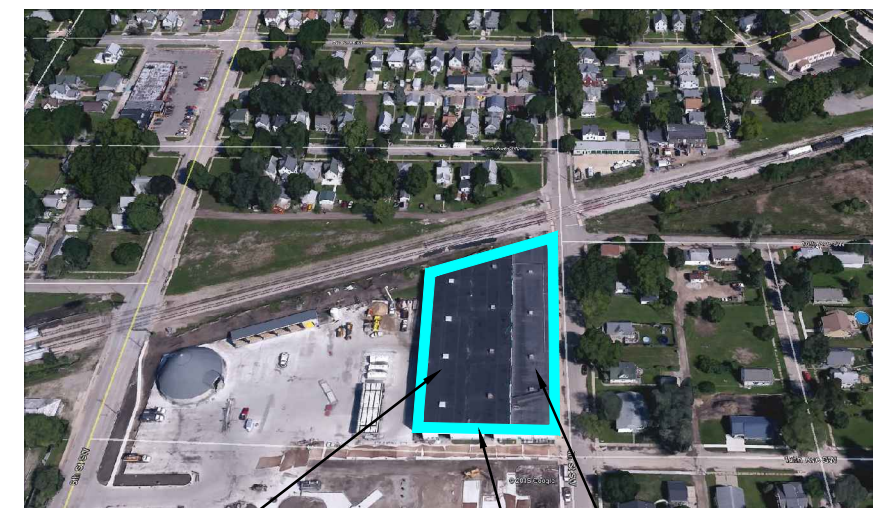
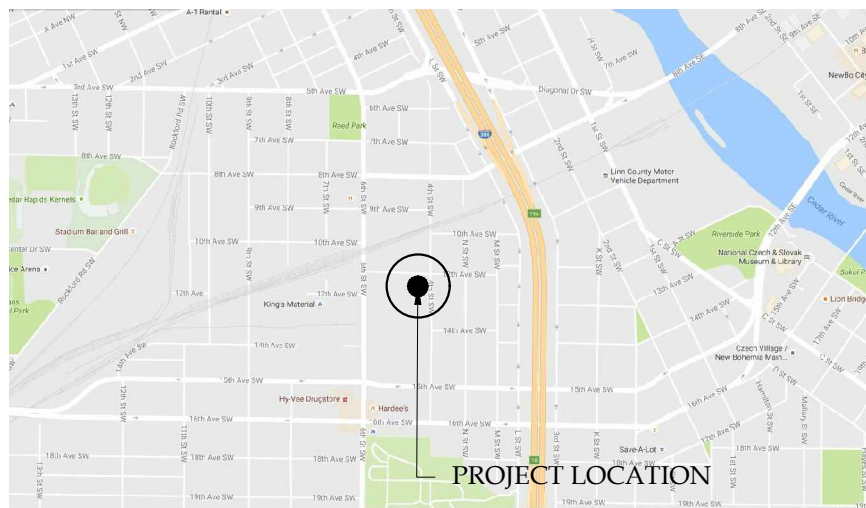


CITY OF CEDAR RAPIDS BUILDING 16 ROOF REPLACEMENT CITY SERVICES CENTER - 913-934 4th STREET SW CEDAR RAPIDS, IOWA CIP # 085103-01



LEVEL B PROJECT ROOF AREA LEVEL A

ROOF CONSTRUCTION NOTES

1. EXISTING ROOFING SYSTEM AS FOLLOWS PER CORE CUTS -
 - a. **UPPER ROOF (LEVEL A)**- METAL DECK WITH ASPHALT (COAL TAR PITCH) RESIDUE ON DECK, 2.3 ± INCH THICK POLYISO, TWO LAYERS OF 0.5 INCH FIBERBOARD INSULATION (ONE INCH TOTAL) FULLY ADHERED 60 MIL THICK EPDM SHEET. AROUND ROOF DRAINS THERE IS ORIGINAL BUILT-UP ROOF FELTS (ASBESTOS CONTAINING MATERIAL- ACRM) AND ASPHALT ALONG WITH ADDITIONAL TORCH APPLIED MODIFIED BITUMEN PATCH MATERIAL ON SURFACE.
 - b. **LOWER ROOF (LEVEL B)** - METAL DECK WITH ASPHALT (COAL TAR PITCH) RESIDUE ON DECK, POLYETHYLENE SHEET, 3.0 ± INCH THICK POLYISO, 0.25 INCH GYPSUM BASED INSULATION, FULLY ADHERED 60 MIL THICK EPDM SHEET.
2. **BASE BID**
 - a. **UPPER ROOF (LEVEL A)** - TOTAL TEAR-OFF TO DECK. REMOVE EXISTING ACRM AROUND ROOF DRAINS PER OSHA STANDARDS AND DISPOSE OF PER IDNR REQUIREMENTS. INSTALL NEW BASE LAYER 4.5 INCHES (2 LAYERS) POLYISO INSULATION WITH MECHANICAL FASTENERS. FIELD AND PERIMETER OF ROOF ONE FASTENER PER 2.67 S.F. (12 FASTENERS PER 4 FT. x 8 FT. BOARD) AND CORNERS ONE FASTENER PER 2 S.F. PERIMETER AND CORNER DEFINED AS 12 FEET EACH. INSTALL ONE-HALF HIGH DENSITY POLYISO INSULATION COVERBOARD IN INSULATION ADHESIVE OVER BASE LAYER INSULATION. (12 INCH BEAD SPACING - FIELD, 9 INCH BEAD SPACING - 12 FOOT PERIMETER, 6 INCH BEAD SPACING - CORNER 12 FT. x 12 FT.)
INSTALL NEW FULLY ADHERED **90 MIL BLACK EPDM**. ALL NEW ROOF CONSTRUCTION TO OBTAIN **30 YEAR EPDM MANUFACTURERS' WARRANTED SYSTEM**
 - b. **LOWER ROOF (LEVEL B)** - REMOVE EXISTING EPDM SHEET- REMOVE AND REPLACE ANY WET INSULATION WITH NEW TO MATCH TYPE AND THICKNESS. INCLUDE 500 S.F OF WET INSULATION FOR BOTH TYPES OF INSULATION IN BASE BID. INSTALL NEW BASE LAYER 1.5 INCHES POLYISO INSULATION WITH MECHANICAL FASTENERS. FIELD AND PERIMETER OF ROOF ONE FASTENER PER 2.67 S.F. (12 FASTENERS PER 4 FT. x 8 FT. BOARD) AND CORNERS ONE FASTENER PER 2 S.F. PERIMETER AND CORNER DEFINED AS 6 FEET EACH. INSTALL ONE-HALF INCH HIGH DENSITY POLYISO INSULATION COVERBOARD IN INSULATION ADHESIVE OVER BASE LAYER INSULATION. (12 INCH BEAD SPACING - FIELD, 9 INCH BEAD SPACING - 6 FOOT PERIMETER, 6 INCH BEAD SPACING - CORNER 6 FT. x 6 FT.)
INSTALL NEW **FULLY ADHERED 90 MIL BLACK EPDM**. ALL NEW ROOF CONSTRUCTION TO OBTAIN **25 YEAR EPDM MANUFACTURERS' WARRANTED SYSTEM**.
3. SEE ASBESTOS SURVEY REPORT SUMMARY IN APPENDIX REGARDING SEALANT, FLASHING AND TRANSITE PIPE MATERIAL ON ROOFS THAT CONTAIN ASBESTOS. REMOVAL OR DRILLING INTO SUCH MATERIALS WILL REQUIRE PROPER ABATEMENT PROCEDURES BY QUALIFIED STAFF PER OSHA AND DISPOSAL PER IDNR REQUIREMENTS. PROVIDE TO ENGINEER/OWNER BEFORE CONTRACT SIGNING THE CERTIFICATION OF ABATEMENT CONTRACTOR/PERSONNEL FOR APPROVAL. ABATEMENT CONTRACTOR

- SHALL BE RESPONSIBLE FOR ALL NOTICES, CHAIN OF CUSTODY AND DISPOSAL DOCUMENTS PER IDNR AND OSHA. PROVIDE ALL SUCH DOCUMENTATION TO ENGINEER/OWNER AT PROJECT CLOSE-OUT AND PRIOR TO FINAL PAYMENT.
4. **LEVEL A** - REMOVE ANY DETERIORATED METAL DECKING AND REPLACE WITH NEW TYPE B HIGH SHEAR 1.5 INCH DEEP GALVANIZED 18 GAUGE DECK TO MATCH EXISTING DECKING (6 INCH WIDE FLUTES) AS CLOSE AS POSSIBLE. INCLUDE IN BASE BID REPLACEMENT OF 500 SQUARE FEET. EXISTING PURLIN SPAN - EAST WEST DIRECTION 8 FEET ±. COLUMN SPACING IS 20 FEET NORTH-SOUTH DIRECTION.
5. CUT EXISTING SIDERAILS FROM EACH LADDERS BOTTOM TO ACCOMMODATE NEW INSULATION HEIGHT ON LEVEL B ROOF.
6. REMOVE EXISTING EPDM SHEET FROM DUCTWORK. INSTALL AND SEAL NEW MINIMUM 60 MIL THICK EPDM AROUND ALL THE DUCTWORK.
7. ON UPPER ROOF-LEVEL A - INSTALL NEW MIRO PIPE SUPPORTS (MATCH THOSE ON LOWER AND PROTECTIVE PAD UNDER SUPPORTS).
8. ACCESS TO ALL ROOFS FOR CONSTRUCTION SHALL BE AS DESIGNATED BY OWNER. STORAGE AREA FOR MATERIALS SHALL BE IN PARKING LOT AS DESIGNATED BY OWNER. CONTRACTOR TO PROVIDE BARRICADES, DETOUR SIGNS AND FENCING AS REQUIRED AND PROTECTION FOR MATERIALS AND TRAFFIC. CONTRACTOR TO MAINTAIN PEDESTRIAN AND OCCUPANT ACCESS AND EGRESS TO AND FROM BUILDING AT ALL TIMES. CONTRACTOR TO PROVIDE ANY PROTECTIVE MEASURES TO MAINTAIN ACCESS. COORDINATE LOCATION OF DUMPSTER CHUTE WITH OWNER'S STAFF.
9. DRAWINGS ARE PRODUCED AT TABLOID (11-INCHES x 17-INCHES) SIZE. ANY SCALE SHOWN IS APPLICABLE WHEN PRINTED AT THIS SIZE. NOTE THAT ROOF PLANS AND OTHER PROJECT DRAWINGS PRODUCED OR PRINTED AT OTHER PAPER SIZES WILL NOT BE CORRECTLY SCALED WHERE APPLICABLE.
10. CONTRACTOR RESPONSIBLE FOR ALL BUILDING PERMITS REQUIRED.
11. CONTRACTOR RESPONSIBLE FOR PROTECTING EXISTING ADJACENT LAWN AREAS, ABOVE GROUND AND UNDERGROUND UTILITIES, PAVING, AND EXTERIOR BUILDING WALLS FROM DAMAGE. ANY DAMAGE DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED TO MATCH EXISTING CONDITIONS AT CONTRACTOR'S EXPENSE.
12. CONTRACTOR TO REMOVE EXISTING STACK (DISCONNECTED BY CITY) AND CURB AND INSTALL NEW TYPE B HIGH SHEAR 1.5 INCH DEEP GALVANIZED 18 GAUGE METAL DECKING IN VOID AND RE-ROOF OVER DECKING.
13. EXISTING LIGHT FIXTURE IS ATTACHED WITH HORIZONTAL 24 INCH x 6 INCH WIDE METAL PLATE TO ROOF EDGE. COORDINATE REMOVAL/REPLACEMENT OF PLATE AND FIXTURE WITH OWNER AND FLASH HORIZONTAL PLATE AND SUPPORT LEGS ROM PLATE WITH EPDM FIELD FLASHING SIMILAR TO DETAIL 8/R2.
14. INSTALL NEW 3 INCH x 4 INCH PRE-FINISHED OPEN FACED DOWNSPOUTS PER SPEC SECTION 07 62 00. CONNECT TO EXISTING VERTICAL STORM SEWER PIPES. APPROXIMATE LENGTH OF EACH DOWNSPOUT-22 FEET. COORDINATE LOCATION TO MATCH WITH EXISTING VERTICAL STORM SEWER PIPE CONNECTION. COLOR OF DOWNSPOUT TO MATCH COLOR OF EXISTING WALL.

DRAWING INDEX

SHEET NO.	DRAWING TITLE
R0	COVER PAGE
R1	ROOF PLAN
R2	ROOF DETAILS

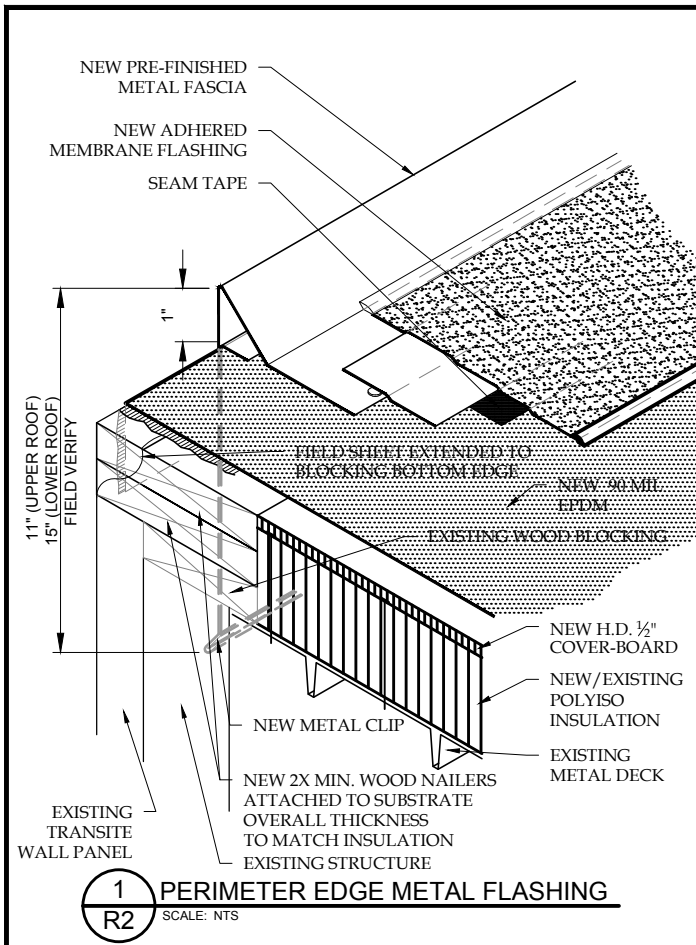
Terracon
Consulting Engineers and Scientists

2640 12TH STREET SW CEDAR RAPIDS, IOWA 52404
PH. (319) 366-8321 FAX. (319) 366-0032

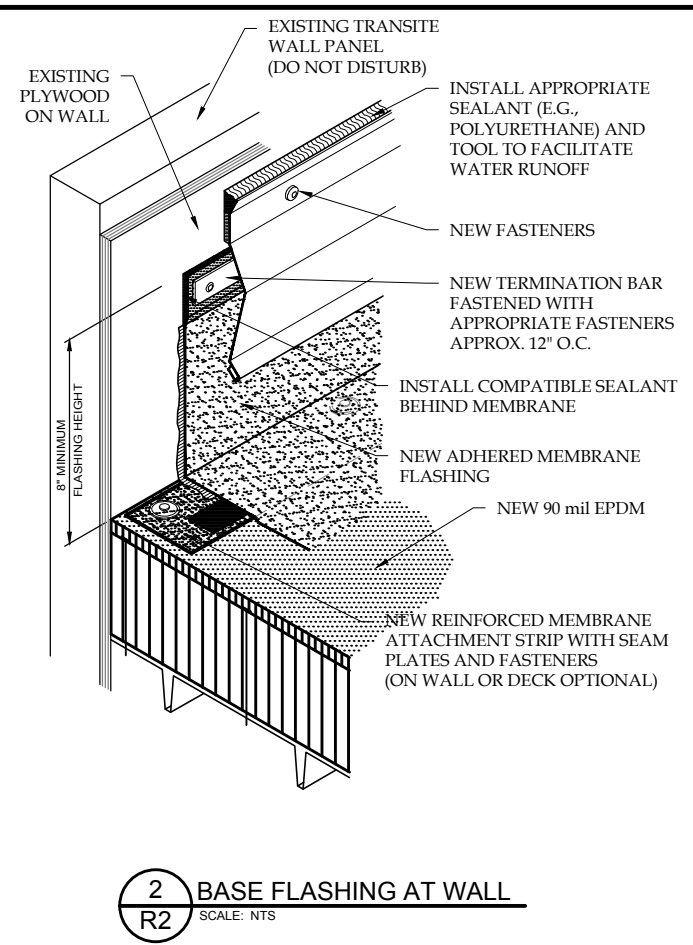


I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

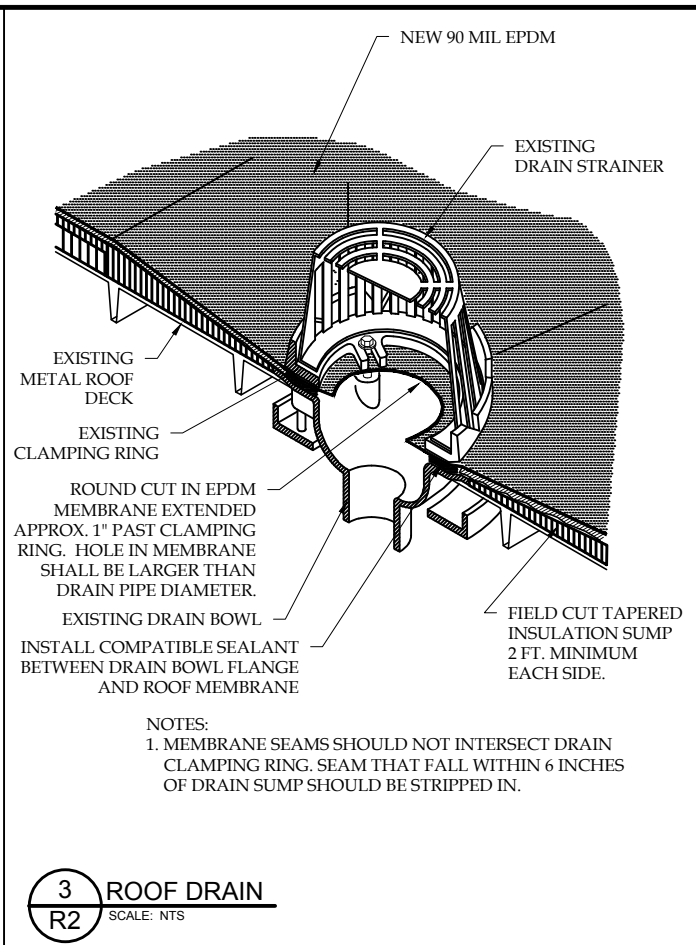
DARRELL SMITH, P.E. _____ 20_____
License number is 11460
My license renewal date is December 31, 2016
Pages or sheets covered by this seal: _____



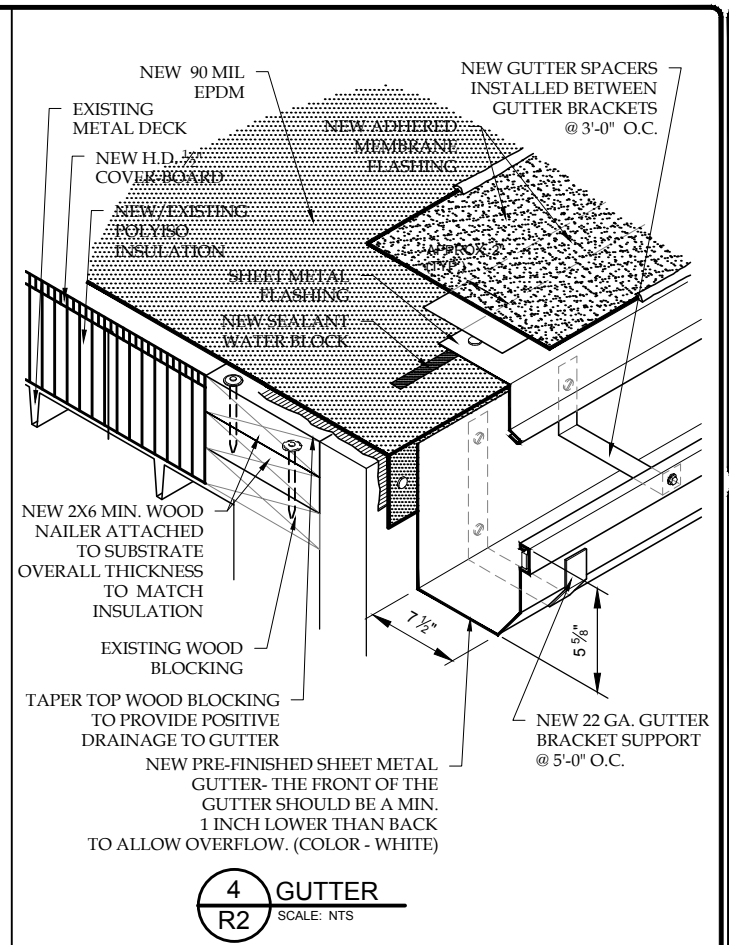
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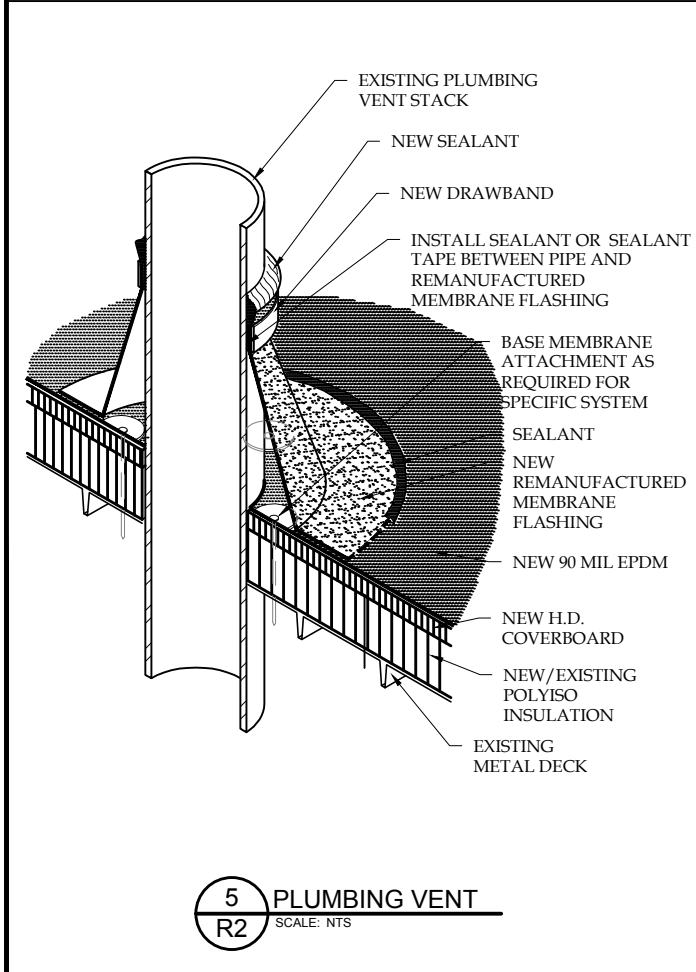
2 BASE FLASHING AT WALL
R2 SCALE: NTS



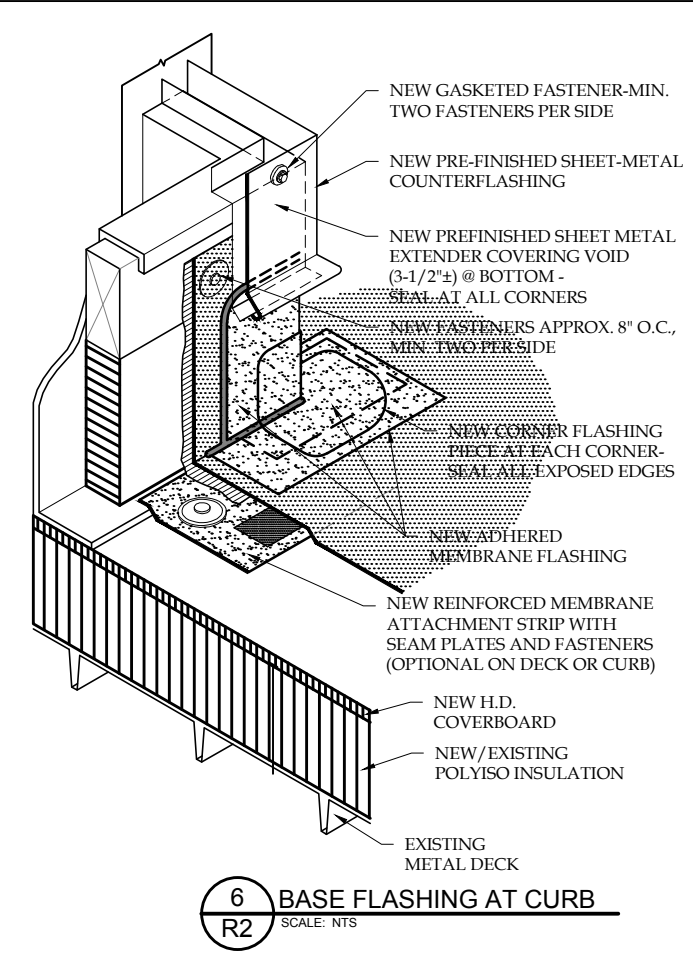
3 ROOF DRAIN
R2 SCALE: NTS



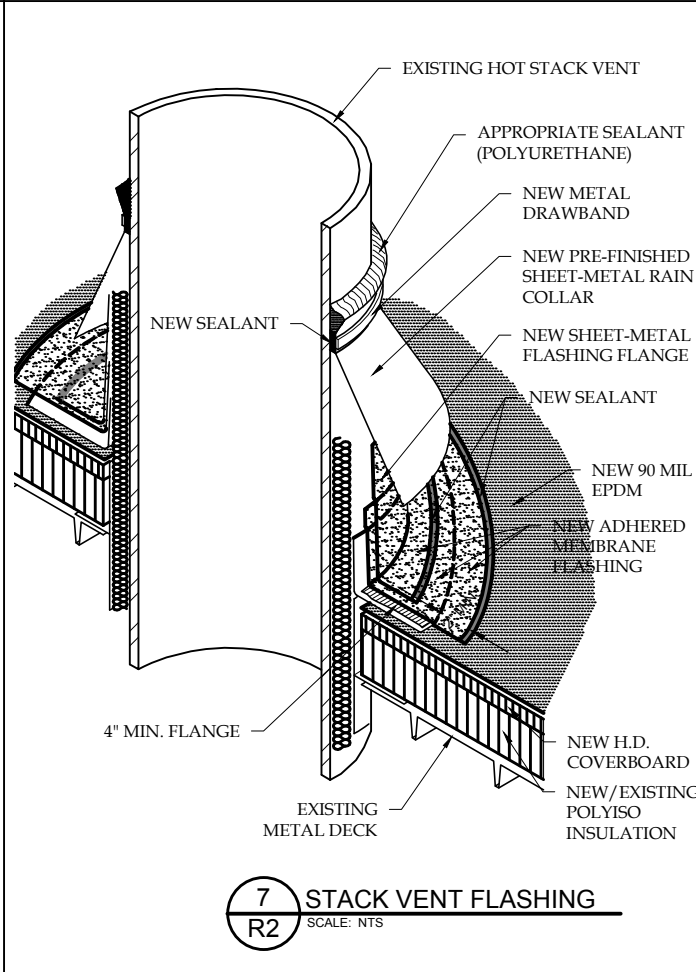
4 GUTTER
R2 SCALE: NTS



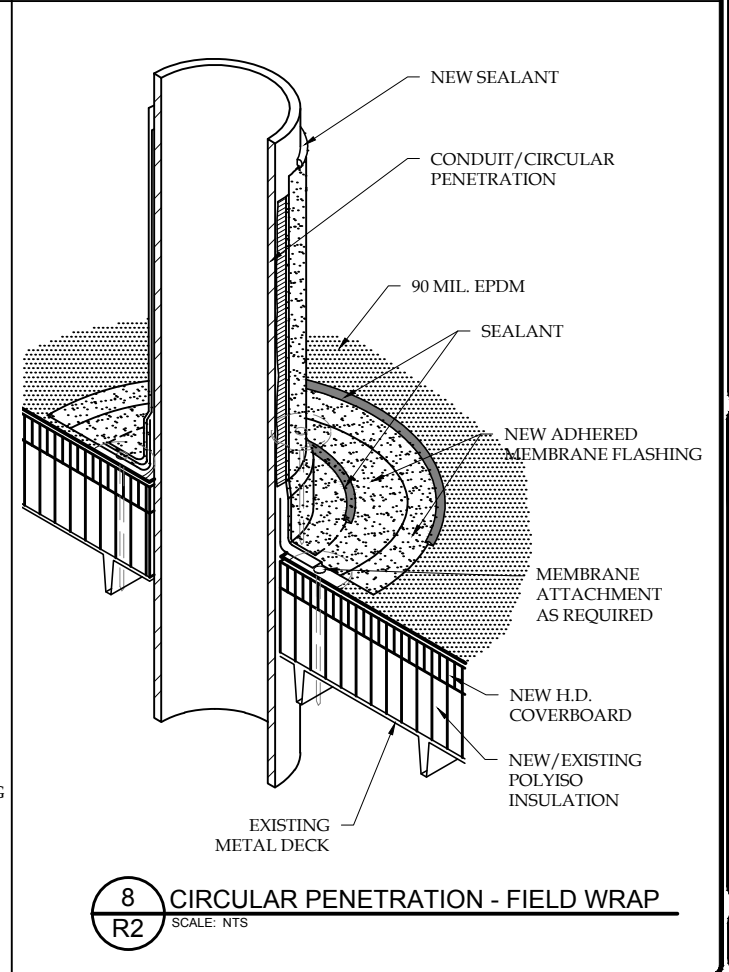
5 PLUMBING VENT
R2 SCALE: NTS



6 BASE FLASHING AT CURB
R2 SCALE: NTS



7 STACK VENT FLASHING
R2 SCALE: NTS



8 CIRCULAR PENETRATION - FIELD WRAP
R2 SCALE: NTS

PROJECT NO: F1166091	DATE: **
DRAWN: J.A.	CHECKED: D.S.
REV: DATE	DESCRIPTION
0 2/6/17	ISSUED FOR BID
	D.S.

CITY OF CEDAR RAPIDS - BUILDING 16 ROOF REPLACEMENT (CIP #085103-01)
CITY SERVICES CENTER - 913-934 4th STREET SW
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R2