

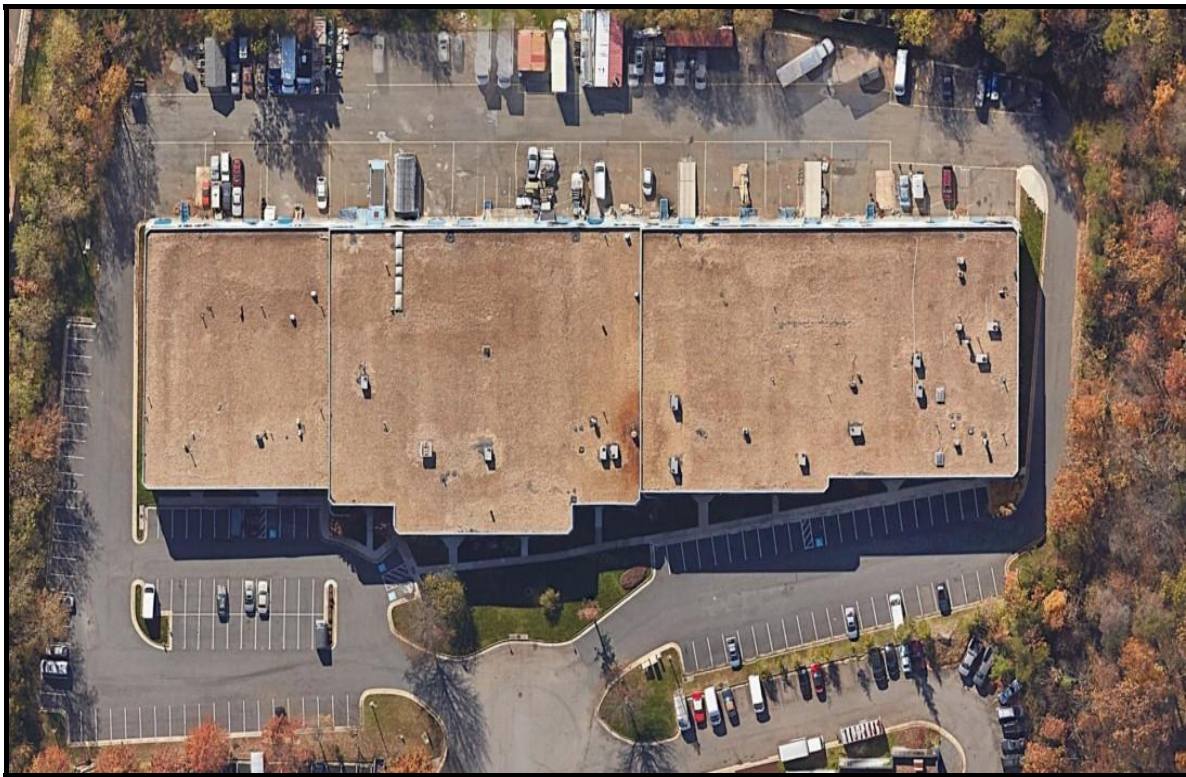


Roof Systems Data Management

CCMC

8456 Tyco Road, Suite A
Vienna, Virginia 22182

Dulles Technical Center



**22611 Markey Ct
Sterling, VA**

8/30/2022

Roof Consulting Services, Inc.
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Glen Allen, Virginia 23060



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TABLE OF CONTENTS
Dulles Technical Center
22611 Markey Ct
Sterling, VA

Introduction to Report Format

Roof Area Key Plan / Project Information **TAB 1**

Bldg 1 - Area A, B & C **TAB 2**
Roof System Data
Detailed Deficiency Listing
Test Cut Information
Photograph Descriptions

11 x 17 Roof Plan **TAB 3**

INTRODUCTION TO REPORT FORMAT

The following condition codes are intended to provide a summary of the overall condition of each roof system.

Below is a listing of the condition codes used and their associated meaning:

ROOF CONDITION CODE	DESCRIPTION
Failed 0-1 Years Remaining Service Life	Removal and replacement of the roof system within the next 12 months is recommended due to the severity of deterioration.
Poor 2-4 Years Remaining Service Life	The roof assembly has surpassed or is nearing the end of its useful service life. Replacement will be required in the near future but can be temporarily postponed with strategic repairs until the frequency of leaks becomes unacceptable to internal operations or on-going repair costs become prohibitive.
Fair 5-7 Years Remaining Service Life	The roof system is serviceable yet requiring repairs and routine maintenance to maintain. Repairs should be implemented in a timely manner to prevent further development.
Good 8 Plus Years Remaining Service Life	Only minor repairs required or early in service life with no repairs required. Repairs should be implemented in a timely manner to prevent further development.

On the Detailed Deficiency Listing page of the report is a Deficiency Priority. It is located on the left hand margin of the page. Each deficiency is given a priority for completing the needed correction, depending on the urgency of the problem. The keys to the priority codes are as follows:

"E" Emergency - Correct immediately - Life Safety or Possibility of Personal Injury is a Major Concern

"C" Critical - Urgent need for immediate repair to avoid imminent failure with risk to life safety or risk of major disruption to operations

"S" Significant - Lack of immediate attention may lead to much higher repair cost or premature failure of roof system within 12 months

"M" Minor - Not an immediate concern, but should be scheduled for repair

"MN" Monitor - Defect should be addressed at time of roof system replacement or re-inspected annually for further deterioration that would support reclassification to a higher risk category

"N/A" – Not Applicable - No Corrective Action Required

INTRODUCTION TO REPORT FORMAT

(Cont'd)

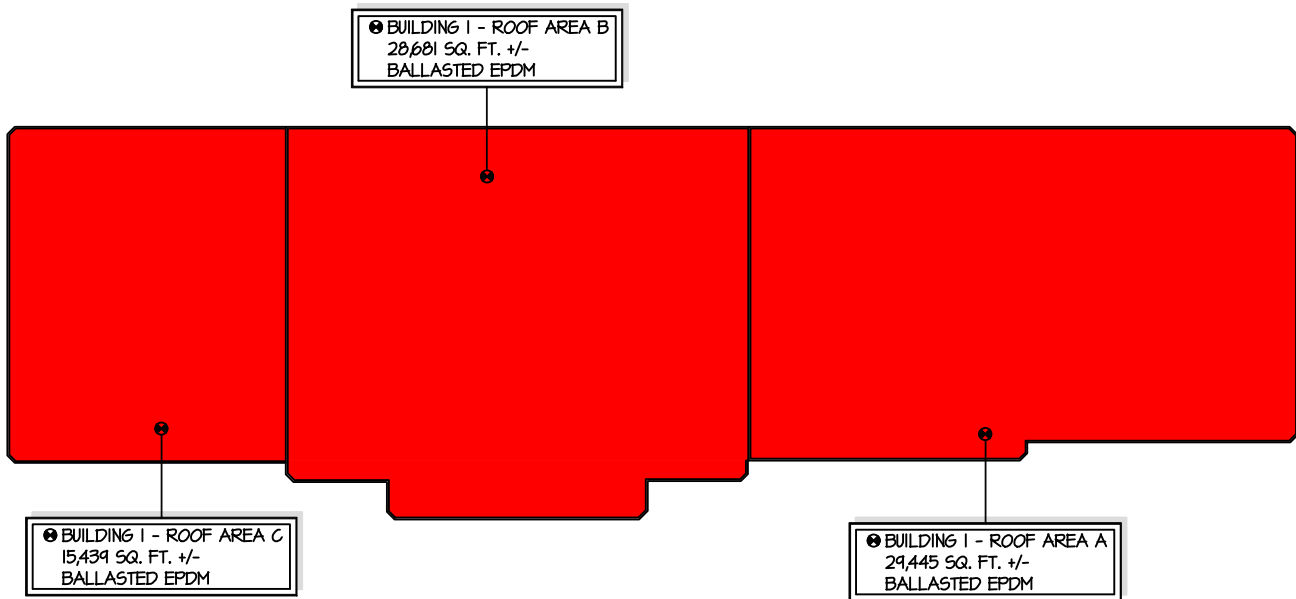
In the event a corrective action is considered routine maintenance for completion sometime with in the next 1-5 years, the following Deficiency Priority Codes will be used.

1 - First Year	Complete within first year
2 - Second Funding Year	Complete during funding year 2
3 - Third Funding Year	Complete during funding year 3
4 - Fourth Funding Year	Complete during funding year 4
5 - Fifth Funding Year	Complete during funding year 5

This information, along with the Summary information, should allow for prioritizing the needs of each roof area and development of a maintenance and capital improvement budget.

Several items have been taken into consideration in establishing anticipated service life and budget estimates.

Service life estimates are based on data obtained through our field survey, historical experience and practical considerations of required repairs and the assumption that routine maintenance procedures, including annual inspections will be followed.



FAILED	POOR	FAIR	GOOD	
0-1 YEARS REMAINING SERVICE LIFE	2-4 YEARS REMAINING SERVICE LIFE	5-7 YEARS REMAINING SERVICE LIFE	8+ YEARS REMAINING SERVICE LIFE	

<p>PROJECT KEY PLAN NOT TO SCALE</p>	<p>(404) 515-0885</p>	<p>ROOF CONSULTING SERVICES, INC P.O. BOX 9747 RICHMOND, VIRGINIA 23228</p> <p>* SURVEYS * SPECIFICATIONS * INSPECTIONS *</p>	<p>Date: 08/30/2022 Project: DULLES TECHNICAL CENTER Address: 22611 MARKEY CT STERLING, VA</p>	<p>REVISIONS:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="font-size: small;">MARK</th> <th style="font-size: small;">DATE</th> <th style="font-size: small;">BY:</th> <th style="font-size: small;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	MARK	DATE	BY:	DESCRIPTION				
MARK	DATE	BY:	DESCRIPTION									

Roof System Condition Evaluation Report

Project Information

Facility Name: Dulles Technical Center
 22611 Markey Ct
 Sterling, VA

Contact: Maria Quigley-skillin
Phone: (703) 448-6900 **Cell:** (703) 564-6511
Email: maria@ccmc.ws

Total Roof Area Sq. Ft. (+/-): 73,565

Exterior Wall Type: Masonry

Year Building Built:

Exterior Wall Condition: Fair

Building Use: Office

Exterior Moisture Staining: None Observed



Roof Areas Summary

Roof Area Identification	Size (sq/ft)	Roof Type	Year Installed	Remaining Life (Yrs)	Roof Condition Code	Replace Year	Replacement Cost Estimate	Repair Cost Estimate
Bldg 1 - Area A, B & C	73,565	Ballasted EPDM	1987 +/-	0-1 +/-	Failed	2023	\$810,000.00	\$8,250.00
Totals	73,565	Sq Ft					\$810,000.00	\$8,250.00

Project Comments:

On Tuesday, August 30, 2022, a comprehensive visual roof inspection was completed on Dulles Technical Center located at 22611 Markey Ct, Sterling, VA. The purpose of this inspection was document observed roof system deficiencies, determine the overall condition of the existing roof systems and to estimate the remaining service life of the in-place roof assemblies.

The building / roof areas inspected have been designated as Bldg 1 - Area A, B & C. Roof areas on the same building with similar roof system compositions and remaining service life expectancies have been grouped together for reporting purposes.

The installed roofing consists of the following roof system types that are in the overall condition as listed below:

- Bldg 1 - Area A, B & C - Ballasted EPDM - Failed - 0-1 +/- years of remaining service life - Repair Cost: \$8,250.00

For repairs on all roof areas, we have estimated a total repair cost of \$8,250.00. This repair cost estimate is based on all recommended repairs being completed under a single work order. In the event only selective items are repaired, then the estimated cost is subject to an increase in overall repair cost.

Please reference the Roof Area Information, Detailed Deficiency Listing, Photograph Documentation and Roof Plan drawing sections of this report for the detailed information pertaining to our findings and recommendations for corrective action.

Roof Area Information For:

Dulles Technical Center
22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

Roof System Data

Area Name: Bldg 1 - Area A, B & C Year Installed: 1987 +/- Active Leaks: None Reported
Size Sq. Ft. (+/-): 73,565 Remaining Service Life (Years): 0-1 +/- Leak History: Unknown
Roof Elevation: 28' +/- Average Roof System R Value: 17.32 Leak Sensitivity: Normal

Roofing Contractor:

Company: Unknown
Contact: Unknown
Phone: Unknown

Guarantee Info:

Guarantee (Y/N): Unknown
Manufacturer: Carlisle
Guarantee Term: Unknown
Guarantee Number: Unknown
Expiration Date: Unknown

Roof System:

Roof System Type: Ballasted EPDM
Roof Membrane Type: 45 Mil EPDM
Membrane Condition: Failed
Roof Surfacing Type: Ballast
Recovery System: No

Roof Deck and Support Structure:

Deck Type: Painted Metal
Deck Thickness: 22 Gauge +/-
Roof Truss Type: Steel Bar Joist
Truss Height: 32"
Truss Span: Varies
Truss Spacing: 8' o.c.

Vapor Retarder:

Vapor Retarder: No
Type: N/A
Location: N/A
Attachment: N/A
Condition: N/A
Relative Humidity: N/A

Maintenance Items:

Mechanical Damage: None Observed
Chemical Exposure: None Observed
Roof Traffic: Yes - Service
Debris: None Observed

Base Flashings:

Flashing Type: EPDM
Height: 7" - 18" +/-
Coated: No
Cant Strip Type: N/A
Condition: Poor
Securement: Adhered & Mechanical

Counter Flashing:

Reglet Joint: Surface Mount:
Thru Wall: Term Bar:
CF Metal Type: Aluminum

Perimeter Types:

Gravel Stop Type: N/A
Gravel Stop Condition: N/A
Parapet Wall Type: Pre-Cast Concrete
Parapet Wall Condition: Good
Wall Coping Type: Metal
Wall Coping Condition: Poor
Wall Coping Size: 9"
Metal Coping Material Type: Painted Metal
Metal Coping Quantity: 1623 LF
Expansion Joint Type: N/A
Expansion Joint Condition: N/A

Penetrations:

Quantity:

Soil Stacks:	<input checked="" type="checkbox"/>	16
Exhaust Units:	<input checked="" type="checkbox"/>	5
Standard Curbs:	<input checked="" type="checkbox"/>	16
Pipe Supports:	<input type="checkbox"/>	0
Pitch Pans:	<input checked="" type="checkbox"/>	9
Roof Hatch:	<input type="checkbox"/>	0
Hot Stacks:	<input checked="" type="checkbox"/>	20
Skylights:	<input checked="" type="checkbox"/>	7
Smoke Hatch:	<input type="checkbox"/>	0
Other:	<input checked="" type="checkbox"/>	52

Drainage:

Drainage: Fair
Slope: 1/4" - 1' +/-
Ponding Water: No
Drainage Comments: No ponding water observed during this inspection

Item:

Size:

Material Type:

Quantity:

Condition:

Roof Drains:	<input checked="" type="checkbox"/>	4" - 6"	PVC	15	Fair / Poor
Scuppers:	<input type="checkbox"/>	N/A	N/A	N/A	N/A
Gutters:	<input type="checkbox"/>	N/A	N/A	N/A	N/A
Downspouts:	<input type="checkbox"/>	N/A	N/A	N/A	N/A

Roof Area Information For:

**Dulles Technical Center
22611 Markey Ct
Sterling, VA**

Roof Area - Bldg 1 - Area A, B & C

Asbestos Material Testing:

Performed:	Results:	Required:
Membrane: No	Membrane: N/A	Membrane: No
Flashing: No	Flashing: N/A	Flashing: No
Repairs: No	Repairs: N/A	Repairs: No
Other: No	Other: N/A	Other: No

Roof Moisture Survey:

Moisture Survey Completed:	No
Results:	N/A - Ballasted System
Number of Anomalies:	N/A
% of Wet Roof Area:	N/A
Total Sq. Ft. of Wet Roof Area:	N/A

Sq. Ft.

Roof System Composition

Layer No	Layer Type	Thickness	Attachment	Condition
1	Painted Metal	22 Gauge +/-	Spot Welded	Good at Test Cut
2	EPS - (Expanded Polystyrene Insulation)	4.5 Inch	Loose Laid	Fair
3	EPDM Single Ply Membrane	45 Mil	Ballasted	Failed
4	Ballast Stone Surfacing	Varies	Loose Laid	Fair

Roof Condition Code: Failed

Recommendation: Replacement

Replacement Year: 2023

Replacement Cost (+/-): \$810,000.00

Deficiencies Repair Cost: \$8,250.00

Budget Notes:

The budget estimate does not include pricing for asbestos or lead abatement, if required, or for any unforeseen conditions that may exist. Deficiency repair costs are based on all work being completed under one work order.

Roof Area Comments:

Bldg 1 - Area A, B & C

The existing roof system is a Ballasted 45 mil EPDM over 4.5 inch expanded polystyrene insulation (EPS) installed over a painted metal deck. Drainage is facilitated by 15 interior roof drains. No information pertaining to the date of installation, roof system manufacturer or any warranty that may be in effect was provided by the Owner for these roof areas. However, we did observe a stamp on the roof membrane indicating the roof membrane was manufactured by Carlisle.

No infrared moisture survey was performed on these roof areas due to the stone ballast in place over the roof membrane. An interior inspection was performed and no active leak areas were reported during this inspection.

The overall condition of these roof areas is considered Failed. The Failed condition is based on the extent of deficient conditions observed. Sixteen (16) types of deficient conditions were observed during the course of

Roof Area Information For:

Dulles Technical Center

22611 Markey Ct

Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

this investigation. A comprehensive list of these deficient conditions can be found in the Detailed Deficiency Listing section of this report. With the current overall condition of the existing roof system considered Failed, corrections to the noted deficiencies has been limited to open conditions that are directly related to active leak areas or conditions that we feel could develop into leak areas within the next 12 months. It should also be anticipated that additional repairs may be required to stop additional leak conditions that may develop prior to the roof system replacement being completed. The roof system has surpassed its useful service life and should be budgeted for replacement within the next 12 months.

The roof replacement budget estimate is based on removal and disposal of the existing stone ballast, disabling the existing single ply membrane as required by the new roof system manufacturer, installation of minimal thickness (1/2 inch) high density polyisocyanurate insulation installed over the existing insulation and a new mechanically attached 60 mil single ply roof system incorporating a manufacturer 15 or 20 year watertight warranty.

Note: For budgeting purposes, we have added \$.50 per square foot of roof area for removal and disposal of the stone ballast to provide adequate funding for the roof system replacement.

Detailed Deficiency Listing For:
Dulles Technical Center
22611 Markey Ct - Sterling, VA
Roof Area - Bldg 1 - Area A, B & C

Deficiency Priority Codes:

Current Year Priorities
 E - Emergency
 C - Critical
 S - Significant
 M - Minor
 MN - Monitor

Future Year Maintenance
 1 - First Year Funding
 2 - Second Year Funding
 3 - Third Year Funding
 4 - Fourth Year Funding
 5 - Fifth Year Funding

N/A - Not Applicable
 No Correction Action
 Required

Inspection Date: 8/30/2022

Inspectors: Robert B. Pennington

NUMBER	PRIORITY CODE	DEFICIENCY DESCRIPTION	QUANTITY	UNIT PRICE	REPAIR COST
		DEFICIENCY SOLUTION	UNITS		
1	MN	Bridging of base flashing	702		
		Monitor and address as needed to maintain a watertight condition until roof system replacement	LnFt		
2	M	Open membrane seam / flashing lap	20	\$150.00	\$3,000.00
		Properly clean, prime and overlay the affected seam with a EPDM cover strip with all cut edges sealed with EPDM lap sealant	Locations		
3	MN	Improper detailing - Pitch pocket or similar detailing needed for penetration flashing	2		
		Monitor and address at time of roof system replacement or as needed to maintain watertight integrity	Locations		
4	M	Improper repair detail - fastener through flashing membrane	3	\$150.00	\$450.00
		Remove fastener, cover with an EPDM patch centered over fastener head or hole to extend 2 inches past on all sides and caulk edges with lap sealant	Locations		
5	MN	Improper flashing detail at penetration	7		
		Monitor and address at time of roof system replacement or as needed to maintain watertight integrity	Locations		
6	MN	Rust developing on metal component	15		
		Monitor and address at time of roof system replacement or as needed to maintain watertight integrity	Locations		
7	M	Deteriorated pipe penetration flashing	7	\$175.00	\$1,225.00
		Flash pipe penetration with compatible materials to provide a watertight condition	Locations		

Detailed Deficiency Listing For:
Dulles Technical Center
22611 Markey Ct - Sterling, VA
Roof Area - Bldg 1 - Area A, B & C

Deficiency Priority Codes:

Current Year Priorities
 E - Emergency
 C - Critical
 S - Significant
 M - Minor
 MN - Monitor

Future Year Maintenance
 1 - First Year Funding
 2 - Second Year Funding
 3 - Third Year Funding
 4 - Fourth Year Funding
 5 - Fifth Year Funding

N/A - Not Applicable
 No Correction Action
 Required

Inspection Date: 8/30/2022

Inspectors: Robert B. Pennington

NUMBER	PRIORITY CODE	DEFICIENCY DESCRIPTION	QUANTITY	UNIT PRICE	REPAIR COST
		DEFICIENCY SOLUTION	UNITS		
8	M	Hole in flashing	2	\$125.00	\$250.00
		Properly clean and prime the affected area - apply pressure sensitive EPDM membrane centered over the hole to provide a watertight condition - seal the edge of repair membrane with EPDM lap sealant	Locations		
9	MN	Deteriorated conduit cover	1		
		Address at time of roof system replacement or as needed to maintain watertight integrity	Location		
10	M	Missing drain bowl clamping ring	2	\$250.00	\$500.00
		Install new drain clamping ring of appropriate size and material for existing drain bowl with fasteners installed at all provided locations	Locations		
11	MN	Membrane exhibiting various signs of deterioration - cracking & splitting	1		
		Monitor and address at time of roof system replacement or as needed to maintain watertight integrity	Typical		
12	M	Open masonry control joint	11	\$25.00	\$275.00
		Rake joint clean and install new foam backer rod as needed and then reseal joint with industrial grade polyurethane sealant	LnFt		
13	M	Loose termination bar	1	\$50.00	\$50.00
		Remove loose fasteners as required and re-secure with fasteners of sufficient length and diameter to secure termination bar- seal top of bar with industrial grade polyurethane sealant	Location		
14	MN	Dissimilar materials used for repair to EPDM membrane	10		
		Monitor and address at time of roof system replacement or as needed to maintain watertight integrity	Locations		

Detailed Deficiency Listing For:
Dulles Technical Center
22611 Markey Ct - Sterling, VA
Roof Area - Bldg 1 - Area A, B & C

Deficiency Priority Codes:

Current Year Priorities
 E - Emergency
 C - Critical
 S - Significant
 M - Minor
 MN - Monitor

Future Year Maintenance
 1 - First Year Funding
 2 - Second Year Funding
 3 - Third Year Funding
 4 - Fourth Year Funding
 5 - Fifth Year Funding

N/A - Not Applicable
 No Correction Action
 Required

Inspection Date: 8/30/2022

Inspectors: Robert B. Pennington

NUMBER	PRIORITY CODE	DEFICIENCY DESCRIPTION	QUANTITY	UNIT PRICE	REPAIR COST
		DEFICIENCY SOLUTION	UNITS		
15	MN	Deteriorating / peeling paint on metal coping	1,549		
		Monitor and address at time of roof system replacement or as needed to maintain watertight integrity	LnFt		
16	M	Missing termination bar	100	\$25.00	\$2,500.00
		At missing location, install termination bar at edge of flashing and fasten 6" o.c. with fasteners appropriate for substrate - seal top edge of termination bar and fastener heads with industrial grade polyurethane sealant	LnFt		

Grand Total **\$8,250.00**

Priority Code Totals:

Minor **\$8,250.00**

TEST CUT / PROBE INFORMATION FOR:

Dulles Technical Center

Roof Area - Bldg 1 - Area A, B & C

Inspection Date: 8/30/2022

<i>TEST CUT / PROBE NUMBER</i>	1
<i>Test Cut Size</i>	4" x 4"
<i>Troxler Reading</i>	N/A
<i>Infra-red Reading</i>	N/A
<i>Delmhorst Reading</i>	Dry
<i>Deck Condition</i>	Good
<i>Vapor Retarder Condition</i>	N/A
<i>Insulation Condition</i>	Fair
<i>Membrane Condition</i>	Failed

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

1. Building exterior front elevation overview



2. Building exterior front elevation overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

3. Building exterior front elevation overview



4. Building exterior front elevation overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

5. Building exterior front & side elevation overview



6. Building exterior rear elevation overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

7. Building exterior rear elevation overview



8. Building exterior side elevation overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

9. View of underside of roof deck at building interior



10. View of underside of roof deck at building interior



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

11. Bldg 1 - Area A roof system overview



12. Bldg 1 - Area A roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

13. Bldg 1 - Area A roof system overview



14. Bldg 1 - Area A roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

15. Bldg 1 - Area A roof system overview



16. Bldg 1 - Area A roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

17. Bldg 1 - Area A roof system overview



18. Bldg 1 - Area A roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

19. Bldg 1 - Area A roof system overview



20. Bldg 1 - Area B roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

21. Bldg 1 - Area B roof system overview



22. Bldg 1 - Area B roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

23. Bldg 1 - Area B roof system overview



24. Bldg 1 - Area B roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

25. Bldg 1 - Area B roof system overview



26. Bldg 1 - Area B roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

27. Bldg 1 - Area B roof system overview



28. Bldg 1 - Area B roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

29. Bldg 1 - Area B roof system overview



30. Bldg 1 - Area B roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

31. Bldg 1 - Area C roof system overview



32. Bldg 1 - Area C roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

33. Bldg 1 - Area C roof system overview



34. Bldg 1 - Area C roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

35. Bldg 1 - Area C roof system overview



36. Bldg 1 - Area C roof system overview



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

37. Bldg 1 - Area C roof system overview



38. Deficiency #1 - Bridging of base flashing



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct

Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

39. Deficiency #1 - Bridging of base flashing



40. Deficiency #2 - Open membrane seam / flashing lap



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

41. Deficiency #2 - Open membrane seam / flashing lap



42. Deficiency #3 - Improper detailing - Pitch pocket or similar detailing needed for penetration flashing



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

43. Deficiency #4 - Improper repair detail - fastener through flashing membrane



44. Deficiency #4 - Improper repair detail - fastener through flashing membrane



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

45. Deficiency #5 - Improper flashing detail at penetration



46. Deficiency #5 - Improper flashing detail at penetration



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

47. Deficiency #6 - Rust developing on metal component



48. Deficiency #6 - Rust developing on metal component



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

49. Deficiency #7 - Deteriorated pipe penetration flashing



50. Deficiency #7 - Deteriorated pipe penetration flashing



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

51. Deficiency #8 - Hole in flashing



52. Deficiency #8 - Hole in flashing



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

53. Deficiency #9 - Deteriorated
conduit cover



54. Deficiency #10 - Missing drain
bowl clamping ring



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

55. Deficiency #10 - Missing drain bowl clamping ring



56. Deficiency #11 - Membrane exhibiting various signs of deterioration - cracking & splitting



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

57. Deficiency #12 - Open masonry control joint



58. Deficiency #12 - Open masonry control joint



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

59. Deficiency #13 - Loose termination bar



60. Deficiency #14 - Dissimilar materials used for repair to EPDM membrane



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

61. Deficiency #14 - Dissimilar materials used for repair to EPDM membrane



62. Deficiency #15 - Deteriorating / peeling paint on metal coping



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

63. Deficiency #15 - Deteriorating / peeling paint on metal coping

Deficiency #16 - Missing termination bar



64. Deficiency #16 - Missing termination bar



8/30/2022

Photograph Documentation

Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

65. View of roof core on Bldg 1 - Area C with roof membrane removed exposing insulation



66. Probe #1 - Delmhorst moisture meter reading negative for insulation moisture on Bldg 1 - Area C



8/30/2022

Photograph Documentation

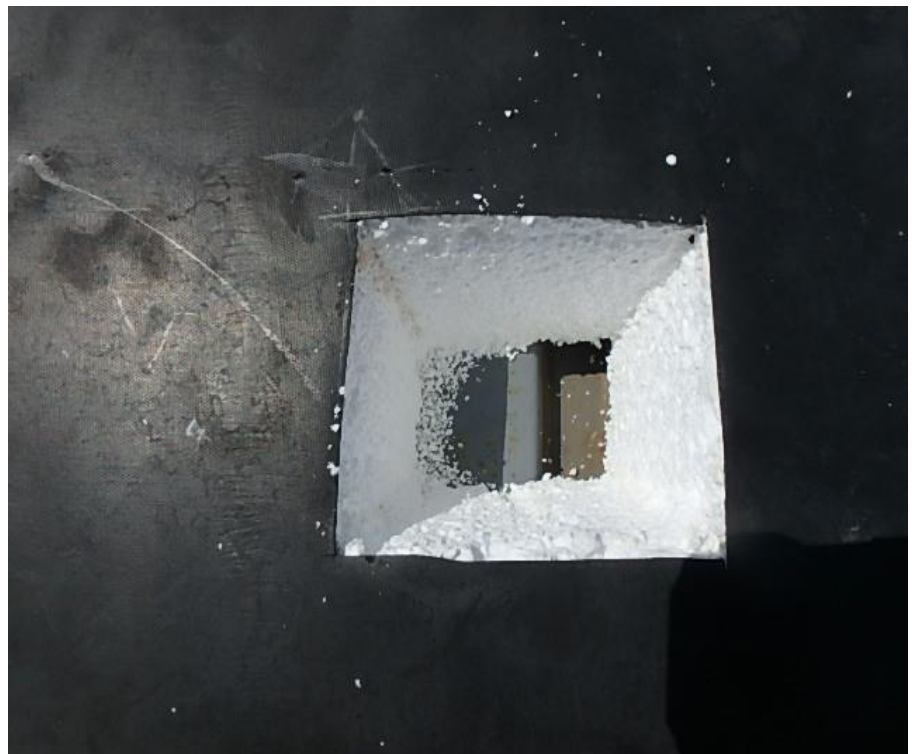
Dulles Technical Center - 22611 Markey Ct
Sterling, VA

Roof Area - Bldg 1 - Area A, B & C

67. View of roof insulation measurement on Bldg 1 - Area C



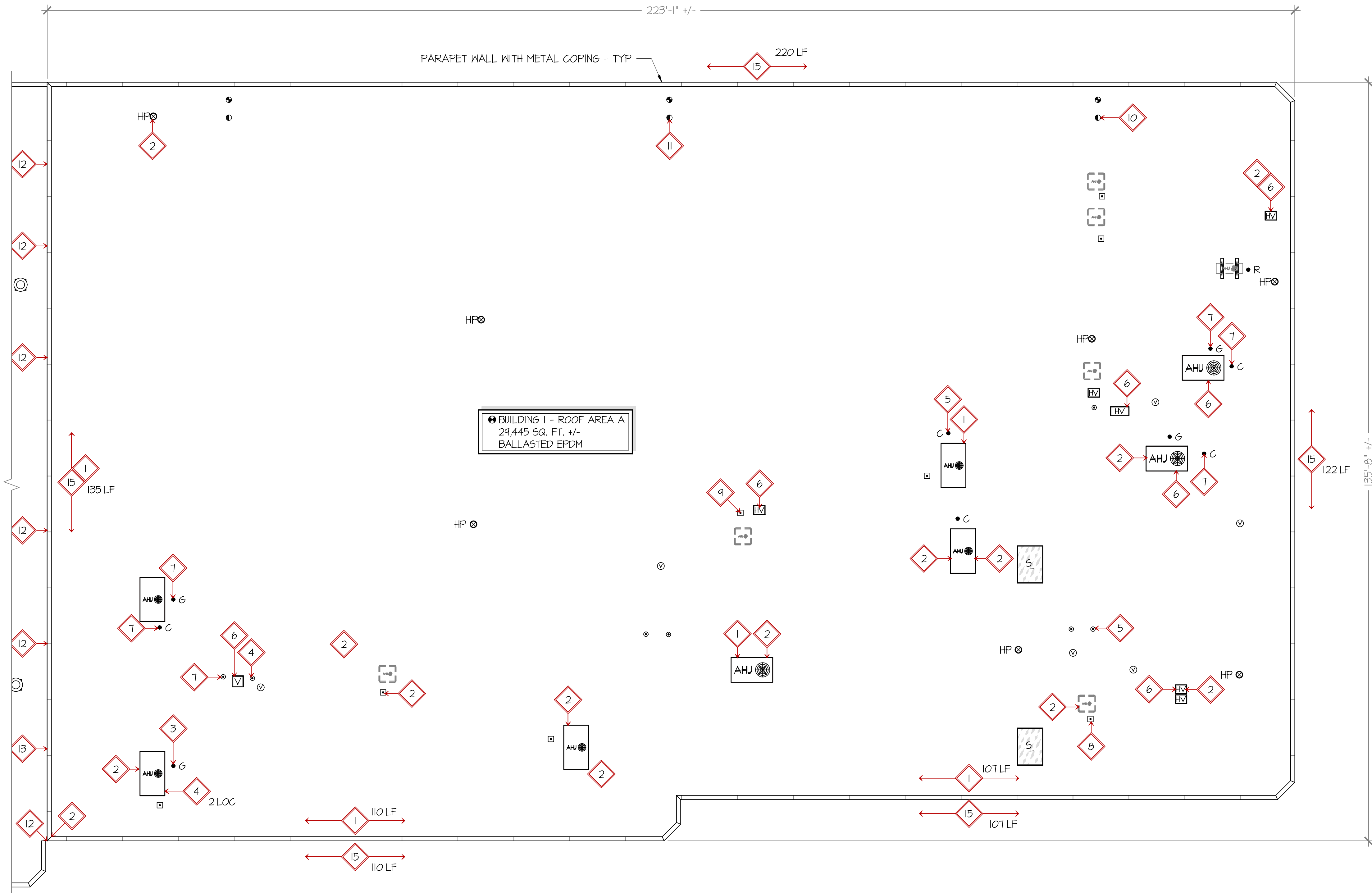
68. View of roof composition removed on Bldg 1 - Area C exposing a painted metal deck



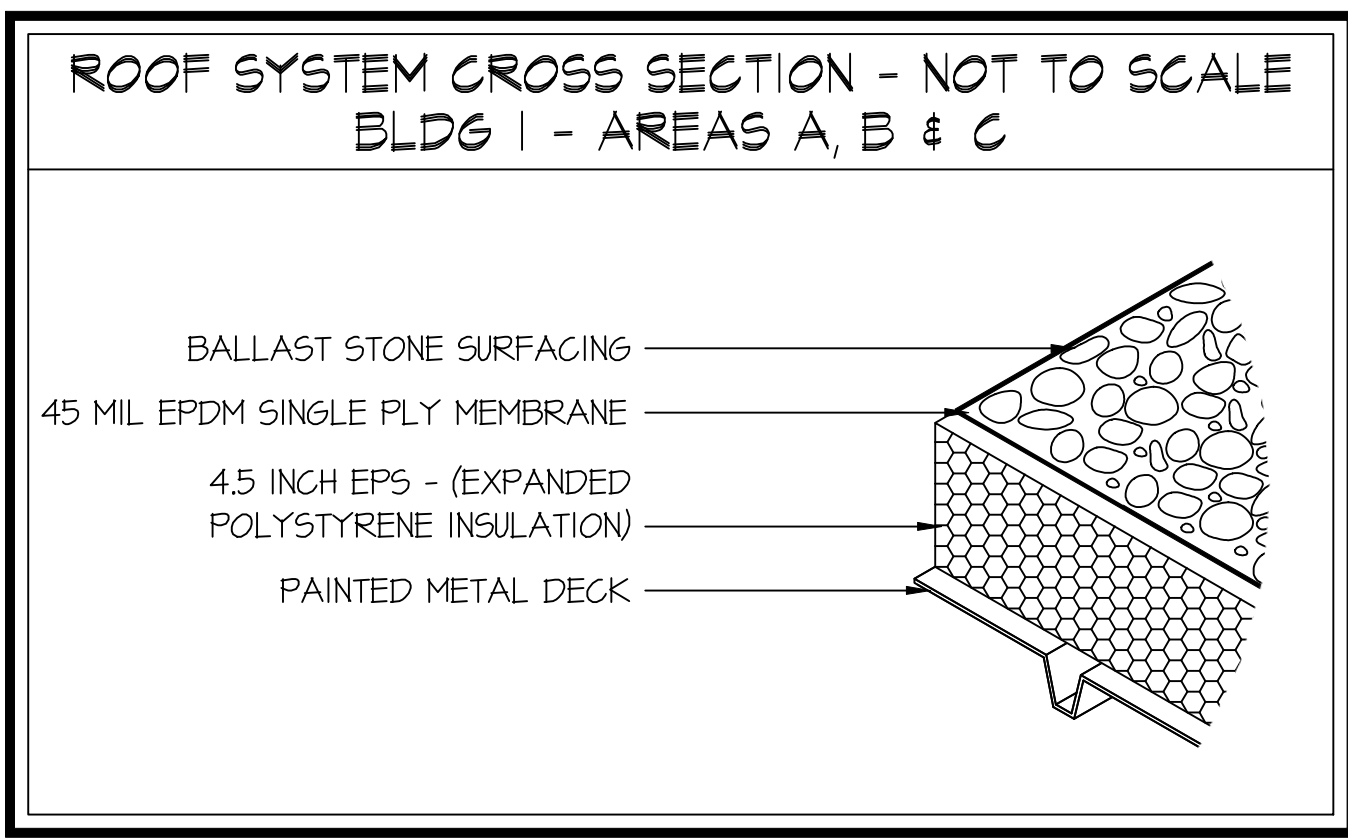
8/30/2022

\\T640SERVER\ROG5SERVER\DWG\CLIENT INSPECTION DRAWINGS BY CS\12135-942684-61109420.DWG

DEFICIENCY LIST	
1	BRIDGING OF BASE FLASHING
2	OPEN MEMBRANE SEAM / FLASHING LAP
3	IMPROPER DETAILING - PITCH POCKET OR SIMILAR DETAILING NEEDED FOR PENETRATION FLASHING
4	IMPROPER REPAIR DETAIL - FASTENER THROUGH FLASHING MEMBRANE
5	IMPROPER FLASHING DETAIL AT PENETRATION
6	RUST DEVELOPING ON METAL COMPONENT
7	DETERIORATED PIPE PENETRATION FLASHING
8	HOLE IN FLASHING
9	DETERIORATED CONDUIT COVER
10	MISSING DRAIN BOWL CLAMPING RING
11	MEMBRANE EXHIBITING VARIOUS SIGNS OF DETERIORATION - CRACKING & SPLITTING
12	OPEN MASONRY CONTROL JOINT
13	LOOSE TERMINATION BAR
14	DISSIMILAR MATERIALS USED FOR REPAIR TO EPDM MEMBRANE
15	DETERIORATING / PEELING PAINT ON METAL COPING
16	MISSING TERMINATION BAR

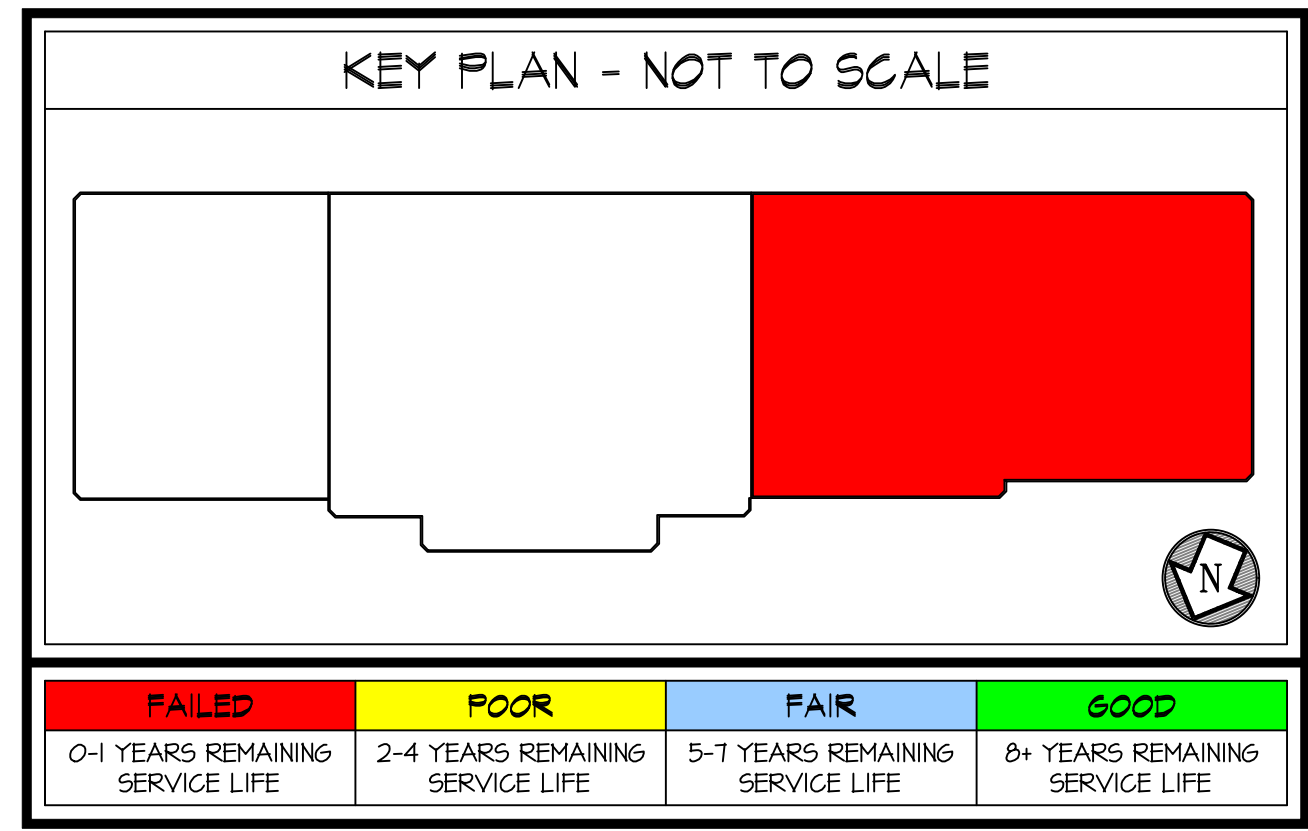


1 TOTAL PROJECT ROOF AREA - 73,565 SQ. FT. +/-
AI SCALE: 3/32"=1'-0"



SYMBOL LEGEND			
TC-#	TEST CUT LOCATION NO.	C	CONDUIT
☑	SQUARE CURB TO ROUND VENT	R	REFRIGERATION LINE
☑	SQUARE VENT	G	GAS LINE
DV	AIR DUCT CURB	⊕	OVERFLOW DRAIN
SAT	SATELLITE TRAY	⊙	ROOF DRAIN
HV	HOOK VENT	⊔	WOOD SLEEPER
HV ⊙	ROUND HOOK VENT	⊞	PITCH POCKET
⊙	EXHAUST UNIT	□	EQUIPMENT PAD
⊞	SKYLIGHT	⊕	VENT
		AHU ⊙	AHU ON CURB
		AHU ⊕	AHU ON SUPPORT
		⊙	PLUMBING VENT
		HP ⊙	HOT PIPE
		⬅️ #	DEFICIENCY LOCATION / NO.

NOTE: PENETRATIONS ARE APPROXIMATE IN SIZE AND LOCATION TO BE USED AS REFERENCE POINTS ONLY



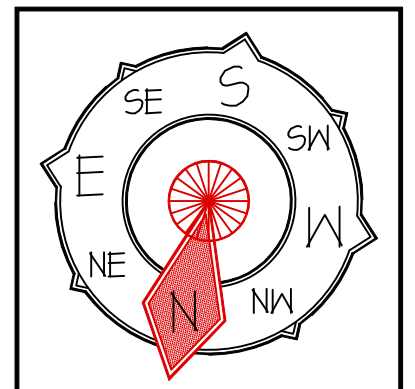
ROOF CONSULTING SERVICES, INC
P.O. BOX 9747
RICHMOND, VIRGINIA 23228

ros

* SURVEYS * SPECIFICATIONS * INSPECTIONS *

(804) 515-0885

DATE:	08/30/2022
DRAWN BY:	C.W.T.
SCALE:	3/32"=1'-0"
CHECKED BY:	J.R.L.G.

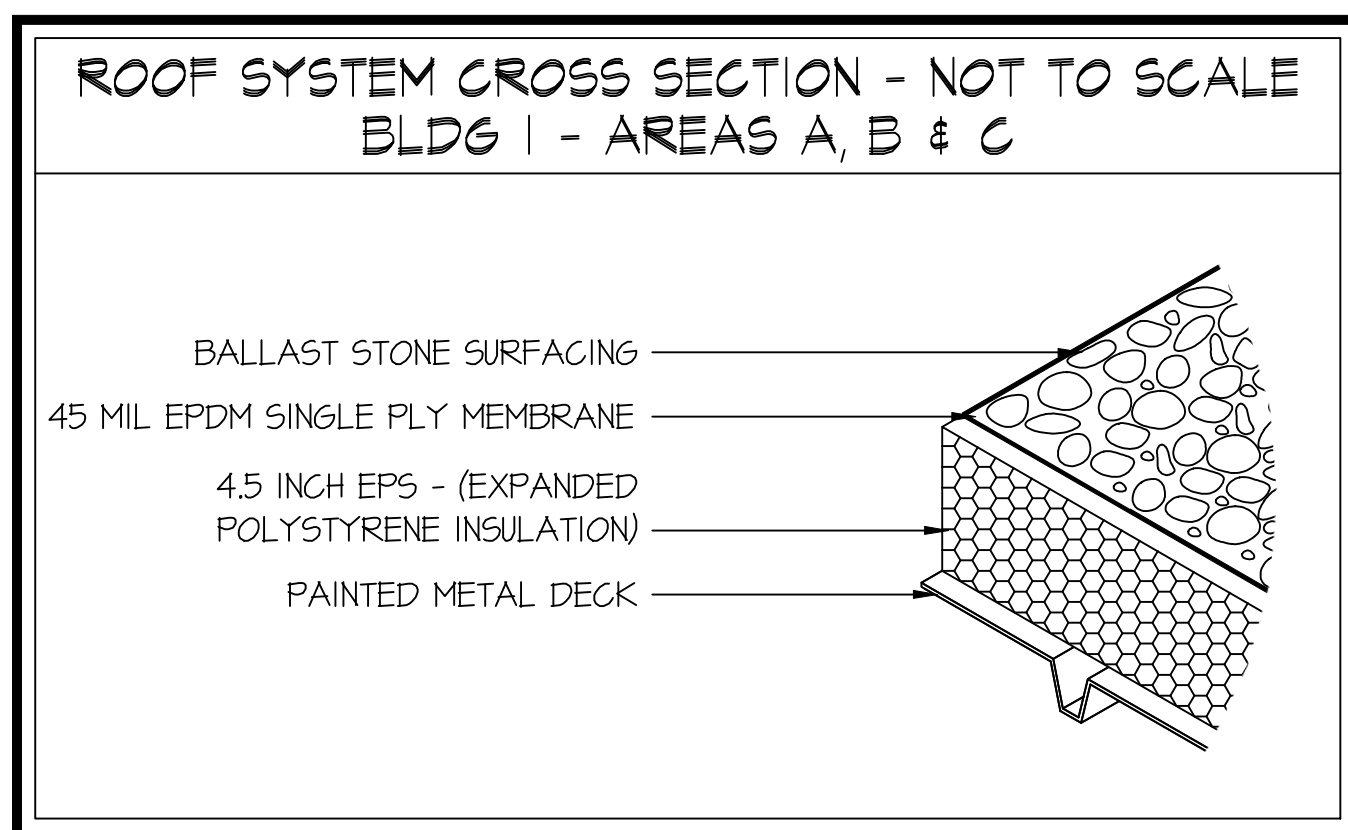
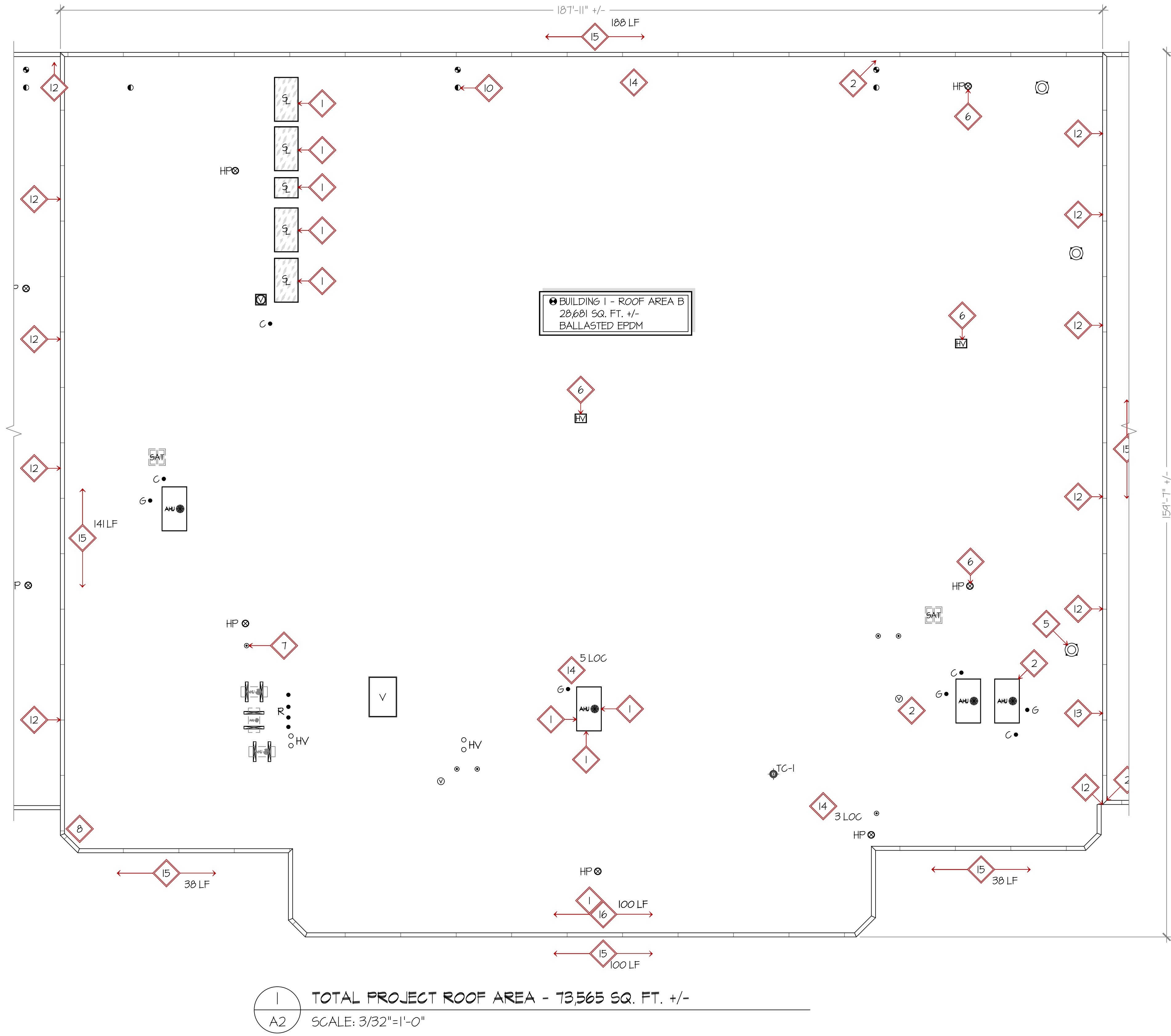


VISUAL INSPECTION

CLIENT: GC/HC
PROJECT: DULLES TECHNICAL CENTER
ADDRESS: 22611 MARKEY CT
STERLING, VA
DRAWING: ROOF PLAN

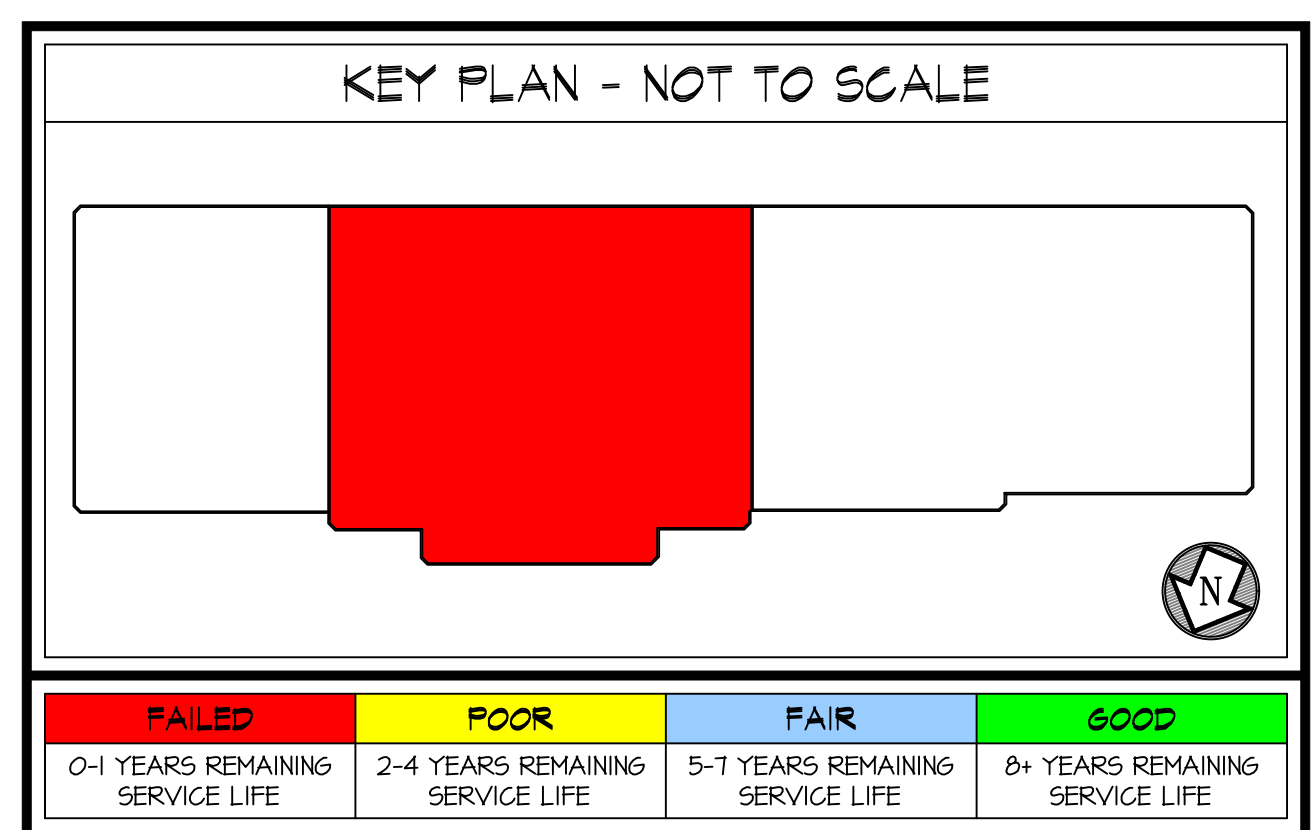
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DEFICIENCY LIST	
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15	DETERIORATING / PEELING PAINT ON METAL COPING
16	MISSING TERMINATION BAR



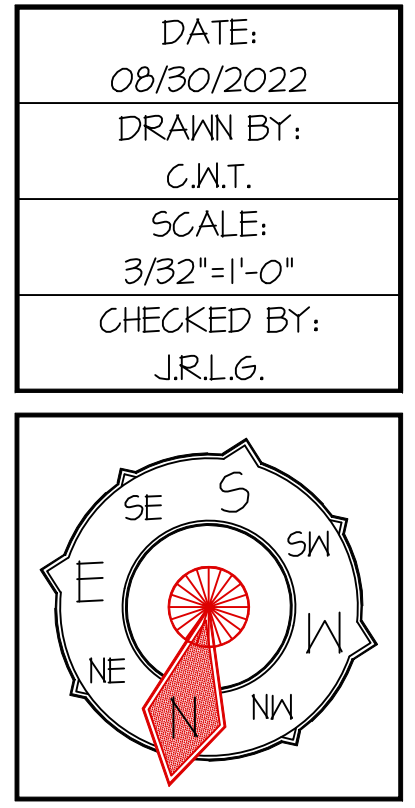
SYMBOL LEGEND			
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☑	SQUARE VENT	G	GAS LINE
DV	AIR DUCT CURB	⊕	OVERFLOW DRAIN
SAT	SATELLITE TRAY	●	ROOF DRAIN
HV	HOOK VENT	▬	WOOD SLEEPER
HV	ROUND HOOK VENT	▭	PITCH POCKET
⊙	EXHAUST UNIT	□	EQUIPMENT PAD
⊕	SKYLIGHT	⊙	VENT
AHU	AHU ON CURB	⊙	PLUMBING VENT
AHU	AHU ON SUPPORT	HP	HOT PIPE
◆	DEFICIENCY LOCATION / NO.		

NOTE: PENETRATIONS ARE APPROXIMATE IN SIZE AND LOCATION TO BE USED AS REFERENCE POINTS ONLY



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 RICHMOND, VIRGINIA 23228
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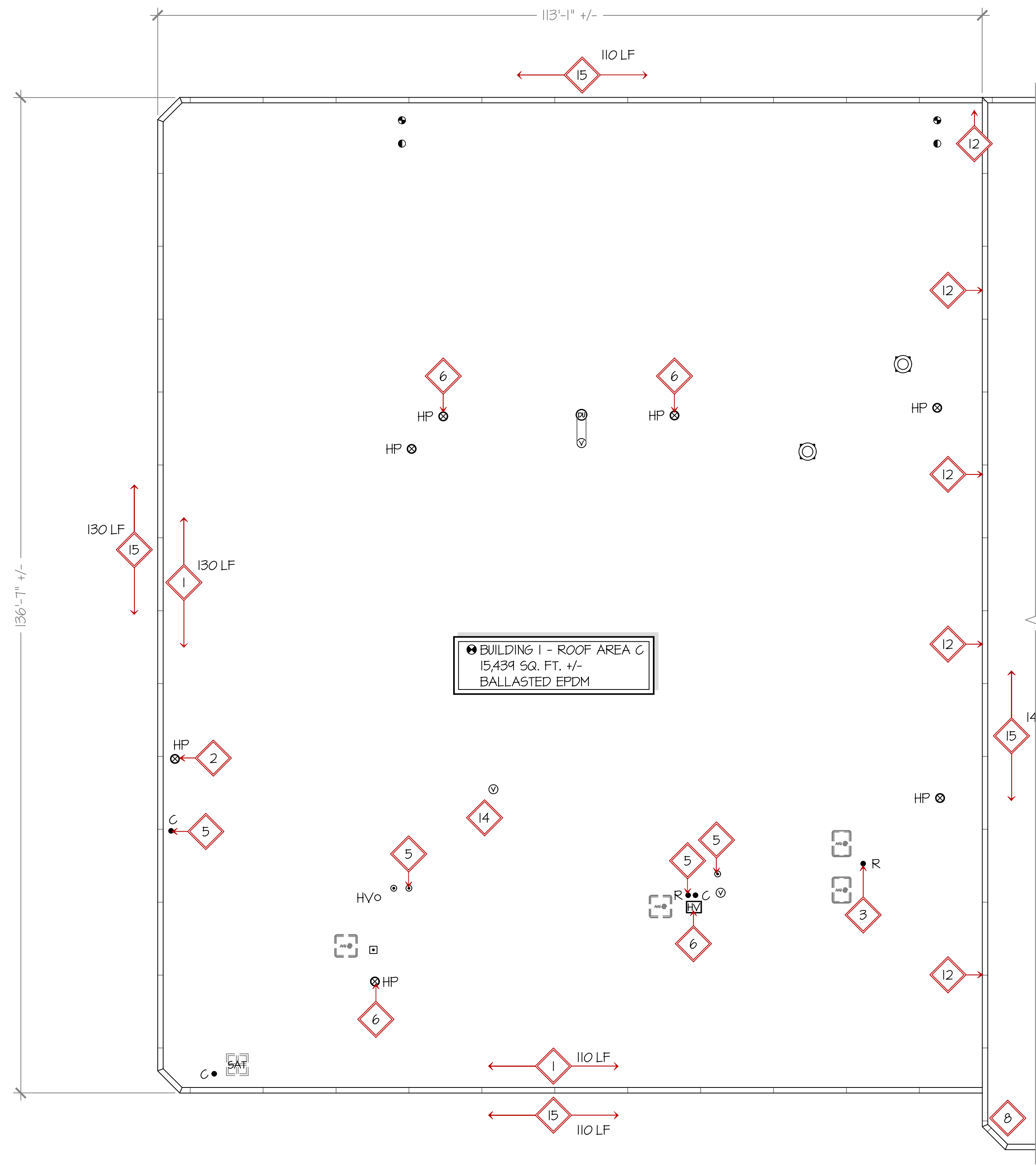


VISUAL INSPECTION
 CLIENT: GCNC
 PROJECT: DULLES TECHNICAL CENTER
 ADDRESS: 22611 MARKEY CT
 STERLING, VA
 DRAWING: ROOF PLAN

A2

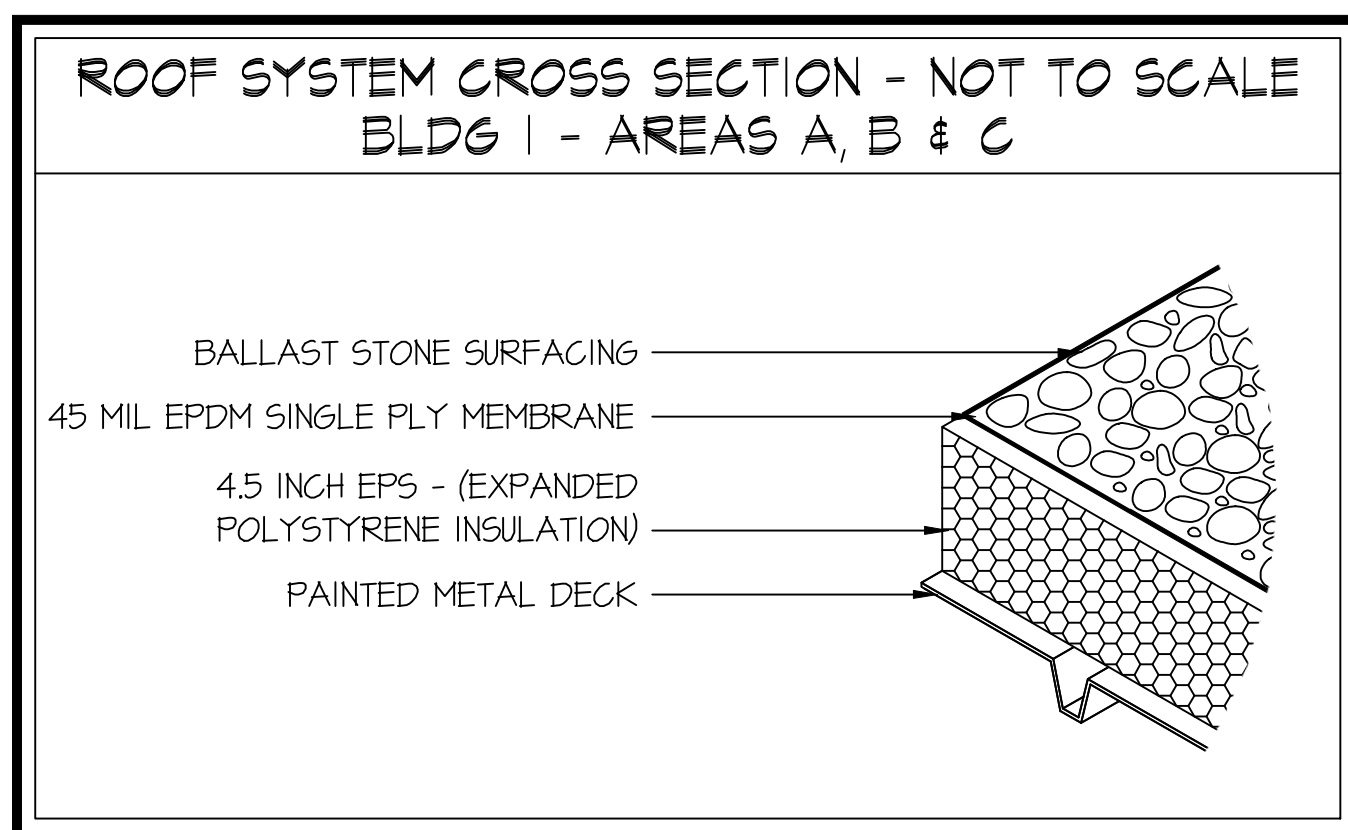
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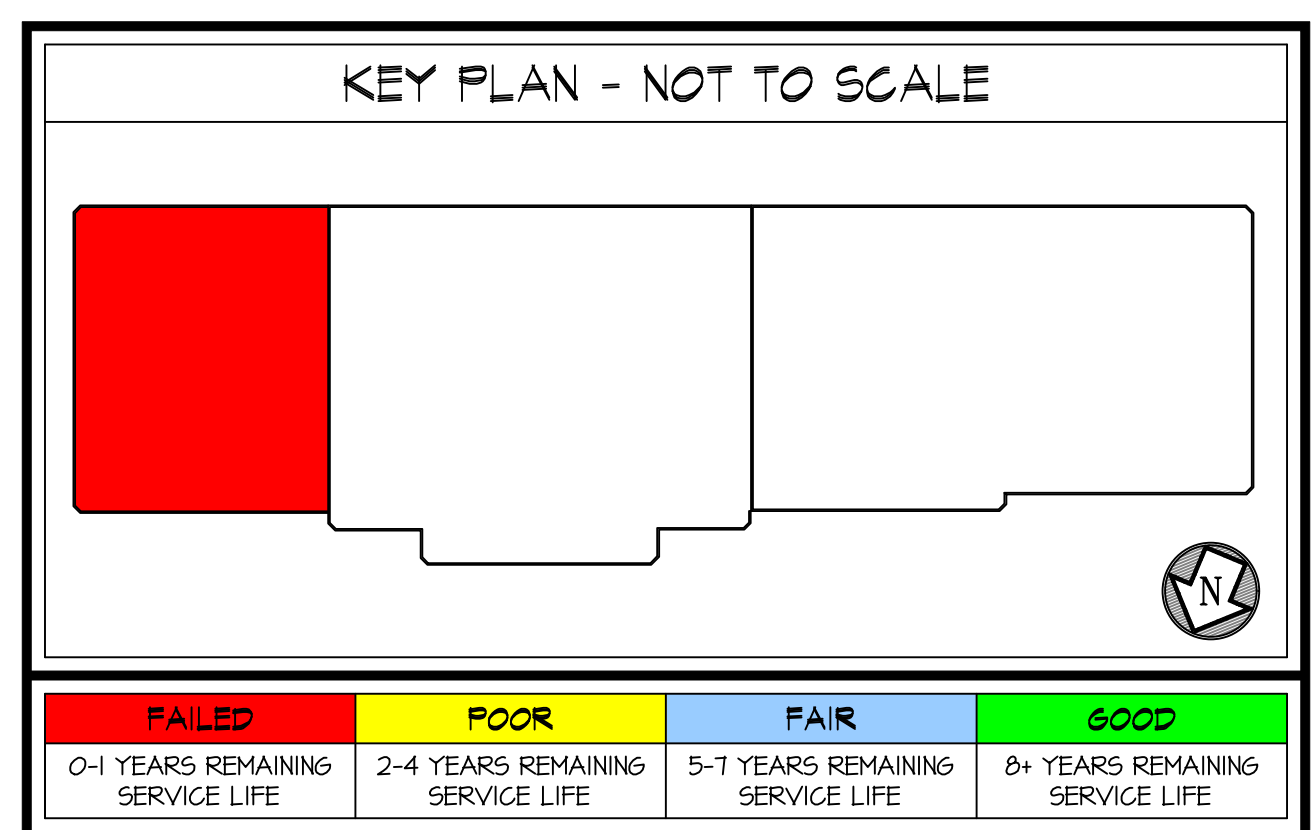


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R•	REFRIGERATION LINE
G•	GAS LINE
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⊙	ROOF DRAIN
—	WOOD SLEEPER
☐	PITCH POCKET
☐	EQUIPMENT PAD
⊙	VENT
AHU	AHU ON CURB
AHU	AHU ON SUPPORT
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HP	HOT PIPE
◆	DEFICIENCY LOCATION / NO.

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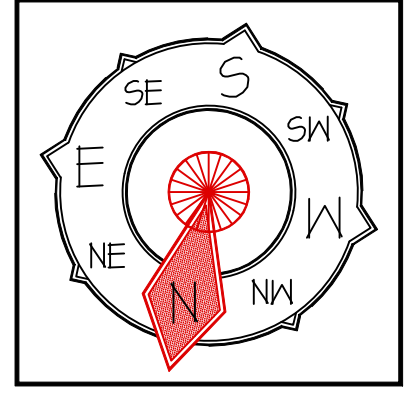
1 TOTAL PROJECT ROOF AREA - 73,565 SQ. FT. +/-
 A3 SCALE: 3/32"=1'-0"



0-1 YEARS REMAINING SERVICE LIFE	2-4 YEARS REMAINING SERVICE LIFE	5-7 YEARS REMAINING SERVICE LIFE	8+ YEARS REMAINING SERVICE LIFE
FAILED	POOR	FAIR	GOOD

ros ROOF CONSULTING SERVICES, INC
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 * SURVEYS * SPECIFICATIONS * INSPECTIONS *

DATE: 08/30/2022
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 SCALE: 3/32"=1'-0"
 CHECKED BY: J.R.L.G.



VISUAL INSPECTION
 CLIENT: GCNC
 PROJECT: DULLES TECHNICAL CENTER
 ADDRESS: 22611 MARKEY CT
 STERLING, VA
 DRAWING: ROOF PLAN

A3