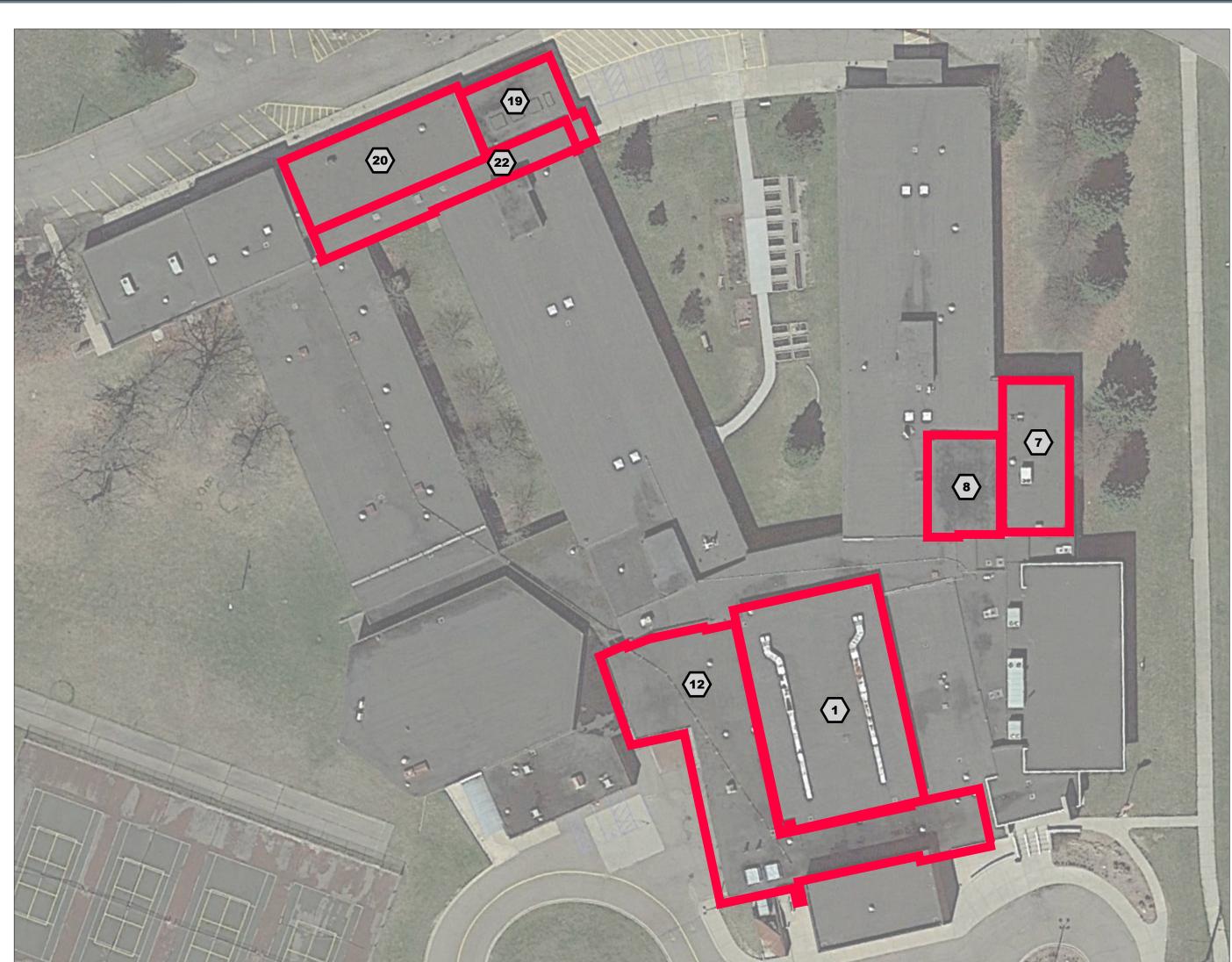
# 2023 Waterford School District Crary Campus Roofing Replacement 501 N. Cass Lake Road Waterford Twp., Michigan 48328









#### **GENERAL NOTES**

- THE BUILDING WILL REMAIN PARTIALLY OCCUPIED WITH THE OWNER'S SCHEDULED SUMMER MAINTENANCE, CONSTRUCTION AND ACADEMIC/ATHLETIC ACTIVITIES DURING THE COURSE OF THIS PROJECT. CLOSELY COORDINATE WORK WITH THE OWNER'S REPRESENTATIVE AND OTHER ACTIVITIES THAT MAY BE OCCURRING AT THE SITE.
- WHERE NOT INDICATED ON THE PROJECT DRAWINGS OR DESCRIBED IN THE SUMMARY
  OF WORK, PROVIDE THE MANUFACTURER'S STANDARD DETAILS. PROVIDE SPECIFIED
  CONTRACTOR'S SHOP DRAWINGS AND SPECIAL DETAILING REQUIREMENTS WITH THE
  PROJECT SUBMITTALS.
- PROVIDE NECESSARY TEMPORARY FENCING, BARRICADES, OR STRUCTURES AND OTHER SUCH MEASURES AS NEEDED TO PROTECT PEDESTRIAN AND VEHICLE TRAFFIC ADJACENT TO THE WORK AREA.
- 4. PROVIDE TEMPORARY PROTECTION FOR EXTERIOR WALLS AND WINDOWS, ENTRANCES, LANDSCAPING AND PAVEMENTS. RESTORE DAMAGES CAUSED BY ROOFING OPERATIONS TO PRE-PROJECT CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- 5. IN ADDITION TO ITEM 4 ABOVE, PROVIDE TEMPORARY PROTECTION FOR ROOFING THAT WILL BE TRAFFICKED OVER, OR USED FOR STAGING PURPOSES, INCLUDING BOTH NEW AND OLD ROOF AREAS, TO REDUCE THE POTENTIAL FOR LEAKAGE. SECTIONS ADJACENT TO THE WORK AREAS NOT INCLUDED IN THIS PROJECT ARE TO BE PROTECTED DURING THE FLASHING TIE-INS. THE CONTRACTOR WILL BE HELD RESPONSIBLE TO REPAIR SECTIONS DAMAGED DURING THIS PROJECT.
- 6. PROVIDE TEMPORARY ROOFING, TIE-INS, WATER BLOCKS, AND INTERIOR PROTECTION DURING THE ROOFING REPLACEMENT TO PREVENT LEAKAGE INTO THE BUILDING, AND WATER DAMAGE TO INTERIOR FURNISHINGS, FINISHES, STORED MATERIALS AND FOLUMENT
- 7. SPREAD OUT STORED MATERIALS ON THE ROOF SO AS NOT TO OVERLOAD THE ROOF DECKS
- 8. STORE MATERIALS OFF THE GROUND ON PALLETS, AND COVERED WITH OPAQUE, BREATHABLE WATERPROOF TARPAULINS TO PROTECT FROM UV EXPOSURE AND WET WEATHER.
- 9. STORE CONTAINERS OF MATERIALS SENSITIVE TO HIGH TEMPERATURES IN THE SHADE, OR IN CLIMATE CONTROLLED LOCATIONS.
- 10. STORAGE OF MATERIALS INSIDE THE BUILDING IS PROHIBITED UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM THE OWNER'S REPRESENTATIVE. NO STORAGE OF FLAMMABLE MATERIALS ON OR WITHIN THE BUILDING IS PERMITTED. HOIST FLAMMABLES TO THE GROUND AND EITHER SECURELY STORE OR REMOVE FROM THE SITE AT THE END OF EACH WORK DAY. STORE FLAMMABLE FLUIDS A MINIMUM 50 FEET AWAY FROM THE BUILDING WHEN NOT IN USE.
- 11. REMOVE DEBRIS FROM THE ROOF AND GROUNDS DAILY AND DISPOSE IN A PROPER MANNER.
- 12. PROMPTLY REPORT UNANTICIPATED CONDITIONS UNCOVERED DURING ROOFING REMOVAL, REPLACEMENTS, AND RECOVERS THAT ARE CONTRARY TO THE PROJECT DOCUMENTS, OR WILL NEGATIVELY IMPACT THE NEW ROOFING SYSTEM, TO THE ENGINEER AND OWNER'S REPRESENTATIVE FOR REVIEW.
- 13. VERIFY DIMENSIONS AND FIELD CONDITIONS BEFORE ORDERING MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND VERIFYING WORK ITEMS REQUIRED FOR A COMPLETE WORK PRODUCT. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE UNDERSIDE OF THE ROOF DECK FOR CONDUITS OF OTHER UTILITIES THAT MAY BE DAMAGED FROM THE ROOFING PROJECT. CONDUIT WERE FOUND ON TOP OF THE ROOF DECK ON ROOF AREA 12.
- 14. INSTALL NEW ROOFING IN COMPLIANCE WITH THE REQUIREMENTS AND RECOMMENDATIONS OF THE LATEST REVISED EDITION OF THE NRCA ROOFING AND WATERPROOFING MANUAL, AND THE ROOFING MANUFACTURER.
- 15. PROVIDE SHEET METAL COMPONENTS THAT COMPLY WITH THE LATEST EDITION OF THE SMACNA ARCHITECTURAL SHEET METAL MANUAL. COPINGS AND PERIMETER EDGE FLASHINGS TO BE TESTED AND INSTALLED ANSI-SPRI ES-1 ASSEMBLIES.
- 16. SUBMIT THE SPECIFIC ROOFING MANUFACTURER'S PRODUCT DATA SHEETS, INSTALLATION GUIDELINES AND CONSTRUCTION DETAILS, AND THE SHEET METAL MANUFACTURER'S PRODUCT DATA SHEETS AND INSTALLATION INSTRUCTIONS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIALS.
- 17. PROVIDE LICENSED ELECTRICAL, PLUMBING, OR HVAC SUBCONTRACTORS TO DISCONNECT AND RECONNECT MECHANICAL UNITS, ADJUST OR RELOCATE UTILITIES, RAISE CURBS, ABANDON DESIGNATED CURBS, RAISE DUCTWORK, INSTALL NEW DRAINS OR SCUPPER COMPONENTS, AND ABANDON DESIGNATED DRAINS AND PIPING. IN-PLACE SYSTEMS SHALL ACCOMMODATE NEW INSULATION THICKNESSES AND MEET WARRANTY REQUIREMENTS FOR FLASH HEIGHT BY ROOFING MANUFACTURER. ALL MECHANICAL UNITS AND UTILITIES MUST BE OPERATIONAL AND DRAINS FREE FLOWING AT THE COMPLETION OF THE PROJECT. THIS INCLUDES CONDUITS DAMAGED BY SCREWS OR OTHER ITEMS THAT MAY DAMAGE UTILITIES. WORK TO BE COMPLETED IN ACCORDANCE WITH LOCAL CODES AND JURISDICTION(S) OF AUTHORITY. DO NOT SHUT OFF OR INHIBIT UTILITY SERVICES WITHOUT NOTIFYING OWNER'S REPRESENTATIVE IN ADVANCE.
- 18. EXISTING DRAINS ARE TO BE REPLACED DOWN TO THE FIRST CONTINUOUS SECTION OF VERTICAL OR HORIZONTAL PIPING BENEATH THE DECK FOR ALL STANDARD DRAIN AND OVERFLOW DRAINS THAT ARE TO BE REMOVED AND REPLACED.
- 19. NEW DRAIN LOCATIONS SHALL BE CONNECTED TO NEAREST ROOF STORM WATER PLUMBING SYSTEM

## LIST OF DRAWINGS

SHEET NO.	SHEET TITLE
G0.0	COVER SHEET
G1.0	ROOF AREA 1 WIND DESIGN LOADING / ZONE PLAN
G1.1	ROOF AREA 12 WIND DESIGN LOADING / ZONE PLAN
G1.2	ROOF AREAS 7 AND 8 WIND DESIGN LOADING / ZONE PLAN
G1.3	ROOF AREAS 19, 20, AND 22 WIND DESIGN LOADING / ZONE PLAN
A1.0	ROOF PLAN AREA 1
A1.1	ROOF PLAN AREA 12
A1.2	ROOF PLAN AREAS 7 AND 8
A1.3	ROOF PLAN AREAS 19, 20, AND 22
A5.0	DETAILS
A5.1	DETAILS
A5.2	DETAILS

#### **ENGINEER**

SME
43980 PLYMOUTH OAKS BLVD.
PLYMOUTH, MI 48170
(734) 454-9900
CONTACT: KYLE DAMEROW, EIT

#### **APPLICABLE CODES**

2015 MICHIGAN BUILDING CODE

#### SCOPE OF WORK

WORK INCLUDES PROVIDING LABOR, MATERIALS, EQUIPMENT, AND ADMINISTRATION NECESSARY TO INTEGRATE A NEW ADHERED, BLACK 60-MIL EPDM SINGLE-PLY ROOFING MEMBRANE, WITH A 20-YEAR WARRANTY, INTO THE TOTAL BUILDING SYSTEM AS SHOWN ON THE DRAWING SET.

**OWNER / CLIENT** 

WATERFORD SCHOOL DISTRICT

WATERFORD, MICHIGAN 48328

WWW.WATERFORD.K12.MIUS

OWNER REPRESENTATIVE: MR. JOHN KEGLOVITZ

501N. CASS LAKE ROAD

(248) 682-7800

#### ROOF AREAS:

ROOF AREA 7 (BASE BID) IS APPROXIMATELY 2,745 SQUARE FEET.

ROOF AREA 8 (BASE BID) IS APPROXIMATELY 1,795 SQUARE FEET.

ROOF AREA 1 (ALTERNATE) IS APPROXIMATELY 7,250 SQUARE FEET.

ROOF AREA 12 (ALTERNATE) IS APPROXIMATELY 8,975 SQUARE FEET.

ROOF AREA 19 (ALTERNATE) IS APPROXIMATELY 1,700 SQUARE FEET.

ROOF AREA 20 (ALTERNATE) IS APPROXIMATELY 3,575 SQUARE FEET.

ROOF AREA 22 (ALTERNATE) IS APPROXIMATELY 2,010 SQUARE FEET.

TOTAL ROOF AREA IS APPROXIMATELY 28,050 SQUARE FEET WORK TASKS INCLUDE:

#### RECOVER

ROOF AREA 7 (BASE BID)

- A. REMOVE EXISTING BUR GRAVEL SURFACING, MEMBRANE FLASHINGS, SUMPS, GRAVEL STOPS, AND SHEET METAL FLASHINGS.
- B. VERIFY EXISTING MEMBRANE AND INSULATION ARE DRY. IF WET MEMBRANE AND/OR INSULATION IS ENCOUNTERED CONTACT ENGINEER PRIOR TO RECOVER INSTALLATION.
- C. REVIEW ROOFING SUBSTRATES AND REPAIR OR REPLACE DETERIORATED PARAPET WALLS AND NAILERS AS NEEDED BASED ON UNCOVERED CONDITIONS DURING SELECTIVE DEMOLITION.
- D. INSTALL POLYISOCYANURATE INSULATION AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 53 23 ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING.
- E. INSTALL NEW METAL FLASHINGS AS SHOWN ON THE PROJECT DRAWINGS AND AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 62 00 SHEET METAL FLASHING AND TRIM.
- F. WHERE MECHANICAL UNITS ARE LIFTED TO ALLOW ROOF RECOVER, REINSTALL FASTENERS WITH INTEGRAL RUBBER GASKETS ON ALL SIDES OF THE UNIT.

### REPLACEMENT

ROOF AREA 8 (BASE BID), 1 (ALTERNATE), 12 (ALTERNATE), 19 (ALTERNATE), 22 (ALTERNATE), AND 20 (ALTERNATE)

- A. LOCALIZED DAMAGED SECTIONS OF GYPSUM DECKING ARE ANTICIPATED IN ROOF AREA 12. MEANS AND METHODS OF GYPSUM REMOVAL ARE THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL PROVIDE AN ENGINEERED DETAIL FOR GYPSUM DECK INFILL (SIGNED AND STAMPED BY AN ENGINEER LICENSED IN THE STATE OF MICHIGAN). DETAIL TO BE PROVIDED TO SME (ENGINEER) FOR REVIEW AND SUBSEQUENT APPROVAL PRIOR TO INSTALLATION.
- B. INSTALL BASE SHEET AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 53 23 ETHYLENE-DIENE-MONOMER (EPDM) ROOFING
- C. INSTALL VAPOR RETARDER TO BASE SHEET AT ROOF AREAS 1 AND 12 AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 26 00 VAPOR RETARDERS.
- D. INSTALL POLYISOCYANURATE INSULATION AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 53 23 ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING.
- E. INSTALL COVER BOARD AS DESCRIBED IN 01 10 00 SUMMARY OF WORK AND 07 53 23

ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING.

- F. INSTALL NEW METAL FLASHINGS AS SHOWN ON THE PROJECT DRAWINGS AND AS DESCRIBED IN 01 10 00
- SUMMARY OF WORK AND 07 62 00 SHEET METAL FLASHING AND TRIM.

  G. WHERE MECHANICAL UNITS ARE LIFTED TO ALLOW ROOF REPLACEMENT, REINSTALL FASTENERS WITH INTEGRAL RUBBER GASKETS ON ALL SIDES OF THE UNIT.

ISSUED FOR BID



roject

2023 WATERFORD SCHOOL DISTRICT CRARY CAMPUS ROOFING REPLACEMENT

siact Location

501 N. CASS LAKE RD., WATERFORD TWP., MI 48328

Sheet Name

**COVER SHEET** 

Sea

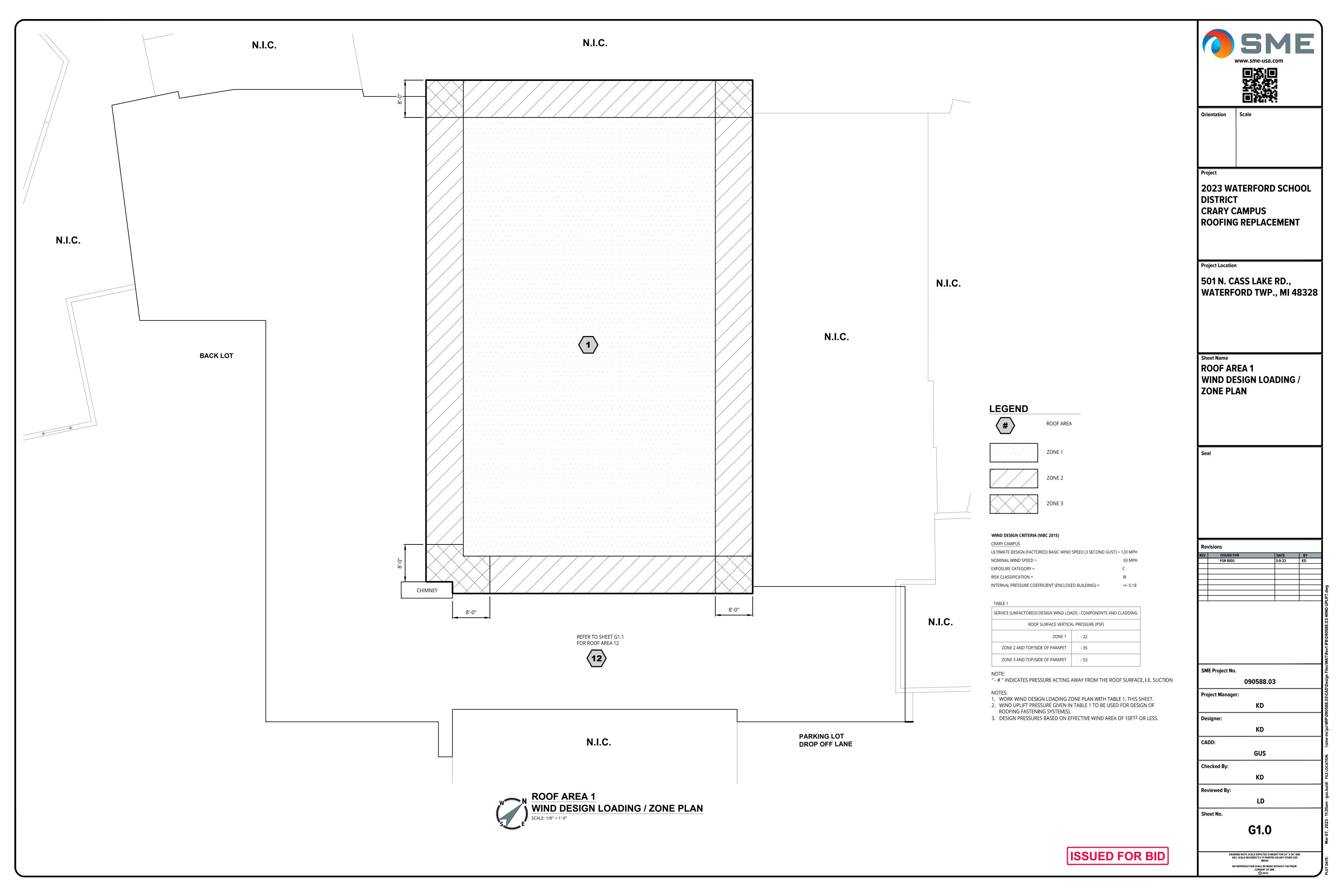
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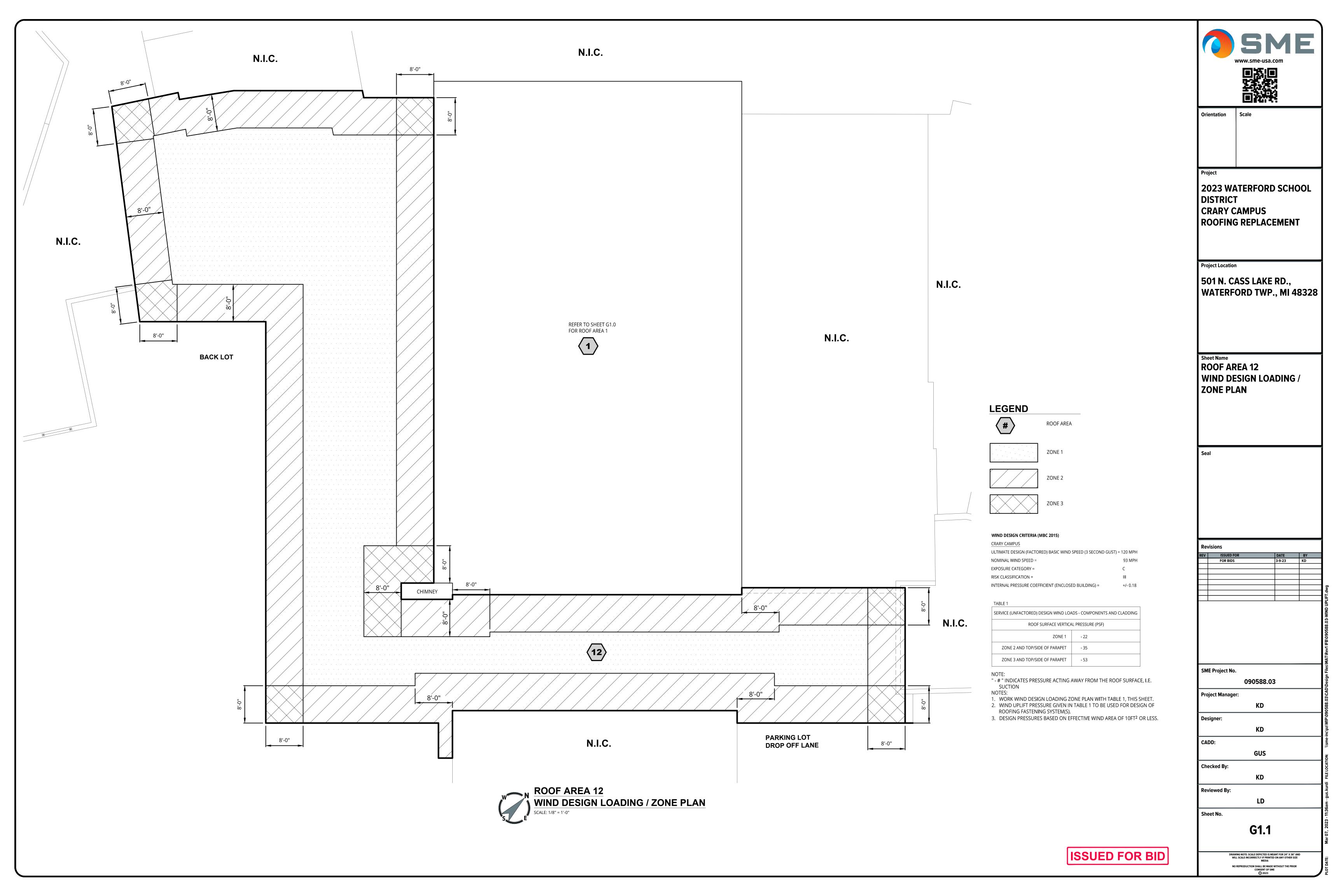
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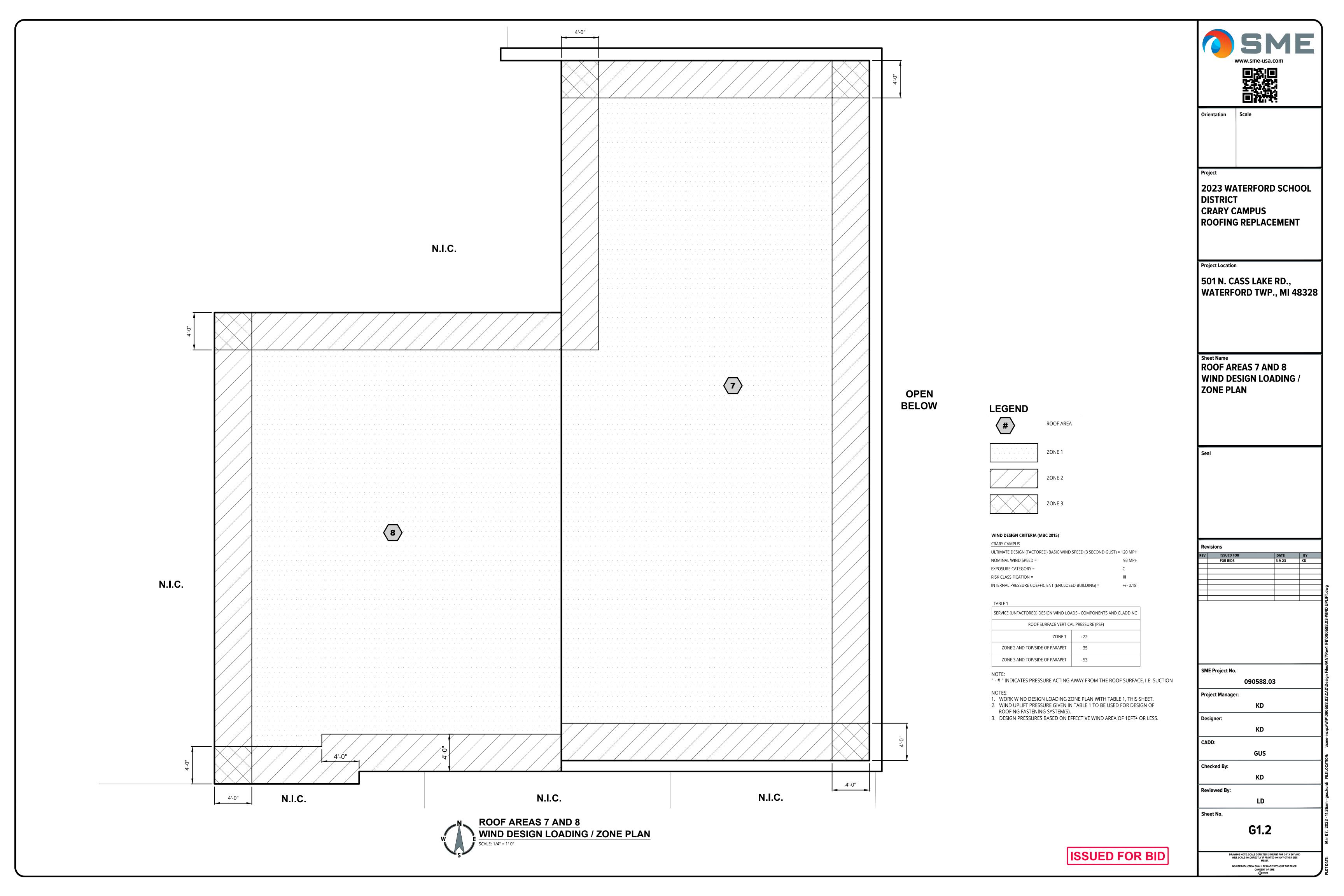
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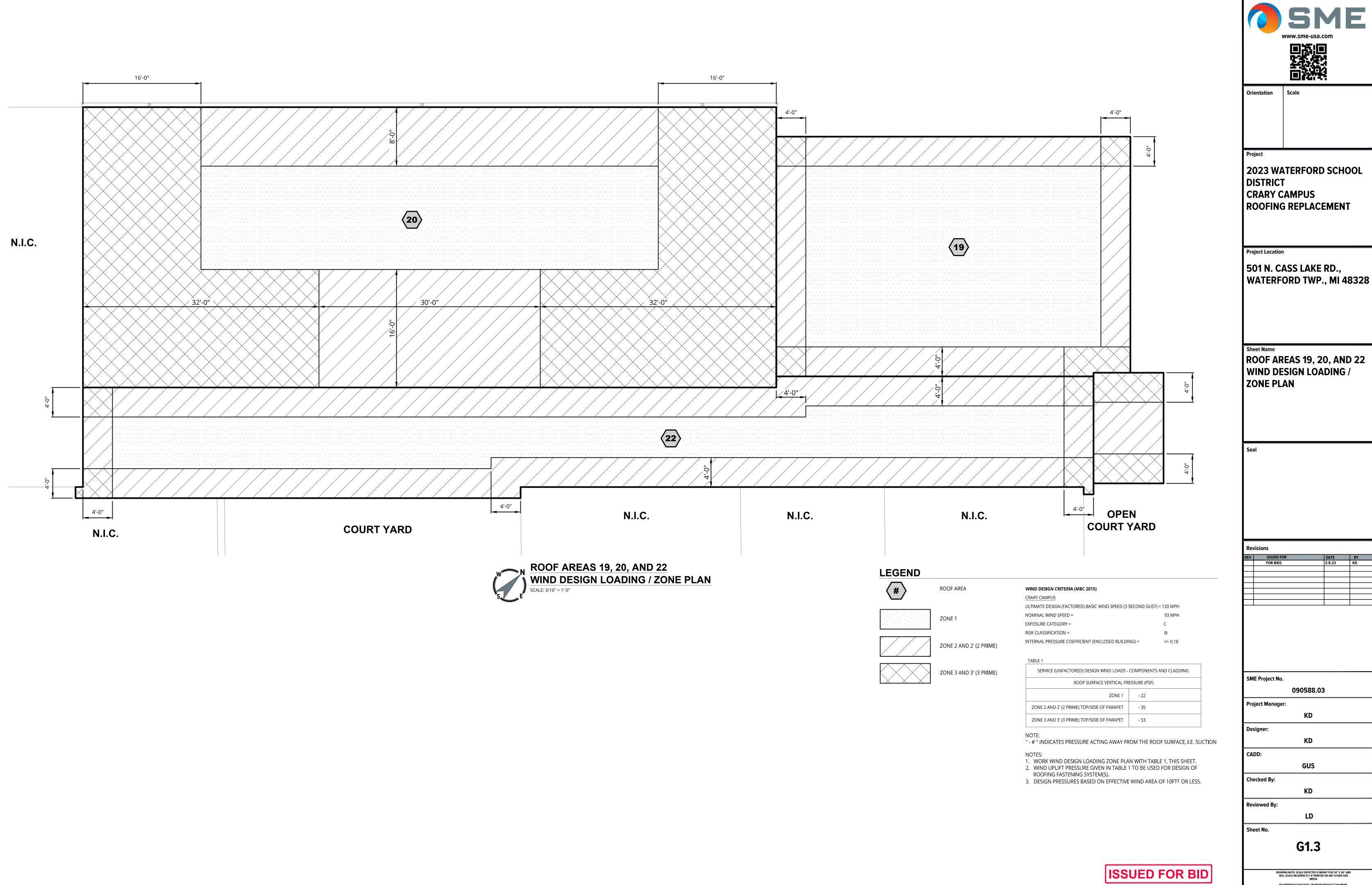
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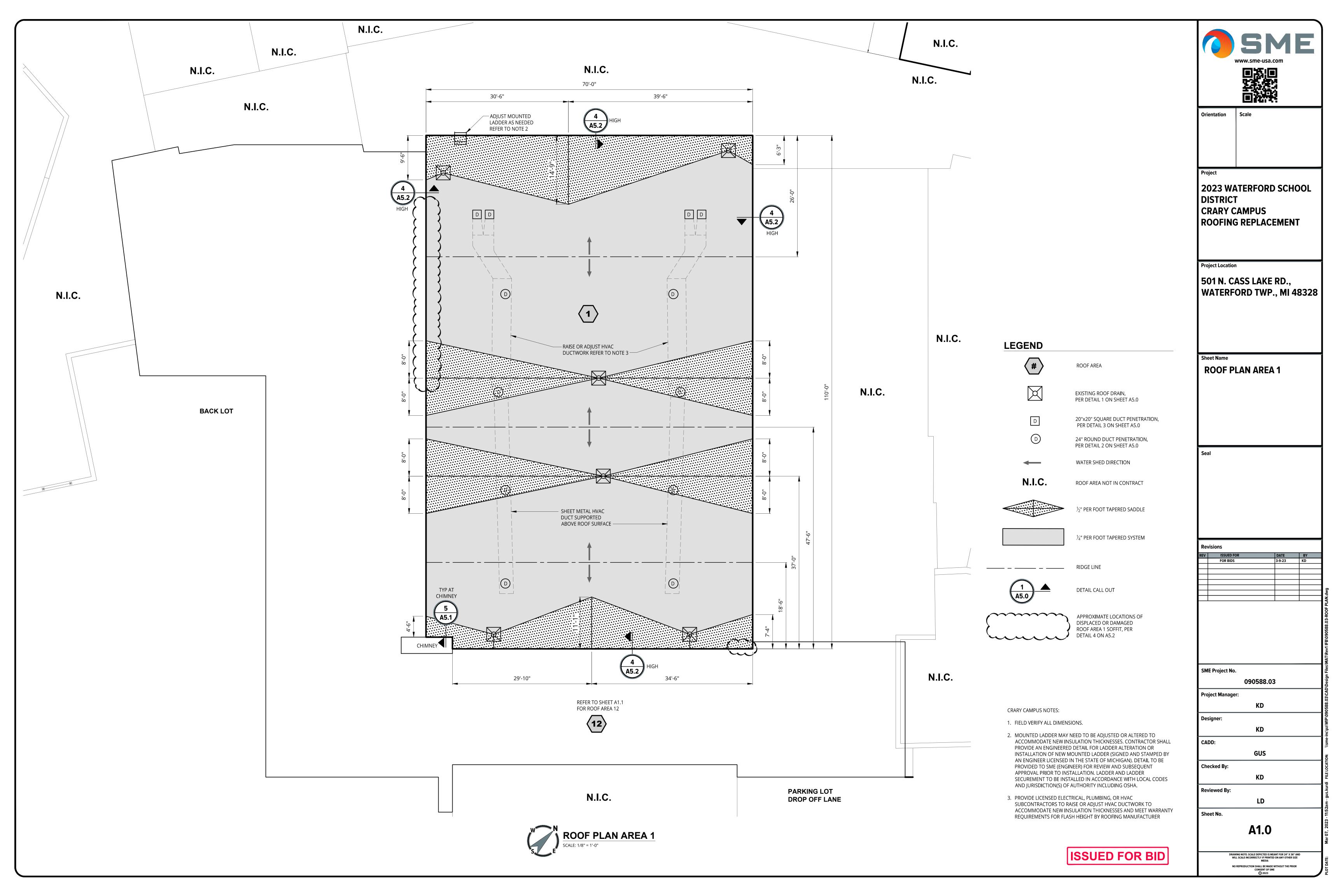


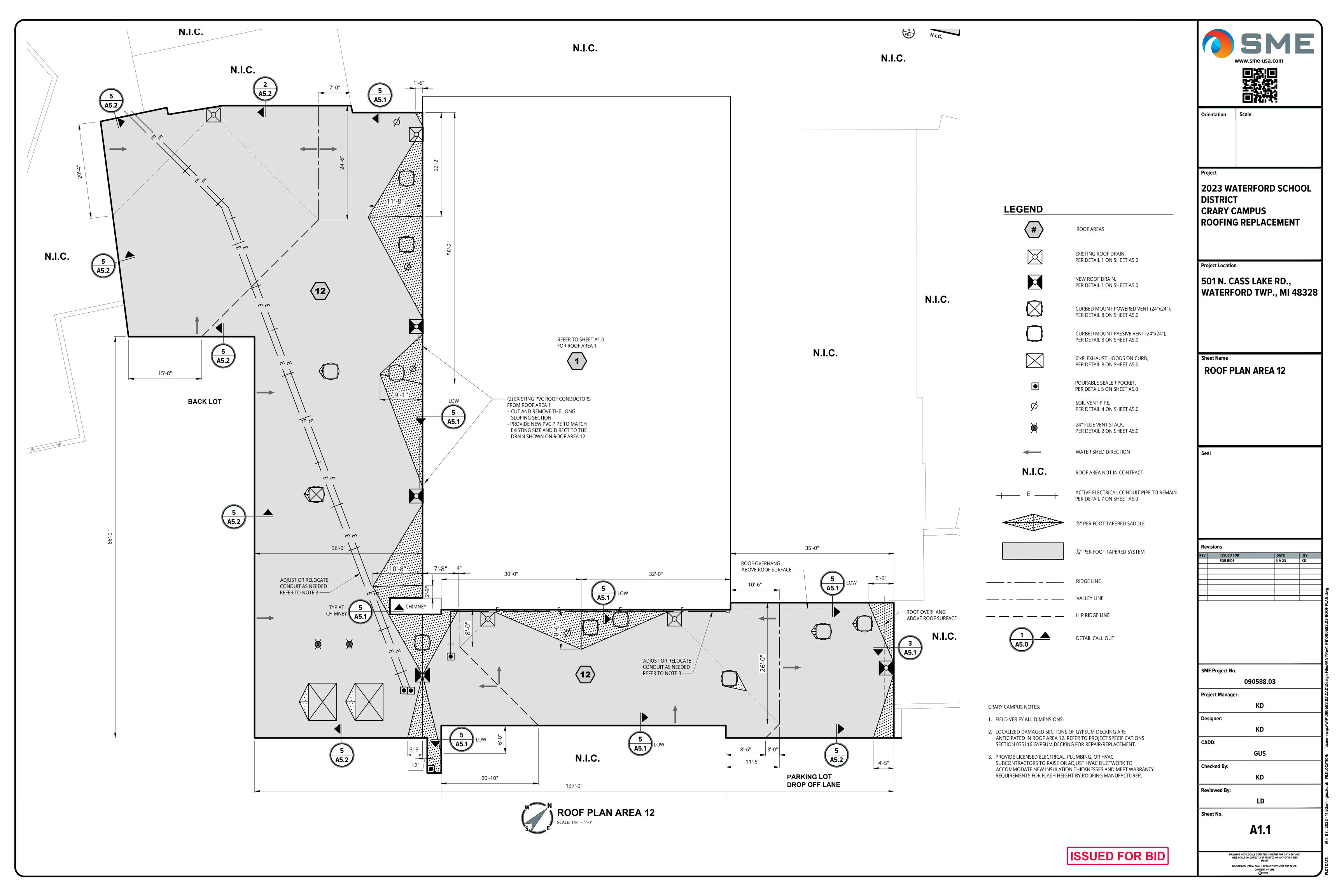


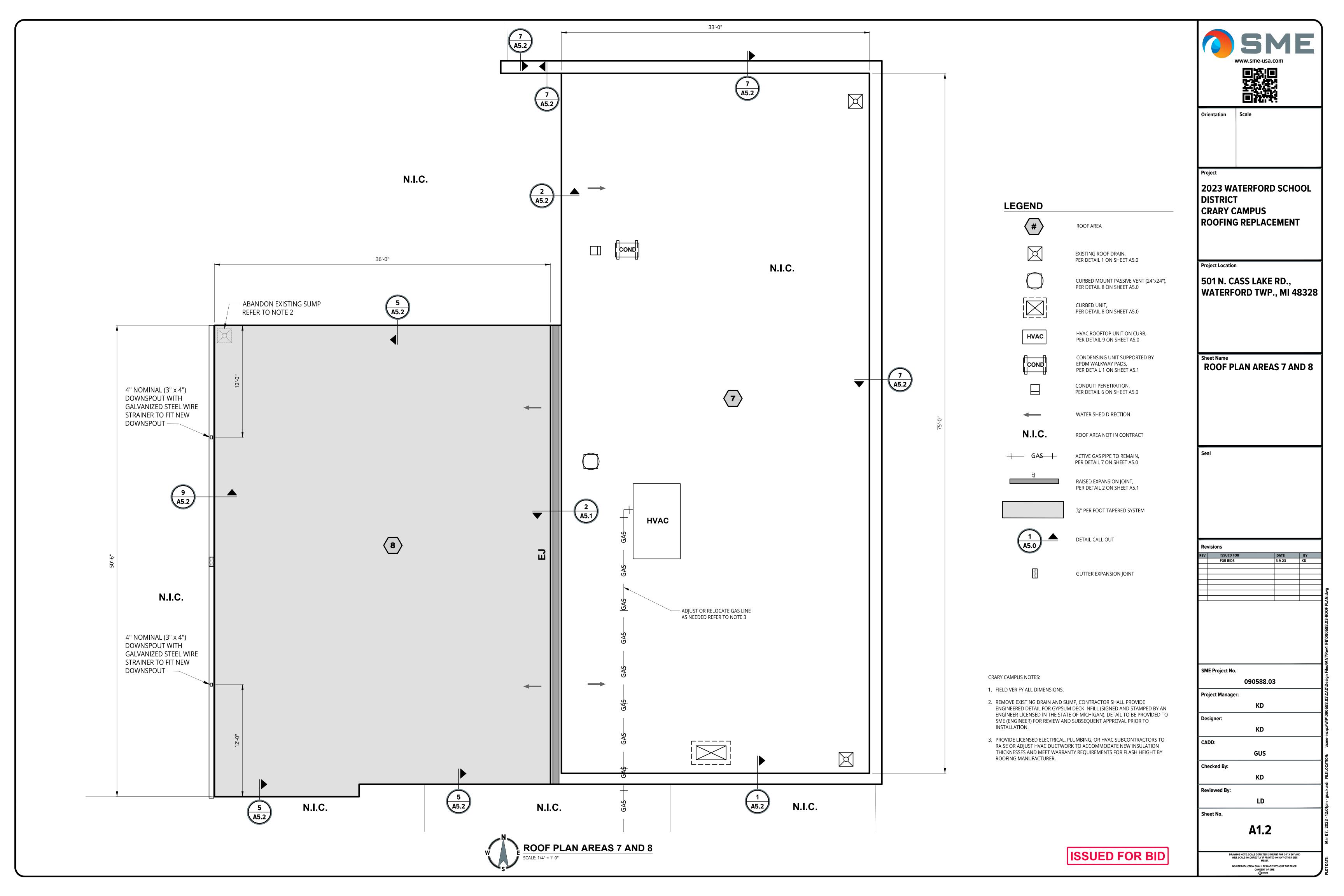


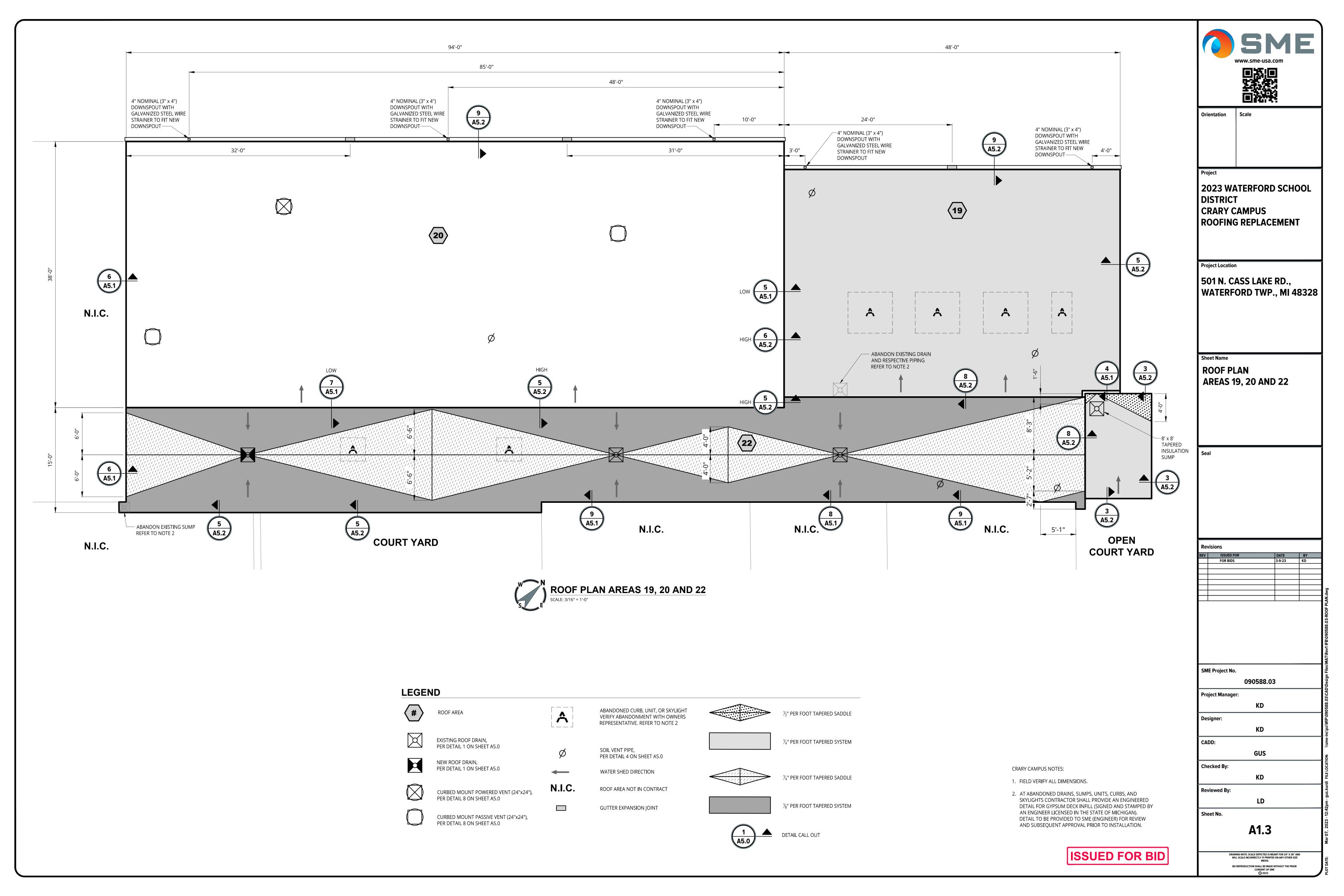
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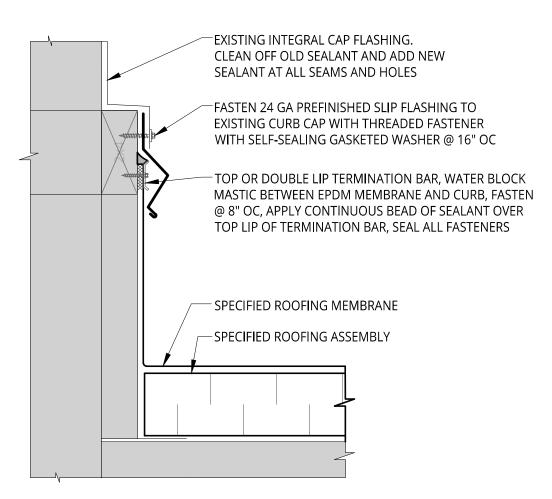
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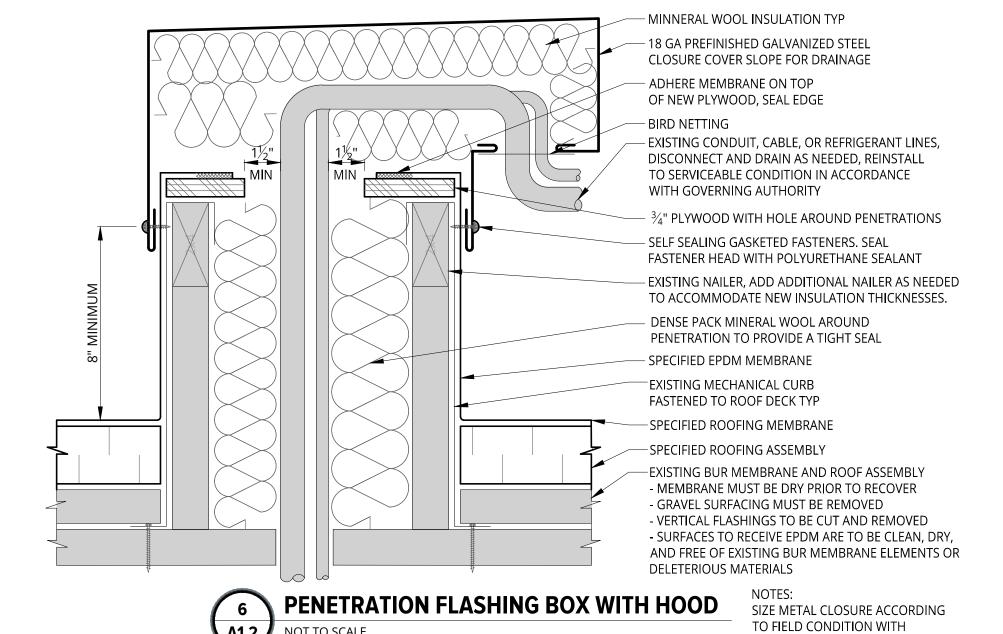


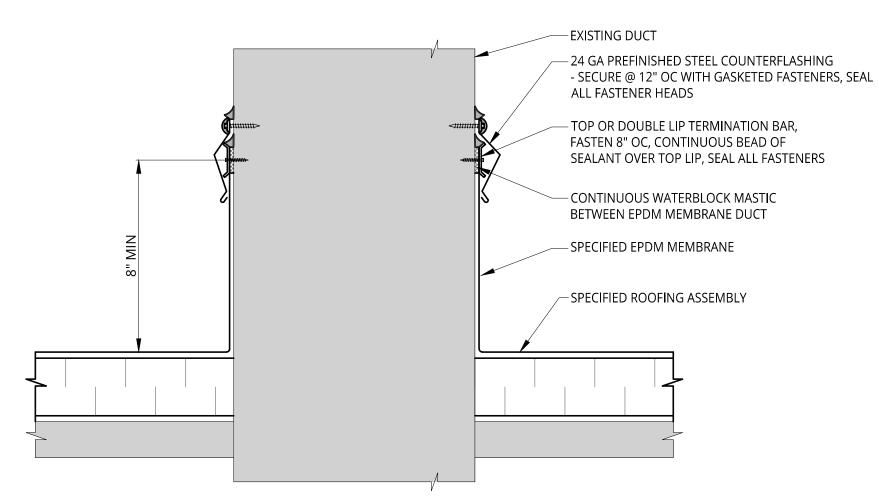






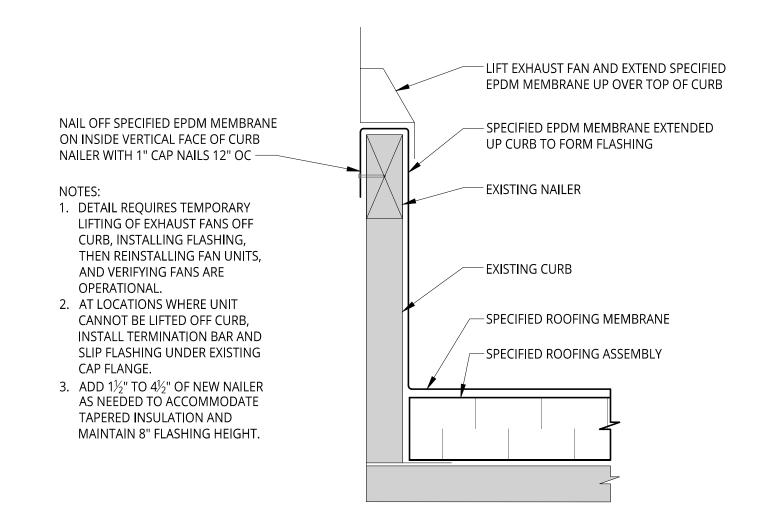
# TYPICAL CURB WITH SLIP FLASHING



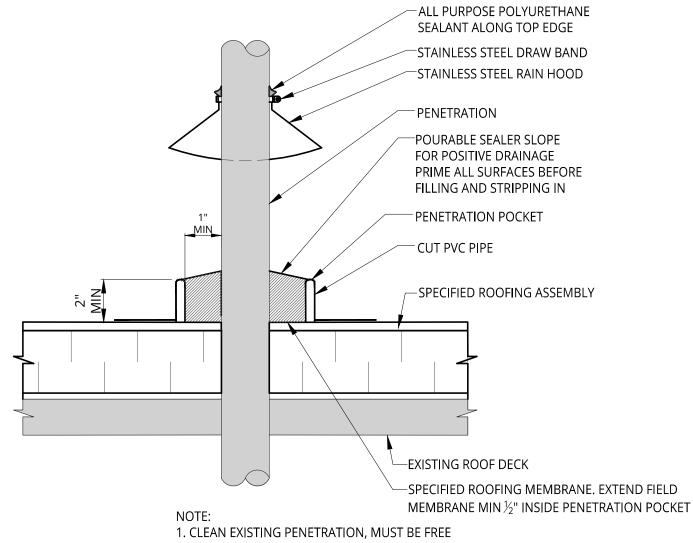


MINIMUM SIZE OF 12" x 12"



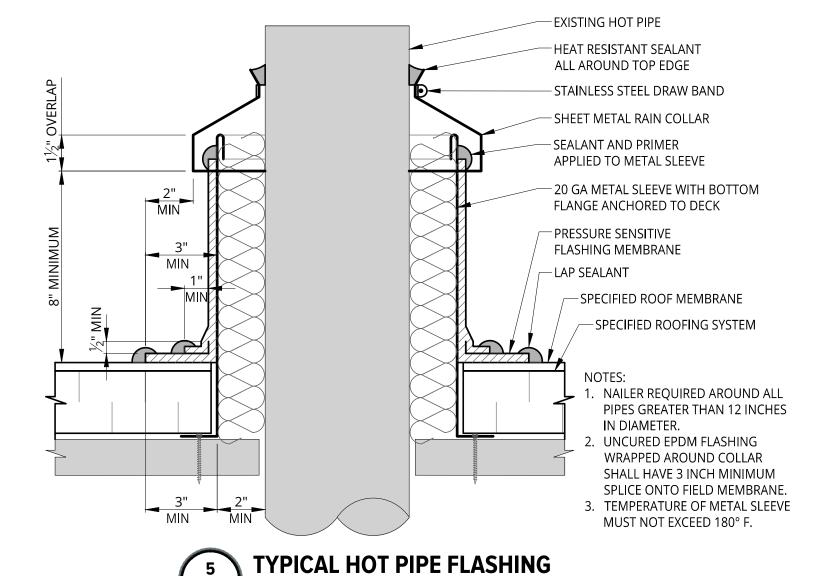


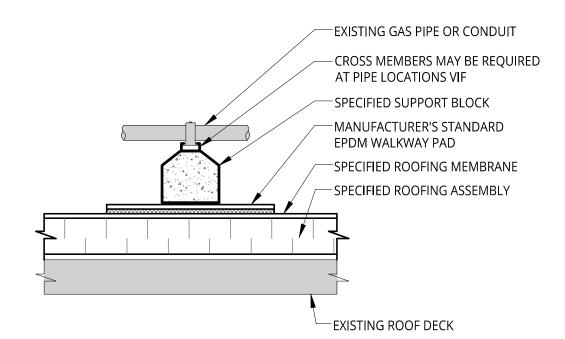
### **TYPICAL CURB UP AND OVER FLASHING** NOT TO SCALE



OF RUST, GREASE AND OTHER CONTAMINANTS





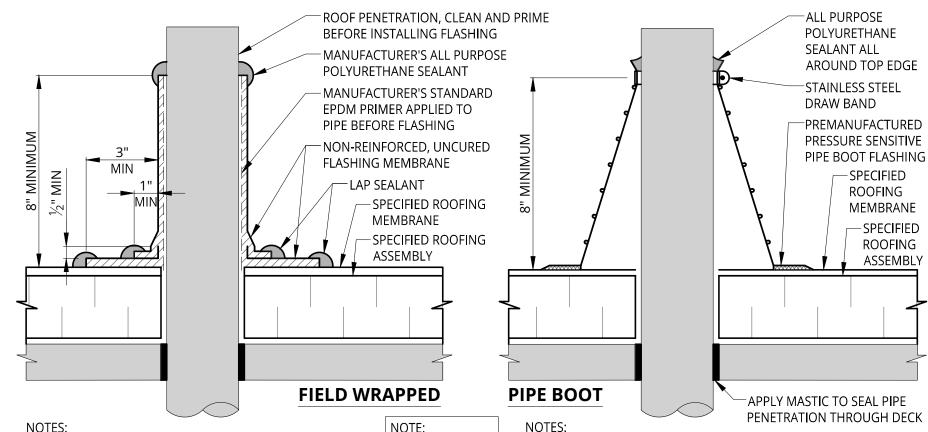


1. EQUIPMENT SUPPORTS OVER WALKWAY PADS MAY VARY BASED ON USE.

- SEVERAL WALKWAY PADS MAY BE REQUIRED AT SUPPORTS. 2. THIS ROOF PROTECTION AND SUPPORT DETAIL SHALL NOT BE USED FOR HVAC EQUIPMENT SUPPORT CURBS THAT REQUIRE ATTACHMENT TO THE ROOF DECK FOR PROPER INSTALLATION. 3. WALKWAY PADS SHALL BE APPLIED IN WHOLE UNITS UNLESS SPECIFIC
- 4. THE USE OF WOOD BLOCKING FOR PIPE OR CONDUIT IS NOT PERMITTED. **CONDUIT / GAS PIPE SUPPORT BLOCK**

CONDITIONS REQUIRE SMALLER PIECES.

NOT TO SCALE



1. REMOVE ALL EXISTING FLASHING BEFORE INSTALLING FIELD-FABRICATED PIPE SEAL.

2. NAILER REQUIRED TO STABILIZE STEEL DECK AROUND ALL PIPES GREATER THAN 12" DIA.

3. MANUFACTURER'S PREFABRICATED PIPE BOOT MAY BE INSTALLED IN LIEU OF THIS DETAIL WHERE APPLICABLE. 4. DO NOT USE FOR HOT EXHAUST STACKS.

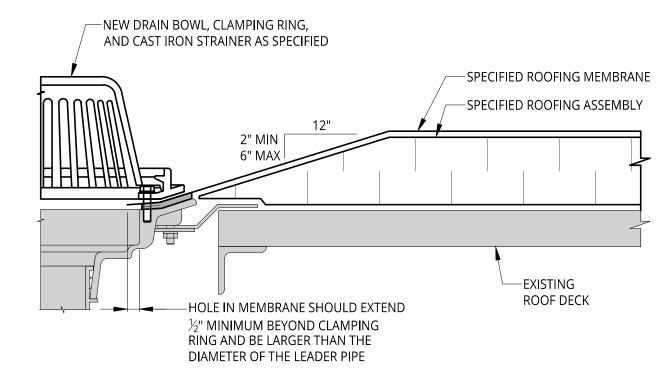
5. FASTENERS AROUND PIPES 4" DIA MAY BE OMITTED IF APPROVED BY ROOFING MEMBRANE MANUFACTURER.

1. THE USE OF LAP SEALANT TO SEAL TOP EDGE OF PIPE BOOT IS NOT CAN USE EITHER PERMITTED. CONTRACTOR SHALL USE ROOFING MANUFACTURER'S OF THESE DETAILS MULTIPURPOSE POLYURETHANE SEALANT OR SEALANT LISTED IN SPECIFICATIONS.

2. PIPE BOOTS ARE NOT TO BE APPLIED DIRECTLY TO HOT VENTS. 3. NAILERS REQUIRED TO STABILIZE STEEL DECK AT PENETRATIONS

LARGER THAN 12" DIA. 4. FASTENERS MAY BE OMITTED AT PENETRATIONS LESS THAN 18" DIA OR AS OTHERWISE INDICATED BY THE ROOFING MANUFACTURER.

**ROUND PENETRATION FLASHING** 



NOTES: 1. DO NOT RUN SEAMS THROUGH DRAINS OR SUMPS. 2. WHERE FIELD SEAMS ARE WITHIN 18" OF DRAINS, THEY SHALL BE

STRIPPED IN WITH 5" WIDE UNCURED EPDM. 3. DRAIN HEIGHT TO REMAIN AS IS, INSTALL TAPERED INSULATION TO CREATE A 4'x4' (UNO) SUMP AREA AROUND EACH DRAIN, WITH MODIFICATIONS AS NEEDED AT EXPANSION JOINTS AND TIGHT SPACES. NEW INSULATION MAY NEED TO BE OMITTED TO ALLOW SUMPED AREA.

4. AT EXISTING DRAIN LOCATIONS, REPLACE DRAIN PIPING TO FIRST CONTINUOUS STRETCH. DIAMETER TO MATCH EXISTING. 5. NEW DRAIN LOCATIONS, SHALL BE CONNECTED TO NEAREST ROOF





Orientation Scale

2023 WATERFORD SCHOOL DISTRICT **CRARY CAMPUS** 

ROOFING REPLACEMENT

**Project Location** 

501 N. CASS LAKE RD., WATERFORD TWP., MI 48328

**Sheet Name FLASHING DETAILS** 

**SME Project No.** 090588.03 **Project Manager:** KD

KD CADD:

Checked By:

Reviewed By:

LD Sheet No.

**A5.0** 

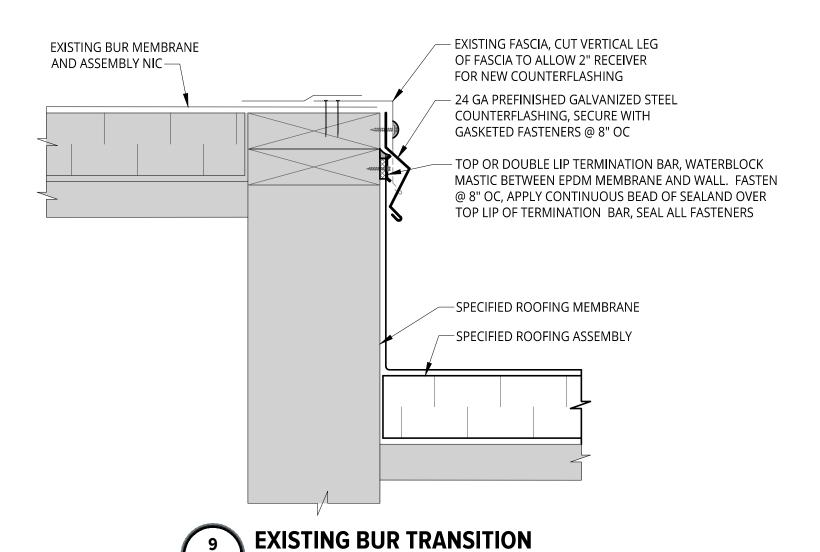
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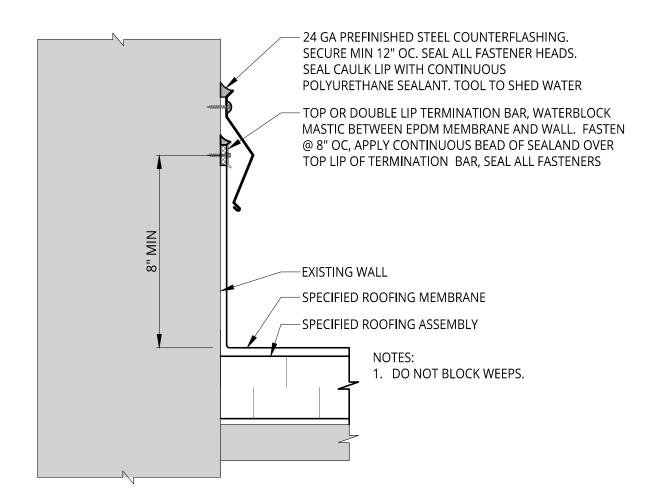
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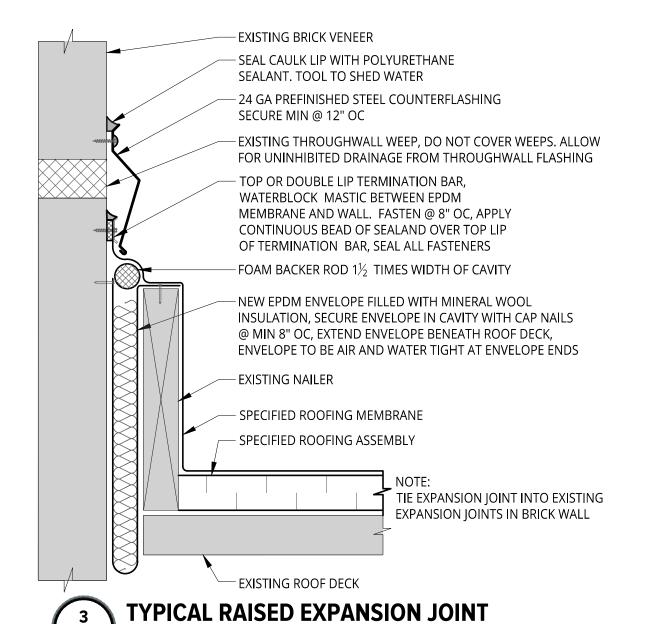
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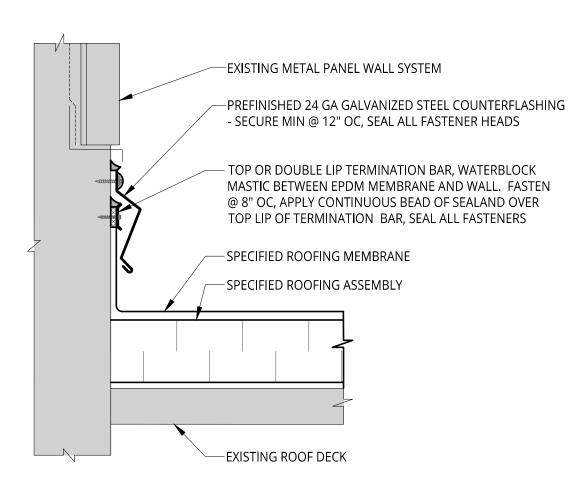




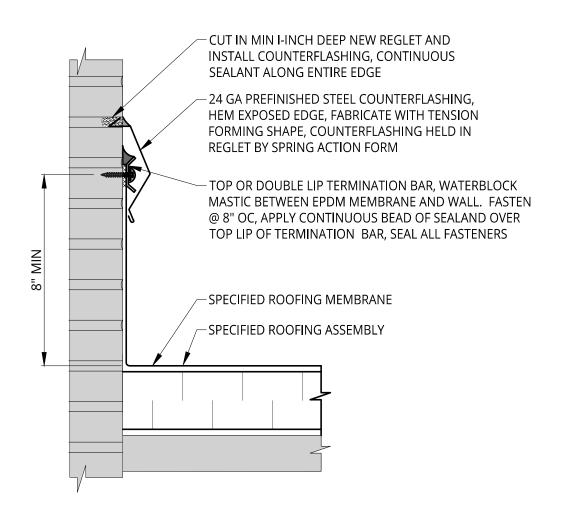
### **BASE FLASHING - SURFACE MOUNTED** COUNTERFLASHING 6 A1.3



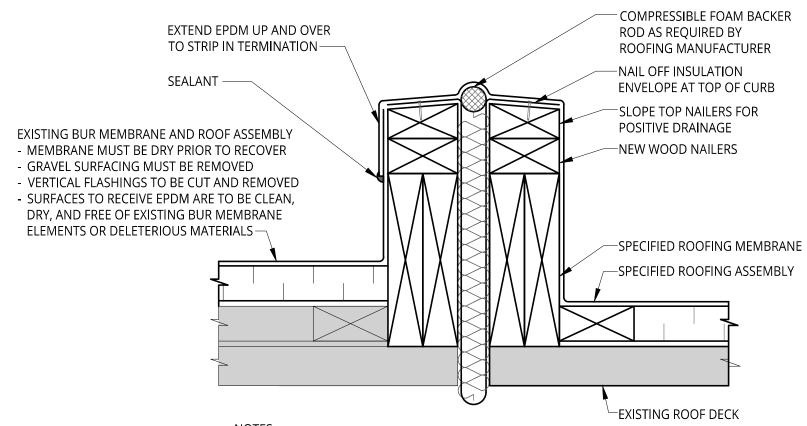
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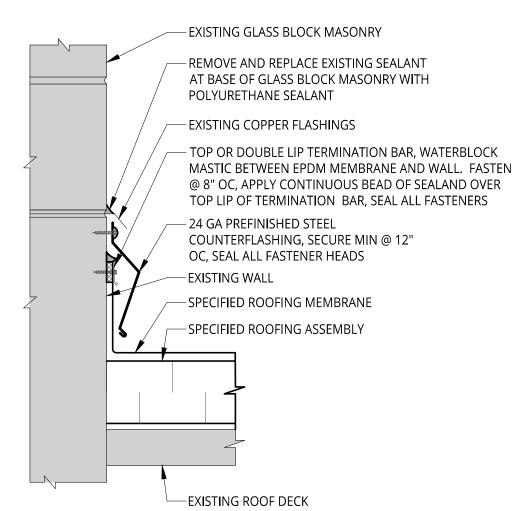




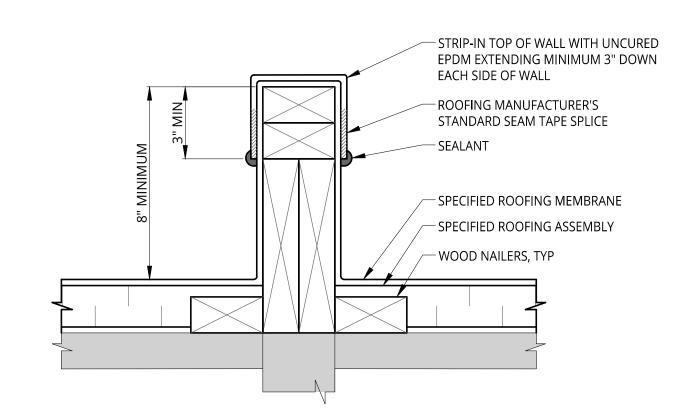
1. ADD NEW NAILER AS REQUIRED TO PROVIDE MINIMUM 8" FLASHING HEIGHT

- ABOVE FINISHED ROOF SURFACE. 2. INSTALL INSULATION ON INSIDE OF EXPANSION JOINT AS NEEDED BASED ON
- CONDITIONS UNCOVERED DURING DEMOLITION.
- 3. EPDM INSULATION ENVELOPE TO BE SEALED WATERTIGHT, INCLUDING ENDS, TO PROVIDE A SECONDARY WATERPROOF BARRIER.

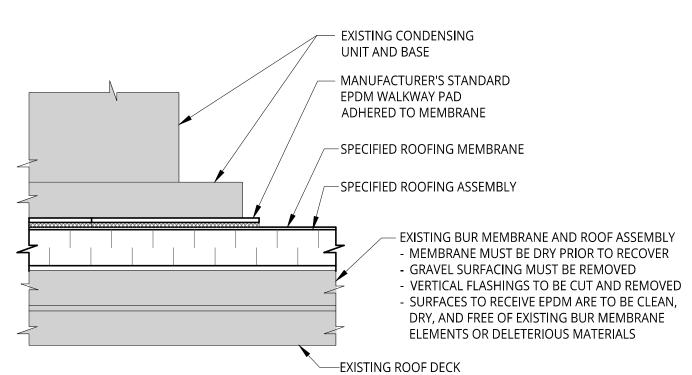














**ISSUED FOR BID** 



Scale Orientation

2023 WATERFORD SCHOOL DISTRICT **CRARY CAMPUS** ROOFING REPLACEMENT

**Project Location** 

**501 N. CASS LAKE RD.,** WATERFORD TWP., MI 48328

**Sheet Name** 

**FLASHING DETAILS** 

SME Project No. 090588.03 **Project Manager:** KD Designer: KD

Checked By: KD

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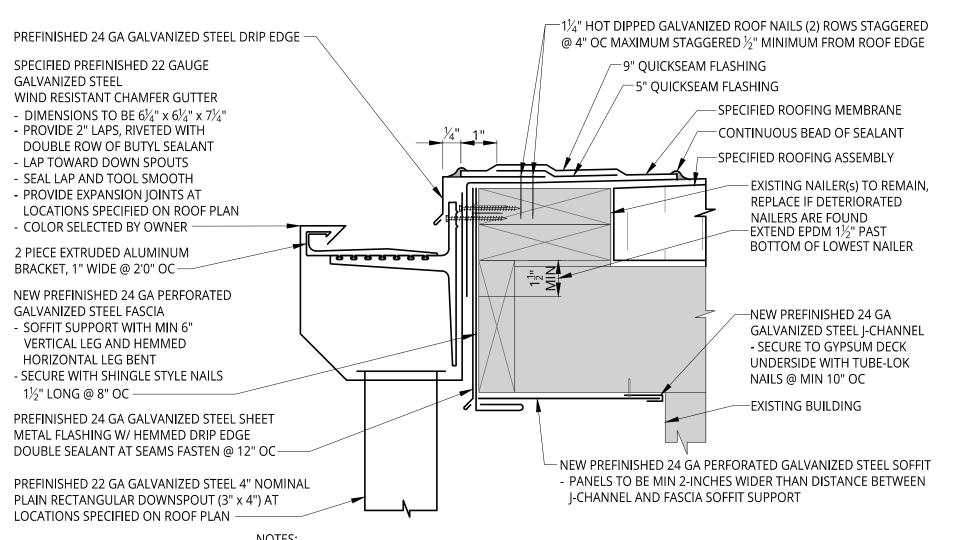
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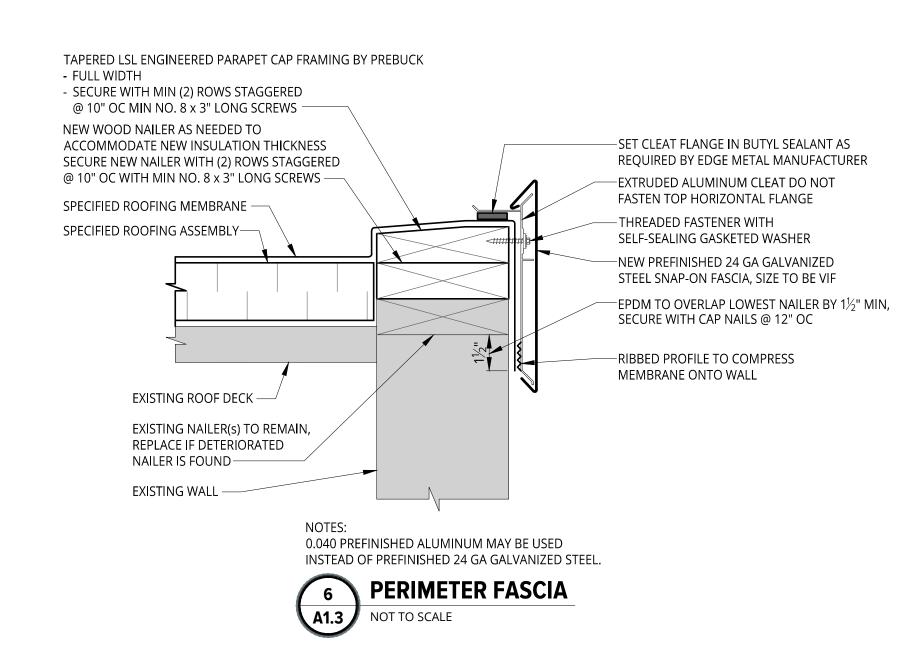
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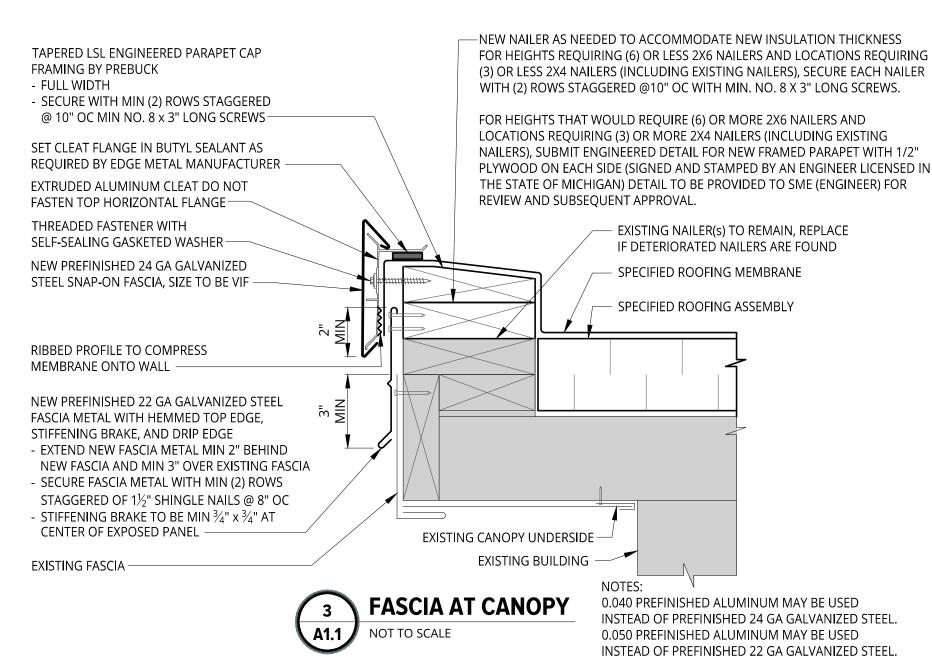
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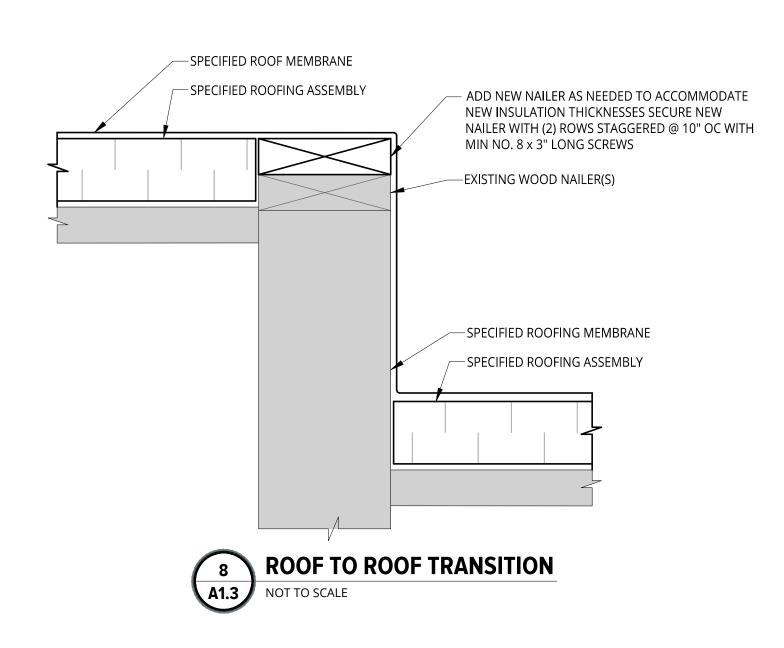


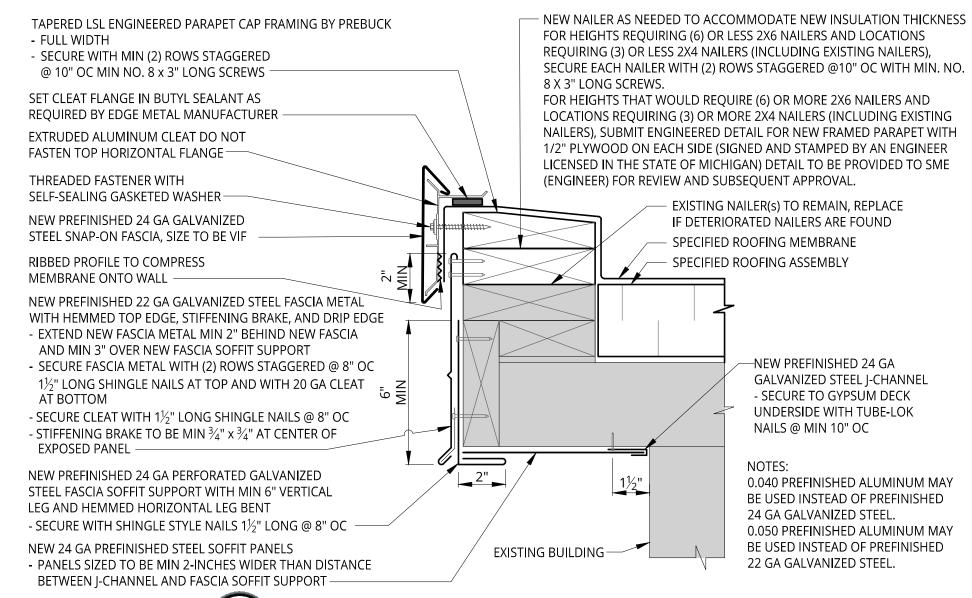
0.040 PREFINISHED ALUMINUM MAY BE USED INSTEAD OF PREFINISHED 24 GA GALVANIZED STEEL 0.050 PREFINISHED ALUMINUM MAY BE USED INSTEAD OF PREFINISHED 22 GA GALVANIZED STEEL

PERIMETER FASCIA WITH SOFFIT REPLACEMENT
NOT TO SCALE

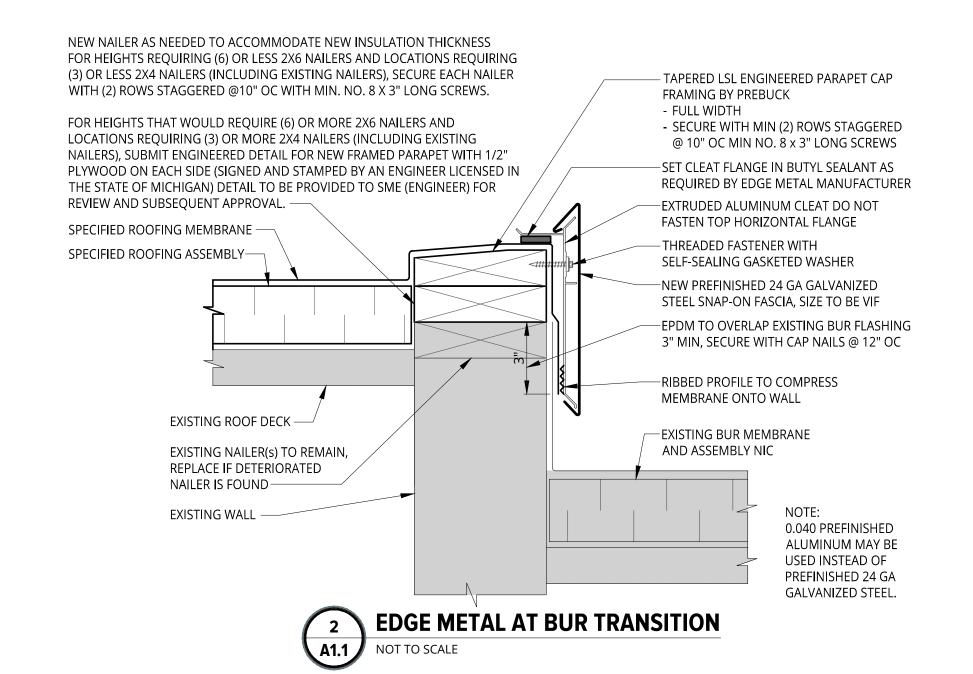


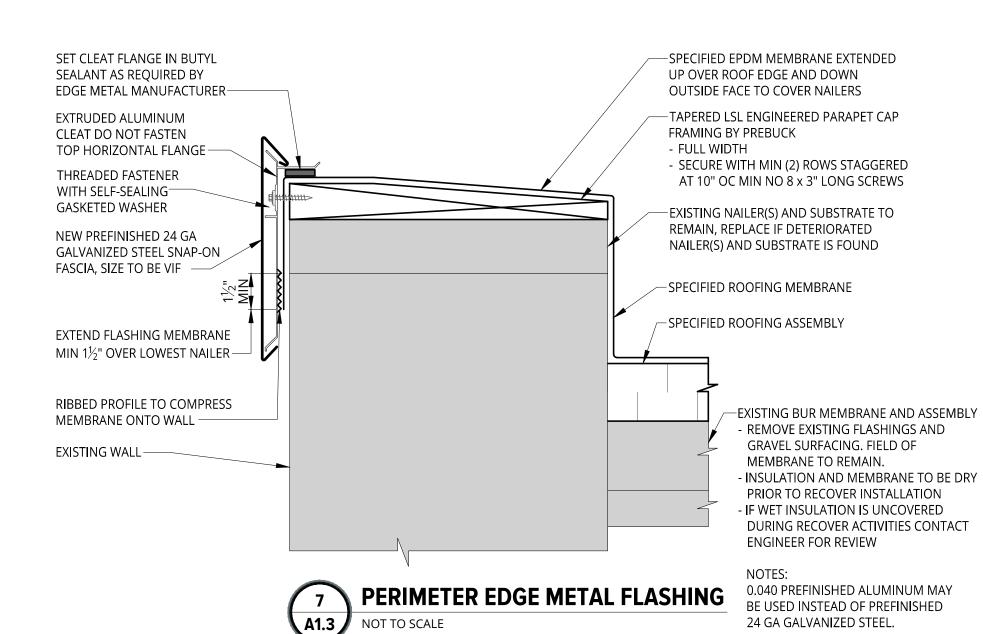


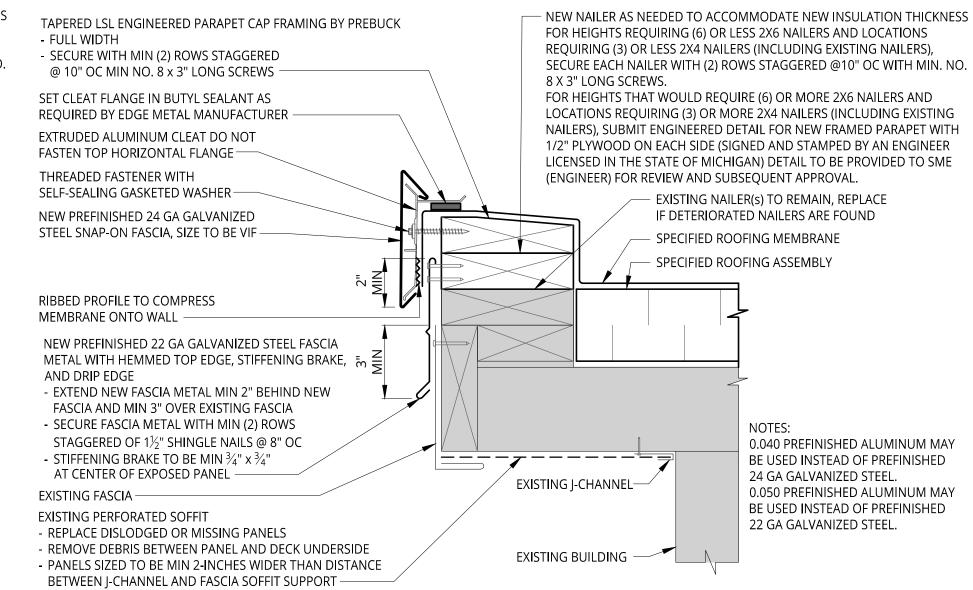




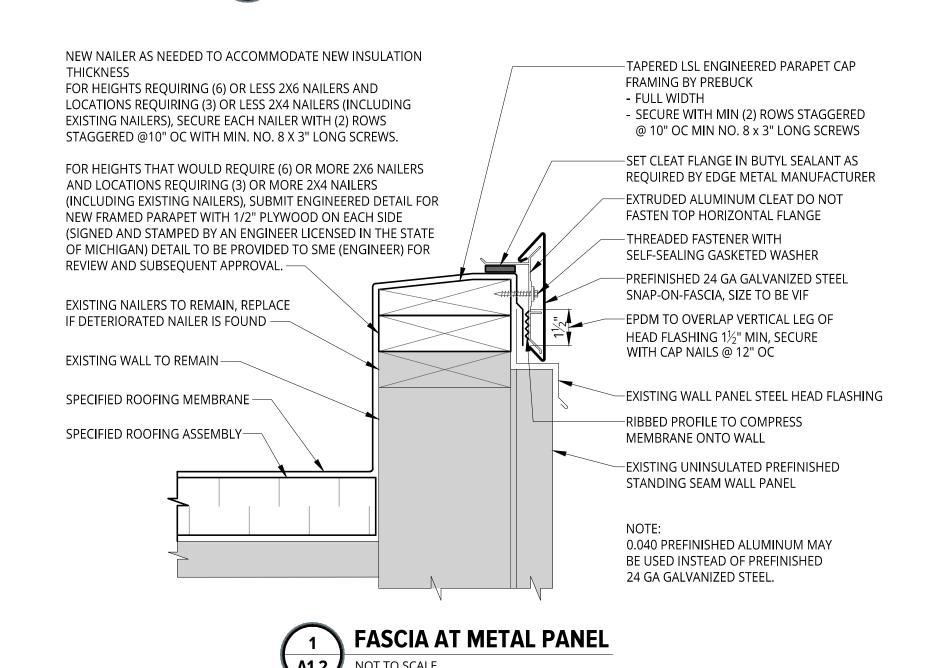
# 5 PERIMETER FASCIA WITH SOFFIT REPLACEMENT NOT TO SCALE







# PERIMETER FASCIA WITH SOFFIT REPAIR NOT TO SCALE



ISSUED FOR BID



Orientation Scale

Project

2023 WATERFORD SCHOOL DISTRICT CRARY CAMPUS ROOFING REPLACEMENT

Project Location

501 N. CASS LAKE RD., WATERFORD TWP., MI 48328

Sheet Name

FLASHING DETAILS

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FOR BIDS		3-9-23	KD
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D FOR BID

DRAWING NOTE: SCALE WILL SCALE INCORR

Reviewed By:

Sheet No.