

CONSTRUCTION DOCUMENTS

# SWRF INFLUENT PUMP STATION AND SOUTH PLANT ELECTRICAL BUILDING ROOF REPLACEMENT PROJECT

4760 WEST SAND LAKE ROAD  
ORLANDO, FL 32819  
PREPARED FOR:



## ORANGE COUNTY GOVERNMENT

OCU SEQUENCE NUMBER: 94807  
OCU CIP#: 1555-0028

JANUARY 21, 2019

### DRAWING INDEX

SHEET NUMBER	SHEET TITLE	ORIGINAL DATE	REVISION NUMBER	REVISION DATE
C1.0	COVER SHEET	01/21/2019	0	NA
SP1.0	SITE PLAN	01/21/2019	0	NA
G1.0	GENERAL	01/21/2019	0	NA
A1.0	INFLUENT PUMP STATION - DEMOLITION ROOF PLAN	01/21/2019	0	NA
A1.1	INFLUENT PUMP STATION - PROPOSED ROOF PLAN	01/21/2019	0	NA
A1.2	INFLUENT PUMP STATION - WIND UPLIFT PRESSURE ROOF PLAN	01/21/2019	0	NA
A1.3	ELECTRICAL BUILDING - DEMOLITION ROOF PLAN	01/21/2019	0	NA
A1.4	ELECTRICAL BUILDING - PROPOSED ROOF PLAN	01/21/2019	0	NA
A1.5	ELECTRICAL BUILDING - WIND UPLIFT PRESSURE ROOF PLAN	01/21/2019	0	NA
A2.1	INFLUENT PUMP STATION - ROOF DETAILS	01/21/2019	0	NA
A2.2	INFLUENT PUMP STATION - ROOF DETAILS	01/21/2019	0	NA
A2.3	INFLUENT PUMP STATION - ROOF DETAILS	01/21/2019	0	NA
A2.4	INFLUENT PUMP STATION - ROOF DETAILS	01/21/2019	0	NA
A2.5	INFLUENT PUMP STATION - ROOF DETAILS	01/21/2019	0	NA
A2.6	INFLUENT PUMP STATION - ROOF DETAILS	01/21/2019	0	NA
A3.1	ELECTRICAL BUILDING - ROOF DETAILS	01/21/2019	0	NA
A3.2	ELECTRICAL BUILDING - ROOF DETAILS	01/21/2019	0	NA
A3.3	ELECTRICAL BUILDING - ROOF DETAILS	01/21/2019	0	NA
A3.4	ELECTRICAL BUILDING - ROOF DETAILS	01/21/2019	0	NA
A3.5	ELECTRICAL BUILDING - ROOF DETAILS	01/21/2019	0	NA
A3.6	ELECTRICAL BUILDING - ROOF DETAILS	01/21/2019	0	NA
A3.7	ELECTRICAL BUILDING - ROOF DETAILS	01/21/2019	0	NA
A3.8	ELECTRICAL BUILDING - LADDER DETAILS	01/21/2019	0	NA
A4.0	INFLUENT PUMP STATION - PHOTOGRAPHS	01/21/2019	0	NA
A4.1	ELECTRICAL BUILDING - PHOTOGRAPHS	01/21/2019	0	NA

SHEET NUMBER	SHEET TITLE	ORIGINAL DATE	REVISION NUMBER	REVISION DATE
M0.1	MECHANICAL LEGENDS, NOTES AND SCHEDULES	01/21/2019	0	NA
M1.1	MECHANICAL PLAN	01/21/2019	0	NA
M7.0	MECHANICAL DETAILS AND CONTROLS	01/21/2019	0	NA

MAYOR:  
JERRY L. DEMINGS

BOARD OF COUNTY COMMISSIONERS:  
DISTRICT 1 - BETSY VANDERLEY  
DISTRICT 2 - CHRISTINE MOORE  
DISTRICT 3 - MAYRA URIBE  
DISTRICT 4 - MARIBEL GOMEZ CORDERO  
DISTRICT 5 - EMILY BONILLA  
DISTRICT 6 - VICTORIA P. SIPLIN

**STATEMENT OF COMPLIANCE**  
TO THE BEST OF OUR KNOWLEDGE THESE DRAWINGS ARE COMPLETE AND COMPLY WITH THE FLORIDA BUILDING CODE 2017 (6TH ED.), AND REFERENCED STATUTES, CODES, RULES AND REGULATIONS REFERENCED THEREIN.

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ORANGE COUNTY GOVERNMENT  
SWRF INFLUENT PUMP STATION  
AND  
SOUTH PLANT ELECTRICAL BUILDING  
ORLANDO, FLORIDA  
ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
(407) 333-1977 • FAX: (407) 333-4686 • E-MAIL: JAY@JAYAMMON.COM

REVISIONS		
NUMBER	TYPE	DATE

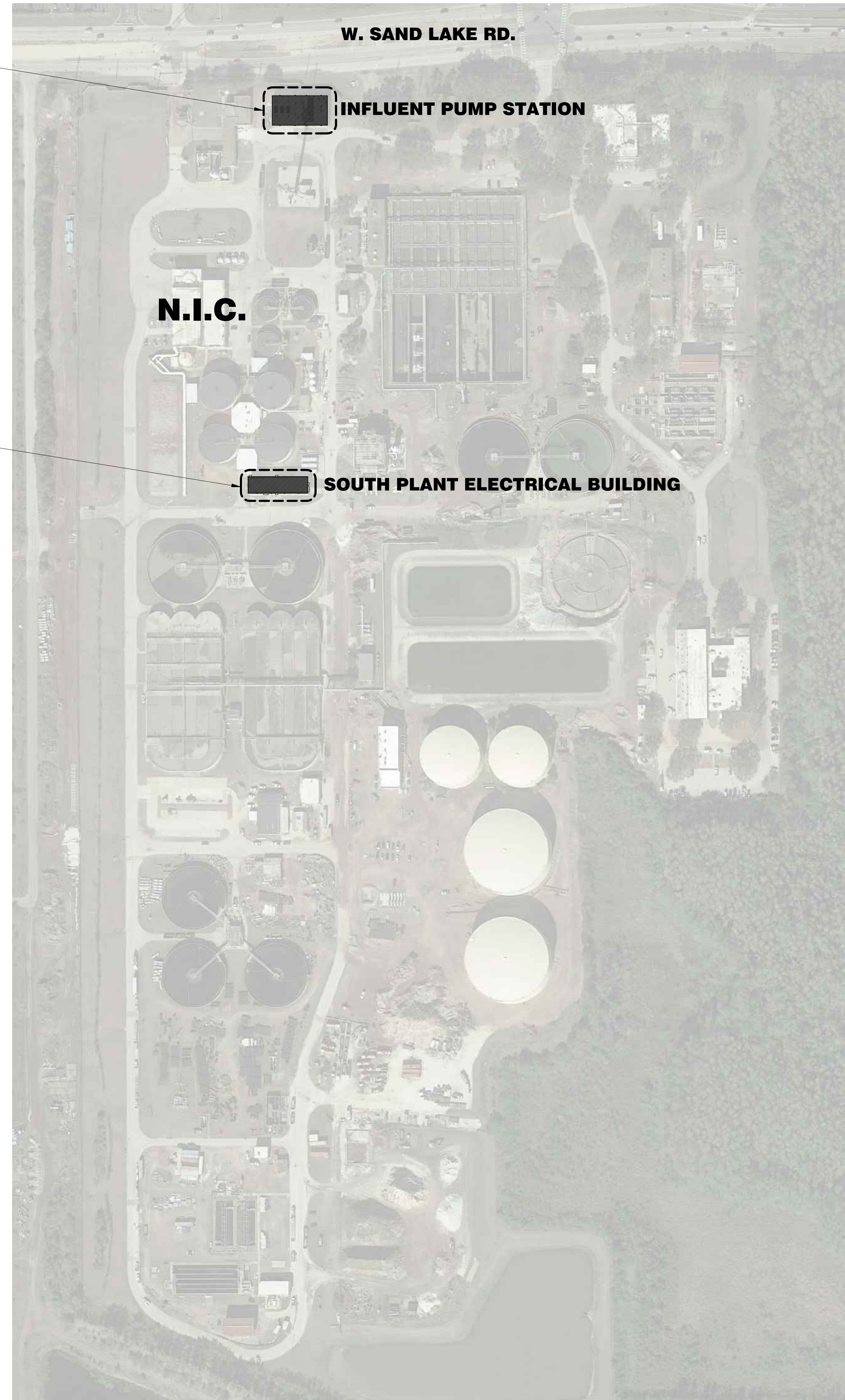
DRAWN BY: JSJ PROJECT NUMBER: 18-079  
APPROVED BY: JPA DATE: JANUARY 21, 2019

COVER SHEET  
**C1.0**

PLOT: NTS SHEET

**INFLUENT PUMP STATION -  
SEE ENLARGED PLANS ON  
SHEETS A1.0, A1.1, AND A1.2**

**SOUTH PLANT ELECTRICAL BUILDING -  
SEE ENLARGED PLANS ON  
SHEETS A1.3, A1.4, AND A1.5**



**SITE PLAN**  
SCALE: 1" = 150'-0"

## LEGEND

 **BUILDINGS INCLUDED IN SCOPE OF WORK**

## CONSTRUCTION NOTES:

1. **CONSTRUCTION LIMITS:** LIMITS ARE WITHIN 10 FEET MAXIMUM OF BUILDINGS EXCEPT WHERE OTHERWISE INDICATED.
2. **CONSTRUCTION STAGING AREA:** COORDINATE IN THE FIELD WITH REPRESENTATIVE FROM THE OWNER.
3. **ACCESSABLE PATH:** THE ACCESSABLE PATH MUST BE LEFT UNIMPEDED THROUGHOUT THE CONSTRUCTION. PROVIDE BARRIERS BETWEEN THE CONSTRUCTION AND THE ACCESSABLE PATH AS NECESSARY TO PROVIDE SAFE ACCESS.
4. **SAFETY PLAN:** CONTRACTOR TO SUBMIT SAFETY PLAN WHICH CLEARLY DELINEATES AREAS FOR CONSTRUCTION, SAFETY BARRIERS, EXITS, CONSTRUCTION TRAFFIC DURING VARIOUS PHASES OF THE PROJECT AND WHEN CONDITIONS CHANGE. CONTRACTOR TO CONFORM WITH REQUIREMENTS IN FBC-B, FFPC 1-16.1 AND NFPA 241.

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PLOT: 1" = 150'-0"

SHEET  
**SITE PLAN  
SP1.0**

## GENERAL NOTES:

- 1. EXISTING CONDITIONS VERIFICATION:** THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO, ROOF AREA SIZES, ROOF SLOPES, AND EXISTING ROOF MATERIALS AND DETAILS. THE CONTRACTOR SHALL BASE THE BID UPON PROVIDING A COMPLETE ROOFING REPLACEMENT PROJECT AS REQUIRED TO PROVIDE A ROOFING ASSEMBLY WHICH WILL REMAIN WATERTIGHT FOR A MINIMUM PERIOD OF 20 YEARS. THE CONTRACTOR SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE CONSTRUCTION DOCUMENTS, PRIOR TO SUBMISSION OF THE BID.
- 2. COMPLIANCE WITH INDUSTRY STANDARDS:** ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE DOCUMENT REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS, AND OTHER RECOGNIZED INDUSTRY STANDARDS, INCLUDING BUT NOT LIMITED TO, "THE NRCA 'ROOFING MANUAL: MEMBRANE ROOF SYSTEMS - 2015 WITH 2016 UPDATES", "THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING AND CONDENSATION CONTROL AND AIR LEAKAGE CONTROL - 2018" AND THE SMACNA 'ARCHITECTURAL SHEET METAL MANUAL 7TH EDITION".
- 3. COMPLIANCE WITH FLORIDA BUILDING CODE 2017 (6TH ED):** ALL WORK TO MEET OR EXCEED REQUIREMENTS OF THE FLORIDA BUILDING CODE 2017 (6TH ED).
- 4. WIND RESISTANCE:** ALL ROOFING AND OTHER COMPONENTS SHALL BE INSTALLED TO RESIST ALL FORCES RESULTING FROM AN ULTIMATE DESIGN WIND SPEED OF 150 MPH IN ACCORDANCE WITH ASCE 7-10 AND TO MEET OR EXCEED REQUIREMENTS OF CHAPTER 16, FLORIDA BUILDING CODE 2017 (6TH ED). SUBMIT ENGINEERING CALCULATIONS PREPARED BY A FLORIDA LICENSED STRUCTURAL ENGINEER TO VERIFY COMPLIANCE WITH THIS REQUIREMENT FOR EACH NEW COMPONENT. SEE WIND UPLIFT PRESSURE PLAN FOR WIND UPLIFT PRESSURES AND ZONES.
- 5. TYPICAL NOTES, SECTIONS AND DETAILS:** NOTES, SECTIONS, AND DETAILS DESCRIBING REQUIRED WORK AT EACH COMPONENT ARE TYPICAL FOR ALL SIMILAR COMPONENTS AND THE NOTE, SECTION, OR DETAIL SHALL APPLY AS IF CALLED OUT SEPARATELY AT EACH LOCATION. THE DETAILS REFLECT A GENERAL DESIGN OF EACH DETAIL. THE CONTRACTOR SHALL MAKE ANY REQUIRED MODIFICATIONS TO THE GIVEN DETAILS NECESSARY TO MAKE THE DETAIL COMPATIBLE WITH EXISTING CONDITIONS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ARCHITECT FOR ALL MODIFIED DETAILS BEFORE THE DETAILS ARE CONSTRUCTED.
- 6. PATCHING:** PATCH ALL EXISTING COMPONENTS THAT ARE AFFECTED BY THE WORK OF THIS PROJECT WHETHER OR NOT IDENTIFIED BY THE CONSTRUCTION DOCUMENTS TO BE PATCHED. PATCHING IS DEFINED AS: REPAIRING ALL EXISTING COMPONENTS INCLUDING BUT NOT LIMITED TO SUBSTRATE MATERIALS, STRUCTURAL COMPONENTS, AND FINISHES IN ACCORDANCE WITH INDUSTRY STANDARDS. ALL FINISHES SHALL BE PATCHED TO MATCH ALL CHARACTERISTICS OF EXISTING ADJACENT MATERIALS INCLUDING BUT NOT LIMITED TO MATERIAL TYPE, FINISH TEXTURE, AND COLOR OF FINISH.
- 7. POSITIVE SLOPE:** INSTALL NEW SLOPE WHERE DESIGNATED AND WHERE REQUIRED TO ACHIEVE A POSITIVE ROOF SLOPE THAT DOES NOT POND WATER. INSTALL SLOPED CRICKETS AT THE UP-SLOPE OF ALL ROOF MOUNTED EQUIPMENT AS REQUIRED TO PREVENT PONDING OF WATER.
- 8. MOCKUPS:** PREPARE IN-PLACE MOCKUPS OF EACH APPLICATION AND DETAIL. RECEIVE WRITTEN APPROVAL FROM ALL MATERIAL MANUFACTURER'S FOR PRODUCTS INCLUDED IN THE MOCKUP, FROM THE ARCHITECT, AND FROM THE OWNER PRIOR TO FURTHER APPLICATION OR INSTALLATION.
- 9. REFERENCE TO "ALL":** WHERE SCOPE OF WORK REFERS TO "ALL", THIS IS DEFINED AS ALL SIMILAR COMPONENTS WHETHER OR NOT THAT REFERENCED COMPONENT IS DEPICTED ON THE DRAWING.
- 10. NEW COMPONENTS:** ALL DEPICTED COMPONENTS ON DRAWINGS ARE NEW UNLESS IDENTIFIED AS EXISTING.
- 11. INTERIOR PROTECTION:** PRIOR TO DEMOLITION, INSTALL PROTECTION OVER INTERIOR SPACES AS REQUIRED TO PROTECT OCCUPANTS, BUILDING COMPONENTS, AND EQUIPMENT FROM WEATHER ELEMENTS AND CONSTRUCTION RELATED DEBRIS.
- 12. WEATHERPROOF ENCLOSURE:** APPLY WEATHERPROOF ROOF COVERINGS OVER THE ROOF AREAS DESIGNATED FOR REPLACEMENT OR REPAIR AS REQUIRED TO PREVENT THE INTRUSION OF WEATHER ELEMENTS INTO THE BUILDING DURING THE CONSTRUCTION PROCESS.
- 13. HOUSEKEEPING:** THOROUGHLY CLEAN ALL CONSTRUCTION RELATED DEBRIS FROM ALL INTERIOR SURFACES, EXTERIOR SURFACES, AND SITE SURFACES ON A DAILY BASIS. ALL CONSTRUCTION EQUIPMENT, DEBRIS, AND NEW MATERIAL STORED ON THE SITE SHALL BE SECURED TO PREVENT WIND DISPLACEMENT.
- 14. SAFETY:** PROVIDE ALL NECESSARY MEASURES TO ENSURE SAFETY TO BUILDING OCCUPANTS DURING THE PERIODS WHEN THE BUILDING IS OCCUPIED. PREVENT ACCESS TO THE CONSTRUCTION AREAS AND STAGING AREAS BY SIGNS, FENCES, AND OTHER BARRIERS. INSTALL A TEMPORARY BARRIER OVER THE TOP OF ALL ENTRANCES FOR A DISTANCE OF 10 FEET BEYOND THE ENTRANCE AS REQUIRED TO PROTECT PEDESTRIANS FROM FALLING DEBRIS.
- 15. MANUFACTURER'S AND PRODUCTS:** MANUFACTURERS AND PRODUCTS LISTED ARE A BASIS OF DESIGN. SUBSTITUTIONS SHALL BE ADDRESSED AS SPECIFIED IN THE GENERAL CONDITIONS.
- 16. TRADES:** ALL WORK SHALL BE PERFORMED BY CONTRACTORS LICENSED IN THEIR TRADES AND AS REQUIRED BY THE BUILDING DEPARTMENT OFFICIALS. THESE TRADES INCLUDE BUT ARE NOT LIMITED TO ROOFING CONTRACTORS, GENERAL CONTRACTORS, ELECTRICAL CONTRACTORS, HVAC CONTRACTORS, PLUMBING CONTRACTORS, AND SEALANT CONTRACTORS.
- 17. FINAL INSPECTION:** THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AFTER ALL WORK HAS BEEN COMPLETED. A FINAL INSPECTION SHALL BE PERFORMED JOINTLY BY THE ARCHITECT, COUNTY STAFF, AND BUILDING OFFICIAL, IN ACCORDANCE WITH FLORIDA BUILDING CODE 2017 (6TH ED) 1512.4.3.3.

## SCOPE OF WORK

### THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

#### 1.0 GENERAL:

- 1.1 ENGINEERING:** CONDUCT PULL TESTS OF THE EXISTING ROOF DECK. PROVIDE ENGINEERING CALCULATIONS PREPARED BY A FLORIDA LICENSED STRUCTURAL ENGINEER INCLUDING THE ATTACHMENT SPACING FOR EACH ROOF WIND ZONE. SUBMIT PULL TEST RESULTS AND THE ENGINEERING CALCULATIONS TO THE ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF THE ROOFING INSTALLATION. SEE DRAWINGS FOR WIND PRESSURES.
- 1.2 SUBSTRATE PREPARATION:** PREPARE, REPAIR, OR REPLACE ALL SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOFING ASSEMBLY SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING ASSEMBLY THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE ASSEMBLY.
- 1.3 WARRANTY:** THE NEW ROOFING ASSEMBLY IS TO BE EXAMINED AND APPROVED BY THE MANUFACTURER'S OF THE ROOFING ASSEMBLY AND SHALL RECEIVE A 20 YEAR NDL LABOR AND MATERIAL WARRANTY AGAINST DEFECTS AND LEAKS. THE CONTRACTOR SHALL SUBMIT A 5 YEAR NDL WARRANTY FOR ALL WORK AGAINST DEFECTS AND LEAKS UPON COMPLETION OF THE WORK. ADJUST THE SCOPE OF WORK AS REQUIRED TO OBTAIN THIS WARRANTY.
- 1.4 SUBSTRATE PREPARATION:** REPLACE ALL DETERIORATED SUBSTRATE MATERIAL TO A CONDITION REQUIRED BY THE ROOF MEMBRANE MANUFACTURER. PREPARE ALL EXISTING SURFACES TO WHICH NEW OR REINSTALLED COMPONENTS ARE TO BE ATTACHED AS REQUIRED BY THE MANUFACTURER OF EACH NEW COMPONENT. REPLACE OR REPAIR ALL DAMAGED SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING, BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOF MEMBRANE, SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING MEMBRANE THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE PROPOSED ROOF ASSEMBLY.

#### 2.0 ROOFING ASSEMBLY - PUMP STATION:

- 2.1 DEMOLITION:** REMOVE EXISTING ROOF MEMBRANE AND LIGHTWEIGHT INSULATING CONCRETE FROM TOP SURFACE OF EXISTING CONCRETE DECK. REMOVE ALL METAL FLASHINGS INCLUDING BUT NOT LIMITED TO THE RAISED PERIMETER EDGE, COUNTERFLASHINGS, METAL EDGES AND SCUPPERS. REMOVE ALL EXISTING MECHANICAL EQUIPMENT AND EQUIPMENT CURBS. TEMPORARILY REMOVE THE ROOF HATCHES FOR REINSTALLATION.
- 2.2 INSTALLATION OF NEW ROOFING ASSEMBLY:** INSTALL NEW MECHANICAL EQUIPMENT CURBS OVER EXISTING OPENINGS. PRIME THE EXISTING CONCRETE DECK AND TORCH APPLY A VAPOR BARRIER, COMPOSED OF A MODIFIED BITUMINOUS MEMBRANE, OVER THE CONCRETE DECK. INSTALL FLAT AND TAPERED INSULATION, IN A MINIMUM OF TWO STAGGERED LAYERS, ADHERED WITH URETHANE ADHESIVE OVER THE TEMPORARY ROOF MEMBRANE. INSTALL TAPERED INSULATION AS REQUIRED TO ACHIEVE A MINIMUM SURFACE SLOPE OF 1/4 INCH PER LINEAR FOOT POSITIVE SLOPE TOWARD THE GUTTERS. THE SLOPE PLAN WILL BE A HIP SHAPE. INSTALL A 1/2 INCH COVER BOARD IN URETHANE ADHESIVE OVER THE INSULATION AND UP ALL EQUIPMENT CURBS. TORCH APPLY A SMOOTH MODIFIED BITUMINOUS MEMBRANE BASE SHEET OVER THE COVER BOARD. TORCH APPLY A GRANULATED MODIFIED BITUMINOUS CAP SHEET OVER THE BASE SHEET. AT ALL BASE FLASHINGS, TORCH APPLY A SMOOTH MODIFIED BITUMINOUS BASE FLASHING INNER PLY AND A GRANULATED MODIFIED BITUMINOUS BASE FLASHING OUTER PLY OVER THE COVER BOARDS AT THE ADJACENT VERTICAL SURFACES AT CURBS.
- 2.3 INSTALLATION OF NEW METAL FLASHINGS:** FABRICATE AND INSTALL STAINLESS STEEL FLASHINGS COMPLYING WITH ALL ANSI / SPRI WIND RESISTANCE REQUIREMENTS AND WITH FULLY SOLDERED NON-MOVING SEAMS. NEW FLASHINGS INCLUDE BUT ARE NOT LIMITED TO METAL EDGES SKIRT FLASHINGS AND GUTTERS.
- 2.4 INSTALLATION OF NEW DOWNSPOUTS:** FABRICATE AND INSTALL NEW PVC DOWNSPOUTS SECURED WITH STAINLESS STEEL STRAPS. PAINT DOWNSPOUTS TO MATCH COLOR OF EXISTING WALLS.
- 2.5 EXISTING ROOF MOUNTED MECHANICAL EQUIPMENT:** INSTALL NEW ROOF MOUNTED MECHANICAL EQUIPMENT OVER THE NEW EQUIPMENT CURBS. INSTALL HOLD DOWN STRAPS TO PREVENT WIND DISPLACEMENT. SEE MECHANICAL.
- 2.6 EXISTING ROOF HATCH:** REINSTALL THE EXISTING ROOF HATCHES OVER THE EXISTING CURBS. INSTALL A LADDER EXTENSION AND A PERIMETER SAFETY RAIL WITH GATE AT THE ONE ACCESSIBLE ROOF HATCH.
- 2.7 EXISTING ELECTRICAL CONNECTIONS TO ROOF MOUNTED EQUIPMENT:** RELOCATE ALL DISCONNECT SWITCHES, CONVENIENCE OUTLETS, AND EXISTING SUPPORTS TO A MINIMUM OF 24 INCHES AWAY FROM THE EQUIPMENT TO WHICH IT SERVES. ALSO, RELOCATE THE CONDUITS OF ALL ROOF MOUNTED ELECTRICAL EQUIPMENT TO THE INTERIOR OF THE EQUIPMENT. A RECEPTACLE OUTLET SHALL BE PROVIDED FOR ALL EQUIPMENT REQUIRING SERVICE IN A LOCATION IN ACCORDANCE WITH NFPA TO REROUTE.
- 2.8 GUARD RAILS:** WHERE DESIGNATED, INSTALL A 42 INCH HIGH GUARDRAIL BETWEEN ROOF MOUNTED EQUIPMENT AND THE METAL EDGE. EXTEND THE GUARDRAIL A MINIMUM OF 30 INCHES BEYOND EACH END OF THE EQUIPMENT.

#### 3.0 ROOFING ASSEMBLY - ELECTRIC BUILDING:

- 3.1 DEMOLITION:** REMOVE EXISTING ROOF MEMBRANE AND INSULATION FROM TOP SURFACE OF EXISTING CONCRETE TOPPING SLAB. REMOVE ALL METAL FLASHINGS INCLUDING BUT NOT LIMITED TO THE COPINGS, COUNTERFLASHINGS, AND SCUPPERS. REMOVE DESIGNATED WALL SURFACES FOR INSTALLATION OF NEW EMERGENCY OVERFLOW SCUPPERS.
- 3.2 INSTALLATION OF NEW ROOFING ASSEMBLY:** PRIME THE EXISTING CONCRETE TOPPING SLAB AND TORCH APPLY A VAPOR BARRIER, COMPOSED OF A MODIFIED BITUMINOUS MEMBRANE, OVER THE CONCRETE TOPPING SLAB. INSTALL FLAT INSULATION OVER THE STRUCTURALLY SLOPED EXISTING ROOF DECK AND TAPERED INSULATION AT THE CRICKETS, IN A MINIMUM OF TWO STAGGERED LAYERS, ADHERED WITH URETHANE ADHESIVE OVER THE TEMPORARY ROOF MEMBRANE. INSTALL TAPERED INSULATION CRICKETS AS REQUIRED TO ACHIEVE A MINIMUM SURFACE SLOPE OF 1/4 INCH PER LINEAR FOOT POSITIVE SLOPE TOWARD THE SCUPPERS. INSTALL A 1/2 INCH COVER BOARD IN URETHANE ADHESIVE OVER THE INSULATION AND UP ALL ADJACENT WALL SURFACES. TORCH APPLY A SMOOTH MODIFIED BITUMINOUS MEMBRANE BASE SHEET OVER THE COVER BOARD. TORCH APPLY A GRANULATED MODIFIED BITUMINOUS CAP SHEET OVER THE BASE SHEET. AT ALL BASE FLASHINGS, TORCH APPLY A SMOOTH MODIFIED BITUMINOUS BASE FLASHING INNER PLY AND A GRANULATED MODIFIED BITUMINOUS BASE FLASHING OUTER PLY OVER THE COVER BOARDS AT THE ADJACENT VERTICAL WALLS.
- 3.3 INSTALLATION OF NEW METAL FLASHINGS:** FABRICATE AND INSTALL STAINLESS STEEL FLASHINGS COMPLYING WITH ALL ANSI / SPRI WIND RESISTANCE REQUIREMENTS AND WITH FULLY SOLDERED NON-MOVING SEAMS. NEW FLASHINGS INCLUDE BUT ARE NOT LIMITED TO COPINGS, SCUPPERS, AND LIGHTING PROTECTION ROOF PENETRATIONS.
- 3.4 INSTALLATION OF NEW DOWNSPOUTS:** FABRICATE AND INSTALL NEW PVC DOWNSPOUTS SECURED WITH STAINLESS STEEL STRAPS. PAINT DOWNSPOUTS TO MATCH COLOR OF EXISTING WALLS.
- 3.5 LIGHTNING PROTECTION:** REMOVE ALL LIGHTNING PROTECTION ASSEMBLY COMPONENTS ATTACHED TO THE ROOFING ASSEMBLY, INCLUDING BUT NOT LIMITED TO, AIR TERMINALS, CONDUCTOR CABLES, ATTACHMENT COMPONENTS, AND RELATED FASTENERS. REPLACE ALL EXISTING LIGHTNING PROTECTION WITH NEW COMPONENTS THAT WILL BE COMPATIBLE WITH THE NEW ROOFING ASSEMBLY. WHERE EXISTING LIGHTNING PROTECTION DOES NOT EXIST, INSTALL A NEW LIGHTNING PROTECTION ASSEMBLY. TIE-IN THE NEW LIGHTNING PROTECTION ASSEMBLY COMPONENTS WITH THE EXISTING LIGHTNING PROTECTION GROUNDING COMPONENTS USING BI-METAL CONNECTORS WHERE MATERIAL COMPATIBILITY WILL NOT AFFECT THE NEW ROOFING PROTECTION INSTALLER WITH A MINIMUM OF 5 YEARS EXPERIENCE IN THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS IN ACCORDANCE WITH NFPA-780 AND ALL APPLICABLE BUILDING CODES.
- 3.6 ROOF ACCESS LADDER:** INSTALL NEW ROOF ACCESS LADDER. SEE SHEET A3.8 FOR SPECIFICATION AND DETAILS.

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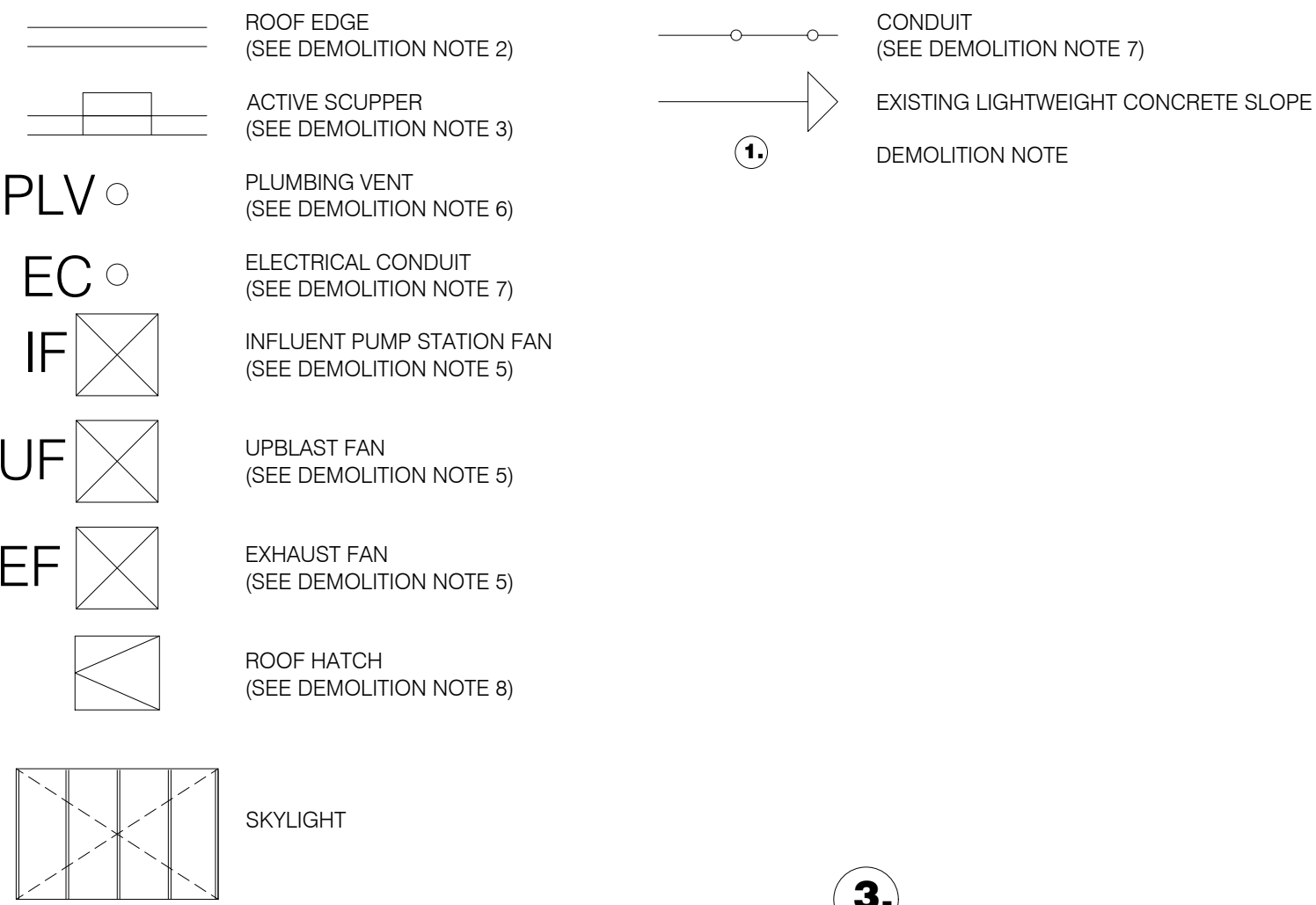
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GENERAL  
G1.0  
PLOT: NTS SHEET

**LEGEND**

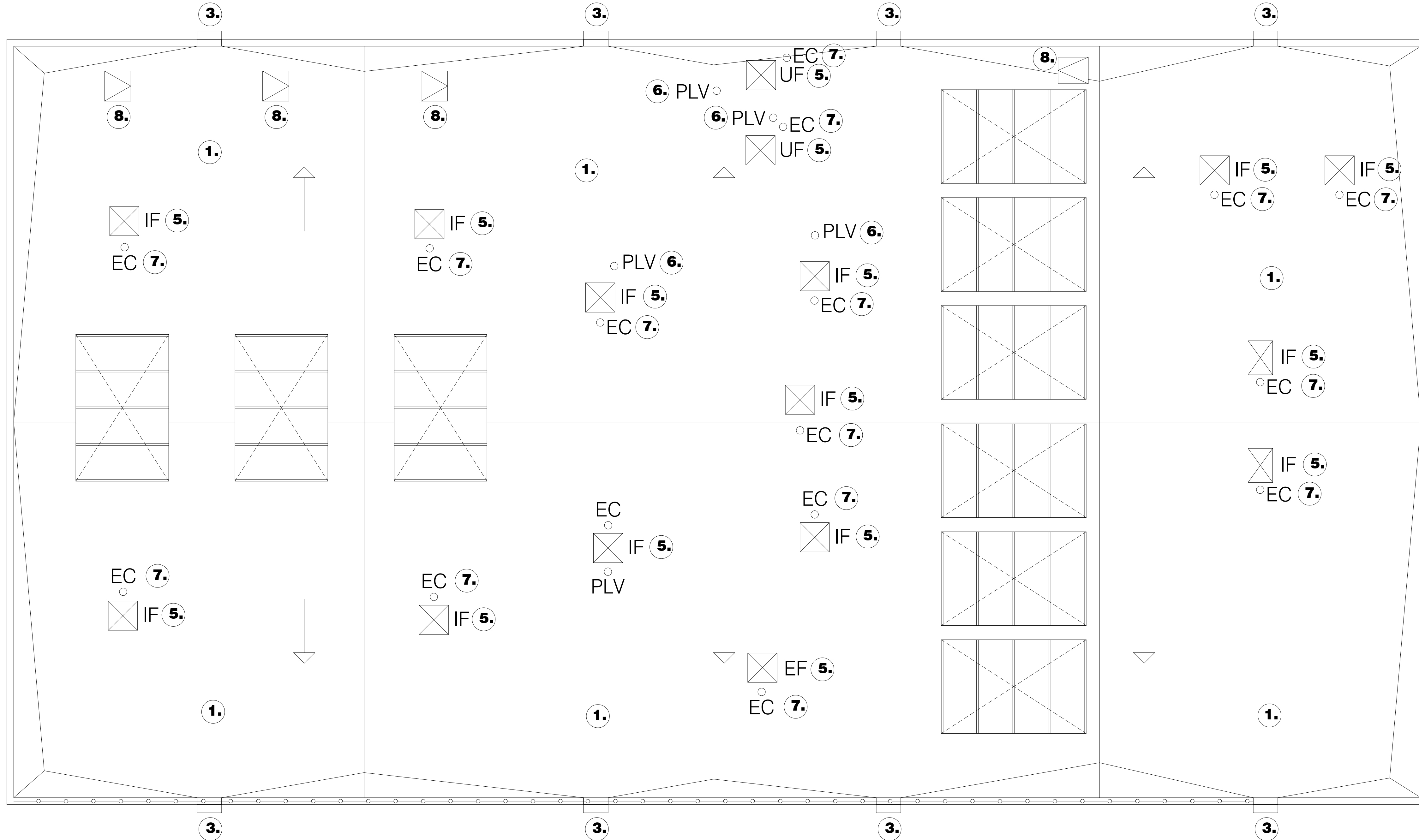


**DEMOLITION NOTES**

1. **EXISTING ROOF ASSEMBLY:** REMOVE EXISTING SINGLE-PLY MEMBRANE FROM THE TOP OF THE EXISTING LIGHTWEIGHT CONCRETE.
2. **EXISTING METAL FLASHINGS:** REMOVE ALL EXISTING METAL FLASHINGS UNLESS DESIGNATED OTHERWISE.
3. **EXISTING ACTIVE SCUPPERS AND DOWNSPOUTS:** REMOVE ALL EXISTING ACTIVE SCUPPERS AND DOWNSPOUTS UNLESS DESIGNATED OTHERWISE.
4. **EXISTING ROOF MOUNTED EQUIPMENT TO REMAIN:** TEMPORARILY REMOVE EXISTING ROOF MOUNTED EQUIPMENT.
5. **EXISTING ROOF MOUNTED EQUIPMENT TO BE REPLACED:** REMOVE EXISTING ROOF MOUNTED EQUIPMENT.
6. **EXISTING PLUMBING VENTS TO REMAIN:** REMOVE FLASHINGS AT THE EXISTING PLUMBING VENTS.
7. **EXISTING ELECTRICAL CONDUIT FLASHING:** REMOVE FLASHINGS AT THE EXISTING ELECTRICAL CONDUITS.
8. **EXISTING ROOF HATCH:** TEMPORARILY REMOVE EXISTING ROOF HATCH.

**SCOPE OF WORK**

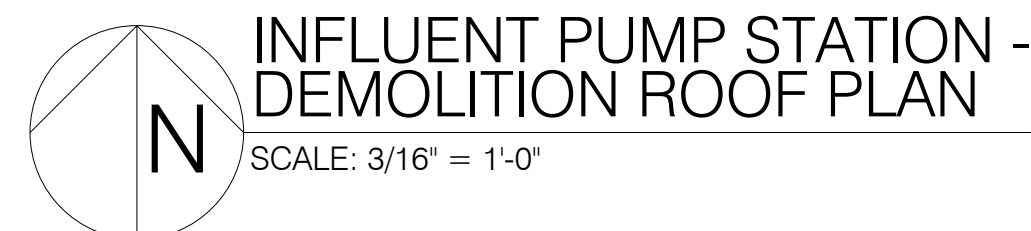
- THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:**
- 1.0 **GENERAL:**
    - 1.1 **ENGINEERING:** CONDUCT PULL TESTS OF THE EXISTING ROOF DECK. PROVIDE ENGINEERING CALCULATIONS PREPARED BY A FLORIDA LICENSED STRUCTURAL ENGINEER INCLUDING THE ATTACHMENT SPACING FOR EACH ROOF WIND ZONE. SUBMIT PULL TEST RESULTS AND THE ENGINEERING CALCULATIONS TO THE ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF THE ROOFING INSTALLATION. SEE DRAWINGS FOR WIND PRESSURES.
    - 1.2 **SUBSTRATE PREPARATION:** PREPARE, REPAIR, OR REPLACE ALL SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOFING ASSEMBLY SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING ASSEMBLY THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE ASSEMBLY.
    - 1.3 **WARRANTY:** THE NEW ROOFING ASSEMBLY IS TO BE EXAMINED AND APPROVED BY THE MANUFACTURERS OF THE ROOFING ASSEMBLY AND SHALL RECEIVE A 20 YEAR NDL LABOR AND MATERIAL WARRANTY AGAINST DEFECTS AND LEAKS. THE CONTRACTOR SHALL SUBMIT A 5 YEAR NDL WARRANTY FOR ALL WORK AGAINST DEFECTS AND LEAKS UPON COMPLETION OF THE WORK. ADJUST THE SCOPE OF WORK AS REQUIRED TO OBTAIN THIS WARRANTY.
    - 1.4 **SUBSTRATE PREPARATION:** REPLACE ALL DETERIORATED SUBSTRATE MATERIAL TO A CONDITION REQUIRED BY THE ROOF MEMBRANE MANUFACTURER. PREPARE ALL EXISTING SURFACES TO WHICH NEW OR REINSTALLED COMPONENTS ARE TO BE ATTACHED AS REQUIRED BY THE MANUFACTURER OF EACH NEW COMPONENT. REPLACE OR REPAIR ALL DAMAGED SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOF MEMBRANE, SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING MEMBRANE THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE PROPOSED ROOF ASSEMBLY.
  - 2.0 **ROOFING ASSEMBLY - PUMP STATION:**
    - 2.1 **DEMOLITION:** REMOVE EXISTING ROOF MEMBRANE AND LIGHTWEIGHT INSULATING CONCRETE FROM TOP SURFACE OF EXISTING CONCRETE DECK. REMOVE ALL METAL FLASHINGS INCLUDING BUT NOT LIMITED TO THE RAISED PERIMETER EDGE. TEMPORARILY REMOVE THE ROOF HATCHES FOR REINSTALLATION.
    - 2.2 **INSTALLATION OF NEW ROOFING ASSEMBLY:** INSTALL NEW MECHANICAL EQUIPMENT CURBS OVER EXISTING OPENINGS. PRIME THE EXISTING CONCRETE DECK AND TORCH APPLY A VAPOR BARRIER, COMPOSED OF A MODIFIED BITUMINOUS MEMBRANE, OVER THE CONCRETE DECK. INSTALL FLAT AND TAPERED INSULATION, IN A MINIMUM OF TWO STAGGERED LAYERS, ADHERED WITH URETHANE ADHESIVE OVER THE TEMPORARY ROOF MEMBRANE. INSTALL TAPERED INSULATION AS REQUIRED TO ACHIEVE A MINIMUM SURFACE SLOPE OF 1/4 INCH PER LINEAR FOOT POSITIVE SLOPE TOWARD THE GUTTERS. THE SLOPE PLAN WILL BE A HIP SHAPE. INSTALL A 1/2 INCH COVER BOARD IN URETHANE ADHESIVE OVER THE INSULATION AND UP ALL EQUIPMENT CURBS. TORCH APPLY A SMOOTH MODIFIED BITUMINOUS MEMBRANE BASE SHEET OVER THE COVER BOARD. TORCH APPLY A GRANULATED MODIFIED BITUMINOUS CAP SHEET OVER THE BASE SHEET. AT ALL BASE FLASHINGS, TORCH APPLY A SMOOTH MODIFIED BITUMINOUS BASE FLASHING INNER PLY AND A GRANULATED MODIFIED BITUMINOUS BASE FLASHING OUTER PLY OVER THE COVER BOARDS AT THE ADJACENT VERTICAL SURFACES AT CURBS.
    - 2.3 **INSTALLATION OF NEW METAL FLASHINGS:** FABRICATE AND INSTALL STAINLESS STEEL FLASHINGS COMPLYING WITH ALL ANS/SPR WIND RESISTANCE REQUIREMENTS AND WITH FULLY SOLDERED NON-MOVING SEAMS. NEW FLASHINGS INCLUDE BUT ARE NOT LIMITED TO METAL EDGES SKIRT FLASHINGS AND GUTTERS.
    - 2.4 **INSTALLATION OF NEW DOWNSPOUTS:** FABRICATE AND INSTALL NEW PVC DOWNSPOUTS SECURED WITH STAINLESS STEEL STRAPS. PAINT DOWNSPOUTS TO MATCH COLOR OF EXISTING WALLS.
    - 2.5 **EXISTING ROOF MOUNTED MECHANICAL EQUIPMENT:** INSTALL NEW ROOF MOUNTED MECHANICAL EQUIPMENT OVER THE NEW EQUIPMENT CURBS. INSTALL HOLD DOWN STRAPS TO PREVENT WIND DISPLACEMENT. SEE MECHANICAL.
    - 2.6 **EXISTING ROOF HATCH:** REINSTALL THE EXISTING ROOF HATCHES OVER THE EXISTING CURBS. INSTALL A LADDER EXTENSION AND A PERIMETER SAFETY RAIL WITH GATE AT THE ONE ACCESSIBLE ROOF HATCH.
    - 2.7 **EXISTING ELECTRICAL CONNECTIONS TO ROOF MOUNTED EQUIPMENT:** RELOCATE ALL DISCONNECT SWITCHES, CONVENIENCE OUTLETS, AND EXISTING SUPPORTS TO A MINIMUM OF 24 INCHES AWAY FROM THE EQUIPMENT TO WHICH IT SERVES. ALSO, RELOCATE THE CONDUITS OF ALL ROOF MOUNTED ELECTRICAL EQUIPMENT TO THE INTERIOR OF THE EQUIPMENT. A RECEPTACLE OUTLET SHALL BE PROVIDED FOR ALL EQUIPMENT REQUIRING SERVICE IN A LOCATION IN ACCORDANCE WITH NFPA TO REROUTE.
    - 2.8 **GUARD RAILS:** WHERE DESIGNATED, INSTALL A 42 INCH HIGH GUARDRAIL BETWEEN ROOF MOUNTED EQUIPMENT AND THE METAL EDGE. EXTEND THE GUARDRAIL A MINIMUM OF 30 INCHES BEYOND EACH END OF THE EQUIPMENT.
  - 3.0 **ROOFING ASSEMBLY - ELECTRIC BUILDING:** SEE SHEET A1.3.



**EXISTING ROOFING ASSEMBLY NOTES:** EXISTING ROOFING ASSEMBLY THICKNESSES ARE APPROXIMATE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO ROOF ASSEMBLY THICKNESSES.

**EXISTING ROOFING ASSEMBLY - TYPE 1**

	ROOF COMPONENTS
ROOF FINISH	SINGLE-PLY ROOF MEMBRANE
ROOF DECK	LIGHTWEIGHT INSULATING CONCRETE
STRUCTURAL DECK	CONCRETE DECK
ROOF FLASHINGS	PAINTED STEEL
DRAINAGE	ACTIVE SCUPPERS AND DOWNSPOUTS



CONSTRUCTION DOCUMENTS  
ORANGE COUNTY GOVERNMENT  
SWRF INFLUENT PUMP STATION  
AND  
SOUTH PLANT ELECTRICAL BUILDING  
ORLANDO, FLORIDA  
ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
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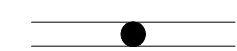




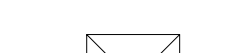
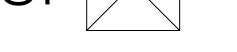

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NUMBER	TYPE	DATE

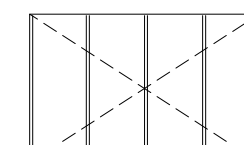
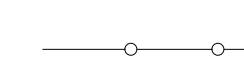
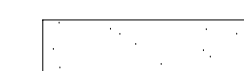



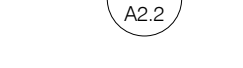
DRAWN BY: JSJ PROJECT NUMBER: 18-079  
APPROVED BY: JPA DATE: JANUARY 21, 2019

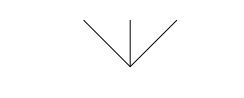
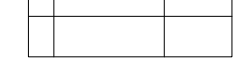
**INFLUENT PUMP STATION - DEMOLITION ROOF PLAN**

PLOT: 3/16" = 1'-0" SHEET **A1.0**

**LEGEND**

-  ROOF EDGE  
(SEE DETAIL B/A2.1)
-  GUTTER AND DOWNSPOUT  
(SEE DETAILS ON SHEET A2.5)
-  GUTTER EXPANSION JOINT  
(SEE DETAIL B/A2.5 AND NEW CONSTRUCTION NOTE 1)
-  PLUMBING VENT  
(SEE DETAILS A/A2.2 AND B/A2.2)
-  ELECTRICAL CONDUIT  
(SEE DETAIL C/A2.2)
-  INFLUENT PUMP STATION FAN  
(SEE DETAILS D/A2.2, E/A2.2, NEW CONSTRUCTION NOTE 4 AND COORDINATE WITH MECHANICAL)
-  UPBLAST FAN  
(SEE DETAILS D/A2.2, E/A2.2, NEW CONSTRUCTION NOTE 4 AND COORDINATE WITH MECHANICAL)
-  EXHAUST FAN  
(SEE DETAILS D/A2.2, E/A2.2, NEW CONSTRUCTION NOTE 4 AND COORDINATE WITH MECHANICAL)
-  ROOF HATCH WITH SAFETY POST AND RAIL SYSTEM  
(SEE DETAILS ON SHEET A2.3)

-  SKYLIGHT  
(SEE DETAILS ON SHEET A2.4)
-  CONDUIT  
(SEE DETAIL)
-  ROOFING ASSEMBLY - TYPE 1  
(SEE DETAIL A/A2.1)
-  NEW ROOF SLOPE - 1/4:12
-  N.I.C.  
NOT IN CONTRACT
-  4  
NEW CONSTRUCTION NOTE DESIGNATION
-  A  
SECTION DESIGNATION

-  CRICKETS  
(SEE NEW CONSTRUCTION NOTE 4)
-  ROOF TRAFFIC PADS  
(SEE NEW CONSTRUCTION NOTE 4)

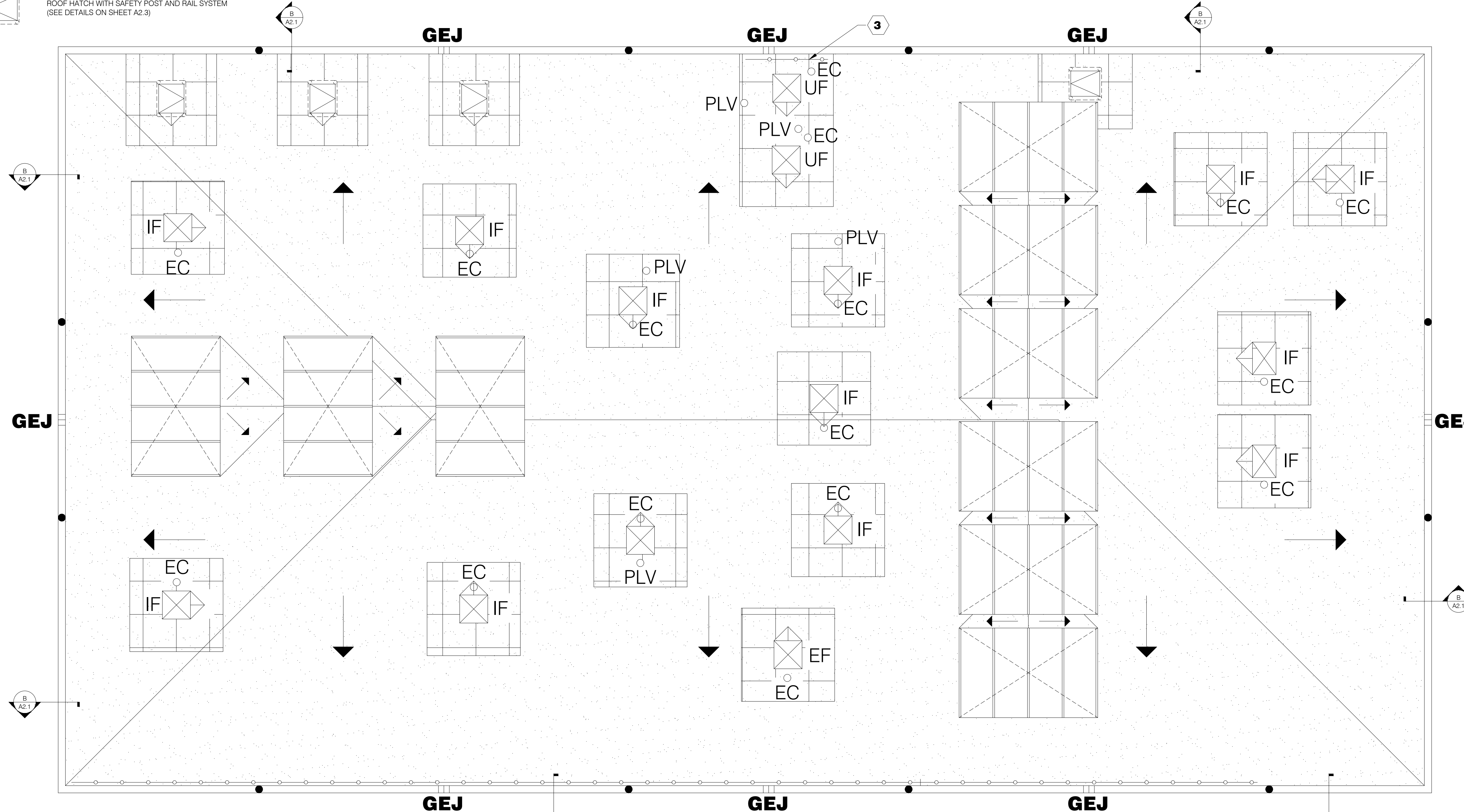
**NEW CONSTRUCTION NOTES**

- 1. GUTTERS AND DOWNSPOUTS:** INSTALL NEW GUTTERS AND NEW DOWNSPOUTS. NORTH AND SOUTH DOWNSPOUTS ARE TO BE INSTALLED IN SAME LOCATIONS AS WHERE THEY WERE REMOVED. INSTALL GUTTER EXPANSION JOINTS CENTERED IN BETWEEN DOWNSPOUT LOCATIONS, NO MORE THAN 50 FEET APART IN LONG, STRAIGHT RUNS AND NO MORE THAN 25 FEET FROM ANY FIXED CORNER. SEE DETAILS ON SHEET A2.5.
- 2. ONE-PIECE TRANSITION FLASHING:** INSTALL NEW ONE-PIECE TRANSITION FLASHING WITH ALL WELDED NON-MOVING JOINTS. PREPARE IN-PLACE MOCKUP FOR OWNER AND A/E APPROVAL.
- 3. MECHANICAL EQUIPMENT - GUARD RAILS:** INSTALL GUARDS WHERE EQUIPMENT REQUIRING SERVICING IS LOCATED WITHIN 10 FEET OF A ROOF EDGE. INSTALL TUBULAR, STAINLESS STEEL GUARDRAIL SYSTEM. PROVIDE SHOP DRAWINGS TO A/E FOR APPROVAL PRIOR TO ORDERING AND INSTALLING GUARD RAIL SYSTEM. SEE DETAIL SHEET A2.6. GUARDRAIL TO COMPLY WITH FBC -MECHANICAL 304.11 AND FBC - BUILDING 1607.8. AND OSHA 1910.
- 4. MECHANICAL EQUIPMENT - CRICKETS AND ROOF TRAFFIC PADS:** INSTALL CRICKETS MADE FROM POLYISOCYANURATE INSULATION ON THE UPSLOPE OF ALL ROOF MOUNTED EQUIPMENT TO DIVERT WATER AROUND THE EQUIPMENT. INSTALL ROOF TRAFFIC PADS RECOMMENDED BY THE ROOF MEMBRANE MANUFACTURER AROUND ALL ROOF ACCESS POINTS AND MECHANICAL EQUIPMENT THAT REQUIRES SERVICING. INSTALL 2 INCH DRAINAGE SLOTS BETWEEN EACH ROOF TRAFFIC PAD.

**SCOPE OF WORK**

THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

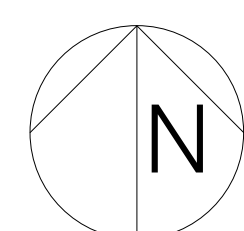
- 1.0 GENERAL:**
- 1.1 ENGINEERING:** CONDUCT PULL TESTS OF THE EXISTING ROOF DECK. PROVIDE ENGINEERING CALCULATIONS PREPARED BY A FLORIDA LICENSED STRUCTURAL ENGINEER INCLUDING THE ATTACHMENT SPACING FOR EACH ROOF WIND ZONE. SUBMIT PULL TEST RESULTS AND THE ENGINEERING CALCULATIONS TO THE ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF THE ROOFING INSTALLATION. SEE DRAWINGS FOR WIND PRESSURES.
- 1.2 SUBSTRATE PREPARATION:** PREPARE, REPAIR, OR REPLACE ALL SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOFING ASSEMBLY SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING ASSEMBLY THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE ASSEMBLY.
- 1.3 WARRANTY:** THE NEW ROOFING ASSEMBLY IS TO BE EXAMINED AND APPROVED BY THE MANUFACTURERS OF THE ROOFING ASSEMBLY AND SHALL RECEIVE A 20 YEAR NDL LABOR AND MATERIAL WARRANTY AGAINST DEFECTS AND LEAKS. THE CONTRACTOR SHALL SUBMIT A 5 YEAR NDL WARRANTY FOR ALL WORK AGAINST DEFECTS AND LEAKS UPON COMPLETION OF THE WORK. ADJUST THE SCOPE OF WORK AS REQUIRED TO OBTAIN THIS WARRANTY.
- 1.4 SUBSTRATE PREPARATION:** REPLACE ALL DETERIORATED SUBSTRATE MATERIAL TO A CONDITION REQUIRED BY THE ROOF MEMBRANE MANUFACTURER. PREPARE ALL EXISTING SURFACES TO WHICH NEW OR REINSTALLED COMPONENTS ARE TO BE ATTACHED AS REQUIRED BY THE MANUFACTURER OF EACH NEW COMPONENT. REPLACE OR REPAIR ALL DAMAGED SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING, BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOF MEMBRANE, SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING MEMBRANE THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE PROPOSED ROOF ASSEMBLY.
- 2.0 ROOFING ASSEMBLY - PUMP STATION:**
- 2.1 DEMOLITION:** REMOVE EXISTING ROOF MEMBRANE AND LIGHTWEIGHT INSULATING CONCRETE FROM TOP SURFACE OF EXISTING CONCRETE DECK. REMOVE ALL METAL FLASHINGS INCLUDING BUT NOT LIMITED TO THE RAISED PERIMETER EDGE. TEMPORARILY REMOVE THE ROOF HATCHES FOR REINSTALLATION.
- 2.2 INSTALLATION OF NEW ROOFING ASSEMBLY:** INSTALL NEW MECHANICAL EQUIPMENT CURBS OVER EXISTING OPENINGS. PRIME THE EXISTING CONCRETE DECK AND TORCH APPLY A VAPOR BARRIER, COMPOSED OF A MODIFIED BITUMINOUS MEMBRANE, OVER THE CONCRETE DECK. INSTALL FLAT AND TAPERED INSULATION, IN A MINIMUM OF TWO STAGGERED LAYERS, ADHERED WITH URETHANE ADHESIVE OVER THE TEMPORARY ROOF MEMBRANE. INSTALL TAPERED INSULATION AS REQUIRED TO ACHIEVE A MINIMUM SURFACE SLOPE OF 1/4 INCH PER LINEAR FOOT POSITIVE SLOPE TOWARD THE GUTTERS. THE SLOPE PLAN WILL BE A HIP SHAPE. INSTALL A 1/2 INCH COVER BOARD IN URETHANE ADHESIVE OVER THE INSULATION AND UP ALL EQUIPMENT CURBS. TORCH APPLY A SMOOTH MODIFIED BITUMINOUS MEMBRANE BASE SHEET OVER THE COVER BOARD. TORCH APPLY A GRANULATED MODIFIED BITUMINOUS CAP SHEET OVER THE BASE SHEET. AT ALL BASE FLASHINGS, TORCH APPLY A SMOOTH MODIFIED BITUMINOUS BASE FLASHING INNER PLY AND A GRANULATED MODIFIED BITUMINOUS BASE FLASHING OUTER PLY OVER THE COVER BOARDS AT THE ADJACENT VERTICAL SURFACES AT CURBS.
- 2.3 INSTALLATION OF NEW METAL FLASHINGS:** FABRICATE AND INSTALL STAINLESS STEEL FLASHINGS COMPLYING WITH ALL ANSI/SPRI WIND RESISTANCE REQUIREMENTS AND WITH FULLY SOLDERED NON-MOVING SEAMS. NEW FLASHINGS INCLUDE BUT ARE NOT LIMITED TO METAL EDGES SKIRT FLASHINGS AND GUTTERS.
- 2.4 INSTALLATION OF NEW DOWNSPOUTS:** FABRICATE AND INSTALL NEW PVC DOWNSPOUTS SECURED WITH STAINLESS STEEL STRAPS. PAINT DOWNSPOUTS TO MATCH COLOR OF EXISTING WALLS.
- 2.5 EXISTING ROOF MOUNTED MECHANICAL EQUIPMENT:** INSTALL NEW ROOF MOUNTED MECHANICAL EQUIPMENT OVER THE NEW EQUIPMENT CURBS. INSTALL HOLD DOWN STRAPS TO PREVENT WIND DISPLACEMENT. SEE MECHANICAL.
- 2.6 EXISTING ROOF HATCH:** REINSTALL THE EXISTING ROOF HATCHES OVER THE EXISTING CURBS. INSTALL A LADDER EXTENSION AND A PERIMETER SAFETY RAIL WITH GATE AT THE ONE ACCESSIBLE ROOF HATCH.
- 2.7 EXISTING ELECTRICAL CONNECTIONS TO ROOF MOUNTED EQUIPMENT:** RELOCATE ALL DISCONNECT SWITCHES, CONVENIENCE OUTLETS, AND EXISTING SUPPORTS TO A MINIMUM OF 24 INCHES AWAY FROM THE EQUIPMENT TO WHICH IT SERVES. ALSO, RELOCATE THE CONDUITS OF ALL ROOF MOUNTED ELECTRICAL EQUIPMENT TO THE INTERIOR OF THE EQUIPMENT. A RECEPTACLE OUTLET SHALL BE PROVIDED FOR ALL EQUIPMENT REQUIRING SERVICE IN A LOCATION IN ACCORDANCE WITH NFPA TO RELOCATE.
- 2.8 GUARD RAILS:** WHERE DESIGNATED, INSTALL A 42 INCH HIGH GUARDRAIL BETWEEN ROOF MOUNTED EQUIPMENT AND THE METAL EDGE. EXTEND THE GUARDRAIL A MINIMUM OF 30 INCHES BEYOND EACH END OF THE EQUIPMENT.
- 3.0 ROOFING ASSEMBLY - ELECTRIC BUILDING: SEE SHEET A1.4.**



**EXISTING ROOFING ASSEMBLY NOTES:** EXISTING ROOFING ASSEMBLY THICKNESSES ARE APPROXIMATE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO ROOF ASSEMBLY THICKNESSES.

**PROPOSED ROOFING ASSEMBLY - TYPE 1**

ROOF COMPONENTS	
ROOF MEMBRANE	GRANULE SURFACED MODIFIED BITUMEN CAP SHEET OVER BASE PLY
COVER BOARD	1/2" COVER BOARD
TAPERED INSULATION	TAPERED POLYISOCYANURATE INSULATION
FLAT INSULATION	FLAT POLYISOCYANURATE INSULATION
TEMPORARY ROOF	SAND-SURFACED MODIFIED BITUMEN PLY
EXISTING STRUCTURAL DECK	PRIME EXISTING CONCRETE DECK WITH ASTM D41 PRIMER
ROOF FLASHINGS	STAINLESS STEEL
DRAINAGE	GUTTERS AND DOWNSPOUTS


**INFLUENT PUMP STATION - PROPOSED ROOF PLAN**  
 SCALE: 3/16" = 1'-0"

**CONSTRUCTION DOCUMENTS**  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
 ORLANDO, FLORIDA  
**ROOF REPLACEMENT PROJECT**

  
 JAY AMMON ARCHITECT, INC.  
 3346 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
 (407) 333-1977 • FAX: (407) 333-4686 • E MAIL: JAY@JAYAMMON.COM


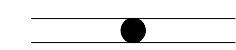

REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

**INFLUENT PUMP STATION - PROPOSED ROOF PLAN**

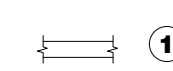
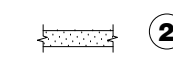
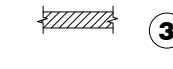
**A1.1**  
 PLOT: 3/16" = 1'-0" SHEET

**LEGEND**

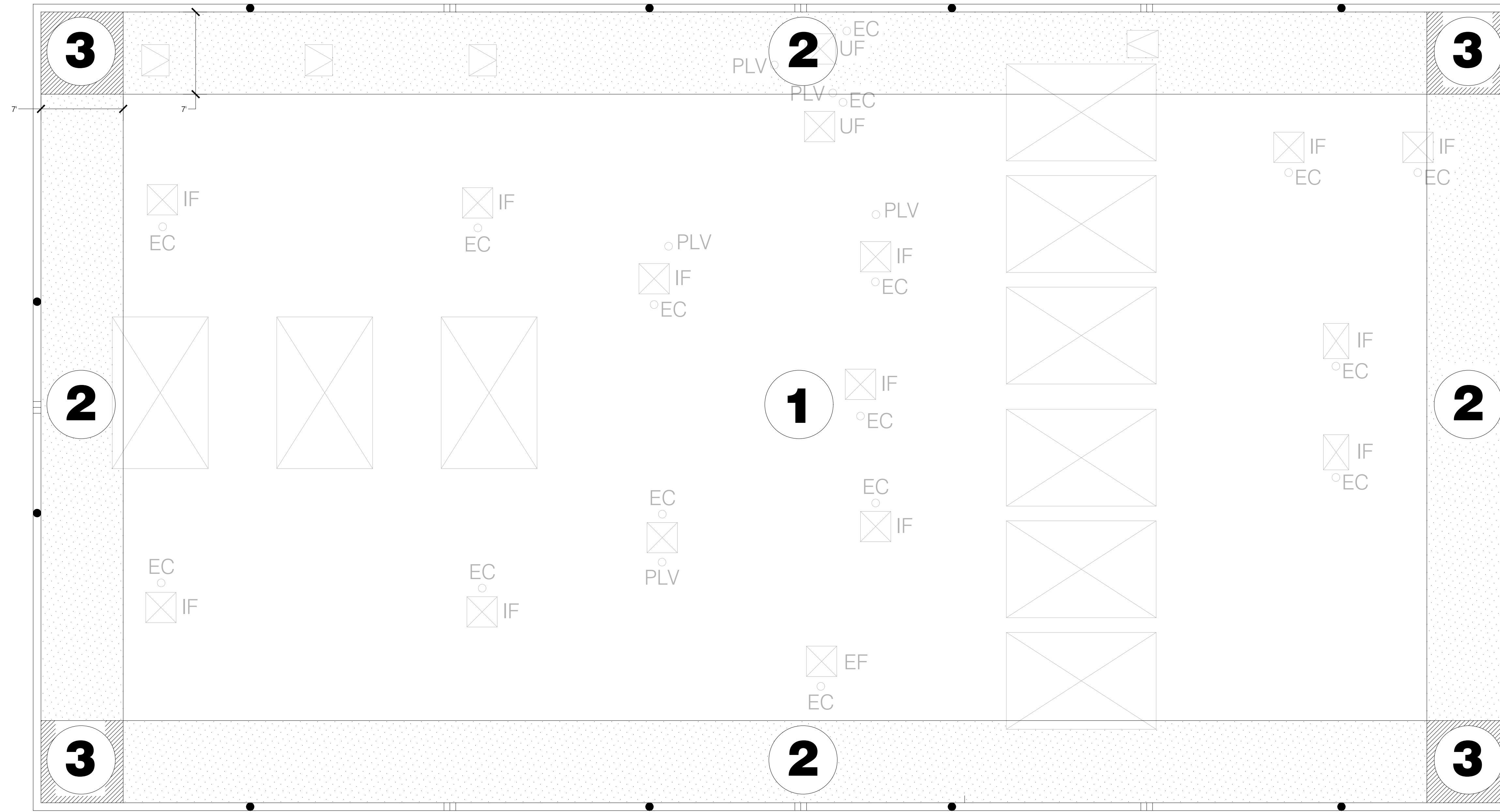
-  ROOF EDGE
-  GUTTER AND DOWNSPOUT
-  GUTTER EXPANSION JOINT

WIND DESIGN FOR ROOFING COMPONENTS AND CLADDING:  
 ASCE 7-10, Vult=150 mph wind, Vasd=116 mph wind, category III, Exposure "C", Kd = 0.85, h = 25 ft., ENCLOSED BUILDING: Gcpi = ± 0.18. (VALUES USED TO MEET FM 1-28 "WIND DESIGN" FOR 1-90 WIND RATING)  
 WIND UPLIFT PRESSURES SHOWN ARE GROSS PRESSURES FOR CORNER ZONE, EDGE ZONE, AND FIELD ZONE FOR ROOF COMPONENTS AND CLADDING (C & C). AREA ≤ 10 SF. WIND HAS BEEN CHECKED FOR AN ENCLOSED STRUCTURE AT EACH ROOF SLOPE AND HIGHEST WIND PRESSURES ARE SHOWN FOR EACH AREA.  
 CODES: FLORIDA BUILDING CODE 2017 (6TH ED) AND ASCE 7-10

**WIND PRESSURES:**

WIND UPLIFT PRESSURE LEGEND:		ASCE 7-10 ROOF C & C DESIGN PRESSURES
ZONE 1 - FIELD ZONE		-32.8 PSF
ZONE 2 - EDGE ZONE		-55.0 PSF
ZONE 3 - CORNER ZONE		-82.8 PSF

ALL PRESSURES ARE ALLOWABLE STRESS DESIGN (ASD).  
 DEPTH OF PERIMETER AND CORNER ZONES FROM ROOF EDGE - 'a' DIMENSION IS 7 FEET



**INFLUENT PUMP STATION - WIND UPLIFT PRESSURE ROOF PLAN**  
 SCALE: 3/16" = 1'-0"

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION AND SOUTH PLANT ELECTRICAL BUILDING  
 ORLANDO, FLORIDA  
 ROOF REPLACEMENT PROJECT

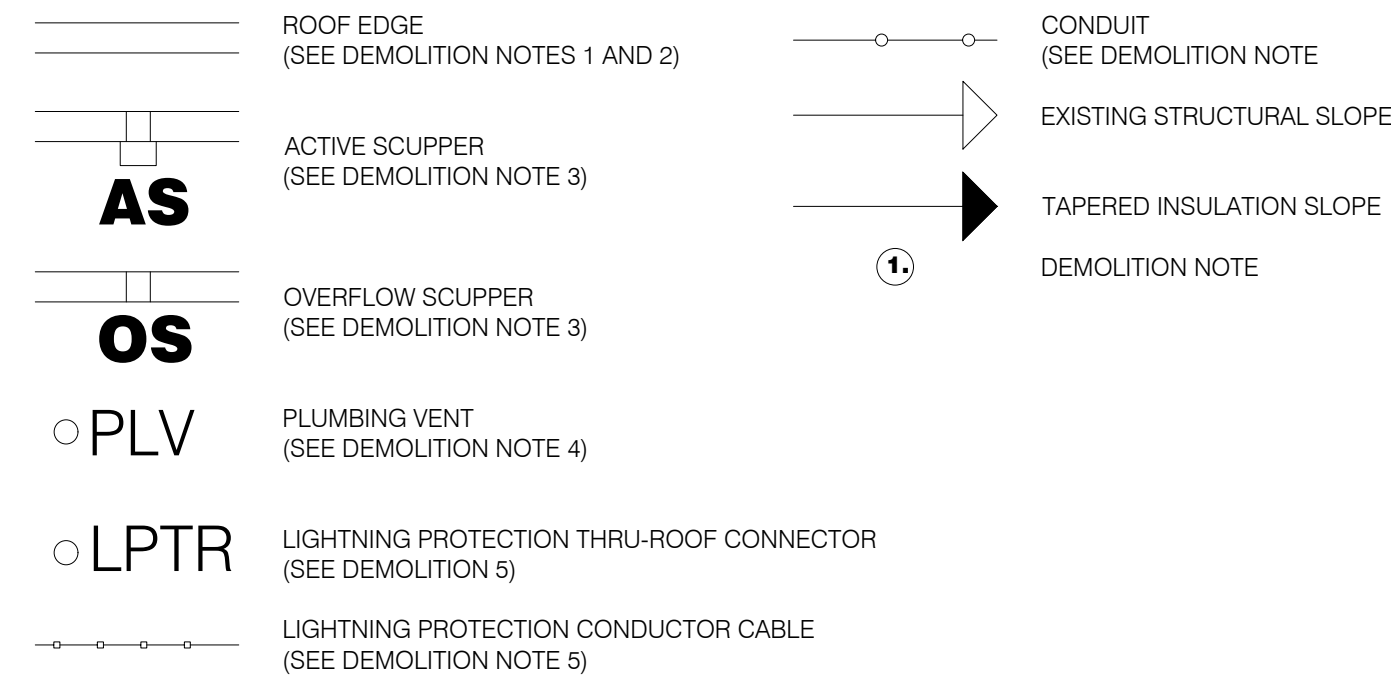
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REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

**INFLUENT PUMP STATION - WIND UPLIFT PRESSURE ROOF PLAN**  
 PLOT: 3/16" = 1'-0" SHEET **A1.2**

**LEGEND**

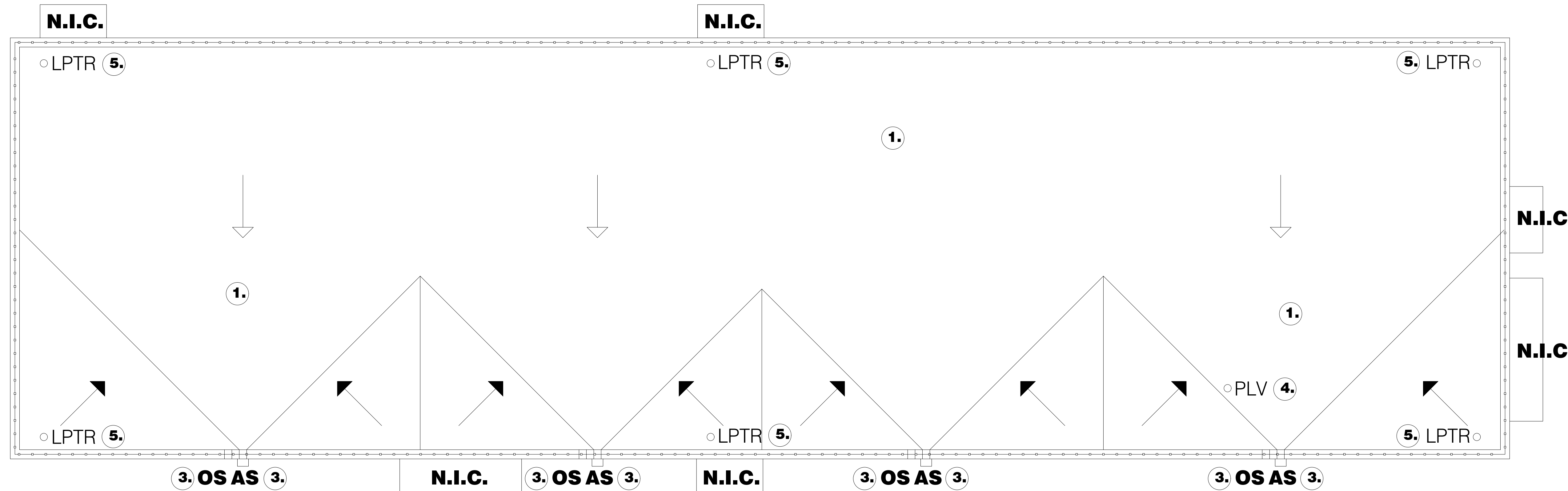


**DEMOLITION NOTES**

1. **EXISTING ROOF ASSEMBLY:** REMOVE EXISTING SINGLE-PLY MEMBRANE FROM THE TOP OF THE EXISTING CONCRETE TOPPING SLAB.
2. **EXISTING METAL FLASHINGS:** REMOVE ALL EXISTING METAL FLASHINGS UNLESS DESIGNATED OTHERWISE.
3. **EXISTING ACTIVE SCUPPERS AND DOWNSPOUTS:** REMOVE ALL EXISTING ACTIVE SCUPPERS AND DOWNSPOUTS UNLESS DESIGNATED OTHERWISE.
4. **EXISTING PLUMBING VENTS TO REMAIN:** REMOVE FLASHINGS AT THE EXISTING PLUMBING VENTS.
5. **EXISTING LIGHTNING PROTECTION:** TEMPORARILY REMOVE EXISTING LIGHTNING PROTECTION ASSEMBLY.

**SCOPE OF WORK**

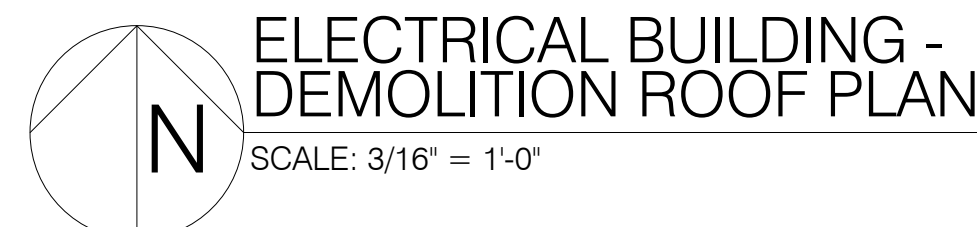
- THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:**
- 1.0 **GENERAL:**
  - 1.1 **ENGINEERING:** CONDUCT PULL TESTS OF THE EXISTING ROOF DECK. PROVIDE ENGINEERING CALCULATIONS PREPARED BY A FLORIDA LICENSED STRUCTURAL ENGINEER INCLUDING THE ATTACHMENT SPACING FOR EACH ROOF WIND ZONE. SUBMIT PULL TEST RESULTS AND THE ENGINEERING CALCULATIONS TO THE ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF THE ROOFING INSTALLATION. SEE DRAWINGS FOR WIND PRESSURES.
  - 1.2 **SUBSTRATE PREPARATION:** PREPARE, REPAIR, OR REPLACE ALL SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOFING ASSEMBLY SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING ASSEMBLY THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE ASSEMBLY.
  - 1.3 **WARRANTY:** THE NEW ROOFING ASSEMBLY IS TO BE EXAMINED AND APPROVED BY THE MANUFACTURERS OF THE ROOFING ASSEMBLY AND SHALL RECEIVE A 20 YEAR NDL LABOR AND MATERIAL WARRANTY AGAINST DEFECTS AND LEAKS. THE CONTRACTOR SHALL SUBMIT A 5 YEAR NDL WARRANTY FOR ALL WORK AGAINST DEFECTS AND LEAKS UPON COMPLETION OF THE WORK. ADJUST THE SCOPE OF WORK AS REQUIRED TO OBTAIN THIS WARRANTY.
  - 1.4 **SUBSTRATE PREPARATION:** REPLACE ALL DETERIORATED SUBSTRATE MATERIAL TO A CONDITION REQUIRED BY THE ROOF MEMBRANE MANUFACTURER. PREPARE ALL EXISTING SURFACES TO WHICH NEW OR REINSTALLED COMPONENTS ARE TO BE ATTACHED AS REQUIRED BY THE MANUFACTURER OF EACH NEW COMPONENT. REPLACE OR REPAIR ALL DAMAGED SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING, BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOF MEMBRANE, SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING MEMBRANE THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE PROPOSED ROOF ASSEMBLY.
  - 2.0 **ROOFING ASSEMBLY - PUMP STATION: SEE SHEET A1.0.**
  - 3.0 **ROOFING ASSEMBLY - ELECTRIC BUILDING:**
  - 3.1 **DEMOLITION:** REMOVE EXISTING ROOF MEMBRANE AND INSULATION FROM TOP SURFACE OF EXISTING CONCRETE TOPPING SLAB. REMOVE ALL METAL FLASHINGS INCLUDING BUT NOT LIMITED TO THE COPINGS, COUNTERFLASHINGS, AND SCUPPERS. REMOVE DESIGNATED WALL SURFACES FOR INSTALLATION OF NEW EMERGENCY OVERFLOW SCUPPERS.
  - 3.2 **INSTALLATION OF NEW ROOFING ASSEMBLY:** PRIME THE EXISTING CONCRETE TOPPING SLAB AND TORCH APPLY A VAPOR BARRIER, COMPOSED OF A MODIFIED BITUMINOUS MEMBRANE, OVER THE CONCRETE TOPPING SLAB. INSTALL FLAT INSULATION OVER THE STRUCTURALLY SLOPED EXISTING ROOF DECK AND TAPERED INSULATION AT THE CRICKETS. IN A MINIMUM OF TWO STAGGERED LAYERS, ADHERED WITH URETHANE ADHESIVE OVER THE TEMPORARY ROOF MEMBRANE. INSTALL TAPERED INSULATION CRICKETS AS REQUIRED TO ACHIEVE A MINIMUM SURFACE SLOPE OF 1/4 INCH PER LINEAR FOOT POSITIVE SLOPE TOWARD THE SCUPPERS. INSTALL A 1/2 INCH COVER BOARD IN URETHANE ADHESIVE OVER THE INSULATION AND UP ALL ADJACENT WALL SURFACES. TORCH APPLY A SMOOTH MODIFIED BITUMINOUS MEMBRANE BASE SHEET OVER THE COVER BOARD. TORCH APPLY A GRANULATED MODIFIED BITUMINOUS CAP SHEET OVER THE BASE SHEET. AT ALL BASE FLASHINGS, TORCH APPLY A SMOOTH MODIFIED BITUMINOUS BASE FLASHING INNER PLY AND A GRANULATED MODIFIED BITUMINOUS BASE FLASHING OUTER PLY OVER THE COVER BOARDS AT THE ADJACENT VERTICAL WALLS.
  - 3.3 **INSTALLATION OF NEW METAL FLASHINGS:** FABRICATE AND INSTALL STAINLESS STEEL FLASHINGS COMPLYING WITH ALL ANSI / SPRI WIND RESISTANCE REQUIREMENTS AND WITH FULLY SOLDERED NON-MOVING SEAMS. NEW FLASHINGS INCLUDE BUT ARE NOT LIMITED TO COPINGS, SCUPPERS, AND LIGHTNING PROTECTION ROOF PENETRATIONS.
  - 3.4 **INSTALLATION OF NEW DOWNSPOUTS:** FABRICATE AND INSTALL NEW PVC DOWNSPOUTS SECURED WITH STAINLESS STEEL STRAPS. PAINT DOWNSPOUTS TO MATCH COLOR OF EXISTING WALLS.
  - 3.5 **LIGHTNING PROTECTION:** REMOVE ALL LIGHTNING PROTECTION ASSEMBLY COMPONENTS ATTACHED TO THE ROOFING ASSEMBLY, INCLUDING BUT NOT LIMITED TO, AIR TERMINALS, CONDUCTOR CABLES, ATTACHMENT COMPONENTS, AND RELATED FASTENERS. REPLACE ALL EXISTING LIGHTNING PROTECTION WITH NEW COMPONENTS THAT WILL BE COMPATIBLE WITH THE NEW ROOFING ASSEMBLY. WHERE EXISTING LIGHTNING PROTECTION DOES NOT EXIST, INSTALL A NEW LIGHTNING PROTECTION ASSEMBLY. TIE-IN THE NEW LIGHTNING PROTECTION ASSEMBLY COMPONENTS WITH THE EXISTING LIGHTNING PROTECTION GROUNDING COMPONENTS USING BI-METAL CONNECTORS WHERE MATERIAL COMPATIBILITY WILL NOT AFFECT THE NEW ROOFING ASSEMBLY. INSTALL ALL LIGHTNING PROTECTION ASSEMBLIES AND COMPONENTS BY A QUALIFIED, LICENSED LIGHTNING PROTECTION INSTALLER WITH A MINIMUM OF 5 YEARS EXPERIENCE IN THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS IN ACCORDANCE WITH NFPA-780 AND ALL APPLICABLE BUILDING CODES.
  - 3.6 **ROOF ACCESS LADDER:** INSTALL NEW ROOF ACCESS LADDER. SEE SHEET A0.8 FOR SPECIFICATION AND DETAILS.



**EXISTING ROOFING ASSEMBLY NOTES:** EXISTING ROOFING ASSEMBLY THICKNESSES ARE APPROXIMATE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO ROOF ASSEMBLY THICKNESSES.

**EXISTING ROOFING ASSEMBLY - TYPE 1**

	ROOF COMPONENTS
ROOF FINISH	SINGLE-PLY ROOF MEMBRANE
INSULATION	POLYISOCYANURATE INSULATION
TOPPING SLAB	2 INCH CONCRETE TOPPING SLAB
STRUCTURAL DECK	SLOPED HOLLOW CORE ROOF DECK
ROOF FLASHINGS	PAINTED STEEL
DRAINAGE	ACTIVE SCUPPERS AND DOWNSPOUTS



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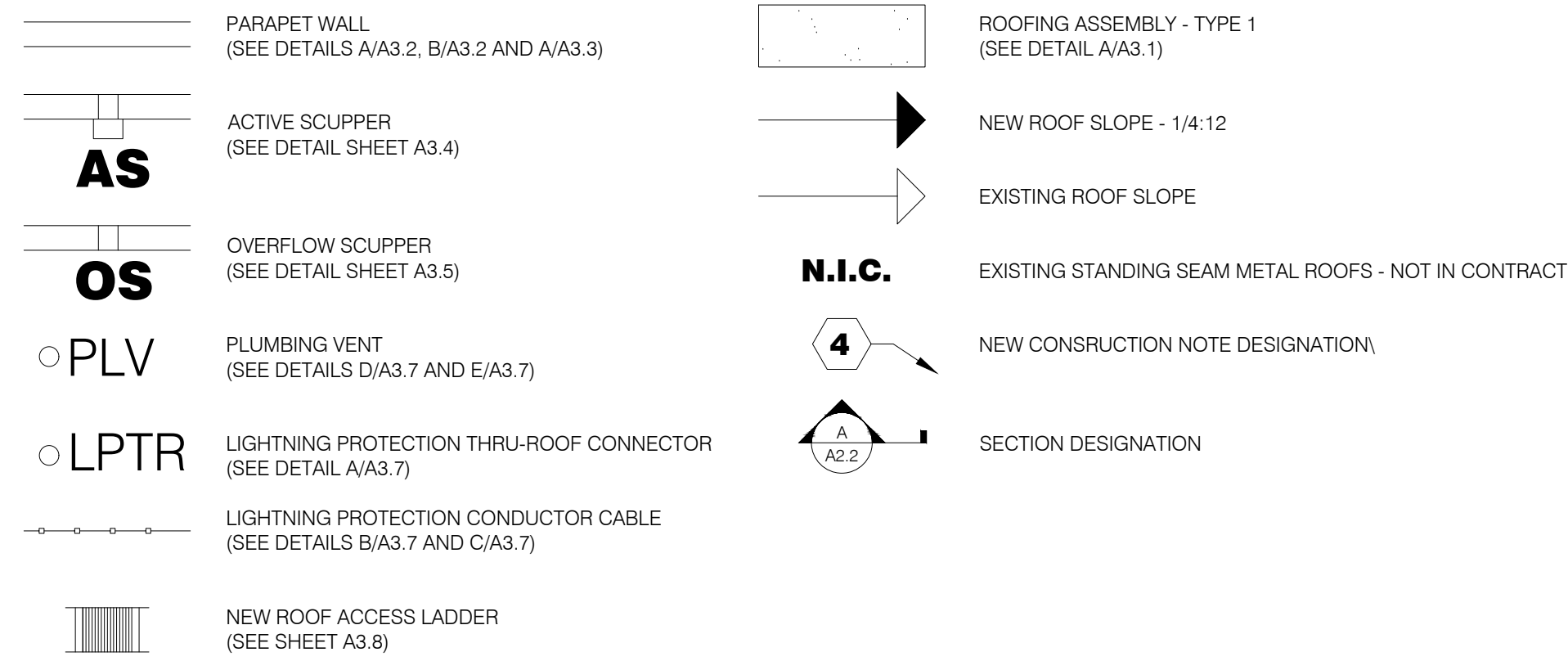
REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

**ELECTRICAL BUILDING - DEMOLITION ROOF PLAN**

PLOT: 3/16" = 1'-0" SHEET **A1.3**

**LEGEND**

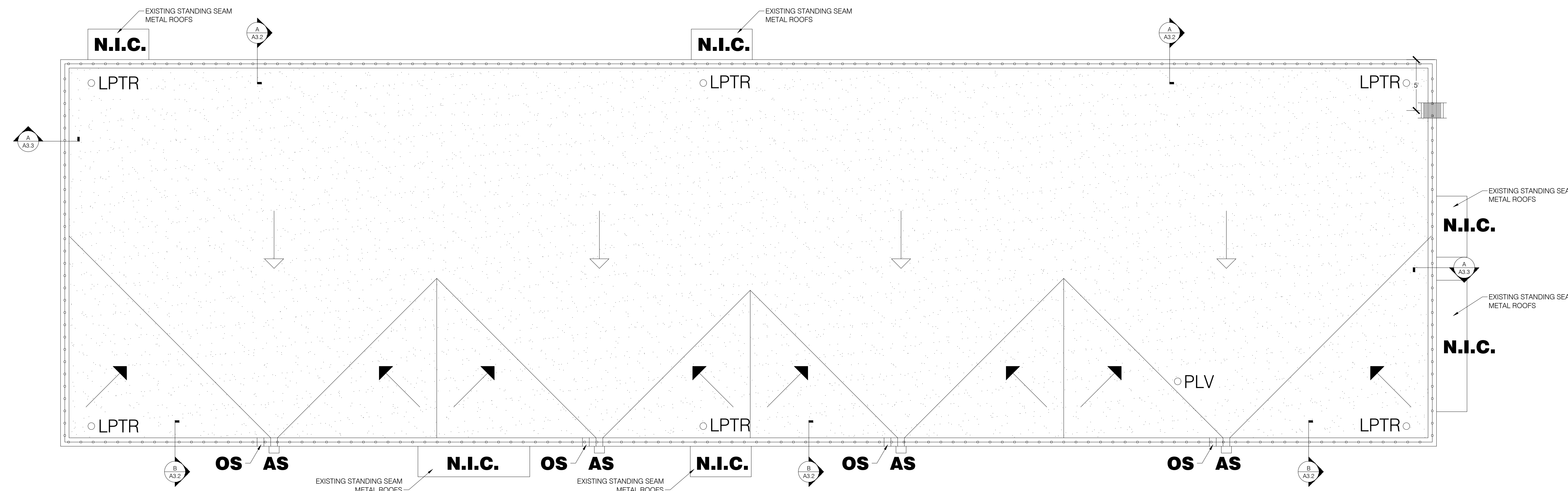


**NEW CONSTRUCTION NOTES**

- ONE-PIECE TRANSITION FLASHING:** INSTALL NEW ONE-PIECE TRANSITION FLASHING WITH ALL WELDED NON-MOVING JOINTS. PREPARE IN-PLACE MOCKUP FOR OWNER AND A/E APPROVAL.

**SCOPE OF WORK**

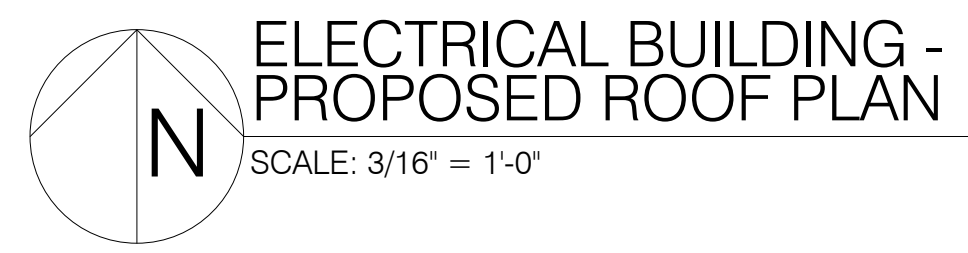
- THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:**
- GENERAL:**
    - ENGINEERING:** CONDUCT PULL TESTS OF THE EXISTING ROOF DECK. PROVIDE ENGINEERING CALCULATIONS PREPARED BY A FLORIDA LICENSED STRUCTURAL ENGINEER INCLUDING THE ATTACHMENT SPACING FOR EACH ROOF WIND ZONE. SUBMIT PULL TEST RESULTS AND THE ENGINEERING CALCULATIONS TO THE ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF THE ROOFING INSTALLATION. SEE DRAWINGS FOR WIND PRESSURES.
    - SUBSTRATE PREPARATION:** PREPARE, REPAIR, OR REPLACE ALL SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOFING ASSEMBLY SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING ASSEMBLY THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE ASSEMBLY.
    - WARRANTY:** THE NEW ROOFING ASSEMBLY IS TO BE EXAMINED AND APPROVED BY THE MANUFACTURERS OF THE ROOFING ASSEMBLY AND SHALL RECEIVE A 20 YEAR NDL LABOR AND MATERIAL WARRANTY AGAINST DEFECTS AND LEAKS. THE CONTRACTOR SHALL SUBMIT A 5 YEAR NDL WARRANTY FOR ALL WORK AGAINST DEFECTS AND LEAKS UPON COMPLETION OF THE WORK. ADJUST THE SCOPE OF WORK AS REQUIRED TO OBTAIN THIS WARRANTY.
    - SUBSTRATE PREPARATION:** REPLACE ALL DETERIORATED SUBSTRATE MATERIAL TO A CONDITION REQUIRED BY THE ROOF MEMBRANE MANUFACTURER. PREPARE ALL EXISTING SURFACES TO WHICH NEW OR REINSTALLED COMPONENTS ARE TO BE ATTACHED AS REQUIRED BY THE MANUFACTURER OF EACH NEW COMPONENT. REPLACE OR REPAIR ALL DAMAGED SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING, BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOF MEMBRANE, SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING MEMBRANE THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE PROPOSED ROOF ASSEMBLY.
  - ROOFING ASSEMBLY - PUMP STATION: SEE SHEET A1.1.**
  - ROOFING ASSEMBLY - ELECTRIC BUILDING:**
  - DEMOLITION:** REMOVE EXISTING ROOF MEMBRANE AND INSULATION FROM TOP SURFACE OF EXISTING CONCRETE TOPPING SLAB. REMOVE ALL METAL FLASHINGS INCLUDING BUT NOT LIMITED TO THE COPINGS, COUNTERFLASHINGS, AND SCUPPERS. REMOVE DESIGNATED WALL SURFACES FOR INSTALLATION OF NEW EMERGENCY OVERFLOW SCUPPERS.
  - INSTALLATION OF NEW ROOFING ASSEMBLY:** PRIME THE EXISTING CONCRETE TOPPING SLAB AND TORCH APPLY A VAPOR BARRIER, COMPOSED OF A MODIFIED BITUMINOUS MEMBRANE, OVER THE CONCRETE TOPPING SLAB. INSTALL FLAT INSULATION OVER THE STRUCTURALLY SLOPED EXISTING ROOF DECK AND TAPERED INSULATION AT THE CRICKETS, IN A MINIMUM OF TWO STAGGERED LAYERS, ADHERED WITH URETHANE ADHESIVE OVER THE TEMPORARY ROOF MEMBRANE. INSTALL TAPERED INSULATION CRICKETS AS REQUIRED TO ACHIEVE A MINIMUM SURFACE SLOPE OF 1/4 INCH PER LINEAR FOOT POSITIVE SLOPE TOWARD THE SCUPPERS. INSTALL A 1/2 INCH COVER BOARD IN URETHANE ADHESIVE OVER THE INSULATION AND UP ALL ADJACENT WALL SURFACES. TORCH APPLY A SMOOTH MODIFIED BITUMINOUS MEMBRANE BASE SHEET OVER THE COVER BOARD. TORCH APPLY A GRANULATED MODIFIED BITUMINOUS CAP SHEET OVER THE BASE SHEET. AT ALL BASE FLASHINGS, TORCH APPLY A SMOOTH MODIFIED BITUMINOUS BASE FLASHING INNER PLY AND A GRANULATED MODIFIED BITUMINOUS BASE FLASHING OUTER PLY OVER THE COVER BOARDS AT THE ADJACENT VERTICAL WALLS.
  - INSTALLATION OF NEW METAL FLASHINGS:** FABRICATE AND INSTALL STAINLESS STEEL FLASHINGS COMPLYING WITH ALL ANSI / SPRI WIND RESISTANCE REQUIREMENTS AND WITH FULLY SOLDERED NON-MOVING SEAMS. NEW FLASHINGS INCLUDE BUT ARE NOT LIMITED TO COPINGS, SCUPPERS, AND LIGHTNING PROTECTION ROOF PENETRATIONS.
  - INSTALLATION OF NEW DOWNSPOUTS:** FABRICATE AND INSTALL NEW PVC DOWNSPOUTS SECURED WITH STAINLESS STEEL STRAPS. PAINT COPINGS TO MATCH COLOR OF EXISTING WALLS.
  - LIGHTNING PROTECTION:** REMOVE ALL LIGHTNING PROTECTION ASSEMBLY COMPONENTS ATTACHED TO THE ROOFING ASSEMBLY, INCLUDING BUT NOT LIMITED TO, AIR TERMINALS, CONDUCTOR CABLES, ATTACHMENT COMPONENTS, AND RELATED FASTENERS. REPLACE ALL EXISTING LIGHTNING PROTECTION WITH NEW COMPONENTS THAT WILL BE COMPATIBLE WITH THE NEW ROOFING ASSEMBLY. WHERE EXISTING LIGHTNING PROTECTION DOES NOT EXIST, INSTALL A NEW LIGHTNING PROTECTION ASSEMBLY. TIE-IN THE NEW LIGHTNING PROTECTION ASSEMBLY COMPONENTS WITH THE EXISTING LIGHTNING PROTECTION GROUNDING COMPONENTS USING BI-METAL CONNECTORS WHERE MATERIAL COMPATIBILITY WILL NOT AFFECT THE NEW ROOFING ASSEMBLY. INSTALL ALL LIGHTNING PROTECTION ASSEMBLIES AND COMPONENTS BY A QUALIFIED, LICENSED LIGHTNING PROTECTION INSTALLER WITH A MINIMUM OF 5 YEARS EXPERIENCE IN THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS IN ACCORDANCE WITH NFPA-780 AND ALL APPLICABLE BUILDING CODES.
  - ROOF ACCESS LADDER:** INSTALL NEW ROOF ACCESS LADDER. SEE SHEET A3.8 FOR SPECIFICATION AND DETAILS.



**EXISTING ROOFING ASSEMBLY NOTES:** EXISTING ROOFING ASSEMBLY THICKNESSES ARE APPROXIMATE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO ROOF ASSEMBLY THICKNESSES.

**PROPOSED ROOFING ASSEMBLY - TYPE 1**

ROOF COMPONENTS	
ROOF MEMBRANE	GRANULE SURFACED MODIFIED BITUMEN CAP SHEET OVER BASE PLY
COVER BOARD	1/2" COVER BOARD
TAPERED INSULATION	TAPERED POLYISOCYANURATE INSULATION
FLAT INSULATION	FLAT POLYISOCYANURATE INSULATION
TEMPORARY ROOF	SAND-SURFACED MODIFIED BITUMEN PLY
EXISTING TOPPING SLAB	PRIME EXISTING CONCRETE TOPPING SLAB WITH ASTM D41 PRIMER
EXISTING STRUCTURAL DECK	EXISTING SLOPED HOLLOW CORE ROOF DECK
ROOF FLASHINGS	STAINLESS STEEL
DRAINAGE	ACTIVE SCUPPERS, DOWNSPOUTS AND OVERFLOW SCUPPERS



CONSTRUCTION DOCUMENTS  
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 SWRF INFLUENT PUMP STATION  
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 3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
 (407) 333-1977 • FAX: (407) 333-4686 • E MAIL: JAY@JAYAMMON.COM

REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

ELECTRICAL BUILDING -  
 PROPOSED ROOF PLAN  
 A1.4  
 PLOT: 3/16" = 1'-0" SHEET



**LEGEND**

===== ROOF EDGE

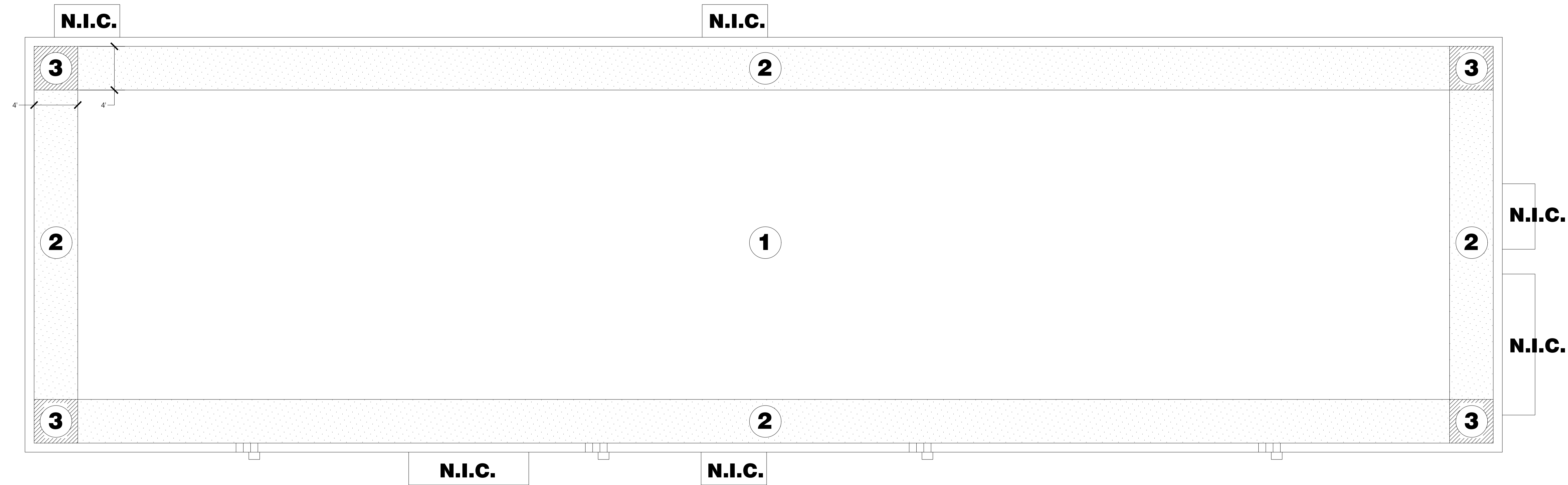
WIND DESIGN FOR ROOFING COMPONENTS AND CLADDING:  
 ASCE 7-10, Vult=150 mph wind, Vasd=116 mph wind, category III,  
 Exposure "C", Kd = 0.85, h = 25 ft., ENCLOSED BUILDING: GCpi = ± 0.18.  
 (VALUES USED TO MEET FM 1-28 "WIND DESIGN" FOR 1-90 WIND RATING)  
 WIND UPLIFT PRESSURES SHOWN ARE GROSS  
 PRESSURES FOR CORNER ZONE, EDGE ZONE, AND  
 FIELD ZONE FOR ROOF COMPONENTS AND CLADDING (C & C).  
 AREA ≤ 10 SF. WIND HAS BEEN CHECKED FOR AN  
 ENCLOSED STRUCTURE AT EACH ROOF SLOPE AND  
 HIGHEST WIND PRESSURES ARE SHOWN FOR EACH AREA.

CODES: FLORIDA BUILDING CODE 2017 (6TH ED) AND ASCE 7-10

**WIND PRESSURES:**

WIND UPLIFT PRESSURE LEGEND:		ASCE 7-10 ROOF C & C DESIGN PRESSURES
ZONE 1 - FIELD ZONE	①	-32.8 PSF
ZONE 2 - EDGE ZONE	②	-55.0 PSF
ZONE 3 - CORNER ZONE	③	-82.8 PSF

ALL PRESSURES ARE ALLOWABLE STRESS DESIGN (ASD).  
 DEPTH OF PERIMETER AND CORNER ZONES FROM ROOF EDGE - 'a' DIMENSION IS 4 FEET



**ELECTRICAL BUILDING -  
 WIND UPLIFT PRESSURE ROOF PLAN**  
 SCALE: 3/16" = 1'-0"

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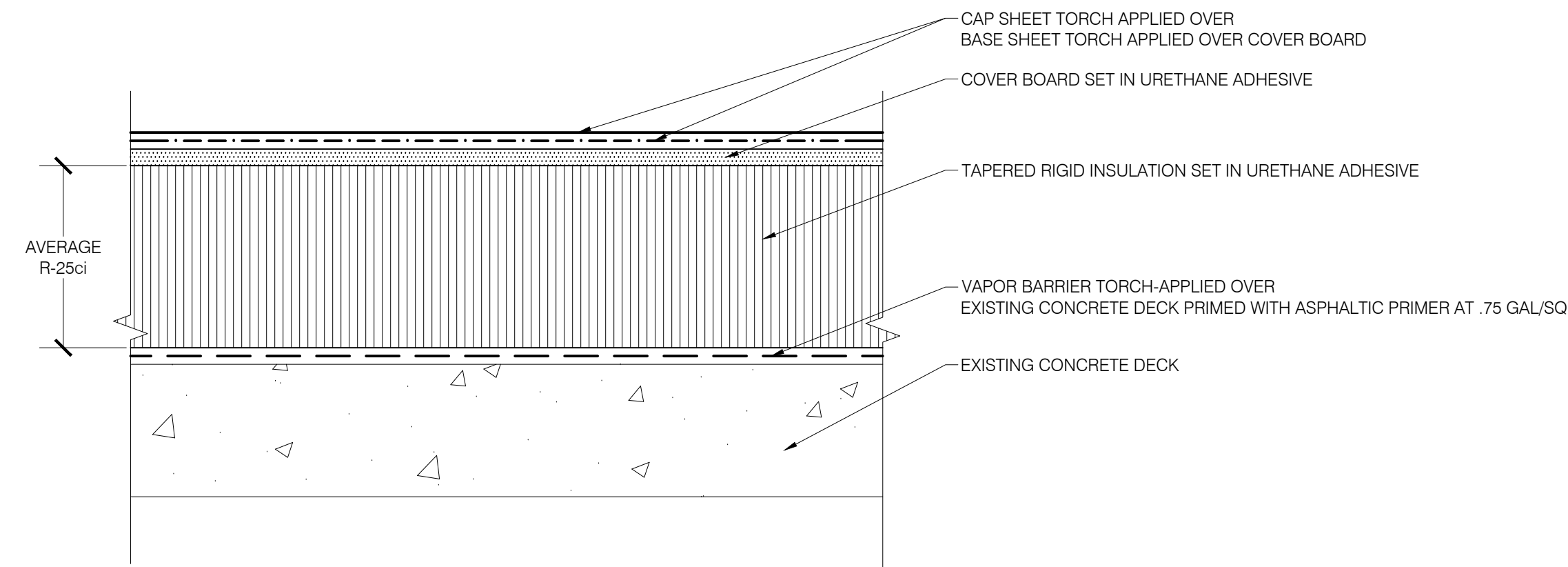
DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

**ELECTRICAL BUILDING -  
 WIND UPLIFT PRESSURE ROOF PLAN**

PLOT: 3/16" = 1'-0" SHEET **A1.5**

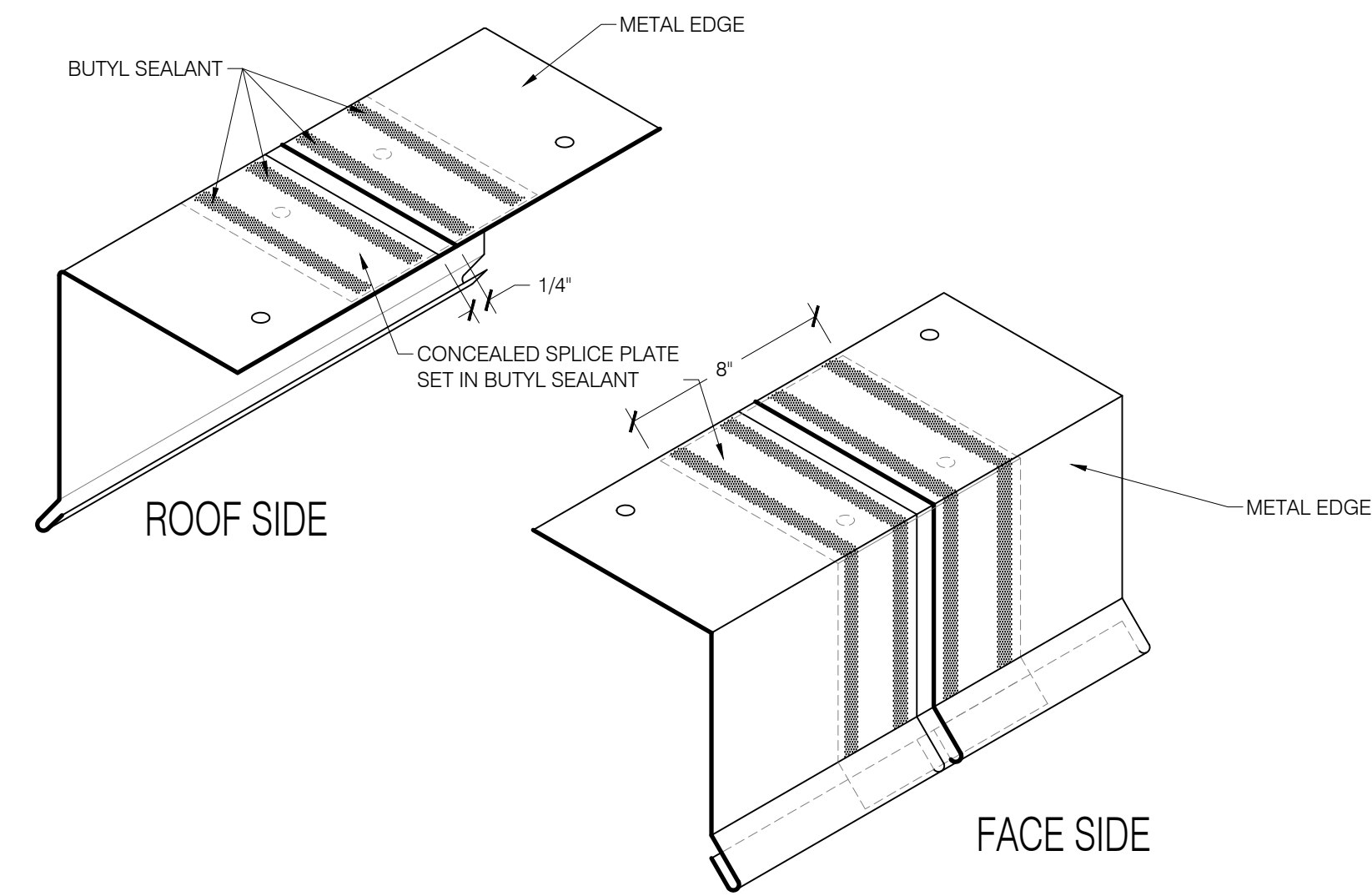
NOTES A/A2.1:

- A. BASIS OF DESIGN: FLORIDA PRODUCT APPROVAL: MIAMI-DADE NOA NO.: 15-0709.14, PAGES 109-110.
- B. SECUREMENT TYPE AND SPACING PER PRODUCT APPROVAL AND MANUFACTURER'S RECOMMENDATION TO MEET DESIGN WIND UPLIFT PRESSURES.
- C. EXISTING ROOFING ASSEMBLY THICKNESSES ARE APPROXIMATE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO ROOF ASSEMBLY THICKNESSES.

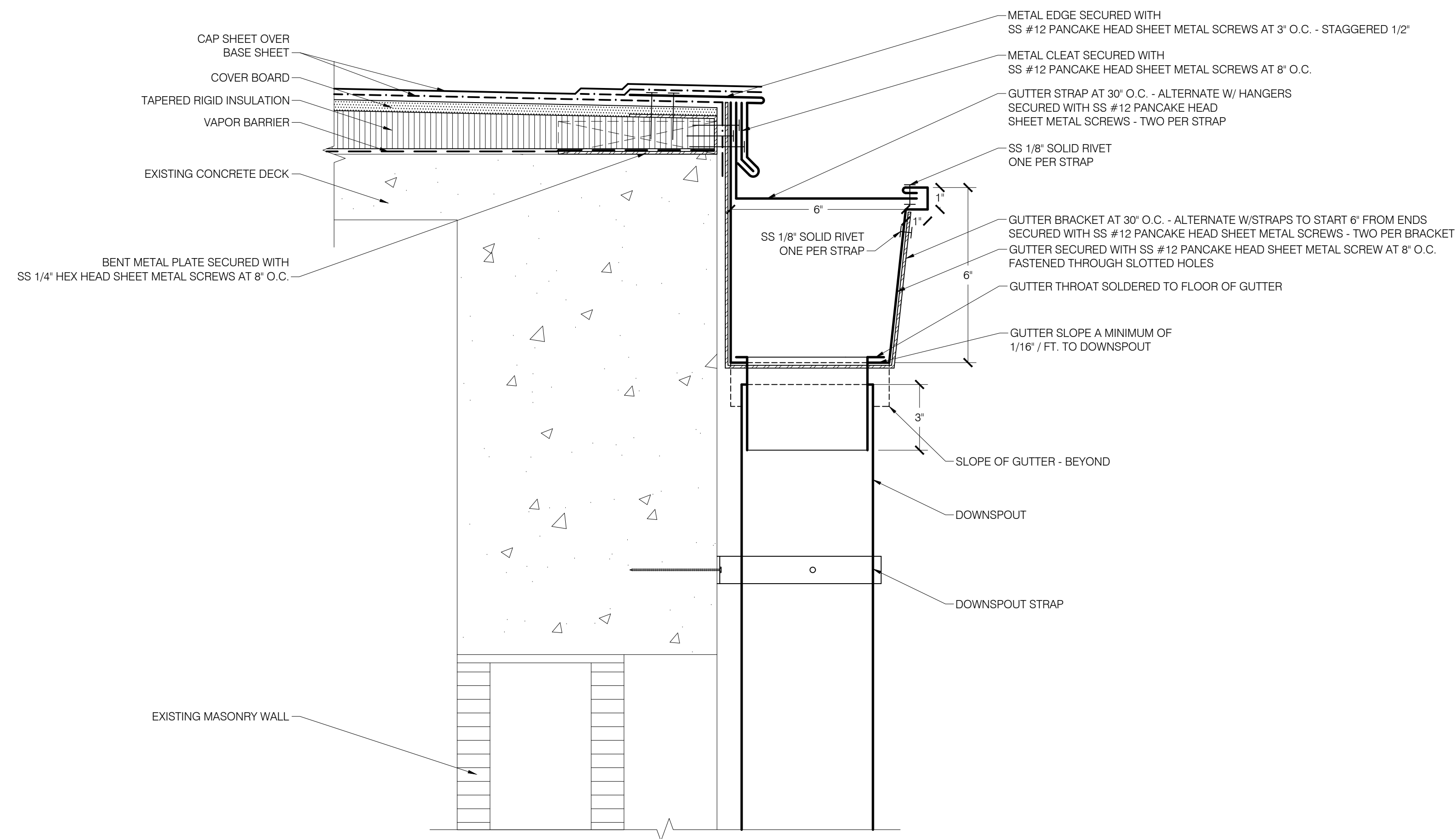


**A**  
A2.1  
NTS  
ROOFING ASSEMBLY - TYPE 1

NOTE: METAL CLEAT, STRIPPING PLY AND CAP SHEET NOT SHOWN FOR CLARITY.

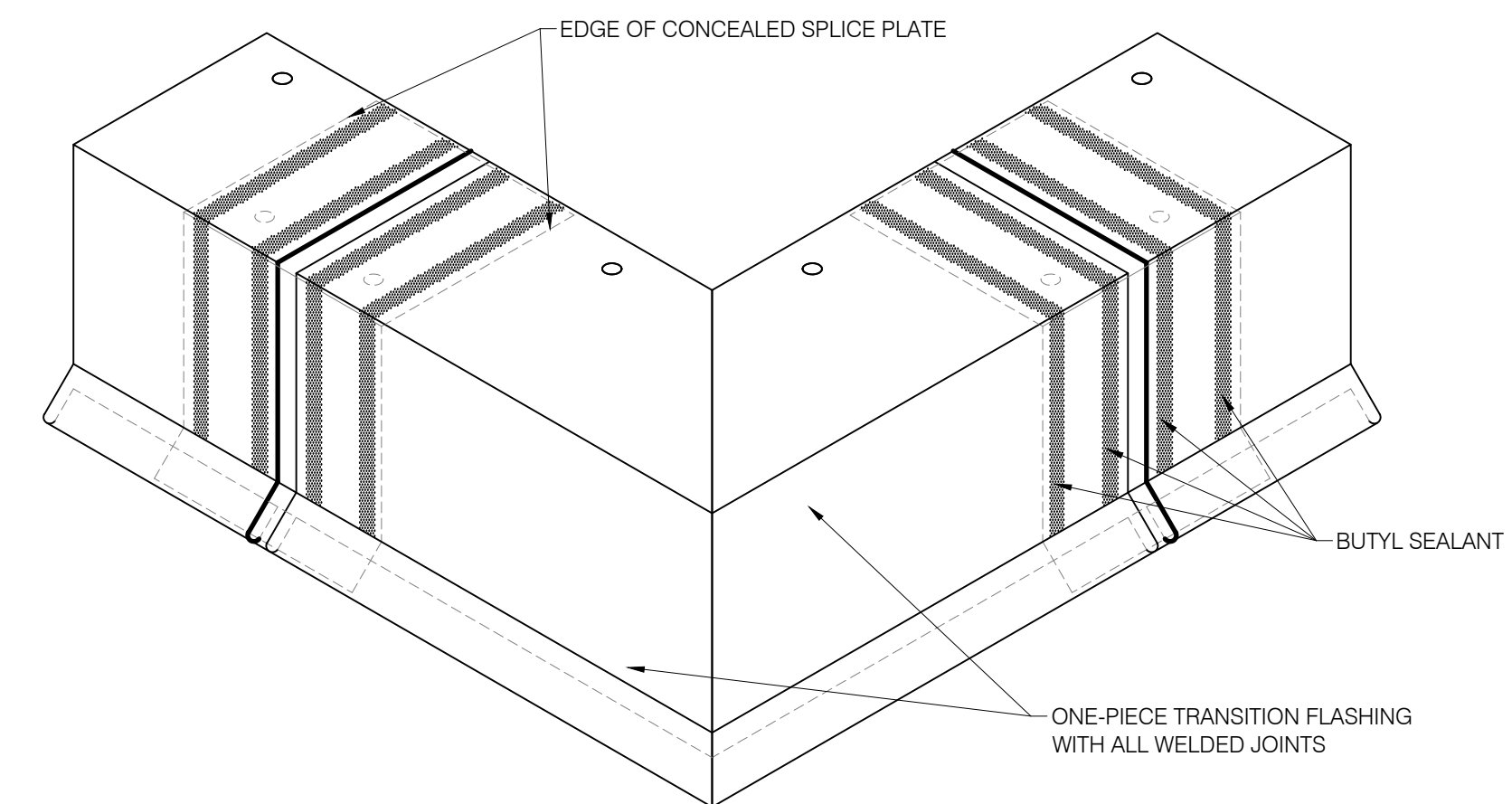


**C**  
A2.1  
NTS  
METAL EDGE - CONCEALED SPLICE PLATE



**B**  
A2.1  
NTS  
SECTION THROUGH ROOF EDGE - TYPICAL

NOTE: METAL CLEAT, STRIPPING PLY AND CAP SHEET NOT SHOWN FOR CLARITY.



**D**  
A2.1  
NTS  
METAL EDGE - OUTSIDE CORNER TRANSITION

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2, FLAT INSULATION BOARDS. INSTALL TAPERED INSULATION OVER FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 0755  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07631  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07220  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.

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 ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
 3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
 (407) 333-1977 • FAX: (407) 333-4686 • E MAIL: JAY@JAYAMMON.COM

REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

INFLUENT PUMP STATION -  
 ROOF DETAILS  
**A2.1**

PLOT: 3" = 1'-0" SHEET

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2. FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

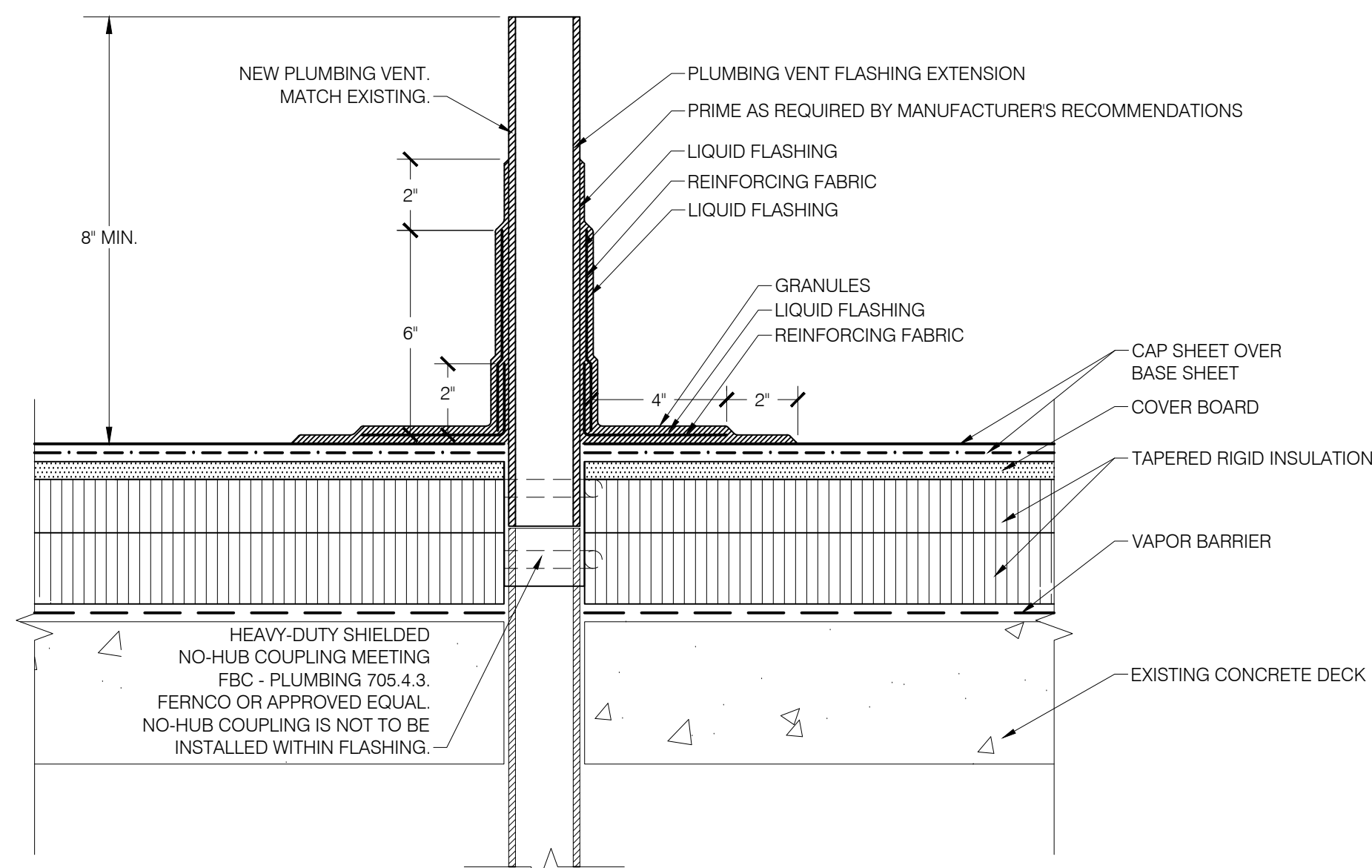
**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07550  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
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**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOT TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

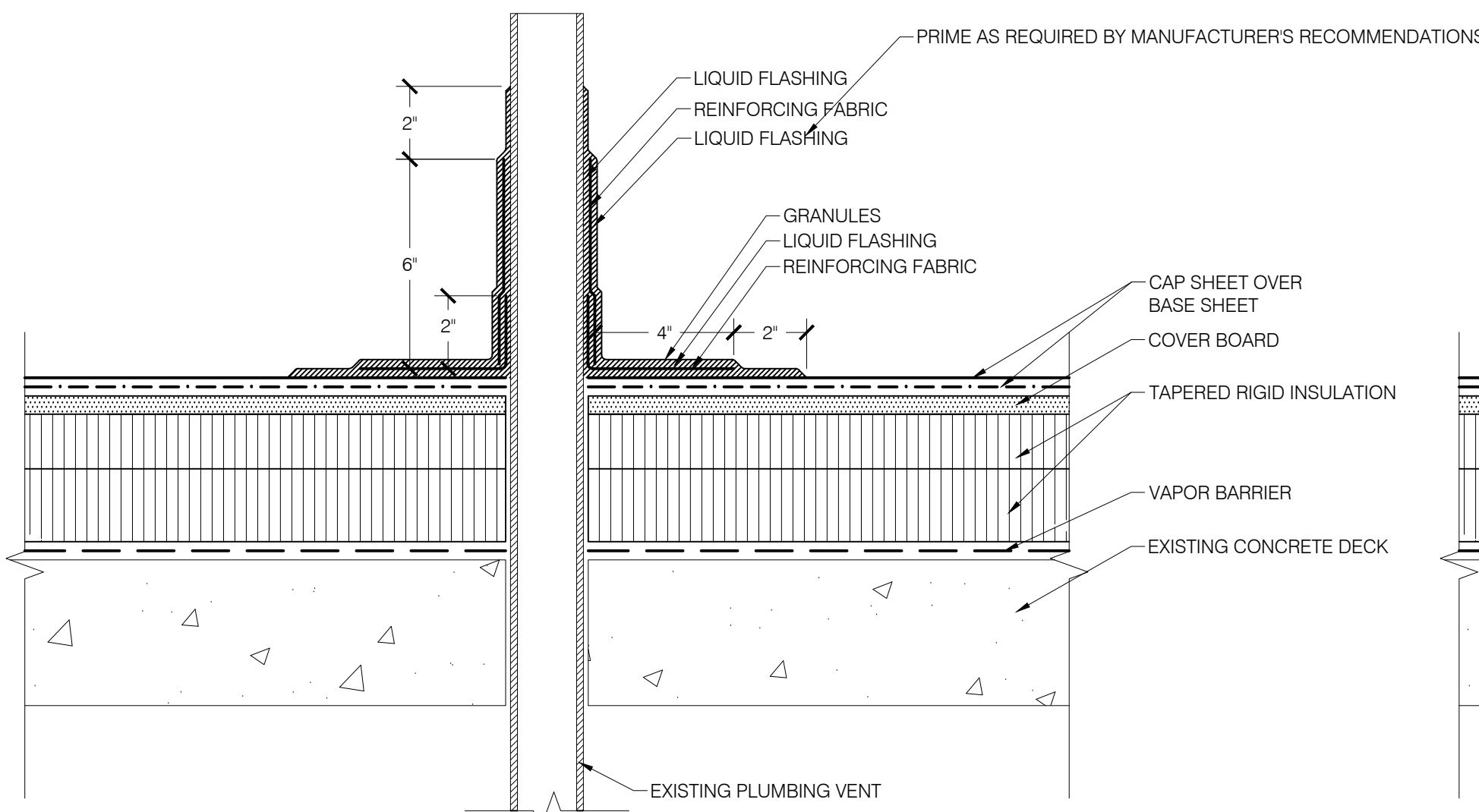
**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07220  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

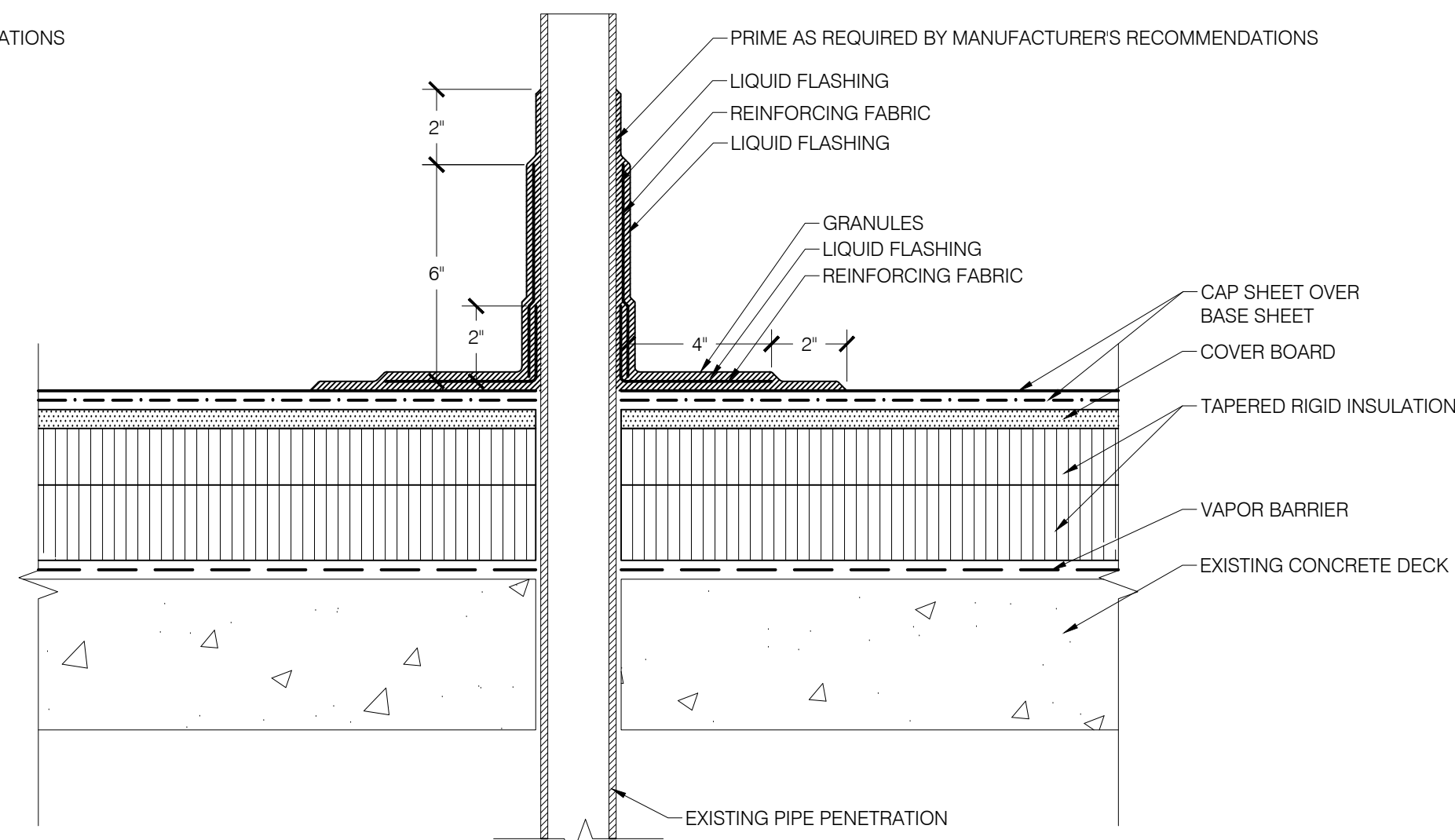
**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.



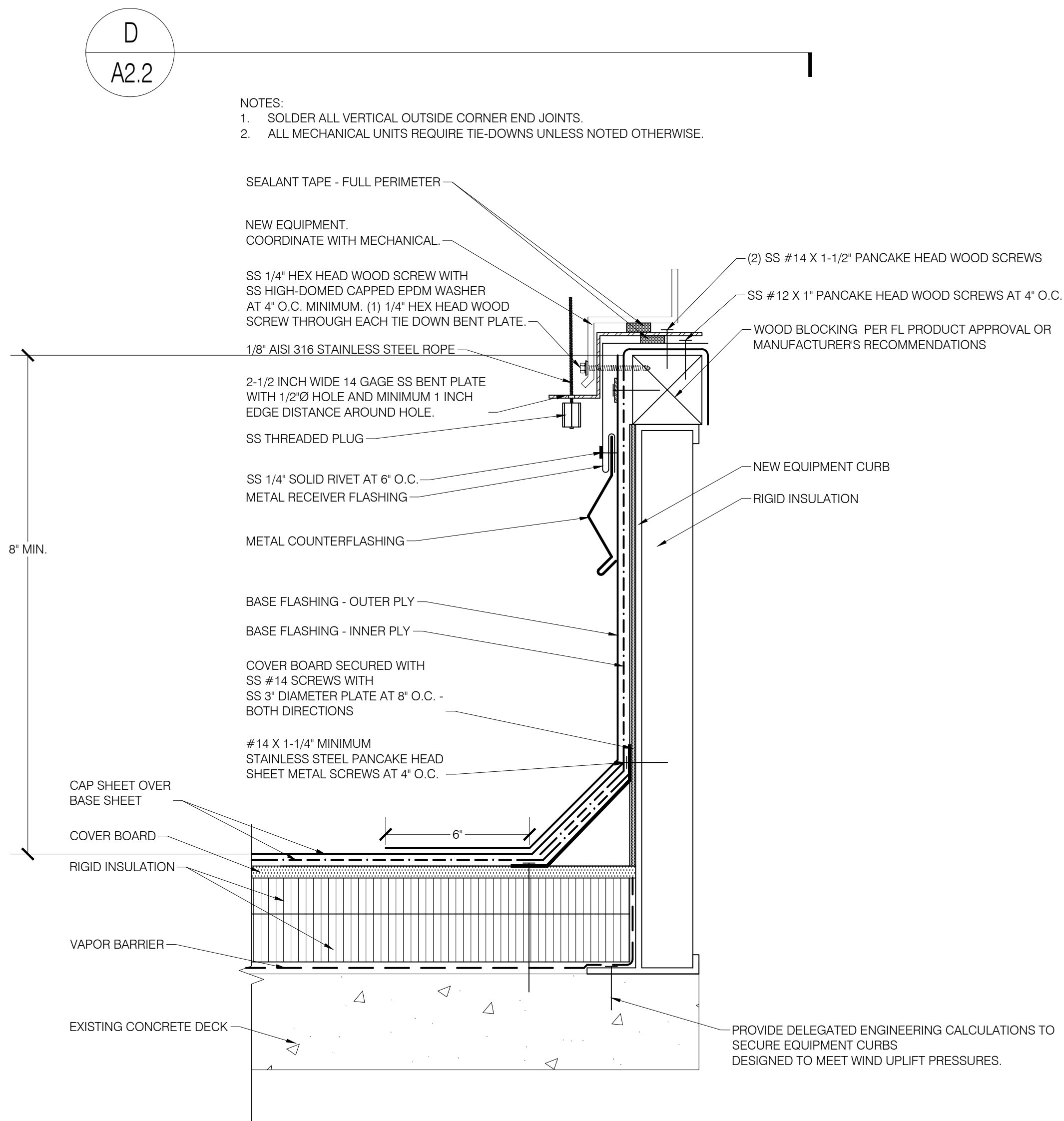
**A**  
**A2.2**  
 EXTENSION REQUIRED -  
 PLUMBING VENT FLASHING - TYPE 1  
 NTS



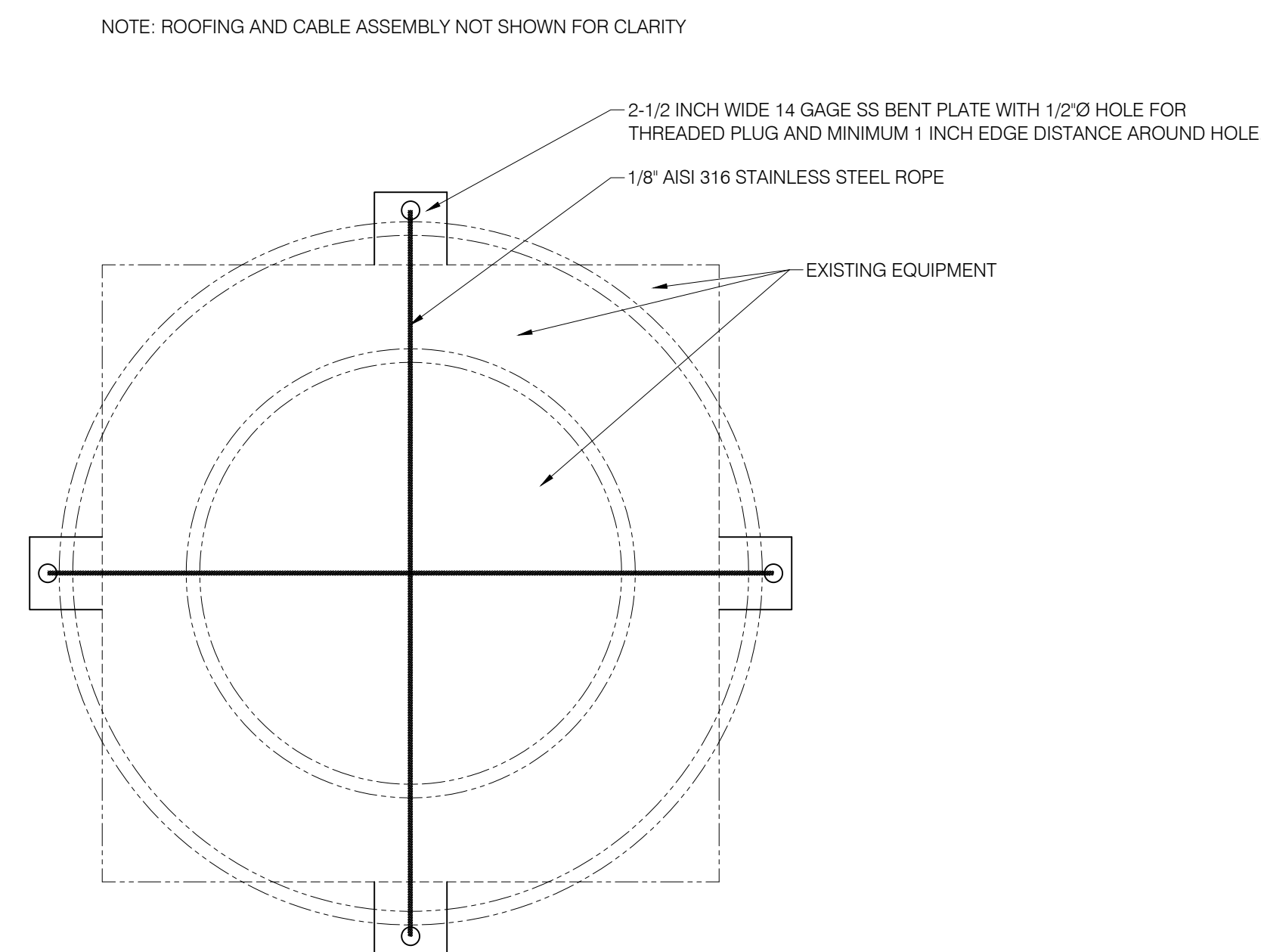
**B**  
**A2.2**  
 NO EXTENSION REQUIRED -  
 PLUMBING VENT FLASHING - TYPE 2  
 NTS



**C**  
**A2.2**  
 PIPE PENETRATION FLASHING  
 NTS



**D**  
**A2.2**  
 EQUIPMENT CURB FLASHING  
 NTS



**E**  
**A2.2**  
 EQUIPMENT TIE-DOWN - PLAN VIEW  
 NTS

NOTES:  
 1. SOLDER ALL VERTICAL OUTSIDE CORNER END JOINTS.  
 2. ALL MECHANICAL UNITS REQUIRE TIE-DOWNS UNLESS NOTED OTHERWISE.

NOTE: ROOFING AND CABLE ASSEMBLY NOT SHOWN FOR CLARITY

CONSTRUCTION DOCUMENTS  
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 SWRF INFLUENT PUMP STATION  
 AND  
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INFLUENT PUMP STATION -  
 ROOF DETAILS  
**A2.2**

PLOT: 3" = 1'-0" SHEET

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
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**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 0755  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
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**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
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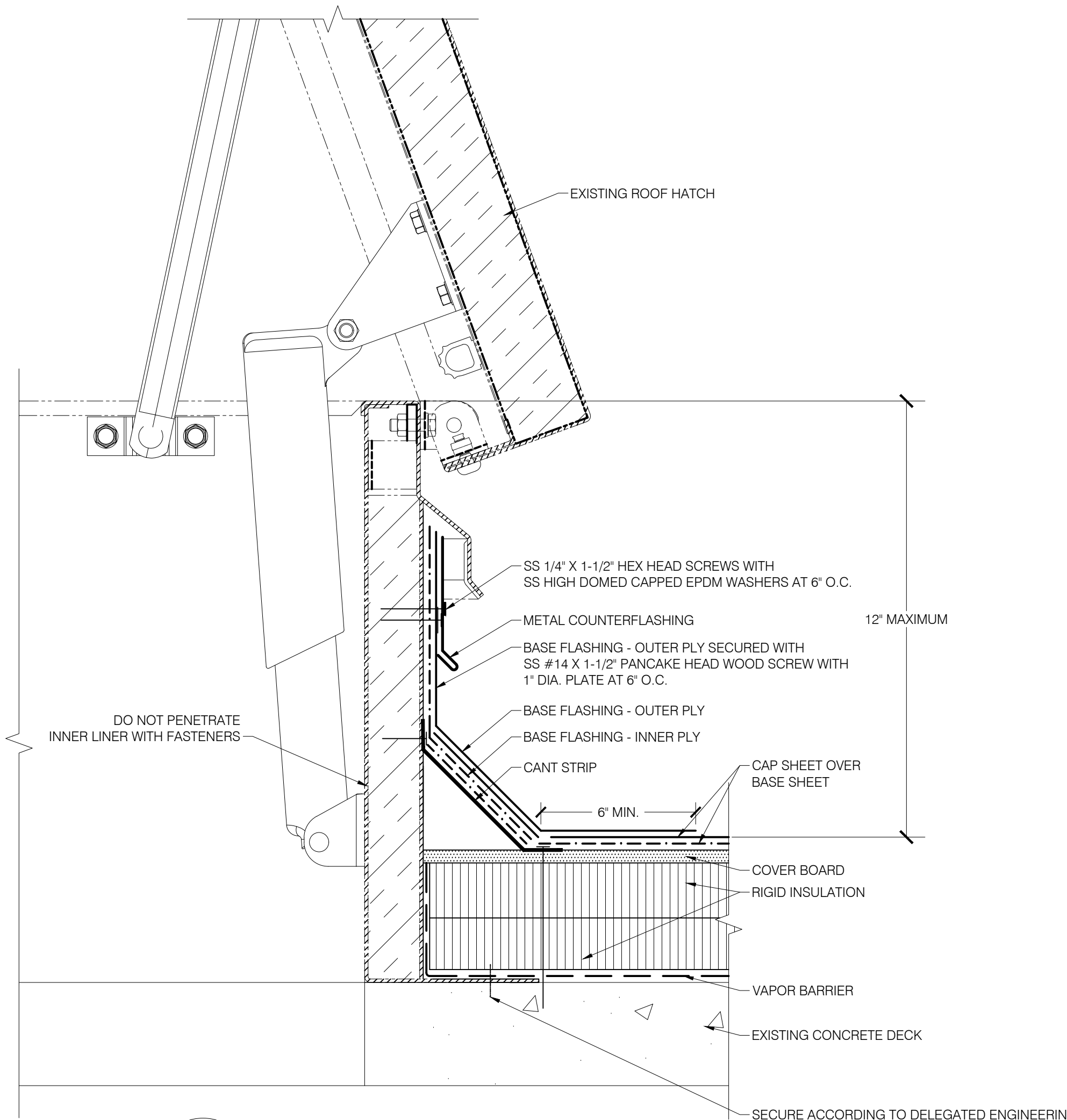
**ROOF ACCESSORIES** SPECIFICATION SECTION 07920  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
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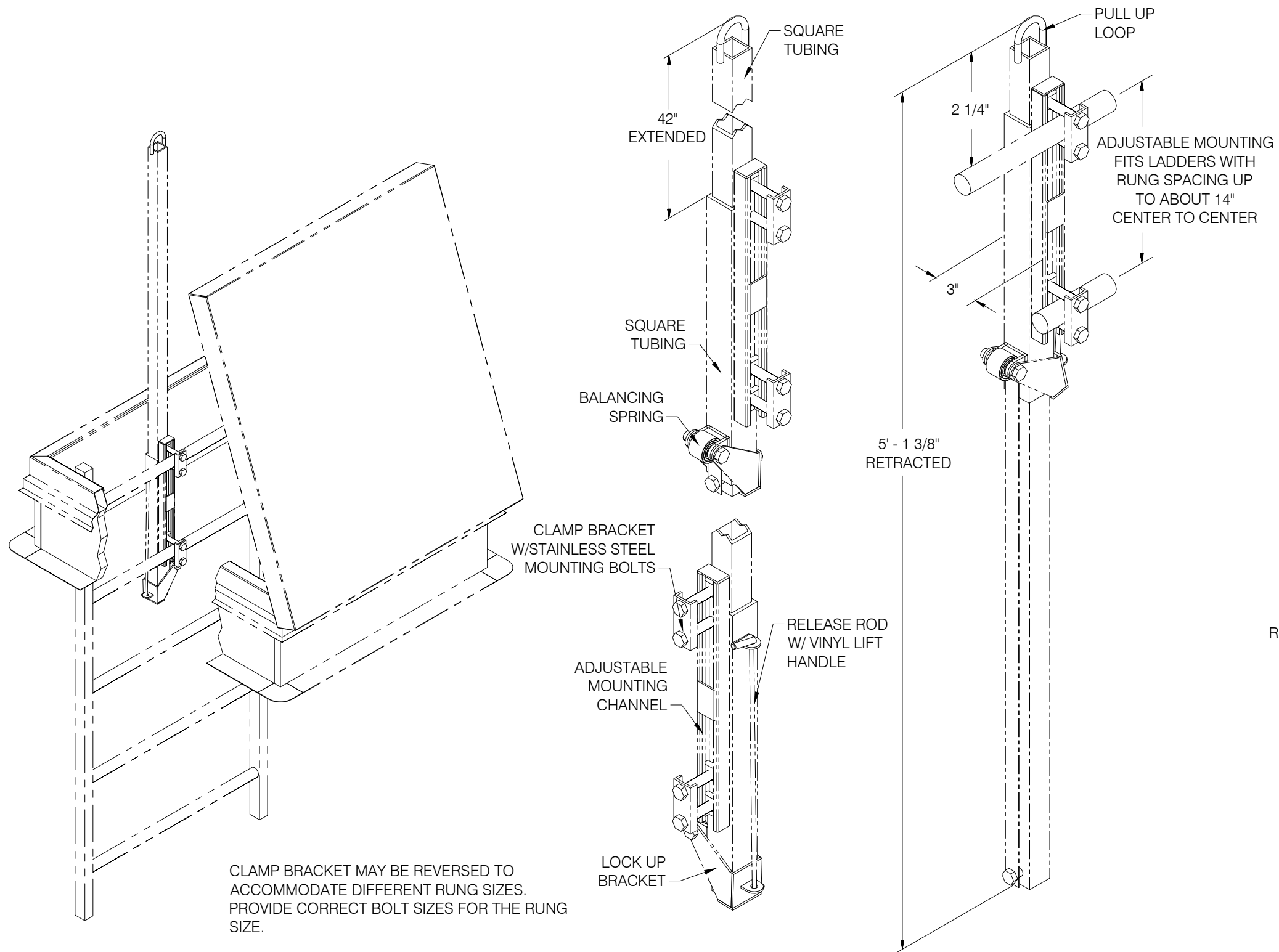
NOTES FOR A/A2.3:  
 1. TOP OF EXISTING LADDER RUNG TO TOP OF ROOF HATCH CURB TO BE NO GREATER THAN 12 INCHES.  
 2. TOP OF ROOF HATCH CURB TO TOP OF FINISHED ROOF SURFACE TO BE NO GREATER THAN 12 INCHES.  
 3. AT OUTSIDE CORNER TRANSITION FLASHING FULLY SOLDER ALL NON-MOVING JOINTS.

NOTES FOR B/A2.3:  
 1. BASIS OF DESIGN: MODEL BASED ON SIZE MANUFACTURED BY BILCO.

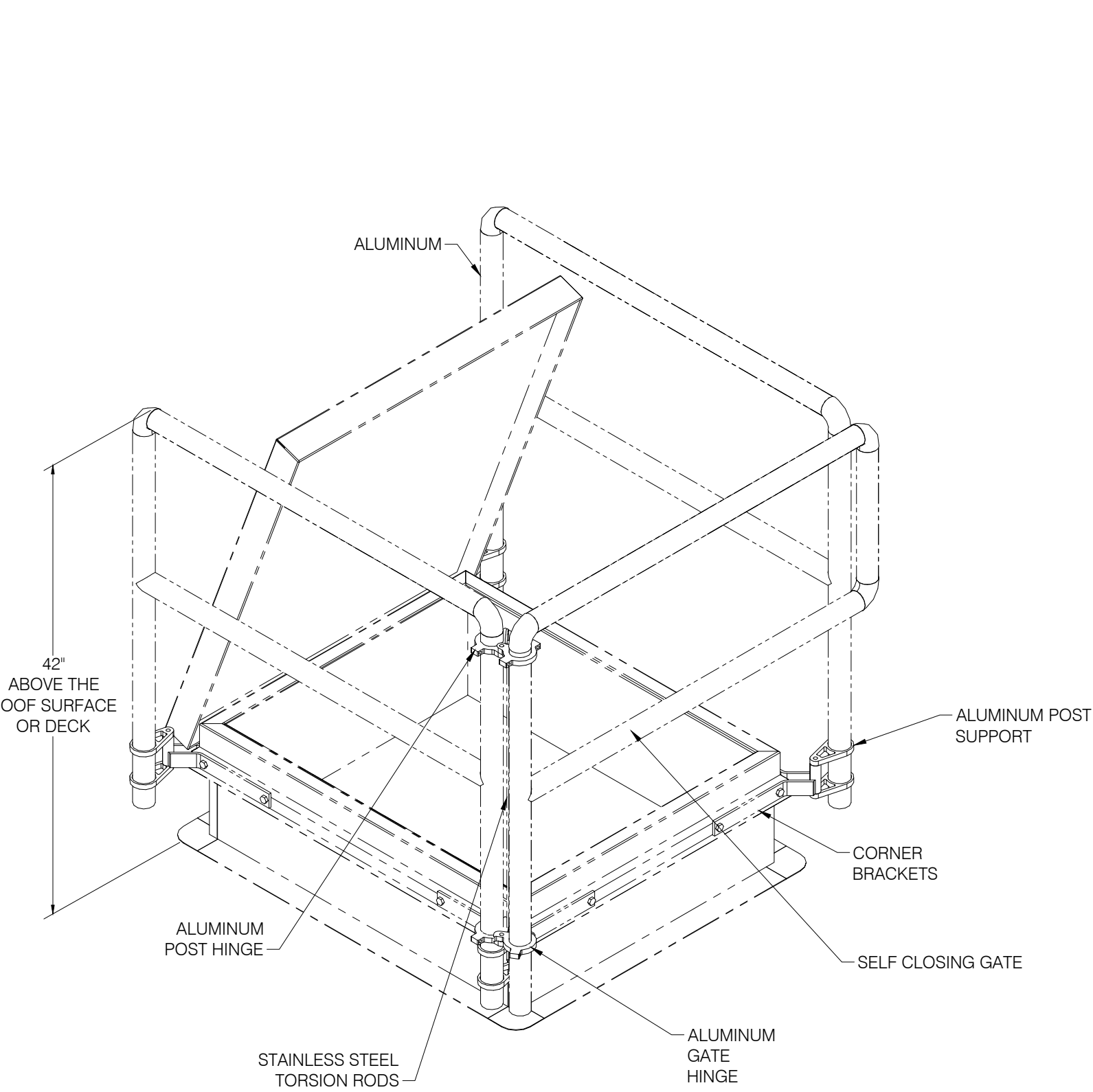
NOTES FOR C/A2.3:  
 1. BASIS OF DESIGN: MODEL BASED ON SIZE MANUFACTURED BY BILCO.



**A**  
 A2.3  
 ROOF HATCH SECTION



**B**  
 A2.3  
 ROOF HATCH SAFETY POST



**C**  
 A2.3  
 ROOF HATCH RAIL SYSTEM

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
 ORLANDO, FLORIDA  
 ROOF REPLACEMENT PROJECT

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 ROOF DETAILS  
**A2.3**

PLOT: 3" = 1'-0" SHEET

**MATERIAL COMPONENT SCHEDULE**

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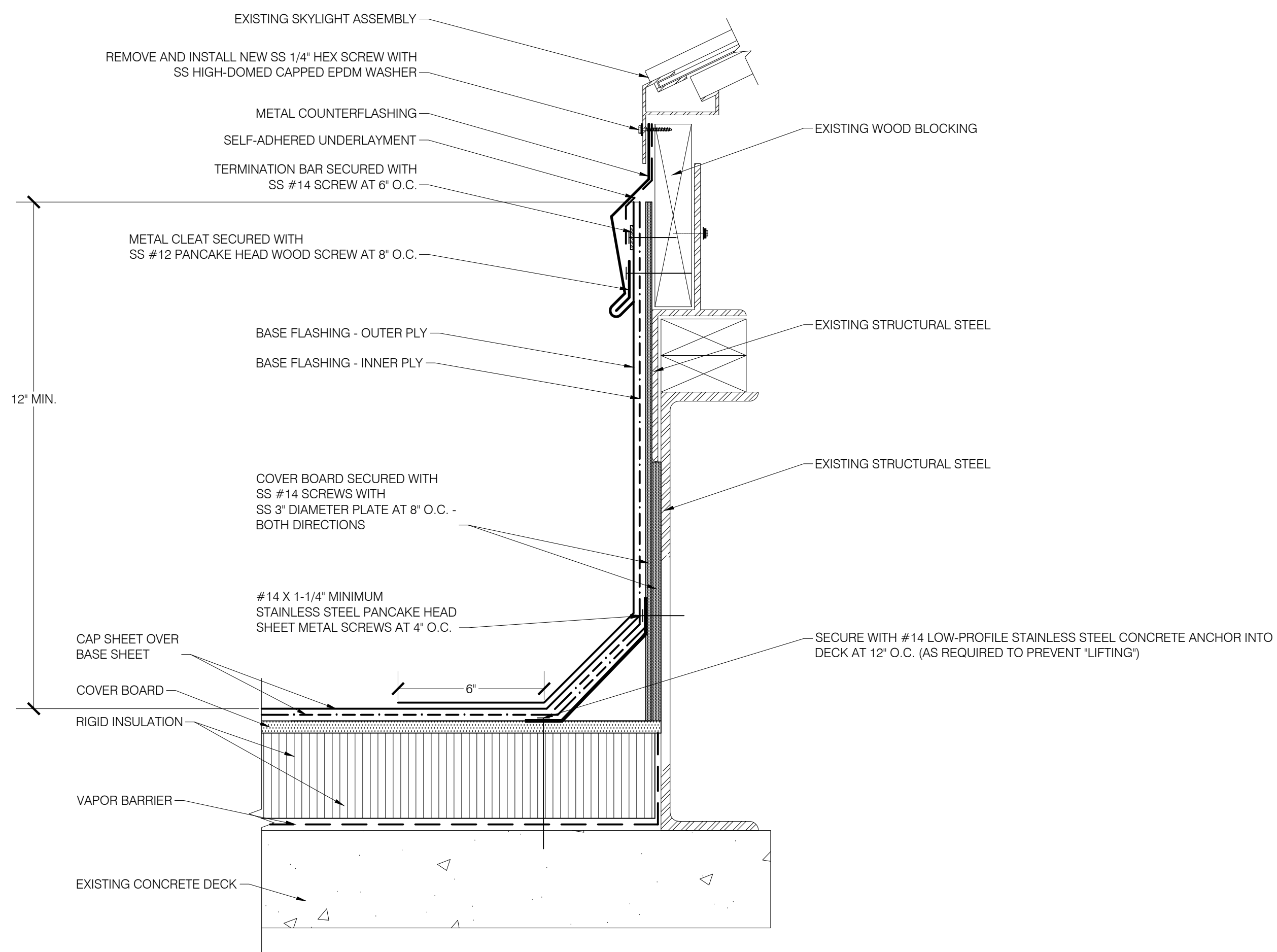
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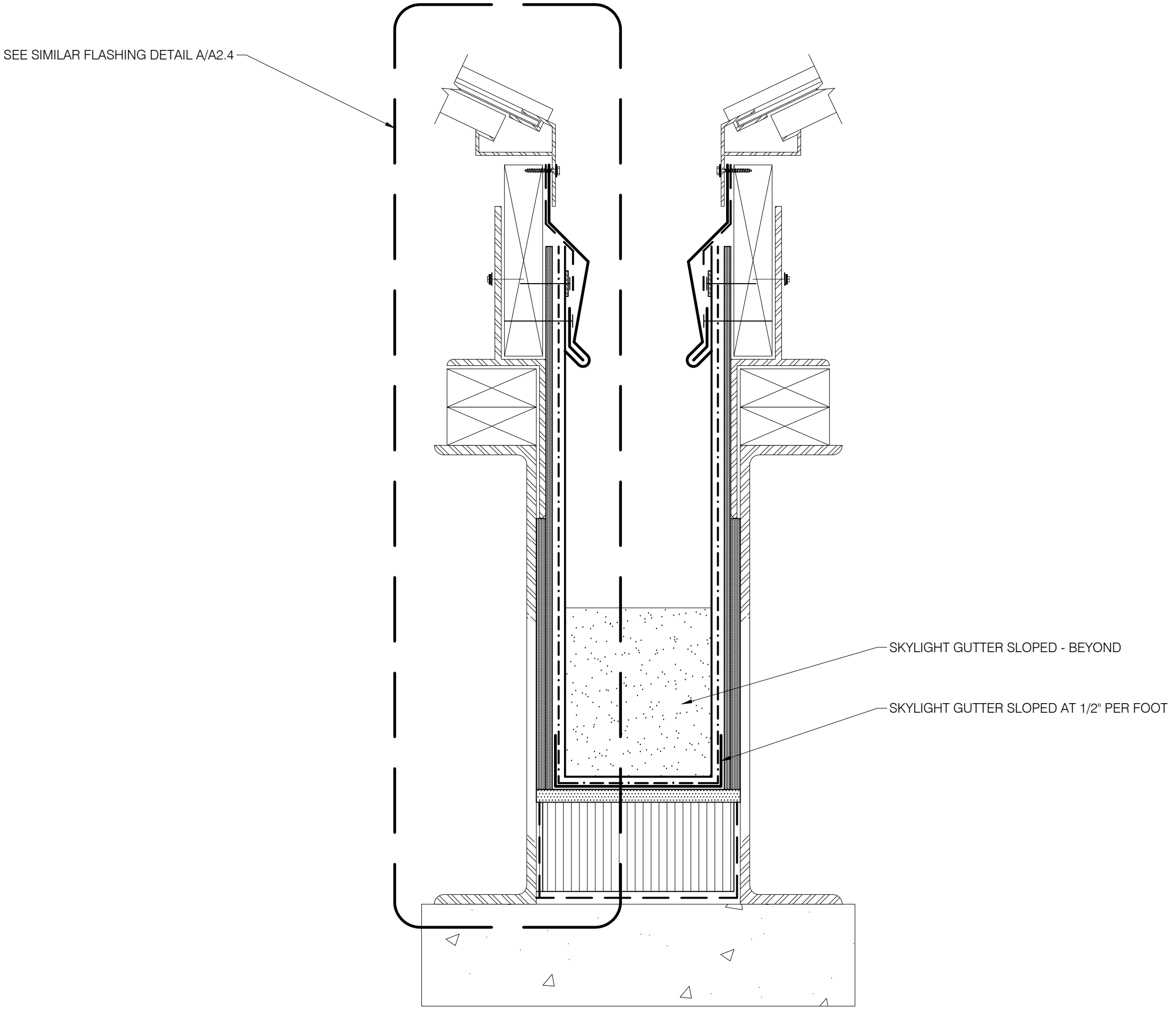
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A SECTION THROUGH SKYLIGHT  
A2.4



B SECTION THROUGH SKYLIGHT GUTTER  
A2.4

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
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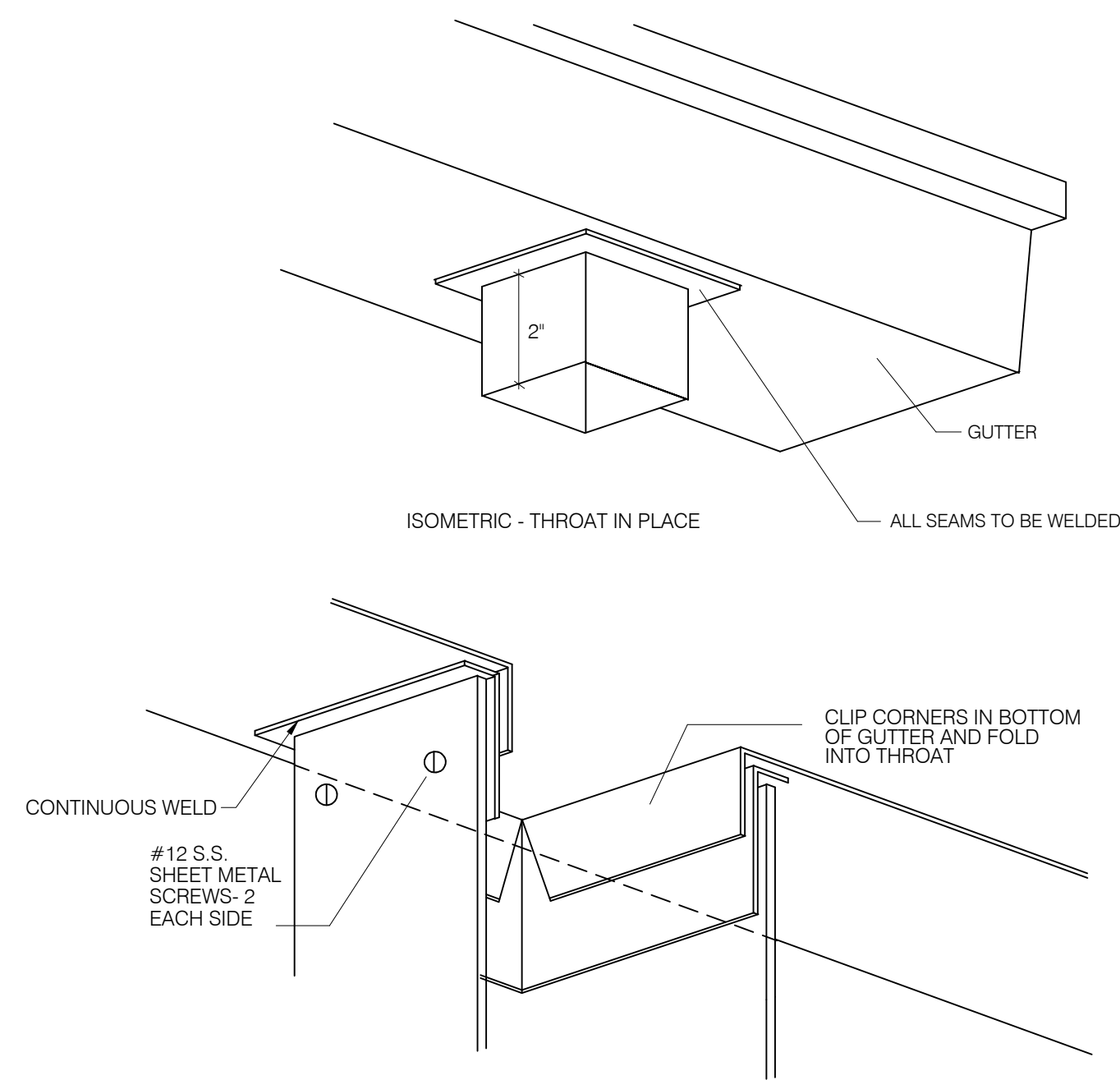
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**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

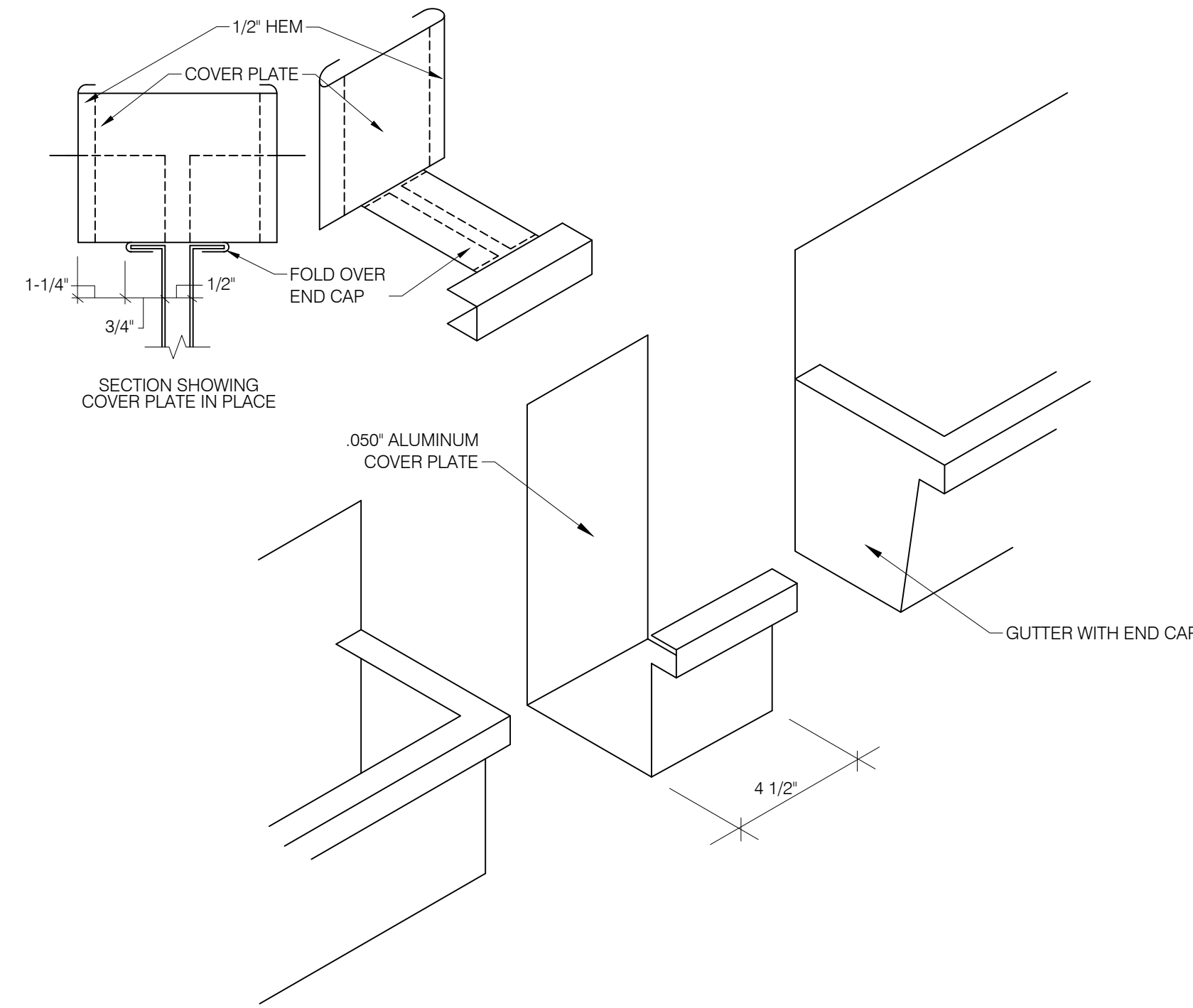
**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07631  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07920  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

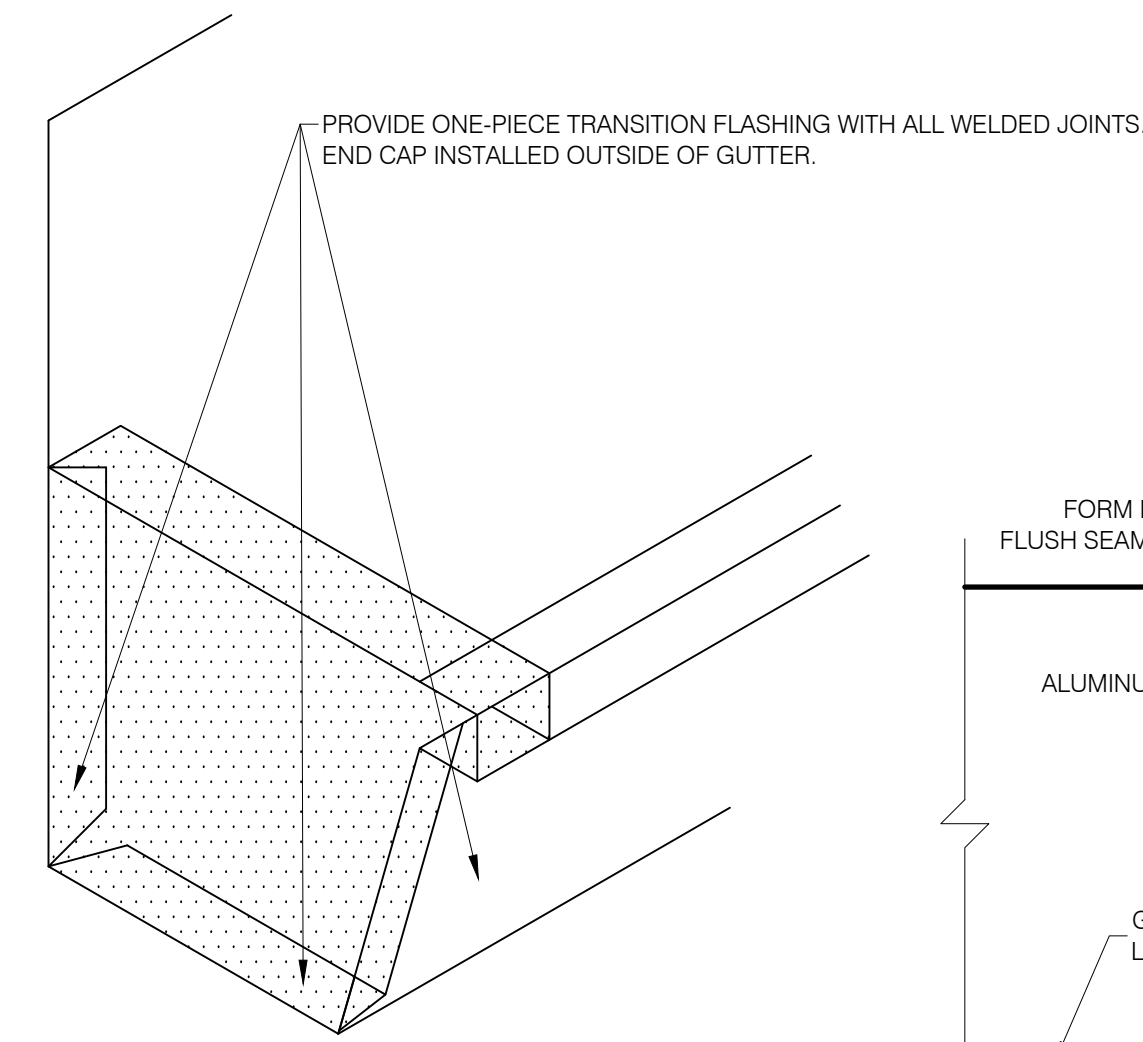
**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.



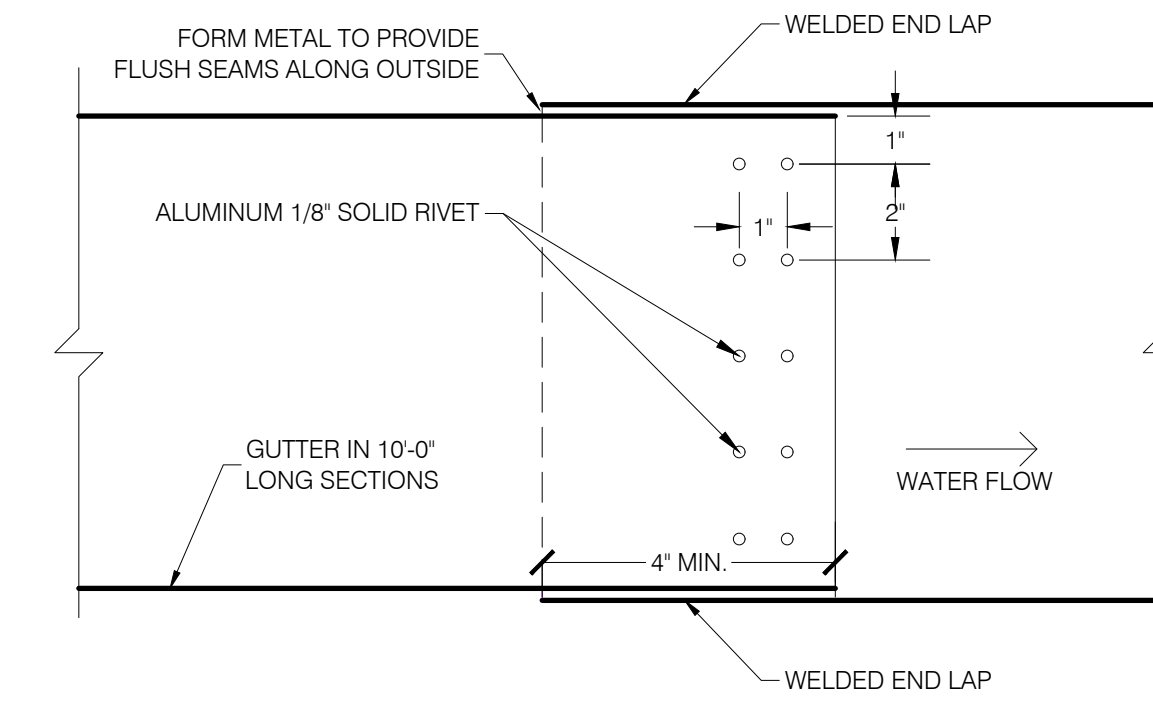
**A** GUTTER DOWNSPOUT CONNECTION  
 SCALE: NTS  
 A2.5



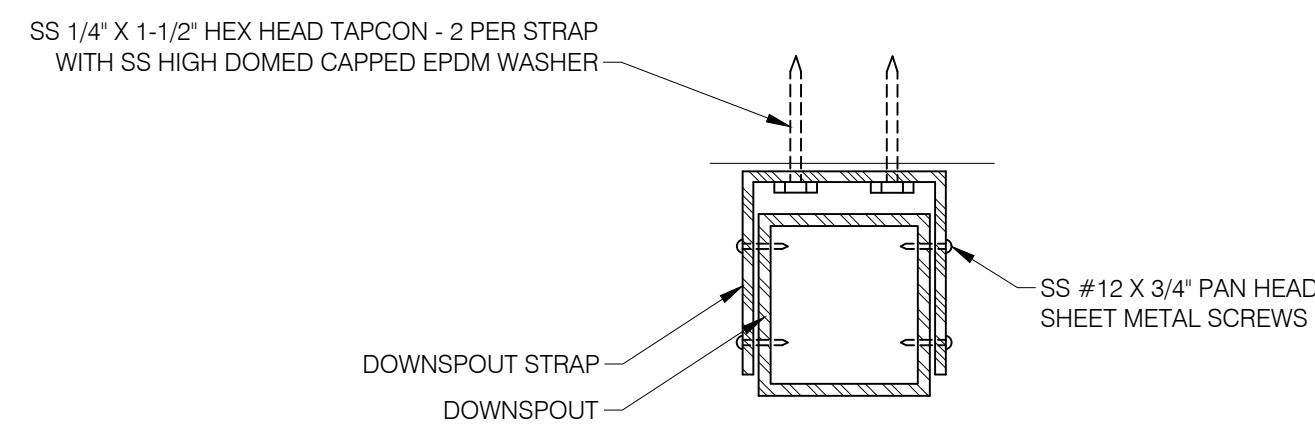
**B** GUTTER EXPANSION JOINT  
 SCALE: NTS  
 A2.5



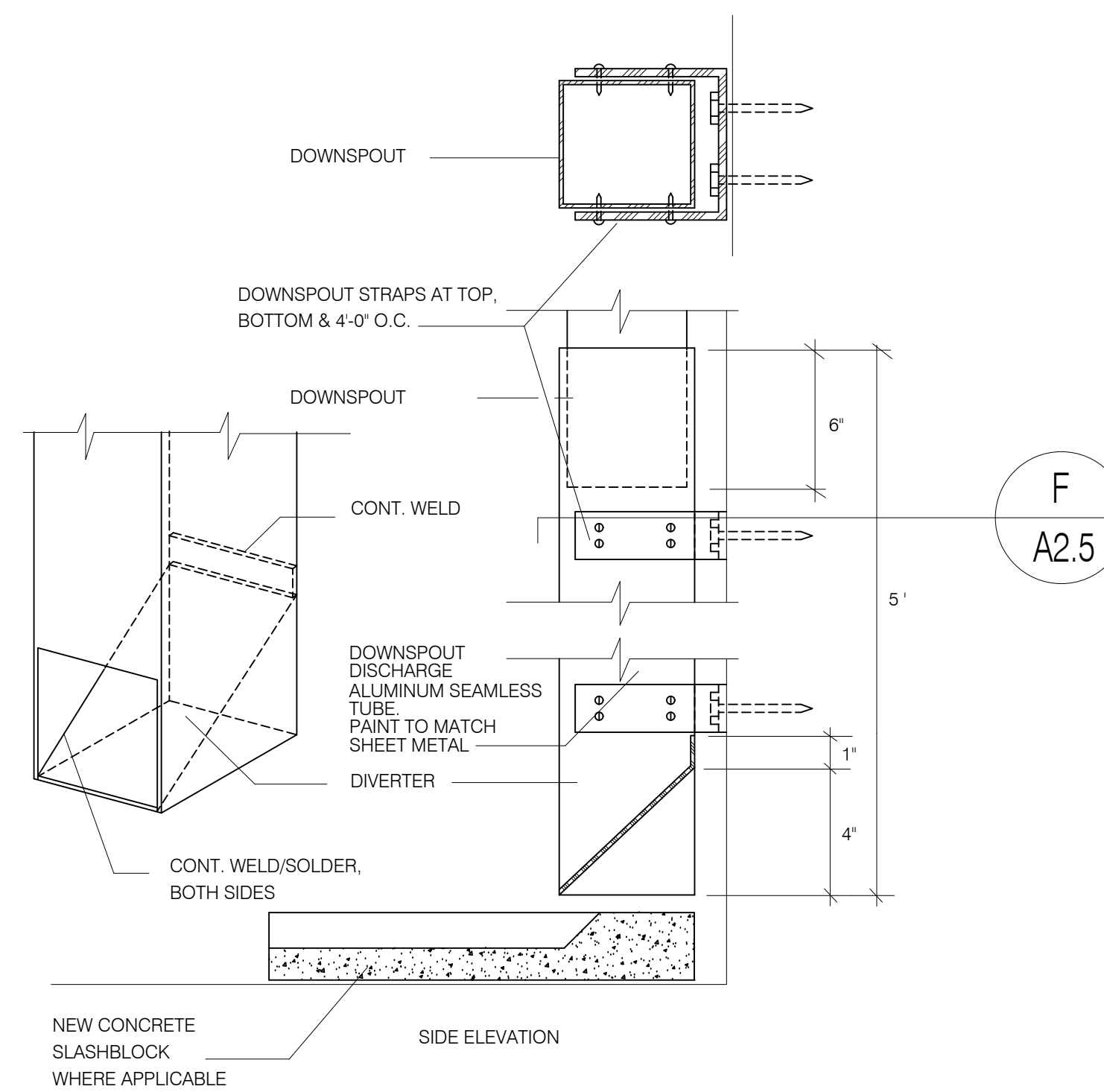
**C** GUTTER END CAP  
 SCALE: NTS  
 A2.5



**D** GUTTER END LAP  
 SCALE: NTS  
 A2.5



**E** DOWNSPOUT CONNECTION - AT GRADE  
 SCALE: NTS  
 A2.5



**F** DOWNSPOUT CONNECTION  
 SCALE: NTS  
 A2.5

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
 ORLANDO, FLORIDA  
 ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
 3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
 (407) 333-1977 • FAX: (407) 333-4686 • E MAIL: JAY@JAYAMMON.COM

REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

INFLUENT PUMP STATION -  
 ROOF DETAILS  
**A2.5**

PLOT: 3" = 1'-0" SHEET

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2, FLAT INSULATION BOARDS. INSTALL TAPERED INSULATION OVER FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

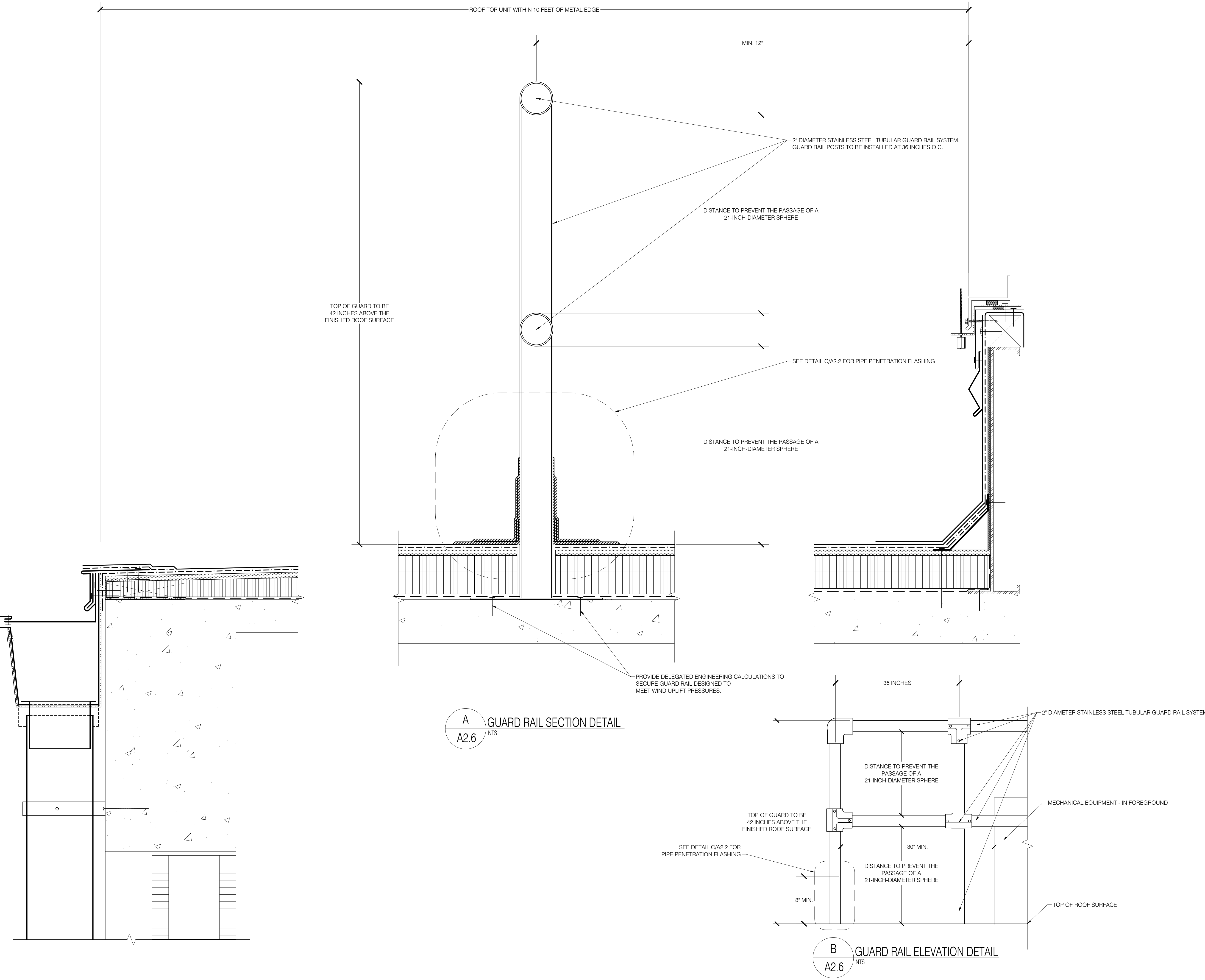
**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07550  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** 063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** 050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** 050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07720  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.



**A**  
**A2.6**  
 NTS  
**GUARD RAIL SECTION DETAIL**

**B**  
**A2.6**  
 NTS  
**GUARD RAIL ELEVATION DETAIL**

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
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 ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
 3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
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REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

**INFLUENT PUMP STATION - ROOF DETAILS**  
**A2.6**

PLOT: 3" = 1'-0" SHEET

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2. FLAT INSULATION BOARDS. INSTALL TAPERED INSULATION OVER FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07550  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

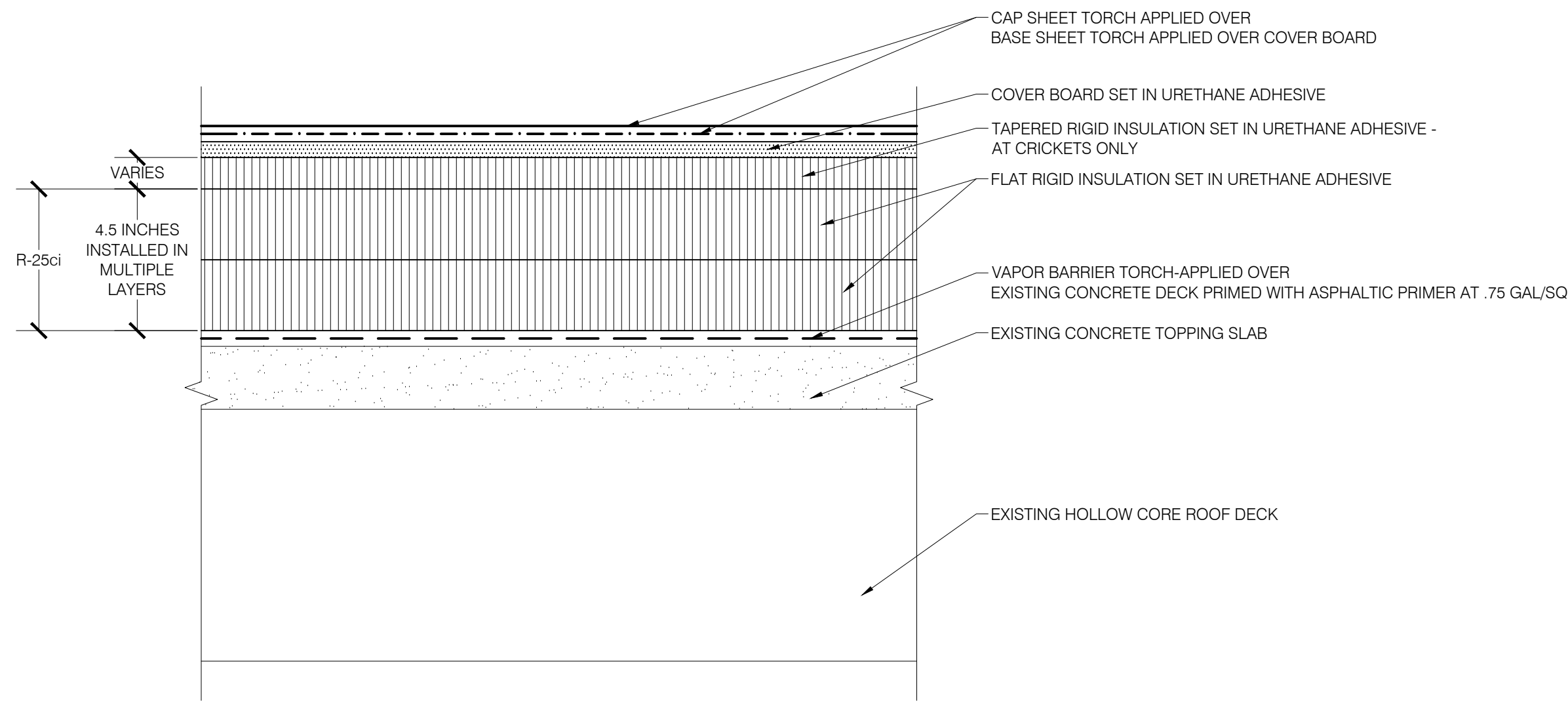
**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07920  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

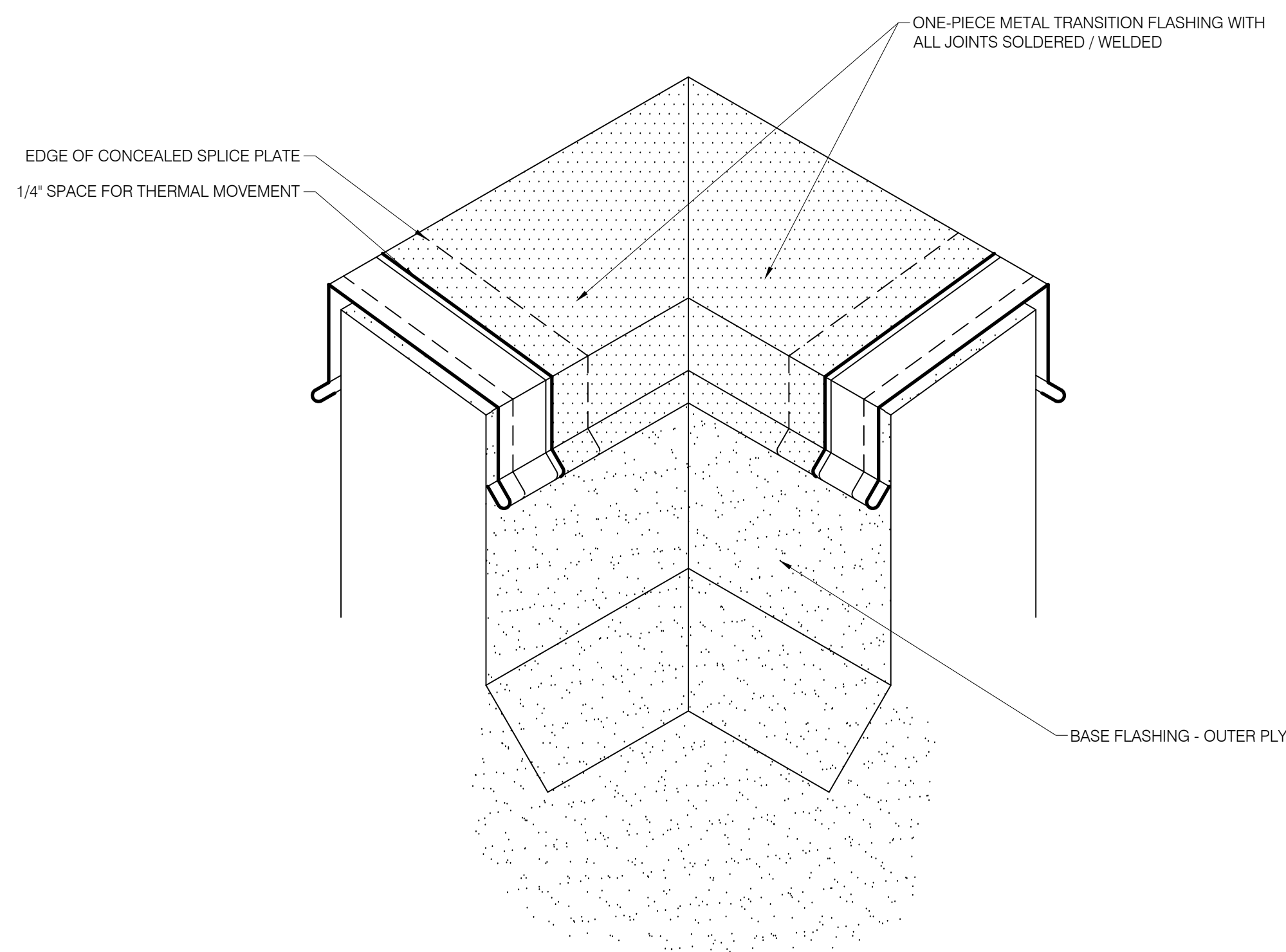
**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.

- NOTES A/A3.1:  
 A. BASIS OF DESIGN: MIAMI-DADE NOA NO.: 15-0709.14, PAGES 109-110.  
 B. SECUREMENT TYPE AND SPACING PER PRODUCT APPROVAL AND MANUFACTURER'S RECOMMENDATION TO MEET DESIGN WIND UPLIFT PRESSURES.  
 C. EXISTING ROOFING ASSEMBLY THICKNESSES ARE APPROXIMATE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO ROOF ASSEMBLY THICKNESSES.



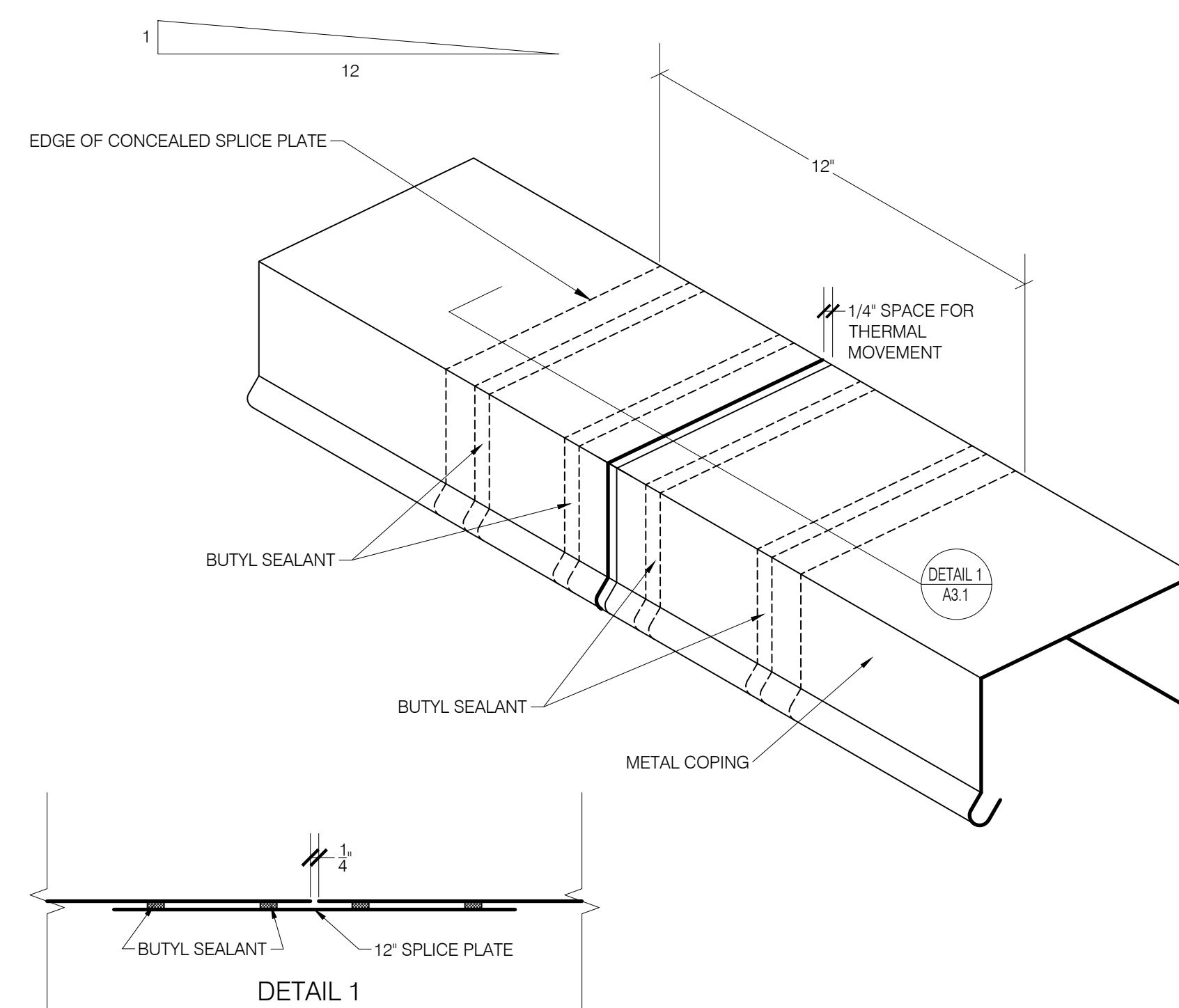
**A** ROOFING ASSEMBLY - TYPE 1  
 A3.1 NTS

NOTE A:  
 METAL HOLD-DOWN CLEAT AND SUBSTRATE MATERIALS NOT SHOWN FOR CLARITY.



**B** METAL COPING - OUTSIDE CORNER  
 A3.1 NTS

NOTE A:  
 METAL HOLD-DOWN CLEAT AND SUBSTRATE MATERIALS NOT SHOWN FOR CLARITY.



**C** METAL COPING - CONCEALED SPLICE PLATE  
 A3.1 NTS

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
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REVISIONS		
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DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

ELECTRICAL BUILDING - ROOF DETAILS  
 A3.1  
 PLOT: 3" = 1'-0" SHEET



**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2, FLAT INSULATION BOARDS. INSTALL TAPERED INSULATION OVER FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07550  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07220  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.

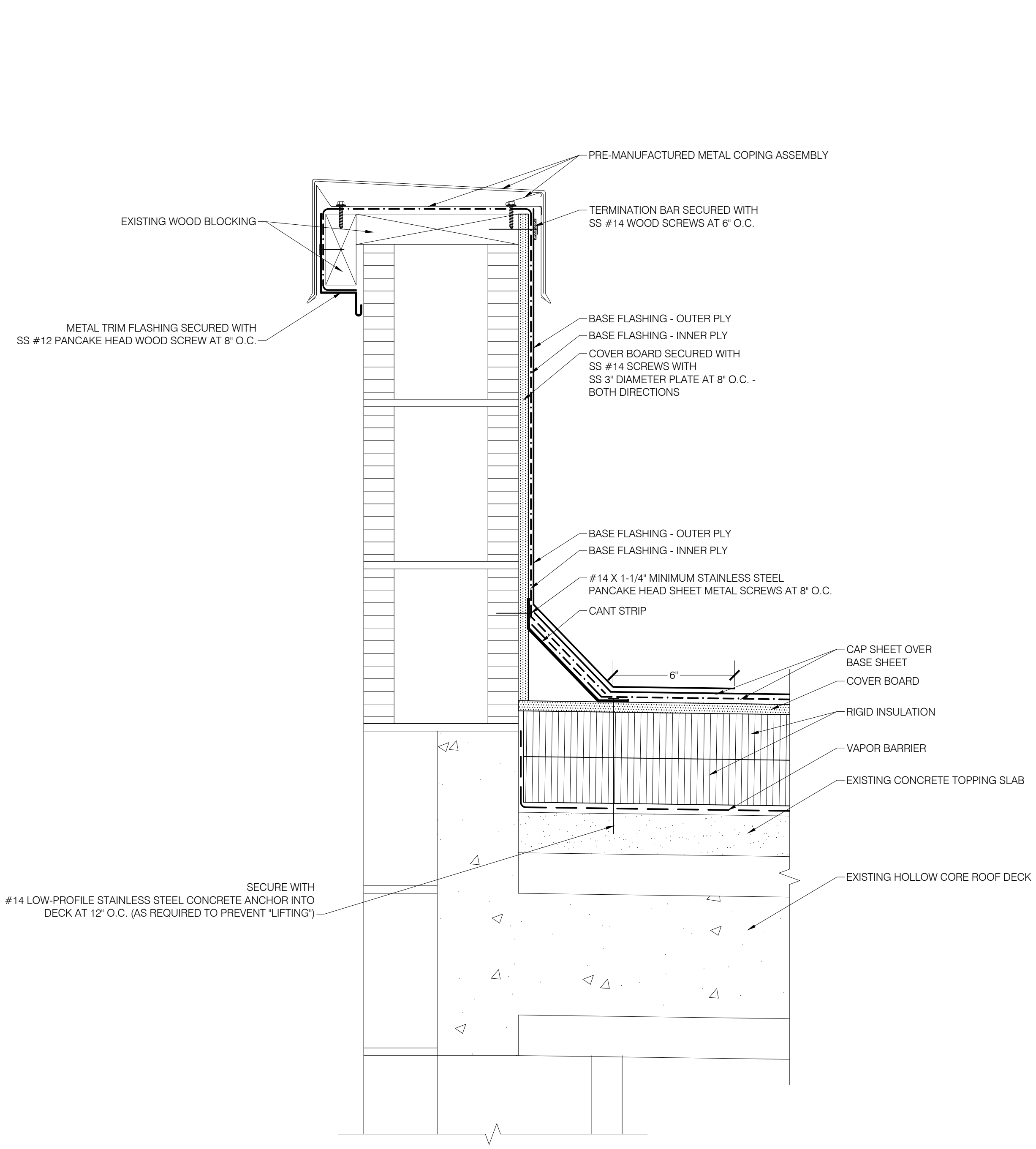
CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
 ORLANDO, FLORIDA  
 ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
 3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
 (407) 333-1977 • FAX: (407) 333-4686 • E MAIL: JAY@JAYAMMON.COM

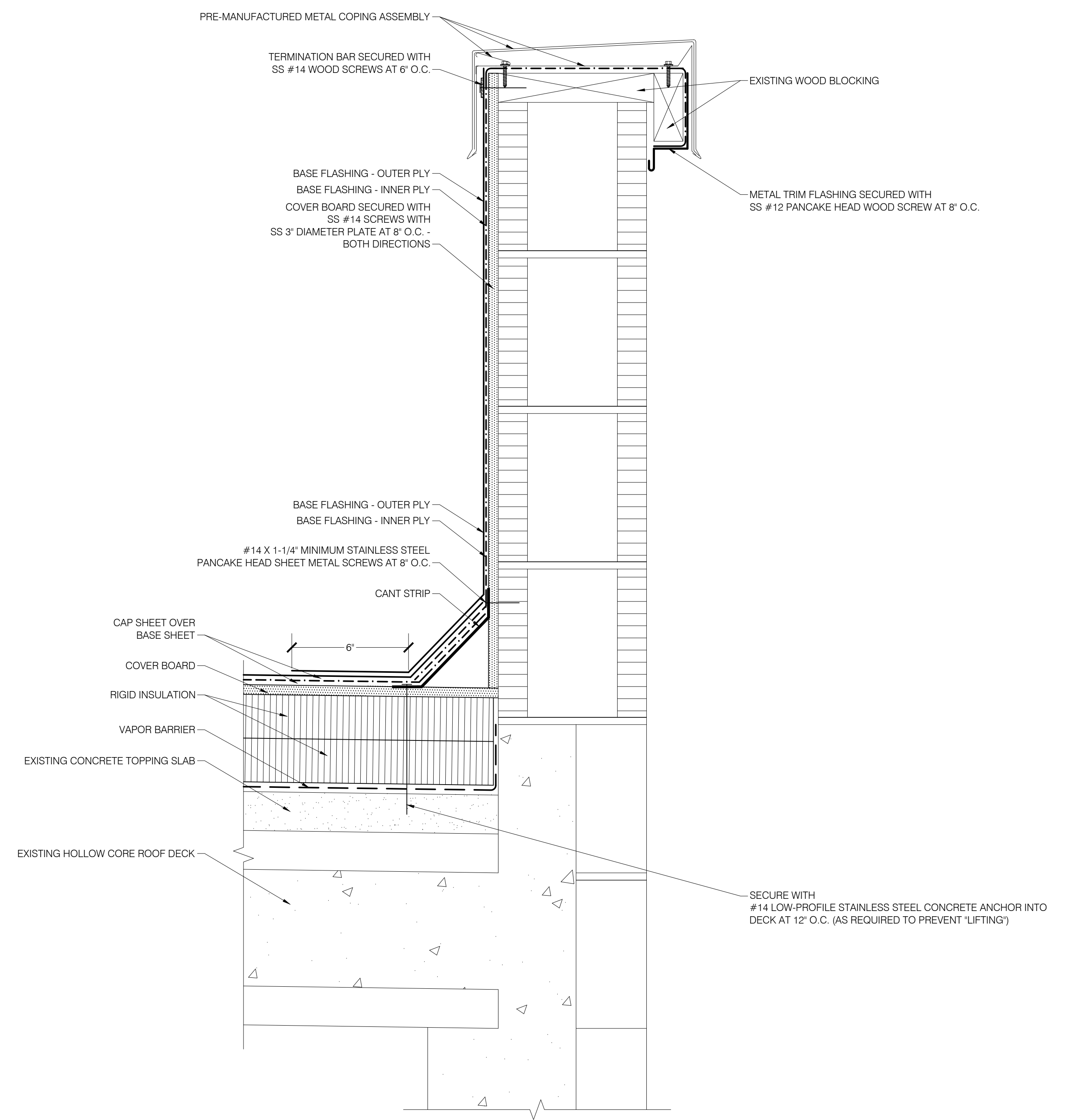
REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

ELECTRICAL BUILDING - ROOF DETAILS  
 A3.2  
 PLOT: 3" = 1'-0" SHEET



A SECTION THROUGH PARAPET WALL  
 A3.2 NTS



B SECTION THROUGH PARAPET WALL  
 A3.2 NTS

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2, FLAT INSULATION BOARDS. INSTALL TAPERED INSULATION OVER FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

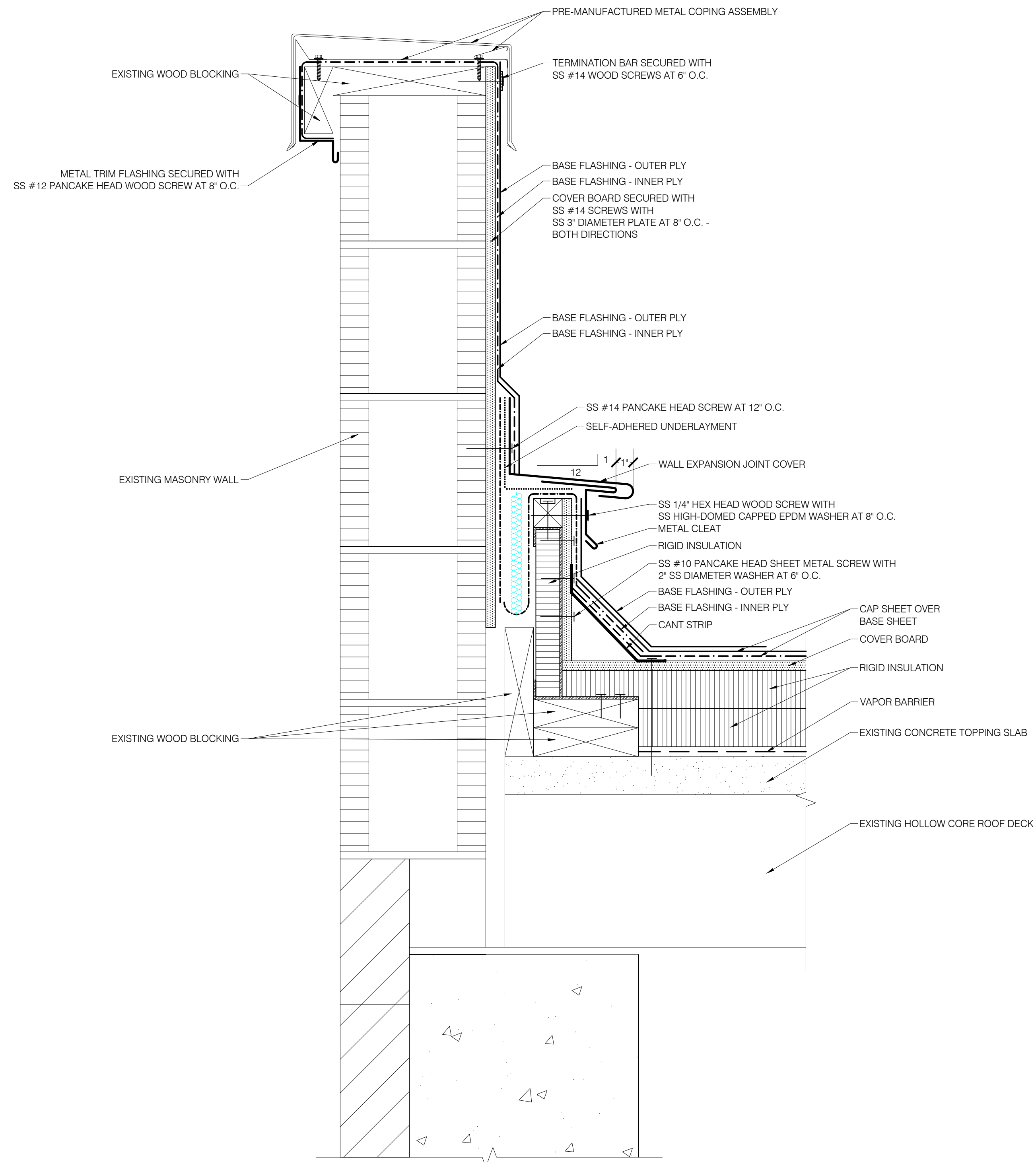
**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07550  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07720  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.



A SECTION THROUGH WALL EXPANSION JOINT  
 A3.3 NTS

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
 ORLANDO, FLORIDA  
 ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
 3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
 (407) 333-1977 • FAX: (407) 333-4686 • E MAIL: JAY@JAYAMMON.COM

REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

ELECTRICAL BUILDING -  
 ROOF DETAILS  
 A3.3  
 PLOT: 3" = 1'-0" SHEET

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2, FLAT INSULATION BOARDS. INSTALL TAPERED INSULATION OVER FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07551  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07631  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07220  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.

CONSTRUCTION DOCUMENTS

ORANGE COUNTY GOVERNMENT

SRWF INFLUENT PUMP STATION  
AND  
SOUTH PLANT ELECTRICAL BUILDING  
ORLANDO, FLORIDA

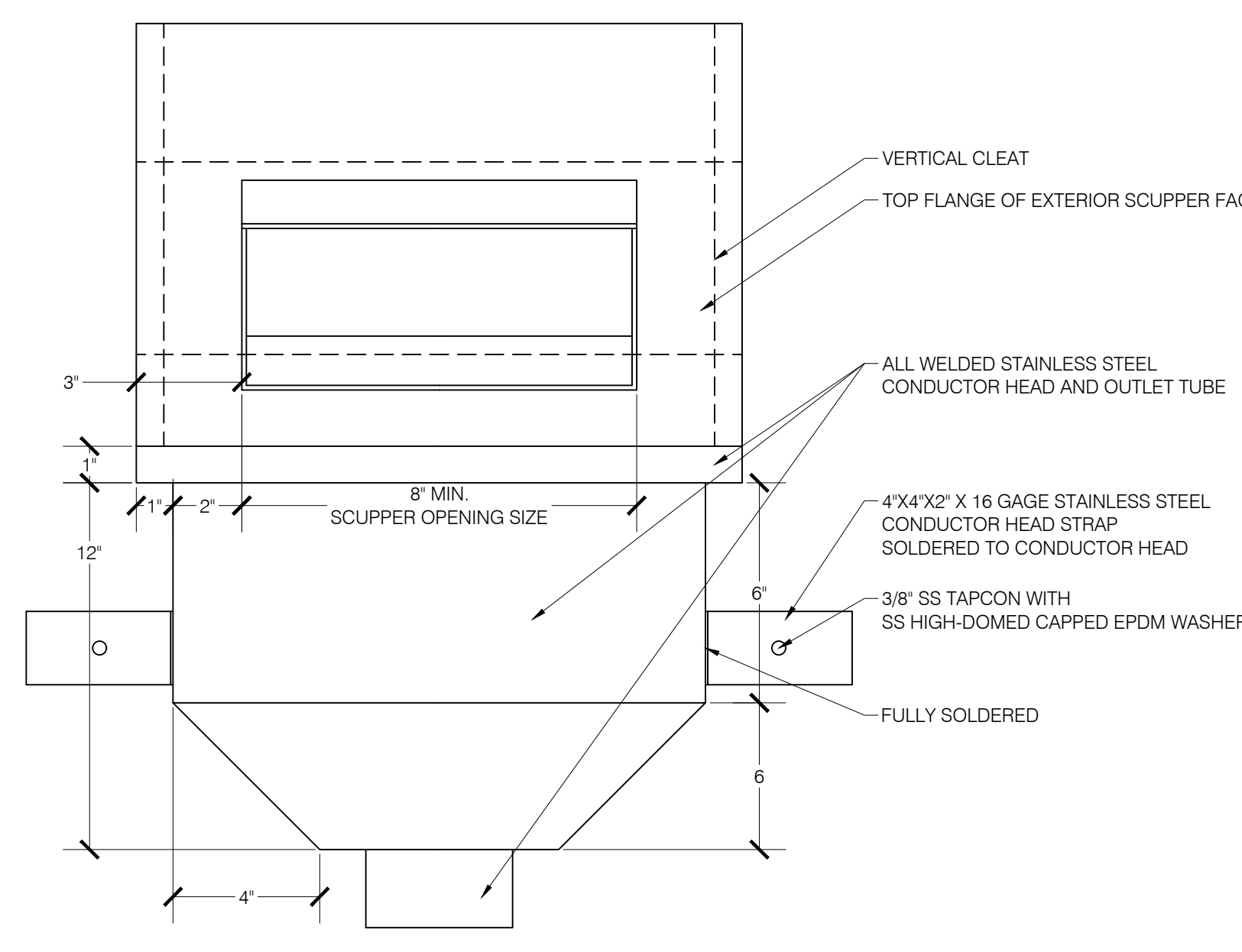
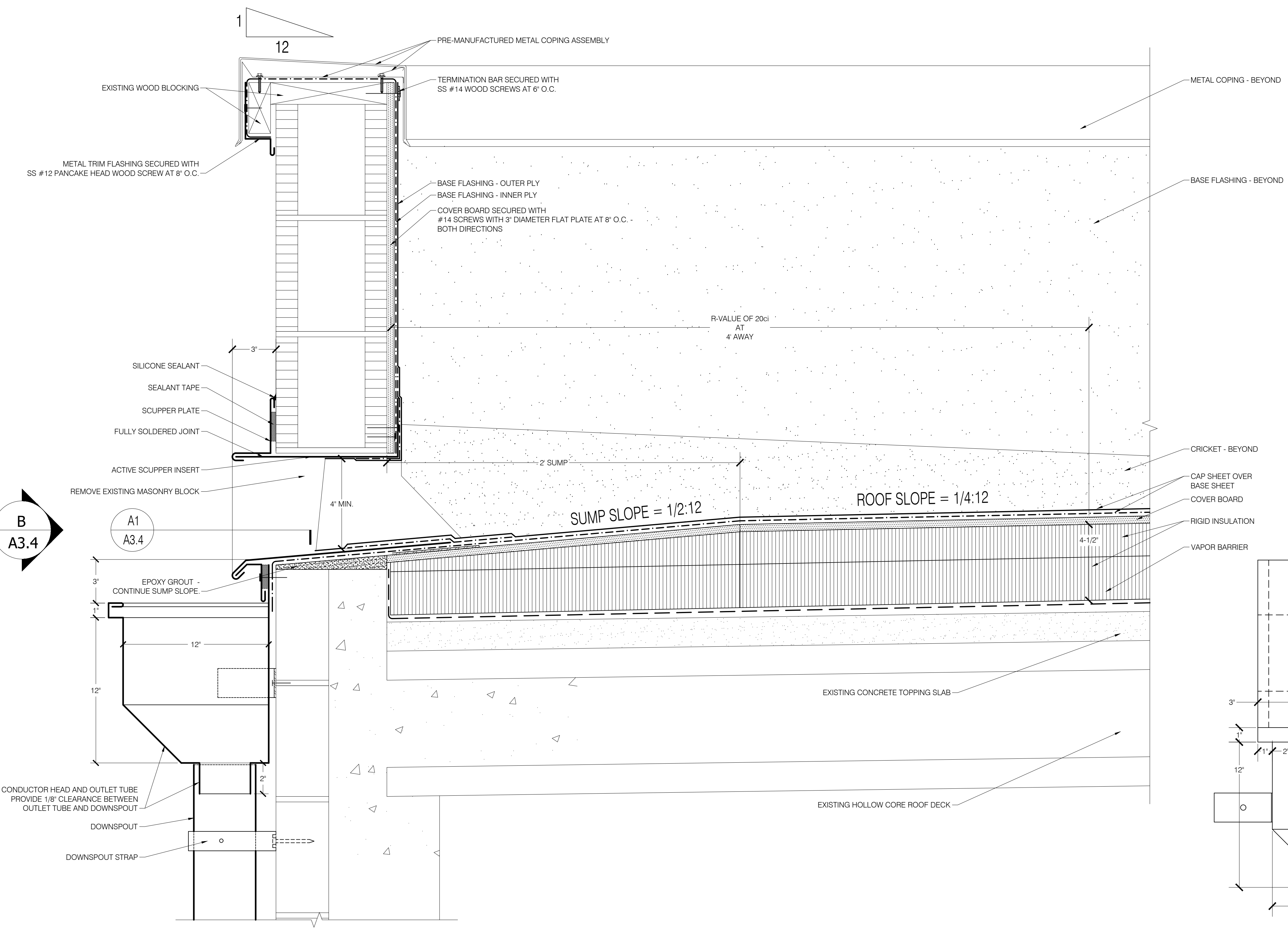
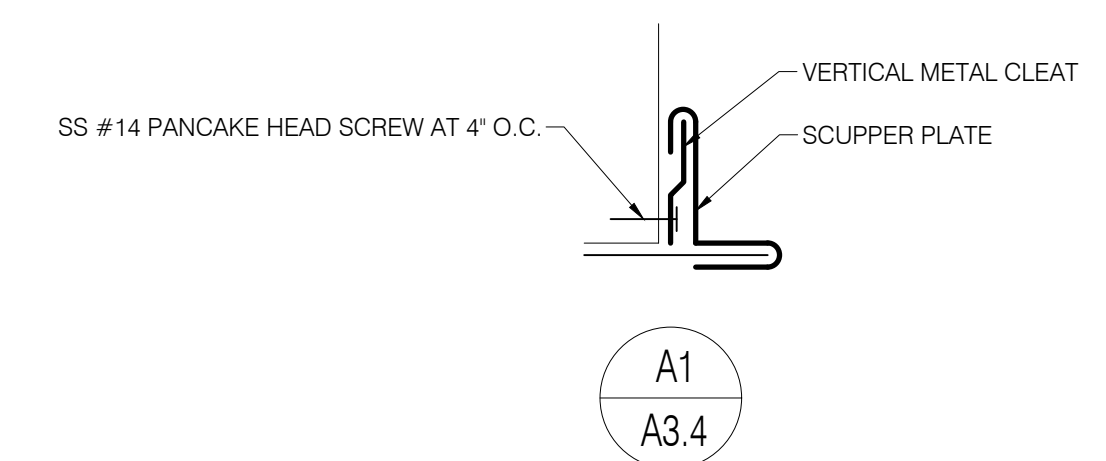
ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
(407) 333-1977 • FAX: (407) 333-4686 • E MAIL: JAY@JAYAMMON.COM

REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

**ELECTRICAL BUILDING - ROOF DETAILS**



**A**  
A3.4  
ACTIVE SCUPPER AND CONDUCTOR HEAD  
NTS

**B**  
A3.4  
CONDUCTOR HEAD AND EXTERIOR SCUPPER PLATE ELEVATION  
NTS

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2, FLAT INSULATION BOARDS. INSTALL TAPERED INSULATION OVER FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

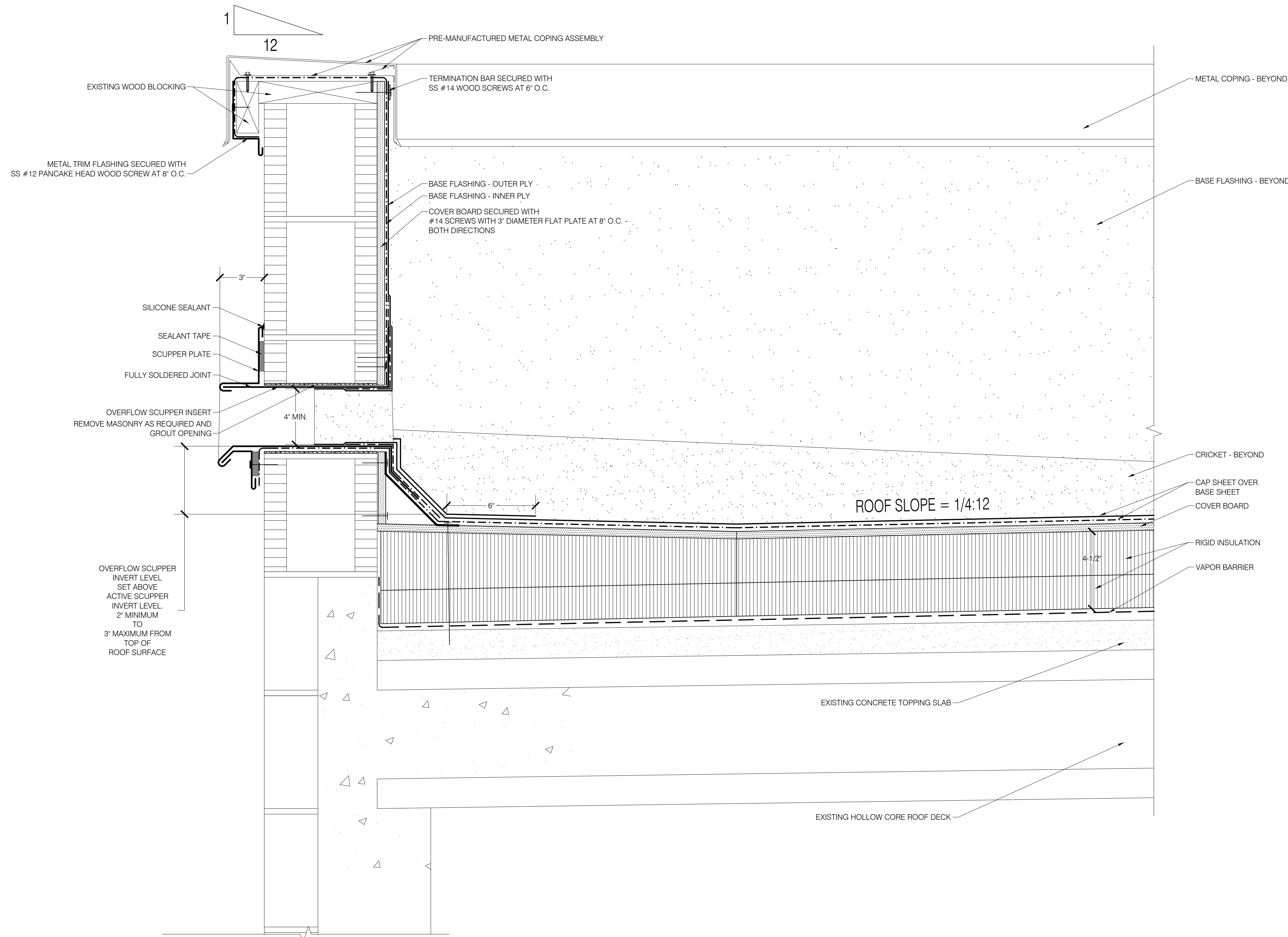
**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07550  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07220  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.



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 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
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REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

ELECTRICAL BUILDING -  
 ROOF DETAILS

PLOT: 3' = 1'-0" SHEET **A3.5**

**A**  
**A3.5**  
 OVERFLOW SCUPPER  
 NTS

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2, FLAT INSULATION BOARDS. INSTALL TAPERED INSULATION OVER FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

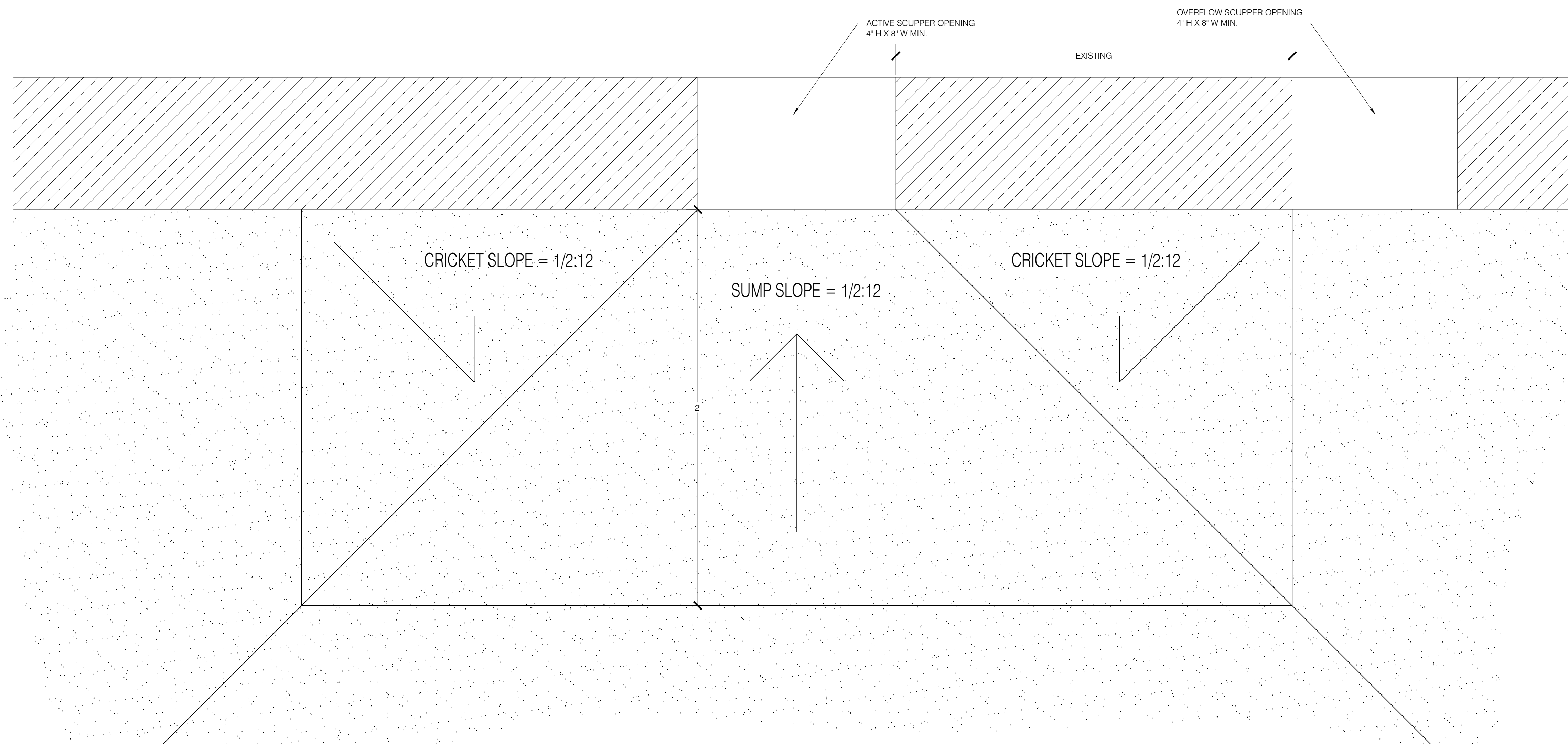
**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07550  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
**ACTIVE SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**CONDUCTOR HEAD AND OUTLET TUBE:** 22 GAGE STAINLESS STEEL, TYPE 316, ALL WELDED.  
**CONDUCTOR HEAD STRAP:** 16 GAGE STAINLESS STEEL, TYPE 316.  
**DOWNSPOUT:** SCHEDULE 40 PVC DOWNSPOUT PAINTED TO MATCH WALL.  
**DOWNSPOUT STRAPS:** .063" THICK X 1" WIDE PRE-PAINTED ALUMINUM.  
**GUTTER:** .050" ALUMINUM WITH ALL NON-MOVING JOINTS WELDED AND POST-PAINTED.  
**GUTTER BRACKET:** 3/16" X 1" PRE-PAINTED ALUMINUM.  
**GUTTER STRAPS:** .050" PRE-PAINTED ALUMINUM.  
**OVERFLOW SCUPPER INSERT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SCUPPER PLATE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**SKYLIGHT GUTTER:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**WALL EXPANSION JOINT COVER:** 22 GAGE STAINLESS STEEL, TYPE 316.

**ROOF ACCESSORIES** SPECIFICATION SECTION 07720  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
**BACKER ROD:** CLOSED-CELL BACKER ROD.  
**BUTYL SEALANT:** ONE-PART GUN GRADE, BUTYL-RUBBER BASED JOINT SEALANT, ASTM C 1311.  
**SILICONE SEALANT:** SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.  
**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
**STRUCTURAL SEALANT:** SINGLE-COMPONENT, MOISTURE CURING, GUN GRADE ADHESIVE, "M-1" MANUFACTURED BY CHEM LINK ENGINEERED SYSTEMS.  
**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.



**A**  
**A3.6** PLAN VIEW OF ROOF DRAINAGE SUMP  
NTS

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
ORLANDO, FLORIDA  
 ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
 3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
 (407) 333-1977 • FAX: (407) 333-4686 • E MAIL: JAY@JAYAMMON.COM

REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

**MATERIAL COMPONENT SCHEDULE**

**ROOF INSULATION** SPECIFICATION SECTION 07220  
**COVER BOARD:** 1/2" FIBER-REINFORCED ROOF BOARD, ASTM C 1278. BASIS OF DESIGN: "SECUROCK GYPSUM-FIBER ROOF BOARD" MANUFACTURED BY USG.  
**RIGID INSULATION:** POLYISOCYANURATE INSULATION, ASTM C 1289 TYPE 2. FLAT INSULATION WHERE DESIGNATED AND AS REQUIRED TO ACHIEVE A 1/2 INCH PER FOOT POSITIVE SLOPE WITH NO PONDING AFTER 24 HOUR DRYING TIME. TAPERED INSULATION SHALL BE FABRICATED AT ZERO INCH THICKNESS AT THIN EDGE.

**MODIFIED BITUMEN ROOFING** SPECIFICATION SECTION 07550  
**BASE FLASHING - INNER PLY:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**BASE FLASHING - OUTER PLY:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**BASE SHEET:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 180" MANUFACTURED BY SOPREMA.  
**CANT STRIP:** 16 GA. GALVANIZED STEEL, G90, MANUFACTURED BY A.R.B.S.  
**CAP SHEET:** SBS GRANULE SURFACED MODIFIED BITUMEN, ASTM D 6164, TYPE 2, TORCHED APPLIED OVER MEMBRANE BELOW. BASIS OF DESIGN: "SOPRALENE FLAM 250 FR GR WITH SG GRANULE" MANUFACTURED BY SOPREMA.  
**LIQUID-APPLIED FLASHING:** A THREE-COAT, POLYESTER REINFORCED LIQUID-APPLIED FLASHING BY ROOF MEMBRANE MANUFACTURER.  
**ROOF TRAFFIC PADS:** SBS MODIFIED BITUMEN WITH GRANULATED SURFACE, ASTM D 6164, TYPE 2, WITH COLOR CONTRAST TO THE CAP SHEET. COLOR TO BE SELECTED BY OWNER.  
**VAPOR BARRIER:** SBS SMOOTH MODIFIED BITUMEN, ASTM D 6164, TYPE 1, TORCHED APPLIED OVER SUBSTRATE BELOW. BASIS OF DESIGN: "SOPRALENE 180 SP 3.5" MANUFACTURED BY SOPREMA.

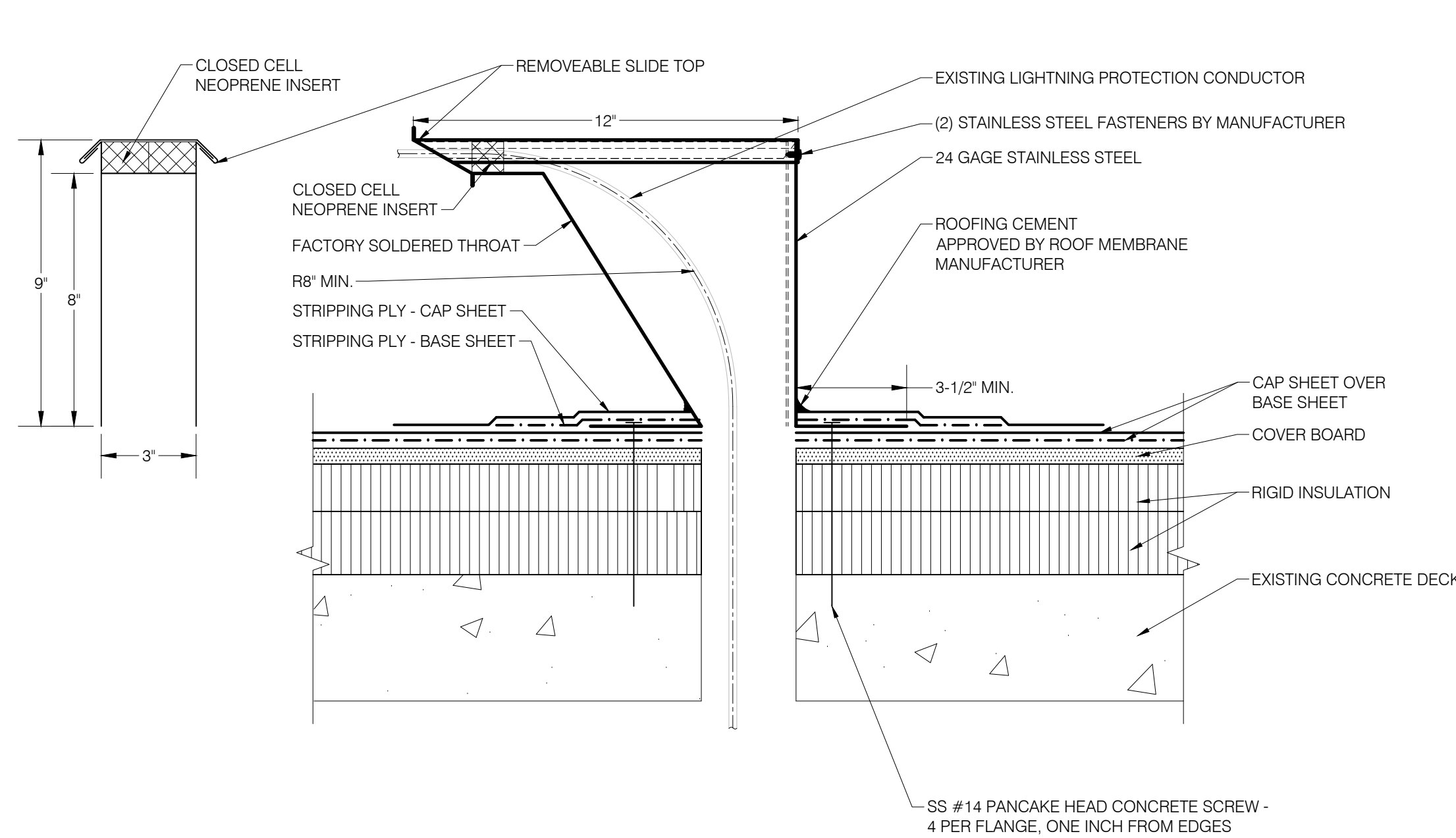
**FLASHING AND SHEET METAL** SPECIFICATION SECTION 07600  
**BENT METAL PLATE:** 16 GAGE, GALVANIZED G90.  
**METAL CLEAT:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL COUNTERFLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL EDGE:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL RECEIVER FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**METAL TRIM FLASHING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**PRE-MANUFACTURED METAL COPING:** 22 GAGE STAINLESS STEEL, TYPE 316.  
**TERMINATION BAR:** 1/8" THICK X 1" WIDE STAINLESS STEEL.

**GUTTER AND DOWNSPOUTS** SPECIFICATION SECTION 07630  
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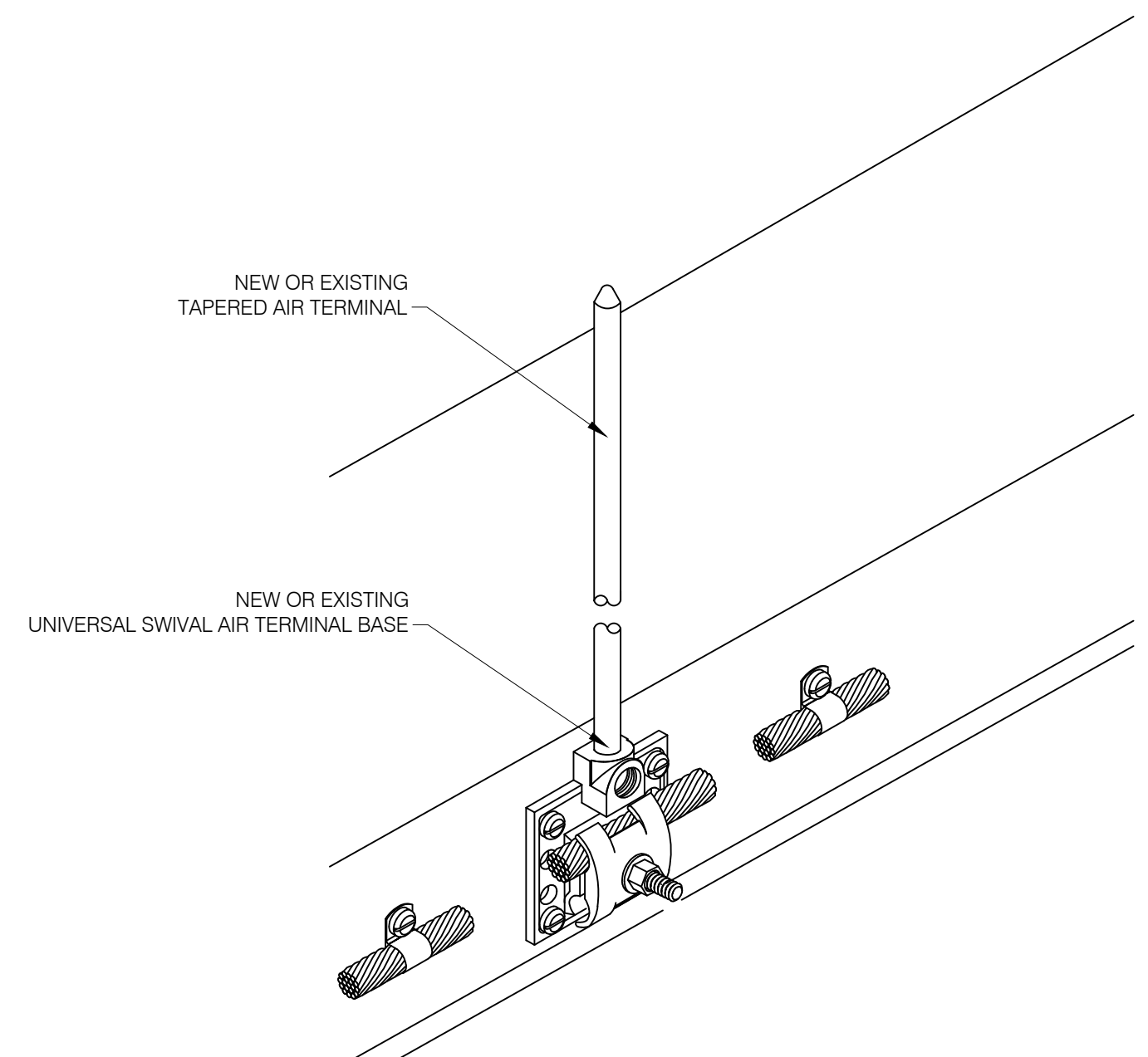
**ROOF ACCESSORIES** SPECIFICATION SECTION 07720  
**PLUMBING VENT FLASHING EXTENSION:** PRE-FABRICATED PVC EXTENSIONS.

**JOINT SEALANTS** SPECIFICATION SECTION 07920  
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**SEALANT TAPE:** 1" WIDE BUTYL SEALANT TAPE, APPLIED BETWEEN METAL SURFACES AND UNDERLYING SURFACE.  
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**URETHANE SEALANT:** SINGLE-COMPONENT, NONSAG, POLYURETHANE JOINT SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, FOR USE NT. APPLIED TO PRIMED SURFACES.

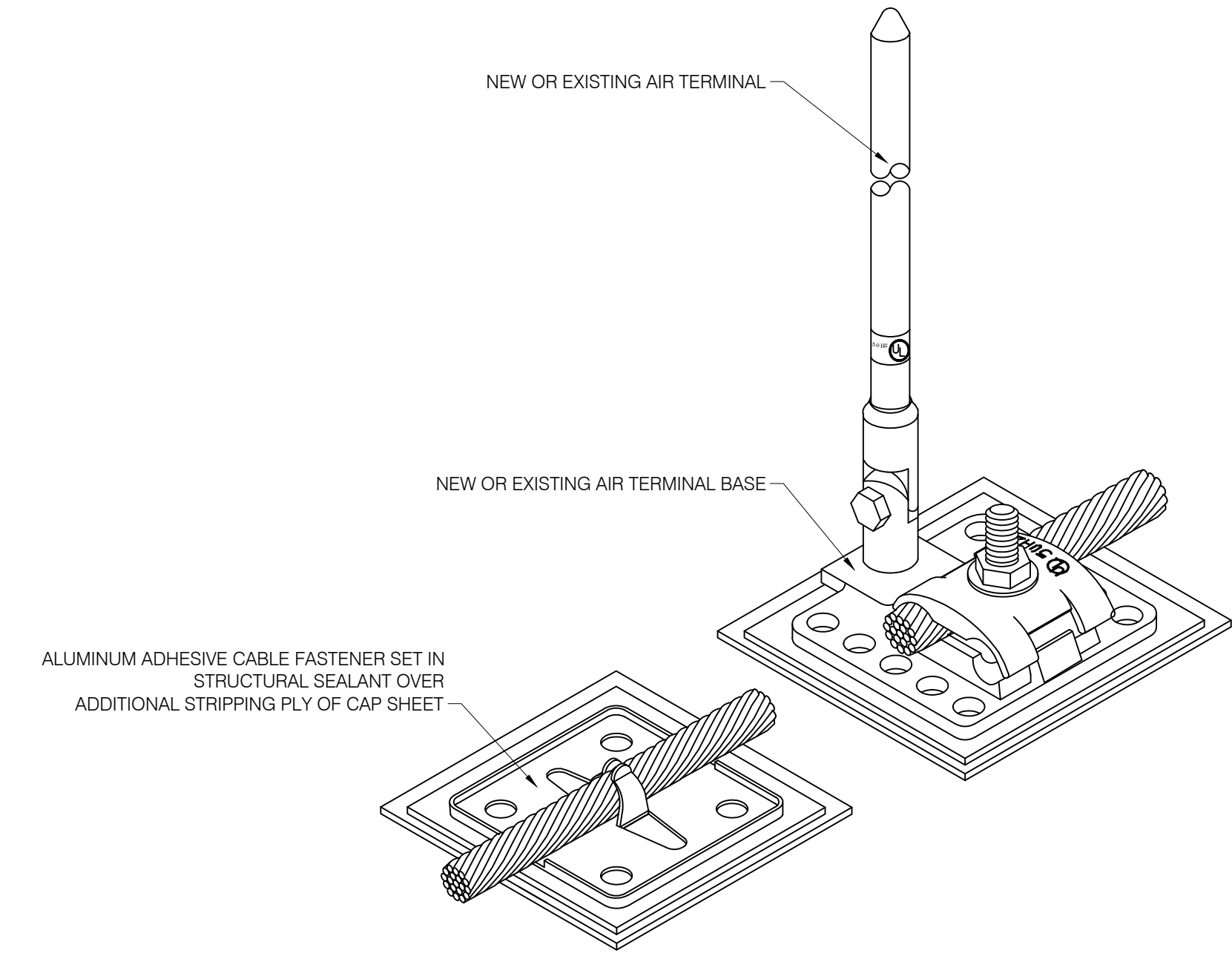
NOTE: LIGHTNING PROTECTION CABLE FLASHING (VERSA LINE ML/S) BY ("SBC INDUSTRIES") OR PRE-APPROVED EQUAL.



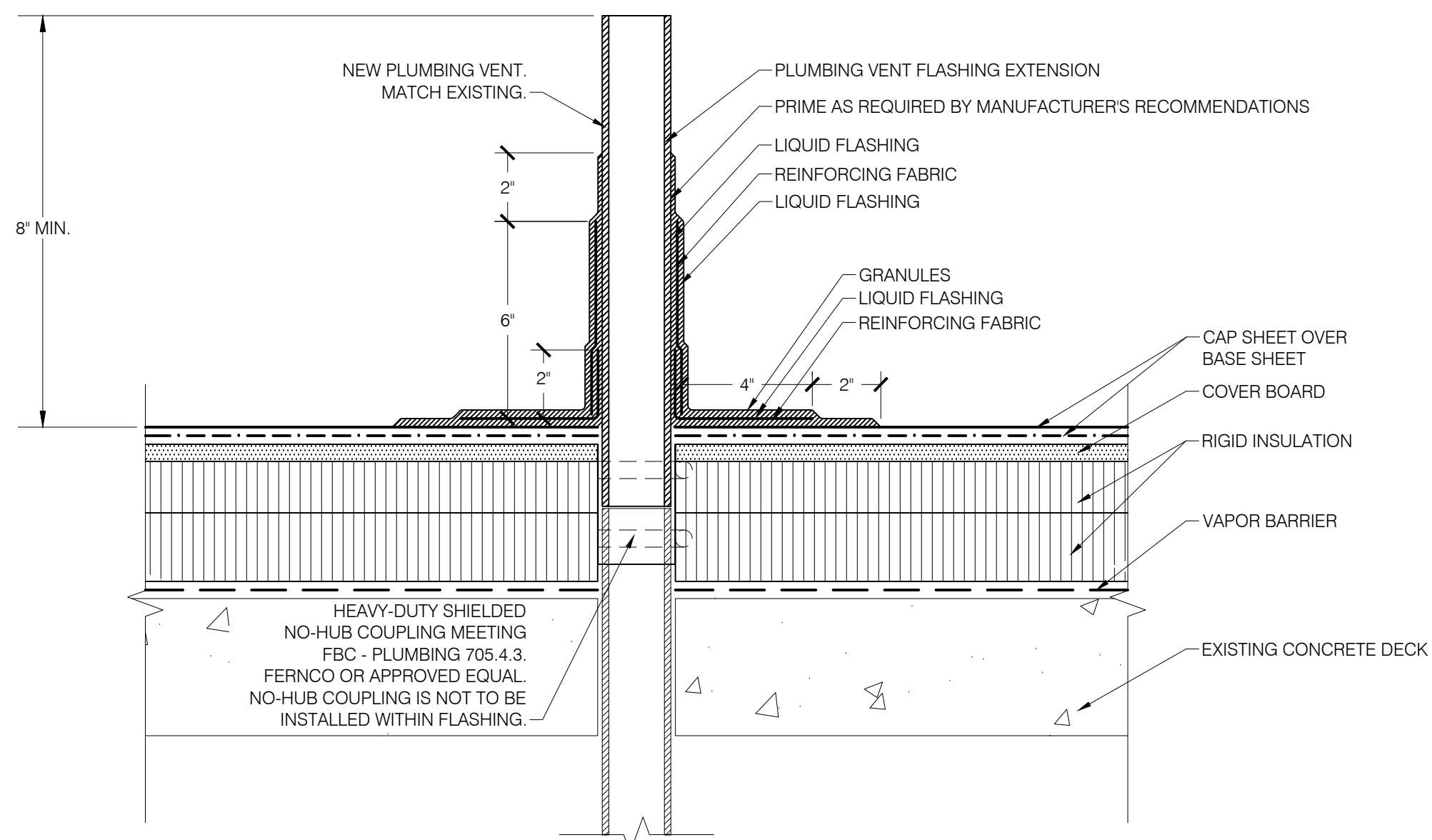
**A** LIGHTNING PROTECTION - THRU-ROOF CONNECTOR FLASHING  
 A3.7 NTS



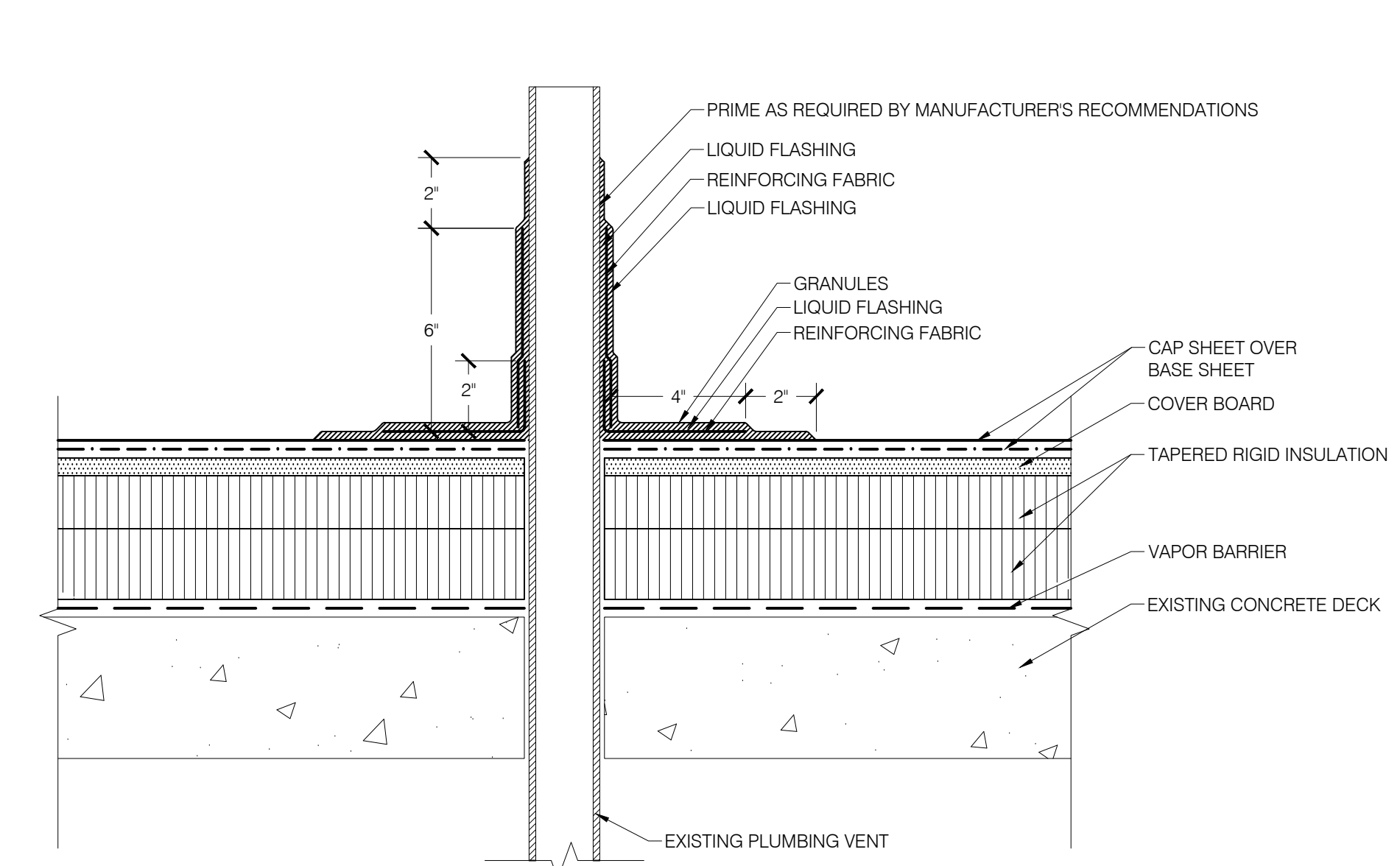
**B** LIGHTNING PROTECTION - ATTACHMENT TO METAL COPING  
 A3.7 NTS



**C** LIGHTNING PROTECTION - BASE DETAIL  
 A3.7 NTS



**D** EXTENSION REQUIRED - PLUMBING VENT FLASHING - TYPE 1  
 A3.7 NTS



**E** NO EXTENSION REQUIRED - PLUMBING VENT FLASHING - TYPE 2  
 A3.7 NTS

CONSTRUCTION DOCUMENTS  
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REVISIONS

NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

ELECTRICAL BUILDING - ROOF DETAILS  
 A3.7  
 PLOT: 3" = 1'-0" SHEET

# EXTERIOR ROOF LADDER SPECIFICATION

SECTION 0515

## NOTES:

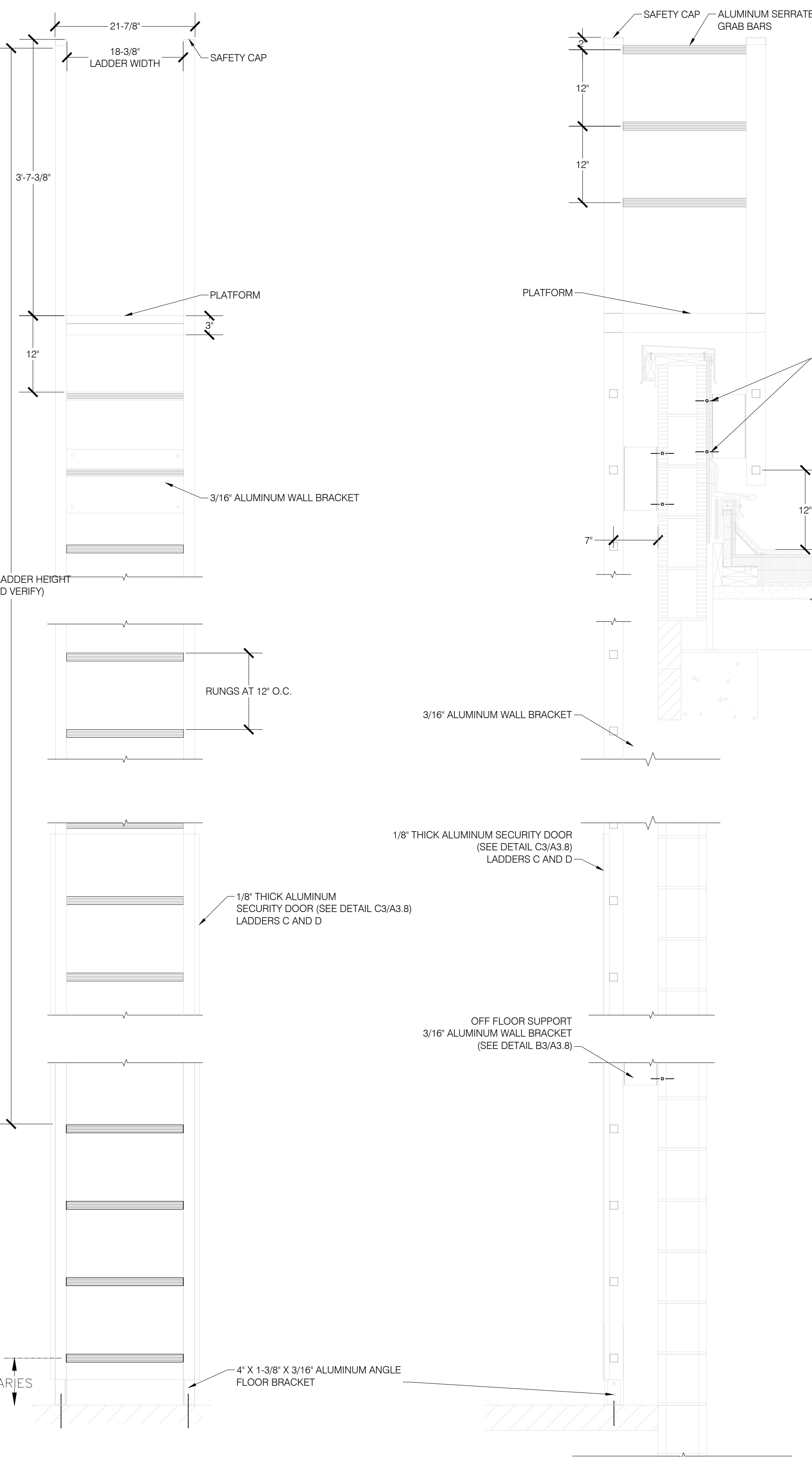
1. INSTALL MILLER SAF-T-CLIMB LADDER SYSTEM IN ALUMINUM MANUFACTURED BY HONEYWELL.
2. INSTALL SAF-T-PIVOT PERMANENT DISMOUNT IN ALUMINUM.

- PART 1 GENERAL**
- 1.1 SECTION INCLUDES**
- A. ALUMINUM ACCESS LADDERS
- 1.2 RELATED SECTIONS**
- A. SECTION 0550 - METAL FABRICATIONS: FASTENERS AND INSTALLATION REQUIREMENTS USED TO ATTACH LADDERS TO STRUCTURE.
- 1.3 REFERENCES**
- A. AA - ALUMINUM ASSOCIATION.
- B. ASTM B 209 - STANDARD SPECIFICATION FOR ALUMINUM AND ALUMINUM-ALLOY SHEET AND PLATE.
- C. ASTM B 21 - STANDARD SPECIFICATION FOR ALUMINUM AND ALUMINUM-ALLOY EXTRUDED BARS, RODS, WIRE, PROFILES AND TUBES.
- D. OSHA 1910.27 - FIXED LADDERS.
- 1.4 SUBMITTALS**
- A. SUBMIT UNDER PROVISIONS OF SECTION 01000.
- B. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT.
- C. SHOP DRAWINGS:
1. DETAIL FABRICATION AND ERECTION OF EACH LADDER INDICATED. INCLUDE PLANS, ELEVATIONS, SECTIONS, AND DETAILS OF METAL FABRICATIONS AND THEIR CONNECTIONS.
  2. PROVIDE TEMPLATES FOR ANCHORS AND BOLTS SPECIFIED FOR INSTALLATION UNDER OTHER SECTIONS.
  3. PROVIDE REACTION LOADS FOR EACH HANGER AND BRACKET.
- D. QUALIFICATION DATA:
1. REFER TO QUALITY ASSURANCE PROVISIONS FOR SUBMITTAL REQUIREMENTS INCLUDING EXPERIENCE, CERTIFICATIONS AND RESOURCES.
  2. ELECTION SAMPLES: FOR EACH FINISH SPECIFIED, TWO COMPLETE SETS OF COLOR CHIPS REPRESENTING MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS.
  3. VERIFICATION SAMPLES: FOR EACH FINISH SPECIFIED, TWO SAMPLES, MINIMUM SIZE 6 INCHES (150 MM) SQUARE, REPRESENT ACTUAL PRODUCT COLOR.
- 1.5 QUALITY ASSURANCE**
- A. MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN PRODUCING ALUMINUM METAL LADDERS SIMILAR TO THOSE INDICATED FOR THIS PROJECT.
1. RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
  2. SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS.
  3. PROFESSIONAL ENGINEERING COMPETENT IN DESIGN AND STRUCTURAL ANALYSIS TO FABRICATE LADDERS IN COMPLIANCE WITH INDUSTRY STANDARDS AND LOCAL CODES.
- B. INSTALLER QUALIFICATIONS: COMPETENT AND EXPERIENCED FIRM - CAPABLE OF SELECTING FASTENERS AND INSTALLING LADDERS TO ATTAIN DESIRED OPERATIONAL AND STRUCTURAL PERFORMANCE.
- C. PRODUCT QUALIFICATION: PRODUCT DESIGN SHALL COMPLY WITH OSHA 1910.27 MINIMUM STANDARDS FOR LADDERS.
- D. MOCK-UP: PROVIDE A MOCK-UP FOR EVALUATION OF SURFACE PREPARATION TECHNIQUES AND APPLICATION WORKMANSHIP.
1. INSTALL LADDER IN AREA DESIGNATED BY ARCHITECT.
  2. DO NOT PROCEED WITH REMAINING WORK UNTIL WORKMANSHIP AND INSTALLATION ARE APPROVED BY ARCHITECT.
- E. BEFORE MOCK-UP IS REQUIRED TO PRODUCE WORKMANSHIP.
- 1.6 DELIVERY, STORAGE, AND HANDLING**
- A. STORE PRODUCTS IN MANUFACTURER'S UNOPENED PACKAGING UNTIL READY FOR INSTALLATION.
- 1.7 PROJECT CONDITIONS**
- A. FIELD MEASUREMENTS: VERIFY DIMENSIONS BY FIELD MEASUREMENT BEFORE FABRICATION.
- B. ESTABLISHED DIMENSIONS: WHERE FIELD MEASUREMENTS CANNOT BE MADE WITHOUT DELAYING THE WORK, INDICATE ESTABLISHED DIMENSIONS ON SHOP DRAWING SUBMITTAL AND PROCEED WITH FABRICATION.
- 1.8 WARRANTY**
- A. MANUFACTURER HAS RESPONSIBILITY FOR AN EXTENDED CORRECTIVE PERIOD FOR WORK OF THIS SECTION FOR A PERIOD OF 5 YEARS FROM DATE OF SUBSTANTIAL COMPLETION AGAINST ALL THE CONDITIONS INDICATED BELOW, AND WHEN NOTIFIED IN WRITING FROM OWNER, MANUFACTURER SHALL PROMPTLY AND WITHOUT INCONEVENIENCE AND COST TO OWNER CORRECT SAID DEFICIENCIES.
1. DEFECTS IN MATERIALS AND WORKMANSHIP.
  2. DETERIORATION OF MATERIAL AND SURFACE PERFORMANCE BELOW MINIMUM OSHA STANDARDS AS CERTIFIED BY INDEPENDENT THIRD PARTY TESTING LABORATORY. ORDINARY WEAR AND TEAR, UNUSUAL ABUSE OR NEGLIGENCE EXCEPTED.
  3. WITHIN THE WARRANTY PERIOD, THE MANUFACTURER SHALL, AT ITS OPTION, REPAIR, REPLACE, OR REFUND THE PURCHASE PRICE OF DEFECTIVE LADDER.
- B. MANUFACTURER SHALL BE NOTIFIED IMMEDIATELY OF DEFECTIVE PRODUCTS, AND BE GIVEN A REASONABLE OPPORTUNITY TO INSPECT THE GOODS PRIOR TO RETURN. MANUFACTURER WILL NOT ASSUME RESPONSIBILITY OR COMPENSATION FOR UNAUTHORIZED REPAIRS OR LABOR.
- C. MANUFACTURER MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, TO THE MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, DESIGN, SALE, INSTALLATION, OR USE OF THE LADDER, AND SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES OF PROFITS OR EXPENSES, RESULTING FROM THE USE OF LADDER PRODUCTS.
- 1.9 EXTRA MATERIALS**
- A. FURNISH TOUCH-UP KIT FOR EACH TYPE AND COLOR OF PAINT FINISH PROVIDED.

- PART 2 PRODUCTS**
- 2.1 MANUFACTURERS**
- A. BASIS OF DESIGN: O'KEEFE'S, INC., 325 NEWHALL ST., SAN FRANCISCO, CA 94124, ASD, TOLL FREE TEL: (888) 853-3533, TEL: (415) 824-4900, FAX: (415) 824-4900, EMAIL: INFO@OKEEFES.COM, WEB: HTTP://WWW.OKEEFES.COM
- B. SUBJECT TO COMPLIANCE, OTHER MANUFACTURERS TO BE CONSIDERED: ALACO LADDER, INC. AND UPDOWN, INC.
- C. REQUESTS FOR SUBSTITUTIONS WILL BE CONSIDERED IN ACCORDANCE WITH PROVISIONS OF GENERAL CONDITIONS.
- 2.2 APPLICATIONS/SCOPE**
- A. FIXED ACCESS LADDER.
- B. TUBULAR RAIL, LOW PARAPET ACCESS LADDER WITH PLATFORM AND RETURN.
- A. MODEL 550 AS MANUFACTURED BY O'KEEFE'S, INC.
- 2.3 FINISHES**
- A. MILL FINISH, AS EXTRUDED.
- B. CLEAR ANODIC FINISH: AA-M10C2241 MECHANICAL FINISH AS FABRICATED, ARCHITECTURAL CLASS 1.
- C. CLEAR COATING 0.018 MM OR THICKER.
- D. PAINT: URETHANE OVER CHEMICALLY PRETREATED SUBSTRATE.
1. FIRE RED (RAL 2002).
  2. ALERT ORANGE (RAL 2003).
  3. WARNING BLUE (RAL 5005).
  4. CAUTION YELLOW (RAL 1018).
  5. SAFETY GREEN (RAL 6001).
  6. AS SCHEDULED ON DRAWINGS.
- 2.4 MATERIALS**
- A. ALUMINUM SHEET: ALLOY 5005-H34 TO COMPLY WITH ASTM B209.
- B. ALUMINUM EXTRUSIONS: ALLOY 6063-T6 TO COMPLY WITH ASTM B221.
- 2.5 FABRICATION**
- A. RUNGS: NOT LESS THAN 1-1/4 INCHES (32 MM) IN SECTION AND 18-3/8 INCHES (467 MM) LONG, FORMED FROM TUBULAR ALUMINUM EXTRUSIONS, SQUARED AND DEEPLY SERRATED ON ALL SIDES.
- B. RUNGS SHALL WITHSTAND A 1,500 POUND (454 KG) LOAD WITHOUT DEFORMATION OR FAILURE.
- C. CHANNEL SIDE RAILS: NOT LESS THAN 1.8 INCH (45 MM) WALL THICKNESS BY 3 INCHES (76 MM) WIDE.
- D. HEAVY DUTY TUBULAR SIDE RAILS: ASSEMBLED FROM TWO INTERLOCKING ALUMINUM EXTRUSIONS NO LESS THAN 1.8 INCH (45 MM) WALL THICKNESS BY 3 INCHES (76 MM) WIDE. CONSTRUCTION SHALL BE SELF-LOCKING STAINLESS STEEL FASTENERS, FULL PENETRATION TIG WELDS AND CLEAN, SMOOTH AND BURR-FREE SURFACES.
- E. WALK-THROUGH RAIL AND ROOF RAIL EXTENSION: NOT LESS THAN 3 FEET 6 INCHES (1067 MM) ABOVE THE LANDING AND SHALL BE FITTED WITH DEEPLY SERRATED, SQUARE, TUBULAR GRAB RAILS.
- F. LANDING PLATFORM: 1-1/2 INCHES (38 MM) OR GREATER DIAMETER, TUBULAR ALUMINUM GUARDRAILS AND DECKS OF SERRATED ALUMINUM TREADS.
- G. SECURITY DOORS: FORMED 1/8 INCH (3 MM) THICK ALUMINUM SHEET. SECURITY PANELS SHALL EXTEND ON BOTH SIDES, PERPENDICULAR TO THE DOOR FACE, TO WITHIN 2 INCHES (51 MM) OF THE WALL. SECURITY DOOR SHALL BE FURNISHED WITH CONTINUOUS ALUMINUM PIANO HINGE AND HEAVY DUTY FORGED STEEL LOCKING HASPS.

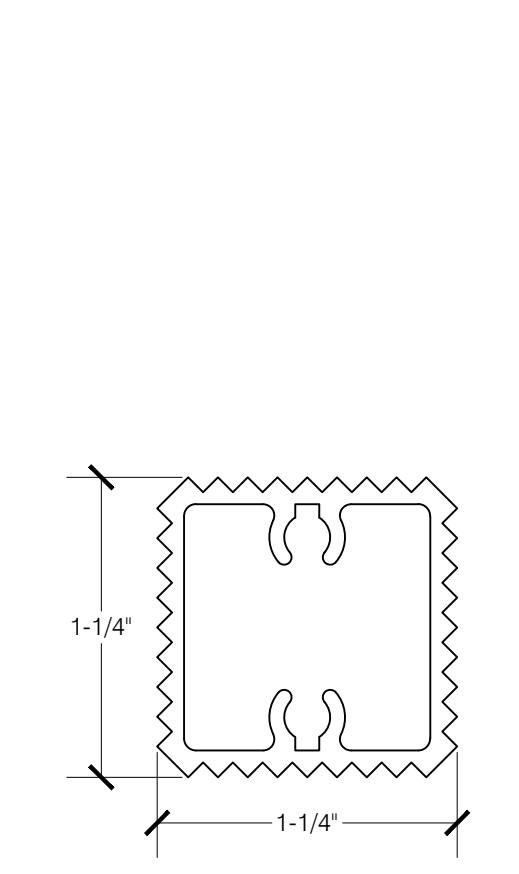
- PART 3 EXECUTION**
- 3.1 EXAMINATION**
- A. COORDINATE ANCHORAGES, FURNISH SETTING DRAWINGS, TEMPLATES, AND ANCHORAGE STRUCTURAL LOADS FOR FASTENER RESISTANCE.
- B. DO NOT BEGIN INSTALLATION UNTIL SUPPORTING STRUCTURE IS COMPLETE AND LADDER INSTALLATION WILL NOT INTERFERE WITH SUPPORTING STRUCTURE WORK.
- C. IF SUPPORTING STRUCTURE IS THE RESPONSIBILITY OF ANOTHER INSTALLER, NOTIFY ARCHITECT OF INSTANTANEOUS SUPPORTING WORK BEFORE PROCEEDING.
- 3.2 INSTALLATION**
- A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND IN PROPER RELATIONSHIP WITH ADJACENT CONSTRUCTION.
- 3.3 PROTECTION**
- A. PROTECT INSTALLED PRODUCTS UNTIL COMPLETION OF PROJECT.
- B. TOUCH-UP, REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE SUBSTANTIAL COMPLETION.

- END OF SECTION**

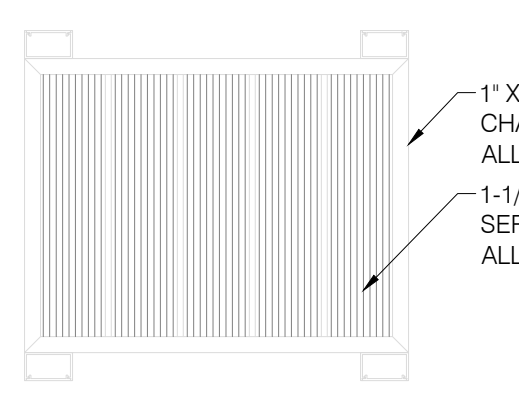


C1 ALUMINUM LADDER - FRONT ELEVATION  
A3.8 NTS

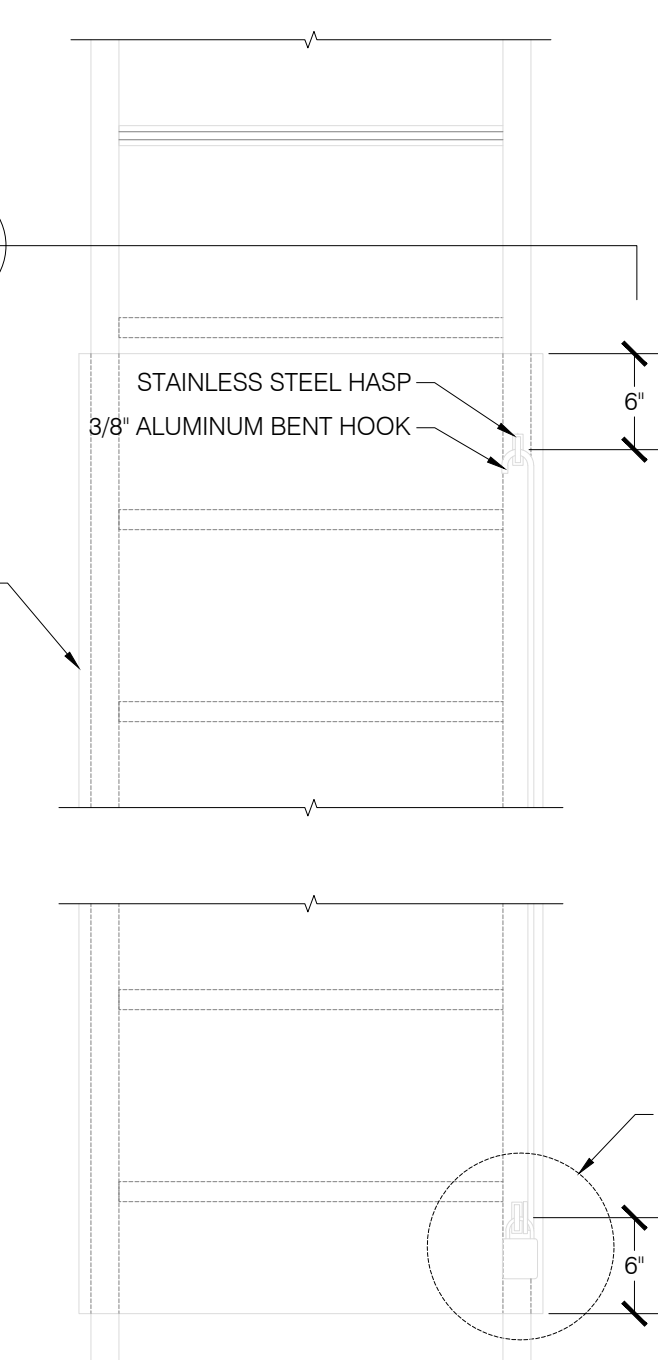
C2 ALUMINUM LADDER - SIDE ELEVATION  
A3.8 NTS



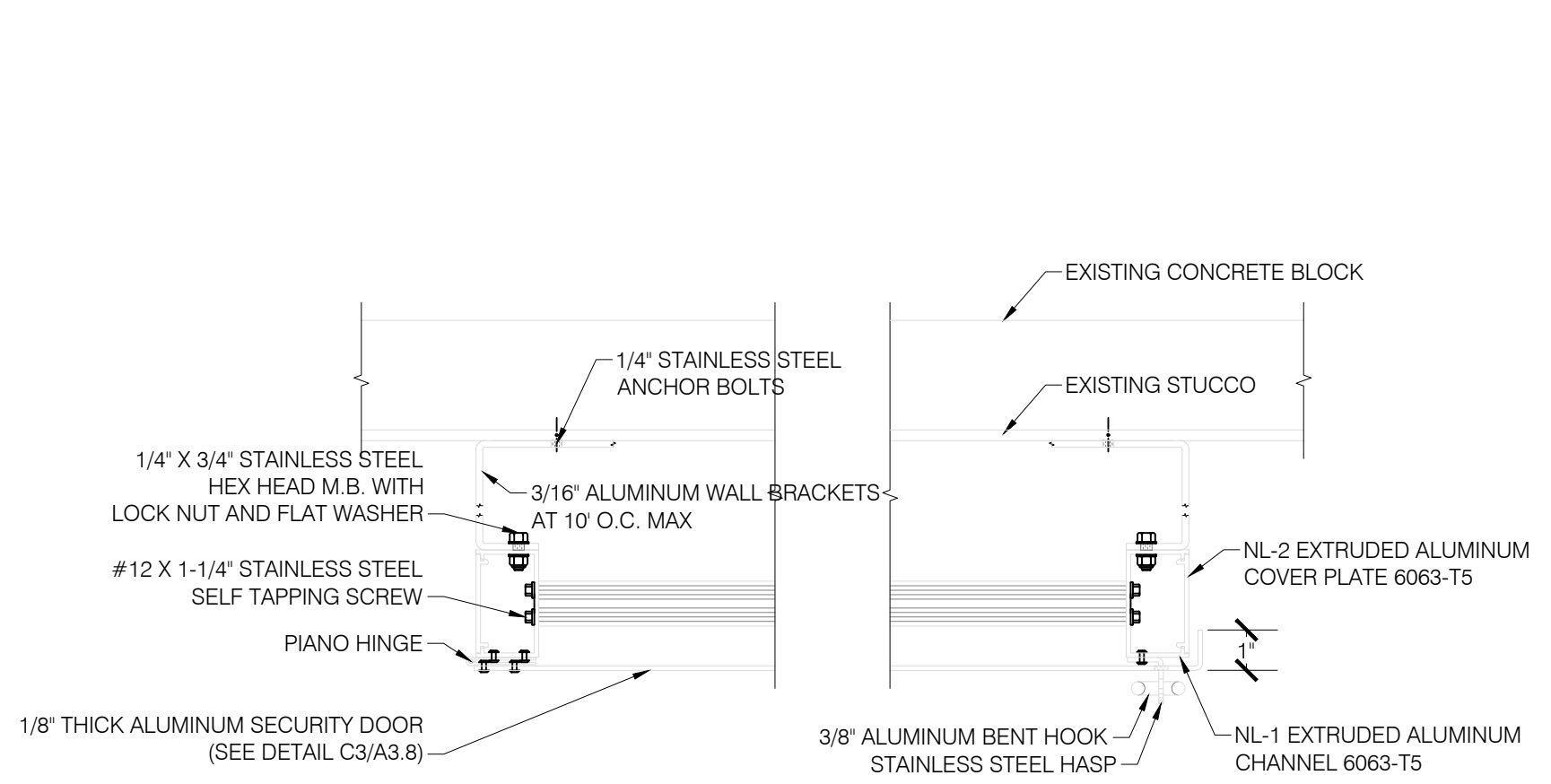
A1 ALUMINUM LADDER - RUNG  
A3.8 NTS



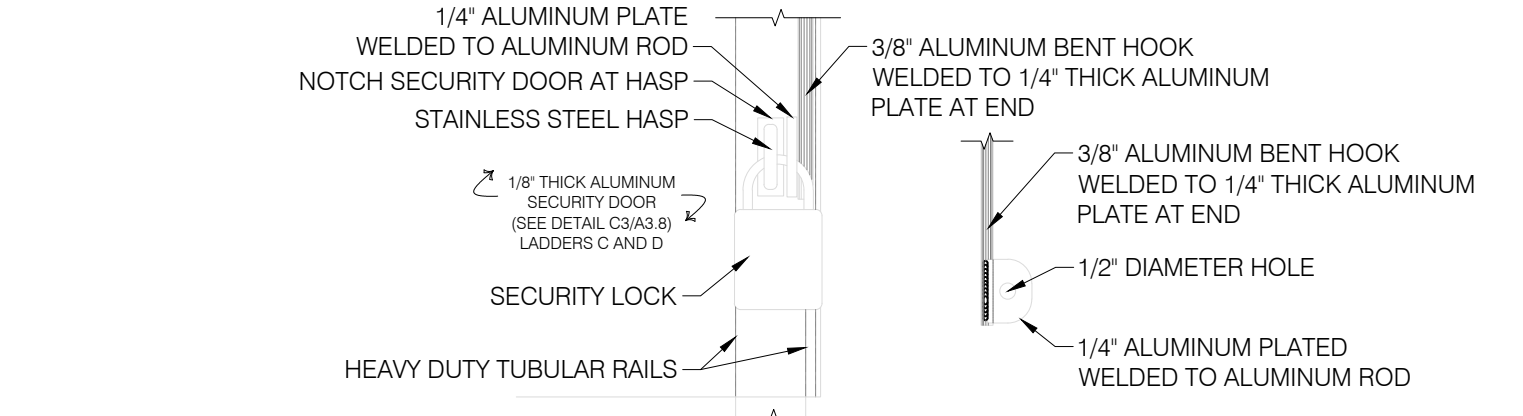
B1 ALUMINUM LADDER - PLATFORM - TOP VIEW  
A3.8 NTS



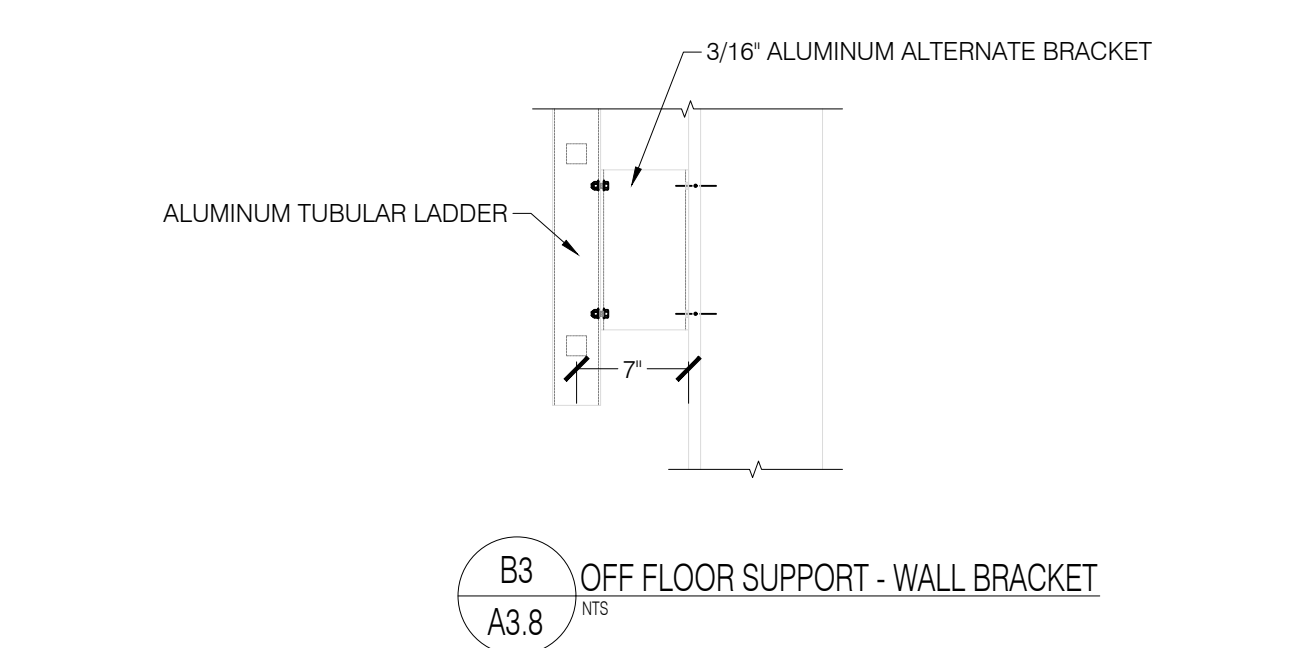
C3 ALUMINUM LADDER - SECURITY DOOR  
A3.8 NTS



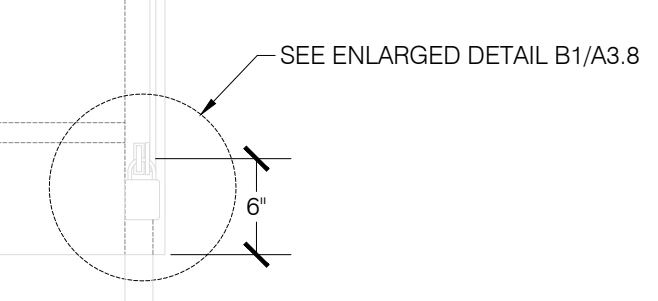
A2 ALUMINUM LADDER THROUGH CONCRETE BLOCK WALL - PLAN VIEW  
A3.8 NTS



B2 SECURITY DOOR DETAILS  
A3.8 NTS



B3 OFF FLOOR SUPPORT - WALL BRACKET  
A3.8 NTS



C4 LOCATION OF NEW LADDER  
A3.8 NTS

CONSTRUCTION DOCUMENTS  
ORANGE COUNTY GOVERNMENT  
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AND  
SOUTH PLANT ELECTRICAL BUILDING  
ORLANDO, FLORIDA

ROOF REPLACEMENT PROJECT

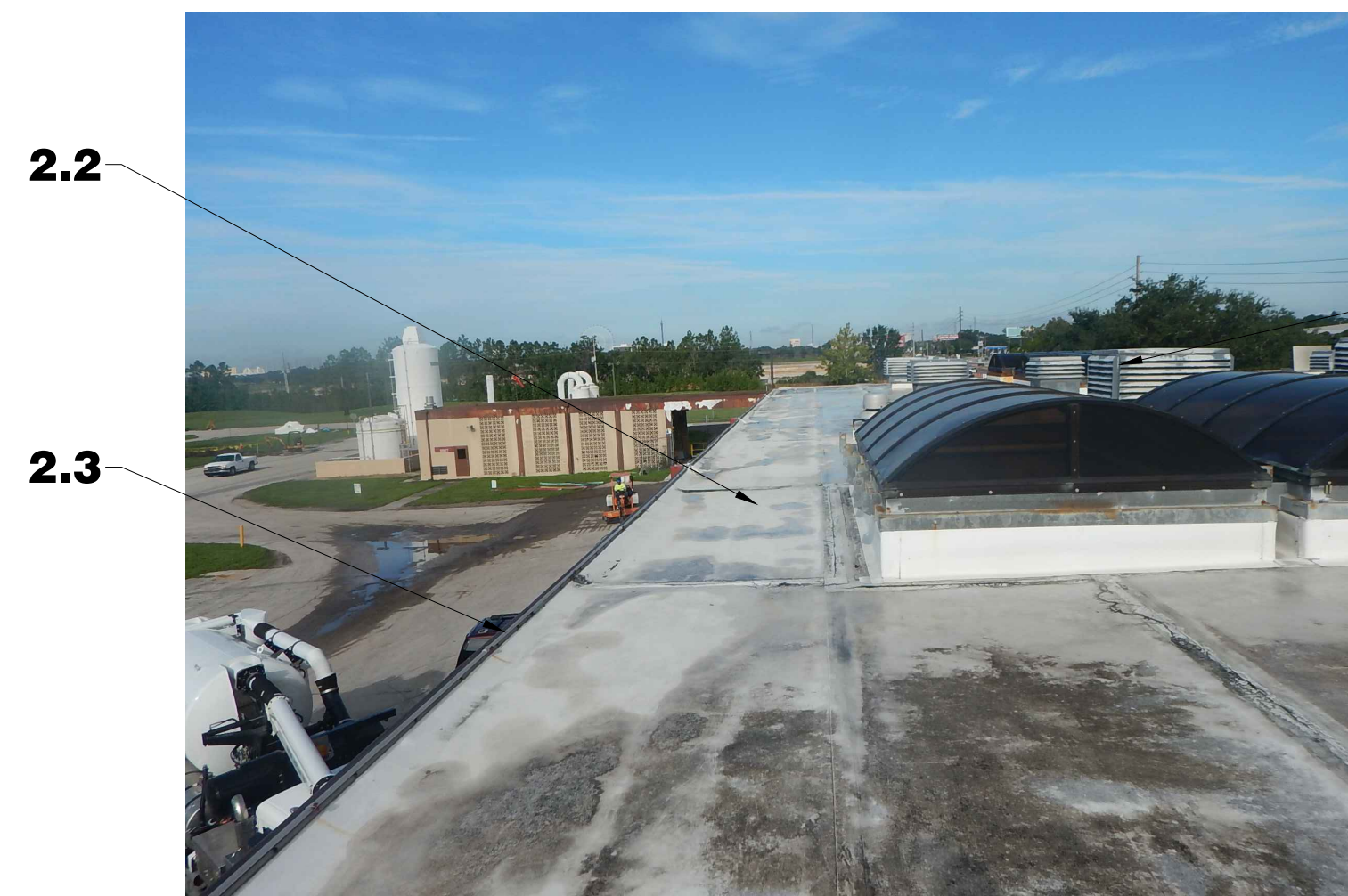
JAY AMMON ARCHITECT, INC.  
3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
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APPROVED BY: JPA DATE: JANUARY 21, 2019

ELECTRICAL BUILDING - LADDER DETAILS  
PLOT: 3' = 1'-0" SHEET A3.8

EXISTING ROOF AREA



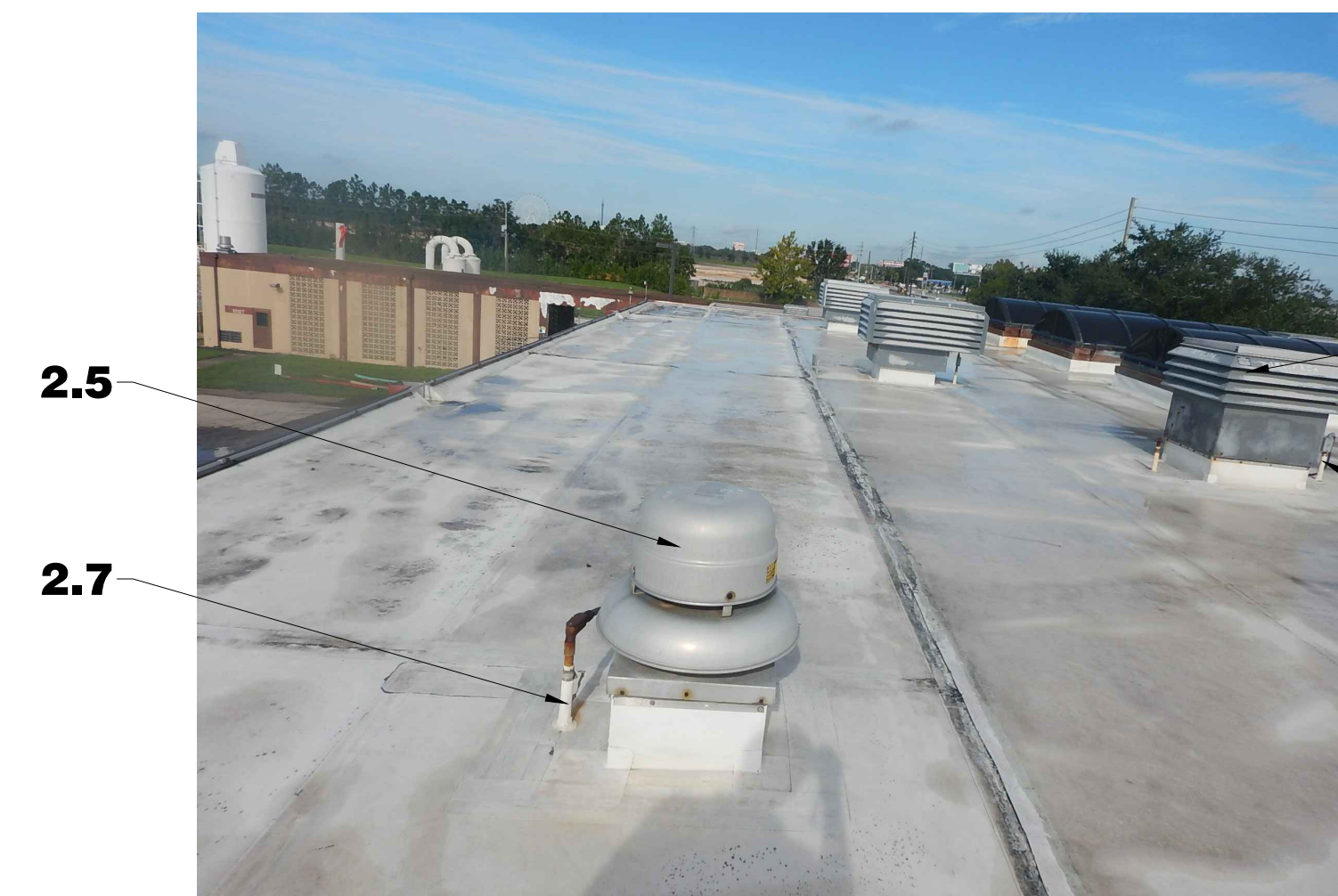
1 PHOTOGRAPH 1  
A4.0

EXISTING ACTIVE SCUPPER



2 PHOTOGRAPH 2  
A4.0

EXISTING EXHAUST FAN



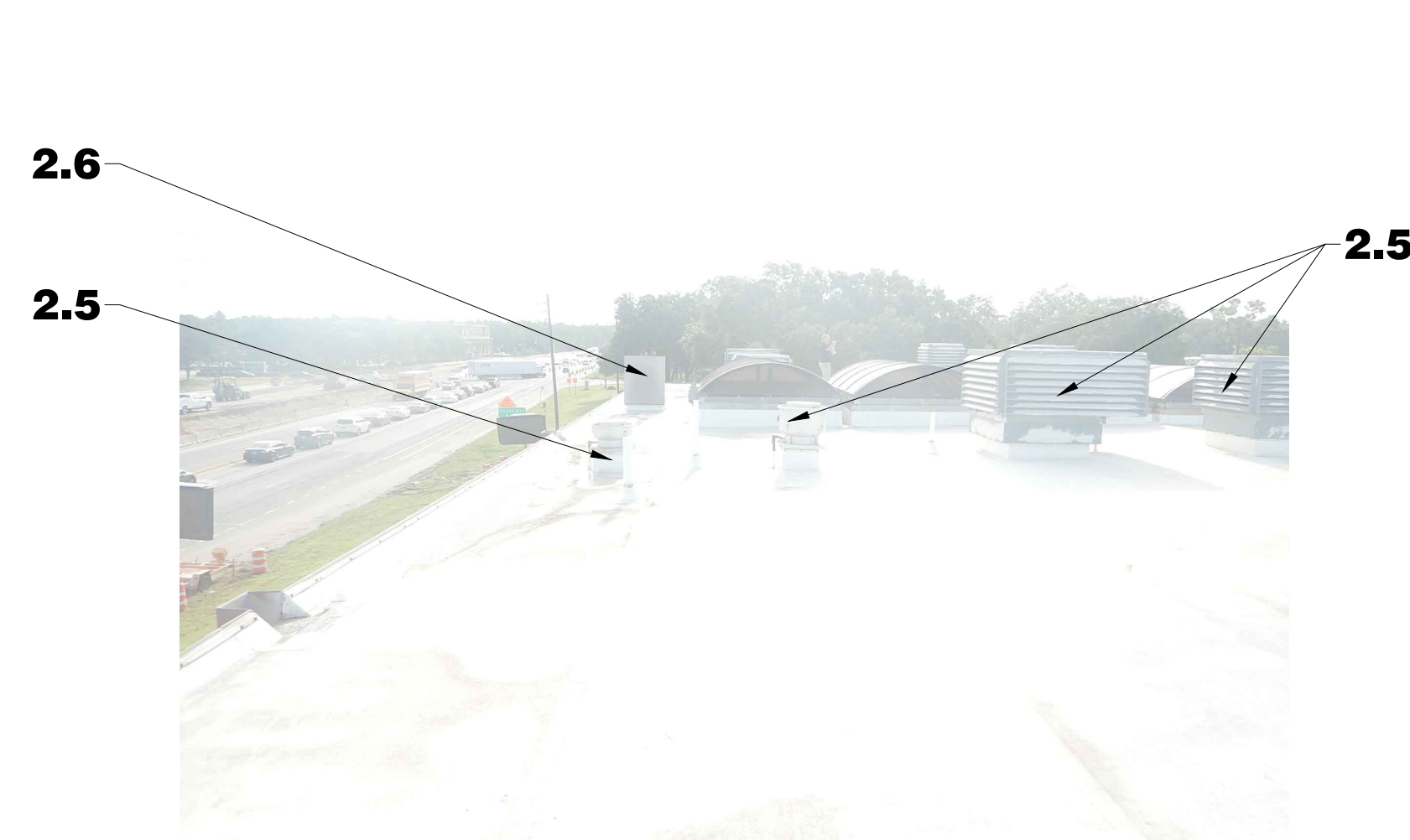
3 PHOTOGRAPH 3  
A4.0

EXISTING FANS TO BE REPLACED



4 PHOTOGRAPH 4  
A4.0

EXISTING ROOF AREA



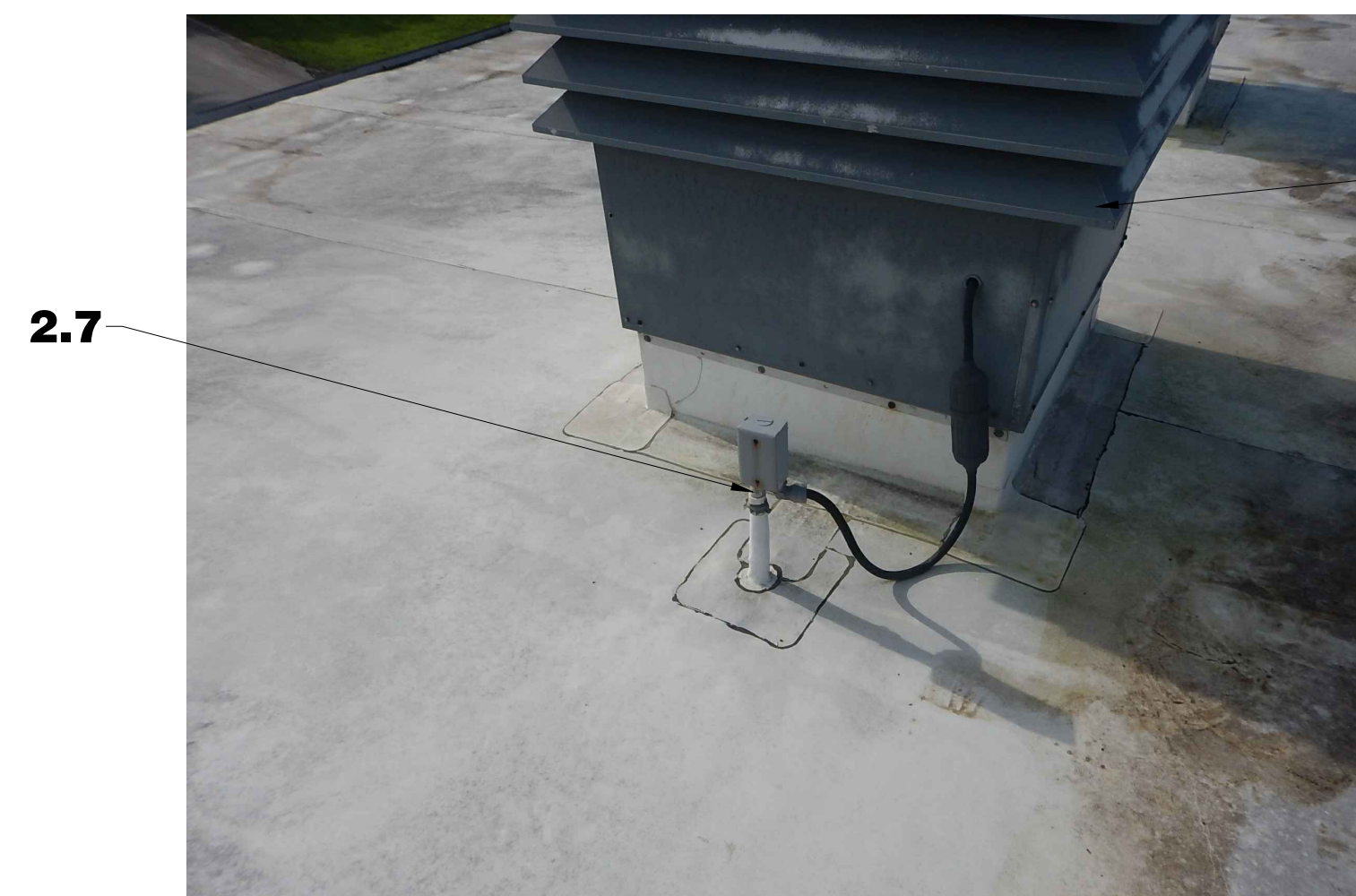
5 PHOTOGRAPH 5  
A4.0

EXISTING SKYLIGHTS



6 PHOTOGRAPH 6  
A4.0

EXISTING CONDUIT



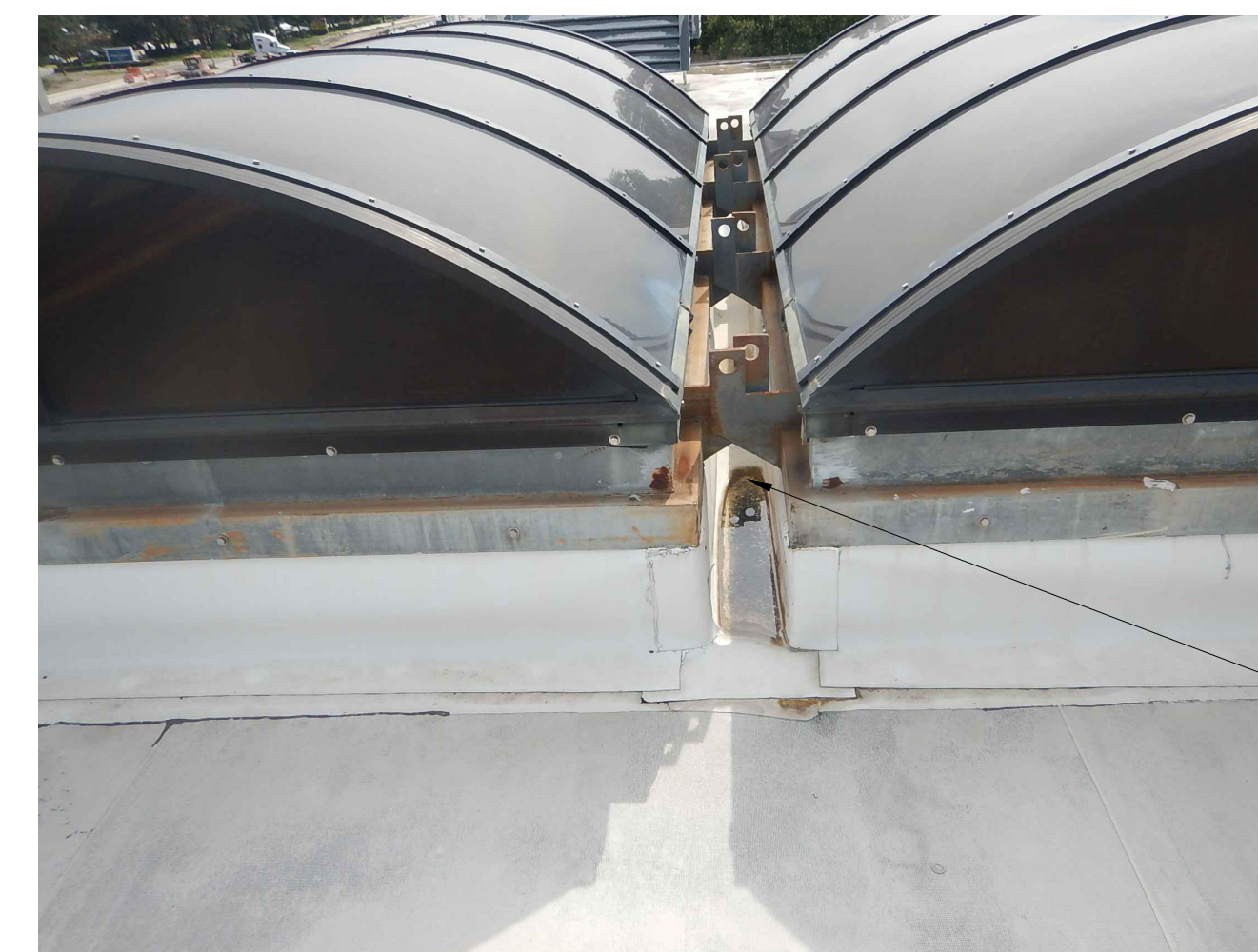
7 PHOTOGRAPH 7  
A4.0

EXISTING ROOF HATCHES



8 PHOTOGRAPH 8  
A4.0

EXISTING SKYLIGHT GUTTER



9 PHOTOGRAPH 9  
A4.0

A INFLUENT PUMP STATION -  
A4.0 PHOTOGRAPHS

**SCOPE OF WORK**

THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

- 1.0 GENERAL:**
- 1.1 ENGINEERING:** CONDUCT PULL TESTS OF THE EXISTING ROOF DECK. PROVIDE ENGINEERING CALCULATIONS PREPARED BY A FLORIDA LICENSED STRUCTURAL ENGINEER INCLUDING THE ATTACHMENT SPACING FOR EACH ROOF WIND ZONE. SUBMIT PULL TEST RESULTS AND THE ENGINEERING CALCULATIONS TO THE ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF THE ROOFING INSTALLATION. SEE DRAWINGS FOR WIND PRESSURES.
- 1.2 SUBSTRATE PREPARATION:** PREPARE, REPAIR, OR REPLACE ALL SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOFING ASSEMBLY SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING ASSEMBLY THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE ASSEMBLY.
- 1.3 WARRANTY:** THE NEW ROOFING ASSEMBLY IS TO BE EXAMINED AND APPROVED BY THE MANUFACTURERS OF THE ROOFING ASSEMBLY AND SHALL RECEIVE A 20 YEAR NDL LABOR AND MATERIAL WARRANTY AGAINST DEFECTS AND LEAKS. THE CONTRACTOR SHALL SUBMIT A 5 YEAR NDL WARRANTY FOR ALL WORK AGAINST DEFECTS AND LEAKS UPON COMPLETION OF THE WORK. ADJUST THE SCOPE OF WORK AS REQUIRED TO OBTAIN THIS WARRANTY.
- 1.4 SUBSTRATE PREPARATION:** REPLACE ALL DETERIORATED SUBSTRATE MATERIAL TO A CONDITION REQUIRED BY THE ROOF MEMBRANE MANUFACTURER. PREPARE ALL EXISTING SURFACES TO WHICH NEW OR REINSTALLED COMPONENTS ARE TO BE ATTACHED AS REQUIRED BY THE MANUFACTURER OF EACH NEW COMPONENT. REPLACE OR REPAIR ALL DAMAGED SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING, BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOF MEMBRANE, SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING MEMBRANE THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE PROPOSED ROOF ASSEMBLY.
- 2.0 ROOFING ASSEMBLY - PUMP STATION:**
- 2.1 DEMOLITION:** REMOVE EXISTING ROOF MEMBRANE AND LIGHTWEIGHT INSULATING CONCRETE FROM TOP SURFACE OF EXISTING CONCRETE DECK. REMOVE ALL METAL FLASHINGS INCLUDING BUT NOT LIMITED TO THE BASED PERIMETER EDGE, COUNTERFLASHINGS, METAL EDGES AND SCUPPERS. REMOVE ALL EXISTING MECHANICAL EQUIPMENT AND EQUIPMENT CURBS. TEMPORARILY REMOVE THE ROOF HATCHES FOR REINSTALLATION.
- 2.2 INSTALLATION OF NEW ROOFING ASSEMBLY:** INSTALL NEW MECHANICAL EQUIPMENT CURBS OVER EXISTING OPENINGS. FRAME THE EXISTING CONCRETE DECK AND TORCH APPLY A VAPOR BARRIER, COMPOSED OF A MODIFIED BITUMINOUS MEMBRANE OVER THE CONCRETE DECK. INSTALL FLAT AND TAPERED INSULATION, IN A MINIMUM OF TWO STAGGERED LAYERS, ADHERED WITH URETHANE ADHESIVE OVER THE TEMPORARY ROOF MEMBRANE. INSTALL TAPERED INSULATION AS REQUIRED TO ACHIEVE A MINIMUM SURFACE SLOPE OF 1/4 INCH PER LINEAR FOOT POSITIVE SLOPE TOWARD THE GUTTERS. THE SLOPE PLAN WILL BE A HIP SHAPE. INSTALL A 1/2 INCH COVER BOARD IN URETHANE ADHESIVE OVER THE INSULATION AND UP ALL EQUIPMENT CURBS. TORCH APPLY A SMOOTH MODIFIED BITUMINOUS MEMBRANE BASE SHEET OVER THE COVER BOARD. TORCH APPLY A GRANULATED MODIFIED BITUMINOUS CAP SHEET OVER THE BASE SHEET. AT ALL BASE FLASHINGS, TORCH APPLY A SMOOTH MODIFIED BITUMINOUS BASE FLASHING INNER PLY AND A GRANULATED MODIFIED BITUMINOUS BASE FLASHING OUTER PLY OVER THE COVER BOARDS AT THE ADJACENT VERTICAL SURFACES AT CURBS.
- 2.3 INSTALLATION OF NEW METAL FLASHINGS:** FABRICATE AND INSTALL STAINLESS STEEL FLASHINGS COMPLYING WITH ALL ANSI / SPIRI WIND RESISTANCE REQUIREMENTS AND WITH FULLY SOLDERED NON-MOVING SEAMS. NEW FLASHINGS INCLUDE BUT ARE NOT LIMITED TO METAL EDGES SKIRT FLASHINGS AND GUTTERS.
- 2.4 INSTALLATION OF NEW DOWNSPOUTS:** FABRICATE AND INSTALL NEW PVC DOWNSPOUTS SECURED WITH STAINLESS STEEL STRAPS. PAINT DOWNSPOUTS TO MATCH COLOR OF EXISTING WALLS.
- 2.5 EXISTING ROOF MOUNTED MECHANICAL EQUIPMENT:** INSTALL NEW ROOF MOUNTED MECHANICAL EQUIPMENT OVER THE NEW EQUIPMENT CURBS. INSTALL HOLD DOWN STRAPS TO PREVENT WIND DISPLACEMENT. SEE MECHANICAL.
- 2.6 EXISTING ROOF HATCH:** REINSTALL THE EXISTING ROOF HATCHES OVER THE EXISTING CURBS. INSTALL A LADDER EXTENSION AND A PERIMETER SAFETY RAIL WITH GATE AT THE ONE ACCESSIBLE ROOF HATCH.
- 2.7 EXISTING ELECTRICAL CONNECTIONS TO ROOF MOUNTED EQUIPMENT:** RELOCATE ALL DISCONNECT SWITCHES, CONVENIENCE OUTLETS, AND EXISTING SUPPORTS TO A MINIMUM OF 24 INCHES AWAY FROM THE EQUIPMENT TO WHICH IT SERVES. ALSO, RELOCATE THE CONDUITS OF ALL ROOF MOUNTED ELECTRICAL EQUIPMENT TO THE INTERIOR OF THE EQUIPMENT. A RECEPTACLE OUTLET SHALL BE PROVIDED FOR ALL EQUIPMENT REQUIRING SERVICE IN A LOCATION IN ACCORDANCE WITH NFPA TO REROUTE.
- 2.8 GUARD RAILS:** WHERE DESIGNATED, INSTALL A 42 INCH HIGH GUARDRAIL BETWEEN ROOF MOUNTED EQUIPMENT AND THE METAL EDGE. EXTEND THE GUARDRAIL A MINIMUM OF 30 INCHES BEYOND EACH END OF THE EQUIPMENT.
- 3.0 ROOFING ASSEMBLY - ELECTRIC BUILDING: SEE SHEET A4.1.**

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
 ORLANDO, FLORIDA  
 ROOF REPLACEMENT PROJECT

B/A2.4

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REVISIONS		
NUMBER	TYPE	DATE

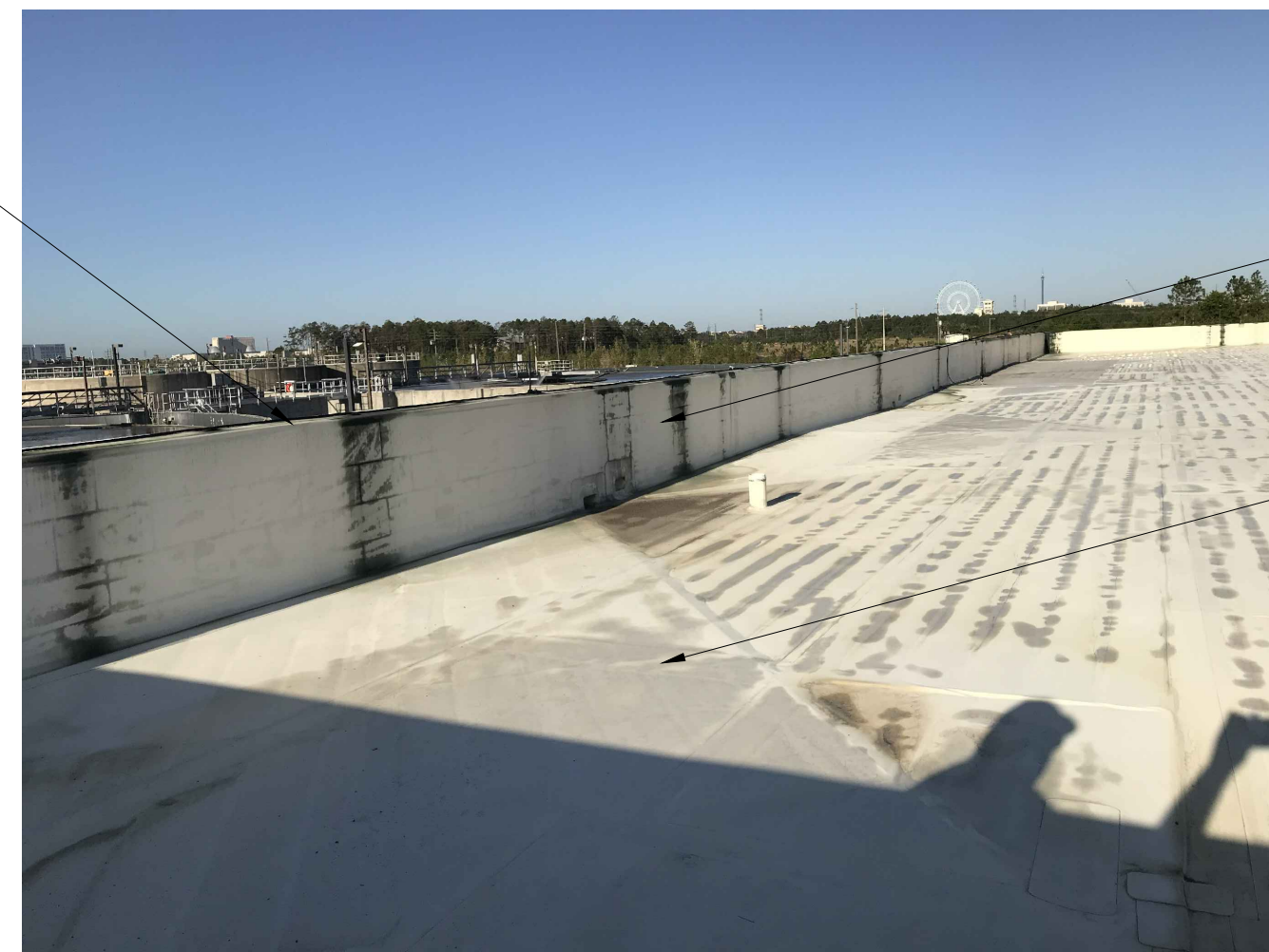
DRAWN BY: JSJ PROJECT NUMBER: 18-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

INFLUENT PUMP STATION -  
 PHOTOGRAPHS  
 A4.0

PLOT: N.T.S. SHEET



EXISTING ROOF AREA



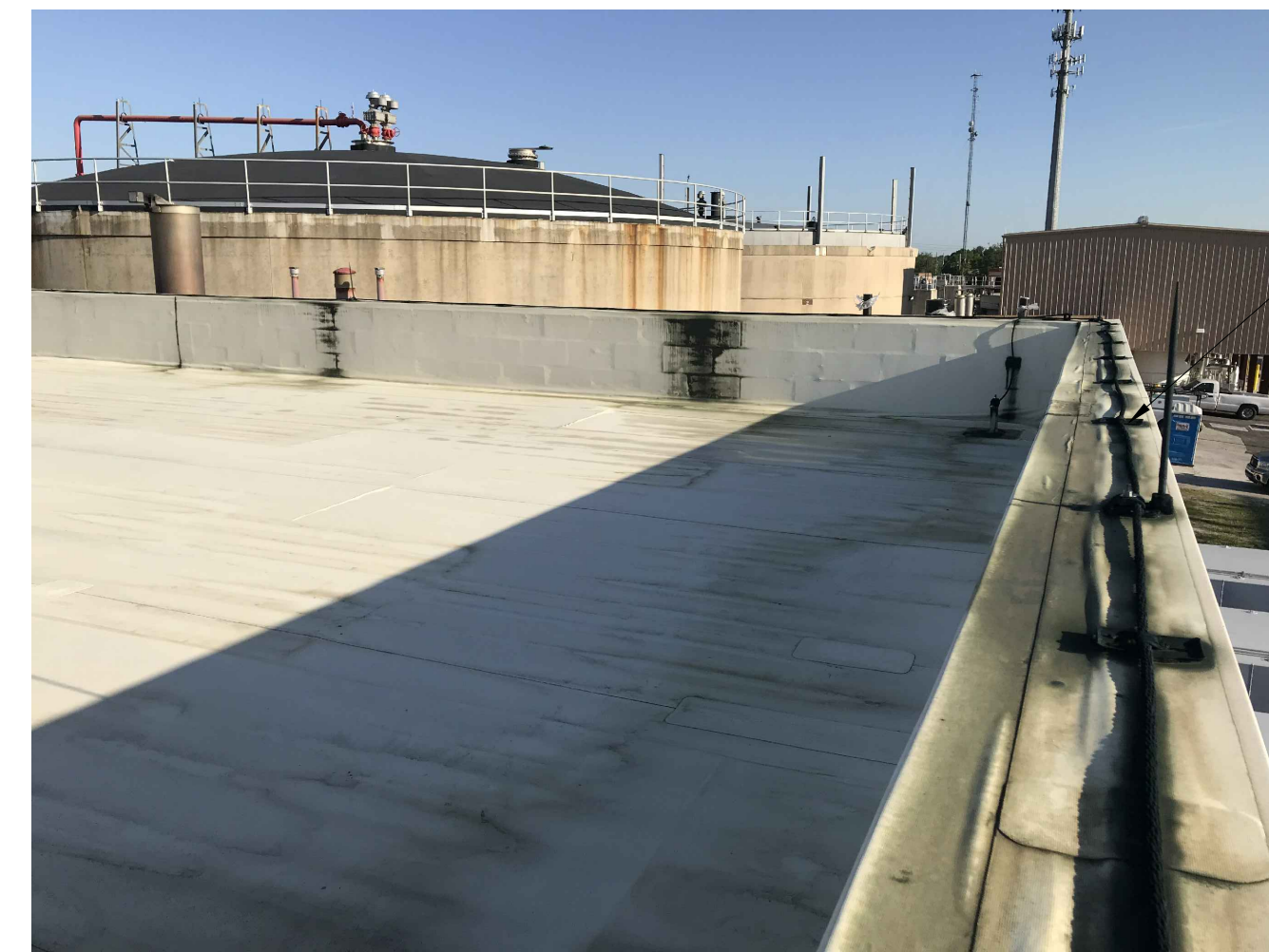
1 PHOTOGRAPH 1  
A4.1

EXISTING ROOF AREA



2 PHOTOGRAPH 2  
A4.1

EXISTING LIGHTNING PROTECTION



3 PHOTOGRAPH 3  
A4.1

EXISTING LIGHTNING PROTECTION



4 PHOTOGRAPH 4  
A4.1

EXISTING ACTIVE SCUPPER / DOWNSPOUT



5 PHOTOGRAPH 5  
A4.1

EXISTING ACTIVE SCUPPER / DOWNSPOUT



6 PHOTOGRAPH 6  
A4.1

**SCOPE OF WORK**

THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

- 1.0 GENERAL:**
- 1.1 ENGINEERING:** CONDUCT PULL TESTS OF THE EXISTING ROOF DECK. PROVIDE ENGINEERING CALCULATIONS PREPARED BY A FLORIDA LICENSED STRUCTURAL ENGINEER INCLUDING THE ATTACHMENT SPACING FOR EACH ROOF WIND ZONE. SUBMIT PULL TEST RESULTS AND THE ENGINEERING CALCULATIONS TO THE ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF THE ROOFING INSTALLATION. SEE DRAWINGS FOR WIND PRESSURES.
- 1.2 SUBSTRATE PREPARATION:** PREPARE, REPAIR, OR REPLACE ALL SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOFING ASSEMBLY SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING ASSEMBLY THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE ASSEMBLY.
- 1.3 WARRANTY:** THE NEW ROOFING ASSEMBLY IS TO BE EXAMINED AND APPROVED BY THE MANUFACTURERS OF THE ROOFING ASSEMBLY AND SHALL RECEIVE A 20 YEAR NDL LABOR AND MATERIAL WARRANTY AGAINST DEFECTS AND LEAKS. THE CONTRACTOR SHALL SUBMIT A 5 YEAR NDL WARRANTY FOR ALL WORK AGAINST DEFECTS AND LEAKS UPON COMPLETION OF THE WORK. ADJUST THE SCOPE OF WORK AS REQUIRED TO OBTAIN THIS WARRANTY.
- 1.4 SUBSTRATE PREPARATION:** REPLACE ALL DETERIORATED SUBSTRATE MATERIAL TO A CONDITION REQUIRED BY THE ROOF MEMBRANE MANUFACTURER. PREPARE ALL EXISTING SURFACES TO WHICH NEW OR REINSTALLED COMPONENTS ARE TO BE ATTACHED AS REQUIRED BY THE MANUFACTURER OF EACH NEW COMPONENT. REPLACE OR REPAIR ALL DAMAGED SURFACES AS NECESSARY TO COMPLY WITH REQUIREMENTS INCLUDING, BUT NOT LIMITED TO: WIND UPLIFT REQUIREMENTS, MANUFACTURERS RECOMMENDATIONS, BUILDING CODE REQUIREMENTS, AND RELEVANT INDUSTRY STANDARDS. PRIOR TO INSTALLATION OF THE ROOF MEMBRANE, SUBMIT A WRITTEN APPROVAL TO THE ARCHITECT, FROM THE MANUFACTURER OF THE ROOFING MEMBRANE THAT ALL SUBSTRATES ARE PROPERLY PREPARED FOR THE INSTALLATION OF THE PROPOSED ROOF ASSEMBLY.
- 2.0 ROOFING ASSEMBLY - PUMP STATION: SEE SHEET A4.0.**
- 3.0 ROOFING ASSEMBLY - ELECTRIC BUILDING:**
- 3.1 DEMOLITION:** REMOVE EXISTING ROOF MEMBRANE AND INSULATION FROM TOP SURFACE OF EXISTING CONCRETE TOPPING SLAB. REMOVE ALL METAL FLASHINGS INCLUDING BUT NOT LIMITED TO THE COPINGS, COUNTERFLASHINGS, AND SCUPPERS. REMOVE DESIGNATED WALL SURFACES FOR INSTALLATION OF NEW EMERGENCY OVERFLOW SCUPPERS.
- 3.2 INSTALLATION OF NEW ROOFING ASSEMBLY:** FRAME THE EXISTING CONCRETE TOPPING SLAB AND TORCH APPLY A VAPOR BARRIER, COMPOSED OF A MODIFIED BITUMINOUS MEMBRANE, OVER THE CONCRETE TOPPING SLAB. INSTALL FLAT INSULATION OVER THE STRUCTURALLY SLOPED EXISTING ROOF DECK AND TAPERED INSULATION AT THE CRICKETS, IN A MINIMUM OF TWO STAGGERED LAYERS, ADHERED WITH URETHANE ADHESIVE OVER THE TEMPORARY ROOF MEMBRANE. INSTALL TAPERED INSULATION CRICKETS AS REQUIRED TO ACHIEVE A MINIMUM SURFACE SLOPE OF 1/4 INCH PER LINEAR FOOT POSITIVE SLOPE TOWARD THE SCUPPERS. INSTALL A 1/2 INCH COVER BOARD IN URETHANE ADHESIVE OVER THE INSULATION AND UP ALL ADJACENT WALL SURFACES. TORCH APPLY A SMOOTH MODIFIED BITUMINOUS MEMBRANE BASE SHEET OVER THE COVER BOARD. TORCH APPLY A GRANULATED MODIFIED BITUMINOUS CAP SHEET OVER THE BASE SHEET. AT ALL BASE FLASHINGS, TORCH APPLY A SMOOTH MODIFIED BITUMINOUS BASE FLASHING INNER PLY AND A GRANULATED MODIFIED BITUMINOUS BASE FLASHING OUTER PLY OVER THE COVER BOARDS AT THE ADJACENT VERTICAL WALLS.
- 3.3 INSTALLATION OF NEW METAL FLASHINGS:** FABRICATE AND INSTALL STAINLESS STEEL FLASHINGS COMPLYING WITH ALL ANSI / SPRI WIND RESISTANCE REQUIREMENTS AND WITH FULLY SOLDERED NON-MOVING SEAMS. NEW FLASHINGS INCLUDE BUT ARE NOT LIMITED TO COPINGS, SCUPPERS, AND LIGHTNING PROTECTION ROOF PENETRATIONS.
- 3.4 INSTALLATION OF NEW DOWNSPOUTS:** FABRICATE AND INSTALL NEW PVC DOWNSPOUTS SECURED WITH STAINLESS STEEL STRAPS. PAINT DOWNSPOUTS TO MATCH COLOR OF EXISTING WALLS.
- 3.5 LIGHTNING PROTECTION:** REMOVE ALL LIGHTNING PROTECTION ASSEMBLY COMPONENTS ATTACHED TO THE ROOFING ASSEMBLY, INCLUDING BUT NOT LIMITED TO: AIR TERMINALS, CONDUCTOR CABLES, ATTACHMENT COMPONENTS, AND RELATED FASTENERS. REPLACE ALL EXISTING LIGHTNING PROTECTION WITH NEW COMPONENTS THAT WILL BE COMPATIBLE WITH THE NEW ROOFING ASSEMBLY. WHERE EXISTING LIGHTNING PROTECTION DOES NOT EXIST, INSTALL A NEW LIGHTNING PROTECTION ASSEMBLY. TIE-IN THE NEW LIGHTNING PROTECTION ASSEMBLY COMPONENTS WITH THE EXISTING LIGHTNING PROTECTION GROUNDING COMPONENTS USING BI-METAL CONNECTORS WHERE MATERIAL COMPATIBILITY WILL NOT AFFECT THE NEW ROOFING ASSEMBLY. INSTALL ALL LIGHTNING PROTECTION ASSEMBLIES AND COMPONENTS BY A QUALIFIED, LICENSED LIGHTNING PROTECTION INSTALLER WITH A MINIMUM OF 5 YEARS EXPERIENCE IN THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS IN ACCORDANCE WITH NFPA-780 AND ALL APPLICABLE BUILDING CODES.
- 3.6 ROOF ACCESS LADDER:** INSTALL NEW ROOF ACCESS LADDER. SEE SHEET AS 8 FOR SPECIFICATION AND DETAILS.

CONSTRUCTION DOCUMENTS  
 ORANGE COUNTY GOVERNMENT  
 SWRF INFLUENT PUMP STATION  
 AND  
 SOUTH PLANT ELECTRICAL BUILDING  
 ORLANDO, FLORIDA  
 ROOF REPLACEMENT PROJECT

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REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: JSJ PROJECT NUMBER: 19-079  
 APPROVED BY: JPA DATE: JANUARY 21, 2019

ELECTRICAL BUILDING -  
 PHOTOGRAPHS

A4.1

PLOT: N.T.S. SHEET

A  
 A4.1  
 ELECTRICAL BUILDING -  
 PHOTOGRAPHS

MECHANICAL GENERAL NOTES	MECHANICAL ABBREVIATIONS		MECHANICAL SYMBOLS LEGEND									
<p>1. IF THE INTENT OF ARCHITECT/ENGINEER WITH REGARD TO ANY DETAIL IS NOT CLEAR, OR IS CAPABLE OF MORE THAN ONE INTERPRETATION, SUCH MATTERS WILL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE SUBMISSION OF BIDS, AND THE ENGINEER SHALL MAKE CORRECTION OR EXPLANATION IN WRITING. OTHERWISE, NO EXTRA CHARGE WILL BE ALLOWED FOR THE WORK OR MATERIAL IN QUESTION.</p> <p>2. THE PLANS AND SPECIFICATIONS ARE INTENDED AS A GENERAL DESCRIPTION OF THE WORK TO BE PERFORMED. ALL ITEMS NOT SPECIFICALLY MENTIONED OR SHOWN, BUT NECESSARY FOR THE COMPLETION OF THE INSTALLATION, SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. THIS CONTRACTOR SHALL THOROUGHLY ACQUAINT THEMSELVES WITH THE MECHANICAL, AND ELECTRICAL PLANS BEFORE SUBMITTING THEIR FINAL BID.</p> <p>3. ALL WORK SHALL BE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2017, FLORIDA MECHANICAL &amp; ELECTRICAL CODES, 2017 AND LATEST N.E.C &amp; NFPA CODES.</p> <p>4. THE SIZE AND LOCATION OF EQUIPMENT INSTALLED UNDER DIVISION 23 MECHANICAL SHALL BE COORDINATED WITH OTHER TRADES. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.</p> <p>5. DUCTWORK AND PIPING TO MECHANICAL EQUIPMENT SHALL BE INSTALLED IN A MANNER THAT DOES NOT OBSTRUCT EQUIPMENT SERVICE CLEARANCES.</p> <p>6. INTERRUPTION OF EXISTING SERVICES SHALL BE MINIMAL AND SHALL BE FULLY COORDINATED WITH THE OWNER AND ALL TRADES IN ADVANCE TO SCHEDULE ALL INTERRUPTIONS DURING NON-CRITICAL TIMES. OWNER SHALL BE PROVIDED WITH THREE BUSINESS DAYS NOTICE PRIOR TO INTERCEPTION.</p> <p>7. DISCONNECT SWITCHES REQUIRED FOR THE MECHANICAL EQUIPMENT SHALL BE PROVIDED BY DIVISION 26 ELECTRICAL EXCEPT WHEN INDICATED ON SCHEDULE.</p> <p>8. PROVIDE 4" HIGH CONCRETE PADS UNDER ALL FLOOR MOUNTED EQUIPMENT, WITH CHAMFERED EDGES AND 6" EXTENSIONS BEYOND EQUIPMENT UNLESS NOTED OTHERWISE.</p> <p>9. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED AND/OR SPECIFIED. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED TO PROVIDE A VIBRATION-FREE, RIGID INSTALLATION. SUPPORT ALL OBJECTS FROM STRUCTURE WITHOUT PENETRATING THE CEILING.</p> <p>10. ALL HVAC EQUIPMENT LOCATION &amp; WEIGHT SHALL BE COORDINATED AND APPROVED BY THE STRUCTURAL ENGINEER, CONTRACTOR AND OWNER PRIOR TO PURCHASE AND INSTALLATION.</p> <p>11. CONDENSATE DRAINS FROM ALL MECHANICAL EQUIPMENT SHALL BE COORDINATED FOR PROPER DRAINAGE TO SUIT EQUIPMENT FURNISHED. ALL CONDENSATE DRAIN LINES SHALL BE INSULATED AND INSTALLED WITH A "P" TRAP AT THE UNIT.</p> <p>12. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH LATEST SMACNA, NFPA 90A AND 90B REQUIREMENTS. OFFSETS IN DUCTS AND PIPING AND TRANSITIONS AROUND OBSTRUCTIONS. PROVIDE ALL TRANSITIONS, ELBOWS, FITTINGS, ETC., TO ALLOW SMOOTH FLOWS.</p> <p>13. PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTS CONNECTING TO EACH FAN, AIR HANDLING UNIT AND FAN COIL UNIT. COORDINATE DIFFUSER, GRILLE AND REGISTER LOCATIONS WITH EQUIPMENT OF ALL TRADES and VERIFY CEILING FINISHES.</p> <p>14. ALL OPERABLE THERMOSTAT PARTS SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR. ROOM THERMOSTATS DO NOT REQUIRE COVERS. VOLTAGE SHALL BE 24 VOLT UNLESS OTHERWISE INDICATED.</p> <p>15. ALL CONTROL WIRING AND HARDWARE TO COMPLETE THE HVAC CONTROL SYSTEM SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 23 MECHANICAL OF THESE CONTRACT DOCUMENTS.</p> <p>16. INSTALLATION OF DUCT SMOKE DETECTORS SHALL BE BY DIVISION 23 AND FURNISHED BY DIVISION 26.</p> <p>17. THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND ENGINEER FOR REVIEW, A TEST AND BALANCE REPORT OF ALL SYSTEMS. THE TESTING AND BALANCING SHALL BE PERFORMED BY A CERTIFIED TEST AND BALANCE COMPANY. TEST AND BALANCE REPORT SHALL BE COMPLETED BY SUBSTANTIAL COMPLETION DATE.</p> <p>18. PROVIDE ALL MANUFACTURER INSTALLATION &amp; MAINTENANCE MANUALS FOR EQUIPMENT INSTALLED FOR ENGINEER REVIEW BEFORE RELEASE TO THE OWNER.</p>	<p>AAV AUTOMATIC AIR VENT AC AIR CONDITIONING ACU AIR CONDITIONING UNIT AD ACCESS DOOR, AIR DRYER AFF ABOVE FINISHED FLOOR AFMS AIR FLOW MEASURING STATION AHU AIR HANDLING UNIT ALUM ALUMINUM AP ACCESS PANEL APD AIR PRESSURE DROP ATC AUTOMATIC TEMPERATURE CONTROL AV AIR VENT BDD BACK DRAFT DAMPER BOT BOTTOM BFP BACKFLOW PREVENTER BTU BRITISH THERMAL UNIT C CELSIUS, DEGREE CELSIUS CFM CUBIC FEET PER MINUTE CHWS&amp;R CHILLED WATER SUPPLY &amp; RETURN CLG CEILING CF CEILING FAN CO CLEAN OUT COND CONDENSATE (D) DEMOLISH DB DRY BULB, DOWN BLOW DCW DOMESTIC COLD WATER DEG DEGREE DELIV DELIVERY DHW DOMESTIC HOT WATER DISC DISCONNECT DN DOWN (E) EXISTING EA EXHAUST AIR, EACH EAT ENTERING AIR TEMPERATURE EDB ENTERING DRY BULB EF EXHAUST FAN EFF EFFICIENCY ELEV ELEVATION EMS ENERGY MANAGEMENT SYSTEM ENT ENTERING EWB ENTERING WET BULB F FAHRENHEIT FD FIRE DAMPER, FLOOR DRAIN FPM FEET PER MINUTE FPS FEET PER SECOND F/SD FIRE/SMOKE DAMPER FT FEET GPH GALLONS PER HOUR GPM GALLONS PER MINUTE</p> <p>HOA HAND-OFF-AUTOMATIC HP HORSEPOWER, HEAT PUMP HVAC HEATING VENTILATING AND AIR CONDITIONING HZ HERTZ (CYCLES PER SECOND) ID INSIDE DIAMETER IN INCH KEF KITCHEN EXHAUST FAN KW KILOWATT LDB LEAVING DRY BULB LWB LEAVING WET BULB LOR LIMIT OF REMOVAL MAX MAXIMUM MBH THOUSAND BTU PER HOUR MD MANUAL DAMPER MIN MINIMUM (N) NEW N NORTH NA NOT APPLICABLE NO OR # NUMBER, NORMALLY OPEN NTS NOT TO SCALE OA OUTSIDE AIR OBD OPPOSED BLADE DAMPER OD OUTSIDE DIAMETER OPER OPERATING PSI POUNDS PER SQUARE INCH PSIG POUNDS PER SQUARE INCH GAUGE RA RETURN AIR REG REGISTER RF RETURN FAN RG RETURN GRILLE RH RELATIVE HUMIDITY RHC REHEAT COIL RM ROOM SA SUPPLY AIR SEF SMOKE EXHAUST FAN SF SUPPLY FAN S/FD SMOKE/FIRE DAMPER T THERMOSTAT TEC TERMINAL EQUIPMENT CONTROLLER TEMP TEMPERATURE TD TRANSFER DUCT TYP TYPICAL V VENT, VOLT VD VOLUME DAMPER VERT VERTICAL WB WET BULB WPD WATER PRESSURE DROP</p>	<p>POINT OF CONNECTION</p> <p>POINT OF DISCONNECTION</p> <p>THERMOSTAT</p> <p>CARBON DIOXIDE SENSOR</p> <p>SMOKE DETECTOR</p> <p>EXISTING FIRE DAMPER</p> <p>FIRE DAMPER</p> <p>FIRE SMOKE DAMPER</p> <p>MANUAL VOLUME DAMPER</p> <p>MOTOR OPERATED DAMPER</p> <p>BUILDING MANAGEMENT SYSTEM</p> <p>NEW WORK</p> <p>EXISTING DUCT TO REMAIN</p> <p>EXISTING DUCT TO BE DEMOLISHED</p> <p>SUPPLY AIR DUCT</p> <p>RETURN AIR DUCT</p> <p>EXHAUST AIR DUCT</p> <p>ELBOW TURNED UP</p> <p>ELBOW TURNED DOWN</p> <p>TAP WITH 45° ENTRY</p>										
	<p><b>SCOPE OF WORK</b></p> <p>DEMOLISH THE EXISTING EXHAUST FANS AND PROVIDE NEW EXHAUST FANS</p>		<p><b>DRAWING INDEX</b></p> <table border="1"> <thead> <tr> <th>DWG #</th> <th>DWG. TITLE</th> </tr> </thead> <tbody> <tr> <td>M0.01</td> <td>MECHANICAL LEGENDS, NOTES &amp; SCHEDULES</td> </tr> <tr> <td>M1.01</td> <td>MECHANICAL PLAN</td> </tr> <tr> <td>M7.01</td> <td>MECHANICAL DETAILS &amp; CONTROLS</td> </tr> </tbody> </table>		DWG #	DWG. TITLE	M0.01	MECHANICAL LEGENDS, NOTES & SCHEDULES	M1.01	MECHANICAL PLAN	M7.01	MECHANICAL DETAILS & CONTROLS
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FAN SCHEDULE										
MARK	MANUF.	MODEL #	CFM	ESP (IN.WG.)	DRIVE	FAN RPM	ELECTRICAL		TYPE	NOTES
							MOTOR HP	POWER		
SF-1	GREENHECK	RSFP-180	6,400	0.5"	BELT	544	3.00	480/3	SUPPLY	1,2,3,4,5,7,8,9
SF-2	GREENHECK	RSFP-180	6,400	0.5"	BELT	544	3.00	480/3	SUPPLY	1,2,3,4,5,7,8,9
SF-3	GREENHECK	RSFP-180	5,250	0.5"	BELT	495	3.00	480/3	SUPPLY	1,2,3,4,5,7,8,9
SF-4	GREENHECK	RSFP-180	5,250	0.5"	BELT	495	3.00	480/3	SUPPLY	1,2,3,4,5,7,8,9
EF-1	GREENHECK	RBE-2L30	8,000	0.25"	BELT	543	2.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-2	GREENHECK	RBE-2L30	8,000	0.25"	BELT	543	2.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-3	GREENHECK	RBE-2H42	13,500	0.25"	BELT	572	3.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-4	GREENHECK	RBE-2H42	13,500	0.25"	BELT	572	3.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-5	GREENHECK	RBE-2H42	13,500	0.25"	BELT	572	3.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-6	GREENHECK	RBE-3H30	5,250	0.25"	BELT	799	2.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-7	GREENHECK	RBE-3H30	5,250	0.25"	BELT	799	2.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-8	GREENHECK	RBE-3H30	5,250	0.25"	BELT	799	2.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-9	GREENHECK	RBE-3H30	5,250	0.25"	BELT	799	2.00	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-10	GREENHECK	GB-141	2,200	0.5"	BELT	1286	0.20	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-11	GREENHECK	GB-141	2,200	0.5"	BELT	1286	0.20	480/3	EXHAUST	1,2,3,4,5,6,8,9,10
EF-12	GREENHECK	GB-141	2,200	0.5"	BELT	1286	0.20	480/3	EXHAUST	1,2,3,4,5,6,8,9,10

NOTES:

- PROVIDE 18" ROOF CURB.
- PROVIDE WITH BIRD SCREEN.
- FAN SHALL BE ALUMINUM CONSTRUCTION.
- PROVIDE NEOPRENE ISOLATORS.
- PROVIDE HIGH WIND APPLICATION.
- PROVIDE WITH EXPLOSION PROOF MOTOR & SPARK RESISTANCE CONSTRUCTION.
- PROVIDE WASHABLE SS FILTERS.
- INTEGRAL DISCONNECT.
- PROVIDE BACKDRAFT DAMPER.
- PROVIDE HI-PRO POLYESTER COATING FOR ALL FAN COMPONENTS INCLUDING BACKDRAFT DAMPER.

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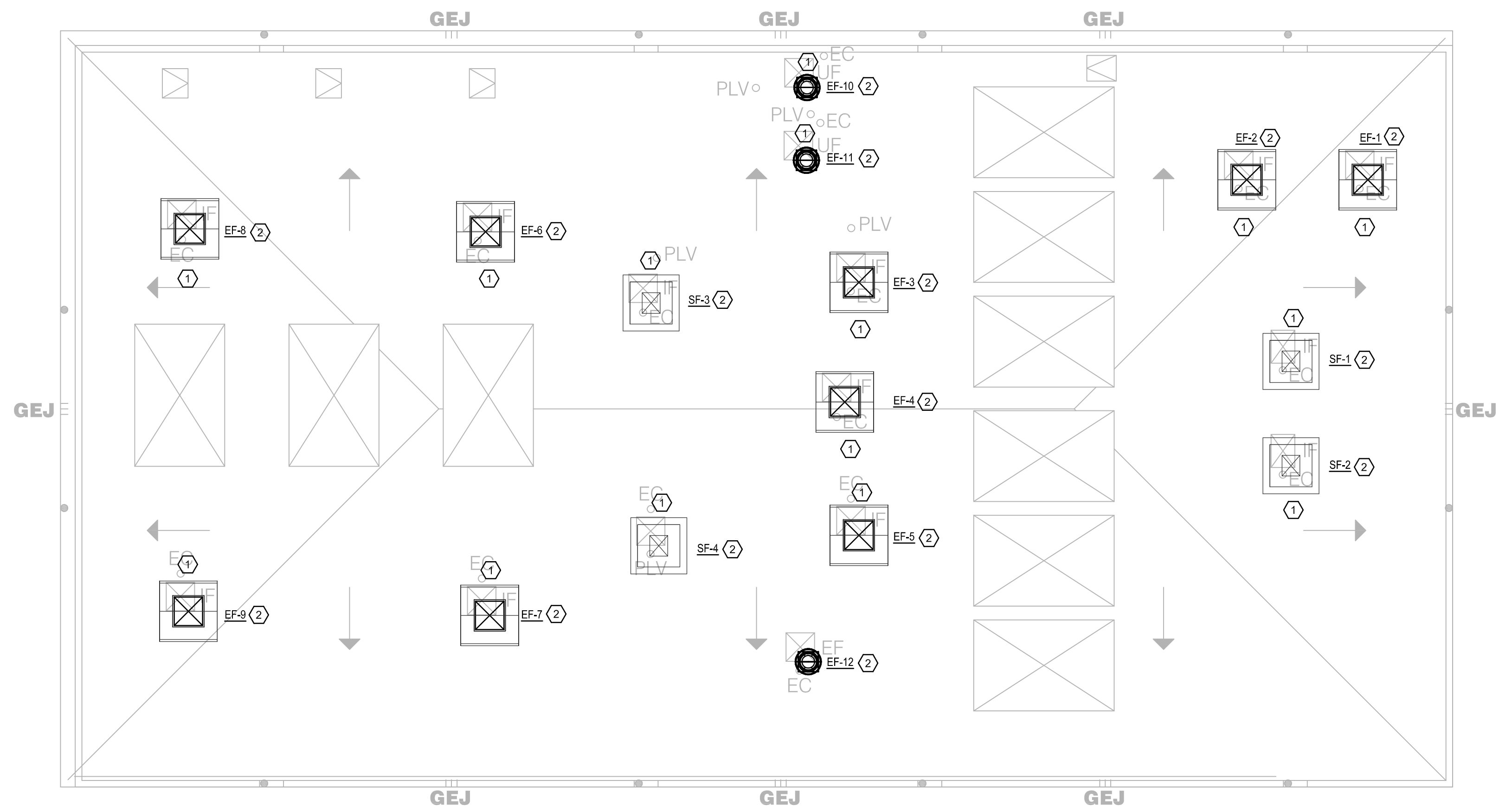
CONSTRUCTION DOCUMENTS  
ORANGE COUNTY GOVERNMENT  
SWRF INFLUENT PUMP STATION  
AND  
SOUTH PLANT ELECTRICAL BUILDING  
ORLANDO, FLORIDA  
ROOF REPLACEMENT PROJECT

JAY AMMON ARCHITECT, INC.  
3246 LAKEVIEW OAKS DRIVE • LONGWOOD, FLORIDA 32779  
(407) 333-1977 • FAX: (407) 333-6686 • E MAIL: JAY@JAYAMMON.COM

REVISIONS		
NUMBER	TYPE	DATE

DRAWN BY: GU PROJECT NUMBER: 18-029  
APPROVED BY: JAS DATE: JANUARY 21, 2019

MECHANICAL LEGENDS, NOTES AND SCHEDULES



**GENERAL NOTES:**

- a. REFER TO SYMBOL LEGENDS.
- b. REFER TO SPECIFICATION MANUAL.
- c. MODIFY ROOF OPENINGS AS REQUIRED FOR NEW FAN CURBS. ATTACH CURBS TO ROOF DECK PER MANUFACTURERS RECOMMENDATIONS FOR HIGH WIND CURB APPLICATION.

**PLAN KEY NOTES:** (1)

- 1. CONTRACTOR SHALL DISCONNECT ALL POWER FROM THE MECHANICAL EQUIPMENT BEING REPLACED. PROVIDE NEW NEMA 6 JUNCTION BOX, CONDUIT, PIPE SLEEVE AND FLEX WIRING. COORDINATE WITH NEW ROOF WORK AND FAN POWER LOCATION. CONDUIT AND WIRING SHALL MATCH EXISTING AND SHALL BE EXTENDED AS REQUIRED FOR A COMPLETE INSTALLATION OF NEW FAN WIRING.
- 2. DEMOLISH FAN AND CURB, PROVIDE NEW FAN TO MATCH EXISTING. COORDINATE WITH NEW ROOF WORK AND POWER LOCATION.

**MECHANICAL PLAN**  
 SCALE: 1/8"=1'-0"

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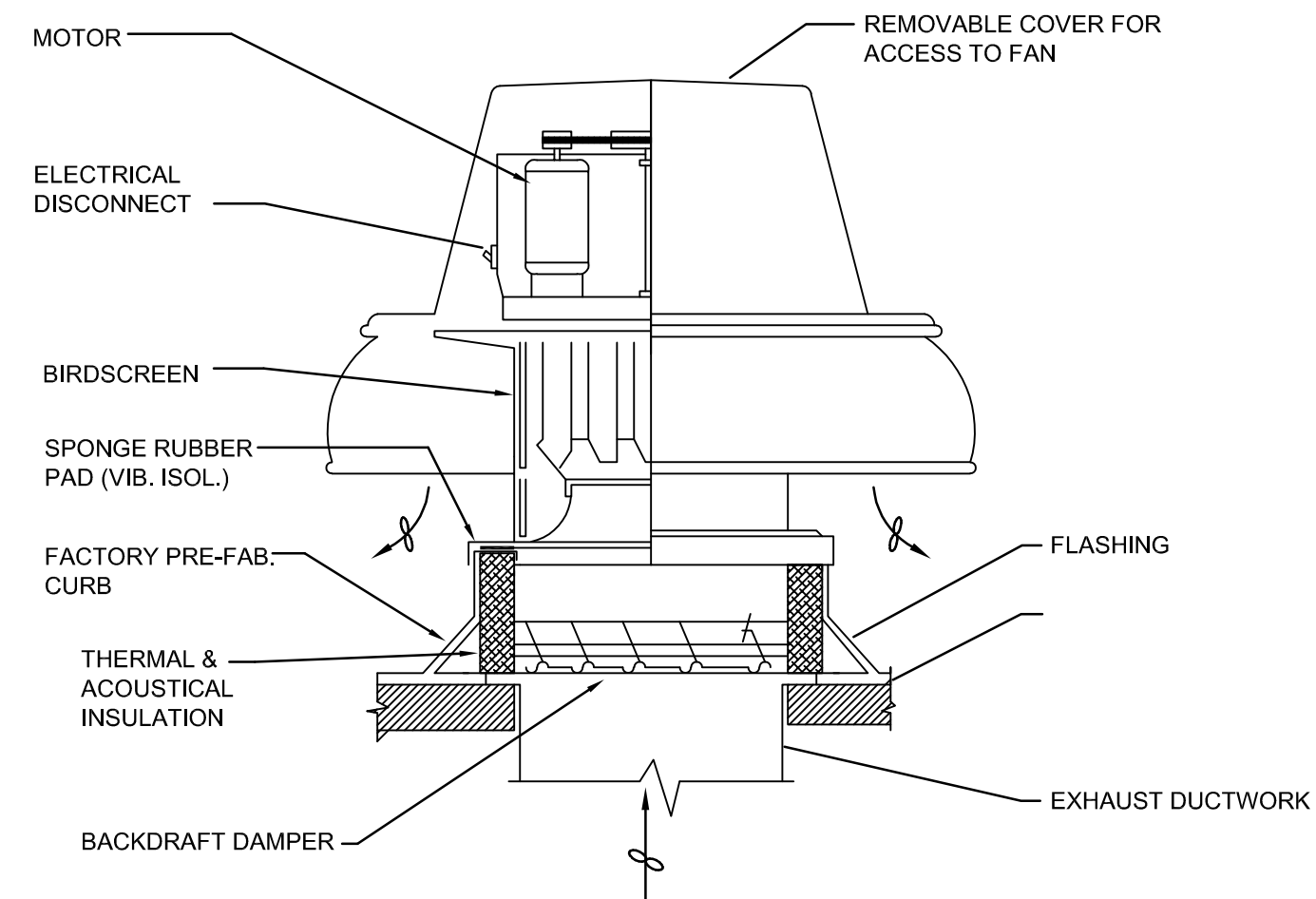
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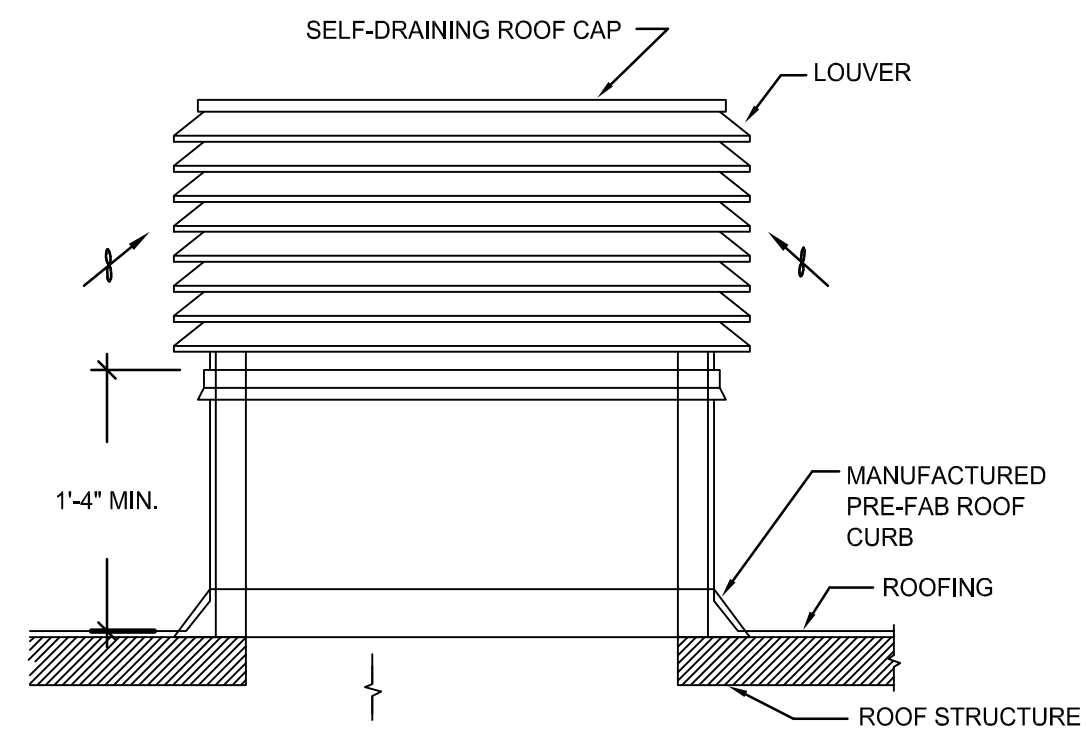
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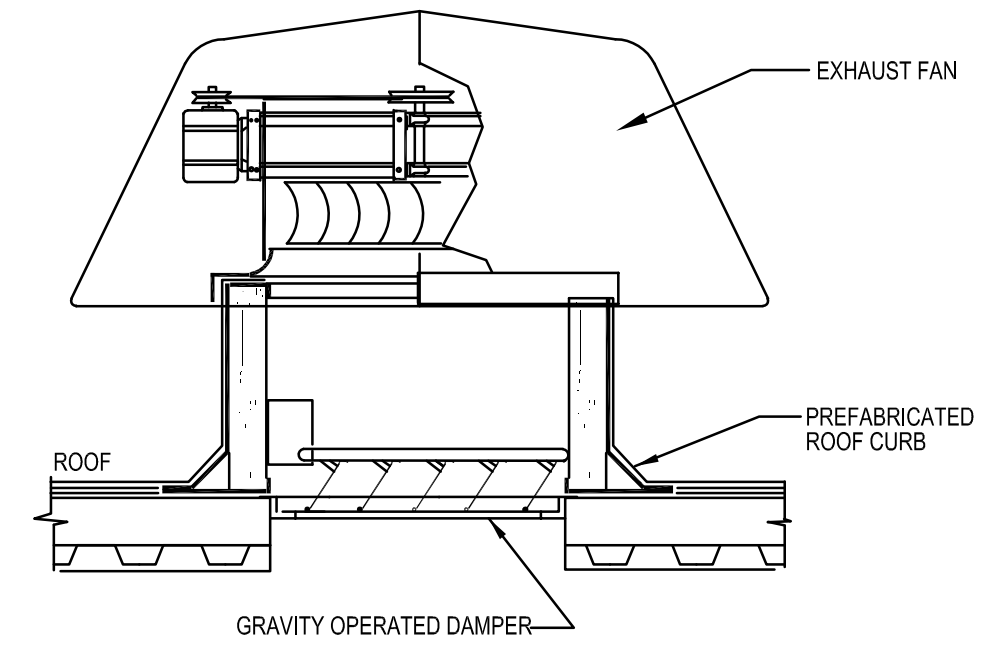
- NOTES:
1. PROVIDE INSECT SCREEN
  2. ALL ROOF MOUNTED EQUIPMENT MUST ADHERE TO CURRENT HURRICANE CODES REGARDING ROOF TIE-IN, IMPACT RATING AND WIND DRIVEN RAIN RESISTANCE, I.E. MIAMI-DADE COUNTY NOA CERTIFICATION.

**DOMED EXHAUST FAN**  
No Scale



- NOTES:
1. PROVIDE INSECT SCREEN
  2. ALL ROOF MOUNTED EQUIPMENT MUST ADHERE TO CURRENT HURRICANE CODES REGARDING ROOF TIE-IN, IMPACT RATING AND WIND DRIVEN RAIN RESISTANCE, I.E. MIAMI-DADE COUNTY NOA CERTIFICATION.

**ROOF MOUNTED SUPPLY FAN**  
No Scale



- NOTES:
1. PROVIDE INSECT SCREEN
  2. ALL ROOF MOUNTED EQUIPMENT MUST ADHERE TO CURRENT HURRICANE CODES REGARDING ROOF TIE-IN, IMPACT RATING AND WIND DRIVEN RAIN RESISTANCE, I.E. MIAMI-DADE COUNTY NOA CERTIFICATION.

**ROOF EXHAUST FAN**  
NOT TO SCALE

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