural</b>					
Brick		5 Life	58 years	Life	
CMU walls		5 Life	58 years	Life	
Exterior Finishes		2 25 years	58 years	0 years	Metal Fascia need inspected and painted
Wood trim		4 15 years	N/A	N/A	Need refinishing or replace
Interior doors		4 20 years	12 years	8 years	Older Wood doors need refinish or replace
Exterior doors		2 50 years	58 years	0 years	HM doors need replacing
Door hardware		2 7 years	12 years	0 years	Need upgrad to ADA code Compliant
Electronic door hardware, entrance security		5 5 years	2 years	3 years	Entrance updated in 2014
Vinyl floor tile		4 12 years	N/A	N/A	Recent installation (unknow time frame)
Ceramic/Porcelain floor tile		5 50 years	N/A	N/A	Recent installation (unknow time frame)
Carpet		5 5 years	12 years	7 years	
Quarry Tile		2 50 years	58 years	0 years	Older Toilet Rooms
Wood gym floor		3 10 years	N/A	N/A	Repair and Refinish
Other wood floors		3 10 years	N/A	N/A	Repair and Refinish
Exposed concrete floors		2 50 years	58 years	0 years	Flooring appears to be in good shape
Curtain Wall, Storefront		5 50 years	N/A	N/A	
Exterior windows		4 30 years	12 years	18 years	
Interior windows		1 30 years	12 yrs - 58 yrs	0 years	Replace Wire glass with new safety glass
Standing Seam Metal Roof		5 25 years	12 years	13 years	
Roof (Including flashings, coping, etc.)		4 20 years	12 years	8 years	Maintenance and drain basket installation required
Suspended acoustical tile ceilings (lay-in)		4 25 years	12 years	8 years	Replace Stained Ceiling Tiles
Plaster/GWB ceilings		4 30 years	12 years	8 years	
Ceiling/exposed structure finish (paint)		2 5 years	12 years	0 years	Need repainting
Interior wall finishes (paint)		2 5 years	12 years	0 years	Need repainting
Marker boards, chalk boards, tack boards and projection screens		5 N/A	12 yrs - 58 yrs	N/A	
Casework		3 N/A	12 yrs - 58 yrs	N/A	Wood Casework w/Plastic Laminate Countertop
Window treatments		2 N/A	12 yrs - 58 yrs	N/A	Window Shades need replacing
Toilet partitions		4 20 years	12 years	8 years	Plastic Laminate Partition
Toilet accessories		4 N/A	12 years	N/A	
Exterior and Interior railings		4 30 years	12 years	18 years	Need Painting
School sign		3 25 years	12 yrs - 58 yrs	N/A	ADA Code Compliant signage needs updated
Sprinkler/No Sprinkler		5 N/A	N/A	N/A	No sprinkler
ADA Code Compliant		3 N/A	N/A	N/A	Update Toilet Rooms and Signage
<b>Condition Categories</b>					
<b>1 Immediate replacement required, life saftey concern</b>					
<b>2 System has reached it's useful life</b>					
<b>3 Major repair or modifications required, useful life remaining</b>					
<b>4 Minor repair required</b>					
<b>5 General maintenance required</b>					

**Mountain View Elementary School Mechanical Plumbing Condition Assessment**

Reference Building Owners and Managers Association International (BOMA)

Preventative Maintenance Guidebook

System/Components	Condition Category	Expected Useful Life	Current Age	Expected Life Remaining	Notes
<b>Mechanical</b>					
Boiler	4	30 years	12 years	18 years	
Chiller	4	20 years	12 years	8 years	
Mechanical piping	4	30 years	12 years	18 years	
Refrigerant piping	4	30 years	12 years	18 years	
Duct	4	30 years	12 years	18 years	
Air Terminal units	4	30 years	12 years	18 years	
Package units	4	18 years	12 years	6 years	
Controls	4	20 years	12 years	8 years	
Exhaust fans	4	25 years	12 years	13 years	
Science fume hoods	N/A				
Kitchen hood	4	30 years	12 years	18 years	
<b>Plumbing</b>					
Plumbing fixtures and controls	5	30 years	12 years	18 years	2004 Addition (Renovation)
Floor drains	5	30 years	12 years	18 years	
Water heaters	5	25 years	12 years	13 years	
Pumps	4	15 years	12 years	0 years	
Potable water piping & valves	5	30 years	12 years	18 years	
Sprinkler system	N/A				
Back-flow preventer	5	30 years	12 years	18 years	
Service line & meter (size appropriate)	5	30 years	58 years	0 years	Some original waste piping remains
Wall and yard hydrants	5	15 years	12 years	3 years	
Eye wash stations	N/A				
Emergency showers	N/A				
<b>Condition Categories</b>					
<b>1 Immediate replacement required, life safety concern</b>					
<b>2 System has reached it's useful life</b>					
<b>3 Major repair or modifications required, useful life remaining</b>					
<b>4 Minor repair required</b>					
<b>5 General maintenance required</b>					



**Mountain View Elementary School Civil Condition Assessment**  
Reference Building Owners and Managers Association International (BOMA)  
Preventative Maintenance Guidebook

System/Components	Condition Category	Expected Useful Life	Current Age	Expected Life Remaining	Notes
<b>Civil</b>					
Asphalt pavement	4	15 years	13 years	0 years	
Asphalt walks	2/4	20 years	13+ years	0-7 years	
Concrete pavement	4	30 years	13-58 years	0-17 years	
Concrete walks	2-4	30 years	13-58 years	0-17 years	
Stairs	4	30 years	13-58 years	0-17 years	
Ramps	4	30 years	13-58 years	0-17 years	
Railings	4	15 years	13-58 years	2 years	
Concrete curb and gutter	2/4	30 years	13-58 years	0-17 years	
Concrete / Brick Pavers	N/A	N/A	N/A	N/A	
Guardrail, Parking Bumpers, Misc.	N/A	N/A	N/A	N/A	
Fire lane	4	Varies by Material	Unknown	0 years	
Fire lines and hydrants	3	40 years	Unknown	10-15 years	
Domestic Water system	3	40 years	Unknown	5-10 years	
Sewer system	3	40 years	58 years	0 years	
Natural Gas system	4	40 years	Unknown	10-15 years	
Electrical System	5	25 years	Unknown	10-15 years	
Exterior Lighting	4	25 years	Unknown	5-10 years	
Storm water system	4	40 years	Unknown	10-15 years	
Detention / Retention ponds	4	Life	Unknown	10-15 years	
Stormwater Management BMP's	N/A	N/A	N/A	N/A	
Surface drainage and grading	4	N/A	N/A	N/A	
Vegetative landsaping	5	Life	13-58 years	Varies	
Lawns	5	Life	13-58 years	Life	
Fencing and gates	5	20 years	Unknown	10+ years	
Signage	4	10 years	13 years	0 years	
Flagpoles	5	50 years	13 years	37 years	
Site furnishings	5	15 years	Unknown	5+ years	
Awnings / Canopies	N/A	N/A	N/A	N/A	
Site retaining walls	N/A	N/A	N/A	N/A	
Accessory structures	5	50 years	Unknown	5+ years	
Playgrounds	5	10 years	Unknown	5+ years	
Paved play areas	3/5	20 years	Unknown	10+ years	
Play / PE fields	5	Life	13+ years	Life	
<b>Condition Categories</b>					
<b>1 Immediate replacement required, life safety concern</b>					
<b>2 System has reached it's useful life</b>					
<b>3 Major repair or modifications required, useful life remaining</b>					
<b>4 Minor repair required</b>					
<b>5 General maintenance required</b>					



# Budgetary Cost Estimate

Estimate Date 12/7/2016  
 Facility Name Mountain View Elementary School  
 Client Name Roanoke County Schools



Quantity	Description	Unit	Cost / unit	Total w/ OH&P
<b>ARCHITECTURAL</b>				
90	New interior signage-adhesive back /braille ADA compliant	Ea	\$42.00	\$4,536.00
84	Replace gymnasium windows	SF	\$40.00	\$4,032.00
25	Partial replacement of interior doors and hardware	EA	\$1,500.00	\$45,000.00
350	Replace floor covering at HC ramps	SF	\$3.50	\$1,470.00
3,223	Refinish gym floor	SF	\$4.50	\$17,404.20
800	Quarry Tile Flooring	SF	\$15.00	\$14,400.00
25	Exterior Doors		\$1,350.00	\$40,500.00
80	Door Hardware		\$1,000.00	\$96,000.00
1	Paint Exterior Trim Finishes	LS	\$5,000.00	\$6,000.00
65	Paint interior (cost per room)	EA	\$600.00	\$46,800.00
<b>CIVIL</b>				
100	ADA striping	LF	\$0.20	\$24.00
4	ADA signage	EA	\$500.00	\$2,400.00
6	Fire lane signage	EA	\$500.00	\$3,600.00
4	Directional signage	EA	\$1,500.00	\$7,200.00
600	Asphalt pavement	SF	\$3.00	\$2,160.00
80,000	Mill and overlay asphalt pavement	SF	\$1.00	\$96,000.00
500	Concrete sidewalk	SF	\$5.00	\$3,000.00
30	Provide handrails	LF	\$50.00	\$1,800.00
1,200	Repaint curbs and fire lanes	LF	\$0.10	\$144.00
3	Install bollards	EA	\$650.00	\$2,340.00
1	Provide trash grate	EA	\$100.00	\$120.00
4	Repair basketball goals/backboards	EA	\$1,000.00	\$4,800.00
<b>MECHANICAL / PLUMBING</b>				
<b>ELECTRICAL</b>				
<b>TOTAL Budgetary Cost</b>				<b>\$399,730</b>