



**ROOF AND WALL SURVEY
FIRE STATION #1
102 SHORELINE DRIVE W.
SUNSET BEACH, NORTH CAROLINA**



Project No. FH176078

Terracon Consultants, Inc. 2020-E Starita Road Charlotte, North Carolina 28206
P 704-509-1777 F 704-509-1888 terracon.com

Environmental



Facilities



Geotechnical



Materials



July 25, 2017
Project No. FH176078

Mr. Kevin Dempsey
Fire Department Chief
Town of Sunset Beach
102 Shoreline Drive W.
Sunset Beach, North Carolina 28468

Subject: Roof and Wall Survey Services
Fire Station #1
102 Shoreline Drive W.
Sunset Beach, North Carolina

Dear Mr. Dempsey:

In accordance with Proposal No. PFH176078 dated May 31, 2017 and Agreement for Services signed June 7, 2017 a roof and wall survey was accomplished at Fire Station #1 located in Sunset Beach, North Carolina.

BACKGROUND AND CONSTRUCTION

Fire Station #1 was built in 2005 and was dedicated in January of 2006. The fire station was constructed from plans prepared by Stewart Cooper Newell Architects dated June 25, 2004. A sign at one end of the building has CECO stamped on it which would indicate the building was constructed by Ceco Building Systems. The roof system consists of low-slope standing seam metal roofing. Exterior wall construction generally consists of brick veneer with concrete masonry unit and cold formed metal framing with gypsum sheathing back-up walls. Leaks reportedly have occurred at various locations throughout the building since the facility was opened. Active leaks are present in the Captain's office.

ROOF AND WALL SURVEY

The roof and wall survey was accomplished on July 6, 2017, by Mr. Dennis W. Mashburn, RRC, RRO, REWO, CIT, Project Facilities Professional with Terracon Consultants, Inc. Weather was mostly sunny with calm winds. Temperatures varied from the mid 70's to mid 90's.

The roof and wall survey consisted of visual observations of the roof and exterior walls to evaluate the condition of the existing metal roofing, drainage components, metal flashings, roof penetrations, equipment curb flashings, brick veneer, wall control joints, sealant at windows and doors, and wall penetrations. Interior visual observations of previous or active leaks and building components were also made. Building plans were reviewed.

Attached to this summary letter is a Roof and Wall Information sheet which describes specific information about the roof system and exterior wall components surveyed based on visual observations and information obtained from building plans, a Roof and Wall Inspection Report for the roof system and exterior wall system components surveyed, roof overview photographs and photographs of conditions noted during the survey. A roof plan has been provided depicting general roof system layout and general location of deficiencies. Area designations have been established for orientation purposes. Area A was established for the roof area over the

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Administration and Training section and Area B was established for the roof area over the Operations and Living Quarters section of the facility. Elevation drawings have been provided depicting general location of deficiencies found. Deficiency numbers shown on roof plan and elevation drawings coincide with general observation numbers listed below.

GENERAL OBSERVATIONS OF ROOF SYSTEM AND EXTERIOR WALLS

1. Metal end closure flashing shelves water at various locations.
2. The metal ridge cap is bent and holds water at one location.
3. Sealant at mechanical equipment bases is deteriorated at numerous locations.
4. Metal roof panels are rusted at isolated locations.
5. The flange for the ridge cap shelves water at one location at a joint between sections.
6. Sealant at bonnet flashings for heat vents is deteriorated at one location.
7. All of the elastomeric coating within built-in gutters is deteriorated and loose.
8. Sealant around several vent pipe flashings is deteriorated.
9. Several fasteners along eaves are installed at an angle and the EPDM washers are not seated.
10. Isolated fasteners are backing out of metal ridge cap laps.
11. The metal fascia extension below the gutter is loose at numerous locations.
12. A downspout hanger is loose.
13. The gutter is bent at one location.
14. Sealant at exterior wall control joints is cracked and has cohesive and adhesive failure at numerous locations.
15. Sealant is open at one window.
16. Sealant is open around a door.
17. Sealant around several electrical receptacles is deteriorated.
18. Mortar joints are cracked at several locations.
19. Sealant along the edge of a soffit panel is open.
20. One brick face has spalled.
21. A brick is cracked at one location.

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Refer to attached Roof and Wall Information and Inspection forms for a more detailed description of roof system components, findings and representative photographs.

DISCUSSION

The existing metal roof system is 12 years old and the normal life expectancy for the type roof system on this facility is generally 30+ years.

Although the metal roof panels are in generally fair to good condition, the metal flashings and gutters have numerous deficiencies which if not corrected will allow the metal roof system to leak and allow other leaks to develop.

Drawings indicate the brick wall above roof level between Areas A and B required through-wall flashing, but there is no indication on drawings that a moisture or water barrier was required. Chronic leaks reported along the entire wall are an indication that a wall problem may exist. Further investigation would be required to confirm whether leaks were from the wall or roof.

The cause for mortar joints cracks at exterior walls was not determined. Mortar joint cracks may be due to settling or from expansion and contraction. One cracked brick appears to have been caused during the installation of the metal fascia extension beneath a gutter at one location.

Sealant failure at exterior wall control joints appears to be from normal deterioration of the sealant or from a low-grade sealant being utilized. Sealant adhesion failure is most likely due to improper joint preparation and improper depth to width ratios for the backer rod and sealant.

A recommendation to apply an elastomeric coating on the entire roof and flashings is not being made because we believe its performance would likely be compromised by the conditions noted for the roof system in General Observations. We believe it would be more appropriate to fix the metal components and then coat the entire roof if necessary in future years.

RECOMMENDATIONS

1. Remove and discard existing coping cap, siding, counterflashing, gutters and overflow scuppers at built-in gutters on Area A. Install new overflow scuppers, gutters, counterflashing, siding and coping.
2. Remove and discard existing coping cap, siding, end closure flashing and "Zee" closures along north and south sides of Area A, along the high eave of Area A, and at the south side of Area B. Install new "Zee" closures, end closure flashing, siding and coping.
3. Remove and discard all existing metal ridge cap and "Zee" closures. Install new "Zee" closures and ridge cap.
4. Remove and discard all existing end closure flashing along north side of Areas A and B.
5. Remove existing sealants around all equipment curb flashing flanges and apply PMMA Liquid-Applied Waterproofing over all laps between metal roof panels and metal flashing flanges for each equipment curb.

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6. Install new metal siding or apply a clear sealer over the brick wall above roof level between Areas A and B.
7. Remove and discard all vent pipe flashings and install new vent pipe flashings.
8. Replace rusted ventilator on Area A with a ventilator fabricated from galvalume or stainless steel. Otherwise, wire brush, prime and paint existing ventilator.
9. Apply PMMA Liquid-Applied Waterproofing over all rusted metal roof panels.
10. Straighten bent gutter to the extent possible at one location at the west side of Area B.
11. Remove and replace existing sealant around all heat stack bonnet flashings.
12. Remove all existing fasteners that are installed at an angle along eaves of Areas A and B. Install new oversized fasteners at existing fastener locations.
13. Re-secure a downspout hanger at one location on Area B.
14. Re-secure all existing metal fascia extension flashing below gutters on Area B.
15. Remove existing sealant and backer rod at all exterior brick veneer control joints. Install new backer rod and sealant.
16. Remove existing sealant at all electrical receptacle covers and apply new sealant around cover.
17. Remove and replace existing sealant along edge of metal soffit panels at one location.
18. Remove and replace all existing sealant around one door and one window.
19. Cut-out existing mortar where brick veneer mortar joints are cracked and tuck point joints with new mortar.
20. Cut out existing cracked brick at one location at west side of Area B and replace with new brick to match existing.
21. Remove existing soffit panels beneath built-in gutters on Area A. Sandblast or remove rust formed on structural steel members, then prime and paint.

We estimate the cost to accomplish this work to be approximately \$125,000 to \$150,000.

As a comparison, we estimate the cost for complete roof replacement and remedial repairs to exterior walls would be in the range of \$325,000 to \$350,000

Note: Some cost savings could be obtained by re-using some of the metal components for the roof system if not damaged during removals.

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QUALIFICATION STATEMENT

The observations, findings, and recommendations within this Report are based on our professional judgment and information obtained during the course of this survey consistent with the scope of work authorized. The general intent of our visual observations was to identify representative conditions given the time and information constraints. No design calculations have been made. Adequacy of the in-place system(s) and/or compliance with current or previous building code requirements are beyond the scope of our services and have not been determined. Defects and/or deficiencies may exist that were not readily accessible or visible and therefore may not be included in our findings. The opinions and recommendations in this Report should not be construed in any way to constitute a warranty or guarantee regarding the current or future performance of any system reviewed. Only the systems and/or components specifically noted herein have been reviewed. Recommendations included herein are not suitable as design specifications for completing the work.

The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification of prevention of pollutants, hazardous materials or conditions. If the Town of Sunset Beach is concerned about the potential for such contamination or pollution, other studies should be undertaken.

It should be recognized that leaks often have more than one source and identification of all sources may require a systematic approach whereby sources are identified, repaired and subsequently monitored to verify all sources have been addressed. This may require additional testing and invasive investigation after implementation of recommended remedial procedures.

We trust this provides the information you require at this time. Please notify the undersigned should you have any questions or comments concerning the information presented herein.

Respectfully,

Terracon Consultants, Inc.

Dennis W. Mashburn, RRC, RRO, CIT
Field Project Manager

Louis T. Hall, PE RRC
Senior Engineer

DWM: dwm

Enclosure: Roof and Wall Information
Roof and Wall Inspection Report
Photographs
Roof Plan
Elevations Plan

ROOF AND WALL INFORMATION

PROJECT NO.: FH176078

DATE: July 6, 2017

PROJECT: Roof and Wall Survey
Fire Station #1
102 Shoreline Drive W.
Sunset Beach, North Carolina 28468

OWNER: Town of Sunset Beach

ROOF IDENTIFICATIONS: Area A (Administration and Training)
Area B (Operations and Living Quarters)

WALL IDENTIFICATIONS: North Elevation
South Elevation
East Elevation
West Elevation

DESCRIPTION OF ROOFING SYSTEM

ROOF DECK: None. Based on project drawings, metal roof panels are supported by steel purlins over steel I-beams *

VAPOR RETARDER: Vinyl on bottom of fiberglass batt insulation beneath roof panels *

INSULATION: 6-inch fiberglass batt insulation *

ROOF COVERING: Standing seam galvalume metal roof panels with 3-inch trapezoidal seams spaced 24 inches on center

DATE OF INSTALLATION: 2005

ROOF WARRANTY: Information not provided

ROOF SLOPE: Area A – 1/2" per ft. Area B – 1/2" per ft.

SIZE OF ROOF: Area A – 7600 sq. ft. Area B – 7100 sq. ft.

DESCRIPTION OF WALL SYSTEM

With the exception of the north and south elevation walls of Area A, the exterior elevation walls consist of brick masonry cavity walls with two wythes of masonry separated by an air space and insulation connected by metal ties. The exterior masonry wythe consists of brick and the interior masonry wythe consists of concrete masonry units. The north and south elevation walls of Area A consist of brick masonry cavity walls with exterior brick veneer separated by an air space connected by metal ties to cold formed metal framing covered with 5/8 inch DensGlas sheathing. *

* Based on information obtained from project drawings provided by Owner.

ROOF AND WALL INSPECTION REPORT

PROJECT NO.: FH176078

DATE: July 6, 2017

ROOF AREAS: Area A – See Photograph 1
Area B – See Photograph 2

INSPECTOR: Dennis W. Mashburn, RRC, RRO, REWO, CIT

1. ROOF COVERING

Metal Roof Panels: In generally fair to good condition. See Photographs 3 and 4. Rust has developed on the surface of isolated roof panels on Area B. See Photographs 5 and 6. Fasteners securing the ends of metal roof panels along the eaves are misaligned at several locations and the EPDM washers are not properly seated. See Photographs 7 and 8.

Panel Seams: In generally good condition. See Photographs 9 and 10. Foam closures are missing at the ends of isolated panel seams along eaves. See Photographs 11 and 12, (one with foam closure and one without, respectively).

Panel Laps: In generally fair condition on Area A. See Photographs 13 and 14. A depression exists in the panel lap at one location which appears to allow water to collect at the lap. See Photograph 15. Isolated previous repairs have been made along panel laps. See Photograph 16. No panels laps exist on Area B.

2. FLASHING

Ridge Caps: In generally fair condition. See Photographs 17 and 18. Isolated fasteners at end laps are loose and backed out on Area A. See Photograph 19. The peak of the ridge cap is bent at one location on Area B and holds water near the lap between cap sections. See Photograph 20. The flange of the ridge cap where secured to the “Zee” closure beneath the ridge cap holds water at one location on Area B and it occurs at lap in the ridge cap. See Photograph 21. Openings existed at several locations where the standing seams for the metal roof panels extend under the ridge cap. See Photographs 22 and 23. Openings also exist at several locations along the butyl tape where the ridge cap sets on the “Zee” closures along the ridge between standing seams. See Photographs 24 and 25.

Closure Flashings: In generally fair to poor condition. The end closure flashing along the wall above roof level where Area A joins Area B is concaved and it appears that it can hold water at isolated locations. See Photograph 26. Previous repairs have been made at flashing end laps and along the “Zee” closure for the closure flashing. See Photograph 27. End closure flashing along parapet walls is sloped towards the walls at numerous locations and it appears that it can hold water at several locations along the side walls. See Photograph 28. The closure flashing along a head wall on Area A hold water at one location and it occurs at a lap in the flashing. See Photograph 29.

Pipe Penetration Flashings: In generally fair condition. Cracks have formed at isolated locations in the pre-molded pipe flashings at folds in the flashing. See Photograph 30. Sealant around the compression ring at the base of flashings is deteriorated at numerous locations. See Photographs 31 and 32. Sealant is deteriorated and open around the top of several pre-molded pipe penetration flashings and at bonnet flashings for exhaust vents. See Photographs 33 and 34.

Equipment Flashings: In generally poor condition. Sealant is deteriorated and appears open at numerous locations where the metal roof panels are overlapped and secured to the curb flashing flanges around the bases at all equipment curb flashings. See Photographs 35, 36 and 37. Isolated repairs have been made with roofing cement. See Photograph 38.

Metal Fascia: In generally fair condition. The fascia metal is loose at isolated locations and appears to be inadequately fastened at numerous locations. See Photographs 39 and 40.

3. **EXPANSION JOINT AND/OR CONTROL JOINT CURBS AND COVERS**

No expansion joint or control joint covers are present.

4. **WALLS ABOVE ROOF LEVEL**

Siding: In generally fair to good condition other than isolated fasteners are rusted. See Photograph 41.

Coping Cap: In generally fair condition. Numerous previous repairs have been accomplished at the joints between coping cap sections on Area A. See Photograph 42 and 43.

Receiver Flashing: In generally fair condition. The metal receiver flashing embedded in the brick veneer that serves as receiver flashing for the counterflashing along the wall above roof level between Areas A and B is rusted at several locations. See Photographs 44 and 45.

Brick Veneer: In generally fair to good condition. Efflorescence has formed on the brick veneer at isolated locations along the wall above roof level between Areas A and B. See Photograph 46.

Brick Control Joints: In generally poor condition. Cracks have developed in the sealant and cohesive and adhesive sealant failure has occurred at isolated locations. See Photographs 47 and 48.

5. **ROOF MOUNTED EQUIPMENT**

Ventilators: A vent on Area A is rusted. See Photograph 49. Otherwise, except as noted for Equipment Flashing, all other ventilators are in generally good condition. See Photograph 50.

Heat Stacks: Except as noted for Equipment Flashing, in generally good condition. See Photograph 51.

Safety Guardrail: In generally good condition. See Photograph 52.

6. **DRAINAGE SYSTEM**

Do roofs drain freely? Yes.

Type and condition of drainage system: Build-in gutters exist on Area A and they are generally in poor condition. An elastomeric coating has previously been applied on the interior of the gutters and the coating is deteriorated, loose and peeling off the entire length of the gutters. See Photographs 53, 54, 55 and 56. Openings exist where overflow scuppers installed at the ends of the built-in gutters. See Photographs 57 and 58. Hung gutters exist on Area B and they are generally in fair condition. See Photograph 59. The gutter is bent at one location at the west side of Area B. See Photograph 60. A hanger is loose for a downspout at the east side of Area B. See Photograph 61.

7. **UNDERSIDE/INTERIOR INSPECTION**

Condition of batt insulation: In generally fair to good. Suspended ceilings with ceiling tiles exist beneath Area A and visibility of the batt insulation beneath the metal roof panels was limited. The vinyl backing on the batt insulation beneath Area B has been cut and resealed with tape at numerous locations reportedly to allow water to drain from water pockets that formed in the vinyl during previous roof leaks. See Photograph 62. Several locations exist where the vinyl has been cut but has not been resealed with tape. See Photograph 63.

Condition of steel framing supporting roof system: In generally fair condition. Light rust has formed on the steel framing beneath Area B. See Photographs 64 and 65. The bottom of an I-beam beneath the built-in gutter at the east side of Area A is extensively rusted where previous gutter leaks have occurred. See Photograph 66.

Condition of ceiling tiles: In generally fair to good condition. Ceiling tiles are missing at several locations where recent leaks have occurred. See Photograph 67.

Condition of interior walls/finishes: The gypsum sheathing is water damaged around a window in the Captain's office within Area A and the gypsum wall board is missing along the head of the window. See Photographs 68 and 69.

Other conditions which might affect roof system: Different type fasteners were used to secure the metal roof system components. Numerous fasteners have stainless steel caps with zinc plated carbon steel shanks while the others have aluminum alloy caps. See Photograph 70. Isolated fastener caps are rusted that do not appear to have stainless steel or aluminum alloy caps. See Photograph 71.

8. **EXTERIOR WALLS**

Condition of brick veneer: In generally fair to good condition. Cracks exist in mortar joints at isolated locations at the West and East Elevations. See Photographs 72 and 73. A brick is loose and mortar joints are cracked at one location at the West Elevation. See Photograph 74. The face of the brick is spalled at one location at the North Elevation. See Photograph 75. Efflorescence has formed on the brick veneer beneath a water spigot at the east elevation side of Area A. See Photograph 76. Stains exist on the brick veneer at various locations from water discharging from overflow scuppers, previous gutter leaks and water bypassing the gutter discharging off end closure flashing. See Photographs 77, 78 and 79.

Condition of sealant at brick control joints: In generally fair to poor condition. Cracks have developed in the sealant and cohesive and adhesive failure has occurred at numerous locations at all elevations. See Photographs 80, 81 and 82.

Condition of sealant at windows, doors, louvers, soffit panels and penetrations: In generally fair to good condition at windows. In generally fair to poor condition at doors. In generally fair condition at soffit panels and generally poor condition at penetrations. Adhesive failure has occurred at isolated window and door frames. See Photographs 83 and 84. Sealant is deteriorated and open around numerous electrical receptacle covers. See Photograph 85. Sealant along a joint between the metal soffit panel and brick veneer is open at one location at the west elevation along the west side of Area A. See Photograph 86.

Condition of windows, doors and soffit panels: Windows and doors are in generally good condition. Soffit panels are missing at one location at the east elevation at a previous gutter leak. See Photograph 87.

Condition of through-wall flashing: Through-wall flashing and weeps are illustrated and labeled on elevation details at numerous locations. Through-wall flashing was visible at one location at the east elevation along the base of the wall. See Photograph 88. Weeps are missing at several locations where through-wall flashing is illustrated and labeled on elevation details and some weeps don't appear to be at the correct locations. See Photographs 89 and 90.

Fire Station #1, Sunset Beach, North Carolina



Photograph #1



Photograph #2



Photograph #3



Photograph #4



Photograph #5



Photograph #6

Fire Station #1, Sunset Beach, North Carolina



Photograph #7



Photograph #8



Photograph #9



Photograph #10

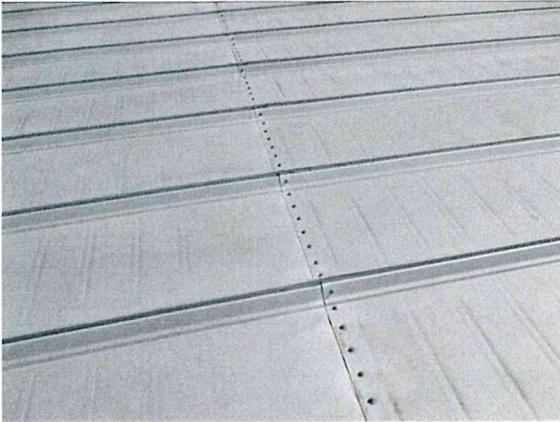


Photograph #11



Photograph #12

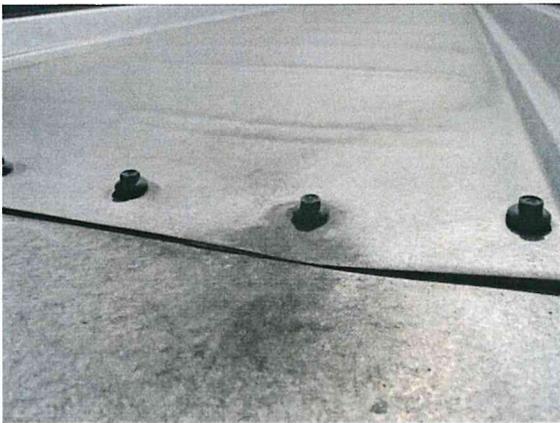
Fire Station #1, Sunset Beach, North Carolina



Photograph #13



Photograph #14



Photograph #15



Photograph #16



Photograph #17



Photograph #18

Fire Station #1, Sunset Beach, North Carolina



Photograph #19



Photograph #20



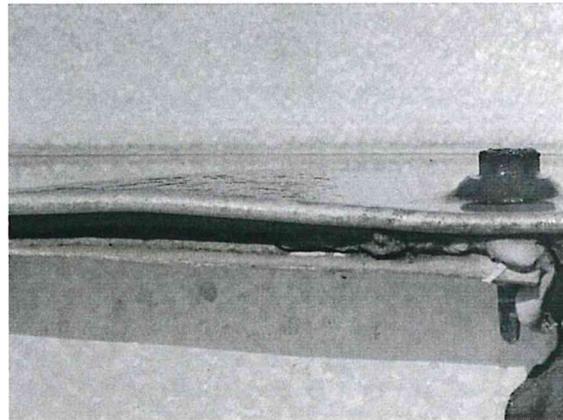
Photograph #21



Photograph #22



Photograph #23



Photograph #24

Fire Station #1, Sunset Beach, North Carolina



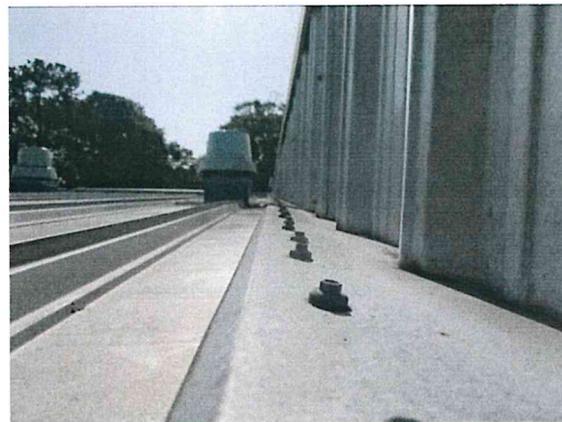
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Photograph #26



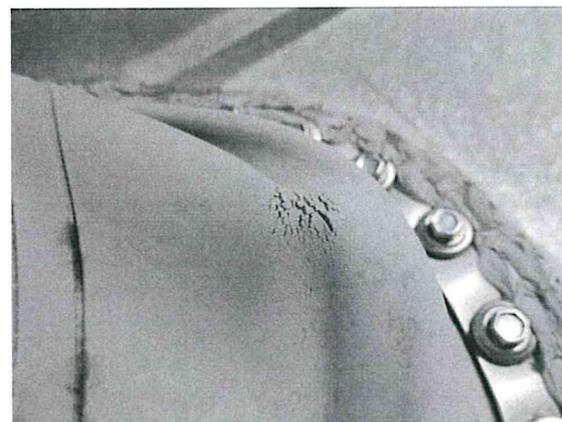
Photograph #27 .



Photograph #28

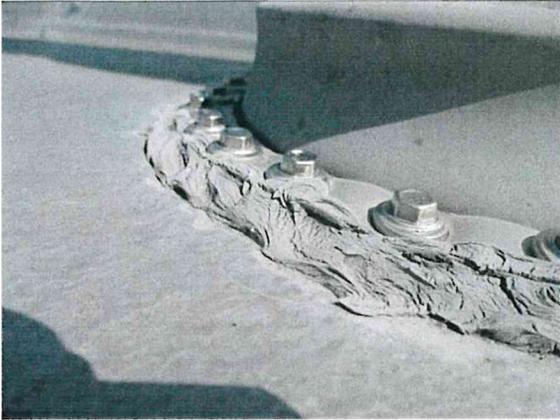


Photograph #29



Photograph #30

Fire Station #1, Sunset Beach, North Carolina



Photograph #31



Photograph #32



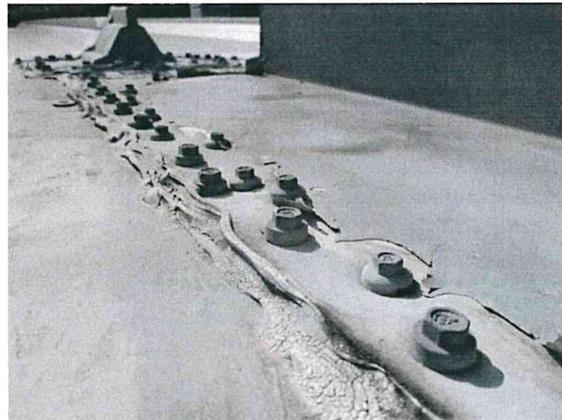
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Photograph #34

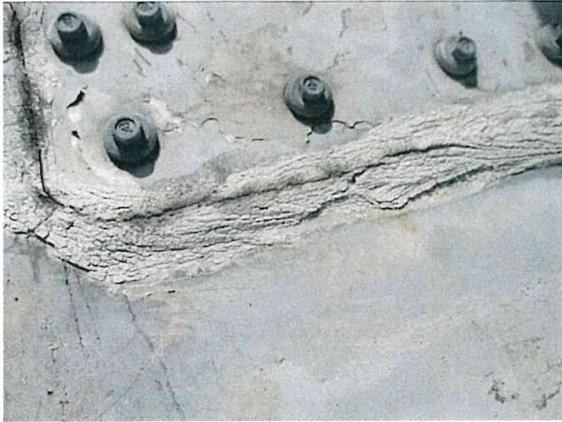


Photograph #35



Photograph #36

Fire Station #1, Sunset Beach, North Carolina



Photograph #37



Photograph #38



Photograph #39 .



Photograph #40



Photograph #41



Photograph #42

Fire Station #1, Sunset Beach, North Carolina



Photograph #43



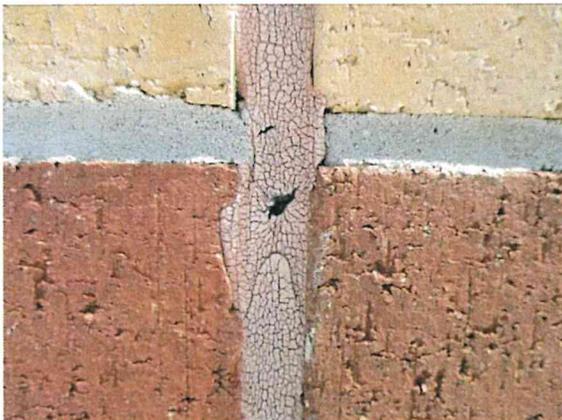
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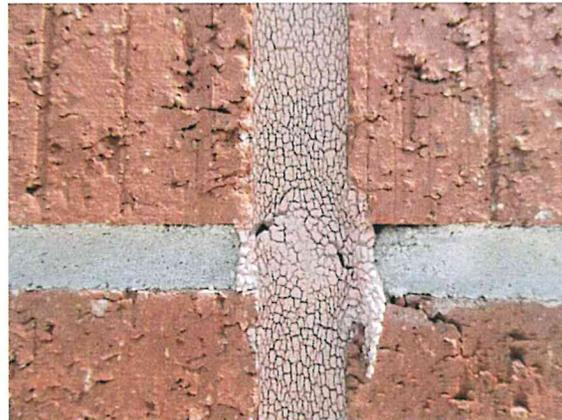
Photograph #45



Photograph #46

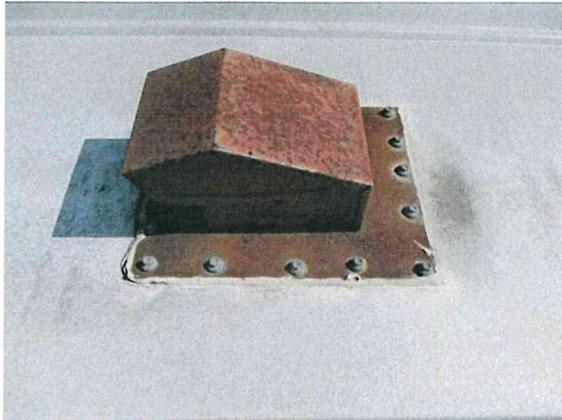


Photograph #47



Photograph #48

Fire Station #1, Sunset Beach, North Carolina



Photograph #49



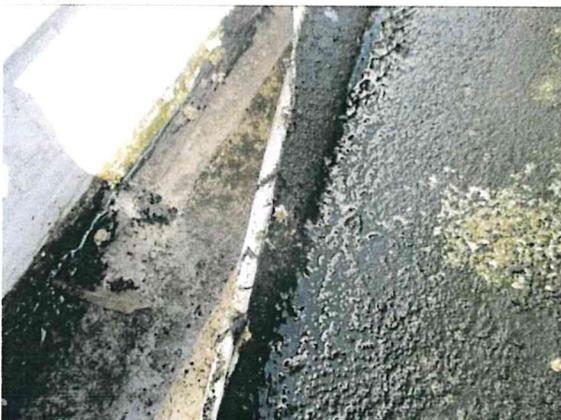
Photograph #50



Photograph #51



Photograph #52



Photograph #53



Photograph #54

Fire Station #1, Sunset Beach, North Carolina



Photograph #55



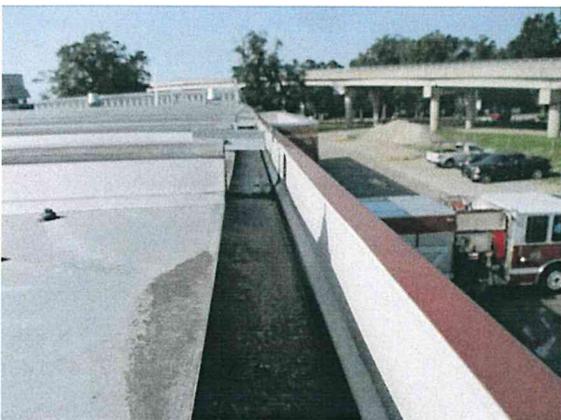
Photograph #56



Photograph #57



Photograph #58



Photograph #59

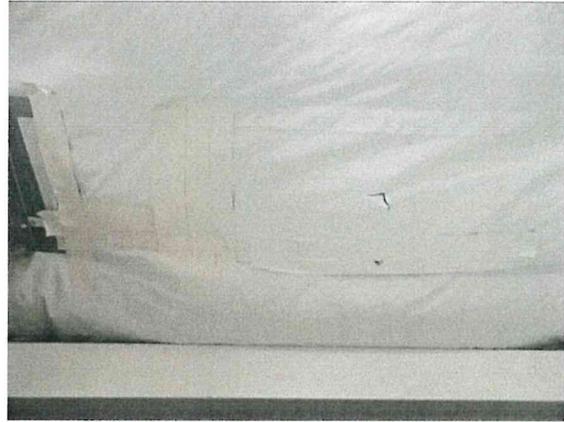


Photograph #60

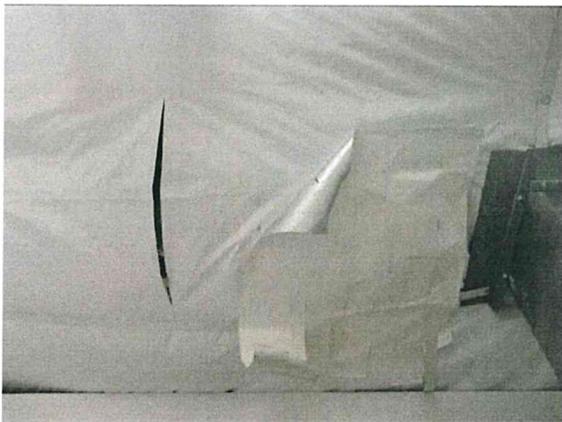
Fire Station #1, Sunset Beach, North Carolina



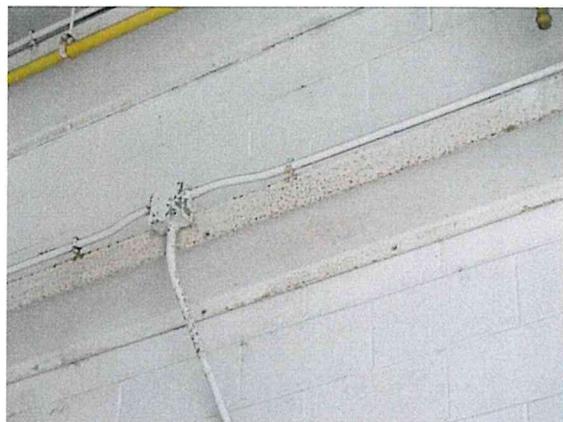
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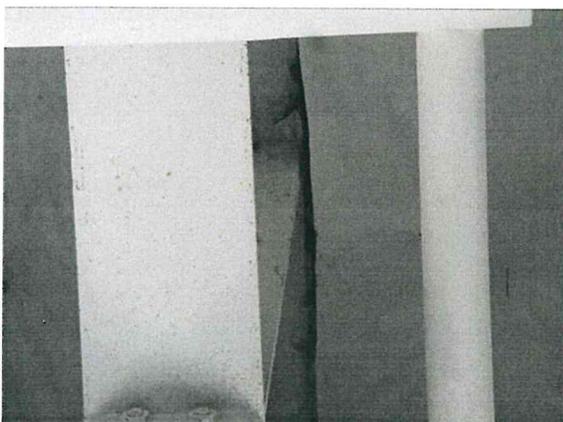
Photograph #62



Photograph #63



Photograph #64



Photograph #65



Photograph #66

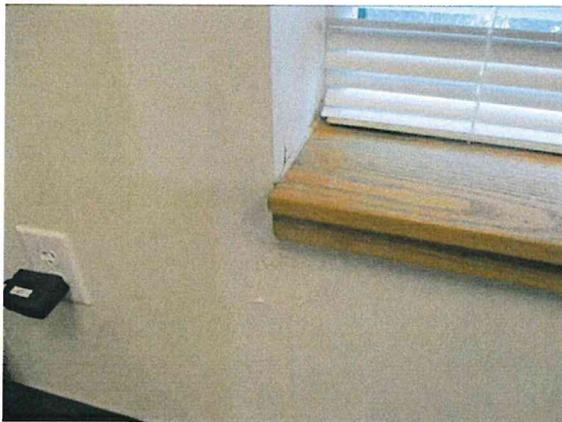
Fire Station #1, Sunset Beach, North Carolina



Photograph #67



Photograph #68



Photograph #69



Photograph #70



Photograph #71



Photograph #72

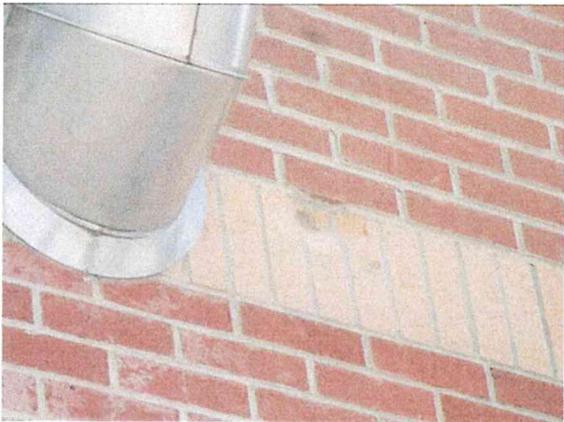
Fire Station #1, Sunset Beach, North Carolina



Photograph #73



Photograph #74



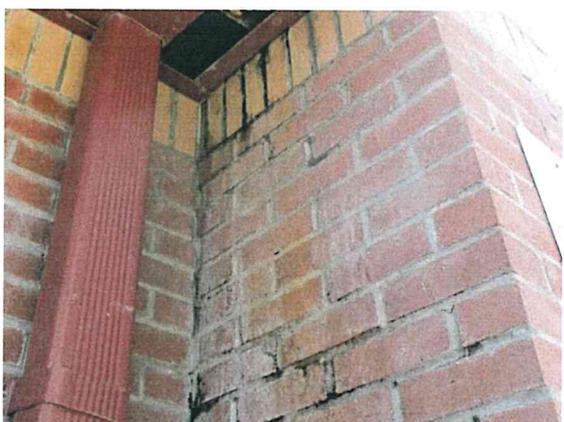
Photograph #75



Photograph #76

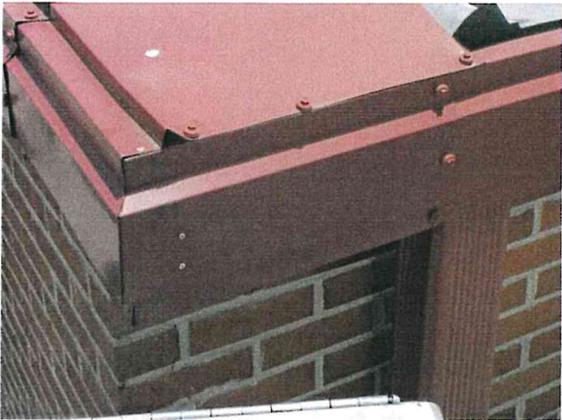


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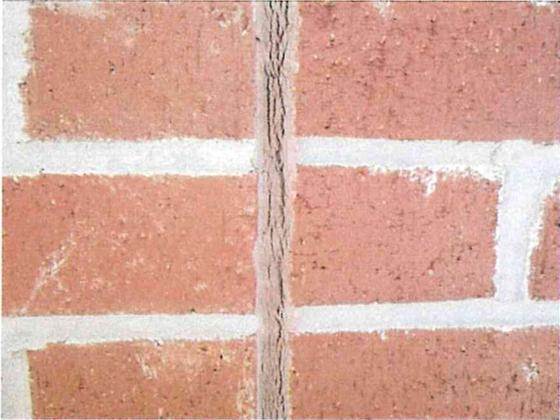


Photograph #78

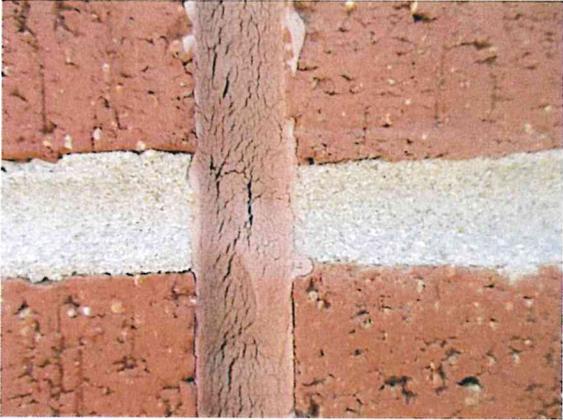
Fire Station #1, Sunset Beach, North Carolina



Photograph #79



Photograph #80



Photograph #81 .



Photograph #82



Photograph #83



Photograph #84

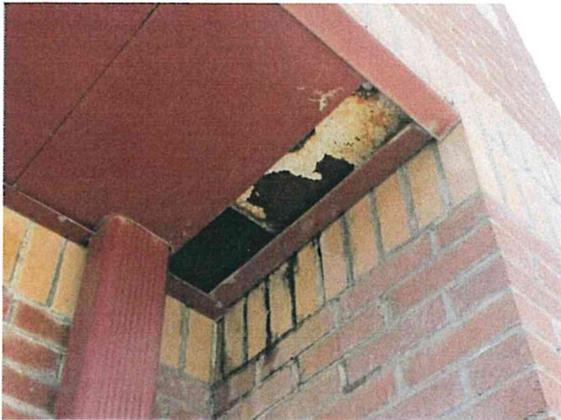
Fire Station #1, Sunset Beach, North Carolina



Photograph #85



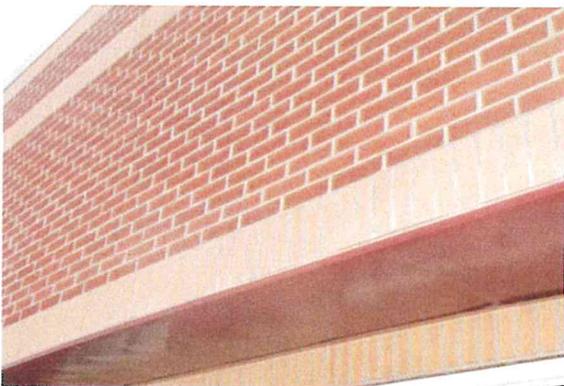
Photograph #86



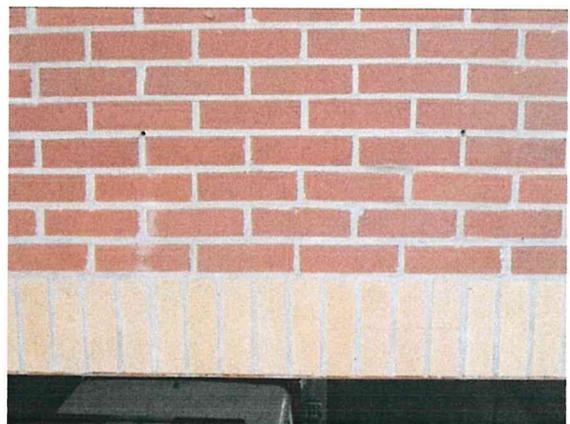
Photograph #87



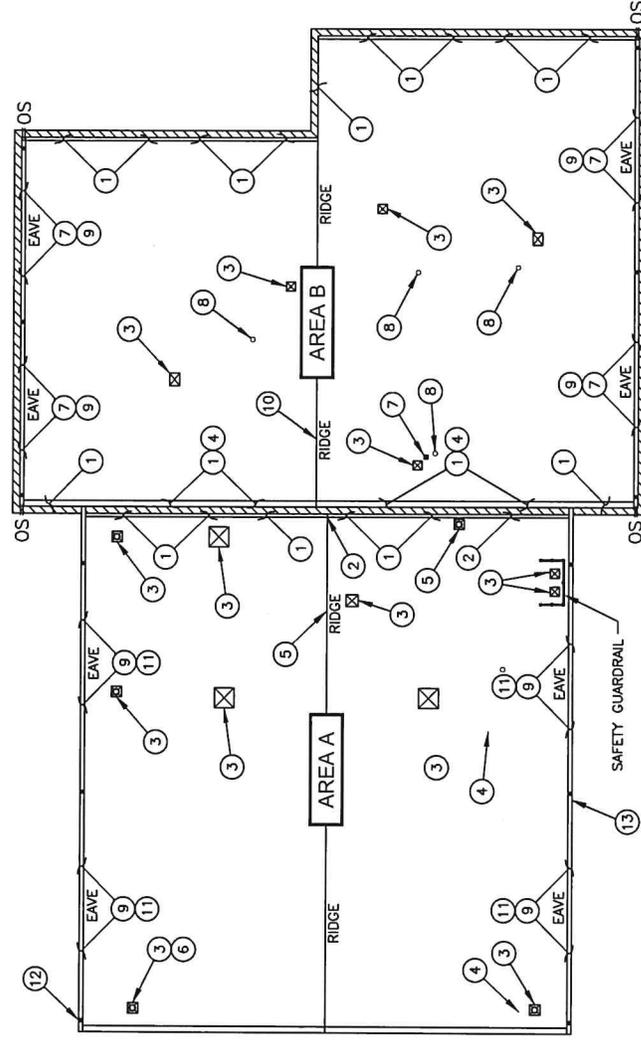
Photograph #88



Photograph #89



Photograph #90



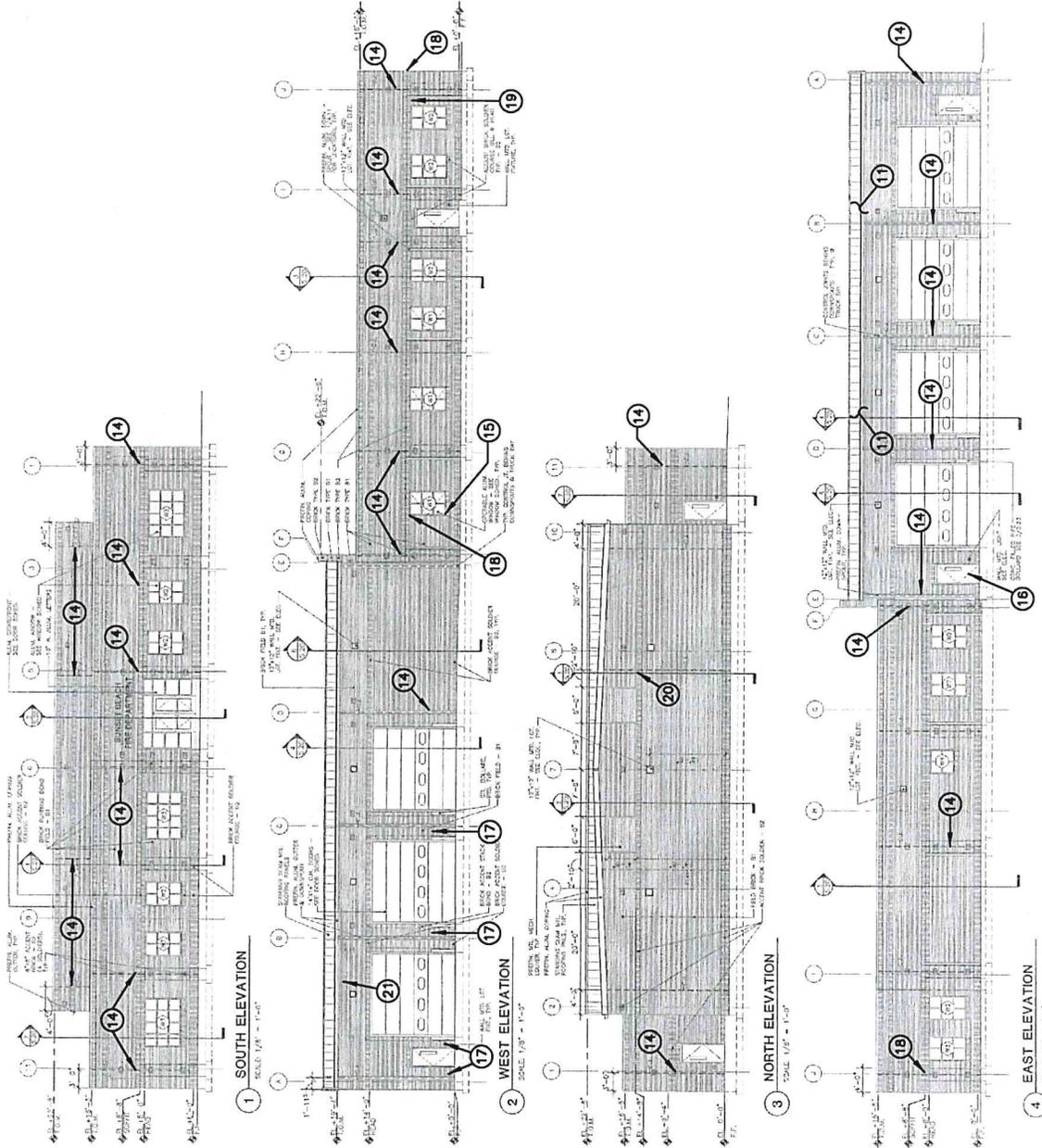
ROOF SURVEY PLAN

- DEFICIENCIES**
- ① METAL END CLOSURE FLASHING SHELVES WATER AT VARIOUS LOCATIONS.
 - ② THE METAL RIDGE CAP IS BENT AND HOLDS WATER AT ONE LOCATION.
 - ③ SEALANT AT MECHANICAL EQUIPMENT BASES IS DETERIORATED AT NUMEROUS LOCATIONS.
 - ④ METAL ROOF PANELS ARE RUSTED AT ISOLATED LOCATIONS.
 - ⑤ THE FLANGE FOR THE RIDGE CAP SHELVES WATER AT ONE LOCATION AT A JOINT BETWEEN SECTIONS.
 - ⑥ SEALANT AT BONNET FLASHINGS FOR HEAT VENTS IS DETERIORATED AT ONE LOCATION.
 - ⑦ ALL OF THE ELASTOMERIC COATING WITHIN BUILT-IN GUTTERS IS DETERIORATED AND LOOSE.
 - ⑧ SEALANT AROUND SEVERAL VENT PIPE FLASHINGS IS DETERIORATED.
 - ⑨ SEVERAL FASTENERS ALONG EAVES ARE INSTALLED AT AN ANGLE AND THE EPDM WASHERS ARE NOT SEATED.
 - ⑩ ISOLATED FASTENERS ARE BACKING OUT OF METAL RIDGE CAP LAPS.
 - ⑪ THE METAL FASCIA EXTENSION BELOW THE GUTTER IS LOOSE AT NUMEROUS LOCATIONS.
 - ⑫ A DOWNSPOUT HANGER IS LOOSE.
 - ⑬ THE GUTTER IS BENT AT ONE LOCATION.

- LEGEND**
- = VENT PIPE
 - ⊠ = VENTILATOR
 - ⊞ = HEAT STACK
 - OS= = OVERFLOW SCUPPER
 - ≡ = GUTTER W/DOWNSPOUT
 - ≡ = END CLOSURE FLASHING
 - ⊖ = SPECIFIC DEFECT LOCATION
 - ⊖ = GENERAL DEFECT LOCATION
 - ≡ = PARAPET & BUILT-IN GUTTER W/DOWNSPOUT
 - ≡ = PARAPET W/SIDING & END CLOSURE FLASHING

DEFICIENCIES

- 14 SEALANT AT EXTERIOR WALL CONTROL JOINTS IS CRACKED AND HAS COHESIVE AND ADHESIVE FAILURE AT NUMEROUS LOCATIONS.
- 15 SEALANT IS OPEN AT ONE WINDOW.
- 16 SEALANT IS OPEN AROUND A DOOR.
- 17 SEALANT AROUND SEVERAL ELECTRICAL RECEPTACLES IS DETERIORATED.
- 18 MORTAR JOINTS ARE CRACKED AT SEVERAL LOCATIONS.
- 19 SEALANT ALONG THE EDGE OF A SOFFIT PANEL IS OPEN.
- 20 ONE BRICK FACE HAS SPALLED.
- 21 A BRICK IS CRACKED AT ONE LOCATION.



PROJECT NAME: FIRE STATION #1 102 SHORELINE DRIVE W. SUNSET BEACH, NORTH CAROLINA	DATE: 07/18/17	SCALE: N.T.S.	DWG NAME: ELEVATIONS
CONSULTING ENGINEERS AND SCIENTISTS Terracon			CHKD BY: LTH
			DWN BY: DWM
			PROJ. NO: FH176078