OAK GROVE ELEMENTARY SCHOOL

ARCHITECTURAL

Oak Grove Elementary School (OGES) was originally built in 1954 and renovated in 2005. The total facility square footage is 46,444 SF. Each portion of the building loosely complies with the accessibility requirements of the time in which the work was performed; however, most spaces do not comply with current standards. The single level brick and metal structure has a flat EPDM membrane roof and sloping standing seam metal roof. The metal roof structure at the main entrance slopes back toward flat membrane roofing. The building is generally one story, with a mechanical room / boiler room located next to the cafeteria. The building has a partial automatic sprinkler system. The main entrance was renovated in 2014 by the RCPS. The renovation was provided to allow for building accessibility and security controlled by the Administration Office. A courtyard is off of the Media Center and it appears to be used as an outdoor learning area and contains a picnic table and outdoor planting bed.

Exterior Finishes

Exterior Cladding:

Exterior wall material is brick, and metal.

Other exterior materials include metal gravel stops and flashings.

Roof:

The building roof may have been re-roofed during the 2005 renovation. None of the existing roof appears to be less than 20 years old. The building has a flat black EPDM membrane roof that has minimal drains and most water flows toward gutter and downspout along the edges. The pitched roofing consists of standing seam metal roof with snow guards. In general, maintenance activities should be increased on the roof. Several roof drains have had strainer baskets removed. These should be replaced as quickly as possible to avoid accumulation of debris in leader piping. Drains were observed with debris blocking passage of water and water ponding was observed on the roof. Water ponding occurs over a corridor located between Room 200 and 201. The water ponding was not making it to the gutter at that location. The slope is so low that water will not flow to drains and gutters properly. Sealants along roof edges should be regularly monitored and replaced as needed. Several joints have experienced sealant degradation and cracking and should be resealed.

Windows:

Original windows were replaced with aluminum storefront window systems during the 2005 renovation. These windows have operable vents with screens, which allow natural

ventilation. Glazing consists of tinted, insulated glass, and translucent, insulated panels. These windows are generally in good condition.

Exterior Doors:

Exterior doors in the original building are hollow metal doors and frames, likely original to the building. Exterior doors elsewhere are aluminum doors and frames with lites, side lites and transoms. Doors are in good-poor condition. Door hardware is in good-poor condition, and has mostly been replaced since the buildings were built. Doors and door hardware replacement is recommended during renovations since a large amount of the existing hardware do not meet the latest handicap accessible code requirements.

Interior Finishes, Fixtures & Equipment

(See assessment tabulations for interior finish conditions).

Vinyl Composition Tile, Quarry Tile (Reading Room and Toilet Rooms) and Terrazzo are the predominant floor finishes at OGES. Other floor finishes include carpet, painted and unpainted concrete, and wood flooring. Carpet is present in the Administration and Media/Library areas.

Interior wall finishes are generally painted concrete block, brick veneer and painted. Walls would be patched and painted during renovations.

Window treatments are typically vinyl roller shades. Most are in poor condition and should be replaced during renovations.

Ceilings are generally 2'x4' suspended acoustical tile (lay-in) with some gypsum wall board ceilings. Exposed painted perforated roof decking is present in the Administrations and Media Center areas. The gymnasium has exposed painted tectum roof deck w/burn damage from roof top unit framing welds. There has been some water damage as well from the roof deck or roof top unit causing wood flooring damage. Water damage is present in some of the suspended acoustic tile ceilings. 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. All existing wire glass would be replaced with safety glazing during substantial renovation.

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 21st 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. Most restrooms are not handicap accessible to the latest ADA standards, and will require substantial renovations to achieve full handicap accessibility. The one Handicap Toilet Room 125 is close to meeting ADA standards; however, the room has items stored in it and this room must remain accessible at all times. The stage is currently not handicap accessible without special accommodation. Some doors lack clearances required to be handicap accessible. Room signage would need to be upgraded to meet the latest handicap accessible code requirements. 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 vestibule at all schools. The vestibule at Oak Grove Elementary School provides visibility from the office and control over the 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. Due to the nature of the school, the building is reasonably compartmentalized. Sight lines and distance are reasonably long in most areas of the building.

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 Oak Grove Elementary School has almost no visibility to the interior and exterior of the building. A more transparent administration area should be considered as part of renovations and additions.

End of Oak Grove Elementary School Architectural Narrative

PLUMBING/FIRE PROTECTION

Plumbing Fixtures:

Water Closets: Water closets observed were floor mounted vitreous china with manual type flush valves. The age of these water closets is unknown and varied; however, they seemed to be in good working condition.

Urinals: Urinals observed were wall mounted vitreous china with manual type flush valves. The age of these urinals is unknown and varied; however, they seemed to be in good working condition.

Lavatories: Lavatories observed were wall mounted vitreous china with manual type faucets. The age of these lavatories is unknown and varied; however, they seemed to be in good working condition.

Sinks: Classroom sinks observed were stainless steel with polished chrome gooseneck faucets and bubblers. The age of these sinks is unknown and varied; however, they seemed to be in good working condition.

Electric Water Coolers: The water coolers are wall mounted, ADA compliant high/low models. The water coolers are from 2009 and seemed to be in good working condition. The water coolers are expected to have a useful life of 15 years.

Water Heaters:

Domestic water heating is done partially by two localized electric tank type water heaters whose ages are unknown and partially by a heat exchanger. The heat exchanger system provides domestic hot water from the buildings mechanical heat system.

Piping:

Water: Copper with fiberglass insulation
Sanitary Piping: Cast iron and PVC
Storm Piping: Cast iron
Gas Piping: Black steel

Domestic Water Entrance:

The building is primarily served by a 4" cold water line that is assumed to be from a municipal system. There is a RPZ backflow preventer and pressure reducing valve.

Fire Protection:

The building is not sprinkled.

Recommendations:

Add a sprinkler system to the entire building.

End of Oak Grove Elementary School Plumbing/Fire Protection Narrative

MECHANICAL (HVAC)

Heating:

There are three gas-fired water-tube boilers that provide heat to the building through a hot water circulation system. Hot water is circulated to the buildings heating coils with two base mounted pumps. The boilers and pumps were installed in 2004. The boilers have a useful life expectancy of 30 years. The pumps have a useful life expectancy of 25 years. Coils are located in rooftop air handler units, in terminal units, and in unit heaters. Most of the mechanical equipment was installed in 2004-2005. The rooftop units have a useful life expectancy of 18 years.

Ventilation:

Ventilation is provided to the building by rooftop air handling units. There are also louvered penthouse ventilators that provide fresh air into the building. The kitchen 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 was installed in 2015 and is expected to have a useful life expectancy of 20 years. The pumps are only 1-year-old and are expected to have a useful life expectancy of 25 years. 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:

The ductwork insulation in the gym needs some attention. Looks like some sort of water damage. The mechanical equipment is in good, working condition.

End of Oak Grove Elementary School Mechanical Narrative

ELECTRICAL

Main Switch Gear:

Main Switchboard: The main switchboard is a 2000 Amp, 3 phase, 4 wire, 480Y/277 volt Square D, service entrance rated switchboard. This then feeds down through a transformer to the main 1200 Amp, 208/120 volt Square D switchboard. The existing switchboards are new to the building with the 2005 renovation/addition and have 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: All of the building transformers were added/replaced during the 2005 renovation/addition and convert from 480/277V to 208/120V. All of the transformers are currently in good working condition; however, over time transformers become less energy efficient.

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

Panelboards:

Distribution and Branch Circuit Panelboards: All of the panels are newer Square D panels that were added with the 2005 renovation/addition. The panels have space and spares available.

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: All of the building wiring is new to the 2005 renovation/addition. All visible wiring appears to be in conduit. Classrooms in older sections of the building have had original outlets capped off and are now provided power and data through surface raceway.

Recommendation: If renovations and additions occur, inspect and reuse existing wiring as appropriate.

Conduit/Raceway:

Conduit/Raceway: All new conduit and raceway was used for the 2005 renovation/addition. 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 2005 renovation/addition. Staff mentioned that the gym 8' T8 fixtures have exceeded their serviceable life. Some of the fixtures cannot light a bulb and most others will blow their bulbs after less than a few months of service.

Recommendation: Gym lighting fixtures have exceeded their useful life and should be replaced. To accommodate a new addition or renovation for the rest of the school building, 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 a switchbank in the front office. Cafeteria is provided with motion controlled switching.

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 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. The PA system was updated with the 2005 renovation/addition.

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. The main data server room has poor ventilation and remains warm or hot at times.

Recommendation: The current system meets the needs of the building and switches and patch panels could be reused in any renovation or new construction. The main data server room should be air conditioned to maintain a constant temperature and prevent overheating.

Fire Alarm System:

Fire Alarm System: The fire alarm control panel is a Simplex 4100U system that was added during the 2005 renovation/addition. The current system consists of limited area manual pull stations, smoke detectors, and horn/strobe alarms throughout. However, there are no alarm strobe devices located in classrooms.

Recommendation: If renovations and additions are pursued, retain, expand and reconfigure the existing system as necessary for renovations. Expand existing fire alarm system with visual notification devices throughout the classrooms.

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 some exterior doors. The fixtures appear to be new to the 2005 renovation/addition and the site is well covered.

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

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. MakerSpace classroom provides access to electronic building components, 3D printers, and other modern learning activities.

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 Oak Grove Elementary School Electrical Narrative

CIVIL

Traffic Circulation

Buses: School is served by 7 regular buses, 2 special needs buses, and 3 daycare vans. There is a dedicated bus loop on the south side of the school.

Morning: Buses enter the bus loop and drop off students at the sidewalk on the south side of the school. Occasionally buses will need to wait in the adjacent road to pull into the bus loop for drop off.

Afternoon: Buses enter the bus loop and park in the lot to pick up students.

Cars: Cars utilize the main parking area at the north side of the school for a drop off / pick up loop.

Morning: Cars enter the parking lot, loop all the way through the back, and drop students off near the main entrance. Cars exiting the site are not allowed to turn left back out to Route 419 for safety reasons. They are directed to turn right and then left down a road which takes them behind the shopping center to a traffic light. Drop off works with little to no backup.

Afternoon: Same scenario as the morning drop off, however pick up traffic can back up out to the adjacent roadway.

Parking: 91 striped parking spaces are provided with 4 designated ADA spaces. Day to day parking is adequate 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 is shared with the main parking / drop off / pick up loop. Service or delivery vehicles will block the driveway while unloading due to the lack of maneuvering room.

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

Separation: There is some faculty parking in the bus loop, but that is not an issue. The service area shared with the main parking / drop off / pick up area can be an issue due to the small maneuvering area.

Adjacent Roadways: The entrances to the school are very close to the intersection of the adjacent roadway and Route 419. Due to this, traffic is not allowed to turn left back out to 419 as they exit the site. Traffic is directed use the access road behind the shopping center and utilize the traffic light to access Route 419.

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 near the main entrance. None are designated as van accessible.

Signage: Signage is leaning, does not have a penalty sign, and no van accessible designation.

Recommendation: Replace existing sign posts and replace signage with ADA compliant signs with van accessible designation and fine listed.

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 except for the baseball / softball field.

Recommendation: Provide a paved walking path to the baseball / softball press box / dugout area.

Parking Areas, Driveways, and Sidewalks

Asphalt Pavement: Fair condition, some bad sections at main entrance and throughout parking lot.

Recommendation: Repair areas with alligator cracking (subgrade deficiencies) mill and overlay the parking lot area.

Asphalt Walks: Good condition.

Concrete Pavement: Loading area severely cracked and spalling. Dumpster area good.

Recommendation: Remove and replace concrete pavement at loading area.

Concrete Walks: Fair / good condition, some cracking. Some undermining at playground area could cause major damage.

Recommendation: Remove and replace sections of settled concrete that are tripping hazards. Backfill walk to playground area.

Stairs, Ramps, and Railings: Stairs to adjacent park are wooden and unstable. Concrete stairs to loading dock are old and deteriorated. Concrete stairs into building

are ok. There are no railings on the stairs to the loading dock. Railings on other stairs do not meet current code.

Recommendation: Provide new railings on all stairs to meet current code. Replace stairs to loading dock. Repair or replace the wooden stairs to the adjacent park in conjunction with the Parks and Recreation Department.

Concrete Curb and Gutter: Old but still in fair condition, some cracking.

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

Concrete / Brick Pavers: Commemorative paver walkway is in good condition.

Guardrail, Parking Bumpers, and Miscellaneous: Good condition.

Fire Lane: Paint on curbs and asphalt is faded. Some fire lane signs are faded and illegible. There is an insufficient quantity of fire lane signs. 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. There are no fire hydrants on site, but there are two across the street. No paved fire lane around building, but fire truck access is present.

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

Domestic Water System: The water system is in fair condition. Staff indicated no pressure or water discoloration issues. Water is provided to school via tap into public water main. The water meter is located in a vault next to Route 419.

Sewer System: The sanitary sewer system consists of concrete manholes and pipes in fair condition. System is half functional with proper invert shaping, but staff indicated issues with strong sewage odors in Kindergarten wing. Observations show significant stagnant waste not draining correctly.

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

Natural Gas System: Gas meter is located at the service area of the school and not located in a vehicular traffic area. The meter is in fair condition and functional, but shows signs of rust and deterioration.

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 at the service area of the school and then into the building. The meter is mounted on the building and the transformer is safe from vehicular traffic.

Site Lighting: Large lights illuminate the parking lots and building mounted lights illuminate sidewalks and entrances. Lighting is sufficient for safety and security.

Grading and Drainage

Storm Water System: Majority of runoff outlets to detention pond and then to roadside swale along Route 419. Majority of runoff is sheet flow to pond or swales. Swales in good condition, but grates along road are clogged.

Recommendation: Provide general maintenance by clearing off grates.

Stormwater Management BMPs: Major accumulation of sediment and vegetative obstructions at inlet into detention pond.

Slopes, Ponding, and other Drainage Issues: Grates along swale at street are clogged and minor erosion at drop inlet at rear of school and sediment accumulation in faculty parking lot.

Site Features

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

Recommendation: Trees on southeast side the building require more significant pruning keep limbs of building and buildup of leaf debris on roof. Continue general maintenance of pruning and mulching.

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

Recommendation: Repair and reseed bare areas. Provide fencing and erosion control mat to protect seed in high traffic areas.

Fencing and Gates: Limited site fencing. Split rail wood fence along road frontage in good condition but will age quickly. White vinyl fence along parent dropoff in good condition.

Signage: Overall site signage is in poor condition. ADA signage is not to code. No directional signage provided. Sign legibility is generally faded. Many poles are rusting, leaning, and lack foundations.

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

Flagpoles: Good condition.

Site Furnishings: Site furnishings limited to wooden benches and picnic tables.

Accessory Structures: Wood dumpster enclosure is in poor condition. Two storage structures with wood framing and vinyl coating in good condition. One storage building of CMU construction in good condition.

Recommendation: Replace wooden dumpster enclosure with composite PVC boards.

Play Areas and Physical Education

Play / PE Areas (General):

Playgrounds / Stationary Play Equipment: Grade PreK-1 equipment in good condition. Play area requires fresh mulch. Grade 2-5 equipment is in fair condition with signs of vinyl coating wearing down.

Recommendation: Monitor grade 2-5 equipment and plan for replacement.

Paved Play Areas: Asphalt paving in good condition.

Play / PE Fields: Multipurpose games field provided on campus. Turf condition is fair. Infield condition is good. Fencing in good condition. Accessory structures including dugouts, press box, and bleachers in fair condition. Large PE field provided with fair turf condition due to some bare spots and lumpy material.

Recommendation: Paint dugouts to increase life span. Monitor bleachers for future replacement.

End of Oak Grove Elementary School Civil Narrative

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Notes

Project Name: RCPS Facilities Assessment	**Comm. #: 1637**

Subject: Oak Grove Elementary School	**Total Pages:**
Date: 10/05/2016	**Location: Roanoke, Virginia**
Copies To:	**Report Prepared By: JFH**

General:

The Facility was constructed in 1954 and renovated in 2005. The building is a single Level Brick structure with a flat EPDM membrane roof and sloping standing seam metal roof that slope back and down toward the membrane roof. The standing seam metal roof has snow guards attached to the ribbing of the standing seam. The roof appears to be in pretty good shape overall. The building is partially sprinkled and is fully air conditioned. The building has aluminum energy efficient windows and Power Assist Aluminum Entrance Doors that provides adequate security and accessibility.

Entry Vestibule:

VCT flooring
Painted CMU Walls
Suspended Acoustic Tile Ceiling (SATC)
Aluminum Storefront (Power Assist)

Administration:

VCT Flooring and Carpeting Flooring
Brick Veneer, Painted CMU and Painted GWB Walls
Perforated Metal Deck (Exposed Vaulted Structure)
GWB Bulkhead and SATC Ceiling
Aluminum Door and Frame (Exterior)
Aluminum Windows (Exterior)
HM Frame and Wood Door (Interior)

Administration Toilet:

ADA Accessible (Remove Casework under the sink)
Remove the Casework along the wall out completely

Corridor:

Terrazzo Floor with Vinyl Base
Glazed Tile and Painted CMU Walls
Suspended Acoustic Tile Ceiling (SATC)

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Notes

Mechanical Room:
- CMU Walls
- Concrete floors
- Exposed Ceiling Structure
- HM Frame and door (wire glass)

Roof:
- EPDM (60 mil) Membrane (Roof looks good)
- Mechanical Room Access
- Maintenance is required at all roof drains

Kitchen:
- Poured flooring
- Glazed Tile Wainscot and Painted CMU Walls
- Moisture Resistant SATC
- HM Frames and Wood Doors

Cafeteria:
- VCT flooring
- SATC Ceiling
- Glazed Block Wainscot with Painted CMU Walls
- (Recessed HM Frame Openings at side walls – 7 each, 14 total)

Media Center (New Addition)
- Perforated Ceiling Deck (Exposed Vaulted Space)
- GWB bulkhead and SATC Ceiling
- Aluminum Clearstory Windows leading to the courtyard
- Painted CMU Walls
- HM Frames and Wood doors leading to corridor
- Aluminum Doors and Frame leading to courtyard
- Carpeted Flooring
- Wood Furniture
- HM Frame

Reading Office:
- Wood Casework with Formica Top
- Quarry Tile Flooring
- Glazed Tile Wainscot and Painted CMU Walls

Boys Toilet Room Outside of Gymnasium:
- 1 water closet, 4 urinals, 3 lavatories
- Terrazzo Flooring
- Glazed Tile (Floor to Ceiling)
- SATC Ceiling

Corridor (Old)
- Terrazzo Flooring
- Painted CMU
- SATC Ceiling
- Old push/pull hardware doors

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Notes

Boys Toilet Room:
- Quarry Tile
- Glazed Block Wainscot and Painted CMU Walls
- SATC Ceiling
- Plastic Laminate Toilet Partitions
- 3 Water Closets (Floor MTD, Flush Valve)
- 5 Urinals
- 4 Wall Mounted Lavatories

Teacher Work Room/Mail Room:
- VCT Flooring
- CMU Walls and GWB Walls
- SATC Ceiling

Classroom:
- VCT Flooring and Vinyl Base
- Painted CMU Walls
- Aluminum windows
- SATC Ceiling
- HM Frames with Wood Doors
- Plastic Laminate Casework with Stainless Steel Sink

Classroom Toilet:
- Quarry Tile Floor
- Painted CMU Walls
- Painted GWB Ceiling
- HM Frame and Wood Door

Corridor Ramp:
- Slip Resist Rubber floor covering (need to be replaced)
- Steel Pipe Railing

Room 125 W/HC Accessible Toilet:
- VCT Flooring
- Painted CMU Walls
- SATC Ceiling
- HM Frame with Wood Doors
- Aluminum Windows
- HC Toilet w/Ceramic Tile Flooring, Painted GWB Ceiling, Painted CMU Walls
- (Storage Carts must be removed from HC Toilet Room)

Computer Lab:
- VCT Flooring and Vinyl Base
- Painted CMU Walls
- Aluminum windows
- SATC Ceiling
- HM Frames with Wood Doors

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Notes

Courtyard:

Well Maintain
Bricked over old mechanical thru wall equipment
Concrete pad and grass area
Media Center empty out into courtyard

Gymnasium:

Parquet Wood Flooring (Damaged Area due to Roof/Equipment Leaks)
Painted CMU walls
Exposed Tectum Ceiling Structure
Wood Doors and HM Frames
Aluminum Gym Windows
(Roof top AC Unit Framing was added to Gym Structure and not painted. The tectum deck shows signs of weld burns)
Stage has wood flooring (need refinishing) Stage is used as storage

Lobby outside of Gymnasium:

Handicap Drinking Fountain
Brick veneer and CMU walls

Physical Education Office:

VCT Flooring
Painted CMU Walls
SATC Ceiling

Conclusion:

The building is in very good shape and the finishes appear to be in good shape as well. Several Leaks have been commented on from the staff. Leaks have occurred over the gymnasium floor which has caused damaged to the wood flooring. The leaks may have come from the Roof Unit. The existing exterior Concrete pads slope back toward building and not away from building causing water intrusion under the doors. The existing Hollow Metal Doors and Door frames need fresh paint throughout. All wood doors need to be refinished and new hardware upgraded to Handicap Accessibility standards. All spaces need new signage throughout the existing building. The new signage must meet today's handicap accessibility requirements. The building maintenance is needed and required throughout.

Oak Grove 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
Architectural					
Brick	5	Life	11 years	Life	
Metal Panels	4	30 years	11 years	19 years	
Pre-cast Concrete	4	35 years	11 years	24 years	
CMU walls	5	Life	11 years	Life	
Wood trim	3	15 years	11 years	4 years	
Interior doors	4	20 years	11 years	9 years	
Exterior doors	4	50 years	11 years	39 years	
Door hardware	2	7 years	11 years	0 years	
Electronic door hardware, Security Entrance	5	5 years	2 years	3 years	Security entrance completed 2014
Terrazzo	4	50 years	11 years	39 years	
Vinyl floor tile	2	12 years	11 years	1 year	
Quarry floor tile	4	50 years	11 years	39 years	
Wood gym floor	2	10 years	11 years	1 year	
Other wood floors	2	10 years	11 years	1 year	
Exposed concrete floors	5	50 years	11 years	39 years	
Curtain wall, Storefront	4	50 years	11 years	39 years	
Exterior windows	4	30 years	11 years	19 years	
Interior windows	4	30 years	11 years	19 years	
Roof (Including flashings, coping, etc.)	5	20 years	11 years	9 years	
Standing Seam Metal Roof	5	25 years	11 years	14 years	
Suspended acoustical tile ceilings (lay-in)	5	25 years	11 years	14 years	
Plaster/GWB ceilings	5	30 years	11 years	19 years	
Sound control panels (wall and ceiling)	4	N/A	N/A	N/A	
Ceiling/exposed structure finish (paint)	2	5 years	11 years	0 years	Painting is required
Interior wall finishes (paint)	2	5 years	11 years	0 years	Painting is required
Marker boards, chalk boards, tack board, projection screens	4	N/A	N/A	N/A	
Casework	4	N/A	N/A	N/A	
Window treatments	4	N/A	N/A	N/A	
Toilet partitions	5	20 years	11 years	9 years	
Toilet accessories	3	N/A	N/A	N/a	
Exterior Railing, Interior railings	3	30 years	11 years	19 years	
Sprinkler/No Sprinkler	4	25 years	11 years	14 years	Partial Sprinkle (Sprinkler Heads)
School sign	3	25 years	11 years	14 years	Signage do not meet Code ICC A117.1-2009
ADA Code Compliant	2	N/A	11 years	N/A	ADA accessiblity do not meet ICC A117.1-2009
Condition Categories					
1 Immediate replacement required, life saftey concern					
2 System has reached it's useful life					
3 Major repair or modifications required, useful life remaining					
4 Minor repair required					
5 General maintenance required					

Oak Grove 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
Mechanical					
Boiler	5	30 years	12 years	18 years	
Chiller	5	20 years	1 year	19 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	
Outdoor air units	N/A				
Terminal units	4	30 years	12 years	18 years	
Package units	4	18 years	12 years	6 years	Unit serving the Gym is only 1 year old
Controls	5	20 years	12 years	8 years	
Exhaust fans	5	25 years	12 years	13 years	
Kitchen hood	4	30 years	12 years	18 years	
Plumbing					
Plumbing fixtures and controls	5	30 years	12 years	18 years	
Floor drains	5	30 years	12 years	18 years	
Water heaters	5	15 years	12 years	18 years	
Pumps	5	15 years	12 years	18 years	
Potable water piping & valves	5	30 years	12 years	18 years	
Sprinkler system					
Back-flow preventer	5	30 years	12 years	18 years	
Service line & meter (size appropriate)	5	30 years	12 years	18 years	
Wall and yard hydrants					
Eye wash stations					
Emergency showers					
Condition Categories					
1 Immediate replacement required, life saftey concern					
2 System has reached it's useful life					
3 Major repair or modifications required, useful life remaining					
4 Minor repair required					
5 General maintenance required					

Oak Grove Elementary School Electrical Condition Assessment

Reference Building Owners and Managers Association International (BOMA)
Preventative Maintenance Guidebook

System/Components	Average Useful Life	Current Age	Expected Life Remaining	Condition Category	Notes
Electrical					
Main switch gear	40	11	29	5	
Transformers	30	11	19	5	
Panelboards	30	11	19	5	
Cabling	40	11	29	5	
Conduit/raceway	40	11	29	5	
Light fixtures	20	11	9	5	
Light fixtures - Gym lighting	20	30	-10	1	
Lighting controls	30	11	19	5	
Public address system	30	11	19	5	
Security system	10	2	8	5	
Camera system	10	5	5	5	
Data system	15	5	10	5	
Fire alarm system	30	11	19	5	
Site lighting	20	11	9	5	
Classroom media systems (TV, projector, etc.)	10	5	5	5	
Phone system	10	5	5	5	

Condition Categories

1 Immediate replacement required, life safety concern
2 System has reached it's useful life
3 Major repair or modifications required, useful life remaining
4 Minor repair required
5 General maintenance required

Oak Grove 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
Civil					
Asphalt pavement	4	15 years	11 years	4 years	
Asphalt walks	5	20 years	11 years	9 years	
Concrete pavement	2/5	30 years	11-62 years	0-19 years	
Concrete walks	4	30 years	11-62 years	0-19 years	
Stairs	1	30 years	11-62 years	0-19 years	
Ramps	5	30 years	11-62 years	0-19 years	
Railings	1	15 years	11-62 years	0-4 years	
Concrete curb and gutter	4	30 years	11-62 years	0-19 years	
Concrete / Brick Pavers	5	30 years	Unknown	Unknown	
Guardrail, Parking Bumpers, Misc.	5	Varies	Unknown	Unknown	
Fire lane	4	Varies by Material	11 years	0 years	
Fire lines and hydrants	4	40 years	Unknown	10-15 years	
Domestic Water system	5	40 years	11 years	29 years	
Sewer system	2	40 years	62 years	0 years	
Natural Gas system	4	40 years	62 years	0 years	
Electrical System	5	25 years	Unknown	10-15 years	
Exterior Lighting	5	25 years	11 years	29 years	
Storm water system	4	40 years	11 years	29 years	
Detention / Retention ponds	4	Life	11 years	Life	
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	11-62 years	Varies	
Lawns	5	Life	11-62 years	Life	
Fencing and gates	5	20 years	Unknown	15+ years	
Signage	3	10 years	Unknown	2 years	
Flagpoles	5	50 years	11 years	39 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	3/5	50 years	11+ years	3-25+ years	
Playgrounds	5	10 years	Unknown	5+ years	
Paved play areas	5	20 years	11 years	9 years	
Play / PE fields	4	Life	11+ years	Life	
Condition Categories					
1 Immediate replacement required, life saftey concern					
2 System has reached it's useful life					
3 Major repair or modifications required, useful life remaining					
4 Minor repair required					
5 General maintenance required					

Budgetary Cost Estimate

Estimate Date 12/7/2016
Facility Name **Oak Grove Elementary School**
Client Name Roanoke County Schools

OWPR ARCHITECTS AND ENGINEERS

Quantity	Description	Unit	Cost / unit	Total w/ OH&P
	ARCHITECTURAL			
75	New interior signage-adhesive back /braille	Ea	$42.00	$3,780.00
	ADA compliant			
12	New interior door hardware	Ea	$800.00	$11,520.00
4	Upgrade existing common area restrooms	Ea	$35,000.00	$168,000.00
	to comply with ADA			
15,000	Replace Vinyl Flooring	SF	$2.50	$45,000.00
4,000	Replace Wood Flooring	SF	$11.00	$52,800.00
4,000	Paint Ceiling Structure	SF	$1.15	$5,520.00
55	Repaint interior walls	EA	$650.00	$42,900.00
	CIVIL			
4	ADA signage	EA	$500.00	$2,400.00
5	Fire lane signage	EA	$500.00	$3,000.00
4	Directional signage	EA	$1,500.00	$7,200.00
2,000	Asphalt pavement	SF	$3.00	$7,200.00
3,000	Remove and repair asphalt pavement	SF	$3.00	$10,800.00
54,000	Mill and overlay asphalt pavement	SF	$1.00	$64,800.00
100	Replace concrete pavement	SF	$7.00	$840.00
300	Replace concrete sidewalk	SF	$5.00	$1,800.00
1	Concrete stairs	LS	$2,500.00	$3,000.00
500	Repaint curbs and fire lanes	LF	$0.10	$60.00
1	Demo/Replace dumpster enclosure	LS	$10,000.00	$12,000.00
1	6" Sprinkler System	LS	$20,000.00	$24,000.00
	MECHANICAL / PLUMBING			
46,444	Add Sprinkler System - includes ceiling modifications	SF	$6.00	$278,664.00
	ELECTRICAL			
46,444	Ceiling Modifications	SF	$1.00	$46,444.00
4	Upgrade existing common area restrooms	Ea	$2,000.00	$9,600.00
30	Gym Light Fixtures	EA	$1,000.00	$30,000.00
	TOTAL Budgetary Cost			**$831,328**