FACILITIES WAREHOUSE - FLEET BUILDING
325 4TH STREET NW
CHARLOTTESVILLE, VIRGINIA

ECS PROJECT NO. 46:6713

FOR

CITY OF CHARLOTTESVILLE - FACILITIES DEVELOPMENT

SEPTEMBER 22, 2021

September 22, 2021

Mr. Josh Bontrager
City of Charlottesville - Facilities Development
305 4th Street NW
Charlottesville, Virginia, 22903

ECS Project No. 46:6713

Reference: Facility Condition Assessment Report for Facilities Warehouse - Fleet Building, 325 4th Street NW, Charlottesville, Virginia

Dear Mr. Bontrager:

ECS Mid-Atlantic, LLC is pleased to provide the results of our Facility Condition Assessment (FCA) for the referenced property. The scope of the FCA was performed in general accordance with ASTM and industry guidelines and items contained within the ECS Proposal No. 46:7239-FP, dated June 12, 2020. We understand that our work is being performed under the City of Charlottesville Purchase Order Number 4500313133.

It has been our pleasure to be of service to you on this project. Should you have any questions or comments with regard to the findings and recommendations, please feel free to contact us at your convenience.

Respectfully,

ECS Mid-Atlantic, LLC

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Project Manager
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703-471-8400

Michael G. Doyle, AIA
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Project Summary

Construction System	Good	Fair	Poor	Action	Immediate	Over Term Years 1-20
3.2.1 Topography	X			None		
3.2.2 Storm Water Drainage	X			None		
3.2.3 Access and Egress	X			None		
3.2.4 Paving, Curbing, and Parking	X	X		Repair		$30,000
3.2.5 Flatwork		X		Repair		$100,000
3.2.6 Landscaping and Appurtenances	X			None		
3.2.7 Recreational Facilities		NA		None		
3.2.8 Special Utility Systems	X	X		None		
3.3.1 Foundation	X			None		
3.3.2 Building Frame	X			None		
3.3.3 Building Exteriors		X		Replace		$200,000
3.3.4 Exterior Doors		X		Replace		$30,000
3.3.5 Exterior Windows	X	X		Replace		$4,000
3.3.6 Roofing Systems	X	X		Replace		$630,000
3.4.1.1 Supply and Waste Piping	X			None		
3.4.1.2 Domestic Hot Water Production		X		Replace		$4,000
3.4.2.1 Equipment		X		Replace		$140,000
3.4.2.2 Distribution System	X			None		
3.4.2.3 Control Systems	X			None		
3.4.3.1 Service and Metering	X	X		Replace		$25,000
3.4.3.2 Distribution	X			None		
3.5 VERTICAL TRANSPORTATION SYSTEMS		NA		None		
3.6.1 Sprinklers and Suppression Systems	X			None		
3.6.2 Alarm Systems	X			None		
3.6.3 Security and Other Systems	X			None		
3.7.1 Interior Finishes of Common Areas	X			None		
3.8 Accessibility (ADA) Compliance	X	X		Install Additional Accessible Parking Spaces	$1,500	
5.1 MOISTURE AND MOLD	X			None		
Totals					$1,500	$1,238,000

Summary	Today's Dollars	$/Square Feet
Immediate Repairs	$1,500	$0.03

	Today's Dollars	$/Square Feet	$/Square Feet/Year
Replacement Reserves, today's dollars	$1,238,000.00	$28.14	$1.41
Replacement Reserves, w/20, 2.5% escalation	$1,530,165.50	$34.78	$1.74

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1.0 EXECUTIVE SUMMARY

1.1 BACKGROUND

ECS Mid-Atlantic, LLC (ECS) performed a Facility Condition Assessment (FCA) in general conformance with ASTM guidelines and general scope items contained within the ECS Proposal 46:7239-FP dated June 12, 2020 for the Facilities Warehouse - Fleet Building property in Charlottesville, Virginia - hereinafter known as the Property.

The FCA was conducted by ECS in response to the authorization of our Proposal by Ms. Susan Dyer on November 23, 2020. The report was completed and reviewed by the following team members:

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Reliance

This report is provided for the exclusive use of City of Charlottesville - Facilities Development. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties. The use of this report by any undesignated third party or parties will be at such party's sole risk and ECS disclaims liability for any such third party use or reliance.

1.2 METHODOLOGY

ECS observations and historical property data provided by the owner were utilized to determine the effective age of the property components. Various factors including exposure to weather elements, system manufacturer quality, level of maintenance, and usage determine the effective age of property components. Depending on the impact of these various factors, the effective age of property components can reduce the Remaining Useful Life (RUL) of a property component. The general requirements of the owner to address facility needs were requested to be prioritized based on the RUL and type of property component. The following Priorities were established by the Owner as follows:

Priority 1: Immediately Critical Items (Year 0)

Items in this Priority category include physical deficiencies that require immediate action as a result of (i) existing or potentially unsafe conditions, (ii) significant negative conditions impacting tenancy, (iii) material building code violations or Title II American with Disabilities Act (ADA) items.

Priority 2: Critical Items (Year 0-1)

Items in this Priority category include physical deficiencies that require immediate action as a result of (i) poor or deteriorated condition of critical element or system, or (ii) a condition that is left "as is," with an extensive delay in addressing same, would result in or contribute to critical element or system failure within one year.

Priority 3: Near Term Items (Years 2-5)

Items in this category include physical deficiencies that require near term action as a result of (i) poor or deteriorated condition of critical element or system, or (ii) a condition that is left "as is," with an extensive delay in addressing same, would result in or contribute to critical element or system failure within two to five years.

Priority 4: Reserve Items (Years 5-20)

Items in this Priority category include Capital Reserves for recurring probable expenditures, which are not classified as operational or maintenance expenses, which should be annually budgeted for in advance. Capital reserves are reasonably predictable both in terms of frequency and cost. However, they may also include components or systems that have an indeterminable life but nonetheless have a potential liability for failure within an estimated time period. A component method has also been included within this report as well.

Reserve items excludes systems or components that are estimated to expire after the reserve term and that are not considered material to the structural and mechanical integrity of the subject property. Furthermore, systems and components that were not deemed to have a material affect on the use were also excluded. Costs that are caused by acts of God, accidents or other occurrences that are typically covered by insurance, rather than reserved funds, are also excluded.

Replacement costs were solicited from ownership/property management, ECS' discussions with service companies, manufacturers' representatives, and previous experience in preparing such schedules for other similar facilities. Costs for work performed by ownership's or property management's maintenance staff were also considered.

ECS's reserve methodology involves identification and quantification of those systems or components requiring capital reserve funds within the evaluation period. Additional information concerning systems or components respective replacement costs (in today's dollars), typical expected useful lives, and remaining useful lives were estimated so that a funding schedule could be prepared. The Capital Reserve Schedule presupposes that all required remedial work has been performed or that monies for remediation have been budgeted for items defined in the Immediate Needs Cost Estimates.

1.3 PROPERTY DESCRIPTION

The Facilities Warehouse - Fleet Building, located at 325 4th Street NW, in Charlottesville, Virginia, consists of a One-story building. The building totals approximately 44,000 square feet. Parking is provided with Asphalt pavement. The Warehouse and office building was reportedly constructed in 1973 and was recently renovated in 2013.

SURVEY INFORMATION	
Date of Assessment	May 20, 2021
Assessor	William R. Pratt, P.E.
Weather Conditions	Partly Cloudy | 88F
Property Contact	Josh Bontrager, Project Manager for City of Charlottesville - Facilities Development

SITE INFORMATION	
Land Area	Unknown acres
Major Cross Streets	Preston Avenue
Pavement - Parking	Asphalt pavement
Number of Parking Spaces	181
Number of Accessible Spaces	Three
Number of Van Accessible Spaces	None

BUILDING INFORMATION	
Building Type	Warehouse and office
Number of Buildings	One
Building Height	One-story
Square Footage	44,000
Year Constructed	1973
Year Remodeled	2013

BUILDING CONSTRUCTION	
Foundation	Assumed shallow spread footings

BUILDING CONSTRUCTION	
Structural System	Structural steel
Roof	Single-ply sheet membrane
Exterior Finishes	Metal
Windows	Aluminum frame double pane
Entrance	Storefront entrance

BUILDING SYSTEMS	
HVAC System	Split systems
Domestic Hot Water	Gas domestic water heater
Water Distribution	Copper
Sanitary Waste Line	PVC and cast iron
Electrical Service	3-phase, 4-wire, 2,500 amps
Branch Wiring	Copper
Elevators	None
Fire Suppression System	Fire extinguishers

UTILITY SERVICE PROVIDERS	
Water	Charlottesville Water
Sewer	Charlottesville Public Utilities - Wastewater
Electric	Dominion Virginia Power
Natural Gas	City of Charlottesville

1.4 OPINIONS OF COST

The opinions of cost are provided in the attached reserve replacement table and a summary of immediate repairs included in this report. The reserve replacement table covers capital expenditure items only. Items less than $1,000 in cost have been excluded, except for immediate repairs, ADA or safety issues. Please refer to section 6.0 of this report for a detailed explanation on how these costs are derived.

1.5 COST TABLES

Immediate Repair Cost

Item	Quantity	Unit	Unit Cost	Replacement Percent	Immediate Total
3.8 Accessibility (ADA) Compliance					
INSTALL THREE ADDITIONAL ACCESSIBLE PARKING SPACES (ONE VAN ACCESSIBLE)	1	EA	$1,500.00	100%	$1,500
Total Repair Cost					$1,500.00

Capital Reserve Schedule

Item	EUL	EFF AGE	RUL	Quantity	Unit	Unit Cost	Cycle Replace	Replace Percent	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Year 11 2031	Year 12 2032	Year 13 2033	Year 14 2034	Year 15 2035	Year 16 2036	Year 17 2037	Year 18 2038	Year 19 2039	Year 20 2040	Total Cost
3.2.4 Paving, Curbing, and Parking																												
REPAIR ASPHALT PAVEMENTS AS NEEDED	20	19	1	1	LS	$30,000.00	$30,000	100%	$10,000									$10,000										$10,000	$30,000
3.2.5 Flatwork																												
REPAIR CONCRETE STEPS AND LOADING AREAS	25	24	1	1	LS	$100,000.00	$100,000	100%	$25,000				$25,000					$25,000					$25,000						$100,000
3.3.3 Building Exteriors																												
REPLACE METAL SIDING	50	45	5	1	LS	$200,000.00	$200,000	100%					$100,000					$100,000											$200,000
3.3.4 Exterior Doors																												
REPLACE DAMAGED OVERHEAD DOORS	30	29	1	15	EA	$2,000.00	$30,000	100%	$30,000																				$30,000
3.3.5 Exterior Windows																												
REPLACE OLDER WINDOW UNITS	30	29	1	4	EA	$1,000.00	$4,000	100%	$4,000																				$4,000
3.3.6 Roofing Systems																												
REPLACE SINGLE-PLY ROOFING SYSTEM	15	5	10	45,000	SF	$14.00	$630,000	100%										$630,000											$630,000
3.4.1.2 Domestic Hot Water Production																												
REPLACE WATER HEATERS	12	10	2	2	EA	$1,000.00	$2,000	200%		$2,000												$2,000							$4,000
3.4.2.1 Equipment																												
REPLACE CONDENSORS	15	13	2	8	EA	$5,500.00	$44,000	100%		$11,000	$11,000							$11,000			$11,000								$44,000
REPLACE COMBINATION GAS FURNACE - AIR HANDLER UNITS	15	12	3	8	EA	$5,500.00	$44,000	100%			$14,668							$14,666			$14,666								$44,000

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Item	EUL	EFF AGE	RUL	Quantity	Unit	Unit Cost	Cycle Replace	Replace Percent	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Year 11 2031	Year 12 2032	Year 13 2033	Year 14 2034	Year 15 2035	Year 16 2036	Year 17 2037	Year 18 2038	Year 19 2039	Year 20 2040	Total Cost
REPLACE HEAT PUMPS	15	13	2	4	EA	$5,500.00	$22,000	100%		$11,000											$11,000								$22,000
REPLACE SPACE HEATERS	20	19	1	8	EA	$2,500.00	$20,000	100%	$10,000					$10,000															$20,000
REPLACE DUCTLESS SPLIT SYSTEMS	15	12	3	4	EA	$2,500.00	$10,000	100%			$5,000			$5,000															$10,000
3.4.3.1 Service and Metering																													
REPLACE GENERATOR AND TRANSFER SWITCH	25	11	14	1	EA	$25,000.00	$25,000	100%														$25,000							$25,000
3.4.3.3 Solar Power System																													
REPLACE SOLAR PANELS AS NEEDED	25	7	18	1	LS	$75,000.00	$75,000	100%																	$75,000				$75,000
Total (Uninflated)									$79,000.00	$24,000.00	$30,668.00	$0.00	$125,000.00	$15,000.00	$0.00	$0.00	$0.00	$790,666.00	$0.00	$0.00	$36,666.00	$27,000.00	$25,000.00	$0.00	$0.00	$75,000.00	$0.00	$10,000.00	$1,238,000.00
Inflation Factor (2.5%)									1.0	1.025	1.051	1.077	1.104	1.131	1.16	1.189	1.218	1.249	1.28	1.312	1.345	1.379	1.413	1.448	1.485	1.522	1.56	1.599	
Total (inflated)									$79,000.00	$24,600.00	$32,220.57	$0.00	$137,976.61	$16,971.12	$0.00	$0.00	$0.00	$987,433.49	$0.00	$0.00	$49,311.69	$37,219.80	$35,324.35	$0.00	$0.00	$114,121.37	$0.00	$15,986.50	$1,530,165.50

Evaluation Period:	20
# of Square Feet:	44,000
Reserve per Square Feet per year (Uninflated)	$1.41
Reserve per Square Feet per year (Inflated)	$1.74

2.0 PURPOSE AND SCOPE

2.1 SCOPE OF SERVICES

This Facility Condition Assessment (FCA) was conducted in general accordance with items and terminology requested by the Owner herein and ASTM E 2018-15, "Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process".

The primary purpose of a FCA is to note construction deficiencies and to identify components which appear to exhibit less than expected service life or which have been poorly maintained. The assessment is not intended to develop detailed remedial plans for identified problems. The services are qualitative in nature and do not include engineering calculations or design. Photographic documentation of our observations is attached.

The following building systems were observed in accordance with ASTM E 2018-15:

- Site Conditions
- Structural Frame and Building Envelope
- Plumbing, Mechanical and Electrical Systems
- Vertical Transportation Systems
- Life Safety and Fire Protection
- Interior Elements
- ADA Considerations
- Building Code Violations

Out of Scope Items

Environmental issues and concerns are considered to be outside of the ASTM scope of services for a Facility Condition Assessment. Although properties may have possible environmental contamination, including, but not limited to radon, mold, lead based paint, asbestos, lead piping, PCB's or volatile chemicals, these issues and concerns should be addressed by an Environmental Assessment, as defined by ASTM Guidelines. ECS recommends that properties be studied by a qualified environmental assessor who can appropriately access, identify, and quantify issues related to environmental safety concerns.

ECS is providing a Facility Condition Assessment consistent with commercial and customary practices and the ASTM E-2018, current at the time the services are provided. The parties expressly acknowledge and agree that ECS is not providing a Reserve Study, which is subject to the National Reserve Study Standards and requires much more detail than a typical Facility Condition Assessment.

2.2 Deviations from Guide (ASTM E2018-15)

ASTM E2018-15 requires that any deviations from the Guide be noted within the report. ECS reduced the cost threshold from $3,000 to $1,000 to allow for smaller items needing repair, replacement or refurbishment. Therefore items with costs less than $1,000 are typically not included in this report unless related to life, safety or accessibility items.

ECS interviewed personnel associated with the Facilities Warehouse - Fleet Building facility and other government agencies based upon availability. These individuals are identified in Section 4.2. Information obtained from the interviews are included in the applicable sections of this report.

2.3 ASSESSMENT PROCEDURES

The FCA included site reconnaissance, limited interviews with property management, and inquiries or attempted inquiries with the local building and fire departments. Operational testing of building systems or components was not conducted. During the FCA, ECS conducted observations of the following facility features: site development systems; building structure systems; building exterior systems; building interior systems; roof systems; mechanical systems; electrical systems; plumbing systems; and life and fire safety systems.

This report is intended for review as a complete document. Therefore, interpretations and conclusions drawn from the review of any individual section are the sole responsibility of the User.

2.4 DEFINITIONS

Fair, adj - the property or component is functional but will likely require immediate maintenance or repairs during the duration of the term.

Good, adj - the property or component is functional and should continue to provide its intended service with continued routine maintenance through the duration of the term.

Poor, adj - the property or component is not functional. Immediate or near term repairs are required to bring the component back into service or replacement is expected during the duration of the term.

2.4.1 Partial List of ASTM Definitions

de minimis condition - a physical deficiency that is not material to the conclusions of the report.

deferred maintenance, n - physical deficiencies that could have been remedied with routine maintenance, normal operating maintenance, etc., excluding de minimis conditions that generally do not present a material physical deficiency to the subject property.

easily visible, adj - describes items, components, and systems that are conspicuous, patent, and which may be observed visually during the walk-though survey without: intrusion, relocation or removal of materials, exploratory probing, use of special protective clothing, or use of any equipment (hand tools, meters of any kind, telescope instruments, stools, ladders, lighting devices, etc.).

effective age, n - the estimated age of a building component that considers actual age as affected by maintenance history, location, weather conditions, and other factors. Effective age may be more or less than actual age.

expected useful life (EUL), n - the average amount of time in years that an item, component or system is estimated to function without material repair when installed new and assuming routine maintenance is practiced.

immediate cost, n - opinions of costs that require immediate action as a result of any of the following: (1) material existing or potentially unsafe conditions, (2) material building or fire code violations, (3) physical deficiencies that if left uncorrected would be expected to result in or contribute to critical element or system failure within on year or will result most probably in significant escalation of its remedial cost.

observation, n - the visual survey of items, systems, conditions, or components that are readily accessible and easily visible during a walk-through survey of the subject property.

observe, v - to conduct an observation pursuant to this guide within the context of easily visible and readily accessible.

obvious, adj - plain, evident, and readily accessible; a condition easily visible or fact not likely to be ignored or overlooked by a field observer when conducting a walk-through survey or that which is practically reviewable and would be understood easily by a person conducting the FCA.

opinions of costs, n - opinion of costs that may be encountered in correction of physical deficiencies.

physical deficiency, n - a conspicuous defect or deferred maintenance of a subject property's material systems, components, or equipment as observed during the completion of the FCA. - This definition specifically excludes deficiencies that may be remedied with routine maintenance, miscellaneous minor repairs, normal operating maintenance, etc., and excludes de minimis conditions that generally do not present material physical deficiencies of the subject property.

Point of Contact (POC), n - owner, owner's agent, or user-identified person or persons knowledgeable about the physical characteristics, maintenance, and repair of the subject property.

practically reviewable, adj - describes information that is provided by the source in a manner and form that, upon review, yields information relevant to the subject property without the need for significant analysis, measurements, or calculations. Records or information that feasibly cannot be retrieved by reference to the location of the subject property are not generally considered practically reviewable.

primary commercial real estate improvements, n - the site and building improvements that are of fundamental importance with respect to the commercial real estate. This definition specifically excludes ancillary structures, that may have been constructed to provide support uses such as maintenance sheds, security booths, utility garages, pool filter and equipment buildings, etc.

property, n - the site improvements, which are inclusive of both site work and buildings.

readily accessible, adj - describes areas of the subject property that are promptly made available for observation by the field observer at the time of the walk-through survey and do not require the removal or relocation of materials or personal property, such as furniture, floor, wall, or ceiling coverings; and that are safely accessible in the opinion of the field observer.

readily available, adj - describes information or records that are easily and promptly provided to the consultant upon making a request in compliance with an appropriate inquiry and without the need for the consultant to research archive files.

reasonably ascertainable, adj - describes information that is publicly available, as well as readily available, provided to the consultant's offices from either its source or an information research/ retrieval service within reasonable time, practically reviewable, and available at a nominal cost for either retrieval, reproduction or forwarding.

remaining useful life (RUL), n - a subjective estimate based upon observations, or average estimates of similar items, components, or systems, or a combination thereof, of the number of remaining years that an item, component, or system is estimated to be able to function in accordance with its intended purpose before warranting replacement. Such period of time is affected by the initial quality of an item, component, or system, the quality of the initial installation, the quality and amount of preventive maintenance exercised, climatic conditions, extent of use, etc.

representative observations, n - observations of a reasonable number of samples of repetitive systems, components, areas, etc., which are conducted by the field observer during the walk-through survey. The concept of representative observations extends to all conditions, areas, equipment, components, systems, buildings, etc., to the extent that they are similar and representative of one another.

routine maintenance, n - a repair that does not require specialized equipment, profession services, or contractors, but rather can be corrected within budget and skill set of typical property maintenance staff.

short term cost, n - opinions of costs to remedy physical deficiencies, such as deferred maintenance, that may not warrant immediate attention, but require repairs or replacements that should be undertaken on a priority basis in addition to routine preventive maintenance.

technically exhaustive, adj - describes the use of measurements, instruments, testing, calculations, exploratory probing or discovery, or other means to discover, or a combination thereof, or troubleshoot physical deficiencies or develop architectural or engineering findings, conclusions, and recommendations, or combination thereof.

3.0 SYSTEM DESCRIPTION AND OBSERVATIONS

3.1 PROPERTY DESCRIPTION

The Property contains a One-story Warehouse and office building.

3.1.1 Property Location

The Property is located at 325 4th Street NW in Charlottesville, Virginia.

Surrounding Properties	
North	Commercial properties
East	4th Street NW
South	Commercial properties
West	Residential properties

A Site Location Map and Aerial View are included in Appendix I.

3.1.2 Construction History

We understand that the building was constructed approximately 48 years ago in 1973 and was reportedly renovated in 2013.

3.1.3 Current Property Improvements

The Warehouse and office building, located at 325 4th Street NW, in Charlottesville, Virginia, consists of a One-story building. The building totals approximately 44,000 square feet. Parking is provided with Asphalt pavement.

3.2 SITE CONDITIONS

3.2.1 Topography

TOPOGRAPHY		
Item	**Description**	**Condition**
Slope of the property	The property generally slopes to the south	Good
Adjoining Properties	Located down gradient	Good

Comments

The property is generally level and slopes to the south. The adjoining properties are located down gradient from the property.

3.2.2 Storm Water Drainage

STORM WATER DRAINAGE		
Item	**Description**	**Condition**
Storm Water Collection System	Municipal	Good
Storm Water (Retention) Pond		N/A
Storm Water Filtration Structure		N/A
Pavement Drainage	Grate and curb inlets	Good
Landscape Drainage	Gravity run-off	Good
Sump Pumps		N/A

Comments

The storm water collection system includes a municipal system.

Photographs

Typical drainage

3.2.3 Access and Egress

SITE ACCESS AND EGRESS		
Item	**Description**	**Condition**
Entrance Aprons		N/A
Fire Truck Access	All sides of structure	Good
Easements		N/A

Comments

Vehicular access to the site is located on the east side of the site. Fire truck access is available on the four sides of the building.

3.2.4 Paving, Curbing, and Parking

PARKING		
Item	**Description**	**Condition**
Striping	Painted	Fair
Quantity of Parking Spaces	181	Good
Quantity of Loading Spaces		N/A
Arrangement of Spaces	Perpendicular parking	Good
Site Circulation	Served by common access road	Good
Lighting		N/A
Accessible Spaces	Three	Fair
Accessible Aisles	None	N/A

SURFACE PAVEMENT		
Item	**Description**	**Condition**
Pavement Surface	Asphalt pavement	Fair
Drainage	Grate and curb inlets	Fair
Repair History	Patching noted	Fair
Concrete Curbs and Gutters	Minor blemishes	Fair

SURFACE PAVEMENT		
Item	**Description**	**Condition**
Dumpster Pad		N/A
Asphalt Curbs		N/A
Fire Lane Painting		N/A

Comments

Asphalt-paved drive lanes and parking are located on the four sides of the building. The expected useful life of asphalt pavement is 20 years. The asphalt pavement was observed to be in generally fair condition with cracking observed at various locations. Some of the drainage issues are being caused by the deterioration of the loading area as water pools on the deteriorated asphalt. Based on the areas of cracking, we recommend an allowance to perform repairs as needed during the report period.

Photographs

Asphalt pavement west side of the site - note alligator cracks

Asphalt pavement - note previous repair

Asphalt pavement - note deterioration

Typical asphalt pavement - note cracking

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPAIR ASPHALT PAVEMENTS AS NEEDED	20	19	1	1 10 20	$10,000 $10,000 $10,000
Total					$30,000

3.2.5 Flatwork

CONCRETE FLAT WORK		
Item	**Description**	**Condition**
Ramps	Access to loading dock	Good
Steps	Access to loading dock	Fair/Poor
Loading Areas	North side of building	Fair/Poor
Landings		N/A
Walkways		N/A
Handrails		N/A
Curb Ramps		N/A
Truncated Domes		N/A

Comments

The site contains a concrete ramp, concrete steps, and concrete loading areas of undetermined thickness. Regularly spaced control joints were observed.

The concrete ramp was generally in good condition. The expected useful life of concrete ramps is typically 25 years.

The concrete steps and concrete loading area were cracking and deteriorated at various locations. The concrete ramp was generally in fair to poor condition. We recommend an allowance for concrete repairs during the report period.

Photographs

Concrete sidewalk and loading area at south side of the building - note deterioration

Concrete loading area at north side of the building - note deterioration

Concrete loading area at north side of the building - note deterioration

Concrete loading area at north side of the building - note deterioration

Concrete loading area at north side of the building - note deterioration

Typical concrete sidewalk - note deterioration

Typical concrete sidewalk - note deterioration

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPAIR CONCRETE STEPS AND LOADING AREAS	25	24	1	1 5 10 15	$25,000 $25,000 $25,000 $25,000
Total					$100,000

3.2.6 Landscaping and Appurtenances

LANDSCAPING		
Item	**Description**	**Condition**
Trees	Mature trees surrounding site	Good
Planting Beds		N/A
Lawn Areas		N/A
Fences and Gates	Located at west end of the site	Fair
Monumental Sign		N/A
Landscape Lighting		N/A
Retaining Wall		N/A
Dumpster Area	Dumpsters sitting on asphalt parking lot	Good
Fountains		N/A

Comments

The landscaping consists generally of mature trees and small shrubs and grassed areas around the site. The landscaping was observed to be in generally good condition.

A metal chain link fence and gate were located at the west end of the site. The metal chain link fence and gate were generally in fair condition.

Photographs

Typical chain link fence note deterioration

Typical chain link metal gate and fence

Adjacent garage wall - note efflorescence

Dumpster area on north side of the building

3.2.7 Recreational Facilities

Comments

The property does not contain recreational systems.

3.2.8 Special Utility Systems

Item	Description	Condition
Water Well		N/A
Lift Station		N/A
Septic Field		N/A
Solar Power	Solar power panels located on roof	Good
Wind Power		N/A

Comments

The Property contains solar panels. Please refer to Section 3.4.3.3 for description, condition, and recommendations.

3.3 STRUCTURAL FRAME AND BUILDING EXTERIOR

3.3.1 Foundation

FOUNDATION		
Item	**Description**	**Condition**
Load Bearing Support	Assumed shallow spread footings	Good
Basement		N/A
Crawl Space		N/A

Comments

The foundation of the building includes Assumed shallow spread footings. Large cracks were not observed in the exterior walls. The foundation system appeared to provide adequate structural support to the building. The foundation was generally in good condition.

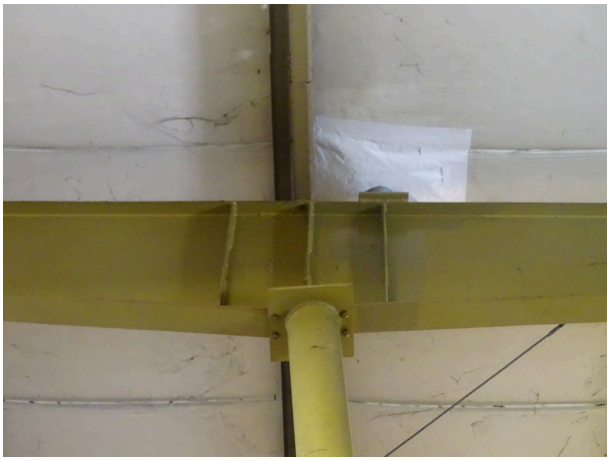
3.3.2 Building Frame

BUILDING FRAME		
Item	**Description**	**Condition**
Floor Framing	Concrete slab on grade	Good
Roof Framing	Structural steel	Good
Columns	Steel columns at interior and exterior	Good
Load Bearing Walls		N/A
Balconies		N/A
Decks		N/A

Comments

The structure of the building consists of Structural steel. The structural frame of the building was generally in good condition.

Photographs



Structural framing

3.3.3 Building Exteriors

EXTERIOR FINISHES		
Item	**Description**	**Condition**
Metal	Damage and deterioration observed at various locations	Fair/Poor
Masonry		N/A
Stone		N/A
Stucco/Plaster		N/A
Accent/Trim		N/A
Covered Soffits	Metal panel	Good
Awnings	Located on west side of the building	Good
Paint	Damaged surfaces throughout	Fair
Sealants	Various	Fair

Comments

The primary exterior of the building consists of Metal. The metal siding was physically damaged and deteriorated at various locations. The building exteriors were generally in fair condition. The expected useful life of metal siding is approximately 50 years. We recommend that the metal siding be replaced.

Photographs

Typical building exterior in loading dock area

Typical building exterior - note metal siding physical damage

Typical building exterior - note metal siding physical damage

Building exterior west side of the building

Typical exterior soffit

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE METAL SIDING	50	45	5	5 10	$100,000 $100,000
Total					$200,000

3.3.4 Exterior Doors

DOORS		
Item	**Description**	**Condition**
Main Entrance Doors	Storefront entrance	Good
Personnel Doors	Located throughout exterior	Fair
Door Hardware	Operable	Fair
Accessibility Controls		N/A
Overhead/Roll-up Doors	Located throughout exterior	Fair

Comments

The main entrance is a Storefront entrance. The main entrance door was generally in good condition. Personnel doors are located at around the building. The personnel doors were generally in fair condition. Exterior doors typically have an expected useful life of 20 to 30 years.

An overhead door is located at the west side of the building. The overhead doors were generally in fair condition with vehicular damage to some. It was noted by the tenants that the overhead doors to the warehouse area were not wide enough to process deliveries to and from the facility. Overhead doors typically have an expected useful life of 20 years. We recommend the damaged overhead doors to be replaced.

Photographs

Exterior door main entrance

Typical personnel door

Typical overhead door - note deterioration

Typical overhead door - note physical damaged

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE DAMAGED OVERHEAD DOORS	30	29	1	1	$30,000
Total					$30,000

3.3.5 Exterior Windows

WINDOWS		
Item	**Description**	**Condition**
Window Frame	Aluminum	Good/Fair
Glass Pane	Double pane	Good/Fair
Operation		N/A
Screen		N/A
Exterior Header	Metal	Good
Exterior Sill	Metal	Good
Gaskets or Glazing	Neoprene	Good

Comments

The window system for the building primarily consists of Aluminum frame double pane window units. There are older window units and newer window units that were generally in fair and good condition, respectively. The expected useful life of gaskets is typically 20 years. We recommend replacing the older window units.

Photographs

Typical window exterior

Typical older exterior window unit

Typical newer exterior window unit

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE OLDER WINDOW UNITS	30	29	1	1	$4,000
Total					$4,000

3.3.6 Roofing Systems

ROOFING		
Item	**Description**	**Condition**
Single-Ply Membrane	Reportedly installed in 2015	Good/Fair
Parapet Walls		N/A
Cap Flashing/Coping	Metal	Good
Insulation	Underside of roofing	Good
Substrate/Deck	Steel deck	Good
Slope/Pitch	Shallow pitch	Good
Drainage	To edge gutter	Good
Plumbing Vents	Standard clamped pipe boots	Good
Exhaust Vents	Countered flashed	Good
Equipment Curbs		N/A
Pitch Pockets		N/A
Gravel Stops		N/A
Skylights		N/A
Flashing	Metal	Good

Comments

The main roofing system consists of single-ply sheet membrane roofing system. The roofing system was reportedly replaced in 2015. Drainage for the roofing system is provided by both gutters and downspouts and internal drains. The drainage was observed to be in generally good condition. The expected useful life of the roofing systems is generally 15 years. Based on the reported age of the roofing system, we recommend scheduled replacement during the end of the study period.

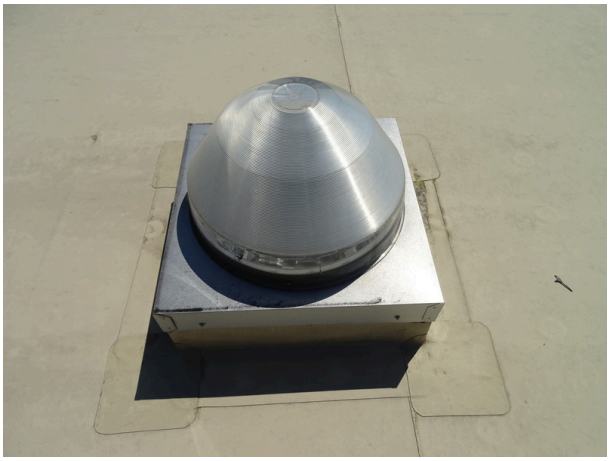
Photographs

Roofing system looking east side of the building looking east

Roofing system looking east side of the building looking east

Roofing system looking west side of the building looking east

Typical plumbing penetration



Typical smaller skylight

Typical larger skylights

Typical gutter and downspout

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE SINGLE-PLY ROOFING SYSTEM	15	5	10	10	$630,000
Total					$630,000

3.4 PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS

3.4.1 Plumbing Systems

3.4.1.1 Supply and Waste Piping

PLUMBING - WATER SUPPLY SYSTEM		
Item	**Description**	**Condition**
Piping Material	Copper	Good
Pipe Insulation	Fiberglass wrap with PVC formed fittings	Good
Water Shut-offs	Ball and globe type valves	Fair
Water Flow and Pressure		Good
Pressure Pumps		N/A
Pump Controller		N/A

PLUMBING - WASTE SUPPLY SYSTEM		
Item	**Description**	**Condition**
Piping Material	PVC and cast iron	Good
Vertical Vent Stacks	PVC	Good
Clean-outs	PVC and cast iron	Good
Ejector Pumps		N/A

Comments

Water Lines
The main water supply lines inside the building are Copper. The expected useful life of Copper piping is approximately 40 years. The water supply pipes were generally in good condition.

Waste Lines

The waste lines in the building are PVC and cast iron. The expected useful life of PVC and cast iron waste line is approximately 50 years. The waste lines were generally in good condition.

3.4.1.2 Domestic Hot Water Production

HOT WATER PRODUCTION		
Item	**Description**	**Condition**
Heating Equipment	Gas domestic water heater	Fair
Water Storage	Located in the water heater	Fair
Circulation Pumps		N/A

Comments

Domestic hot water to the building is provided by 2 Gas domestic water heaters. The Gas domestic water heaters were installed in 1999 and in 2011. The expected useful life of a Gas domestic water heater is approximately 12 to 15 years. We recommend replacing the Gas domestic water heaters during the report period.

Photographs

Typical water heater

Typical water heater

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE WATER HEATERS	12	10	2	2 14	$2,000 $2,000
Total					$4,000

3.4.2 HVAC Systems

3.4.2.1 Equipment

EQUIPMENT		
Item	**Description**	**Condition**
Boilers		N/A
Chillers		N/A
Fan Coil Units		N/A
Heat Exchangers		N/A
Interior Package Air Conditioner		N/A
Radiators		N/A
Variable Air Volume (VAV) Boxes		N/A
Combination Gas Furnace - Air Handlers	Located throughout building interior	Good
Condensing Units (split system)	Located outside of building	Good
Heat Pumps (split system)	Located outside of building	Good
Ceiling Fans		N/A
Exhaust Fans	Vehicle emission exhaust systems	Good
Space Heaters	Ceiling mounted in garage and warehouse	Fair

Comments

The building is served by Split systems and includes condensers and heat pumps with corresponding combination gas furnace - air handler units and air handler units. Ceiling mounted space heaters are located in the garage and warehouse areas. Various exhaust fans were located throughout the interior.

Combination Gas Furnace - Air Handler Units

The combination gas furnace - air handler units are located throughout the building. The combination gas furnace - air handler units were in good condition. The typical expected useful life of the combination gas furnace - air handler units is 15 to 20 years. We recommend a scheduled replacement of the units.

Condensers

Condensers manufactured by Carrier and American Standard are located outside. Condensers have an expected useful life of 15 years and should be replaced during the study period based on their age.

Heat Pumps

Heat pumps manufactured by Carrier and American Standard are located outside and the air handlers located in the attic space with installation dates of 2008 and 2019. Heat pumps have an expected useful life of 15 years and should be replaced during the study period based on their age.

Ductless Split Systems

Ductless split systems manufactured by Mitsubishi and Fujitsu are located outside and wall hung EMI interior units with installation dates ranging between 2009 and 2016. Ductless split systems have an expected useful life of 15 years and should be replaced during the study period based on their age.

Space Heaters

Eight ceiling mounted space heaters are located in the garage and warehouse areas. The space heaters were manufactured by Trane and Sterling in 1975 and 2007, respectively. The expected useful life of space heaters is approximately 20 years. The space heaters were generally in fair condition. We recommend replacing the space heaters based on their age during the report period.

Photographs

Typical air handler unit located in attic area

Gas furnaces

Condenser Units

Ductless Split System

Ductless Split System Wall Mounted Unit

Typical space Heaters

Condenser Units

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE CONDENSORS	15	13	2	2 3 10 13	$11,000 $11,000 $11,000 $11,000
REPLACE COMBINATION GAS FURNACE - AIR HANDLER UNITS	15	12	3	3 10 13	$14,668 $14,666 $14,666

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE HEAT PUMPS	15	13	2	2 13	$11,000 $11,000
REPLACE SPACE HEATERS	20	19	1	1 6	$10,000 $10,000
REPLACE DUCTLESS SPLIT SYSTEMS	15	12	3	3 6	$5,000 $5,000
Total					$140,000

3.4.2.2 Distribution System

HVAC DISTRIBUTION		
Item	**Description**	**Condition**
Plumbing Pipe System	PVC combustion and exhaust air piping	Good
Ducts	Insulated sheet metal	Good
Return Air	Insulated sheet metal	Good

Comments

The distribution system includes ducted supply and return. The ductwork was observed to be in generally good condition

3.4.2.3 Control Systems

HVAC CONTROL SYSTEMS		
Item	**Description**	**Condition**
Thermostats	Digital	Good
Compressor (Pneumatic System)		N/A
Variable Frequency Drives		N/A
Energy Management System		N/A

Comments

Thermostats are located in the interior space. The thermostats were observed to be in generally good condition.

3.4.3 Electrical Systems

3.4.3.1 Service and Metering

SERVICE AND METERING		
Item	**Description**	**Condition**
Service Entrance	On west side of building	Good
Master (House) Meter		Good
Emergency Power	Located outside on the west side of the building	Fair
Transfer Switch	Located in the shop area	Fair

Comments

Electricity is provided to the building by Dominion Virginia Power. The electrical service is located on the west side of the building and provides 3-phase, 4-wire, 2,500 amps service.

An emergency generator manufactured by Generac was reportedly installed in 1997 and is located outside on the west side of the building. The emergency generator is reportedly tested on a weekly basis. The expected useful life of an emergency generator is 25 years with proper maintenance. The emergency generator was observed to be in fair condition. Based on the age of the generator, we recommend replacement during the report period.

Photographs

Main electrical disconnect, utility meter, and emergency transfer switch

Main electrical disconnect,

Typical circuit breaker panel

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE GENERATOR AND TRANSFER SWITCH	25	11	14	14	$25,000
Total					$25,000

3.4.3.2 Distribution

ELECTRICAL DISTRIBUTION SYSTEM		
Item	**Description**	**Condition**
Electrical Sub-panels	Multiple manufacturers	Good
Branch Wiring	Copper	Good
GFCI Devices		Good
Building Transformers	Acme Electric	Good
Sub-Meters		N/A
COPALUM Connectors		N/A

Comments

Power is distributed by copper wire from circuit breaker panels located throughout the building. The expected useful life of sub-panels is 50 years with proper maintenance. The circuit breaker panels were observed to be in generally good condition.

Photographs

Typical building transformer

3.4.3.3 Solar Power System

The building contains a Solar Power System. The system consists of two arrays of roof top solar panels. The installation of solar panels was reportedly completed in 2015. The solar panel manufacturer reportedly provides a 25-year warranty on the panels.

The solar power system consists of electronic controls manufactured by REFUsol located in the shop area. The Solar Power System was generally in good condition.

Photographs

Solar Power System located on roof

Solar Power System located on roof

Solar Power system electronics and meter

Recommendation

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
REPLACE SOLAR PANELS AS NEEDED	25	7	18	18	$75,000
Total					$75,000

3.5 VERTICAL TRANSPORTATION SYSTEMS

ELEVATORS		
Item	**Description**	**Condition**
Quantity	None	N/A
Escalators		N/A
Dumb-waiters		N/A
Man lifts		N/A

Comments

There were no vertical transportation systems at the property.

3.6 LIFE SAFETY AND FIRE PROTECTION

3.6.1 Sprinklers and Suppression Systems

SPRINKLER AND SUPPRESSION SYSTEMS		
Item	**Description**	**Condition**
Sprinkler System (wet)		N/A
Sprinkler System (dry)		N/A
Fire Extinguishers	Located throughout building	Good
Date of Last Inspection (Fire Extinguishers)	June 9, 2021	Good
Fire Standpipes		N/A
Fire Department Connections		N/A
Hose Cabinets		N/A
Fire Hydrants	Located throughout city yard	Good

Comments

The fire suppression system includes fire extinguishers. The fire suppression system was observed but not tested. The fire extinguishers were observed to have recent inspection tags issued reportedly in June 2021. These devices are required to be inspected annually. Replacement of the fire extinguishers is considered routine maintenance.

3.6.2 Alarm Systems

ALARM SYSTEMS		
Item	**Description**	**Condition**
Annunciator Panel		N/A
Public Address System		N/A
Central Fire Alarm Control Panel		N/A
Automatic Notification		N/A
Bells		N/A
Strobes		N/A
Exit Signs	Located throughout the building	Good
Exit Lights	Located throughout the building	Good
Pull Stations		N/A
Smoke Detectors	Located throughout the building	Good

Comments

Emergency exit signs, emergency lighting, and fire extinguishers, are located throughout the building. These items were generally in good condition.

Photographs

Typical smoke detector

Typical exit sign with emergency lighting

3.6.3 Security and Other Systems

SECURITY AND OTHER SYSTEMS		
Item	**Description**	**Condition**
Security Cameras	Located throughout the building	Good
Alarm System	With motion sensors	Good
Access Control	Card reader	Good
Security Fencing		N/A
Lightning Protection		N/A
Roof Anchors		N/A

Comments

The building is monitored by security cameras and a motion sensor security system that is activated after-hours. The security system was generally in good condition.

3.7 INTERIOR BUILDING COMPONENTS

3.7.1 Interior Finishes of Common Areas

LOBBY		
Item	**Description**	**Condition**
Floor Finishes	Vinyl tile	Good
Wall Finishes	Painted gypsum board	Good
Ceiling Finishes	Suspended acoustical tile	Good
Lighting	Fluorescent fixtures	Good
Accessories	Reception area	Good
Fountains		N/A
Drinking Fountains		N/A

OFFICES		
Item	**Description**	**Condition**
Floor Finishes	Carpet	Good
Wall Finishes	Painted gypsum board	Good
Ceiling Finishes	Suspended acoustical tile	Good

OFFICES		
Item	**Description**	**Condition**
Lighting	Fluorescent fixtures	Good

RESTROOMS		
Item	**Description**	**Condition**
Floor Finishes	Vinyl tile	Good
Wall Finishes	Painted gypsum board and CMU	Good
Ceiling Finishes	Suspended acoustical tile	Good
Fixtures	Toilets, urinals, lavatories	Good
Accessories	Partitions, mirrors, dispensers	Good
Ventilation	Exhaust fan	Good
Lighting	Fluorescent fixtures	Good
Doors	Metal	Good
Door Hardware	Operable	Good

CORRIDORS		
Item	**Description**	**Condition**
Floor Finishes	Vinyl tile	Good
Wall Finishes	Painted gypsum board and CMU	Good
Ceiling Finishes	Suspended acoustical tile	Good
Lighting	Fluorescent fixtures	Good
Doors	Metal	Good
Door Hardware	Operable	Good
Drinking Fountains		N/A

STAIRS		
Item	**Description**	**Condition**
Location	West and north side of the building	Good
Enclosure	CMU	Good
Framing Support	Steel	Good

STAIRS		
Item	**Description**	**Condition**
Treads	Concrete	Good
Risers	Steel	Good
Nosing	Steel	Good
Handrails	Steel tube	Good
Lighting	Florescent	Good
Doors	Metal	Good
Door Hardware	Operable	Good

KITCHEN		
Item	**Description**	**Condition**
Floor Finishes	Vinyl tile	Good
Wall Finishes	Painted gypsum board	Good
Ceiling Finishes	Suspended acoustical tile	Good
Counters	Laminate	Good
Sink	Stainless	Good
Cabinets	Wood laminate	Good
Refrigerator	Side by side	Good
Dish Washer	Built-in	Good
Microwave Oven	Countertop	Good

MEETING ROOMS		
Item	**Description**	**Condition**
Floor Finishes	Carpet	Good
Wall Finishes	Painted gypsum board	Good
Ceiling Finishes	Suspended acoustical tile	Good
Lighting	Fluorescent fixtures	Good
Doors	Metal	Good
Door Hardware	Operable	Good

GARAGE AREA		
Item	**Description**	**Condition**
Floor Finishes	Unfinished concrete	Good
Wall Finishes	Painted CMU and unfinished	Good
Ceiling Finishes	Unfinished	Good
Lighting	Fluorescent fixtures	Good

SmartTable

WAREHOUSE AREA		
Item	**Description**	**Condition**
Floor Finishes	Unfinished concrete	Good
Wall Finishes	Painted CMU and unfinished	Good
Ceiling Finishes	Unfinished	Good
Lighting	Fluorescent fixtures	Good

Comments

The interior common building areas include a lobby, offices, restrooms, corridors, kitchen, shop area, and meeting room.

The finishes in the lobby include vinyl tile floors, painted gypsum board walls and suspended acoustical tile ceilings. The finishes in the lobby were observed to be in generally good condition.

The finishes in the offices include carpet floors, painted gypsum board walls, and suspended acoustical tile ceilings. The finishes in the offices were observed to be in generally good condition.

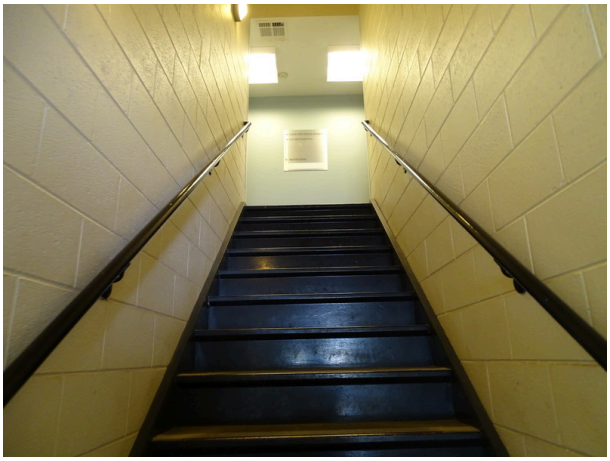
The finishes in the restrooms include vinyl tile floors, painted gypsum board and CMU walls, and suspended acoustical tile ceilings. The restrooms were observed to be in generally good condition.

The finishes in the corridors included vinyl tile floors, painted gypsum board and CMU walls, and suspended acoustical tile ceilings. The finishes in the corridors were observed to be in generally good condition.

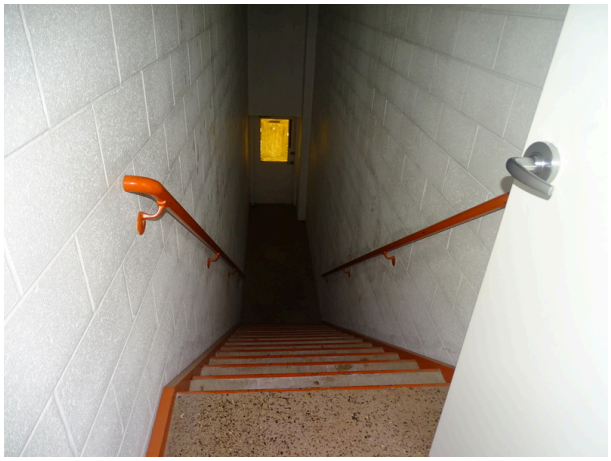
The finishes in the kitchens include vinyl tile floors, painted gypsum board, and suspended acoustical tile ceilings. The finishes in the kitchens were observed to be in generally good condition.

The finishes in the garage and warehouse areas include unfinished floors, painted CMU walls and unfinished walls, and unfinished ceilings. The finishes in the utility room were observed to be soiled and in generally good condition.

Photographs



Interior finishes stairway area



Interior finishes stairway area

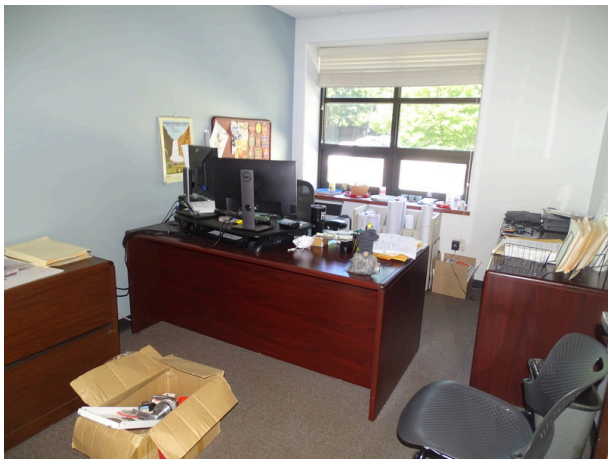
Corridor

Interior finishes restroom area

Interior finishes restroom area

Interior finishes lobby area

Interior finishes office area



Interior finishes office area

Interior finishes kitchen area

Interior finishes meeting room area

Interior finishes warehouse area

3.8 Accessibility (ADA) Compliance

Comments

Facilities, including site features and buildings, completed and occupied after January 26, 1992 are required to comply fully with the Americans with Disabilities Act (ADA). Facilities constructed after this date must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Existing facilities constructed prior to this date are held to the lesser standard of complying with the extent allowed by structural feasibility and the financial resources available, or a reasonable accommodation must be made. Title III, for the purposes of the ECS scope of work is to address public accommodations. ECS will note work that shall remove architectural barriers in existing facilities, including communication barriers, that are structural in nature, where such removal is readily achievable and able to be carried out without much difficulty or expense.

The Facilities Warehouse - Fleet Building property is considered by the City of Charlottesville - Facilities Development to not be within "areas of public accommodations" or a "commercial facility" and is therefore subject to compliance with Title III of the ADA.

The parking area serving the property has a total of approximately 181 parking spaces. Of the parking spaces, Three are accessible with None being van accessible. Accessibility requires that six accessible parking space be provided in parking areas with a total of 151 to 200 spaces. One in six of the accessible parking spaces are required to be van accessible. A minimum of a 60-inch wide access aisle is required to be provided for every two accessible parking spaces. Accessible aisles were not provided. The number of parking spaces provided does not meet accessibility requirements. We recommend installing three more additional accessible spaces with one being van accessible.

Photographs

Accessible parking space - note striping faded

Accessible parking space - note striping faded

Accessible concrete ramp at southwest side of the building

Recommendations

Cost Recommendation	EUL	EFF AGE	RUL	Year	Cost
INSTALL THREE ADDITIONAL ACCESSIBLE PARKING SPACES (ONE VAN ACCESSIBLE)	1	1	0	Immediate	$1,500
Total					$1,500

Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act			
	Item	**Yes/ No**	**Comments**
A.	**History**		
1.	Has an ADA Survey been completed for this property?	No	EMG report dated March 24, 2005
2.	Have any ADA improvements been made to the property since original construction?	No	
3.	Has building ownership/management reported any ADA complaints or litigation?	No	none reported
B.	**Parking**		
1.	Does the required number of standard ADA-designated spaces appear to be provided?	No	Three out of the 181 are accessible.
2.	Does the required number of van-accessible designated spaces appear to be provided?	No	None out of the Three accessible spaces are van accessible
3.	Are accessible spaces part of the shortest accessible route to an accessible building entrance?	No	
4.	Is a sign with the International Symbol of Accessibility at the head of each space?	No	
5.	Does each accessible space have an adjacent access aisle?	No	
6.	Do parking spaces and access aisles appear to be relatively level and without obstruction?	Yes	
C.	**Exterior Accessible Route**		

Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act			
	Item	**Yes/ No**	**Comments**
1.	Is an accessible route present from public transportation stops and municipal sidewalks in the property?	N/A	
2.	Are curb cut ramps present at transitions through curbs on an accessible route?	N/A	
3.	Do curb cut ramps appear to have the proper slope for all components?	N/A	
4.	Do ramps on an accessible route appear to have a compliant slope?	N/A	
5.	Do ramps on an accessible route appear to have a compliant length and width?	N/A	
D.	**Building Entrances**		
1.	Do a sufficient number of accessible entrances appear to be provided?	Yes	
2.	If the main entrance is not accessible, is an alternate accessible entrance provided?	N/A	
3.	Is signage provided indicating the location of alternate accessible entrances?	N/A	
4.	Do doors at accessible entrances appear to have compliant clear floor area on each side?	Yes	
5.	Do doors at accessible entrances appear to have compliant hardware?	Yes	
6.	Do doors at accessible entrances appear to have complaint opening width?	Yes	
7.	Do pairs of accessible entrance doors in series appear to have the minimum clear space between them?	N/A	
8.	Do thresholds at accessible entrances appear to have compliant height?	Yes	
E.	**Interior Accessible Routes and Amenities**		
1.	Does an accessible route appear to connect with all public areas inside the building?	Yes	
2.	Do accessible routes appear free of obstructions and/or protruding objects?	Yes	

Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act			
	Item	**Yes/ No**	**Comments**
3.	Do ramps on accessible routes appear to have compliant slope?	N/A	
4.	Do ramps on accessible routes appear to have compliant length and width?	N/A	
5.	Do ramps on accessible routes appear to have compliant end and intermediate landings?	N/A	
6.	Do ramps on accessible routes appear to have compliant handrails?	N/A	
7.	Are adjoining public areas and areas of egress identified with accessible signage?	N/A	
8.	Do public transaction areas have an accessible, lowered counter section?	N/A	
9.	Do public telephones appear mounted with an accessible height and location?	N/A	
10.	Are publicly-accessible swimming pools equipped with an entrance lift?	N/A	
F.	**Interior Doors**		
1.	Do doors at interior accessible routes appear to have compliant clear floor area on each side?	Yes	
2.	Do doors at interior accessible routes appear to have compliant hardware?	Yes	
3.	Do doors at interior accessible routes appear to have compliant opening force?	Yes	
4.	Do doors at interior accessible routes appear to have a compliant clear opening width?	Yes	
G.	**Elevators**	N/A	
H.	**Toilet Rooms**		
1.	Do publicly-accessible toilet rooms appear to have a minimum compliant floor area?	Yes	
2.	Does the lavatory appear to be mounted at a compliant height and with compliant knee area?	Yes	

Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act			
	Item	**Yes/ No**	**Comments**
3.	Does the lavatory faucet have compliant handles?	Yes	
4.	Is the plumbing piping under lavatories configured to protect against contact?	Yes	
5.	Are grab bars provided at compliant locations around the toilet?	Yes	
6.	Do toilet stall doors appear to provide the minimum compliant clear width?	N/A	
7.	Do toilet stalls appear to provide the minimum compliant clear floor area?	Yes	
8.	Do urinals appear to be mounted at a compliant height and with compliant approach width?	N/A	
9.	Do accessories and mirrors appear to be mounted at a compliant height?	Yes	

4.0 DOCUMENT REVIEW

4.1 DOCUMENTATION REVIEW

ECS requested relevant documentation from Josh Bontrager, to gain insight into the subject property's physical improvements, extent and type of use, and/or assist in identifying material discrepancies between reported information and observed conditions. ECS' review of documents submitted does not include commenting on the accuracy of such documents or their preparation, methodology, or protocol.

ECS was provided access to drawings, certificate of occupancy, safety inspection records, and warranty information stored on site.

4.2 INTERVIEW SUMMARY

ECS was escorted through the property by Josh Bontrager and Chris Woods who provided information about the property.

5.0 ADDITIONAL CONSIDERATIONS

5.1 MOISTURE AND MOLD

Comments

If present, evidence of mold and moisture issues are noted in the interior section of the report.

6.0 RECOMMENDATIONS AND OPINIONS OF COST

The opinion of cost are based upon approximate quantities, costs, and published information, and they include labor, material, design fees, and appropriate overhead, general conditions, and profit. A detailed analysis of quantities for cost estimating purposes is not included. The opinion of cost to repair, replace, or upgrade the improvements are considered typical for the marketplace. No contractors have provided pricing. The actual cost of repairs may vary from our opinions. ECS has not included contingency funds in our opinions. Amounts indicated represent today's dollars. ECS offers the following comments relative to Immediate and Capital Reserves criteria:

Immediate Issues

Physical deficiencies that require immediate action as a result of (i) existing or potentially unsafe conditions, (ii) significant negative conditions impacting tenancy, (iii) material building code violations, (iv) poor or deteriorated condition of critical element or system, or (v) a condition that is left "as is," with an extensive delay in addressing same, would result in or contribute to critical element or system failure within one year.

ECS has also included physical deficiencies inclusive of deferred maintenance that may not warrant immediate attention, but requiring repairs or replacements that should be undertaken on a priority basis, taking precedence over routine preventative maintenance work within a zero to one year time frame. Included are such physical deficiencies resulting from improper design, faulty installation, and/or substandard quality of original systems or materials. Components or systems that have realized or exceeded their Expected Useful Life (EUL) that may require replacement to be implemented within a zero to one year time frame are also included.

Capital Reserves

Capital Reserves are for recurring probable expenditures, which are not classified as operational or maintenance expenses, which should be annually budgeted for in advance. Capital reserves are reasonably predictable both in terms of frequency and cost. However, they may also include components or systems that have an indeterminable life but nonetheless have a potential liability for failure within an estimated time period. A component method has also been included within this report as well.

Capital Reserves excludes systems or components that are estimated to expire after the reserve term and that are not considered material to the structural and mechanical integrity of the subject property. Furthermore, systems and components that were not deemed to have a material affect on the use were also excluded. Costs that are caused by acts of God, accidents or other occurrences that are typically covered by insurance, rather than reserved funds, are also excluded.

Replacement costs were solicited from ownership/property management, ECS' discussions with service companies, manufacturers' representatives, and previous experience in preparing such schedules for other similar facilities. Costs for work performed by ownership's or property management's maintenance staff were also considered.

ECS's reserve methodology involves identification and quantification of those systems or components requiring capital reserve funds within the evaluation period. Additional information concerning systems or components respective replacement costs (in today's dollars), typical expected useful lives, and remaining useful lives were estimated so that a funding schedule could be prepared. The Capital Reserve Schedule presupposes that all required remedial work has been performed or that monies for remediation have been budgeted for items defined in the Immediate Needs Cost Estimates.

7.0 FACILITY CONDITION INDEX (FCI)

In accordance with our proposal add alternate, ECS determined the Facility Condition Index (FCI) value for the Facilities Warehouse - Fleet Building building. ECS determined the FCI value in accordance with industry standards and methodology sponsored by The National Association of College and University Business Officers (NACUBO). The FCI calculation methodology consists of dividing the total cost of Maintenance, Repair, and Replacement Deficiencies of the Facility by the Current Replacement Value of the Facility. FCI values and condition of the buildings based on the industry accepted interpretation of FCI values with ratings: good (under 0.05), fair (0.05 to 0.10), and poor (over 0.10).

Based on our Facility Condition Assessment, the total repair and replacement costs for the Facilities Warehouse - Fleet Building building is $1,210,500. The replacement construction cost value obtained from the RS MEANS square foot estimator application is $4,069,874. Please see attached documentation from RS MEANS program output as an appendix to the report. The calculated FCI value is determined to be 0.30. In accordance with the industry standards and methodology sponsored by The National Association of College and University Business Officers (NACUBO), the condition of Facilities Warehouse - Fleet Building is rated as poor.

8.0 LIMITATIONS AND QUALIFICATIONS

ECS's FCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and the performance of a property's building systems. Preparation of a FCA in accordance with ASTM E 2018-15 “Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process” is intended to reduce, but not eliminate, the uncertainty regarding the potential for component or system failure and cannot reduce the potential that such component or system may not be initially observed.

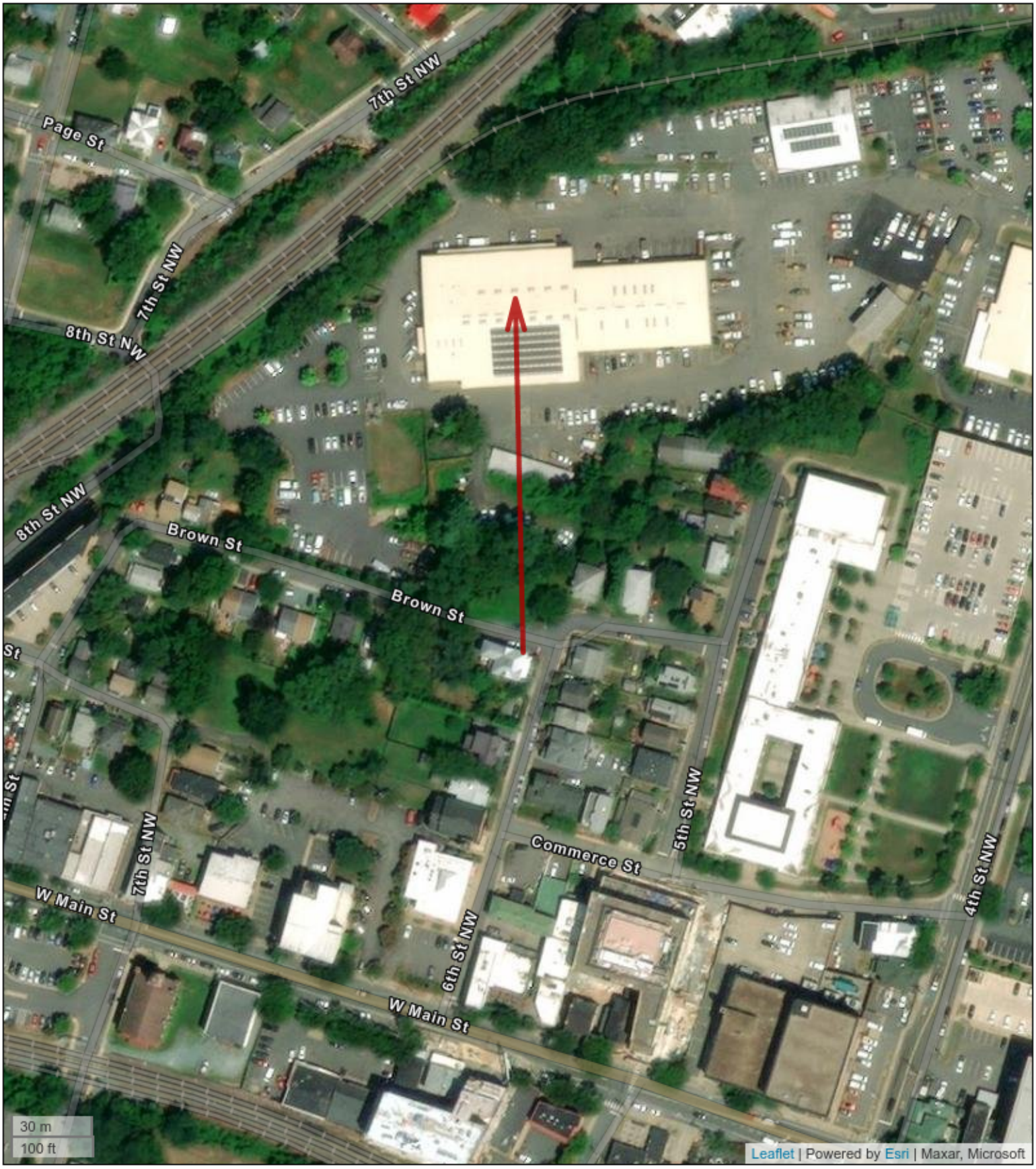
This FCA was prepared recognizing the inherent subjective nature of ECS's opinions as to such issues as workmanship, quality of original installation, and estimating the remaining useful life of any given component or system. It should be understood that ECS's suggested remedy may be determined under time constraints, formed without the aid of engineering calculations, testing, exploratory probing, the removal of materials, or design. Furthermore, there may be other alternate or more appropriate schemes or methods to remedy the physical deficiency. ECS’s opinions are generally formed without detailed knowledge from individuals familiar with the component’s or system’s performance.

The opinions ECS expresses in this report were formed utilizing the degree of skill and care ordinarily exercised by a prudent professional in the same community under similar circumstances. ECS assumes no responsibility or liability for the accuracy of information contained in this report which has been obtained from the Client or the Client's representatives, from other interested parties, or from the public domain. The conclusions presented represent ECS' professional judgment based on information obtained during the course of this assignment. ECS's evaluations, analyses and opinions are not representations regarding the design integrity, structural soundness, or actual value of the property. Factual information regarding operations, conditions and test data provided by the Client or their representative has been assumed to be correct and complete. The conclusions presented are based on the data provided, observations made, and conditions that existed specifically on the date of the assessment.

Appendix I: SITE MAP AND AERIAL PHOTOGRAPH

Site Map

Facilities Warehouse - Fleet Building - FCA 2021



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Aerial Photograph

Facilities Warehouse - Fleet Building - FCA 2021

ECS

Appendix II: FIRE EXTINGUISHER INSPECTION

Inspection Certificate

For

City of Charlottesville -City Yard Warehouse
325 4th Street North West
Charlottesville, VA 22903

This Inspection was performed in accordance with applicable Standards. The subsequent pages of this report provide performance measurements, listed ranges of acceptable results, and complete documentation of the inspection. Whenever discrepancies exist between acceptable performance standards and actual test results, notes and/or recommended solutions have been proposed or provided for immediate review and approval.

Inspection Date
Jun 9, 2021

Building: City of Charlottesville -City Yard Warehouse
Contact: Jason Davis
Title: Maintenance Tech

Company: Fire Solutions
Contact: Tommy VO
Title: Technician

Executive Summary

Generated by: BuildingReports.com

Building Information

Building: City of Charlottesville -City Yard Warehouse
Address: 325 4th Street North West
Address:
City/State/Zip: Charlottesville, VA 22903
Country: United States of America

Contact: Jason Davis
Phone: 434-964-6771
Fax:
Mobile:
Email: davisja@charlottesville.org

Inspection Performed By

Company: Fire Solutions
Address: 205 Haley Road
Address:
City/State/Zip: Ashland, Virginia 23005
Country: United States

Inspector: Tommy VO
Phone: 804-385-3301
Fax:
Mobile: 804-385-3301
Email: tommyv@firesolutionsinc.com

Inspection Summary

Category:	Total Items		Serviced		Passed		Failed/Other	
	Qty	%	Qty	%	Qty	%	Qty	%
Fire	24	100.00%	24	100.00%	24	100.00%	0	0%
Totals	**24**	**100%**	**24**	**100.00%**	**24**	**100.00%**	**0**	**0%**

Verification

Company: Fire Solutions

Inspector: Tommy VO

Building: City of Charlottesville -City Yard Warehouse

Contact: Jason Davis

Fire Solutions Certifications

Certification Type	Number
WBENC Certified	2005121836

Inspection & Testing

Generated by: BuildingReports.com

Building: City of Charlottesville -City Yard Warehouse

The Inspection & Testing section lists all of the items inspected in your building. Items are grouped by Passed or Failed /Other. Items are listed by Category. Each item includes the services performed, and the time & date at which testing occurred.

Device Type	Location	ScanID : S/N	Service	Date Time
Passed				
Fire				
Fire Extinguisher, 5 Lbs, A.B.C.	1st FM warehouse storage 106.02	47001119 XF-108354	Inspected	06/09/21 1:39:34 PM
Fire Extinguisher, 10 Lbs, A.B.C.	1st Shop bay 10 column 106.08	47001110 Y592176	Inspected	06/09/21 2:07:01 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st Shop bay 11 column 106.12	47001109 XM274062	Inspected	06/09/21 2:05:57 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st Shop bay 12 column 106.05	47001112 GH00951732	Inspected	06/09/21 2:08:36 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st Shop bay 2 column 106.13	47001104 HT00829723	Inspected	06/09/21 2:01:37 PM
Fire Extinguisher, 10 Lbs, A.B.C.	1st Shop bay 3 column 106.14	47001103 ZT-008315	Inspected	06/09/21 2:00:15 PM
Fire Extinguisher, 10 Lbs, A.B.C.	1st Shop bay 3 wall 106.07	61768868 ZC-789966	Inspected	06/09/21 2:01:55 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st Shop bay 4 column 106.15	47001102 XF-121337	Inspected	06/09/21 2:01:07 PM
Fire Extinguisher, 10 Lbs, A.B.C.	1st Shop bay 5 wall by tires 106.09	47001106 WL-698634	Inspected	06/09/21 2:03:33 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st Shop bay 6 wall 106.10	47001107 WN-31194	Inspected	06/09/21 2:03:55 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st Shop bay 7 by door 106.16	47001101 XF-121339	Inspected	06/09/21 1:57:38 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st Shop bay 9 column 106.06	47001111 F57330687	Inspected	06/09/21 2:07:47 PM
Fire Extinguisher, 10 Lbs, A.B.C.	1st Shop wall by tire chains 106.11	47001108 XK-494519	Inspected	06/09/21 2:04:47 PM
Fire Extinguisher, 10 Lbs, A.B.C.	1st quartermaster storage 106.20	47001120 CG613351	Inspected	06/09/21 1:51:50 PM
Fire Extinguisher, 5 Lbs, A.B.C.	1st traffic area hallway 106.21	47001122 WL-819055	Inspected	06/09/21 1:25:58 PM
Fire Extinguisher, 5 Lbs, A.B.C.	1st traffic shop 106.23	47001121 WL-819057	Inspected	06/09/21 1:24:32 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st warehouse back door 106.01	47001116 AW28658	Inspected	06/09/21 1:35:27 PM

Device Type	Location	ScanID : S/N	Service	Date Time
Passed				
Fire				
Fire Extinguisher, 5 Lbs, A.B.C.	1st warehouse break room 106.	47001114 E82156548	Inspected	06/09/21 1:44:50 PM
Fire Extinguisher, 10 Lbs, A.B.C.	1st warehouse dock door 106.03	47001118 F88773258	Inspected	06/09/21 1:40:44 PM
Fire Extinguisher, 20 Lbs, A.B.C.	1st warehouse parts room 106.04	47001115 WN-31199	Inspected	06/09/21 1:37:03 PM
Fire Extinguisher, 5 Lbs, A.B.C.	1st warehouse reception area 106.	52888009 E93417721	Inspected	06/09/21 1:45:58 PM
Fire Extinguisher, 5 Lbs, A.B.C.	1st warehouse shelfs 106.19	47001117 G17169697	Inspected	06/09/21 1:41:11 PM
Fire Extinguisher, 10 Lbs, A.B.C.	2nd facility development hallway 106.22	47001123 ZZ-141100	Inspected	06/09/21 1:27:05 PM
Fire Extinguisher, 20 Lbs, A.B.C.	Ground propane station fence 106.24	47001100 B73275392	Inspected	06/09/21 1:21:11 PM

Service Summary

Generated by: BuildingReports.com

Building: City of Charlottesville -City Yard Warehouse

The Service Summary section provides an overview of the services performed in this report.

Device Type	Service	Quantity
	Passed	
Fire Extinguisher, 10 Lbs, A.B.C.	Inspected	8
Fire Extinguisher, 20 Lbs, A.B.C.	Inspected	10
Fire Extinguisher, 5 Lbs, A.B.C.	Inspected	6
Total		**24**
Grand Total		**24**

Fire Extinguisher Maintenance Report

Generated by: BuildingReports.com

Building: City of Charlottesville -City Yard Warehouse

This report provides details on the Hydrostatic Test and Maintenance/Breakdown dates for fire extinguishers. Items that will need either of these services at any time in the next two years are displayed. Items are grouped together by year for budgeting purposes.

ScanID	Location	Serial #	Hydro	Breakdown	Mfr Date	
Due in 2022						
Breakdown/Maintenance						
Fire Extinguisher, A.B.C., 20 Lbs						
47001100	Ground propane station fence 106.24	B73275392	08/19/16	08/19/16	08/19/16	
					Total Fire Extinguisher, A.B.C., 20 Lbs:	**1**
Hydrostatic Test						
Fire Extinguisher, A.B.C., 10 Lbs						
47001110	1st Shop bay 10 column 106.08	Y592176	05/29/10	05/29/17	05/29/10	
					Total Fire Extinguisher, A.B.C., 10 Lbs:	**1**
Fire Extinguisher, A.B.C., 20 Lbs						
47001112	1st Shop bay 12 column 106.05	GH00951732	05/29/10	05/29/17	05/29/98	
					Total Fire Extinguisher, A.B.C., 20 Lbs:	**1**
Fire Extinguisher, A.B.C., 5 Lbs						
47001121	1st traffic shop 106.23	WL-819057	05/29/10	05/29/17	05/29/04	
47001122	1st traffic area hallway 106.21	WL-819055	05/29/10	05/29/17	05/29/04	
					Total Fire Extinguisher, A.B.C., 5 Lbs:	**2**
Due in 2023						
Breakdown/Maintenance						
Fire Extinguisher, A.B.C., 10 Lbs						
47001106	1st Shop bay 5 wall by tires 106.09	WL-698634	05/29/17	05/29/17	05/29/04	
47001108	1st Shop wall by tire chains 106.11	XK-494519	05/29/17	05/29/17	05/29/05	
					Total Fire Extinguisher, A.B.C., 10 Lbs:	**2**
Fire Extinguisher, A.B.C., 20 Lbs						
47001115	1st warehouse parts room 106.04	WN-31199	05/29/17	05/29/17	05/29/04	
47001101	1st Shop bay 7 by door 106.16	XF-121339	05/29/17	05/29/17	05/29/05	
47001102	1st Shop bay 4 column 106.15	XF-121337	05/29/17	05/29/17	05/29/05	
47001107	1st Shop bay 6 wall 106.10	WN-31194	05/29/17	05/29/17	05/29/04	
					Total Fire Extinguisher, A.B.C., 20 Lbs:	**4**
Fire Extinguisher, A.B.C., 5 Lbs						
47001119	1st FM warehouse storage 106.02	XF-108354	05/29/17	05/29/17	05/29/05	
					Total Fire Extinguisher, A.B.C., 5 Lbs:	**1**

ScanID	Location	Serial #	Hydro	Breakdown	Mfr Date
Due in 2023					
Hydrostatic Test					
Fire Extinguisher, A.B.C., 20 Lbs					
47001104	1st Shop bay 2 column 106.13	HT00829723	05/29/11	08/21/18	05/29/88
				Total Fire Extinguisher, A.B.C., 20 Lbs:	**1**

Inventory & Warranty Report

Generated by: BuildingReports.com

Building: City of Charlottesville -City Yard Warehouse

The Inventory & Warranty Report lists each of the devices and items that are included in your Inspection Report. A complete inventory count by device type and category is provided. Items installed within the last 90 days, within the last year, and devices installed for two years or more are grouped together for easy reference.

Device or Type	Category	% of Inventory	Quantity
Fire Extinguisher	Fire	100.00%	24

Type	Qty	Model #	Description	Manufacture Date
New (under 90 days)				
Buckeye				
Fire Extinguisher	1	5 HI SA40 ABC	A.B.C.	10/08/2021
In Service - 1 Year to 2 Years				
Amerex				
Fire Extinguisher	1	F88773258	A.B.C.	06/09/2020
In Service - 3 Years to 5 Years				
Amerex				
Fire Extinguisher	2	AB402-18	A.B.C.	08/21/2018
Fire Extinguisher	1	AA411-18	A.B.C.	08/19/2018
In Service - 5 Years to 10 Years				
Kidde				
Fire Extinguisher	1	PRO20TCM	A.B.C.	08/19/2016
Amerex				
Fire Extinguisher	1	AA411-12	A.B.C.	08/19/2012
In Service - 10 Years to 15 Years				
Ansul				
Fire Extinguisher	1	XA10H	A.B.C.	05/29/2010
Amerex				
Fire Extinguisher	1	AB456-14	A.B.C.	05/29/2009
Buckeye				
Fire Extinguisher	1	10HISA80ABC	A.B.C.	10/08/2008
Fire Extinguisher	1	10HISA80ABC	A.B.C.	05/29/2008
Badger				
Fire Extinguisher	1	10MB-8H-07	A.B.C.	08/19/2007
In Service - 15 Years to 25 Years				
Badger				
Fire Extinguisher	1	10MB-8H-05	A.B.C.	05/29/2005
Amerex				
Fire Extinguisher	1	AA411-05	A.B.C.	05/29/2005

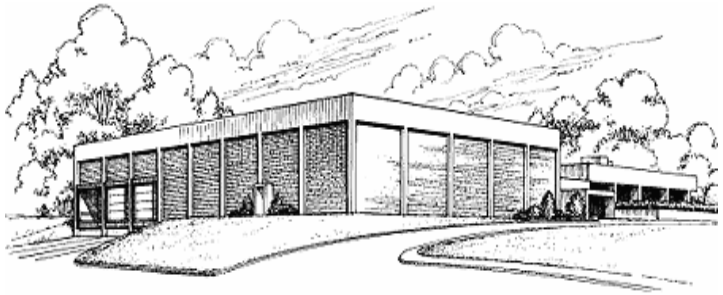
Badger				
Fire Extinguisher	2	B20M-05	A.B.C.	05/29/2005
Fire Extinguisher	1	B5M-05	A.B.C.	05/29/2005
Fire Extinguisher	1	B10M-04	A.B.C.	05/29/2004
Fire Extinguisher	2	B20M-04	A.B.C.	05/29/2004
Fire Extinguisher	2	B5M-04	A.B.C.	05/29/2004
Buckeye				
Fire Extinguisher	1	20HSAABC	A.B.C.	05/29/1998
In Service - 25 Years or Older				
Buckeye				
Fire Extinguisher	1	20HSAABC	A.B.C.	05/29/1988

Appendix III: RS MEANS ESTIMATE FOR FACILITY CONDITION INDEX (FCI)

Square Foot Cost Estimate Report

Date: **9/22/2021**

Estimate Name	**Facilities Warehouse - Fleet Building - FCA 2021**
	City of Charlottesville 325 4th Street NW Charlottesville Virginia 22902
Building Type	Warehouse with Metal Panel / Rigid Steel
Location	CHARLOTTESVILLE, VA
	1.00
Stories Height	24.00
Floor Area (S.F.)	44,000.00
LaborType	OPN
Basement Included	No
Data Release	Year 2021
Cost Per Square Foot	$92.50
Total Building Cost	**$4,069,873.88**



Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.

Assembly Customization Type :

⊕ Added

◐ Partially Swapped

● Fully Swapped

		Quantity	% of Total	Cost Per SF	Cost
A Substructure			**12.3%**	**$8.48**	**$373,252.57**
A1010	**Standard Foundations**			**$2.79**	**$122,584.57**
	Foundation wall, CIP, 4' wall height, direct chute, .148 CY/LF, 7.2 PLF, 12" thick	1,000.00		$1.54	**$67,641.00**
	Strip footing, concrete, reinforced, load 11.1 KLF, soil bearing capacity 6 KSF, 12" deep x 24" wide	1,000.00		$0.82	**$36,203.00**
	Spread footings, 3000 PSI concrete, load 100K, soil bearing capacity 6 KSF, 4' - 6" square x 15" deep	51.33		$0.43	**$18,740.57**
A1030	**Slab on Grade**			**$5.57**	**$245,297.36**
	Slab on grade, 5" thick, non industrial, reinforced	44,000.00		$5.57	**$245,297.36**

		Quantity	% of Total	Cost Per SF	Cost
A2010	**Basement Excavation**			**$0.12**	**$5,370.64**
	Excavate and fill, 30,000 SF, 4' deep, sand, gravel, or common earth, on site storage	44,000.00		$0.12	**$5,370.64**
B Shell			**45.5%**	**$31.49**	**$1,385,574.06**
B1010	**Floor Construction**			**$2.10**	**$92,384.83**
	Floor, concrete, slab form, steel joists, joist girder, 1.5" 22 ga metal deck, on columns, 50'x50' bay, 32" deep, 40 PSF superimposed load, 84 PSF total load	4,400.00		$1.45	**$63,978.29**
	Floor, concrete, slab form, steel joists, joist girder, 1.5" 22 ga metal deck, on columns, 50'x50'' bay, 40 PSF superimposed load, 84 PSF total load, for columns add	4,400.00		$0.10	**$4,596.02**
	Fireproofing, concrete, 1" thick, 8" steel column, 1 hour rating, 110 PLF	690.00		$0.54	**$23,810.52**
B1020	**Roof Construction**			**$12.84**	**$564,841.20**
	Roof, steel joists, joist girder, 1.5" 22 ga metal deck, on columns, 50'x50' bay, 40 PSF superimposed load, 59" deep, 64 PSF total load	44,000.00		$11.79	**$518,881.00**
	Roof, steel joists, joist girder, 1.5" 22 ga metal deck, on columns, 50'x50' bay, 40 PSF superimposed load, 59" deep, 64 PSF total load, add for columns	44,000.00		$1.04	**$45,960.20**
B2010	**Exterior Walls**			**$8.07**	**$355,257.84**
	Metal facing pnl, textured al, 4' x 8' x 5/16" plywd backing, sgl face, 6" Metal stud, 16" o,c., R-19 insulation	23,520.00		$8.07	**$355,257.84**
B2020	**Exterior Windows**			**$0.35**	**$15,383.55**
	Windows, aluminum, sliding, standard glass, 5' x 3'	32.00		$0.35	**$15,383.55**
B2030	**Exterior Doors**			**$1.32**	**$58,101.75**
	Door, aluminum & glass, with transom, narrow stile, double door, hardware, 6'-0" x 10'-0" opening	1.47		$0.22	**$9,768.88**
	Door, steel 18 gauge, hollow metal, 1 door with frame, no label, 3'-0" x 7'-0" opening	5.87		$0.37	**$16,396.48**
	Door, steel 24 gauge, overhead, sectional, electric operator, 12'-0" x 12'-0" opening	8.80		$0.73	**$31,936.39**
B3010	**Roof Coverings**			**$6.51**	**$286,226.67**
	Roofing, single ply membrane, EPDM, 60 mils, loosely laid, stone ballast	44,000.00		$1.73	**$76,098.00**
	Insulation, rigid, roof deck, extruded polystyrene, 40 PSI compressive strength, 4" thick, R20	44,000.00		$3.96	**$174,340.32**
	Roof edges, aluminum, duranodic, .050" thick, 6" face	1,000.00		$0.57	**$25,159.80**
	Gravel stop, aluminum, extruded, 4", mill finish, .050" thick	1,000.00		$0.24	**$10,628.55**

		Quantity	% of Total	Cost Per SF	Cost
B3020	**Roof Openings**			**$0.30**	**$13,378.22**
	Roof hatch, with curb, 1" fiberglass insulation, 2'-6" x 3'-0", galvanized steel, 165 lbs	1.00		$0.03	**$1,257.20**
	Smoke hatch, unlabeled, galvanized, 2'-6" x 3', not incl hand winch operator	8.00		$0.28	**$12,121.02**
C Interiors			**6.6%**	**$4.57**	**$200,964.82**
C1010	**Partitions**			**$0.91**	**$39,989.25**
	Concrete block (CMU) partition, light weight, hollow, 6" thick, no finish	1,267.20		$0.20	**$8,746.91**
	Metal partition, 5/8"fire rated gypsum board face, no base,3 -5/8" @ 24" OC framing, same opposite face, no insulation	2,252.80		$0.15	**$6,492.71**
	Gypsum board, 1 face only, exterior sheathing, fire resistant, 5/8"	23,520.00		$0.37	**$16,464.94**
	Add for the following: taping and finishing	23,520.00		$0.19	**$8,284.69**
C1020	**Interior Doors**			**$0.43**	**$19,075.50**
	Door, single leaf, kd steel frame, hollow metal, commercial quality, flush, 3'-0" x 7'-0" x 1-3/8"	17.60		$0.43	**$19,075.50**
C2010	**Stair Construction**			**$0.57**	**$25,154.70**
	Stairs, steel, grate type w/nosing & rails, 20 risers, with landing	2.00		$0.57	**$25,154.70**
C3010	**Wall Finishes**			**$0.47**	**$20,660.10**
	2 coats paint on masonry with block filler	2,534.40		$0.11	**$5,059.37**
	Painting, interior on plaster and drywall, walls & ceilings, roller work, primer & 2 coats	4,505.60		$0.06	**$2,508.09**
	Painting, interior on plaster and drywall, walls & ceilings, roller work, primer & 2 coats	23,520.00		$0.30	**$13,092.64**
C3020	**Floor Finishes**			**$1.66**	**$73,071.91**
	Concrete topping, hardeners, metallic additive, minimum	19,800.00		$0.41	**$18,094.43**
	Concrete topping, hardeners, metallic additive, maximum	19,800.00		$1.01	**$44,241.52**
	Vinyl, composition tile, maximum	4,400.00		$0.24	**$10,735.96**
C3030	**Ceiling Finishes**			**$0.52**	**$23,013.36**
	Acoustic ceilings, 3/4"mineral fiber, 12" x 12" tile, concealed 2" bar & channel grid, suspended support	4,400.00		$0.52	**$23,013.36**
D Services			**24.1%**	**$16.67**	**$733,671.57**
D2010	**Plumbing Fixtures**			**$0.59**	**$25,816.40**
	Water closet, vitreous china, bowl only with flush valve, wall hung	2.93		$0.22	**$9,710.07**
	Urinal, vitreous china, wall hung	1.47		$0.04	**$1,754.45**
	Lavatory w/trim, wall hung, PE on CI, 18" x 15"	2.93		$0.11	**$4,930.93**

		Quantity	% of Total	Cost Per SF	Cost
	Service sink w/trim, PE on CI,wall hung w/rim guard, 24" x 20"	1.47		$0.14	**$6,375.49**
	Water cooler, electric, wall hung, wheelchair type, 7.5 GPH	1.47		$0.07	**$3,045.46**
D2020	**Domestic Water Distribution**			**$0.23**	**$10,114.21**
	Gas fired water heater, commercial, 100< F rise, 75.5 MBH input, 63 GPH	1.47		$0.23	**$10,114.21**
D2040	**Rain Water Drainage**			**$0.52**	**$22,792.43**
	Roof drain, DWV PVC, 5" diam, 10' high	7.33		$0.39	**$17,318.58**
	Roof drain, steel galv sch 40 threaded, 5" diam piping, for each additional foot add	100.00		$0.12	**$5,473.85**
D3020	**Heat Generating Systems**			**$4.56**	**$200,495.59**
	Warehouse ventilization with heat system 24,000 CFM Supply and Exhaust	1.58		$4.56	**$200,495.59**
D3050	**Terminal & Package Units**			**$0.79**	**$34,652.82**
	Rooftop, single zone, air conditioner, offices, 3,000 SF, 9.50 ton	4,400.00		$0.79	**$34,652.82**
D4010	**Sprinklers**			**$3.66**	**$161,087.08**
	Wet pipe sprinkler systems, grooved steel, black, sch 40 pipe, ordinary hazard, 1 floor, 10,000 SF	44,000.00		$3.66	**$161,087.08**
D4020	**Standpipes**			**$0.51**	**$22,432.96**
	Wet standpipe risers, class III, steel, black, sch 40, 6" diam pipe, 1 floor	1.47		$0.51	**$22,432.96**
D5010	**Electrical Service/Distribution**			**$0.35**	**$15,256.00**
	Overhead service installation, includes breakers, metering, 20' conduit & wire, 3 phase, 4 wire, 120/208 V, 200 A	1.00		$0.05	**$2,351.00**
	Feeder installation 600 V, including RGS conduit and XHHW wire, 200 A	50.00		$0.04	**$1,699.25**
	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 3 phase, 400 A	1.00		$0.25	**$11,205.75**
D5020	**Lighting and Branch Wiring**			**$3.37**	**$148,120.28**
	Receptacles incl plate, box, conduit, wire, 5 per 1000 SF, .6 watts per SF	44,000.00		$0.58	**$25,392.40**
	Wall switches, 1.0 per 1000 SF	22,000.00		$0.11	**$4,738.80**
	Miscellaneous power, to .5 watts	44,000.00		$0.12	**$5,156.80**
	Central air conditioning power, 3 watts	4,400.00		$0.05	**$2,009.48**
	Fluorescent fixtures recess mounted in ceiling, 0.8 watt per SF, 20 FC, 5 fixtures @32 watt per 1000 SF	39,600.00		$1.89	**$83,298.60**
	Fluorescent fixtures recess mounted in ceiling, 2.4 watt per SF, 60 FC, 15 fixtures @ 32 watt per 1000 SF	4,400.00		$0.63	**$27,524.20**
D5030	**Communications and Security**			**$2.11**	**$92,903.80**

		Quantity	% of Total	Cost Per SF	Cost
	Communication and alarm systems, fire detection, addressable, 100 detectors, includes outlets, boxes, conduit and wire	1.47		$2.02	**$88,772.93**
	Fire alarm command center, addressable without voice, excl. wire & conduit	1.47		$0.09	**$4,130.87**
E Equipment & Furnishin			**2.2%**	**$1.54**	**$67,969.00**
E1030	**Vehicular Equipment**			**$1.54**	**$67,969.00**
	Architectural equipment, dock boards, heavy duty, 5' x 5', aluminum, 5000 lb capacity	8.80		$0.23	**$10,120.00**
	Architectural equipment, dock levelers, hydraulic, 7' x 8', 10 ton capacity	8.80		$1.31	**$57,849.00**
E1090	**Other Equipment**			**$0.00**	**$0.00**
F Special Construction			**9.3%**	**$6.40**	**$281,464.34**
F1020	**Integrated Construction**			**$6.40**	**$281,464.34**
	Special construction, air curtain, shipping & receiving, 12' high x 12' wide	105.60		$6.40	**$281,464.34**
G Building Sitework			**0.0%**	**$0.00**	**$0.00**
Sub Total			**100%**	**$69.16**	**$3,042,896.36**
Contractor's Overhead & Profit			**25.0 %**	**$17.29**	**$760,724.09**
Architectural Fees			**7.0 %**	**$6.05**	**$266,253.43**
User Fees			**0.0 %**	**$0.00**	**$0.00**
Total Building Cost				**$92.50**	**$4,069,873.88**

Appendix IV: SITE PHOTOGRAPHS

1 - Facilities Warehouse - Fleet Building

2 - Asphalt pavement west side of the site

3 - Asphalt pavement west side of the site - note cracking

4 - Asphalt pavement west side of the site - note alligator cracks

5 - Asphalt pavement - note previous repair

6 - Asphalt pavement - note deterioration

7 - Typical asphalt pavement - note cracking

8 - Asphalt parking and pavement

9 - Asphalt parking and pavement - note previous repair

10 - Concrete sidewalk and loading area at south side of the building - note deterioration

11 - Concrete loading area at north side of the building - note deterioration

12 - Concrete loading area at north side of the building - note deterioration

13 - Concrete loading area at north side of the building - note deterioration

14 - Concrete loading area at north side of the building - note deterioration

15 - Typical concrete sidewalk - note deterioration

16 - Typical concrete sidewalk - note deterioration

17 - Typical downspout

18 - Typical drainage

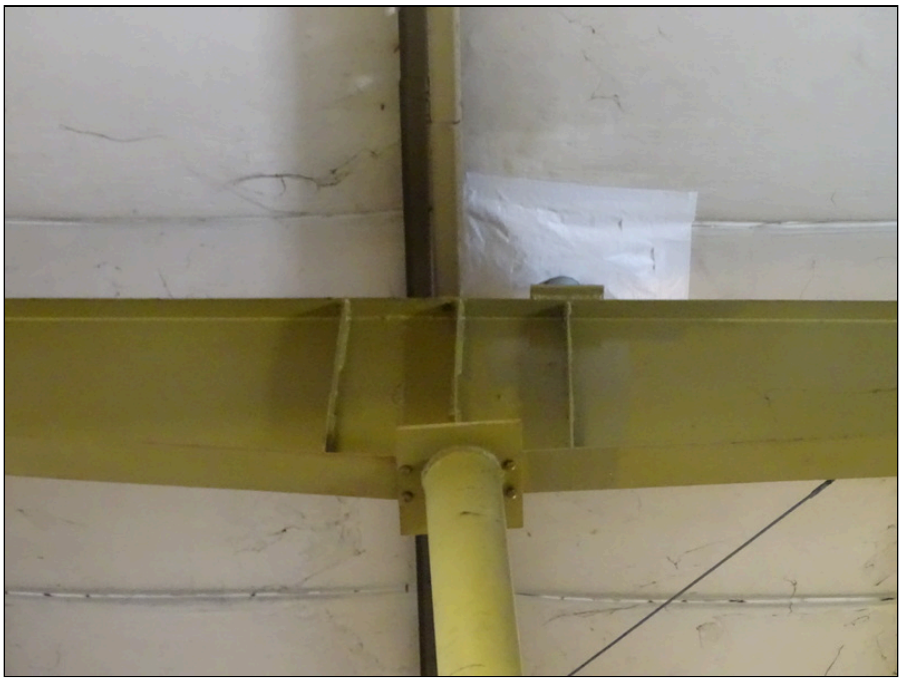
19 - Chain link metal gate and fence at west end of the site

20 - Dumpster area on north side of the building

21 - Typical chain link fence note deterioration

22 - Typical chain link metal gate and fence

23 - Structural framing



24 - Structural framing

25 - Structural framing

26 - Typical building exterior

27 - Typical building exterior in loading dock area

28 - Typical building exterior - note metal siding physical damage

29 - Typical building exterior - note metal siding physical damage

30 - Typical building exterior - note metal siding physical damage

31 - Building exterior west side of the building

32 - Typical canopy at west side of the building

33 - Typical exterior soffit

34 - Exterior door main entrance

35 - Typical personnel door

36 - Typical overhead door - note deterioration

37 - Typical overhead door - note physical damaged

38 - Building exterior - note patching

39 - Typical overhead door - note damaged

40 - Typical window exterior

41 - Typical older exterior window unit

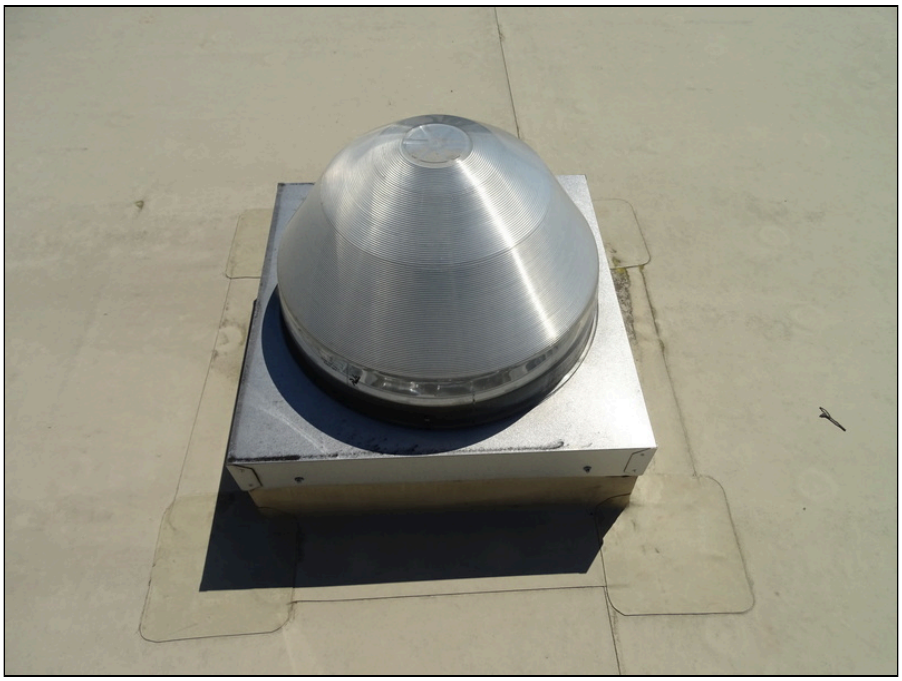
42 - Typical newer exterior window unit

43 - Roofing system looking east side of the building looking east

44 - Roofing system looking east side of the building looking east

45 - Roofing system looking west side of the building looking east

46 - Typical plumbing penetration



47 - Typical smaller skylight

48 - Typical larger skylights

49 - Typical gutter and downspout

50 - Solar Power System located on roof

51 - Solar Power System located on roof

52 - Typical water heater

53 - Typical water heater

54 - Typical air handler unit located in attic area

55 - Typical air handler unit located in attic area

56 - DSC05746

57 - Condenser Units

58 - Condenser Units

59 - Ductless Split System

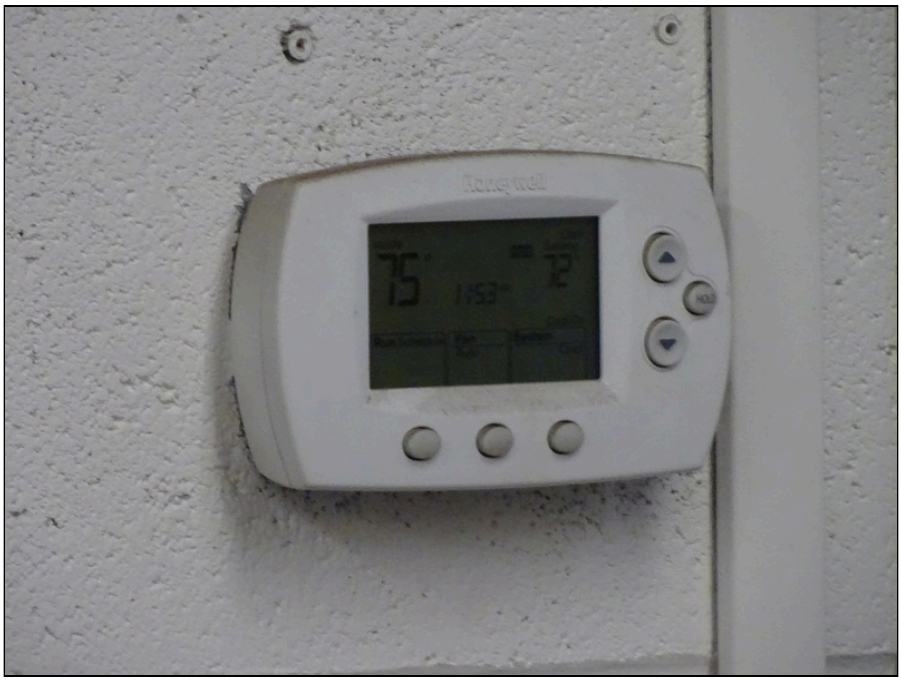
60 - Ductless Split System Wall Mounted Unit

61 - Heat Pump

62 - Typical space Heaters

63 - Typical space Heaters

64 - Typical digital thermostat



65 - Typical digital thermostat

66 - Typical digital thermostat

67 - Typical mechanical duct

68 - Solar Power system electronics and meter

69 - Typical gas meter

70 - Typical building transformer

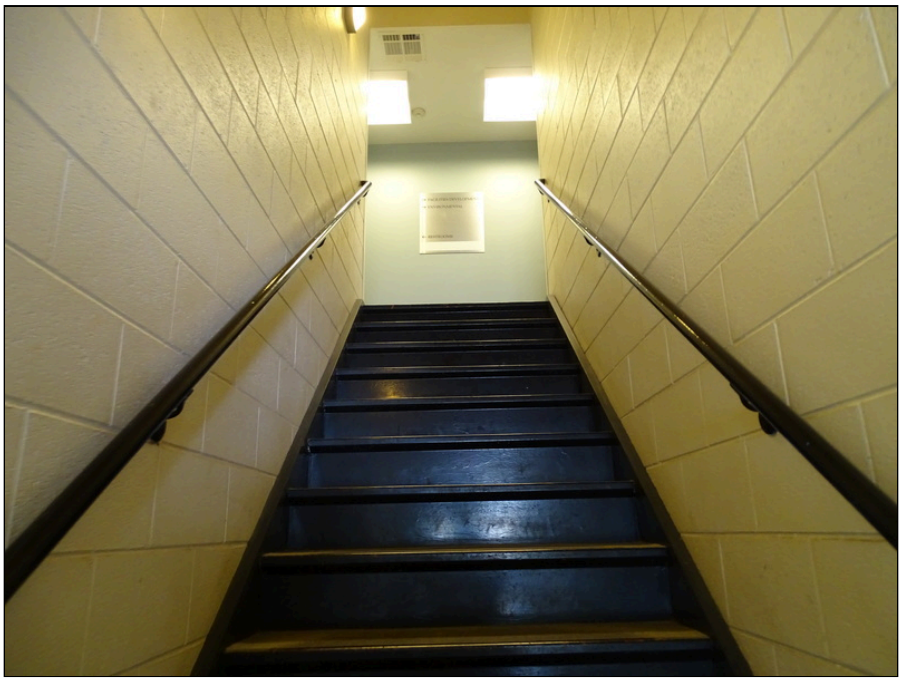
71 - Main electrical disconnect, utility meter, and emergency transfer switch

72 - Main electrical disconnect,

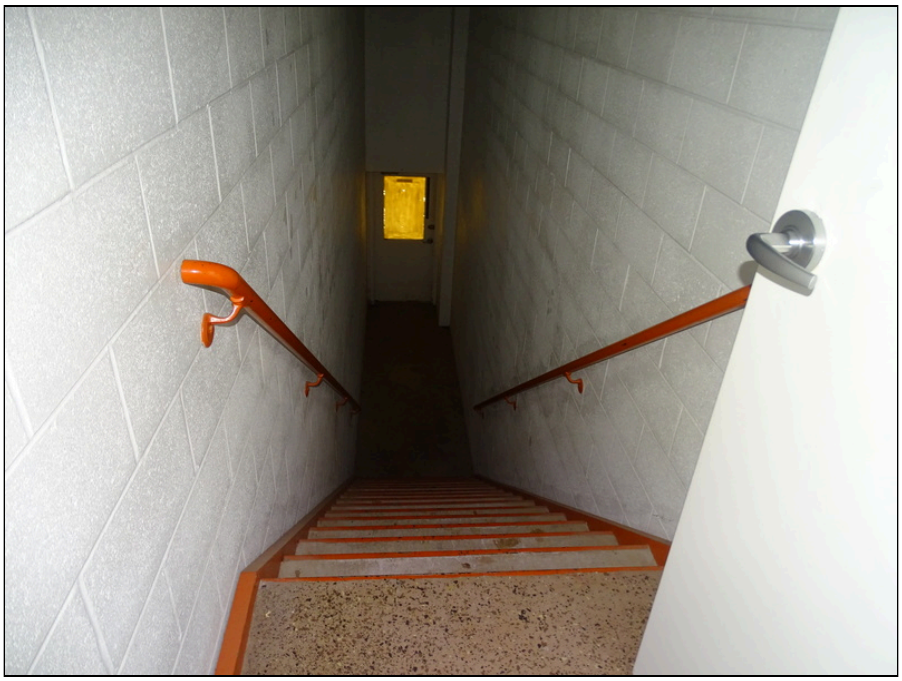
73 - Typical circuit breaker panel

74 - Typical smoke detector

75 - Typical exit sign with emergency lighting



76 - Interior finishes stairway area



77 - Interior finishes stairway area

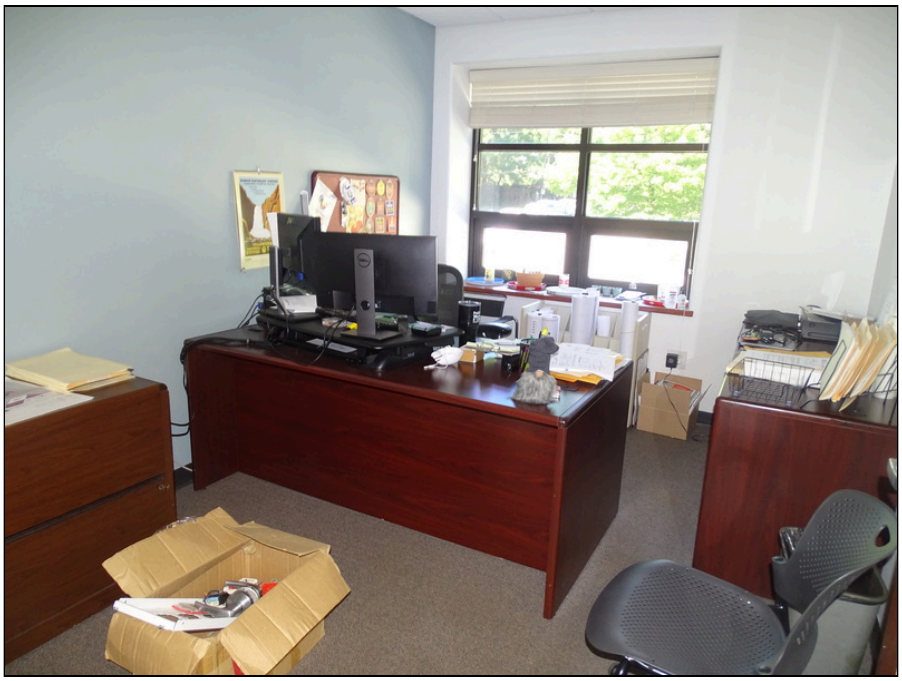
78 - Corridor

79 - Interior finishes restroom area

80 - Interior finishes restroom area

81 - Interior finishes lobby area

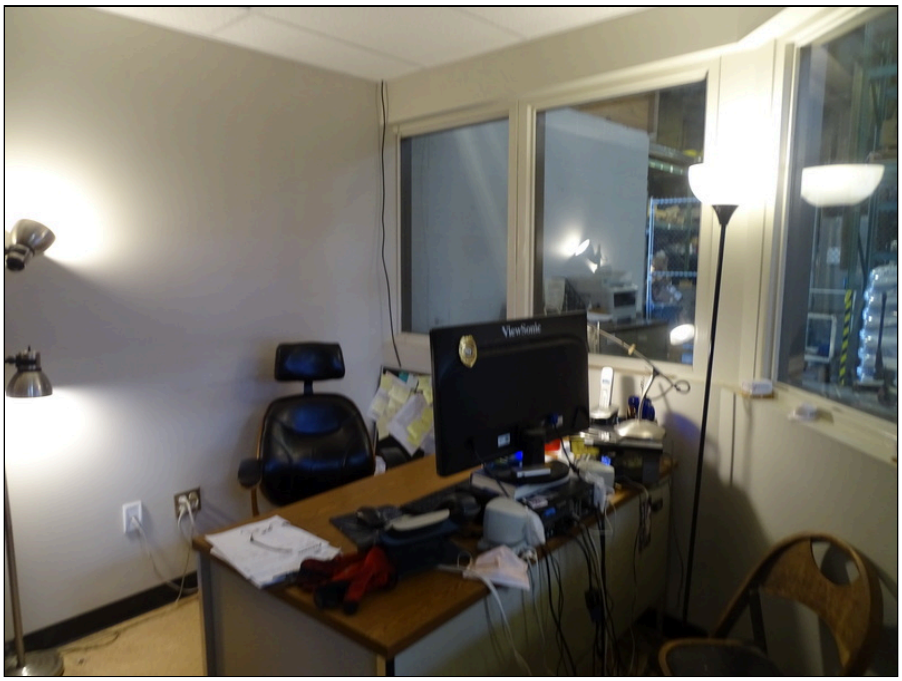
82 - Interior finishes office area



83 - Interior finishes office area

84 - Interior finishes kitchen area

85 - Interior finishes meeting room area



86 - Interior finishes office area

87 - Interior finishes warehouse area

88 - Interior finishes warehouse area

89 - Interior finishes warehouse area

90 - Interior finishes warehouse area

91 - Accessible parking space - note striping faded

92 - Accessible parking space - note striping faded

93 - Accessible concrete ramp at southwest side of the building

Appendix V: RESUMES

William R. Pratt, PE

Senior Project Engineer, ECS Mid-Atlantic, LLC
Professional-In-Charge

Education

Bachelor of Science, 1989, Mechanical Engineering, University of Massachusetts

Registrations

Professional Engineer: DC, VA, MD

ICC Commercial Building, Plumbing, and Mechanical Inspector

Mr. Pratt serves as Senior Project Engineer for ECS Mid-Atlantic, LLC. Mr. Pratt is responsible as the Professional-In-Charge of the code compliance group and provides supervision of code compliance inspection programs for the local jurisdictions. Additionally, he oversees execution of project management for construction materials testing, property condition assessments.

Property Condition Assessments - Bill has extensive experience in performing property condition assessments for a variety of properties and structures. These assessments include evaluation of site improvements, building components, roofing, pavements, electrical systems, mechanical systems, and HVAC systems. He performs assessment in general accordance with ASTM E 2018 – 08, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. Bill also has experience in performing property condition assessments that meet with lender and specific client requirements. He works with teams of experts in providing detailed reports and simple reserve analysis for properties.

Select Project Experience – PCA

- City of Charlottesville, VA - 51 Property Portfolio including schools, libraries, museums, fire and police stations, and court buildings
- Home Properties 800+ Apartment Units, 4-Property Portfolio to Freddie Mac Standard, Hampton and Virginia Beach, VA
- Boulders Office Park 300,000+ SF, 3-Property Portfolio , Richmond, VA
- Darien Lake Theme Park, Darien Center, NY
- Madison Place Office Building, Alexandria, VA
- King of Glory Lutheran Church, Williamsburg, VA
- Comfort Inn, Charlottesville, VA
- The Wisconsin Building, Washington, DC

Select Project Experience – Code Compliance and Special Inspections

- City Center DC, Washington, DC
- DC Courts Judiciary Square, IDIQ Contract, Washington, DC
- Hilton Garden Inn, Washington, DC
- Waterfront Mall, Washington, DC
- 4th Street Reconstruction, Washington, DC
- Sibley Memorial Hospital Addition, Cancer Center, Washington, DC
- Washington Headquarters Services, Arlington, VA
- Walmart #5968-00, Washington, DC
- Progression Place, 7th Street, NW, Washington, DC
- National Gallery of Art, Washington, DC
- City Market @ O, Washington, DC

Michael G. Doyle, AIA

Principal Architect – Facilities Department

Education

Bachelor of Architecture, 1987, Architecture, Virginia Polytechnic Institute and State University, Blacksburg, VA

Registrations

Registered Architect: AZ, DC, MD, VA, NC, IL
The Leadership in Energy and Environmental Design (LEED) Accredited Professional: 2009

Mr. Doyle serves as a Principal Architect for the Facilities Engineering Group in ECS Chantilly. He has over 25 years of experience in the construction industry, and his expertise includes the Americans with Disabilities Act, Property Condition Surveys, Pre and Post Construction Survey Services, Pavement Assessments, and Third-Party Plan Review. He has worked with numerous government agencies and has significant experience with local government and educational facilities; commercial high-rise buildings; multi-unit, residential, and correctional facilities. Mr. Doyle also has had experience on several high-profile historic projects, including the Jefferson Memorial, the Tivoli Theater, the Tariff Building, The White House, the Court of Appeals in Washington, DC; the Valley Bank Building in Leesburg, Virginia; and the Shenandoah Courthouse at Woodstock, Virginia.

Property Condition Assessments - Mr. Doyle has extensive experience performing property condition assessments from small commercial properties, large high rise buildings, to government-owned properties. Mr. Doyle has performed assessment in general accordance with ASTM E 2018, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. Mr. Doyle also has experience in performing property condition assessments in accordance with lender and specific client requirements. Mr. Doyle has worked with teams of experts in providing detailed reports and simple reserve analysis for properties.

Relevant Project Experience

Darien Lake, Darien Center, NY – Mr. Doyle was the Principal Architect for the property assessment of the Darien Lake amusement park. The property included over 200 buildings including buildings within the park, maintenance and administration buildings, hotel, campground buildings, and sewer treatment center.

Ballston Park Apartments, Arlington, VA (2014) - originally developed in 1938, this complex includes 50 two-story apartment buildings, one three-story apartment building, one single-family residence, and a single-story office/clubhouse. A PCA and a Phase I Environmental Site Assessment was conducted and documented.

Hyatt House Lodging, Sterling, VA (2014) - This six-story, 162-room, 98,793-square-foot hotel with surface parking was constructed in 2007 as a Sierra Suites and subsequently converted to a Hyatt House. Recreational facilities include a swimming pool, fitness center, a grill area, and a fire pit. Building systems observed per ASTM E 2018 included site conditions, the structural frame and building envelope; plumbing, mechanical and electrical systems, vertical transportation Systems, life safety and fire protection, and ADA Considerations. A Phase I Environmental Site Assessment was also conducted.

WHMO Facilities Assessment, Washington, DC (2015) - This is a privately owned, government-leased facility with a sensitive mission. The structure is believed to be a 1920s vintage building designed as a multi-story car dealership. The government has occupied this space continuously since 1963. Mr. Doyle conducted a survey of the complete facility, identified and documented areas of concerns. He also provide a recommendation for remediation for each area of concern, a Rough Order Magnitude (ROM) cost for remediation, and categorized each area of concern as critical, non-critical or aesthetic.

Additional Project Experience

- City of Charlottesville Portfolio, Charlottesville, VA
- Liberty Park, Herndon, VA
- Oakcrest School, McLean, VA
- Signature Flight Support, Arlington, VA
- The Gap, Washington, DC
- Lanham Crossing, Lanham, MD
- ZIM American Headquarters Building, Sulfolk, VA
- The Portrait Building, Washington, DC
- The Aventine of Alexandria, Alexandria, VA

DONALD GOGLIO

CODE COMPLIANCE PROJECT MANAGER

PROFESSIONAL PROFILE

Mr. Goglio has 38 years of construction, mechanical trade, and management experience. He manages code compliance projects, including reviewing plans, providing technical support, and conducting inspections.

PROJECT EXPERIENCE

Fort Lee AIT Barracks, Ft. Lee, VA – Quality Control Manager – The Fort Lee AIT Barracks project is a soldiers' basic combat training facility for over 1,200 Army personnel. The complex is a cohesive development, providing both housing and affiliated functions for soldiers in the AIT program. In addition to housing, the facility includes an outdoor jogging track, physical training pits, and access drivers and parking areas that meet USACE requirements. The project's five-story brick buildings meet DoD Minimum Antiterrorism Standards for Buildings and obtained LEED® Gold certification from the US Green Building Council. The Fort Lee project is part of the Northeast Region Multiple Award Task Order Contract (MATOC).

Terrapin Row, College Park, MD – Assistant Superintendent – Terrapin Row is a transformative student housing complex located on the University of Maryland's historic South Campus. The mixed-use community features 1,493 beds across 418 apartments as well as a 489-space parking garage. Terrapin Row boasts ample amenities centered around a college lifestyle, including a swimming pool, volleyball court, outdoor kitchens and fire pits, exterior TVs, a fitness center, bike storage, a cyber cafe and game room, and numerous live-learn spaces. The multi-phase project consists of seven buildings and encompasses a pedestrian and bike-friendly Village Green surrounded by over 11,856 square feet of retail space. The Village Green flows into a grand stairway and amphitheater that opens to a pedestrian plaza to welcome pedestrians towards the main academic centers of campus.

The Hartley at the Parks, Washington, DC – Assistant Superintendent – The Hartley is a 323-unit mixed-use apartment community with a Whole Foods Market as its retail anchor in Northwest DC. This six-story community consists of five stories of wood framing over a one-story concrete podium with 317 apartments and six townhomes. It is a part of The Parks at Walter Reed, a mixed-use master-planned redevelopment of the 66-acre historic Walter Reed Army Medical Center with 2,200 residential units plus office and retail. The Hartley features two interior courtyards; the north courtyard includes pool and amenity space, and the south courtyard includes a Zen garden. The second-floor amenity space includes a lounge, multi-purpose room, fitness center, and pet spa. The studio, one-, two-, and three-bedroom units feature high-end finishes, including quartz countertops and EnergyStar® appliances.

CERTIFICATIONS

WSSC Master Plumber

WSSC Master Gasfitter

WSSC Cross Connection Technician Certification

CPR/First Aid Training

OSHA 30 hr Training

ICC Certified Commercial Building Inspector

ICC Certified Commercial Plumbing Inspector

ICC Certified Commercial Mechanical Inspector

LEED Green Associate

SKILLS

Code Compliance

Construction Administration

Special Inspection Services

Condition Assessments

Forensic Consultation

PROFESSIONAL MEMBERHSHIPS

American Wood Council

USGBC

EDUCATION

Montgomery College, 1991, Silver Spring, MD

YEARS OF EXPERIENCE

ECS: <1 Other: 38

DONALD GOGLIO

CODE COMPLIANCE PROJECT MANAGER

PROFESSIONAL PROFILE

Mr. Goglio has 38 years of construction, mechanical trade, and management experience. He manages code compliance projects, including reviewing plans, providing technical support, and conducting inspections.

PROJECT EXPERIENCE

- Fort Lee AIT Barracks, Ft. Lee, VA
- Terrapin Row, College Park, MD
- The Hartley at the Parks, Washington, DC
- River Point, Washington, DC
- Juniper, Columbia, MD
- The Smith, King of Prussia, PA
- Banner Hill, Baltimore, MD
- Jefferson Square, Baltimore, MD
- Metropolitan at Largo Station, Largo, MD
- The Village at Leesburg, Leesburg, VA
- The Elms at Clarksburg Village, Clarksburg, MD – Assistant Superintendent
- Hidden Creek, Gaithersburg, MD
- Paramount, Gaithersburg, MD
- Thayer & Spring, Silver Spring, MD

CERTIFICATIONS

WSSC Master Plumber

WSSC Master Gasfitter

WSSC Cross Connection Technician Certification

CPR/First Aid Training

OSHA 30 hr Training

ICC Certified Commercial Building Inspector

ICC Certified Commercial Plumbing Inspector

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USGBC

EDUCATION

Trade Specific (Plumbing), 1991, Montgomery College, Silver Spring, MD

YEARS OF EXPERIENCE

ECS: <1 Other: 38