

LEE'S SUMMIT SCHOOL DISTRICT  
2025-2026 ROOF REPLACEMENT PROJECT  
502 SE TRANSPORT DRIVE  
LEE'S SUMMIT, MO 64063

LEE'S SUMMIT HIGH SCHOOL (BUILDINGS D AND E)  
BUILDING D SECTION A  
BUILDING E SECTION A  
400 SOUTHWEST BLUE PARKWAY  
LEE'S SUMMIT, MO 64063



AERIAL IMAGE  
SCALE: NONE

LEGEND  
PROJECT AREA  
A ROOF SECTION

SHEET INDEX

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R2.01	ATTACHMENT DETAILS
R2.02	SHEET METAL SCHEDULE AND DETAILS
R2.03	DETAILS
R2.04	DETAILS

DRAWING RECORD			
REV. NO.	DESCRIPTION	DATE	BY
NA	REVIEW SET	02/07/25	THJH

DATE	02/07/25
DRAWN BY	T. HARTLAND
CHECKED BY	J. HICKMAN
DESIGNED BY	T. HARTLAND
PROJECT	LEE'S SUMMIT HIGH SCHOOL (BUILDINGS D AND E)
LOCATION	400 SOUTHWEST BLUE PARKWAY
CITY	LEE'S SUMMIT, MO 64063
STATE	MO
COUNTRY	USA
DRAWING NO.	24LSSLESUR013B01.dwg



CLIENT: LEE'S SUMMIT SCHOOL DISTRICT

PROJECT: LEE'S SUMMIT HIGH SCHOOL (BUILDINGS D AND E)  
400 SOUTHWEST BLUE PARKWAY  
LEE'S SUMMIT, MO 64063

DRAWING TITLE: TITLE SHEET

BENCHMARK PROJECT NO.: 24LSSLESUR013B  
SHEET NUMBER:


R0.01

ORIGINAL SHEET SIZE: 36 x 24

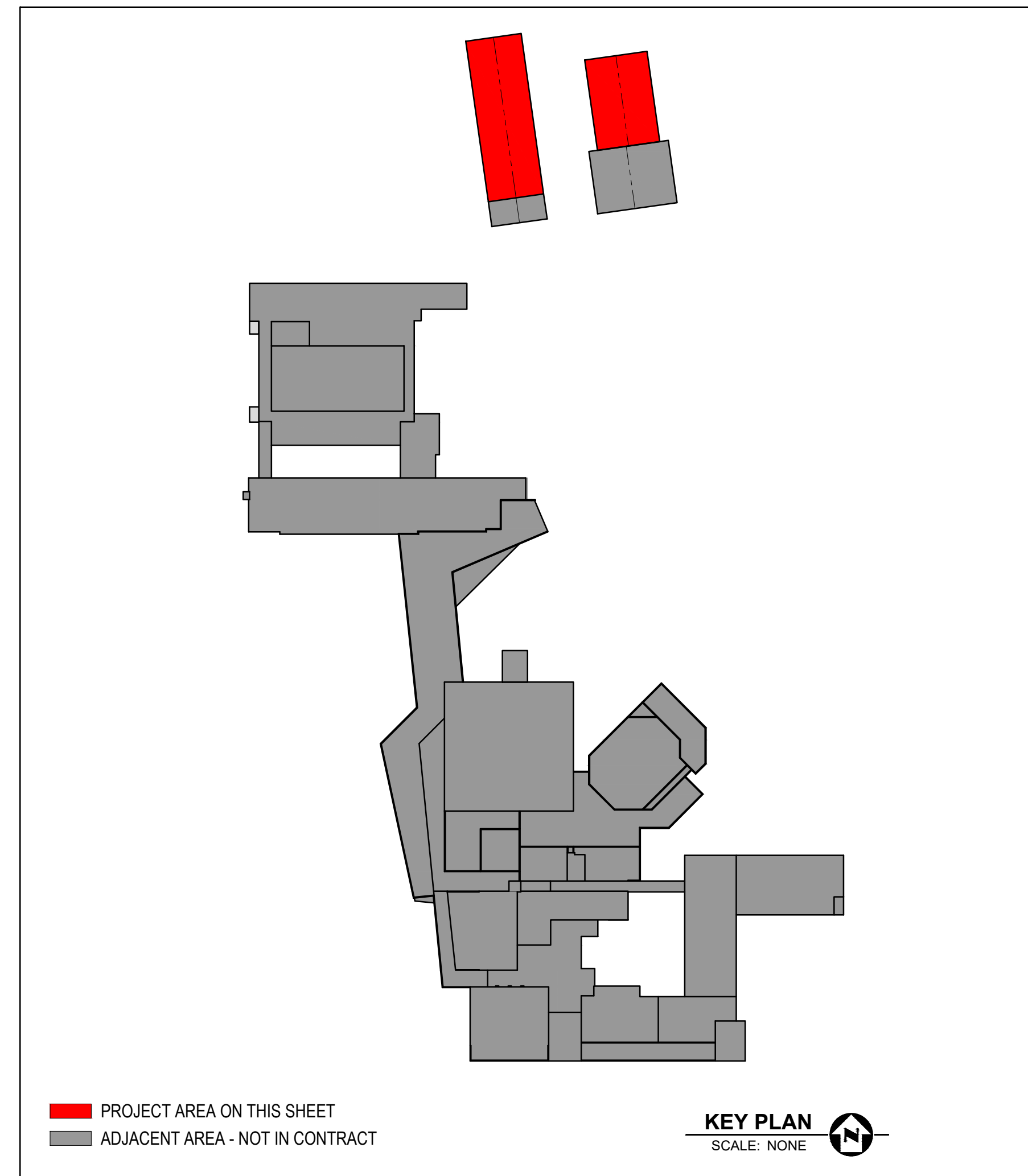


1.01	GENERAL	A.	THIS SUMMARY OF WORK IS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND SHALL NOT BE CONSTRUED AS A COMPLETE ACCOUNTING OF ALL WORK TO BE PERFORMED.		
		B.	THE EXTENT OF THE SCOPE OF WORK IS INDICATED ON THE DRAWINGS AND BY THE REQUIREMENTS OF EACH SECTION OF THE SPECIFICATIONS.		
		C.	THE CONTRACTOR SHALL EXAMINE THE SITE AND SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONSTRUCTION AND CONDITIONS. REFER TO DIVISION 00 REQUIREMENTS.		
1.02	QUALITY ASSURANCE BY ROOF SYSTEM MANUFACTURER	A.	MEMBRANE MANUFACTURER'S TECHNICAL REPRESENTATIVE, WHO SHALL BE A FULL-TIME EMPLOYEE OF THE MEMBRANE MANUFACTURER, SHALL PROVIDE ON-SITE TRAINING AND QUALITY ASSURANCE IN CONJUNCTION WITH THE BEGINNING OF MEMBRANE INSTALLATION. THE MANUFACTURER'S TECHNICAL REPRESENTATIVE SHALL THEN VISIT THE SITE TO PROVIDE QUALITY ASSURANCE AND FOLLOW-UP TRAINING A MINIMUM OF EVERY THREE WEEKS THEREAFTER.		
		B.	THE MANUFACTURER'S TECHNICAL REPRESENTATIVE SHALL COORDINATE ALL SITE VISITS WITH THE CONTRACTOR AND OWNER'S REPRESENTATIVE A MINIMUM OF THREE BUSINESS DAYS IN ADVANCE.		
		C.	DURING EACH VISIT, THE MANUFACTURER'S TECHNICAL REPRESENTATIVE SHALL CHECK ALL WORK INSTALLED SINCE THE LAST VISIT, MARK ALL DEFECTS FOR REPAIR, AND PROVIDE A WRITTEN SITE VISITATION REPORT LISTING ANY DEFICIENT WORK REQUIRING CORRECTION BY THE CONTRACTOR.		
		D.	ALL REPORTS AND OTHER CORRESPONDENCE ASSOCIATED WITH THE SITE VISIT SHALL BE PROVIDED TO THE CONTRACTOR AND THE CONTRACTOR SHALL PROVIDE THESE REPORTS TO THE CONSULTANT WITHIN THREE BUSINESS DAYS OF THE VISIT.		
1.03	LICENSING, PERMITTING AND ASSOCIATED SERVICES	A.	THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL AUTHORITIES HAVING JURISDICTION (AHJ) AND FULFILLING ALL PROJECT-RELATED LICENSING AND PERMITTING REQUIREMENTS DEFINED BY RELATED ORDINANCES. ALL BID PRICING SHALL INCLUDE ALL APPLICABLE SERVICE FEES, PERMITTING FEES AND OTHER COSTS TO PROVIDE TURN-KEY AWARD AND DELIVERY OF THE PROJECT.		
		1.	COMPLY WITH ALL THE LICENSING REGULATIONS APPLICABLE TO THE CONTRACTOR AND ALL SUBCONTRACTORS.		
		2.	PROVIDE ALL ADMINISTRATIVE PROCESSES AND SUPPORT SERVICES NECESSARY TO COMPLY WITH AHJ REQUIREMENTS FOR PERMIT APPLICATION(S), DOCUMENT REVIEW(S), AND ISSUANCE AND CLOSEOUT OF PERMIT(S); INCLUDING BUT NOT LIMITED TO ENGINEERING SERVICES, ENGINEERING STAMPS AND SEALS, REVIEW COMMENT RESOLUTION, AND THIRD-PARTY INSPECTION(S) NOT FURNISHED BY THE OWNER.		
		3.	PROCURE, MANAGE AND EXECUTE ALL PERMITS AS REQUIRED BY THE AHJ, INCLUDING COORDINATION OF ASSOCIATED PROCESSES AND SERVICES WITH THE OWNER, OWNER'S CONSULTANTS AND REPRESENTATIVES OF THE AHJ.		
		B.	THE SCHEDULE-RELATED INFORMATION PROPOSED ON THE BID FORM SHALL BE ACCURATE AND ACHIEVABLE, INCLUDING AMPLE TIME ALLOWANCES FOR PERMIT PROCUREMENT AND REQUIRED ENGINEERING, REVIEWS, REVIEW COMMENT RESOLUTION, FINAL APPROVAL, AND ADMINISTRATIVE. CONTRACTOR IS RESPONSIBLE FOR PERMIT EXPEDITOR SERVICES AT NO ADDITIONAL COST TO THE OWNER, IF NECESSARY TO MAINTAIN THE PROJECT START DATE REFERENCED IN THE CONTRACT AGREEMENT. PERMIT PROCUREMENT DELAYS SHALL NOT BE CONSIDERED EXCUSABLE UNDER THE TERMS OF THE CONTRACT, UNLESS THE DELAYS RESULT FROM UNFORESEEABLE CAUSES.		
		C.	IF THE AHJ REQUIRES LICENSING, PROVIDE SCANNED IMAGES OF ALL APPLICABLE CONTRACTOR AND SUBCONTRACTOR LICENSES WITH THE PRECONSTRUCTION SUBMITTALS. IF THE AHJ DOES NOT REQUIRE LICENSING FOR THE CONTRACTOR AND/OR SPECIFIC EXEMPT TRADES, PROVIDE A LETTER OF EXPLANATION WITH THE PRECONSTRUCTION SUBMITTALS.		
		D.	DURING THE PRECONSTRUCTION SUBMITTAL PROCESS, INCLUDE SCANNED IMAGES FOR ALL PERMITS AND BACKUP DOCUMENTATION. SUBMITTALS TO INCLUDE INSTRUCTIONS, REVIEWS AND APPROVALS BY THE AHJ; ALL CORRESPONDENCE BETWEEN CONTRACTOR AND AHJ INCLUDING DELIVERABLES AND/OR COMMENTS BY CONTRACTOR'S SERVICE PROVIDER(S); AND ANY OTHER DOCUMENTATION SPECIFICALLY REFERENCING THE ROOF DESIGNER AND/OR BENCHMARK, INC.		
		E.	UPON COMPLETION OF WORK, COORDINATE AND COMPLETE ALL INSPECTIONS AND/OR OTHER ADMINISTRATIVE ACTIVITIES REQUIRED BY THE AHJ TO CLOSE-OUT ANY OPEN PERMIT(S). CONTRACTOR'S CLOSEOUT SUBMITTALS SHALL INCLUDE PERMIT CLOSE-OUT DOCUMENTATION FROM THE AHJ.		
1.04	APPLICABILITY OF MANUFACTURER REQUIREMENTS DURING BIDDING AND CONSTRUCTION	A.	THE CONTRACT DOCUMENTS MAY REQUIRE MATERIALS OR INSTALLATION PRACTICES THAT EXCEED THE MANUFACTURER'S MINIMUM REQUIREMENTS FOR THE SPECIFIED WARRANTY. THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SUPERSEDE THE MANUFACTURER'S REQUIREMENTS IN THESE INSTANCES. THESE REQUIREMENTS MAY NOT BE ALTERED DURING BIDDING OR INSTALLATION OF THE WORK, UNLESS FORMAL MODIFICATIONS ARE ISSUED DURING BIDDING OR CONSTRUCTION BY THE OWNER OR OWNER'S REPRESENTATIVE.		
		B.	IF THE MANUFACTURER'S MINIMUM REQUIREMENTS FOR THE SPECIFIED WARRANTY REQUIRE PRACTICES THAT EXCEED THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, OR IF THE CONTRACT DOCUMENTS DO NOT REFERENCE A MANUFACTURER'S REQUIREMENT PERTINENT TO SUCCESSFUL PERFORMANCE OF THE WORK, THE ASSOCIATED MANUFACTURER'S REQUIREMENTS SHALL BE FOLLOWED IN THESE INSTANCES.		
		C.	THE MANUFACTURER'S REQUIREMENTS MAY CONTAIN MORE DETAIL ABOUT WORK EXECUTION-RELATED PROCEDURES THAN THE CONTRACT DOCUMENTS. WHERE THESE ADDITIONAL REQUIREMENTS DO NOT CONFLICT WITH THE CONTRACT DOCUMENTS, THEY SHALL GUIDE THE PERFORMANCE OF RELATED ASPECTS OF THE WORK.		
1.05	INTERIOR PROTECTION AND COORDINATION	A.	COORDINATE ALL ASPECTS OF INTERIOR PROTECTION WITH THE OWNER'S REPRESENTATIVE AND OWNER'S OPERATIONS.		
		B.	PROVIDE PROTECTIVE MEASURES WITHIN THE BUILDING WHEN DECK REPLACEMENT AND OBSOLETE PENETRATIONS ARE REMOVED, PRIOR TO BEGINNING WORK.		
		C.	PROVIDE COMPETENT PERSON WITHIN THE BUILDING FROM THE BEGINNING OF TEAR-OFF, UNTIL SUCH TIME AS ROOFING DEBRIS/CONSTRUCTION MATERIAL MAY NOT ENTER THE BUILDING. CONTRACTOR'S INTERIOR PERSONNEL SHALL MAINTAIN RADIO CONTACT WITH CREW SUPERVISOR ON THE ROOF AT ALL TIMES. REFER TO SPECIFIED REQUIREMENTS.		
		D.	PRIOR TO DEMOLITION WORK, VERIFY THAT ALL SOIL PIPES, FLUES, STEEL MEMBERS, AND OTHER SIMILAR PENETRATIONS ARE SECURED TO THE BUILDING STRUCTURE. COORDINATE REMOVAL OR SECUREMENT OF ALL UNSECURED PENETRATIONS PRIOR TO THE START OF DEMOLITION WORK.		
1.06	EXISTING ROOF SYSTEM INFORMATION	A.	REFER TO INFORMATION BELOW FOR A DESCRIPTION OF THE EXISTING ROOF ASSEMBLY COMPONENTS AS THEY ARE BELIEVED TO EXIST, LISTED TOP TO BOTTOM:		
		1.	ROOF SECTION A, BUILDING D <table border="1"> <tr> <td>ROOF COVERING</td> <td>METAL ROOF PANEL</td> </tr> <tr> <td>ROOF DECK</td> <td>NONE</td> </tr> </table>	ROOF COVERING	METAL ROOF PANEL
ROOF COVERING	METAL ROOF PANEL				
ROOF DECK	NONE				
2.	ROOF SECTION A, BUILDING E <table border="1"> <tr> <td>ROOF COVERING</td> <td>METAL ROOF PANEL</td> </tr> <tr> <td>ROOF DECK</td> <td>NONE</td> </tr> </table>	ROOF COVERING	METAL ROOF PANEL	ROOF DECK	NONE
ROOF COVERING	METAL ROOF PANEL				
ROOF DECK	NONE				
B.	CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION PRIOR TO BASING BIDS ON THE PROVIDED INFORMATION.				
1.07	DEMOLITION AND ROOF PREPARATION	A.	COORDINATE ALL ASPECTS OF DEMOLITION WORK WITH OWNER'S REPRESENTATIVE AND ALL OTHER TRADES.		
		B.	PROVIDE PROTECTIVE MEASURES AROUND THE ROOF AND BUILDING AS SPECIFIED, PRIOR TO BEGINNING WORK.		
		C.	TEAR OFF ALL BASE FLASHINGS AT PIPE PENETRATIONS. PREPARE ALL SUBSTRATES AS REQUIRED BY THE MANUFACTURER OF THE REPLACEMENT FLASHINGS.		
		D.	REMOVE OBSOLETE ROOF PENETRATIONS IDENTIFIED ON THE DRAWINGS. CONTRACTOR SHALL VERIFY AND COORDINATE PENETRATION REMOVAL WITH THE OWNER. CONTRACTOR SHALL PERFORM ALL NECESSARY SERVICE DISCONNECTS.		
		E.	REMOVE AND DISPOSE OF EXISTING ROOF-RELATED SHEET METAL, UNLESS NOTED OTHERWISE ON THE DRAWINGS.		
		F.	REMOVE THE RIDGE CAP FROM SECTION A, BUILDING E TO CREATE A SMOOTH TRANSITION.		
		G.	REMOVE THE GUTTERS AND DOWNSPOUTS AND TRIM EAVE OVERHANG FROM THE METAL ROOF PANEL.		
		H.	REMOVE EXISTING REGLET COUNTERFLASHINGS WHERE NOTED AND REUSE EXISTING RECEIVER.		
		I.	REMOVE ALL DEBRIS FROM METAL ROOF PANELS. ENTIRE AREA SHALL BE BROOMED CLEAN AT A MINIMUM PRIOR TO BEGINNING ROOF SYSTEM APPLICATION.		
		J.	REMOVE DEBRIS FROM ROOF AREA AND PROPERLY DISPOSE OF ALL MATERIALS OFF SITE.		
1.08	METAL ROOF PANEL REPAIR	A.	INSTALL FLAT STOCK 20-GAUGE GALVANIZED SHEET METAL OVER OBSOLETE PIPE PENETRATION OPENINGS.		
1.09	ROUGH CARPENTRY	A.	INSTALL WOOD NAILERS FOR CURB EXTENSIONS AS REQUIRED FOR MINIMUM CURB HEIGHT OF 8" ABOVE FINISHED ROOF SURFACE ELEVATION.		
1.10	METAL FABRICATIONS	A.	INSTALL METAL GUYWIRE ANCHOR.		
1.11	RIGID INSULATION	A.	INSTALL ROOF INSULATION AND MEANS OF ATTACHMENT PER DRAWINGS AND SPECIFICATIONS.		
		B.	INSTALL COVER BOARD AND MEANS OF ATTACHMENT PER DRAWINGS AND SPECIFICATIONS.		
1.12	LOW SLOPE ROOFING MEMBRANE AND FLASHINGS	A.	INSTALL ADHERED, REINFORCED PVC SINGLE-PLY MEMBRANE SYSTEM.		
		B.	INSTALL PVC		


















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<div> CEDAR RAPIDS, IA • WAUKESHA, WI Phone: 319.393.9100 www.benchmark-inc.com</div>	CLIENT:		LEE'S SUMMIT SCHOOL DISTRICT	
	PROJECT:		LEE'S SUMMIT HIGH SCHOOL (BUILDINGS D AND E) 400 SOUTHWEST BLUE PARKWAY LEE'S SUMMIT, MO 64063	
BENCHMARK PROJECT NO.:		DRAWING TITLE:		
24LSLESUR013B		SUMMARY OF WORK		
SHEET NUMBER:		R0.02		





## SYMBOL LEGEND

	ROOF EDGE
	GUTTER
	PITCH PAN
	PIPE PENETRATION
	FLANGED PENETRATION
	ROOF CURB
	ELEVATED UNIT/EQUIPMENT
	ROOF HATCH
	OBSOLETE PENETRATION
	RIDGE/VALLEY LINE (PITCHED)
	SLOPE DIRECTION
	ROOF SECTION
	DETAIL L.O.C.ATION
	SYSTEM ASSEMBLY DETAIL L.O.C.ATION
	KEYED NOTE L.O.C.ATION
	REVISION NUMBER
	ADJACENT AREA - NOT IN CONTRACT

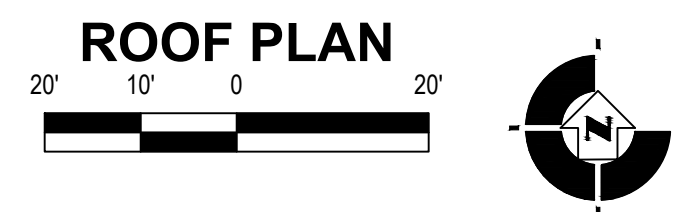
DATE	02/07/25
DRAWN BY	T. HATLAND
PROJECT MANAGER	J. HACKMAN
CHECKED BY	T. BOSTON
CHECKED BY	B. CONLIN
BEACON-HX DRAWING NO.	24LSSESUR013B008.dwg

## GENERAL NOTES

- A. THIS DRAWING IS INTENDED FOR ORIENTATION, APPROXIMATE CONFIGURATION, AND LOCATION OF DETAILS AND NOTES. CONTRACTOR SHALL FIELD VERIFY ALL ITEMS FOR BIDDING AND INSTALLATION PURPOSES.
- B. WHERE DETAIL OR KEYED NOTE CALLOUTS ARE NOTED AS "TYPICAL", THE REFERENCED INFORMATION SHALL APPLY AT ALL SIMILAR LOCATIONS THROUGHOUT THE PROJECT AREA.
- C. WHERE DETAIL CALLOUTS ARE NOTED AS "SIMILAR", THE ROOF DECK, INSULATION, AND/OR SUBSTRATE COMPONENTS MAY DIFFER FROM THOSE SHOWN. HOWEVER, THE CONCEPT IN THE REFERENCED DETAIL SHALL PERTAIN.
- D. IF A GIVEN CONDITION IS NOT REPRESENTED BY A DETAIL DRAWING, AND THE WORK CANNOT BE DEFINED BY REFERRING TO SIMILAR DETAIL, SUBMIT A REQUEST FOR CLARIFICATION TO THE OWNER'S REPRESENTATIVE. PROCEED BASED ON FULLY EXECUTED CHANGE DIRECTIVE OR CHANGE ORDER. REGARDLESS OF SPECIFIED WARRANTY, BID SHALL INCLUDE VALUE OF INSTALLING ALL WORK, COMPLETE, PER ROOFING MANUFACTURER'S REQUIREMENTS FOR A 20-YEAR MINIMUM WARRANTY. UNAUTHORIZED DETAIL CHANGES ARE SUBJECT TO REJECTION BY THE OWNER'S REPRESENTATIVE.
- E. REFER TO SUMMARY OF WORK DRAWING SHEET FOR BASIC SCOPE OF WORK, INCLUDING PRESUMED EXISTING ROOF SYSTEM COMPONENTS, QUANTITY ALLOWANCES FOR UNIT PRICE WORK AND PROPERTY INSURANCE COMPANY REQUIREMENTS WHERE APPLICABLE.
- F. FOR ROOF DESIGN DATA AND ROOF ATTACHMENT REQUIREMENTS, REFER TO THE CORRESPONDING DESIGN DATA AND ATTACHMENT PLAN DRAWING SHEET.
- G. INSTALL TAPERED CRICKET TO DIVERT DRAINAGE AROUND ANY PENETRATION 18" OR WIDER MEASURED PERPENDICULAR TO SLOPE DIRECTION. CRICKET SLOPE SHALL BE DOUBLE THE FIELD SLOPE.
- H. INSTALL SPECIFIED WALKWAY MATERIAL AT ROOF ACCESS POINTS, INCLUDING LADDERS, ROOF HATCHES, DOORS, ACCESS PANELS, AND/OR STAIRS. BID SHALL INCLUDE THESE AREAS, AND ANY OTHER AREAS SHOWN OR SPECIFIED.
- I. TRANSITIONS BETWEEN ADJACENT MEMBRANE FLASHING DETAILS SHALL BE CONTINUOUS AND WATERTIGHT. WATERTIGHT SHEET METAL FLASHING CLOSURES SHALL BE PROVIDED TO FIT SUBSTRATE AND MEMBRANE FLASHING PROFILES. SHEET METAL TYPE, GAUGE, AND COLOR SHALL MATCH ADJACENT COMPONENTS. SHEET METAL SHALL BE SECURED WITH EPDM WASHERED FASTENERS WITH SEALANT APPLIED AS SPECIFIED.
- J. DETAIL EXPOSED EDGES OF BASE FLASHINGS USING VERTICAL SHEET METAL TERMINATION DETAIL. TERMINATION BAR IS NOT AN ACCEPTABLE SUBSTITUTION.

## KEYED NOTES

1. REMOVE OBSOLETE/OF PENETRATION AND REPAIR WITH 22 GAUGE GALVALUME PATCH. PATCH SHALL BE A MINIMUM 6" WIDER THAN OPENING. FASTEN PATCH AT 3" O.C. WITH #12 PAN HEAD SHEET METAL FASTENERS. VERIFY WITH OWNER BEFORE REMOVING MARKED PENETRATION.
2. DISCONNECT, RAISE, AND RECONNECT ROOF CURB AS REQUIRED FOR MINIMUM 8" FLASHING HEIGHT.
3. REMOVE ROOF TOP EQUIPMENT STRAPS AND FASTEN EQUIPMENT TOGETHER TO PREVENT MOVEMENT.
4. REMOVE EXISTING FLANGED PIPE SLEEVE AND REPLACED WITH NEW, TYPICAL AT ALL HOT STACKS.
5. REMOVE GUTTER AND TRIM METAL PANEL OVERHANG. DOWNSPOUTS SHALL BE REMOVED AND REPLACED AT EXISTING LOCATIONS.
6. REMOVE RIDGE VENT CAP FOR SMOOTH ROOF SYSTEM TRANSITION.
7. EXTENDED PIPE PENETRATIONS TO ACHIEVE A MINIMUM FLASHING HEIGHT OF 8".
8. RAISE ELECTRICAL CONDUIT TO ACHIEVE A MINIMUM FLASHING HEIGHT OF 8".
9. REMOVE THE STITCH FASTENED RIDGE CAP CLOSURE METAL. INSTALL A MEMBRANE-CLAD RIDGE CAP CLOSURE METAL TO ALLOW MEMBRANE FLASHING TERMINATION/ATTACHMENT. THIS WILL BE DESIGNED IN THE FIELD WITH THE ASSISTANCE OF THE OWNERS ON-SITE REPRESENTATIVE.



PROJECT: **LEE'S SUMMIT SCHOOL DISTRICT**

LEE'S SUMMIT HIGH SCHOOL (BUILDINGS D AND E)  
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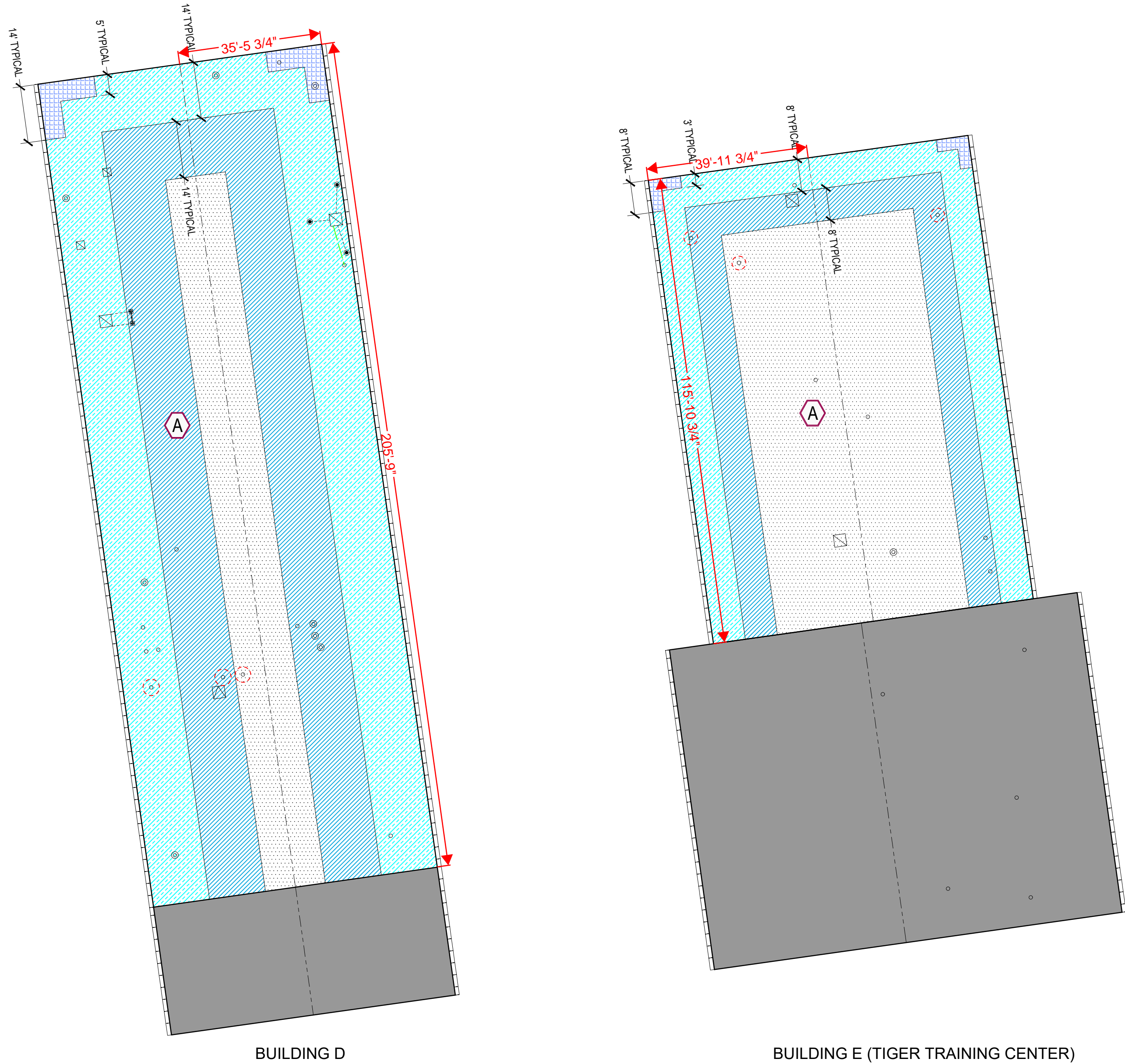
ROOF PLAN

MARK PROJECT NO.:  
LSSLESUR013B

R1.01



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ATTACHMENT ZONES (HEIGHT ≤ 60')					
BUILDING	SECTION	ZONE 1'	ZONE 1	ZONE 2	ZONE 3
D	A	AS SHOWN	AS DIMENSIONED	AS DIMENSIONED	AS DIMENSIONED
E	A	AS SHOWN	AS DIMENSIONED	AS DIMENSIONED	AS DIMENSIONED

## DESIGN DATA

### 1.01 GENERAL NOTES

- THIS SHEET IS INTENDED TO COMMUNICATE BUILDING CODE INFORMATION, DESIGN STANDARDS, DESIGN DATA, AND ROOF SYSTEM ATTACHMENT REQUIREMENTS.
- THE INFORMATION ON THIS SHEET IS INTENDED FOR COMMUNICATION OF ATTACHMENT ZONES ONLY. REFER TO CORRESPONDING ROOF PLAN(S) ON SEPARATE SHEET(S) FOR INFORMATION NOT NOTED.
- REFER TO DETAIL SAD (SCHEDULE OF ATTACHMENT DETAILS) ON SHEET R2.01 – ATTACHMENT DETAILS, WHICH DEFINES THE ATTACHMENT DETAILS THAT ARE REQUIRED FOR EACH ROOF SECTION.
- REFER TO ATTACHMENT ZONE TABLE(S) ON THIS SHEET, WHICH DEFINE THE ZONES AND ZONE HATCHING STYLES APPLICABLE TO EACH ROOF SECTION.

### 1.02 PROJECT REQUIREMENTS

- THE COMPLETED ROOF SYSTEM SHALL MEET THE FOLLOWING REQUIREMENTS AT A MINIMUM:

- ALL ROOF SECTIONS:

BUILDING CODE:	2018 INTERNATIONAL BUILDING CODE
ENERGY CODE:	CODE OF ORDINANCES, CITY OF LEE'S SUMMIT, ARTICLE VIII - ENERGY CONSERVATION CODE, SECTION 7-803
WIND DESIGN STANDARD:	ASCE 7-16

### 1.03 ROOF SECTION SPECIFIC REQUIREMENTS

- THE COMPLETED ROOF SYSTEM SHALL MEET THE FOLLOWING DESIGN WIND LOAD PRESSURES:

- LEE'S SUMMIT HIGH SCHOOL - BUILDING D

ROOF SECTIONS	ZONE 1'	ZONE 1	ZONE 2	ZONE 3
A	-34.35	-59.79	-78.87	-107.49

- LEE'S SUMMIT HIGH SCHOOL - BUILDING E

ROOF SECTIONS	ZONE 1'	ZONE 1	ZONE 2	ZONE 3
A	-31.11	-54.16	-71.44	-97.37

- THE INSTALLED COPINGS AND EDGE METAL SHALL COMPLY WITH ANSI/APRI/FM 4470/ES-1 STANDARDS AND SHALL MEET THE FOLLOWING DESIGN WIND PRESSURES:

- ROOF SECTIONS ALL SECTIONS

ZONE 2 HORIZONTAL	44 PSF
ZONE 3 HORIZONTAL	55 PSF
ZONE 2 VERTICAL	76 PSF
ZONE 3 VERTICAL	115 PSF

- THE ROOF SYSTEM SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ASTM E108 AND SHALL HAVE ACHIEVED THE FOLLOWING EXTERIOR FIRE RATING OR BETTER:

- ROOF SECTIONS ALL ROOF SECTIONS

UL	CLASS A
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### 1.04 PROJECT DESIGN DATA

- WIND DESIGN DATA:

BASIC DESIGN WIND SPEED (V):	115 MPH
ALLOWABLE STRESS DESIGN WIND SPEED (V <sub>all</sub> ):	89 MPH
SAFETY FACTOR:	2.0

- ROOF DRAINAGE:

RAIN INTENSITY (i):	3.52 INCHES/HOUR
MODIFICATIONS TO DRAINAGE:	NO

### 1.05 ROOF SECTION-SPECIFIC WIND / LOAD DESIGN DATA

NOTE: ROOF HEIGHT INFORMATION FURNISHED SHALL NOT BE USED FOR THE PURPOSES OF DETERMINING AND/OR BIDDING CONSTRUCTION LOGISTICS.

- LEE'S SUMMIT HIGH SCHOOL BUILDING D - ROOF SECTION A

RISK CATEGORY:	II
EXPOSURE CATEGORY:	C
INTERNAL PRESSURE COEFFICIENT:	0.18
MEAN ROOF HEIGHT:	24 FEET
ROOF SLOPE:	1/8" IN 12"
APPROXIMATE EXISTING ROOF SYSTEM WEIGHT:	0 PSF
APPROXIMATE NEW ROOF SYSTEM WEIGHT:	3.61 PSF
APPROXIMATE CHANGE IN ROOF SYSTEM WEIGHT:	100 % INCREASE
APPROXIMATE NET CHANGE IN ROOF SYSTEM WEIGHT:	3.61 PSF INCREASE

- LEE'S SUMMIT HIGH SCHOOL BUILDING E - ROOF SECTION A

RISK CATEGORY:	II
EXPOSURE CATEGORY:	C
INTERNAL PRESSURE COEFFICIENT:	0.18
MEAN ROOF HEIGHT:	14 FEET
ROOF SLOPE:	1/8" IN 12"
APPROXIMATE EXISTING ROOF SYSTEM WEIGHT:	0 PSF
APPROXIMATE NEW ROOF SYSTEM WEIGHT:	3.61 PSF
APPROXIMATE CHANGE IN ROOF SYSTEM WEIGHT:	100 % INCREASE
APPROXIMATE NET CHANGE IN ROOF SYSTEM WEIGHT:	3.61 PSF INCREASE


## DRAWING RECORD

REV. NO.	DESCRIPTION	DATE	BY
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## SYMBOL LEGEND

	ROOF EDGE
	GUTTER
	PITCH PAN
	PIPE PENETRATION
	FLANGED PENETRATION
	ROOF CURB
	ELEVATED UNIT/EQUIPMENT
	ROOF HATCH
	OBsolete PENETRATION
	RIDGE/VALLEY LINE (PITCHED)
	ROOF SECTION
	REVISION NUMBER
	ADJACENT AREA - NOT IN CONTRACT

DATE	02/07/25
DRAWN BY	T. HARTLAND
CHECKED BY	J. HICKMAN
APPROVED BY	T. HICKMAN
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**LEE'S SUMMIT, MO 64063**

DRAWING TITLE: **DESIGN DATA AND ATTACHMENT PLAN**

BENCHMARK PROJECT NO.: **24LSLESUR013B**

SHEET NUMBER: **R1.02**



[illegible]

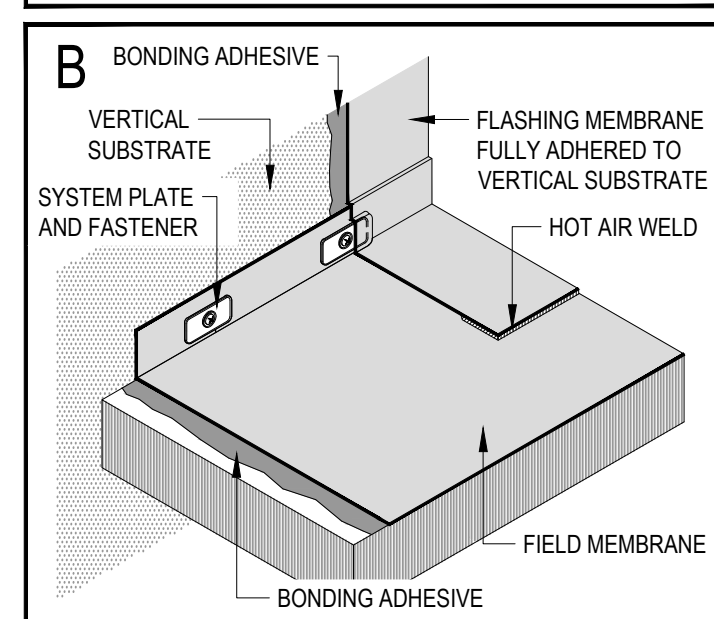
**SAD SCHEDULE OF ATTACHMENT DETAILS**  
NO SCALE 24LSSLESJR0138009







NO SCALE 24LSSUESUR0138009



FAS MEMBRANE PERIMETER SECUREMENT  
NO SCALE 24LSLESUR0138009

5/8" STORMY GYPSUM COVER BOARD (SET IN BEAD-APPLIED POLYURETHANE ADHESIVE)

INSULATION PLATE AND FASTENER

DOWNLOP

SINGLE-PLY MEMBRANE (ADHERED)

HOT AIR WELD

SINGLE-PLY BONDING ADHESIVE

7" POLYISOCYANURATE INSULATION (MECHANICALLY STRESSED)

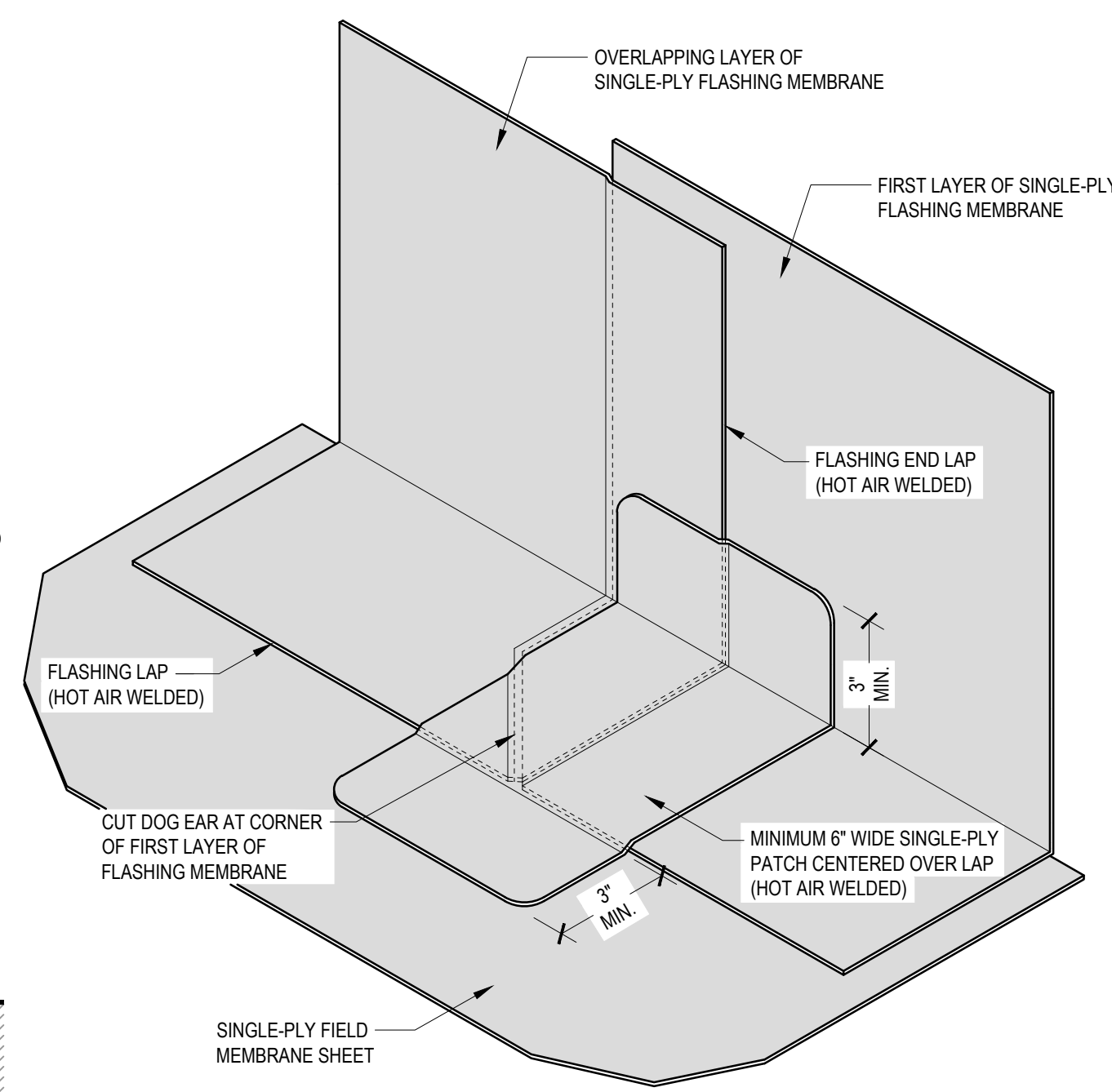
1.5" POLYISOCYANURATE FILL INSULATION STRIPS (BEVEL CUT TO FIT PANEL PROFILE AND LOOSE-LAID BETWEEN PANEL RIBS)

EXISTING THROUGH FASTENED METAL ROOF PANEL

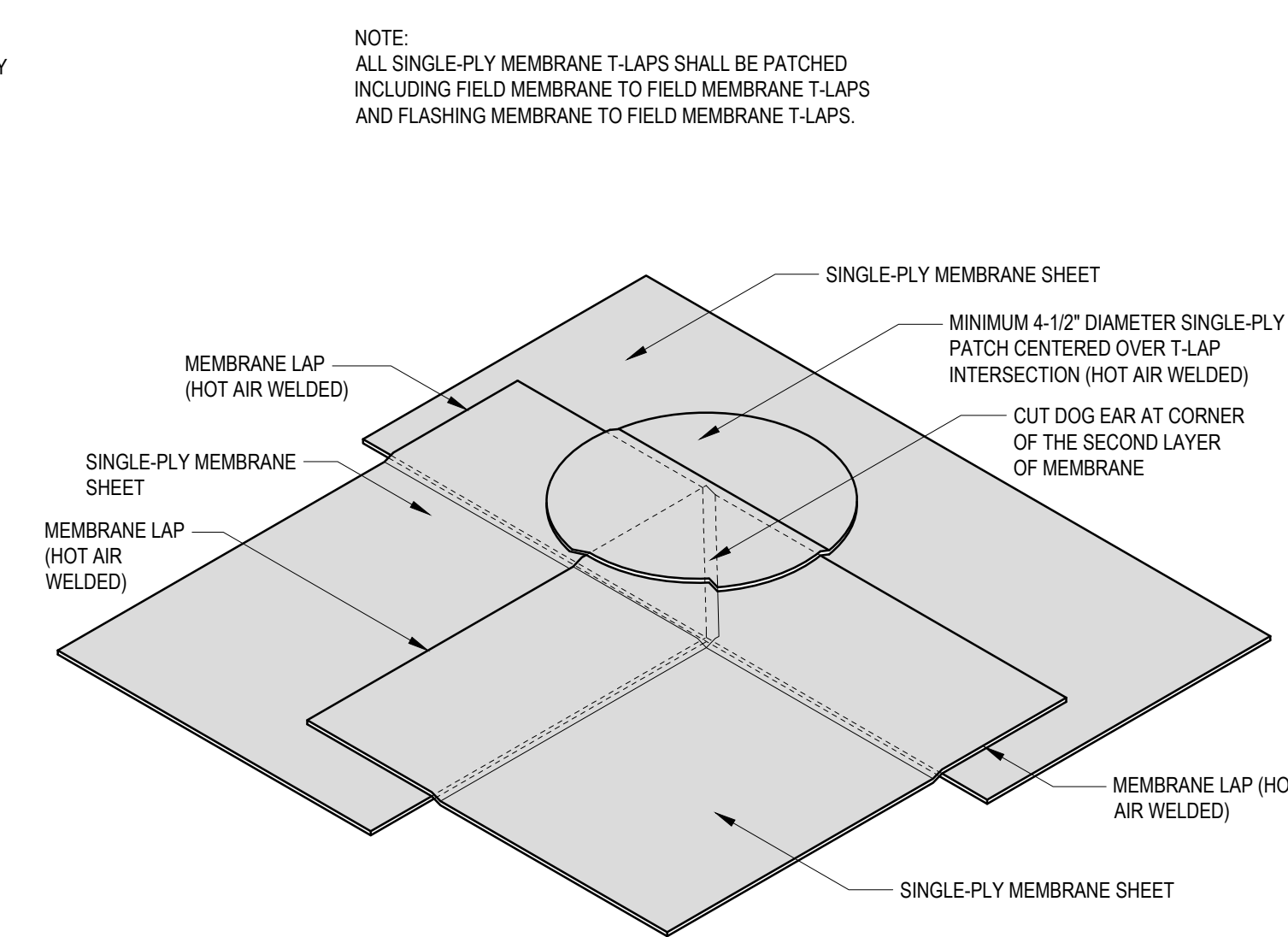
EXISTING FACED FIBERGLASS BLANKET INSULATION

EXISTING ROOF PURLIN


**A** **ROOF SYSTEM CROSS SECTION**  
NO SCALE 24LSLESUR013B009



**D** **TYPICAL PATCH AT FLASHING END LAP**  
NO SCALE 24LSLESUR0138009

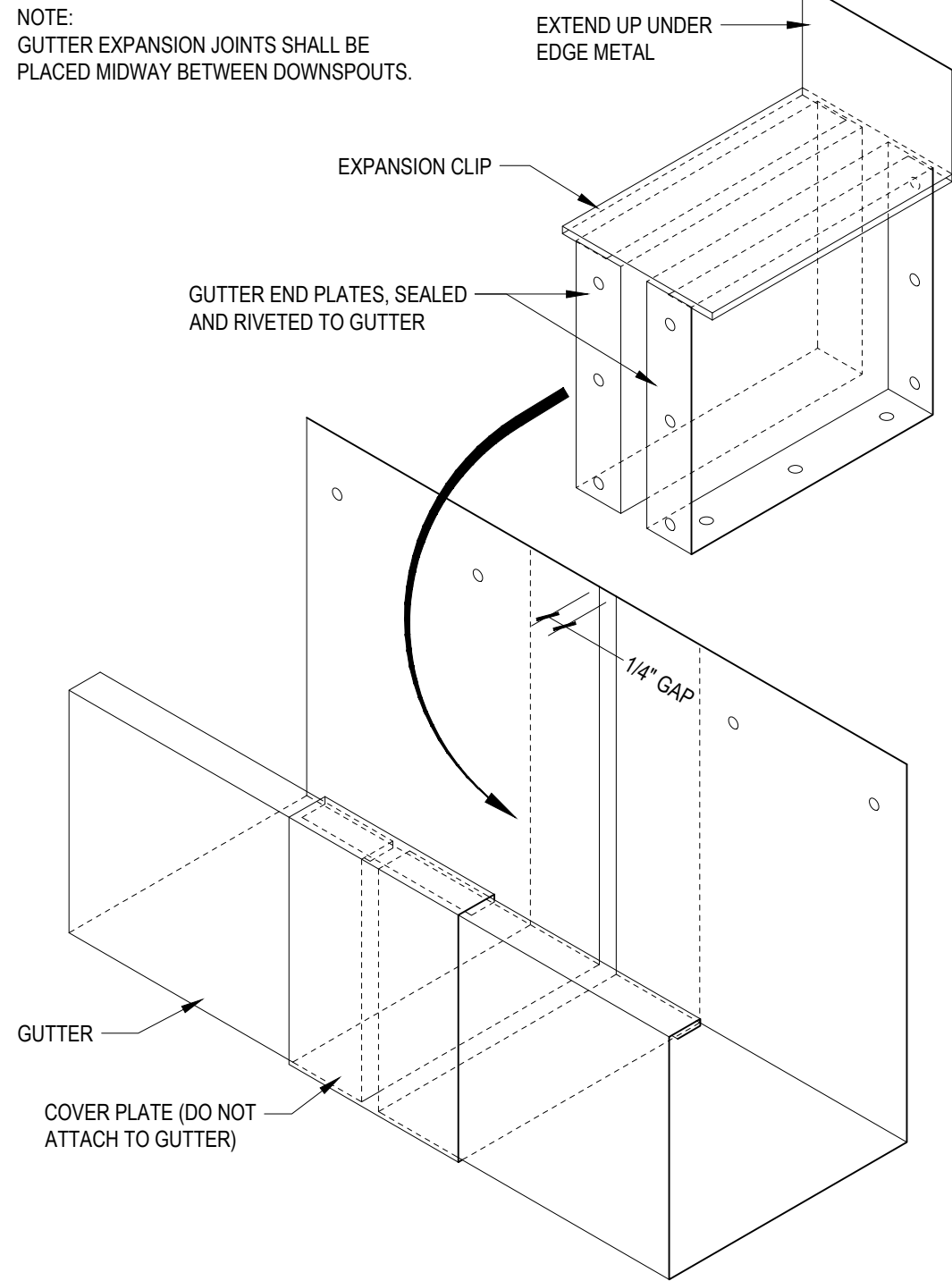


**E** **TYPICAL PATCH AT MEMBRANE T-LAP**  
NO SCALE 24LSLESUR0138009

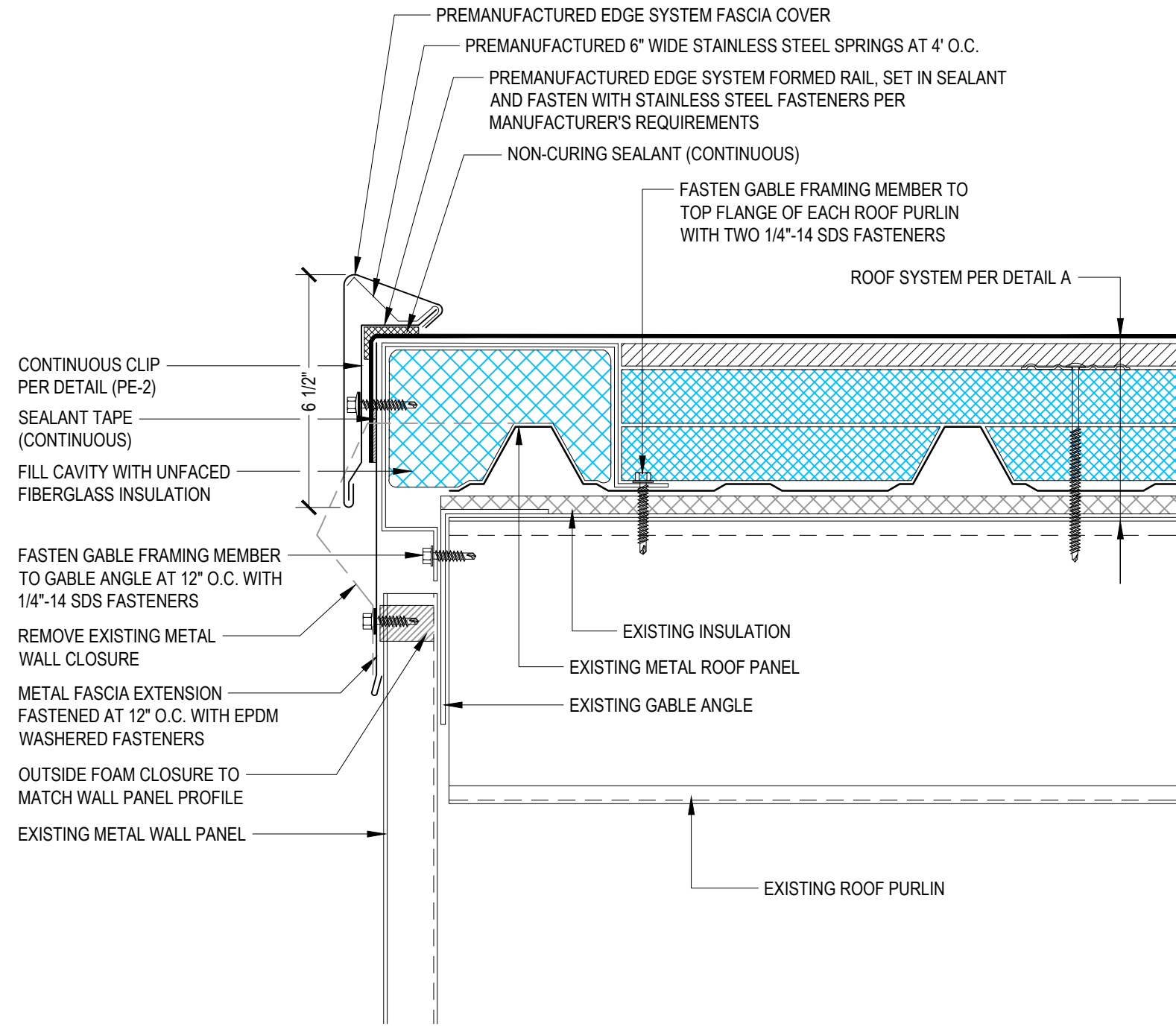
 <p><b>Benchmark</b> INC CEDAR RAPIDS, IA • WALKESHA, WI Phone: 319.393.9100 www.benchmark-inc.com</p>	<p>CLIENT: <b>LEE'S SUMMIT SCHOOL DISTRICT</b></p> <p>PROJECT: <b>LEE'S SUMMIT HIGH SCHOOL (BUILDINGS D AND E) 400 SOUTHWEST BLUE PARKWAY LEE'S SUMMIT, MO 64063</b></p> <p>BENCHMARK PROJECT NO.: <b>24LSSLESUR013B</b></p> <p>SHEET NUMBER: <b>R2.02</b></p>	<p>DRAWING TITLE: <b>SHEET METAL SCHEDULE AND DETAILS</b></p>
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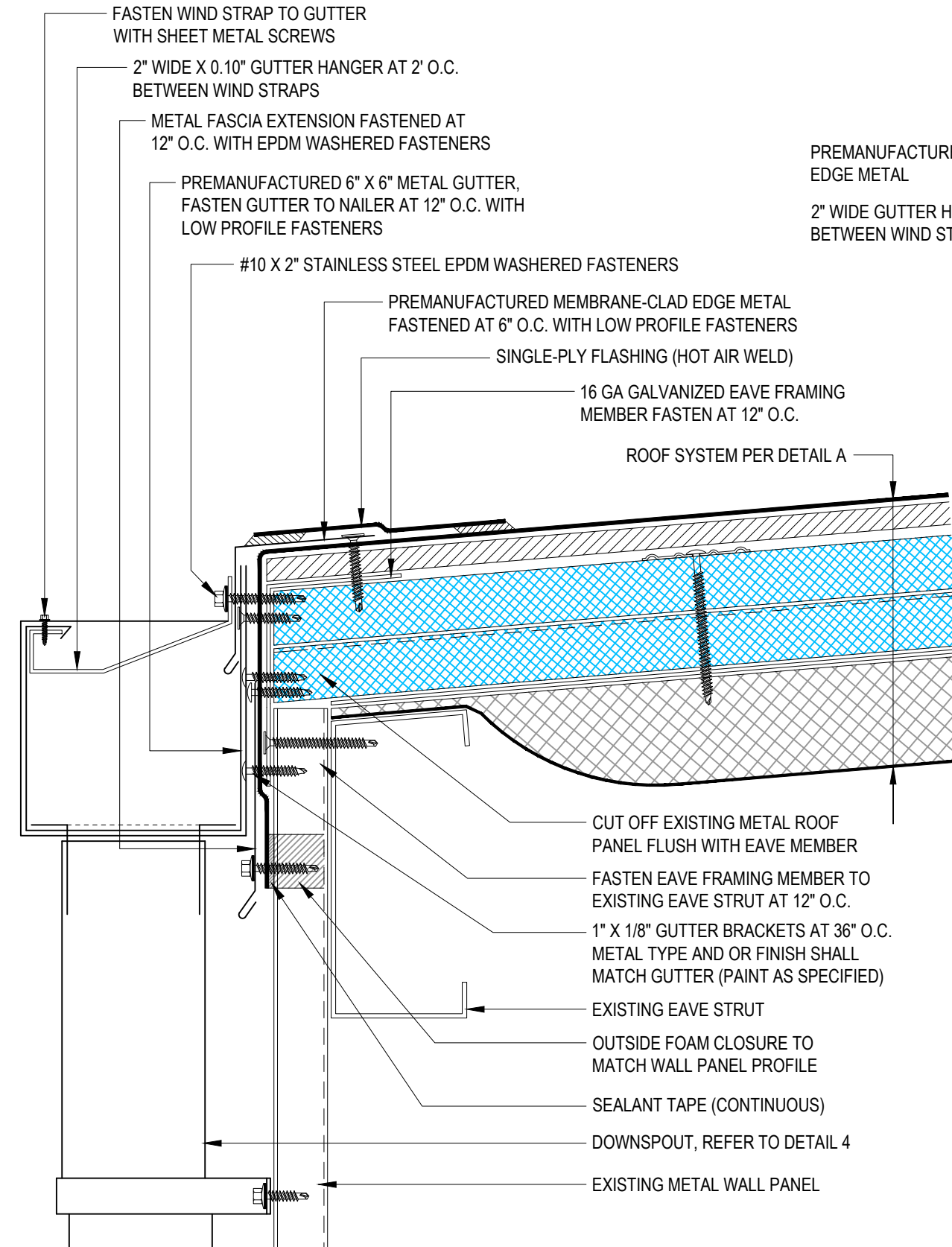
File: \\lee's summit-7 school district\lee's summit-no. 24\sslsur013b\dwg\24\sslsur013b009.dwg Time: Feb 06, 2025 - 1:13:26m



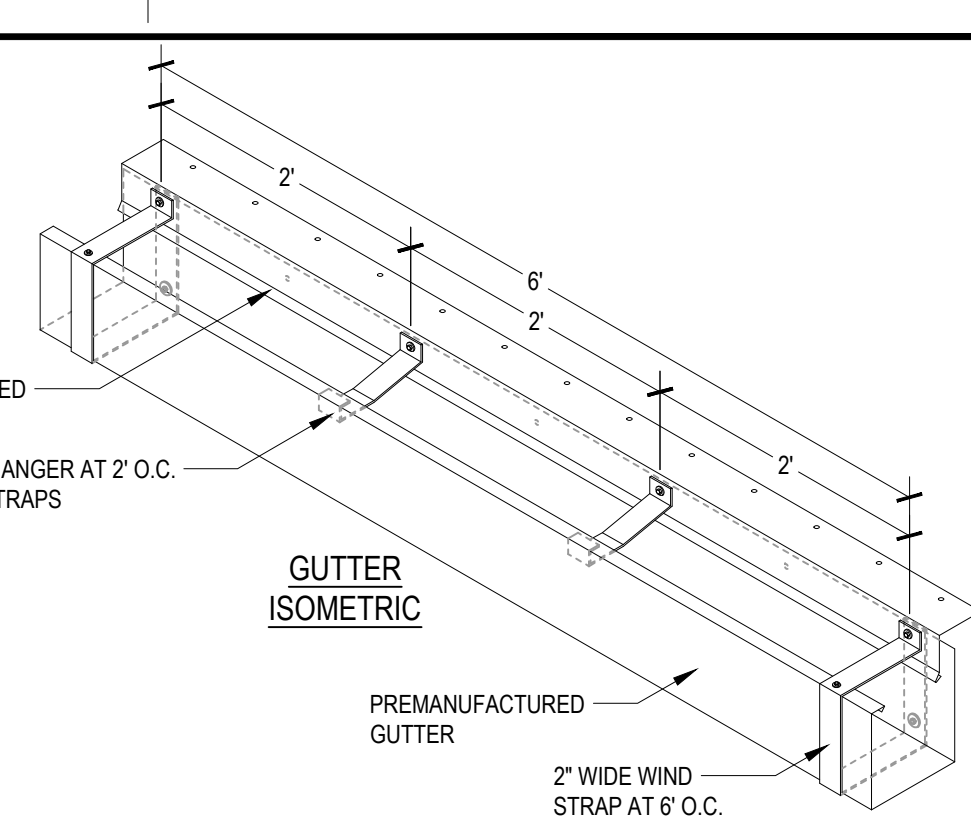
**F GUTTER EXPANSION JOINT**  
NO SCALE 24\SSLESUR013B009



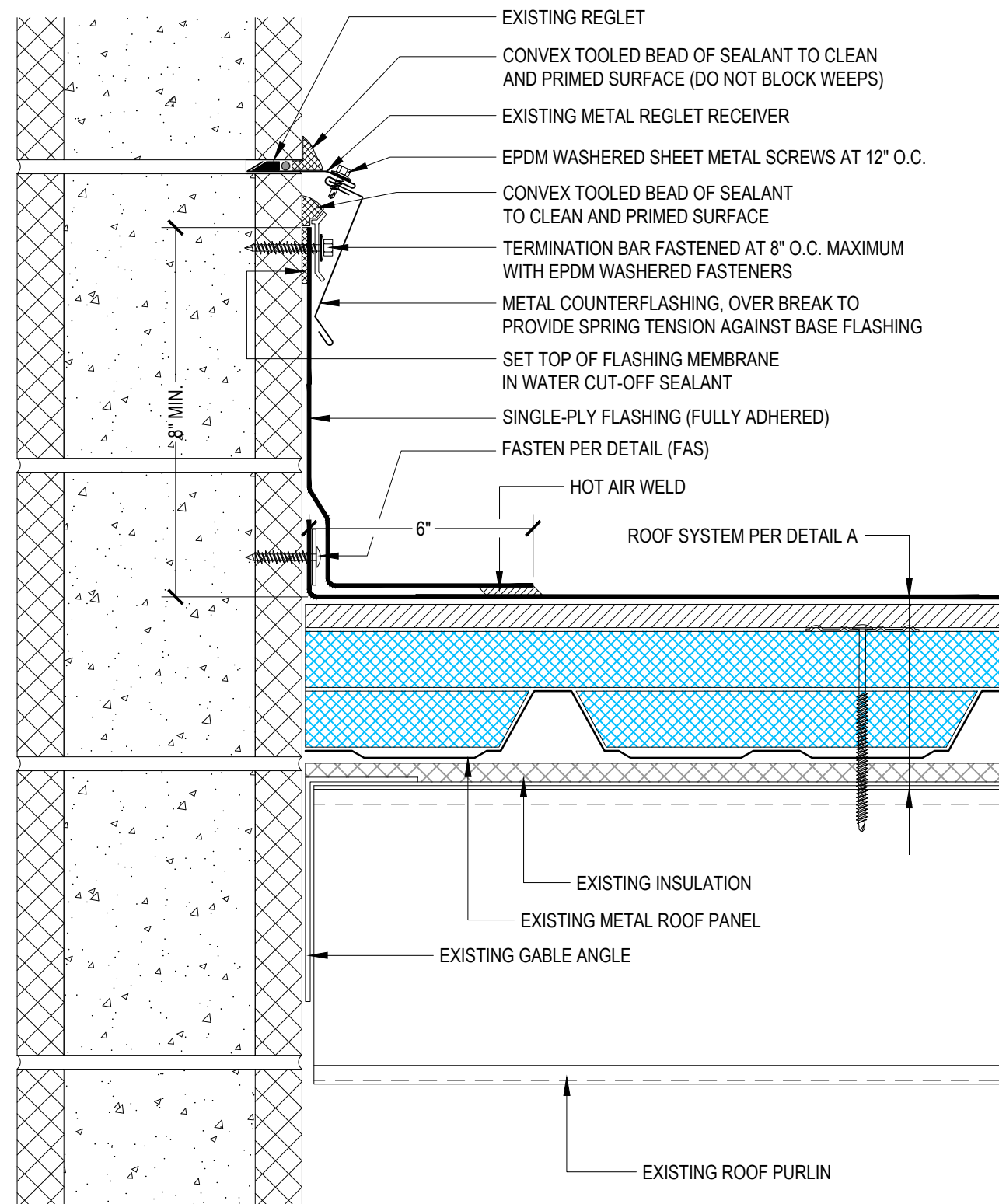
**1 GABLE EDGE DETAIL**  
NO SCALE 24\SSLESUR013B009



**2 GUTTER EDGE DETAIL**  
NO SCALE 24\SSLESUR013B009

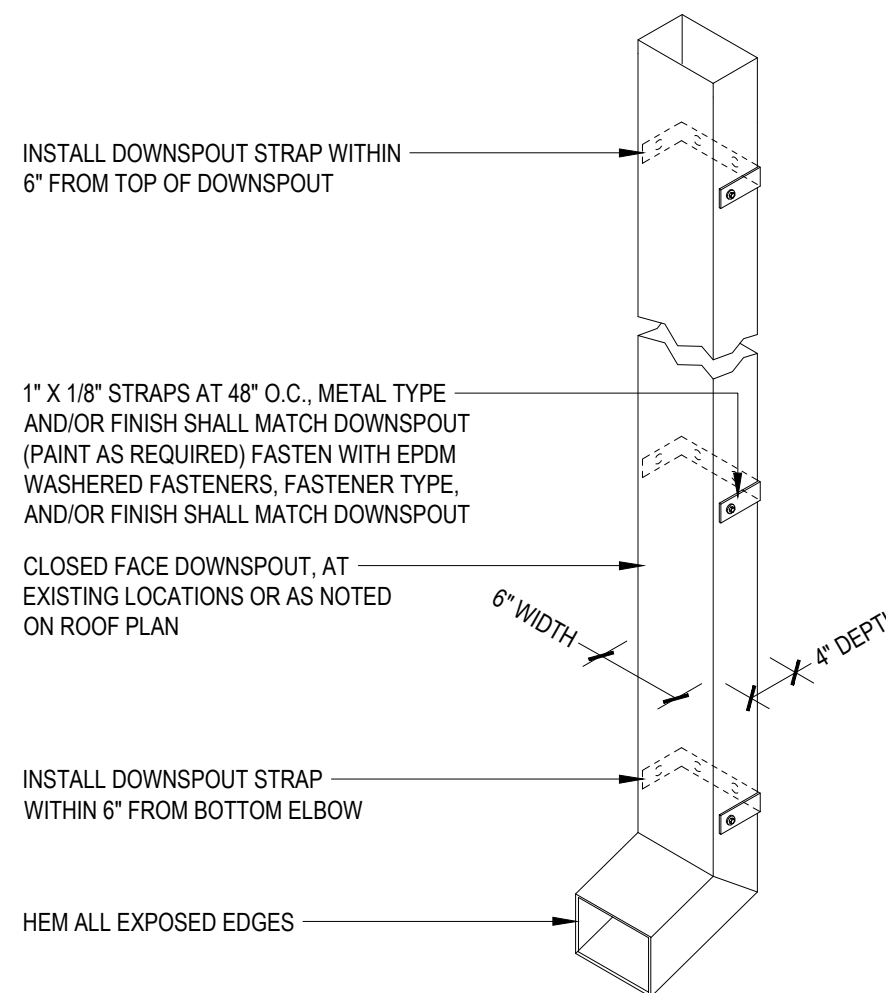


**GUTTER ISOMETRIC**

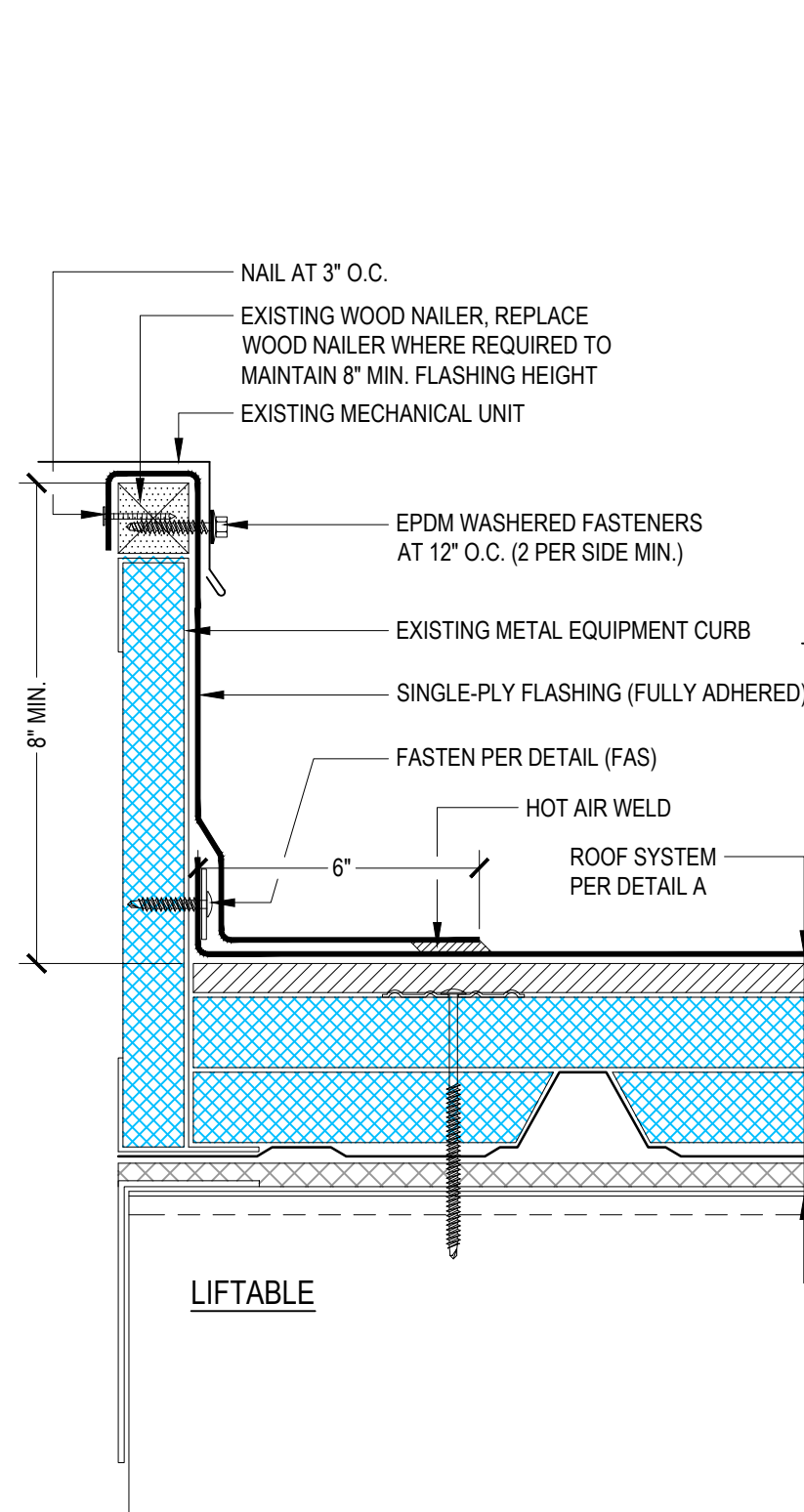


**3 BASE FLASHING DETAIL**  
NO SCALE 24\SSLESUR013B009

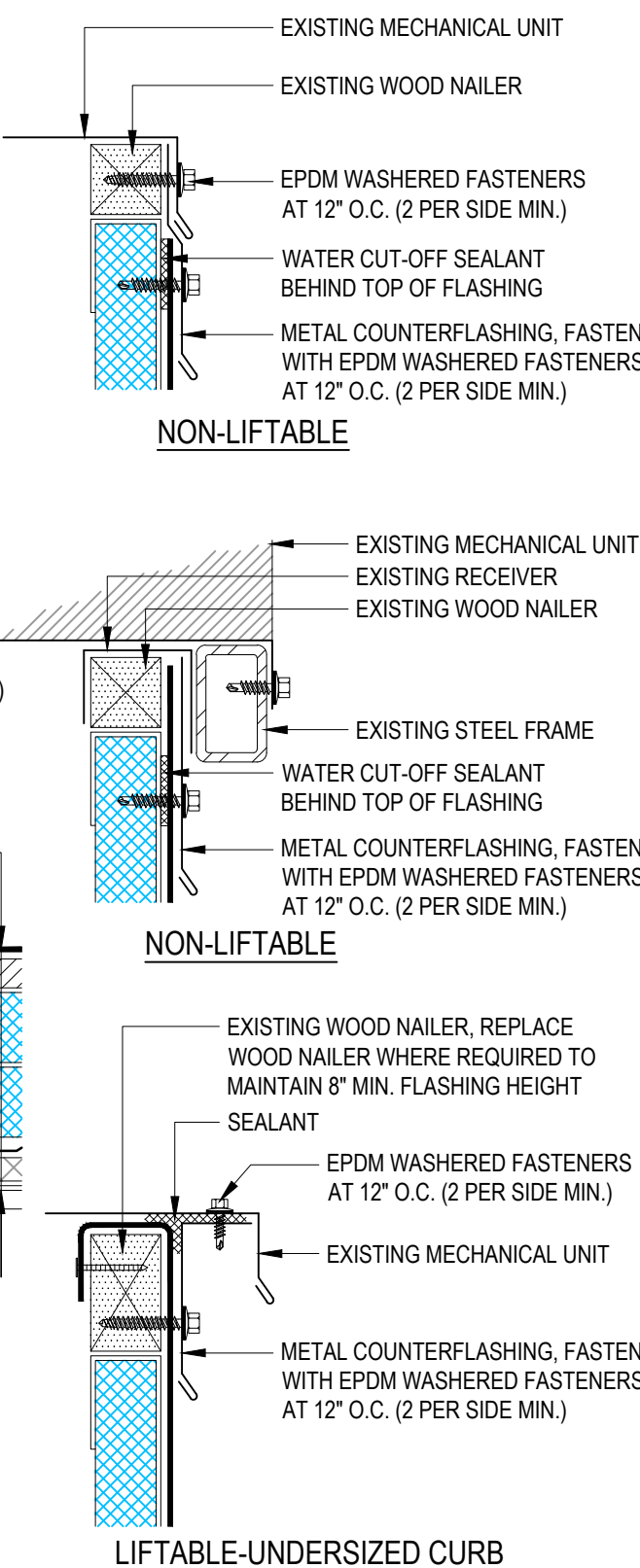
NOTE:  
AT EXISTING DOWNSPOUT LOCATIONS  
MATCH EXISTING LAYOUT PATTERN.



**4 CLOSED FACE DOWNSPOUT DETAIL**  
NO SCALE 24\SSLESUR013B009



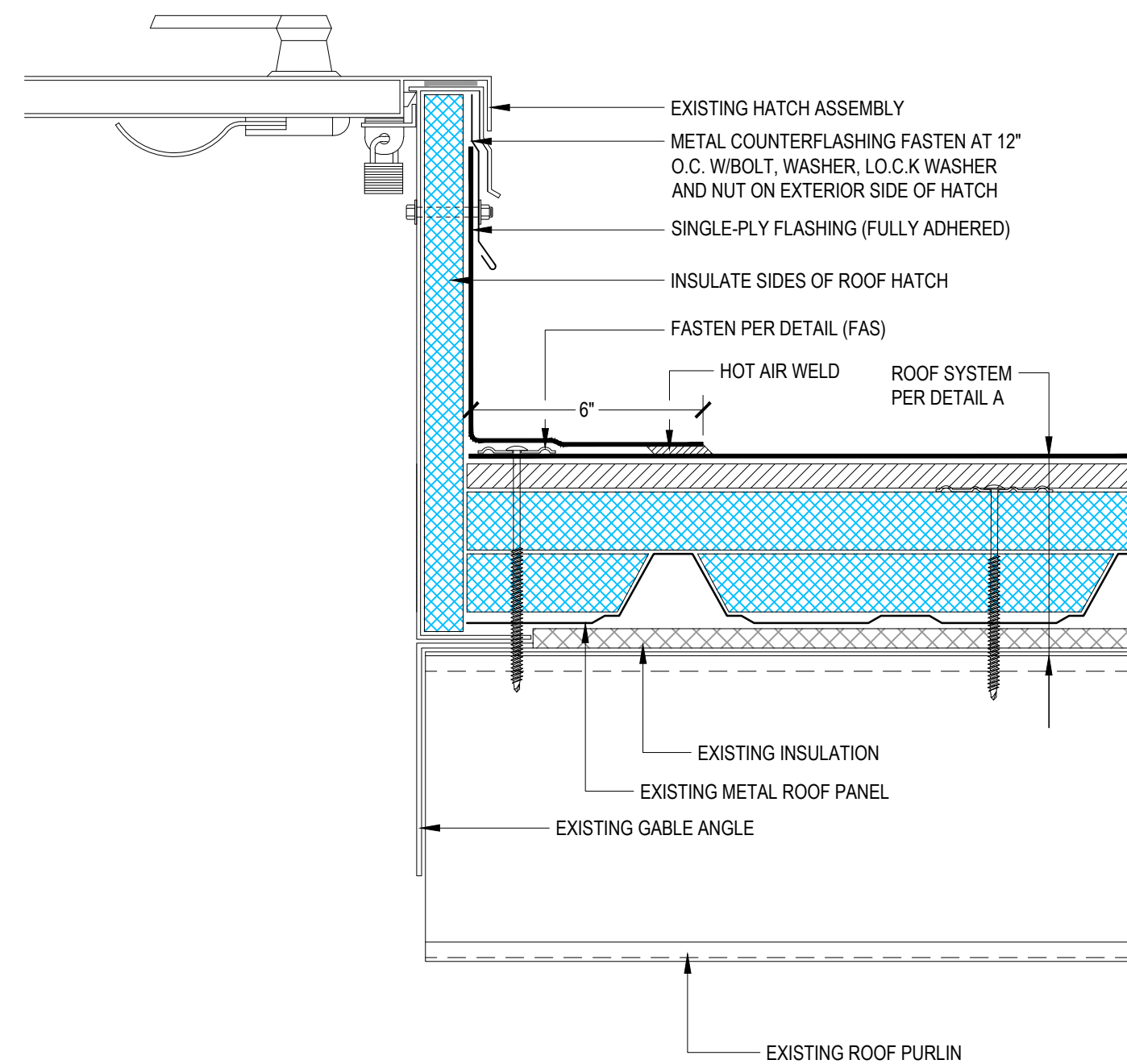
**5 TYPICAL CURB FLASHING DETAIL**  
NO SCALE 24\SSLESUR013B009



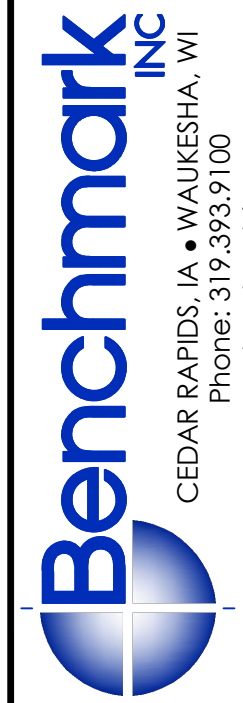
**NON-LIFTABLE**

**NON-LIFTABLE**

**LIFTABLE-UNDERSIZED CURB**



**6 ROOF HATCH DETAIL**  
NO SCALE 24\SSLESUR013B009



CLIENT: **LEE'S SUMMIT SCHOOL DISTRICT**

PROJECT: **LEE'S SUMMIT HIGH SCHOOL (BUILDINGS D AND E)  
400 SOUTHWEST BLUE PARKWAY  
LEE'S SUMMIT, MO 64063**

DRAWING TITLE: **DETAILS**

BENCHMARK PROJECT NO.: **24\SSLESUR013B**  
SHEET NUMBER:

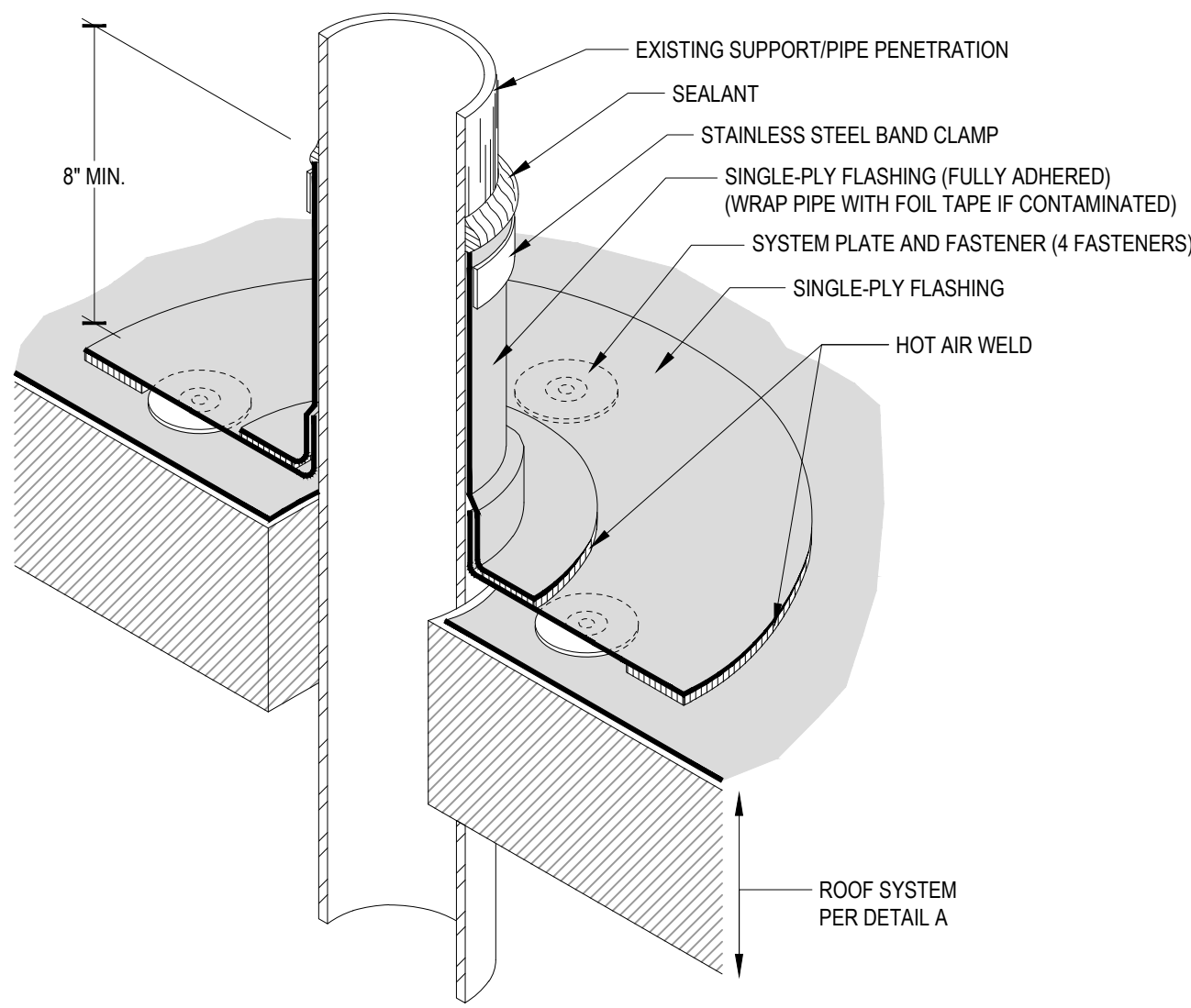
**R2.03**

ORIGINAL SHEET SIZE: 36 x 24

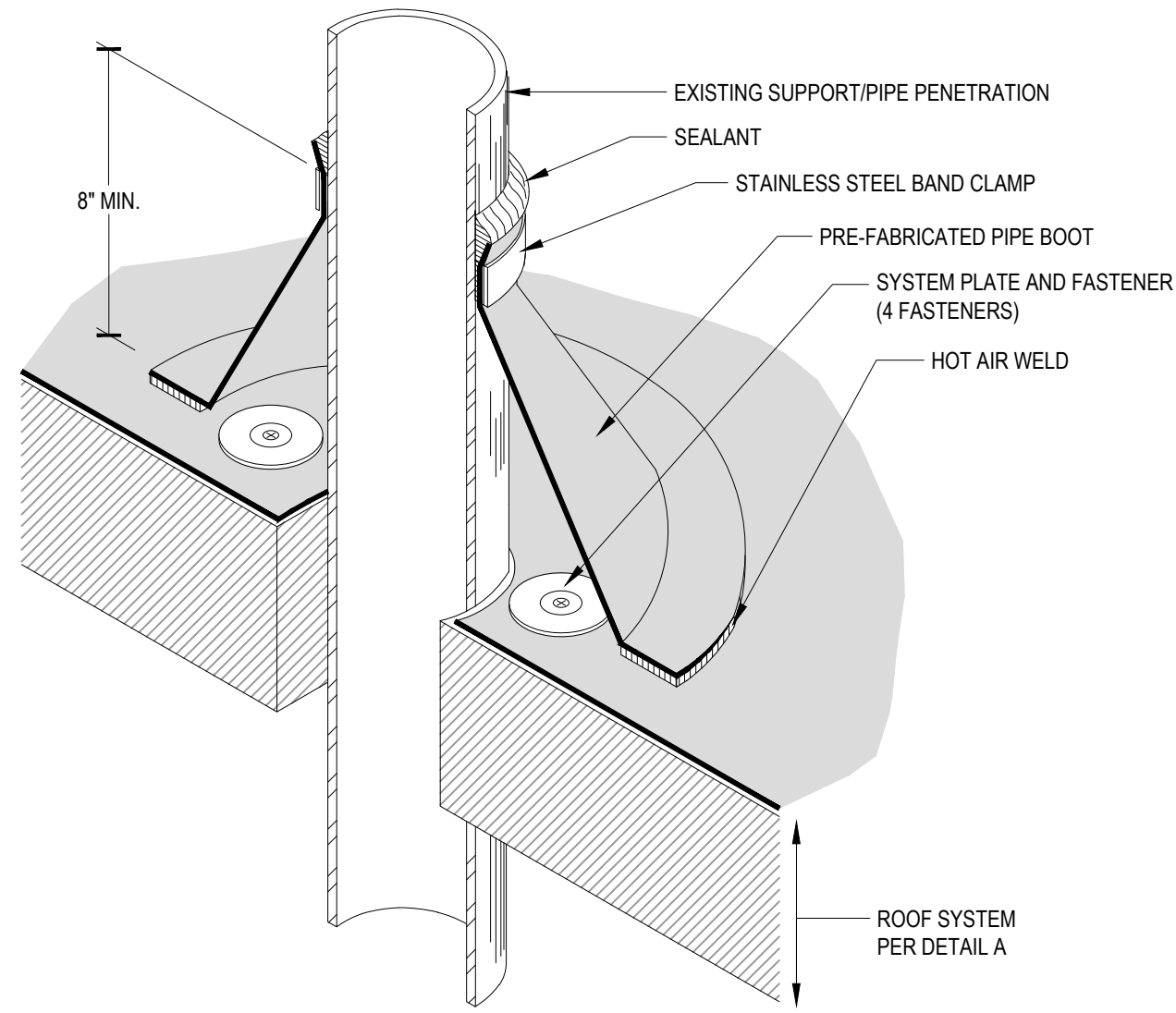
DRAWING RECORD			
REV. NO.	DESCRIPTION	DATE	BY
NA	REVIEW SET	02/07/25	THJH

DATE: 02/07/25	DRAWN BY: T. HAYLAND
PROJECT: J. HICKMAN	REVIEWED: J. HICKMAN
LOCATION: T. HICKMAN	DATE: 02/07/25
SCALE: 1" = 8'-0"	BY: B. CONLIN
FILE: 24\SSLESUR013B009.dwg	

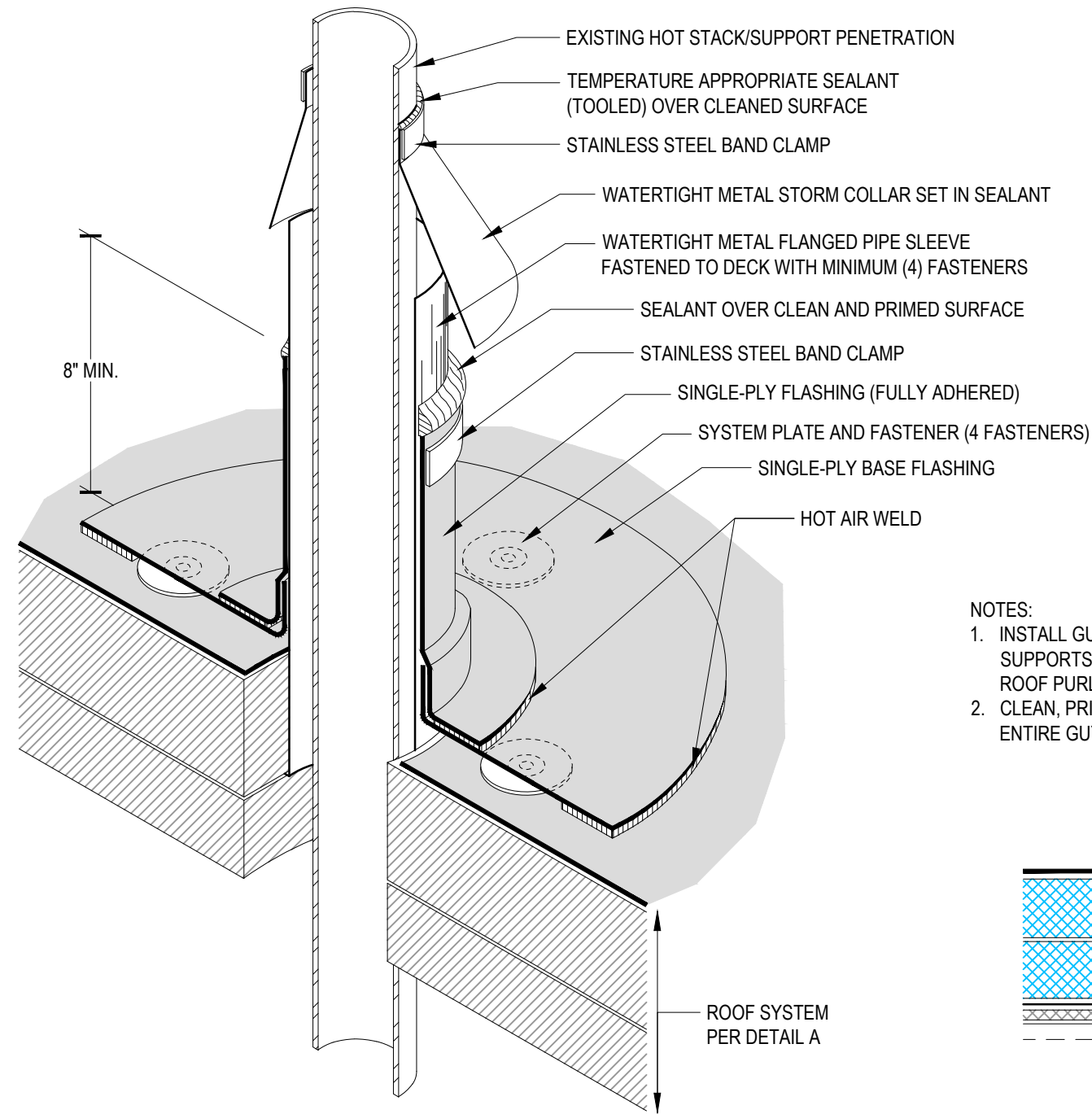




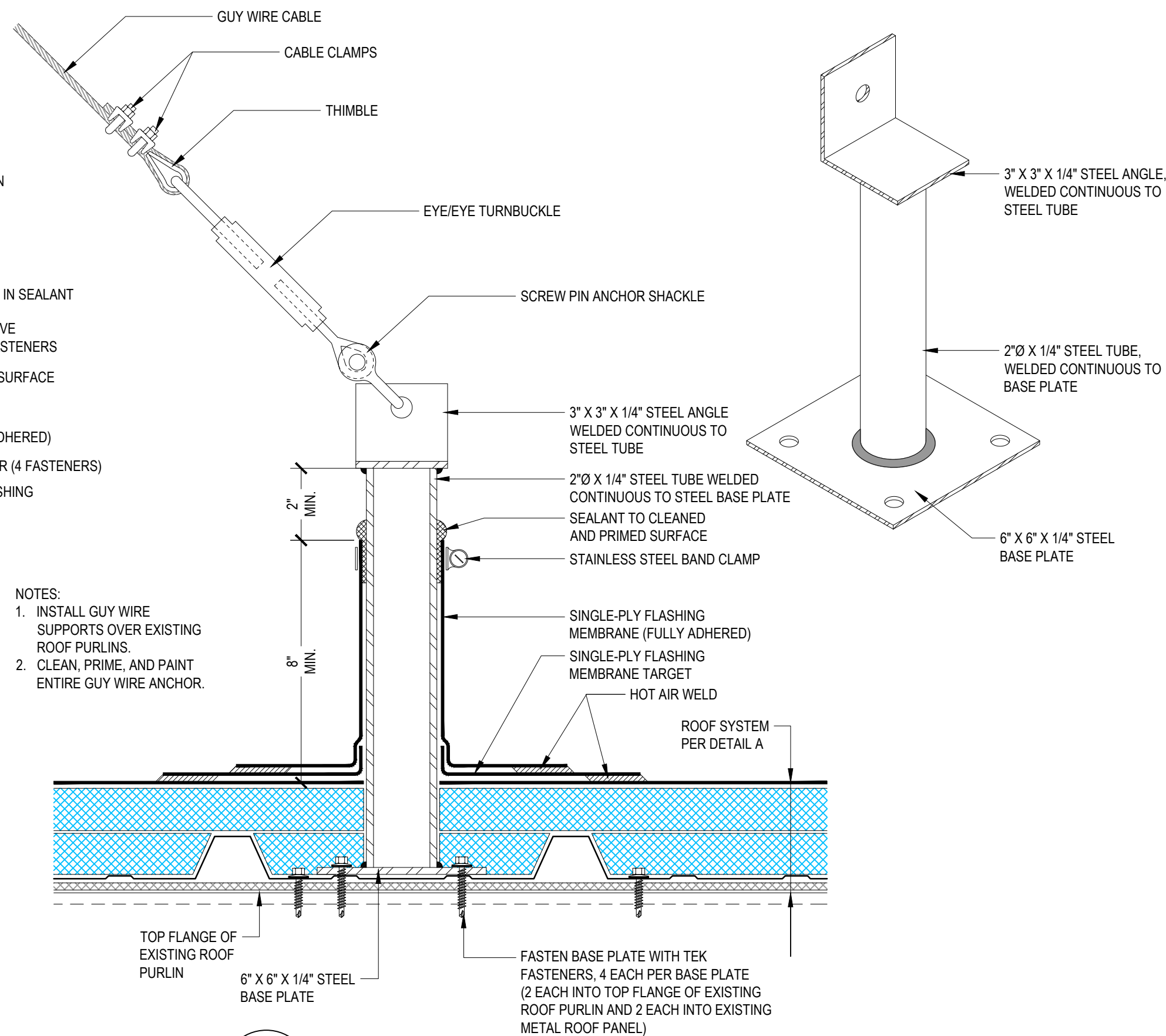
7 FIELD-FABRICATED PIPE FLASHING DETAIL  
NO SCALE 24LSLESUR0138009



8 PRE-FABRICATED PIPE FLASHING DETAIL  
NO SCALE 24LSLESUR0138009



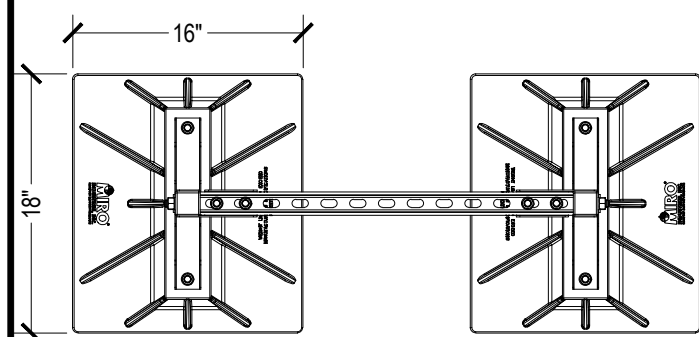
9 FLANGED PENETRATION DETAIL  
NO SCALE 24LSLESUR0138009



10 GUY WIRE ANCHOR DETAIL  
NO SCALE 24LSLESUR0138009

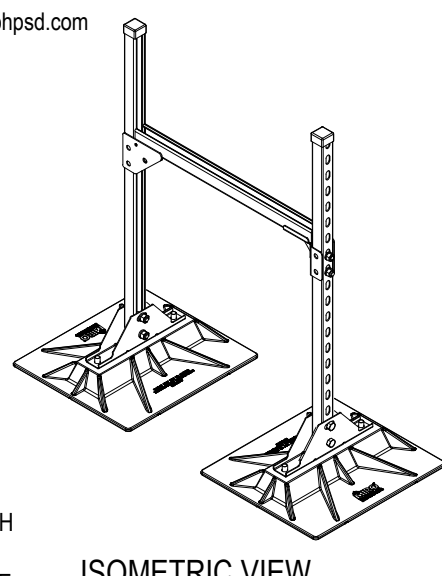
MIRO INDUSTRIES, INC.  
844 South 430 West, Suite 100  
Heber City, UT 84032  
800-768-6978  
www.miroind.com

PHP SYSTEMS AND DESIGN  
5534 Harvey Wilson Dr.  
Houston, TX 77020-8016  
800-797-6585  
www.phpsd.com

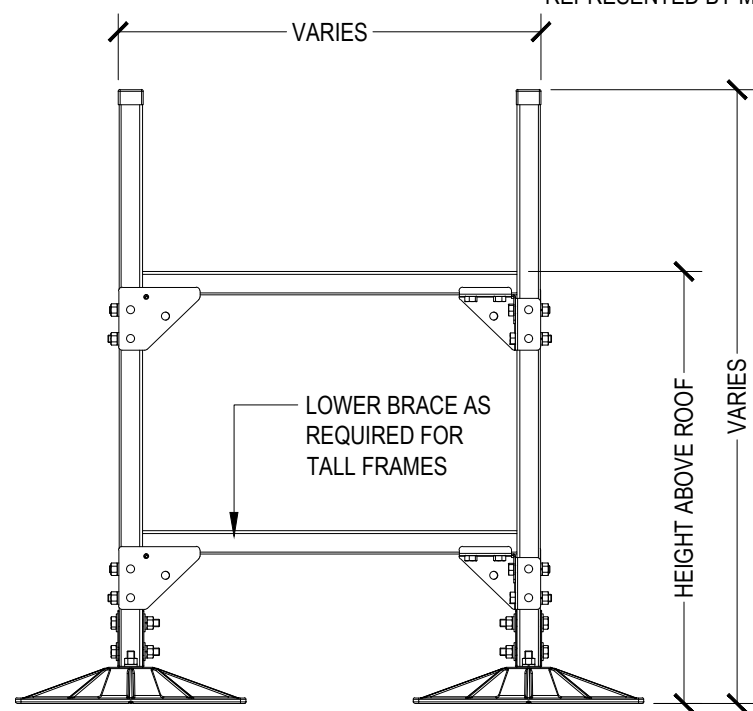


TOP VIEW

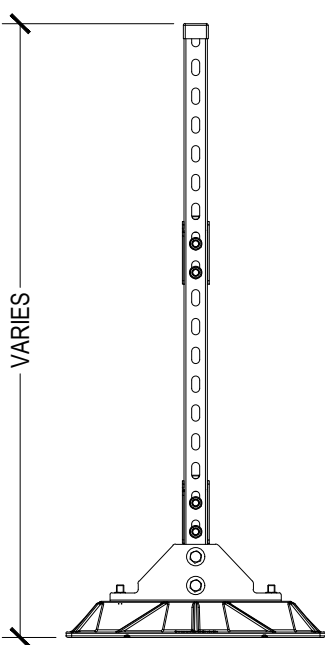
- NOTE:  
1. INSTALL WALKWAY PAD BENEATH EACH SUPPORT BASE. EXTEND 3\"/>



ISOMETRIC VIEW



END VIEW



SIDE VIEW

MIRO MODEL 8-DS-SB

11 DUCT SUPPORT  
NO SCALE 24LSLESUR0138009

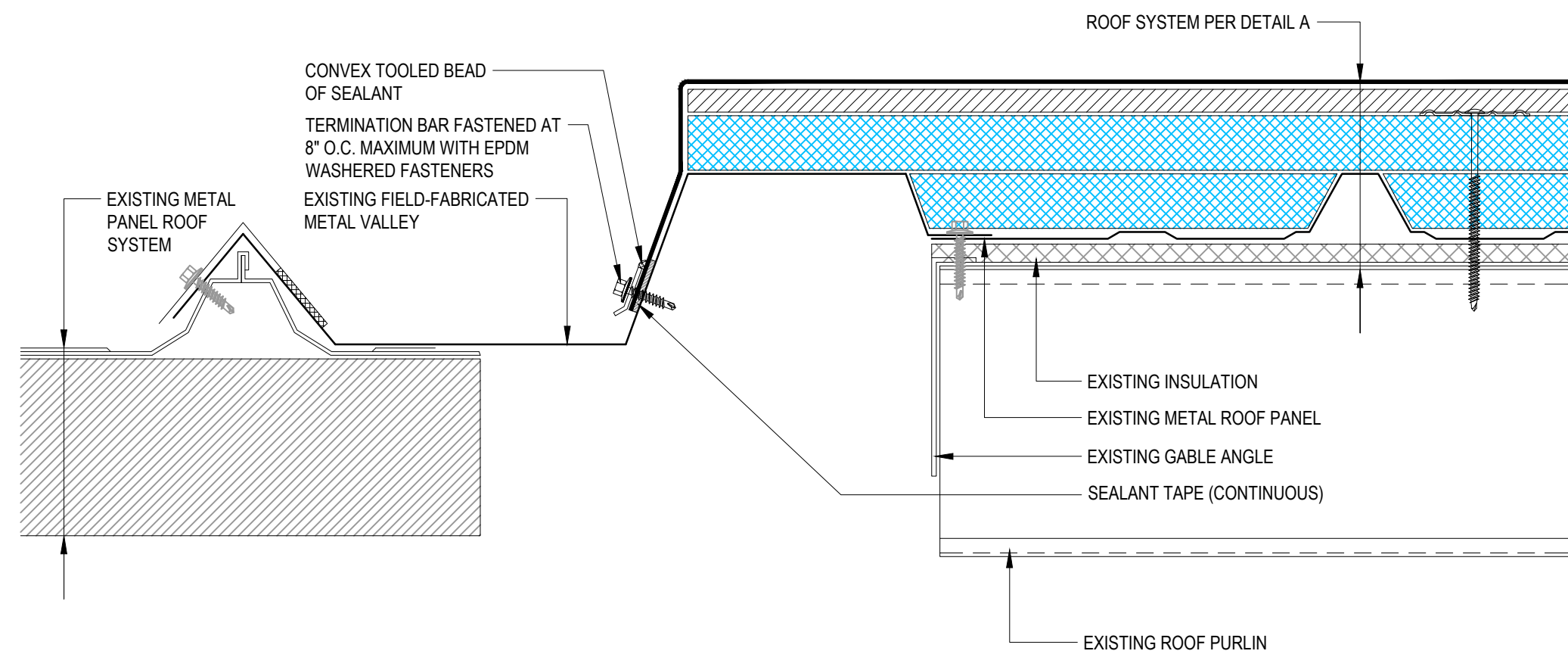
PIPE SUPPORT SCHEDULE									
PHP SYSTEMS AND DESIGN				MIRO INDUSTRIES				NOTES	
PIPE TYPE	PIPE O.D. SIZE	MODEL	MAX. HEIGHT	MODEL	MAX. HEIGHT	SUPPORT SPACING	MAX. BASE LOAD (LBS)	(NOTES 6, 7, & 8 APPLY TO ALL SUPPORTS)	
CONDUIT	<=1"	SS8 WITH CHANNEL	10"	8-BASE STRUT-2	2-1/2"	5' O.C.	172	1,2,4	
CONDUIT	<=1"			8-BASE STRUT-5	5-3/8"	5' O.C.	172	1,2,4	
CONDUIT	<=1"			8-BASE STRUT-8	8-7/8"	5' O.C.	172	1,2,4	
CONDUIT	<=1"			8-BASE STRUT-12	12-7/8"	5' O.C.	172	1,2,4	
CONDUIT	>1"<=2"	SS8 WITH ROLLER	10"	3-RAH-8	8"	8' O.C.	172	1,2	
CONDUIT	>1"<=2"	PP10 WITH ROLLER	16"	3-RAH-12	12"	8' O.C.	172	1,2	
CONDUIT	>2"<=4"	PP10 WITH ROLLER	16"	5-RAH-8	8"	8' O.C.	335	1,2	
CONDUIT	>2"<=4"	PP10 WITH ROLLER	16"	5-RAH-12	12"	8' O.C.	335	1,2	
GAS	<=3"	PP10 WITH ROLLER	16"	3-RAH-8	8"	5' O.C.	172	1,3	
GAS	<=3"			3-RAH-12	12"	5' O.C.	172	1,3	
GAS	>3"<=3-1/2"	PP10 WITH ROLLER	16"	5-RAH-8	8"	8' O.C.	335	1,3	
GAS	>3"<=3-1/2"			5-RAH-12	12"	8' O.C.	335	1,3	
CONDENSATE	<=2-1/2"	SS8 WITH CHANNEL	10"	8-BASE STRUT-2	2-1/2"	5' O.C.	172	1,3,4,5	
CONDENSATE	<=2-1/2"			8-BASE STRUT-5	5-3/8"	5' O.C.	172	1,3,4,5	
CONDENSATE	<=2-1/2"			8-BASE STRUT-8	8-7/8"	5' O.C.	172	1,3,4,5	
CONDENSATE	<=2-1/2"			8-BASE STRUT-12	12-7/8"	5' O.C.	172	1,3,4,5	

- NOTES:  
1. PROVIDED PIPE SUPPORT SPACINGS ARE MAXIMUMS. SPACING SHALL BE ADJUSTED SO THAT THE MAXIMUM BASE LOAD IS NOT EXCEEDED.  
2. SUPPORT SHALL BE LOCATED WITHIN 12" OF EACH CONDUIT JOINT.  
3. SUPPORT SHALL BE LOCATED WITHIN 24" OF ALL PIPING CHANGE IN DIRECTION.  
4. PIPES <1" DIAMETER SHALL BE TIGHTLY CLAMPED TO THE SUPPORT.  
5. PIPES >1" DIAMETER SHALL BE LOOSELY CLAMPED TO THE SUPPORT.  
6. INSTALL WALKWAY PAD BENEATH EACH SUPPORT BASE. EXTEND 3" MINIMUM BEYOND SUPPORT BASE ON EACH SIDE.  
7. PROVIDE AND INSTALL ALL REQUIRED HARDWARE NOT SHOWN FOR SECUREMENT OF EQUIPMENT TO PIPE SUPPORTS.  
8. FIELD CUT AND REMOVE ANY ALL-THREAD ABOVE TOP SECUREMENT NUT ON ALL SUPPORTS.

APPROVED MANUFACTURERS

PHP SYSTEMS AND DESIGN  
HOUSTON, TEXAS  
800-797-6585  
WWW.PHPSD.COM

MIRO INDUSTRIES, INC.  
HEBER CITY, UTAH  
800-768-6978  
WWW.MIROIND.COM



13 TIE-IN DETAIL  
NO SCALE 24LSLESUR0138009



CLIENT: LEE'S SUMMIT SCHOOL DISTRICT  
PROJECT: LEE'S SUMMIT HIGH SCHOOL (BUILDINGS D AND E)  
400 SOUTHWEST BLUE PARKWAY  
LEE'S SUMMIT, MO 64063

BENCHMARK PROJECT NO.: 24LSLESUR013B  
SHEET NUMBER: R2.04

DRAWING TITLE: DETAILS