

# ROOF REHABILITATION PROGRAM BUILDING "D" McHENRY COUNTY COLLEGE

8900 U.S. HWY. 14  
McHENRY, ILLINOIS

## BUILDING CODES

ALL WORK PERFORMED SHALL CONFORM TO ALL CODES  
RECOGNIZED BY McHENRY COUNTY, ILLINOIS

- 2015 INTERNATIONAL BUILDING CODE
- ADOPTION ORDINACE W/ LOCAL AMENDMENTS
- 2018 ILLINOIS ENERGY CONSERVATION CODE
- ADOPTION ORDINACE W/ LOCAL AMENDMENTS

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## GENERAL NOTES

VERIFY ALL CONDITIONS IN FIELD. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR SHALL VISIT THE PROJECT SITE TO LOCATE, SURVEY, AND VERIFY ALL CONDITIONS, INCLUDING (BUT NOT LIMITED TO) DECK CONDITIONS, FASCIAS, STRUCTURE RELATED TO WORK, MASONRY WALL SURFACES, AND ALL AREAS INCLUDED IN SCOPE OF WORK. MEASURE THE WORK AND BE RESPONSIBLE FOR ALL REQUIRED QUANTITIES. SCALED DIMENSIONS ON THE DRAWINGS ARE INTENDED TO BE APPROXIMATE AND GENERALLY LOCATE THE AREAS OF WORK ONLY.

THE CONTRACTOR SHALL RESTORE ANY AND ALL PORTIONS OF BUILDINGS AND GROUNDS DAMAGED DURING CONSTRUCTION TO PRE-CONSTRUCTION CONDITIONS. RESTORATION SHALL INCLUDE DAMAGE TO ANY EXTERIOR AND INTERIOR FINISHES.

UNLESS OTHERWISE INDICATED BY THE CONTRACT DOCUMENTS OF THE SPECIFIED MANUFACTURER'S RECOMMENDATIONS, FOLLOW INSTALLATION PROCEDURES RECOMMENDED BY THE NATIONAL ROOFING CONTRACTORS ASSOCIATION [NRCA] AND/OR THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION [SMACNA] CURRENT EDITION LITERATURE.

PRIOR TO BEGINNING THE WORK, REVIEW THE FOLLOWING WITH THE OWNER'S REPRESENTATIVE: A) TEMPORARY BUILDING AND GROUNDS PROTECTION AND HOUSEKEEPING, B) PROJECT SAFETY PROVISIONS AND PROCEDURES.

THE OWNER'S REPRESENTATIVE PRIOR TO FABRICATION MUST APPROVE FULL SIZE SHEET METAL MOCK-UPS. ALL EXPOSED EDGES OF THE SHEET METAL FABRICATION MUST BE HEMMED. SPECIFIED CLEATS MUST BE CONTINUOUS. PROTECT NEW METAL WORK FINISHES FROM DAMAGE DUE TO OTHER ROOFING OPERATIONS.

ALL DRAINS, VENTS AND DECK OPENINGS MUST BE COVERED AND/OR PROTECTED DURING ROOFING OPERATIONS TO PREVENT ENTRY OF FOREIGN DEBRIS AND FUMES INTO EXISTING CONSTRUCTION.

TARGET NOTES (IDENTIFIED IN THE NOTE LEGEND) ARE INTENDED TO IDENTIFY TYPICAL DETAILING REQUIREMENTS. IN THE EVENT THAT THE DETAIL CONDITIONS ENCOUNTERED ARE SIMILAR TO THOSE SHOWN ON THE DRAWINGS, ASSUME THAT THE TYPICAL DETAILING APPLIES UNLESS OTHERWISE INDICATED VIA THE OWNER'S REPRESENTATIVE.

THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR OWNERS REPRESENTATIVE OF ANY DAMAGED DECKING DURING THE REMOVAL PROCESS. THE CONTRACTOR SHALL ALSO BE PREPARED TO MAKE ANY CORRECTIVE REPAIRS UNDER UNIT PRICE PROVISIONS. THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY AND COORDINATE ALL DECKING WORK WITH THE OWNERS PRIOR TO PROCEEDING WITH ANY WORK.

POSITION HOT KETTLES AND/OR TANKERS IN A MANNER, WHICH WILL NOT INTERFERE WITH THE BUILDINGS FRESH AIR INTAKE REQUIREMENTS. THIS ASPECT SHALL BE COORDINATED WITH THE BUILDING ENGINEERS AND/OR OWNERS REPRESENTATIVE.

SITE SET-UP AREAS SHALL BE RESTRICTED TO AREAS AS DESIGNATED BY THE OWNER'S REPRESENTATIVE.  
INTERIOR ACCESS: MATERIAL LOADING AND DEBRIS REMOVAL SHALL BE PERFORMED IN A CONTROLLED MANNER. ANY MATERIAL LOADING AND/OR DEBRIS REMOVAL THAT MAY REQUIRE INTERIOR ACCESS AND/OR FREIGHT ELEVATOR ACCESS SHALL BE ARRANGED WITH THE BUILDING OWNER / OWNER'S REPRESENTATIVE. INTERIOR PROTECTION FOR MATERIAL LOADING AND DEBRIS REMOVAL SHALL BE PROVIDED BY THE CONTRACTOR.

## DRAWING NOTES

**BASE BID: ROOF D - [ROOF REPLACEMENT (20-YEAR NDL WARRANTY) - ROOF REMOVAL / MECH. FASTENED BASE / FULLY ADHERED TAPERED INSULATION ASSEMBLY / FULLY ADHERED COVER BOARD / 2-PLY BUR - APP MODIFIED ROOFING / SHEET METAL FLASHINGS & RELATED METAL WORK]**

THE BASE BID PROGRAM INCLUDES COMPLETE REMOVAL AND DISPOSAL OF THE ROOF SURFACE CONSISTING OF ROCK BALLAST, ROOFING AND INSULATION ASSEMBLY DOWN TO THE GYPSUM DECK AND INSTALLATION OF NEW MODIFIED ROOF SYSTEM. THE ENTIRE ROOF AREA SHALL BE SWEEP CLEAN OF ALL DEBRIS AND INSPECTED FOR AREAS OF DAMAGED/DETERIORATION. ALL AREAS OF DAMAGED/DETERIORATED GYPSUM DECKING SHALL BE REPAIRED UNDER UNIT PRICE PROVISIONS.

INSTALL NEW WOOD BLOCKING AS REQUIRED AT ALL CURBS, PENETRATIONS, AND PERIMETER EDGES TO ACCOMMODATE NEW INSULATION AND FLASHINGS HEIGHT REQUIREMENTS. EXISTING ROOF HATCH TO BE RAISED, BLOCKED, AND RESET AS REQUIRED TO ACCOMMODATE NEW ROOF AND INSULATION ASSEMBLY. CLEAN AND PAINT EXTERIOR SIDE.

INSTALL NEW MECHANICALLY FASTENED NAILABLE BASE SHEET TO THE EXISTING GYPSUM DECK. INSTALL 2- LAYERS 2.6" INSULATION BOARD (R-30) TOTAL SET IN 'DUOTACK' LOW RISE FOAM. INSTALL NEW FULLY ADHERED MULTI-LAYERED 1/4" PER FOOT TAPERED RIGID INSULATION SADDLES SET IN LOW RISE FOAM ADHESIVE. INSTALL NEW FULLY ADHERED ½" COVER BOARD SET IN LOW RISE FOAM. PROVIDE FULLY ADHERED 1/2" PER FOOT TAPERED INSULATION CRICKETS AT HIGH SIDE OF ALL ROOF PENETRATIONS TO DIVERT WATER. PROVIDE A MINIMUM 4' X 4'; 1/2" PER FOOT TAPERED SUMPS AT ALL DRAIN LOCATIONS. ADJUST DRAIN BOWL HEIGHT AS REQUIRED TO ACCOMMODATE NEW INSULATION ASSEMBLY. INSTALL CLAMPING RING ASSEMBLY WITH NEW CAST IRON DOMES AND NEW MOUNTING HARDWARE. INSTALL NEW CANT STRIPS, TAPERED EDGE STRIPS, SADDLES, AND CRICKETS AT PERIMETER EDGES AND ROOF PENETRATIONS. ASSEMBLY TO OBTAIN FM-1-300 EQUIVALENT WIND UP LIFT RATING.

INSTALL NEW 2-PLY TYPE VI FELTS BUILT-UP ROOFING SYSTEM SET IN UNIFORMED MOPPING OF HOT ASPHALT AND NEW TORCH-APPLIED FULLY ADHERED GRANULAR SURFACED "ENERGY STAR" APP MODIFIED BITUMEN ROOFING AND FLASHING ASSEMBLY. HEAT WELD ALL SEAMS AND EMBED ADDITIONAL GRANULES INTO LEADING EXPOSED EDGES/ BLEAD OUTS OF MODIFIED BITUMEN DURING INSTALLATION TO CREATE A CONTINUOUS GRANULAR SURFACE. NEW SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH FM 1-300 UPLIFT RATING. ALL SEAMS SHALL BE CHECKED DAILY FOR CONTINUITY AND STRENGTH BY THE CONTRACTOR.

ALL ROLLED MATERIAL IS TO BE OPENED AND ALLOWED TO RELAX PRIOR TO INSTALLATION - FAILURE TO RELAX ROLLED MATERIAL MAY RESULT IN THE REJECTION OF THE COMPLETED WORK.

ANY TAR AND/OR DAMAGE TO PRIVATE VEHICLES OR PROPERTY SHALL BE PROFESSIONALLY REPAIRED/CLEANED AT THE EXPENSE OF THE CONTRACTOR.

INSTALL NEW TREATED WOOD BLOCKING TO ACHIEVE MINIMUM FLASHING HEIGHTS. INSTALL NEW SHEET METAL, FLASHINGS, COUNTER-FLASHINGS, AND RELATED METAL AND MISCELLANEOUS WORK AS SPECIFIED.

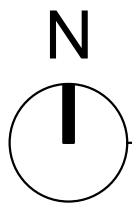
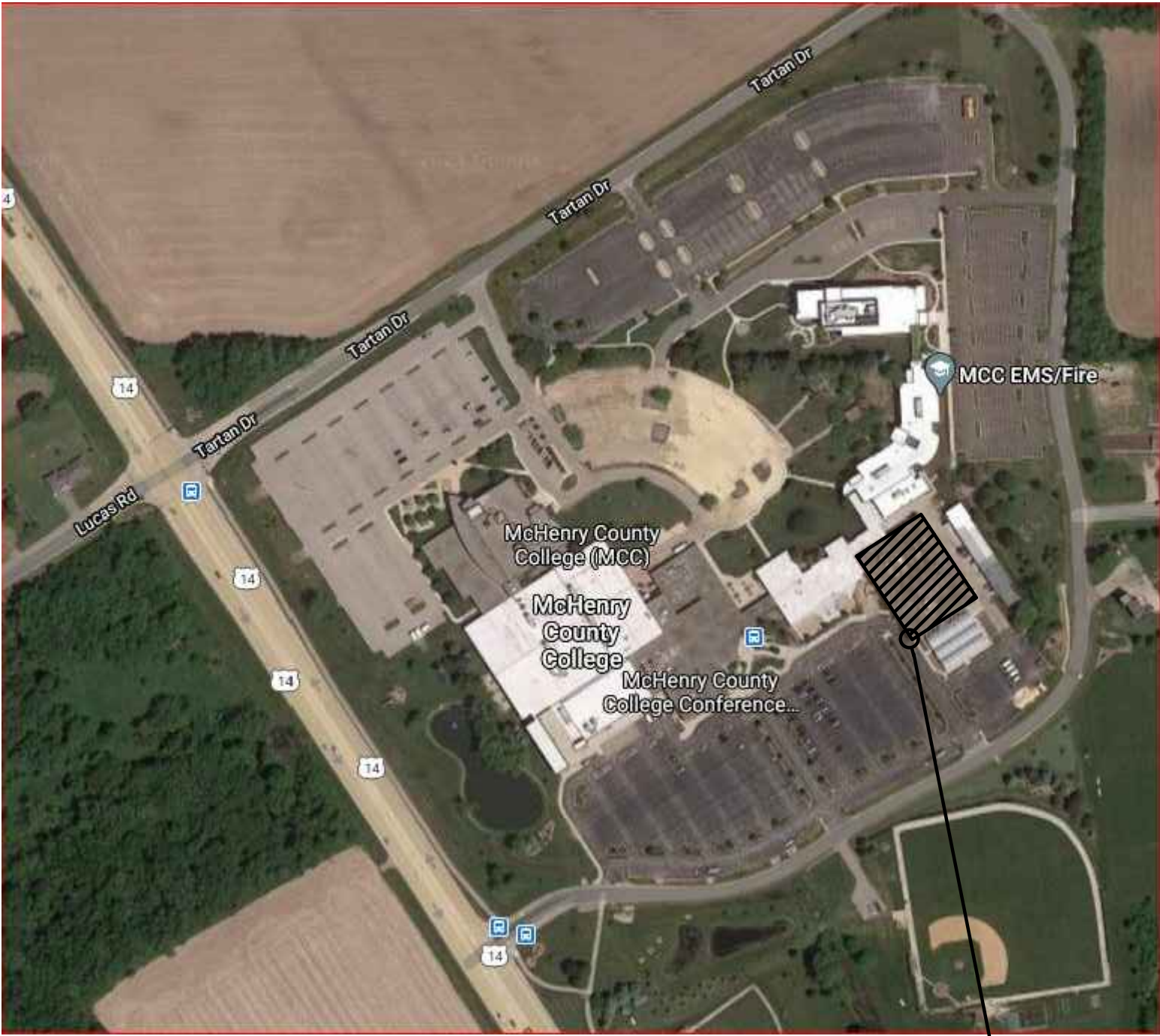
DISCONNECT, RAISE AND RESET ALL VENTS, DUCTS AND PIPING AS REQUIRED TO ACCOMMODATE NEW ROOF ASSEMBLY AND FLASHINGS. ALL PIPES AND CONDUITS SHALL BE SET ON NEW PREFABRICATED COMPOSITE PIPE SUPPORTS AND ROLLERS. INSTALL AN ADDITIONAL PLY OF ROOFING MEMBRANE UNDER ALL EQUIPMENT AND PIPE SUPPORTS. EXISTING ROLLER SUPPORTS AND PADS TO BE RAISED AND RESET. DISCARD WOOD PIPE SUPPORTS AND REPLACE WITH NEW ROLLER SUPPORTS AND PADS TO MATCH EXISTING. REPLACE DETERIORATED ROLLER SUPPORTS AS REQUIRED- FIELD VERIFY.

CLEAN PRIME AND PAINT WITH RUST INHIBITOR PAINT ALL EXPOSED REMAINING SHEET METAL VENTS, HOODS, DRIP CAPS, FLUES AND PIPES. CLEAN AND PAINT HORIZONTAL PIPING 'SAFETY YELLOW'.

CLEAN-UP ROOF SURFACE PRIOR TO FINAL COMPLETION OF ROOF.

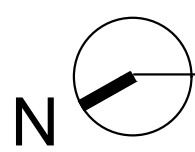
### ALTERNATE BIDS:

**ALTERNATE BID 1:** IN LIEU OF INSTALLING INSULATION BOARDS SET IN THE LOW RISE FOAM ADHESIVE, INSTALL NEW INSULATION BOARDS IN UNIFORM MOPPINGS OF HOT ASPHALT. REMAINDER OF BASE BID WORK TO REMAIN THE SAME



## LOCATION KEY PLAN

**LOCATION OF WORK**  
McHENRY COUNTY COLLEGE  
BUILDING "D".  
CRYSTAL LAKE, ILLINOIS



## SITE LOCATION

Architectural  
Consulting  
Group,  
Ltd.

**ACG**

422 N. Hough Street  
Barrington, IL 60010  
Tel: 847-277-1900  
www.acg-llc.net

I hereby certify that these documents  
have been prepared under my  
supervision and to the best of my  
knowledge conform with all  
applicable building codes ordinances.

Thomas F. Zordan, AIA  
IL Arch. Lic. #001-014575  
Expires: 11-30-2022

## ROOF REHABILITATION PROGRAM BUILDING "D" McHENRY COUNTY COLLEGE

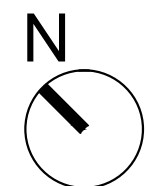
CRYSTAL LAKE, ILLINOIS 60012

| NO. | DESCRIPTION   | DATE   |
|-----|---------------|--------|
| 1   | 90% Review    |        |
| 2   | ISSUE FOR BID | 1.3.22 |
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|---------------|--|
| Drawing Date: | 01.03.2022   |
| Project No.:  | 21-033   |
| Sheet Title:  | GENERAL NOTES<br>DRAWING NOTES<br>LOCATION/ SITE MAP |
| Sheet No.:    |  |

**T-1**





# 1 ROOF PLAN

SCALE: 1/8"=1'-0"

## TARGET NOTES

- 1 **COPING CAP DETAIL:** Remove existing roofing and flashing assembly and existing sheet metal coping caps. Install new treated wood blocking, as required to maintain min 8" flashing heights, tapered towards the roof surface at the top edge of all raised perimeter edges. Install new insulation assembly and cant strips. Install new roofing and flashing assembly. Flashings at all raised perimeter edges are to extend onto the top of the parapet wall and completely covering the top and lap over leading edge of the blocking and secure with new mechanical fasteners. Install new sheet metal coping cap with continuous cleat and new gasketed fasteners at 12" O.C.. See Detail 1 / Sheet A2.
- 2 **DRAIN DETAIL:** Remove existing roofing assembly and clamping rings. Adjust height of drain head as required. Install new insulation and roofing assembly. Provide 4'x4' sumps at all drain locations with tapered insulation. Provide tapered saddles between all drains. Install lead flashing and membrane flashing. Install new clamping ring, drain dome, and stainless steel mounting hardware. Reinstall existing drain strainer using new S.S. hardware, tap and thread mountings as required. See Detail 2 / Sheet A2.
- 3 **SOIL STACK DETAIL:** Remove existing roofing assembly. Remove existing soil stack flashing and install new lead flashings at all soil stack/pipe penetration locations. Prime flange and install new membrane flashings and sealer. See Detail 3 / Sheet A2.
- 4 **PIPE SUPPORT DETAIL:** Disconnect and raise existing pipe, line sets and related components as required to accomodate new roofing assembly. Remove existing roof system complete down roof deck. Install new pre fab pillow block with additional membrane ply at 8'-0" o.c. Reconnect all lines and related components by licensed certified technician. Scrape and paint safety yellow. See Detail 4 / Sheet A2.
- 5 **FLUE VENT DETAIL:** Safely remove and store existing unit/metal cap. Remove existing and install new roofing assembly. Extend pipe as required to maintain 8" minimum flashing heights. Remove existing and install new sheet metal cone flashing at pipe. Install new continuous membrane sealant bead at base of vent stack. Install new sheet metal umbrella hood with new continuous sealant bead. reset existing cap. Scrape prime and paint all metal. See Detail 5 / Sheet A2.

- 6 **PITCH PAN DETAIL:** Remove existing and install new sheet metal pitch pan with continous flange. All joints to be soldered. Prime flange and install membrane flashing and membrane sealant. Fill pitch pan with cementitious fill and self-leveling sealant. Install new sheet metal hood and sealant. See Detail 6 / Sheet A2.
- 7 **VENT CURB DETAIL:** Safely remove and store existing unit. Remove existing and install new roofing assembly. Install new treated wood blocking as required at top of existing curb to maintain minimum 8" flashing heights. Install new flashing plies terminated at the top edge of the equipment curb with new gasketed fasteners. Reinstall existing unit and secure with new fasteners and gasketed washers. See Detail 7 / Sheet A2.
- 8 **MECH. CURB DETAIL:** Existing mechanical unit to remain in place. Remove existing roofing assembly down to the existing roof deck. Trim existing flashing as required to slip new flashing membrane behind. Install new roof assembly and flashing. Install new butyl tape over new and behind existing flashing. Install liquid apply flashing over transition. Install new sheet metal slip flashing behind existing sheet metal cover with gasketed fasteners at 16" O.C. See Detail 8 / Sheet A2.
- 9 **CURB DETAIL-ROOF HATCH:** Safely remove and store existing roof hatch. Remove existing and install new roofing assembly. Install new treated wood blocking as required at top of existing curb to maintain 8" minimum flashing heights. Install new flashing plies terminated at the top edge of the equipment curb with new gasketed fasteners. Scrape, clean, paint and reinstall existing hatch and flashing and secure with new fasteners and gasketed washers. See Detail 9 / Sheet A2.
- 10 **RAISED PLATFORM COVER:** Safely remove and store metal platform cover. Remove roof assembly down to deck. Install new treated wood blocking as req'd. on existing curbs to maintain 8" min. flashing height. Install new roofing assembly, wrap roof membrane over curb, install membrane flashing. Reset platform cover See Detail 10 / Sheet A2.

- 11 **FLUE CHASE DETAIL:** Remove 2- flues, raise metal cover and save for re- installation. Scrape, and clean cover to remove rust and dirt. Paint cover. Install new wood blocking as req'd for min. flashing heights. Install new roof assembly. Reset cover with gasketed fasteners at 12"o.c., Reset flues, collars, and rain caps. new caulk at all joints. See Detail 11 / Sheet A-2.
- 12 **ABANDONED: VERIFY W/ OWNER.** Remove curbs, pipes, and metal caps. Metal plate over opening in deck.

### NOTE:

- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES AND MEASUREMENTS IN FIELD. IF ANY DISCREPENCIES SHOULD ARISE, THEY SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION.
- SAFELY RAISE AND RESET ALL EQUIPMENT AS NECESSARY TO PERFORM ALL WORK.
- COORDINATE ALL EXTENSION OF MEP EQUIPMENT & CONDUIT, IF REQUIRED, BY LICENSED CONTRACTORS OF THE RESPECTIVE TRADE.
- PROVIDE 1/2" PER FOOT TAPERED SADDLES BETWEEN EACH DRAIN AND WHERE SPECIFIED. COORDINATION OF SADDLE LAYOUT AND CONTROL JOINTS WITH ARCHITECT SHALL BE REQUIRED.

NOTE:  
TAPERED PLAN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS AND HEIGHTS IN FIELD AND SUBMIT SHOP DRAWINGS FOR REVIEW

I hereby certify that these documents have been prepared under my supervision and to the best of my knowledge conform with all applicable building codes ordinances.

Thomas F. Zordan, AIA  
IL Arch. Lic. #001-014575  
Expires: 11-30-2022

## ROOF REHABILITATION PROGRAM BUILDING "D" McHENRY COUNTY COLLEGE CRYSTAL LAKE, ILLINOIS 60012

| NO. | DESCRIPTION   | DATE   |
|-----|---------------|--------|
| 1   | 90% Review    |        |
| 2   | ISSUE FOR BID | 1.3.22 |
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Drawing Date: 01.03.2022

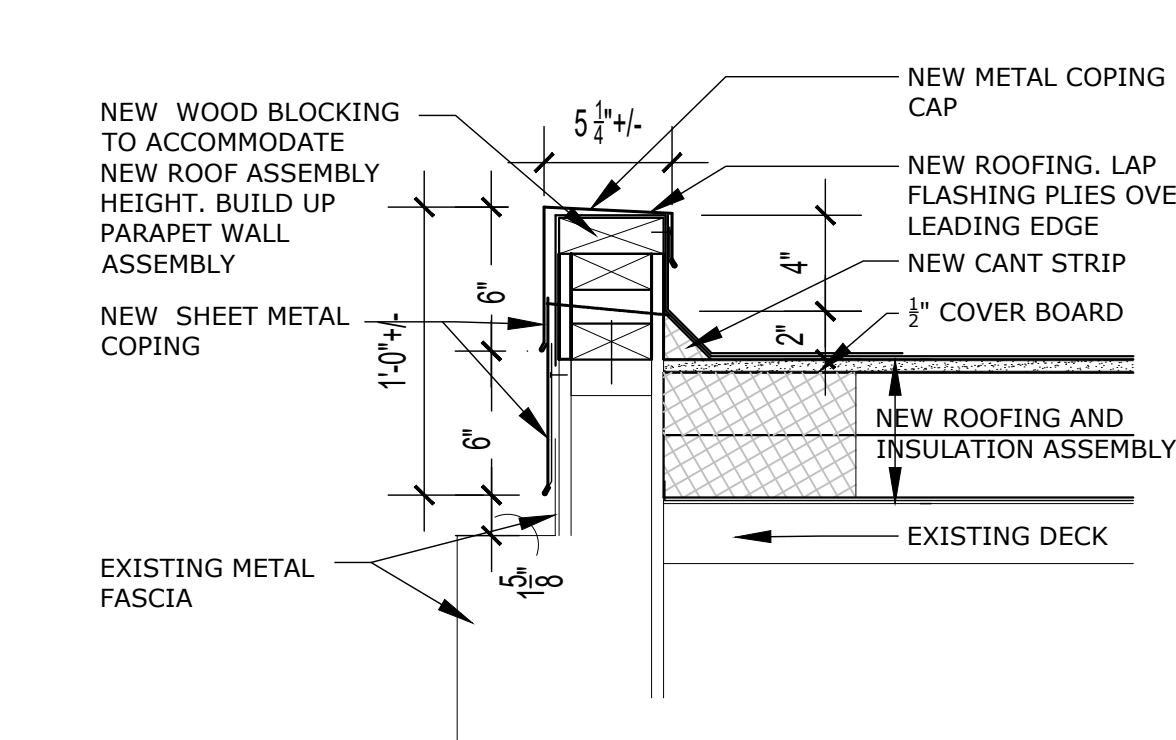
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Sheet Title:  
ROOF PLAN  
TARGET NOTES

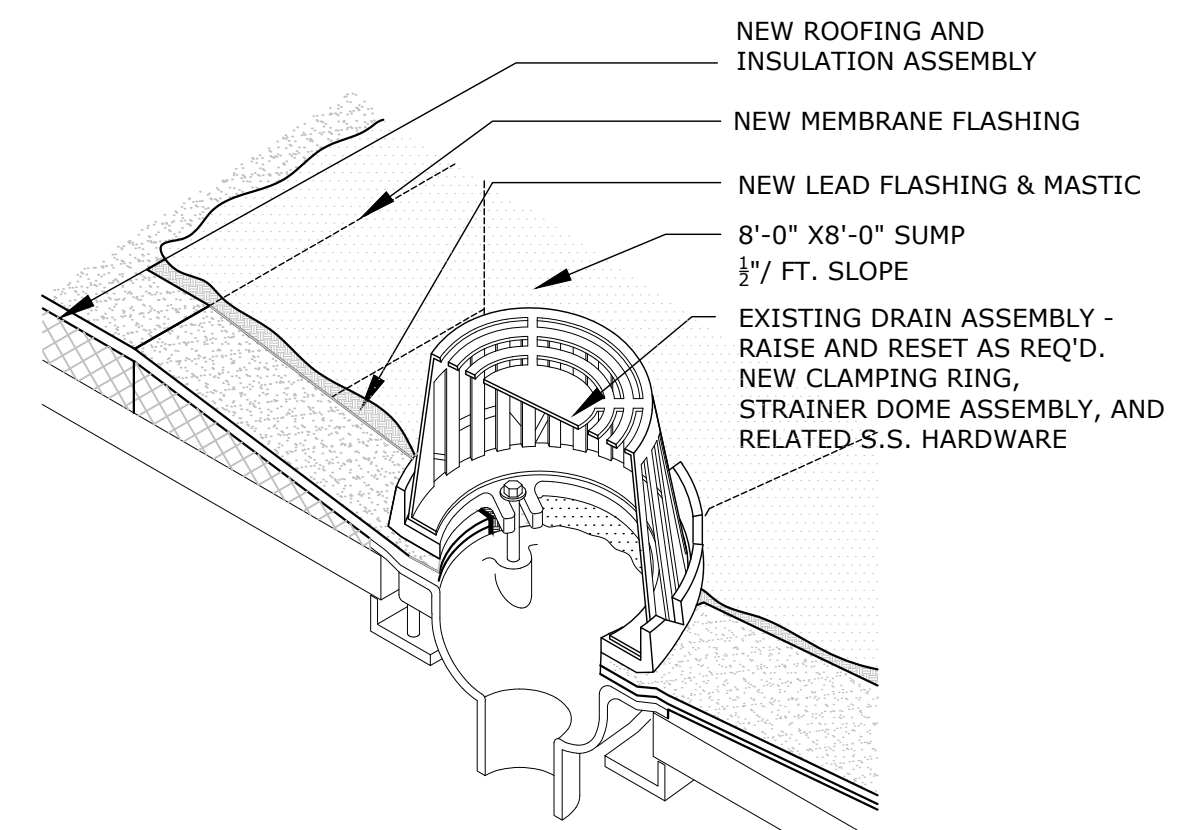
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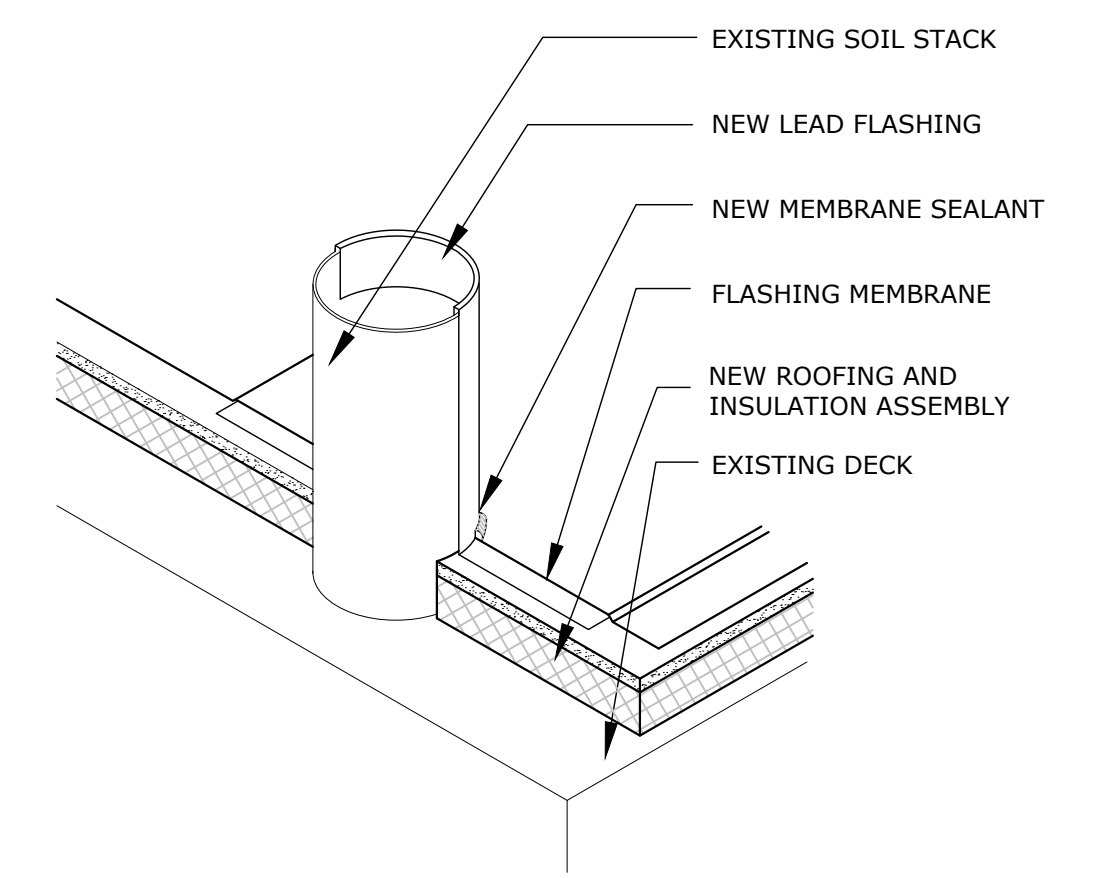




1 COPING DETAIL  
SCALE: 1-1/2" = 1'-0"



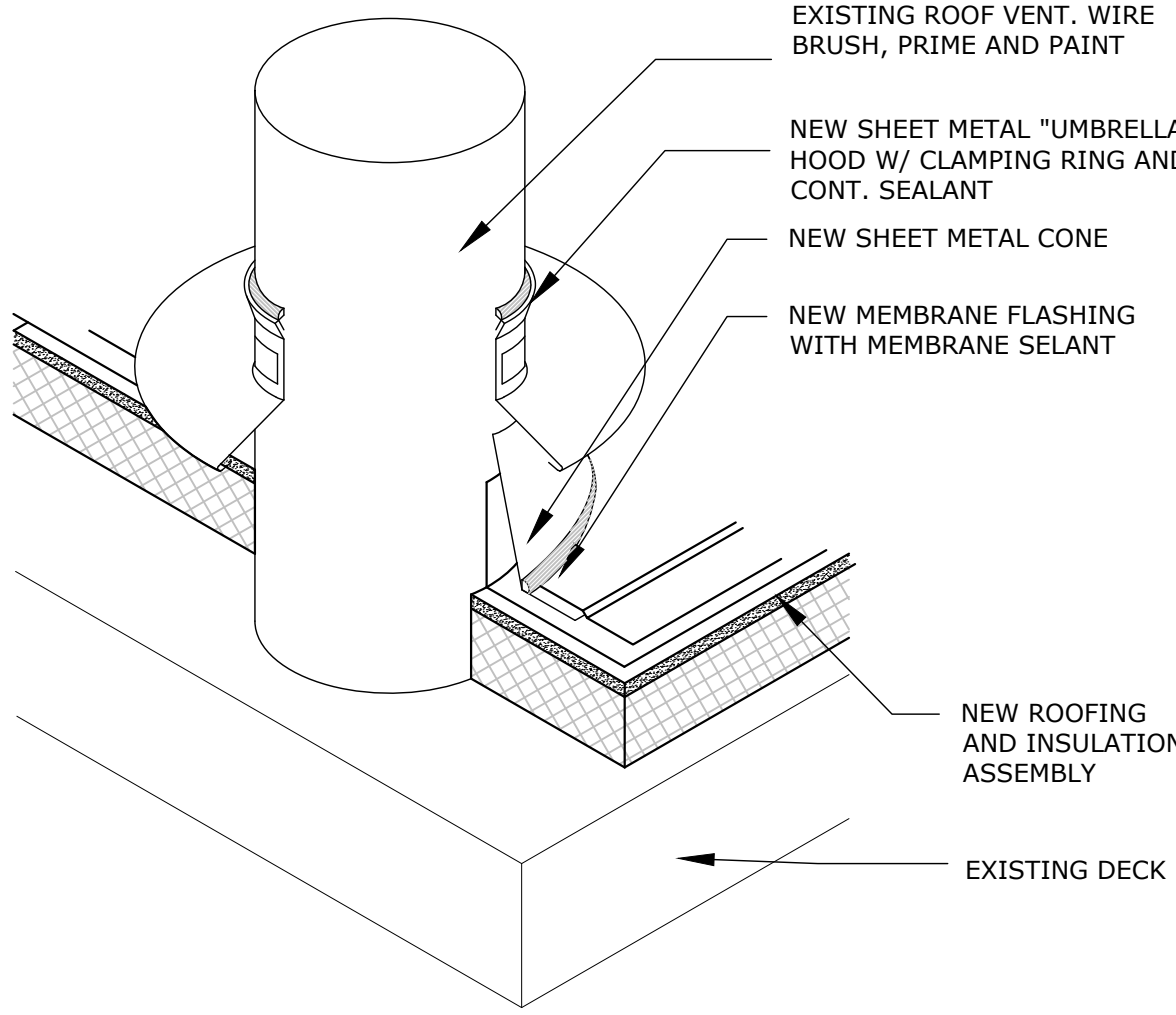
2 ROOF DRAIN DETAIL  
SCALE: 1-1/2" = 1'-0"



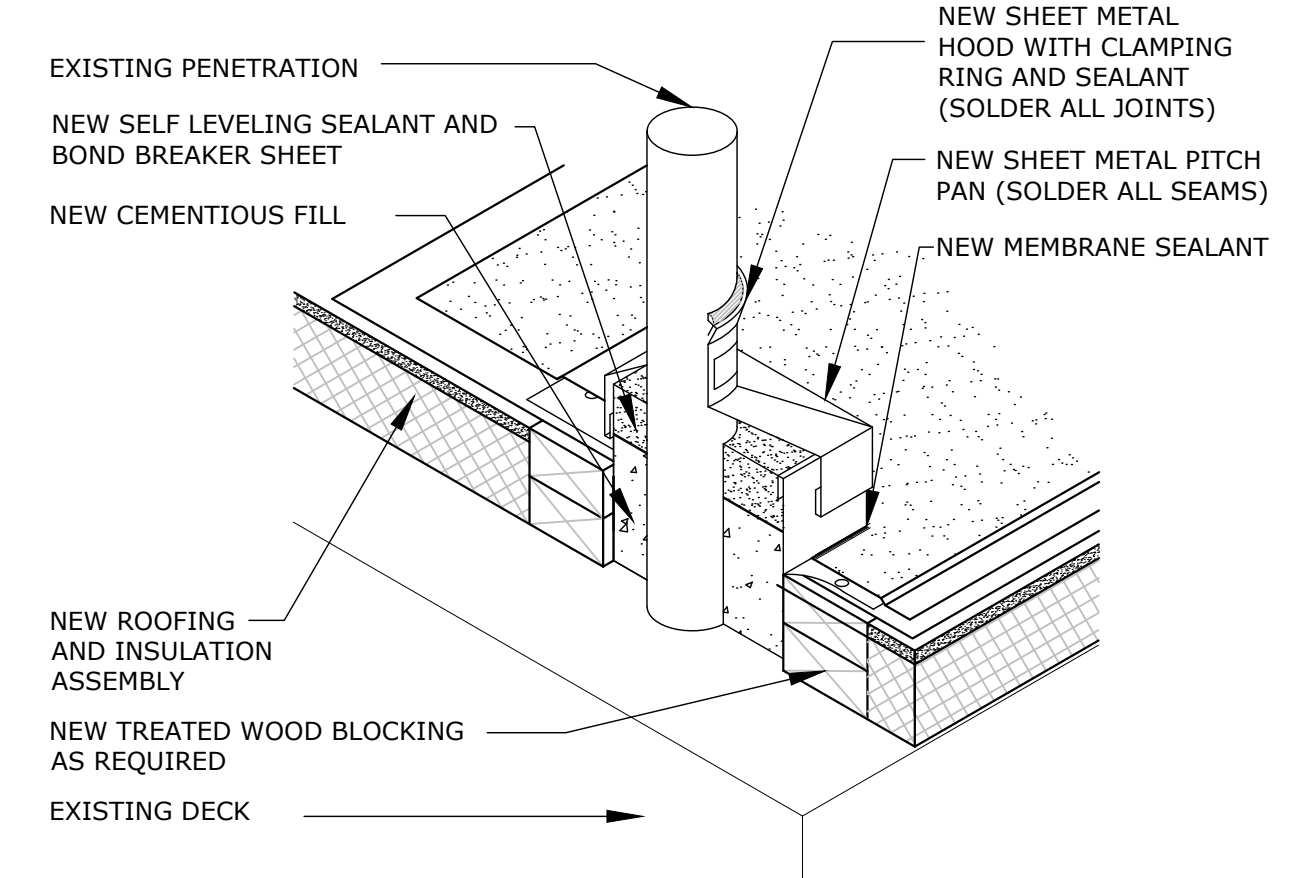
3 SOIL STACK DETAIL  
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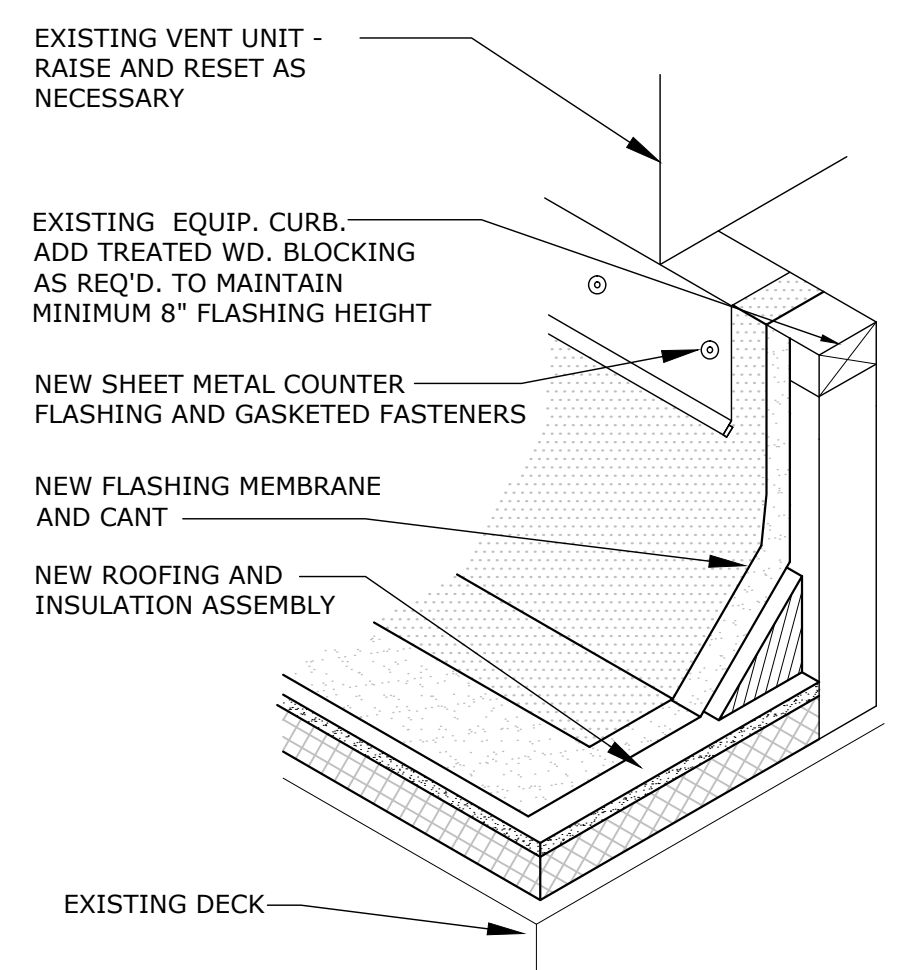
4 PIPE SUPPORT DETAIL  
SCALE: 1-1/2" = 1'-0"



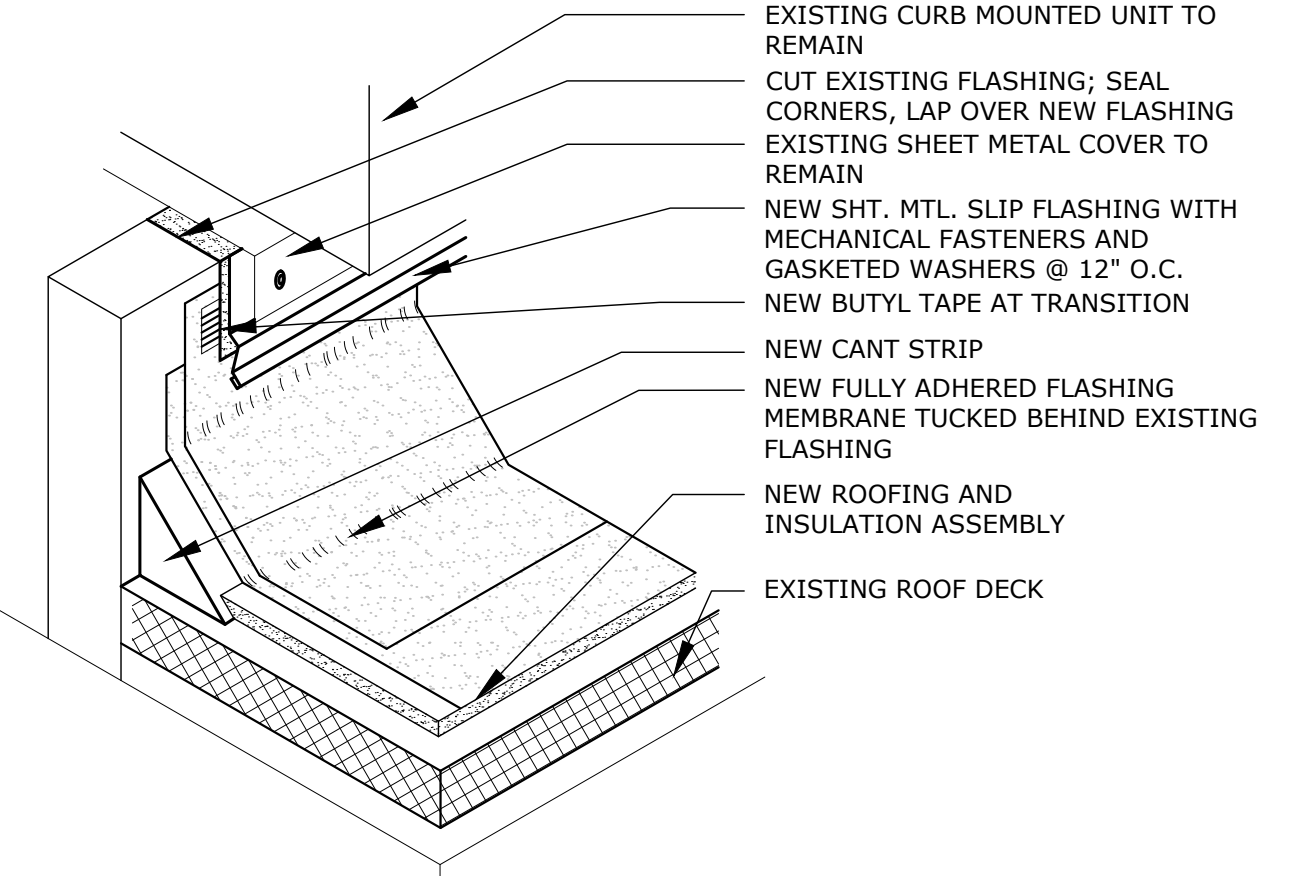
5 FLUE VENT DETAIL  
SCALE: 1-1/2" = 1'-0"



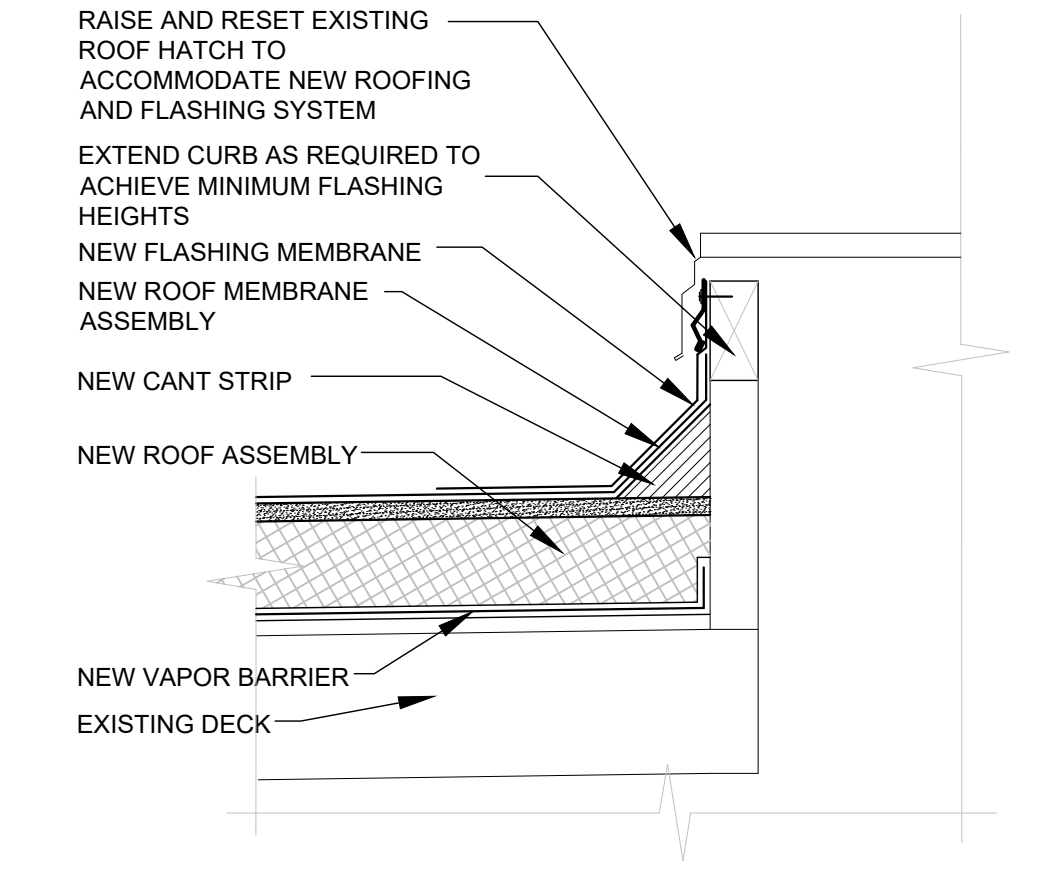
6 PITCH PAN DETAIL  
SCALE: 1-1/2" = 1'-0"



7 VENT CURB  
SCALE: 1-1/2" = 1'-0"



8 MECH CURB DETAIL  
SCALE: 1-1/2" = 1'-0"



9 ROOF HATCH DETAIL  
SCALE: 1-1/2" = 1'-0"



6 RAISE METAL COVER, INSTALL ADDITIONAL TREATED WD. BLOCKING TO RAISE CURB FOR 8" MIN. FLASHING HEIGHT, WRAP MEMBRANE UP AND OVER TOP OF CURB. SCRAPE AND CLEAN RUST FROM SURFACE PAINT. REMOVE ALL EXISTING CAULKING AT SEAMS AND APPLY NEW CAULK TO SEAL ALL JOINTS.



5 RAISE METAL COVER, INSTALL ADDITIONAL TREATED WD. BLOCKING TO RAISE CURB FOR 8" MIN. FLASHING HEIGHT, WRAP MEMBRANE UP AND OVER TOP OF CURB. CAULK ALL JOINTS.

10 RAISED PLATFORM COVER DETAIL  
SCALE: NTS



5 RAISE METAL COVER, INSTALL ADDITIONAL TREATED WD. BLOCKING TO RAISE CURB FOR 8" MIN. FLASHING HEIGHT, WRAP MEMBRANE UP AND OVER TOP OF CURB. CAULK ALL JOINTS.

11 FLUE CHASE DETAIL  
SCALE: NTS



8 EXISTING CURB MOUNTED UNIT TO REMAIN. CUT EXISTING FLASHING; SEAL CORNERS, LAP OVER NEW FLASHING. EXISTING SHEET METAL COVER TO REMAIN. NEW SHT. MTL. SLIP FLASHING WITH MECHANICAL FASTENERS AND GASKETED WASHERS @ 12" O.C. NEW BUTYL TAPE AT TRANSITION. NEW CANT STRIP. NEW FULLY ADHERED FLASHING MEMBRANE TUCKED BEHIND EXISTING FLASHING. NEW ROOFING AND INSULATION ASSEMBLY. EXISTING ROOF DECK.

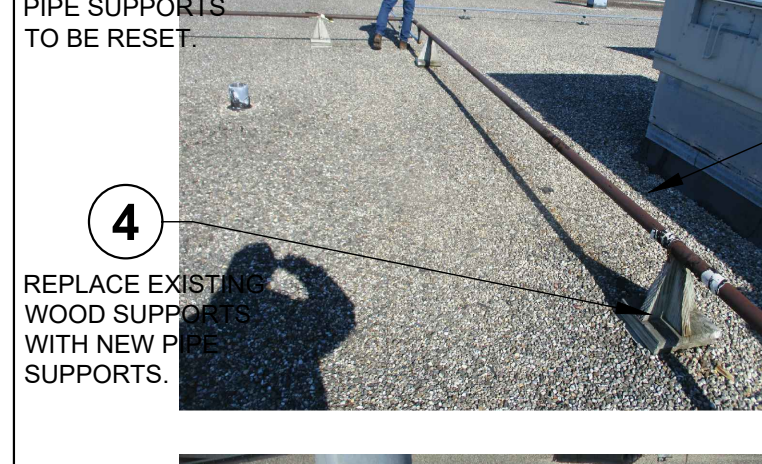
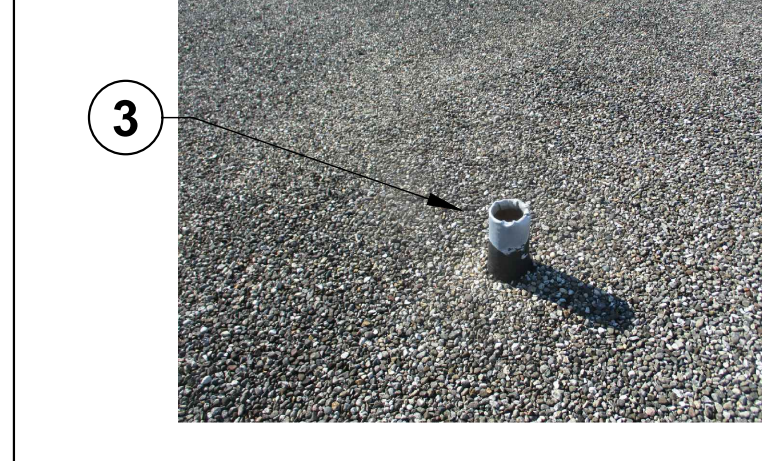


7 NEW ROOFING AND INSULATION ASSEMBLY. EXISTING ROOF DECK.



9 REPLACE EXISTING WOOD PIPE SUPPORTS WITH NEW PIPE SUPPORTS.

## DETAIL PHOTOS



8 ABANDONED PENETRATION: REMOVE EXISTING COVERICAP, INSTALL PLATE OVER DECK OPENING.

Architectural Consulting Group, Inc. ACG  
422 N. Hough Street  
Barrington, IL 60010  
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www.acg-llc.net

I hereby certify that these documents have been prepared under my supervision and to the best of my knowledge conform with all applicable building codes ordinances.

Thomas F. Zordan, AIA  
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|     |               |        |
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Drawing Date: 01.03.2022

Project No.: 21-033

Sheet Title:

DETAILS

Sheet No.:

A-2