



Facility Condition Assessment and Feasibility Study for the Historic Bennett School

January 2, 2019

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OVERVIEW

The County of Prince William, Virginia engaged Moseley Architects to conduct a Facility Condition Assessment and Feasibility Study for the Historic Bennett School located at 9300 Lee Ave, Manassas, Virginia 20110. Moseley Architects is a full service architectural firm with headquarters in Richmond, Virginia. Moseley Architects has specialized in facility condition assessments, space needs analyses, master planning, and facility designs for local governments since its inception in 1969.

PROJECT BACKGROUND & SCOPE

The purpose of this study is to evaluate the feasibility of changing the use of the Historic Bennett School Building to house the Prince William County Sheriff's Office and to determine the approximate construction cost thereof. The building measures approximately 12,000 SF in area and currently is uninhabited. The building is on the list of Prince William County Historic Properties. This study also includes a report by a historic preservation consultant to identify possible regulatory requirements and areas of sensitivity related to the proposed re-use of the building. A copy of their report is included as Appendix A.

The facility condition assessment consists of a walk-through survey of the existing building where the design team makes non-intrusive visual observations and assessments of readily accessible and easily visible, components and systems of the subject property to assist the County in determining the condition of the facility. In addition, the County has engaged Moseley Architects to make conceptual recommendations and associated opinions of probable cost in a written report of both required and recommended improvements to the facility to facilitate using the building for its proposed use as the Sheriff's Office.

Required improvements are those items that must be completed prior to changing the building's use to offices. Recommended improvements are those that are encouraged, however not required by Code, or statute. Required and recommended improvements outlined in this report are not technically exhaustive; they are based on preliminary information and are conceptual in nature. Detailed analysis, calculations, and designs must be completed to verify the suitability and detail the specific scope of the conceptual recommendations before implementing any of the items suggested in this report.

The findings of the Architect's walk-through survey, and conceptual recommendations are documented in the following report.

SPACE NEEDS ASSESSMENT

A space needs assessment was prepared as a part of the Scope of this study. The Final Space Needs Analysis is included in Appendix D. The 20 year space needs for the Sheriff's Office total approximately 16,000 net square feet which equates to about 25,000 gross square feet when utilizing the existing Bennett Building existing building efficiency of roughly 65%.

ENVIRONMENTAL ISSUES

Apex Companies, LLC conducted a survey of the existing conditions on July 18, 19, and 25, 2018. A copy of their report is included as Appendix B.

APPLICABLE BUILDING CODES AND STANDARDS

Renovations are required to comply with the 2015 Virginia Rehabilitation Code (USBC, Part II) which adopts and amends the International Rehabilitation Code (IRC). The currently adopted IRC is the 2012 edition. The project must also comply with the ADA Accessibility Guidelines (ADAAG) and ADA Standards for Accessible Design (ASAD). The ADA requires that those facilities that are altered for the use of a public entity shall be designed, constructed, or altered to be readily accessible to and usable by individuals with disabilities.

The Code requires buildings or portions of buildings to be classified as a specific occupancy type based on its intended use listed in the Code, or the classification that the use most closely resembles if the use is not specifically identified in the Code.

The original building was built in 1908 and predates modern building codes. Based on its previous use as offices for the Prince William County Police Department, the building would be classified as a Group “Business, B” occupancy classification under the current Uniform Statewide Building Code (USBC).

The Gross Building Area (inside face of exterior walls) for this building appears to be slightly more than 11,550 SF. For a B use at 1 occupant per 100 gross square feet results in an occupant load of 115.

FACILITY CONDITION ASSESSMENT AND IMPROVEMENTS

Members of the Architect’s staff and Historic Preservation Consultant visited the building on Wednesday, July 18th and Thursday, July 19th, 2018 to conduct the walk-through survey. The following observations and recommendations are based on the information that was observed during that site visit.

SITE

EXISTING CONDITIONS

The existing Bennett School Building is located at 9300 Lee Avenue, Manassas, VA at the Prince William County Courthouse complex on GPIN #7795-48-1570 properties owned by Prince William County within the City of Manassas. The existing building is about 12,000 square feet.

GRADING AND TOPOGRAPHY

The existing building sits up on a slight rise with the adjacent land falling away from the building at slopes ranging from 3-10%. A parking lot is adjacent to the building on the northern and eastern sides so that constrains any grading that will need to be done. The building entrance elevation will not be able to match either the basement floor or the first-floor elevation because of site drainage and overland relief. The building entrance is recommended to be on an intermediate elevation. Depending on where the doors are located, the elevation at the entrance should be 6” higher than the existing grade for grass areas and 2-3” higher for impervious areas to prevent flooding and allow water to drain away from the building.

PAVEMENT

Currently there are 78 parking spots and 5 handicap parking spots located in close proximity to the building. An analysis of the overall parking for the courthouse complex will need to be conducted and coordinated with Prince William County to determine if the number of spaces for the complex is adequate with the removal of spaces required to accommodate this building addition. Currently Option 1 appears to disturb the least number of parking spaces only requiring the removal of approximately 6 parking spaces. Option 4 disturbs the most parking spaces requiring the loss of at least 20 parking spaces. Fifteen parking spaces are removed due to the building addition and an additional 5 will be lost because the spaces are located on a one-way travel lane which will be impacted by the building addition.

WATERLINE/SANITARY

There is a 4” sanitary sewer lateral on the north side of the building that may be impacted by the building addition. This lateral appears to serve the main courthouse building. There is also a waterline that appears to serve the existing building that may need to be relocated because it currently runs underneath all the layout options except for Option 1. There is another unknown utility line that runs underneath most of the conceptual design options that will need to be removed or relocated. Based off the previous building addition plans it is believed it is a sanitary lateral however, test holes will be required to confirm the size and use of the line. Additional subsurface utility location may be required to determine the exact location and size of all utility lines found around the building.

STORM DRAINAGE/STORMWATER MANAGEMENT/BMP

Any roof drains associated with the building or building addition must be able to drain to the storm sewer system located on the west side of the building. The site currently drains to a pond that is located behind the Manassas Senior Center located at 9320 Mosby Street. According to the approved Prince William County Judicial Center Addition plan (SP#02-00179), the SWM pond appears to already account for a building expansion to the existing Bennett School. Additional calculations will be required to confirm the addition conforms with this existing plan and coordinates with Watershed Management to determine if additional SWM or BMP measures will be required.

ELECTRICAL/COMMUNICATION

There are existing underground electric and communications lines underneath or close to where the building addition is proposed to be located. This will require the relocation of underground utilities. Additional communication, electric, and phone lines may need to be installed to the expanded building.

ARCHITECTURAL

EXTERIOR CONSTRUCTION

Overall the building’s exterior construction generally appears to be in fair condition. Exterior walls consist of load bearing stone and load bearing brick. The north elevation has damaged brick and existing openings that are infilled with CMU. Much of the north elevation is in need of patching and repair. The majority of the roof has asphalt shingles, the center portion includes a low slope membrane roof. Access to the roof was not available at the time of the Architect’s visit and therefore the precise condition could not be verified. The existing windows appear to be original to the

building and show signs of deterioration and cracks. The exterior doors are in poor condition and show signs of deterioration. The existing columns at the entrance show signs of deterioration. One of the six columns is no longer in place.

REQUIRED IMPROVEMENTS

The majority of the brick and stone on the exterior should be cleaned and the brick should be repointed in locations where the mortar has been damaged. The north elevation should have any exterior CMU infill removed and replaced with stone and brick to match the existing stone and brick. The entrance columns should be repaired or replaced.

RECOMMENDED IMPROVEMENTS

Existing windows should be preserved and repaired if possible. Windows unable to be preserved shall be replaced with windows that match the appearance and configuration of existing windows. These shall be approved by the architectural review board.

The existing exterior wood trim should be repainted and limited areas that are rotten or deteriorated should be replaced.

The existing low sloped roof at the center of the building should be replaced with a new membrane roof system.

There are existing wood louvers that are showing signs of rot and should be replaced.

The existing exterior doors should be replaced with plastic or composite trim.

The ASHRAE standard for model energy-efficiency for buildings, Standard 90, was not published until 1975. Prior to that time it was not uncommon for buildings to be constructed without insulation. Based on the age of this building, it is likely that there is no insulation within the perimeter walls. To improve thermal comfort and decrease operational costs it is recommended that the perimeter walls be insulated if detailed investigations confirm there is no insulation in the exterior walls.

INTERIOR CONSTRUCTION

The exterior walls consist of plaster and/or gypsum on wood furring over load bearing masonry walls. The majority of the interior walls consist of gypsum on wood studs. The gypsum and plaster are in poor condition.

Interior floor finishes consist of wood flooring and concrete slab at the basement level. The wood floor varies from poor to fair condition throughout the building. Ceilings are ceiling tile on wood furring. The ceiling tiles are in poor condition and falling in most locations.

Interior wall finishes consist of painted gypsum and plaster. Painted wood trim exists throughout much of the interior. The finishes are in poor condition throughout.

REQUIRED IMPROVEMENTS

1. Provide elevator to all floors to provide ADA accessibility.
2. Provide ADA accessible toilet facilities.

3. Restore existing stair configuration and historic railings. Install modified handrails where required to meet code requirements.
4. Repair wood floor to maintain historic nature.
5. Repair or replace all plaster walls.
6. Replace all existing ceiling tile.

RECOMMENDED IMPROVEMENTS

1. Maintain existing room layouts to maintain historic nature.

STRUCTURAL REVIEW

EXISTING CONDITIONS

A visual inspection was performed by Moseley Architects for the County of Prince William, with the intent to assess the structural condition of the Historic Bennett School building. As part of the general evaluation, the inspection was to focus on the structural condition and components of existing floor and roof construction, for purposes of future use and renovations by the County of Prince William. The inspection was visual and non-invasive in nature, with no demolition or testing of any kind being performed, and therefore limited to areas of exposed construction. Construction drawings of the original building constructed in 1908, and a rear addition constructed in 1937 (which has since been demolished in 2006), do not appear to exist. The 2006 construction drawings for a proposed renovation and addition to the Bennett School Building, which were not implemented, were provided to Moseley Architects by the County of Prince William for assistance.

The construction of the building consists of exterior brick bearing walls. The brick bearing walls are supported on solid, cut stone foundation walls. The exterior bearing walls appear to be in fair to good condition. However, the rear of the building, where the 1937 addition was demolished, has been infilled with CMU. This has resulted in damage to existing brick and stone, as well incompatible appearance with original construction. The building contains a basement, two framed levels and a hip roof. Six columns support the entrance portico. One column was previously removed due to damage and has not been replaced.

The first and second floors are constructed with full cut wood floor joists. The wood floor joists at the first floor are supported on a combination of wood girders and masonry bearing walls. The first floor wood girders are supported on timber posts along their spans and cut stone and masonry piers at the exterior walls. The wood floor joists at the second floor are supported on a combination of steel girders and masonry bearing walls. The second floor steel girders are supported on masonry bearing walls and masonry piers at the exterior walls. The roof construction consists of two main wood trusses and two main wood girders, running perpendicular to the trusses. The wood trusses bear on exterior masonry piers at each end. The wood girders are supported by the wood trusses and by wood posts down to interior masonry bearing walls along their spans. Full cut wood rafters supported by the exterior walls and the interior wood trusses and girders, form the hip roof. Wood framing, internal to the attic and extending through the hip roof, is founded by wood posts down to interior masonry bearing walls. This wood framing provided support for a cupola that was removed from the building.

CONCLUSIONS

The exterior building shell components are of high architectural quality but have suffered some deterioration over the years. Masonry repointing shall be required in damaged locations. The missing column at the entry portico shall be replaced. The first and second floor wood floor joists were only visible through several existing holes in the ceilings below. Overall, the wood floor joists visually appear to be in good condition and walking on the floors did not reveal any structural issues. However, there are localized signs of water damage at each level, as noticed in the wooden floor coverings. Removal of the existing wood floor covering from above, or the ceiling system from below, would be required to visually inspect any areas of concern for the wood joists. Similarly, existing floor coverings and ceiling or beam wraps would require removal to visually inspect all wood and steel girders. The existing roof structure, visible via attic access, visually appears to be in good condition. However, the roof sheathing appears to have many areas of deterioration, especially around the area of the cupola removal, and would require replacement.

From the limited visual inspection and site observations, the existing structure would be adequate for future use alternatives, based upon a structural review using final loading conditions. Reinforcement and/or supplemental support may be required for existing joist spans, depending upon final loading and deflection conditions. Also, visual access of existing floor structure from above or below shall be required for future inspection and analysis.

Understanding the building to be an unreinforced masonry bearing wall structure, it is very unlikely the building will comply with lateral load requirements of the current Building Code. Additionally, the retrofit of this type of structure for current code lateral loading could prove to be complex and may require changes to the exterior and interior appearance. Many factors, including the historical building provisions, change of occupancy, extent of repairs and alteration level can affect the structural code requirements. Any of these factors could trigger the requirement to bring the building up to current code requirements with regards to lateral loading. Conversations with the local code official about these factors are recommended for this type of structure. It would be prudent to focus on reasonable upgrades, and pursue certain code exceptions with the local code official, using the most practical means of structural reinforcement while maintaining public safety.

MECHANICAL

EXISTING CONDITIONS

The existing building has a steam boiler in the ground floor/ basement that serves steam radiators and unit heaters throughout the building. This entire system is not operational and well beyond its normal service life and should be replaced.

REQUIRED IMPROVEMENTS

An entirely new HVAC system should be provided to meet current codes and energy standards.

RECOMMENDED IMPROVEMENTS

Provide high efficiency modern HVAC system throughout the existing and addition. The air handling equipment would be located on the ground floor/ basement, with new intake and exhaust louvers provided in the existing building. Three HVAC options will be evaluated as follows:

Option 1: Variable Refrigerant Flow (VRF) system with Dedicated Outside Air Units located in basement. VRF outdoor condensing units would be located on grade in equipment yard.

Option 2: VAV Split DX Cooling Air Handling Units located in basement serving VAV terminal boxes with electric reheat.

Option 3: VAV Split DX Cooling Air Handling Units located in basement serving VAV terminal boxes with hot water reheat. A gas-fired boiler would be located in basement with circulation pumps and piping distribution to VAV box coils.

PLUMBING

EXISTING CONDITIONS

There are no existing plumbing systems currently serving the building.

REQUIRED IMPROVEMENTS

Provide complete plumbing systems throughout to meet current codes and water efficiency standards.

RECOMMENDED IMPROVEMENTS

Provide new domestic water service from the site domestic water main to the building domestic water service entrance room or mechanical room. A building shutoff valve, strainer, and reduced pressure zone principal backflow preventer will be provided on the domestic water service entry to the building.

Domestic hot water will be provided by either condensing, gas-fired or electric domestic water heaters with dedicated controls and thermal expansion tank. Final fuel source will be selected in conjunction with selection of HVAC system. Final domestic hot water storage will be set to maintain a storage temperature of 140°F minimum. Building domestic hot water will be provided by an ASSE 1017 thermostatic master mixing valve, dedicated 110°F loop, and recirculation pump.

Plumbing fixtures will be high efficiency commercial grade units and specified to reduce water consumption. Fixtures accessible to the physically handicapped will be provided where required by the building code. Water closets will be wall-mounted units with hardwired, sensor-operated, 1.28 gpf (gallon per flush) flush valves; toilet room lavatories will be wall-hung and/or counter-mounted, self-rimming units with hardwired, sensor-operated, single-temp, 0.50 gpm (gallon per minute) faucets; shower valves will be wall-mounted, manually-operated, single lever, 1.75 gpm (gallon per minute) heads with integral supply stops and reversible supply inlets; ADA-compliant shower units will be provided with adjustable, hand-held, shower unit in addition to the standard shower valve and head assembly; mop basins shall be floor-mounted, units with manually-operated faucets with integral vacuum breaker, supply check-stops, male thread hose end, pail hook, and adjustable wall anchor; electric water coolers will be bi-level units with integral cane aprons and bottle filling stations where desired; kitchenette and breakroom sinks will be 18-gauge, stainless steel, counter-mounted, self-rimming units with manually-operated, 1.00 gpm faucets.

FIRE PROTECTION

EXISTING CONDITIONS

The existing building is not served by a sprinkler system.

REQUIRED IMPROVEMENTS

Provide sprinkler system throughout to meet current codes and NFPA requirements.

RECOMMENDED IMPROVEMENTS

The fire protection system will be a wet pipe system served by the fire protection service located in the mechanical room. The sprinkler system will provide a separate zone for each floor in the building. Flow test data is required to determine if the local water supply is sufficient to serve the sprinkler system, or if a fire pump will be required. All work will be coordinated with the structural, mechanical, plumbing, electrical and architectural disciplines. The system will be hydraulically calculated and designed by the sprinkler contractor including all required drawings, calculations, etc. consistent with 2010 NFPA 13 requirements.

ELECTRICAL

EXISTING CONDITIONS

The existing building does not have a working electrical service. The service was previously fed from an underground vault on the site into the basement of the building. The service entrance rated conductors are cut at the interior wall of the building where they enter. The service previously originated at a Dominion Energy(DE) underground handhole fed from what appears to be a loop on the campus. The existing distribution panels within the building are beyond their service life.

The interior lighting that is remaining consists of surface mounted incandescent sockets.

General Purpose receptacles are provided throughout the building with a few exterior receptacles.

The main telephone service enters the building along the back and comes into the basement. The service wires have been cut off where they enter the building. The service wires are fed from an existing pedestal on the site.

There is a limited fire alarm system for the building with manual pull stations, and horn/strobes at a few locations.

There is no lightning protection system provided for the building.

There is no emergency generator for the building.

REQUIRED IMPROVEMENTS

A new electrical service will be required for the building. The anticipated service size is approximately 800A at 480Y/277-Volts, 3 Phase.

A service surge protection device (SPD) shall be provided. The service shall be properly grounded to the main cold-water pipe, ground rods and building steel. Distribution circuit breakers shall serve

load critical panelboards in the building. These panelboards shall also be provided with SPD's. All feeders shall be copper inside EMT raceway.

New LED lighting should be provided in the facility. These fixtures shall be dimmable controlled by local switches. Occupancy sensors shall be provided in all occupied spaces to comply with ASHRAE. All lighting and exit signs shall be connected to emergency power via an inverter or localized battery packs. Exterior lighting shall be decorative wall lanterns consistent with the aesthetic of the county complex. These should be LED and controlled by a combination of time clock and photocells.

A data network system shall be provided that shall include data racks, UPS power and grounding. The telephone system shall be a voice over internet protocol system (VoIP). Grounding bus bars shall be provided at the MDF closet and all racks and equipment shall be properly grounded.

A digital, addressable, fire alarm system will be required throughout the facility.

RECOMMENDED IMPROVEMENTS

A lightning protection system is recommended based on the type of facility and geographical location.

FLOOR PLANS OF THE EXISTING BUILDING

Floor plans of the existing Bennett School Building are included as Appendix C.

CONCEPTUAL DESIGN OPTIONS

Seven Options for meeting the Sheriff's Office anticipated twenty-year space needs (2038) and historic reservation are included as Appendix E.

CONCEPTUAL PROJECT BUDGET

The budget estimate will be provided as part of the final report.

The cost estimate and opinions of probable construction cost included in Appendix F are based on similar facility types; however, they have been developed without a detailed design or project specific specifications. The estimates are intended for preliminary budgeting purposes only. Moseley Architects has no control over the cost of labor and materials or other construction market conditions and cannot guarantee the accuracy of this or any other construction cost estimate. Any additional project costs anticipated by Prince William County should be added to the total amount indicated.

**APPENDIX A:
HISTORIC PRESERVATION REPORT**

Sadler & Whitehead

ARCHITECTS PLC

Bennett School, Prince William County, Virginia

HISTORIC PRESERVATION RECOMMENDATIONS



Ca. 1909 postcard of the Bennett Agricultural High School, Manassas, Virginia (from the collections of the Virginia Historical Society as found on cmrobinsonschools.omeka.net, a website cataloging Charles M. Robinson's Schoolhouses in Northern Virginia)

The purpose of this report is to provide an overview of Bennett School's history, an outline of the building's historic features, and recommendations for their preservation. The intent of the treatment recommendations is to comply with the Secretary of the Interior's Standards for Rehabilitation in case the school is rehabilitated using tax credits or using state or federal grants.

The building was designed by renowned architect Charles M. Robinson. Constructed in 1908 as an agricultural high school, the Colonial-Revival-style Bennett School building is an architecturally and historically significant property. The school, whose construction cost \$16,000, was named for Dr. Maitland C. Benentt who donated the land for the school's construction. The school was used as a primary school and for teacher training. It had 9 rooms, an auditorium, a gym, and a principal's office. A rear addition was constructed in 1937. In 1969 the building was renovated for office use by Prince William County. By 1970, the building was occupied by the Prince William County Police Department, which after relocating its offices, used the building for storage.

In 2002 the Virginia Department of Historic Resources determined that Bennett School is an historic building that meets the criteria for listing on the Virginia Landmarks Register and the National Register of Historic Places.

The 1937 rear wing was demolished in 2006. The historic cupola was dismantled by 1978. The exterior of the building has been boarded up and secured, which helps prevent vandalism and pigeon infestation, but does not reduce moisture infiltration at the roof, which has failed.

The biggest threat to the building is ongoing moisture infiltration at the roof and at the foundation. Top priority should be given to addressing this issue.

HISTORIC EXTERIOR FEATURES

Walls: Brownstone foundation and brick walls laid in Flemish bond with glazed headers. The walls appear to be in fair to good condition except at the rear, where removal of the 1937 addition has resulted in damaged to the historic stone and brick and incompatible patching with CMU.

- Recommendation: Preserve the historic brick and stone walls and the historic window and door openings.
- Recommendation: Develop more appropriate treatment of the rear elevation based on whether or not a new addition is necessary for effective reuse.
- Recommendation: repoint masonry only as needed. Repointing should be in accordance with NPS Preservation Brief #2. Joints should match mortar in color, composition, and joint profile.
- Recommendation: Preserve the brownstone corner block which says: "AGRICULTURE A.D. 1908"

Roof: The hipped roof is covered in composition shingles. It appears to be in poor condition. The deck and roofing installed over the former cupola appears to have failed.

- Recommendation: Install a new roof, flashing, gutters and downspouts. Maintain the historic roof form.
- Recommendation: Evaluate the cost of reconstructing the cupola.
- Recommendation: Cap and flash the chimneys

Portico: The monumental portico is supported by six Corinthian columns and two pilasters. One of the corner columns is missing.

- Recommendation: Replace the missing column in kind.

Entry doors: The front entry doors have been replaced with an incompatible door. The historic fan light over the front entry remains and is boarded over. The side entry doors are also incompatible replacements.

- Recommendation: Replace the entry doors with more compatible doors, based on historic photos of the front.

Windows: The windows have been boarded over. Remaining sash in the 1st and 2nd floors are 9/9 wood double-hung in poor condition. The sash in the basement are paired 4-light casements.

- Recommendation: Preserve any windows that can be repaired. Replace the windows beyond repair with new sash that match the appearance and configuration of the historic windows.

Future additions:

- Recommendation: A new addition should be constructed, if possible, at the rear, where the 1937 addition was located.
- Recommendation: New additions should be constructed so that the historic form of the building is still easily understood and so that there is minimal damage to the remaining historic fabric.

HISTORIC INTERIOR FEATURES

Floor plan: The plan is organized by a central hall with two large rooms on either side. The basement plan varies slightly from the 1st and 2nd floors because it enclosed a furnace room and included the gym. Mechanical shafts between the classrooms heated and cooled the rooms by convection. Each classroom was also served by a wardrobe.

- Recommendation: Preserve the plan organization. Use office furniture or partial height walls where appropriate.
- Recommendation: Reuse vertical shafts if possible for HVAC or other building systems.

Stairs: The stairs are at the front of the building and rise through the building in paired runs. One run of the stairs from first to second floor has been altered with the insertion of a landing. The stairs are wood with straight pickets and a molded wood handrail.

- Recommendation: Restore the historic stair configuration. Install compatible modifications (such as wall-mounted handrails) to meet code requirements.

Flooring: The original 1st and 2nd floor flooring was wood. The basement floor was painted concrete.

- Recommendation: Repair the wood and concrete flooring in kind.

Walls and ceilings: The walls and ceilings are plaster. Many of the ceilings have been laminated with acoustical tiles. Some of the basement walls are painted brick.

- Recommendation: Repair the plaster where possible. Where not possible, laminate with drywall.
- Recommendation: Remove ACT from ceilings.
- Recommendation: Retain painted brick walls in basement.
- Recommendation: Maintain ceiling heights. Minimize dropped ceilings.

Trim: Most of the historic interior trim has been removed. Remnants of historic baseboards and window and door casings remain in different rooms throughout the building. Windows and doors had plain casings with eased edges and mitered corners. The door casings had plinth blocks. The baseboards had an ogee cap.

- Recommendation: Replace missing moldings at historic walls and partitions with moldings that match the historic profiles.
- Recommendation: Install clearly differentiated moldings on any new partitions.

Doors: The historic classroom doors were four-panel wood doors. The historic doors to the basement stairs had 9 lights over two panels.

- Recommendation: Preserve the remaining historic doors.
- Recommendation: Install four-panel wood doors in the classroom entries.

**APPENDIX B:
HAZARDOUS MATERIALS SURVEY**



August 6, 2018

Mr. Anthony J. Bell, III, AIA, LEED AP BD+C
Moseley Architects
3200 Norfolk Street
Richmond, VA 23230

**Re: Hazardous Materials Survey
Bennett Building
9300 Lee Avenue
Manassas, VA**

Dear Mr. Bell:

Apex Companies, LLC (Apex) was contracted to perform a hazardous material survey within the Bennett Building located at 9300 Lee Avenue in Manassas, VA (subject property). The survey included an asbestos inspection, lead-based paint inspection, universal waste (mercury thermostats, polychlorinated biphenyl [PCB] light ballasts, etc.), visual mold and wood destroying insect inspection. Apex visited the site on July 18, 19 and 25, 2018 to perform the inspection and collect samples per Apex's proposal dated January 23, 2018.

1.0 ASBESTOS INSPECTION

Materials that were considered suspect asbestos containing (ACM) were identified, and the number of samples to be collected was determined using AHERA (40 Code of Federal Regulations (CFR) Part 763) protocols. As defined by AHERA policy, suspect materials include the following building material types:

1. Surfacing materials - including spray-applied fire proofing or trowel-applied wall and/or ceiling plaster;
2. Thermal System Insulation (TSI) - including tank insulation, pipe insulation, and mudded pipe elbows; and
3. Miscellaneous materials - including ceiling tile, floor tiles and mastics, gaskets (if accessible), fire doors, drywall (gypsum board) and joint (spackling) compound.

Suspect ACMs that are homogeneous in nature (i.e., uniform in color and texture) were identified and touched to determine friability (ability to be reduced to powder by hand pressure), sampled by removing a small piece that was placed in a labeled sample bag, and given a specific identifier for reference, e.g. B01. For a given homogeneous area, one or more samples were collected in a randomly distributed manner in accordance with AHERA provisions as referenced in the OSHA asbestos in construction standard [29 CFR 1926.1101].

Every reasonable attempt was made to locate ACM. However, areas that are inaccessible can only be addressed through extrapolation of conditions in accessible building space and review of building plans, specifications, or other building documents provided to Apex. Inaccessible is defined as areas of the building that could not be tested (sampled) without destruction of the structure or a portion of the structure.

Changes in the condition of the site may occur with time due to either natural processes or human activities. The findings presented in this report are based on site conditions existing at the time of the inspection. Apex cannot be responsible for any errors or omissions in this assessment resulting from incomplete or inaccurate disclosures.

Apex’s representatives, Ms. Toni Sanders, collected a total of 79 samples from suspect ACM on the interior and exterior of the subject property. All samples were sent to EMSL Analytical (EMSL), a National Voluntary Laboratory Accredited Program (NVLAP Certification No. 101048-0) accredited laboratory located in Cinnaminson, New Jersey. A summary of the samples collected and laboratory results are presented in the table below. EMSL’s laboratory Certificate of Analysis and chain-of-custody documentation are presented in **Appendix B**. The photolog of ACM and the asbestos sampling location map is presented in **Appendix A**.

Table 1 – Summary of Suspect Asbestos Containing Materials Testing

Description of Material Type	Friable (Yes/No)	Location	Sample Numbers	ACM	Estimated Quantity ^{1,2}
Surfacing Materials					
No samples collected					
Thermal System Insulation (TSI) Materials					
Boiler Insulation	Yes	Basement Boiler Room	B34 – B36	ND	--
Pipe Insulation	Yes	Basement Boiler Room	B37 – B39	ND	--
Brown Insulation	Yes	1 st Floor Hallway	B59 – B61	ND	--
Attic Insulation	Yes	Attic	B68 – B70	ND	--
Miscellaneous Materials					
Plaster	Yes	Throughout	B01 – B03	ND	--
9"x9" White Ceiling Tiles with Pinholes	Yes	1 st Floor Hallway	B04 – B06	ND	--
Drywall	Yes	Throughout	B07 – B09	ND	--
Joint Compound	Yes	Throughout	B10 – B12	ND	--
14"x14" White Ceiling Tile	Yes	Classrooms	B13 – B15	ND	--
Exterior Panel Window Glazing	No	Exterior Multiple Panel Windows	B16 – B18	ND	--
Wall Felt Paper	No	1 st Floor Hallway	B19 – B21	ND	--
Exterior Column	No	Exterior Front Entrance	B22 – B24	ND	--
Window Board Caulking	No	Exterior Board Covering on Windows	B25 – B27	ND	--
Tan Wall Glue	No	2 nd Floor Classrooms	B28 – B30	ND	--
Black Wall Glue	No	2nd Floor Classrooms	B31 – B33	3% Chrysotile	--
12"x12" Cork Ceiling Tile	Yes	Basement Classrooms	B40 – B41	ND	--
Brown Drywall	Yes	Basement Classrooms	B42 – B44	ND	--
Residual Black Floor Tile Mastic	No	Right Rear Basement Classroom	B45 – B46	ND	--
Exterior Red Brick Mortar	No	Exterior	B47 – B49	ND	--

Description of Material Type	Friable (Yes/No)	Location	Sample Numbers	ACM	Estimated Quantity ^{1,2}
Brown Stair Covering with Tan Mastic	No	Stairs Throughout	B50 – B52	ND	--
Exterior Panel Window Caulking	No	Exterior Multiple Panel Windows	B53 – B55	ND	--
Exterior Panel Window Caulking	No	Exterior Single Panel Window	B56 – B58	ND	--
Roof Tar	No	Exterior Roof	B62 – B64	8% Chrysotile	--
Roof Shingles	No	Exterior Roof	B65 – B67	ND	--
Exterior Gray Brick Mortar	No	Exterior	B71 – B73	ND	--
Door Caulking	No	Front Exterior Door	B74 – B76	5% Chrysotile	--
Residual Yellow Floor Tile Mastic	No	1 st Floor	B77 – B79	ND	--

¹ SF: square feet. ² LF: linear feet. ND: non-detect. NS: not sampled. Note: these quantities are estimates only and not to be relied upon for Contractor bidding or proposal purposes, or for Notification requirements, Prospective abatement Contractor's are solely responsible for determining actual quantities of ACMs and site conditions for pricing removal and developing work plans for ACM removal.

Note: During the time of the asbestos inspection, the roof was inaccessible. The roof components (B62-B67) were collected from the attic space near the roof access ladder. Residual black roof tar and shingles were present at the roof access ladder, during the time of the inspections.

2.0 LIMITED LEAD-BASED PAINT SURVEY

Apex’s representative Ms. Toni Sanders collected X-ray Fluorescence (XRF) readings from locations throughout the subject property. Lead based paint testing was conducted by collecting readings from each area with separate paint types (substrates, textures, etc.). Positive lead-based paint locations are represented in a photolog presented in **Appendix C**.

The purpose of this survey was to provide general information for the subject property regarding the presence of accessible and/or exposed building materials, which may contain lead-based paint.

In 1978, the Consumer Product Safety Commission banned the sale of lead-based paint to consumers, and its application to areas where consumers have direct access to painted surfaces. As a result of this ban, buildings painted prior to 1978 are suspected of containing leaded paint.

Table 2 – Summary of Lead-Based Paint Sampling

Description/Location	Color	XRF Results (mg/m ³)	Photo #
Lower plaster wall of the entrance stairwell and wood riser and stringer of the stairs	Mint green	3.26 – 4.80	1
Upper plaster wall of the entrance stairwell	Cream	5.00	1
Door casing in the front left classroom on the 1 st floor	Brown	1.03	2
Door frame and door casing in the front left classroom on the 1 st floor	White	1.02 – 1.04	2
Plaster wall in the 1 st and 2 nd floor hallway	White, mint green, cream and green	2.30 – 5.00	3
Wood door casing in the left rear classroom on the 1 st floor	Mint green	1.09	4
Wood door frame in the left rear classroom on the 1 st floor	Cream	1.23	4
Plaster walls throughout the 1 st floor classrooms	Cream and beige	1.80 – 2.28	5
Plaster walls throughout the 1 st floor classroom	White	1.00	6
All single and multiple panel wood windows, window frames, window casing and window sills in the 1 st floor and 2 nd floor classrooms	Cream, white, mint green and brown	1.15 – 1.80	7, 8
Wood door of the 1 st floor right front classroom	Mint green	5.00	9

Description/Location	Color	XRF Results (mg/m ³)	Photo #
1 st to 2 nd floor stairwell plaster walls and wood stringers on both sides of the stairwell	Green and cream	5.00	10
Wood door frame of 2 nd floor right front classroom	White	1.04	11
All plaster walls in the 2 nd floor classrooms	Blue, green, cream and white	2.01-5.00	12
Brick wall and wood paneling in the basement stairwell on both sides. Drywall overhang in stairwell.	White	1.00-2.10	13
Wood risers on both sides of the basement stairs	Blue gray	2.30	14
Wood paneling and brick walls of the basement stairs	White and mint green	1.40-2.40	15
Wood door casing of the right front and left front classroom in the basement	Mint green	1.30-1.47	16
All plaster walls in the basement classrooms and hallways	Mint green and white	2.53-3.77	17
Wood columns in the basement left front classroom	White	1.67	18
All wood windows in the basement.	White and mint green	1.00-3.77	19
All walls, door, door frame and door casing in the basement left rear entry room to the left rear classroom	Mint green	1.01-1.49	20
Wood door frame and door casing on the basement right exit door in the right rear classroom	Brown	1.00-1.56	21
Wood door frame and door casing in the left side room of the basement right rear classroom	Brown and mint green	1.00-1.62	22
Brick wall and metal piping in the left side room of the basement right rear classroom	White and mint green	1.24-2.63	22
Left exterior exit wood door	White	1.26	23

Description/Location	Color	XRF Results (mg/m ³)	Photo #
Wood window frame/caulking area and window sills on the exterior windows of the subject property	White	1.03-4.27	24
Right exterior wood door	White	1.19	25

LBP Standard: is 1.0 mg/m³

3.0 UNIVERSAL WASTE SURVEY

Concurrently with the asbestos/lead-based inspection, Apex conducted a universal waste survey.

3.1 Polychlorinated Biphenyls (PCBs) and Mercury Containing Items

PCBs are regulated under the Toxic Substances Control Act (TSCA), 40 CFR 761, which is administered by the US EPA. The proper method of disposing of PCB-containing ballasts depends on the type and condition of the ballast. All ballasts (PCB-containing and Non PCB-containing) should be removed from fixtures prior to demolition of fluorescent lighting. PCB-containing ballasts should be segregated from non-PCB ballasts for proper disposal. Recycling of non-PCB ballasts and non-leaking PCB ballasts is recommended.

Fluorescent lamps and thermostats are considered characteristic hazardous wastes for mercury as defined by the Resource Conservation and Recovery Act (RCRA), Subtitle C. Federal and state environmental regulatory agencies encourage recycling of fluorescent lamps and recovery of mercury from thermostats.

Apex observed the following during the PCBs and Mercury Containing Items survey:

- Apex observed approximately 10 fluorescent light bulbs and approximately 5 ballasts during the hazardous waste survey. The ballasts were labeled as non-PCB containing.
- Apex observed approximately 2 mercury containing thermostats at the subject property during the hazardous waste survey.

3.2 Chlorofluorocarbons (CFCs)

- Apex did not observe any CFC containing materials at the buildings during the hazardous material survey.

3.3 Additional Hazardous Waste Survey

During the hazardous material survey, Apex also did a visual inspection of additional hazardous materials such as refrigerants, halon fire extinguishers, lead and non-lead acid batteries, smoke detectors and any other hazardous materials that may have been found in the buildings.

Apex observed the following during the additional hazardous waste survey:

- Apex observed 3 exit signs during the hazardous material survey.

4.0 MOLD SURVEY

During Apex's hazardous material survey, accessible areas were visually inspected for the presence of visible mold growth, water damaged building materials and any other potential sources of mold growth. Mold and water damaged building materials were identified in various locations within the subject property at the time of the inspection, contractors should be aware of these areas during upcoming abatement and demolition activities.

The visual mold survey is based on Apex's investigation of the premises as defined by the agreement between Apex and Moseley Architects with respect to the locations and times of day Apex services were to be performed. The evaluation provided of mold is only valid as to the dates and times when the services were performed as mold is naturally occurring and their scope may change over time.

5.0 WOOD DESTROYING INSECT INSPECTION

Apex sub-contracted Triple S Services, a Virginia Licensed Pest Control Company, to perform a wood destroying insect inspection of the subject property. The wood destroying insect inspection consisted of a property wide inspection for any wood destroying insect such as termites, powder post beetles, carpenter ants and any others that were present during the survey. The survey included both physical and visual inspection to identify past or present conditions that may be conducive to the above insects. A copy of the Wood Destroying Insect Inspection Report is included in **Appendix E**.

The following was observed during the wood destroying insect inspection:

- Termite tubes were observed on the foundation wall in the basement and on beams.
- Termite damage to wall stud was observed in the basement.
- Termite damage to the baseboard was observed on the third floor.

6.0 CONCLUSIONS/RECOMMENDATIONS

Asbestos

Based on the laboratory results and visual assessments from July 18, 2018, Apex concludes that the following materials are ACM: A material is considered by the Environmental Protection Agency (EPA) to be an ACM if at least one sample collected from a homogenous area is determined to contain asbestos in an amount greater than one percent (1%). The following sampled materials were identified to be ACM (>1%) asbestos:

- The Black Glue Wall Lines (3% Chrysotile) in the 2nd floor classrooms was identified as asbestos containing.
- The Roofing Tar (8% Chrysotile) was identified as asbestos containing.
- The Front Door Caulking (5% Chrysotile) was identified as asbestos containing.

Based on the laboratory results, Apex recommends the following:

- Asbestos-containing materials that will be impacted during the upcoming project activities should be removed from the subject building prior to beginning of work. The Occupational Safety and Health Administration (OSHA) “Asbestos in Construction” regulation (29 CFR 1926.1101) defines work involving the removal of surfacing materials and thermal system insulation as Class I and the removal of all other ACMs as Class II work. The Class I and Class II requirements as defined in 29 CFR 1926.1101 should be followed during the project.
- If suspect materials not documented in this report are encountered during work activities, the material should be considered asbestos-containing unless bulk sampling is performed and laboratory analysis proves otherwise.

Lead-Based Paint

- Based on the condition of the building, Apex recommends conducting a lead-based paint risk assessment on the lead-based paint materials to determine the condition of the materials.
- Materials that have been identified as lead-based paint should be removed from the subject property prior to renovation or demolition activities by a licensed lead based paint abatement contractor.
- If materials are not documented in this report are encountered during work activities, the materials should be considered lead based paint unless sampling is performed to prove otherwise.

Mold

- If materials not identified within this report are encountered during work activities and are identified to have visible mold growth, materials should be either sampled to identify specific mold species and/or removed prior to work activities.

Hazardous Waste Survey

- All materials on site identified as hazardous materials should be disposed of as universal wastes if removed during any demolition or renovation.

Wood Destroying Insect Inspection

- Termite tubes were observed on the foundation wall in the basement and on beams.
- Termite damage to wall stud was observed in the basement.
- Termite damage to the baseboard was observed on the third floor.
- Treatment for the termite damage is recommended at the subject property.

Apex is pleased to have been of service and if you have any questions regarding this report, please do not hesitate to contact us at (703) 396-6730.

Sincerely,
APEX COMPANIES, LLC



William Thomas
Industrial Hygiene Project Manager

Appendix A – ACM Photolog and Asbestos Sampling Location Map
Appendix B – Asbestos Laboratory Data Sheets and Executed Chains of Custody
Appendix C – Lead-Based Paint Photolog
Appendix D – Bennett Building Photolog
Appendix E – Wood Destroying Insect Inspection Report

APPENDIX A

ACM Photolog and Asbestos Sampling Location Map



Photo 1: HA1 Plaster located throughout the subject property (B01-B03)



Photo 2: HA2 9"x9" white ceiling tiles with pinholes located in the 1st floor hallway (B04-B06)



Photo 3: HA3 Drywall located throughout the subject property (B07-B09)



Photo 4: HA4 Joint Compound located throughout the subject property (B10-B12)



Photo 5: HA5 14"x14" white ceiling tiles located in the classrooms throughout the subject property (B13-B15)



Photo 6: HA6 Exterior window glazing on the multiple panel windows throughout the subject property (B16-B18)



Photo 7: HA7 Brown felt paper in the walls in the 1st floor hallway (B19-B21)



Photo 8: HA8 Exterior columns at the front entrance (B22-B24)



Photo 9: HA9 Caulking on the window boards covering the exterior windows of the subject property. The sample was collected from an extra window board at the front entrance (B25-B27)



Photo 10: HA10 Tan wall glue lines on the walls of the 2nd floor classrooms (B28-B30)



Photo 11: HA11 Black wall glue lines on the walls of the 2nd floor classrooms (B31-B33) 3% **Chrysotile**



Photo 12: HA12 Boiler insulation on the boiler in the basement (B34-B36)



Photo 13: HA13 Pipe insulation on the pipes in the boiler room in the basement (B37-B39)



Photo 14: HA14 12"x12" cork ceiling tiles in the basement classrooms (B40-B41)



Photo 15: HA15 Brown drywall in basement classrooms (B42-B44)



Photo 16: HA16 Residual black floor tile mastic in the corner of the rear right room of the basement, trace amounts (B45-B46)



Photo 17: HA17 Exterior red brick mortar on the exterior of the subject property (B47-B49)



Photo 18: HA18 Brown stair covering and associated tan mastic on the stairwells of the subject property (B50-B52)



Photo 19: HA19 Exterior window caulking on the multiple panel windows of the subject property (B53-B55)



Photo 20: HA20 Exterior window caulking on the single panel windows of the subject property (B56-B58)



Photo 21: HA21 Brown insulation in the walls of the 1st floor hallway (B59-B61)



Photo 22: HA22 Roof tar (B62-B64). Access to the roof was unavailable, roofing materials were collected in the attic near the roof access ladder. **8% Chrysotile**



Photo 23: HA23 Roof shingles (B65-B67). Access to the roof was unavailable, roofing materials were collected in the attic near the roof access ladder.



Photo 24: HA24 Attic insulation (B68-B70)



Photo 25: HA25 Gray brick mortar on the exterior of the subject property (B71-B73)

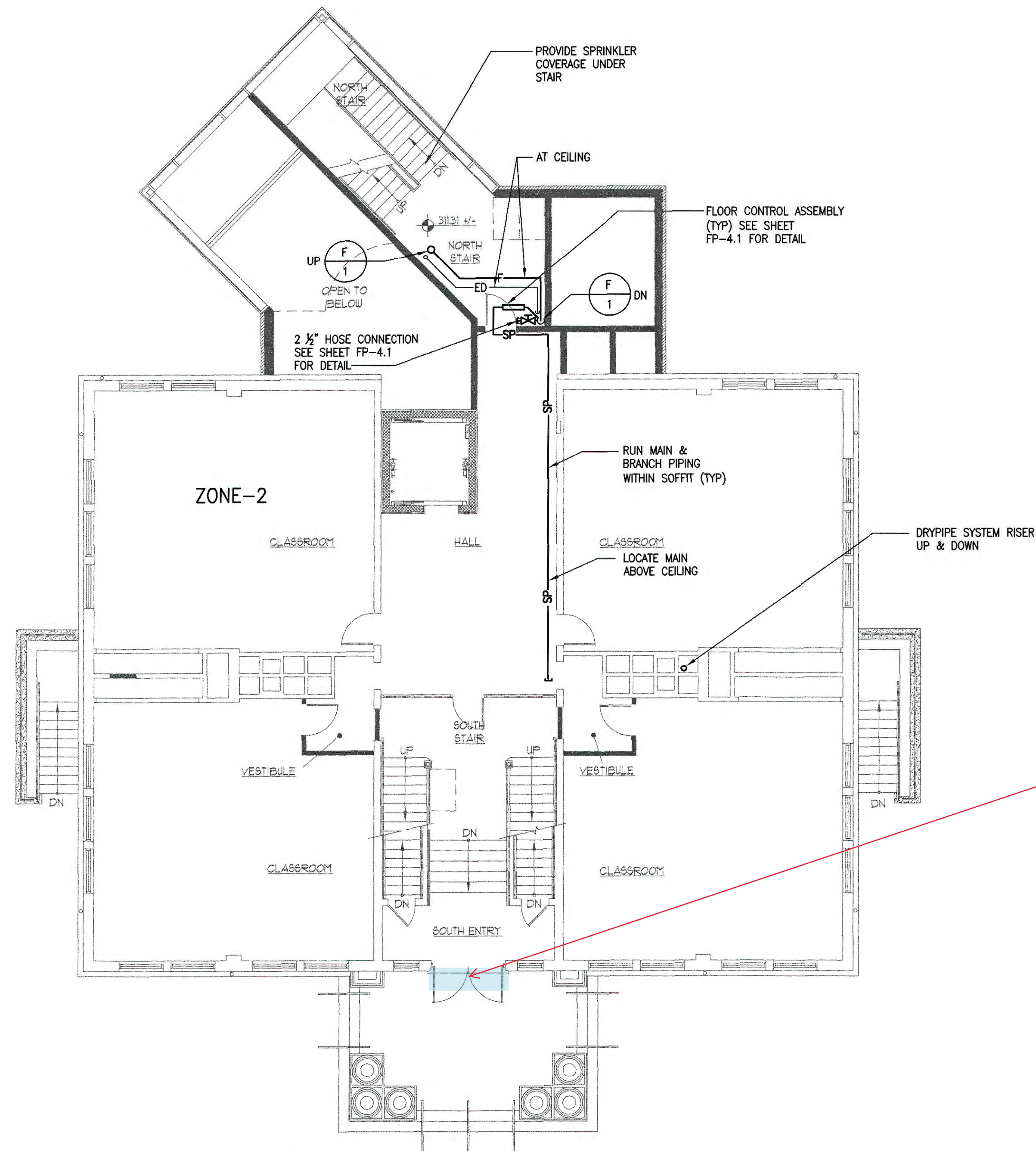


Photo 26: HA26 Exterior front door caulking (B74-B76) **5% Chrysotile**

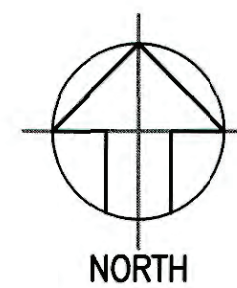


Photo 27: HA27 Residual yellow floor tile mastic on the 1st floor (B77-B79)

Note: Actual floor plan varies from the drawing presented below. Restrooms are not present in the actual subject property and the east addition is not present on any level of the subject property.



**FIRST FLOOR
SPRINKLER NEW WORK PLAN**
SCALE: 1/8"=1'-0"



Door caulking on the exterior front door (5% Chryostile)

Reuse and Rehabilitation of
**Old Bennett
School**
9300 Lee Avenue
Manassas, Virginia

for the
Department of Public Works
Historic Preservation Div.
Prince William County,
Virginia

JMA
John Milner Associates, Inc.

5250 Cherokee Avenue
Third Floor
Alexandria, Virginia 22312

t: 703 354 9737
f: 703 642 1837

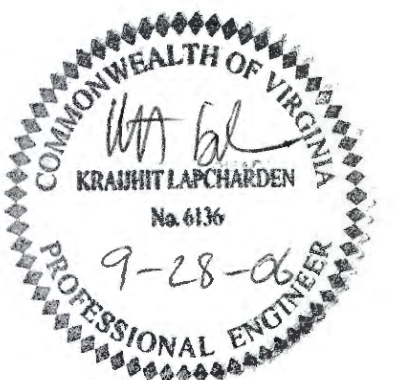
johnmilnerassociates.com

Civil Engineer
William H. Gordon
Associates, Inc.
Prince William, Virginia

Structural Engineer
Linton Engineering, LLC
Vienna, Virginia

Mechanical/Electrical Engineer
JVP Engineers, PC
Washington, DC

Lighting Designer
Lighting Design Collaborative
Philadelphia, Pennsylvania



project: OLDBEN
drawn: XXX
checked: XXX
phase: Permit
date: 15 Sept 2006
revised:

NOT FOR CONSTRUCTION

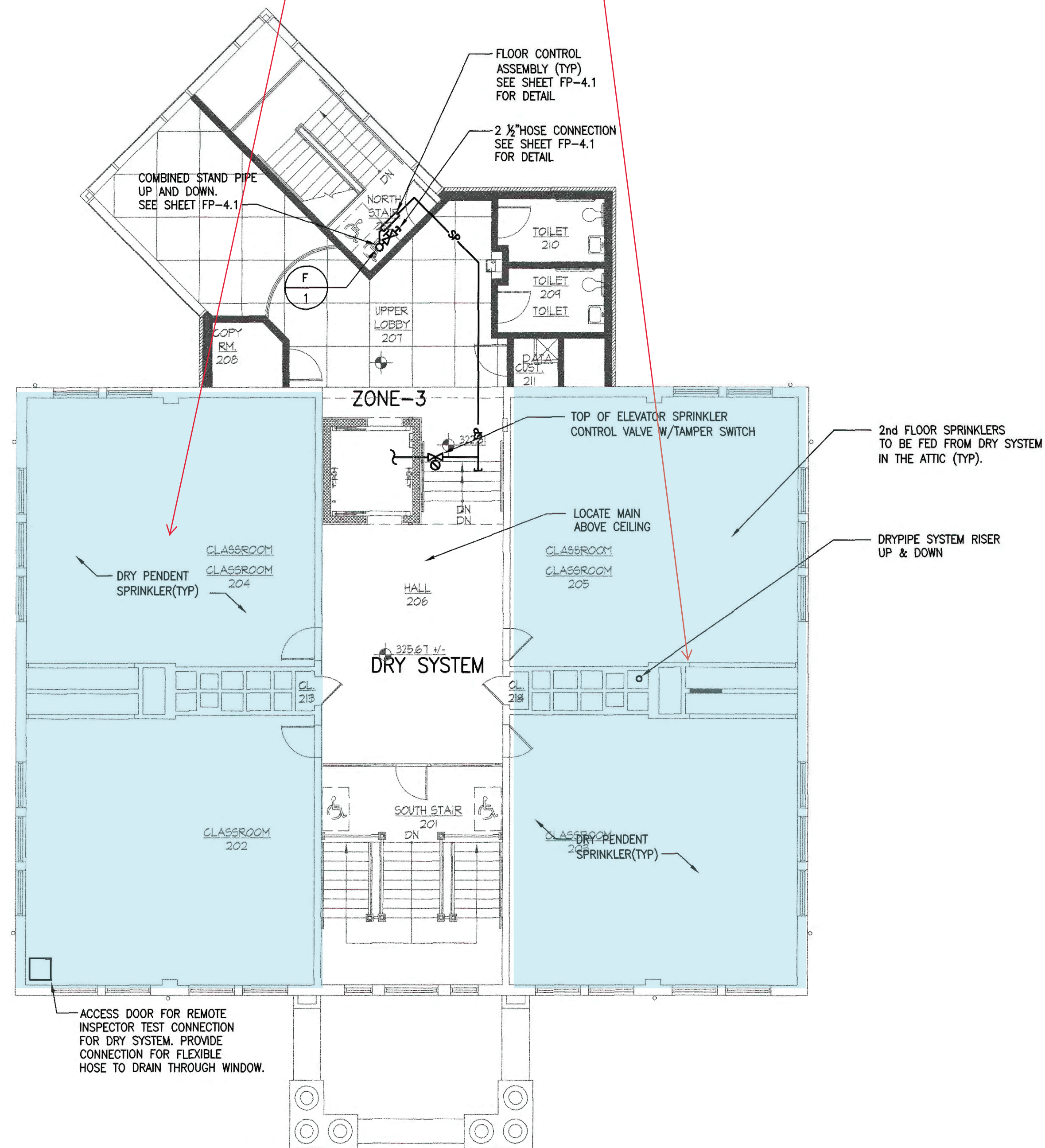
FIRST FLOOR
PLAN - SPRINKLER
NEW WORK

FP1.2

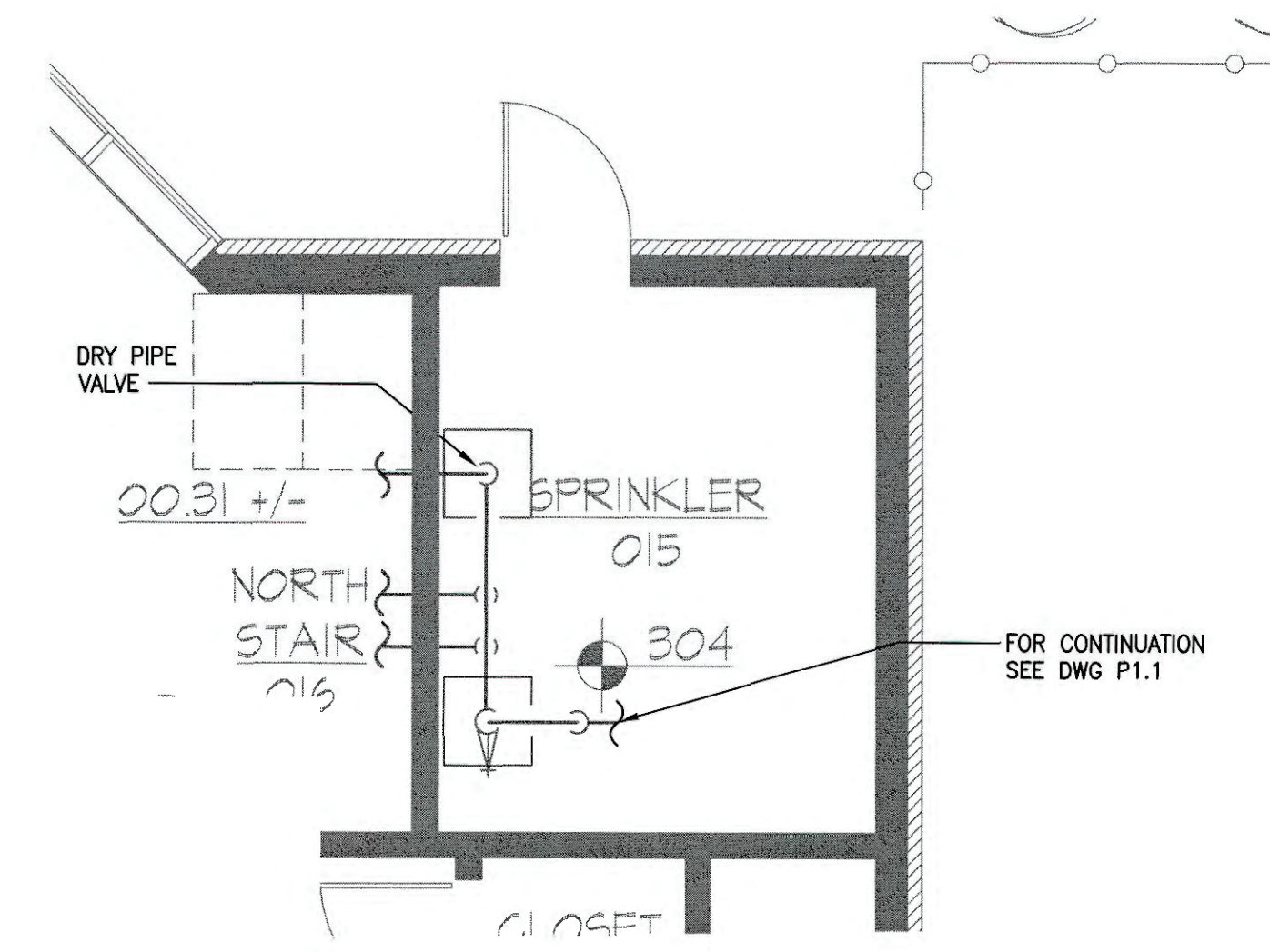
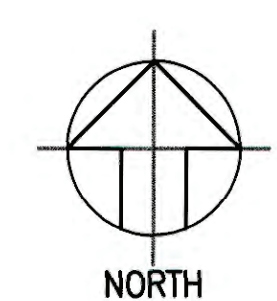
THIS APPROVAL DOES NOT INCLUDE FIRE
ALARM/SPRINKLER SYSTEMS. SEPARATE
PLANS SUBMISSION AND PERMIT REQUIRED

Note: Actual floor plan varies from the drawing presented below. Restrooms are not present in the actual subject property and the east addition is not present on any level of the subject property.

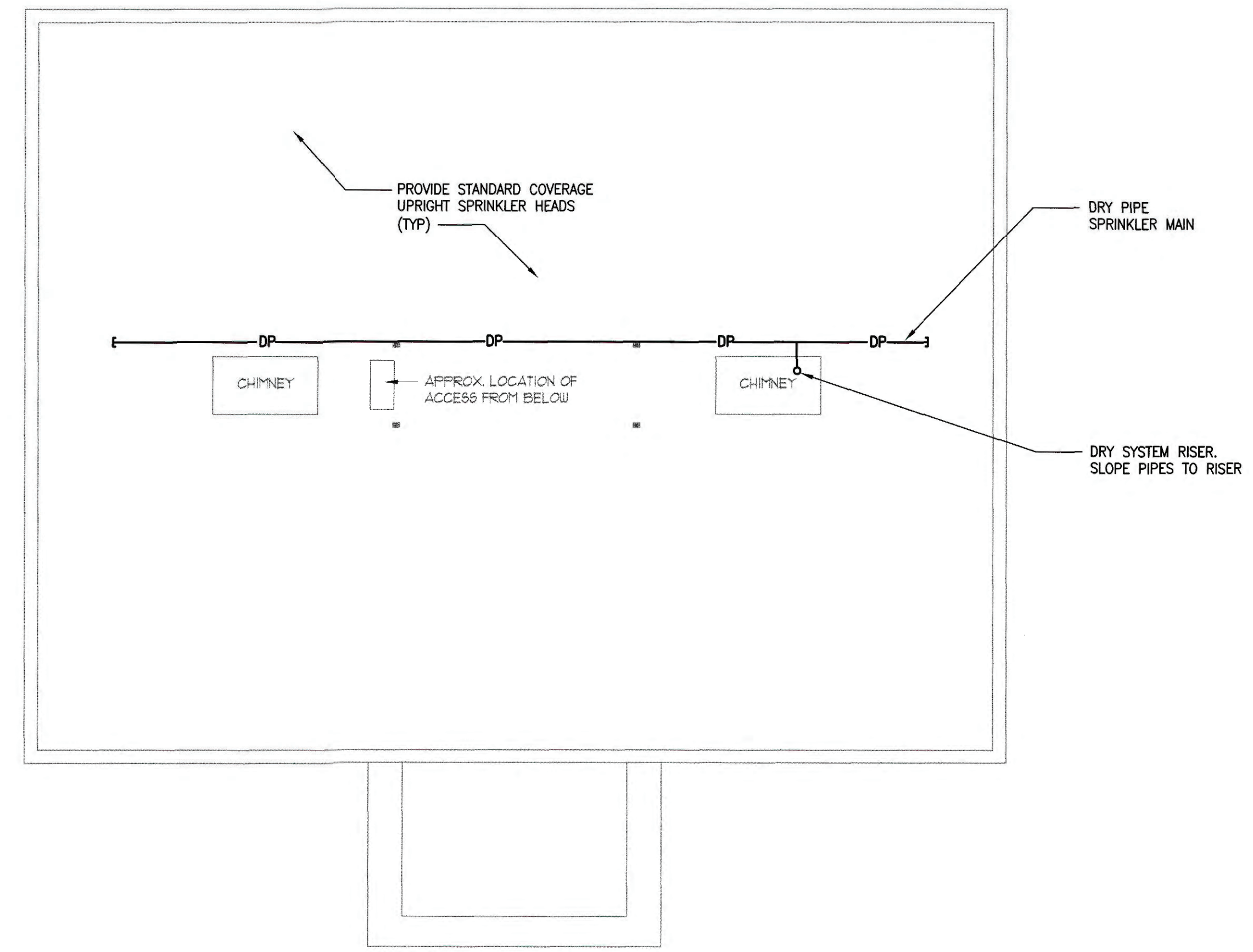
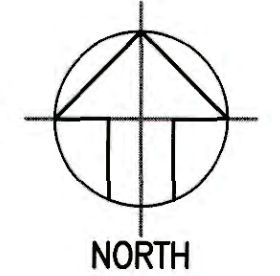
Black wall glue lines throughout the classrooms on the 2nd floor



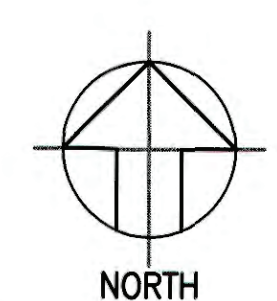
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FP1.4
SCALE: 1/8"=1'-0"
SECOND FLOOR
SPRINKLER NEW WORK PLAN



2
FP1.4
SCALE: 1/8"=1'-0"
SPRINKLER ROOM PART PLAN-FIRE PROTECTION



2
FP1.4
SCALE: 1/8"=1'-0"
ATTIC SPRINKLER NEW WORK PLAN

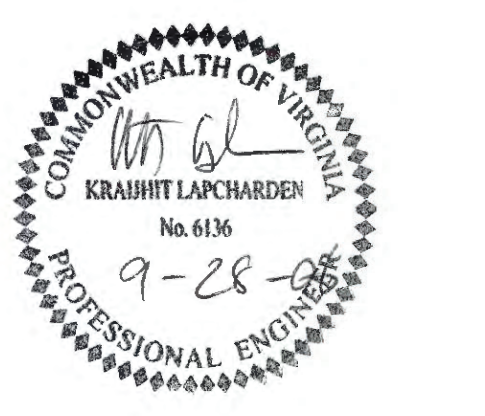


THIS APPROVAL DOES NOT INCLUDE FIRE ALARM/SPRINKLER SYSTEMS. SEPARATE PLANS SUBMISSION AND PERMIT REQUIRED.

Reuse and Rehabilitation of
Old Bennett School
9300 Lee Avenue
Manassas, Virginia
for the
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Prince William County,
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Structural Engineer
Linton Engineering, LLC
Vienna, Virginia
Mechanical/Electrical Engineer
JVP Engineers, PC
Washington, DC
Lighting Designer
Lighting Design Collaborative
Philadelphia, Pennsylvania



project: OLDBEN
drawn: XXX
checked: XXX
phase: Permit
date: 15 Sept 2006
revised:

NOT FOR CONSTRUCTION
SECOND FLOOR &
ATTIC PLAN - SPRINKLER
NEW WORK

FP1.3

APPENDIX B
Asbestos Laboratory Data Sheets and Executed Chains of Custody
(EMSL Analytical Laboratory)



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnaslab@EMSL.com

EMSL Order: 041822006

Customer ID: APXC62

Customer PO:

Project ID:

Attention: William Thomas
Apex Companies, LLC
9700 Capital Court, Ste 100
Manassas, VA 20110

Phone: (703) 396-6730

Fax: (703) 396-6743

Received Date: 07/20/2018 9:15 AM

Analysis Date: 07/22/2018 - 07/25/2018

Collected Date:

Project: Bennett Building

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B01-Skim Coat <i>041822006-0001</i>	1st Floor Classroom - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 1		
B01-Base Coat <i>041822006-0001A</i>	1st Floor Classroom - Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
			HA: 1		
B02 <i>041822006-0002</i> <i>No Skim Coat Present.</i>	Basement Classroom - Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 1		
B03-Skim Coat <i>041822006-0003</i>	2nd Floor Classroom - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 1		
B03-Base Coat <i>041822006-0003A</i>	2nd Floor Classroom - Plaster	Gray Fibrous Homogeneous	2% Hair	98% Non-fibrous (Other)	None Detected
			HA: 1		
B04 <i>041822006-0004</i>	1st Floor Hallway - 9x9 White CT w/Pinholes	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
			HA: 2		
B05 <i>041822006-0005</i>	1st Floor Hallway - 9x9 White CT w/Pinholes	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
			HA: 2		
B06 <i>041822006-0006</i>	1st Floor Hallway - 9x9 White CT w/Pinholes	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
			HA: 2		
B07 <i>041822006-0007</i>	1st Floor - Drywall	Brown/White Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
			HA: 3		
B08 <i>041822006-0008</i>	2nd Floor - Drywall	Brown/White Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
			HA: 3		
B09 <i>041822006-0009</i>	Basement - Drywall	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
			HA: 3		
B10 <i>041822006-0010</i>	1st Floor - Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 4		

Initial report from: 07/25/2018 21:37:38



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 041822006
Customer ID: APXC62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B11 <small>041822006-0011</small>	2nd Floor - Joint Compound	White Non-Fibrous Homogeneous	HA: 4	100% Non-fibrous (Other)	None Detected
B12 <small>041822006-0012</small>	1st Floor - Joint Compound	White Non-Fibrous Homogeneous	HA: 4	100% Non-fibrous (Other)	None Detected
B13 <small>041822006-0013</small>	1st Floor Classroom - 12x12 White CT	Brown/White Fibrous Homogeneous	HA: 5	90% Cellulose 10% Non-fibrous (Other)	None Detected
B14 <small>041822006-0014</small>	1st Floor Classroom - 12x12 White CT	Brown/White Fibrous Homogeneous	HA: 5	90% Cellulose 10% Non-fibrous (Other)	None Detected
B15 <small>041822006-0015</small>	1st Floor Classroom - 12x12 White CT	Brown Fibrous Homogeneous	HA: 5	90% Cellulose 10% Non-fibrous (Other)	None Detected
B16 <small>041822006-0016</small>	1st Floor - Exterior Window Glazing Panels	White Non-Fibrous Homogeneous	HA: 6	100% Non-fibrous (Other)	None Detected
B17 <small>041822006-0017</small>	2nd Floor - Exterior Window Glazing Panels	White Non-Fibrous Homogeneous	HA: 6	100% Non-fibrous (Other)	None Detected
B18 <small>041822006-0018</small>	1st Floor - Exterior Window Glazing Panels	Gray Non-Fibrous Homogeneous	HA: 6	100% Non-fibrous (Other)	None Detected
B19 <small>041822006-0019</small>	1st Floor Hallway - Wall Felt Paper	Brown Fibrous Homogeneous	HA: 7	90% Cellulose 10% Non-fibrous (Other)	None Detected
B20 <small>041822006-0020</small>	1st Floor Hallway - Wall Felt Paper	Brown Fibrous Homogeneous	HA: 7	90% Cellulose 10% Non-fibrous (Other)	None Detected
B21 <small>041822006-0021</small>	1st Floor Hallway - Wall Felt Paper	Brown Fibrous Homogeneous	HA: 7	90% Cellulose 10% Non-fibrous (Other)	None Detected
B22-Brick <small>041822006-0022</small>	Front Entrance - Exterior Column	Red Non-Fibrous Homogeneous	HA: 8	100% Non-fibrous (Other)	None Detected
B22-Wrap <small>041822006-0022A</small>	Front Entrance - Exterior Column	Brown Fibrous Homogeneous	HA: 8	90% Cellulose 10% Non-fibrous (Other)	None Detected
B23-Brick <small>041822006-0023</small>	Front Entrance - Exterior Column	Red Non-Fibrous Homogeneous	HA: 8	100% Non-fibrous (Other)	None Detected

Initial report from: 07/25/2018 21:37:38



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 041822006
Customer ID: APXC62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B23-Wrap <small>041822006-0023A</small>	Front Entrance - Exterior Column	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
			HA: 8		
B24-Brick <small>041822006-0024</small>	Front Entrance - Exterior Column	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 8		
B24-Wrap <small>041822006-0024A</small>	Front Entrance - Exterior Column	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
			HA: 8		
B25 <small>041822006-0025</small>	Exterior on Windows - Caulking on Window Board	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 9		
B26 <small>041822006-0026</small>	Exterior on Windows - Caulking on Window Board	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 9		
B27 <small>041822006-0027</small>	Exterior on Windows - Caulking on Window Board	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 9		
B28 <small>041822006-0028</small>	2nd Floor Classrooms - Tan Wall Glue	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 10		
B29 <small>041822006-0029</small>	2nd Floor Classrooms - Tan Wall Glue	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 10		
B30 <small>041822006-0030</small>	2nd Floor Classrooms - Tan Wall Glue	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 10		
B31 <small>041822006-0031</small>	2nd Floor Classrooms - Black Wall Glue	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
			HA: 11		
B32 <small>041822006-0032</small>	2nd Floor Classrooms - Black Wall Glue				Positive Stop (Not Analyzed)
			HA: 11		
B33 <small>041822006-0033</small>	2nd Floor Classrooms - Black Wall Glue				Positive Stop (Not Analyzed)
			HA: 11		
B34-Insulation <small>041822006-0034</small>	Boiler Room Basement - Boiler Insulation	Gray Fibrous Homogeneous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
			HA: 12		
B34-Wrap <small>041822006-0034A</small>	Boiler Room Basement - Boiler Insulation	White Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
			HA: 12		
B35-Insulation <small>041822006-0035</small>	Boiler Room Basement - Boiler Insulation	Gray Fibrous Homogeneous	30% Min. Wool	70% Non-fibrous (Other)	None Detected

Initial report from: 07/25/2018 21:37:38



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 041822006
Customer ID: APXC62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
HA: 12					
B35-Wrap <small>041822006-0035A</small>	Boiler Room Basement - Boiler Insulation	White Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
HA: 12					
B36-Insulation <small>041822006-0036</small>	Boiler Room Basement - Boiler Insulation	Gray Fibrous Homogeneous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
HA: 12					
B36-Wrap <small>041822006-0036A</small>	Boiler Room Basement - Boiler Insulation	White Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
HA: 12					
B37-Insulation <small>041822006-0037</small>	Boiler Room Basement - Pipe Insulation	Yellow Fibrous Homogeneous	90% Glass	10% Non-fibrous (Other)	None Detected
HA: 13					
B38-Insulation <small>041822006-0038</small>	Boiler Room Basement - Pipe Insulation	Yellow Fibrous Homogeneous	90% Glass	10% Non-fibrous (Other)	None Detected
HA: 13					
B39 <small>041822006-0039</small>	Boiler Room Basement - Pipe Insulation	White/Yellow Fibrous Homogeneous	65% Glass	35% Non-fibrous (Other)	None Detected
HA: 13					
B40 <small>041822006-0040</small>	Basement Classroom - 12x12 Cork CT	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
HA: 14					
B41 <small>041822006-0041</small>	Basement Classroom - 12x12 Cork CT	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
HA: 14					
B42 <small>041822006-0042</small>	Basement Classroom - Brown Drywall	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
HA: 15					
B43 <small>041822006-0043</small>	Basement Classroom - Brown Drywall	Brown Non-Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
HA: 15					
B44 <small>041822006-0044</small>	Basement Classroom - Brown Drywall	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
HA: 15					
B45 <small>041822006-0045</small>	Basement Classroom - Residual Black FT Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 16					
B46 <small>041822006-0046</small>	Basement Classroom - Residual Black FT Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 16					
B47 <small>041822006-0047</small>	Exterior - Exterior Red Brick Mortar	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 17					

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200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

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EMSL Order: 041822006
Customer ID: APXC62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B48 <small>041822006-0048</small>	Exterior - Exterior Red Brick Mortar	Red Non-Fibrous Homogeneous	HA: 17	100% Non-fibrous (Other)	None Detected
B49 <small>041822006-0049</small>	Exterior - Exterior Red Brick Mortar	Red Non-Fibrous Homogeneous	HA: 17	100% Non-fibrous (Other)	None Detected
B50-Stair Tread <small>041822006-0050</small>	1st Floor Stairs - Brown Stair Covering w/Tan Mastic	Brown Non-Fibrous Homogeneous	HA: 18	100% Non-fibrous (Other)	None Detected
B50-Mastic <small>041822006-0050A</small>	1st Floor Stairs - Brown Stair Covering w/Tan Mastic	Brown Non-Fibrous Homogeneous	HA: 18	100% Non-fibrous (Other)	None Detected
B51-Stair Tread <small>041822006-0051</small>	2nd Floor Stairs - Brown Stair Covering w/Tan Mastic	Brown Non-Fibrous Homogeneous	HA: 18	100% Non-fibrous (Other)	None Detected
B51-Mastic <small>041822006-0051A</small>	2nd Floor Stairs - Brown Stair Covering w/Tan Mastic	Brown Non-Fibrous Homogeneous	HA: 18	100% Non-fibrous (Other)	None Detected
B52-Stair Tread <small>041822006-0052</small>	2nd Floor Stairs - Brown Stair Covering w/Tan Mastic	Brown Non-Fibrous Homogeneous	HA: 18	100% Non-fibrous (Other)	None Detected
B52-Mastic <small>041822006-0052A</small>	2nd Floor Stairs - Brown Stair Covering w/Tan Mastic	Brown Non-Fibrous Homogeneous	HA: 18	100% Non-fibrous (Other)	None Detected
B53 <small>041822006-0053</small>	1st Floor - Exterior Window Caulking	Gray/White Non-Fibrous Homogeneous	HA: 19	100% Non-fibrous (Other)	None Detected
B54 <small>041822006-0054</small>	2nd Floor - Exterior Window Caulking	Gray/White Non-Fibrous Homogeneous	HA: 19	100% Non-fibrous (Other)	None Detected
B55 <small>041822006-0055</small>	1st Floor - Exterior Window Caulking	Gray/White Non-Fibrous Homogeneous	HA: 19	100% Non-fibrous (Other)	None Detected
B56 <small>041822006-0056</small>	1st Floor - Exterior Window Caulking	Gray/White Non-Fibrous Homogeneous	HA: 20	100% Non-fibrous (Other)	None Detected
B57 <small>041822006-0057</small>	1st Floor - Exterior Window Caulking	Gray/White Non-Fibrous Homogeneous	HA: 20	100% Non-fibrous (Other)	None Detected
B58 <small>041822006-0058</small>	1st Floor - Exterior Window Caulking	Gray/White Non-Fibrous Homogeneous	HA: 20	100% Non-fibrous (Other)	None Detected

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EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 041822006
Customer ID: APXC62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B59 041822006-0059	1st Floor Hallway - Brown Insulation	Brown Fibrous Homogeneous	80% Cellulose HA: 21	20% Non-fibrous (Other)	None Detected
B60 041822006-0060	1st Floor Hallway - Brown Insulation	Brown Fibrous Homogeneous	80% Cellulose HA: 21	20% Non-fibrous (Other)	None Detected
B61 041822006-0061	1st Floor Hallway - Brown Insulation	Brown Fibrous Homogeneous	75% Cellulose HA: 21	25% Non-fibrous (Other)	None Detected
B62 041822006-0062	Roof - Roof Tar	Black Fibrous Homogeneous		92% Non-fibrous (Other)	8% Chrysotile
B63 041822006-0063	Roof - Roof Tar				Positive Stop (Not Analyzed)
B64 041822006-0064	Roof - Roof Tar				Positive Stop (Not Analyzed)
B65 041822006-0065	Roof - Roof Shingles	Black Fibrous Homogeneous	30% Cellulose HA: 23	70% Non-fibrous (Other)	None Detected
B66 041822006-0066	Roof - Roof Shingles	Black Fibrous Homogeneous	30% Cellulose HA: 23	70% Non-fibrous (Other)	None Detected
B67 041822006-0067	Roof - Roof Shingles	Gray/Black Fibrous Homogeneous	25% Cellulose HA: 23	75% Non-fibrous (Other)	None Detected
B68 041822006-0068	Attic - Insulation	Tan Fibrous Homogeneous	85% Min. Wool HA: 24	15% Non-fibrous (Other)	None Detected
B69 041822006-0069	Attic - Insulation	Tan Fibrous Homogeneous	85% Min. Wool HA: 24	15% Non-fibrous (Other)	None Detected
B70 041822006-0070	Attic - Insulation	Tan Fibrous Homogeneous	90% Min. Wool HA: 24	10% Non-fibrous (Other)	None Detected
B71 041822006-0071	Exterior - Exterior Gray Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B72 041822006-0072	Exterior - Exterior Gray Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B73 041822006-0073	Exterior - Exterior Gray Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order: 041822006
Customer ID: APXC62
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
HA: 25					
B74 <small>041822006-0074</small>	Front Door - Door Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 26					
B75 <small>041822006-0075</small>	Front Door - Door Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
HA: 26					
B76 <small>041822006-0076</small>	Front Door - Door Caulking	Gray/White Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
HA: 26					

Analyst(s) _____
 John Flanagan (34)
 Maxwell Taylor (49)


 Benjamin Ellis, Laboratory Manager
 or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from: 07/25/2018 21:37:38



EMSL Analytical, Inc.

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Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 041822572

Customer ID: APXC62

Customer PO:

Project ID:

Attention: William Thomas
Apex Companies, LLC
9700 Capital Court, Ste 100
Manassas, VA 20110

Phone: (703) 396-6730

Fax: (703) 396-6743

Received Date: 07/26/2018 9:20 AM

Analysis Date: 07/28/2018 - 07/30/2018

Collected Date: 07/25/2018

Project: Bennett Building

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B77 <small>041822572-0001</small>	1st Floor - Residual Yellow Mastic	Yellow Non-Fibrous Homogeneous	HA: 27	100% Non-fibrous (Other)	None Detected
B78 <small>041822572-0002</small>	1st Floor - Residual Yellow Mastic	Yellow Non-Fibrous Homogeneous	HA: 27	100% Non-fibrous (Other)	None Detected
B79 <small>041822572-0003</small>	1st Floor - Residual Yellow Mastic	Yellow Non-Fibrous Homogeneous	HA: 27	100% Non-fibrous (Other)	None Detected

Analyst(s)

Ebony Miller (2)

Erica Valent (1)

Benjamin Ellis, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from: 07/30/2018 11:17:29



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

041822006

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMENON, NJ 08077
PHONE: (609) 225-3675
FAX: (609) 225-5974
CINNAMENON, N.J.

Company: Apex Companies, LLC		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note Instructions in Comments*</small>	
Street: 9700 Capital Court, Suite 100		Third Party Billing requires written authorization from third party	
City: Manassas	State/Province: VA	Zip/Postal Code: 20110	Country: USA
Report To (Name): William Thomas		Telephone #: 703-396-0730	
Email Address: wthomas@apexcos.com		Fax #: 703-396-6743	
Project Name/Number: Bennett Building		Purchase Order:	
U.S. State Samples Taken: VA		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour
 6 Hour
 24 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)	<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1
<input type="checkbox"/> PLM EPA NOB (<1%)	<input type="checkbox"/> NY ELAP Method 198.4 (TEM)
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2
<input type="checkbox"/> NIOSH 9002 (<1%)	<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique
<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)	<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)	<u>Other</u>
<input type="checkbox"/> OSHA ID-191 Modified	<input type="checkbox"/>
<input type="checkbox"/> Standard Addition Method	

Check For Positive Stop - Clearly Identify Homogenous Group Date Sampled: 7/18/18

Samplers Name: Toni Sanders Samplers Signature: *[Signature]*

Sample #	HA #	Sample Location	Material Description
B01	1	1st Floor Classroom	Plaster
B02	1	Basement Classroom	↓
B03	1	2nd Floor Classroom	↓
B04	2	Basement 1st Floor hallway	9x9 white GT w/ pinholes
B05	2		↓
B06	2		↓
B07	3	1st Floor	Drywall
B08	3	2nd Floor	↓
B09	3	Basement	↓
B10	4	1st Floor	Joint Compound

Client Sample # (s): B01	- B710	Total # of Samples: 76
Relinquished (Client): <i>[Signature]</i>	Date: 7/19/18	Time: 1400
Received (Lab): C/S	Date: 7-20-18	Time: 9:15a
Comments/Special Instructions: please send results to toni.sanders@apexcos.com		

76plu



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

041822006

EMSL ANALYTICAL, INC.
2000 130 NORTH
CINNAMON, NJ 08077
PHONE: (856) 220-3675
FAX: (856) 788-5974

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Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
B11	4	2nd FLOOR	Joint Compound
B12	4	1st FLOOR	↓
B13	5	1st FLOOR CLASSROOM	14x14 white CT
B14	5	↓	↓
B15	5	↓	↓
B16	6	1st FLOOR	Exterior window glazing panels
B17	6	2nd FLOOR	↓
B18	6	1st FLOOR	↓
B19	7	1st FLOOR hallway	wall felt paper
B20	7	↓	↓
B21	7	↓	↓
B22	8	FRONT entrance	Exterior column
B23	8	↓	↓
B24	8	↓	↓
B25	9	Exterior on windows	caulking on window board
B26	9	↓	↓
B27	9	↓	↓
B28	10	2nd FLOOR classrooms	Tan wall glue
B29	10	↓	↓
B30	10	↓	↓
B31	11	2nd FLOOR classrooms	Black wall glue
B32	11	↓	↓
B33	11	↓	↓
B34	12	Boiler Rm - Basement	boiler insulation

*Comments/Special Instructions:



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

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EMSL ANALYTICAL, INC.
208 W. 130 NORTH
CINCINNATI, OH 45207
PHONE: (513) 220-3675
FAX: (513) 786-5974

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Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
B35	12	Boiler Rm - Basement	Boiler Insulation
B36	12	↓	↓
B37	13	Boiler Rm - Basement	Pipe Insulation
B38	13	↓	↓
B39	13	↓	↓
B40	14	Basement classroom	12x12 CONK CT
B41	14	↓	↓
B42	15	Basement classrooms	Brown Dry Wall
B43	15	↓	↓
B44	15	↓	↓
B45	16	Basement classroom	Residual Black FT waste
B46	16	↓	↓
B47	17	Exterior	Exterior Red Brick mortar
B48	17	↓	↓
B49	17	↓	↓
B50	18	1st Floor Stairs	Brown stair covering w/ Tar waste
B51	18	2nd Floor Stairs	↓
B52	18	↓	↓
B53	19	1st Floor	Exterior Window Caulking - Panel
B54	19	2nd Floor	↓
B55	19	1st Floor	↓
B56	20	1st Floor	Exterior window caulking - large
B57	20	↓	↓
B58	20	↓	↓

*Comments/Special Instructions:



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

**Asbestos Bulk Building Material
Chain of Custody**

EMSL Order Number (Lab Use Only):

041822006

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMISON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 761-5974

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Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
B59	21	1st Floor hallway	Brown Insulation
B60	21	↓	↓
B61	21	↓	↓
B62	22	Roof	Roof Tar
B63	22	↓	↓
B64	22	↓	↓
B65	23	Roof	Roof Shingles
B66	23	↓	↓
B67	23	↓	↓
B68	24	Attic	Insulation
B69	24	↓	↓
B70	24	↓	↓
B71	25	Exterior	Exterior gray brick mortar
B72	25	↓	↓
B73	25	↓	↓
B74	26	Front door	Door caulking
B75	26	↓	↓
B76	26	↓	↓
*Comments/Special Instructions:			



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

041822572

EMSL ANALYTICAL, INC.

200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077

EMSL
CINNAMINSON, NJ
(800) 220-3675
FAX: (800) 786-5974

18 JUL 26 10:42 AM '18

Company: <u>Apex Companies, LLC</u>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments	
Street: <u>9700 Capital Court, Suite 100</u>		Third Party Billing requires written authorization from third party	
City: <u>Manassas</u>	State/Province: <u>VA</u>	Zip/Postal Code: <u>20110</u>	Country: <u>USA</u>
Report To (Name): <u>William Thomas</u>		Telephone #: <u>703-396-6730</u>	
Email Address: <u>Wthomas@apexcos.com</u>		Fax #: <u>703-396-6743</u> Purchase Order: <u> </u>	
Project Name/Number: <u>Bennett Building</u>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: <u>VA</u>		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

3 Hour 6 Hour 24 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)		TEM - Bulk	
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)	<input type="checkbox"/> PLM EPA NOB (<1%)	<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1	<input type="checkbox"/> NY ELAP Method 198.4 (TEM)
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	<input type="checkbox"/> Chatfield Protocol (semi-quantitative)	<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2
<input type="checkbox"/> NIOSH 9002 (<1%)	<input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)	<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique	<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)	<input type="checkbox"/> OSHA ID-191 Modified	Other	
<input type="checkbox"/> Standard Addition Method		<input type="checkbox"/>	

Check For Positive Stop - Clearly Identify Homogenous Group Date Sampled: 7/25/18

Samplers Name: Toni Sanders Samplers Signature: [Signature]

Sample #	HA #	Sample Location	Material Description
B77	27	1st Floor	Residual yellow waste
B78	27	↓	↓
B79	27	↓	↓

Client Sample # (s): B77 - B79 Total # of Samples: 3

Relinquished (Client): [Signature] Date: 7/25/18 Time: 16:10

Received (Lab): [Signature] Date: 7-26-18 Time: 9:20

Comments/Special Instructions: please send results to toni.sanders@apexcos.com

APPENDIX C
Lead-Based Paint Photolog



Photo 1: Mint green and cream paint on the plaster walls of the entrance stairwell. The mint green paint on the riser and stringer of the stairs. Both sides of the stairwell.

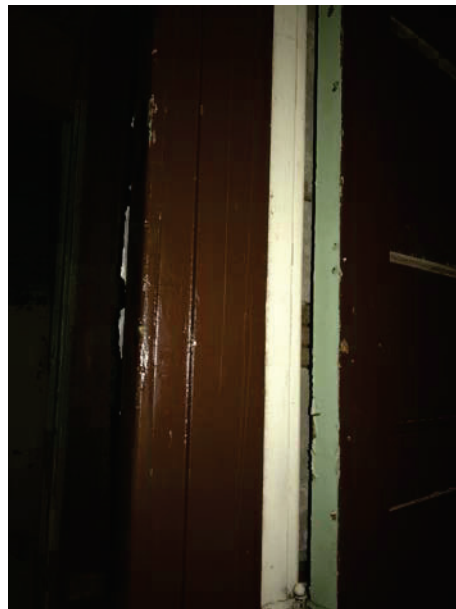


Photo 2: Brown paint on the door casing and the white paint on the door frame and door casing in the front left classroom on the 1st floor.

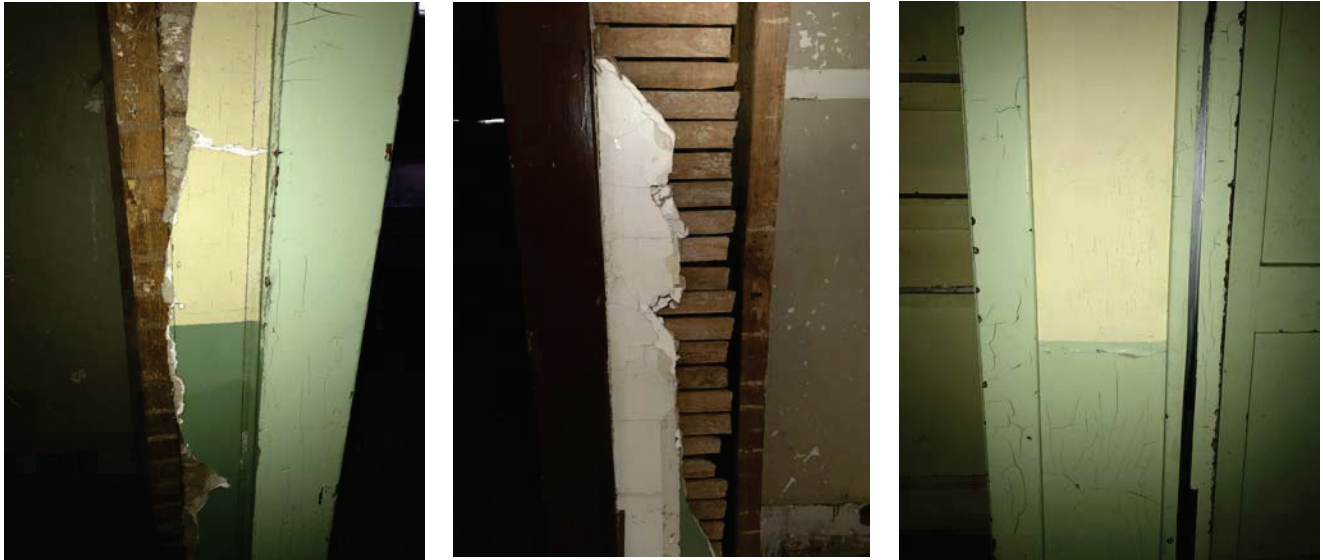


Photo 3: White, mint green, cream and green paint on the plaster in the 1st and 2nd floor hallway



Photo 4: Mint green paint on the wood door casing in the left rear classroom on the 1st floor. Cream paint on the door frame in the left rear classroom on the 1st floor.



Photo 5: Cream and beige paint on the plaster walls throughout the classrooms on the 1st floor



Photo 6: White paint on the plaster walls throughout the classrooms on the 1st floor



Photo 7: All single panel windows, window sills, window frames and window casing throughout the 1st and 2nd floor classrooms. Approximately 13 single panel windows throughout the 1st and 2nd floor classrooms.



Photo 8: All multiple panel windows, window sills, window frames and window casing throughout the 1st and 2nd floor classrooms. Approximately 80 multiple panel windows throughout the 1st and 2nd floor classrooms.



Photo 9: Mint green paint on the door of the 1st floor right front classroom



Photo 10: Green and cream paint on the plaster walls and wood stringer of the 1st to 2nd floor stairwell. Both sides of the stairwell.

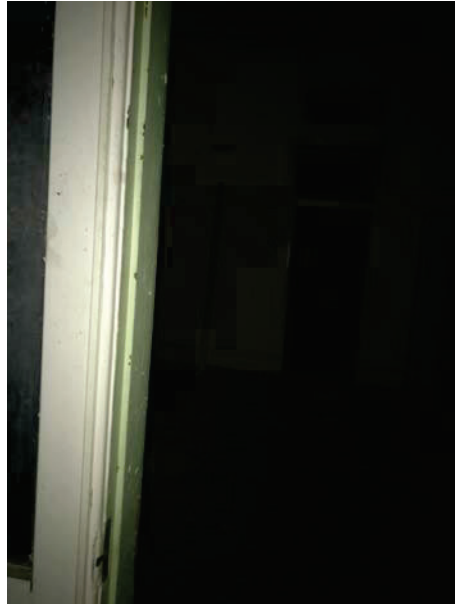


Photo 11: White paint on the door frame of the 2nd floor right front classroom

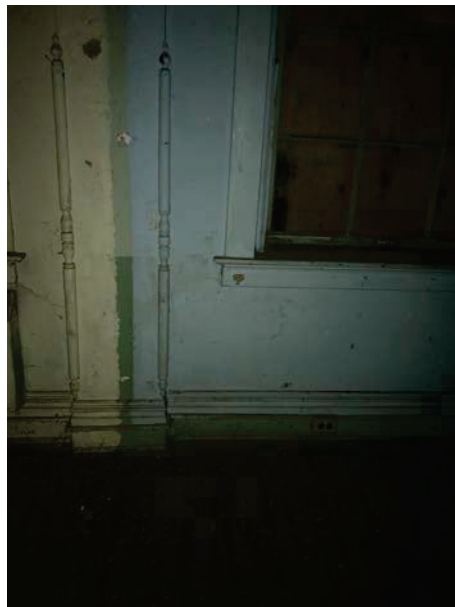


Photo 12: Blue, green, cream and white paint on the plaster walls in all the 2nd floor classrooms.



Photo 13: White paint on the brick the basement stairwell on both sides. White drywall overhang in this area on both sides of the basement stairs.



Photo 14: Blue gray paint on the basement stair risers on both sides.



Photo 15: White and green paint on the wood paneling and brick wall of the basement stairs.



Photo 16: Green paint on the basement right front and left front classroom wood door casing.



Photo 17: White and mint green paint on all plaster walls in the basement classrooms and hallway



Photo 18: White paint on the wood columns in the basement left front classroom



Photo 19: White and mint green paint on all windows in the basement. Approximately 10 windows in the basement.



Photo 20: Mint green paint on the walls, door, door frame and door casing in the basement left rear entry room to the left rear classroom.



Photo 21: Brown paint on the wood door frame and door casing on the basement right exit door in the right rear classroom.



Photo 22: Brown and mint green paint on the wood door frame and door casing in the left side room of the basement right rear classroom. The mint green and white paint on the brick wall and metal pipes in the same room.



Photo 23: White paint on the exterior left exit door.



Photo 24: White paint on all exterior window frame/caulking throughout the exterior of the subject property



Photo 25: White paint on the exterior right exit door

APPENDIX D
Bennett Building Photolog



Photo 1: Exterior View of Bennet Building [Looking toward Southern face]



Photo 2: Exterior View of Bennet Building [Looking toward Southeastern Corner]



Photo 3: Exterior View of Bennet Building [Looking toward Southeastern Corner]



Photo 4: Exterior View of Bennet Building [Looking toward Northeastern Corner]



Photo 5: Exterior View of Bennet Building [Looking toward Northern Face]



Photo 6: Exterior View of Bennet Building [Looking toward Northern Face]



Photo 7: Exterior View of Bennet Building [Looking toward Northwestern Corner]



Photo 8: Exterior View of Bennet Building [Looking toward Southwestern Corner]



Photo 9: Entryway/Front Door [Looking towards Southeast]



Photo 10: Entryway/Front Door [Looking towards Southwest]



Photo 11: Closet Space [Eastern side 1st floor]



Photo 12: Classroom [1st Floor, 1st room on left]



Photo 13: Classroom [1st floor, 2nd room on left]



Photo 14: Boiler Room [North End of Basement]



Photo 15: Unit Heaters [multiple in basement]



Photo 16: Classroom Radiators



Photo 17: Thermostat [Corner of Northeastern basement room]



Photo 18: Wiring [Basement Boiler Room]



Photo 19: Boiler Tanks [Basement Boiler Room]



Photo 20: Boiler Pipe Insulation [Basement Boiler Room]



Photo 21: Planking under Hardwood Flooring



Photo 22: Closeup of Planking under Flooring



Photo 23: 14" x 14" Ceiling Tiles [1st Floor]



Photo 24: Water-Stained Ceiling Tiles [1st Floor]

APPENDIX E
Wood Destroying Insect Inspection Report

Wood Destroying Insect Inspection Report

Notice: Please read important consumer information on page 2.

Section I. General Information

Inspection Company, Address & Phone
Triple S Services, Inc.
9160 Prince William Street
Manassas, VA 20110
703-368-8000

Company's Business Lic. No.
91000530

Date of Inspection
07/18/18

Address of Property Inspected
Office bldg
9300 Lee Ave
Manassas, VA 20110-5556

Inspector's Name, Signature & Certification, Registration, or Lic. #

Mark Boersig

#30292 - C

Structure(s) Inspected

Office Building

Section II. Inspection Findings This report is indicative of the condition of the above identified structure(s) on the date of inspection and is not to be construed as a guarantee or warranty against latent, concealed, or future infestations or defects. **Based on a careful visual inspection of the readily accessible areas of the structure(s) inspected:**

A. No visible evidence of wood destroying insects was observed.

B. Visible evidence of wood destroying insects was observed as follows:

1. Live insects (description and location): _____

2. Dead insects, insect parts, frass, shelter tubes, exit holes, or staining (description and location): Termite tubes on foundation wall in basement and on beam.

3. Visible damage from wood destroying insects was noted as follows (description and location): Termite damage to wall stud in basement. Termite damage to baseboard on 3th floor.

NOTE: This is not a structural damage report. If box B above is checked, it should be understood that some degree of damage, including hidden damage, may be present. If any questions arise regarding damage indicated by this report, it is recommended that the buyer or any interested parties contact a qualified structural professional to determine the extent of damage and the need for repairs.

Yes No It appears that the structure(s) or a portion thereof may have been previously treated. Visible evidence of possible previous treatment: _____

The inspecting company can give no assurances with regard to work done by other companies. The company that performed the treatment should be contacted for information on treatment and any warranty or service agreement which may be in place.

Section III. Recommendations

No treatment recommended: (Explain if Box B in Section II is checked) _____

Recommend treatment for the control of: Treatment for Termites

Section IV. Obstructions and Inaccessible Areas

The following areas of the structure(s) inspected were obstructed or inaccessible:

Basement 1,3,4,9,11,13,24

Crawlspace _____

Main Level 1,3,4,9,11,13

Attic _____

Garage _____

Exterior 17

Porch _____

Addition _____

Other _____

The inspector may write out obstructions or use the following optional key:

- | | |
|-------------------------|--|
| 1. Fixed ceiling | 13. Only visual access |
| 2. Suspended ceiling | 14. Cluttered condition |
| 3. Fixed wall covering | 15. Standing water |
| 4. Floor covering | 16. Dense vegetation |
| 5. Insulation | 17. Exterior siding |
| 6. Cabinets or shelving | 18. Window well covers |
| 7. Stored items | 19. Wood pile |
| 8. Furnishings | 20. Snow |
| 9. Appliances | 21. Unsafe conditions |
| 10. No access or entry | 22. Rigid foam board |
| 11. Limited access | 23. Synthetic stucco |
| 12. No access beneath | 24. Duct work, plumbing, and/or wiring |

Section V. Additional Comments and Attachments (these are an integral part of the report)

This report does not address health

implications or air quality

NO TREATMENT RENDERED BY TRIPLE S AS OF 7-18-18

Attachments _____

Signature of Seller(s) or Owner(s) if refinancing. Seller acknowledges that all information regarding W.D.I. infestation, damage, repair, and treatment history has been disclosed to the buyer.

X

Signature of Buyer. The undersigned hereby acknowledges receipt of a copy of both page 1 and page 2 of this report and understands the information reported.

X

Important Consumer Information Regarding the Scope and Limitations of the Inspection

Please read this entire page as it is part of this report. This report is not a guarantee or warranty as to the absence of wood destroying insects nor is it a structural integrity report. The inspector's training and experience do not qualify the inspector in damage evaluation or any other building construction technology and/or repair.

- 1. About the Inspection:** A visual inspection was conducted in the readily accessible areas of the structure(s) indicated (see Page 1) including attics and crawlspaces which permitted entry during the inspection. The inspection included probing and/or sounding of unobstructed and accessible areas to determine the presence or absence of visual evidence of wood destroying insects. The WDI inspection firm is not responsible to repair any damage or treat any infestation at the structure(s) inspected, except as may be provided by separate contract. Also, wood destroying insect infestation and/or damage may exist in concealed or inaccessible areas. The inspection firm cannot guarantee that any wood destroying insect infestation and/or damage disclosed by this inspection represents all of the wood destroying insect infestation and/or damage which may exist as of the date of the inspection. ***For purposes of this inspection, wood destroying insects include: termites, carpenter ants, carpenter bees, and reinfesting wood boring beetles. This inspection does not include mold, mildew or noninsect wood destroying organisms.*** This report shall be considered invalid for purposes of securing a mortgage and/or settlement of property transfer if not used within ninety (90) days from the date of inspection. **This shall not be construed as a 90-day warranty.** There is no warranty, express or implied, related to this report unless disclosed as required by state regulations or a written warranty or service agreement is attached.
- 2. Treatment Recommendation Guidelines Regarding Subterranean Termites:** FHA and VA require treatment when any active infestation of subterranean termites is found. If signs of subterranean termites — but no activity — are found in a structure that shows no evidence of having been treated for subterranean termites in the past, then a treatment should be recommended. A treatment may also be recommended for a previously treated structure showing evidence of subterranean termites — but no activity — if there is no documentation of a liquid treatment by a licensed pest control company within the previous five years unless the structure is presently under warranty or covered by a service agreement with a licensed pest control company.
- 3. Obstructions and Inaccessible Areas:** No inspection was made in areas which required the breaking apart or into, dismantling, removal of any object, including but not limited to: moldings, floor coverings, wall coverings, siding, fixed ceilings, insulation, furniture, appliances, and/or personal possessions; nor were areas inspected which were obstructed or inaccessible for physical access on the date of inspection. Your inspector may write out inaccessible areas or use the key in Section IV. Crawl spaces, attics, and/or other areas may be deemed inaccessible if the opening to the area is not large enough to provide physical access for the inspector or if a ladder was required for access. Crawl spaces (or portions thereof) may also be deemed inaccessible if there is less than 24 inches of clearance from the bottom of the floor joists to the surface below. If any area which has been reported as inaccessible is made accessible, the inspection company may be contacted for another inspection. An additional fee may apply.
- 4. Consumer Maintenance Advisory Regarding Integrated Pest Management for Prevention of Wood Destroying Insects.** Any structure can be attacked by wood destroying insects. Homeowners should be aware of and try to eliminate conditions which promote insect infestation in and around their structure(s). Factors which may lead to wood destroying insect infestation include: earth to wood contact, foam insulation at foundation in contact with soil, faulty grade, improper drainage, firewood against structure(s), insufficient ventilation, moisture, wood debris in crawlspace, wood mulch or ground cover in contact with the structure, tree branches touching structure(s), landscape timbers and wood decay. Should these or other conditions exist, corrective measures should be taken in order to reduce the chances of infestation of wood destroying insects and the need for treatment.
- 5. Neither the inspecting company nor the inspector has had, presently has, or contemplates having any interest in the property inspected.**

VA Toll Free - 800-475-3785

MD Toll Free - 888-874-7536

Address 9300 Lee Ave

Owner Apex

Manassas, VA

Inspector M.H.H.

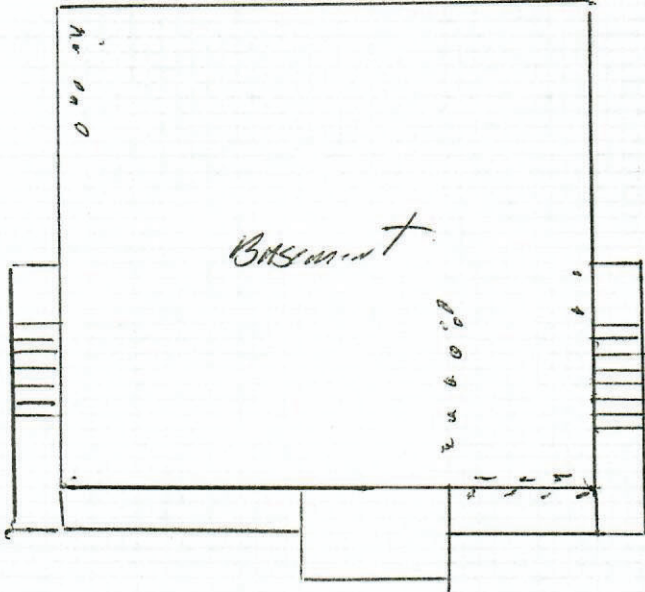
Date 7/18/2018 MAP # _____

Type of Structure:	Stone Brick Veneer <input type="checkbox"/>	Frame Block <input checked="" type="checkbox"/>	Basement Walls:	Concrete Block <input type="checkbox"/>	Partial Finished <input checked="" type="checkbox"/>	Finished <input type="checkbox"/>	Unfinished <input type="checkbox"/>	
Basement Ceiling:	Open <input type="checkbox"/>	Closed <input checked="" type="checkbox"/>	Basement Floor:	Concrete Tile <input type="checkbox"/>	Wood Carpet <input type="checkbox"/>			
Type Heat:	Radiant <input type="checkbox"/>	Hot Air <input type="checkbox"/>	Type Water Supply:	Well <input type="checkbox"/>	Public <input checked="" type="checkbox"/>	Basement Excavation:	Crawl Full <input checked="" type="checkbox"/>	Slab Split <input type="checkbox"/>

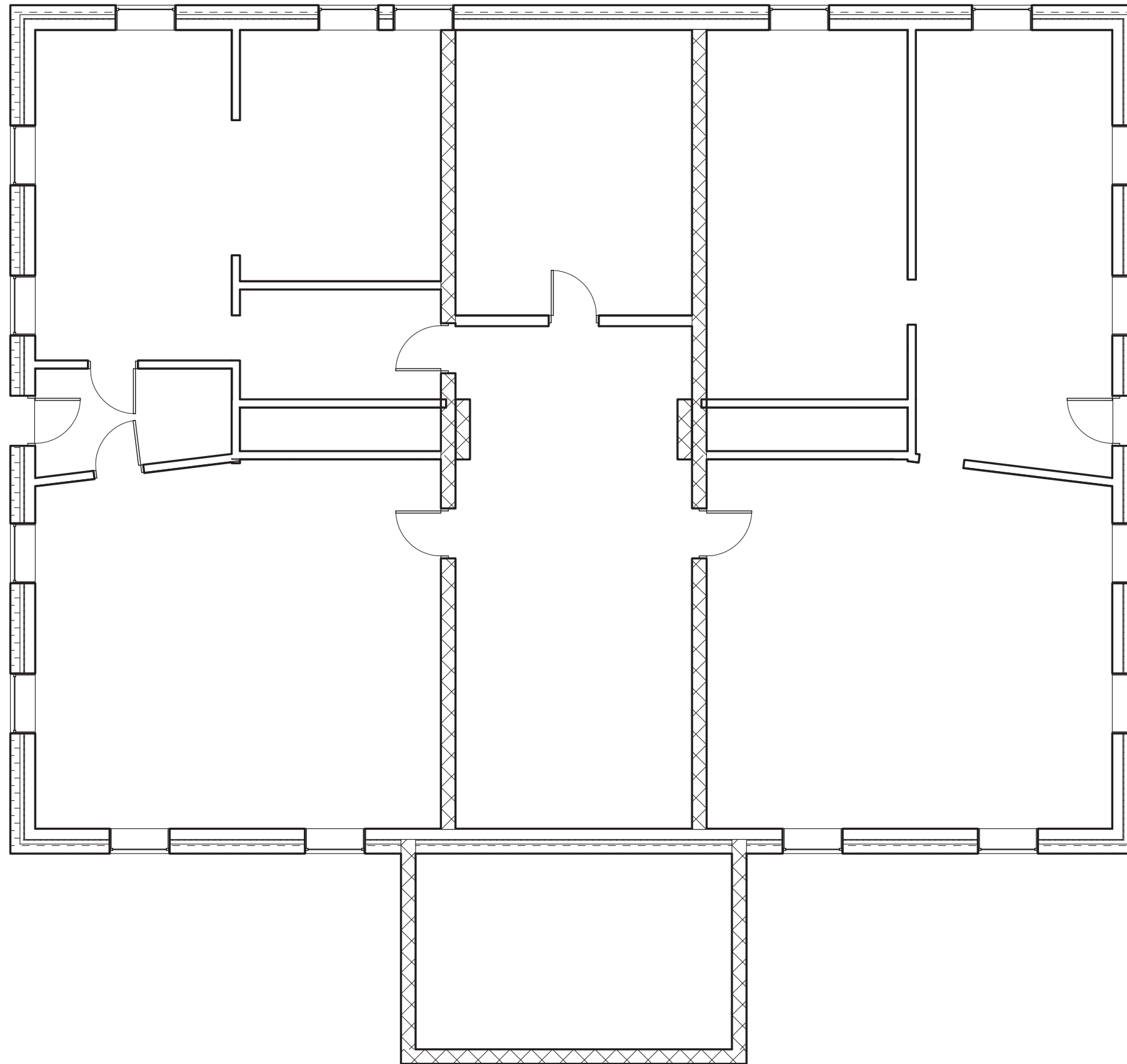
INFESTED AREA XXX

REPAIRS NEEDED ■■■

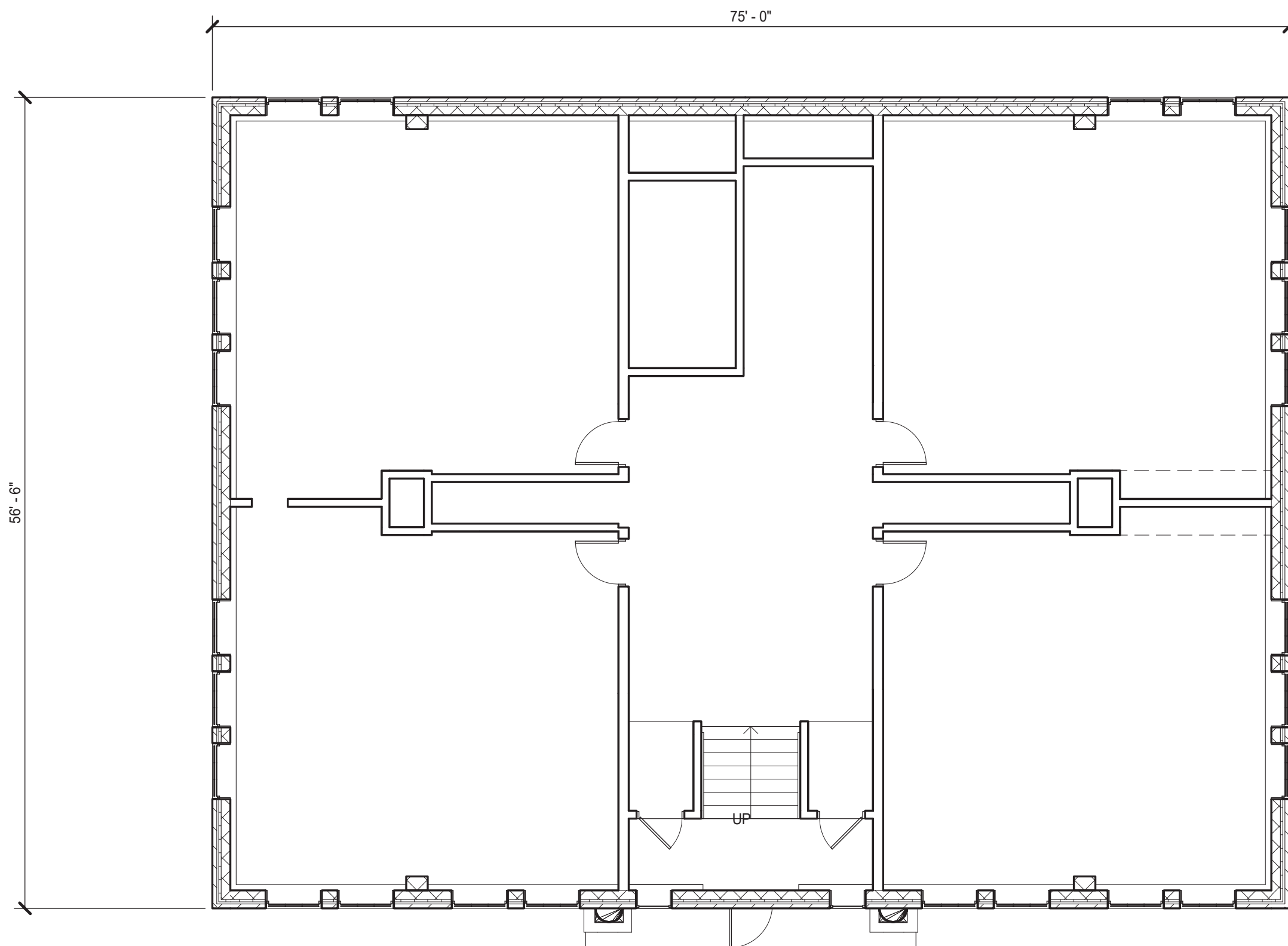
260



**APPENDIX C:
FLOOR PLANS OF THE EXISTING BUILDING**

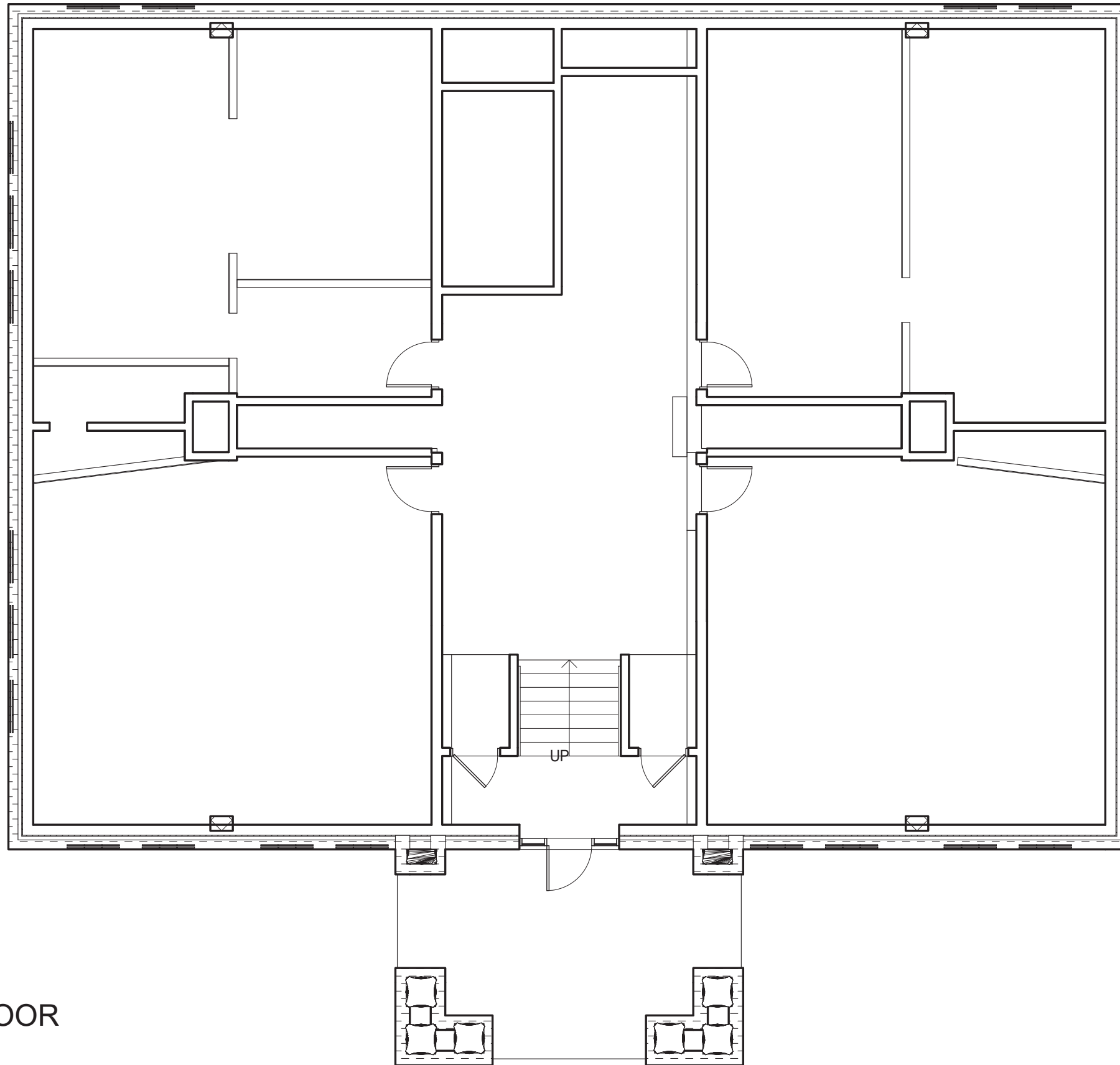


BASEMENT

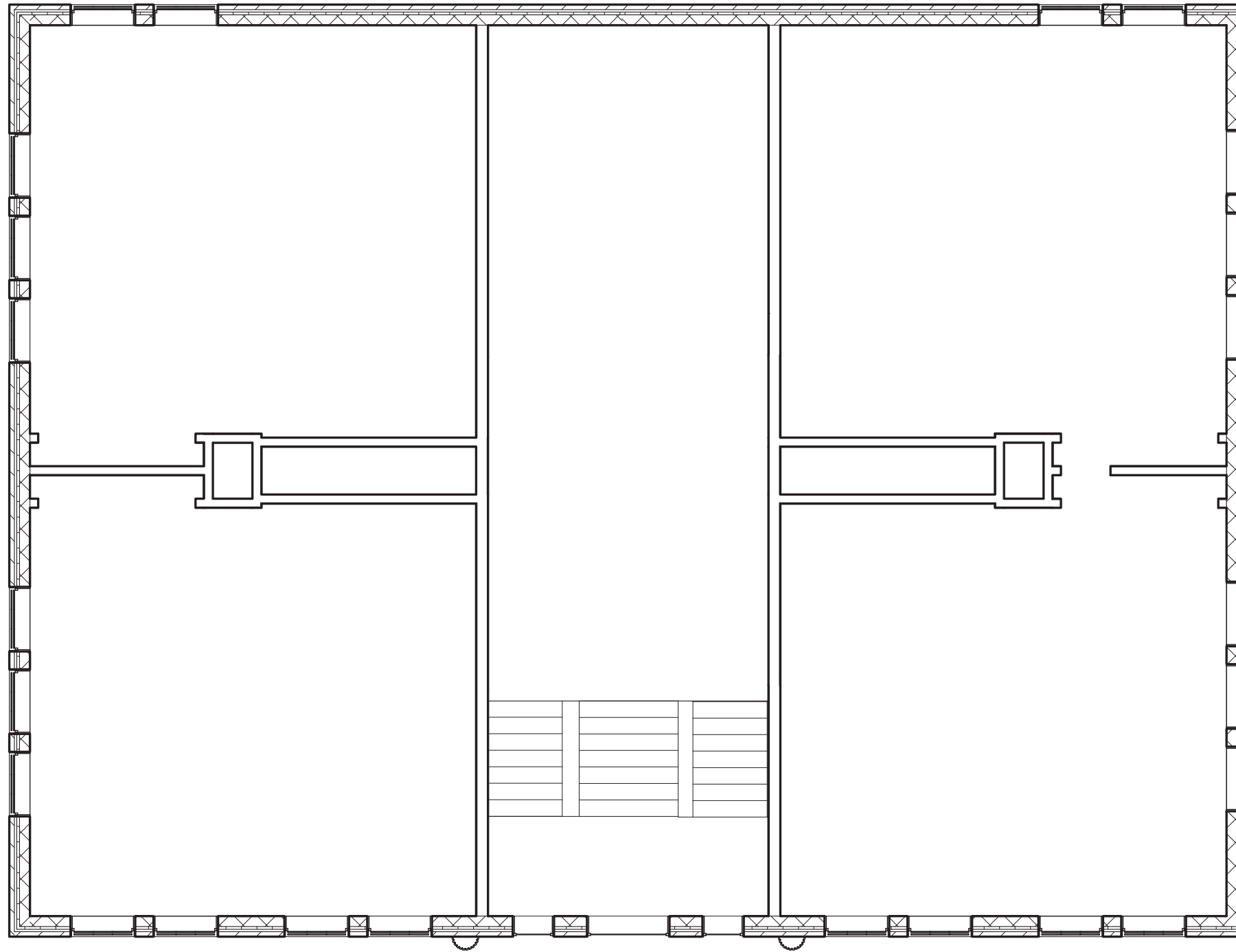


FIRST FLOOR





GROUND FLOOR



SECOND FLOOR



**APPENDIX D:
SPACE NEEDS ASSESSMENT**

PRINCE WILLIAM COUNTY SHERIFF'S OFFICE SPACE NEEDS ANALYSIS

SPACE REQUIREMENTS SUMMARY

PAGE	CURRENT SPACE & PERSONNEL*		CURRENT NEEDS**		2023 NEEDS		2028 NEEDS		2038 NEEDS		ADDITIONAL SQUARE FOOTAGE NEEDED BY 2038	
	NET SQ FT (NSF)	PERS	NSF	PERS	NSF	PERS	NSF	PERS	NSF	NET SQ FT (NSF)	GROSS SQ FT (GSF)	
PUBLIC SAFETY												
		3	3,480	3	3,501	4	3,609	5	3,845		+3845	+5915
		33	2,303	39	2,580	44	2,742	47	2,796		+2796	+4301
		10	3,923	14	4,321	18	4,868	21	5,253		+5253	+8081
		53	521	63	575	74	629	85	2,857		+2857	+4395
			2,977		3,220		3,470		3,699		+3699	+5691
		99	13,204	119	14,197	140	15,317	158	18,449		18,449	28,383
		65.00%		20,314		21,841		23,565		28,383		
Required gross square footage calculation above is determined using an efficiency of 65%.												

The existing Bennett Building is approximately 12,600 gross square feet (approximately 56'x75' on three floors).

There is approximately 2700 square feet of net usable square feet per floor divided among the four classrooms. This equates to an efficiency of approximately 65%.

Based on an efficiency of 65% an expansion of approximately 12,000 square feet would be required to provide 24,600 total gross square feet.

* CURRENT SPACE AND PERSONNEL indicates the amount of NSF (net square feet) currently occupied by a department with its current staff. The current staffing level indicated is the number of personnel currently staffing the department which needs to be housed in its space. It does not account for any current staffing deficiencies or excesses.

** CURRENT NEEDS NSF indicates the amount of NSF (net square feet) required to meet the needs of the current staff based on appropriate space standards. The difference between CURRENT NEEDS NSF and CURRENT SPACE NSF is the deficiency or excess of space for the current staff.

PRINCE WILLIAM COUNTY SHERIFF'S OFFICE SPACE NEEDS ANALYSIS

SPACE REQUIRED			CURRENT NEEDS		2023 NEEDS		2028 NEEDS		2038 NEEDS		REMARKS
	DESCRIPTION	SPACE CODE	SQ FT EACH	QTY	SQ FT	QTY	SQ FT	QTY	SQ FT	QTY	
SHERIFF - EXECUTIVE STAFF											
<u>PERSONNEL SPACE</u>											
Sheriff	po4	160	1	160	1	160	1	160	1	160	Conference space in office; located at southwest corner of third floor
Major - chief deputy	po4	160	1	160	1	160	1	160	2	320	
Executive assistant - administrative assistant	ws3	65	1	65	1	65	2	130	2	130	With BR glass window to visitor waiting
<u>SUPPORT SPACE</u>											
Visitor waiting - seat 10	vis10	200	1	200	1	200	1	200	1	200	With CCTV cameras; on third floor
Public workstation/counter	cs5	25	1	25	1	25	1	25	1	25	For completing forms or documents
Public toilet rooms	toil2	120	2	240	2	240	2	240	2	240	
Shared VCIN workstation	ws3	65									Located in Sheriff - Operations; securable with door and access control
Files - Active	wall4	15	17	255	18	270	19	285	20	300	CONFIRM all are shared files (currently 2 lats, 7 verts, 8 open shelf units)
Files - Inactive	wall4	15	27	405	27	405	27	405	27	405	CONFIRM all are shared files (currently 12 verts, 8 open shelf units, and 70 boxes)
Storage - secured/vault	st1	25	1	25	1	25	1	25	1	25	
Storage - office supplies	st2	50	1	50	1	50	1	50	1	50	
Storage - maint supplies for cleaning	st2	50	1	50	1	50	1	50	1	50	
Conference room - seat 8	cnf8	180	2	360	2	360	2	360	2	360	Access from outside secured area; one for front of house; one next to Sheriff's Office
Conference room - seat 25	cnf24	375	1	375	1	375	1	375	1	375	Sheriff's Conference Room; projectors, projector screens, Smart Boards, audio equipment for handling multi-media technology, wall mounter monitors, multiple computer jacks, multiple phones with multiple line capabilities, dry-erase boards, and the ability to interface with the security system of the Judicial Center to have live feed from cameras at all times; on southeast corner of building
Coffee niche	cof1	30	1	30	1	30	1	30	1	30	Adjacent to conference room; Refrigerator, microwave, sink, coffee pot
Staff toilet rooms	toil1	50	2	100	2	100	2	100	2	100	
Copier	cpy10	50	1	50	1	50	1	50	1	50	
Fax machine	fax1	6	1	6	1	6	1	6	1	6	
Handgun lockers	n/a	6	1	6	1	6	1	6	1	6	
Fitness Room											Refer to Shared division
Toilet/shower rooms											Refer to Shared division
Locker rooms											Refer to Shared division
Handgun lockers	n/a	6	1	6	1	6	1	6	1	6	
Coat closet	clos1	10	1	10	1	10	1	10	1	10	
TOTAL PERSONNEL			3		3		4		5		Parking area within secured lot
SUBTOTAL SPACE REQUIRED				2,578		2,593		2,673		2,848	Secured access to suite; BR perimeter around public areas
INTERNAL CIRCULATION FACTOR		35%		902		908		936		997	CCTV camera monitoring in all offices and customer service
TOTAL DEPARTMENT NET SPACE REQ'D				3,480		3,501		3,609		3,845	Locate on third floor

PRINCE WILLIAM COUNTY SHERIFF'S OFFICE SPACE NEEDS ANALYSIS

SPACE REQUIRED	SPACE CODE	SQ FT EACH	CURRENT NEEDS		2023 NEEDS		2028 NEEDS		2038 NEEDS		REMARKS
			QTY	SQ FT	QTY	SQ FT	QTY	SQ FT	QTY	SQ FT	
SHERIFF - OPERATIONS DIVISION - CIVIL PROCESS, WARRANTS, TRANSPORTATION											
<u>PERSONNEL SPACE</u>											
Captain	po2	120	1	120	1	120	1	120	1	120	
Lieutenant	po2	120	1	120	1	120	2	240	2	240	
First sergeant	po1	100	2	200	3	300	3	300	3	300	
Sergeant	ws3	65	3	195	4	260	4	260	4	260	Co-located in shared enclosed office
Master deputy	n/a	n/a	4		5		6		6		No dedicated work space required
Deputy	n/a	n/a	18		21		24		27		No dedicated work space required
Civilian staff supervisor	po1	100	1	100	1	100	1	100	1	100	
Civilian staff	n/a	n/a	3		3		3		3		No dedicated work space required
<u>SUPPORT SPACE</u>											
Visitor waiting - seat 20	vis20	400									Shared with Sheriff - Administration
Files - Active	wall4	15	3	45	3	45	3	45	3	45	
Files - Inactive	vert	10	5	50	5	50	5	50	5	50	
Storage - vehicle keys	cab1	10	1	10	1	10	1	10	1	10	Vehicle keys, manuals, SOP's
Storage - office supplies	st1	25	1	25	1	25	1	25	1	25	
Storage - multi-bin shelving	st1	25	1	25	1	25	1	25	1	25	Paperwork
Shared deputy workstations	ws1	40	4	160	5	200	5	200	6	240	One workstation for every 6 deputies and part-time deputies
Conference room - seat 6	cnf6	120	1	120	1	120	1	120	1	120	Large wall maps depicting County Beat areas
Roll call/Conference room - seat 25	cnf24	375	1	375	1	375	1	375	1	375	Share with Sheriff - Court Security; for community meetings, town hall meetings, command post for incidents
Shared VCIN workstation	ws3	65	1	65	1	65	1	65	1	65	Share with Sheriff - Executive staff; refer to Sheriff - Executive Staff; securable with door and access control
Copier	cpy10	50	1	50	1	50	1	50	1	50	
Fax	fax1	6	1	6	1	6	1	6	1	6	
Coffee niche	cof1	30	1	30	1	30	1	30	1	30	
Coat closet	clo1	10	1	10	1	10	1	10	1	10	
TOTAL PERSONNEL			33		39		44		47		
SUBTOTAL SPACE REQUIRED				1,706		1,911		2,031		2,071	
INTERNAL CIRCULATION FACTOR			35%	597		669		711		725	
TOTAL DEPARTMENT NET SPACE REQ'D				2,303		2,580		2,742		2,796	

PRINCE WILLIAM COUNTY SHERIFF'S OFFICE SPACE NEEDS ANALYSIS

SPACE REQUIRED	CURRENT NEEDS		2023 NEEDS		2028 NEEDS		2038 NEEDS		REMARKS		
	DESCRIPTION	SPACE CODE	SQ FT EACH	QTY	SQ FT	QTY	SQ FT	QTY		SQ FT	
SHERIFF - ADMINSTRATIVE DIVISION - OFFICE OF PROFESSIONAL STANDARDS											
<u>PERSONNEL SPACE</u>											
Captain	po2	120	1	120	1	120	1	120	1	120	Electronic access; IA and accreditation files
Lieutenant	po2	120	1	120	1	120	2	240	2	240	Electronic access; IA and accreditation files
Master deputy	ws3	65	1	65	2	130	2	130	2	130	
Deputy	ws3	65	2	130	3	195	3	195	4	260	
Budget analyst***	po2	120	1	120	1	120	1	120	1	120	Includes files for current financial year, fax and printer; located with Executive staff - third floor***
HR/Payroll**	po2	120					1	120	1	120	Includes files for current financial year, fax and printer; located with Executive staff - third floor***
Records manager***	po2	120	1	120	1	120	1	120	2	240	Includes files for past three years, dutch door for distribution of documents; secured documents storage; located with Executive staff - third floor***
IT***	po1	100	1	100	2	200	2	200	3	300	Located with Executive staff - third floor***
Supply coordinator***	po1	100	1	100	1	100	2	200	2	200	Located with Executive staff - third floor***
Civilian staff*	ws3	65	1	65	2	130	3	195	3	195	Located on first floor adjacent to visitor waiting* ; receptionists for entire building
<u>SUPPORT SPACE</u>											
Visitor waiting - seat 20*	vis20	400	1	400	1	400	1	400	1	400	Shared with Sheriff - Operations; located on first floor near entry*
Fingerprint room*	cnf4	120	1	120	1	120	1	120	1	120	Located on first floor adjacent to visitor waiting*
Interview room - seat 6*	cnf6	120	1	120	1	120	1	120	1	120	Located on first floor adjacent to visitor waiting*
Receptionist - shared workstations*	ws1	40	2	80	2	80	2	80	2	80	Located on first floor adjacent to visitor waiting*
Files - Active	vert	10	14	140	14	140	14	140	14	140	
Files - Inactive	vert	10	5	50	5	50	5	50	5	50	
Conference room - seat 20	cnf20	350	1	350	1	350	1	350	1	350	DCJS classroom; For Project Lifesaver clients
Storage - quartermaster	st9	400	1	400	1	400	1	400	1	400	16'x24' with shelving and rollup window for distribution; uniforms, gear, equipment, riot gear, PPE equipment, shields; counterspace for sorting equipment
Storage - ammunition and armory	st5	160	1	160	1	160	1	160	1	160	Vault with fire partitions and weapon cleaning station
Storage - office supplies	st1	25	1	25	1	25	1	25	1	25	
Storage - general	st1	25	1	25	1	25	1	25	1	25	Storage for community service products and event equipment
Copier	cpy10	50	1	50	1	50	1	50	1	50	
Fax	fax1	6	1	6	1	6	1	6	1	6	
Coffee niche	cof1	30	1	30	1	30	1	30	1	30	
Coat closet	clos1	10	1	10	1	10	1	10	1	10	
TOTAL PERSONNEL			10		14		18		21		
SUBTOTAL SPACE REQUIRED				2,906		3,201		3,606		3,891	
INTERNAL CIRCULATION FACTOR			35%	1,017		1,120		1,262		1,362	
TOTAL DEPARTMENT NET SPACE REQ'D				3,923		4,321		4,868		5,253	Five sections: Human Resources, Internal Affairs, Records, Information Technology, and Budget/Financial Analysis

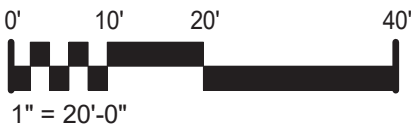
PRINCE WILLIAM COUNTY SHERIFF'S OFFICE SPACE NEEDS ANALYSIS

SPACE REQUIRED			CURRENT NEEDS		2023 NEEDS		2028 NEEDS		2038 NEEDS		REMARKS
	DESCRIPTION	SPACE CODE	SQ FT EACH	QTY	SQ FT	QTY	SQ FT	QTY	SQ FT	QTY	
SHERIFF - COURT SERVICES DIVISION											
<u>PERSONNEL SPACE</u>											
Captain	po2	120	1	120	1	120	1	120	2	240	
Lieutenant	po2	120	1	120	1	120	2	240	2	240	
First sergeant	po1	100	3	300	4	400	4	400	4	400	
Sergeant	po1	100	4	400	5	500	6	600	6	600	
Master deputy	n/a	n/a	5		5		6		7		No dedicated work space required
Deputy	n/a	n/a	27		32		37		42		No dedicated work space required
Part-time deputy	n/a	n/a	8		9		10		12		No dedicated work space required
Live scan	n/a	n/a	2		3		3		4		Located in Judicial Center
Dispatcher	n/a	n/a	2		3		3		4		Located in Judicial Center
Civilian staff	ws3	65					2	130	2	130	
<u>SUPPORT SPACE</u>											
Visitor queuing area - standing room for 40	vis40	800									Located in Judicial Center
Court security shared office	po5	200									Located in Judicial Center; With CCTV monitoring equipment
Public entry security screening station	n/a	384									Two magnetometers, two x-ray machines, two workstations
Spare screening equipment storage	st6	200									Two magnetometers, two x-ray machines
Storage - tactical gear/armory	st3	80									Located in Judicial Center
Conference/training/roll call room - seat 60	tr6	900									Located in Judicial Center; use jury assembly
Shared deputy worktable	wrk3	30	2	60	2	60	2	60	2	60	Worktable for shared communal workspace
Shared deputy workstations	ws1	40	6	240	7	280	8	320	9	360	One workstation for every 6 deputies and part-time deputies
Roll call/Conference room - seat 25	cnf24	375									Shared with Sheriff - Operations; Refer to Sheriff - Operations;
Files - Active											No dedicated space required.
Copier	cpy10	50	1	50	1	50	1	50	1	50	
Fax	fax1	6	1	6	1	6	1	6	1	6	
Coffee niche	cof1	30	1	30	1	30	1	30	1	30	
<u>Central prisoner holding area</u>											
~Holding cell - seat 1 or 2											Located in Judicial Center
~Holding cell - seat 10											Located in Judicial Center
~Holding cell sallyports											Located in Judicial Center
~Holding area vestibule											Located in Judicial Center
~Holding area sallyport											Located in Judicial Center
~Security control room	cnt1	250									Located in Judicial Center
~Security electronics room	st7	250									Located in Judicial Center
~Vehicle sallyport											Located in Judicial Center
TOTAL PERSONNEL			53		63		74		85		
SUBTOTAL SPACE REQUIRED				386		426		466		2,116	
INTERNAL CIRCULATION FACTOR			35%	135		149		163		741	
TOTAL DEPARTMENT NET SPACE REQ'D				521		575		629		2,857	

PRINCE WILLIAM COUNTY SHERIFF'S OFFICE SPACE NEEDS ANALYSIS

SPACE REQUIRED			CURRENT NEEDS		2023 NEEDS		2028 NEEDS		2038 NEEDS		REMARKS
DESCRIPTION	SPACE CODE	SQ FT EACH	QTY	SQ FT	QTY	SQ FT	QTY	SQ FT	QTY	SQ FT	
SHERIFF - SHARED											
<u>PERSONNEL SPACE</u>											
None											
<u>SUPPORT SPACE</u>											
Locker - duty for sergeants/deputies	lkr3	10	76	760	92	920	106	1,060	120	1,200	For all with workstations or no dedicated workspace; divided between 65% male and 35% female
Locker - day for captains, lieutenant, and administration	lkr1	5	23	115	27	135	34	170	38	190	For all with private offices and admin; divided between 65% male and 35% female
Fitness room	n/a	400	1	400	1	400	1	400	1	400	Share with all divisions
Toilet/shower room	toil5	300	2	600	2	600	2	600	2	600	Share with all divisions; three showers, three water closets, two sinks
Kitchen/breakroom - seat 10	kit10	320	1	320	1	320	1	320	1	320	Share with all divisions; Refrig, two microwaves, counter or rolling convection oven by caterer, counter with outlets; adjacent to roll call, community meeting room
Coat closet	clos1	10	1	10	1	10	2	20	3	30	
TOTAL PERSONNEL											
SUBTOTAL SPACE REQUIRED					2,205	2,385		2,570		2,740	Requires special parking for bus, trailer, ATV's and covered area for servicing and cleaning vehicles
INTERNAL CIRCULATION FACTOR		35%		772		835		900		959	
TOTAL DEPARTMENT NET SPACE REQ'D					2,977	3,220		3,470		3,699	

**APPENDIX E:
CONCEPTUAL DESIGN OPTIONS**



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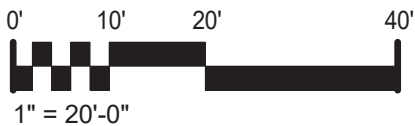
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OPTION 1 - FIRST FLOOR PLAN

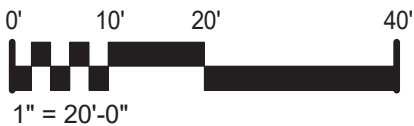
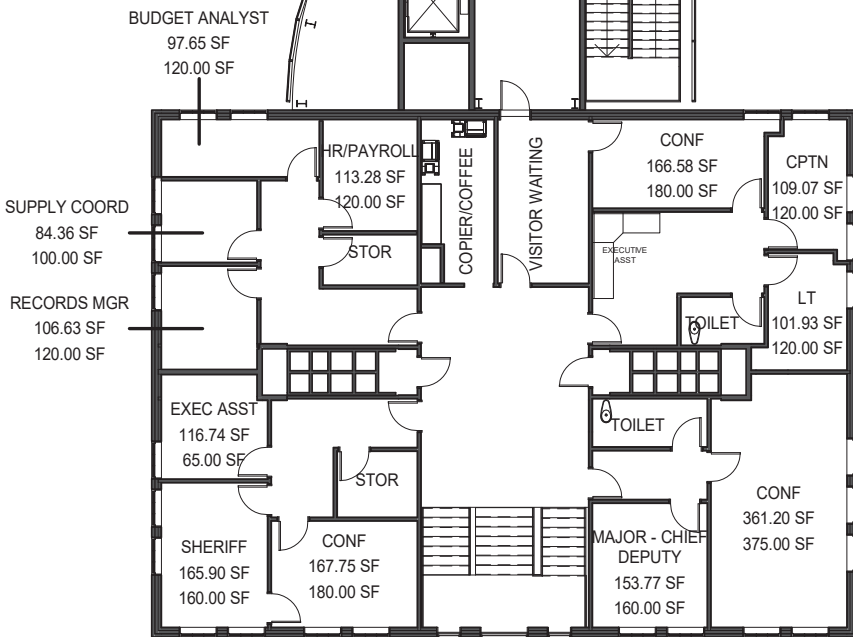
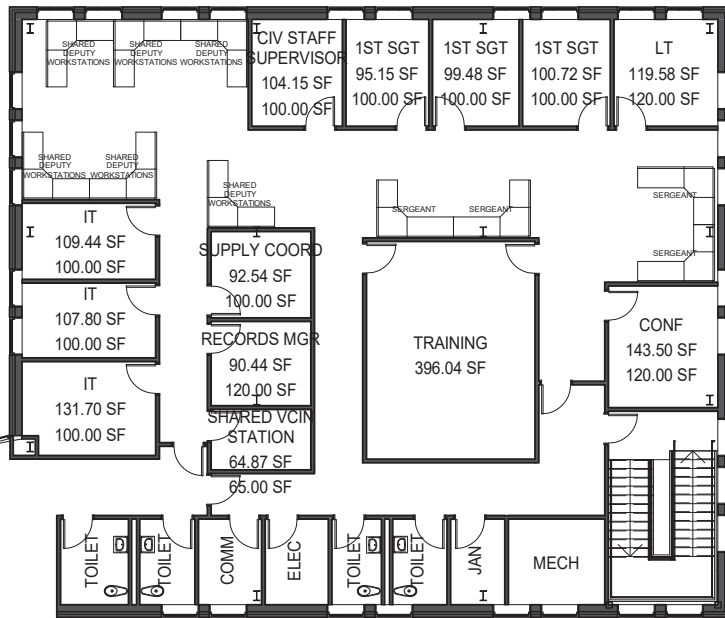
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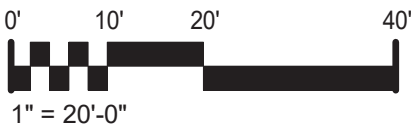
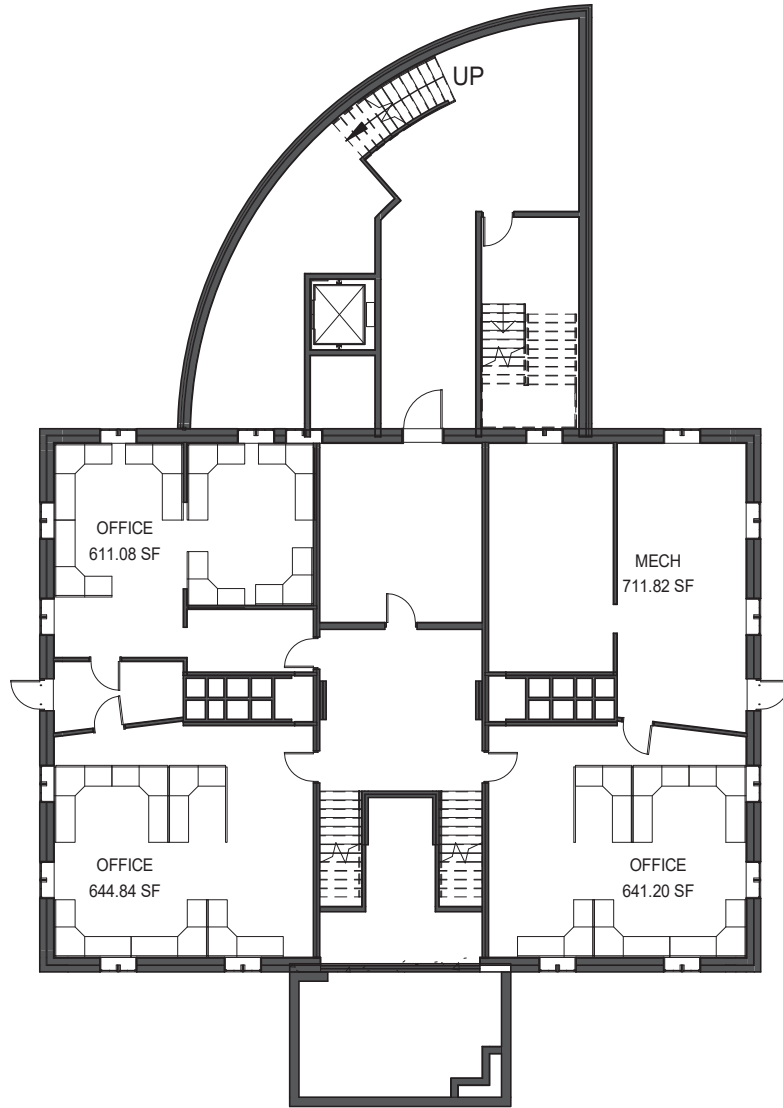
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OPTION 2 - LOWER LEVEL FLOOR PLAN

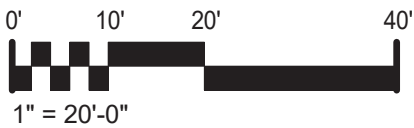
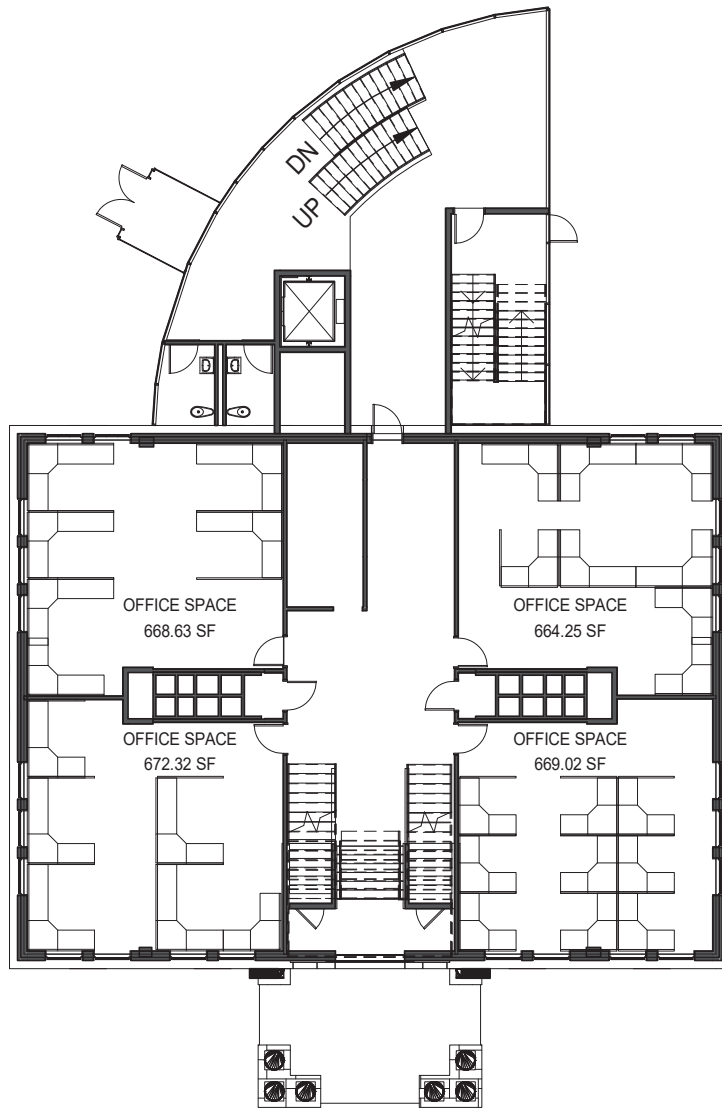
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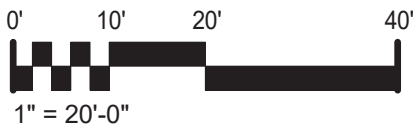
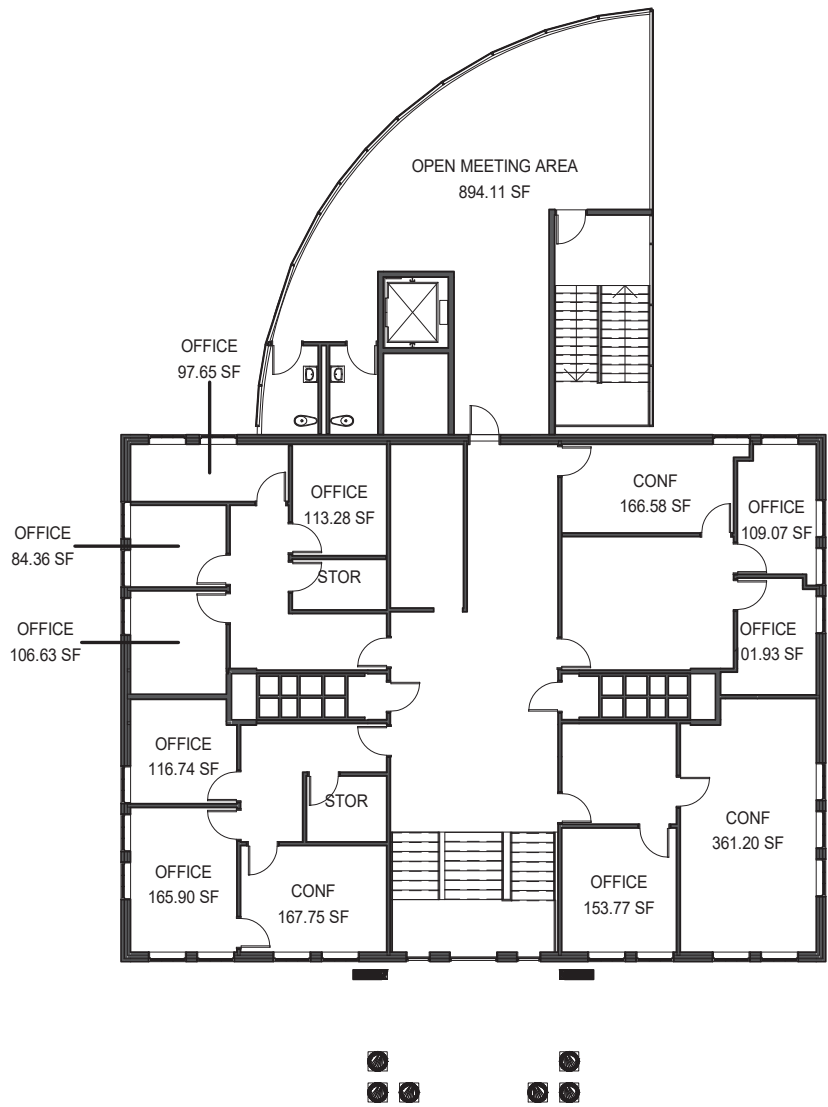
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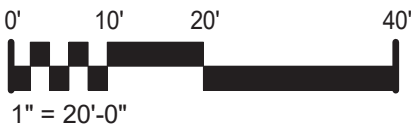
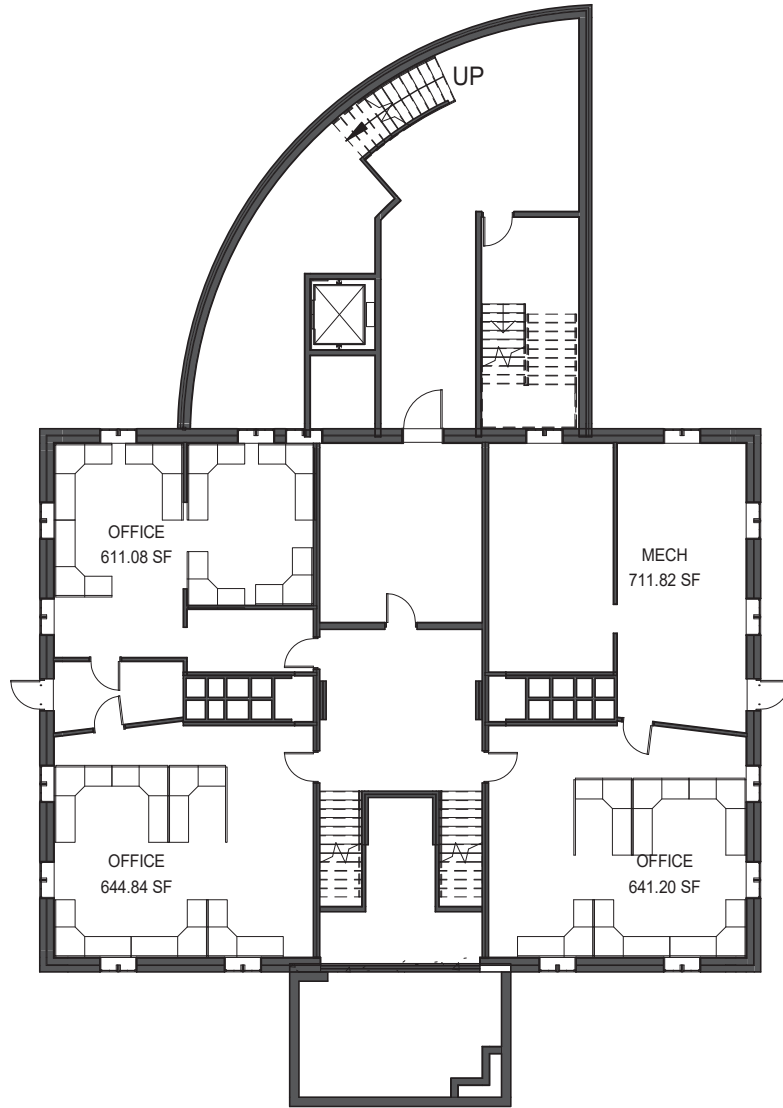
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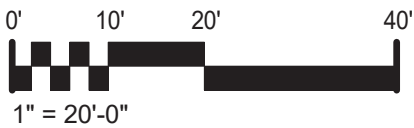
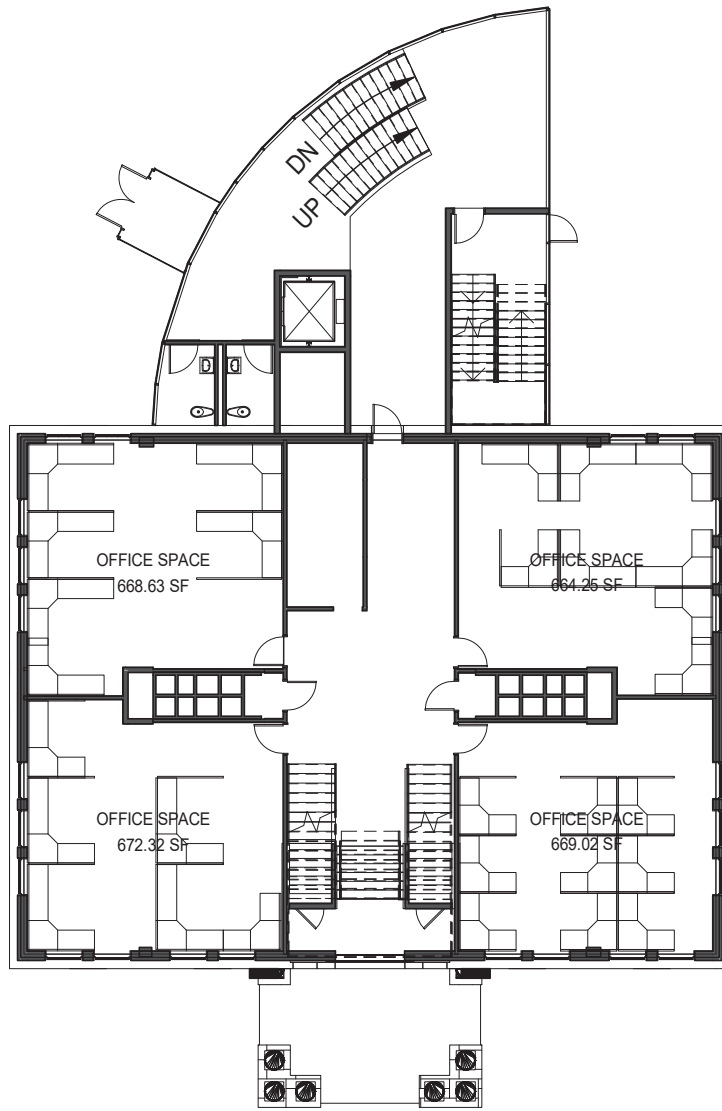
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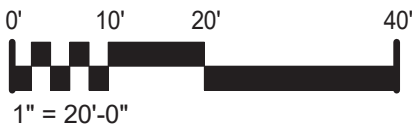
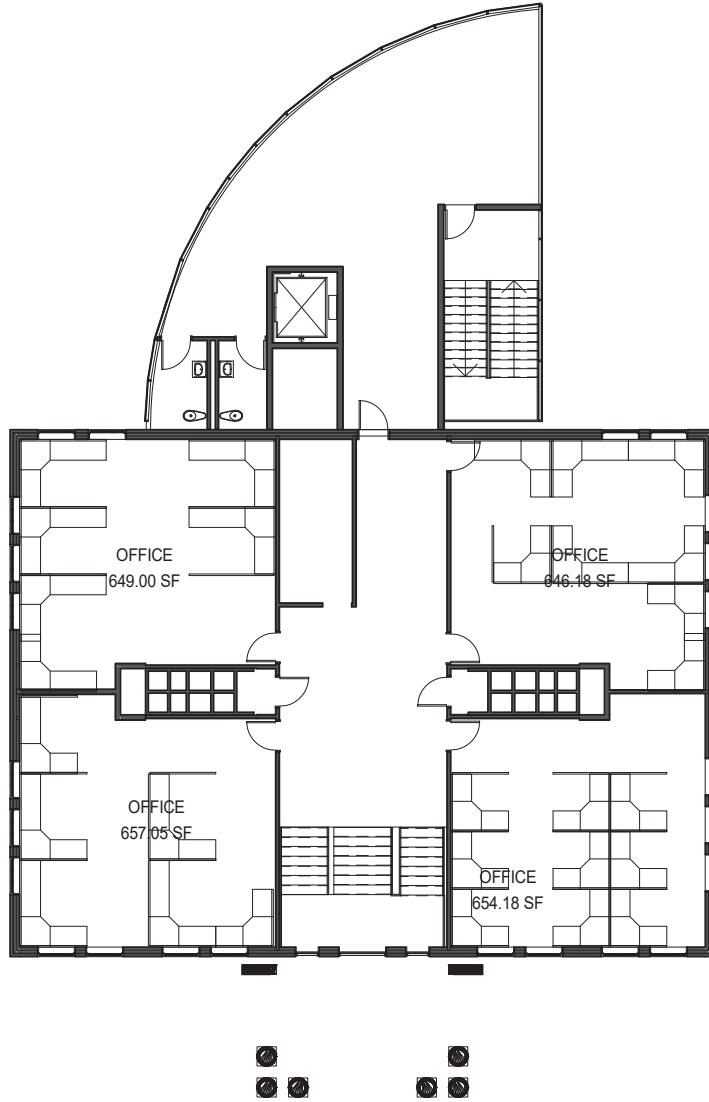
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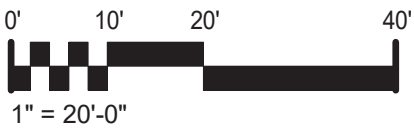
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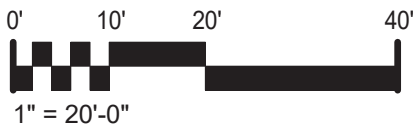


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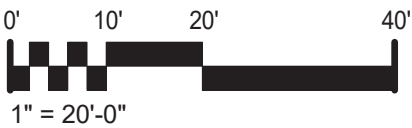
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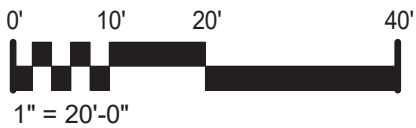
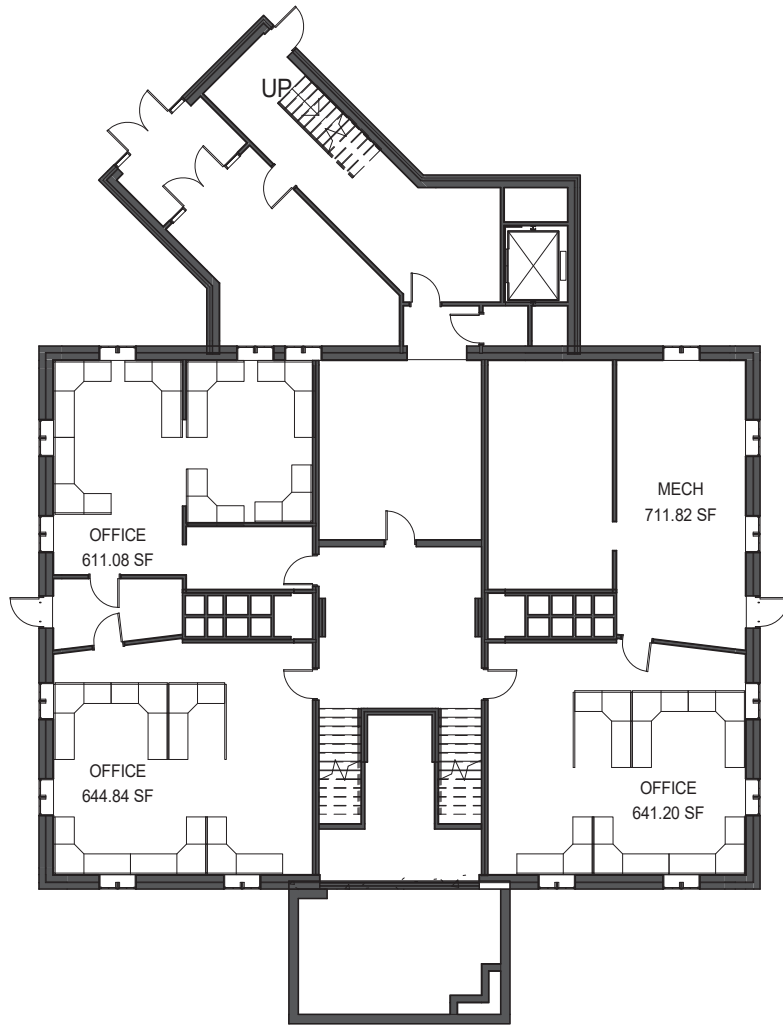
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OPTION 5 - LOWER LEVEL FLOOR PLAN

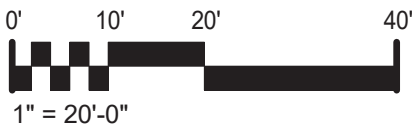
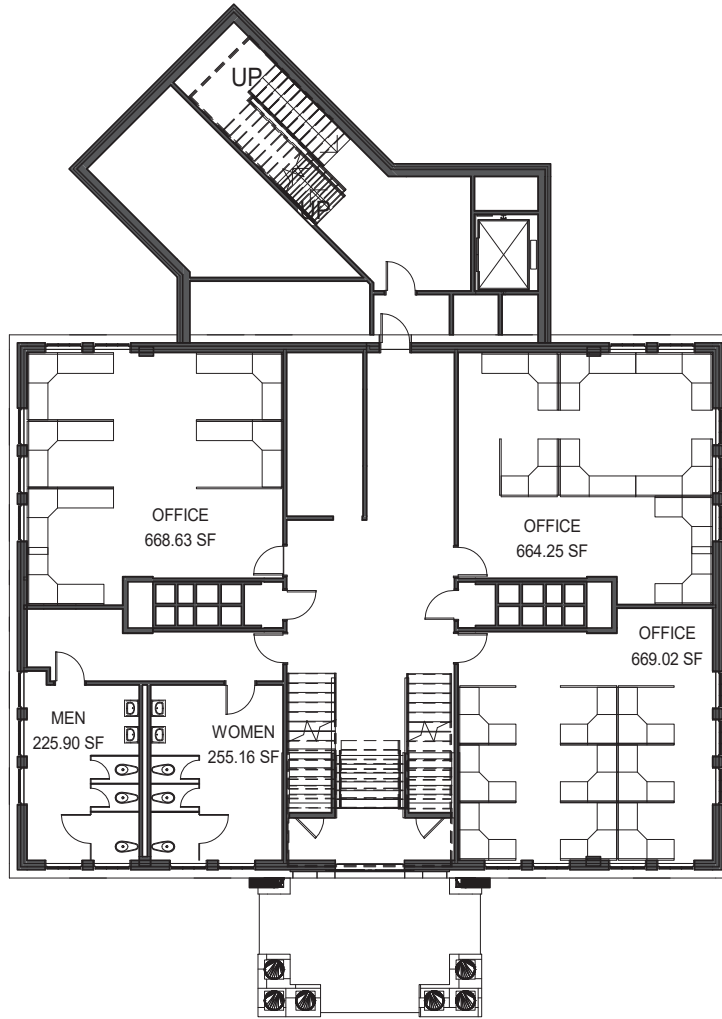
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OPTION 5 - FIRST FLOOR PLAN

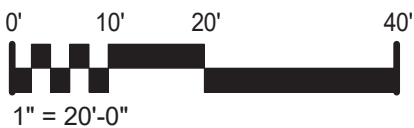
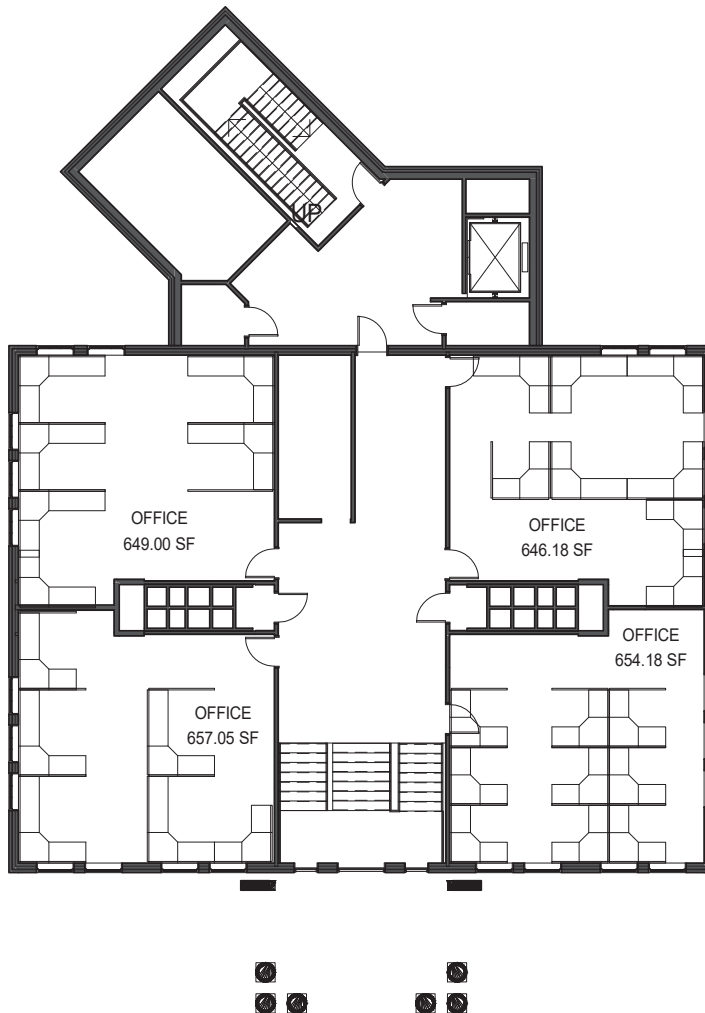
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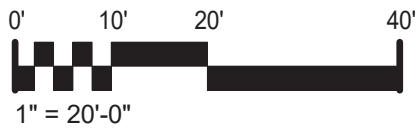
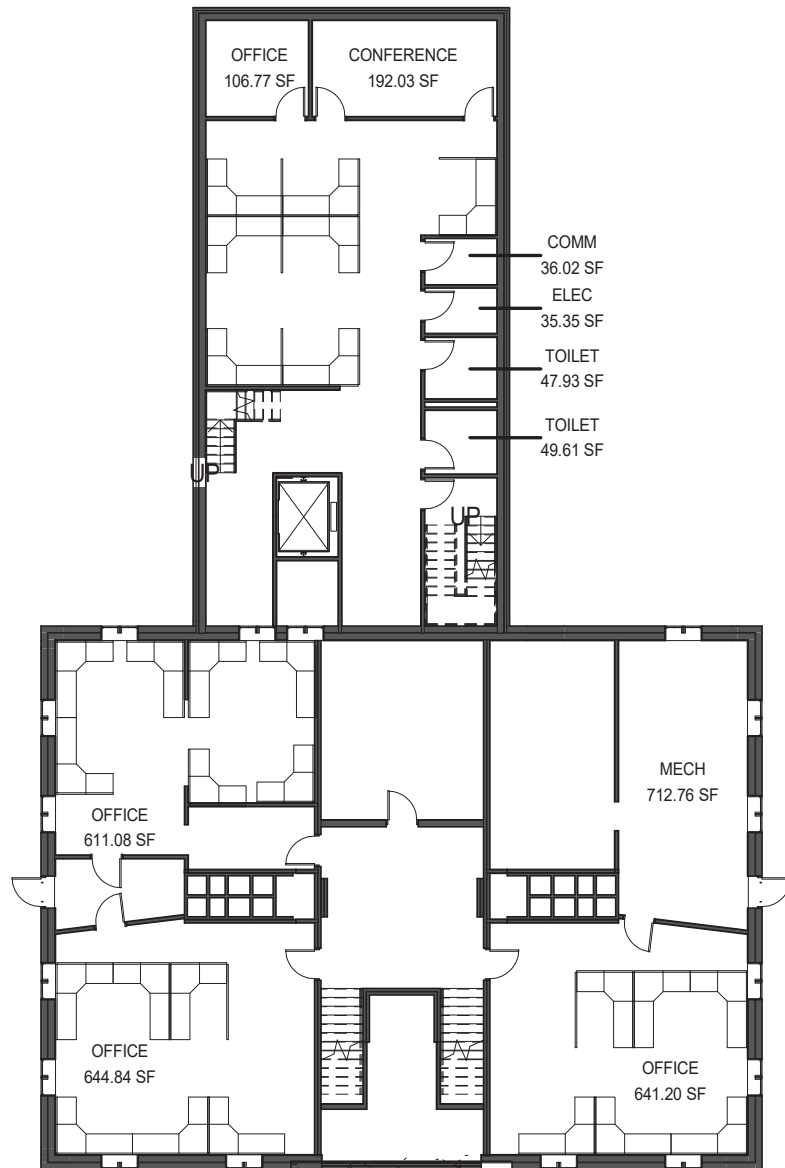
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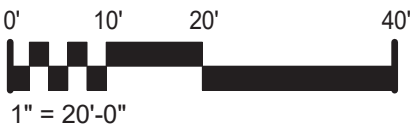
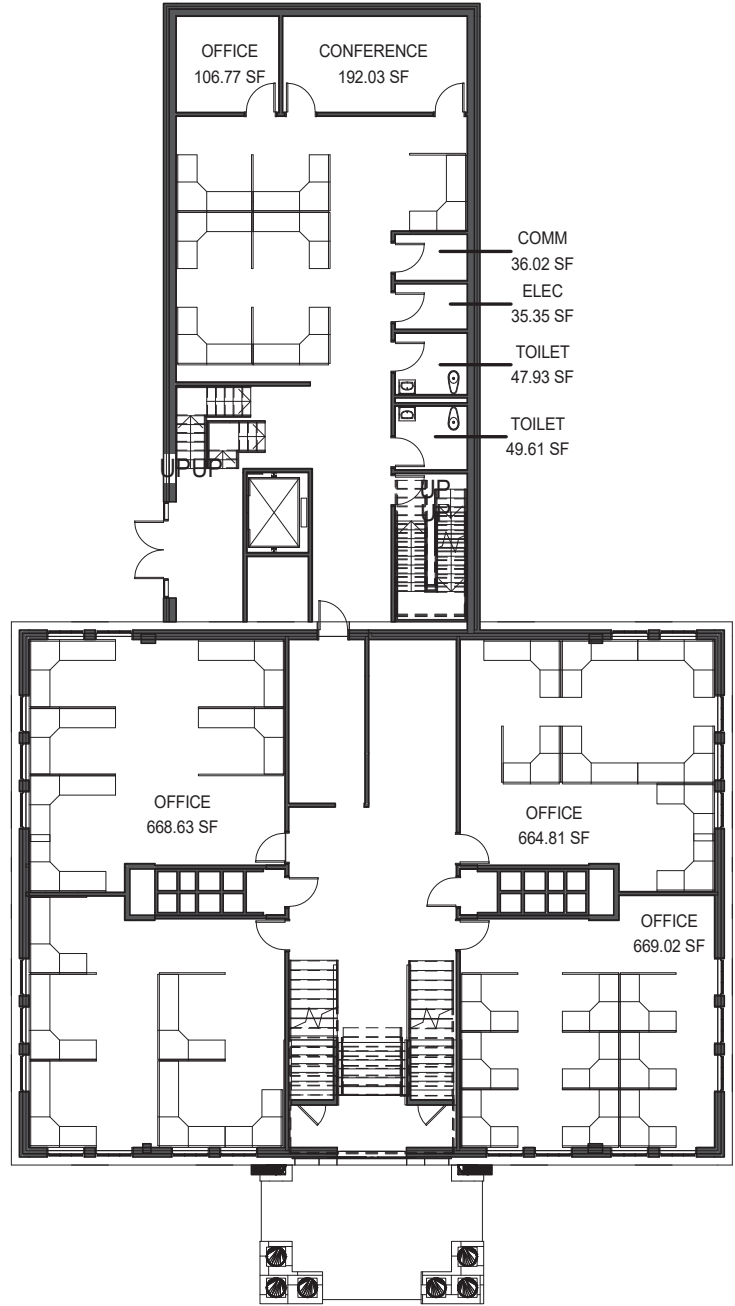
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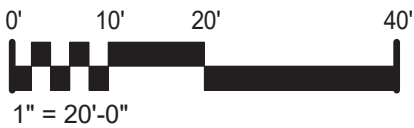
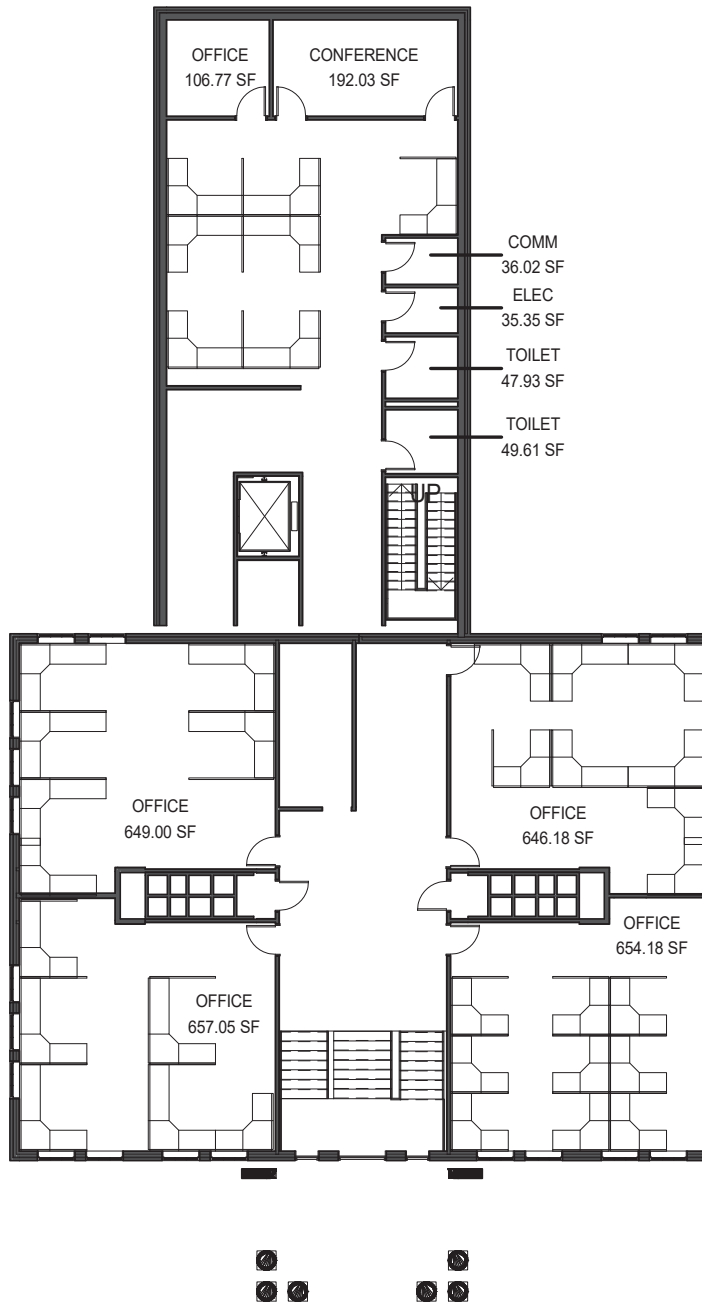
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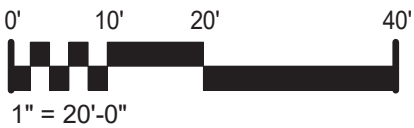
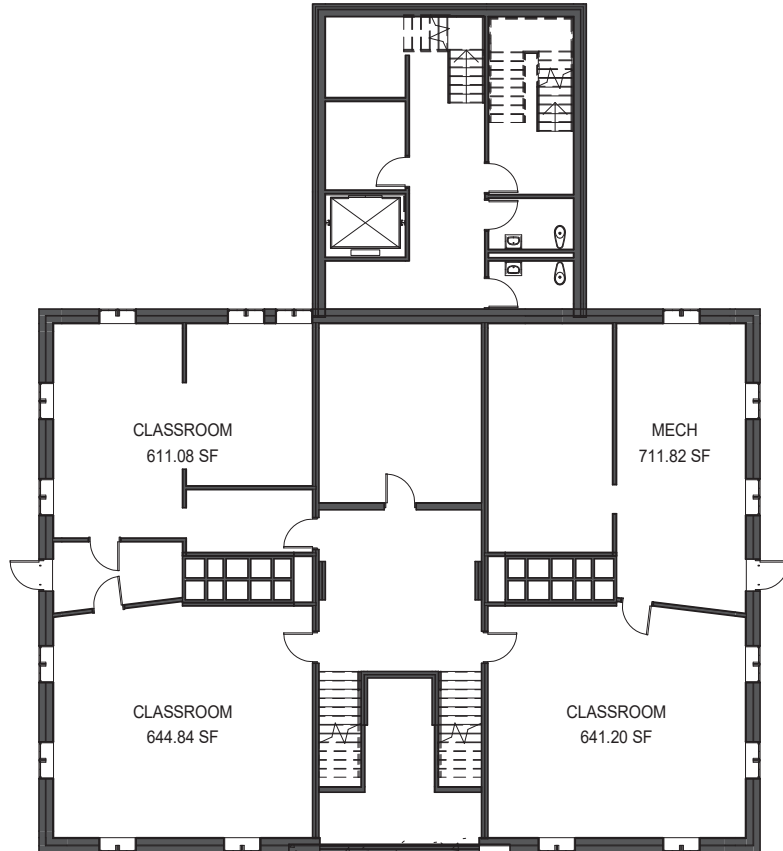
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OPTION 7 - LOWER LEVEL FLOOR PLAN

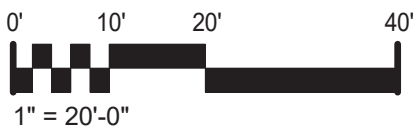
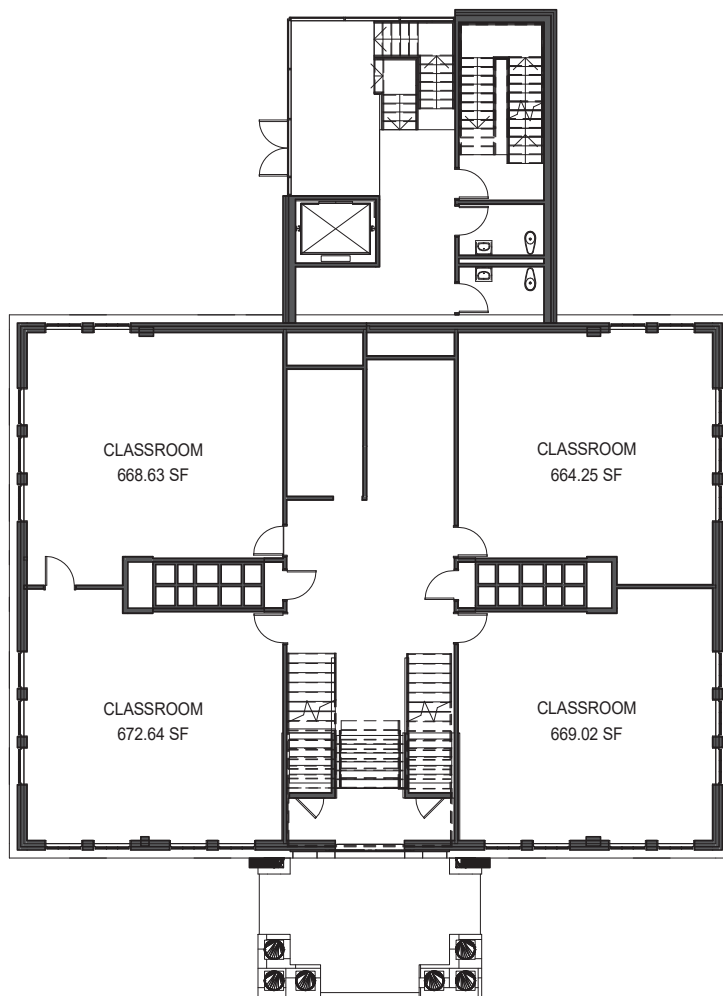
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OPTION 7 - FIRST FLOOR PLAN

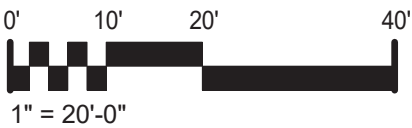
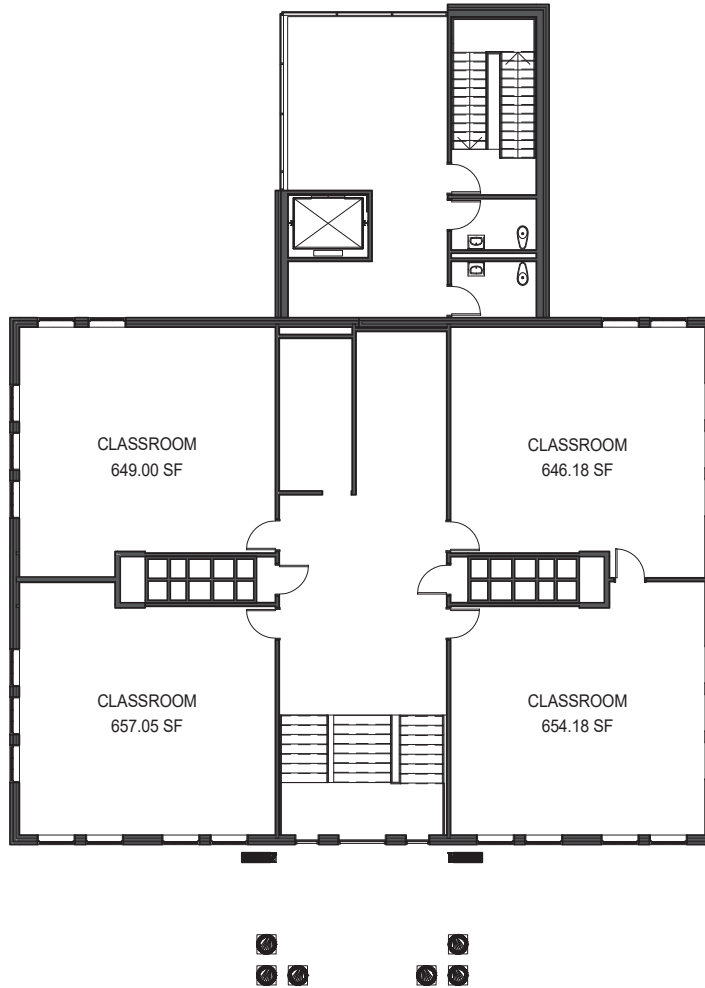
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OPTION 7 - SECOND FLOOR PLAN

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**APPENDIX F:
OPINION OF PROBABLE CONSTRUCTION COSTS**

Concept Cost Estimate Report

Report Date September 28, 2018

Prepared for:

Moseley Architects

MOSELEY ARCHITECTS
DESIGNING SOLUTIONS ■ BUILDING TRUST ■ ENRICHING LIVES

Bennett Building Addition & Renovation Manassas, VA





COST ESTIMATE CLARIFYING NOTES & EXCLUSIONS

- We have incorporated construction costs for a single Contractor procurement via lump sum General Contract for a non-phased construction.
- Without exception, we have included hard construction costs only and all soft construction costs are excluded. Please refer to list of Owner Budget Items.
- The Limits of Construction are those indicated on the documents provided.
- We have included an allowance for HAZMAT abatement costs.
- Design Contingency accounts for the costs of yet unidentified scope requirements and have been included in the amount indicated in the project summary.
- Construction Contingency accounts for the costs of change orders. A Construction Contingency has not been included. We recommend that the owner carry an additional 3-5% Construction Contingency for unforeseen conditions.
- Escalation accounts for the inflationary effects of elapsed time and costs have been included in the amount indicated in the project summary.
- Our costs do not include any Owner Furniture storage or moving costs.
- All cost data is based on Open shop wage and burden rates contemplating an after hour's project work schedule.

OWNER COSTS NOT INCLUDED IN OUR COSTS ANALYSIS



We have found during the budgeting phase, Owners sometimes do not fully consider all the costs they will incur when implementing capital improvements. For convenience, we provide below a list of common non-construction Owner costs.

FURNITURE, FIXTURE & EQUIPMENT [FF&E]

- Loose, unattached system furniture, traditional furniture, etc.
- Special fixtures relevant to subject facility operations and uses
- Communications equipment, such as servers, telephone sets, communications cables, instruments, & accessories
- Vending equipment purchases and/or leases, etc.
- Exterior equipment, such as exercise equipment, pay telephones.

MOVING & STORAGE COSTS

- Contract and/or internal staff implemented moving costs.
- Temporary storage and insurance.
- Removal and disposal of furnishings of no salvage value.

TEMPORARY FACILITIES

- Non-contractor temporary storage trailers.
- Non-contractor temporary utilities.

REAL ESTATE

- Land acquisitions, leases, easements and rights of way.
- Real estate taxes.
- Transfer taxes.
- Recordation fees & taxes.
- Brokerage commissions.
- Settlement charges.
- Legal fees.

MANAGEMENT *Indirect Owner Mgt Expenses*

- Real estate necessary to house management & staff.
- Utilities.
- Insurance.
- Furniture, fixture & equipment.
- Project management salaries.
- Communications, telephone, facsimile expenses, e-mail, etc.
- Travel, parking, courier services, etc.
- Security.
- Office equipment & supplies.

COMMON OWNER COSTS (continued)



PROMOTION / RESPONDING TO PUBLIC & MEDIA INQUIRIES

- Artwork and reproduction of advertising, brochures, hand-outs.
- Advertising fees.
- Postage.
- Signage.
- Photography.
- Renderings.
- Public and/or promotional events, such as hearings, fund raisers, etc.

FINANCIAL

- Accounting [in-house].
- Accounting [CPA].
- Interim financing [loan, bond, other] origination fees, expenses & interest.
- Permanent financing [loan, bond, other] origination fees, expenses & interest.
- Appraisal fees.
- Working capital / start-up.
- Performance [Owner, not to be confused with contractor] bonds

INSURANCE PREMIUMS

- Builder's risk
- Liability
- Title
- Other

LEGAL FEES

- Real estate, land, zoning, proffers
- Partnerships
- Financing
- Contracts
- Leasing

JURISDICTIONAL FEES

- Zoning, site and general building permit fees & expenses. Note: jurisdictional trade permit fees are included in our computations.
- Primary water utility availability and connection fees
- Primary sewer utility availability and connection fees
- Gas Company fees
- Power company fees
- Telephone company fees



COMMON OWNER COSTS (continued)

- Cable TV company fees
- State & local highway fees
- Mandatory completion bonds
- Adjoining owner demands
- Mandated off-site storm water management contributions

DESIGN FEES

- Architect / Engineer / Cost Management / Construction Management Consultant Fees

RECOMMENDED COST CONTROL PROCESS

Controlling construction costs is a continuous process that spans from the initial programmatic level through to final completion.

MARKET CONDITIONS & OPINIONS OF PROBABLE COST

Downey and Scott, LLC has no control over market conditions or acts of God that can create rapid fluctuations in material prices. We have extensive experience in similar projects and have employed our best judgment in analyzing the subject project. We cannot, however, guarantee that actual construction costs will not vary from the opinions of probable construction costs herein provided.

Please contact Don 'D' Daigle – Vice President of Preconstruction Services regarding this project should you have any questions or concerns.

Revision 1							
Report:	Preliminary Study Cost Estimate	<i>Prepared by: Downey & Scott, LLC</i>		Status:	Study/Concept	PM: ja/ct/mvd	
Project:	Bennet Building Addition & Renovation	6799 Kennedy Road, Suite F		Client:	Moseley	Chckd by: ja	
Location:	Manassas, VA	Warrenton, Virginia 20187		Submission:	September 28, 2018	Job no: 18143	
Documents Dated:	September, 7, 2017	Ph 540.347.5001 Fax 540.347.5021		Run Date:	See footer		
		www.downeyscott.com		Revised:	January 23, 2019		
LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION

PROJECT CONSTRUCTION COST SUMMARY

OPTION 1	\$9,023,448
OPTION 2	\$4,802,854
OPTION 3	\$4,498,127
OPTION 4	\$8,961,121
OPTION 5	\$4,301,208
OPTION 6	\$5,017,475
HVAC SYSTEM OPTIONS	See End of Report

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
Project: Bennet Building Addition & Renovation
Location: Manassas, VA
Documents Dated: September, 7, 2017

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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OPTION 1 PROJECT CONSTRUCTION COST SUMMARY

OPTION 1

Addition

Building Addition
Sitework

GSF 18,410.00 \$294.66 \$5,424,718
\$656,772

Total Cost - Addition

18,410.00 \$330.34 \$6,081,490

Renovation

Exsiting Building

GSF 12,858.00 \$228.80 \$2,941,958

Total Cost - Renovation

12,858.00 \$228.80 \$2,941,958

TOTAL PROJECT COST INCLUDING ADDITION & RENOVATION

GSF 31,268.00 288.58 \$9,023,448

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition

CONSTRUCTION COSTS

Addition	New Building Addition			<i>Carried forward</i>		<i>Cost per SF</i> 263.09	\$4,843,498
Addition							
Addition							
Addition	Subtotal						\$4,843,498
Addition	Escalation to construction mid point Current Dollars per Direction			0.00%			\$0
Addition	Subtotal						\$4,843,498
Addition	Design Contingency			12.00%			\$581,220
Addition							
Addition	Total Hard Construction Costs Base Bid					\$294.66	\$5,424,718

Sitework	SITWORK			<i>Carried forward</i>		<i>N/A</i>	\$586,404
Sitework							
Sitework							
Sitework	Subtotal						\$586,404
Sitework	Escalation to construction mid point Current Dollars per Direction			0.00%			\$0
Sitework	Subtotal						\$586,404
Sitework	Design Contingency			12.00%			\$70,368
Sitework							
Sitework	Total Hard Construction Costs Base Bid						\$656,772

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition	00.00		NEW BUILDING				
Addition	00.50	SELECT BLDG. DEMO	Demo at new building tie-ins	1.00	LS	4,500.00	4,500.00
Addition			Temporary Shoring & Protections	1.00	LS	5,800.00	5,800.00
Addition	01.00	FOUNDATIONS	Foundations Footing	31.11	CY	559.00	17,391.11
Addition			Foundations Walls	62.22	CY	595.00	37,022.22
Addition			Elevator pit walls & slab	1.00	EA	4,200.00	4,200.00
Addition			Misc. foundation requirements	1.00	LS	5,000.00	5,000.00
Addition	02.00	SUBSTRUCTURE	SOG	6,136.67	SF	9.40	57,684.67
Addition			SOD	12,273.33	SF	7.90	96,959.33
Addition	03.00	SUPERSTRUCTURE	Floor Framing & deck	12,273.33	SF	18.20	223,374.67
Addition			Roof framing & deck	6,136.67	SF	14.80	90,822.67
Addition			Misc. metals	18,410.00	GSF	1.22	22,460.20
Addition			Egress Stairs	2.00	EA	46,500.00	93,000.00
Addition			Lobby Stairs	1.00	EA	58,500.00	58,500.00
Addition			Misc. Wood Blocking	18,410.00	GSF	0.90	16,569.00
Addition	04.00	EXTERIOR CLOSURE	Exterior Wall Back-up & Veneer	7,704.00	SF	50.00	385,200.00
Addition			Foundation wall waterproofing	2,016.00	SF	6.50	13,104.00
Addition			Exterior wall vapor barrier	7,704.00	SF	3.75	28,890.00
Addition			Curtainwall	2,376.00	SF	90.00	213,840.00
Addition			Windows	76.00	EA	1,230.00	93,480.00
Addition			Exterior Curtianwall Doors	5.00	EA	3,250.00	16,250.00
Addition			Exterior Double Doors	2.00	EA	2,180.00	4,360.00
Addition			Building perimeter drains in gravel bed	336.00	LF	10.50	3,528.00
Addition			Misc. w.p./caulk/fire sealants/etc. Div. 7	18,410.00	GSF	0.74	13,623.40
Addition	05.00	ROOFING	Asphalt Shingle Roofing with insulation, copings, flashings, gutters etc.	6,136.67	SF	11.60	71,185.33
Addition	06.00	INTERIOR CONST	Interior CMU Partitions	18,410.00	GSF	3.20	58,912.00
Addition			Interior GWB Partitions	18,410.00	GSF	8.95	164,769.50
Addition			Interior Doors & Frames	61.00	EA	1,520.00	92,720.00
Addition			Acoustic ceiling, avg	18,410.00	GSF	3.50	64,435.00
Addition			Upgraded Lobby Ceiling Finishes	996.00	GSF	12.75	12,699.00
Addition			Ceramic Tile - Allowance	2,600.00	GSF	13.25	34,450.00
Addition			Soft flooring/ vinyl base	15,810.00	GSF	3.95	62,449.50
Addition			Painting	18,410.00	GSF	2.05	37,740.50
Addition			Misc. cut and patching	18,410.00	GSF	0.58	10,677.80
Addition	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	18,410.00	GSF	0.82	15,096.20
Addition			Misc. spec. dr signs/f.e./jan shelving/etc.	18,410.00	GSF	0.70	12,887.00
Addition			Millwork	18,410.00	GSF	3.80	69,958.00
Addition			Office furnishings, sofas and chairs			Refer to FF&E	
Addition	08.00	CONVEYING	Three Stop Elevator	1.00	EA	114,000.00	114,000.00

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 1 VRF System	18,410.00	GSF	17.06	314,074.60
Addition			Piping & Valves	18,410.00	GSF	3.88	71,430.80
Addition			Ductwork	18,410.00	GSF	5.39	99,229.90
Addition			Air Outlets	18,410.00	GSF	0.69	12,702.90
Addition			Ductwork Accessories	18,410.00	GSF	0.57	10,493.70
Addition			Insulation	18,410.00	GSF	3.00	55,230.00
Addition			Temperature Controls	18,410.00	GSF	5.16	94,995.60
Addition			Air & Water Balance	18,410.00	GSF	0.55	10,125.50
Addition			Coordination Drawings	18,410.00	GSF	0.25	4,657.73
Addition			HVAC General Conditions	18,410.00	GSF	0.35	6,443.50
Addition			Systems Operation & Testing	18,410.00	GSF	0.29	5,292.88
Addition	9.20	PLUMBING	Fixtures	18,410.00	GSF	3.20	58,912.00
Addition			Gas Piping	18,410.00	GSF	0.40	7,364.00
Addition			Domestic Water Piping	18,410.00	GSF	2.94	54,125.40
Addition			DWV Piping	18,410.00	GSF	2.50	46,025.00
Addition			Storm Piping	18,410.00	GSF	1.75	32,217.50
Addition			Insulation	18,410.00	GSF	1.92	35,347.20
Addition			Coordination Drawings	18,410.00	GSF	0.25	4,657.73
Addition			Plumbing General Conditions	18,410.00	GSF	0.35	6,443.50
Addition			Systems Operation & Testing	18,410.00	GSF	0.20	3,682.00
Addition	9.30	FIRE SPRINKLER	Sprinkler	18,410.00	GSF	3.50	64,435.00
Addition			Fire Pump			<i>Not included</i>	
Addition	10.00	ELECTRICAL	Switchboards	18,410.00	GSF	0.90	16,569.00
Addition			Panelboards	18,410.00	GSF	0.94	17,305.40
Addition			Generator & Automatic Transfer Switches			<i>See Renovation</i>	
Addition			Bus Duct & Transformers	18,410.00	GSF	0.44	8,100.40
Addition			Light Fixtures	18,410.00	GSF	7.48	137,706.80
Addition			Light Switches - includes DDC control connections	18,410.00	GSF	1.25	23,012.50
Addition			Power Outlets	18,410.00	GSF	0.90	16,569.00
Addition			Safety Cabinets & Disconnects	18,410.00	GSF	0.40	7,364.00
Addition			Power Feeders	18,410.00	GSF	3.05	56,150.50
Addition			Power Home Runs	18,410.00	GSF	1.35	24,853.50
Addition			Power Branches	18,410.00	GSF	1.45	26,694.50
Addition			Lighting Home Runs	18,410.00	GSF	1.30	23,933.00
Addition			Lighting Branches	18,410.00	GSF	1.45	26,694.50
Addition			Grounding/Lightning Protection	18,410.00	GSF	0.33	6,075.30
Addition			Cable Tray	18,410.00	GSF	0.50	9,205.00
Addition			Phone/Data System	18,410.00	GSF	5.50	101,255.00
Addition			Security System & Equipment	18,410.00	GSF	2.55	46,945.50
Addition			P.A. & A.V. Systems	18,410.00	GSF	0.80	14,728.00
Addition			TV System	18,410.00	GSF	0.55	10,125.50
Addition			Fire Alarm	18,410.00	GSF	1.97	36,267.70
Addition			Coordination Drawings	18,410.00	GSF	0.25	4,602.50
Addition			Electrical General Conditions	18,410.00	GSF	0.35	6,443.50
Addition			Systems Operation & Testing	18,410.00	GSF	0.20	3,682.00

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition							
Addition							
Addition	11.00	MARK-UPS	Subtotal				3,949,708.64
Addition			General Conditions	12.00%			473,965.04
Addition			Subtotal				4,423,673.67
Addition			GC OH & Profit	8.00%			353,893.89
Addition			Subtotal				4,777,567.56
Addition			Costs for Phasing & Staging	0%			0.00
Addition			Subtotal				4,777,567.56
Addition			Bonds & insurance	1.38%			65,930.43
Addition			Subtotal	18,410.00	GSF	\$263.09	4,843,498.00

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Addition			SITework				
Sitework			SITework				
Sitework			SITework				
Sitework			SITework				
Sitework	12.05	SITE DEMO	Concrete curb	30	LF	3.44	103.20
Sitework			Concrete sidewalks 4" thick	1,500	SF	0.80	1,200.00
Sitework			Asphalt pavement	2,111	SY	5.84	12,328.89
Sitework			Saw cut concrete	30	LF	1.83	54.90
Sitework			Saw cut asphalt	250	LF	2.11	527.50
Sitework			Trees	2	EA	1,100.00	2,200.00
Sitework			Pipe 2"-4" sewer and water	120	LF	6.43	771.60
Sitework			Pipe 6"-12" sewer and water	60	LF	10.43	625.80
Sitework			Pipe 15"-18" sewer	150	LF	23.80	3,570.00
Sitework			Pipe 21"-24" sewer	100	LF	29.43	2,943.00
Sitework			SWM structure	3	EA	356.00	1,068.00
Sitework			OHE and poles	1	LS	4,500.00	4,500.00
Sitework			Misc site demo	60	CY	98.00	5,880.00
Sitework			CY of site debris for landfill disposal	117	CY		calculates quantities for hauling
Sitework			CY of concrete and asphalt for recycling	750	CY		calculates quantities for hauling
Sitework			Haul/Dispose of Site Debris				
Sitework			Dump truck to landfill 2 axle/10 CY	23	EHR	125.00	2,926.85
Sitework			Dump fees assume 1 ton per CY	117	CY	76.00	8,897.63
Sitework			Dump truck to recycling facility 2 axle/10 CY	150	EHR	125.00	18,759.26
Sitework	12.10	ENVIRONMENTAL	Erosion and Sediment Controls				
Sitework			Dust control	1	LS	2,566.00	2,566.00
Sitework			Silt fence	250	LF	2.95	737.50
Sitework			Gravel construction entrance	95	TNS	33.62	3,193.90
Sitework			Wash rack	1	EA	812.00	812.00
Sitework			Inlet/outlet protection	3	EA	76.00	228.00
Sitework			Maintenance of E&S measures	1	LS	753.74	753.74

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Sitework	12.20	EARTHWORK	Foundation Drainage				
Sitework			Drainage foundation gravel/filter cloth	370	LF	18.86	6,978.20
Sitework			Daylight at suitable outfall pipe only	93	LF	6.22	575.35
Sitework			Soil Testing				
Sitework			Compaction See Div 1				
Sitework			Moisture See Div 1				
Sitework			CBR See Div 1				
Sitework			Topsoil/Fine Grade				
Sitework			Topsoil strip and stockpile onsite small quantity, skid steer	100	CY	5.06	506.00
Sitework			Topsoil respread/fine grade onsite	100	CY	5.82	582.00
Sitework			Building pad fine grade	677	SY	4.05	2,740.50
Sitework			Cut/Fill				
Sitework			Cut directly to fill, using onsite soils, avg 50' haul	500	CY	3.04	1,520.00
Sitework			Cut and haul off-site - cut, load, haul, dispose	500	CY	21.80	10,900.00
Sitework			Undercut and Replace with Suitable Soils				
Sitework			Undercut and haul - cut, load, haul, dispose	250	CY	21.80	5,450.00
Sitework			Import fill - purchase, import, place, compact	250	CY	36.67	9,167.50
Sitework			Grading and Shaping				
Sitework			Rough grading entire disturbed area	3,889	SY	1.14	4,433.33
Sitework			Rock Excavation		Excluded		
Sitework			Special Foundations		Excluded		
Sitework			Backfill				
Sitework			Backfill building	62	CY	9.69	597.55
Sitework			Soil Treatment Termite Control				
Sitework			Termite control	6,090	SF	0.06	365.40
Sitework	12.25	WATER	Water Supply & Distribution Systems				
Sitework			Test pit	1	EA	296.00	296.00
Sitework			Domestic supply to tie into existing building				
Sitework			6" DIP fire	120	LF	32.66	3,919.20
Sitework			6" Valve w/ post indicator	2	EA	3,330.00	6,660.00
Sitework			Fire hydrant	1	EA	3,296.00	3,296.00
Sitework			Thrust blocks	1	EA	153.00	153.00
Sitework			Excavation & backfill	80	CY	19.22	1,537.60
Sitework			Pipe bedding	8	CY	27.04	216.32
Sitework			Spoils removal	16	CY	19.13	306.08

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Sitework	12.30	SANITARY SEWER	Sanitary Sewer Systems				
Sitework			Test pit	1	EA	296.00	296.00
Sitework			Manholes, precast	1	EA	3,294.00	3,294.00
Sitework			Cleanout	2	EA	264.00	528.00
Sitework			Tie into existing manhole	1	LOC	674.00	674.00
Sitework			6" PVC	100	LF	7.88	788.00
Sitework			Excavation & backfill	59	CY	19.22	1,138.96
Sitework			Pipe bedding	6	CY	27.04	160.24
Sitework			Spoils removal	12	CY	19.13	226.73
Sitework	12.35	STORM WATER MANAGEMENT	Storm Sewer Systems				
Sitework			Test pit	2	EA	296.00	592.00
Sitework			Tie into existing structure	1	LOC	623.00	623.00
Sitework			Grate inlet	1	EA	2,869.00	2,869.00
Sitework			Curb inlet, top only, add manhole	3	EA	1,530.00	4,590.00
Sitework			Manholes, precast, 48"	4	EA	3,977.00	15,908.00
Sitework			Allowance for detention/treatment or Nutrient Credits	1	LS	25,000.00	25,000.00
Sitework			6" PVC	400	LF	7.88	3,151.90
Sitework			12" RCP	100	LF	29.99	2,998.70
Sitework			15" RCP	150	LF	35.09	5,263.72
Sitework			18" RCP	60	LF	41.87	2,512.16
Sitework			Excavation & backfill	685	CY	19.22	13,160.72
Sitework			Pipe bedding	68	CY	27.04	1,851.54
Sitework			Spoils removal	137	CY	19.13	2,619.82
Sitework	12.40	SITE ELECTRIC, LIGHTING, AND SECURITY	Site Lighting Systems				
Sitework			Pole and light, 12' pole, LED, single lamp	4	EA	3,156.00	12,624.00
Sitework			Pole base excavation and concrete fill	4	EA	506.00	2,024.00
Sitework			Site lighting control	1	EA	828.00	828.00
Sitework			PVC conduit, 1"	300	LF	2.00	600.00
Sitework			Wiring	300	LF	3.99	1,197.00
Sitework			Chain trenching 24" deep	300	LF	1.44	432.00
Sitework			Site Electrical Utilities		Change OHE to UGE		
Sitework			Direct bury primary elec (2) 6" pvc conduit	200	LF	32.45	6,490.00
Sitework			Duct bank pvc conduit (15) 4"	60	LF	65.43	3,925.80
Sitework			Duct bank pvc conduit (10) 4"	40	LF	43.95	1,758.00
Sitework			Excavation & backfill	59	CY	28.89	1,712.00
Sitework			Concrete fill	12	CY	174.24	2,065.07
Sitework			Spoils removal	12	CY	19.13	226.73
Sitework			Wiring for conduits 3" and larger	1,300	LF	8.29	10,777.00

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 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Sitework	12.45	PRIMARY TELECOMM	Duct bank pvc conduit (2) 4", wiring by utility company	150	LF	8.95	1,342.50
Sitework			Excavation & backfill	44	CY	29.40	1,306.67
Sitework			Concrete fill	9	CY	174.24	1,548.80
Sitework			Spoils removal	9	CY	19.13	170.04
Sitework	12.50	PRIMARY GAS			Excluded		
Sitework	12.60	PAVING	Asphalt Pavement				
Sitework			8/4/2 section	2,756	SY	52.60	144,942.22
Sitework			Paving Specialties				
Sitework			Traffic control	4	DAY	1,271.00	5,084.00
Sitework			Mill and overlay asphalt	300	SY	17.42	5,226.00
Sitework			Paint striping	1,750	LF	1.65	2,887.50
Sitework	12.61	SITE CONCRETE AND WALLS	Curb & Gutter				
Sitework			Curb and gutter	1,090	LF	21.10	22,999.00
Sitework			Site Concrete				
Sitework			Sidewalks, concrete, broom finish, 4"	3,640	SF	3.41	12,412.40
Sitework			Gravel base for concrete sidewalk, 4"	3,640	SF	1.05	3,822.00
Sitework			CG12 type ADA sidewalk ramp	3	EA	837.16	2,511.48
Sitework	12.65	LANDSCAPING	Sod	1,000	SY	2.76	2,760.00
Sitework			Trees/plantings		Excluded		
Sitework	12.75	SPECIALTIES	Bollards, incl foundation	3	EA	899.00	2,697.00
Sitework			Signage, H/C, traffic, firelane	6	EA	121.51	729.06
Sitework	11.00	MARK-UPS	Subtotal				478,192.55
Sitework			General Conditions	12.00%			57,383.11
Sitework			Subtotal				535,575.66
Sitework			GC OH & Profit	8.00%			42,846.05
Sitework			Subtotal				578,421.71
Sitework			Bonds & insurance	1.38%			7,982.22
Sitework			Subtotal				586,403.93

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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RENOVATION

CONSTRUCTION COSTS

Renovation	Renovation			<i>Carried forward</i>		204.29	\$2,626,748
Renovation							
Renovation	Subtotal						\$2,626,748
Renovation	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Renovation	Subtotal						\$2,626,748
Renovation	Design Contingency			12.00%			\$315,210
Renovation	Subtotal						\$2,941,958
Renovation	Phasing / Interim Moves	Allowance		0.00%			\$0
Renovation							
Renovation	Total Hard Construction Costs Base Bid					228.80	\$2,941,958
Renovation							

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Renovation							
Renovation	00.00		Renovation				
Renovation							
Renovation	00.50	SELECT BLDG. DEMO	Misc. interior Demo of Renovated area	12,858.00	GSF	6.20	79,719.60
Renovation			Hazmat abatement Allowance - asbestos	12,858.00	GSF	4.60	59,146.80
Renovation			Hazmat abatement Allowance- lead	12,858.00	GSF	2.40	30,859.20
Renovation							
Renovation	01.00	FOUNDATIONS	Misc. Foundation Repairs	1.00	LS	6,800.00	6,800.00
Renovation							
Renovation	02.00	SUBSTRUCTURE	SOG misc. repairs	12,858.00	GSF	0.90	11,572.20
Renovation							
Renovation							
Renovation	03.00	SUPERSTRUCTURE	Misc. Wood Blocking	12,858.00	GSF	0.90	11,572.20
Renovation			Misc. Structural repairs	12,858.00	GSF	1.10	14,143.80
Renovation			Misc Metals	1.00	LS	10,500.00	10,500.00
Renovation							
Renovation	04.00	EXTERIOR CLOSURE	Repair or Replace Exterior Windows - Allowance	51.00	EA	922.50	47,047.50
Renovation			Point up & Repairs of existing venner - allowance	1.00	LS	50,000.00	50,000.00
Renovation			Repair or replace exterior trim - Allowance	1.00	LS	12,000.00	12,000.00
Renovation			Replace exterior louvers	1.00	LS	950.00	950.00
Renovation			Misc. w.p./caulk/fire sealants/etc. Div. 7	12,858.00	GSF	0.74	9,514.92
Renovation							
Renovation	05.00	ROOFING	Misc. patch & repair - Allowance	1.00	LS	8,200.00	8,200.00
Renovation			Repalce membrane roof - Allowance	2,786.00	SF	18.00	50,148.00
Renovation							
Renovation							
Renovation	06.00	INTERIOR CONST	Interior CMU Partitions	12,858.00	GSF	3.20	41,145.60
Renovation			New & Repaired Interior GWB Partitions & Plaster Wall	12,858.00	GSF	12.40	159,439.20
Renovation			Interior Wood Trim Repairs Allowance	1.00	LS	7,500.00	7,500.00
Renovation			Interior Doors & Frames	12,858.00	GSF	6.20	79,719.60
Renovation			Acoustic ceiling, avg	12,858.00	GSF	3.50	45,003.00
Renovation			Upgraded Ceiling Finishes	800.00	SF	12.75	10,200.00
Renovation			Ceramic Tile - Allowance	108.00	GSF	13.25	1,431.00
Renovation			Soft flooring/ vinyl base	12,750.00	GSF	3.95	50,362.50
Renovation			Painting	12,858.00	GSF	2.05	26,358.90
Renovation			Misc. cut and patching	12,858.00	GSF	0.58	7,457.64
Renovation							
Renovation							
Renovation	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	12,858.00	GSF	0.82	10,543.56
Renovation			Millwork	12,858.00	GSF	3.80	48,860.40
Renovation			Window treatment Allowance	12,858.00	GSF	0.20	2,571.60
Renovation			Misc. spec. door signs/f.e./jan shelving/etc.	12,858.00	GSF	0.45	5,786.10
Renovation							
Renovation	08.00	CONVEYING					See Addition

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Renovation							
Renovation							
Renovation	09.00	MECHANICAL HVAC	Misc. Demo	12,858.00	GSF	0.84	10,762.15
Renovation			HVAC Equipment - based on Option 1 VRF System	12,858.00	GSF	17.06	219,357.48
Renovation			Piping & Valves	12,858.00	GSF	3.88	49,889.04
Renovation			Ductwork	12,858.00	GSF	5.39	69,304.62
Renovation			Air Outlets	12,858.00	GSF	0.69	8,872.02
Renovation			Ductwork Accessories	12,858.00	GSF	0.57	7,329.06
Renovation			Insulation	12,858.00	GSF	3.00	38,574.00
Renovation			Temperature Controls	12,858.00	GSF	5.16	66,347.28
Renovation			Air & Water Balance	12,858.00	GSF	0.55	7,071.90
Renovation			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation			HVAC General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation			Systems Operation & Testing	12,858.00	GSF	0.29	3,696.68
Renovation							
Renovation	9.20	PLUMBING	Misc. Demo	12,858.00	GSF	0.79	10,157.82
Renovation			Fixtures	12,858.00	GSF	3.20	41,145.60
Renovation			Gas Piping	12,858.00	GSF	0.40	5,143.20
Renovation			Domestic Water Piping	12,858.00	GSF	2.94	37,802.52
Renovation			Storm Piping	12,858.00	GSF	1.75	22,501.50
Renovation			Plumbing General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60
Renovation							
Renovation	9.30	FIRE SPRINKLER	Sprinkler	12,858.00	GSF	4.50	57,861.00
Renovation							
Renovation							
Renovation	10.00	ELECTRICAL	Misc. Demo	12,858.00	GSF	0.88	11,315.04
Renovation			Switchboards	12,858.00	GSF	0.90	11,572.20
Renovation			Panelboards	12,858.00	GSF	0.94	12,086.52
Renovation			Generator & Automatic Transfer Switches, allowance	1.00	LS	125,500.00	125,500.00
Renovation			Bus Duct & Transformers	12,858.00	GSF	0.44	5,657.52
Renovation			Light Fixtures	12,858.00	GSF	7.48	96,177.84
Renovation			Light Switches - includes DDC control connections	12,858.00	GSF	1.25	16,072.50
Renovation			Power Outlets	12,858.00	GSF	0.90	11,572.20
Renovation			Safety Cabinets & Disconnects	12,858.00	GSF	0.40	5,143.20
Renovation			Power Feeders	12,858.00	GSF	3.05	39,216.90
Renovation			Power Home Runs	12,858.00	GSF	1.35	17,358.30
Renovation			Power Branches	12,858.00	GSF	1.45	18,644.10
Renovation			Lighting Home Runs	12,858.00	GSF	1.30	16,715.40
Renovation			Lighting Branches	12,858.00	GSF	1.45	18,644.10
Renovation			Grounding/Lightning Protection	12,858.00	GSF	0.33	4,243.14
Renovation			Cable Tray	12,858.00	GSF	0.50	6,429.00
Renovation			Phone/Data System	12,858.00	GSF	5.50	70,719.00
Renovation			Security System & Equipment	12,858.00	GSF	2.55	32,787.90
Renovation			P.A. & A.V. Systems	12,858.00	GSF	0.80	10,286.40
Renovation			TV System	12,858.00	GSF	0.55	7,071.90
Renovation			Fire Alarm	12,858.00	GSF	1.97	25,330.26
Renovation			Coordination Drawings	12,858.00	GSF	0.25	3,214.50
Renovation			Electrical General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Renovation			Subtotal				2,142,024.28
Renovation	11.00	MARK-UPS	General Conditions	12.00%			257,042.91
Renovation			Subtotal				2,399,067.19
Renovation			GC OH & Profit	8.00%			191,925.38
Renovation			Subtotal				2,590,992.56
Renovation			Costs for Phasing & Staging	0%			0.00
Renovation			Subtotal				2,590,992.56
Renovation			Bonds & insurance	1.38%			35,755.70
Renovation			Subtotal	12,858.00 GSF		\$204.29	2,626,748.26

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OPTION 2

Addition

Building Addition
Sitework

GSF	4,335.00	Cost/SF \$395.38	\$1,713,993
			\$146,903

Total Cost - Addition

4,335.00	\$429.27	\$1,860,896
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Renovation

Exsiting Building

GSF	12,858.00	\$228.80	\$2,941,958
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Total Cost - Renovation

12,858.00	\$228.80	\$2,941,958
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TOTAL PROJECT COST INCLUDING ADDITION & RENOVATION

GSF	17,193.00	279.35	\$4,802,854
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CONSTRUCTION COSTS

Addition - Option 2	New Building Addition			<i>Carried forward</i>		<i>Cost per SF</i> 353.02	\$1,530,351
Addition - Option 2							
Addition - Option 2	Subtotal						\$1,530,351
Addition - Option 2	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Addition - Option 2	Subtotal						\$1,530,351
Addition - Option 2	Design Contingency			12.00%			\$183,642
Addition - Option 2	Total Hard Construction Costs Base Bid					<u>\$395.38</u>	<u>\$1,713,993</u>

Sitework	SITWORK			<i>Carried forward</i>		<i>N/A</i>	\$131,163
Sitework							
Sitework	Subtotal						\$131,163
Sitework	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Sitework	Subtotal						\$131,163
Sitework	Design Contingency			12.00%			\$15,740
Sitework	Total Hard Construction Costs Base Bid						\$146,903

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Addition - Option 2	00.00		NEW BUILDING				
Addition - Option 2	00.50	SELECT BLDG. DEMO	Demo at new building tie-ins	1.00	LS	4,500.00	4,500.00
Addition - Option 2			Temporary Shoring & Protections	1.00	LS	5,800.00	5,800.00
Addition - Option 2	01.00	FOUNDATIONS	Foundations Footing	10.46	CY	559.00	5,848.80
Addition - Option 2			Foundations Walls	20.93	CY	595.00	12,450.93
Addition - Option 2			Elevator pit walls & slab	1.00	EA	4,200.00	4,200.00
Addition - Option 2			Misc. foundation requirements	1.00	LS	2,000.00	2,000.00
Addition - Option 2	02.00	SUBSTRUCTURE	SOG	1,445.00	SF	9.40	13,583.00
Addition - Option 2			SOD	2,890.00	SF	7.90	22,831.00
Addition - Option 2	03.00	SUPERSTRUCTURE	Floor Framing & deck	2,890.00	SF	18.20	52,598.00
Addition - Option 2			Roof framing & deck	1,445.00	SF	14.80	21,386.00
Addition - Option 2			Misc. metals	4,335.00	GSF	1.22	5,288.70
Addition - Option 2			Egress Stairs	1.00	EA	46,500.00	46,500.00
Addition - Option 2			Lobby Stairs	1.00	EA	58,500.00	58,500.00
Addition - Option 2			Misc. Wood Blocking	4,335.00	GSF	0.90	3,901.50
Addition - Option 2	04.00	EXTERIOR CLOSURE	Exterior Wall Back-up & Veneer	2,352.00	SF	50.00	117,600.00
Addition - Option 2			Foundation wall waterproofing	678.00	SF	6.50	4,407.00
Addition - Option 2			Exterior wall vapor barrier	2,352.00	SF	3.75	8,820.00
Addition - Option 2			Curtainwall	2,376.00	SF	90.00	213,840.00
Addition - Option 2			Windows	0.00	EA	1,230.00	0.00
Addition - Option 2			Exterior Curtianwall Doors	5.00	EA	3,250.00	16,250.00
Addition - Option 2			Exterior Double Doors	0.00	EA	2,180.00	0.00
Addition - Option 2			Building perimeter drains in gravel bed	113.00	LF	10.50	1,186.50
Addition - Option 2			Misc. w.p./caulk/fire sealants/etc. Div. 7	4,335.00	GSF	0.74	3,207.90
Addition - Option 2	05.00	ROOFING	Roofing with insulation, copings, flashings, gutters etc.	1,445.00	SF	11.60	16,762.00
Addition - Option 2	06.00	INTERIOR CONST	Interior CMU Partitions	4,335.00	GSF	5.20	22,542.00
Addition - Option 2			Interior GWB Partitions	4,335.00	GSF	3.95	17,123.25
Addition - Option 2			Interior Doors & Frames	4.00	EA	1,520.00	6,080.00
Addition - Option 2			Acoustic ceiling, avg	4,335.00	GSF	3.50	15,172.50
Addition - Option 2			Upgraded Lobby Ceiling Finishes	996.00	GSF	12.75	12,699.00
Addition - Option 2			Ceramic Tile - Allowance	192.00	GSF	13.25	2,544.00
Addition - Option 2			Soft flooring/ vinyl base	4,143.00	GSF	3.95	16,364.85
Addition - Option 2			Painting	4,335.00	GSF	2.05	8,886.75
Addition - Option 2			Misc. cut and patching	4,335.00	GSF	0.58	2,514.30
Addition - Option 2	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	4,335.00	GSF	0.82	3,554.70
Addition - Option 2			Misc. spec. dr signs/f.e./jan shelving/etc.	4,335.00	GSF	0.70	3,034.50
Addition - Option 2			Millwork	0.00	GSF	3.80	0.00
Addition - Option 2			Office furnishings, sofas and chairs				Refer to FF&E
Addition - Option 2	08.00	CONVEYING	Three Stop Elevator	1.00	EA	114,000.00	114,000.00

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Addition - Option 2							
Addition - Option 2	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 1 VRF System	4,335.00	GSF	17.06	73,955.10
Addition - Option 2			Piping & Valves	4,335.00	GSF	3.88	16,819.80
Addition - Option 2			Ductwork	4,335.00	GSF	5.39	23,365.65
Addition - Option 2			Air Outlets	4,335.00	GSF	0.69	2,991.15
Addition - Option 2			Ductwork Accessories	4,335.00	GSF	0.57	2,470.95
Addition - Option 2			Insulation	4,335.00	GSF	3.00	13,005.00
Addition - Option 2			Temperature Controls	4,335.00	GSF	5.16	22,368.60
Addition - Option 2			Air & Water Balance	4,335.00	GSF	0.55	2,384.25
Addition - Option 2			Coordination Drawings	4,335.00	GSF	0.25	1,096.76
Addition - Option 2			HVAC General Conditions	4,335.00	GSF	0.35	1,517.25
Addition - Option 2			Systems Operation & Testing	4,335.00	GSF	0.29	1,246.31
Addition - Option 2	9.20	PLUMBING	Fixtures	4,335.00	GSF	3.20	13,872.00
Addition - Option 2			Gas Piping	4,335.00	GSF	0.40	1,734.00
Addition - Option 2			Domestic Water Piping	4,335.00	GSF	2.94	12,744.90
Addition - Option 2			DWV Piping	4,335.00	GSF	2.50	10,837.50
Addition - Option 2			Storm Piping	4,335.00	GSF	1.75	7,586.25
Addition - Option 2			Insulation	4,335.00	GSF	1.92	8,323.20
Addition - Option 2			Coordination Drawings	4,335.00	GSF	0.25	1,096.76
Addition - Option 2			Plumbing General Conditions	4,335.00	GSF	0.35	1,517.25
Addition - Option 2			Systems Operation & Testing	4,335.00	GSF	0.20	867.00
Addition - Option 2	9.30	FIRE SPRINKLER	Sprinkler	4,335.00	GSF	3.50	15,172.50
Addition - Option 2			Fire Pump			<i>Not included</i>	
Addition - Option 2	10.00	ELECTRICAL	Switchboards	4,335.00	GSF	0.90	3,901.50
Addition - Option 2			Panelboards	4,335.00	GSF	0.94	4,074.90
Addition - Option 2			Generator & Automatic Transfer Switches			<i>See Renovation</i>	
Addition - Option 2			Bus Duct & Transformers	4,335.00	GSF	0.44	1,907.40
Addition - Option 2			Light Fixtures	4,335.00	GSF	7.48	32,425.80
Addition - Option 2			Light Switches - includes DDC control connections	4,335.00	GSF	1.25	5,418.75
Addition - Option 2			Power Outlets	4,335.00	GSF	0.90	3,901.50
Addition - Option 2			Safety Cabinets & Disconnects	4,335.00	GSF	0.40	1,734.00
Addition - Option 2			Power Feeders	4,335.00	GSF	3.05	13,221.75
Addition - Option 2			Power Home Runs	4,335.00	GSF	1.35	5,852.25
Addition - Option 2			Power Branches	4,335.00	GSF	1.45	6,285.75
Addition - Option 2			Lighting Home Runs	4,335.00	GSF	1.30	5,635.50
Addition - Option 2			Lighting Branches	4,335.00	GSF	1.45	6,285.75
Addition - Option 2			Grounding/Lightning Protection	4,335.00	GSF	0.33	1,430.55
Addition - Option 2			Cable Tray	4,335.00	GSF	0.50	2,167.50
Addition - Option 2			Phone/Data System	4,335.00	GSF	5.50	23,842.50
Addition - Option 2			Security System & Equipment	4,335.00	GSF	2.55	11,054.25
Addition - Option 2			P.A. & A.V. Systems	4,335.00	GSF	0.80	3,468.00
Addition - Option 2			TV System	4,335.00	GSF	0.55	2,384.25
Addition - Option 2			Fire Alarm	4,335.00	GSF	1.97	8,539.95
Addition - Option 2			Coordination Drawings	4,335.00	GSF	0.25	1,083.75
Addition - Option 2			Electrical General Conditions	4,335.00	GSF	0.35	1,517.25
Addition - Option 2			Systems Operation & Testing	4,335.00	GSF	0.20	867.00

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Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation
 Location: Manassas, VA
 Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: **September 28, 2018**
 Run Date: See footer
 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

11.00 MARK-UPS

Subtotal							1,247,949.19
General Conditions				12.00%			149,753.90
Subtotal							1,397,703.10
GC OH & Profit				8.00%			111,816.25
Subtotal							1,509,519.35
Costs for Phasing & Staging				0%			0.00
Subtotal							1,509,519.35
Bonds & insurance				1.38%			20,831.37
Subtotal				4,335.00 GSF		\$353.02	1,530,350.71

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Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

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Addition - Option 2

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Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

Addition - Option 2

SITEWORK

12.05 SITE DEMO

Misc site demo
 CY of site debris for landfill disposal

60 CY
 60 CY

98.00
 calculates quantities for hauling

5,880.00

Haul/Dispose of Site Debris
 Dump truck to landfill 2 axle/10 CY
 Dump fees assume 1 ton per CY

12 EHR
 60 CY

125.00
 76.00

1,500.00
 4,560.00

12.10 ENVIRONMENTAL

Erosion and Sediment Controls

Dust control
 Silt fence
 Gravel construction entrance
 Wash rack
 Inlet/outlet protection
 Maintenance of E&S measures

1 LS
 120 LF
 95 TNS
 1 EA
 2 EA
 1 LS

2,566.00
 2.95
 33.62
 812.00
 76.00
 707.79

2,566.00
 354.00
 3,193.90
 812.00
 152.00
 707.79

12.20 EARTHWORK

Foundation Drainage

Drainage foundation gravel/filter cloth
 Daylight at suitable outfall pipe only

110 LF
 28 LF

18.86
 6.22

2,074.60
 171.05

Soil Testing

Compaction See Div 1
 Moisture See Div 1
 CBR See Div 1

Topsoil/Fine Grade

Topsoil strip and stockpile onsite small quantity, skid steer
 Topsoil respread/fine grade onsite
 Building pad fine grade

30 CY
 100 CY
 156 SY

5.06
 5.82
 4.05

151.80
 582.00
 630.00

Cut/Fill

Cut directly to fill, using onsite soils, avg 50' haul
 Cut and haul off-site - cut, load, haul, dispose

60 CY
 100 CY

3.04
 21.80

182.40
 2,180.00

Undercut and Replace with Suitable Soils

Undercut and haul - cut, load, haul, dispose
 Import fill - purchase, import, place, compact

100 CY
 100 CY

21.80
 36.67

2,180.00
 3,667.00

Grading and Shaping

Rough grading entire disturbed area

389 SY

1.14

443.33

Rock Excavation

Excluded

Special Foundations

Excluded

Backfill

Backfill building

18 CY

9.69

177.65

Soil Treatment Termite Control

Termite control

1,400 SF

0.06

84.00

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Addition - Option 2							
Addition - Option 2	12.25	WATER	Water Supply & Distribution Systems				
Addition - Option 2			Test pit	1	EA	296.00	296.00
Addition - Option 2			Domestic supply to tie into existing building				
Addition - Option 2			6" DIP fire	120	LF	32.66	3,919.20
Addition - Option 2			6" Valve w/ post indicator	2	EA	3,330.00	6,660.00
Addition - Option 2			Fire hydrant	1	EA	3,296.00	3,296.00
Addition - Option 2			Thrust blocks	1	EA	153.00	153.00
Addition - Option 2			Excavation & backfill	80	CY	19.22	1,537.60
Addition - Option 2			Pipe bedding	8	CY	27.04	216.32
Addition - Option 2			Spoils removal	16	CY	19.13	306.08
Addition - Option 2	12.30	SANITARY SEWER	Sanitary Sewer Systems				
Addition - Option 2			Test pit	1	EA	296.00	296.00
Addition - Option 2			Manholes, precast	1	EA	3,294.00	3,294.00
Addition - Option 2			Cleanout	2	EA	264.00	528.00
Addition - Option 2			Tie into existing manhole	1	LOC	674.00	674.00
Addition - Option 2			6" PVC	60	LF	7.88	472.80
Addition - Option 2			Excavation & backfill	36	CY	19.22	683.38
Addition - Option 2			Pipe bedding	4	CY	27.04	96.14
Addition - Option 2			Spoils removal	7	CY	19.13	136.04
Addition - Option 2	12.35	STORM WATER MANAGEMENT	Storm Sewer Systems				
Addition - Option 2			Allowance for detention/treatment or Nutrient Credits	1	LS	15,000.00	15,000.00
Addition - Option 2			6" PVC	150	LF	7.88	1,181.96
Addition - Option 2			Excavation & backfill	125	CY	19.22	2,402.50
Addition - Option 2			Pipe bedding	13	CY	27.04	338.00
Addition - Option 2			Spoils removal	25	CY	19.13	478.25
Addition - Option 2	12.40	SITE ELECTRIC, LIGHTING, AND SECURITY	Site Lighting Systems		Existing to remain		
Addition - Option 2			Site Electrical Utilities				
Addition - Option 2			Allowance to relocate existing	1	LS	8,500.00	8,500.00
Addition - Option 2	12.45	PRIMARY TELECOMM	Allowance to relocate existing	1	LS	6,500.00	6,500.00
Addition - Option 2	12.50	PRIMARY GAS	Excluded				
Addition - Option 2	12.60	PAVING	Asphalt Pavement				
Addition - Option 2			Repair existing damaged during construction	1	LS	8,000.00	8,000.00
Addition - Option 2	12.61	SITE CONCRETE AND WALLS	Site Concrete				
Addition - Option 2			Sidewalks, concrete, broom finish, 4"	1,500	SF	3.41	5,115.00
Addition - Option 2			Gravel base for concrete sidewalk, 4"	1,500	SF	1.05	1,575.00
Addition - Option 2			CG12 type ADA sidewalk ramp	2	EA	837.16	1,674.32
Addition - Option 2	12.65	LANDSCAPING	Sod	500	SY	2.76	1,380.00
Addition - Option 2			Trees/plantings		Excluded		
Addition - Option 2	11.00	MARK-UPS	Subtotal				106,959.11
Addition - Option 2			General Conditions	12.00%			12,835.09
Addition - Option 2			Subtotal				119,794.20
Addition - Option 2			GC OH & Profit	8.00%			9,583.54
Addition - Option 2			Subtotal				129,377.74
Addition - Option 2			Bonds & insurance	1.38%			1,785.41
Addition - Option 2			Subtotal				131,163.15

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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RENOVATION

CONSTRUCTION COSTS

Renovation - Option 2	Renovation			<i>Carried forward</i>		206.05	\$2,649,373
Renovation - Option 2	Subtotal						\$2,649,373
Renovation - Option 2	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Renovation - Option 2	Subtotal						\$2,649,373
Renovation - Option 2	Design Contingency			12.00%			\$317,925
Renovation - Option 2	Subtotal						\$2,967,298
Renovation - Option 2	Phasing / Interim Moves			0.00%			\$0
Renovation - Option 2	Total Hard Construction Costs Base Bid					230.77	\$2,967,298

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Renovation - Option 2	00.00		Renovation				
Renovation - Option 2	00.50	SELECT BLDG. DEMO	Misc. interior Demo of Renovated area	12,858.00	GSF	6.20	79,719.60
Renovation - Option 2			Hazmat abatement Allowance - asbestos	12,858.00	GSF	4.60	59,146.80
Renovation - Option 2			Hazmat abatement Allowance- lead	12,858.00	GSF	2.40	30,859.20
Renovation - Option 2	01.00	FOUNDATIONS	Misc. Foundation Repairs	1.00	LS	6,800.00	6,800.00
Renovation - Option 2	02.00	SUBSTRUCTURE	SOG misc. repairs	12,858.00	GSF	0.90	11,572.20
Renovation - Option 2	03.00	SUPERSTRUCTURE	Misc. Wood Blocking	12,858.00	GSF	0.90	11,572.20
Renovation - Option 2			Misc. Structural repairs	12,858.00	GSF	1.10	14,143.80
Renovation - Option 2			Misc Metals	1.00	LS	10,500.00	10,500.00
Renovation - Option 2	04.00	EXTERIOR CLOSURE	Repair or Replace Exterior Windows - Allowance	51.00	EA	922.50	47,047.50
Renovation - Option 2			Repairs & Point up existing veneer - allowance	1.00	LS	50,000.00	50,000.00
Renovation - Option 2			Repair or replace exterior trim - Allowance	1.00	LS	12,000.00	12,000.00
Renovation - Option 2			Replace exterior louvers	1.00	LS	950.00	950.00
Renovation - Option 2			Misc. w.p./caulk/fire sealants/etc. Div. 7	12,858.00	GSF	0.74	9,514.92
Renovation - Option 2	05.00	ROOFING	Misc. patch & repair - Allowance	1.00	LS	8,200.00	8,200.00
Renovation - Option 2			Repalce membrane roof - Allowance	2,786.00	SF	18.00	50,148.00
Renovation - Option 2	06.00	INTERIOR CONST	Interior CMU Partitions	12,858.00	GSF	3.20	41,145.60
Renovation - Option 2			New & Repaired Interior GWB Partitions & Plaster Wall	12,858.00	GSF	11.16	143,495.28
Renovation - Option 2			Interior Wood Trim Repairs Allowance	1.00	LS	7,500.00	7,500.00
Renovation - Option 2			Interior Doors & Frames	12,858.00	GSF	5.10	65,575.80
Renovation - Option 2			Acoustic ceiling, avg	12,858.00	GSF	3.50	45,003.00
Renovation - Option 2			Upgraded Ceiling Finishes	800.00	SF	12.75	10,200.00
Renovation - Option 2			Ceramic Tile - Allowance	0.00	GSF	13.25	0.00
Renovation - Option 2			Soft flooring/ vinyl base	12,858.00	GSF	3.95	50,789.10
Renovation - Option 2			Painting	12,858.00	GSF	2.05	26,358.90
Renovation - Option 2			Misc. cut and patching	12,858.00	GSF	0.58	7,457.64
Renovation - Option 2	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	0.00	GSF	0.82	0.00
Renovation - Option 2			Millwork	12,858.00	GSF	3.80	48,860.40
Renovation - Option 2			Window treatment Allowance	12,858.00	GSF	0.20	2,571.60
Renovation - Option 2			Misc. spec. door signs/f.e./jan shelving/etc.	12,858.00	GSF	0.45	5,786.10

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Renovation - Option 2							
Renovation - Option 2							
Renovation - Option 2	09.00	MECHANICAL HVAC	Misc. Demo	12,858.00	GSF	0.84	10,762.15
Renovation - Option 2			HVAC Equipment - based on Option 1 VRF System	12,858.00	GSF	17.06	219,357.48
Renovation - Option 2			Piping & Valves	12,858.00	GSF	3.88	49,889.04
Renovation - Option 2			Ductwork	12,858.00	GSF	5.39	69,304.62
Renovation - Option 2			Air Outlets	12,858.00	GSF	0.69	8,872.02
Renovation - Option 2			Ductwork Accessories	12,858.00	GSF	0.57	7,329.06
Renovation - Option 2			Insulation	12,858.00	GSF	3.00	38,574.00
Renovation - Option 2			Temperature Controls	12,858.00	GSF	5.16	66,347.28
Renovation - Option 2			Air & Water Balance	12,858.00	GSF	0.55	7,071.90
Renovation - Option 2			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 2			HVAC General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 2			Systems Operation & Testing	12,858.00	GSF	0.29	3,696.68
Renovation - Option 2							
Renovation - Option 2	9.20	PLUMBING	Misc. Demo	12,858.00	GSF	0.79	10,157.82
Renovation - Option 2			Fixtures	12,858.00	GSF	3.20	41,145.60
Renovation - Option 2			Gas Piping	12,858.00	GSF	0.40	5,143.20
Renovation - Option 2			Domestic Water Piping	12,858.00	GSF	2.94	37,802.52
Renovation - Option 2			DWV Piping	12,858.00	GSF	2.50	32,145.00
Renovation - Option 2			Storm Piping	12,858.00	GSF	1.75	22,501.50
Renovation - Option 2			Insulation	12,858.00	GSF	1.92	24,687.36
Renovation - Option 2			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 2			Plumbing General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 2			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60
Renovation - Option 2							
Renovation - Option 2	9.30	FIRE SPRINKLER	Sprinkler	12,858.00	GSF	4.50	57,861.00
Renovation - Option 2							

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Renovation - Option 2							
Renovation - Option 2	10.00	ELECTRICAL	Misc. Demo	12,858.00	GSF	0.88	11,315.04
Renovation - Option 2			Switchboards	12,858.00	GSF	0.90	11,572.20
Renovation - Option 2			Panelboards	12,858.00	GSF	0.94	12,086.52
Renovation - Option 2			Generator & Automatic Transfer Switches, allowance	1.00	LS	125,500.00	125,500.00
Renovation - Option 2			Bus Duct & Transformers	12,858.00	GSF	0.44	5,657.52
Renovation - Option 2			Light Fixtures	12,858.00	GSF	7.48	96,177.84
Renovation - Option 2			Light Switches - includes DDC control connections	12,858.00	GSF	1.25	16,072.50
Renovation - Option 2			Power Outlets	12,858.00	GSF	0.90	11,572.20
Renovation - Option 2			Safety Cabinets & Disconnects	12,858.00	GSF	0.40	5,143.20
Renovation - Option 2			Power Feeders	12,858.00	GSF	3.05	39,216.90
Renovation - Option 2			Power Home Runs	12,858.00	GSF	1.35	17,358.30
Renovation - Option 2			Power Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 2			Lighting Home Runs	12,858.00	GSF	1.30	16,715.40
Renovation - Option 2			Lighting Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 2			Grounding/Lightning Protection	12,858.00	GSF	0.33	4,243.14
Renovation - Option 2			Cable Tray	12,858.00	GSF	0.50	6,429.00
Renovation - Option 2			Phone/Data System	12,858.00	GSF	5.50	70,719.00
Renovation - Option 2			Security System & Equipment	12,858.00	GSF	2.55	32,787.90
Renovation - Option 2			P.A. & A.V. Systems	12,858.00	GSF	0.80	10,286.40
Renovation - Option 2			TV System	12,858.00	GSF	0.55	7,071.90
Renovation - Option 2			Fire Alarm	12,858.00	GSF	1.97	25,330.26
Renovation - Option 2			Coordination Drawings	12,858.00	GSF	0.25	3,214.50
Renovation - Option 2			Electrical General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 2			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60
Renovation - Option 2			Subtotal				2,160,474.03
Renovation - Option 2	11.00	MARK-UPS	General Conditions	12.00%			259,256.88
Renovation - Option 2			Subtotal				2,419,730.91
Renovation - Option 2			GC OH & Profit	8.00%			193,578.47
Renovation - Option 2			Subtotal				2,613,309.39
Renovation - Option 2			Costs for Phasing & Staging	0%			0.00
Renovation - Option 2			Subtotal				2,613,309.39
Renovation - Option 2			Bonds & insurance	1.38%			36,063.67
Renovation - Option 2			Subtotal	12,858.00	GSF	\$206.05	2,649,373.05

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation
 Location: Manassas, VA
 Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
 Run Date: See footer
 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition

CONSTRUCTION COSTS

Addition - Option 3	New Building Addition			<i>Carried forward</i>		<i>Cost per SF</i> 353.02	\$1,530,351
Addition - Option 3							
Addition - Option 3							
Addition - Option 3	Subtotal						\$1,530,351
Addition - Option 3	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Addition - Option 3	Subtotal						\$1,530,351
Addition - Option 3	Design Contingency			12.00%			\$183,642
Addition - Option 3							
Addition - Option 3	Total Hard Construction Costs Base Bid					<u>\$395.38</u>	<u>\$1,713,993</u>
Sitework	SITWORK			<i>Carried forward</i>		<i>N/A</i>	\$131,163
Sitework							
Sitework	Subtotal						\$131,163
Sitework	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Sitework	Subtotal						\$131,163
Sitework	Design Contingency			12.00%			\$15,740
Sitework							
Sitework	Total Hard Construction Costs Base Bid						\$146,903

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Addition - Option 3	00.00		NEW BUILDING				
Addition - Option 3	00.50	SELECT BLDG. DEMO	Demo at new building tie-ins	1.00	LS	4,500.00	4,500.00
Addition - Option 3			Temporary Shoring & Protections	1.00	LS	5,800.00	5,800.00
Addition - Option 3	01.00	FOUNDATIONS	Foundations Footing	10.46	CY	559.00	5,848.80
Addition - Option 3			Foundations Walls	20.93	CY	595.00	12,450.93
Addition - Option 3			Elevator pit walls & slab	1.00	EA	4,200.00	4,200.00
Addition - Option 3			Misc. foundation requirements	1.00	LS	2,000.00	2,000.00
Addition - Option 3	02.00	SUBSTRUCTURE	SOG	1,445.00	SF	9.40	13,583.00
Addition - Option 3			SOD	2,890.00	SF	7.90	22,831.00
Addition - Option 3	03.00	SUPERSTRUCTURE	Floor Framing & deck	2,890.00	SF	18.20	52,598.00
Addition - Option 3			Roof framing & deck	1,445.00	SF	14.80	21,386.00
Addition - Option 3			Misc. metals	4,335.00	GSF	1.22	5,288.70
Addition - Option 3			Egress Stairs	1.00	EA	46,500.00	46,500.00
Addition - Option 3			Lobby Stairs	1.00	EA	58,500.00	58,500.00
Addition - Option 3			Misc. Wood Blocking	4,335.00	GSF	0.90	3,901.50
Addition - Option 3	04.00	EXTERIOR CLOSURE	Exterior Wall Back-up & Veneer	2,352.00	SF	50.00	117,600.00
Addition - Option 3			Foundation wall waterproofing	678.00	SF	6.50	4,407.00
Addition - Option 3			Exterior wall vapor barrier	2,352.00	SF	3.75	8,820.00
Addition - Option 3			Curtainwall	2,376.00	SF	90.00	213,840.00
Addition - Option 3			Windows	0.00	EA	1,230.00	0.00
Addition - Option 3			Exterior Curtianwall Doors	5.00	EA	3,250.00	16,250.00
Addition - Option 3			Exterior Double Doors	0.00	EA	2,180.00	0.00
Addition - Option 3			Building perimeter drains in gravel bed	113.00	LF	10.50	1,186.50
Addition - Option 3			Misc. w.p./caulk/fire sealants/etc. Div. 7	4,335.00	GSF	0.74	3,207.90
Addition - Option 3	05.00	ROOFING	Roofing with insulation, copings, flashings, gutters etc.	1,445.00	SF	11.60	16,762.00
Addition - Option 3	06.00	INTERIOR CONST	Interior CMU Partitions	4,335.00	GSF	5.20	22,542.00
Addition - Option 3			Interior GWB Partitions	4,335.00	GSF	3.95	17,123.25
Addition - Option 3			Interior Doors & Frames	4.00	EA	1,520.00	6,080.00
Addition - Option 3			Acoustic ceiling, avg	4,335.00	GSF	3.50	15,172.50
Addition - Option 3			Upgraded Lobby Ceiling Finishes	996.00	GSF	12.75	12,699.00
Addition - Option 3			Ceramic Tile - Allowance	192.00	GSF	13.25	2,544.00
Addition - Option 3			Soft flooring/ vinyl base	4,143.00	GSF	3.95	16,364.85
Addition - Option 3			Painting	4,335.00	GSF	2.05	8,886.75
Addition - Option 3			Misc. cut and patching	4,335.00	GSF	0.58	2,514.30
Addition - Option 3	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	4,335.00	GSF	0.82	3,554.70
Addition - Option 3			Misc. spec. dr signs/f.e./jan shelving/etc.	4,335.00	GSF	0.70	3,034.50
Addition - Option 3			Millwork	0.00	GSF	3.80	0.00
Addition - Option 3			Office furnishings, sofas and chairs				Refer to FF&E
Addition - Option 3	08.00	CONVEYING	Three Stop Elevator	1.00	EA	114,000.00	114,000.00

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Addition - Option 3							
Addition - Option 3	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 1 VRF System	4,335.00	GSF	17.06	73,955.10
Addition - Option 3			Piping & Valves	4,335.00	GSF	3.88	16,819.80
Addition - Option 3			Ductwork	4,335.00	GSF	5.39	23,365.65
Addition - Option 3			Air Outlets	4,335.00	GSF	0.69	2,991.15
Addition - Option 3			Ductwork Accessories	4,335.00	GSF	0.57	2,470.95
Addition - Option 3			Insulation	4,335.00	GSF	3.00	13,005.00
Addition - Option 3			Temperature Controls	4,335.00	GSF	5.16	22,368.60
Addition - Option 3			Air & Water Balance	4,335.00	GSF	0.55	2,384.25
Addition - Option 3			Coordination Drawings	4,335.00	GSF	0.25	1,096.76
Addition - Option 3			HVAC General Conditions	4,335.00	GSF	0.35	1,517.25
Addition - Option 3			Systems Operation & Testing	4,335.00	GSF	0.29	1,246.31
Addition - Option 3	9.20	PLUMBING	Fixtures	4,335.00	GSF	3.20	13,872.00
Addition - Option 3			Gas Piping	4,335.00	GSF	0.40	1,734.00
Addition - Option 3			Domestic Water Piping	4,335.00	GSF	2.94	12,744.90
Addition - Option 3			DWV Piping	4,335.00	GSF	2.50	10,837.50
Addition - Option 3			Storm Piping	4,335.00	GSF	1.75	7,586.25
Addition - Option 3			Insulation	4,335.00	GSF	1.92	8,323.20
Addition - Option 3			Coordination Drawings	4,335.00	GSF	0.25	1,096.76
Addition - Option 3			Plumbing General Conditions	4,335.00	GSF	0.35	1,517.25
Addition - Option 3			Systems Operation & Testing	4,335.00	GSF	0.20	867.00
Addition - Option 3	9.30	FIRE SPRINKLER	Sprinkler	4,335.00	GSF	3.50	15,172.50
Addition - Option 3			Fire Pump			<i>Not included</i>	
Addition - Option 3	10.00	ELECTRICAL	Switchboards	4,335.00	GSF	0.90	3,901.50
Addition - Option 3			Panelboards	4,335.00	GSF	0.94	4,074.90
Addition - Option 3			Generator & Automatic Transfer Switches			<i>See Renovation</i>	
Addition - Option 3			Bus Duct & Transformers	4,335.00	GSF	0.44	1,907.40
Addition - Option 3			Light Fixtures	4,335.00	GSF	7.48	32,425.80
Addition - Option 3			Light Switches - includes DDC control connections	4,335.00	GSF	1.25	5,418.75
Addition - Option 3			Power Outlets	4,335.00	GSF	0.90	3,901.50
Addition - Option 3			Safety Cabinets & Disconnects	4,335.00	GSF	0.40	1,734.00
Addition - Option 3			Power Feeders	4,335.00	GSF	3.05	13,221.75
Addition - Option 3			Power Home Runs	4,335.00	GSF	1.35	5,852.25
Addition - Option 3			Power Branches	4,335.00	GSF	1.45	6,285.75
Addition - Option 3			Lighting Home Runs	4,335.00	GSF	1.30	5,635.50
Addition - Option 3			Lighting Branches	4,335.00	GSF	1.45	6,285.75
Addition - Option 3			Grounding/Lightning Protection	4,335.00	GSF	0.33	1,430.55
Addition - Option 3			Cable Tray	4,335.00	GSF	0.50	2,167.50
Addition - Option 3			Phone/Data System	4,335.00	GSF	5.50	23,842.50
Addition - Option 3			Security System & Equipment	4,335.00	GSF	2.55	11,054.25
Addition - Option 3			P.A. & A.V. Systems	4,335.00	GSF	0.80	3,468.00
Addition - Option 3			TV System	4,335.00	GSF	0.55	2,384.25
Addition - Option 3			Fire Alarm	4,335.00	GSF	1.97	8,539.95
Addition - Option 3			Coordination Drawings	4,335.00	GSF	0.25	1,083.75
Addition - Option 3			Electrical General Conditions	4,335.00	GSF	0.35	1,517.25
Addition - Option 3			Systems Operation & Testing	4,335.00	GSF	0.20	867.00

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 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

11.00 MARK-UPS

Subtotal							1,247,949.19
General Conditions				12.00%			149,753.90
Subtotal							1,397,703.10
GC OH & Profit				8.00%			111,816.25
Subtotal							1,509,519.35
Costs for Phasing & Staging				0%			0.00
Subtotal							1,509,519.35
Bonds & insurance				1.38%			20,831.37
Subtotal				4,335.00 GSF		\$353.02	1,530,350.71

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Addition - Option 3

Addition - Option 3

Addition - Option 3

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Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

Addition - Option 3

SITEWORK

12.05 SITE DEMO

Misc site demo
 CY of site debris for landfill disposal

60 CY
 60 CY

98.00
 calculates quantities for hauling

5,880.00

Haul/Dispose of Site Debris
 Dump truck to landfill 2 axle/10 CY
 Dump fees assume 1 ton per CY

12 EHR
 60 CY

125.00
 76.00

1,500.00
 4,560.00

12.10 ENVIRONMENTAL

Erosion and Sediment Controls

Dust control
 Silt fence
 Gravel construction entrance
 Wash rack
 Inlet/outlet protection
 Maintenance of E&S measures

1 LS
 120 LF
 95 TNS
 1 EA
 2 EA
 1 LS

2,566.00
 2.95
 33.62
 812.00
 76.00
 707.79

2,566.00
 354.00
 3,193.90
 812.00
 152.00
 707.79

12.20 EARTHWORK

Foundation Drainage

Drainage foundation gravel/filter cloth
 Daylight at suitable outfall pipe only

110 LF
 28 LF

18.86
 6.22

2,074.60
 171.05

Soil Testing

Compaction See Div 1
 Moisture See Div 1
 CBR See Div 1

Topsoil/Fine Grade

Topsoil strip and stockpile onsite small quantity, skid steer
 Topsoil respread/fine grade onsite
 Building pad fine grade

30 CY
 100 CY
 156 SY

5.06
 5.82
 4.05

151.80
 582.00
 630.00

Cut/Fill

Cut directly to fill, using onsite soils, avg 50' haul
 Cut and haul off-site - cut, load, haul, dispose

60 CY
 100 CY

3.04
 21.80

182.40
 2,180.00

Undercut and Replace with Suitable Soils

Undercut and haul - cut, load, haul, dispose
 Import fill - purchase, import, place, compact

100 CY
 100 CY

21.80
 36.67

2,180.00
 3,667.00

Grading and Shaping

Rough grading entire disturbed area

389 SY

1.14

443.33

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Addition - Option 3			Rock Excavation				Excluded
Addition - Option 3			Special Foundations				Excluded
Addition - Option 3			Backfill				
Addition - Option 3			Backfill building	18	CY	9.69	177.65
Addition - Option 3			Soil Treatment Termite Control				
Addition - Option 3			Termite control	1,400	SF	0.06	84.00
Addition - Option 3	12.25	WATER	Water Supply & Distribution Systems				
Addition - Option 3			Test pit	1	EA	296.00	296.00
Addition - Option 3			Domestic supply to tie into existing building				
Addition - Option 3			6" DIP fire	120	LF	32.66	3,919.20
Addition - Option 3			6" Valve w/ post indicator	2	EA	3,330.00	6,660.00
Addition - Option 3			Fire hydrant	1	EA	3,296.00	3,296.00
Addition - Option 3			Thrust blocks	1	EA	153.00	153.00
Addition - Option 3			Excavation & backfill	80	CY	19.22	1,537.60
Addition - Option 3			Pipe bedding	8	CY	27.04	216.32
Addition - Option 3			Spoils removal	16	CY	19.13	306.08
Addition - Option 3	12.30	SANITARY SEWER	Sanitary Sewer Systems				
Addition - Option 3			Test pit	1	EA	296.00	296.00
Addition - Option 3			Manholes, precast	1	EA	3,294.00	3,294.00
Addition - Option 3			Cleanout	2	EA	264.00	528.00
Addition - Option 3			Tie into existing manhole	1	LOC	674.00	674.00
Addition - Option 3			6" PVC	60	LF	7.88	472.80
Addition - Option 3			Excavation & backfill	36	CY	19.22	683.38
Addition - Option 3			Pipe bedding	4	CY	27.04	96.14
Addition - Option 3			Spoils removal	7	CY	19.13	136.04
Addition - Option 3	12.35	STORM WATER MANAGEMENT	Storm Sewer Systems				
Addition - Option 3			Allowance for detention/treatment or Nutrient Credits	1	LS	15,000.00	15,000.00
Addition - Option 3			6" PVC	150	LF	7.88	1,181.96
Addition - Option 3			Excavation & backfill	125	CY	19.22	2,402.50
Addition - Option 3			Pipe bedding	13	CY	27.04	338.00
Addition - Option 3			Spoils removal	25	CY	19.13	478.25

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Addition - Option 3	12.40	SITE ELECTRIC, LIGHTING, AND SECURITY	Site Lighting Systems				
Addition - Option 3							
Addition - Option 3							
Addition - Option 3			Site Electrical Utilities				
Addition - Option 3			Allowance to relocate existing	1	LS	8,500.00	8,500.00
Addition - Option 3	12.45	PRIMARY TELECOMM	Allowance to relocate existing	1	LS	6,500.00	6,500.00
Addition - Option 3	12.50	PRIMARY GAS					
Addition - Option 3							
Addition - Option 3	12.60	PAVING	Asphalt Pavement				
Addition - Option 3			Repair existing damaged during construction	1	LS	8,000.00	8,000.00
Addition - Option 3	12.61	SITE CONCRETE AND WALLS					
Addition - Option 3			Site Concrete				
Addition - Option 3			Sidewalks, concrete, broom finish, 4"	1,500	SF	3.41	5,115.00
Addition - Option 3			Gravel base for concrete sidewalk, 4"	1,500	SF	1.05	1,575.00
Addition - Option 3			CG12 type ADA sidewalk ramp	2	EA	837.16	1,674.32
Addition - Option 3	12.65	LANDSCAPING	Sod	500	SY	2.76	1,380.00
Addition - Option 3			Trees/plantings		Excluded		
Addition - Option 3	11.00	MARK-UPS					
Addition - Option 3			Subtotal				106,959.11
Addition - Option 3			General Conditions	12.00%			12,835.09
Addition - Option 3			Subtotal				119,794.20
Addition - Option 3			GC OH & Profit	8.00%			9,583.54
Addition - Option 3			Subtotal				129,377.74
Addition - Option 3			Bonds & insurance	1.38%			1,785.41
Addition - Option 3			Subtotal				131,163.15

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RENOVATION

CONSTRUCTION COSTS

Renovation - Option 3	Renovation			<i>Carried forward</i>		205.10	\$2,637,232
Renovation - Option 3							
Renovation - Option 3	Subtotal						\$2,637,232
Renovation - Option 3	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Renovation - Option 3	Subtotal						\$2,637,232
Renovation - Option 3	Design Contingency			12.00%			\$316,468
Renovation - Option 3	Subtotal						\$2,953,700
Renovation - Option 3	Phasing / Interim Moves	Allowance		0.00%			\$0
Renovation - Option 3							
Renovation - Option 3	Total Hard Construction Costs Base Bid					229.72	\$2,953,700

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Renovation - Option 3	00.00		Renovation				
Renovation - Option 3	00.50	SELECT BLDG. DEMO	Misc. interior Demo of Renovated area	12,858.00	GSF	6.20	79,719.60
Renovation - Option 3			Hazmat abatement Allowance - asbestos	12,858.00	GSF	4.60	59,146.80
Renovation - Option 3			Hazmat abatement Allowance- lead	12,858.00	GSF	2.40	30,859.20
Renovation - Option 3	01.00	FOUNDATIONS	Misc. Foundation Repairs	1.00	LS	6,800.00	6,800.00
Renovation - Option 3	02.00	SUBSTRUCTURE	SOG misc. repairs	12,858.00	GSF	0.90	11,572.20
Renovation - Option 3	03.00	SUPERSTRUCTURE	Misc. Wood Blocking	12,858.00	GSF	0.90	11,572.20
Renovation - Option 3			Misc. Structural repairs	12,858.00	GSF	1.10	14,143.80
Renovation - Option 3			Misc Metals	1.00	LS	10,500.00	10,500.00
Renovation - Option 3	04.00	EXTERIOR CLOSURE	Repair or Replace Exterior Windows - Allowance	51.00	EA	922.50	47,047.50
Renovation - Option 3			Repairs & Point up existing veneer - allowance	1.00	LS	50,000.00	50,000.00
Renovation - Option 3			Repair or replace exterior trim - Allowance	1.00	LS	12,000.00	12,000.00
Renovation - Option 3			Replace exterior louvers	1.00	LS	950.00	950.00
Renovation - Option 3			Misc. w.p./caulk/fire sealants/etc. Div. 7	12,858.00	GSF	0.74	9,514.92
Renovation - Option 3	05.00	ROOFING	Misc. patch & repair - Allowance	1.00	LS	8,200.00	8,200.00
Renovation - Option 3			Repalce membrane roof - Allowance	2,786.00	SF	18.00	50,148.00
Renovation - Option 3	06.00	INTERIOR CONST	Interior CMU Partitions	12,858.00	GSF	3.05	39,216.90
Renovation - Option 3			New & Repaired Interior GWB Partitions & Plaster Wall	12,858.00	GSF	10.54	135,523.32
Renovation - Option 3			Interior Wood Trim Repairs Allowance	1.00	LS	7,500.00	7,500.00
Renovation - Option 3			Interior Doors & Frames	12,858.00	GSF	5.10	65,575.80
Renovation - Option 3			Acoustic ceiling, avg	12,858.00	GSF	3.50	45,003.00
Renovation - Option 3			Upgraded Ceiling Finishes	800.00	SF	12.75	10,200.00
Renovation - Option 3			Ceramic Tile - Allowance	0.00	GSF	13.25	0.00
Renovation - Option 3			Soft flooring/ vinyl base	12,858.00	GSF	3.95	50,789.10
Renovation - Option 3			Painting	12,858.00	GSF	2.05	26,358.90
Renovation - Option 3			Misc. cut and patching	12,858.00	GSF	0.58	7,457.64
Renovation - Option 3	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	0.00	GSF	0.82	0.00
Renovation - Option 3			Millwork	12,858.00	GSF	3.80	48,860.40
Renovation - Option 3			Window treatment Allowance	12,858.00	GSF	0.20	2,571.60
Renovation - Option 3			Misc. spec. door signs/f.e./jan shelving/etc.	12,858.00	GSF	0.45	5,786.10

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation
 Location: Manassas, VA
 Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
 Run Date: See footer
 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Renovation - Option 3							
Renovation - Option 3							
Renovation - Option 3	09.00	MECHANICAL HVAC	Misc. Demo	12,858.00	GSF	0.84	10,762.15
Renovation - Option 3			HVAC Equipment - based on Option 1 VRF System	12,858.00	GSF	17.06	219,357.48
Renovation - Option 3			Piping & Valves	12,858.00	GSF	3.88	49,889.04
Renovation - Option 3			Ductwork	12,858.00	GSF	5.39	69,304.62
Renovation - Option 3			Air Outlets	12,858.00	GSF	0.69	8,872.02
Renovation - Option 3			Ductwork Accessories	12,858.00	GSF	0.57	7,329.06
Renovation - Option 3			Insulation	12,858.00	GSF	3.00	38,574.00
Renovation - Option 3			Temperature Controls	12,858.00	GSF	5.16	66,347.28
Renovation - Option 3			Air & Water Balance	12,858.00	GSF	0.55	7,071.90
Renovation - Option 3			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 3			HVAC General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 3			Systems Operation & Testing	12,858.00	GSF	0.29	3,696.68
Renovation - Option 3							
Renovation - Option 3	9.20	PLUMBING	Misc. Demo	12,858.00	GSF	0.79	10,157.82
Renovation - Option 3			Fixtures	12,858.00	GSF	3.20	41,145.60
Renovation - Option 3			Gas Piping	12,858.00	GSF	0.40	5,143.20
Renovation - Option 3			Domestic Water Piping	12,858.00	GSF	2.94	37,802.52
Renovation - Option 3			DWV Piping	12,858.00	GSF	2.50	32,145.00
Renovation - Option 3			Storm Piping	12,858.00	GSF	1.75	22,501.50
Renovation - Option 3			Insulation	12,858.00	GSF	1.92	24,687.36
Renovation - Option 3			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 3			Plumbing General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 3			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60
Renovation - Option 3							
Renovation - Option 3	9.30	FIRE SPRINKLER	Sprinkler	12,858.00	GSF	4.50	57,861.00
Renovation - Option 3							
Renovation - Option 3	10.00	ELECTRICAL	Misc. Demo	12,858.00	GSF	0.88	11,315.04
Renovation - Option 3			Switchboards	12,858.00	GSF	0.90	11,572.20
Renovation - Option 3			Panelboards	12,858.00	GSF	0.94	12,086.52
Renovation - Option 3			Generator & Automatic Transfer Switches, allowance	1.00	LS	125,500.00	125,500.00
Renovation - Option 3			Bus Duct & Transformers	12,858.00	GSF	0.44	5,657.52
Renovation - Option 3			Light Fixtures	12,858.00	GSF	7.48	96,177.84
Renovation - Option 3			Light Switches - includes DDC control connections	12,858.00	GSF	1.25	16,072.50
Renovation - Option 3			Power Outlets	12,858.00	GSF	0.90	11,572.20
Renovation - Option 3			Safety Cabinets & Disconnects	12,858.00	GSF	0.40	5,143.20
Renovation - Option 3			Power Feeders	12,858.00	GSF	3.05	39,216.90
Renovation - Option 3			Power Home Runs	12,858.00	GSF	1.35	17,358.30
Renovation - Option 3			Power Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 3			Lighting Home Runs	12,858.00	GSF	1.30	16,715.40
Renovation - Option 3			Lighting Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 3			Grounding/Lightning Protection	12,858.00	GSF	0.33	4,243.14
Renovation - Option 3			Cable Tray	12,858.00	GSF	0.50	6,429.00
Renovation - Option 3			Phone/Data System	12,858.00	GSF	5.50	70,719.00
Renovation - Option 3			Security System & Equipment	12,858.00	GSF	2.55	32,787.90
Renovation - Option 3			P.A. & A.V. Systems	12,858.00	GSF	0.80	10,286.40
Renovation - Option 3			TV System	12,858.00	GSF	0.55	7,071.90
Renovation - Option 3			Fire Alarm	12,858.00	GSF	1.97	25,330.26
Renovation - Option 3			Coordination Drawings	12,858.00	GSF	0.25	3,214.50
Renovation - Option 3			Electrical General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 3			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60

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Renovation - Option 3			Subtotal				2,150,573.37
Renovation - Option 3	11.00	MARK-UPS	General Conditions	12.00%			258,068.80
Renovation - Option 3			Subtotal				2,408,642.17
Renovation - Option 3			GC OH & Profit	8.00%			192,691.37
Renovation - Option 3			Subtotal				2,601,333.55
Renovation - Option 3			Costs for Phasing & Staging	0%			0.00
Renovation - Option 3			Subtotal				2,601,333.55
Renovation - Option 3			Bonds & insurance	1.38%			35,898.40
Renovation - Option 3			Subtotal	12,858.00 GSF		\$205.10	2,637,231.95

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OPTION 4

Addition

Building Addition
Sitework

	GSF	18,410.00	Cost/SF \$291.28	\$5,362,391
				\$656,772

Total Cost - Addition

	18,410.00	\$326.95	\$6,019,163
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Renovation

Exsiting Building

	GSF	12,858.00	\$228.80	\$2,941,958
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Total Cost - Renovation

	12,858.00	\$228.80	\$2,941,958
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TOTAL PROJECT COST INCLUDING ADDITION & RENOVATION

	GSF	31,268.00	286.59	\$8,961,121
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Addition

CONSTRUCTION COSTS

Addition - Option 4	New Building Addition			<i>Carried forward</i>		<i>Cost per SF</i> 260.07	\$4,787,849
Addition - Option 4							
Addition - Option 4							
Addition - Option 4	Subtotal						\$4,787,849
Addition - Option 4	Escalation to construction mid point Current Dollars per Direction			0.00%			\$0
Addition - Option 4	Subtotal						\$4,787,849
Addition - Option 4	Design Contingency			12.00%			\$574,542
Addition - Option 4							
Addition - Option 4	Total Hard Construction Costs Base Bid					<u>\$291.28</u>	<u>\$5,362,391</u>
Sitework							
Sitework	SITWORK			<i>Carried forward</i>		<i>N/A</i>	\$586,404
Sitework							
Sitework	Subtotal						\$586,404
Sitework	Escalation to construction mid point Current Dollars per Direction			0.00%			\$0
Sitework	Subtotal						\$586,404
Sitework	Design Contingency			12.00%			\$70,368
Sitework							
Sitework	Total Hard Construction Costs Base Bid						\$656,772

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Addition - Option 4	00.00		NEW BUILDING				
Addition - Option 4	00.50	SELECT BLDG. DEMO	Demo at new building tie-ins	1.00	LS	4,500.00	4,500.00
Addition - Option 4			Temporary Shoring & Protections	1.00	LS	5,800.00	5,800.00
Addition - Option 4	01.00	FOUNDATIONS	Foundations Footing	31.11	CY	559.00	17,391.11
Addition - Option 4			Foundations Walls	62.22	CY	595.00	37,022.22
Addition - Option 4			Elevator pit walls & slab	1.00	EA	4,200.00	4,200.00
Addition - Option 4			Misc. foundation requirements	1.00	LS	5,000.00	5,000.00
Addition - Option 4	02.00	SUBSTRUCTURE	SOG	6,136.67	SF	9.40	57,684.67
Addition - Option 4			SOD	12,273.33	SF	7.90	96,959.33
Addition - Option 4	03.00	SUPERSTRUCTURE	Floor Framing & deck	12,273.33	SF	18.20	223,374.67
Addition - Option 4			Roof framing & deck	6,136.67	SF	14.80	90,822.67
Addition - Option 4			Misc. metals	18,410.00	GSF	1.22	22,460.20
Addition - Option 4			Egress Stairs	2.00	EA	46,500.00	93,000.00
Addition - Option 4			Lobby Stairs	1.00	EA	58,500.00	58,500.00
Addition - Option 4			Misc. Wood Blocking	18,410.00	GSF	0.90	16,569.00
Addition - Option 4	04.00	EXTERIOR CLOSURE	Exterior Wall Back-up & Veneer	7,704.00	SF	50.00	385,200.00
Addition - Option 4			Foundation wall waterproofing	2,016.00	SF	6.50	13,104.00
Addition - Option 4			Exterior wall vapor barrier	7,704.00	SF	3.75	28,890.00
Addition - Option 4			Curtainwall	2,376.00	SF	90.00	213,840.00
Addition - Option 4			Windows	76.00	EA	1,230.00	93,480.00
Addition - Option 4			Exterior Curtianwall Doors	5.00	EA	3,250.00	16,250.00
Addition - Option 4			Exterior Double Doors	2.00	EA	2,180.00	4,360.00
Addition - Option 4			Building perimeter drains in gravel bed	336.00	LF	10.50	3,528.00
Addition - Option 4			Misc. w.p./caulk/fire sealants/etc. Div. 7	18,410.00	GSF	0.74	13,623.40
Addition - Option 4	05.00	ROOFING	Asphalt Shingle Roofing with insulation, copings, flashings, gutters etc.	6,136.67	SF	11.60	71,185.33
Addition - Option 4	06.00	INTERIOR CONST	Interior CMU Partitions	18,410.00	GSF	3.20	58,912.00
Addition - Option 4			Interior GWB Partitions	18,410.00	GSF	7.61	140,054.08
Addition - Option 4			Interior Doors & Frames	61.00	EA	1,520.00	92,720.00
Addition - Option 4			Acoustic ceiling, avg	18,410.00	GSF	3.50	64,435.00
Addition - Option 4			Upgraded Lobby Ceiling Finishes	996.00	GSF	12.75	12,699.00
Addition - Option 4			Ceramic Tile - Allowance	378.00	GSF	13.25	5,008.50
Addition - Option 4			Soft flooring/ vinyl base	18,032.00	GSF	3.95	71,226.40
Addition - Option 4			Painting	18,410.00	GSF	2.05	37,740.50
Addition - Option 4			Misc. cut and patching	18,410.00	GSF	0.58	10,677.80
Addition - Option 4	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	18,410.00	GSF	0.82	15,096.20
Addition - Option 4			Misc. spec. dr signs/f.e./jan shelving/etc.	18,410.00	GSF	0.70	12,887.00
Addition - Option 4			Millwork	18,410.00	GSF	3.80	69,958.00
Addition - Option 4			Office furnishings, sofas and chairs			Refer to FF&E	
Addition - Option 4	08.00	CONVEYING	Three Stop Elevator	1.00	EA	114,000.00	114,000.00

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Addition - Option 4							
Addition - Option 4	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 1 VRF System	18,410.00	GSF	17.06	314,074.60
Addition - Option 4			Piping & Valves	18,410.00	GSF	3.88	71,430.80
Addition - Option 4			Ductwork	18,410.00	GSF	5.39	99,229.90
Addition - Option 4			Air Outlets	18,410.00	GSF	0.69	12,702.90
Addition - Option 4			Ductwork Accessories	18,410.00	GSF	0.57	10,493.70
Addition - Option 4			Insulation	18,410.00	GSF	3.00	55,230.00
Addition - Option 4			Temperature Controls	18,410.00	GSF	5.16	94,995.60
Addition - Option 4			Air & Water Balance	18,410.00	GSF	0.55	10,125.50
Addition - Option 4			Coordination Drawings	18,410.00	GSF	0.25	4,657.73
Addition - Option 4			HVAC General Conditions	18,410.00	GSF	0.35	6,443.50
Addition - Option 4			Systems Operation & Testing	18,410.00	GSF	0.29	5,292.88
Addition - Option 4	9.20	PLUMBING	Fixtures	18,410.00	GSF	3.20	58,912.00
Addition - Option 4			Gas Piping	18,410.00	GSF	0.40	7,364.00
Addition - Option 4			Domestic Water Piping	18,410.00	GSF	2.94	54,125.40
Addition - Option 4			DWV Piping	18,410.00	GSF	2.50	46,025.00
Addition - Option 4			Storm Piping	18,410.00	GSF	1.75	32,217.50
Addition - Option 4			Insulation	18,410.00	GSF	1.92	35,347.20
Addition - Option 4			Coordination Drawings	18,410.00	GSF	0.25	4,657.73
Addition - Option 4			Plumbing General Conditions	18,410.00	GSF	0.35	6,443.50
Addition - Option 4			Systems Operation & Testing	18,410.00	GSF	0.20	3,682.00
Addition - Option 4	9.30	FIRE SPRINKLER	Sprinkler	18,410.00	GSF	3.50	64,435.00
Addition - Option 4			Fire Pump			<i>Not included</i>	
Addition - Option 4	10.00	ELECTRICAL	Switchboards	18,410.00	GSF	0.90	16,569.00
Addition - Option 4			Panelboards	18,410.00	GSF	0.94	17,305.40
Addition - Option 4			Generator & Automatic Transfer Switches			<i>See Renovation</i>	
Addition - Option 4			Bus Duct & Transformers	18,410.00	GSF	0.44	8,100.40
Addition - Option 4			Light Fixtures	18,410.00	GSF	7.48	137,706.80
Addition - Option 4			Light Switches - includes DDC control connections	18,410.00	GSF	1.25	23,012.50
Addition - Option 4			Power Outlets	18,410.00	GSF	0.90	16,569.00
Addition - Option 4			Safety Cabinets & Disconnects	18,410.00	GSF	0.40	7,364.00
Addition - Option 4			Power Feeders	18,410.00	GSF	3.05	56,150.50
Addition - Option 4			Power Home Runs	18,410.00	GSF	1.35	24,853.50
Addition - Option 4			Power Branches	18,410.00	GSF	1.45	26,694.50
Addition - Option 4			Lighting Home Runs	18,410.00	GSF	1.30	23,933.00
Addition - Option 4			Lighting Branches	18,410.00	GSF	1.45	26,694.50
Addition - Option 4			Grounding/Lightning Protection	18,410.00	GSF	0.33	6,075.30
Addition - Option 4			Cable Tray	18,410.00	GSF	0.50	9,205.00
Addition - Option 4			Phone/Data System	18,410.00	GSF	5.50	101,255.00
Addition - Option 4			Security System & Equipment	18,410.00	GSF	2.55	46,945.50
Addition - Option 4			P.A. & A.V. Systems	18,410.00	GSF	0.80	14,728.00
Addition - Option 4			TV System	18,410.00	GSF	0.55	10,125.50
Addition - Option 4			Fire Alarm	18,410.00	GSF	1.97	36,267.70
Addition - Option 4			Coordination Drawings	18,410.00	GSF	0.25	4,602.50
Addition - Option 4			Electrical General Conditions	18,410.00	GSF	0.35	6,443.50
Addition - Option 4			Systems Operation & Testing	18,410.00	GSF	0.20	3,682.00

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Addition - Option 4

Addition - Option 4

Addition - Option 4

Addition - Option 4

Addition - Option 4

Addition - Option 4

Addition - Option 4

Addition - Option 4

Addition - Option 4

Addition - Option 4

Addition - Option 4

11.00 MARK-UPS

Subtotal							3,904,328.61
General Conditions				12.00%			468,519.43
Subtotal							4,372,848.04
GC OH & Profit				8.00%			349,827.84
Subtotal							4,722,675.89
Costs for Phasing & Staging				0%			0.00
Subtotal							4,722,675.89
Bonds & insurance				1.38%			65,172.93
Subtotal				18,410.00 GSF		\$260.07	4,787,848.81

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Addition - Option 4	12.20	EARTHWORK	Foundation Drainage					
Addition - Option 4			Drainage foundation gravel/filter cloth	370	LF	18.86	6,978.20	
Addition - Option 4			Daylight at suitable outfall pipe only	93	LF	6.22	575.55	
Addition - Option 4			Soil Testing					
Addition - Option 4			Compaction See Div 1					
Addition - Option 4			Moisture See Div 1					
Addition - Option 4			CBR See Div 1					
Addition - Option 4			Topsoil/Fine Grade					
Addition - Option 4			Topsoil strip and stockpile onsite small quantity, skid steer	100	CY	5.06	506.00	
Addition - Option 4			Topsoil respread/fine grade onsite	100	CY	5.82	582.00	
Addition - Option 4			Building pad fine grade	677	SY	4.05	2,740.50	
Addition - Option 4			Cut/Fill					
Addition - Option 4			Cut directly to fill, using onsite soils, avg 50' haul	500	CY	3.04	1,520.00	
Addition - Option 4			Cut and haul off-site - cut, load, haul, dispose	500	CY	21.80	10,900.00	
Addition - Option 4			Undercut and Replace with Suitable Soils					
Addition - Option 4			Undercut and haul - cut, load, haul, dispose	250	CY	21.80	5,450.00	
Addition - Option 4			Import fill - purchase, import, place, compact	250	CY	36.67	9,167.50	
Addition - Option 4			Grading and Shaping					
Addition - Option 4			Rough grading entire disturbed area	3,889	SY	1.14	4,433.33	
Addition - Option 4			Rock Excavation		Excluded			
Addition - Option 4			Special Foundations		Excluded			
Addition - Option 4			Backfill					
Addition - Option 4			Backfill building	62	CY	9.69	597.55	
Addition - Option 4			Soil Treatment Termite Control					
Addition - Option 4			Termite control	6,090	SF	0.06	365.40	
Addition - Option 4	12.25	WATER	Water Supply & Distribution Systems					
Addition - Option 4			Test pit	1	EA	296.00	296.00	
Addition - Option 4			Domestic supply to tie into existing building					
Addition - Option 4			6" DIP fire	120	LF	32.66	3,919.20	
Addition - Option 4			6" Valve w/ post indicator	2	EA	3,330.00	6,660.00	
Addition - Option 4			Fire hydrant	1	EA	3,296.00	3,296.00	
Addition - Option 4			Thrust blocks	1	EA	153.00	153.00	
Addition - Option 4			Excavation & backfill	80	CY	19.22	1,537.60	
Addition - Option 4			Pipe bedding	8	CY	27.04	216.32	
Addition - Option 4			Spoils removal	16	CY	19.13	306.08	

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation
 Location: Manassas, VA
 Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
 Run Date: See footer
 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 4	12.30	SANITARY SEWER	Sanitary Sewer Systems				
Addition - Option 4			Test pit	1 EA		296.00	296.00
Addition - Option 4			Manholes, precast	1 EA		3,294.00	3,294.00
Addition - Option 4			Cleanout	2 EA		264.00	528.00
Addition - Option 4			Tie into existing manhole	1 LOC		674.00	674.00
Addition - Option 4			6" PVC	100 LF		7.88	788.00
Addition - Option 4			Excavation & backfill	59 CY		19.22	1,138.96
Addition - Option 4			Pipe bedding	6 CY		27.04	160.24
Addition - Option 4			Spoils removal	12 CY		19.13	226.73
Addition - Option 4			12.35	STORM WATER MANAGEMENT	Storm Sewer Systems		
Addition - Option 4	Test pit	2 EA				296.00	592.00
Addition - Option 4	Tie into existing structure	1 LOC				623.00	623.00
Addition - Option 4	Grate inlet	1 EA				2,869.00	2,869.00
Addition - Option 4	Curb inlet, top only, add manhole	3 EA				1,530.00	4,590.00
Addition - Option 4	Manholes, precast, 48"	4 EA				3,977.00	15,908.00
Addition - Option 4	Allowance for detention/treatment or Nutrient Credits	1 LS				25,000.00	25,000.00
Addition - Option 4	6" PVC	400 LF				7.88	3,151.90
Addition - Option 4	12" RCP	100 LF				29.99	2,998.70
Addition - Option 4	15" RCP	150 LF				35.09	5,263.72
Addition - Option 4	18" RCP	60 LF				41.87	2,512.16
Addition - Option 4	Excavation & backfill	685 CY				19.22	13,160.72
Addition - Option 4	Pipe bedding	68 CY				27.04	1,851.54
Addition - Option 4	Spoils removal	137 CY				19.13	2,619.82
Addition - Option 4	12.40	SITE ELECTRIC, LIGHTING, AND SECURITY			Site Lighting Systems		
Addition - Option 4			Pole and light, 12' pole, LED, single lamp	4 EA		3,156.00	12,624.00
Addition - Option 4			Pole base excavation and concrete fill	4 EA		506.00	2,024.00
Addition - Option 4			Site lighting control	1 EA		828.00	828.00
Addition - Option 4			PVC conduit, 1"	300 LF		2.00	600.00
Addition - Option 4			Wiring	300 LF		3.99	1,197.00
Addition - Option 4			Chain trenching 24" deep	300 LF		1.44	432.00
Addition - Option 4				Change OHE to UGE			
Addition - Option 4			Direct bury primary elec (2) 6" pvc conduit	200 LF		32.45	6,490.00
Addition - Option 4			Duct bank pvc conduit (15) 4"	60 LF		65.43	3,925.80
Addition - Option 4			Duct bank pvc conduit (10) 4"	40 LF		43.95	1,758.00
Addition - Option 4			Excavation & backfill	59 CY		28.89	1,712.00
Addition - Option 4			Concrete fill	12 CY		174.24	2,065.07
Addition - Option 4			Spoils removal	12 CY		19.13	226.73
Addition - Option 4			Wiring for conduits 3" and larger	1,300 LF		8.29	10,777.00
Addition - Option 4	12.45	PRIMARY TELECOMM	Duct bank pvc conduit (2) 4", wiring by utility company	150 LF		8.95	1,342.50
Addition - Option 4			Excavation & backfill	44 CY		29.40	1,306.67
Addition - Option 4			Concrete fill	9 CY		174.24	1,548.80
Addition - Option 4			Spoils removal	9 CY		19.13	170.04

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 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: **September 28, 2018**
 Run Date: See footer
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PM: ja/ct/mvd
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 4							
Addition - Option 4	12.50	PRIMARY GAS			Excluded		
Addition - Option 4							
Addition - Option 4	12.60	PAVING	Asphalt Pavement				
Addition - Option 4			8/4/2 section	2,756	SY	52.60	144,942.22
Addition - Option 4			Paving Specialties				
Addition - Option 4			Traffic control	4	DAY	1,271.00	5,084.00
Addition - Option 4			Mill and overlay asphalt	300	SY	17.42	5,226.00
Addition - Option 4			Paint striping	1,750	LF	1.65	2,887.50
Addition - Option 4							
Addition - Option 4	12.61	SITE CONCRETE AND WALLS	Curb & Gutter				
Addition - Option 4			Curb and gutter	1,090	LF	21.10	22,999.00
Addition - Option 4			Site Concrete				
Addition - Option 4			Sidewalks, concrete, broom finish, 4"	3,640	SF	3.41	12,412.40
Addition - Option 4			Gravel base for concrete sidewalk, 4"	3,640	SF	1.05	3,822.00
Addition - Option 4			CG12 type ADA sidewalk ramp	3	EA	837.16	2,511.48
Addition - Option 4							
Addition - Option 4	12.65	LANDSCAPING	Sod				
Addition - Option 4			Trees/plantings	1,000	SY	2.76	2,760.00
Addition - Option 4					Excluded		
Addition - Option 4							
Addition - Option 4	12.75	SPECIALTIES	Bollards, incl foundation				
Addition - Option 4			Signage, H/C, traffic, firelane	3	EA	899.00	2,697.00
Addition - Option 4				6	EA	121.51	729.00
Addition - Option 4							
Addition - Option 4	11.00	MARK-UPS	Subtotal				478,192.55
Addition - Option 4			General Conditions	12.00%			57,383.11
Addition - Option 4			Subtotal				535,575.66
Addition - Option 4			GC OH & Profit	8.00%			42,846.05
Addition - Option 4			Subtotal				578,421.71
Addition - Option 4			Bonds & insurance	1.38%			7,982.22
Addition - Option 4			Subtotal				586,403.93

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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RENOVATION

CONSTRUCTION COSTS

Renovation - Option 4	Renovation			<i>Carried forward</i>		205.10	\$2,637,232
Renovation - Option 4	Subtotal						\$2,637,232
Renovation - Option 4	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Renovation - Option 4	Subtotal						\$2,637,232
Renovation - Option 4	Design Contingency			12.00%			\$316,468
Renovation - Option 4	Subtotal						\$2,953,700
Renovation - Option 4	Phasing / Interim Moves	Allowance		0.00%			\$0
Renovation - Option 4	Total Hard Construction Costs Base Bid					229.72	\$2,953,700

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Renovation - Option 4	00.00		Renovation				
Renovation - Option 4	00.50	SELECT BLDG. DEMO	Misc. interior Demo of Renovated area	12,858.00	GSF	6.20	79,719.60
Renovation - Option 4			Hazmat abatement Allowance - asbestos	12,858.00	GSF	4.60	59,146.80
Renovation - Option 4			Hazmat abatement Allowance- lead	12,858.00	GSF	2.40	30,859.20
Renovation - Option 4	01.00	FOUNDATIONS	Misc. Foundation Repairs	1.00	LS	6,800.00	6,800.00
Renovation - Option 4	02.00	SUBSTRUCTURE	SOG misc. repairs	12,858.00	GSF	0.90	11,572.20
Renovation - Option 4	03.00	SUPERSTRUCTURE	Misc. Wood Blocking	12,858.00	GSF	0.90	11,572.20
Renovation - Option 4			Misc. Structural repairs	12,858.00	GSF	1.10	14,143.80
Renovation - Option 4			Misc Metals	1.00	LS	10,500.00	10,500.00
Renovation - Option 4	04.00	EXTERIOR CLOSURE	Repair or Replace Exterior Windows - Allowance	51.00	EA	922.50	47,047.50
Renovation - Option 4			Repair & Point up existing veneer - allowance	1.00	LS	50,000.00	50,000.00
Renovation - Option 4			Repair or replace exterior trim - Allowance	1.00	LS	12,000.00	12,000.00
Renovation - Option 4			Replace exterior louvers	1.00	LS	950.00	950.00
Renovation - Option 4			Misc. w.p./caulk/fire sealants/etc. Div. 7	12,858.00	GSF	0.74	9,514.92
Renovation - Option 4	05.00	ROOFING	Misc. patch & repair - Allowance	1.00	LS	8,200.00	8,200.00
Renovation - Option 4			Repalce membrane roof - Allowance	2,786.00	SF	18.00	50,148.00
Renovation - Option 4	06.00	INTERIOR CONST	Interior CMU Partitions	12,858.00	GSF	3.05	39,216.90
Renovation - Option 4			New & Repaired Interior GWB Partitions & Plaster Wall	12,858.00	GSF	10.54	135,523.32
Renovation - Option 4			Interior Wood Trim Repairs Allowance	1.00	LS	7,500.00	7,500.00
Renovation - Option 4			Interior Doors & Frames	12,858.00	GSF	5.10	65,575.80
Renovation - Option 4			Acoustic ceiling, avg	12,858.00	GSF	3.50	45,003.00
Renovation - Option 4			Upgraded Ceiling Finishes	800.00	SF	12.75	10,200.00
Renovation - Option 4			Ceramic Tile - Allowance	0.00	GSF	13.25	0.00
Renovation - Option 4			Soft flooring/ vinyl base	12,858.00	GSF	3.95	50,789.10
Renovation - Option 4			Painting	12,858.00	GSF	2.05	26,358.90
Renovation - Option 4			Misc. cut and patching	12,858.00	GSF	0.58	7,457.64
Renovation - Option 4	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	0.00	GSF	0.82	0.00
Renovation - Option 4			Millwork	12,858.00	GSF	3.80	48,860.40
Renovation - Option 4			Window treatment Allowance	12,858.00	GSF	0.20	2,571.60
Renovation - Option 4			Misc. spec. door signs/f.e./jan shelving/etc.	12,858.00	GSF	0.45	5,786.10

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Renovation - Option 4							
Renovation - Option 4	09.00	MECHANICAL HVAC	Misc. Demo	12,858.00	GSF	0.84	10,762.15
Renovation - Option 4			HVAC Equipment - based on Option 1 VRF System	12,858.00	GSF	17.06	219,357.48
Renovation - Option 4			Piping & Valves	12,858.00	GSF	3.88	49,889.04
Renovation - Option 4			Ductwork	12,858.00	GSF	5.39	69,304.62
Renovation - Option 4			Air Outlets	12,858.00	GSF	0.69	8,872.02
Renovation - Option 4			Ductwork Accessories	12,858.00	GSF	0.57	7,329.06
Renovation - Option 4			Insulation	12,858.00	GSF	3.00	38,574.00
Renovation - Option 4			Temperature Controls	12,858.00	GSF	5.16	66,347.28
Renovation - Option 4			Air & Water Balance	12,858.00	GSF	0.55	7,071.90
Renovation - Option 4			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 4			HVAC General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 4			Systems Operation & Testing	12,858.00	GSF	0.29	3,696.68
Renovation - Option 4							
Renovation - Option 4	9.20	PLUMBING	Misc. Demo	12,858.00	GSF	0.79	10,157.82
Renovation - Option 4			Fixtures	12,858.00	GSF	3.20	41,145.60
Renovation - Option 4			Gas Piping	12,858.00	GSF	0.40	5,143.20
Renovation - Option 4			Domestic Water Piping	12,858.00	GSF	2.94	37,802.52
Renovation - Option 4			DWV Piping	12,858.00	GSF	2.50	32,145.00
Renovation - Option 4			Storm Piping	12,858.00	GSF	1.75	22,501.50
Renovation - Option 4			Insulation	12,858.00	GSF	1.92	24,687.36
Renovation - Option 4			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 4			Plumbing General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 4			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60
Renovation - Option 4							
Renovation - Option 4	9.30	FIRE SPRINKLER	Sprinkler	12,858.00	GSF	4.50	57,861.00
Renovation - Option 4							
Renovation - Option 4	10.00	ELECTRICAL	Misc. Demo	12,858.00	GSF	0.88	11,315.04
Renovation - Option 4			Switchboards	12,858.00	GSF	0.90	11,572.20
Renovation - Option 4			Panelboards	12,858.00	GSF	0.94	12,086.52
Renovation - Option 4			Generator & Automatic Transfer Switches, allowance	1.00	LS	125,500.00	125,500.00
Renovation - Option 4			Bus Duct & Transformers	12,858.00	GSF	0.44	5,657.52
Renovation - Option 4			Light Fixtures	12,858.00	GSF	7.48	96,177.84
Renovation - Option 4			Light Switches - includes DDC control connections	12,858.00	GSF	1.25	16,072.50
Renovation - Option 4			Power Outlets	12,858.00	GSF	0.90	11,572.20
Renovation - Option 4			Safety Cabinets & Disconnects	12,858.00	GSF	0.40	5,143.20
Renovation - Option 4			Power Feeders	12,858.00	GSF	3.05	39,216.90
Renovation - Option 4			Power Home Runs	12,858.00	GSF	1.35	17,358.30
Renovation - Option 4			Power Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 4			Lighting Home Runs	12,858.00	GSF	1.30	16,715.40
Renovation - Option 4			Lighting Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 4			Grounding/Lightning Protection	12,858.00	GSF	0.33	4,243.14
Renovation - Option 4			Cable Tray	12,858.00	GSF	0.50	6,429.00
Renovation - Option 4			Phone/Data System	12,858.00	GSF	5.50	70,719.00
Renovation - Option 4			Security System & Equipment	12,858.00	GSF	2.55	32,787.90
Renovation - Option 4			P.A. & A.V. Systems	12,858.00	GSF	0.80	10,286.40
Renovation - Option 4			TV System	12,858.00	GSF	0.55	7,071.90
Renovation - Option 4			Fire Alarm	12,858.00	GSF	1.97	25,330.26
Renovation - Option 4			Coordination Drawings	12,858.00	GSF	0.25	3,214.50
Renovation - Option 4			Electrical General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 4			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60

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Renovation - Option 4							
Renovation - Option 4							
Renovation - Option 4	11.00	MARK-UPS	Subtotal				2,150,573.37
Renovation - Option 4			General Conditions	12.00%			258,068.80
Renovation - Option 4			Subtotal				2,408,642.17
Renovation - Option 4			GC OH & Profit	8.00%			192,691.37
Renovation - Option 4			Subtotal				2,601,333.55
Renovation - Option 4			Costs for Phasing & Staging	0%			0.00
Renovation - Option 4			Subtotal				2,601,333.55
Renovation - Option 4			Bonds & insurance	1.38%			35,898.40
Renovation - Option 4			Subtotal	12,858.00 GSF		\$205.10	2,637,231.95

Revision 1							
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Project:	Bennet Building Addition & Renovation	6799 Kennedy Road, Suite F		Client:	Moseley	Chckd by: ja	
Location:	Manassas, VA	Warrenton, Virginia 20187		Submission:	September 28, 2018	Job no: 18143	
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION

OPTION 5 PROJECT CONSTRUCTION COST SUMMARY

OPTION 5

Addition

<i>Building Addition</i>	GSF	3,170.00	Cost/SF \$382.99	\$1,214,083
<i>Sitework</i>				\$145,167
Total Cost - Addition		3,170.00	\$428.79	\$1,359,250

Renovation

<i>Exsiting Building</i>	GSF	12,858.00	\$228.80	\$2,941,958
Total Cost - Renovation		12,858.00	\$228.80	\$2,941,958

TOTAL PROJECT COST INCLUDING ADDITION & RENOVATION	GSF	16,028.00	268.36	\$4,301,208
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Revision 1							
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition

CONSTRUCTION COSTS

Addition - Option 5	New Building Addition		<i>Carried forward</i>		<i>Cost per SF</i> 341.96	\$1,084,002
Addition - Option 5						
Addition - Option 5						
Addition - Option 5	Subtotal					\$1,084,002
Addition - Option 5	Escalation to construction mid point Current Dollars per Direction		0.00%			\$0
Addition - Option 5	Subtotal					\$1,084,002
Addition - Option 5	Design Contingency		12.00%			\$130,080
Addition - Option 5						
Addition - Option 5	Total Hard Construction Costs Base Bid				<u>\$382.99</u>	<u>\$1,214,083</u>
Sitework	SITWORK		<i>Carried forward</i>		<i>N/A</i>	\$129,614
Sitework						
Sitework	Subtotal					\$129,614
Sitework	Escalation to construction mid point Current Dollars per Direction		0.00%			\$0
Sitework	Subtotal					\$129,614
Sitework	Design Contingency		12.00%			\$15,554
Sitework						
Sitework	Total Hard Construction Costs Base Bid					\$145,167

Revision 1							
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 5	00.00		NEW BUILDING				
Addition - Option 5							
Addition - Option 5	00.50	SELECT BLDG. DEMO	Demo at new building tie-ins	1.00	LS	4,500.00	4,500.00
Addition - Option 5			Temporary Shoring & Protections	1.00	LS	4,650.00	4,650.00
Addition - Option 5							
Addition - Option 5	01.00	FOUNDATIONS	Foundations Footing	9.44	CY	559.00	5,279.44
Addition - Option 5			Foundations Walls	11.33	CY	595.00	6,743.33
Addition - Option 5			Elevator pit walls & slab	0.00	EA	4,200.00	0.00
Addition - Option 5			Misc. foundation requirements	1.00	LS	2,000.00	2,000.00
Addition - Option 5							
Addition - Option 5	02.00	SUBSTRUCTURE	SOG	1,056.67	SF	9.40	9,932.67
Addition - Option 5			SOD	2,113.33	SF	7.90	16,695.33
Addition - Option 5							
Addition - Option 5	03.00	SUPERSTRUCTURE	Floor Framing & deck	2,113.33	SF	18.20	38,462.67
Addition - Option 5			Roof framing & deck	1,056.67	SF	14.80	15,638.67
Addition - Option 5			Misc. metals	3,170.00	GSF	1.22	3,867.40
Addition - Option 5			Egress Stairs	1.00	EA	46,500.00	46,500.00
Addition - Option 5			Lobby Stairs	0.00	EA	58,500.00	0.00
Addition - Option 5			Misc. Wood Blocking	3,170.00	GSF	0.90	2,853.00
Addition - Option 5							
Addition - Option 5	04.00	EXTERIOR CLOSURE	Exterior Wall Back-up & Veneer	3,672.00	SF	50.00	183,600.00
Addition - Option 5			Foundation wall waterproofing	306.00	SF	6.50	1,989.00
Addition - Option 5			Exterior wall vapor barrier	3,672.00	SF	3.75	13,770.00
Addition - Option 5			Storefront	200.00	SF	68.00	13,600.00
Addition - Option 5			Windows	0.00	EA	1,230.00	0.00
Addition - Option 5			Exterior & Vestibule Storefront Doors	4.00	EA	3,250.00	13,000.00
Addition - Option 5			Exterior Single Doors	3.00	EA	1,810.00	5,430.00
Addition - Option 5			Building perimeter drains in gravel bed	102.00	LF	10.50	1,071.00
Addition - Option 5			Misc. w.p./caulk/fire sealants/etc. Div. 7	3,170.00	GSF	0.74	2,345.80
Addition - Option 5							
Addition - Option 5	05.00	ROOFING	Roofing with insulation, copings, flashings, gutters etc.	1,445.00	SF	11.60	16,762.00
Addition - Option 5							
Addition - Option 5	06.00	INTERIOR CONST	Interior CMU Partitions	3,170.00	GSF	5.20	16,484.00
Addition - Option 5			Interior GWB Partitions	3,170.00	GSF	3.95	12,521.50
Addition - Option 5			Interior Doors & Frames	4.00	EA	1,520.00	6,080.00
Addition - Option 5			Acoustic ceiling, avg	3,170.00	GSF	3.50	11,095.00
Addition - Option 5			Upgraded Lobby Ceiling Finishes	996.00	GSF	12.75	12,699.00
Addition - Option 5			Ceramic Tile	0.00	GSF	13.25	0.00
Addition - Option 5			Soft flooring/ vinyl base	3,170.00	GSF	3.95	12,521.50
Addition - Option 5			Painting	3,170.00	GSF	2.05	6,498.50
Addition - Option 5			Misc. cut and patching	3,170.00	GSF	0.58	1,838.60
Addition - Option 5							
Addition - Option 5	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	0.00	GSF	0.82	0.00
Addition - Option 5			Misc. spec. dr signs/f.e./jan shelving/etc.	3,170.00	GSF	0.70	2,219.00
Addition - Option 5			Millwork	0.00	GSF	3.80	0.00
Addition - Option 5			Office furnishings, sofas and chairs				Refer to FF&E
Addition - Option 5							
Addition - Option 5	08.00	CONVEYING	Three Stop Elevator	1.00	EA	114,000.00	114,000.00

Revision 1

Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation
 Location: Manassas, VA
 Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
 Run Date: See footer
 Revised: January 23, 2019

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 5							
Addition - Option 5	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 1 VRF System	3,170.00	GSF	17.06	54,080.20
Addition - Option 5			Piping & Valves	3,170.00	GSF	3.88	12,299.60
Addition - Option 5			Ductwork	3,170.00	GSF	5.39	17,086.30
Addition - Option 5			Air Outlets	3,170.00	GSF	0.69	2,187.30
Addition - Option 5			Ductwork Accessories	3,170.00	GSF	0.57	1,806.90
Addition - Option 5			Insulation	3,170.00	GSF	3.00	9,510.00
Addition - Option 5			Temperature Controls	3,170.00	GSF	5.16	16,357.20
Addition - Option 5			Air & Water Balance	3,170.00	GSF	0.55	1,743.50
Addition - Option 5			Coordination Drawings	3,170.00	GSF	0.25	802.01
Addition - Option 5			HVAC General Conditions	3,170.00	GSF	0.35	1,109.50
Addition - Option 5			Systems Operation & Testing	3,170.00	GSF	0.29	911.38
Addition - Option 5	9.20	PLUMBING	Fixtures	3,170.00	GSF	3.20	10,144.00
Addition - Option 5			Gas Piping	3,170.00	GSF	0.40	1,268.00
Addition - Option 5			Domestic Water Piping	3,170.00	GSF	2.94	9,319.80
Addition - Option 5			DWV Piping	3,170.00	GSF	2.50	7,925.00
Addition - Option 5			Storm Piping	3,170.00	GSF	1.75	5,547.50
Addition - Option 5			Insulation	3,170.00	GSF	1.92	6,086.40
Addition - Option 5			Coordination Drawings	3,170.00	GSF	0.25	802.01
Addition - Option 5			Plumbing General Conditions	3,170.00	GSF	0.35	1,109.50
Addition - Option 5			Systems Operation & Testing	3,170.00	GSF	0.20	634.00
Addition - Option 5	9.30	FIRE SPRINKLER	Sprinkler	3,170.00	GSF	3.50	11,095.00
Addition - Option 5			Fire Pump			<i>Not included</i>	
Addition - Option 5	10.00	ELECTRICAL	Switchboards	3,170.00	GSF	0.90	2,853.00
Addition - Option 5			Panelboards	3,170.00	GSF	0.94	2,979.80
Addition - Option 5			Generator & Automatic Transfer Switches			<i>See Renovation</i>	
Addition - Option 5			Bus Duct & Transformers	3,170.00	GSF	0.44	1,394.80
Addition - Option 5			Light Fixtures	3,170.00	GSF	7.48	23,711.60
Addition - Option 5			Light Switches - includes DDC control connections	3,170.00	GSF	1.25	3,962.50
Addition - Option 5			Power Outlets	3,170.00	GSF	0.90	2,853.00
Addition - Option 5			Safety Cabinets & Disconnects	3,170.00	GSF	0.40	1,268.00
Addition - Option 5			Power Feeders	3,170.00	GSF	3.05	9,668.50
Addition - Option 5			Power Home Runs	3,170.00	GSF	1.35	4,279.50
Addition - Option 5			Power Branches	3,170.00	GSF	1.45	4,596.50
Addition - Option 5			Lighting Home Runs	3,170.00	GSF	1.30	4,121.00
Addition - Option 5			Lighting Branches	3,170.00	GSF	1.45	4,596.50
Addition - Option 5			Grounding/Lightning Protection	3,170.00	GSF	0.33	1,046.10
Addition - Option 5			Cable Tray	3,170.00	GSF	0.50	1,585.00
Addition - Option 5			Phone/Data System	3,170.00	GSF	5.50	17,435.00
Addition - Option 5			Security System & Equipment	3,170.00	GSF	2.55	8,083.50
Addition - Option 5			P.A. & A.V. Systems	3,170.00	GSF	0.80	2,536.00
Addition - Option 5			TV System	3,170.00	GSF	0.55	1,743.50
Addition - Option 5			Fire Alarm	3,170.00	GSF	1.97	6,244.90
Addition - Option 5			Coordination Drawings	3,170.00	GSF	0.25	792.50
Addition - Option 5			Electrical General Conditions	3,170.00	GSF	0.35	1,109.50
Addition - Option 5			Systems Operation & Testing	3,170.00	GSF	0.20	634.00

Revision 1							
Report:	Preliminary Study Cost Estimate	<i>Prepared by: Downey & Scott, LLC</i>		Status:	Study/Concept	PM:	ja/ct/mvd
Project:	Bennet Building Addition & Renovation	6799 Kennedy Road, Suite F		Client:	Moseley	Chckd by:	ja
Location:	Manassas, VA	Warrenton, Virginia 20187		Submission:	September 28, 2018	Job no:	18143
Documents Dated:	September, 7, 2017	Ph 540.347.5001 Fax 540.347.5021		Run Date:	See footer		
		www.downeyscott.com		Revised:	January 23, 2019		

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition - Option 5
 Addition - Option 5
 Addition - Option 5
 Addition - Option 5
 Addition - Option 5
 Addition - Option 5
 Addition - Option 5
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 Addition - Option 5
 Addition - Option 5
 Addition - Option 5

11.00 MARK-UPS

Subtotal							883,967.21
General Conditions				12.00%			106,076.06
Subtotal							990,043.27
GC OH & Profit				8.00%			79,203.46
Subtotal							1,069,246.73
Costs for Phasing & Staging				0%			0.00
Subtotal							1,069,246.73
Bonds & insurance				1.38%			14,755.60
Subtotal				3,170.00 GSF		\$341.96	1,084,002.34

Revision 1							
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Location:	Manassas, VA	Warrenton, Virginia 20187		Submission:	September 28, 2018	Job no: 18143	
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 5			SITework				
Addition - Option 5							
Addition - Option 5							
Addition - Option 5							
Addition - Option 5	12.05	SITE DEMO	Misc site demo	60 CY		98.00	5,880.00
Addition - Option 5			CY of site debris for landfill disposal	60 CY		calculates quantities for hauling	
Addition - Option 5			Haul/Dispose of Site Debris				
Addition - Option 5			Dump truck to landfill 2 axle/10 CY	12 EHR		125.00	1,500.00
Addition - Option 5			Dump fees assume 1 ton per CY	60 CY		76.00	4,560.00
Addition - Option 5	12.10	ENVIRONMENTAL	Erosion and Sediment Controls				
Addition - Option 5			Dust control	1 LS		2,566.00	2,566.00
Addition - Option 5			Silt fence	120 LF		2.95	354.00
Addition - Option 5			Gravel construction entrance	95 TNS		33.62	3,193.90
Addition - Option 5			Wash rack	1 EA		812.00	812.00
Addition - Option 5			Inlet/outlet protection	2 EA		76.00	152.00
Addition - Option 5			Maintenance of E&S measures	1 LS		707.79	707.79
Addition - Option 5	12.20	EARTHWORK	Foundation Drainage				
Addition - Option 5			Drainage foundation gravel/filter cloth	90 LF		18.86	1,697.40
Addition - Option 5			Daylight at suitable outfall pipe only	23 LF		6.22	139.95
Addition - Option 5			Soil Testing				
Addition - Option 5			Compaction See Div 1				
Addition - Option 5			Moisture See Div 1				
Addition - Option 5			CBR See Div 1				
Addition - Option 5			Topsoil/Fine Grade				
Addition - Option 5			Topsoil strip and stockpile onsite small quantity, skid steer	30 CY		5.06	151.80
Addition - Option 5			Topsoil respread/fine grade onsite	100 CY		5.82	582.00
Addition - Option 5			Building pad fine grade	113 SY		4.05	459.00
Addition - Option 5			Cut/Fill				
Addition - Option 5			Cut directly to fill, using onsite soils, avg 50' haul	60 CY		3.04	182.40
Addition - Option 5			Cut and haul off-site - cut, load, haul, dispose	100 CY		21.80	2,180.00
Addition - Option 5			Undercut and Replace with Suitable Soils				
Addition - Option 5			Undercut and haul - cut, load, haul, dispose	90 CY		21.80	1,962.00
Addition - Option 5			Import fill - purchase, import, place, compact	90 CY		36.67	3,300.30
Addition - Option 5			Grading and Shaping				
Addition - Option 5			Rough grading entire disturbed area	350 SY		1.14	399.00
Addition - Option 5			Rock Excavation		Excluded		
Addition - Option 5			Special Foundations		Excluded		

Revision 1							
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Project:	Bennet Building Addition & Renovation	6799 Kennedy Road, Suite F		Client:	Moseley	Chckd by: ja	
Location:	Manassas, VA	Warrenton, Virginia 20187		Submission:	September 28, 2018	Job no: 18143	
Documents Dated:	September, 7, 2017	Ph 540.347.5001 Fax 540.347.5021		Run Date:	See footer		
		www.downeyscott.com		Revised:	January 23, 2019		

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 5			Backfill				
Addition - Option 5			Backfill building	15	CY	9.69	145.35
Addition - Option 5			Soil Treatment Termite Control				
Addition - Option 5			Termite control	1,020	SF	0.06	61.20
Addition - Option 5	12.25	WATER	Water Supply & Distribution Systems				
Addition - Option 5			Test pit	1	EA	296.00	296.00
Addition - Option 5			Domestic supply to tie into existing building				
Addition - Option 5			6" DIP fire	120	LF	32.66	3,919.20
Addition - Option 5			6" Valve w/ post indicator	2	EA	3,330.00	6,660.00
Addition - Option 5			Fire hydrant	1	EA	3,296.00	3,296.00
Addition - Option 5			Thrust blocks	1	EA	153.00	153.00
Addition - Option 5			Excavation & backfill	80	CY	19.22	1,537.60
Addition - Option 5			Pipe bedding	8	CY	27.04	216.32
Addition - Option 5			Spoils removal	16	CY	19.13	306.08
Addition - Option 5	12.30	SANITARY SEWER	Sanitary Sewer Systems				
Addition - Option 5			Test pit	1	EA	296.00	296.00
Addition - Option 5			Manholes, precast	1	EA	3,294.00	3,294.00
Addition - Option 5			Cleanout	2	EA	264.00	528.00
Addition - Option 5			Tie into existing manhole	1	LOC	674.00	674.00
Addition - Option 5			6" PVC	60	LF	7.88	472.80
Addition - Option 5			Excavation & backfill	36	CY	19.22	683.38
Addition - Option 5			Pipe bedding	4	CY	27.04	96.14
Addition - Option 5			Spoils removal	7	CY	19.13	136.04
Addition - Option 5	12.35	STORM WATER MANAGEMENT	Storm Sewer Systems				
Addition - Option 5			Allowance for detention/treatment or Nutrient Credits	1	LS	15,000.00	15,000.00
Addition - Option 5			6" PVC	150	LF	7.88	1,181.96
Addition - Option 5			Excavation & backfill	125	CY	19.22	2,402.50
Addition - Option 5			Pipe bedding	13	CY	27.04	338.00
Addition - Option 5			Spoils removal	25	CY	19.13	478.25

Revision 1

Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation
 Location: Manassas, VA
 Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
 Run Date: See footer
 Revised: January 23, 2019

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 5	12.40	SITE ELECTRIC, LIGHTING, AND SECURITY	Site Lighting Systems		Existing to remain		
Addition - Option 5			Site Electrical Utilities				
Addition - Option 5			Allowance to relocate existing	1	LS	8,500.00	8,500.00
Addition - Option 5	12.45	PRIMARY TELECOMM	Allowance to relocate existing	1	LS	6,500.00	6,500.00
Addition - Option 5	12.50	PRIMARY GAS			Excluded		
Addition - Option 5	12.60	PAVING	Asphalt Pavement				
Addition - Option 5			Repair existing damaged during construction	1	LS	8,000.00	8,000.00
Addition - Option 5	12.61	SITE CONCRETE AND WALLS	Site Concrete				
Addition - Option 5			Sidewalks, concrete, broom finish, 4"	1,500	SF	3.41	5,115.00
Addition - Option 5			Gravel base for concrete sidewalk, 4"	1,500	SF	1.05	1,575.00
Addition - Option 5			CG12 type ADA sidewalk ramp	2	EA	837.16	1,674.32
Addition - Option 5	12.65	LANDSCAPING	Sod	500	SY	2.76	1,380.00
Addition - Option 5			Trees/plantings		Excluded		
Addition - Option 5	11.00	MARK-UPS	Subtotal				105,695.68
Addition - Option 5			General Conditions	12.00%			12,683.48
Addition - Option 5			Subtotal				118,379.16
Addition - Option 5			GC OH & Profit	8.00%			9,470.33
Addition - Option 5			Subtotal				127,849.49
Addition - Option 5			Bonds & insurance	1.38%			1,764.32
Addition - Option 5			Subtotal				129,613.81

Revision 1							
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Project:	Bennet Building Addition & Renovation	6799 Kennedy Road, Suite F		Client:	Moseley	Chckd by: ja	
Location:	Manassas, VA	Warrenton, Virginia 20187		Submission:	September 28, 2018	Job no: 18143	
Documents Dated:	September, 7, 2017	Ph 540.347.5001 Fax 540.347.5021		Run Date:	See footer		
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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RENOVATION

CONSTRUCTION COSTS

Renovation - Option 5	Renovation			<i>Carried forward</i>		206.55	\$2,655,807
Renovation - Option 5							
Renovation - Option 5	Subtotal						\$2,655,807
Renovation - Option 5	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Renovation - Option 5	Subtotal						\$2,655,807
Renovation - Option 5	Design Contingency			12.00%			\$318,697
Renovation - Option 5	Subtotal						\$2,974,503
Renovation - Option 5	Phasing / Interim Moves	Allowance		0.00%			\$0
Renovation - Option 5							
Renovation - Option 5	Total Hard Construction Costs Base Bid					231.33	\$2,974,503

Revision 1							
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Location:	Manassas, VA	Warrenton, Virginia 20187		Submission:	September 28, 2018	Job no: 18143	
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Renovation - Option 5	00.00		Renovation				
Renovation - Option 5	00.50	SELECT BLDG. DEMO	Misc. interior Demo of Renovated area	12,858.00	GSF	6.20	79,719.60
Renovation - Option 5			Hazmat abatement Allowance - asbestos	12,858.00	GSF	4.60	59,146.80
Renovation - Option 5			Hazmat abatement Allowance- lead	12,858.00	GSF	2.40	30,859.20
Renovation - Option 5	01.00	FOUNDATIONS	Misc. Foundation Repairs	1.00	LS	6,800.00	6,800.00
Renovation - Option 5	02.00	SUBSTRUCTURE	SOG misc. repairs	12,858.00	GSF	0.90	11,572.20
Renovation - Option 5	03.00	SUPERSTRUCTURE	Misc. Wood Blocking	12,858.00	GSF	0.90	11,572.20
Renovation - Option 5			Misc. Structural repairs	12,858.00	GSF	1.10	14,143.80
Renovation - Option 5			Misc Metals	1.00	LS	10,500.00	10,500.00
Renovation - Option 5	04.00	EXTERIOR CLOSURE	Repair or Replace Exterior Windows - Allowance	51.00	EA	922.50	47,047.50
Renovation - Option 5			Repair & Point up existing veneer - allowance	1.00	LS	50,000.00	50,000.00
Renovation - Option 5			Repair or replace exterior trim - Allowance	1.00	LS	12,000.00	12,000.00
Renovation - Option 5			Replace exterior louvers	1.00	LS	950.00	950.00
Renovation - Option 5			Misc. w.p./caulk/fire sealants/etc. Div. 7	12,858.00	GSF	0.74	9,514.92
Renovation - Option 5	05.00	ROOFING	Misc. patch & repair - Allowance	1.00	LS	8,200.00	8,200.00
Renovation - Option 5			Repalce membrane roof - Allowance	2,786.00	SF	18.00	50,148.00
Renovation - Option 5	06.00	INTERIOR CONST	Interior CMU Partitions	12,858.00	GSF	3.05	39,216.90
Renovation - Option 5			New & Repaired Interior GWB Partitions & Plaster Wall	12,858.00	GSF	10.54	135,523.32
Renovation - Option 5			Interior Wood Trim Repairs Allowance	1.00	LS	7,500.00	7,500.00
Renovation - Option 5			Interior Doors & Frames	12,858.00	GSF	5.10	65,575.80
Renovation - Option 5			Acoustic ceiling, avg	12,858.00	GSF	3.50	45,003.00
Renovation - Option 5			Upgraded Ceiling Finishes	800.00	SF	12.75	10,200.00
Renovation - Option 5			Ceramic Tile - Allowance	495.00	GSF	13.25	6,558.75
Renovation - Option 5			Soft flooring/ vinyl base	12,363.00	GSF	3.95	48,833.85
Renovation - Option 5			Painting	12,858.00	GSF	2.05	26,358.90
Renovation - Option 5			Misc. cut and patching	12,858.00	GSF	0.58	7,457.64
Renovation - Option 5	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	12,858.00	GSF	0.82	10,543.56
Renovation - Option 5			Millwork	12,858.00	GSF	3.80	48,860.40
Renovation - Option 5			Window treatment Allowance	12,858.00	GSF	0.20	2,571.60
Renovation - Option 5			Misc. spec. door signs/f.e./jan shelving/etc.	12,858.00	GSF	0.45	5,786.10

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Renovation - Option 5							
Renovation - Option 5	09.00	MECHANICAL HVAC	Misc. Demo	12,858.00	GSF	0.84	10,762.15
Renovation - Option 5			HVAC Equipment - based on Option 1 VRF System	12,858.00	GSF	17.06	219,357.48
Renovation - Option 5			Piping & Valves	12,858.00	GSF	3.88	49,889.04
Renovation - Option 5			Ductwork	12,858.00	GSF	5.39	69,304.62
Renovation - Option 5			Air Outlets	12,858.00	GSF	0.69	8,872.02
Renovation - Option 5			Ductwork Accessories	12,858.00	GSF	0.57	7,329.06
Renovation - Option 5			Insulation	12,858.00	GSF	3.00	38,574.00
Renovation - Option 5			Temperature Controls	12,858.00	GSF	5.16	66,347.28
Renovation - Option 5			Air & Water Balance	12,858.00	GSF	0.55	7,071.90
Renovation - Option 5			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 5			HVAC General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 5			Systems Operation & Testing	12,858.00	GSF	0.29	3,696.68
Renovation - Option 5							
Renovation - Option 5	9.20	PLUMBING	Misc. Demo	12,858.00	GSF	0.79	10,157.82
Renovation - Option 5			Fixtures	12,858.00	GSF	3.20	41,145.60
Renovation - Option 5			Gas Piping	12,858.00	GSF	0.40	5,143.20
Renovation - Option 5			Domestic Water Piping	12,858.00	GSF	2.94	37,802.52
Renovation - Option 5			DWV Piping	12,858.00	GSF	2.50	32,145.00
Renovation - Option 5			Storm Piping	12,858.00	GSF	1.75	22,501.50
Renovation - Option 5			Insulation	12,858.00	GSF	1.92	24,687.36
Renovation - Option 5			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 5			Plumbing General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 5			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60
Renovation - Option 5							
Renovation - Option 5	9.30	FIRE SPRINKLER	Sprinkler	12,858.00	GSF	4.50	57,861.00
Renovation - Option 5							
Renovation - Option 5	10.00	ELECTRICAL	Misc. Demo	12,858.00	GSF	0.88	11,315.04
Renovation - Option 5			Switchboards	12,858.00	GSF	0.90	11,572.20
Renovation - Option 5			Panelboards	12,858.00	GSF	0.94	12,086.52
Renovation - Option 5			Generator & Automatic Transfer Switches, allowance	1.00	LS	125,500.00	125,500.00
Renovation - Option 5			Bus Duct & Transformers	12,858.00	GSF	0.44	5,657.52
Renovation - Option 5			Light Fixtures	12,858.00	GSF	7.48	96,177.84
Renovation - Option 5			Light Switches - includes DDC control connections	12,858.00	GSF	1.25	16,072.50
Renovation - Option 5			Power Outlets	12,858.00	GSF	0.90	11,572.20
Renovation - Option 5			Safety Cabinets & Disconnects	12,858.00	GSF	0.40	5,143.20
Renovation - Option 5			Power Feeders	12,858.00	GSF	3.05	39,216.90
Renovation - Option 5			Power Home Runs	12,858.00	GSF	1.35	17,358.30
Renovation - Option 5			Power Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 5			Lighting Home Runs	12,858.00	GSF	1.30	16,715.40
Renovation - Option 5			Lighting Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 5			Grounding/Lightning Protection	12,858.00	GSF	0.33	4,243.14
Renovation - Option 5			Cable Tray	12,858.00	GSF	0.50	6,429.00
Renovation - Option 5			Phone/Data System	12,858.00	GSF	5.50	70,719.00
Renovation - Option 5			Security System & Equipment	12,858.00	GSF	2.55	32,787.90
Renovation - Option 5			P.A. & A.V. Systems	12,858.00	GSF	0.80	10,286.40
Renovation - Option 5			TV System	12,858.00	GSF	0.55	7,071.90
Renovation - Option 5			Fire Alarm	12,858.00	GSF	1.97	25,330.26
Renovation - Option 5			Coordination Drawings	12,858.00	GSF	0.25	3,214.50
Renovation - Option 5			Electrical General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 5			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60

Revision 1							
Report:	Preliminary Study Cost Estimate	<i>Prepared by: Downey & Scott, LLC</i>		Status:	Study/Concept	PM:	ja/ct/mvd
Project:	Bennet Building Addition & Renovation	6799 Kennedy Road, Suite F		Client:	Moseley	Chckd by:	ja
Location:	Manassas, VA	Warrenton, Virginia 20187		Submission:	September 28, 2018	Job no:	18143
Documents Dated:	September, 7, 2017	Ph 540.347.5001 Fax 540.347.5021		Run Date:	See footer		
		www.downeyscott.com		Revised:	January 23, 2019		

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Renovation - Option 5			Subtotal				2,165,720.43
Renovation - Option 5	11.00	MARK-UPS	General Conditions	12.00%			259,886.45
Renovation - Option 5			Subtotal				2,425,606.88
Renovation - Option 5			GC OH & Profit	8.00%			194,048.55
Renovation - Option 5			Subtotal				2,619,655.43
Renovation - Option 5			Costs for Phasing & Staging	0%			0.00
Renovation - Option 5			Subtotal				2,619,655.43
Renovation - Option 5			Bonds & insurance	1.38%			36,151.24
Renovation - Option 5			Subtotal	12,858.00 GSF		\$206.55	2,655,806.68

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
Project: Bennet Building Addition & Renovation
Location: Manassas, VA
Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
6799 Kennedy Road, Suite F
Warrenton, Virginia 20187
Ph 540.347.5001 Fax 540.347.5021
www.downeyscott.com

Status: Study/Concept
Client: Moseley
Submission: September 28, 2018
Run Date: See footer
Revised: NA

PM: ja/ct/mvd
Chckd by: ja
Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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OPTION 6 PROJECT CONSTRUCTION COST SUMMARY

OPTION 6

Addition

Building Addition
Sitework

	GSF		Cost/SF	
	6,450.00	\$298.54		\$1,925,588
				\$149,929

Total Cost - Addition

6,450.00 \$321.79 \$2,075,517

Renovation

Exsiting Building

	12,858.00	\$228.80		\$2,941,958
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Total Cost - Renovation

12,858.00 \$228.80 \$2,941,958

TOTAL PROJECT COST INCLUDING ADDITION & RENOVATION

GSF 19,308.00 259.87 \$5,017,475

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition

CONSTRUCTION COSTS

Addition - Option 6	New Building Addition			<i>Carried forward</i>		<i>Cost per SF</i> 266.55	\$1,719,275
Addition - Option 5							
Addition - Option 6							
Addition - Option 6	Subtotal						\$1,719,275
Addition - Option 6	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Addition - Option 6	Subtotal						\$1,719,275
Addition - Option 6	Design Contingency			12.00%			\$206,313
Addition - Option 6	Total Hard Construction Costs Base Bid					\$298.54	\$1,925,588
Addition - Option 6							
Sitework	SITWORK			<i>Carried forward</i>		<i>N/A</i>	\$133,865
Sitework							
Sitework	Subtotal						\$133,865
Sitework	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Sitework	Subtotal						\$133,865
Sitework	Design Contingency			12.00%			\$16,064
Sitework	Total Hard Construction Costs Base Bid						\$149,929

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 5	00.00		NEW BUILDING				
Addition - Option 5							
Addition - Option 6	00.50	SELECT BLDG. DEMO	Demo at new building tie-ins	1.00	LS	4,500.00	4,500.00
Addition - Option 6			Temporary Shoring & Protections	1.00	LS	4,650.00	4,650.00
Addition - Option 6	01.00	FOUNDATIONS	Foundations Footing	14.81	CY	559.00	8,281.48
Addition - Option 6			Foundations Walls	29.63	CY	595.00	17,629.63
Addition - Option 6			Elevator pit walls & slab	1.00	EA	4,200.00	4,200.00
Addition - Option 6			Misc. foundation requirements	1.00	LS	2,250.00	2,250.00
Addition - Option 6	02.00	SUBSTRUCTURE	SOG	2,150.00	SF	9.40	20,210.00
Addition - Option 6			SOD	1,020.00	SF	7.90	8,058.00
Addition - Option 6	03.00	SUPERSTRUCTURE	Floor Framing & deck	5,393.33	SF	18.20	98,158.67
Addition - Option 6			Roof framing & deck	1,056.67	SF	14.80	15,638.67
Addition - Option 6			Misc. metals	6,450.00	GSF	1.22	7,869.00
Addition - Option 6			Egress Stairs	0.00	EA	46,500.00	0.00
Addition - Option 6			Lobby Stairs	0.00	EA	58,500.00	0.00
Addition - Option 6			Misc. Wood Blocking	6,450.00	GSF	0.90	5,805.00
Addition - Option 6	04.00	EXTERIOR CLOSURE	Exterior Wall Back-up & Veneer	4,960.00	SF	50.00	248,000.00
Addition - Option 6			Foundation wall waterproofing	800.00	SF	6.50	5,200.00
Addition - Option 6			Exterior wall vapor barrier	4,960.00	SF	3.75	18,600.00
Addition - Option 6			Storefront	0.00	SF	68.00	0.00
Addition - Option 6			Windows - Allowance	45.00	EA	1,230.00	55,350.00
Addition - Option 6			Exterior & Vestibule Storefront Doors	0.00	EA	3,250.00	0.00
Addition - Option 6			Exterior Single Doors	0.00	EA	1,810.00	0.00
Addition - Option 6			Building perimeter drains in gravel bed	160.00	LF	10.50	1,680.00
Addition - Option 6			Misc. w.p./caulk/fire sealants/etc. Div. 7	6,450.00	GSF	0.74	4,773.00
Addition - Option 6	05.00	ROOFING	Roofing with insulation, copings, flashings, gutters etc.	2,150.00	SF	11.60	24,940.00
Addition - Option 6	06.00	INTERIOR CONST	Interior CMU Partitions	6,450.00	GSF	5.20	33,540.00
Addition - Option 6			Interior GWB Partitions	6,450.00	GSF	3.95	25,477.50
Addition - Option 6			Interior Doors & Frames	22.00	EA	1,520.00	33,440.00
Addition - Option 6			Acoustic ceiling, avg	6,450.00	GSF	3.50	22,575.00
Addition - Option 6			Upgraded Lobby Ceiling Finishes	540.00	GSF	12.75	6,885.00
Addition - Option 6			Ceramic Tile - Allowance	288.00	GSF	13.25	3,816.00
Addition - Option 6			Soft flooring/ vinyl base	2,882.00	GSF	3.95	11,383.90
Addition - Option 6			Painting	6,450.00	GSF	2.05	13,222.50
Addition - Option 6			Misc. cut and patching	6,450.00	GSF	0.58	3,741.00
Addition - Option 6	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	6,450.00	GSF	0.82	5,289.00
Addition - Option 6			Misc. spec. dr signs/f.e./jan shelving/etc.	6,450.00	GSF	0.70	4,515.00
Addition - Option 6			Millwork	0.00	GSF	3.80	0.00
Addition - Option 6			Office furnishings, sofas and chairs			Refer to FF&E	
Addition - Option 6	08.00	CONVEYING	Three Stop Elevator	1.00	EA	114,000.00	114,000.00

Draft for Review & Comment

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 Project: Bennet Building Addition & Renovation
 Location: Manassas, VA
 Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
 Run Date: See footer
 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition - Option 6

Addition - Option 6

09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 1 VRF System	6,450.00	GSF	17.06	110,037.00
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Addition - Option 6		Piping & Valves	6,450.00	GSF	3.88	25,026.00
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Addition - Option 6		Ductwork	6,450.00	GSF	5.39	34,765.50
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Addition - Option 6		Air Outlets	6,450.00	GSF	0.69	4,450.50
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Addition - Option 6		Ductwork Accessories	6,450.00	GSF	0.57	3,676.50
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Addition - Option 6		Insulation	6,450.00	GSF	3.00	19,350.00
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Addition - Option 6		Temperature Controls	6,450.00	GSF	5.16	33,282.00
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Addition - Option 6		Air & Water Balance	6,450.00	GSF	0.55	3,547.50
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Addition - Option 6		Coordination Drawings	6,450.00	GSF	0.25	1,631.85
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Addition - Option 6		HVAC General Conditions	6,450.00	GSF	0.35	2,257.50
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Addition - Option 6		Systems Operation & Testing	6,450.00	GSF	0.29	1,854.38
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Addition - Option 6

9.20	PLUMBING	Fixtures	6,450.00	GSF	3.20	20,640.00
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Addition - Option 6		Gas Piping	6,450.00	GSF	0.40	2,580.00
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Addition - Option 6		Domestic Water Piping	6,450.00	GSF	2.94	18,963.00
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Addition - Option 6		DWV Piping	6,450.00	GSF	2.50	16,125.00
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Addition - Option 6		Storm Piping	6,450.00	GSF	1.75	11,287.50
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Addition - Option 6		Insulation	6,450.00	GSF	1.92	12,384.00
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Addition - Option 6		Coordination Drawings	6,450.00	GSF	0.25	1,631.85
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Addition - Option 6		Plumbing General Conditions	6,450.00	GSF	0.35	2,257.50
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Addition - Option 6		Systems Operation & Testing	6,450.00	GSF	0.20	1,290.00
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Addition - Option 6

9.30	FIRE SPRINKLER	Sprinkler	6,450.00	GSF	3.50	22,575.00
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Addition - Option 6		Fire Pump			<i>Not included</i>	
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Addition - Option 6

10.00	ELECTRICAL	Switchboards	6,450.00	GSF	0.90	5,805.00
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Addition - Option 6		Panelboards	6,450.00	GSF	0.94	6,063.00
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Addition - Option 6		Generator & Automatic Transfer Switches			<i>See Renovation</i>	
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Addition - Option 6		Bus Duct & Transformers	6,450.00	GSF	0.44	2,838.00
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Addition - Option 6		Light Fixtures	6,450.00	GSF	7.48	48,246.00
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Addition - Option 6		Light Switches - includes DDC control connections	6,450.00	GSF	1.25	8,062.50
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Addition - Option 6		Power Outlets	6,450.00	GSF	0.90	5,805.00
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Addition - Option 6		Safety Cabinets & Disconnects	6,450.00	GSF	0.40	2,580.00
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Addition - Option 6		Power Feeders	6,450.00	GSF	3.05	19,672.50
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Addition - Option 6		Power Home Runs	6,450.00	GSF	1.35	8,707.50
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Addition - Option 6		Power Branches	6,450.00	GSF	1.45	9,352.50
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Addition - Option 6		Lighting Home Runs	6,450.00	GSF	1.30	8,385.00
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Addition - Option 6		Lighting Branches	6,450.00	GSF	1.45	9,352.50
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Addition - Option 6		Grounding/Lightning Protection	6,450.00	GSF	0.33	2,128.50
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Addition - Option 6		Cable Tray	6,450.00	GSF	0.50	3,225.00
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Addition - Option 6		Phone/Data System	6,450.00	GSF	5.50	35,475.00
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Addition - Option 6		Security System & Equipment	6,450.00	GSF	2.55	16,447.50
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Addition - Option 6		P.A. & A.V. Systems	6,450.00	GSF	0.80	5,160.00
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Addition - Option 6		TV System	6,450.00	GSF	0.55	3,547.50
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Addition - Option 6		Fire Alarm	6,450.00	GSF	1.97	12,706.50
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Addition - Option 6		Coordination Drawings	6,450.00	GSF	0.25	1,612.50
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Addition - Option 6		Electrical General Conditions	6,450.00	GSF	0.35	2,257.50
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Addition - Option 6		Systems Operation & Testing	6,450.00	GSF	0.20	1,290.00
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Addition - Option 6

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation
 Location: Manassas, VA
 Documents Dated: September, 7, 2017

Prepared by: Downey & Scott, LLC
 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
 Run Date: See footer
 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
---------	-------	------------------	---------------	----------	-----	-----------	-----------

Addition - Option 6

Addition - Option 6

Addition - Option 6

Addition - Option 6

Addition - Option 6

Addition - Option 6

Addition - Option 6

Addition - Option 6

Addition - Option 6

Addition - Option 6

Addition - Option 6

11.00 MARK-UPS

Subtotal							1,402,010.42
General Conditions				12.00%			168,241.25
Subtotal							1,570,251.67
GC OH & Profit				8.00%			125,620.13
Subtotal							1,695,871.80
Costs for Phasing & Staging				0%			0.00
Subtotal							1,695,871.80
Bonds & insurance				1.38%			23,403.03
Subtotal				6,450.00 GSF		\$266.55	1,719,274.83

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 6	12.25	WATER	Water Supply & Distribution Systems				
Addition - Option 6			Test pit	1	EA	296.00	296.00
Addition - Option 6			Domestic supply to tie into existing building				
Addition - Option 6			6" DIP fire	120	LF	32.66	3,919.20
Addition - Option 6			6" Valve w/ post indicator	2	EA	3,330.00	6,660.00
Addition - Option 6			Fire hydrant	1	EA	3,296.00	3,296.00
Addition - Option 6			Thrust blocks	1	EA	153.00	153.00
Addition - Option 6			Excavation & backfill	80	CY	19.22	1,537.60
Addition - Option 6			Pipe bedding	8	CY	27.04	216.32
Addition - Option 6			Spoils removal	16	CY	19.13	306.08
Addition - Option 6	12.30	SANITARY SEWER	Sanitary Sewer Systems				
Addition - Option 6			Test pit	1	EA	296.00	296.00
Addition - Option 6			Manholes, precast	1	EA	3,294.00	3,294.00
Addition - Option 6			Cleanout	2	EA	264.00	528.00
Addition - Option 6			Tie into existing manhole	1	LOC	674.00	674.00
Addition - Option 6			6" PVC	60	LF	7.88	472.80
Addition - Option 6			Excavation & backfill	36	CY	19.22	683.38
Addition - Option 6			Pipe bedding	4	CY	27.04	96.14
Addition - Option 6			Spoils removal	7	CY	19.13	136.04
Addition - Option 6	12.35	STORM WATER MANAGEMENT	Storm Sewer Systems				
Addition - Option 6			Allowance for detention/treatment or Nutrient Credits	1	LS	15,000.00	15,000.00
Addition - Option 6			6" PVC	150	LF	7.88	1,181.96
Addition - Option 6			Excavation & backfill	125	CY	19.22	2,402.50
Addition - Option 6			Pipe bedding	13	CY	27.04	338.00
Addition - Option 6			Spoils removal	25	CY	19.13	478.25
Addition - Option 6	12.40	SITE ELECTRIC, LIGHTING, AND SECURITY	Site Lighting Systems	Existing to remain			
Addition - Option 6			Site Electrical Utilities				
Addition - Option 6			Allowance to relocate existing	1	LS	8,500.00	8,500.00
Addition - Option 6	12.45	PRIMARY TELECOMM	Allowance to relocate existing	1	LS	6,500.00	6,500.00
Addition - Option 6	12.50	PRIMARY GAS	Excluded				
Addition - Option 6	12.60	PAVING	Asphalt Pavement				
Addition - Option 6			Repair existing damaged during construction	1	LS	8,000.00	8,000.00
Addition - Option 6	12.61	SITE CONCRETE AND WALLS	Site Concrete				
Addition - Option 6			Sidewalks, concrete, broom finish, 4"	1,500	SF	3.41	5,115.00
Addition - Option 6			Gravel base for concrete sidewalk, 4"	1,500	SF	1.05	1,575.00
Addition - Option 6			CG12 type ADA sidewalk ramp	2	EA	837.16	1,674.32
Addition - Option 6	12.65	LANDSCAPING	Sod	500	SY	2.76	1,380.00
Addition - Option 6			Trees/plantings	Excluded			
Addition - Option 6	11.00	MARK-UPS	Subtotal				109,162.76
Addition - Option 6			General Conditions	12.00%			13,099.53
Addition - Option 6			Subtotal				122,262.29
Addition - Option 6			GC OH & Profit	8.00%			9,780.98
Addition - Option 6			Subtotal				132,043.27
Addition - Option 6			Bonds & insurance	1.38%			1,822.20
Addition - Option 6			Subtotal				133,865.47

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation
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 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: September 28, 2018
 Run Date: See footer
 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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RENOVATION

CONSTRUCTION COSTS

Renovation - Option 6	Renovation			<i>Carried forward</i>		206.11	\$2,650,161
Renovation - Option 6							
Renovation - Option 6	Subtotal						\$2,650,161
Renovation - Option 6	Escalation to construction mid point	Current Dollars per Direction		0.00%			\$0
Renovation - Option 6	Subtotal						\$2,650,161
Renovation - Option 6	Design Contingency			12.00%			\$318,019
Renovation - Option 6	Subtotal						\$2,968,181
Renovation - Option 6	Phasing / Interim Moves	Allowance		0.00%			\$0
Renovation - Option 6							
Renovation - Option 6	Total Hard Construction Costs Base Bid					230.84	\$2,968,181

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Renovation - Option 6	00.00		Renovation				
Renovation - Option 6	00.50	SELECT BLDG. DEMO	Misc. interior Demo of Renovated area	12,858.00	GSF	6.20	79,719.60
Renovation - Option 6			Hazmat abatement Allowance - asbestos	12,858.00	GSF	4.60	59,146.80
Renovation - Option 6			Hazmat abatement Allowance- lead	12,858.00	GSF	2.40	30,859.20
Renovation - Option 6	01.00	FOUNDATIONS	Misc. Foundation Repairs	1.00	LS	6,800.00	6,800.00
Renovation - Option 6	02.00	SUBSTRUCTURE	SOG misc. repairs	12,858.00	GSF	0.90	11,572.20
Renovation - Option 6	03.00	SUPERSTRUCTURE	Misc. Wood Blocking	12,858.00	GSF	0.90	11,572.20
Renovation - Option 6			Misc. Structural repairs	12,858.00	GSF	1.10	14,143.80
Renovation - Option 6			Misc Metals	1.00	LS	10,500.00	10,500.00
Renovation - Option 6	04.00	EXTERIOR CLOSURE	Repair or Replace Exterior Windows - Allowance	51.00	EA	922.50	47,047.50
Renovation - Option 6			Repairs & Point up existing veneer - allowance	1.00	LS	50,000.00	50,000.00
Renovation - Option 6			Repair or replace exterior trim - Allowance	1.00	LS	12,000.00	12,000.00
Renovation - Option 6			Replace exterior louvers	1.00	LS	950.00	950.00
Renovation - Option 6			Misc. w.p./caulk/fire sealants/etc. Div. 7	12,858.00	GSF	0.74	9,514.92
Renovation - Option 6	05.00	ROOFING	Misc. patch & repair - Allowance	1.00	LS	8,200.00	8,200.00
Renovation - Option 6			Repalce membrane roof - Allowance	2,786.00	SF	18.00	50,148.00
Renovation - Option 6	06.00	INTERIOR CONST	Interior CMU Partitions	12,858.00	GSF	3.05	39,216.90
Renovation - Option 6			New & Repaired Interior GWB Partitions & Plaster Wall	12,858.00	GSF	10.54	135,523.32
Renovation - Option 6			Interior Wood Trim Repairs Allowance	1.00	LS	7,500.00	7,500.00
Renovation - Option 6			Interior Doors & Frames	12,858.00	GSF	5.10	65,575.80
Renovation - Option 6			Acoustic ceiling, avg	12,858.00	GSF	3.50	45,003.00
Renovation - Option 6			Upgraded Ceiling Finishes	800.00	SF	12.75	10,200.00
Renovation - Option 6			Ceramic Tile	0.00	GSF	13.25	0.00
Renovation - Option 6			Soft flooring/ vinyl base	12,858.00	GSF	3.95	50,789.10
Renovation - Option 6			Painting	12,858.00	GSF	2.05	26,358.90
Renovation - Option 6			Misc. cut and patching	12,858.00	GSF	0.58	7,457.64
Renovation - Option 6	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	12,858.00	GSF	0.82	10,543.56
Renovation - Option 6			Millwork	12,858.00	GSF	3.80	48,860.40
Renovation - Option 6			Window treatment Allowance	12,858.00	GSF	0.20	2,571.60
Renovation - Option 6			Misc. spec. door signs/f.e./jan shelving/etc.	12,858.00	GSF	0.45	5,786.10

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Renovation - Option 6							
Renovation - Option 6							
Renovation - Option 6	09.00	MECHANICAL HVAC	Misc. Demo	12,858.00	GSF	0.84	10,762.15
Renovation - Option 6			HVAC Equipment - based on Option 1 VRF System	12,858.00	GSF	17.06	219,357.48
Renovation - Option 6			Piping & Valves	12,858.00	GSF	3.88	49,889.04
Renovation - Option 6			Ductwork	12,858.00	GSF	5.39	69,304.62
Renovation - Option 6			Air Outlets	12,858.00	GSF	0.69	8,872.02
Renovation - Option 6			Ductwork Accessories	12,858.00	GSF	0.57	7,329.06
Renovation - Option 6			Insulation	12,858.00	GSF	3.00	38,574.00
Renovation - Option 6			Temperature Controls	12,858.00	GSF	5.16	66,347.28
Renovation - Option 6			Air & Water Balance	12,858.00	GSF	0.55	7,071.90
Renovation - Option 6			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 6			HVAC General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 6			Systems Operation & Testing	12,858.00	GSF	0.29	3,696.68
Renovation - Option 6	9.20	PLUMBING	Misc. Demo	12,858.00	GSF	0.79	10,157.82
Renovation - Option 6			Fixtures	12,858.00	GSF	3.20	41,145.60
Renovation - Option 6			Gas Piping	12,858.00	GSF	0.40	5,143.20
Renovation - Option 6			Domestic Water Piping	12,858.00	GSF	2.94	37,802.52
Renovation - Option 6			DWV Piping	12,858.00	GSF	2.50	32,145.00
Renovation - Option 6			Storm Piping	12,858.00	GSF	1.75	22,501.50
Renovation - Option 6			Insulation	12,858.00	GSF	1.92	24,687.36
Renovation - Option 6			Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Renovation - Option 6			Plumbing General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 6			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60
Renovation - Option 6	9.30	FIRE SPRINKLER	Sprinkler	12,858.00	GSF	4.50	57,861.00
Renovation - Option 6							
Renovation - Option 6	10.00	ELECTRICAL	Misc. Demo	12,858.00	GSF	0.88	11,315.04
Renovation - Option 6			Switchboards	12,858.00	GSF	0.90	11,572.20
Renovation - Option 6			Panelboards	12,858.00	GSF	0.94	12,086.52
Renovation - Option 6			Generator & Automatic Transfer Switches, allowance	1.00	LS	125,500.00	125,500.00
Renovation - Option 6			Bus Duct & Transformers	12,858.00	GSF	0.44	5,657.52
Renovation - Option 6			Light Fixtures	12,858.00	GSF	7.48	96,177.84
Renovation - Option 6			Light Switches - includes DDC control connections	12,858.00	GSF	1.25	16,072.50
Renovation - Option 6			Power Outlets	12,858.00	GSF	0.90	11,572.20
Renovation - Option 6			Safety Cabinets & Disconnects	12,858.00	GSF	0.40	5,143.20
Renovation - Option 6			Power Feeders	12,858.00	GSF	3.05	39,216.90
Renovation - Option 6			Power Home Runs	12,858.00	GSF	1.35	17,358.30
Renovation - Option 6			Power Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 6			Lighting Home Runs	12,858.00	GSF	1.30	16,715.40
Renovation - Option 6			Lighting Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 6			Grounding/Lightning Protection	12,858.00	GSF	0.33	4,243.14
Renovation - Option 6			Cable Tray	12,858.00	GSF	0.50	6,429.00
Renovation - Option 6			Phone/Data System	12,858.00	GSF	5.50	70,719.00
Renovation - Option 6			Security System & Equipment	12,858.00	GSF	2.55	32,787.90
Renovation - Option 6			P.A. & A.V. Systems	12,858.00	GSF	0.80	10,286.40
Renovation - Option 6			TV System	12,858.00	GSF	0.55	7,071.90
Renovation - Option 6			Fire Alarm	12,858.00	GSF	1.97	25,330.26
Renovation - Option 6			Coordination Drawings	12,858.00	GSF	0.25	3,214.50
Renovation - Option 6			Electrical General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 6			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60

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 Warrenton, Virginia 20187
 Ph 540.347.5001 Fax 540.347.5021
www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: **September 28, 2018**
 Run Date: See footer
 Revised: **NA**

PM: ja/ct/mvd
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Renovation - Option 6			Subtotal				2,161,116.93
Renovation - Option 6	11.00	MARK-UPS	General Conditions	12.00%			259,334.03
Renovation - Option 6			Subtotal				2,420,450.96
Renovation - Option 6			GC OH & Profit	8.00%			193,636.08
Renovation - Option 6			Subtotal				2,614,087.04
Renovation - Option 6			Costs for Phasing & Staging	0%			0.00
Renovation - Option 6			Subtotal				2,614,087.04
Renovation - Option 6			Bonds & insurance	1.38%			36,074.40
Renovation - Option 6			Subtotal	12,858.00 GSF		\$206.11	2,650,161.44

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HVAC OPTIONS

Option 1 - VRF System

Option 2 - DX Cooling with Electric VAV Boxes

Option 3 - DX Cooling with Hot Water VAV Boxes

1,162,872.55

1,043,116.11

1,254,487.79

All HVAC Options are based on Building Option 1
All HVAC Options costs do not include GC mark-ups, design contingency or escalation.

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HVAC Option 1	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 1 VRF System	31,268.00	GSF	17.06	533,432.08
HVAC Option 1			Piping & Valves	31,268.00	GSF	3.88	121,319.84
HVAC Option 1			Ductwork	31,268.00	GSF	5.39	168,534.52
HVAC Option 1			Air Outlets	31,268.00	GSF	0.69	21,574.92
HVAC Option 1			Ductwork Accessories	31,268.00	GSF	0.57	17,822.76
HVAC Option 1			Insulation	31,268.00	GSF	3.00	93,804.00
HVAC Option 1			Temperature Controls	31,268.00	GSF	5.16	161,342.88
HVAC Option 1			Air & Water Balance	31,268.00	GSF	0.55	17,197.40
HVAC Option 1			Coordination Drawings	31,268.00	GSF	0.25	7,910.80
HVAC Option 1			HVAC General Conditions	31,268.00	GSF	0.35	10,943.80
HVAC Option 1			Systems Operation & Testing	31,268.00	GSF	0.29	8,989.55
Total							1,162,872.55

HVAC Option 2	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 2 DX & Electric VAV System	31,268.00	GSF	11.50	359,582.00
HVAC Option 2			Piping & Valves	31,268.00	GSF	2.50	78,170.00
HVAC Option 2			Ductwork	31,268.00	GSF	8.50	265,778.00
HVAC Option 2			Air Outlets	31,268.00	GSF	0.69	21,574.92
HVAC Option 2			Ductwork Accessories	31,268.00	GSF	0.57	17,822.76
HVAC Option 2			Insulation	31,268.00	GSF	3.00	93,804.00
HVAC Option 2			Temperature Controls	31,268.00	GSF	5.16	161,342.88
HVAC Option 2			Air & Water Balance	31,268.00	GSF	0.55	17,197.40
HVAC Option 2			Coordination Drawings	31,268.00	GSF	0.25	7,910.80
HVAC Option 2			HVAC General Conditions	31,268.00	GSF	0.35	10,943.80
HVAC Option 2			Systems Operation & Testing	31,268.00	GSF	0.29	8,989.55
Total							1,043,116.11

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HVAC Option 3	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 3 DX & Hot Water VAV System	31,268.00	GSF	15.85	495,597.80
HVAC Option 3			Piping & Valves	31,268.00	GSF	4.51	141,018.68
HVAC Option 3			Ductwork	31,268.00	GSF	8.90	278,285.20
HVAC Option 3			Air Outlets	31,268.00	GSF	0.69	21,574.92
HVAC Option 3			Ductwork Accessories	31,268.00	GSF	0.57	17,822.76
HVAC Option 3			Insulation	31,268.00	GSF	3.00	93,804.00
HVAC Option 3			Temperature Controls	31,268.00	GSF	5.16	161,342.88
HVAC Option 3			Air & Water Balance	31,268.00	GSF	0.55	17,197.40
HVAC Option 3			Coordination Drawings	31,268.00	GSF	0.25	7,910.80
HVAC Option 3			HVAC General Conditions	31,268.00	GSF	0.35	10,943.80
HVAC Option 3			Systems Operation & Testing	31,268.00	GSF	0.29	8,989.55
Total							1,254,487.79

Concept – Option 7 Cost Estimate Report

Report Date October 12, 2018

Prepared for:

Moseley Architects

MOSELEY ARCHITECTS
DESIGNING SOLUTIONS ■ BUILDING TRUST ■ ENRICHING LIVES

Bennett Building Addition & Renovation Manassas, VA





COST ESTIMATE CLARIFYING NOTES & EXCLUSIONS

- We have incorporated construction costs for a single Contractor procurement via lump sum General Contract for a non-phased construction.
- Without exception, we have included hard construction costs only and all soft construction costs are excluded. Please refer to list of Owner Budget Items.
- The Limits of Construction are those indicated on the documents provided.
- We have included an allowance for HAZMAT abatement costs.
- Design Contingency accounts for the costs of yet unidentified scope requirements and have been included in the amount indicated in the project summary.
- Construction Contingency accounts for the costs of change orders. A Construction Contingency has not been included. We recommend that the owner carry an additional 3-5% Construction Contingency for unforeseen conditions.
- Escalation accounts for the inflationary effects of elapsed time and costs have been included in the amount indicated in the project summary.
- Our costs do not include any Owner Furniture storage or moving costs.
- All cost data is based on Open shop wage and burden rates and normal working hours.



OWNER COSTS NOT INCLUDED IN OUR COSTS ANALYSIS

We have found during the budgeting phase, Owners sometimes do not fully consider all the costs they will incur when implementing capital improvements. For convenience, we provide below a list of common non-construction Owner costs.

FURNITURE, FIXTURE & EQUIPMENT [FF&E]

- Loose, unattached system furniture, traditional furniture, etc.
- Special fixtures relevant to subject facility operations and uses
- Communications equipment, such as servers, telephone sets, communications cables, instruments, & accessories
- Vending equipment purchases and/or leases, etc.
- Exterior equipment, such as exercise equipment, pay telephones.

MOVING & STORAGE COSTS

- Contract and/or internal staff implemented moving costs.
- Temporary storage and insurance.
- Removal and disposal of furnishings of no salvage value.

TEMPORARY FACILITIES

- Non-contractor temporary storage trailers.
- Non-contractor temporary utilities.

REAL ESTATE

- Land acquisitions, leases, easements and rights of way.
- Real estate taxes.
- Transfer taxes.
- Recordation fees & taxes.
- Brokerage commissions.
- Settlement charges.
- Legal fees.

MANAGEMENT *Indirect* Owner Mgt Expenses

- Real estate necessary to house management & staff.
- Utilities.
- Insurance.
- Furniture, fixture & equipment.
- Project management salaries.
- Communications, telephone, facsimile expenses, e-mail, etc.
- Travel, parking, courier services, etc.
- Security.
- Office equipment & supplies.



COMMON OWNER COSTS (continued)

PROMOTION / RESPONDING TO PUBLIC & MEDIA INQUIRIES

- Artwork and reproduction of advertising, brochures, hand-outs.
- Advertising fees.
- Postage.
- Signage.
- Photography.
- Renderings.
- Public and/or promotional events, such as hearings, fund raisers, etc.

FINANCIAL

- Accounting [in-house].
- Accounting [CPA].
- Interim financing [loan, bond, other] origination fees, expenses & interest.
- Permanent financing [loan, bond, other] origination fees, expenses & interest.
- Appraisal fees.
- Working capital / start-up.
- Performance [Owner, not to be confused with contractor] bonds

INSURANCE PREMIUMS

- Builder's risk
- Liability
- Title
- Other

LEGAL FEES

- Real estate, land, zoning, proffers
- Partnerships
- Financing
- Contracts
- Leasing

JURISDICTIONAL FEES

- Zoning, site and general building permit fees & expenses. Note: jurisdictional trade permit fees are included in our computations.
- Primary water utility availability and connection fees
- Primary sewer utility availability and connection fees
- Gas Company fees
- Power company fees
- Telephone company fees



COMMON OWNER COSTS (continued)

- Cable TV company fees
- State & local highway fees
- Mandatory completion bonds
- Adjoining owner demands
- Mandated off-site storm water management contributions

DESIGN FEES

- Architect / Engineer / Cost Management / Construction Management Consultant Fees

RECOMMENDED COST CONTROL PROCESS

Controlling construction costs is a continuous process that spans from the initial programmatic level through to final completion.

MARKET CONDITIONS & OPINIONS OF PROBABLE COST

Downey and Scott, LLC has no control over market conditions or acts of God that can create rapid fluctuations in material prices. We have extensive experience in similar projects and have employed our best judgment in analyzing the subject project. We cannot, however, guarantee that actual construction costs will not vary from the opinions of probable construction costs herein provided.

Please contact Don 'D' Daigle – Vice President of Preconstruction Services regarding this project should you have any questions or concerns.

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
Project: Bennet Building Addition & Renovation - Option 7
Location: Manassas, VA
Documents Dated: October 1, 2017

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Warrenton, Virginia 20187
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Status: Study/Concept
Client: Moseley
Submission: **October 12, 2018**
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PROJECT CONSTRUCTION COST SUMMARY

OPTION 7

Addition

Building Addition
Sitework

	GSF		Cost/SF	
	2,730.00		\$440.93	\$1,203,727
				\$118,346
Total Cost - Addition		2,730.00	\$484.28	\$1,322,073

Renovation

Exsiting Building

	12,858.00		\$230.83	\$2,968,004
Total Cost - Renovation		12,858.00	\$230.83	\$2,968,004

TOTAL OPTION 7 PROJECT COST INCLUDING ADDITION & RENOVATION

	15,588.00		275.22	\$4,290,077
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Report: Preliminary Study Cost Estimate
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Addition

CONSTRUCTION COSTS

					<i>Cost per SF</i>	
Addition - Option 7	New Building Addition			<i>Carried forward</i>	393.68	\$1,074,756
Addition - Option 7						
Addition - Option 7						
Addition - Option 7	Subtotal					\$1,074,756
Addition - Option 7	Escalation to construction mid point	Current Dollars per Direction		0.00%		\$0
Addition - Option 7	Subtotal					\$1,074,756
Addition - Option 7	Design Contingency			12.00%		\$128,971
Addition - Option 7						
Addition - Option 7	Total Hard Construction Costs Base Bid				<u>\$440.93</u>	<u>\$1,203,727</u>
Sitework	SITWORK			<i>Carried forward</i>	N/A	\$105,666
Sitework						
Sitework	Subtotal					\$105,666
Sitework	Escalation to construction mid point	Current Dollars per Direction		0.00%		\$0
Sitework	Subtotal					\$105,666
Sitework	Design Contingency			12.00%		\$12,680
Sitework						
Sitework	Total Hard Construction Costs Base Bid					\$118,346

Draft for Review & Comment

Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation - Option 7
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 6799 Kennedy Road, Suite F
 Warrenton, Virginia 20187
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 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: October 12, 2018
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 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 7	00.00		NEW BUILDING				
Addition - Option 7	00.50	SELECT BLDG. DEMO	Demo at new building tie-ins	1.00	LS	4,000.00	4,000.00
Addition - Option 7			Temporary Shoring & Protections	1.00	LS	3,900.00	3,900.00
Addition - Option 7	01.00	FOUNDATIONS	Foundations Footing	8.33	CY	559.00	4,658.33
Addition - Option 7			Foundations Walls	16.67	CY	595.00	9,916.67
Addition - Option 7			Elevator pit walls & slab	1.00	EA	4,200.00	4,200.00
Addition - Option 7			Misc. foundation requirements	1.00	LS	1,750.00	1,750.00
Addition - Option 7	02.00	SUBSTRUCTURE	SOG	910.00	SF	9.40	8,554.00
Addition - Option 7			SOD	1,820.00	SF	7.90	14,378.00
Addition - Option 7	03.00	SUPERSTRUCTURE	Floor Framing & deck	1,820.00	SF	18.20	33,124.00
Addition - Option 7			Roof framing & deck	910.00	SF	14.80	13,468.00
Addition - Option 7			Misc. metals	2,730.00	GSF	1.22	3,330.60
Addition - Option 7			Egress Stairs	1.00	EA	46,500.00	46,500.00
Addition - Option 7			Lobby Stairs	1.00	EA	58,500.00	58,500.00
Addition - Option 7			Misc. Wood Blocking	2,730.00	GSF	0.90	2,457.00
Addition - Option 7	04.00	EXTERIOR CLOSURE	Exterior Wall Back-up & Veneer	1,138.00	SF	50.00	56,900.00
Addition - Option 7			Foundation wall waterproofing	540.00	SF	6.50	3,510.00
Addition - Option 7			Exterior wall vapor barrier	1,138.00	SF	3.75	4,267.50
Addition - Option 7			Curtainwall	1,562.00	SF	90.00	140,580.00
Addition - Option 7			Windows	0.00	EA	1,230.00	0.00
Addition - Option 7			Exterior Curtianwall Doors	2.00	EA	3,250.00	6,500.00
Addition - Option 7			Exterior Double Doors	0.00	EA	2,180.00	0.00
Addition - Option 7			Building perimeter drains in gravel bed	90.00	LF	10.50	945.00
Addition - Option 7			Misc. w.p./caulk/fire sealants/etc. Div. 7	2,730.00	GSF	0.74	2,020.20
Addition - Option 7	05.00	ROOFING	Roofing with insulation, copings, flashings, gutters etc.	910.00	SF	13.92	12,667.20

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 7							
Addition - Option 7	06.00	INTERIOR CONST	Interior CMU Partitions	2,730.00	GSF	5.20	14,196.00
Addition - Option 7			Interior GWB Partitions	2,730.00	GSF	3.95	10,783.50
Addition - Option 7			Interior Doors & Frames	10.00	EA	1,520.00	15,200.00
Addition - Option 7			Acoustic ceiling, avg	2,730.00	GSF	3.50	9,555.00
Addition - Option 7			Upgraded Lobby Ceiling Finishes	876.00	GSF	12.75	11,169.00
Addition - Option 7			Ceramic Tile - Allowance	294.00	GSF	13.25	3,895.50
Addition - Option 7			Soft flooring/ vinyl base	2,436.00	GSF	3.95	9,622.20
Addition - Option 7			Painting	2,730.00	GSF	2.05	5,596.50
Addition - Option 7			Misc. cut and patching	2,730.00	GSF	0.58	1,583.40
Addition - Option 7							
Addition - Option 7	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	2,730.00	GSF	0.82	2,238.60
Addition - Option 7			Misc. spec. dr signs/f.e./jan shelving/etc.	2,730.00	GSF	0.70	1,911.00
Addition - Option 7			Millwork	0.00	GSF	3.80	0.00
Addition - Option 7			Office furnishings, sofas and chairs				<i>Refer to FF&E</i>
Addition - Option 7							
Addition - Option 7	08.00	CONVEYING	Three Stop Elevator	1.00	EA	114,000.00	114,000.00
Addition - Option 7							
Addition - Option 7	09.00	MECHANICAL HVAC	HVAC Equipment - based on Option 1 VRF System	2,730.00	GSF	17.06	46,573.80
Addition - Option 7			Piping & Valves	2,730.00	GSF	3.88	10,592.40
Addition - Option 7			Ductwork	2,730.00	GSF	5.39	14,714.70
Addition - Option 7			Air Outlets	2,730.00	GSF	0.69	1,883.70
Addition - Option 7			Ductwork Accessories	2,730.00	GSF	0.57	1,556.10
Addition - Option 7			Insulation	2,730.00	GSF	3.00	8,190.00
Addition - Option 7			Temperature Controls	2,730.00	GSF	5.16	14,086.80
Addition - Option 7			Air & Water Balance	2,730.00	GSF	0.55	1,501.50
Addition - Option 7			Coordination Drawings	2,730.00	GSF	0.25	690.69
Addition - Option 7			HVAC General Conditions	2,730.00	GSF	0.35	955.50
Addition - Option 7			Systems Operation & Testing	2,730.00	GSF	0.29	784.88
Addition - Option 7							
Addition - Option 7	9.20	PLUMBING	Fixtures	2,730.00	GSF	3.20	8,736.00
Addition - Option 7			Gas Piping	2,730.00	GSF	0.40	1,092.00
Addition - Option 7			Domestic Water Piping	2,730.00	GSF	2.94	8,026.20
Addition - Option 7			DWV Piping	2,730.00	GSF	2.50	6,825.00
Addition - Option 7			Storm Piping	2,730.00	GSF	1.75	4,777.50
Addition - Option 7			Insulation	2,730.00	GSF	1.92	5,241.60
Addition - Option 7			Coordination Drawings	2,730.00	GSF	0.25	690.69
Addition - Option 7			Plumbing General Conditions	2,730.00	GSF	0.35	955.50
Addition - Option 7			Systems Operation & Testing	2,730.00	GSF	0.20	546.00

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Addition - Option 7							
Addition - Option 7							
Addition - Option 7	9.30	FIRE SPRINKLER	Sprinkler	2,730.00	GSF	3.50	9,555.00
Addition - Option 7			Fire Pump			<i>Not included</i>	
Addition - Option 7							
Addition - Option 7	10.00	ELECTRICAL	Switchboards	2,730.00	GSF	0.90	2,457.00
Addition - Option 7			Panelboards	2,730.00	GSF	0.94	2,566.20
Addition - Option 7			Generator & Automatic Transfer Switches			<i>See Renovation</i>	
Addition - Option 7			Bus Duct & Transformers	2,730.00	GSF	0.44	1,201.20
Addition - Option 7			Light Fixtures	2,730.00	GSF	7.48	20,420.40
Addition - Option 7			Light Switches - includes DDC control connections	2,730.00	GSF	1.25	3,412.50
Addition - Option 7			Power Outlets	2,730.00	GSF	0.90	2,457.00
Addition - Option 7			Safety Cabinets & Disconnects	2,730.00	GSF	0.40	1,092.00
Addition - Option 7			Power Feeders	2,730.00	GSF	3.05	8,326.50
Addition - Option 7			Power Home Runs	2,730.00	GSF	1.35	3,685.50
Addition - Option 7			Power Branches	2,730.00	GSF	1.45	3,958.50
Addition - Option 7			Lighting Home Runs	2,730.00	GSF	1.30	3,549.00
Addition - Option 7			Lighting Branches	2,730.00	GSF	1.45	3,958.50
Addition - Option 7			Grounding/Lightning Protection	2,730.00	GSF	0.33	900.90
Addition - Option 7			Cable Tray	2,730.00	GSF	0.50	1,365.00
Addition - Option 7			Phone/Data System	2,730.00	GSF	5.50	15,015.00
Addition - Option 7			Security System & Equipment	2,730.00	GSF	2.55	6,961.50
Addition - Option 7			P.A. & A.V. Systems	2,730.00	GSF	0.80	2,184.00
Addition - Option 7			TV System	2,730.00	GSF	0.55	1,501.50
Addition - Option 7			Fire Alarm	2,730.00	GSF	1.97	5,378.10
Addition - Option 7			Coordination Drawings	2,730.00	GSF	0.25	682.50
Addition - Option 7			Electrical General Conditions	2,730.00	GSF	0.35	955.50
Addition - Option 7			Systems Operation & Testing	2,730.00	GSF	0.20	546.00

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Report: Preliminary Study Cost Estimate
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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
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Addition - Option 7							
Addition - Option 7							
Addition - Option 7	11.00	MARK-UPS	Subtotal				876,427.06
Addition - Option 7			General Conditions	12.00%			105,171.25
Addition - Option 7			Subtotal				981,598.30
Addition - Option 7			GC OH & Profit	8.00%			78,527.86
Addition - Option 7			Subtotal				1,060,126.17
Addition - Option 7			Costs for Phasing & Staging	0%			0.00
Addition - Option 7			Subtotal				1,060,126.17
Addition - Option 7			Bonds & insurance	1.38%			14,629.74
Addition - Option 7			Subtotal	2,730.00 GSF		\$393.68	1,074,755.91

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
---------	-------	------------------	---------------	----------	-----	-----------	-----------

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

Sitework - Option 7

SITWORK

12.05 SITE DEMO

Misc site demo

30 CY

98.00

2,940.00

CY of site debris for landfill disposal

30 CY

calculates quantities for hauling

Haul/Dispose of Site Debris

Dump truck to landfill 2 axle/10 CY

6 EHR

125.00

750.00

Dump fees assume 1 ton per CY

30 CY

76.00

2,280.00

12.10 ENVIRONMENTAL

Erosion and Sediment Controls

Dust control

1 LS

2,566.00

2,566.00

Silt fence

120 LF

2.95

354.00

Gravel construction entrance

95 TNS

33.62

3,193.90

Wash rack

1 EA

812.00

812.00

Inlet/outlet protection

2 EA

76.00

152.00

Maintenance of E&S measures

1 LS

707.79

707.79

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Sitework - Option 7							
Sitework - Option 7	12.20	EARTHWORK	Foundation Drainage				
Sitework - Option 7			Drainage foundation gravel/filter cloth	84	LF	18.86	1,584.24
Sitework - Option 7			Daylight at suitable outfall pipe only	21	LF	6.22	130.62
Sitework - Option 7							
Sitework - Option 7			Soil Testing				
Sitework - Option 7			Compaction See Div 1				
Sitework - Option 7			Moisture See Div 1				
Sitework - Option 7			CBR See Div 1				
Sitework - Option 7							
Sitework - Option 7			Topsoil/Fine Grade				
Sitework - Option 7			Topsoil strip, stockpile, respread	1	LS	900.00	900.00
Sitework - Option 7			Building pad fine grade	92	SY	6.00	554.67
Sitework - Option 7							
Sitework - Option 7			Cut/Fill				
Sitework - Option 7			Cut and haul off-site - cut, load, haul, dispose	31	CY	28.00	862.81
Sitework - Option 7							
Sitework - Option 7			Undercut and Replace with Suitable Soils				
Sitework - Option 7			Undercut and haul - cut, load, haul, dispose	40	CY	21.80	872.00
Sitework - Option 7			Import fill - purchase, import, place, compact	40	CY	36.67	1,466.80
Sitework - Option 7							
Sitework - Option 7			Grading and Shaping				
Sitework - Option 7			Rough grading entire disturbed area	400	SY	1.14	456.00
Sitework - Option 7							
Sitework - Option 7			Rock Excavation		Excluded		
Sitework - Option 7							
Sitework - Option 7			Special Foundations		Excluded		
Sitework - Option 7							
Sitework - Option 7			Backfill				
Sitework - Option 7			Backfill building	14	CY	18.00	252.00
Sitework - Option 7							
Sitework - Option 7			Soil Treatment Termite Control				
Sitework - Option 7			Termite control	1	LS	350.00	350.00

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LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Sitework - Option 7							
Sitework - Option 7	12.25	WATER	Water Supply & Distribution Systems		Tie into existing building		
Sitework - Option 7			Test pit	1	EA	296.00	296.00
Sitework - Option 7			Domestic supply to tie into existing building				
Sitework - Option 7			6" DIP fire	120	LF	32.66	3,919.20
Sitework - Option 7			6" Valve w/ post indicator	2	EA	3,330.00	6,660.00
Sitework - Option 7			Fire hydrant	1	EA	3,296.00	3,296.00
Sitework - Option 7			Thrust blocks	1	EA	153.00	153.00
Sitework - Option 7			Excavation & backfill	80	CY	19.22	1,537.60
Sitework - Option 7			Pipe bedding	8	CY	27.04	216.32
Sitework - Option 7			Spoils removal	16	CY	19.13	306.08
Sitework - Option 7	12.30	SANITARY SEWER	Sanitary Sewer Systems				
Sitework - Option 7			Test pit	1	EA	296.00	296.00
Addition - Option 3			Manholes, precast	1	EA	3,294.00	3,294.00
Sitework - Option 7			Cleanout	2	EA	264.00	528.00
Sitework - Option 7			Tie into existing manhole	1	LOC	674.00	674.00
Sitework - Option 7			6" PVC	60	LF	7.88	472.80
Sitework - Option 7			Excavation & backfill	36	CY	19.22	683.38
Sitework - Option 7			Pipe bedding	4	CY	27.04	96.14
Sitework - Option 7			Spoils removal	7	CY	19.13	136.04
Sitework - Option 7	12.35	STORM WATER MANAGEMENT	Storm Sewer Systems				
Sitework - Option 7			Allowance for detention/treatment or Nutrient Credits	1	LS	10,000.00	10,000.00
Sitework - Option 7			6" PVC	150	LF	7.88	1,181.96
Sitework - Option 7			Excavation & backfill	125	CY	19.22	2,402.50
Sitework - Option 7			Pipe bedding	13	CY	27.04	338.00
Sitework - Option 7			Spoils removal	25	CY	19.13	478.25
Sitework - Option 7	12.40	SITE ELECTRIC, LIGHTING, AND SECURITY	Site Lighting Systems		Existing to remain		
Sitework - Option 7			Site Electrical Utilities				
Sitework - Option 7				1	LS	8,500.00	8,500.00
Sitework - Option 7			Site Electrical Utilities		Existing to remain		
Sitework - Option 7	12.45	PRIMARY TELECOMM	Allowance to relocate existing	1	LS	6,500.00	6,500.00

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Sitework - Option 7	12.50	PRIMARY GAS					
Sitework - Option 7							Excluded
Sitework - Option 7	12.60	PAVING	Asphalt Pavement				
Sitework - Option 7			Repair existing damaged during construction	1	LS	6,000.00	6,000.00
Sitework - Option 7	12.61	SITE CONCRETE AND WALLS	Site Concrete				
Sitework - Option 7			Sidewalks, concrete, broom finish, 4"	1,200	SF	3.41	4,092.00
Sitework - Option 7			Gravel base for concrete sidewalk, 4"	1,200	SF	1.05	1,260.00
Sitework - Option 7			CG12 type ADA sidewalk ramp	1	EA	837.16	837.16
Sitework - Option 7	12.65	LANDSCAPING	Sod	300	SY	2.76	828.00
Sitework - Option 7			Trees/plantings				Excluded
Sitework - Option 7	11.00	MARK-UPS	Subtotal				86,167.26
Sitework - Option 7			General Conditions	12.00%			10,340.07
Sitework - Option 7			Subtotal				96,507.33
Sitework - Option 7			GC OH & Profit	8.00%			7,720.59
Sitework - Option 7			Subtotal				104,227.92
Sitework - Option 7			Bonds & insurance	1.38%			1,438.35
Sitework - Option 7			Subtotal				105,666.26

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---------	-------	------------------	---------------	----------	-----	-----------	-----------

RENOVATION

CONSTRUCTION COSTS

Renovation - Option 7	Renovation					<i>Carried forward</i>	206.10	\$2,650,004
Renovation - Option 7								
Renovation - Option 7	Subtotal							\$2,650,004
Renovation - Option 7	Escalation to construction mid point	Current Dollars per Direction			0.00%			\$0
Renovation - Option 7	Subtotal							\$2,650,004
Renovation - Option 7	Design Contingency				12.00%			\$318,000
Renovation - Option 7	Subtotal							\$2,968,004
Renovation - Option 7	Phasing / Interim Moves	Allowance			0.00%			\$0
Renovation - Option 7								
Renovation - Option 7	Total Hard Construction Costs Base Bid						230.83	\$2,968,004

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Renovation - Option 7	00.00		Renovation				
Renovation - Option 7							
Renovation - Option 7	00.50	SELECT BLDG. DEMO	Misc. interior Demo of Renovated area	12,858.00	GSF	6.20	79,719.60
Renovation - Option 7			Hazmat abatement Allowance - asbestos	12,858.00	GSF	4.60	59,146.80
Renovation - Option 7			Hazmat abatement Allowance- lead	12,858.00	GSF	2.40	30,859.20
Renovation - Option 7							
Renovation - Option 7	01.00	FOUNDATIONS	Misc. Foundation Repairs	1.00	LS	6,800.00	6,800.00
Renovation - Option 7							
Renovation - Option 7	02.00	SUBSTRUCTURE	SOG misc. repairs	12,858.00	GSF	0.90	11,572.20
Renovation - Option 7							
Renovation - Option 7	03.00	SUPERSTRUCTURE	Misc. Wood Blocking	12,858.00	GSF	0.90	11,572.20
Renovation - Option 7			Misc. Structural repairs	12,858.00	GSF	1.10	14,143.80
Renovation - Option 7			Misc Metals	1.00	LS	10,500.00	10,500.00
Renovation - Option 7							
Renovation - Option 7	04.00	EXTERIOR CLOSURE	Repair or Replace Exterior Windows - Allowance	51.00	EA	922.50	47,047.50
Renovation - Option 7			Repairs & Point up existing veneer - allowance	1.00	LS	50,000.00	50,000.00
Renovation - Option 7			Repair or replace exterior trim - Allowance	1.00	LS	12,000.00	12,000.00
Renovation - Option 7			Replace exterior louvers	1.00	LS	950.00	950.00
Renovation - Option 7			Misc. w.p./caulk/fire sealants/etc. Div. 7	12,858.00	GSF	0.74	9,514.92
Renovation - Option 7							
Renovation - Option 7	05.00	ROOFING	Misc. patch & repair - Allowance	1.00	LS	8,200.00	8,200.00
Renovation - Option 7			Repalce membrane roof - Allowance	2,786.00	SF	18.00	50,148.00
Renovation - Option 7							

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Report: Preliminary Study Cost Estimate
 Project: Bennet Building Addition & Renovation - Option 7
 Location: Manassas, VA
 Documents Dated: October 1, 2017

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 www.downeyscott.com

Status: Study/Concept
 Client: Moseley
 Submission: October 12, 2018
 Run Date: See footer
 Revised: NA

PM: ja/ct/mvd
 Chckd by: ja
 Job no: 18143

LOC REF	SYS #	UNIFORMAT SYSTEM	SPECIFICATION	QUANTITY	U/M	UNIT COST	EXTENSION
Renovation - Option 7							
Renovation - Option 7	06.00	INTERIOR CONST	Interior CMU Partitions	12,858.00	GSF	3.05	39,216.90
Renovation - Option 7			New & Repaired Interior GWB Partitions & Plaster Wall	12,858.00	GSF	10.54	135,523.32
Renovation - Option 7			Interior Wood Trim Repairs Allowance	1.00	LS	7,500.00	7,500.00
Renovation - Option 7			Interior Doors & Frames	12,858.00	GSF	5.10	65,575.80
Renovation - Option 7			Acoustic ceiling, avg	12,858.00	GSF	3.50	45,003.00
Renovation - Option 7			Upgraded Ceiling Finishes	800.00	SF	12.75	10,200.00
Renovation - Option 7			Ceramic Tile - Allowance	0.00	GSF	13.25	0.00
Renovation - Option 7			Soft flooring/ vinyl base	12,858.00	GSF	3.95	50,789.10
Renovation - Option 7			Painting	12,858.00	GSF	2.05	26,358.90
Renovation - Option 7			Misc. cut and patching	12,858.00	GSF	0.58	7,457.64
Renovation - Option 7							
Renovation - Option 7	07.00	SPECIAL EQUIPMENT	Toilet partitions/accessories	0.00	GSF	0.82	0.00
Renovation - Option 7			Whiteboards/tackboards	12,858.00	GSF	0.42	5,400.36
Renovation - Option 7			Millwork	12,858.00	GSF	4.19	53,875.02
Renovation - Option 7			Window treatment Allowance	12,858.00	GSF	0.20	2,571.60
Renovation - Option 7			Misc. spec. door signs/f.e./jan shelving/etc.	12,858.00	GSF	0.45	5,786.10

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Renovation - Option 7

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09.00 MECHANICAL HVAC

Misc. Demo	12,858.00	GSF	0.84	10,762.15
HVAC Equipment - based on Option 1 VRF System	12,858.00	GSF	17.06	219,357.48
Piping & Valves	12,858.00	GSF	3.88	49,889.04
Ductwork	12,858.00	GSF	5.39	69,304.62
Air Outlets	12,858.00	GSF	0.69	8,872.02
Ductwork Accessories	12,858.00	GSF	0.57	7,329.06
Insulation	12,858.00	GSF	3.00	38,574.00
Temperature Controls	12,858.00	GSF	5.16	66,347.28
Air & Water Balance	12,858.00	GSF	0.55	7,071.90
Coordination Drawings	12,858.00	GSF	0.25	3,253.07
HVAC General Conditions	12,858.00	GSF	0.35	4,500.30
Systems Operation & Testing	12,858.00	GSF	0.29	3,696.68

9.20 PLUMBING

Misc. Demo	12,858.00	GSF	0.79	10,157.82
Fixtures	12,858.00	GSF	3.20	41,145.60
Gas Piping	12,858.00	GSF	0.40	5,143.20
Domestic Water Piping	12,858.00	GSF	2.94	37,802.52
DWV Piping	12,858.00	GSF	2.50	32,145.00
Storm Piping	12,858.00	GSF	1.75	22,501.50
Insulation	12,858.00	GSF	1.92	24,687.36
Coordination Drawings	12,858.00	GSF	0.25	3,253.07
Plumbing General Conditions	12,858.00	GSF	0.35	4,500.30
Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60

9.30 FIRE SPRINKLER

Sprinkler	12,858.00	GSF	4.50	57,861.00
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Renovation - Option 7							
Renovation - Option 7	10.00	ELECTRICAL	Misc. Demo	12,858.00	GSF	0.88	11,315.04
Renovation - Option 7			Switchboards	12,858.00	GSF	0.90	11,572.20
Renovation - Option 7			Panelboards	12,858.00	GSF	0.94	12,086.52
Renovation - Option 7			Generator & Automatic Transfer Switches, allowance	1.00	LS	125,500.00	125,500.00
Renovation - Option 7			Bus Duct & Transformers	12,858.00	GSF	0.44	5,657.52
Renovation - Option 7			Light Fixtures	12,858.00	GSF	7.48	96,177.84
Renovation - Option 7			Light Switches - includes DDC control connections	12,858.00	GSF	1.25	16,072.50
Renovation - Option 7			Power Outlets	12,858.00	GSF	0.90	11,572.20
Renovation - Option 7			Safety Cabinets & Disconnects	12,858.00	GSF	0.40	5,143.20
Renovation - Option 7			Power Feeders	12,858.00	GSF	3.05	39,216.90
Renovation - Option 7			Power Home Runs	12,858.00	GSF	1.35	17,358.30
Renovation - Option 7			Power Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 7			Lighting Home Runs	12,858.00	GSF	1.30	16,715.40
Renovation - Option 7			Lighting Branches	12,858.00	GSF	1.45	18,644.10
Renovation - Option 7			Grounding/Lightning Protection	12,858.00	GSF	0.33	4,243.14
Renovation - Option 7			Cable Tray	12,858.00	GSF	0.50	6,429.00
Renovation - Option 7			Phone/Data System	12,858.00	GSF	5.50	70,719.00
Renovation - Option 7			Security System & Equipment	12,858.00	GSF	2.55	32,787.90
Renovation - Option 7			P.A. & A.V. Systems	12,858.00	GSF	0.80	10,286.40
Renovation - Option 7			TV System	12,858.00	GSF	0.55	7,071.90
Renovation - Option 7			Fire Alarm	12,858.00	GSF	1.97	25,330.26
Renovation - Option 7			Coordination Drawings	12,858.00	GSF	0.25	3,214.50
Renovation - Option 7			Electrical General Conditions	12,858.00	GSF	0.35	4,500.30
Renovation - Option 7			Systems Operation & Testing	12,858.00	GSF	0.20	2,571.60

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Renovation - Option 7							
Renovation - Option 7	11.00	MARK-UPS	Subtotal				2,160,988.35
Renovation - Option 7			General Conditions	12.00%			259,318.60
Renovation - Option 7			Subtotal				2,420,306.95
Renovation - Option 7			GC OH & Profit	8.00%			193,624.56
Renovation - Option 7			Subtotal				2,613,931.51
Renovation - Option 7			Costs for Phasing & Staging	0%			0.00
Renovation - Option 7			Subtotal				2,613,931.51
Renovation - Option 7			Bonds & insurance	1.38%			36,072.25
Renovation - Option 7			Subtotal	12,858.00 GSF		\$206.10	2,650,003.76