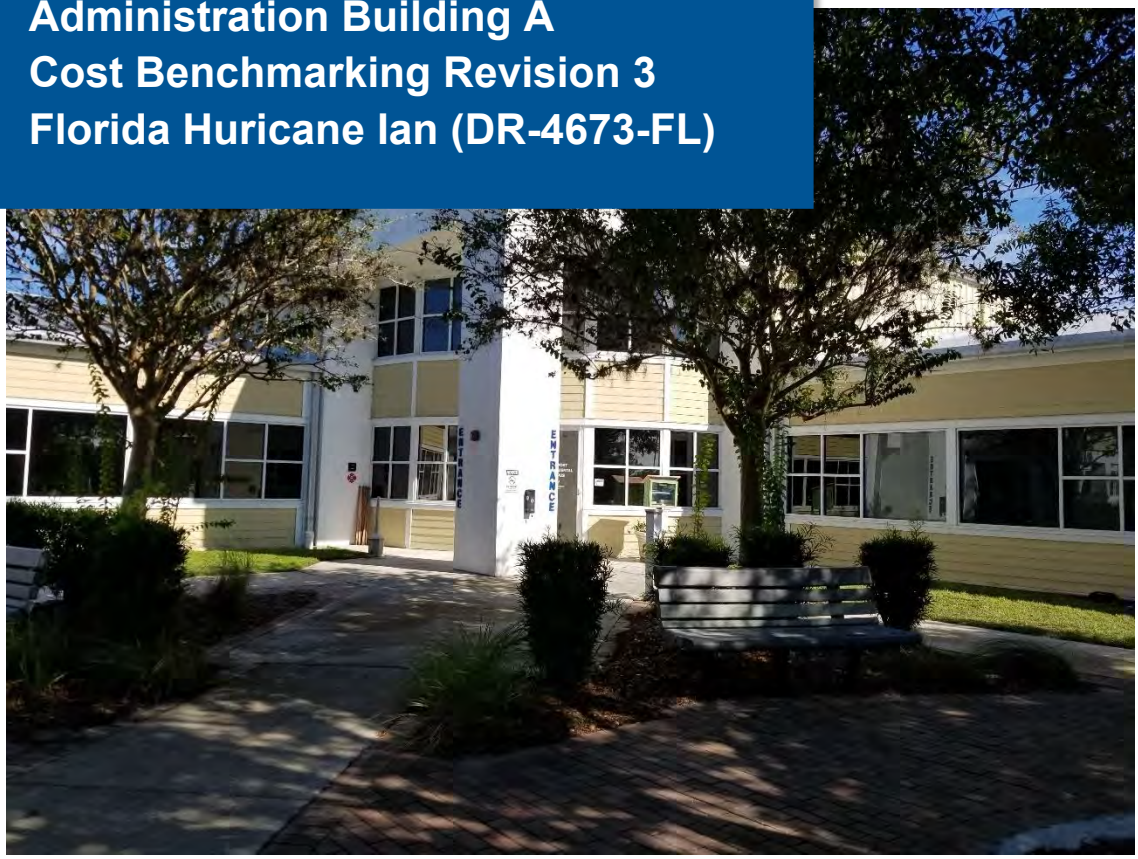
CHARLOTTE COUNTY
FLORIDA

Site Inspection Report for Charlotte County – East Port Environmental Campus Administration Building A Cost Benchmarking Revision 3 Florida Huricane Ian (DR-4673-FL)



CSA CONSULTING GROUP LLC
Consulting Excellence

Prepared for:
Charlotte County, Florida

February 26, 2024

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STORM INFORMATION

IAN STORM INFORMATION

Synoptic Overview

Hurricane Ian (DR-4673-FL)

Hurricane Ian was the 2nd major hurricane of the 2022 Atlantic hurricane season. As a major category 4 storm when it struck Florida, Ian resulted in widespread impacts from southwest to northeast Florida due to high storm surge and waves, high winds, tornadoes, and inland flooding.

Ian made landfall on the September 28, 2022, at Cayo Costa and then near Fort Myers, where the triple threat of high winds, high storm surge and wave action, and heavy rain resulted in catastrophic damage and loss of life.[1]

Event Impacts on Charlotte County

Hurricane Ian

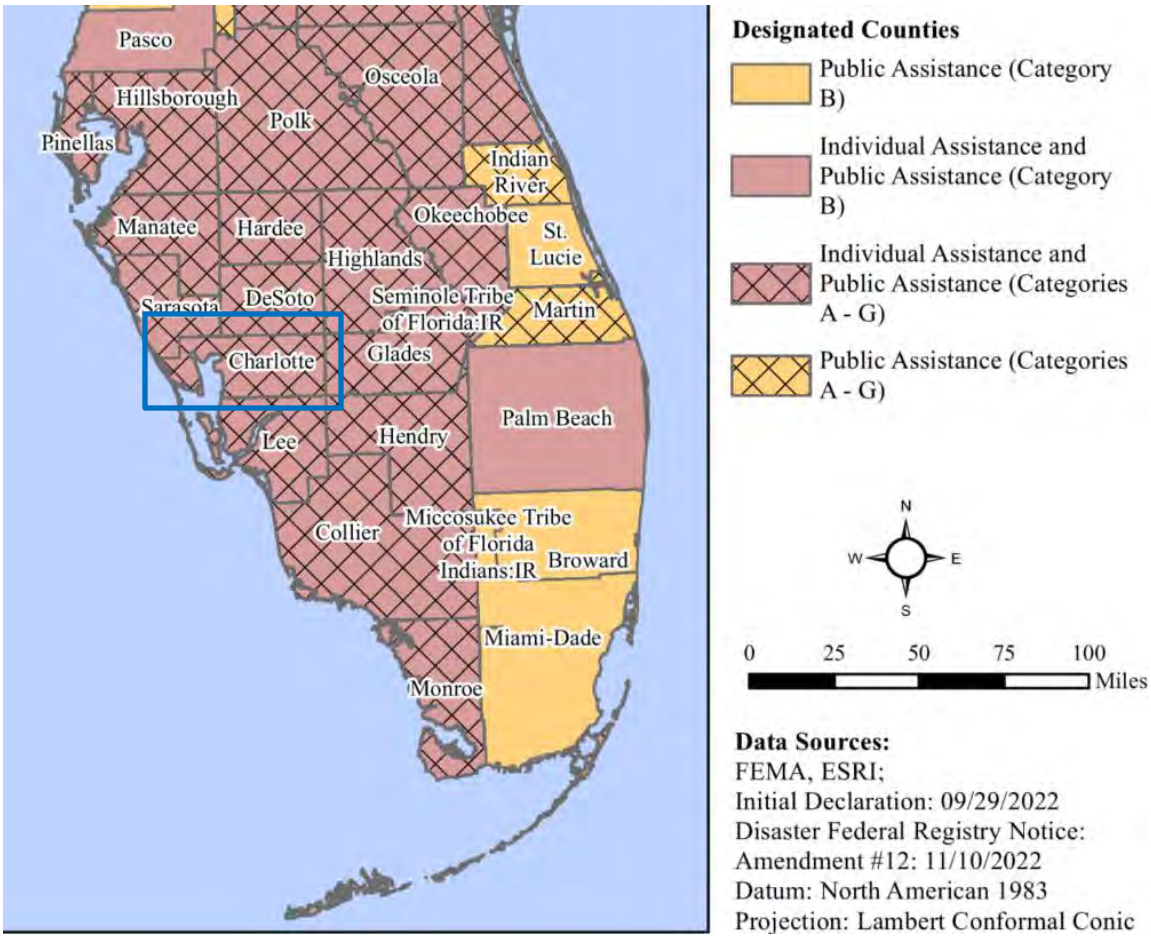
Event	Hurricane
Category	4- Coastal Charlotte 2- Inland Charlotte
State	FLORIDA
County/Area	CHARLOTTE
Report Source	Official NWS Observations
Begin Date	2022-09-28 15:35 EST-5
Deaths Direct/Indirect	8/0

Ian Event Summary	The highest wind reported in Charlotte County from Hurricane Ian was a gust to 111 mph near Grove city at 3:26 PM EST on September 28. Rainfall generally ranged from 5 to 10 inches over the eastern half of the county, to 15 to 25 inches across western and coastal locations, where an event-maximum total of 26.95 inches was reported near Grove City. Initial assessments reported over 200 homes destroyed; however, assessments remain ongoing, with additional structures likely damaged or destroyed. There were 8 fatalities directly attributed to Hurricane Ian by the medical examiner.[2]

[1] Hurricane Ian Report, Florida Climate Center, November 14, 2022
[2] Storm Events Database, NOAA

Storm Event Public Assistance Designation

Hurricane Ian[3]



Located on the Southwest side of the Florida Peninsula, Charlotte County was impacted by Hurricane Ian resulting in FEMA Public Assistance (Categories A-G) designations.

[3] https://gis.fema.gov/maps/dec_4673.pdf

EXECUTIVE SUMMARY

INTRODUCTION

On February 26th, 2024, a team from CSA Consulting Group performed a site inspection of the following location:

- Asset ID: 052 – East Port Environmental Campus- Administration Building A
- Located at 25550 Harborview Road, Port Charlotte, FL 33980

The CSA team members consisted of:

- Chris Riti- Superintendent
- Max Morgan- Structural Inspector

Primary Field Investigation Goal:

- Identify and Document Damages related to Florida Hurricane Ian with an event date of September 28, 2022 (DR-4673-FL)

DOCUMENTS PROVIDED

Prior to the field investigation work performed by CSA on February 26th, 2024, the following documents were provided by Charlotte County:

Pre-Storm Photos

- Administration Building A- Building Façade Photos- 22 photos total.

Post- Storm Photos

- Administration Building A- Building Interior and Exterior Areas- 19 photos total.

Post-Storm Damage Assessments

- FMIT Turnkey Recovery Program Trackdown Damage Assessments dated 10/3/2022 and 10/7/2022.

Drawings and Building Information

- Landscaping Plans by David A. Jahn dated 04/11/2002.
- Overall Site Plan by George Palermo Architect, Inc/ Dufresne-Henry Consulting Engineers dated 04/28/2000.
- Drawing Set with Architectural, Structural, Life Safety, Site Plans, HVAC, Plumbing, and Electrical Drawings by George Palermo Architect, Inc/ Dufresne-Henry Consulting Engineers/ Halfacre Construction Co./ Peter Wallis & Associates Structural Engineer dared 04/28/2000.
- Site Development Construction Plans by Dufresne-Henry Consulting Engineers dated 05/05/2000.
- Structural Shop Drawings/ Manufacturer Design by Varco-Pruden Buildings dated 05/24/2000.

STORM DAMAGE ASSESSMENT

SITE INSPECTION PROCESS

A technical site inspection was performed at the Charlotte County East Port Environmental Campus Administration Building A on February 26th, 2024, consisting of a standard, in-person inspection. The CSA team members inspected the associated exterior areas of the structure to ensure that all reported damages were captured and recorded.

VISUAL ASSESSMENT

The CSA team members performed a visual inspection of each of the rooms and exterior areas of the Administration Building. Specific observations are summarized below:

- Administration Building Interior Areas: The CSA team members observed numerous damages of interior building materials and components such as Acoustical Ceiling Tiles (ACT) and Ceiling Batt Insulation, Drywall and Wall Insulation Panels, Vinyl Wall Baseboards, Carpet Floors, and Electrical Power Wall Outlets.

- Administration Building Exterior Areas: The CSA team members identified significant damage including Soffit Panels, Siding Panels, Plywood Sheathing Panels, Roof Gutters and Downspouts, and Exterior Light Fixtures. Multiple windows and storefronts show signs of past water infiltration.

ASSESSMENT SUMMARY

Based on the information provided by Charlotte County and the Field Investigation Work performed by CSA Consulting Group on February 26th, 2024, the following conclusions apply:

Administration Building Interior Areas

Surface Water Flooding, High Winds, and Wind Driven Rain with subsequent water intrusion during Hurricane Ian with an event date of September 28, 2022 (DR-4673-FL) caused water damage to most of the interior spaces throughout the building.

Administration Building Exterior Areas

High Winds during Hurricane Ian with an event date of September 28, 2022 (DR-4673-FL) caused significant damage to Building Envelope Materials, and Roof Accessories.

CONCLUSIONS AND RECOMMENDATIONS

Based on the information provided by Charlotte County, and the field investigation work performed by CSA Consulting Group on February 26th, 2024, the following conclusions apply:

- The building façade components and interior materials show signs of severe damage caused by Surface Water Flooding, High Winds, and Wind Driven Rain during Hurricane Ian with an event date of September 28, 2022 (DR-4673-FL). Removal and replacement of affected façade components, interior building materials, and furniture along with proper disposal and disinfection of all impacted areas by licensed remediation contractors will likely be required.

- Further assessments including demolition of interior building materials and building envelope components throughout the building may be required to expose hidden surfaces and determine if mold contamination is present. If mold contamination is identified, further investigation will be required including calculation of levels of toxicity to human health in order to establish the required measures for mold mitigation following the current guidelines and protocols published by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE, 2016, 2018), National Institute of Occupational Safety and Health (NIOSH), the American Conference of Governmental Industrial Hygienists (ACGIH), the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA). Even with substantial amounts of demolition and removal of hazardous materials, antimicrobial treatments, and remediation throughout the affected building sections; the possibility exists that the remaining building elements could not be rendered completely remediated for occupational health and safety standards.

- Since the year of construction of this facility, there have been several updates to the Florida Building Code and ASCE 7 wind loads design criteria. As per 2023 Florida Building Code, Existing Building, 8th Edition, Chapter 6 Classification of Work: Alterations, additions, and changes of occupancy to existing structures shall comply with the provisions of Chapters 7 through 13 or with one of the alternatives provided in Chapter 3 Provisions for all Compliance Methods.

  While roof systems don't show apparent signs of severe damage, based on year of construction of the facility, the damages identified on facade components, and the risk of potential concealed damages on building envelope's supporting structures, building envelope's components including façade and roof systems should be inspected by a licensed engineer for structural integrity and potential reuse. Repair and/or replacement work on building envelope's components will require a full engineering analysis, redesign, and reconfiguration of the existing building envelope's components and supporting structures to comply with current Federal, State and Local Codes and Ordinances.

  ASCE/SEI 7-22, Minimum Design Loads and Associated Criteria for Buildings and Other Structures (commonly referred to as ASCE 7-22), developed and published by the American Society of Civil Engineers (ASCE) and Structural Engineering Institute (SEI), is the primary reference standard for structural loads in the 2024 International Building Code, 2024 International Residential Code, and the 8th Edition (2023) Florida Building Code. The standard specifies minimum structural design loads and other criteria for the design of buildings and other structures for dead, live, soil, flood, tsunami, snow, rain, atmospheric ice, earthquake, wind, and tornado loads. It also provides criteria on how to

assess load combinations.

A few of the key significant changes to the wind loading design provisions contained in ASCE 7-22, as compared to the previous version (ASCE 7-16), that affect building design criteria are:

- Changes to the basic wind speed maps
- Change to the Wind-borne Debris Region (WBDR)
- Changes to the component and cladding external pressure coefficients (GCp) for roofs of buildings with roof slopes greater than 7.

Notes:

(1) ASCE 7-22 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

(2) Resources:

- Florida Building Code, www.floridabuilding.org
- International Code Council, www.iccsafe.org
- American Society of Civil Engineers, www.asce.org
- FRSA - Florida Roofing and Sheet Metal Contractors Association (www.floridaroof.com)
- FEMA Hurricane Michael in Florida Recovery Advisory 2, Best Practices for Minimizing Wind and Water Infiltration Damage, https://www.fema.gov/sites/default/files/2020-07/minimizing-wind-water-damage_hurricane-michael_florida.pdf
- FEMA P-2077 Hurricane Michael in Florida Mitigation Assessment Team Report, https://www.fema.gov/sites/default/files/2020-07/mat-report_hurricane-michael_florida.pdf
- FEMA P-2023 Hurricane Irma in Florida Mitigation Assessment Team Report, https://www.fema.gov/sites/default/files/2020-07/mat-report_hurricane-irma_florida.pdf

FEMA CONSENSUS-BASED CODE, SCOPE, AND STANDARDS

As defined in FEMA Recovery Interim Policy FP- 104-009-11 Version 2.1, the purpose of the Recovery Interim Policy FP-104-009-11, Consensus-Based Codes, Specifications and Standards for Public Assistance (Policy) is to define the framework and requirements for consistent and appropriate implementation of consensus-based design, construction and maintenance codes, specifications and standards (subsequently referred to as "consensus-based codes, specifications and standards" in this Policy) for Public Assistance (PA) to promote resiliency and achieve risk reduction under the authority of the Stafford Act §§ 323 and 406(e) (42 U.S.C. §§ 5165a and 5172) and 44 Code of Federal Regulations (CFR) § 206, subpart M. These codes, specifications and standards only apply to repair and replacement of disaster damaged elements and facilities. Nothing in this Policy makes eligible the cost associated with ongoing operations and maintenance. This interim Policy supersedes the Public Assistance Program and Policy Guide (PAPPG)1 subsection: FEMA Required Minimum Codes and Standards.

Following FEMA guidelines, CSA team has identified and included in the Scope of Repair, the works that are required for the implementation of the Recovery Interim Policy FP-104-009-11, Consensus-Based Codes, Specifications and Standards for Public Assistance.

Applicable Codes, Standards, and Specifications

The East Port Environmental Campus is located in a RE-1 (residential estate) zone on unincorporated Charlotte County land in the State of Florida. It is therefore subject to the applicable requirements of the Charlotte County Code of Laws and Ordinances (CLOCC), the Florida Building Code (FBC), and referenced codes and standards. The following referenced standards are of particular importance to both flood and wind hazards and provide the minimum design requirements for structures.

- ASCE/SEI 24-14, Flood Resistant Design and Construction
- ASCE/SEI 7-22, Minimum Design Loads and Associated Criteria for Buildings and Other Structures
- NFPA 70-20, National Electrical Code (NEC)

Notes:

(1) FEMA CBCSS Engineer Report in Appendix 2.

ROUGH ORDER OF MAGNITUDE COST ESTIMATE

COST ESTIMATE

RSMeans and CEF

The cost estimate included in this assessment has been prepared using regional contractors cost benchmarking information based on data collected on site through observations, measurements, and photographs to capture a preliminary high-level approximation of the Construction Direct Cost (base construction cost for labor, equipment, and materials required to perform the work).

To capture a preliminary high-level approximation of the Soft Costs, the cost estimate includes FEMA's Cost Estimating Format (CEF) tool. The CEF includes:

A. Base construction cost for labor, equipment and materials required to perform eligible work.

B. Costs for work execution such as temporary services and utilities, safety and security measures, field supervision, quality control and administrative submittals

C. Construction cost contingencies such as project unknowns and complexities, and the degree of difficulty for site access, storage, and staging

D. Applies to contracted work for the general (or prime) contractor's home office overhead, insurance, bonds, and profit.

E. Accounts for cost escalation at certain points over the duration of the project

F. Fees for building permits, plan checks and special reviews

G. Owner's reserve for change orders and differing site conditions

H. The applicant's project management and design costs[4]

This estimate is intended to provide budgetary information for Project Feasibility Analysis and only for the Specific Scope of Work included in the report. ROM estimates provide a level of accuracy of approx. +/-50 percent.

[4] FEMA Cost Estimating Tools; https://www.fema.gov/assistance/public/tools-resources/cost-estimating-tool

Cost Benchmarking - Repair Work

As requested, CSA Consulting Group engaged a regional general contractor to update and revise unit prices for work to restore the facility to its pre-disaster design and condition.

Unit prices provided by the contractor are based on latest market conditions, recent subcontractor provided material and labor costs, and current resource availability in the region.

Notes:

(2) See Summarized Schedule of Values on the next page for detailed information.

Summarized Schedule of Values (SOV)

SUMMARIZED SCHEDULE OF VALUES (SOV)

		CONTRACTOR BENCHMARKING [1]	
Division	**Component Description**	**Cost Subtotal**	**Notes**
Division 02 - Existing Conditions	Demolition work	$ 37,798.37	Demolitions works and hauling off debris
Division 02 - Existing Conditions	Mold Remediation	$ 44,400.00	Cleaning and decontamination
Division 06 - Wood, Plastics, Composites	Millwork/Casework	$ 12,000.00	Allowance
Division 07 - Thermal and Moisture Protection	R19- Fire Rated Batt Insulation	$ 3,735.00	
Division 07 - Thermal and Moisture Protection	Rigid Board Wall Insulation	$ 12,600.00	
Division 07 - Thermal and Moisture Protection	Metal Soffit Panels	$ 2,580.00	
Division 07 - Thermal and Moisture Protection	8" Fiber Cement Siding Panels	$ 115,506.00	Includes 5/8 plywood and Tyvek water proofing
Division 07 - Thermal and Moisture Protection	Metal Roofing	$ 35,255.00	Reset detached metal panels
Division 07 - Thermal and Moisture Protection	8" Galvanized Steel Gutter	$ 4,960.00	
Division 07 - Thermal and Moisture Protection	5" Galvanized Steel Downspout	$ 2,628.00	
Division 09 - Finishes	Drywall	$ 95,500.00	Include painting
Division 09 - Finishes	2' x 4' Acoustical Ceiling Tile	$ 10,192.00	
Division 09 - Finishes	2' x 2' Acoustical Ceiling Tile	$ 1,428.00	
Division 09 - Finishes	Carpet	$ 3,175.00	
Division 09 - Finishes	4" Vinyl Wall Base	$ 12,495.00	
Division 21 - Fire Suppression	Sprinkler Heads	$ 2,000.00	**Remove/reinstall to allow ceiling works**
Division 23 - Heating, Ventilating, and Air Conditioning (HVAC)	Exterior Condenser Units	$ 18,200.00	Remove/reinstall to allow façade works
Division 23 - Heating, Ventilating, and Air Conditioning (HVAC)	Misc. HVAC Work 2	$ 58,000.00	
Division 26 - Electrical	Duplex Power Wall Outlet	$ 500.00	
Division 26 - Electrical	25' Exterior LED light pole and fixture	$ 3,850.00	
Division 26 - Electrical	3' Exterior Data Junction Box	$ 1,175.00	
Division 32 - Exterior Improvements	Re-grading exterior areas	$ 2,500.00	Ponding water in several areas
Division 07 - Thermal and Moisture Protection	Concrete joint sealer	$ 502.50	North side- building to adjacent slab
Division 08 - Openings	Exterior door industrial grade 3' x 8'	$ 3,720.00	1 EA
Division 08 - Openings	Exterior door industrial grade 3' x 6' - 8"	$ 15,693.75	5 EA
Division 08 - Openings	Exterior windows industrial grade 3' x 3' - 2"	$ 6,045.00	4 EA
Division 08 - Openings	Exterior windows industrial grade 21' x 3' - 2"	$ 179,838.75	17 EA
Division 08 - Openings	Exterior windows industrial grade 15' - 6" x 3' - 2"	$ 39,040.63	5 EA
Division 08 - Openings	Exterior windows industrial grade 10' - 4" x 3' - 2"	$ 26,446.88	5 EA
Division 08 - Openings	Exterior windows industrial grade 3' x 6' - 6"	$ 18,135.00	6 EA
Division 10 - Specialties	Flood Panels at exterior doors	$ 12,500.00	6 EA
Division 23 - Heating, Ventilating, and Air Conditioning (HVAC)	Elevation of exterior HVAC units to BFE+1. Includes detach and reset equiment on galvanized angle framed supports with steel grate platforms	$ 63,511.18	HVAC exterior units and electrical transformer
CEF- Indirect Cost, Contingency, and General Contractor O/H & Profit		$ 832,981.94	
	TOTAL	**$ 1,678,893**	

Notes:

(1) Contractor benchmarking cost estimate is based on their constructability review and knowledge of local market pricing of trades work.

(2) Detailed Master Spreadsheet in Appendix C

(3) Indirect Costs, Contingency, and General Contractor O/H & Profit detailed information with Cost Breakdown in Appendix D

(4) Facilities Conditions Assessment with list of damaged HVAC components in Appendix 1

(5) Engineer Report with Scope of Work based on FEMA CBCSS in Appendix 2

SCOPE OF WORK

Based on Field Investigation Work performed by CSA Consulting Group on February 26th, 2024, FEMA Consensus-Based Codes, Specifications and Standards Engineer Report, and Facilities Conditions Assessment, the recommended Scope of Work has been provided in the Master Spreadsheet in Appendix C.

NEXT-LEVEL ASSESSMENT

FLOODPLAIN & MITIGATION

The existing building is currently identified in a Flood Zone AE (a 1% annual chance of flooding)[5]. If an Ian project is determined to be a substantial improvement or repair of substantial damage, compliance with the flood resistant requirements of the Florida Building Code (FBC) will be required. The FBC states that design and construction of buildings and structures located in flood hazard areas shall be in accordance with Chapter 5 of ASCE 7 (Flood Loads) and with ASCE 24 (Flood Resistant Design and Construction). The Base Flood Elevation (BFE) of the flood hazard area is 10' - for the building class of the existing structure under ASCE 14, the minimum recommended elevation of the lowest floor is BFE + 1'.

Elevation Certificate prepared by Henry G. Fitcher dated 12/18/2023 indicates top of bottom floors to be at 9.3', which would not be compliant with ASCE 24. Therefore, if a substantial damage determination is made by the Floodplain Coordinator, there will likely be an additional building elevation requirement for the building replacement or repair of substantial damage, or a waiver or variance requested.

If a repair is performed there may be improvements funded through the FEMA Public Assistance program that reduce the potential of future damage to the damaged portion(s) of the facility. Based on the cause of damage noted in this report, cost-effective measures that are available include the following:

- Elevate or dry or wet floodproof buildings.
- Doors and windows:
    - Upgrade the weather stripping to prevent water infiltration.
    - Replace doors, door frames, hinges, and hardware with wind-resistant units.
    - Strengthen windows.
    - Replace glass with impact-resistant material.
    - Install shutters on windows.

[5] See National Flood Hazard Layer FIRMette in Appendix A.

- Strengthen the high-wind pressure areas (e.g., corner zones, roof soffits, overhangs)
- Strengthen roof openings, such as hatches and skylights.
- Replace doors, door frames, hinges, and hardware with wind-resistant units.
- Install shutters on windows of buildings with very high-value contents that can be damaged by water.

ADDITIONAL ASSESSMENTS

Based on current conditions, the year the building was constructed, and the damages caused by Hurricane Ian with an event date of September 28, 2022 (DR-4673-FL), the following additional assessments are recommended to bring the facility back to standard operational requirements and in compliance with current federal, state, and local codes and regulations.

1. Inspect functionality / integrity of all building systems and determine cause of damage (when applicable). Prepare professional recommendations of required repairs and/or replacements to bring systems back to full functionality and in compliance with current federal, state, and local codes and regulations.

2. Perform applicable testing by discipline (See Testing Methods Summary List below).

3. Inspect building envelope / structural components and determine cause of damage (when applicable). Prepare professional recommendations of required repairs and/or replacements to bring building envelope and structural components back to full functionality and in compliance with current federal, state, and local codes and regulations. Professional recommendations to include area information, photos, and area size/quantities (when applicable).

To accomplish the three assessments above, a more in-depth analysis of these building systems and components must first occur, which would include a selection of the following inspections.

Electrical and Low Voltage Systems:

- Electrical Main Control and Protections Equipment [preliminary assessment completed]
- Electrical Distribution Circuits including power, lighting, and low voltage [preliminary assessment completed]
- Electrical Fixtures including floor, wall, and ceiling power outlets, data outlets, and lighting fixtures.
- Low Voltage Control Equipment including Data, Communications, Security, Fire Alarm, Intercom, Sound/Announcement Systems, and Access Control
- Others as required.

HVAC Systems:

- HVAC Main Equipment including Condenser Units, Air Handlers, Split Systems, Boilers, Furnaces, and Ventilation/Exhaust Systems [preliminary RTU assessment completed]
- HVAC Distribution Lines and Ducting [preliminary duct assessment completed]
- HVAC Control Devices including Control Panels and Thermostats [preliminary assessment completed]
- Others as required.

Plumbing:

- Plumbing Distribution Lines
- Plumbing Fixtures including Cut-off Valves, Pressure Regulation Valves, Backflow Prevention
- Valves, and Pressure Relieve Valves
- Bathroom, Kitchen, and other Plumbing Fixtures
- Kitchen and Restaurant Equipment and Appliances including Refrigeration, Cooking, Cold Rooms, and Laundry
- Others as required.

<u>Testing Methods Summary List</u>

1. Electrical:

    a. Load Balance Survey
        i. HVAC Equipment
        ii. Lighting
        iii. Outlets
        iv. Boiler
        v. Furness
        vi. Suppression Pumps
        vii. Kitchen Appliances
        viii. Generators (Generators should be tested to confirm they can currently support critical building systems during a no power event)

    b. Continuity Testing - if equipment data is unavailable, results should be compared to typical standards.
        i. Main breaker circuits
        ii. Generator panels panel to service
        iii. Sub panels circuits
        iv. HVAC handlers
        v. HVAC condensers
        vi. Sprinkler Suppression Pumps
        vii. Venting systems
        viii. Alarm systems
        ix. Generators
        x. Furness and associated equipment

c. Resistance Testing – if equipment data is unavailable, results should be compared to typical standards.
    i. Main breaker circuits and panel to service
    ii. Sub panels circuits
    iii. HVAC handlers
    iv. HVAC condensers
    v. Sprinkler Suppression Pumps
    vi. Venting systems
    vii. Alarm systems
    viii. Furness and associated equipment

d. Surge / Arc Testing
    i. Confirm all GFI's, arc fault circuits, and surge protectors are working properly.
    ii. Identify where, if any should they be added.

e. Ground / Earth Test
    i. Main breaker circuits and panel to service
    ii. Meter
    iii. generators
    iv. Any other grounded equipment

f. Design analysis – does the current system meet the required load of the building?

2. HVAC:

    a. Test and Balance report to identifying:
        i. Systems that are not functioning properly due to deferred maintenance or damage
        ii. Systems that are undersized due to building additions, new load requirements
        iii. Undersized / oversized returns and registers that do not meet required load.
        iv. Undersized / oversized duct work that does not meet required load.
    b. Current system compared to current Seer rating requirements.
    c. Missing dampers
    d. Condensation drains functionality
    e. Duct work leak test
    f. Coolant leaks
    g. Design analysis – does the current system meet the required load of the building.
    h. Hazard test on duct work

3. Sprinkler Suppression:

    a. Main drain test at all zones
    b. Water flow test at all zones
    c. Flow test
        i. Results compared to previous years when building was operations or current requirements.

d. Drip test
e. Hydrostatic test
f. Sprinkler heads
    i. Count
    ii. Code compliance
    iii. Current damages – i.e., paint on heads
g. Design analysis – does the current system meet the required load of the building?

4. Plumbing:

    a. CCTV on all sewer and storm drains for clogs, leaks, undersize
    b. Pressure test on domestic water supply
    c. Pressure test on gas supply
    d. Functionality testing of all associated plumbing systems – zone valves, thermostats, circulator pumps, evap tanks, mixing valves, boiler guns.
    e. Functionality testing of all associated plumbing fixtures – sinks, toilets, shut off valves, water heaters.
    f. Backflow analysis per code and current systems if any
    g. Pipe insulation survey
    h. Design analysis – does the current gas supply meet the required load of the building.
    i. Design analysis – does the current water supply meet the required load of the building.
    j. Design analysis – does the current waste system meet the required load of the building.
    k. Water testing – contaminated water, piping, fixtures

5. Roof:

    a. Leak detection test
    b. Roof moisture scan
    c. Roof drainage calculation
        i. Leaders, gutters, scuppers, drain.
    d. Insulation analysis to code standards / requirements
    e. High Winds uplift test
    f. Lap / peel test
    g. Estimated remaining service life report.

PHOTOGRAPHS

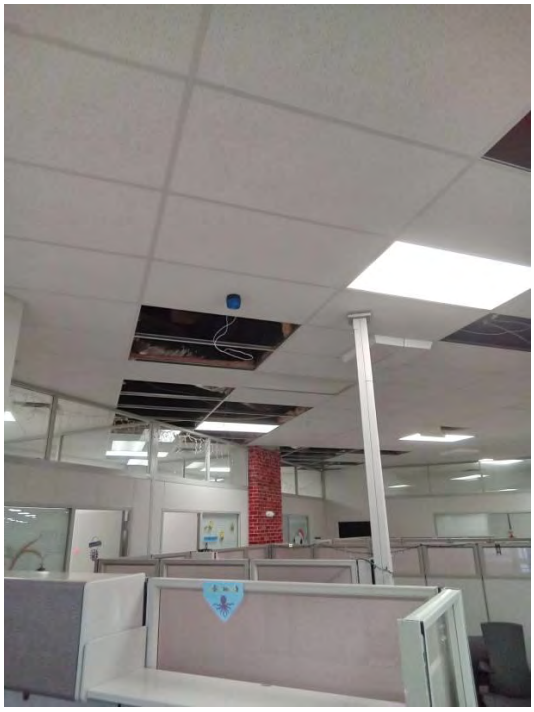
(1)

Created: Thu 27 Jul 07:24 2023
Group: 118 Hall 1
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(2)

Created: Thu 27 Jul 07:27 2023
Group: 130 Engineering 1
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(3)



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Group: 130 Engineering 1
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(4)

Created: Thu 27 Jul 07:33 2023
Group: 130 Engineering 1
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(5)

Created: Thu 27 Jul 07:33 2023
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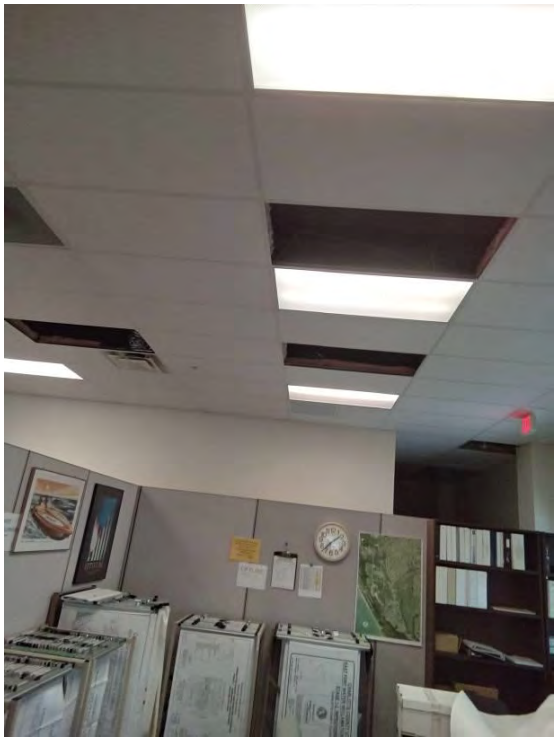
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(6)



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Group: 130 Engineering 1
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(7)

Created: Thu 27 Jul 07:36 2023
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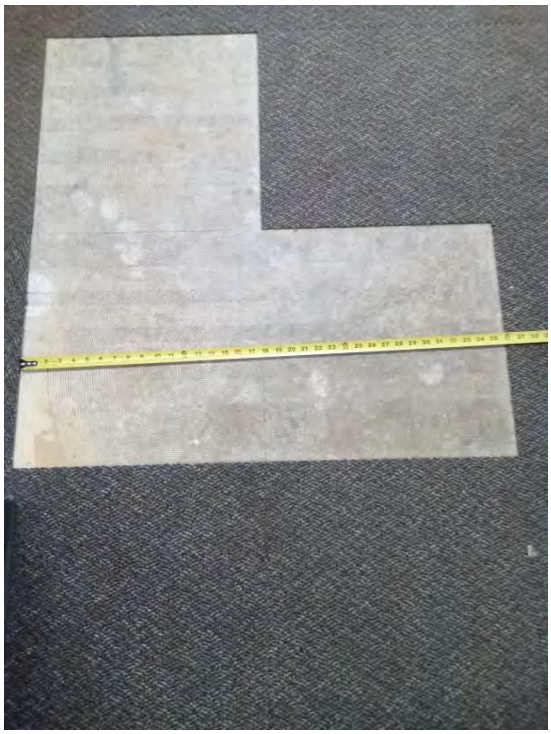
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(8)



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Group: 130 Engineering 1
Cause of Damage: Wind Driven Rain and Surface Water Flooding
Component Description:
- Carpet

(9)

Created: Thu 27 Jul 07:43 2023
Group: 135 Storage 1
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(10)

Created: Thu 27 Jul 07:46 2023
Group: 138 Conference Room 1
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

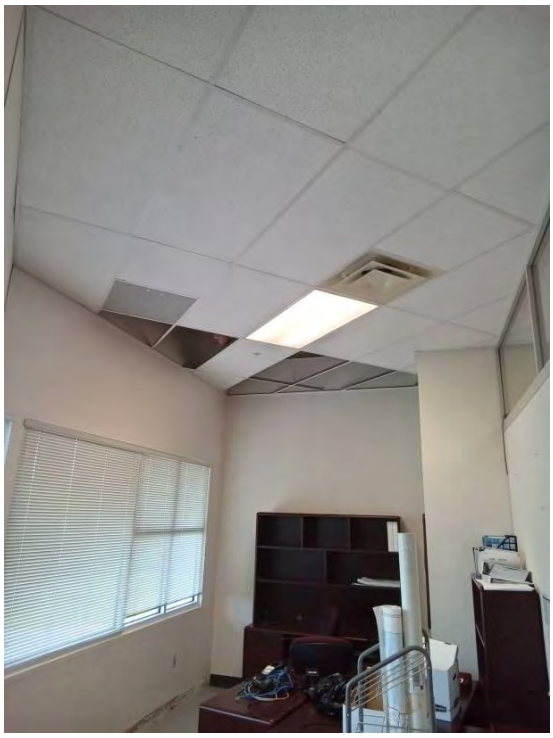
(11)

Created: Thu 27 Jul 07:53 2023
Group: 141 Fiscal Manager
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(12)

Created: Thu 27 Jul 07:54 2023
Group: 141 Fiscal Manager
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(13)



Created: Thu 27 Jul 07:56 2023
Group: 139 Director Conference
Cause of Damage: Wind Driven Rain
Component Description:

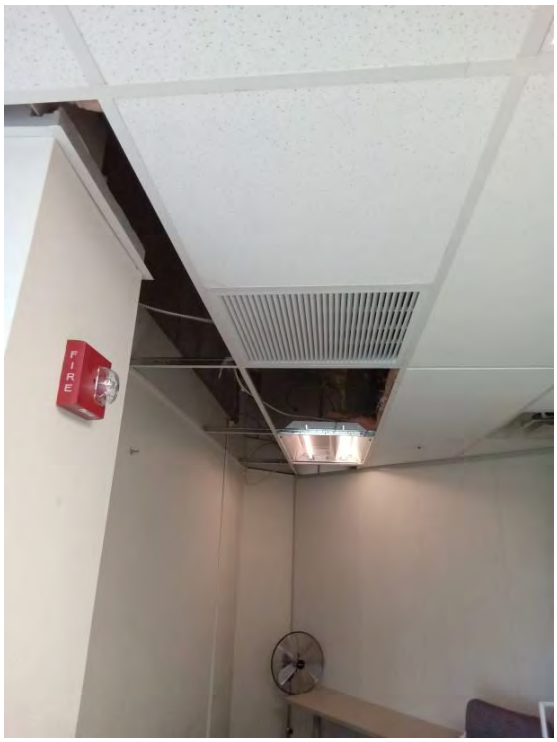
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(14)

Created: Thu 27 Jul 07:59 2023
Group: 139 Director Conference
Cause of Damage: Wind Driven Rain and Surface Water Flooding
Component Description:

- Vinyl Baseboards

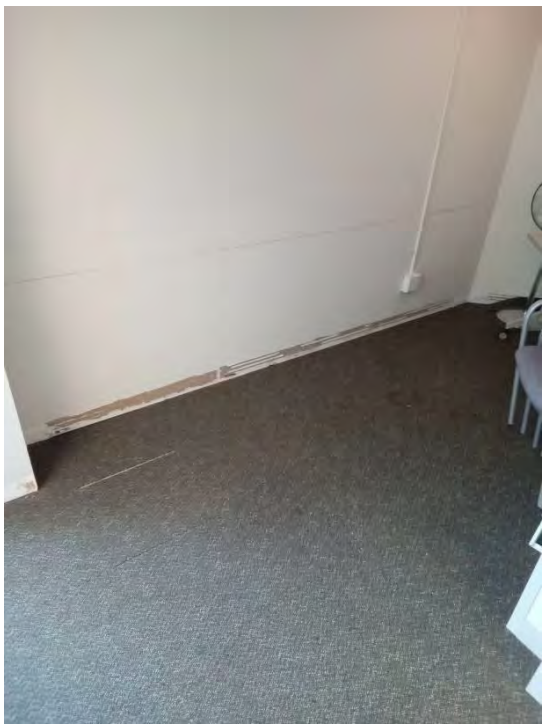
(15)



Created: Thu 27 Jul 08:00 2023
Group: 139 Director Conference

- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(16)



Created: Thu 27 Jul 08:02 2023
Group: 139 Director Conference

- Vinyl Baseboards

(17)

Created: Thu 27 Jul 08:05 2023
Group: 139 Director Conference
Cause of Damage: Wind Driven Rain and Surface Water Flooding
Component Description:

- Vinyl Baseboards
- Exterior Wall Insulation
- Drywall
- Exterior Wall Sheathing
- Carpet
- Electrical Outlets

(18)

Created: Thu 27 Jul 08:07 2023
Group: 140 Office 2
Cause of Damage: Wind Driven Rain
Component Description:

- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(19)

Created: Thu 27 Jul 08:09 2023
Group: 140 Office 2
Cause of Damage: Wind Driven Rain and Surface Water Flooding
Component Description:

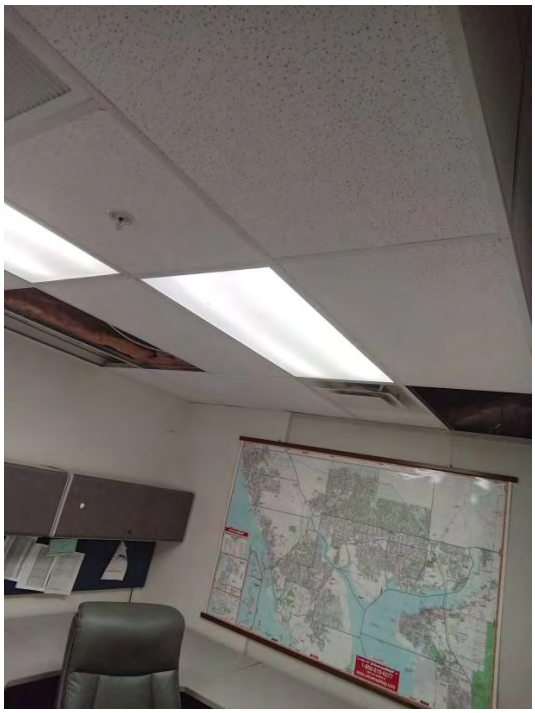
- Vinyl Baseboards
- Exterior Wall Insulation
- Drywall
- Exterior Wall Sheathing
- Carpet
- Electrical Outlets

(20)

Created: Thu 27 Jul 08:15 2023
Group: 121 Copy Room
Cause of Damage: Wind Driven Rain
Component Description:

- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(21)



Created: Thu 27 Jul 08:16 2023
Group: Office 1 Close to Exit
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(22)

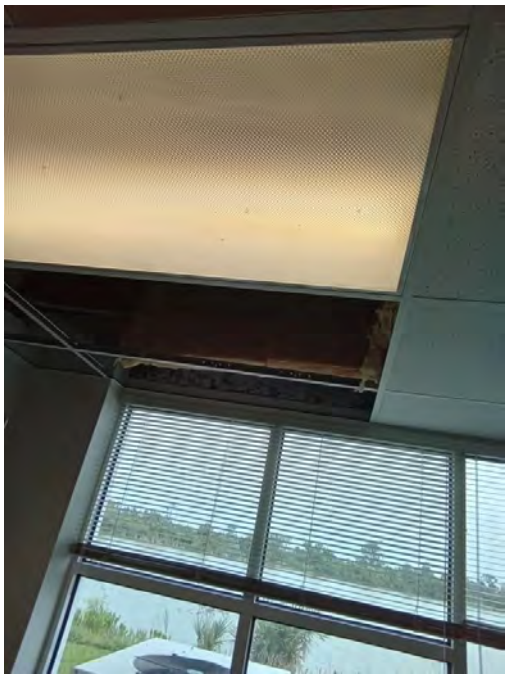
Created: Thu 27 Jul 08:18 2023
Group: Office 2 Close to Exit
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(23)

Created: Thu 27 Jul 08:21 2023
Group: Office 2 Close to Exit
Cause of Damage: Wind Driven Rain and Surface Water Flooding
Component Description:

- Vinyl Baseboards
- Exterior Wall Insulation
- Drywall
- Exterior Wall Sheathing
- Carpet
- Electrical Outlets

(24)



Created: Thu 27 Jul 08:23 2023
Group: Office 3 Close to Exit
Cause of Damage: Wind Driven Rain
Component Description:

- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(25)

Created: Thu 27 Jul 08:24 2023
Group: Office 3 Close to Exit
Cause of Damage: Wind Driven Rain and Surface Water Flooding
Component Description:

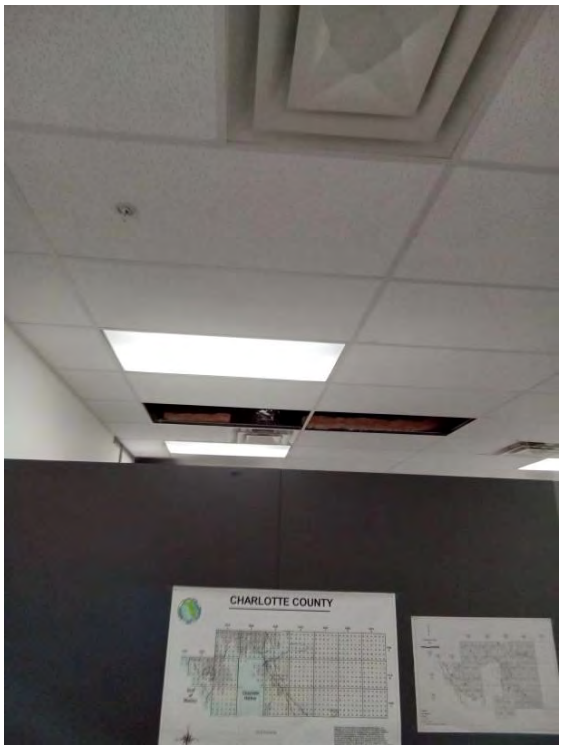
- Vinyl Baseboards
- Exterior Wall Insulation
- Drywall
- Exterior Wall Sheathing
- Carpet
- Electrical Outlets

(26)

Created: Thu 27 Jul 08:48 2023
Group: 122 Customer Records
Cause of Damage: Wind Driven Rain
Component Description:

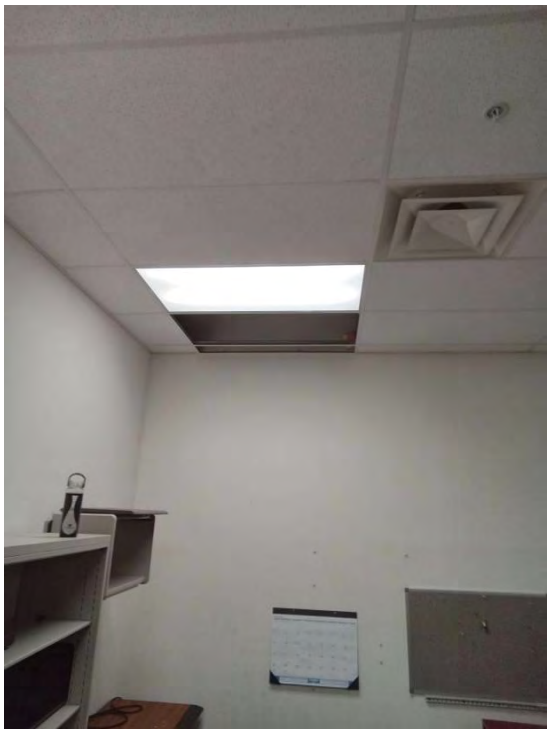
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(27)



Created: Thu 27 Jul 08:50 2023
Group: 123 Engineering
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(28)

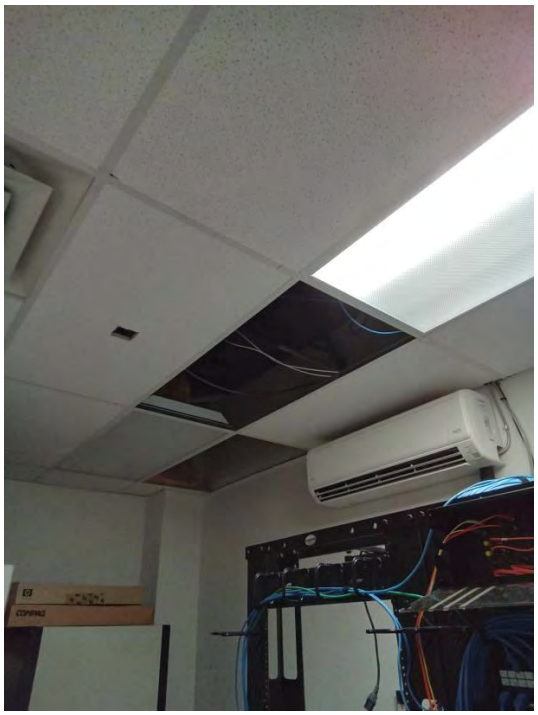


Created: Thu 27 Jul 08:50 2023
Group: 123 Engineering
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(29)

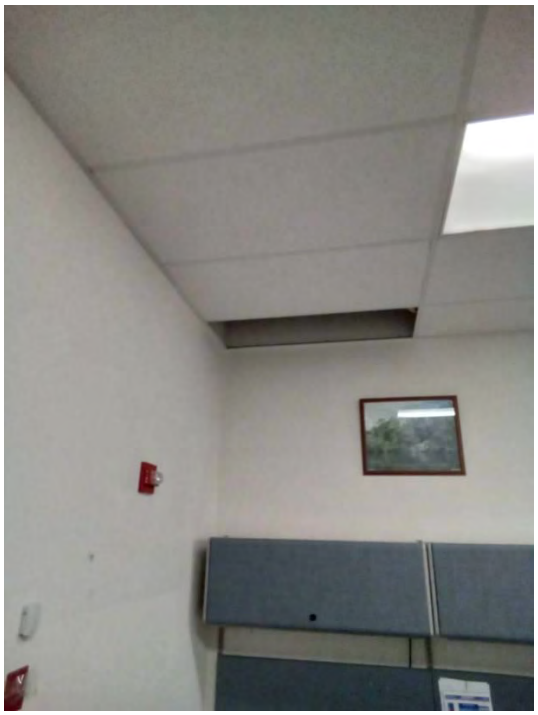
Created: Thu 27 Jul 08:55 2023
Group: 133 Computer Room
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(30)



Created: Thu 27 Jul 08:56 2023
Group: 133 Computer Room
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(31)

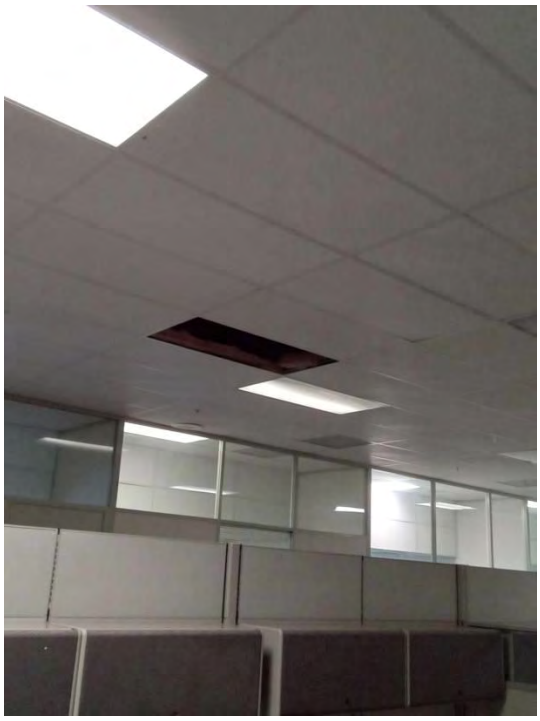


Created: Thu 27 Jul 08:58 2023
Group: 128 Mail Room
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(32)

Created: Thu 27 Jul 08:59 2023
Group: 120 Customer Service
Cause of damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(33)



Created: Thu 27 Jul 09:00 2023
Group: 120 Customer Service
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

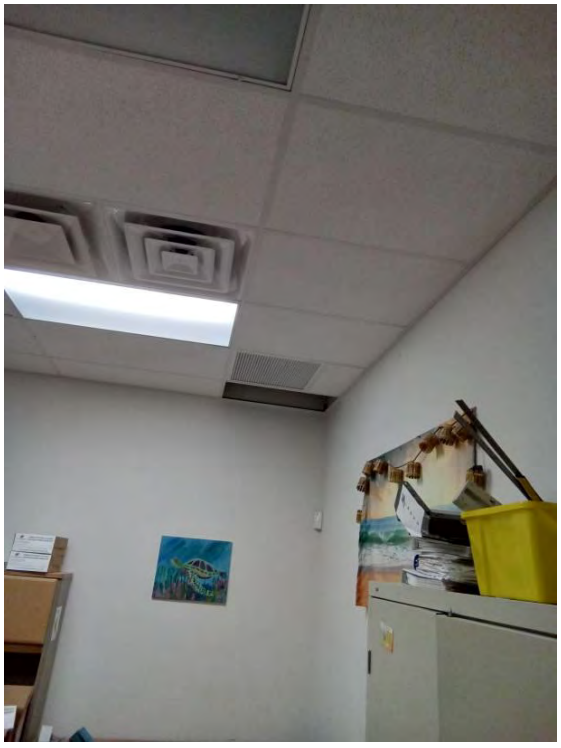
(34)

Created: Thu 27 Jul 09:01 2023
Group: 120 Customer Service
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(35)

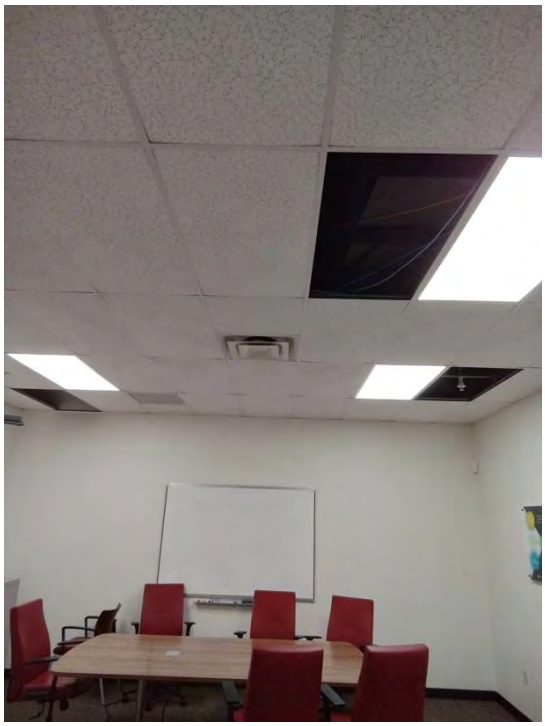
Created: Thu 27 Jul 09:02 2023
Group: 120 Customer Service
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(36)



Created: Thu 27 Jul 09:03 2023
Group: 126 Office 1
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(37)

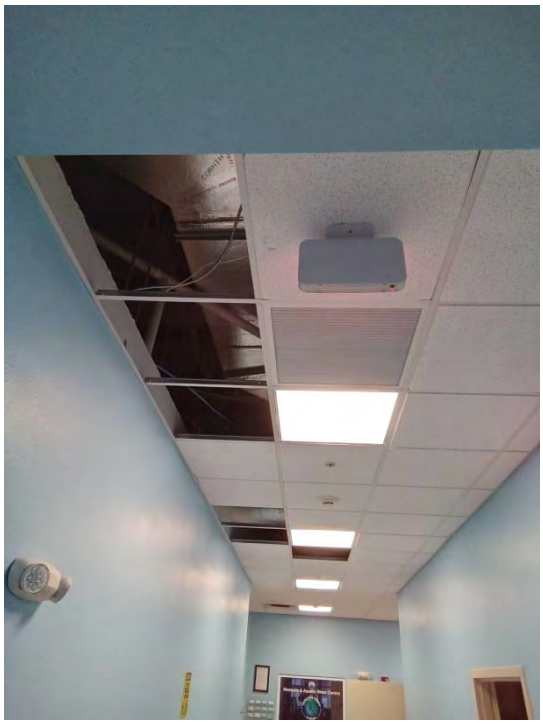


Created: Thu 27 Jul 09:15 2023
Group: 142 Work Room 1
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(38)

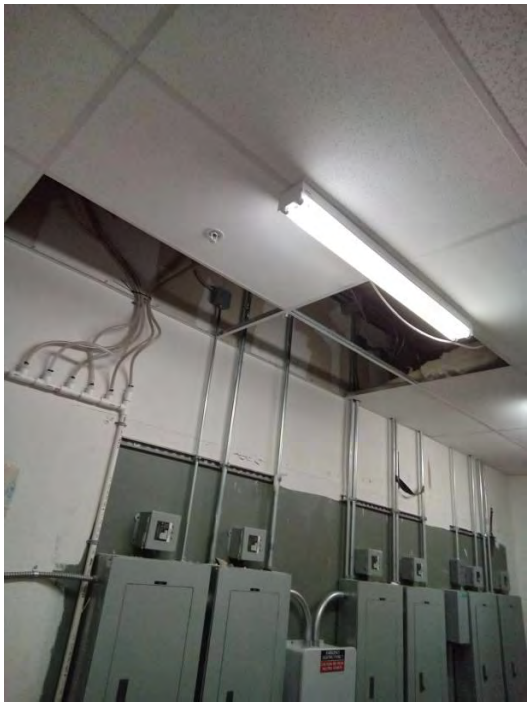
Created: Thu 27 Jul 09:16 2023
Group: 142 Work Room 1
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(39)



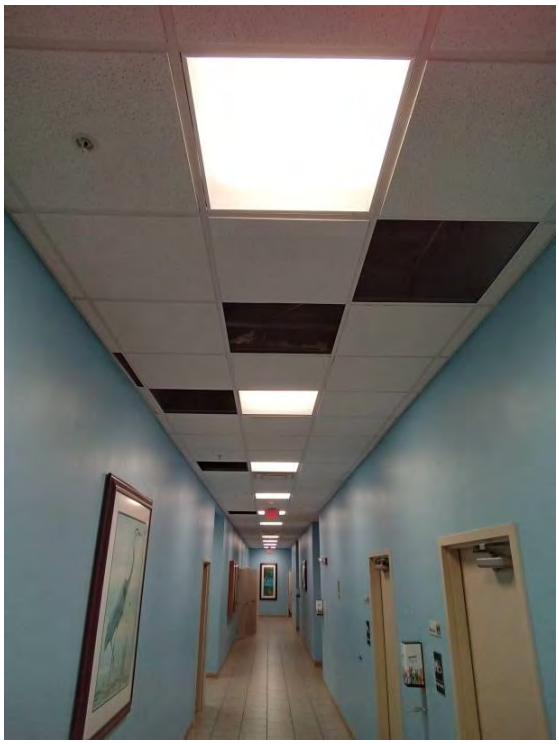
Created: Thu 27 Jul 09:16 2023
Group: 143 Hall 2
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(40)



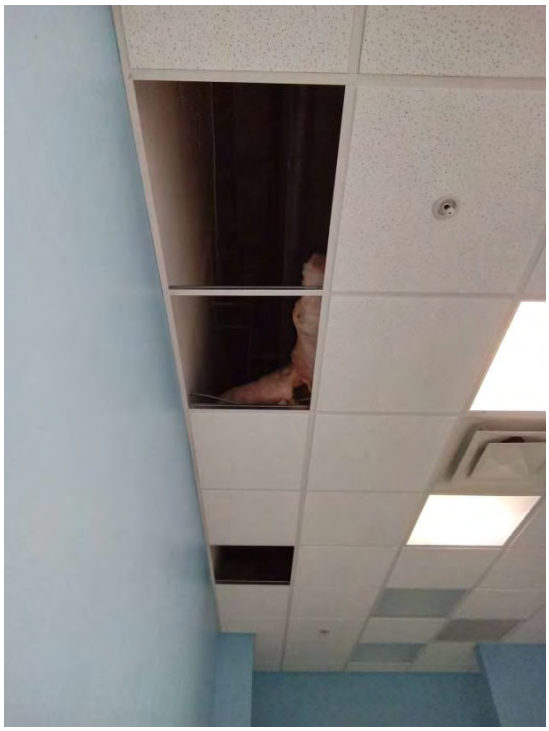
Created: Thu 27 Jul 09:17 2023
Group: 144 Mech Elec Room
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(41)



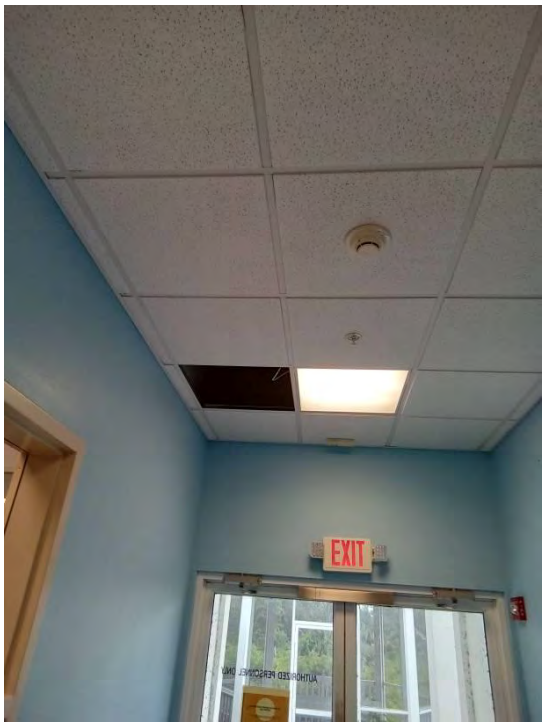
Created: Thu 27 Jul 09:18 2023
Group: 150 Corridor 2
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(42)



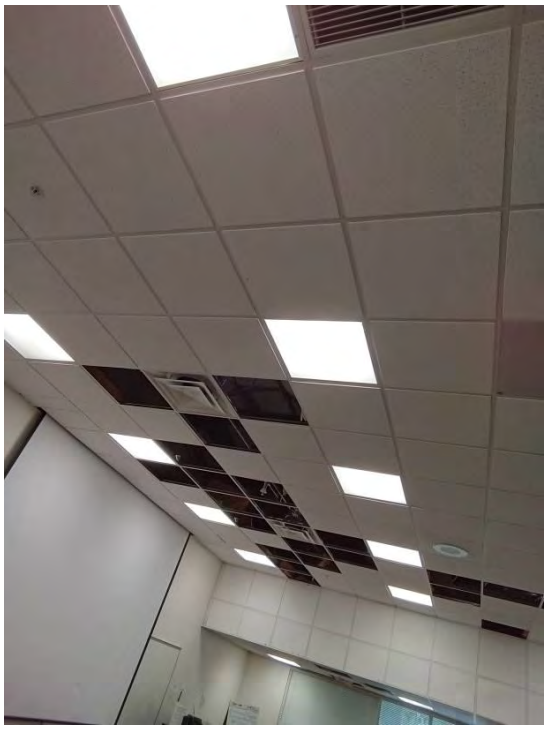
Created: Thu 27 Jul 09:21 2023
Group: 167 Lunchroom
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(43)



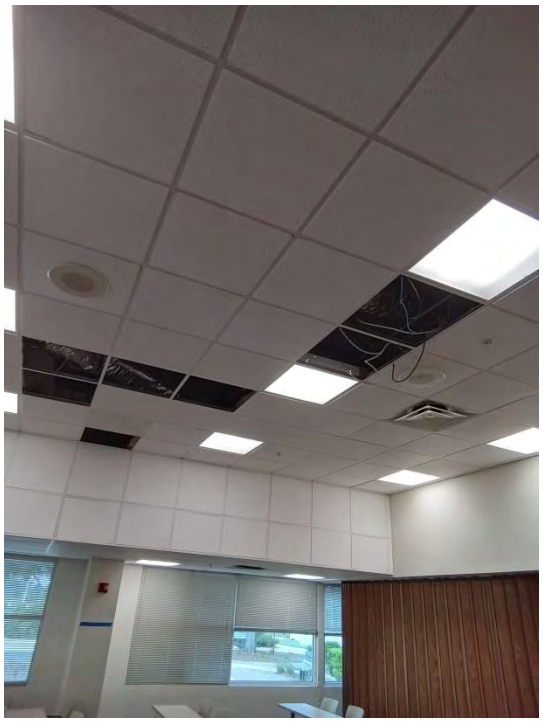
Created: Thu 27 Jul 09:28 2023
Group: 163 Corridor 3
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(44)



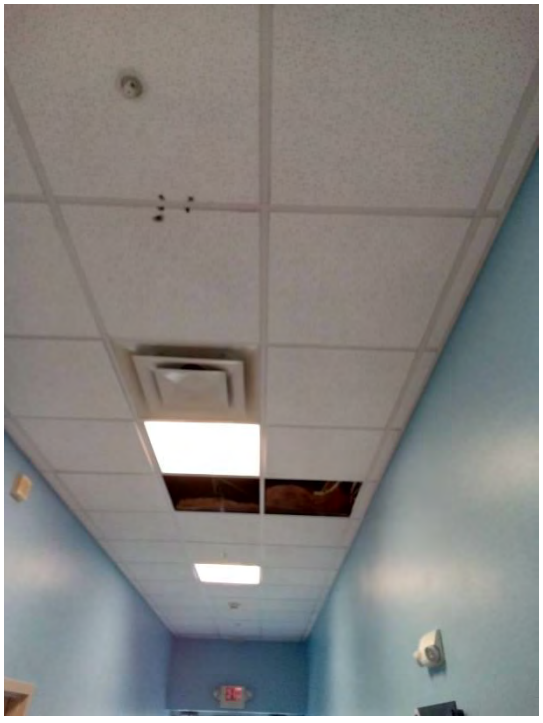
Created: Thu 27 Jul 09:30 2023
Group: 156 Training 2
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(45)



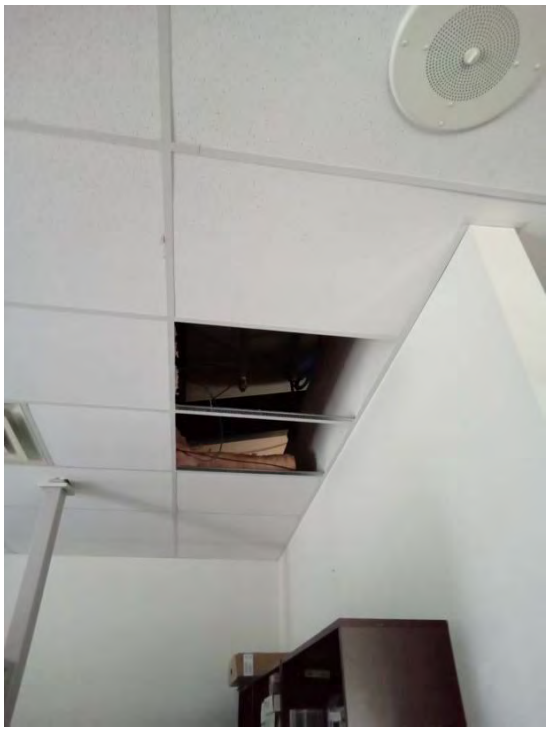
Created: Thu 27 Jul 09:31 2023
Group: 156 Training 2
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(46)



Created: Thu 27 Jul 09:32 2023
Group: 169 Corridor 4
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(47)



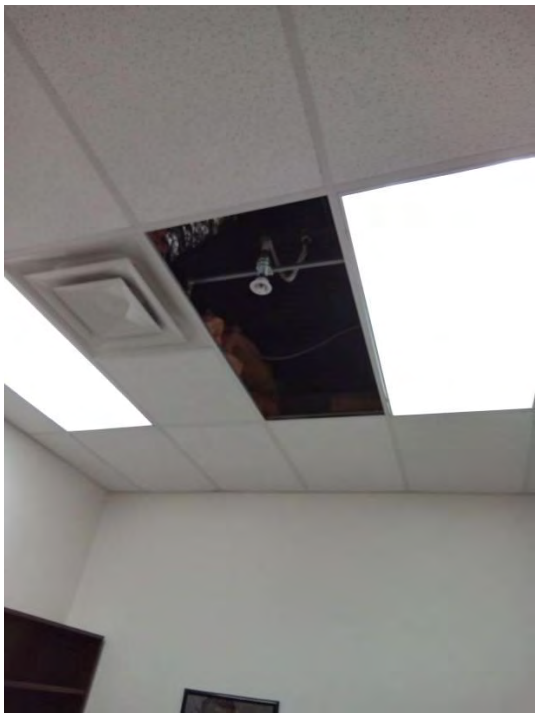
Created: Thu 27 Jul 09:34 2023
Group: 171 Director 3
Cause of Damage: Wind Driven Rain
Component Description:

- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(48)

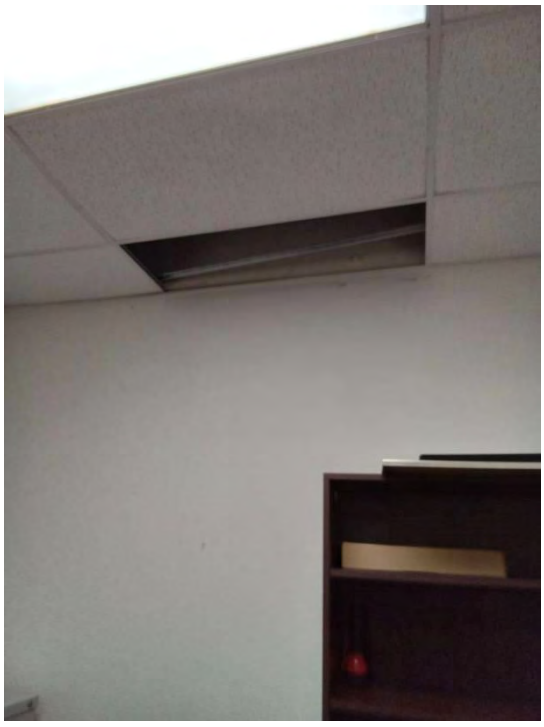
Created: Thu 27 Jul 09:35 2023
Group: 171 Director 3

(49)



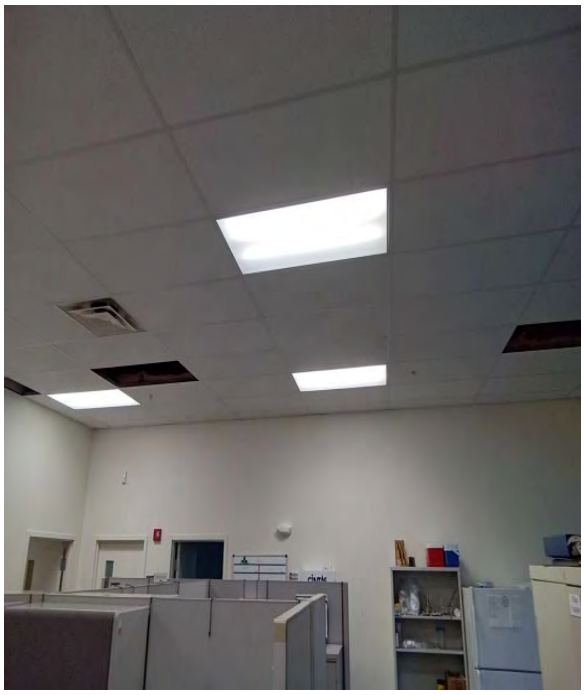
Created: Thu 27 Jul 09:36 2023
Group: 173 Dispatch
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(50)



Created: Thu 27 Jul 09:38 2023
Group: 173 Dispatch
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(51)



Created: Thu 27 Jul 09:39 2023
Group: 159 Work Area 1
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(52)

Created: Thu 27 Jul 09:40 2023
Group: 159 Work Area 1
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

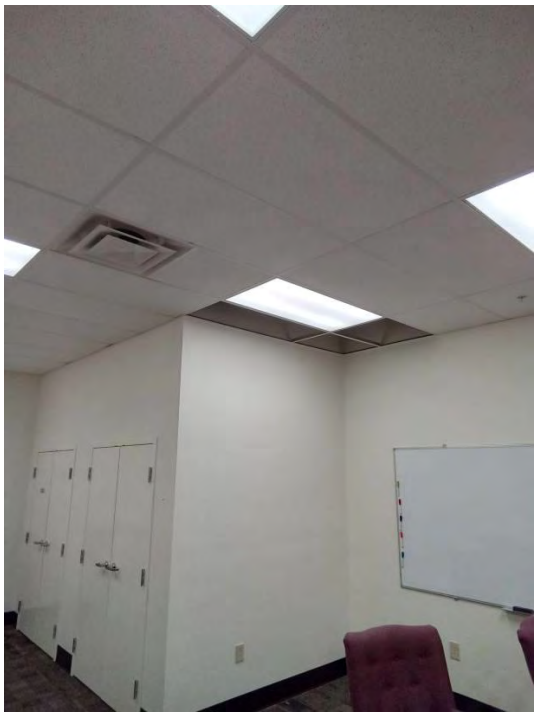
(53)

Created: Thu 27 Jul 09:42 2023
Group: 177 System Office 4
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(54)

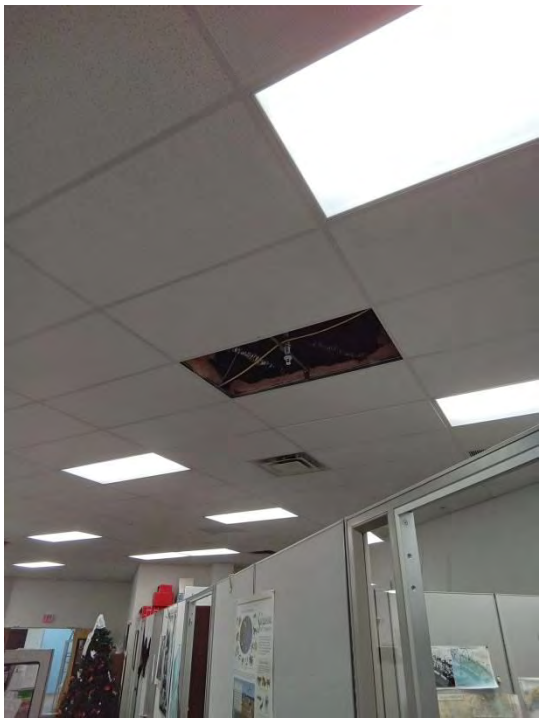
Created: Thu 27 Jul 09:42 2023
Group: 159 Work Area 1
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(55)



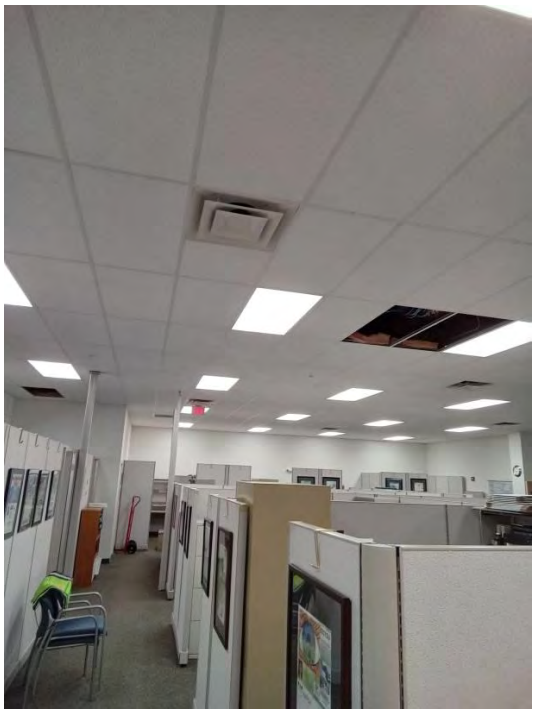
Created: Thu 27 Jul 09:43 2023
Group: 159 Work Area 1
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(56)



Created: Thu 27 Jul 09:50 2023
Group: 146 Environmental
Cause of Damage: Wind Driven Rain
Component Description:
- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(57)



Created: Thu 27 Jul 09:51 2023
Group: 146 Environmental

- Acoustical Ceiling Tiles
- Ceiling Batt Insulation

(58)

Created: Thu 27 Jul 10:35 2023
Group: Exterior
Cause of Damage: High Winds
Component Description:

- LED light pole, round, metal, and single arm.

(59)

Created: Thu 27 Jul 10:37 2023
Group: Exterior
- LED light pole

(60)

Created: Thu 27 Jul 10:38 2023
Group: Exterior
Cause of Damage: High Winds
Component Description:
- Fiber Cement Siding panels
- Roof gutters
- Metal Soffit Panels

(61)

Created: Thu 27 Jul 10:40 2023
Group: Exterior
Cause of Damage: High Winds
Component Description:
- Telecommunications box

(62)

Created: Thu 27 Jul 10:43 2023
Group: Exterior
Cause of Damage: High Winds
Component Description:
- Downspouts

(63) 

Created: Thu 27 Jul 10:44 2023
Group: Exterior
- Downspouts

(64) 

Created: Thu 27 Jul 10:45 2023
Group: Exterior
- Downspouts

(65)

Created: Thu 27 Jul 10:46 2023
Group: Exterior
- Downspouts

(66)

Created: Thu 27 Jul 10:47 2023
Group: Exterior
Cause of Damage: High Winds
Component Description:
- Fiber Cement Siding panels
- Roof Gutters

(67)

Created: Thu 27 Jul 10:48 2023
Group: Exterior
- Fiber Cement Siding panels
- Roof Gutters

(68)

Created: Thu 27 Jul 10:49 2023
Group: Exterior
Cause of Damage: High Winds
Component Description:
- Fiber Cement Siding panels
- Roof Gutters

(69)

Created: Thu 27 Jul 10:50 2023
Group: Exterior

(70)

Created: Thu 27 Jul 10:50 2023
Group: Exterior
Cause of Damage: High Winds
Component Description:

- Fiber Cement Siding panels
- Metal Soffit Panels

(71)

Created: Thu 27 Jul 10:51 2023
Group: Exterior
Cause of Damage: High Winds
Component Description:

- 10 FT of 6-inch galvanized gutters

APPENDICES

APPENDIX 1 – FACILITIES CONDITIONS ASSESSMENT

CHARLOTTE COUNTY EAST PORT ENVIRONMENTAL CAMPUS

25550 Harborview Dr, Port Charlotte, FL 33980

Facility Conditions Assessment

Affiliated Engineers

Table of Contents

Executive Summary

Based on the Facility Conditions Assessment (FCA) conducted at the East Port Environmental Campus by Affiliated Engineers, Inc. (AEI), the condensed FCA findings relevant to the Mechanical, Electrical, and Plumbing systems assessed are as follows:

Direct Condition Rating (DCR) breakdown across the Mechanical, Electrical and Plumbing disciplines:

DCR	1 - Great	2 - Good	3 - Fair	4 - Repair	5 - Replace	Equipment
Mechanical		**11**	**6**	**2**	**3**	**22**
Electrical		**2**		**1**		**3**
Plumbing	**1**			**1**		**2**
Totals	**1**	**13**	**6**	**4**	**3**	**27**

Table 1. Mechanical systems data from Cx Alloy assessment software.

Total **Mechanical** (HVAC) systems assessed:	22
Average **Direct Condition Rating** of Mechanical equipment assessed:	**3**
Average **Age** of Mechanical equipment assessed:	12
Average **Estimated Service Life** of Mechanical equipment assessed:	15
Average **Remaining Service Life** of Mechanical equipment assessed:	3

Table 2. Electrical systems data from Cx Alloy assessment software.

Total **Electrical** (interior, exterior, low voltage) systems assessed:	3
Average **Direct Condition Rating** of Electrical equipment assessed:	**2.7**
Average **Age** of Electrical equipment assessed:	23
Average **Estimated Service Life** of Electrical equipment assessed:	40
Average **Remaining Service Life** of Electrical equipment assessed:	17

Table 3. Plumbing systems data from Cx Alloy assessment software.

Total Plumbing (water heating, fixtures) systems assessed:	2
Average Direct Condition Rating of Plumbing equipment assessed:	2.5
Average Age of Plumbing equipment assessed:	13
Average Estimated Service Life of Plumbing equipment assessed:	15
Average Remaining Service Life of Plumbing equipment assessed:	2

As illustrated above, half of the mechanical systems assessed were in good condition, while half were not. This was based on observed performance, and evidence of storm-related damage to exterior condensing units. Additional details regarding HVAC system performance are provided in the accompanying ***HVAC Systems Performance Report*****.** Of the electrical systems assessed, the interior high and low voltage systems were in good condition, while the exterior power and lighting experienced significant storm-related damage and requires repair or replacement. The plumbing systems included the water heating, and the water distribution and sanitary waste fixtures. The water heater is in great condition, while the fixtures will need repair or replacement. While possible, it is uncertain, if the hurricane contributed to the failure of the plumbing fixtures.

Introduction

In the pursuit of valuable and meaningful resiliency and maintainability data, the Affiliated Engineers, Inc (AEI) team was asked to conduct a Facility Conditions Assessment (FCA) of the Mechanical, Electrical, and Plumbing systems at the East Port Environmental Campus. An on-site assessment was sought to attempt to identify and anticipate any concerns that might result in facility downtime, damages, or significant capital investment. An additional request for this project was to take measurements of the airflows and discharge air temperatures from each air conditioning (AC) unit to compare its operational data to the provided design data. This informed the accompanying ***HVAC Systems Performance Report***, which was modeled after a conventional Tab measurement report. To best accomplish this effort, and to arrive at valuable reporting and direction, the following Assessment Scope was established:

Assessment Scope

1. Evaluate each of the Indoor and Outdoor HVAC Units for:
    a. Functional Specifications,
    b. Physical integrity of the structure, inside and outside,
    c. Functional performance,
    d. Life remaining, and
    e. Possible damage that may have occurred during the 28-Sep-2022 hurricane.
2. Measure airflows and discharge air temperatures for each AC unit and exhaust fan. Compare values to available design values. Provide correlating HVAC System Performance Report, representing the "Test" (measurement) portion of a conventional TAB report.
3. Evaluate the building electrical systems, to include accessible interior and exterior high voltage and lighting and low voltage systems, for integrity of service and overall condition.
4. Evaluate plumbing systems, to include water heating and plumbing fixtures, for proper functionality and any leaks or failures.

Limitations

Equipment ratings, issues observed, and recommendations made and presented in this report were all based on walk-through, non-invasive observations of the areas of the building which were readily accessible during our visual review. Project preparation and scope were derived from information provided by CSA, in the form of original drawings from the 2001 construction of the facility. No other drawings or MEP-related documents were provided. Any and all deviations from the original design will inherently impact the thoroughness and accuracy of this and any other accompanying reports. If deviations from the provided design exist, AEI will use its best judgment in determining installed system configurations and component locations. All DCRs are derived from the DCR Table (*Appendix 1*). ESL is based on the ASHRAE ELE Chart (*Appendix 2*) and other assorted sources.

Building Condition

While our assessment focused on the MEP systems within the facility, a vacant building with a compromised envelope can impact the systems within. It was evident upon arrival that the East Port Environmental Campus had been promptly vacated. From past FCA experience, rapid departure of a facility can mean a lack of maintenance or care for internal infrastructure. Despite the apparent hurricane damage, the interior MEP systems appeared maintained and mostly operational. Light was found to be entering above-ceiling spaces where the envelope was compromised, indicating that certain areas were still exposed to outside conditions. This was also evident in certain areas where the carpeting was still holding moisture and where dry-wall had been removed. In discussing the known damages caused by the hurricanes with the facilities teams, we were informed that many immediate HVAC repairs were made to maintain functionality. Obvious repairs remain, as indicated in this report.

Mechanical Systems Summary

This Mechanical Systems Summary recaps detailed content from the CxAlloy Mechanical Equipment Report (*Appendix 3*), created from data collected during the FCA. Mechanical equipment information was loaded into CxAlloy from original drawings, then it was confirmed, updated, or supplemented during the FCA against installed equipment. The equipment within Cx Alloy features information on the Areas Served based on the original drawings. Some changes were found in the field due to the various renovations.

Direct Condition Rating	
Color Code	Score
Great	**1**
Good	**2**
Fair	**3**
Repair	**4**
Replace	**5**

The mechanical equipment within the building consists of nineteen split system AC units, two exhaust fans, and one mini-split unit. The AC systems were assessed as a whole systems, rather than separately, as replacement usually involves both the interior and exterior components.

Based on the observed condition of the mechanical equipment assessed, the assessor applied the most appropriate *Direct Condition Rating* (DCR) score. The age of the building and available data plates informed the *Age* of the mechanical equipment. Each type of equipment was researched against the ASHRAE ELE Chart to determine its *Estimated Service Life* (ESL). The equipment *Age* was then subtracted from the *ESL* to determine the *Remaining Service Life* (RSL). This information is summarized for the mechanical equipment in the table below.

Table 4. Mechanical equipment data from CxAlloy Mechanical Equipment Report

Total Mechanical (HVAC) systems assessed:	22
Average Direct Condition Rating of Mechanical equipment assessed:	3
Average Age of Mechanical equipment assessed:	12
Average Estimated Service Life of Mechanical equipment assessed:	15
Average Remaining Service Life of Mechanical equipment assessed:	3

As illustrated in Table 4, the mechanical systems have an average mechanical equipment age of 12 years and an average DCR score of 3 (Fair). This shows that the systems remain operational but there are some repairs that need to be made. By our estimation, the facility's mechanical equipment has an average RSL of 3 years. Most of the equipment, however, has 6 years of service life remaining. The few pieces of equipment that are original to the building skew the averages since the age is significantly different. The ductwork and diffusers/registers for each of these units was observed to be in great condition, with no accumulation of dirt, debris or excess moisture observed. This is typically indicative of appropriate and timely maintenance practices.

Example Findings

During the Mechanical FCA, most of the mechanical equipment was observed to be in fair condition. The following are examples of images and comments from the CxAlloy Mechanical Equipment Report showing issues that warrant prompt correction to avoid potential damages.

AC Condensing Units

Virtually every AC condensing unit on the building's exterior showed signs of damage, likely from recent hurricanes. Many of the condenser coil fins were dented and damaged, likely from airborne debris, thus reducing the RSL and efficiency of the systems. Line set insulation showed wear and damage, and has been known to blow off in strong winds. This also lowers the system's efficiency. Low voltage control wires were observed detached and with damage, and could easily see further damage from lawn care equipment. Once damaged, these wires may not signal the condenser to run when demand is present. Lastly, several high voltage AC power supply whips were observed to be compromised with the interior wire now exposed to the elements and subject to failure. We recommend repair or replacement of the damaged condensers.

AC Air Handling Units

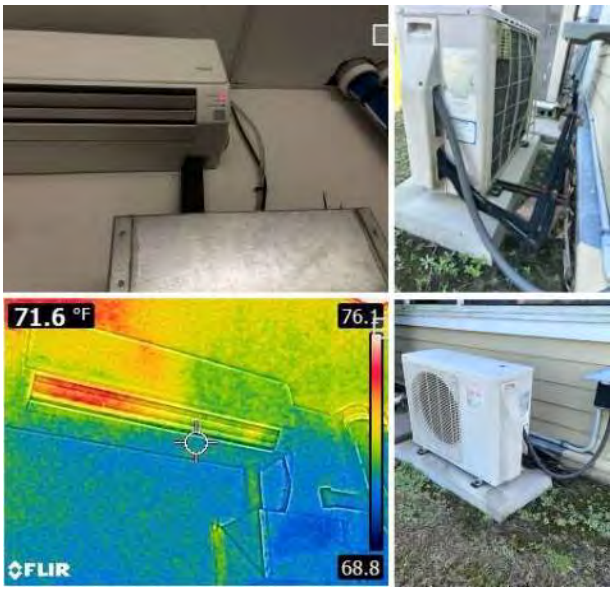
While most of the AHUs proved functional, a few showed low air flow, and most would not produce heat when heat mode was enabled at the corresponding thermostat. There were at least two mismatch systems observed, in which compatible condenser were mated with original AHUs. From the HVAC Systems Performance Report, it is worth noting that the installed systems exceed design airflow values, but fall short on cooling BTUs.

Exhaust Fans

There are two exhaust fans serving this building. One inline fan serves the restrooms within the building. This fan was found to be operational, as tested at several exhaust grilles. Another fan, which is a combination fan/light assembly, serves a space which used to be a single occupant restroom, but is now used as a storage closet. The fan and the light were not operational when tested, but considering the new space use, it does not require replacement. The inline exhaust for the large restrooms should be replaced, as it is at the end of its ESL and storm-force winds have been shown to have detrimental effects on exhaust fans.

IT Room Mini-Split

The installed Fujitsu Mini-Split system was observed in an alarm state, producing now cool air. The thermal heat signature confirms the warm air output. Despite demand from the space and thermostat, the condenser fan would not energize. Functionality of these units is extremely important, as they protect valuable and sensitive IT equipment. It is likely that the mini-split condensing unit was subject to high force winds and water intrusion, given its location at the eastern corner of the building, adjacent to the retention pond. We recommend this system is replaced with a more efficient one.



Electrical Systems Summary

This Electrical Systems Summary recaps detailed content from the CxAlloy Electrical Equipment Report (*Appendix 4*), which was created from data collected during the FCA. Electrical equipment information was loaded into CxAlloy from original drawings, then it was confirmed, updated, or supplemented during the FCA against installed equipment. The CxAlloy Electrical Equipment Report focuses on installed electrical systems, broken down by exterior systems, interior systems, and low voltage systems.

Direct Condition Rating	
Color Code	Score
Great	**1**
Good	**2**
Fair	**3**
Repair	**4**
Replace	**5**

Based on the observed condition of the electrical equipment assessed, the assessor applied the most appropriate *Direct Condition Rating* (DCR) score. The age of the building and available data plates informed the *Age* of the electrical equipment. Each type of equipment was researched across various sources to determine its *Estimated Service Life* (ESL). The equipment *Age* was then subtracted from the *ESL* to determine the *Remaining Service Life* (RSL). This information is summarized for the electrical equipment in the table below.

Table 5. Electrical equipment data from CxAlloy Electrical Equipment Report

Total Electrical (interior, exterior, low voltage) systems assessed:	3
Average Direct Condition Rating of Electrical equipment assessed:	2.7
Average Age of Electrical equipment assessed:	23
Average Estimated Service Life of Electrical equipment assessed:	40
Average Remaining Service Life of Electrical equipment assessed:	17

As illustrated in Table 4, despite an average electrical equipment age of 23 years, the assessed equipment carries a DCR score of 2.7 (Fair), mainly because of the damage to exterior electrical and lighting. Damage aside, the facility appeared to be well maintained with quality, sustained maintenance practices and occupant use, not abuse. By our estimation, the facility's electrical equipment has a RSL of about 17 years.

Example Findings

The following are images and comments from the CxAlloy Electrical Report (*Appendix 4*).

GFCI Exterior Outlets

All of the exterior GFCI outlets were assessed for functionality. Most of the outlets were missing their covers and would not test and reset. They were likely exposed to winds and rain and should be replaced.

AC Power Supply Whips

Several condensing unit AC power supply whips were observed compromised and exposing the internal wiring to the elements. Other wiring was observed unkept and looked as if high winds had blown it loose.

Exterior Lighting

Much of the exterior lighting was damaged, with lighting fixture components scattered about the exterior. Apparent stress to connected wiring & conduit was also observed. Replacement of all exterior lighting is recommended.

Incoming Service

Incoming service from the utility provider appeared to be in good condition and there was stable power to the facility. It is still advised that the infrastructure and power quality are inspected by the appropriate providers.

Interior Outlets

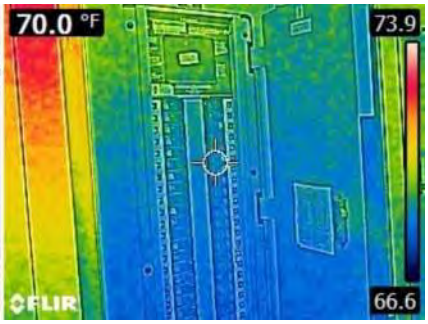
Well over 100 normal and GFCI interior outlets were tested for proper operation. Of those sampled, two were observed to have neutrals reversed. This should be corrected immediately to avoid risk of shock or fire.

Interior Lighting

Other than a few observed bad bulbs, all interior lighting and switches functioned properly. Thermal imaging was also done to check for hot spots in the ceiling, but none were discovered.

Electrical Switchgear

Electrical switchgear, to include panels, breakers, and transformers, were visually inspected and scanned. No issues were found, and system components were within operating temp range.



Low Voltage - Fire

The main fire alarm panel and peripheral low voltage components were visually assessed and scanned for issues and hot spots. All board components were within normal temp ranges.

Low Voltage - Security

Security and other low voltage peripheral panels were visually assessed and scanned for issues and hot spots. All board components were within normal temp operating ranges.

Low Voltage - IT

Various IT equipment, closets racks, and components were visually assessed and thermal scanned for hot spots. All of the assessed IT components were within normal temp operating ranges.

Plumbing Systems Summary

This Plumbing Systems Summary recaps detailed content from the CxAlloy Plumbing Equipment Report (*Appendix 5*), which was created from data collected during the FCA. Plumbing equipment information was loaded into CxAlloy from original drawings, then it was confirmed, updated, or supplemented during the FCA against installed equipment. The CxAlloy Plumbing Equipment Report focuses on installed plumbing systems, broken down by water heating and plumbing fixtures.

Direct Condition Rating	
Color Code	Score
Great	**1**
Good	**2**
Fair	**3**
Repair	**4**
Replace	**5**

Based on the observed condition of the plumbing systems assessed, the assessor applied the most appropriate *Direct Condition Rating* (DCR) score. The age of the building and available data plates informed the *Age* of the plumbing equipment. Each type of equipment was researched across various sources to determine its *Estimated Service Life* (ESL). The equipment *Age* was then subtracted from the *ESL* to determine the *Remaining Service Life* (RSL). This information is summarized for the plumbing equipment in the table below.

Table 6. Plumbing equipment data from CxAlloy Plumbing Equipment Report

Total Plumbing (water heating, fixtures) systems assessed:	2
Average Direct Condition Rating of Plumbing equipment assessed:	2.5
Average Age of Plumbing equipment assessed:	13
Average Estimated Service Life of Plumbing equipment assessed:	15
Average Remaining Service Life of Plumbing equipment assessed:	2

As illustrated in Table 6, despite an average electrical equipment age of 13 years, the assessed equipment carries a DCR score of 2.5 (Fair), mainly because of the leaks observed at the various plumbing fixtures throughout the facility restrooms. Fixtures aside, the water heating system appeared to be well maintained with quality, sustained maintenance practices and occupant use, not abuse. By our estimation, the facility's plumbing equipment has a RSL of about 2 years.

Example Findings

The following are images and comments from the CxAlloy Plumbing Report (*Appendix 5*).

Fixtures - Toilets

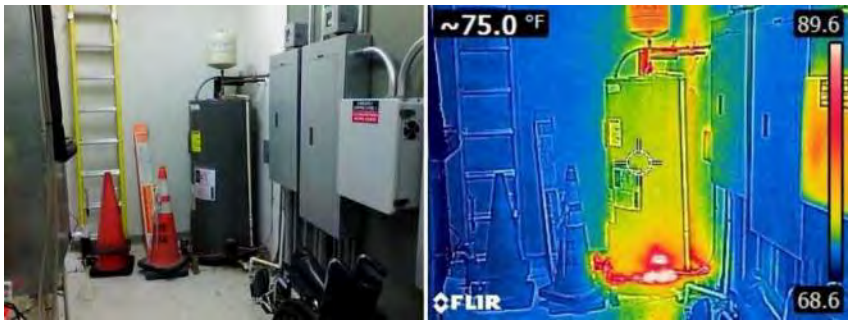
Half of the toilets and urinals assessed leaked at the flush valve or the tank-to-bowl gasket. This only occurred when flushed. Many of the fixtures had no water in them prior to assessment, so dry traps and seals were likely.

Fixtures - Sinks

More than half of the facility sinks leaked at the faucet base or the P-trap when tested. Hurricane force winds may have helped dry out the P-traps, as high winds across vent stacks can cause water in traps to move.

Water Heating System

The Water Heating System was observed to be in great condition and performing like new, with no apparent damage. Thermal imaging shows profile of the water heater and the recirc pump.



Conclusion

As part of this FCA, AEI assessors observed specific Mechanical, Electrical, and Plumbing systems, noting various issues resulting from age and exposure to hurricane conditions. Assorted resiliency, optimization, and maintenance issues were noted in this report and as comments in the attached CxAlloy reports. Recommendations relative to the Mechanical, Electrical, and Plumbing systems were made. The most urgent recommendation is to address the exterior electrical and lighting issues, and the AC condensing units that apparently suffered significant storm-related damages. Replacing or repairing these items during a single mobilization could result in cost savings and efficiency gains, especially in conjunction with other building improvements. Additional investigation and retro-commissioning activities may prove beneficial in identifying more focused maintenance activities. If requested, AEI would be grateful to assist in these efforts.

Thank you for including our team in this FCA effort, and best of luck with this facility moving forward!

AEI FCA Team

Appendix 1

Direct Condition Rating (DCR) Definitions		
Rating	**Rating Definition**	**Score**
Green	Entire component section or component section sample is free of observable or known distresses. Component section is less than one year old.	1
	No component section or sample serviceability or reliable reduction. Some, but not all, minor (non-critical) subcomponents may suffer from slight degradation or few major (critical) subcomponents may suffer from slight degradation. Component section greater than one year old.	
Blue	Slight or no serviceability or reliability reduction overall to the component-section or sample. Some, but not all, minor (non-critical) subcomponents may suffer from minor degradation or more than one major (critical) subcomponent may suffer from slight degradation.	2
	Component-section or sample serviceability or reliability is degraded but adequate. A very few major (critical) subcomponents may suffer from moderate deterioration with perphaps a few minor (non-critical) subcomponents suffer from severe deterioration.	
Amber	Component-section or sample serviceability or reliability is definitely impared. Some but not a majority. Major (critical) subcomponents may suffer from moderate deterioration with perhaps many minor (non-critical) subcomponents may suffer from severe degradation.	3
	Component-section or sample has significantly serviciability or reliability loss. Most subcomponents may suffer from moderate degradation or a few major (critical) subcomponents may suffer from severe degradation.	
Orange	Significant serviceability or reliability reduction in component-section or sample. A majority of subcomponents are severely degraded and others may have varying degrees of degradation.	4
	Severe serviceability or reliability reduction to the component-section on or sample such that it barely able to perform. Most subcomponents arc severly degraded.	
Red	Overall component-section on degradation is total. Few, if any subcomponent salvageable. Complete loss of component-section or sample serviceability.	5

Appendix 2

ASHRAE Equipment Life Expectancy chart

ASHRAE is the industry organization that sets the standards and guidelines for most all HVAC-R equipment. For additional info about ASHRAE the website is www.ashrae.org .

Equipment Item	Median Years
Air conditioners	
Window unit	10
Residential single or Split Package	15
Commercial through-the wall	15
Water-cooled package	15
Heat Pumps	
Residential air-to-air	15
Commercial air-to-air	15
Commercial water-to-air	19
Roof-top air conditioners	
Single-zone	15
Multi-zone	15
Boilers, hot water (steam)	
Steel water-tube	24 (30)
Steel fire-tube	25 (25)
Cast iron	35 (30)
Electric	15
Burners	21
Furnaces	
Gas- or oil-fired	18
Unit heaters	
Gas or electric	13
Hot water or steam	20
Radiant Heaters	
Electric	10
Hot water or steam	25

Equipment Item	Median Years
Air terminals	
Diffusers, grilles, and registers	27
Induction and fan coil units	20
VAV and double-duct boxes	20
Air washers	17
Ductwork	30
Dampers	20
Fans	
Centrifugal	25
Axial	20
Propeller	15
Ventilating roof-mounted	20
Coils	
DX, water, or steam	20
Electric	15
Heat Exchangers	
Shell-and-tube	24
Reciprocating compressors	20
Packaged chillers	
Reciprocating	20
Centrifugal	23
Absorption	23
Cooling towers	
Galvanized metal	20
Wood	20
Ceramic	34

Equipment Item	Median Years
Air-cooled condensers	20
Evaporative condensers	20
Insulation	
Molded	20
Blanket	24
Pumps	
Base-mounted	20
Pipe-mounted	10
Sump and well	10
Condensate 15	
Reciprocating engines	20
Steam turbines	30
Electric motors	18
Motor starters	17
Electric transformers	30
Controls	
Pneumatic	20
Electric	16
Electronic	15
Valve actuators	
Hydraulic	15
Pneumatic	20
Self-contained	10

Appendix 3

Equipment

22 **Mechanical** Equipment sorted by **name**

AC-1

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 163
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-1			

Areas Served 5

Spaces	Description	Floor	Building	Campus
Director 2 164				
Dispatch 173				
Storage 172				
Director 3 171				
Print Shop 162				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number CBX27UH-060-230-6-03
Indoor Unit Serial Number 1614A18619
Manufacturer Lennox
Outdoor Unit Model Number SSB060H4S44Y
Outdoor Unit Serial Number 5814A14819
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 12

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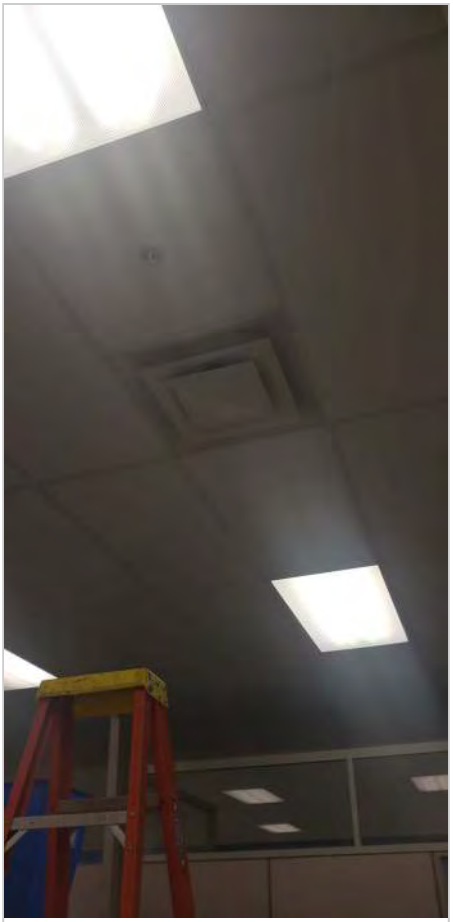
20231218_092302.jpg



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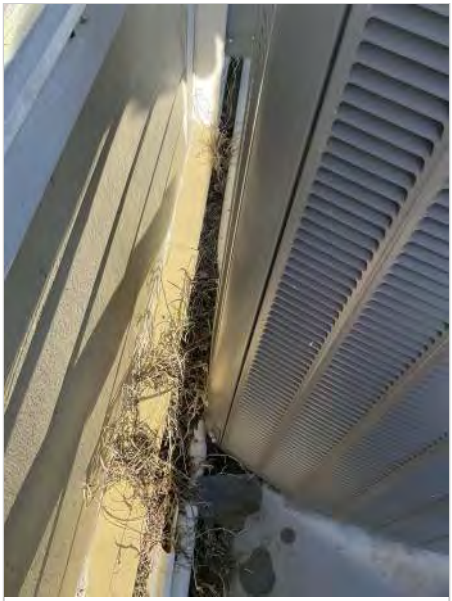

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Comments 1

The outdoor unit featured some minor corrosion around some of the supporting brackets as well as some damaged insulation. Some plants have grown up around the back of the unit as well. Minor corrosion was observed on the exposed copper components. Some algae has accumulated around the base of this unit.

The indoor unit was visibly in good condition. The fan sounded smooth when starting and stopping and during operation. The ductwork, copper tubing, and insulation was in good condition inside.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

The unit was able to provide cooling but it was not able to provide heating. This unit is equipped with electric heat strips. It is possible that power surges during the hurricane could have resulted in damage to the heat strips.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/18/2023 at 04:27 PM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-2

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 163
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-2			

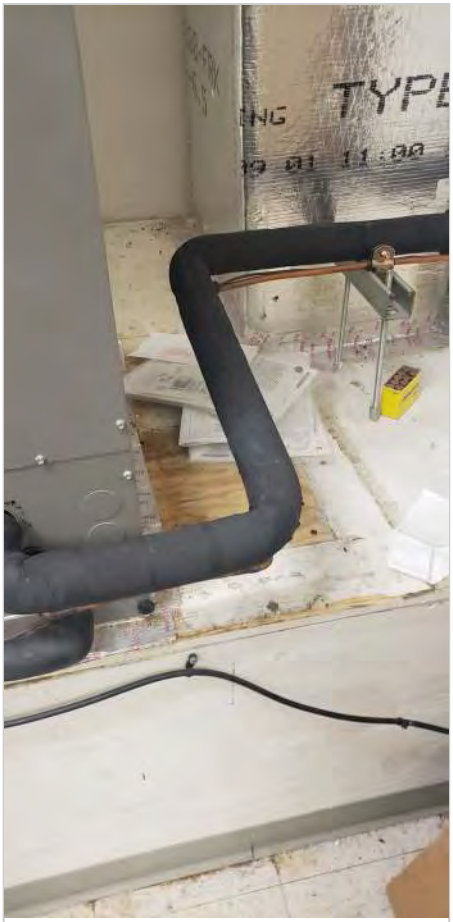
Areas Served 3

Spaces	Description	Floor	Building	Campus
Work Area 1 159				
System Office 4 177				
Work Room 161				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number CBX27UH-060-230-6-03
Indoor Unit Serial Number 1614A18608
Manufacturer Lennox
Outdoor Unit Model Number SSB060H4S44Y
Outdoor Unit Serial Number 5814A14827
Register 1 Rating 1
Register 2 Rating TBD
Remaining Service Life 6 Years

Photos 11



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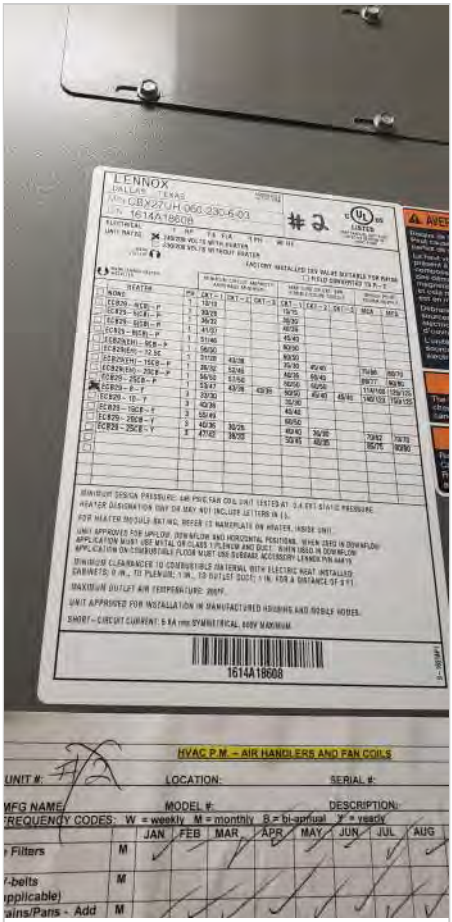

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Comments 1

The outdoor unit features some damaged insulation on its refrigerant lines and some mild UV damage to the casing (an expected amount for the age of the unit). The unit remains level after the storm.

The indoor unit was visibly in good conditioned and made no excessive noise when operating. The insulation and tubing inside also appeared to be in good condition.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

The ductwork configuration for this unit is different from what was expected. This unit was supposed to serve the open work area as well as a smaller work room. Instead the work room is served by AC-3.

Both heating and cooling appeared to function as expected for this unit.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/18/2023 at 04:41 PM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-3

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

3

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-3			

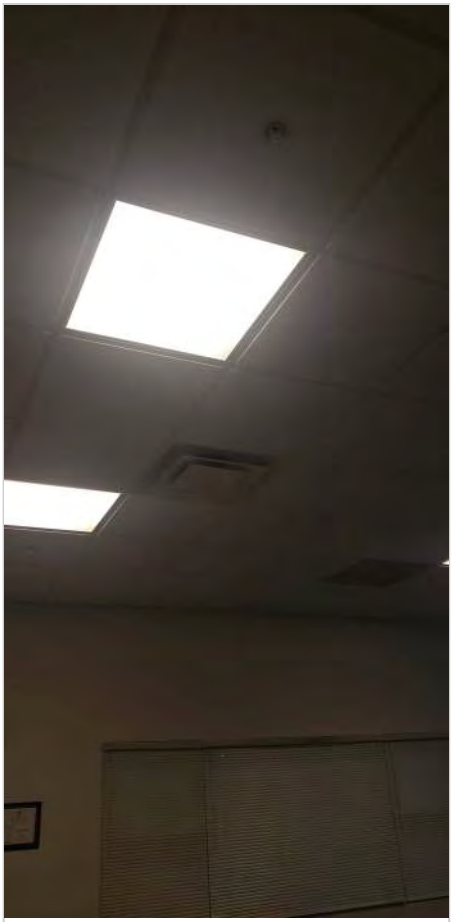
Areas Served 1

Spaces	Description	Floor	Building	Campus
Conference Room 3 168				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number CBX27UH-024-230-6-02
Indoor Unit Serial Number 1614A06041
Manufacturer Lennox
Outdoor Unit Model Number 14ACX-024-230-16
Outdoor Unit Serial Number 1914B18071
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 16



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IMG_2009.jpeg

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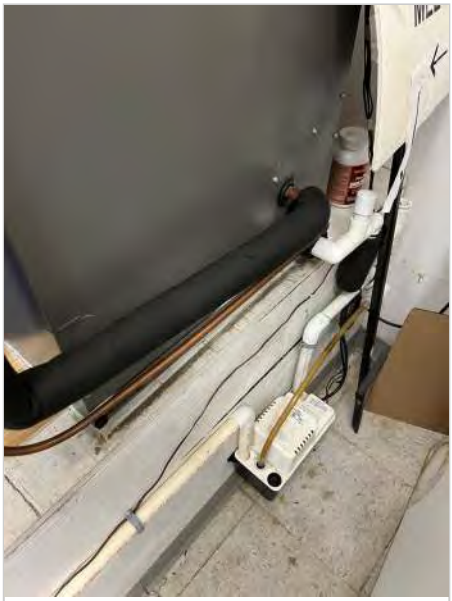

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Comments 1

The outdoor unit featured some corrosion on the supporting brackets as well as on some of the copper tubing. The casing of the unit features some UV damage. The refrigerant line insulation is slightly damaged as well. Partially from UV and possibly also from salt water conditions.

The indoor unit appeared to be in good condition, operating quietly without any excessive noise. The insulation and tubing inside also seemed to be well-maintained.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

The duct configuration is slightly different than what was expected from the drawings. The unit was supposed to only serve a conference room, but now it also serves a work room which was supposed to have been served by AC-2.

During testing, heating did not function. This unit is equipped with electric heat strips. It is possible that power surges during the hurricane could have resulted in damage to the heat strips. The unit was capable of cooling.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/18/2023 at 04:52 PM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-4

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-4			

Areas Served 1

Spaces	Description	Floor	Building	Campus
Conference Room 2 166				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number CBX27UH-024-230-6-02
Indoor Unit Serial Number 1614A06083
Manufacturer Lennox
Outdoor Unit Model Number TTB02414ACX-024-230-16
Outdoor Unit Serial Number 1914B18071
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 14

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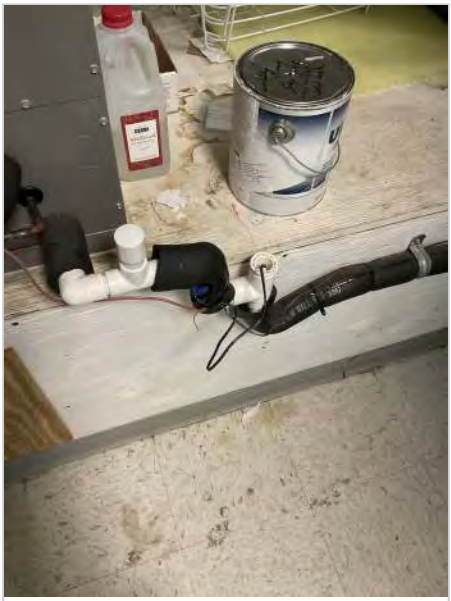

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Comments 1

The outdoor unit features minimal visible damages. Some of the insulation is slightly damaged, likely by UV and possibly also by salt water. The copper tubing only exhibits slight corrosion.

The indoor unit operates smoothly and is generally in good condition visually. A small section of the refrigerant line insulation near the unit is slightly separated.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

Heating and cooling were both confirmed to be functional for this space. The return for this unit was much higher than anticipated based on the original design values. Based on the parameters measured it would appear that this unit is operating with return only. It is possible that this was intentionally done due to the space being unoccupied. If this is not intentional, then there may be an issue in the ductwork.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/18/2023 at 05:22 PM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-5

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

3

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 158
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-5			

Areas Served 1

Spaces	Description	Floor	Building	Campus
Training 2 156				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TAA090S4D-1Y
Indoor Unit Serial Number 5614B02280
Manufacturer Lennox
Outdoor Unit Model Number TSA090S4SN1Y
Outdoor Unit Serial Number 5614B02332
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 16

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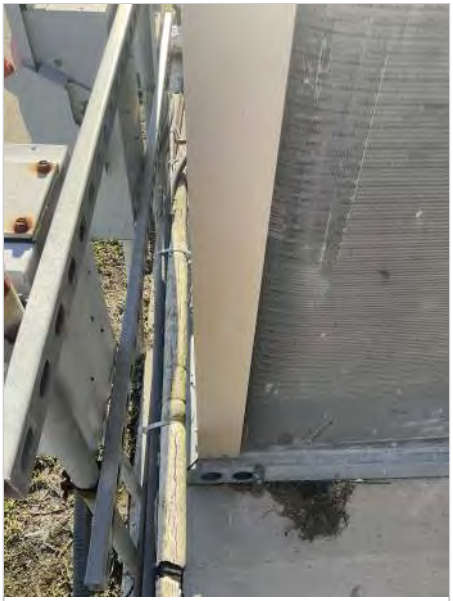

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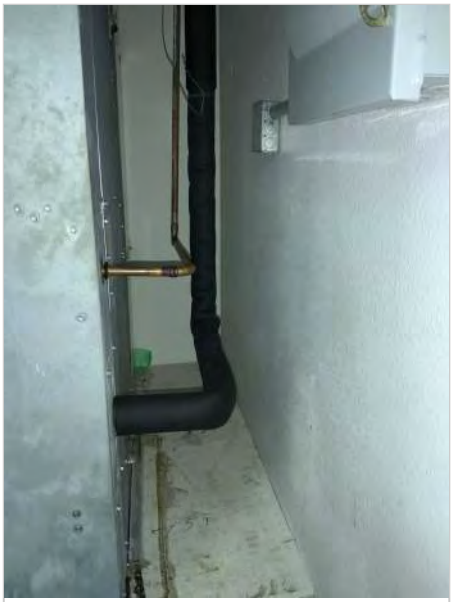

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IMG_3148.JPG

Comments 1

The outdoor unit features minimal UV damage with some damage incurred to the coil fins. It is possible this damage was related to hurricane debris but it is equally possible that this damage occurred through other means. Debris including parking lot signage was found behind the unit. A significant amount of corrosion was found on the copper tubing. The top of the unit and the blades featured corrosion. The unit appeared to be level.

Visually the indoor unit appeared to be in good condition considering its age. Copper tubing and insulation were free from visible damage. Electrical flex conduit connections appear to be tight.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

During testing, heating did not function. This unit is equipped with electric heat strips. It is possible that power surges during the hurricane could have resulted in damage to the heat strips.

Differences in the layout of the ductwork were found between the field conditions and original drawings. Return grills do not align with drawing. Since there are known changes in the space it is possible that the intended airflow through each diffuser or grille is different than what was listed in the original design.

See System Performance Report for recorded airflows and temperatures.

Angela Ferguson on 12/18/2023 at 10:39 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-6

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

3

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 155
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-6			

Areas Served 1

Spaces	Description	Floor	Building	Campus
Training 1 153				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TAA090S4D-1Y
Indoor Unit Serial Number 5614B02278
Manufacturer Lennox
Outdoor Unit Model Number TSA090S4SN1Y
Outdoor Unit Serial Number 5614B07068
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 13

20231218_085832.jpg

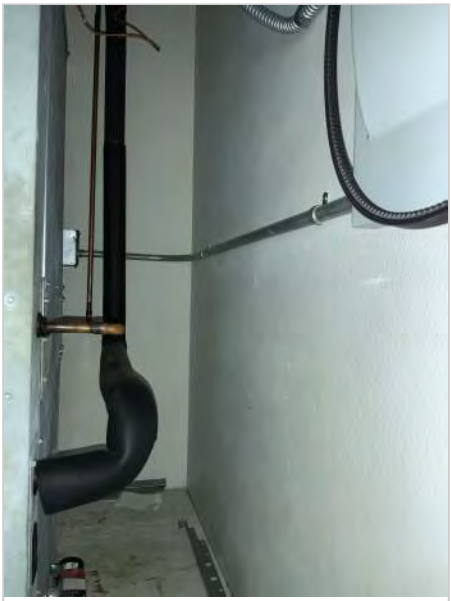
20231218_085839.jpg

20231218_085847.jpg

20231218_085854.jpg

IMG_2013.jpeg

IMG_2014.jpeg



IMG_2016.jpeg

IMG_2017.jpeg

IMG_2018.jpeg

IMG_2019.jpeg

IMG_3149.JPG

IMG_3150.JPG

IMG_3151.JPG

Comments 1

The outdoor unit features UV degradation and corrosion on the top and fan area. Many of the fasteners on this unit were also rusted. The fins are slightly damaged which could have been sustained during the hurricane.

Visually the indoor unit appears to be in good condition given its age and remaining service life. Copper tubing and insulation appeared to be free of damage.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

During testing, heating did not function. This unit is equipped with electric heat strips. It is possible that electrical surges damaged the heat strips.

Differences in the layout of the ductwork were found between the field conditions and original drawings. Return grills do not align with drawing. Since there are known changes in the space it is possible that the intended airflow through each diffuser or grille is different than what was listed in the original design.

See System Performance Report for recorded airflows and temperatures.

Angela Ferguson on 12/18/2023 at 10:57 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-7

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space Mech. Elec. Room 144
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-7			

Areas Served 1

Spaces	Description	Floor	Building	Campus
Lunch Room 167				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number CBX...
Indoor Unit Serial Number 1614A...
Manufacturer Lennox
Outdoor Unit Model Number XC17-036-220-08
Outdoor Unit Serial Number 5814A14060
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 8

ac-7.1.jpg

ac-7.3.jpg

ac-7.6.jpg

ac-7.2.jpg

ac-7.4.jpg

IMG_3141.JPG

IMG_3142.JPG

IMG_3143.JPG

Comments 1

The condenser was observed to be functional. Other observations included minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian.

Visually the indoor unit appears to be in newer condition given its age and remaining service life. Copper tubing and insulation appeared to be free of damage.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

During testing, it was found that the air handler provides sufficient heating and cooling.

Major differences in the layout of the ductwork were found between the field conditions and the provided drawings. Return and supply grills do not align with drawing. Since there are known changes in the space it is possible that the intended airflow through each diffuser or grille is different than what was listed in the original design.

See System Performance Report for recorded airflows and temperatures.

Angela Ferguson on 12/21/2023 at 12:21 PM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-8

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

4

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space Mech. Elec. Room 144
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-8			

Areas Served 9

Spaces	Description	Floor	Building	Campus
Corridor 4 169				
Lobby 111				
Service Counter 116				
Work Room 1 142				
Women 112				
Men 114				
Hall 118				
Corridor 2 150				
Corridor 3 165				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TAA090S4D-1Y
Indoor Unit Serial Number 5614B06987
Manufacturer Lennox
Outdoor Unit Model Number TSA090S4SN1Y
Outdoor Unit Serial Number 5614A09860
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 10

image.jpg

IMG_2021.jpeg

IMG_2024.jpeg

IMG_2020.jpeg

IMG_2022.jpeg

IMG_3133.JPG

IMG_2023.jpeg

IMG_3134.JPG

IMG_3135.JPG

IMG_3136.JPG

Comments 1

The condenser functionality could not be confirmed the results of the testing seem to indicate that it was not functional. Other observations include minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian.

Visually the indoor unit appears to be in good condition given its age and remaining service life. Copper tubing and insulation appeared to be free of damage.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled in the spaces served.

Major differences in the layout of the ductwork were found between the field conditions and the provided drawings. Return and supply grills do not align with drawing. Since there are known changes in the space it is possible that the intended airflow through each diffuser or grille is different than what was listed in the original design.

During testing, it was observed that the fan within the air handler was functional but did not provide heating or cooling.

See the System Performance Report for recorded airflows and temperatures.

Angela Ferguson on 12/18/2023 at 02:27 PM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-9

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

3

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space Mechanical Equipment
147
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-9			

Areas Served 3

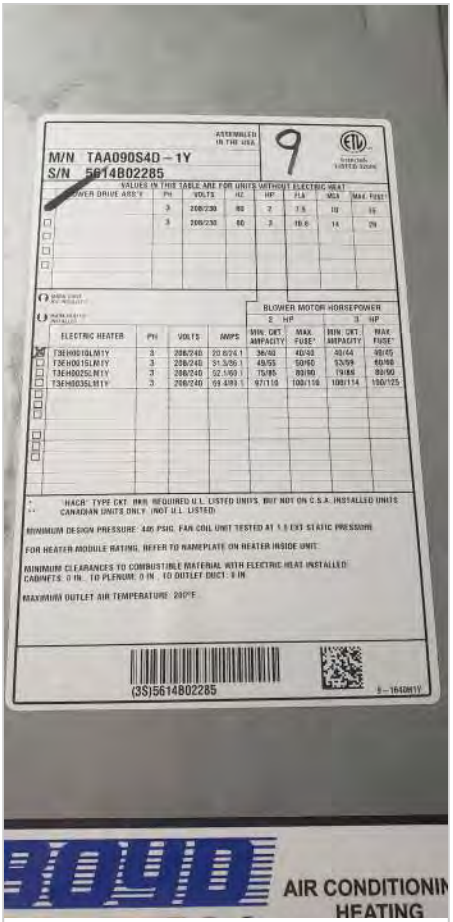
Spaces	Description	Floor	Building	Campus
Environmental 146				
System Office 1 174				
System Office 2 175				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TAA090S4D-1Y
Indoor Unit Serial Number 5614B02285
Manufacturer Lennox
Outdoor Unit Model Number TSA090S4SN1Y
Outdoor Unit Serial Number 5614B07065
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 9

20231218_134114.jpg



20231218_134119.jpg

20231218_134123.jpg

20231218_134138.jpg

20231218_134142.jpg

IMG_3138.JPG

IMG_3139.JPG

IMG_3137.JPG

IMG_3140.JPG

Comments 1

The condenser was observed to be functional, with minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian. The AC power supply whip was also observed to be compromised.

The indoor unit generally appeared to be in good condition. There is some staining on the floor beneath some of the condensate piping that may indicate that there was previously a condensate leak.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

During testing, heating did not function. This unit is equipped with electric heat strips. It is possible that power surges during the hurricane could have resulted in damage to the heat strips. Cooling mode is functional with a very low discharge air temperature compared to other units.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/20/2023 at 08:47 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-10

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

3

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space Storage/HVAC Closet 4
136
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-10			

Areas Served 3

Spaces	Description	Floor	Building	Campus
CCH 137				
Director Conference 139				
Office 2 140				

Attributes 10

Age 13 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TWE090D300AA
Indoor Unit Serial Number 1027364EBA
Manufacturer Trane
Outdoor Unit Model Number TTA090D300AA
Outdoor Unit Serial Number 10052UGNAD
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 2 Years

Photos 12

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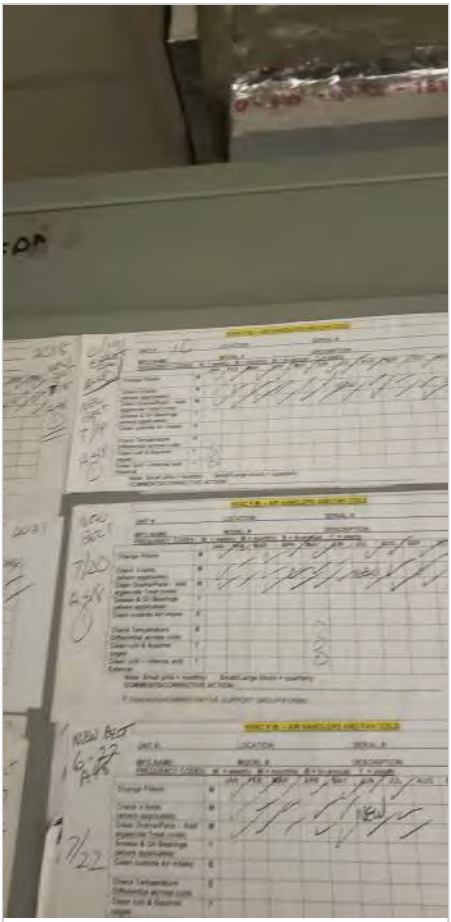
20231218_141531.jpg



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20231218_141613.jpg

20231218_141635.jpg

20231218_141646.jpg

20231219_082128.jpg

20231219_082304.jpg

20231219_082332.jpg

IMG_3106.JPG

IMG_3107.JPG

IMG_3108.JPG

Comments 1

The condenser was found to be functional, with only minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian. The sheet metal access panel was observed to be loose/ compromised at the time of assessment.

The indoor unit appears to be in good condition considering its age and expected remaining service life. This unit features slightly more noise when operating compared to other units but this is not beyond a reasonable level. There is a stain on the ceiling tile near where the refrigerant lines penetrate the ceiling grid. This may indicate that there is condensation forming on the line. Leak may have also been relating to envelope or other piping systems.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

During testing, heating did not function. This unit is equipped with electric heat strips. It is possible that power surges during the hurricane could have resulted in damage to the heat strips. Due to ambient conditions and limitations on the thermostat, cooling mode could not be enabled or confirmed.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/20/2023 at 09:03 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-11

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

5

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 1 119
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-11			

Areas Served 5

Spaces	Description	Floor	Building	Campus
Copy Room 121				
Customer Records 122				
Eng. 2 123				
Cash Room 125				
Mail Room 128				

Attributes 10

Age 23 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TWE060A300CA
Indoor Unit Serial Number Z1921A45H
Manufacturer Ameristar/ Trane
Outdoor Unit Model Number 2A7M3060A1000AA
Outdoor Unit Serial Number 84438084F
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life -8 Years

Photos 8

20231219_095117.jpg

ac-11.2.jpg

ac-11.3.jpg

ac-11.1.jpg

ac-11.4.jpg

IMG_3095.JPG

IMG_3096.JPG

IMG_3097.JPG

Comments 1

This mismatched split system consists of an Ameristar outdoor, condenser unit, and a Trane indoor, air handling unit. Parts of this system appeared to be for residential application and it uses outdated R22 refrigerant.

The condenser was found to be functional, with degradation to refrigerant line insulation, faded paint, and a compromised incoming power whip. The air handler was in fair condition.

Visible ductwork and interior refrigerant piping and insulation appeared to be in good condition.

The diffusers and return grilles for this unit were in good condition, which indicates that there was likely proper maintenance and filtration of this unit and that humidity has been properly controlled in the space it served.

The system tested functional in cooling mode, but the observed flows for this system were very low - granted the design flows are rather low as well. The use of this space has changed from storage to office spaces and thus should warrant a higher airflow to satisfy the occupants. Heating functionality could not be confirmed, as heat was not produced when it was placed in heat mode. We recommend replacement of this system.

See System Performance Report for recorded airflows and temperatures.

Jesse Coyle on 12/21/2023 at 11:19 AM
Affiliated Engineers, Inc. - Gainesville

AC-12

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 1 119
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-12			

Areas Served 1

Spaces	Description	Floor	Building	Campus
Engineering 1 130				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number NA
Indoor Unit Serial Number NA
Manufacturer Lennox
Outdoor Unit Model Number TSA090S4SN1Y
Outdoor Unit Serial Number 5614A09865
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 7

ac-12.1.jpg

ac-12.4.jpg

IMG_3093.JPG

ac-12.2.jpg

IMG_3094.JPG

ac-12.3.jpg

IMG_3092.JPG

Comments 1

The condenser was found to be functional, with only minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian.

The air handler also appeared to be in good condition. Visible ductwork and interior refrigerant piping and insulation appeared to be in good condition. Nameplate data could not be gathered for the indoor unit since it is covered and thus inaccessible.

The diffusers and return grilles for this unit were in good condition, which indicates that there was likely proper maintenance and filtration of this unit and that humidity has been properly controlled in the space it served.

The system tested functional in cooling mode, but the heat strips did not appear to energize when placed in heat mode.

See System Performance Report for recorded airflows and temperatures.

Jesse Coyle on 12/21/2023 at 11:14 AM
Affiliated Engineers, Inc. - Gainesville

AC-13

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

3

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 3 131
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-13			

Areas Served 2

Spaces	Description	Floor	Building	Campus
U.I.S. 132				
P.B.X. 134				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TAA090S4D-1Y
Indoor Unit Serial Number 5614A05389
Manufacturer Lennox
Outdoor Unit Model Number TSA090S4SN1Y
Outdoor Unit Serial Number 5614B02335
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 9

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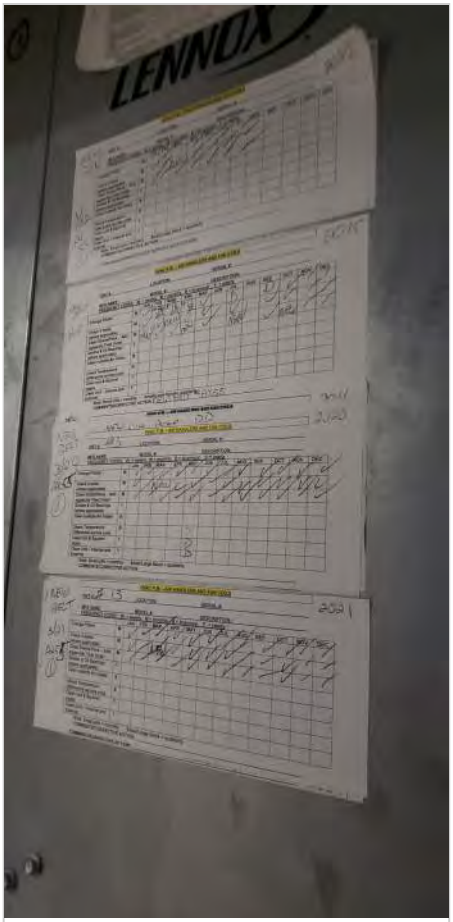
20231219_082728.jpg

20231219_082733.jpg



20231219_082742.jpg

20231219_091720.jpg

IMG_3103.JPG

IMG_3104.JPG

IMG_3102.JPG

IMG_3105.JPG

Comments 1

The condenser was found to be functional, with only minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian. The equipment pad is undersized for the condenser unit. The AC power supply whip for this unit is compromised.

Visually the indoor unit appeared to be in good condition and ran smoothly during continuous operation. It was a little louder than expected upon startup.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

This unit was capable of cooling but not heating. The unit has electric heat strips as its mode of heating.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/20/2023 at 01:55 PM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-14

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

5

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 3 131
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-14			

Areas Served 1

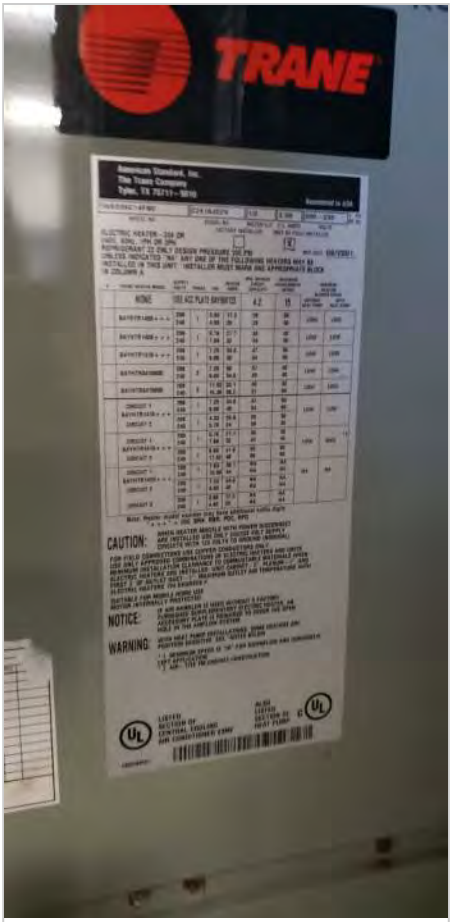
Spaces	Description	Floor	Building	Campus
Computer Room 133				

Attributes 10

Age 23 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TWE036C14F80
Indoor Unit Serial Number Z2416JC2V
Manufacturer Trane/ Lennox
Outdoor Unit Model Number 2AC13B36P-2B
Outdoor Unit Serial Number 4609A56173
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life -8 Years

Photos 9

20231219_082751.jpg



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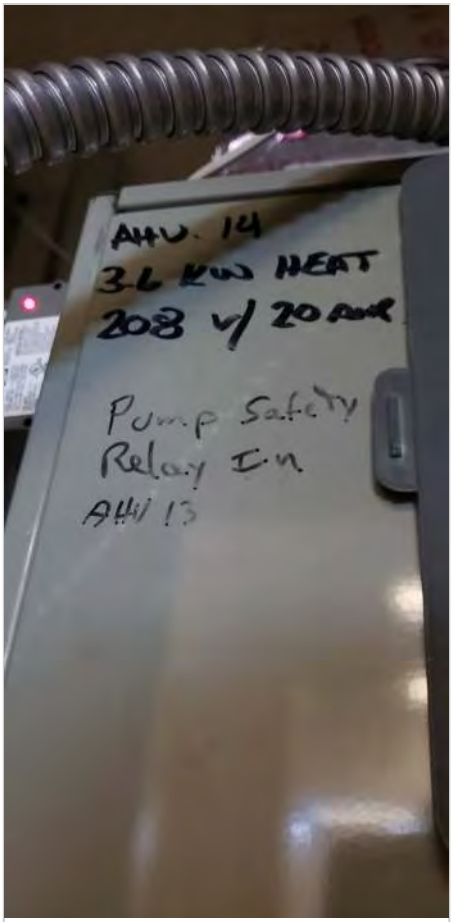

20231219_082800.jpg

20231219_082803.jpg

20231219_082810.jpg

20231219_082813.jpg

IMG_3098.JPG

IMG_3099.JPG

IMG_3100.JPG

Comments 1

This mismatched split system consists of a Lennox outdoor, condenser unit, and a Trane indoor, air handling unit. Parts of this system appeared to be for residential application and it uses outdated R22 refrigerant.

The condenser was found to be functional, with degradation to refrigerant line insulation, faded paint, and a compromised incoming power whip.

The air handler was in fair condition. Visible ductwork and interior refrigerant piping and insulation appeared to be in good condition.

The diffusers and return grilles for this unit were in good condition, which indicates that there was likely proper maintenance and filtration of this unit and that humidity has been properly controlled in the space it served.

The system tested functional in cooling mode, but the observed flows for this system were very low. Heating functionality could not be confirmed, as heat mode was not available on the system thermostat. The unit does have heat strips. We recommend replacement of this system.

See System Performance Report for recorded airflows and temperatures.

Jesse Coyle on 12/21/2023 at 11:40 AM
Affiliated Engineers, Inc. - Gainesville

AC-15

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 2 124
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-15			

Areas Served 3

Spaces	Description	Floor	Building	Campus
Corridor 1 129				
Office 1 126				
Customer Service 120				

Attributes 10

Age 9 Years
Estimated Service Life 15
Indoor Unit Model Number TAA090S4D-1Y
Indoor Unit Serial Number 5614A07648
Manufacturer Lennox
Outdoor Unit Model Number TSA090S4SN1Y
Outdoor Unit Serial Number 5613L07988
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 9

ac-15.1.jpg

ac-15.3.jpg

ac-15.6.jpg

ac-15.2.jpg

ac-15.4.jpg

ac-15.5.jpg

IMG_3089.JPG

IMG_3090.JPG

IMG_3091.JPG

Comments 1

The condenser was found to be functional, with only minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian.

The air handler also appeared to be in good condition. Visible ductwork and interior refrigerant piping and insulation appeared to be in good condition.

The diffusers and return grilles for this unit were in good condition, which indicates that there was likely proper maintenance and filtration of this unit and that humidity has been properly controlled in the space it served.

The system tested functional in cooling mode, but the heat strips did not appear to energize when placed in heat mode.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/21/2023 at 08:13 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-16

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space HVAC Closet 2 124
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-16			

Areas Served 3

Spaces	Description	Floor	Building	Campus
Customer Service 120				
Customer Conference 117				
Service Counter 116				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number TAA090S4D-1Y
Indoor Unit Serial Number 5614A05393
Manufacturer Lennox
Outdoor Unit Model Number TSA090S4SN1Y
Outdoor Unit Serial Number 5614B02331
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 10

20231219_091518.jpg

ac-16.2.jpg

ac-16.4.jpg

ac-16.3.jpg

ac-16.5.jpg

ac-16.1.jpg

IMG_3085.JPG

IMG_3087.JPG

IMG_3086.JPG

IMG_3088.JPG

Comments 1

The condenser was found to be functional, with only minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian.

The air handler also appeared to be in good condition. Visible ductwork and interior refrigerant piping and insulation appeared to be in good condition.

The diffusers and return grilles for this unit were in good condition, which indicates that there was likely proper maintenance and filtration of this unit and that humidity has been properly controlled in the space it served.

The system tested functional in cooling mode, but the heat strips did not appear to energize when placed in heat mode.

See System Performance Report for recorded airflows and temperatures.

Jesse Coyle on 12/20/2023 at 04:00 PM
Affiliated Engineers, Inc. - Gainesville

AC-17

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space Mechanical Equipment 147
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-17			

Areas Served 5

Spaces	Description	Floor	Building	Campus
Environmental 146				
System Office 1 174				
System Office 2 175				
Director 1 149				
System Office 3 176				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number CBX27UH-060-230-6-03
Indoor Unit Serial Number 1614A17547
Manufacturer Lennox
Outdoor Unit Model Number SSB060H4S44Y
Outdoor Unit Serial Number 5814A14820
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 10

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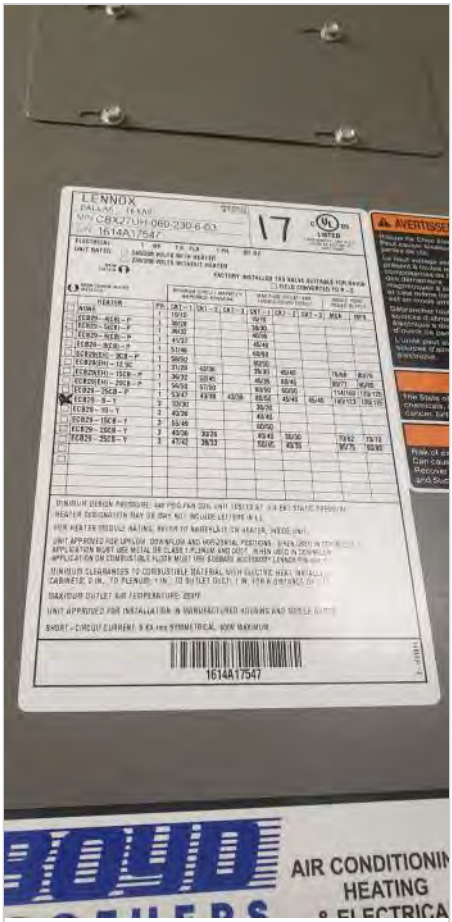
20231218_134146.jpg



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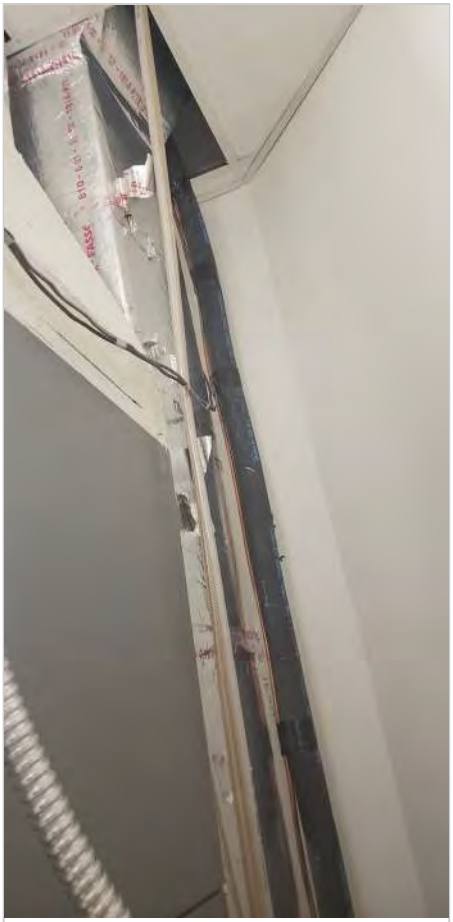

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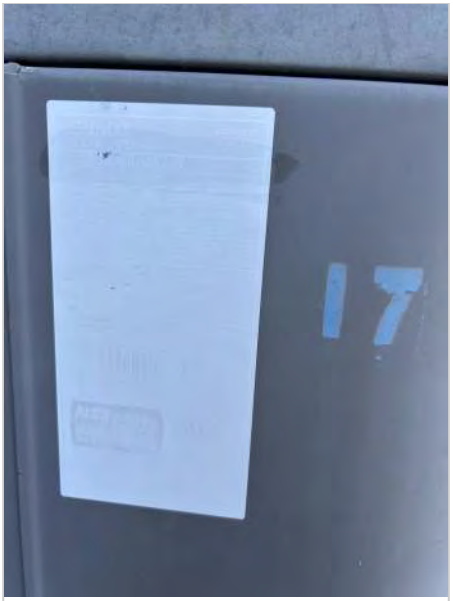


IMG_3127.JPG

IMG_3129.JPG

IMG_3128.JPG

Comments 1

The condenser was found to be functional, with only minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian. See System Performance Report for recorded airflows and temperatures.

Visually, the indoor unit appeared to be in good condition. The insulation and refrigerant lines that were visible were free from damage. The condition of this unit aligned with this unit's age and estimated remaining service life.

The diffusers and return grilles for this unit were in good condition. This indicates that there is proper filtration from this unit and humidity has been properly controlled.

The unit was found to be capable of both heating and cooling.

See System Performance Report for recorded airflows and temperatures.

Kelly Muller on 12/20/2023 at 08:55 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-18

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space Mechanical Equipment
147
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-18			

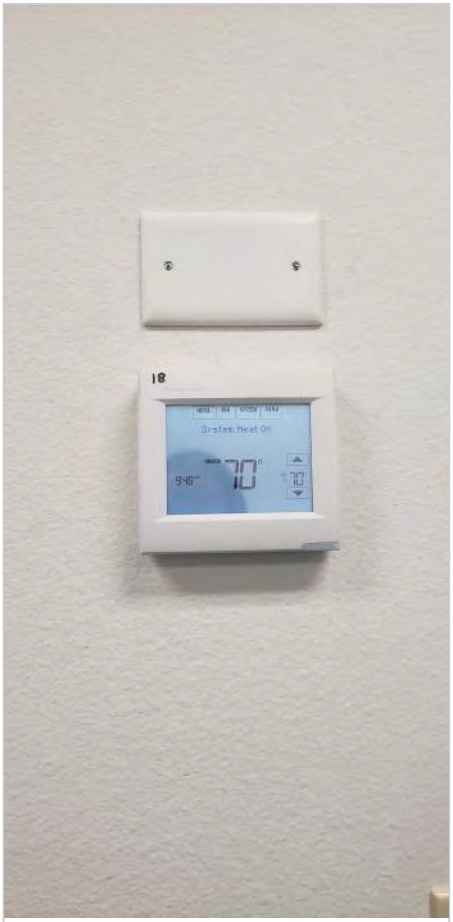
Areas Served 2

Spaces	Description	Floor	Building	Campus
Fiscal Manager 141				
CCH 137				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number CBX27UH-060-230-6-03
Indoor Unit Serial Number 1614A17535
Manufacturer Lennox
Outdoor Unit Model Number SSB060H4S44Y
Outdoor Unit Serial Number 5814A14828
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 17



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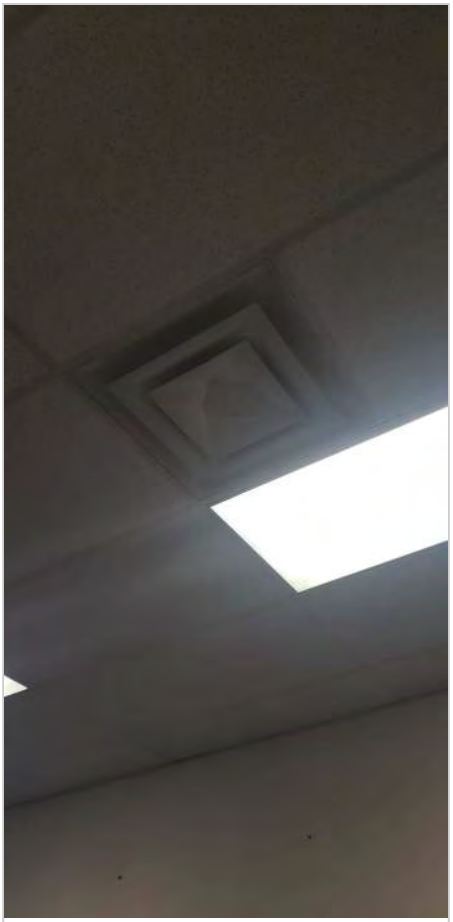

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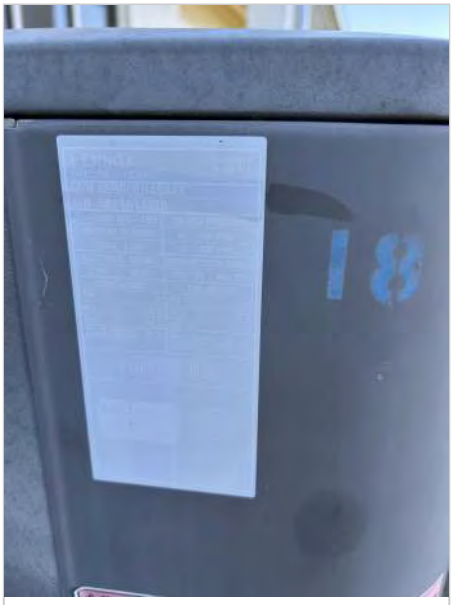

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IMG_3916.JPG

IMG_3917.JPG

IMG_3919.JPG

IMG_3921.JPG

IMG_3918.JPG

IMG_3920.JPG

IMG_3922.JPG

IMG_3930.JPG

Comments 1

The condenser was found to be functional, with only minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian.

The indoor unit appeared to be in good condition, operating quietly without any excessive noise. The insulation and tubing inside also seemed to be well-maintained.

The diffusers and return grilles were notably clean, suggesting effective air conditioning function and filtration.

The ductwork arrangement for this unit diverges from the anticipated design. It now features a new return grille and is providing air to a portion of CCU-137 instead of AC-19.

The unit was found to be capable of both heating and cooling.

See System Performance Report for recorded airflows and temperatures.

Samarth Kathare on 12/20/2023 at 08:17 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

AC-19

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Space Mechanical Equipment 147
Type AC Unit
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
AC-19			

Areas Served 3

Spaces	Description	Floor	Building	Campus
Conference Room 1 138				
CCH 137				
Storage/HVAC Closet 4 136				

Attributes 10

Age 9 Years
Estimated Service Life 15 Years
Indoor Unit Model Number CBX27UH-036-230-6-02
Indoor Unit Serial Number 1614A20288
Manufacturer Lennox
Outdoor Unit Model Number XC17-036-230-08
Outdoor Unit Serial Number 5813K06605
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 6 Years

Photos 11

IMG_3130.JPG

IMG_3132.JPG

IMG_3924.JPG

IMG_3131.JPG

IMG_3923.JPG

IMG_3925.JPG

IMG_3926.JPG

IMG_3928.JPG

IMG_3930.JPG

IMG_3927.JPG

IMG_3929.JPG

Comments 1

The condenser was found to be functional, with only minor degradation to refrigerant line insulation, faded paint, and minor damage to condenser coil fins, possibly caused by Hurricane Ian.

The indoor unit appeared to be in good condition, operating quietly without any excessive noise. The insulation and tubing inside also seemed to be well-maintained.

The diffusers and return grilles were notably clean, suggesting effective air conditioning function and filtration.

The ductwork configuration for this unit deviates from the expected plan. Originally intended to serve a partial space of CCU-137, it

is now directed towards 18 instead.

See System Performance Report for recorded airflows and temperatures.

Samarth Kathare on 12/20/2023 at 08:18 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

EF-1

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Inline exhaust fan

Space Storage/HVAC Closet 4
136
Type Exhaust Fan
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
Restroom Exhaust			

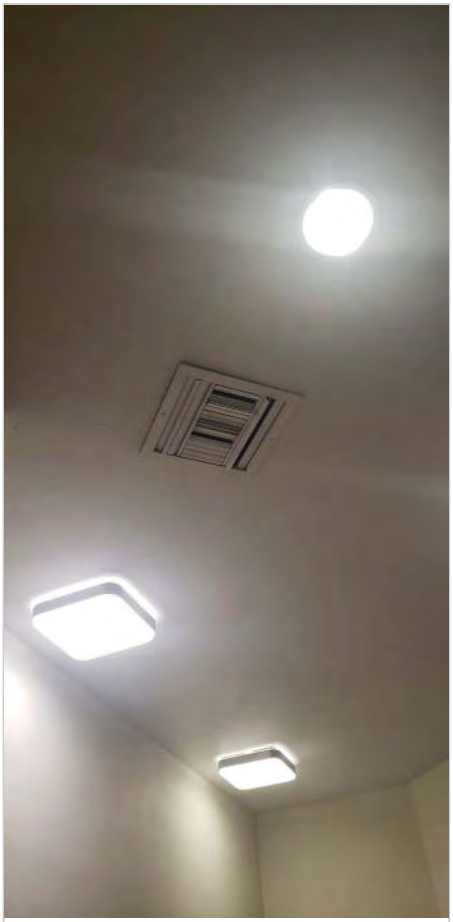
Areas Served 2

Spaces	Description	Floor	Building	Campus
Women 112				
Men 114				

Attributes 8

Age 23 Years
Estimated Service Life 25 Years
Manufacturer Greenheck
Model Number BSQ-120
Register 1 Rating 1
Register 2 Rating 1
Remaining Service Life 2 Years
Serial Number TBD

Photos 3



20231219_095952.jpg

IMG_3069.JPG

IMG_3070.JPG

Comments 1

This unit is an inline exhaust fan that serves the restrooms. The fan was found to be functional. The fan itself was not accessible so it is assumed to be the original fan.

Kelly Muller on 12/21/2023 at 04:37 PM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

EF-2

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

5

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Light switch operated exhaust fan

Space HC 3 127
Type Exhaust Fan
Discipline Mechanical

Systems 1

Name	Description	Building	Discipline
Restroom Exhaust			

Areas Served 1

Spaces	Description	Floor	Building	Campus
HC 3 127				

Attributes 8

Age 23 Years
Estimated Service Life 10 Years
Manufacturer Nutone
Model Number 8673P
Register 1 Rating 1
Register 2 Rating N/A
Remaining Service Life -13 Years
Serial Number Not accessible

Comments 1

This exhaust fan is a fan/light combo serving what was originally a single occupant restroom. The fan and light are not operational currently. The space is currently being used as a storage space. Since the use of the space has changed it is acceptable to not replace the fan. If the space is to be converted back into a restroom, then it will need to be replaced.

Kelly Muller on 12/19/2023 at 11:01 AM
Commissioning Authority, Affiliated Engineers, Inc. - Gainesville

Fujitsu Mini-Split

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

4

0 CHECKLISTS | 0 TESTS | 0 ISSUES

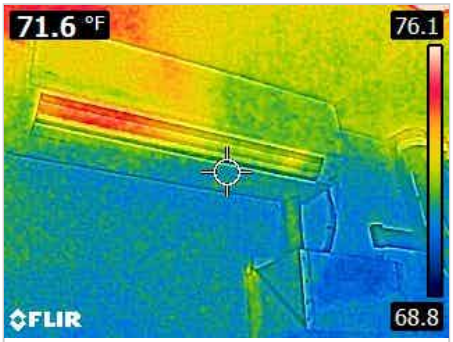
Mini-Split for IT corner of Computer Room

Space Computer Room 133
Type AC Unit
Discipline Mechanical

Attributes 1

Age 11 Years

Photos 7



FLIR3131.jpg

IMG_3057.JPG

IMG_3082.JPG

FLIR3132.jpg

IMG_3058.JPG

IMG_3083.JPG

IMG_3084.JPG

Comments 1

FCU/ IDU observed moving air with a flashing alarm indicator. Unit was calling for cooling but outside condenser was not running. Exterior line set insulation was deteriorated and rear plastic guard appeared warped and detached from condenser chassis. Fujitsu support confirmed 1/10/2013 as date of manufacture. Higher SEER units are available.

Jesse Coyle on 12/20/2023 at 03:47 PM
Affiliated Engineers, Inc. - Gainesville

Appendix 4

Equipment

3 **Electrical** Equipment sorted by **name**

High Voltage Electrical & Lighting - Exterior

Affiliated Engineers Commissioning Practice | East Port Environmental/ CSA - FCA | 24673-02

4

0 CHECKLISTS | 0 TESTS | 0 ISSUES

System assessment included exterior incoming service, exterior 120V power outlet sampling, and condition of exterior lighting functionality, as observed and sampled.

*It was requested that everything be energized for us upon arrival. Anything that failed to function represents a documented functionality issue.

Space Building
Type Electrical
Discipline Electrical

Attributes 1

Age 23 Years

Photos 24

IMG_3071.JPG

IMG_3072.JPG

IMG_3074.JPG

IMG_3075.JPG

IMG_3109.JPG

IMG_3112.JPG

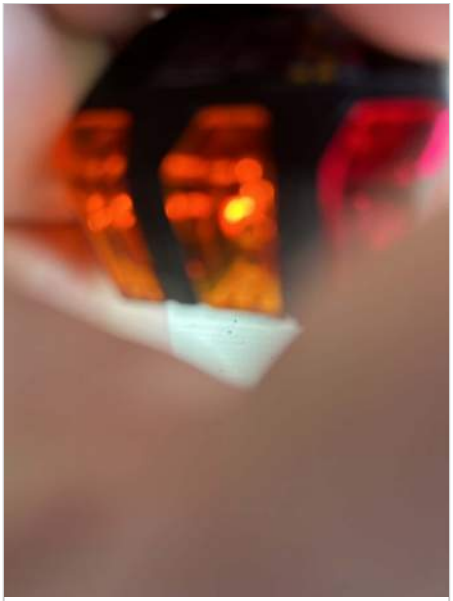
IMG_3113.JPG

IMG_3101.JPG

IMG_3110.JPG

IMG_3111.JPG

IMG_3114.JPG



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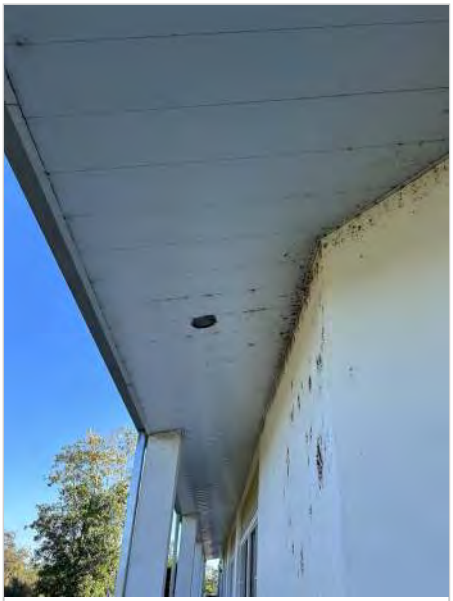
IMG_3118.JPG

IMG_3153.JPG



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IMG_3157.JPG

IMG_3164.JPG

IMG_3166.JPG

IMG_3170.JPG

IMG_3165.JPG

IMG_3167.JPG

IMG_3171.JPG

IMG_3177.JPG

Comments 1

Overall, the exterior electrical and lighting was subject to storm-related damage and is in poor condition and in need of further inspection, repair, or replacement.

While the incoming power transformer, meter and switchgear appeared to be in good condition, there was debris present, indicating a need for the utility provider to confirm component integrity and incoming power quality.

Many of the exterior GFCI power outlets were missing covers and were likely exposed to wind-driven rain and moisture intrusion. While several had power, they would not properly test and reset, indicating that they are compromised and should be replaced.

Several exterior lighting fixtures were observed dislodged and compromised, and lighting components could be seen on the ground around the facility exterior. Stress to the attached flex conduit/ wiring was also apparent. It was uncertain whether the exterior lighting was energized during our assessment, but functional testing was likely unsafe anyway, given the condition of the fixtures.

While the AC disconnects appeared to be in fair condition, many of the attached AC power supply whips were cracked and compromised, exposing the high voltage wiring inside and allowing for moisture intrusion. Their damage is likely due to age, UV exposure, and storm-related winds and vibration.

Jesse Coyle on 01/01/2024 at 11:21 PM
Affiliated Engineers, Inc. - Gainesville

High Voltage Electrical & Lighting - Interior

Affiliated Engineers Commissioning Practice | East Port Environmental/ CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

System assessment included electrical switchgear visual inspection and thermal imaging, 120V power outlet sampling, and confirmation of interior lighting functionality, as observed and sampled.

*It was requested that everything be energized for us upon arrival. Anything that failed to function represents a documented functionality issue.

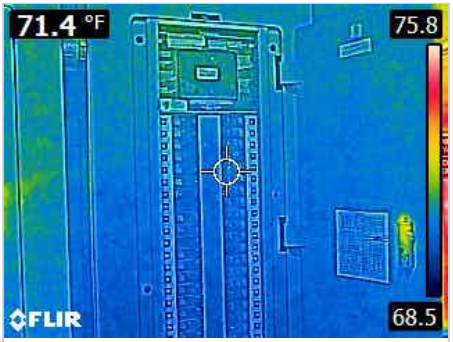
Space Building
Type Electrical
Discipline Electrical

Attributes 1

Age 23 Years

Photos 110

FLIR3057.jpg



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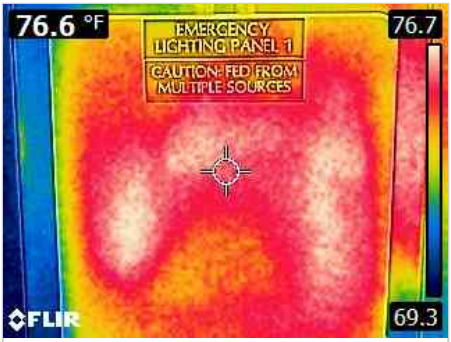

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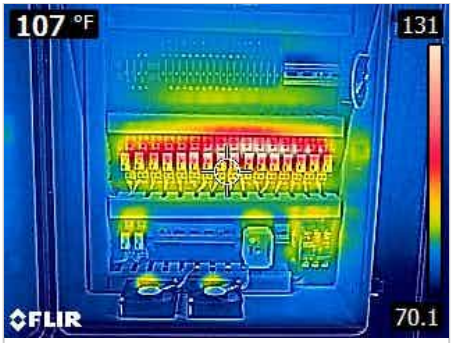
FLIR3058.jpg

FLIR3062.jpg

FLIR3064.jpg



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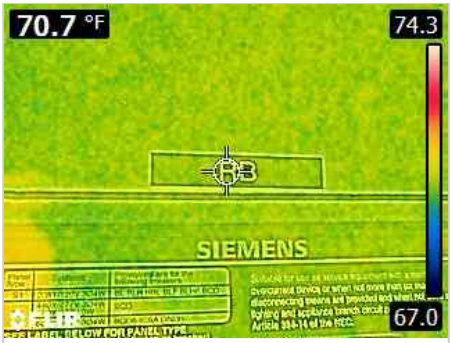

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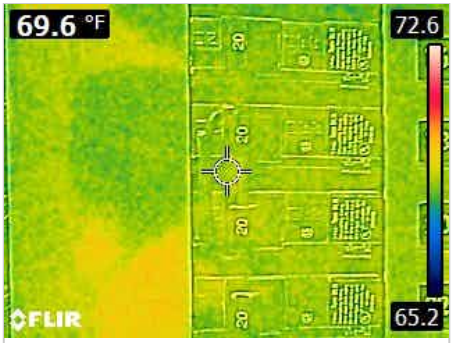

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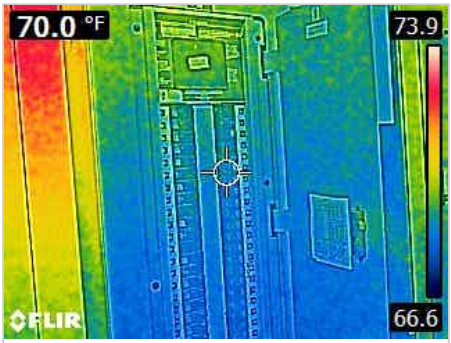
FLIR3070.jpg

FLIR3074.jpg

FLIR3067.jpg



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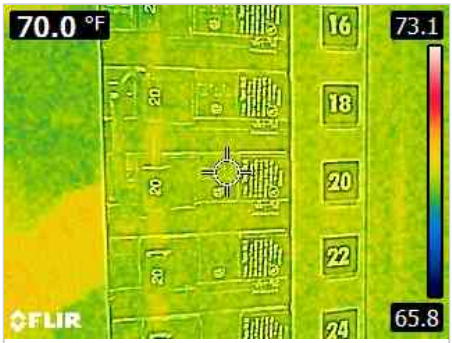

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FLIR3072.jpg

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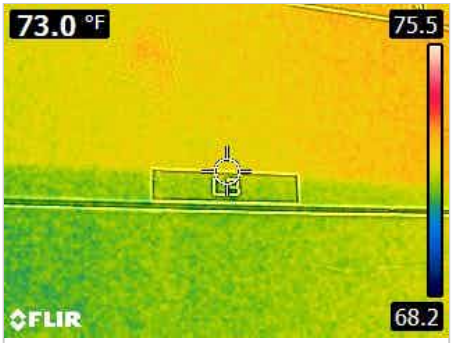

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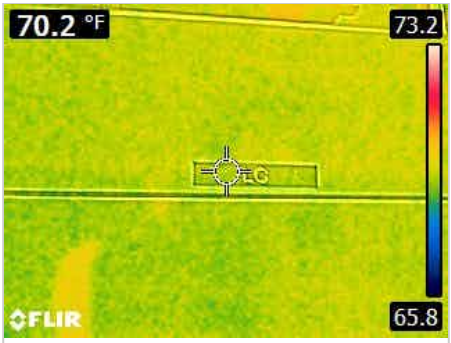

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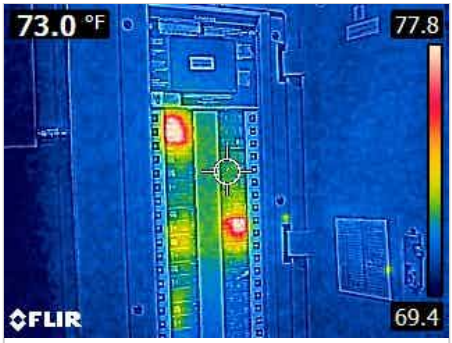

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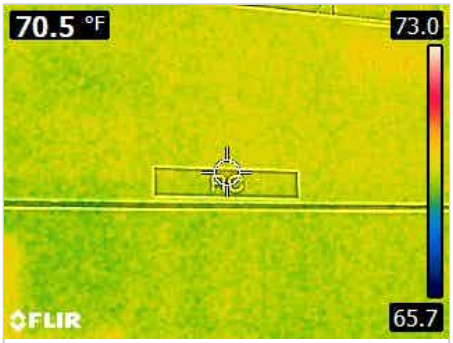
FLIR3082.jpg

FLIR3086.jpg



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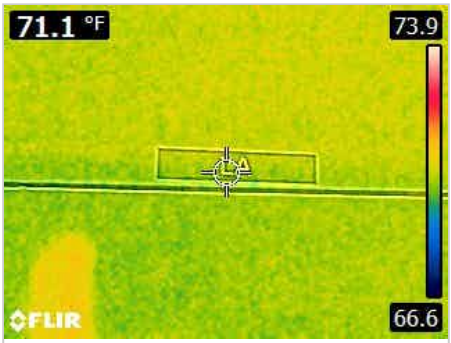

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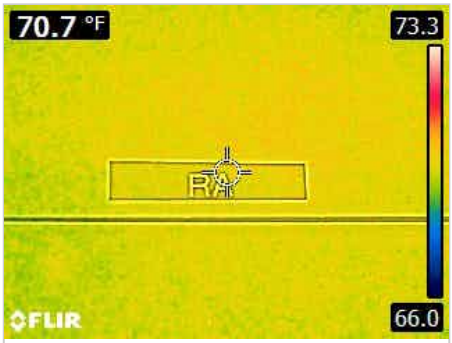

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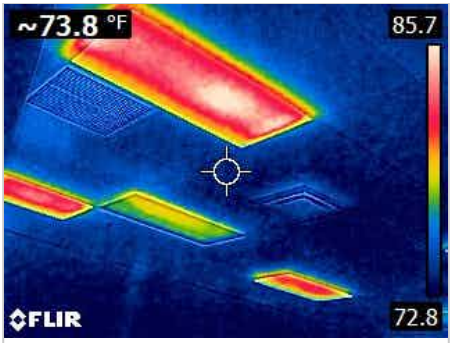
FLIR3089.jpg



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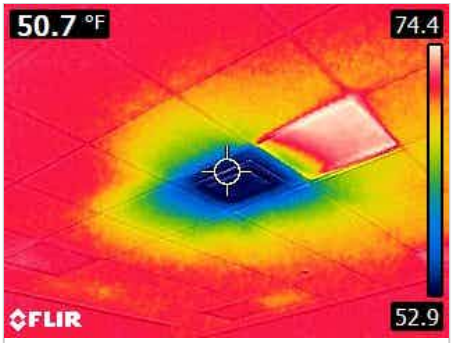

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FLIR3096.jpg

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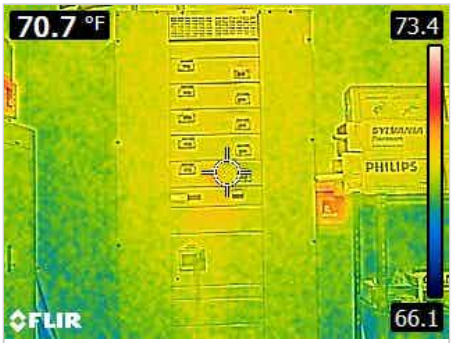

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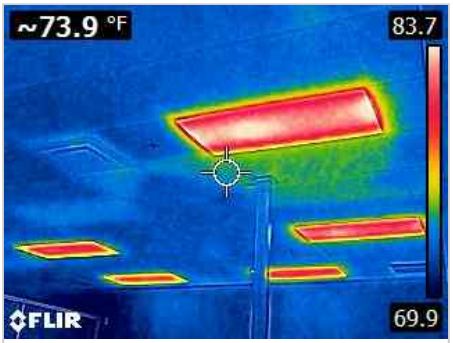

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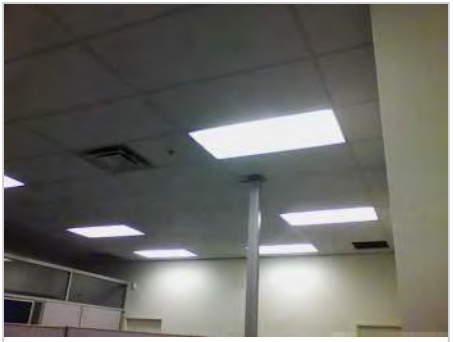

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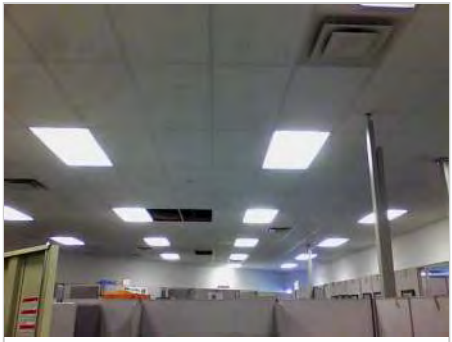

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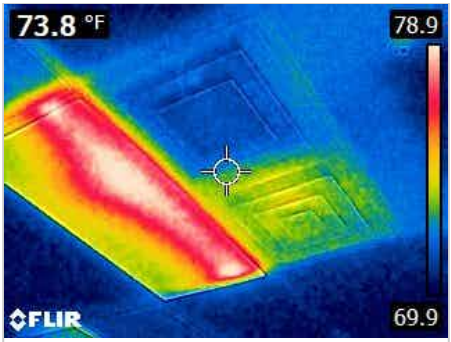

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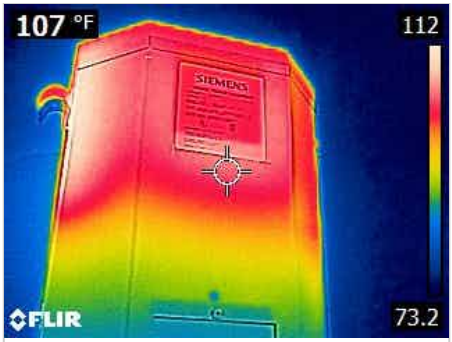

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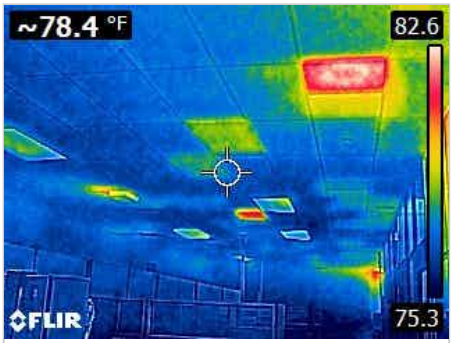

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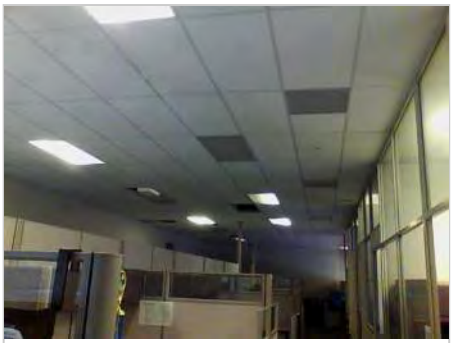

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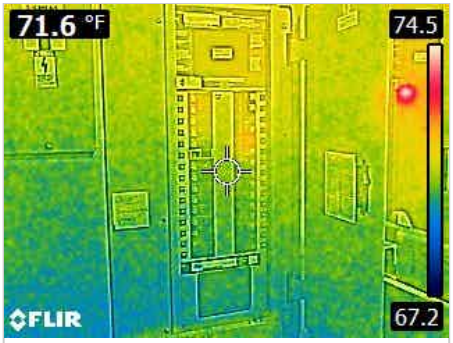

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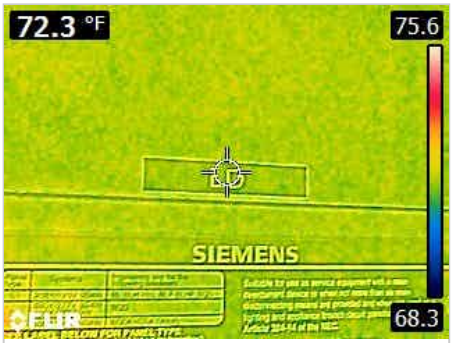

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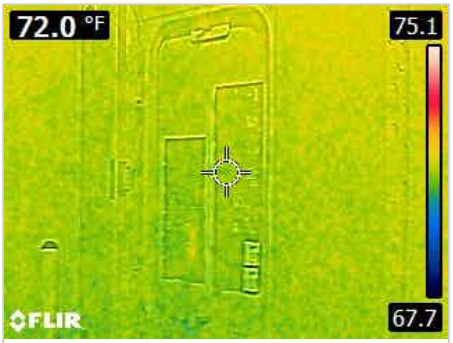

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FLIR3130.jpg

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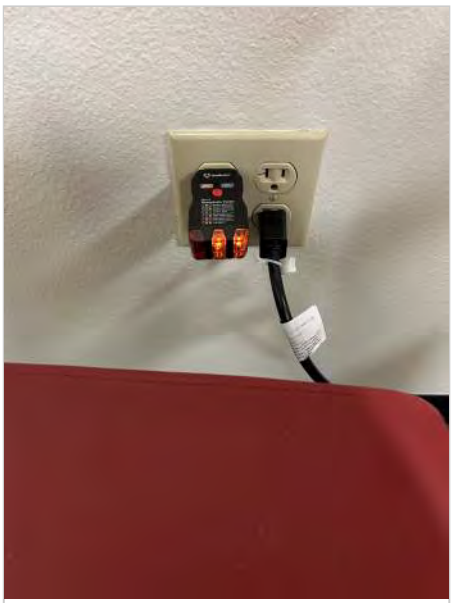

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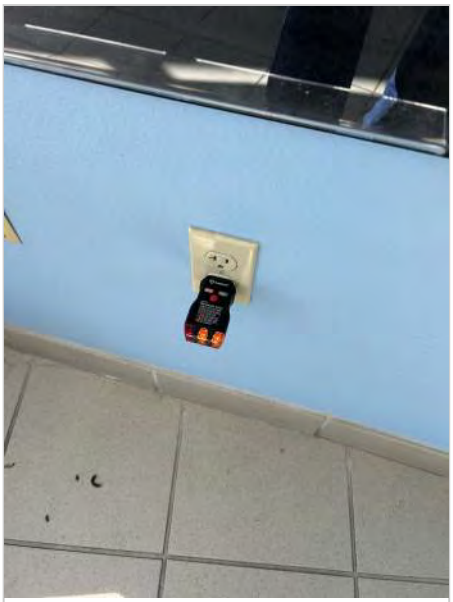

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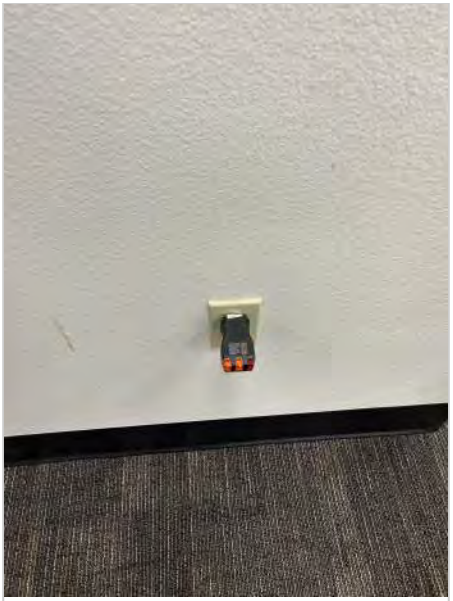

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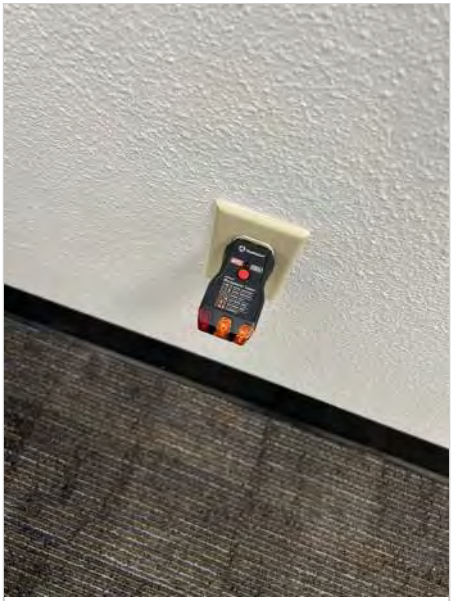

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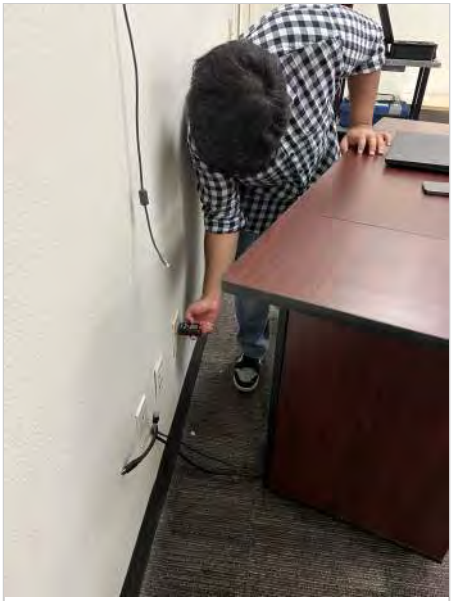

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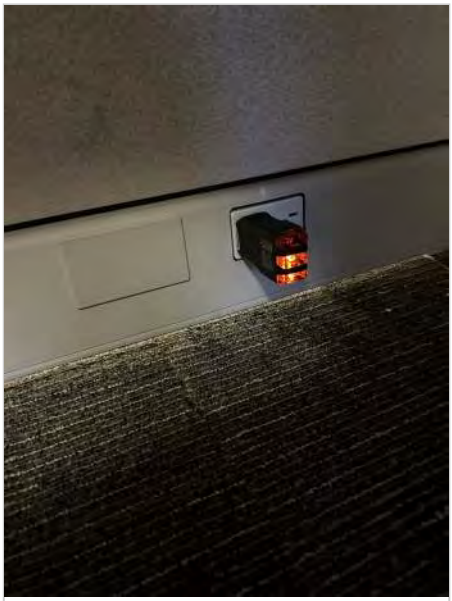

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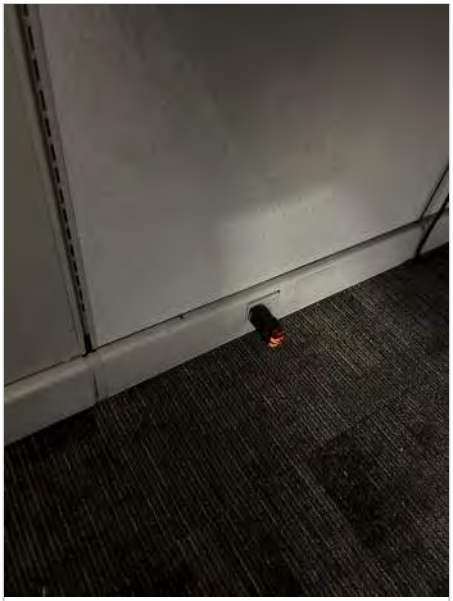

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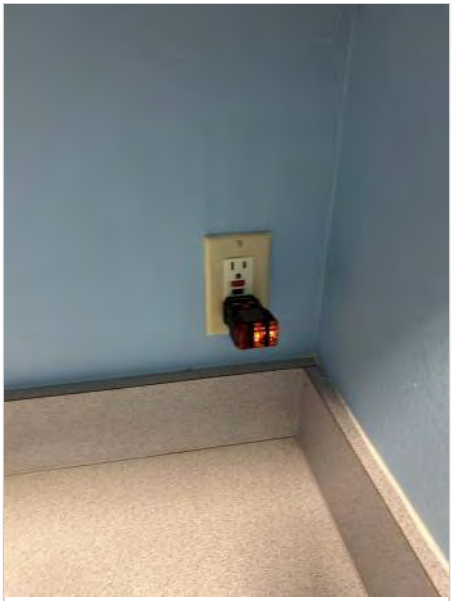

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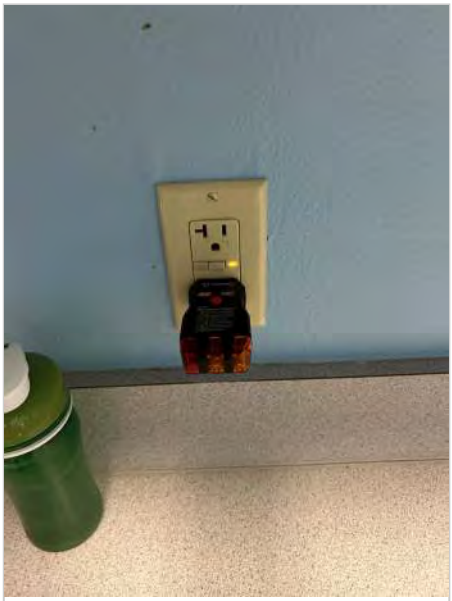

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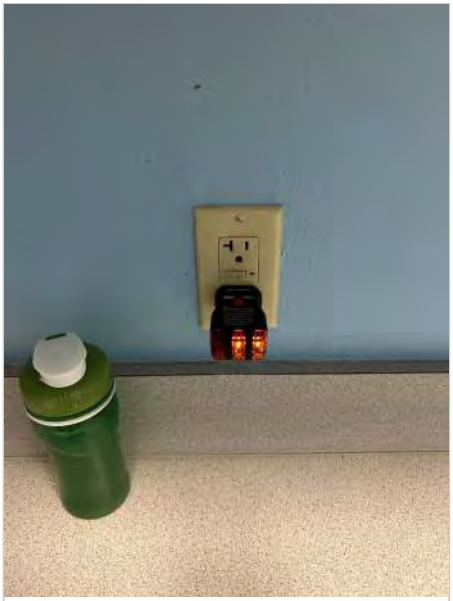

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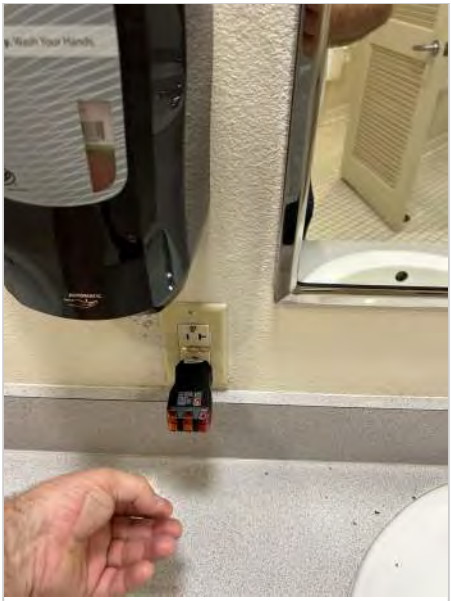

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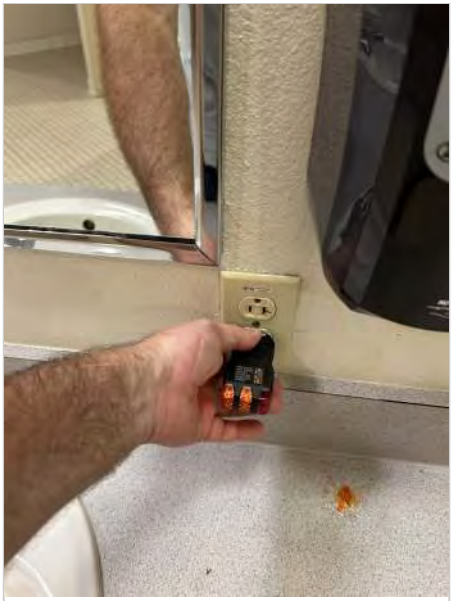

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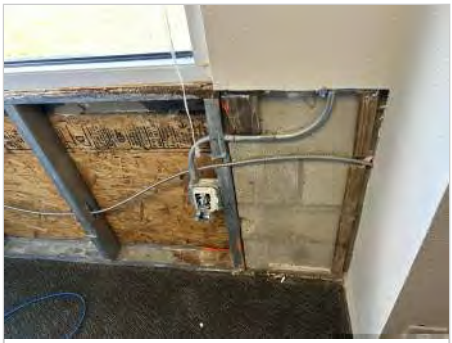


IMG_3065.JPG

IMG_3066.JPG

IMG_3067.JPG

Comments 1

Overall, the interior high voltage electrical and lighting was observed to be in good working order, with no apparent storm-related damage. While water damage was observed to the interior walls adjacent to the retention area, the conduit appeared damage free, and the outlets still functioned properly.

Switchgear was assessed for damage, tripped breakers, and for hot-spots using thermal imaging. All breakers were observed functional and within normal operating temperatures.

Of the 100+ power outlets sampled, all of them functioned but two were observed with the neutrals reversed (a single outlet in rooms 120 and 144). This should be fixed immediately to reduce risk of shock and fire.

With the exception of some bad or missing bulbs, all interior lighting appeared functional, and the lighting circuitry appeared to be free of any damage or hot-spots.

Jesse Coyle on 01/01/2024 at 10:54 PM
Affiliated Engineers, Inc. - Gainesville

Low Voltage Systems

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

2

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Low-voltage Assessment: to include any low voltage equipment indicated by the client (fire alarm panels, security, etc) could be visually inspected and thermally scanned to confirm system completeness and to identify obvious issues. This would not take the place of thorough testing by the Fire Marshall, or a qualified 3rd-party assessment provider.

Space Building
Type Low Voltage
Discipline Electrical

Attributes 2

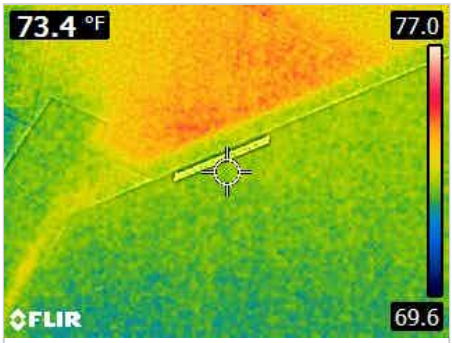
Age 23 Years

Manufacturer Various

Photos 34

FLIR3105.jpg

FLIR3111.jpg



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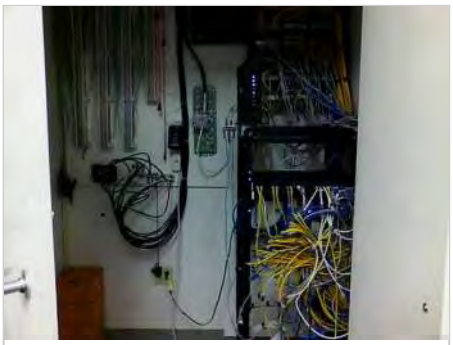

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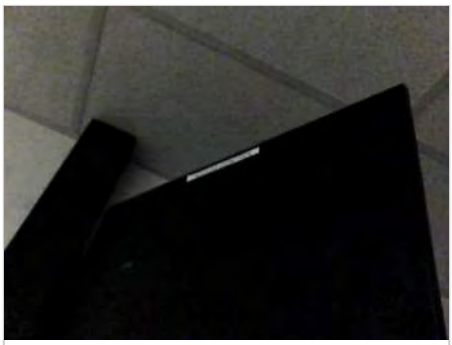

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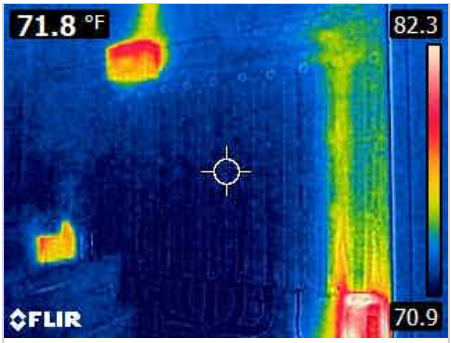

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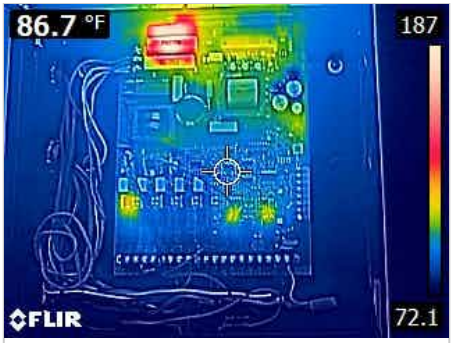

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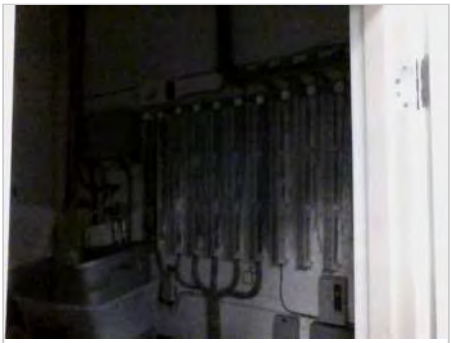

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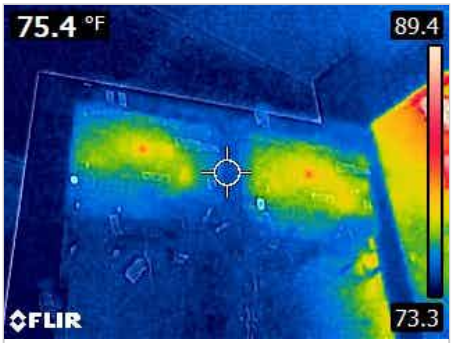

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FLIR3148.jpg

FLIR3149.jpg

FLIR3153.jpg

IMG_3050.JPG

FLIR3150.jpg

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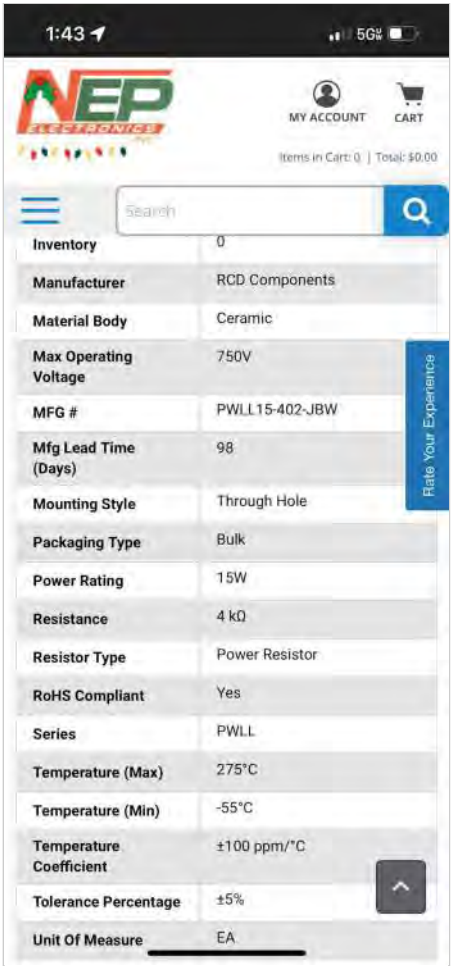
FLIR3152.jpg

FLIR3156.jpg



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IMG_3161.JPG

IMG_3172.JPG

IMG_3173.JPG

IMG_3174.JPG

Comments 1

The following Low-Voltage Systems were visually assessed and thermal scanned:

- Accessible IT Gear
- Fire Alarm System Components
- Security/ Access System Components

Overall, the assessed Low-Voltage Systems appeared to be in good condition, showing no evidence of storm-related damage. Nothing was observed to be in an “alarm state” and most components had evidence of recent inspections. All battery systems appeared functional and thermal scanning did not indicate any low-voltage system components operating outside of normal temperature ranges. It is still recommended that the appropriate authorities or vendors conduct in-depth system analysis before regular occupancy, and that these systems have their dates and times reprogrammed for accuracy and reference.

Jesse Coyle on 01/02/2024 at 01:51 AM
Affiliated Engineers, Inc. - Gainesville

Equipment

2 **Plumbing** Equipment sorted by **name**

Plumbing Fixtures

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

4

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Plumbing fixtures assessment, to include visual inspection, and point-of-use sampling to confirm functionality. As these items are tested, the supply and waste piping will be under load and evaluated for proper functionality and any leaks or failure functions will be noted.

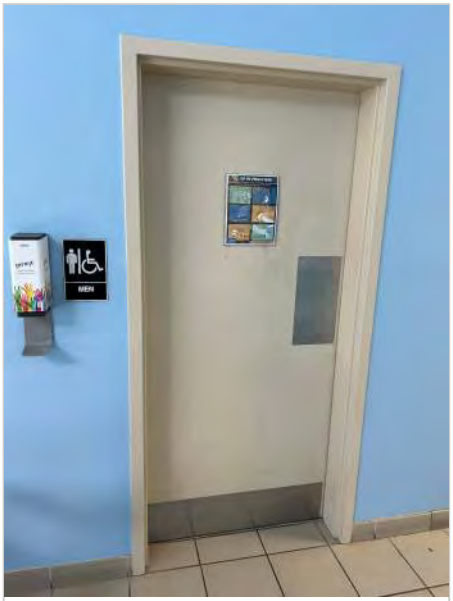
Space Building
Type Domestic Water
Discipline Plumbing

Attributes 2

Age 23 Years

Manufacturer Various

Photos 40



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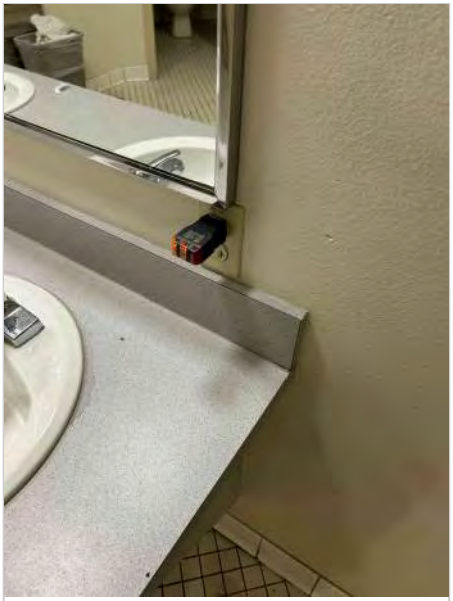

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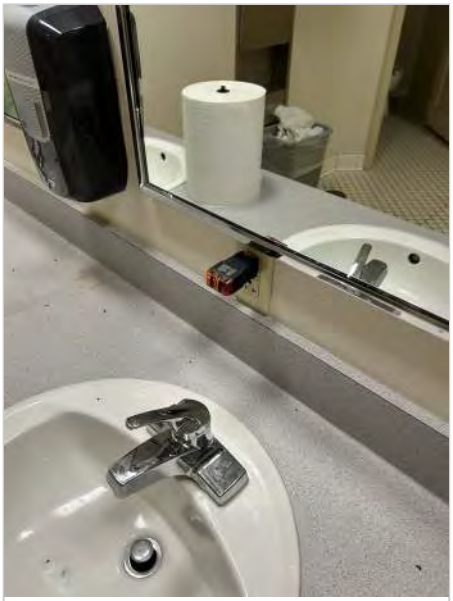

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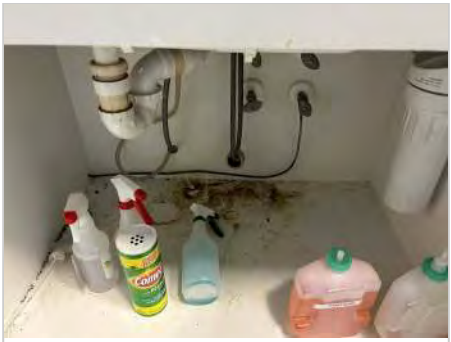

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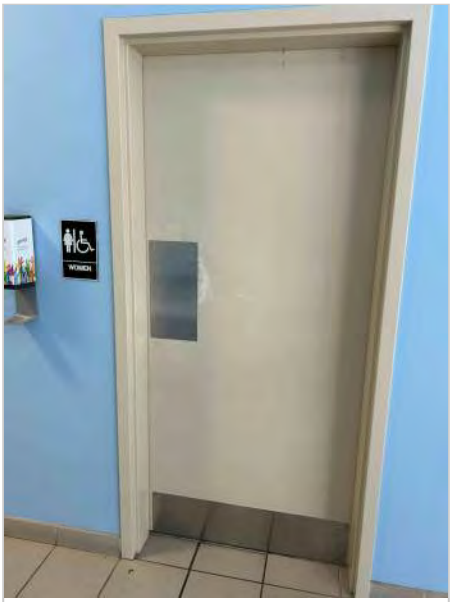

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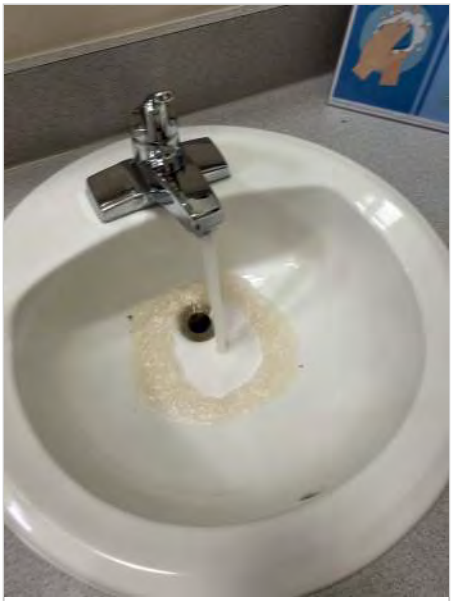

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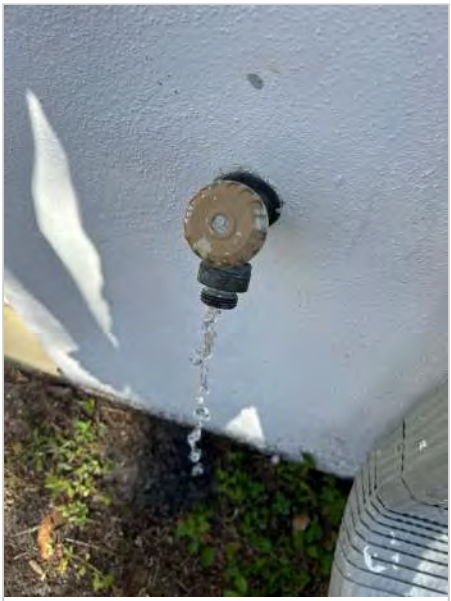

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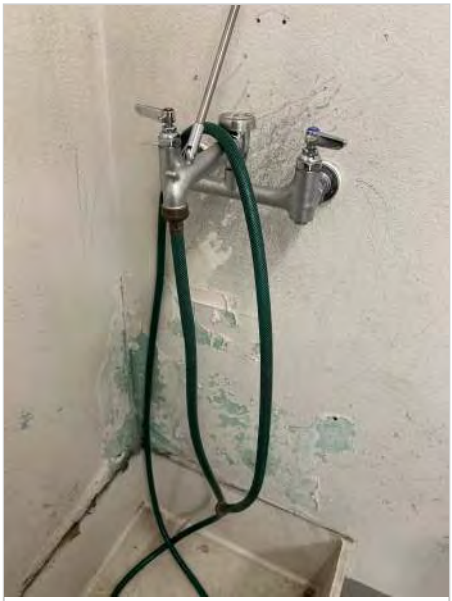


IMG_3176.JPG

IMG_3163.JPG

Comments 1

Overall, the plumbing fixtures assessed throughout the interior and exterior of the facility were in poor condition and require repair or replacement. The irrigation system was observed to be holding water pressure, but the pump was not energized to confirm functionality.

Many of the assessed faucets had leaks at the base, and their respective lavatories/ sinks had substantial leaks at the P-trap. Many of the toilets assessed had leaks between the tank and the bowl. In both cases, it appeared that the lack of water may have caused seals to dry out. This could have been from non-use, due to the building's vacancy. However, high winds have been shown to change the air pressure in plumbing vent stacks, making the water in the trap move, thus promoting dry traps. This may have caused seals to dry out and deteriorate sooner. At minimum, bathroom faucets, P-traps throughout, and tank-to-bowl gaskets should be replaced. Additionally, it is recommended that all supply lines and exterior faucet O-rings get replaced.

Jesse Coyle on 01/02/2024 at 01:35 AM
Affiliated Engineers, Inc. - Gainesville

WH-1

Affiliated Engineers Commissioning Practice | East Port Environmental/
CSA - FCA | 24673-02

1

0 CHECKLISTS | 0 TESTS | 0 ISSUES

Water Heating System, to include Water Heater and Recirc Pump. System was visually assessed, functionally tested, and had thermal imaging performed.

Space Mech. Elec. Room 144
Type Water Heater
Discipline Plumbing

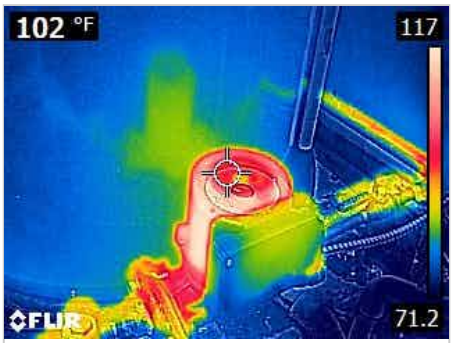
Attributes 4

Age 3 Years
Estimated Service Life 15 Years
Manufacturer Rheem
Remaining Service Life 12 Years

Photos 9

FLIR3053.jpg

FLIR3055.jpg



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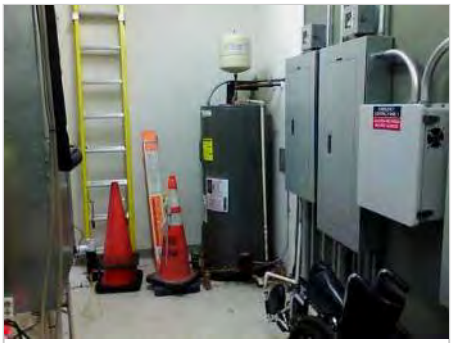


FLIR3054.jpg

FLIR3056.jpg

FLIR3060.jpg

FLIR3107.jpg

FLIR3108.jpg

WH-1.png

Comments 1

The Water Heating System was observed to be in great condition and performing like new, with no apparent storm-related damage. Thermal imaging shows heat profile of the water heater, the recirc pump, and shows hot water at sampled taps.

Jesse Coyle on 01/02/2024 at 12:21 AM
Affiliated Engineers, Inc. - Gainesville

APPENDIX 2 – FEMA CBCSS ENGINEER REPORT

To: CSA Associates LLC
Attn: David Carmet
600 Valley Road, Suite 206A
Wayne, New Jersey 07470

Subject: Charlotte County - East Port Environmental Campus

Property: 25550 Harborview Road
Port Charlotte, Florida 33980

Date: March 22, 2024

1 Site Summary

Located halfway between the Charlotte Harbor and Harbour Heights neighborhoods, the East Port Environmental Campus is an approximately 33,000 square-feet Charlotte County administrative facility containing multiple offices and meeting areas for County employees, as well as areas for the public to make payments for utilities. During the initial stages of the COVID-19 pandemic in 2020, the facility was partially closed and would remain underutilized. On September 28, 2022, Hurricane Ian impacted Southwest Florida, including Charlotte County, and the East Port facility was severely impacted by high winds and wind driven rain (Figure 2). Further damage was caused by Hurricane Idalia on August 30, 2023, which produced significant rainfall (Figure 3). Additionally, multiple severe rain events not linked to the tropical cyclone likely contributed further to the damage.

Figure 1: Aerial image of the East Port Environmental Campus (2020 aerial image).

Figure 2: Track of Hurricane Ian, indicating passage through Charlotte County (NOAA/NHC).

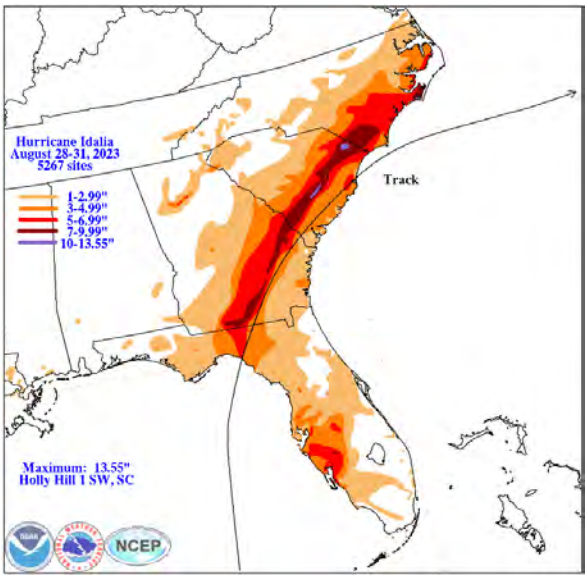


Figure 3: Rainfall reports from Hurricane Idalia, indicating rainfall exceeding 3-inches throughout Charlotte County (NOAA/NHC).

A previous inspection report released by CSA dated September 23, 2023 assessed the condition of the facility in its post-storm state. This report indicated multiple locations where wind-driven rain was suspected, along with exterior siding damaged by wind. WEC performed an on-site inspection of the East Port Environmental Campus on February 26, 2024 to perform an assessment of the existing structure and provide recommendations for repair and remediation.

The building is located in an AE-10 NAVD flood zone on FEMA flood map **12015C0232G**. The elevation certificate for the building, dated December 18, 2023, indicates the finished floor elevation of the structure is 9.3 ft NAVD. This site is subject to **149 mph ultimate wind speed**, located in an **Exposure C** area per ASCE 7-22.

2 Inspection

The inspection of the East Port Environmental Campus was performed by Brian Corso of The Weiler Engineering Corporation*, under responsible charge to Max Morgan, P.E.*

2.1 Exterior

The exterior of the building still exhibited damage from previous storms, with vinyl siding in disrepair along the perimeter of the facility (Figure 4). Along the western entryway, the missing siding along the covered patio exposed the underlying framing elements (Figure 5). The exposed framing elements appeared to be in generally acceptable repair, while the metal flashing adjacent appeared to be damaged (Figure 6).

Figure 4: General condition of East Port Environmental Campus exterior.

Figure 5: Missing siding with framing elements exposed at side entryway.

Figure 6: Closer view of exposed framing members.

Along the eastern wing exterior, a framed-out covering for the HVAC system was present. The adjacent siding was in disrepair, with the underlying sheathing visible (Figure 7). When viewed from beneath, the structure was noted to have no covering and was exposed (Figure 8). Within the covering structure, HVAC ventilation could be viewed, along with the underside of the roofing material over the covering (Figure 9).

Figure 7: Gable end damaged siding near HVAC ventilation.

Figure 8: Underside view of HVAC ventilation structure.

Figure 9: Duct visible inside structure.

Near the location of the HVAC covering, damage to the siding near the bottom of the wall was noted. A hole through the vinyl siding was visible (Figure 10). On close-up inspection, the batt insulation and wall framing members were visible (Figure 11).

Figure 10: Damage to lower portion of wall siding.

Figure 11: Extent of hole in siding, with insulation and metal stud visible.

The north corner of the building at the rear of the facility appeared in generally acceptable condition. This area was covered, though no doors were present, only office windows (Figure 12). Along the bottom of the wall in the covered area, minor separation was noted between the slab on grade and the wall, with no expansion joint or sealant visible (Figure 13).

Figure 12: Rear wall at north end of building.

Figure 13: Minor separation of the slab on grade from the building.

At multiple points along the perimeter of the facility, the downspouts were in disrepair. Each downspout feeds into an underground rain leader, draining into the lawn (Figure 14). In some locations, the downspouts were missing entirely, leaving the rain leader exposed (Figure 15).

Figure 14: Rear wall at north end of building.

Figure 15: Minor separation of the slab on grade from the building.

2.2 Interior

The lobby and reception area provides access to the two wings of the facility, with ceiling-height glazing present (Figure 16). Cracking in the drywall was visible at interior corners, as well as visible splitting and cracking in the window sill sealant (Figure 17).

Figure 16: Interior view of lobby, full height glazing visible.

Figure 17: Cracks in drywall and separation of window and wall.

Inside the eastern wing of the building, a training/meting room had further instances of window sill cracking (Figure 18). Along with splitting and cracking in the sealant, bubbling of paint was also present (Figure 19).

Figure 18: Training room interior condition.

Figure 19: Close view of cracking at window sill.

Along the westernmost wall of the building, drywall had been removed, exposing the underlying wall studs and the backside of the sheathing (Figure 20). It was noted that a strip of drywall, approximately four inches wide, was substituted for plywood, with an approximate half-inch gap visible between the panels (Figure 21). In the corner of multiple locations, corrosion was visible beneath the sill and down the studs, as well as what appeared to be white paint (Figure 22). Ant piles were visible in multiple locations, indicating gaps leading to outside (Figure 23).

Figure 20: Exposed wall studs and sheathing.

Figure 21: Drywall as sheathing visible with daylight through the cracks.

Figure 22: Condition of wall studs and sheathing at corner of wall.

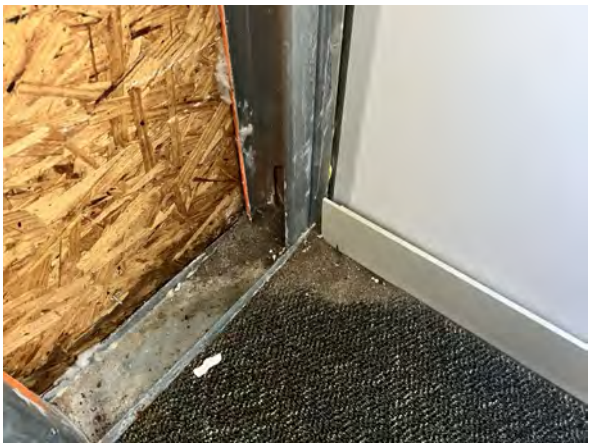


Figure 23: Ant pile visible adjacent and inside wall space.

The western wing of the building provides access for employees. A pair of glazed doors were located approximately halfway along the westernmost wall (Figure 20). Upon closer view, a gap showing daylight between the threshold and bottom of the door was noted (Figure 21).

Figure 24: Western employee entrance.

Figure 25: Daylight visible between door and threshold.

Running roughly northwest along the office area ceiling in the west wing, stains from water intrusion were visible (Figure 26). The attic space above the staining showed no clear source of the stains, with the stains approximately following the HVAC ducting above (Figure 27).

Figure 26: Water infiltration stains on acoustic ceiling tiles.

Figure 27: Attic space above ceiling stains showing HVAC ducting.

Multiple locations inside the building were missing acoustic tiles, allowing the attic above to be easily viewed (Figure 28). In multiple locations, daylight was visible through the roof above (Figure 29. The bag insulation along the roof was visible from the attic, with gaps noted in several locations (Figure 30). Deteriorated bag insulation was visible along the primary ridge of the building (Figure 31).

Figure 28: Missing acoustic tiles in ceiling.

Figure 29: Daylight visible through missing tiles.

Figure 30: Roof ridge visible through attic space.

Figure 31: Insulation visible near roof ridge.

3 Assessment

3.1 Structural Condition

The East Port Environmental Campus is approximately 33,000 square feet in area and approximately 837 linear feet in perimeter. While the building exhibited multiple areas of disrepair, there was no visible evidence of structural disrepair apart from the siding and waterproofing. However, there were multiple areas of disrepair that may affect the future structural integrity of the building if not adequately addressed in a timely manner. The portions of the steel framing that were visible did not exhibit any visible signs of disrepair.

The existing plans for the building indicate concrete masonry infill walls were present along the northwest wall at several locations, including the rear entrance. The wall along the western side of the building with drywall (see Figures 20 through 23) has noticeable gaps between the sheathing panels, permitting vapor, moisture, and wind-driven rain to pass through into the wall cavity. Additionally, as noted in Figure 23, there were visible ant piles, indicating failure of sealant along the length of the wall. While these walls are not part of the overall supporting structural system, they are part of the structural wind envelope and are currently in sufficient disrepair to warrant repairs.

Throughout the attic area, multiple locations where the bag insulation was deteriorated or damaged could be seen, such as in Figures 28 through 31. These were typically located above areas where ceiling tiles had previously been removed for being water damaged. While not structural components, proper thermal and moisture barriers are critical for the overall longevity and functionality of the building. Additionally, there were sufficient failures in the building envelope to permit the entrance of wildlife; while not photographed during the inspection, birds could be heard nesting withing the attic area.

Along the exterior of the building, damaged and missing siding was visible at multiple locations, e.g. Figure 7 and Figure 11. These areas of damage may permit future water infiltration events that could cause further deterioration of the facility. In addition to the damage to the siding, multiple downspouts along the perimeter of the structure were damaged or missing (see Figures 14 and 15). Degradation of the adjacent grade due to the missing downspouts may continue unless addressed.

3.2 Compliance

Historical information According to the original building plans, this facility was designed under the 1997 version of the *Standard Building Code* published by the Southern Building Code Congress International (SBCCI), and was designed for a wind speed of 110 mph. Historical FEMA flood maps indicate the structure was originally placed in an **A10** NGVD flood zone[1]. Under the current flood map[2], the base flood elevation (BFE) is 10.0 ft NAVD. According to the NGS Coordinate Conversion and Transformation Tool (NCAT), an estimated conversion factor between the two data is 1.132 ft, putting the finished floor elevation at 10.433 ft NGVD. Therefore, the building as permitted was 0.433 ft above the original BFE. *Please note that this conversion factor has not been confirmed by a licensed Florida professional surveyor and mapper, and is used only for estimation purposes.*

Applicable Codes, Standards, and Specifications The East Port Environmental Campus is located in an RE-1 (residential estate) zone on unincorporated Charlotte County land in the State of Florida. It is therefore subject to the applicable requirements of the *Charlotte County Code of Laws and Ordinances* (CLOCC), *the Florida*

[1] FEMA FIRM Community Panel 120061 0035D, revised May 1, 1984.
[2] FEMA FIRM map panel 12015C0232G, effective December 15, 2022

Building Code[3] (FBC), and referenced codes and standards. The following referenced standards are of particular importance to both flood and wind hazards and provide the minimum design requirements for structures.

- ASCE/SEI 24-14, *Flood Resistant Design and Construction*
- ASCE/SEI 7-22, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*
- NFPA 70-20, *National Electrical Code* (NEC)

Noted Deficiencies As previously noted, the building is located in an AE-10 NAVD flood zone and the finished floor elevation is 9.3 ft NAVD. According to ASCE 24-14, the minimum elevation for the lowest floor of a building not in a high risk flood hazard area is the base flood elevation plus one foot[4]. The proper design elevation for this building is 11.0 ft NAVD, with no stricter requirements provided for in CLOCC. At its current finished floor elevation of 9.3 ft NAVD, the building is 1.7 ft below the design flood elevation and shall require modification to bring it into compliance with ASCE 24-14.

Beginning with the 2022 revision of ASCE 7, Section 26.5.1 introduces the use of the ASCE Wind Design Geodatabase, an online tool used to determine the hazards of any specific location within the United States. According to the geodatabase, this building is located in a 149 mph wind zone (3-second gust). As previously noted, the building was designed for a continuous wind speed of 110 mph[5], and may not sufficiently resist wind forces. However, the plans available do not provide sufficient information of the steel framing of the building to determine if they will work with the current wind speed.

3.3 Repair Scope

Based on the observed field conditions, the available building plans, and historical documents, it is recommended that the following items be considered for repair. Where available, quantities are provided.

The interior layout shown on the original plans differs from the observed conditions due to multiple temporary office partitions and cubicles present. Permanently installed walls did not appear to differ from the plans.

Exterior walls and siding Damage to the siding of the building was noted along the perimeter, primarily on the western and southern faces. It is recommended that areas where siding is missing or damaged be checked for underlying issues with the walls and structural members. *Per FBC-B Section 1403.2, exterior walls are required to provide weather protection through a water-resistive barrier. All repairs shall meet these requirements. As illustrated in the included photos, approximately 600 square feet of siding will need to be replaced at a minimum.*

Stormwater At least four (4) downspouts were observed to be in disrepair, and it is recommended that they be replaced in kind. The gutter above was not accessible during the inspection, therefore it is recommended that the gutter be checked for damage prior to repair. Several locations at downspouts showed evidence of ponding indicating improper grading away from the building. There are an estimated five (5) locations equal to approximately 1,000 square feet where grade will need to be checked and potentially corrected. *All repairs shall comply with FBC Plumbing, Chapter 11.*

Miscellaneous Exterior The north end of the building had areas where the joint filler between the building and adjacent slab on grade was missing, approximately thirty linear feet (30 LF).

[3] The 2023 *Florida Building Code* is based on the 2021 *International Building Code* (IBC)

[4] ASCE/SEI 24-14, Table 2-1 *Minimum Elevation of the Top of the Lowest Floor - Flood Hazard Areas Other Than Coastal High Hazard Areas, Coastal A Zones, and High Risk Flood Hazard Areas*

[5] Using FBC-B Equation 16-17, the equivalent ultimate wind speed is 142 mph.

Windows/Glazing Multiple windows exhibited signs of past water infiltration, indicating damage to the sealant along the edges. This included windows in the lobby and training room. While this may be addressed through regular maintenance procedures, if included in the scope of work, all windows shall be resealed. All exterior doors shall have their waterproofing seals and sweeps replaced in locations where evidence of water infiltration is noted at the two non-public entrances.

The existing window sills are 2.83 ft above the finished floor elevation, or at 12.13 ft NAVD. Therefore, no further flood hardening will be required for the windows. However, no design information for the windows could be determined and though they were likely appropriate for the governing codes and standards at the time of construction, the windows will need to be replaced to meet the current requirements of the FBC, including Chapter 24 *Glass and Glazing*.

Exterior doors on the building shall also be replaced with models designed to meet or exceed the requirements of the FBC. Additionally, to meet the requirements of ASCE 24-14, dry floodproofing such as flood panels shall be installed. This would require flood panels on six (6) exterior double doors, or about 36 linear feet.

Walls The interior face of the exterior walls indicated water intrusion through the window or siding. As documented in Figure 21, drywall was utilized to fill an approximate 4-inch gap between the window sill and the top of the plywood sheathing. Additionally, due to the insufficient water barrier, the existing plywood sheathing has experienced delamination in multiple locations or is in otherwise poor condition. It is recommended that all locations where the plywood has delaminated and where drywall was used as sheathing have the existing sheathing removed and replaced with an appropriate waterproofed product. It was observed that a minimum estimated 215 linear feet (250 LF) of wall will require replacement and that the issue may extend up to a potentially estimated 600 linear feet (600 LF). *As previously mentioned, exterior walls shall meet the requirements of FBC-B Section 1403.2 for weather proection. Additionally, per FBC-B Section 1403.6, exterior walls below flood shall be constructed with flood-damage-resistant materials. All exterior wall studs and sections of bottom track exhibiting corrosion or other damage shall be replaced in kind.*

The original plans provided indicated the exterior wall was composed of cementitious siding over felt and fiberglass reinforced gypsum sheathing. Fiber-reinforced gypsum panels are subject to ASTM C1278, *Standard Specification for Fiber-Reinforced Gypsum Panel*, which includes specifications for water-resistant exterior sheathing panels. If gypsum panels are desired to be used, they shall comply with ASTM C1278. Non-binding guidance may be found in FEMA P-499[6] for construction of cavity walls below flood.

To fully dry flood proof the building to meet ASCE 24-14, the bottom 1.7 ft of the exterior walls shall be repaired or replaced with water-resistant materials and completely sealed in a water-tight manner to resist hydrostatic pressures. Approximately 837 linear feet will require repair.

Ceiling The magnitude of acoustic tiles removed from the ceiling indicate multiple areas where water infiltration occurred previously, primarily located directly above these areas with removed acoustic tiles. No evidence of current or active water infiltration was noted during the inspection, however. Attic vents may have allowed ingress of wind-driven rain during the last high pressure storm event. It was noted that potential condensation on HVAC drip line was falling onto a series of ceiling tiles that had not been removed.

[6] *Home Builder's Guide to Coastal Construction*, FEMA P-499, December 2010

Insulation All insulation that shows evidence of damage or saturation shall be replaced. Any evident locations where wildlife can enter the building shall be patched appropriately. Approximately 2,000 square feet will require remediation.

Due to the age of the building and the observed conditions, it is likely the insulation throughout the structure does not meet the requirements of the current version of the Florida Building Code, Energy Conservation (FBC-EC). According to FBC-EC Table C301.1, Charlotte County is classified as climate zone 2A in a warm-humid location. For the building to meet the current insulative requirements, FBC-EC Table C402.1.3 provides the necessary R-values:

- Metal building roof: R-19 plus R-11 liner systems
- Attic: R-38
- Metal building walls: R-13 plus R-6.5 continuous insulation

Quantities provided are for level of effort (LOE) estimation purposes only. All contractors shall inspect the building and perform proper due diligence prior to submitting a formal bid. To bring the building into compliance with the most current consensus-based codes, specifications, and standards, all exterior wall sheathing shall be removed to install the correct quantity and type of insulation.

4 Conclusion

Based on the estimated scope to repair, it is extremely unlikely that either the FEMA 50% rule for value or the Florida Building Code 50% rule for area would be invoked. Therefore, it is recommended that these repairs be performed as a Level 2 alteration in accordance with the Florida Building Code. As the suggested repairs will not likely exceed half the value of the facility nor half the area of the building, the building may be permitted to remain as an existing non-compliant structure with respect to the flood zone, wind zone, plumbing, mechanical, electrical, accessibility, energy efficiency, and any further concerns, as it complied with the code at the time of construction. It is recommended, however, that, at a minimum, flood proofing be considered for as to protect the assets within the building and to enhance its resilience.

To sufficiently harden the structure in compliance with the current consensus-based codes, specifications, and standards, it is possible that the cost of construction may exceed 50% of the marked value of the structure. To achieve hardening, the following tasks are necessary:

- Flood proof all exterior walls (1,423 square feet) , re-sheathe exterior (2,511 square feet)
- Replace all doors and windows with products designed for the current Florida Building Code
- Provide flood panels at doors or replace with flood-resistant doors
- Provide insulation, dry wall, paint interior face of exterior walls (approximately 10,000 square feet)
- Provide for accessibility upgrades, including within restroom facilities
- Provide complete original PEMB plans, calculations, and analysis under current wind code
- Provide complete envelope for blower door testing and Florida energy calculations

If you should have any questions or comments regarding the information provided by this letter, please feel free to contact me at The Weiler Engineering Corporation at (941) 505-1700.

Sincerely,

Max Morgan, P.E.
Structural Engineer
CC: Client / WEC File No. 24020.002

Max Morgan,
Professional Engineer,
State of Florida,
License No. 94877
This item has been
digitally signed and sealed by
Max Morgan, P.E.
on the date indicated here.
03/22/2024
Printed copies of this document are
not considered signed and sealed
and the signature must be verified
on any electronic copies.

Max Morgan, P.E.
FL License No. 94877

A Exhibits

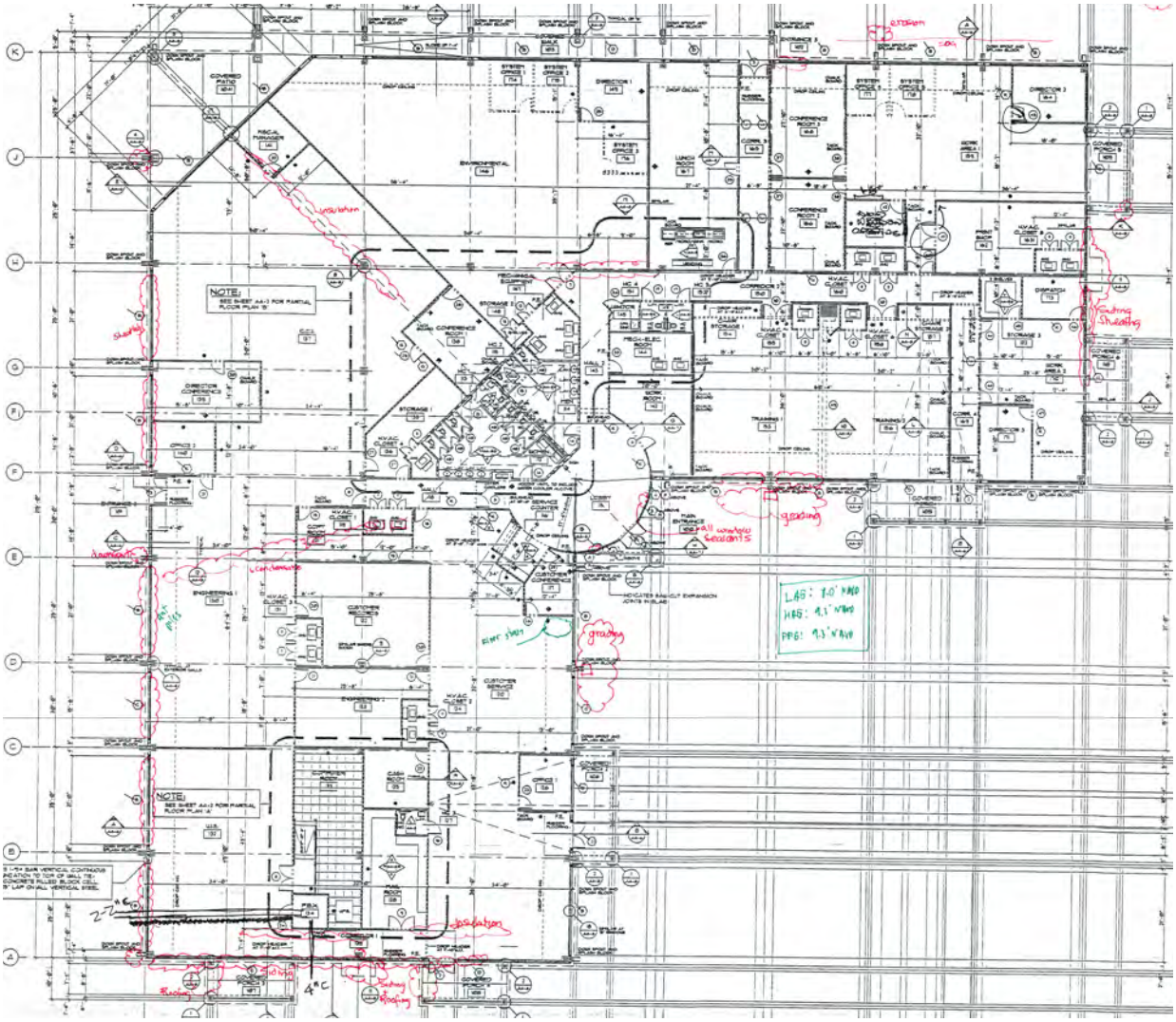


Exhibit 1: Site inspection notes. Areas of interest marked with red and green text.

APPENDIX A – NATIONAL FLOOD HAZARD LAYER FIRMETTE

National Flood Hazard Layer FIRMette

FEMA

82°2'1"W 26°58'56"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

82°1'23"W 26°58'24"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/22/2023 at 3:09 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Insurance Program

Elevation Certificate

and Instructions

2023 EDITION

FEMA

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

OMB Control No. 1660-0008
Expiration Date: 06/30/2026

ELEVATION CERTIFICATE AND INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE

Public reporting burden for this data collection is estimated to average 3.75 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting this form. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20742, Paperwork Reduction Project (1660-0008). **NOTE: Do not send your completed form to this address.**

PRIVACY ACT STATEMENT

Authority: Title 44 CFR § 61.7 and 61.8.

Principal Purpose(s): This information is being collected for the primary purpose of documenting compliance with National Flood Insurance Program (NFIP) floodplain management ordinances for new or substantially improved structures in designated Special Flood Hazard Areas. This form may also be used as an optional tool for a Letter of Map Amendment (LOMA), Conditional LOMA (CLOMA), Letter of Map Revision Based on Fill (LOMR-F), or Conditional LOMR-F (CLOMR-F), or for flood insurance rating purposes in any flood zone.

Routine Use(s): The information on this form may be disclosed as generally permitted under 5 U.S.C. § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/ FEMA-003 – *National Flood Insurance Program Files System of Records Notice* 79 Fed. Reg. 28747 (May 19, 2014) and upon written request, written consent, by agreement, or as required by law.

Disclosure: The disclosure of information on this form is voluntary; however, failure to provide the information requested may impact the flood insurance premium through the NFIP. Information will only be released as permitted by law.

PURPOSE OF THE ELEVATION CERTIFICATE

The Elevation Certificate is an important administrative tool of the NFIP. It can be used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to inform the proper insurance premium, and to support a request for a LOMA, CLOMA, LOMR-F, or CLOMR-F.

The Elevation Certificate is used to document floodplain management compliance for Post-Flood Insurance Rate Map (FIRM) buildings, which are buildings constructed after publication of the FIRM, located in flood Zones A1–A30, AE, AH, AO, A (with Base Flood Elevation (BFE)), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO, and A99. It may also be used to provide elevation information for Pre-FIRM buildings or buildings in any flood zone.

As part of the agreement for making flood insurance available in a community, the NFIP requires the community to adopt floodplain management regulations that specify minimum requirements for reducing flood losses. One such requirement is for the community to obtain the elevation of the lowest floor (including basement) of all new and substantially improved buildings, and maintain a record of such information. The Elevation Certificate provides a way for a community to document compliance with the community's floodplain management ordinance.

Use of this certificate does not provide a waiver of the flood insurance purchase requirement. Only a LOMA or LOMR-F from the Federal Emergency Management Agency (FEMA) can amend the FIRM and remove the federal mandate for a lending institution to require the purchase of flood insurance. However, the lending institution has the option of requiring flood insurance even if a LOMA/LOMR-F has been issued by FEMA. The Elevation Certificate may be used to support a LOMA, CLOMA, LOMR-F, or CLOMR-F request. Lowest Adjacent Grade (LAG) elevations certified by a land surveyor, engineer, or architect, as authorized by state law, will be required if the certificate is used to support a LOMA, CLOMA, LOMR-F, or CLOMR-F request. A LOMA, CLOMA, LOMR-F, or CLOMR-F request must be submitted with either a completed FEMA MT-EZ or MT-1 application package, whichever is appropriate. If the certificate will only be completed to support a LOMA, CLOMA, LOMR-F, or CLOMR-F request, there is an option to document the certified LAG elevation on the Elevation Form included in the MT-EZ and MT-1 application.

This certificate is used only to certify building elevations. A separate certificate is required for floodproofing. Under the NFIP, non-residential buildings can be floodproofed up to or above the BFE. A floodproofed building is a building that has been designed and constructed to be watertight (substantially impermeable to floodwaters) below the BFE. Floodproofing of residential buildings is not permitted under the NFIP unless FEMA has granted the community an exception for residential floodproofed basements. The community must adopt standards for design and construction of floodproofed basements before FEMA will grant a basement exception. For both floodproofed non-residential buildings and residential floodproofed basements in communities that have been granted an exception by FEMA, a floodproofing certificate is required.

The expiration date on the form herein does not apply to certified and completed Elevation Certificates, as a completed Elevation Certificate does not expire, unless there is a physical change to the building that invalidates information in Section A Items A8 or A9, Section C, Section E, or Section H. In addition, this form is intended for the specific building referenced in Section A and is not invalidated by the transfer of building ownership.

Additional guidance can be found in FEMA Publication 467-1, *Floodplain Management Bulletin: Elevation Certificate.*

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

OMB Control No. 1660-0008
Expiration Date: 06/30/2026

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

SECTION A – PROPERTY INFORMATION

FOR INSURANCE COMPANY USE

Policy Number:

Company NAIC Number:

A1. Building Owner's Name: Charlotte County

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 3110 Loveland Blvd - Bldg A

City: Port Charlotte State: FL ZIP Code: 33980

A3. Property Description (e.g., Lot and Block Numbers or Legal Description) and/or Tax Parcel Number:
Tax Parcel Number: 402319100001

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.): Non-Residential

A5. Latitude/Longitude: Lat. 26° 58' 39.73" N Long. -082° 01' 42.12" W Horiz. Datum: ☐ NAD 1927 ☒ NAD 1983 ☐ WGS 84

A6. Attach at least two and when possible four clear color photographs (one for each side) of the building (see Form pages 7 and 8).

A7. Building Diagram Number: 1B

A8. For a building with a crawlspace or enclosure(s):

a) Square footage of crawlspace or enclosure(s): N/A sq. ft.

b) Is there at least one permanent flood opening on two different sides of each enclosed area? ☐ Yes ☐ No ☒ N/A

c) Enter number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade:
Non-engineered flood openings: Engineered flood openings:

d) Total net open area of non-engineered flood openings in A8.c: N/A sq. in.

e) Total rated area of engineered flood openings in A8.c (attach documentation – see Instructions): N/A sq. ft.

f) Sum of A8.d and A8.e rated area (if applicable – see Instructions): N/A sq. ft.

A9. For a building with an attached garage:

a) Square footage of attached garage: N/A sq. ft.

b) Is there at least one permanent flood opening on two different sides of the attached garage? ☐ Yes ☐ No ☒ N/A

c) Enter number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade:
Non-engineered flood openings: Engineered flood openings:

d) Total net open area of non-engineered flood openings in A9.c: N/A sq. in.

e) Total rated area of engineered flood openings in A9.c (attach documentation – see Instructions): N/A sq. ft.

f) Sum of A9.d and A9.e rated area (if applicable – see Instructions): N/A sq. ft.

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1.a. NFIP Community Name: Charlotte County B1.b. NFIP Community Identification Number: 120061

B2. County Name: Charlotte B3. State: FL B4. Map/Panel No.: 12015C/232 B5. Suffix: G

B6. FIRM Index Date: 09/19/1975 B7. FIRM Panel Effective/Revised Date: 12/15/2022

B8. Flood Zone(s): AE B9. Base Flood Elevation(s) (BFE) (Zone AO, use Base Flood Depth): 10.0'

B10. Indicate the source of the BFE data or Base Flood Depth entered in Item B9:
☐ FIS ☒ FIRM ☐ Community Determined ☐ Other:

B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☒ NAVD 1988 ☐ Other/Source:

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No
Designation Date: ☐ CBRS ☐ OPA

B13. Is the building located seaward of the Limit of Moderate Wave Action (LiMWA)? ☐ Yes ☒ No

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 3110 Loveland Blvd - Bldg A

City: Port Charlotte State: FL ZIP Code: 33980

FOR INSURANCE COMPANY USE

Policy Number:

Company NAIC Number:

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☒ Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, AO, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO, A99. Complete Items C2.a–h below according to the Building Diagram specified in Item A7. In Puerto Rico only, enter meters.
Benchmark Utilized: NGS I-75 K 16 (PID AG7980) Vertical Datum: NAVD88

Indicate elevation datum used for the elevations in items a) through h) below.
☐ NGVD 1929 ☒ NAVD 1988 ☐ Other:

Datum used for building elevations must be the same as that used for the BFE. Conversion factor used? ☐ Yes ☒ No
If Yes, describe the source of the conversion factor in the Section D Comments area.

		Check the measurement used:
a) Top of bottom floor (including basement, crawlspace, or enclosure floor):	9.3	☒ feet ☐ meters
b) Top of the next higher floor (see Instructions):	N/A	☐ feet ☐ meters
c) Bottom of the lowest horizontal structural member (see Instructions):	N/A	☐ feet ☐ meters
d) Attached garage (top of slab):	N/A	☐ feet ☐ meters
e) Lowest elevation of Machinery and Equipment (M&E) servicing the building (describe type of M&E and location in Section D Comments area):	9.1	☒ feet ☐ meters
f) Lowest Adjacent Grade (LAG) next to building: ☐ Natural ☒ Finished	8.0	☒ feet ☐ meters
g) Highest Adjacent Grade (HAG) next to building: ☐ Natural ☒ Finished	9.1	☒ feet ☐ meters
h) Finished LAG at lowest elevation of attached deck or stairs, including structural support:	N/A	☐ feet ☐ meters

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by state law to certify elevation information. *I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.*

Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No

☐ Check here if attachments and describe in the Comments area.

Certifier's Name: Henry G. Fichter License Number: 7453

Title: Vice President / Survey Manager

Company Name: AIM Engineering & Surveying, Inc.

Address: 2161 Fowler St. Suite 100

City: Ft. Myers State: FL ZIP Code: 33901

Telephone: (239) 284-1914 Ext.: Email: gfichter@aimengr.com

Signature: Date: 12/18/2023

HENRY G. FICHTER License Number 7453 STATE OF FLORIDA Professional Surveyor & Mapper

Digitally signed by Henry G Fichter
Date: 2023.12.18 08:22:06 -05'00'

Place Seal Here

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including source of conversion factor in C2; type of equipment and location per C2.e; and description of any attachments):
Section C (e) Air Conditioner Pad (Southeast Corner of Building) the other 3 air conditioner pads have an elevation of 9.1'
Well equipment pad elevation = 9.1'
Electrical transformer pad elevation = 9.4'

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 3110 Loveland Blvd - Bldg A City: Port Charlotte State: FL ZIP Code: 33980	**FOR INSURANCE COMPANY USE** Policy Number: Company NAIC Number:

SECTION E – BUILDING MEASUREMENT INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO, ZONE AR/AO, AND ZONE A (WITHOUT BFE)

For Zones AO, AR/AO, and A (without BFE), complete Items E1–E5. For Items E1–E4, use natural grade, if available. If the Certificate is intended to support a Letter of Map Change request, complete Sections A, B, and C. Check the measurement used. In Puerto Rico only, enter meters.

Building measurements are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☐ Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

E1. Provide measurements (C.2.a in applicable Building Diagram) for the following and check the appropriate boxes to show whether the measurement is above or below the natural HAG and the LAG.

a) Top of bottom floor (including basement, crawlspace, or enclosure) is: _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

b) Top of bottom floor (including basement, crawlspace, or enclosure) is: _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6–9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 1–2 of Instructions), the next higher floor (C2.b in applicable Building Diagram) of the building is: _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E3. Attached garage (top of slab) is: _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E4. Top of platform of machinery and/or equipment servicing the building is: _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown The local official must certify this information in Section G.

SECTION F – PROPERTY OWNER (OR OWNER'S AUTHORIZED REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without BFE) or Zone AO must sign here. *The statements in Sections A, B, and E are correct to the best of my knowledge*

☐ Check here if attachments and describe in the Comments area.

Property Owner or Owner's Authorized Representative Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Telephone: _____ Ext.: _____ Email: _____

Signature: _____ Date: _____

Comments:

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 3110 Loveland Blvd - Bldg A

City: Port Charlotte State: FL ZIP Code: 33980

FOR INSURANCE COMPANY USE

Policy Number: _____

Company NAIC Number: _____

SECTION G – COMMUNITY INFORMATION (RECOMMENDED FOR COMMUNITY OFFICIAL COMPLETION)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Section A, B, C, E, G, or H of this Elevation Certificate. Complete the applicable item(s) and sign below when:

G1. ☐ The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by state law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)

G2.a. ☐ A local official completed Section E for a building located in Zone A (without a BFE), Zone AO, or Zone AR/AO, or when item E5 is completed for a building located in Zone AO.

G2.b. ☐ A local official completed Section H for insurance purposes.

G3. ☐ In the Comments area of Section G, the local official describes specific corrections to the information in Sections A, B, E and H.

G4. ☐ The following information (Items G5–G11) is provided for community floodplain management purposes.

G5. Permit Number: _____ G6. Date Permit Issued: _____

G7. Date Certificate of Compliance/Occupancy Issued: _____

G8. This permit has been issued for: ☐ New Construction ☐ Substantial Improvement

G9.a. Elevation of as-built lowest floor (including basement) of the building: _____ ☐ feet ☐ meters Datum: _____

G9.b. Elevation of bottom of as-built lowest horizontal structural member: _____ ☐ feet ☐ meters Datum: _____

G10.a. BFE (or depth in Zone AO) of flooding at the building site: _____ ☐ feet ☐ meters Datum: _____

G10.b. Community's minimum elevation (or depth in Zone AO) requirement for the lowest floor or lowest horizontal structural member: _____ ☐ feet ☐ meters Datum: _____

G11. Variance issued? ☐ Yes ☐ No If yes, attach documentation and describe in the Comments area.

The local official who provides information in Section G must sign here. *I have completed the information in Section G and certify that it is correct to the best of my knowledge. If applicable, I have also provided specific corrections in the Comments area of this section.*

Local Official's Name: _____ Title: _____

NFIP Community Name: _____

Telephone: Ext.: _____ Email: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Signature: _____ Date: _____

Comments (including type of equipment and location, per C2.e; description of any attachments; and corrections to specific information in Sections A, B, D, E, or H):

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 3110 Loveland Blvd - Bldg A City: Port Charlotte State: FL ZIP Code: 33980	**FOR INSURANCE COMPANY USE** Policy Number: Company NAIC Number:

SECTION H – BUILDING'S FIRST FLOOR HEIGHT INFORMATION FOR ALL ZONES (SURVEY NOT REQUIRED) (FOR INSURANCE PURPOSES ONLY)

The property owner, owner's authorized representative, or local floodplain management official may complete Section H for all flood zones to determine the building's first floor height for insurance purposes. Sections A, B, and I must also be completed. Enter heights to the nearest tenth of a foot (nearest tenth of a meter in Puerto Rico). ***Reference the Foundation Type Diagrams (at the end of Section H Instructions) and the appropriate Building Diagrams (at the end of Section I Instructions) to complete this section.***

H1. Provide the height of the top of the floor (as indicated in Foundation Type Diagrams) above the Lowest Adjacent Grade (LAG):

a) **For Building Diagrams 1A, 1B, 3, and 5–8.** Top of bottom floor (include above-grade floors only for buildings with crawlspaces or enclosure floors) is: _____ ☐ feet ☐ meters ☐ above the LAG

b) **For Building Diagrams 2A, 2B, 4, and 6–9.** Top of next higher floor (i.e., the floor above basement, crawlspace, or enclosure floor) is: _____ ☐ feet ☐ meters ☐ above the LAG

H2. Is **all** Machinery and Equipment servicing the building (as listed in Item H2 instructions) elevated to or above the floor indicated by the H2 arrow (shown in the Foundation Type Diagrams at end of Section H instructions) for the appropriate Building Diagram?

☐ Yes ☐ No

SECTION I – PROPERTY OWNER (OR OWNER'S AUTHORIZED REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and H must sign here. *The statements in Sections A, B, and H are correct to the best of my knowledge.* **Note:** If the local floodplain management official completed Section H, they should indicate in Item G2.b and sign Section G.

☐ Check here if attachments are provided (including required photos) and describe each attachment in the Comments area.

Property Owner or Owner's Authorized Representative Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Telephone: Ext.: _____ Email: _____

Signature: _____ Date: _____

Comments:

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

BUILDING PHOTOGRAPHS

See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.:
3110 Loveland Blvd - Bldg A

City: Port Charlotte State: FL ZIP Code: 33980

FOR INSURANCE COMPANY USE

Policy Number:

Company NAIC Number:

Instructions: Insert below at least two and when possible four photographs showing each side of the building (for example, may only be able to take front and back pictures of townhouses/rowhouses). Identify all photographs with the date taken and "Front View," "Rear View," "Right Side View," or "Left Side View." Photographs must show the foundation. When flood openings are present, include at least one close-up photograph of representative flood openings or vents, as indicated in Sections A8 and A9.

Photo One

Photo One Caption: Front & Left Side View 12/12/23

Clear Photo One

Photo Two

Photo Two Caption: Front & Right Side View 12/12/23

Clear Photo Two

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON INSTRUCTION PAGES 1-11

BUILDING PHOTOGRAPHS

Continuation Page

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 3110 Loveland Blvd - Bldg A

City: Port Charlotte State: FL ZIP Code: 33980

FOR INSURANCE COMPANY USE

Policy Number:

Company NAIC Number:

Insert the third and fourth photographs below. Identify all photographs with the date taken and "Front View," "Rear View," "Right Side View," or "Left Side View." When flood openings are present, include at least one close-up photograph of representative flood openings or vents, as indicated in Sections A8 and A9.

Photo Three

Photo Three Caption: Rear View 12/12/23

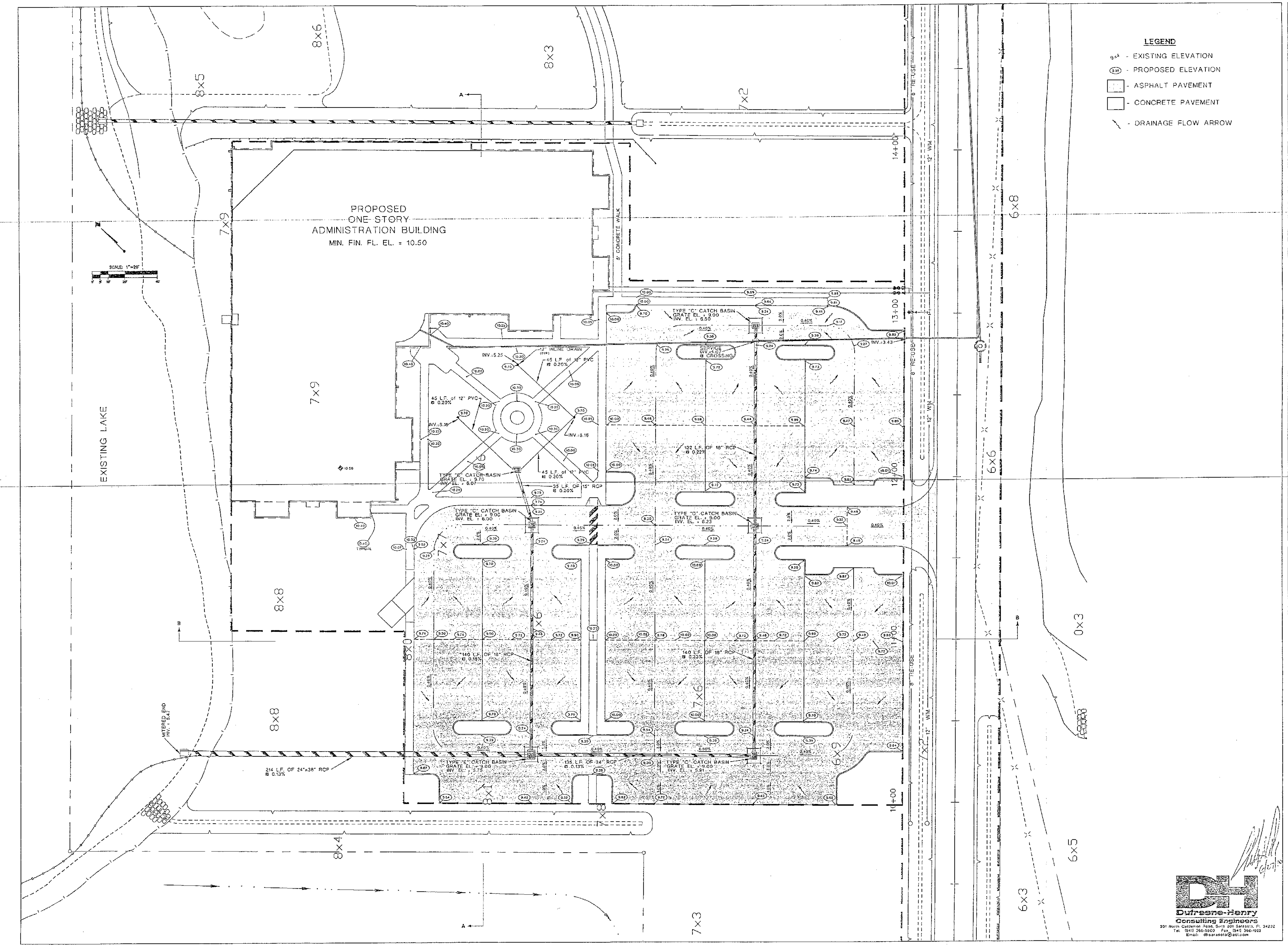
Clear Photo Three

Photo Four

Photo Four Caption: Rear View 12/12/23

Clear Photo Four

APPENDIX B – GENERAL LAYOUT AND BUILDING LOCATIONS



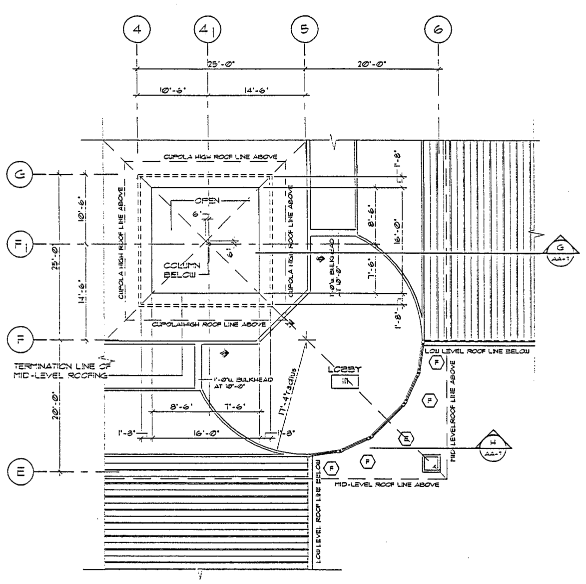
REVISIONS

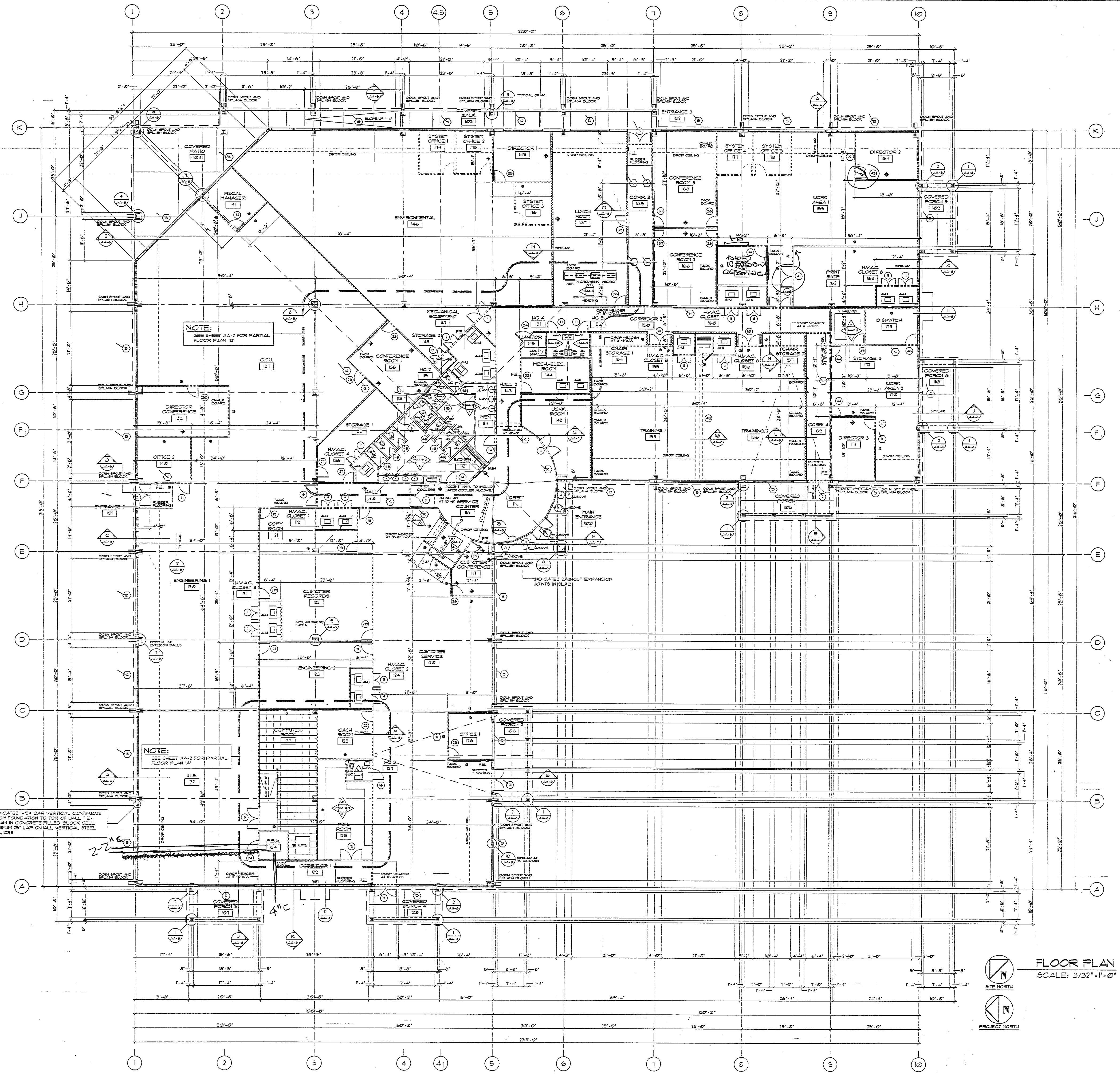
GEORGE PALERMO
ARCHITECT, INC.
1444 FIRST STREET, SARASOTA, FLORIDA, 34236 (941) 365-7777 / FAX (941) 954-4214

DRAINAGE AND GRADING PLAN FOR:
EAST PORT ENVIRONMENTAL CAMPUS
PORT CHARLOTTE, FLORIDA

DATE 4/28/00
FILE 9578425.35

SHEET AC-2
2 OF 4





INTERIOR PARTITION WALL KEY

— 8"nom. CONCRETE MASONRY WALL, COMMON BOND, WITH HORIZONTAL WALL REINFORCING EVERY OTHER COURSE

— 8"-18 GAUGE STEEL STUDS AT 2'-0"o.c. TO UNDERSIDE OF ROOF DECK WITH 6" R-19 FIBERGLASS BATT INSULATION

— 6"-25 GAUGE STEEL STUDS AT 2'-0"o.c. WITH 6" R-19 FIBERGLASS BATT INSULATION SEE SHEETS AA-6, AA-7 AND AA-8 FOR WALL SECTIONS AND DETAILS WALLS TO TERMINATE 2" ABOVE HIGHEST ADJOINING CEILING

— 3 5/8"-25 GAUGE STEEL STUDS AT 2'-0"o.c. WITH 3 1/2" R-11 FIBERGLASS BATT INSULATION SEE SHEETS AA-6, AA-7 AND AA-8 FOR WALL SECTIONS AND DETAILS WALLS TO TERMINATE 2" ABOVE HIGHEST ADJOINING CEILING

— 3 5/8"-25 GAUGE STEEL STUDS AT 2'-0"o.c. SEE SHEETS AA-6, AA-7 AND AA-8 FOR WALL SECTIONS AND DETAILS WALLS TO TERMINATE 2" ABOVE HIGHEST ADJOINING CEILING

— 2 HOUR RATED WALL - 6"-18 GAUGE STEEL STUDS AT 2'-0"o.c. WITH 6" R-19 FIBERGLASS BATT INSULATION SEE SHEETS AA-6, AA-7 AND AA-8 FOR WALL SECTIONS AND DETAILS AND SHEET ALS-1 FOR RATED WALL CONSTRUCTION DETAILS WALL TO EXTEND TO BOTTOM OF ROOF DECK

— 1 HOUR RATED WALL - 6"-18 GAUGE STEEL STUDS AT 2'-0"o.c. WITH 6" R-19 FIBERGLASS BATT INSULATION SEE SHEETS AA-6, AA-7 AND AA-8 FOR WALL SECTIONS AND DETAILS AND SHEET ALS-1 FOR RATED WALL CONSTRUCTION DETAILS WALL TO EXTEND TO BOTTOM OF ROOF DECK

ACCENT WALL KEY

— INDICATES WALL AND SIDE OF WALL WITH ACCENT PAINT

— INDICATES WALL AND SIDE OF WALL WITH ACCENT VINYL WALL COVERING

I HEREBY CERTIFY THAT THESE CONSTRUCTION DRAWINGS ARE IN COMPLIANCE WITH THE 1997 EDITION OF THE STANDARD BUILDING CODE SECTION 1606, FOR CONSTRUCTION IN 110 M.P.H. WIND ZONE.

TO THE BEST OF THIS ARCHITECT'S AND/OR ENGINEER'S KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND APPLICABLE MINIMUM FIRE SAFETY STANDARDS AS DETERMINED IN ACCORDANCE WITH CHAPTERS 553 AND 633, LAWS OF FLORIDA.

SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION

REVISIONS

GEORGE PALERMO
ARCHITECT, INC.
1444 FIRST STREET, SARASOTA, FLORIDA 34236 (941) 365-7777 / FAX (941) 954-4214

ADMINISTRATION BUILDING FOR:
EAST PORT ENVIRONMENTAL CAMPUS
25550 HARBORVIEW ROAD, PORT CHARLOTTE, FLORIDA 33980

DATE 4/28/00
FILE 99110

APPENDIX C – MASTER SPREADSHEET AND COST SUMMARY

Cost Summary

Applicant Entity:	Charlotte County
Facility Name:	East Port Environmental Campus- Administration Building A
Facility Address:	25550 Harborview Road, Port Charlotte, FL 33980
Asset ID:	052 – East Port Environmental Campus- Administration Building A
Inspection Date:	2/26/2024

						CONTRACTOR BENCHMARKING [1]		
Division	**Sub-division Level 1**	**Component Description**	**Quantity**	**Quantity Type**	**Quantity Unit**	**Unit Cost**	**Cost Subtotal**	**Notes**
Division 02 - Existing Conditions	02 40 00 - Demolition and Structure Moving	Demolition work	1	Each	Each	$ 37,798.37	$ 37,798.37	Demolitions works and hauling off debris
Division 02 - Existing Conditions	02 80 00 - Facility Remediation	Mold Remediation	1	Each	Each	$ 44,400.00	$ 44,400.00	Cleaning and decontamination
Division 06 - Wood, Plastics, Composites	06 20 00 - Finish Carpentry	Millwork/Casework	1	Each	Each	$ 12,000.00	$ 12,000.00	Allowance
Division 07 - Thermal and Moisture Protection	07 20 00 - Thermal Protection	R19- Fire Rated Batt Insulation	1,660	Area	Square Foot	$ 2.25	$ 3,735.00	
Division 07 - Thermal and Moisture Protection	07 20 00 - Thermal Protection	Rigid Board Wall Insulation	10,000	Area	Square Foot	$ 1.26	$ 12,600.00	
Division 07 - Thermal and Moisture Protection	07 40 00 - Roofing and Siding Panels	Metal Soffit Panels	48	Area	Square Foot	$ 53.75	$ 2,580.00	
Division 07 - Thermal and Moisture Protection	07 40 00 - Roofing and Siding Panels	8" Fiber Cement Siding Panels	2,511	Area	Square Foot	$ 46.00	$ 115,506.00	Includes 5/8 plywood and Tyvek water proofing
Division 07 - Thermal and Moisture Protection	07 60 00 - Flashing and Sheet Metal	Metal Roofing	1	Each	Each	$ 35,255.00	$ 35,255.00	Reset detached metal panels
Division 07 - Thermal and Moisture Protection	07 70 00 - Roof and Wall Specialties and Accessories	8" Galvanized Steel Gutter	62	Length	Linear Foot	$ 80.00	$ 4,960.00	
Division 07 - Thermal and Moisture Protection	07 70 00 - Roof and Wall Specialties and Accessories	5" Galvanized Steel Downspout	36	Length	Linear Foot	$ 73.00	$ 2,628.00	
Division 09 - Finishes	09 20 00 - Plaster and Gypsum Board	Drywall	10,000	Area	Square Foot	$ 9.55	$ 95,500.00	Include painting
Division 09 - Finishes	09 50 00 - Ceilings	2' x 4' Acoustical Ceiling Tile	1,456	Area	Square Foot	$ 7.00	$ 10,192.00	
Division 09 - Finishes	09 50 00 - Ceilings	2' x 2' Acoustical Ceiling Tile	204	Area	Square Foot	$ 7.00	$ 1,428.00	
Division 09 - Finishes	09 60 00 - Floorings	Carpet	254	Area	Square Foot	$ 12.50	$ 3,175.00	
Division 09 - Finishes	09 60 00 - Floorings	4" Vinyl Wall Base	1,666	Length	Linear Foot	$ 7.50	$ 12,495.00	
Division 21 - Fire Suppression	21 10 00 - Water-Based Fire-Suppression Systems	Sprinkler Heads	1	Each	Each	$ 2,000.00	$ 2,000.00	Remove/reinstall to allow ceiling works
Division 23 - Heating, Ventilating, and Air Conditioning (HVAC)	23 80 00 - Decentralized HVAC Equipment	Exterior Condenser Units	1	Each	Each	$ 18,200.00	$ 18,200.00	Remove/reinstall to allow façade works
Division 23 - Heating, Ventilating, and Air Conditioning (HVAC)	23 80 00 - Decentralized HVAC Equipment	Misc. HVAC Work [2]	1	Each	Each	$ 58,000.00	$ 58,000.00	
Division 26 - Electrical	26 20 00 - Low-Voltage Electrical Transmission	Duplex Power Wall Outlet	2	Each	Each	$ 250.00	$ 500.00	
Division 26 - Electrical	26 50 00 - Lighting	25' Exterior LED light pole and fixture	1	Each	Each	$ 3,850.00	$ 3,850.00	
Division 26 - Electrical	26 50 00 - Lighting	3' Exterior Data Junction Box	1	Each	Each	$ 1,175.00	$ 1,175.00	
Division 32 - Exterior Improvements	32 30 00 - Site Improvements	Re-grading exterior areas	1,000	Area	Square Foot	$ 2.50	$ 2,500.00	Ponding water in several areas
Division 07 - Thermal and Moisture Protection	07 90 00 - Joint Protection	Concrete joint sealer	30	Length	Linear Foot	$ 16.75	$ 502.50	North side- building to adjacent slab
Division 08 - Openings	08 40 00 - Entrances, Storefronts, and Curtain Walls	Exterior door industrial grade 3' x 8'	24	Area	Square Foot	$ 155.00	$ 3,720.00	1 EA
Division 08 - Openings	08 40 00 - Entrances, Storefronts, and Curtain Walls	Exterior door industrial grade 3' x 6' - 8"	101	Area	Square Foot	$ 155.00	$ 15,693.75	5 EA
Division 08 - Openings	08 50 00 - Windows	Exterior windows industrial grade 3' x 3' - 2"	39	Area	Square Foot	$ 155.00	$ 6,045.00	4 EA
Division 08 - Openings	08 50 00 - Windows	Exterior windows industrial grade 21' x 3' - 2"	1,160	Area	Square Foot	$ 155.00	$ 179,838.75	17 EA
Division 08 - Openings	08 50 00 - Windows	Exterior windows industrial grade 15' - 6" x 3' - 2"	252	Area	Square Foot	$ 155.00	$ 39,040.63	5 EA
Division 08 - Openings	08 50 00 - Windows	Exterior windows industrial grade 10' - 4" x 3' - 2"	171	Area	Square Foot	$ 155.00	$ 26,446.88	5 EA
Division 08 - Openings	08 50 00 - Windows	Exterior windows industrial grade 3' x 6' - 6"	117	Area	Square Foot	$ 155.00	$ 18,135.00	6 EA
Division 10 - Specialties	10 70 00 - Exterior Specialties	Flood Panels at exterior doors	5	Each	Each	$ 2,500.00	$ 12,500.00	6 EA
Division 23 - Heating, Ventilating, and Air Conditioning (HVAC)	23 80 00 - Decentralized HVAC Equipment	Elevation of exterior HVAC units to BFE+1. Includes detach and reset equiment on galvanized angle framed supports with steel grate platforms	21	Each	Each	$ 3,024.34	$ 63,511.18	HVAC exterior units and electrical transformer

CEF- Indirect Cost, Contingency, and General Contractor O/H & Profit	$ 832,981.94

TOTAL $ 1,678,893

Contractor benchmarking cost estimate is based on their constructability review and knowledge of local market pricing of trades work.
Facilities Conditions Assessment with list of damaged HVAC components in Appendix 1

APPENDIX D – INDIRECT COSTS, CONTINGENCY, AND GC O/H & PROFIT

CEF Fact Sheet

4/23/2024

Charlotte County - East Port Environmental Campus - Administration Building A

Date of Estimate:	24-Apr-24
FEMA Region:	
Preparer(s):	David Carmet
Applicant Name:	Charlotte County
Project Title:	East Port Environmental Campus - Administration Building A
Damaged Facility:	East Port Environmental Campus - Administration Building A
Declaration Number:	DR-4673-FL
Project Number:	
PA ID No.:	
Date of Inspection:	26-Feb-24
Event Date(s)	28-Sep-22
Work Category:	E
Type of Work: *(Enter New, Repair, etc.)*	Repair

Preparer's Notes:

Historic rain and strong wind from Hurricane Ian (declared disaster # DR-4673-FL) caused damage to the Charlotte County East Port Environmental Campus- Administration Building A. This facility is located at 25550 Harborview Road, Port Charlotte, FL 33980 (GPS Lat/Long: 26.97784, -82.02834).

Part A estimate was prepared using RSMeans Online, Fort Meyers (2024 - Q1), including subcontractor's overhead and profit. Costs not covered by RSMeans were determined using online resources or vendor quotes. Current project status is pre-design planning, and project delivery method is Design-Bid-Build. This estimate was checked by Florida Licensed General Contractor David Carmet (Florida GC License CGC1533947).

CEF Part A

Charlotte County - East Port Environmental Campus - Administration Building A

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
Completed Work Items							
	Completed Permanent Items						
							$ -
							$ -
					$ -		$ -
					$ -		$ -
						Completed - Permanent Total	$ -
	Completed Non-Permanent Items						
					$ -		$ -
					$ -		$ -
					$ -		$ -
					$ -		$ -
						Completed - Non-Permanent Total	$ -

CEF Part A

Charlotte County - East Port Environmental Campus - Administration Building A

Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	Total Cost
Uncompleted Work Items							
	Uncompleted Permanent Items						
	East Port Environmental Campus- Administration Building A	Cost Benchmarking	1	LS	$845,911.06	1.0000	$ 845,911.06
					$ -		$ -
					$ -		$ -
					$ -		$ -
					Uncompleted - Permanent Total		$ 845,911.06
	Uncompleted Non-Permanent Items						
					$ -		$ -
					$ -		$ -
					$ -		$ -
					$ -		$ -
					Uncompleted - Non-Permanent Total		$ -
					TOTAL PART A BASE CONSTRUCTION COST		$ 845,911.06

CEF Summary of Uncompleted Work

Charlotte County - East Port Environmental Campus - Administration Building A

			Repair	$ -	$ -	$ -	$ -	Total
A	**"Base Costs" for Construction Work-In Trades**							
A.1	Permanent Work (CEF Part A)		$ 845,911					$ 845,911
A.2	Non-Permanent Job Specific Work (CEF Part A)							$ -
	Part A Total		$ 845,911	$ -	$ -	$ -	$ -	$ 845,911
B	**General Requirements and General Conditions**							
B.1	General Requirements	Guide Low to High	Enter % in Appropriate Column					
	Safety & Security	4% to 6.0%	4.0%					
	Temporary Services & Utilities	0% to 1.0%	1.0%					
	Quality Control	0% to 1.0%	1.0%					
	Submittals	0% to 5.0%	2.0%					
			$ 67,673	$ -	$ -	$ -	$ -	$ 67,673
B.2	General Conditions (4.25%)		☑	☐	☐	☐	☐	
			$ 35,951	$ -	$ -	$ -	$ -	$ 35,951
	Part B Total		$ 103,624	$ -	$ -	$ -	$ -	$ 103,624
	PART A through B SUBTOTAL		$ 949,535	$ -	$ -	$ -	$ -	$ 949,535
C	**Construction Cost Contingencies**							
C.1	Design-Phase Scope Contingencies	Guide Low to High	Enter % in Appropriate Column					
	Preliminary Engineering Analysis	7.0% to 20.0%	10.0%					
	Working Drawings	2.0% to 10.0%						
			$ 94,954	$ -	$ -	$ -	$ -	$ 94,954
C.2	Facility or Project Constructability		Enter % in Appropriate Column					
	Facility or Project Type and Complexity	See IG for Values						
			$ -	$ -	$ -	$ -	$ -	$ -
C.3	Access, Storage & Staging	Guide Low to High	Enter % in Appropriate Column					
	Access Contingencies	0.0% to 4.0%	1.0%					
	Storage Contingencies	0.0% to 4.0%	3.0%					
	Staging Contingencies	0.0% to 4.0%	1.0%					
			$ 47,477	$ -	$ -	$ -	$ -	$ 47,477
C.4	Economies of Scale		☑	☐	☐	☐	☐	
			-0.7%	0.0%	0.0%	0.0%	0.0%	
			$ (6,280)	$ -	$ -	$ -	$ -	$ (6,280)
	Part C Total		$ 136,150	$ -	$ -	$ -	$ -	$ 136,150
	PART A through C SUBTOTAL		$ 1,085,685	$ -	$ -	$ -	$ -	$ 1,085,685
D	**General Contractor's Overhead and Profit**							
D.1	GC's Home Office Overhead	7.7%	☑	☐	☐	☐	☐	
			$ 83,598	$ -	$ -	$ -	$ -	$ 83,598
D.2	GC's Insurance, Payment & Performance Bonds	3.3%	☑	☐	☐	☐	☐	
			$ 35,828	$ -	$ -	$ -	$ -	$ 35,828
D.3	General Contractor's Profit							
			7.8%	0.0%	0.0%	0.0%	0.0%	
	New Construction		☐	☐	☐	☐	☐	
	Repair/Retrofit		☑	☐	☐	☐	☐	
			$ 93,819	$ -	$ -	$ -	$ -	$ 93,819
	Part D Total		$ 213,245	$ -	$ -	$ -	$ -	$ 213,245
	PART A through D SUBTOTAL		$ 1,298,930	$ -	$ -	$ -	$ -	$ 1,298,930

CEF Summary of Uncompleted Work

Charlotte County - East Port Environmental Campus - Administration Building A

		Repair	$ -	$ -	$ -	$ -	Total
E	**Cost Escalation Factors**						
	Cost Escalation Factor						
	Months	9					
	Monthly Factor	0.648%					
	Part E Total	$ 75,754	$ -	$ -	$ -	$ -	$ 75,754
	PART A through E SUBTOTAL	$ 1,374,684	$ -	$ -	$ -	$ -	$ 1,374,684
F	**Plan Review and Permit Construction Cost**						
F.1	**Plan Review Fees**						
	Allowance for possible environmental reviews costs						
	Civic Art Ordinance compliance	$ 14,803					
		$ 14,803	$ -	$ -	$ -	$ -	$ 14,803
F.2	**Construction Permit Fees**						
	Filing fee to register the project	$ 175					
	Building Permit Fee	$ 8,459					
		$ 8,634	$ -	$ -	$ -	$ -	$ 8,634
	Part F Total	$ 23,438	$ -	$ -	$ -	$ -	$ 23,438
	PART A through F SUBTOTAL	$ 1,398,121	$ -	$ -	$ -	$ -	$ 1,398,121
G	**Applicant's Reserve for Change Orders**						
	Applicant's Reserve for Change Orders	☑ 4.0%	☐ 7.0%	☐ 7.0%	☐ 7.0%	☐ 7.0%	
	PART G Total	$ 55,957	$ -	$ -	$ -	$ -	$ 55,957
	PART A through G SUBTOTAL	$ 1,454,079	$ -	$ -	$ -	$ -	$ 1,454,079
H	**Applicant's Project Management And Design Costs**						
H.1	**Applicant's Project Management - Design Phase** 1.0%	☑	☐	☐	☐	☐	
		$ 14,541	$ -	$ -	$ -	$ -	$ 14,541
H.2	**A/E Design Contract Applicability**						
	Above Average Complexity (Curve A)	☐ 15.3%	☐ 5.6%	☐ 5.6%	☐ 5.6%	☐ 5.6%	
	Average Complexity (Curve B)	☑ 10.9%	☐ 4.5%	☐ 4.5%	☐ 4.5%	☐ 5.6%	
	Basic Construction Inspection Services	☐ 3.0%	☐ 3.0%	☐ 3.0%	☐ 3.0%	☐ 3.0%	
	A/E Design Contract Cost						
	Above Average Complexity (Curve A)	$ -	$ -	$ -	$ -	$ -	
	Average Complexity (Curve B)	$ 157,936	$ -	$ -	$ -	$ -	
	Basic Construction Inspection Services	$ -	$ -	$ -	$ -	$ -	
		$ 157,936	$ -	$ -	$ -	$ -	$ 157,936
H.3	**Project Management - Construction Phase**	☑ 3.6%	☐ 6.0%	☐ 6.0%	☐ 6.0%	☐ 6.0%	
		$ 52,337	$ -	$ -	$ -	$ -	$ 52,337
	Part H Total	$ 224,814	$ -	$ -	$ -	$ -	$ 224,814
	PART A through H SUBTOTAL	$ 1,678,893	$ -	$ -	$ -	$ -	$ 1,678,893
	TOTAL OF UNCOMPLETED WORK						**$ 1,678,893**

CEF Total Project Summary

4/23/2024

Summary

Charlotte County - East Port Environmental Campus - Administration Building A

		Completed	Uncompleted	Total
	Complete Project Total for Completed and Uncompleted Work	**$ -**	**$ 1,678,893**	**$ 1,678,893**
PART A	**"Base Costs" for Construction Work In Trades**	**$ -**	**$ 845,911**	**$ 845,911**
	A.1 Permanent Work	$ -	$ 845,911	$ 845,911
	A.2 Non-Permanent Job Specific Work (CEF Part A)	$ -	$ -	$ -
PART B	**General Requirements and General Conditions**	**$ -**	**$ 103,624**	**$ 103,624**
	B.1 General Requirements	$ -	$ 67,673	$ 67,673
	B.2 General Conditions	$ -	$ 35,951	$ 35,951
PART C	**Construction Cost Contingencies (Design and Construction)**	**$ -**	**$ 136,150**	**$ 136,150**
	C.1 Standard Design-Phase Scope Contingencies	$ -	$ 94,954	$ 94,954
	C.2 Facility or Project Constructability	$ -	$ -	$ -
	C.3 Access, Storage, and Staging Contingencies	$ -	$ 47,477	$ 47,477
	C.4 Economies of Scale in New Construction	$ -	$ (6,280)	$ (6,280)
PART D	**General Contractor's Overhead and Profit**	**$ -**	**$ 213,245**	**$ 213,245**
	D.1 General Contractor's Home Office Overhead Costs	$ -	$ 83,598	$ 83,598
	D.2 General Contractor's Insurance, Payment, and Performance Bonds	$ -	$ 35,828	$ 35,828
	D.3 Contractor's Profit	$ -	$ 93,819	$ 93,819
PART E	**Cost Escalation Allowance**	**$ -**	**$ 75,754**	**$ 75,754**
PART F	**Plan Review and Construction Permit Costs**	**$ -**	**$ 23,438**	**$ 23,438**
	F.1 Plan Review Fees	$ -	$ 14,803	$ 14,803
	F.2 Construction Permit Fees	$ -	$ 8,634	$ 8,634
PART G	**Applicant's Reserve for Construction**	**$ -**	**$ 55,957**	**$ 55,957**
PART H	**Applicant's Project Management and Design Costs**	**$ -**	**$ 224,814**	**$ 224,814**
	H.1 Applicant's Project Management - Design Phase	$ -	$ 14,541	$ 14,541
	H.2 Architecture & Engineering Design Contract Costs	$ -	$ 157,936	$ 157,936
	H.3 Project Management - Construction Phase	$ -	$ 52,337	$ 52,337