CITY OF CANTON POLICE DEPARTMENT
151 ELIZABETH ST
CANTON, GA 30114

FOLLOW-UP ROOF LEAK EVALUATION REPORT

For: Mr. Brandon Poole
City of Canton Infrastructure and Facilities Maintenance Manager
By: Alex Murray, RRO
Williamson & Associates
September 18, 2025

September 18, 2025

Mr. Brandon Poole
City of Canton Georgia
Infrastructure and Facilities Maintenance Manager
110 Academy St
Canton, GA
Direct: 770.720.7674
Email: Brandon.Poole@cantonga.gov

Re: Building Exterior Consulting Services
Roof Consulting Services
City of Canton Police Department
Canton, GA 30114
(W&A Project #: 24-01329-2)

Dear Mr. Poole,

Williamson & Associates has concluded our follow-up roof leak evaluation of the City of Canton Police Department, located at 151 Elizabeth St, Canton, GA. These services were performed in accordance with our proposal dated August 8, 2025. This report presents our findings from services performed September 4, 2025 through September 5, 2025, with our recommendations for next steps.

We appreciate the opportunity to provide our building exterior consulting services on this project.

Please contact us with any questions you have regarding the report below or our services in general.

Sincerely,
Williamson & Associates

Alex Murray, RRO
Consultant II

CC: Mike Allen – Field Services Manager

Attachments: Roof Evaluation Report
Attachment A – Photographs (142)
Attachment B – Annotated Roof Plan
Attachment C – Elevate Termination Detail

Follow-up Roof Leak Evaluation Report
City of Canton Police Department
Canton, GA
(W&A: 24-01329-2)

I. Executive Summary

Williamson & Associates (W&A) arrived on-site on September 4, 2025, to perform roofing evaluation services based on our proposal to Mr. Brandon Poole, dated August 8, 2025. Services performed were visual in nature with one probe taken to view concealed as-built construction within Area 6 of low slope roofing.

A brief and updated history of roof related leakage was given by Mr. Brandon Poole. Leakage was reported by Mr. Poole to be most prominent on the west side of the building, at the northwest corner and along the middle portion of the west elevation. Interior spaces affected were the Municipal Court room, Men and Women restrooms, and the Police Captain's office below the restrooms. W&A was able to locate deficiencies in the as-built conditions in the roof and exterior walls that likely contributed to the leakage. City of Canton reported that the leak locations did not appear until after the roofing work had been completed and continued after the roofer performed limited repairs to their previous work in the steep slope area at the northwest corner of the building.

Based on our initial roofing condition evaluation, W&A had previously determined the primary source of leakage was likely as-built roofing construction that did not conform to the manufacturer required detailing. Numerous areas were found in both steep slope metal panel and low slope single ply roofs that did not conform to standard detailing and would likely contribute to leakage.

In our follow-up leakage evaluation, we have determined that the corrective work performed by the roofer had little impact on the quality and weathertightness of the roof and that additional areas of concern have been identified in the low slope roofing areas. The rising walls above the low slope roofing also contain some areas of concern.

Our general recommendations are consistent with our previous recommendations, with some updates.

- The low slope roofing is recommended to receive repairs to the perimeter flashings in all locations.
- Areas of wet roofing materials (insulation and coverboard) are recommended to be removed and replaced with new.
- The rising walls above the low slope roofing are recommended to receive limited tuck pointing to fill in and repair missing/damaged areas of mortar.
- A coating/repellent on the brick may be considered after-tuck pointing has been completed, similar to what has been done on the east elevation.
- The steep slope roofing panels are recommended to be removed and replaced. At a minimum, there are specific areas of concern that are recommended to be repaired.

II. Background Information

The following information was provided to W&A by the City of Canton and visual observations by W&A. W&A understands that:

- The roof systems were recently replaced by a Contractor out of Florida that subcontracted the labor portion of the project to a different company/crew.
- The status of the single ply warranty remains unknown to W&A at the time of the report's writing.
- Limited corrective work was done by the roofing contractor prior to their demobilization from the site. Observations revealed that some metal roof panel penetrations had been corrected and several metal roof panels had been replaced in the northwest corner of the steep slope roof.
- Leakage on the west side of the building has gotten progressively worse over the last 9 months or so.
- The standing seam metal roof was 1.5" mechanically seamed and was manufactured by Sheffield Metals International (SMI) in Ackworth, GA. The new single-ply roofing was Holcim Elevate TPO (formerly Firestone). Both systems were identified in our previous report. The manufacturer of the existing single-ply that was not replaced was unknown to W&A at the time of this report.

III. Roofing Observations

City of Canton personnel reported multiple leaks, which had grown in severity since our previous condition evaluation, general locations marked below in **Diagram 1**. The primary focus of the evaluation was to identify potential sources of leakage.

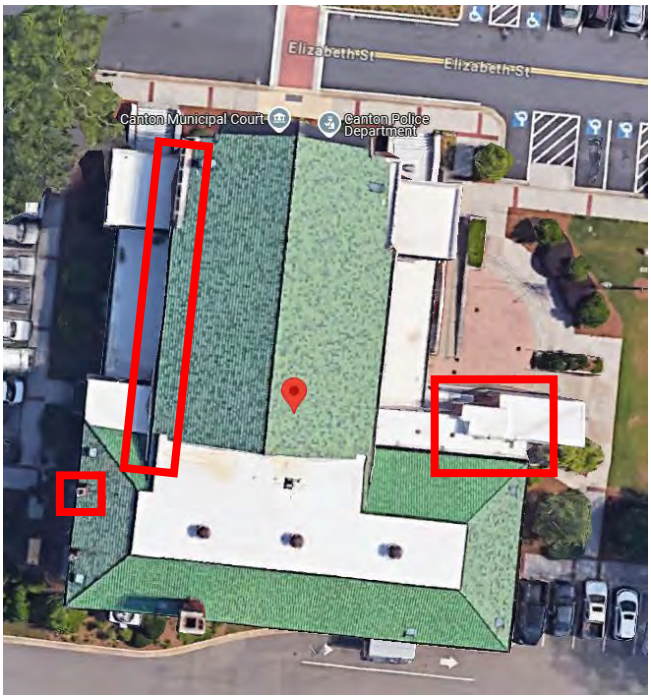


Diagram 1

Attached at the end of this report are the photo log, and annotated roof for reference. A flashing termination detail from Elevate has also been provided for consideration, **Attachment C**.

The evaluation is generally divided by roof area and roof type. The previous roof area designations have been maintained for continuity. The report headings below correspond to locations labeled on **Attachment B**. **Attachment A** is the photo log, with photo descriptions located in the body of this report.

A. Area 1: South Steep Slope Roof (Photos 1 – 14)

The South Steep Slope roof area was observed to be a 1.5" mechanically seamed standing seam engineered metal roof panel system. The area contained 3 brick masonry chimney stacks and 3 vent penetrations. Corrective work in this area appeared to be limited to vent stack penetration flashings. Crickets at the upslope side of the chimneys, among other corrections were not observed.

Photos 1 - 8 show that vent stack penetration flashing had been altered. Alterations were not in general accordance with published SMI details, as provided in our previous report. The sealant appeared to be clear silicone and not a professional grade sealant. These conditions are anticipated to be a source of leakage soon if left uncorrected.

Photos 9 & 10 show several examples of exposed panel fasteners at the head of the panel that were not driven flush, potentially allowing water to get underneath the fasteners and panels.

Photos 11 – 14 show transition detailing that appeared to be a change from our previous evaluation. Previous observations contained exposed panel edges that left the underlayment and adjacent single ply membrane exposed. The corrective works appears to be a field fabricated box that covered the condition. The box does conceal some of the previous concerns but is unlikely to have eliminated the potential for future roof leakage.

B. Area 2: South Low Slope Roof (Photos 15 – 17)

Observations in this area were limited, as corrective work did not appear to have been completed in the area.

Photos 15 – 17 show that termination bar sealant contained voids and abandoned fastener penetrations had not been sealed. Both of these items are anticipated to contribute to leakage inside the building.

C. Area 3: North Steep Slope Roof – West (Photos 18 – 54)

Area 3 corrections appeared to be limited to the northwest corner of the building, above Area 4.

Photos 18 – 20 show that the gutter solder joints are cracked and allowing water into the wood soffit/cover. While this is not anticipated to be a cause of interior leakage, the uncontrolled water may lead to future problems, including but not limited to wood rot of the decorative gutter covers.

Photos 21 – 24 show that panel seams had not been corrected from our last evaluation and report. The level of seaming observed is in consistent with what SMI considered to be Step 2 of 4 of the seaming process. Anchor clips were exposed sporadically across the roof area. These observations were present in areas that Canton reported to have been worked on by the roofer.

Photos 25 – 28 show a detail area within the reported area of corrective work. Panels were field bent to better follow the contour of the roof deck but the detailing of the bent panel and flashing with clear silicone sealant was improper and contained voids. The method of corrective work in this location does not appear to conform with what we would consider best practices.

Photos 29 – 31 show an added penetration boot. The previously observed painted underlayment was left exposed and contained voids. The boot was detailed to the metal panel with clear silicone, indicating that butyl tape, as called for by SMI, was not likely underneath the penetration boot. The clear silicone was not well adhered to the panel.

Photos 32 – 36 show that some correct work had been attempted at the north parapet transition area between Areas 3 & 4. Metal flashings were loosely held in place with clear silicone and screws through the stone coping. An open TPO seam was observed in the area. This area appears to be one of several contributing factors to interior leakage.

Photos 37 – 41 show that the corrective work performed on the Area 4 to Area 3 transition, in the Area 4 drainage path was limited primarily to clear silicone that was not well applied and was not well adhered. Wind driven rains and high volumes of water drainage are anticipated to be able to bypass the detailing in this location and enter the building.

Photos 42 – 44 show that the edge panel bypassing the Area 4 parapet contained a large open void that provided direct access to water. Once water entered the void, it could likely travel and may be able to enter the building. The counter flashing over the gutter was also poorly attached and easily manipulated by hand. Existing sealants had not been replaced with new.

Photo 45 shows that the ridge cap was not well aligned at the ridge and contained sporadically placed fasteners in lieu of pop rivets placed 18” OC as required by SMI.

Photos 46 & 47 show that the panels did not contain boxed ends at the ridge, under the ridge cap, which was not in accordance with SMI required detailing.

Photos 48 – 51 show that the rake flashing at the north gable was not engaged with a cleat and was easily manipulated by hand. Voids were also present that had not been addressed.

Photos 52 – 54 show some exterior wall components that are likely also contributing to leakage. Missing stone coping mortar and open joints between vertical cementitious panel and stone coping were observed and provide potential pathways for water to enter the building.

D. Area 4: North Low Slope – North High (Photos 55 - 65)

Photos 55 – 63 show that multiple damages were in the single ply roofing membrane that had not been replaced. Also observed were coping sealants that were no longer adhered to the stone coping. Both of these items likely allow water to bypass the roofing system and enter the building.

Photos 64 & 65 show that the decorative band at the approximate height of the Area 4 roof decking contained voids in the sealant between pieces of the decorative band.

E. Area 5: West Low Slope – South (Photos 66 – 75)

Photo 66 shows a general view of the roofing area.

Photos 67 & 68 show a large void in the fascia flashing at the Area 1 hip to Area 5 perimeter transition.

Photos 69 & 70 show that the gutter solder joints were cracked and not adhered to the gutter. This was a common observation.

Photos 71 – 73 show masonry distress above the roof flashing. This masonry distress would likely allow bulk water to enter the wall system and bypass the roof flashing.

Photos 74 & 75 show that the new roof flashing membrane was not well terminated over the top of the existing roof flashing at the rising wall. This would likely allow water to enter the roof assembly and leak into the building. Existing sealants had not been replaced and were past their service lives. The degraded sealant would also likely allow water to bypass the surface mounted counter flashing.

F. Area 6: West Low Slope Roof – Middle (Photos 76 – 93)

Photo 76 shows a general view of the roofing area. Corrective work was not reported to have taken place in this general area. We did not observe work that appeared to be corrective. Water was observed to be ponded at the edge of the roof. This ponding appeared to be caused by improperly installed self-adhering edge flashing that contained a hump in the flashing, thus preventing efficient water drainage off of the roof.

Photos 77 & 78 show a vent penetration in the roof area. The penetration flashing was visually watertight and did not contain obvious voids. We could not confirm if butyl mastic was present between the iron pipe and the penetration boot. The iron pipe did transition to PVC several feet below the roof surface. These connections can leak and can be easily damaged.

Photos 79 & 80 show that the vertical edge flashing at the outside edge of the roof was not well adhered and contained voids in the flashing.

Photos 81 – 91 show that the roof flashing from the older roof was still in place and that termination sealants had failed in many areas. The new roof flashing was not adhered to the wall and was not properly terminated. The roof flashing could be pulled out from under the older roof counter flashing and when it was, water was observed beneath the flashing. We removed roofing membrane and discovered that roofing coverboard and insulation in the area was wet. We also observed that the old roof flashing had been left in place.

Photos 92 & 93 show missing mortar joints above the roof flashing. With the flashing installation observed below, it is likely that once bulk water enters the wall it can easily bypass the roof flashing and enter the building.

G. Area 7: West Low Slope Roof – North Low (Photos 94 – 105)

Photo 94 show the general condition of the roof area at the time of our evaluation.

Photo 95 shows additional examples of masonry distress, as has been observed elsewhere.

Photos 96 & 97 show that a wall vent cover contained voids in the perimeter sealant that may allow water leakage.

Photos 98 – 101 show perimeter flashing termination deficiencies that may allow water to enter the building.

Photos 102 – 105 show additional views of degraded sealant at the older/reused surface mounted counter flashing and coping stone to rising wall termination.

H. Area 8: East Steep Slope Roof (Photos 106 – 119)

Photos 106 & 107 show the general condition of the roofing system during our evaluation. A lesser amount of leakage was reported on the east side of the gable, compared to the west side of the gable. Some exterior wall concerns were observed, similar to what was observed on the west side.

Photos 108 – 119 show similar level of detailing to what was observed on the west side of the roof. Voids had been left at transition areas and changes of plane. Sealant voids were present in new and older sealants. Flashings were not well secured to the roof.

I. Area 9: East Low Slope Roof – North High (Photos 120 – 133)

Photo 120 shows the general condition of the roof area. The membrane and associated sealants and flashings appeared aged and had not been addressed. Similar observations were made as in Roof Area 4. Additional observations were made on the exterior walls of the roof area, similar to Areas 3 & 4.

Photos 121 – 133 show failing and missing sealants and mortar on the exterior wall of the roof area, above the window. Reported leakage by the City of Canton and observed by W&A indicate some level of leakage to the interior in this general area.

J. Area 10: East Low Slope Roof – North (Photos 134 – 139)

Photo 134 shows the general condition of the roof area. Similar observations regarding flashing and coping sealant degradation were made on this roof area as Roof Area 7 and similar areas.

Photos 135 – 139 show the as-built perimeter flashing construction was similar in this area as was found in Area 6. This indicates that single-ply systems at Roof Areas 5, 6, 7, 10, 11 & 12 have similar levels of detailing.

K. Area 11: East Low Slope Roof – Middle (Photos 140 & 141)

Photos 140 & 141 show the general condition of the roof area during the evaluation. Corrective work was not reported to have taken place in this area. Of note, we did observe that the rising walls above the roof had a clear elastomeric coating applied to them, similar to GE Optic 3101 Translucent Silicone Coating.

L. Area 12: East Low Slope Roof – South (Photo 142)

Photo 142 shows the general condition of the roof area. Work had not been performed on that area since our initial evaluation in December of 2024. Several temporary repairs that we made during our last visit had not been made permanent, resulting in renewed leakage. We temporarily sealed those areas again but a permanent termination should be made as soon as possible.

M. Area 13: East Low Roof – South Low (Not Photographed)

IV. Conclusions and Recommendations

Based on our visual observations, W&A does not believe that the corrective work performed by the roofer during their recent return adequately corrected the issues identified in our initial report. As such, our overall recommendation to remove and replace the metal roof panels remain. A company skilled in sheet metal roofing may be able to salvage the majority of the roof and be able to address deficiencies without removing the panels entirely, to satisfy SMI warranty requirements, but we would not recommend relying on that being a possibility.

The primary source of leakage currently, however, appears to be deficiencies in the single ply roofing vertical flashings and potential material degradation above those vertical flashings, in Roof Areas 4, 5, 6 and 7. The current vertical flashing detailing relies on the integrity of the rising wall mortar, counter flashing and counter flashing sealant to keep water out of the building. The counter flashing for the current roof was left over from the previous roof. This is normally an acceptable practice, if the counter flashing is removed to allow for proper membrane termination onto the vertical wall. This did not happen. With degraded mortar joints above the counter flashing and degraded sealants at the counter flashing water has multiple access points to bypass the roof flashings and enter the building.

A. Metal Panel Roofing Recommendations

Metal roofing recommendations to remove and replace the panels in their entirety remains. Some improvements were made, but those improvements do not address the overall concern of reduced wind uplift resistance of the current assembly, specifically perimeter edges. A roofing contractor skilled in metal roof panel work may be able to perform repairs necessary to satisfy SMI's warranty requirements, but we would not rely on that being a possibility at this time.

B. Single-ply Membrane Roofing Recommendations

Our primary single-ply membrane recommendations are generally consistent with our previous report, with some added enhancements for masonry wall areas, stone windowsill and copings.

To address the immediate concern of building leakage, we recommend the following:

- Remove the current counter flashing and associated sealants from the assembly entirely.
- Perform edge termination detail similar to Elevate Detail TPM-T-06 (**Attachment C**). Existing counter flashing may be able to be reused.
- Perform moisture survey to locate areas of wet roofing materials, as present, and remove and replace those materials.
- At stone windowsills, remove existing coatings, sealants, etc down to bare stone/metal and install a liquid flashing system by Elevate. Lap liquid flashing onto the newly applied termination detailing sealant to provide continuity of the system. See **Photos 81, 88 & 89** for example locations.
- At stone copings, exterior accent bands and transitions, remove and replace degraded sealants, at a minimum. Consider the application of an elastomeric coating at the skyward facing portion of the stone coping that ties into the roof termination flashings to provide continuity. See **Photos 60 – 65, 116, 117** for example areas.
- After metal panel roofing has been removed above Areas 4 & 9, install new single-ply roofing membranes. At a minimum, repair damages observed in those locations.

Certain enhancements/maintenance items are also recommended for consideration:

- Tuck point areas of wall with missing/degraded mortar above roofing terminations and within areas of exterior wall above leakage. See **Photos 71 – 73, 92, 93, 123, 124, 126 – 128** as examples.
- Repair areas of cracked masonry/masonry distress. See **Photos 95, 101** as examples.
- At rising masonry walls, consider the application of a clear silicone coating after the tuck pointing has been completed. Clear silicone coatings, such as GE Optic, allow the wall system to continue to function as originally intended while limiting bulk water entry into the wall system.
- Remediate cementitious panels at gable ends of roof. See **Photos 52 – 54** for example areas.
- Re-solder copper gutters

END OF REPORT

Photo 1

Photo 2

Photo 3

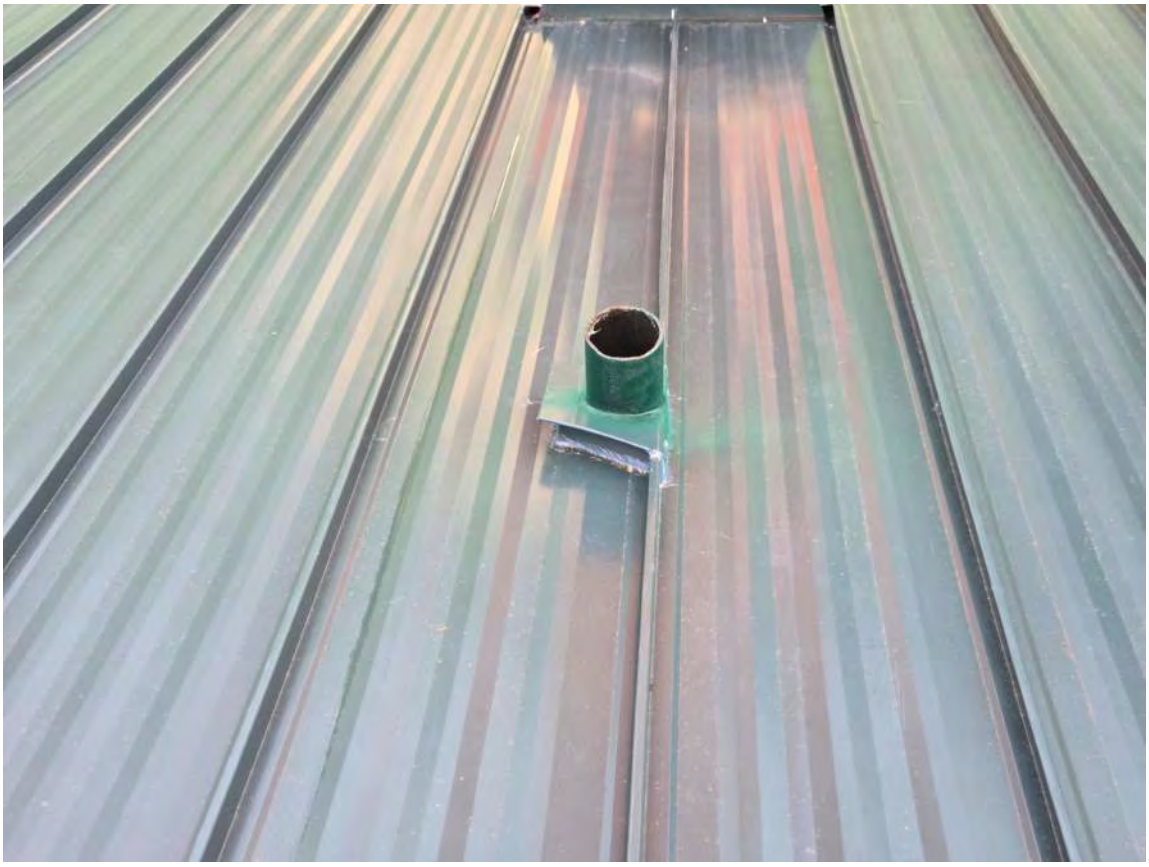


Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Photo 9

Photo 10

Photo 11

Photo 12

Photo 13

Photo 14

Photo 15

Photo 16

Photo 17

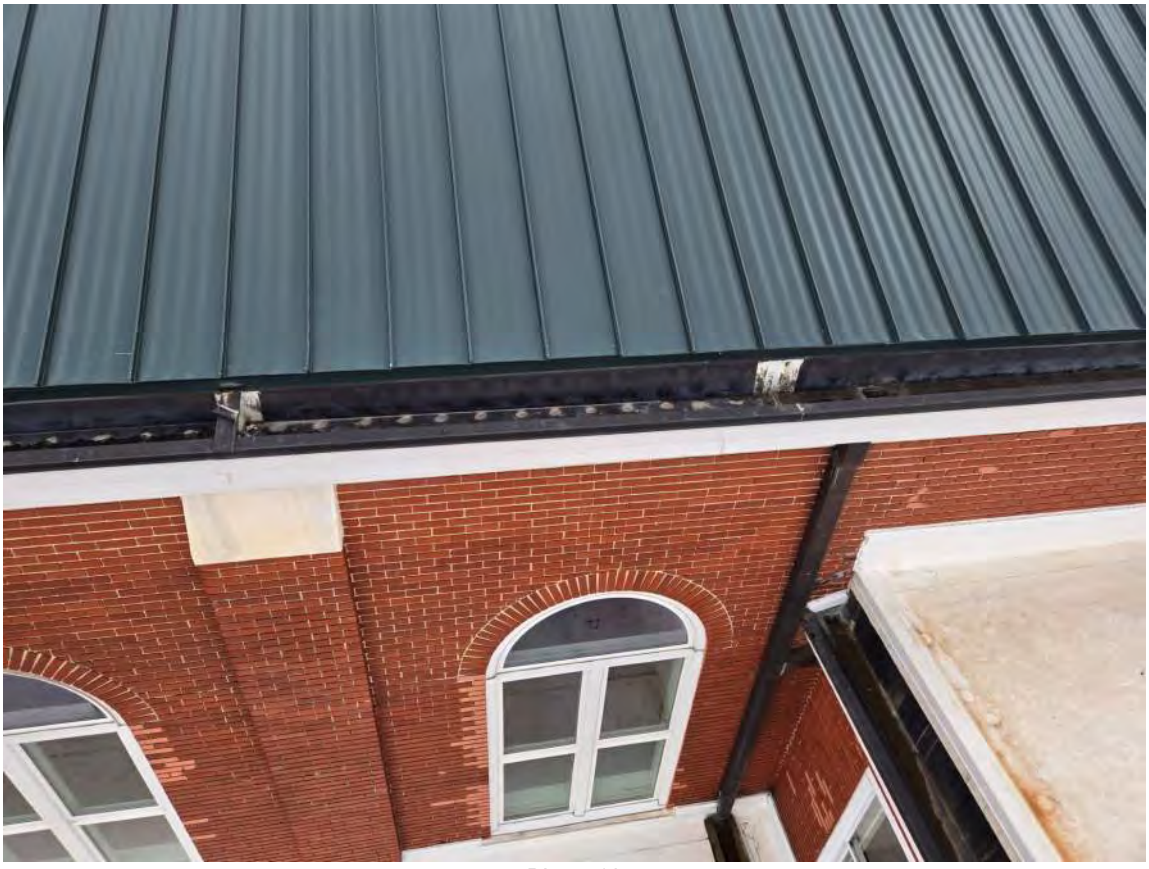


Photo 18

Photo 19

Photo 20

Photo 21

Photo 22

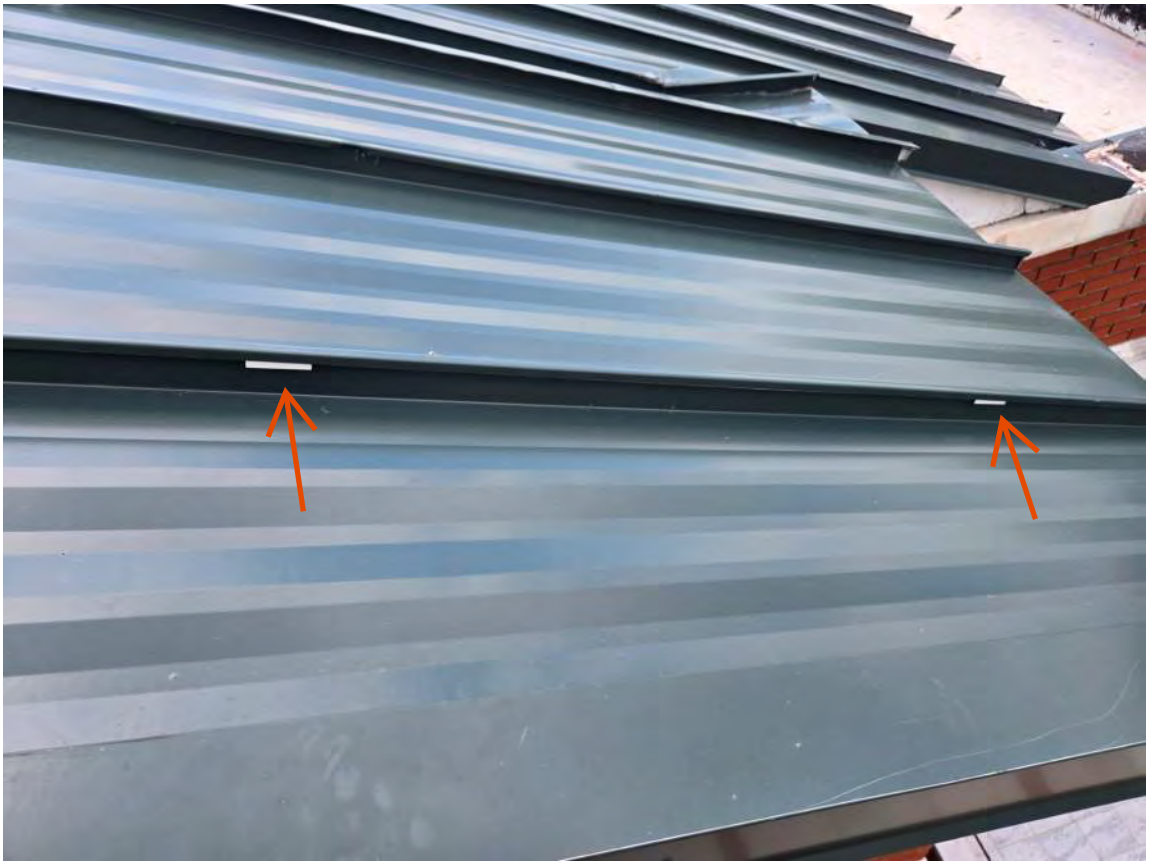


Photo 23

Photo 24

Photo 25

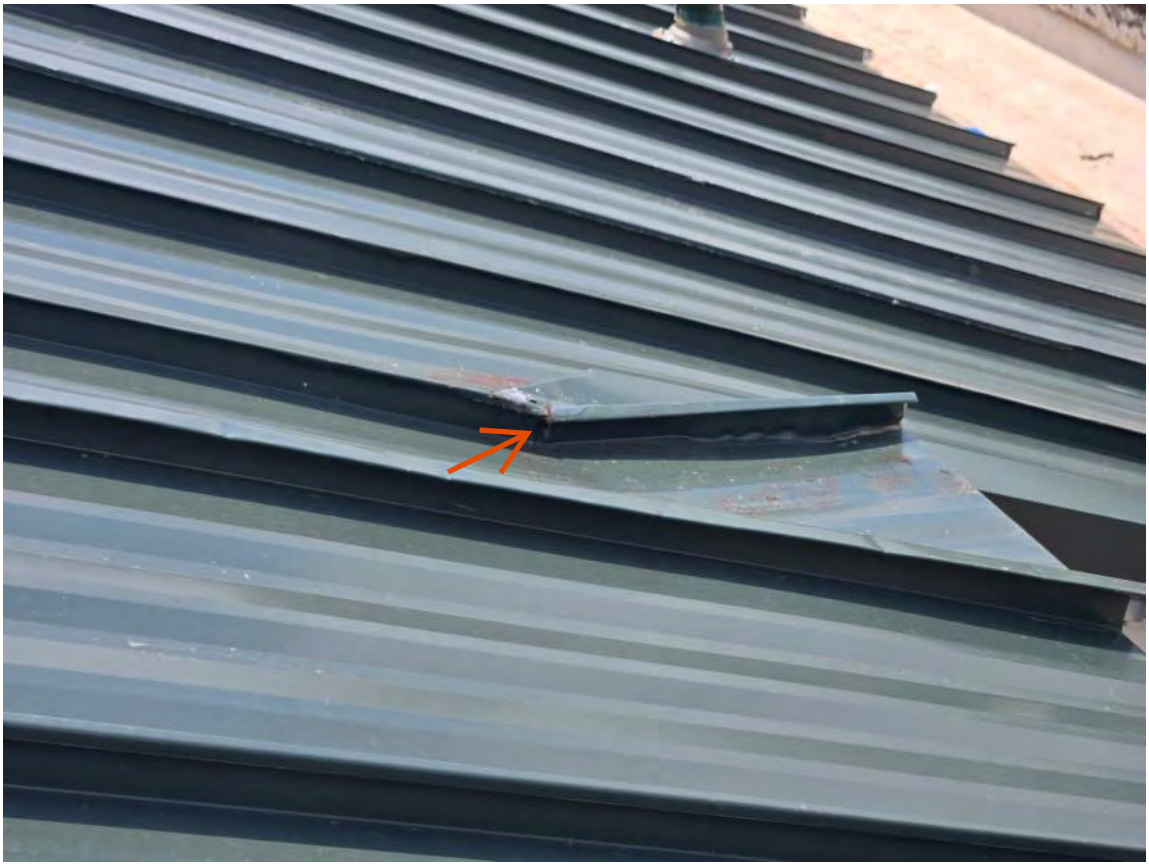


Photo 26

Photo 27

Photo 28

Photo 29

Photo 30

Photo 31

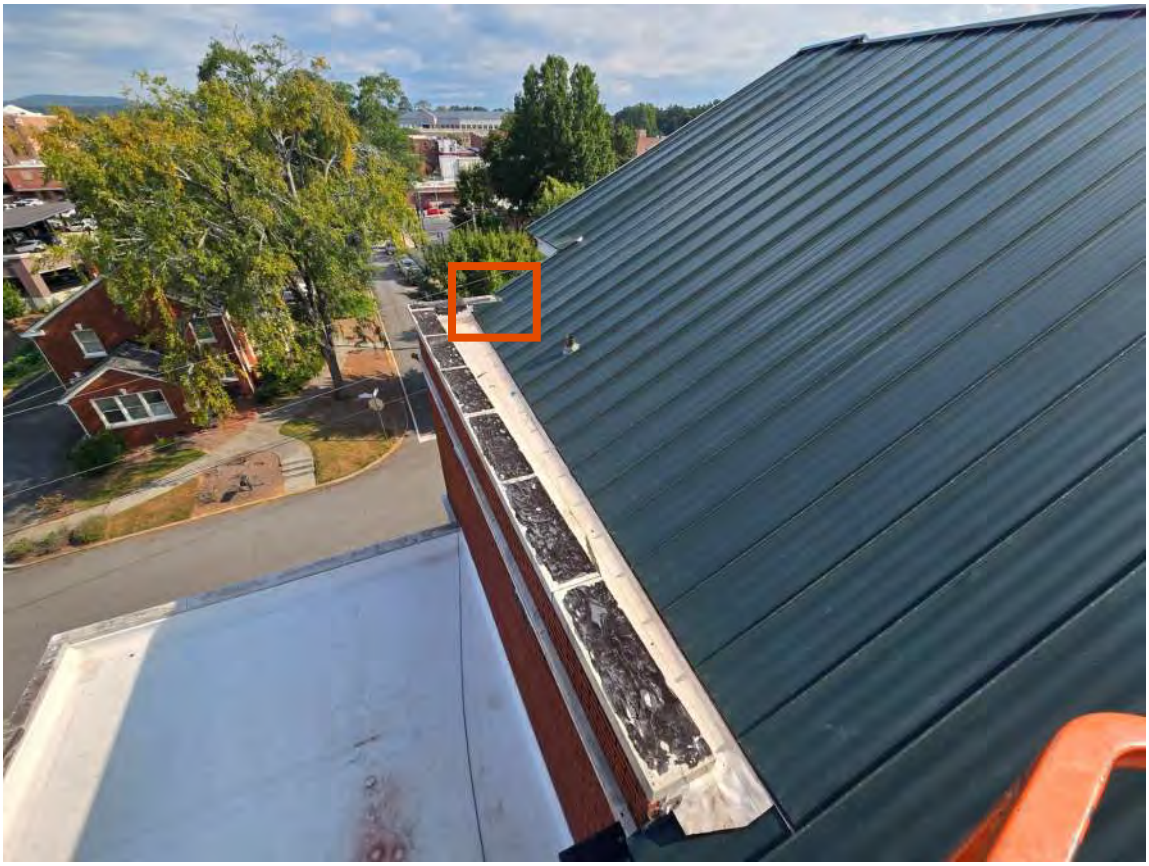


Photo 32

Photo 33

Photo 34

Photo 35

Photo 36

Photo 37

Photo 38

Photo 39

Photo 40

Photo 41

Photo 42

Photo 43

Photo 44

Photo 45

Photo 46

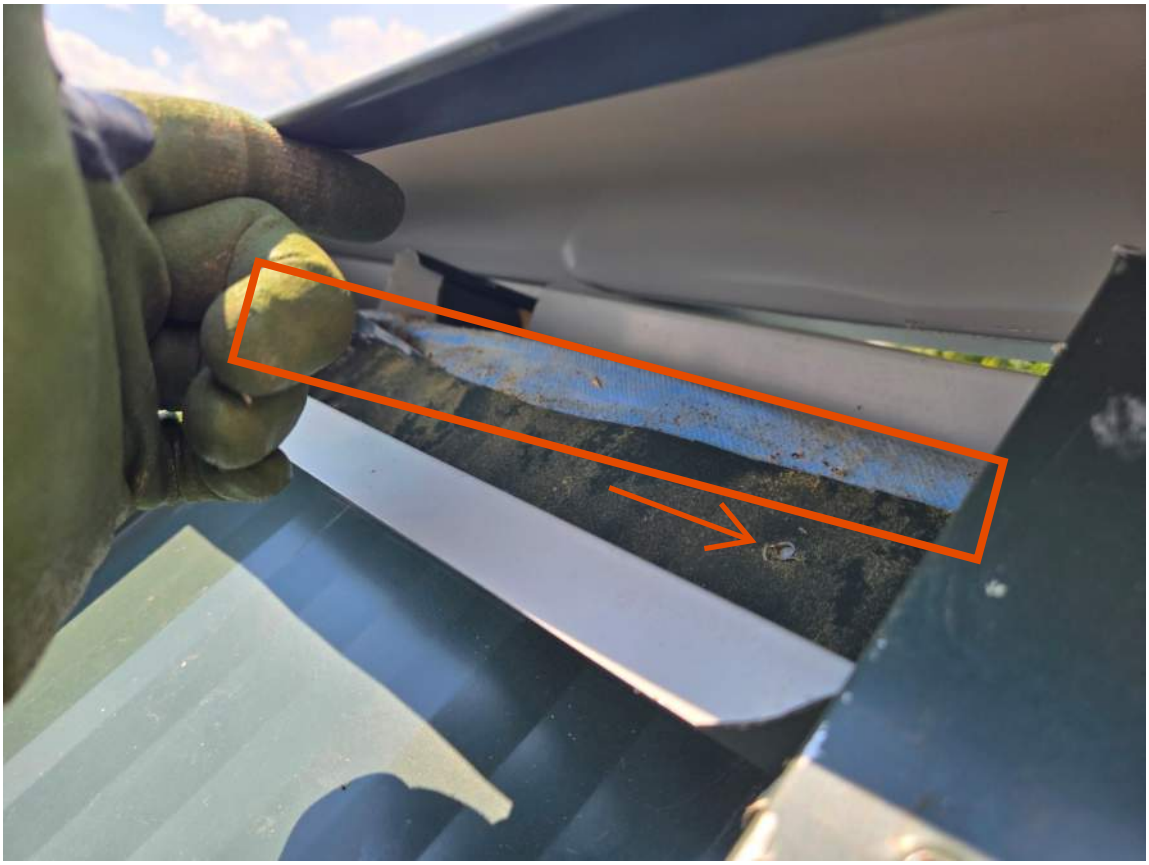


Photo 47

Photo 48

Photo 49

Photo 50

Photo 51

Photo 52

Photo 53

Photo 54

Photo 55

Photo 56

Photo 57

Photo 58

Photo 59

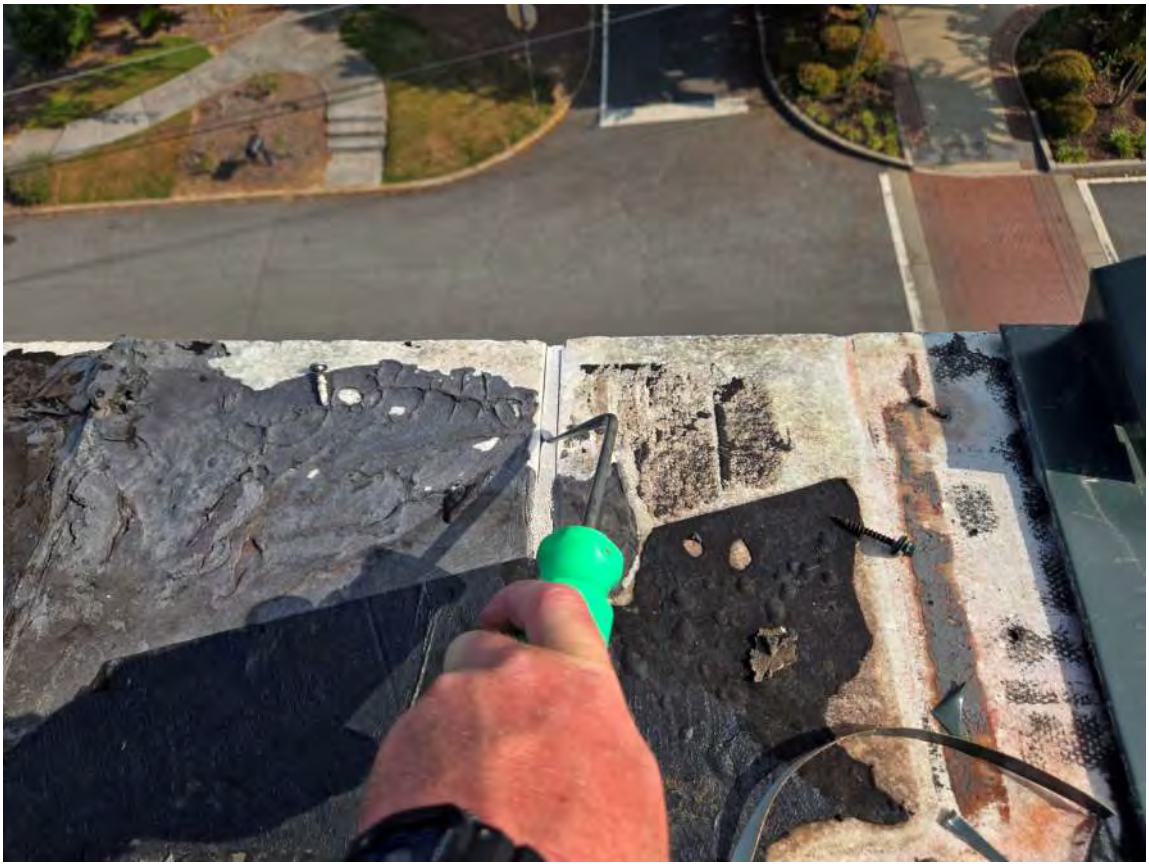


Photo 60

Photo 61

Photo 62

Photo 63

Photo 64

Photo 65

Photo 66

Photo 67

Photo 68

Photo 69

Photo 70

Photo 71

Photo 72

Photo 73

Photo 74

Photo 75

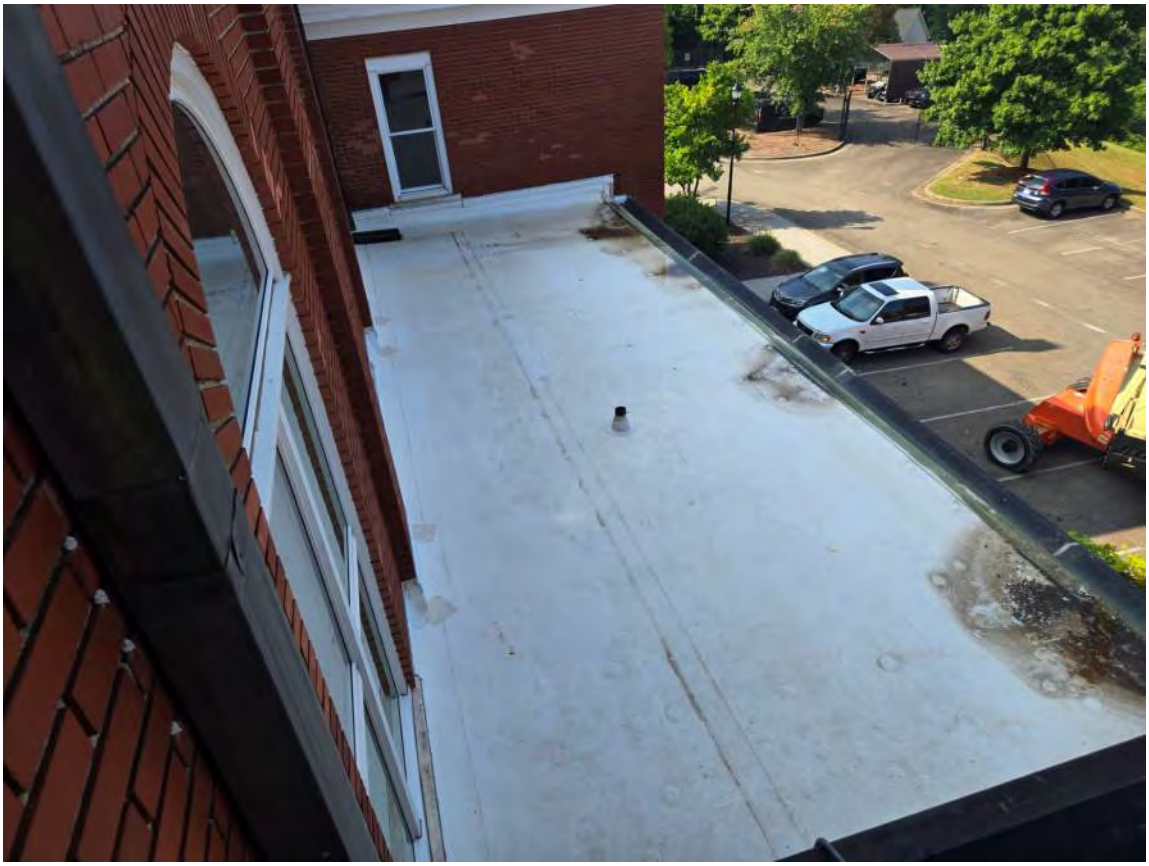


Photo 76

Photo 77

Photo 78

Photo 79

Photo 80

Photo 81

Photo 82

Photo 83

Photo 84

Photo 85

Photo 86

Photo 87

Photo 88

Photo 89

Photo 90

Photo 91

Photo 92

Photo 93

Photo 94

Photo 95

Photo 96

Photo 97

Photo 98

Photo 99

Photo 100

Photo 101

Photo 102

Photo 103

Photo 104

Photo 105

Photo 106

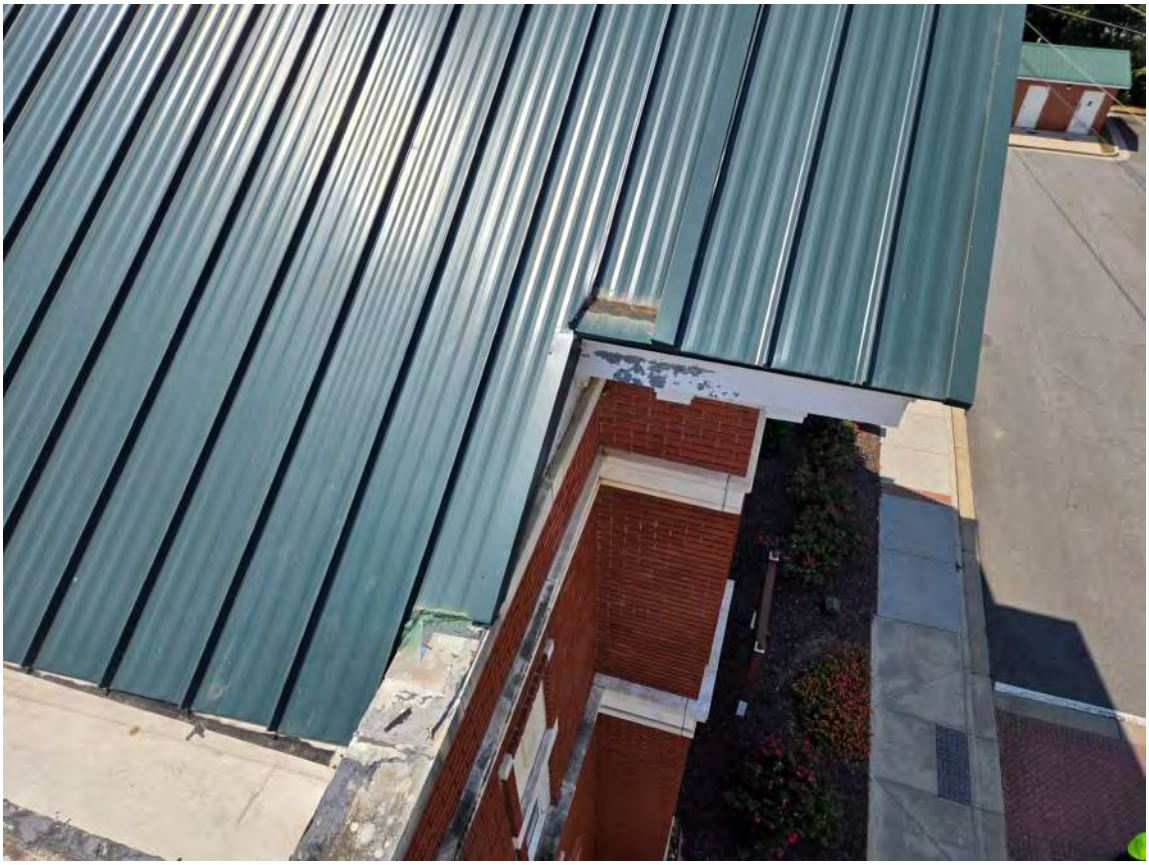


Photo 107

Photo 108

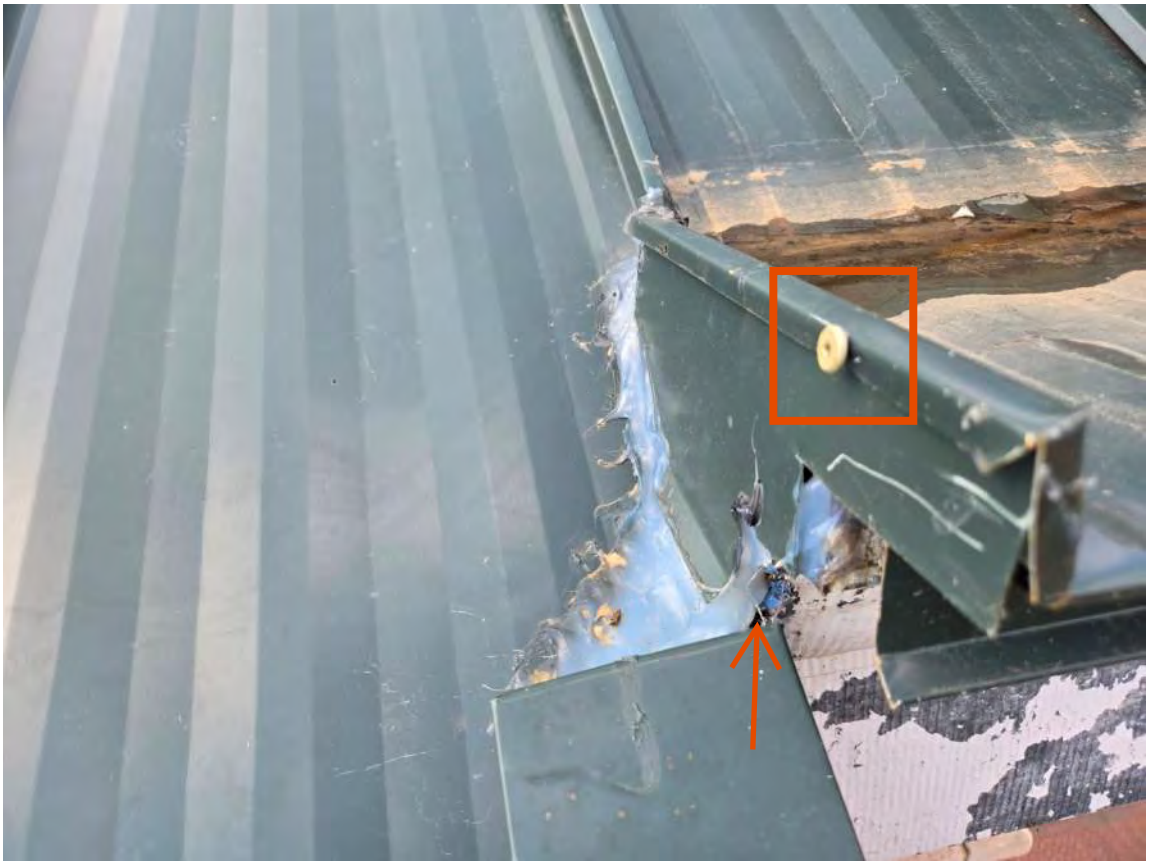


Photo 109

Photo 110

Photo 111

Photo 112

Photo 113

Photo 114

Photo 115

Photo 116

Photo 117

Photo 118

Photo 119

Photo 120

Photo 121

Photo 122

Photo 123

Photo 124

Photo 125

Photo 126

Photo 127

Photo 128

Photo 129

Photo 130

Photo 131

Photo 132

Photo 133

Photo 134

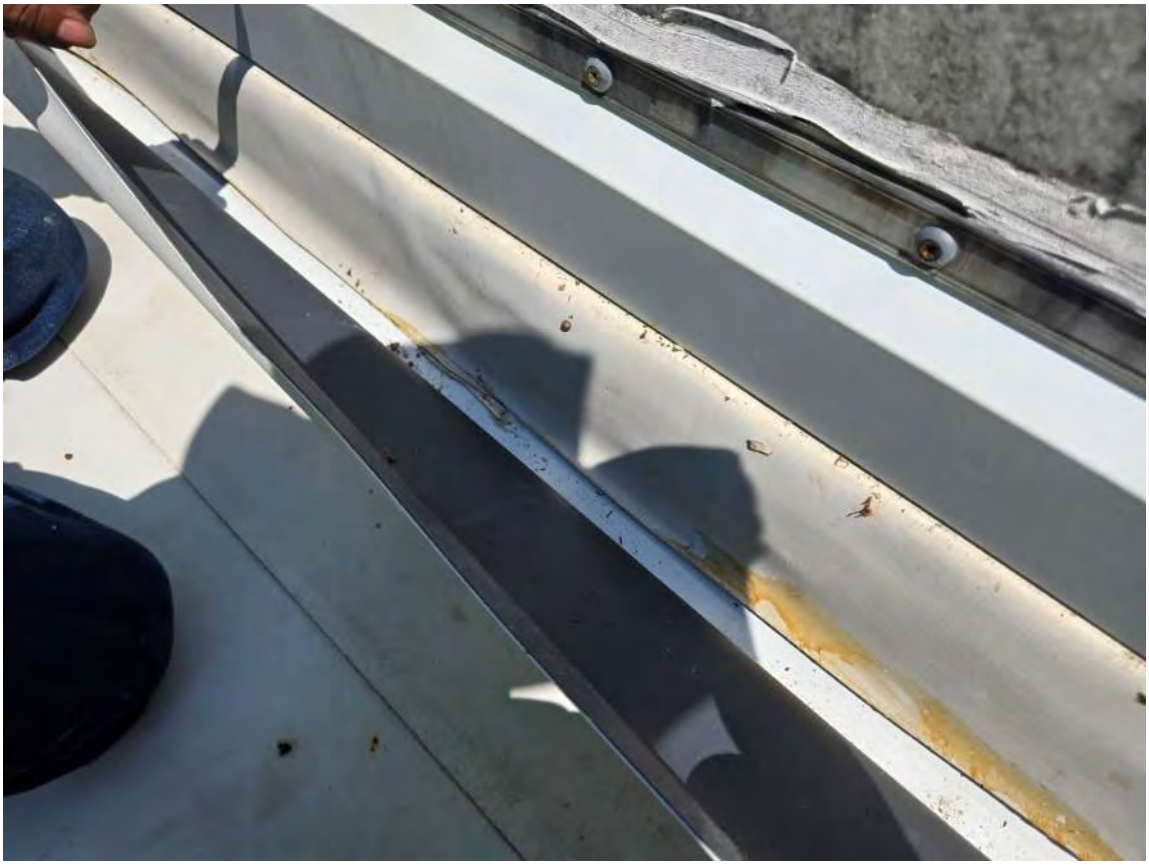


Photo 135

Photo 136

Photo 137

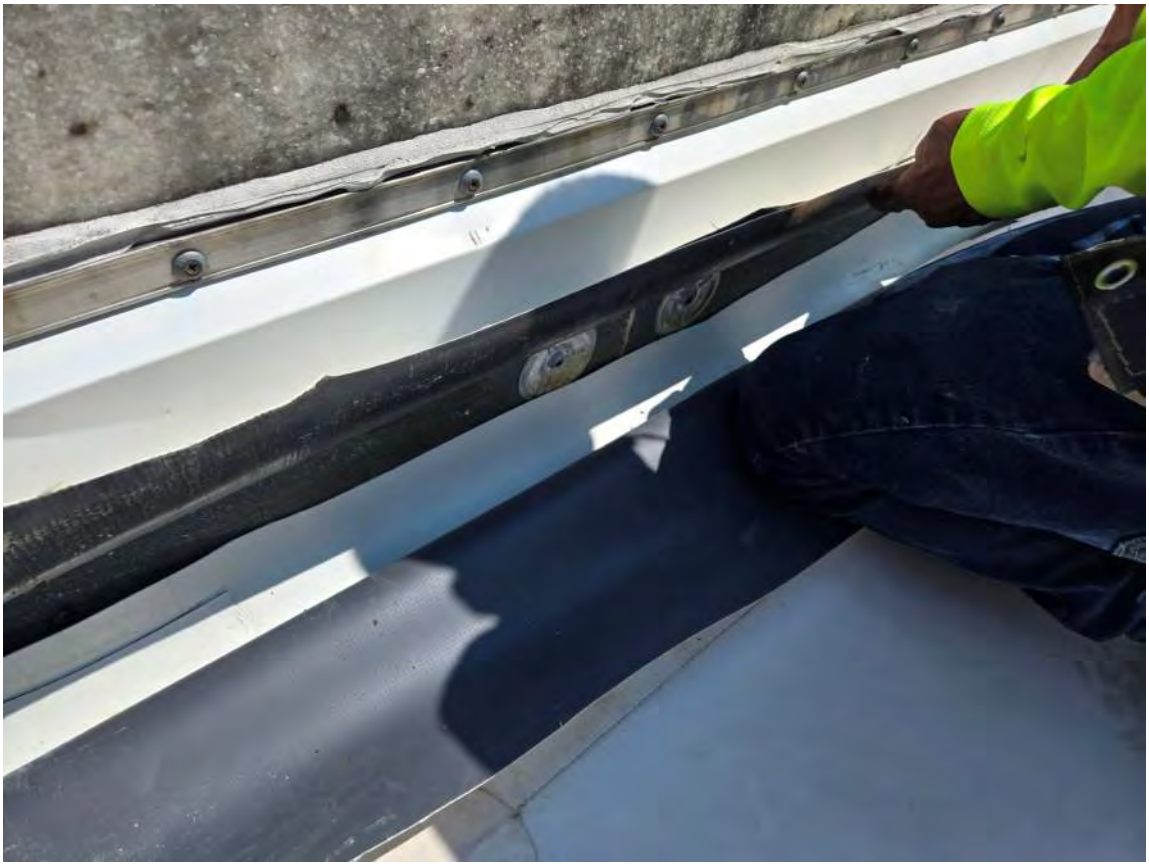


Photo 138

Photo 139

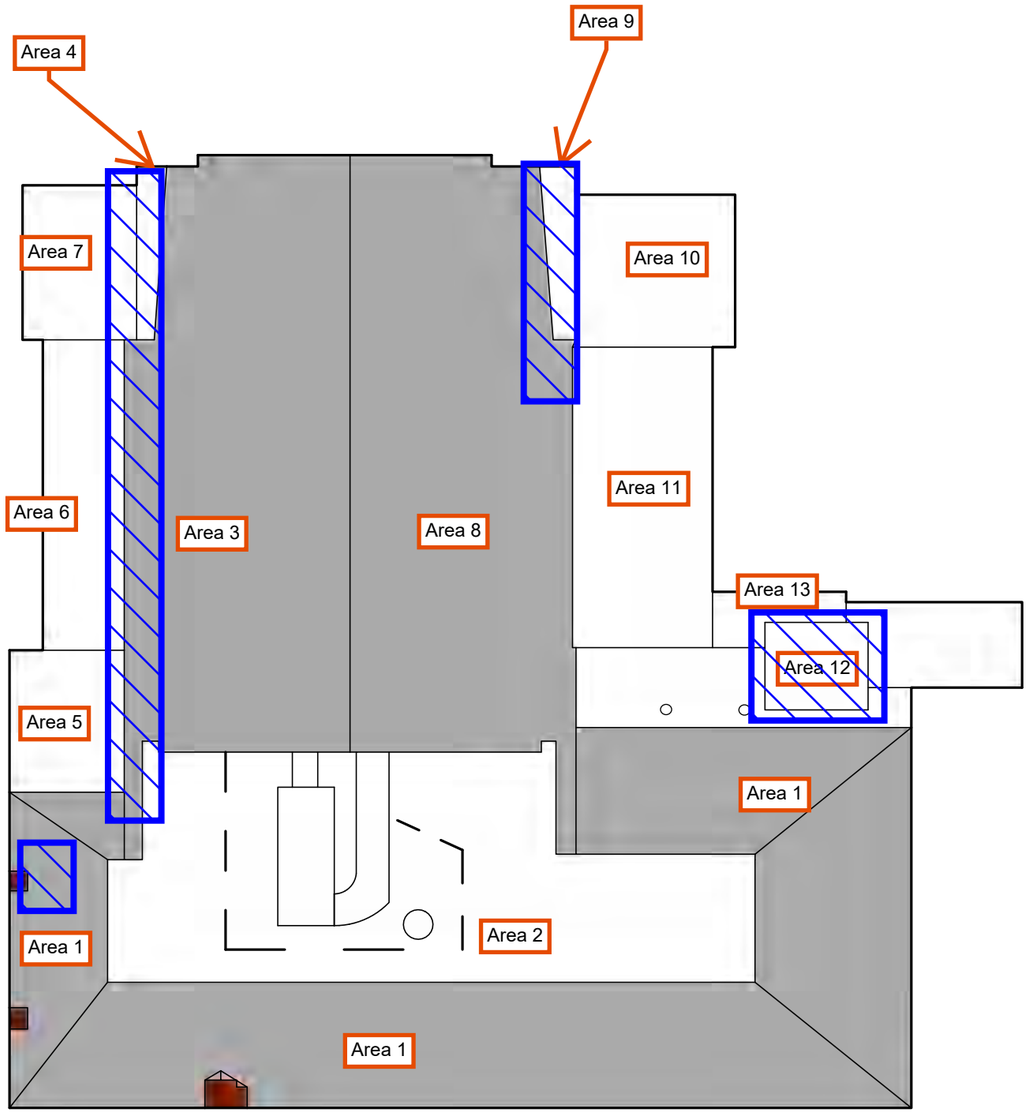
Photo 140

Photo 141

Photo 142

PHOTO LOG KEY

Area 1: Photos 1 - 14
Area 2: Photos 15 - 17
Area 3: Photos 18 - 54
Area 4: Photos 55 - 65
Area 5: Photos 66 - 75
Area 6: Photos 76 - 93
Area 7: Photos 94 - 105
Area 8: Photos 106 - 119
Area 9: Photo 120 - 133
Area 10: Photos 134 - 139
Area 11: Photos 140 & 141
Area 12 : Photo 142
Area 13: Not Photographed



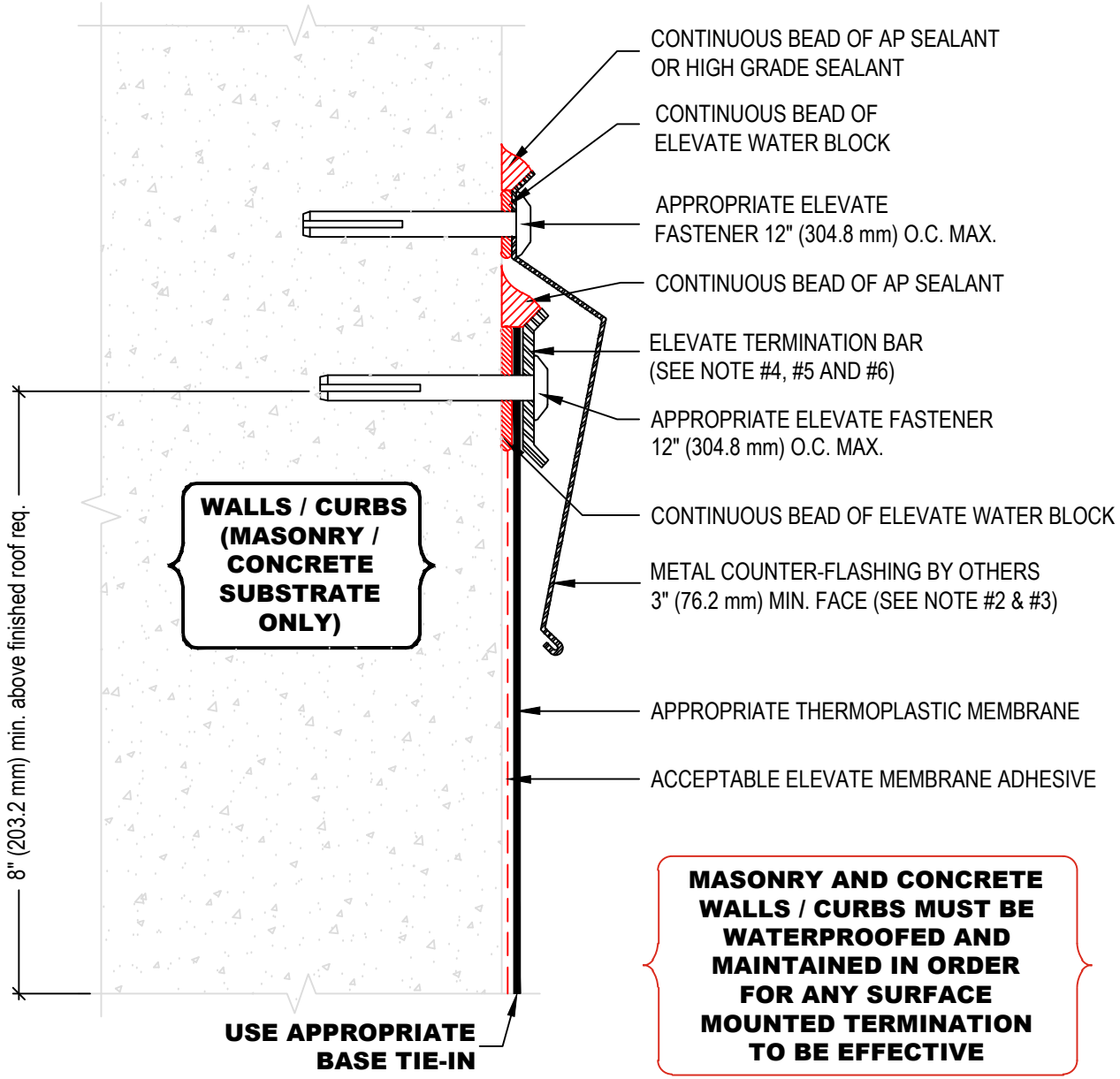
W&A ATTACHMENT B
Annotated Roof Plan
Updated 09/05/25

N

ELEVATE

TERMINATION WITH SURFACE MOUNTED COUNTER-FLASHING AND TERMINATION BAR

MATERIAL: TPO / PVC / PVC KEE / MAX PVC	ACCEPTABLE SYSTEMS: ALL	ISSUE / REVISION DATE:	DETAIL NO.
(800) 428-4511 www.holcimelevate.com	MAXIMUM WARRANTY: 20 YEARS	10/11/2024	TPM-T-06
			NOT TO SCALE



MASONRY AND CONCRETE WALLS / CURBS MUST BE WATERPROOFED AND MAINTAINED IN ORDER FOR ANY SURFACE MOUNTED TERMINATION TO BE EFFECTIVE

NOTE:

1. REFER TO THE ELEVATE™ WEBSITE FOR MOST CURRENT INFORMATION.
2. REGULAR MAINTENANCE OF COUNTER-FLASHING AND SEALANTS REQUIRED. NOT INCLUDED AS PART OF THE RED SHIELD WARRANTY.
3. METAL COUNTER-FLASHING SHALL BE 24 GAUGE PRE-FINISHED STEEL OR .032" (0.81 mm) MIN. ALUMINUM FORMED WITH HEMMED LOWER EDGE.
4. INSTALL ELEVATE TERMINATION BAR WITH 1/4" (6.35 mm) GAP BETWEEN ADJOINING SECTIONS.
5. TERMINATION BAR MUST BE CUT AT INSIDE AND INSIDE CORNERS. **DO NOT BEND AROUND CORNERS.**
6. TERMINATION BAR MUST BE FASTENED WITHIN 1" (25.4 mm) MAX. OF ALL SECTION ENDS.
7. INSTALL METAL WORK IN ACCORDANCE WITH CURRENT SMACNA RECOMMENDATIONS.

REPLACED DETAILS
UT-T-06 & PVC-T-06

NOTE:

1. *DO NOT MIX ELEVATE PVC/PVC KEE AND ELEVATE MAX PVC MEMBRANE.*
2. *DO NOT MIX TPO AND PVC MEMBRANES.*

WARRANTY MEMBRANE REQUIREMENTS:

15-YEAR
TPO - 45 MIL
PVC, PVC KEE, MAX PVC - 50 MIL

20-YEAR
TPO - 60 MIL
PVC, PVC KEE, MAX PVC - 60 MIL