

PLANS OF PROPOSED IMPROVEMENTS FOR

2023

THE EASTERN IOWA AIRPORT  
TERMINAL BUILDING - HVAC COOLING ROOM

INSTALL ROOF ACCESS HATCH

CEDAR RAPIDS, IOWA

LOCATION MAP

NOT TO SCALE

ISSUED  
FOR BID

UTILITY AND EMERGENCY TELEPHONE NUMBERS

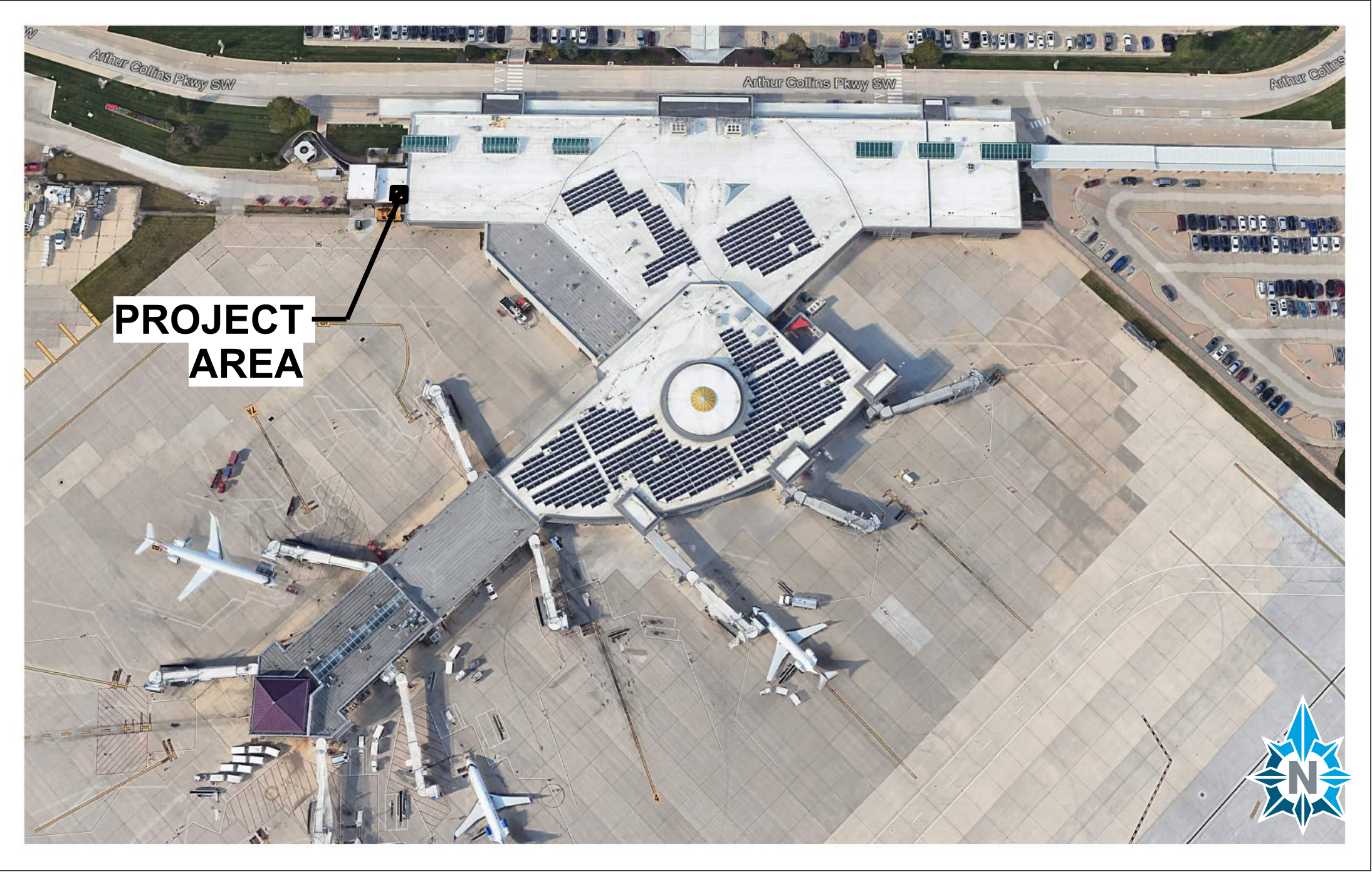
THE EASTERN IOWA AIRPORT - CEDAR RAPIDS, IOWA	
AIRPORT ADMINISTRATION:	(319) 362-3131
AIRPORT PUBLIC SAFETY DEPARTMENT:	(319) 731-5722
EMERGENCY:	911
AIRFIELD MAINTENANCE:	(319) 731-5717
AIR TRAFFIC CONTROL TOWER:	(319) 558-5060
FAA AIRWAYS FACILITIES:	(319) 558-5151
IOWA ONE CALL (UTILITIES):	(800) 292-8989
CID GROUND CONTROL FREQUENCY	121.6 MHz

CEDAR RAPIDS AIRPORT COMMISSION

DUANE SMITH - CHAIR  
DAVID NIEUWSMA - VICE CHAIR  
DR. LORI SUNDBERG - SECRETARY  
BARRY BOYER - ACTING SECRETARY  
STEVE WEST - CHAIRMAN

AIRPORT STAFF

MARTY LENSSE - AIRPORT DIRECTOR  
DONALD SWANSON - DIRECTOR OF FINANCE & ADMINISTRATION  
TODD GIBBS - DIRECTOR OF OPERATIONS  
KATHY BELL - DEPUTY DIRECTOR OF FINANCE & ADMINISTRATION  
PAM HINMAN - DIRECTOR OF MARKETING & COMMUNICATIONS



INDEX OF SHEETS	
NUMBER	DESCRIPTION
A.00	TITLE SHEET - PROJECT DESCRIPTION
A.01-A.03	HATCH AND FRAME GEOMETRY
A.04	HATCH DETAILS
S.001	STRUCTURAL GENERAL NOTES AND DETAILS
SD-101	STRUCTURAL DEMO PLAN
S-101-S-102	STRUCTURAL ROOF PLANS

PROJECT DESCRIPTION

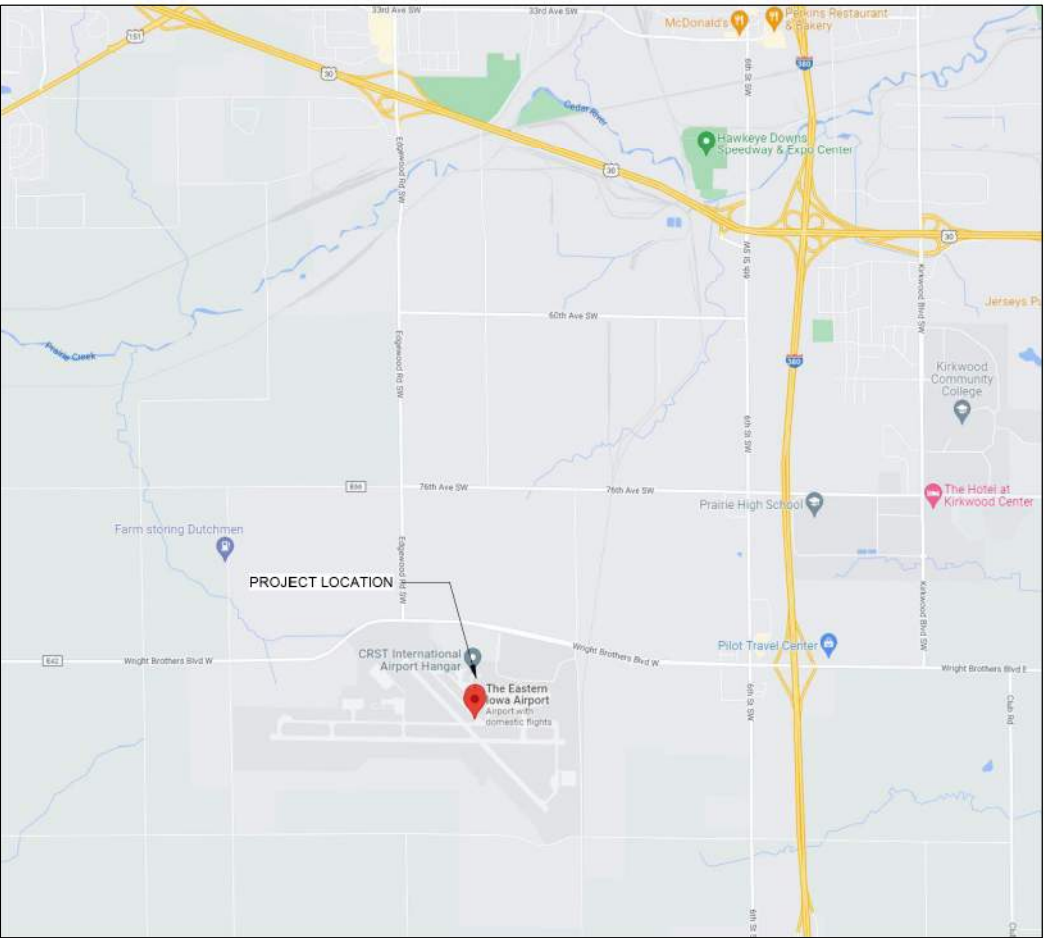
REMOVE EXISTING ROOFING MEMBRANE, INSULATION, DUCT FLASHING AND STRUCTURAL MEMBERS AS INDICATED IN ARCHITECTURAL AND STRUCTURAL PLANS.

FABRICATE ROOF OPENING FRAME, INSTALL AND RECONSTRUCT INSULATION AND ROOFING MEMBRANE AS DETAILED TO ROOF HATCH FRAMING.

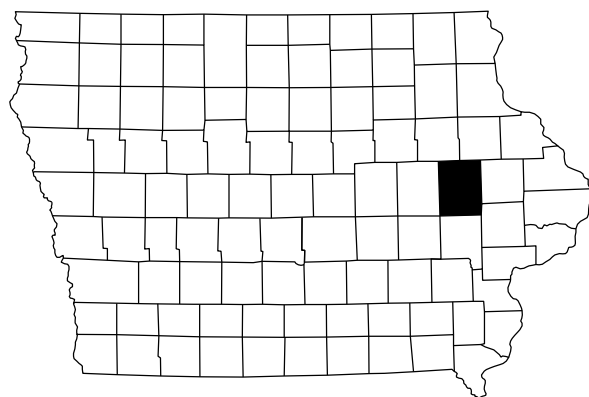
FABRICATE ROOF HATCH AND INSTALL ON HATCH OPENING FRAMING.

FABRICATE AND INSTALL DUCT EXTENSIONS.

COORDINATE ALL EQUIPMENT ACCESS WITH RESIDENTIAL PROJECT REPRESENTATIVE



REGIONAL MAP



MEYER | BORGMAN | JOHNSON

STRUCTURAL DESIGN + ENGINEERING

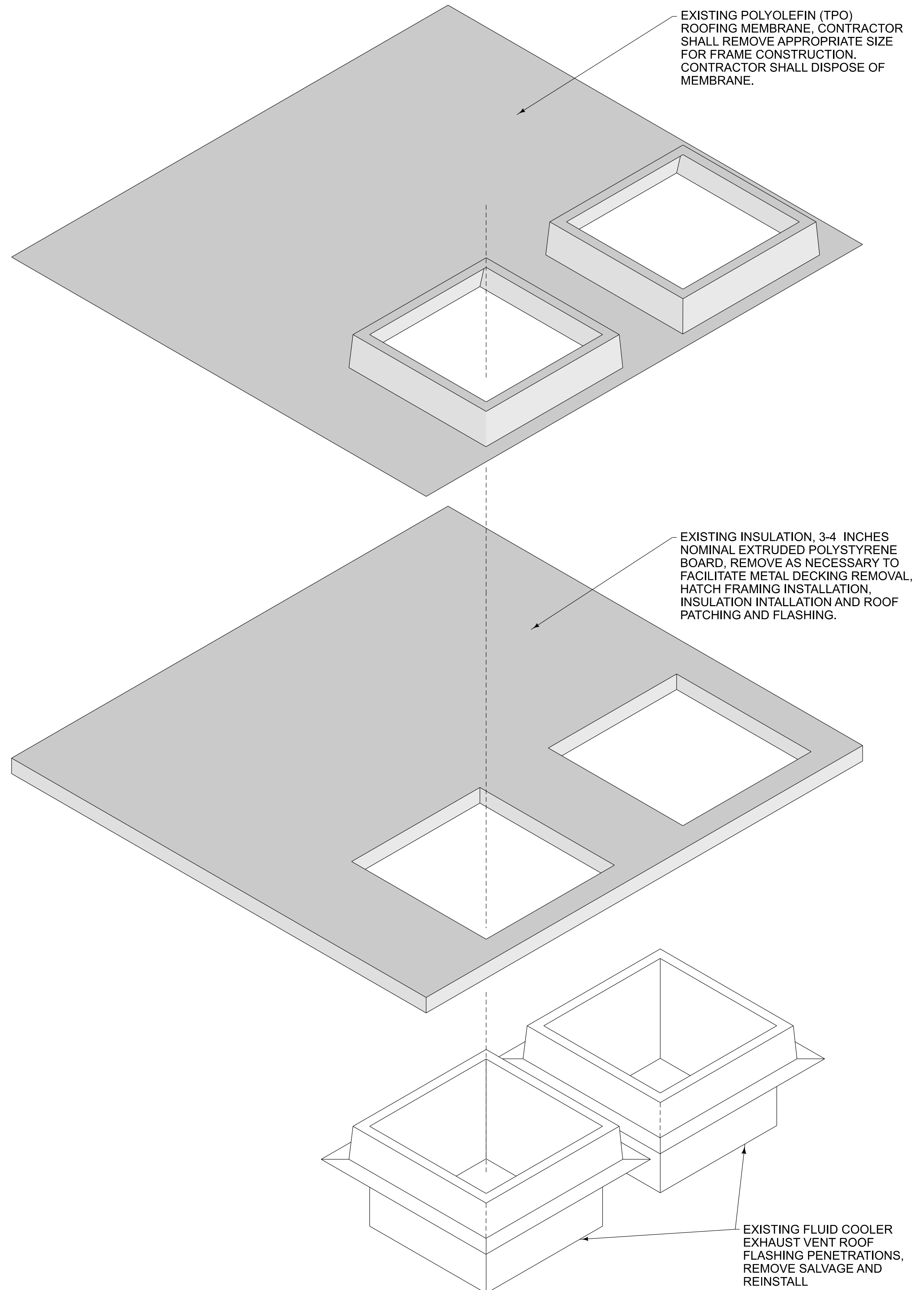
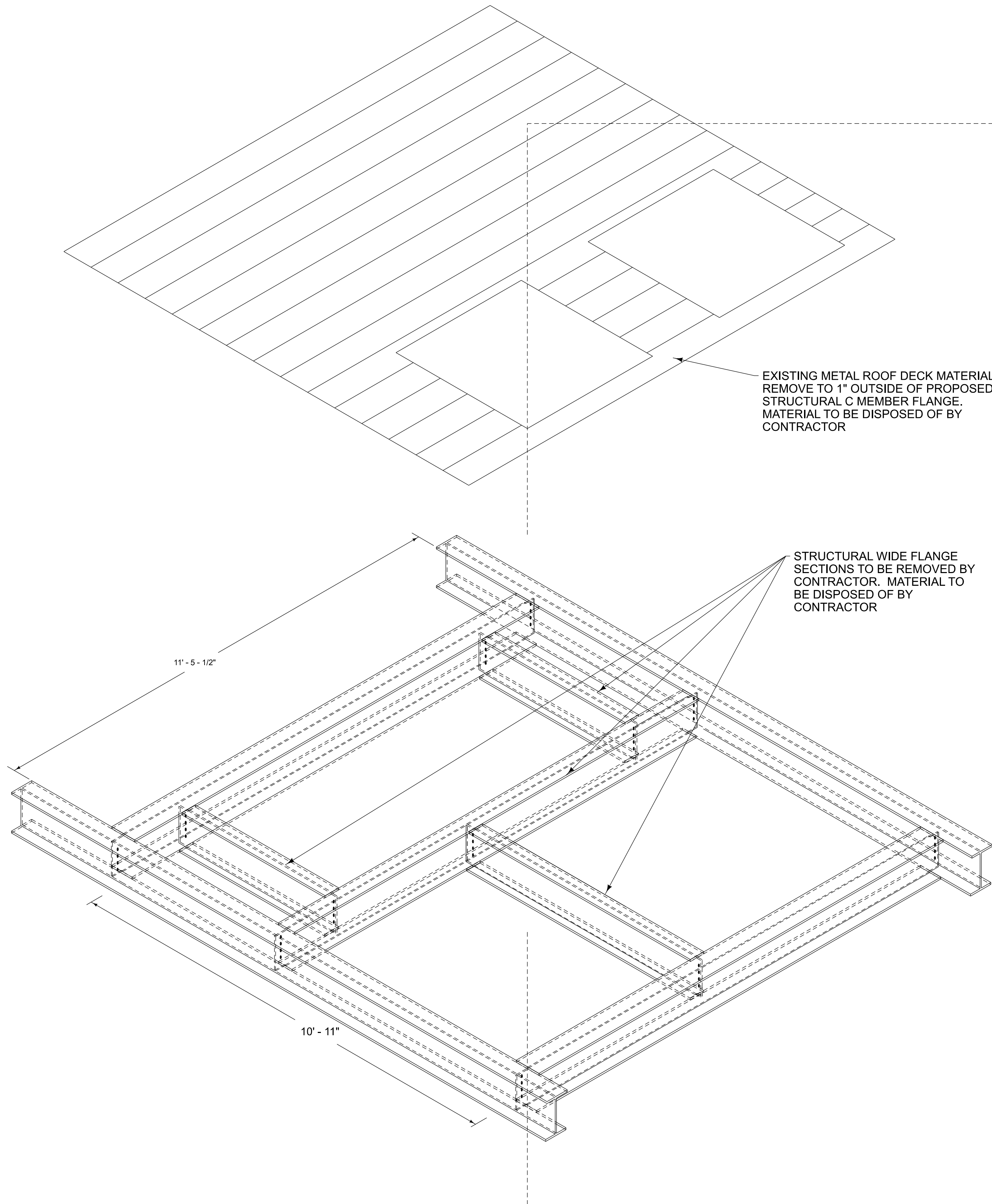


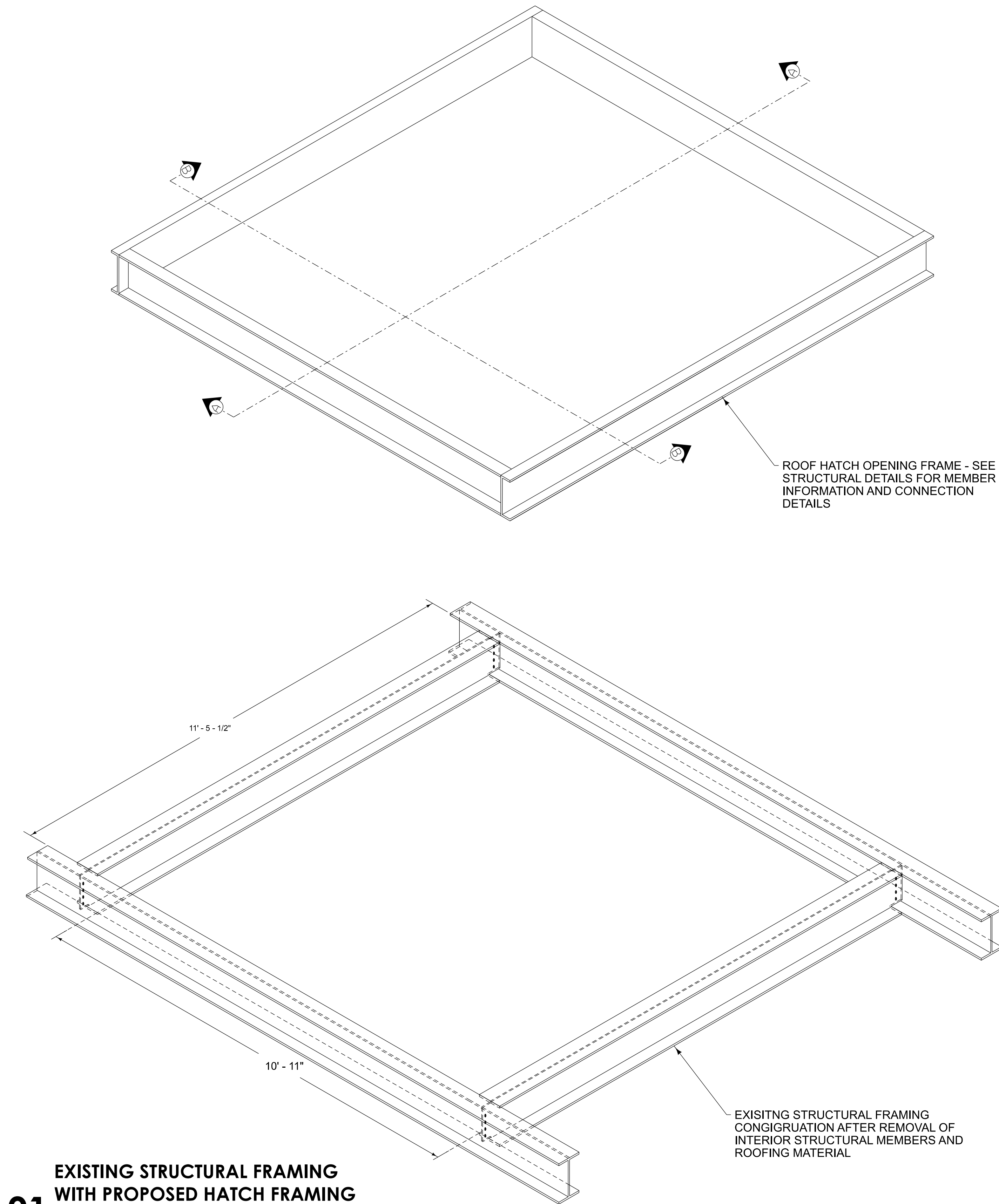
SDATES  
\$FILES

01

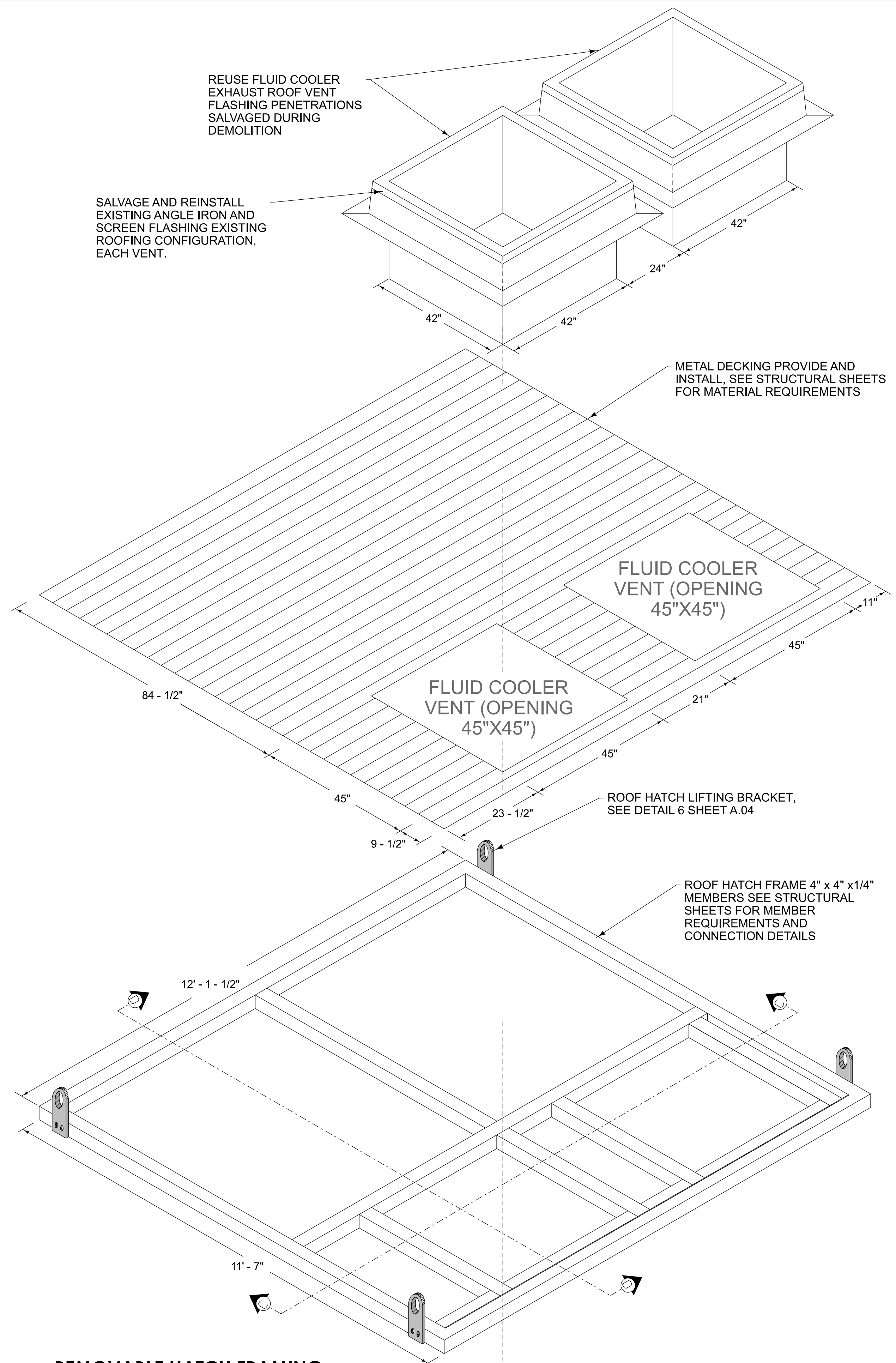
**EXISTING STRUCTURAL FRAMING  
AND ROOF COMPONENT REMOVAL**

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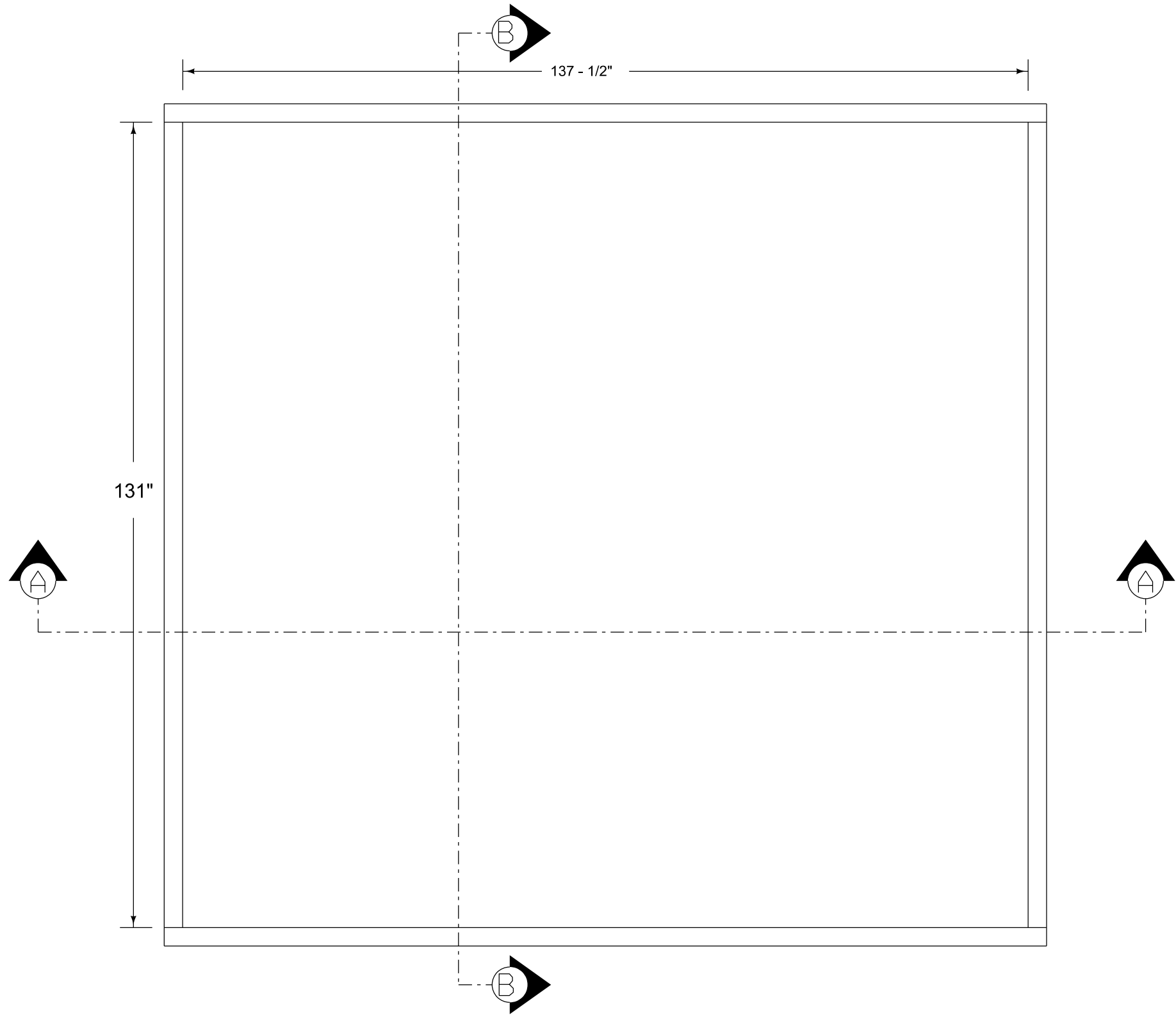


**01** EXISTING STRUCTURAL FRAMING  
WITH PROPOSED HATCH FRAMING  
SCALE: NONE



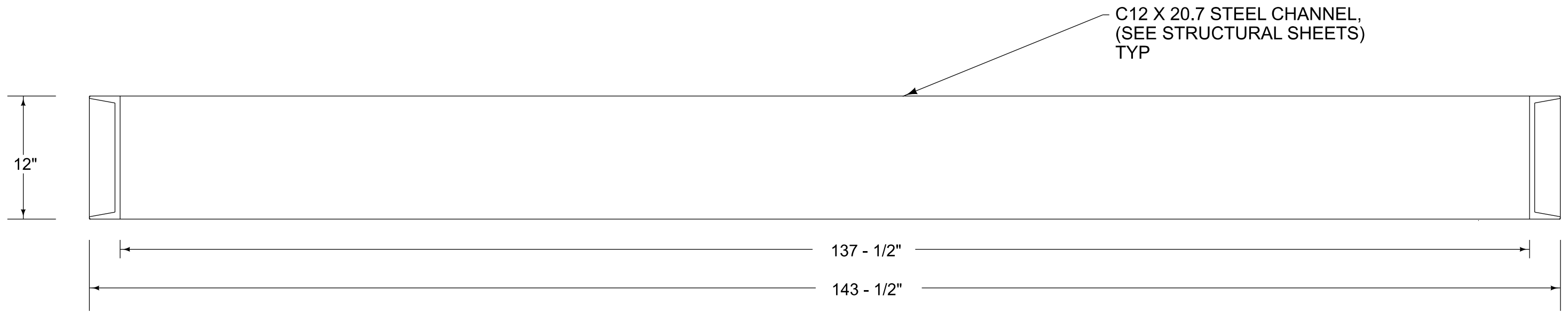
**02** REMOVABLE HATCH FRAMING  
SCALE: NONE

SPFILES  
SDATES

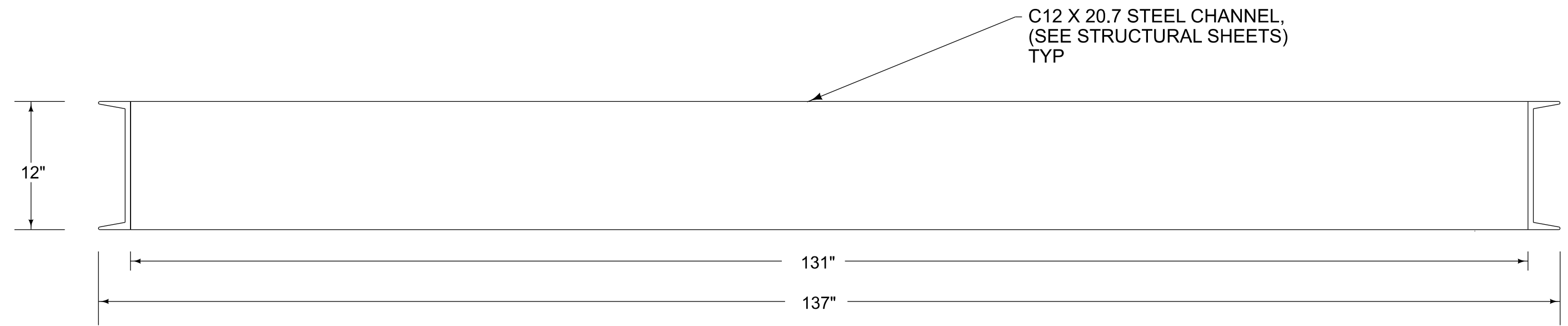


**01** ROOF HATCH OPENING FRAMING  
WITH DIMENSIONS

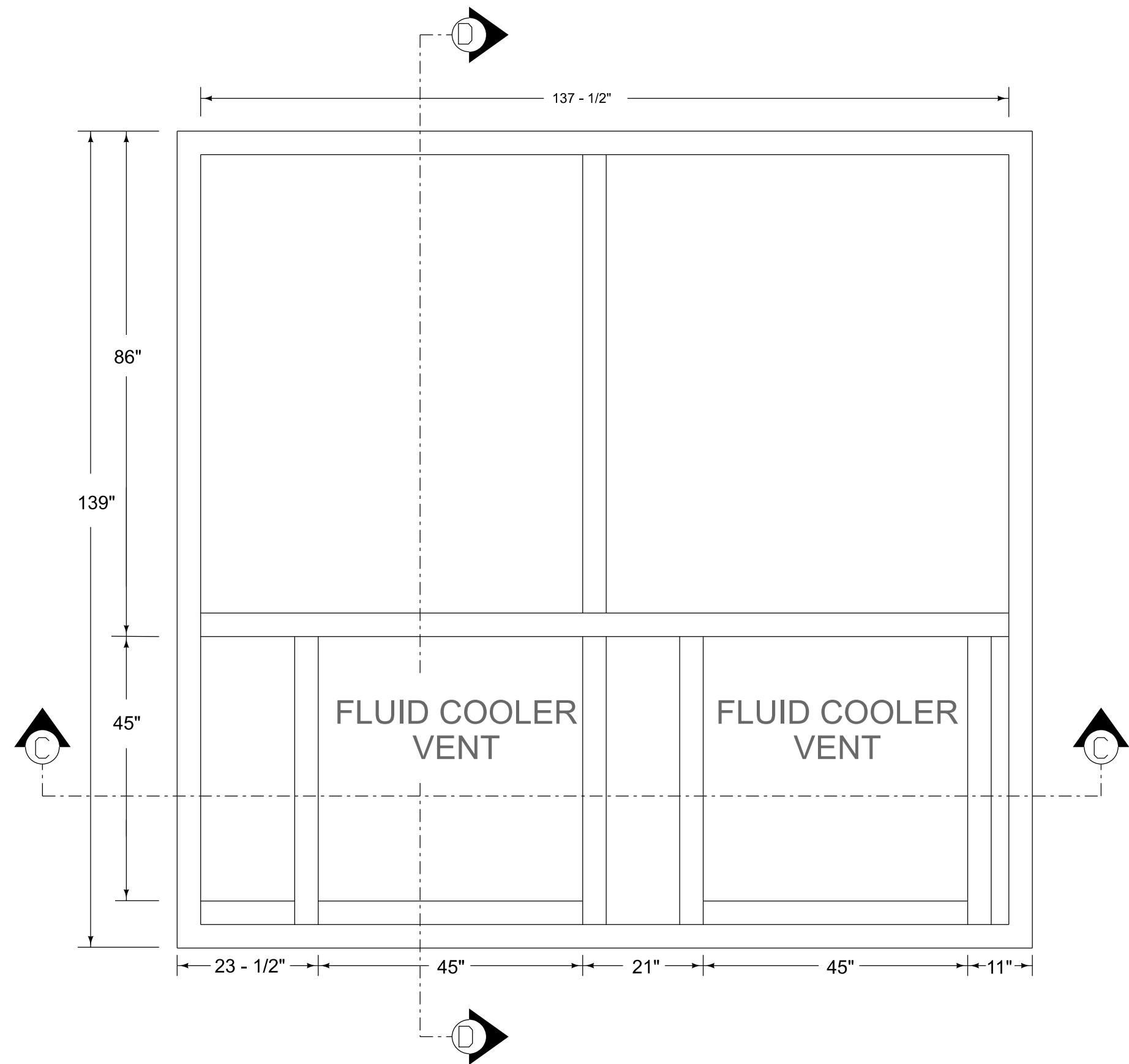
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SECTION A-A

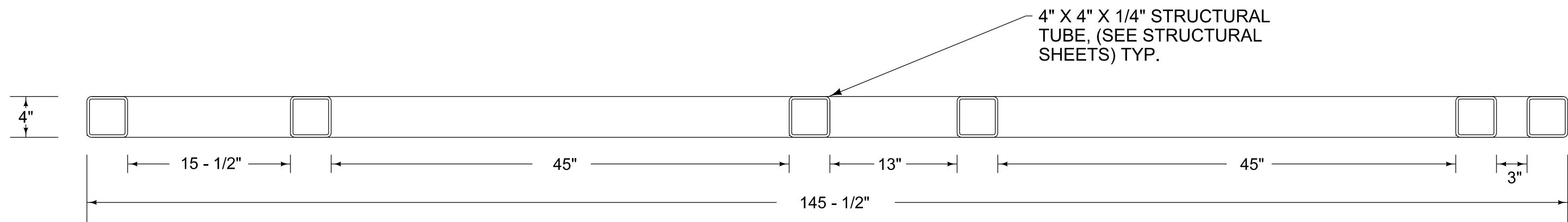


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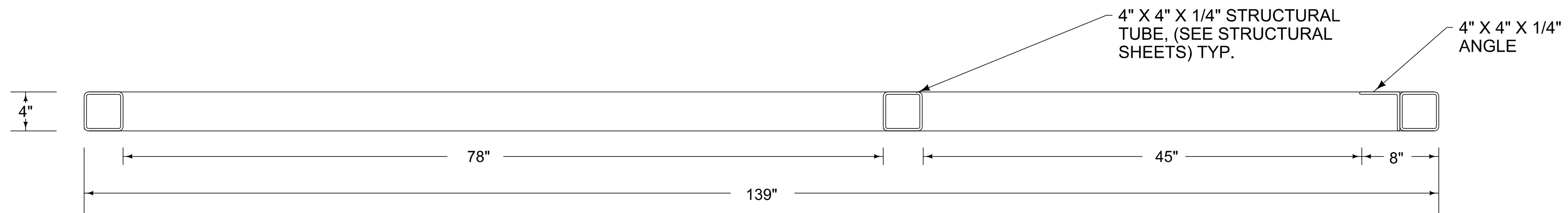


**02** REMOVABLE HATCH FRAMING  
DIMENSIONS

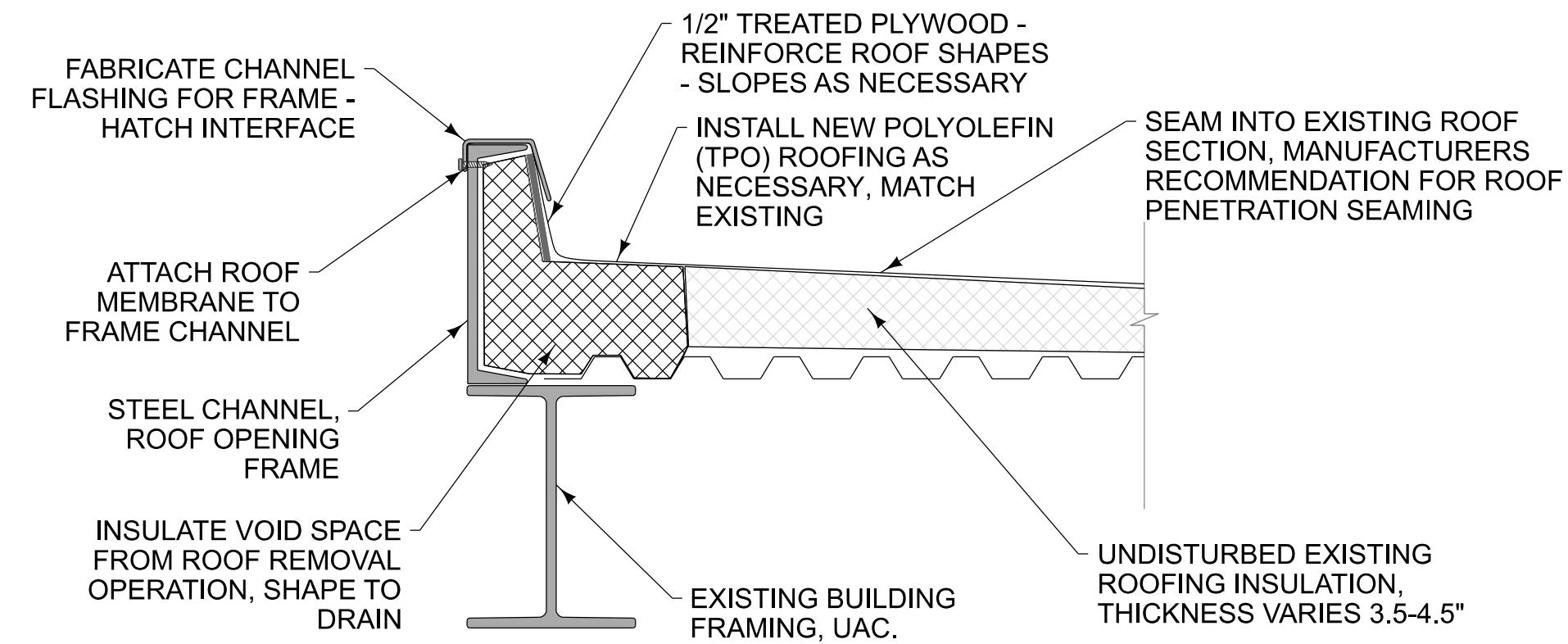
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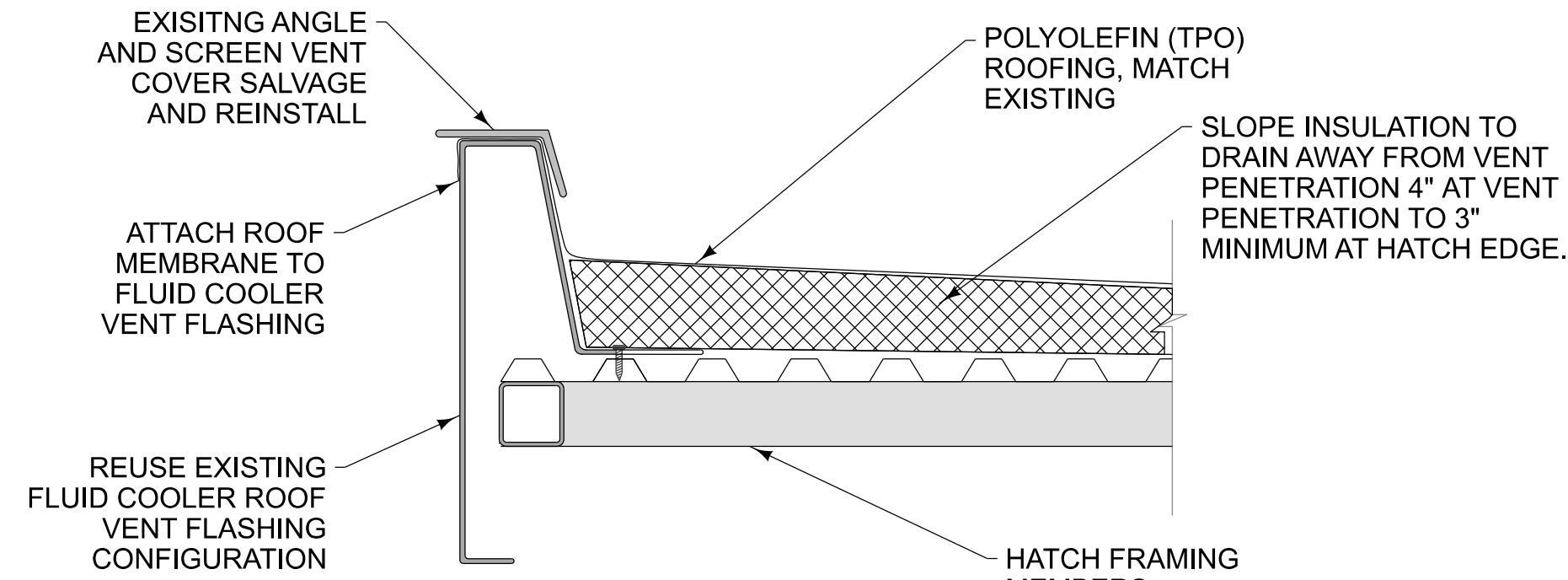
SECTION C-C



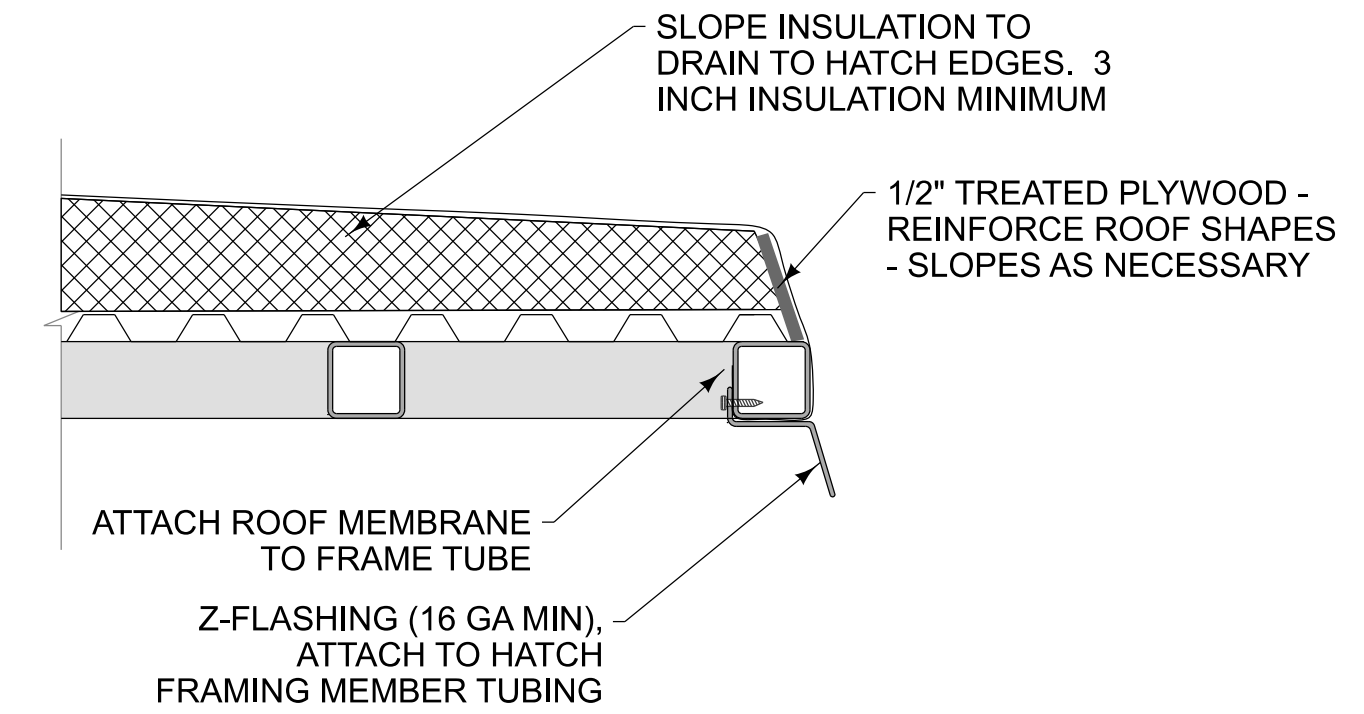
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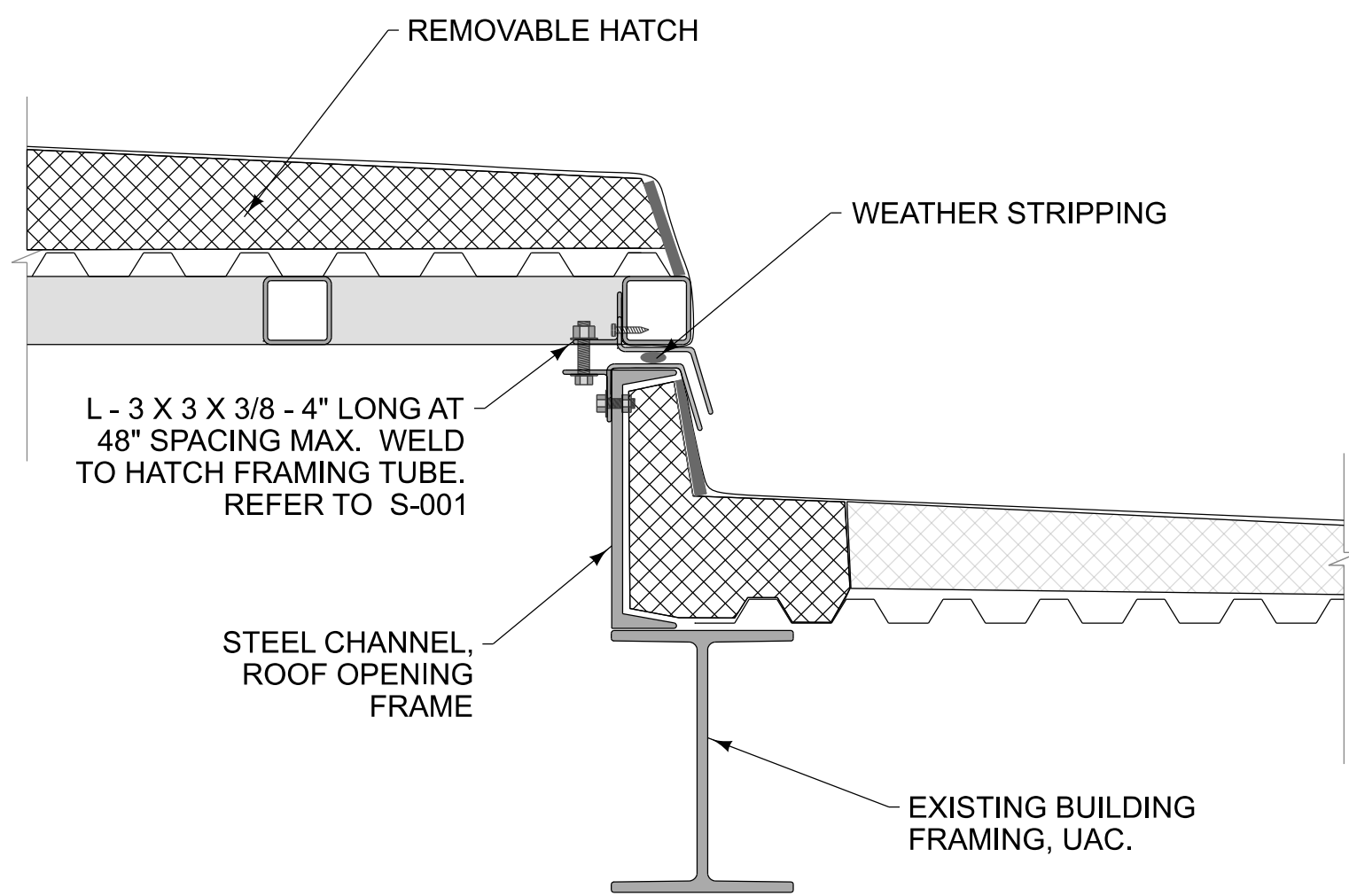
**01** **DETAIL, ROOF HATCH OPENING FRAME, INSTALLED IN EXISTING ROOF SECTION**  
SCALE: NONE



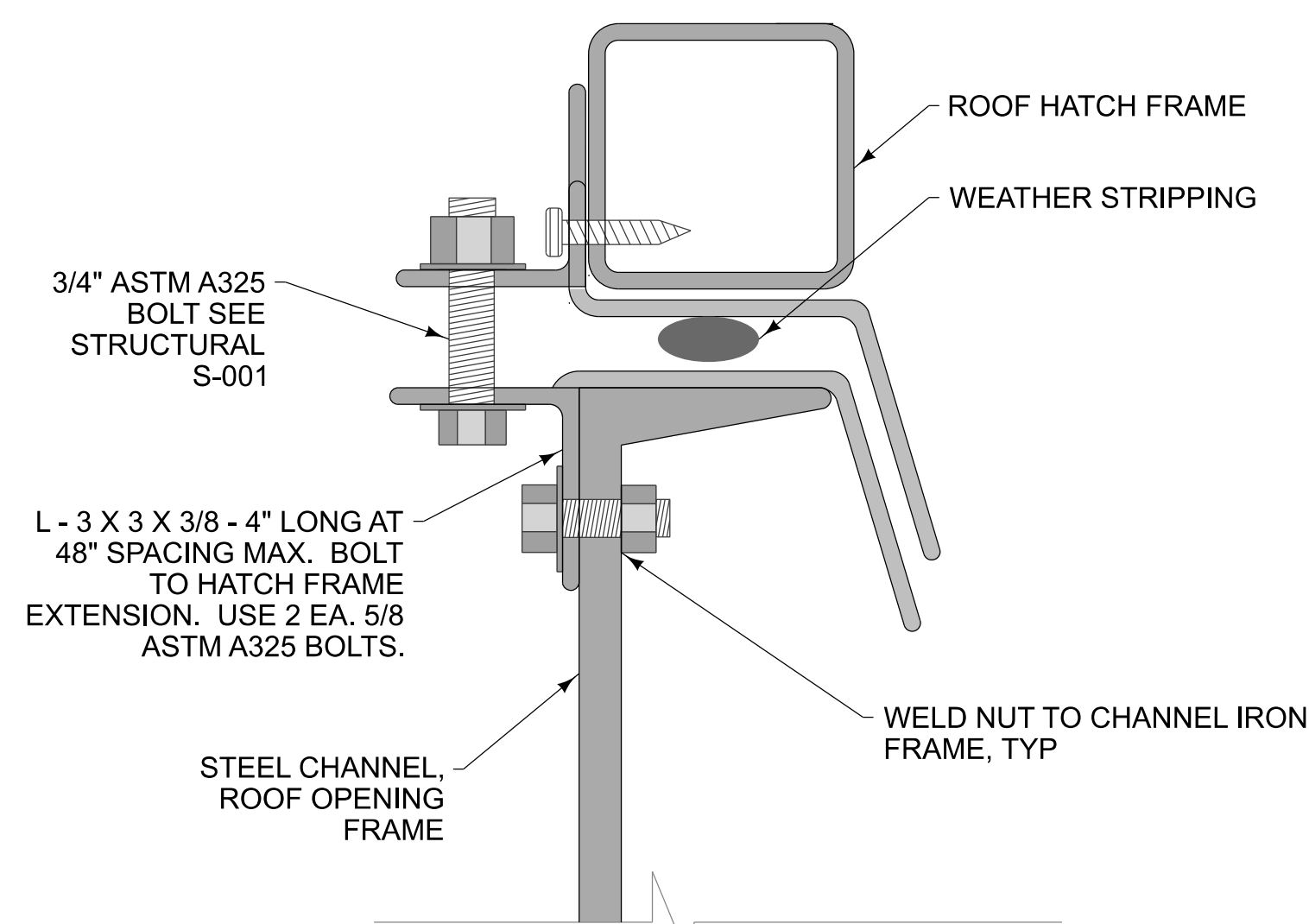
**02** **REMOVABLE ROOF HATCH, INSULATION AND ROOFING MEMBRANE ASSEMBLY AT FLUID COOLER EXHAUST VENT**  
SCALE: NONE



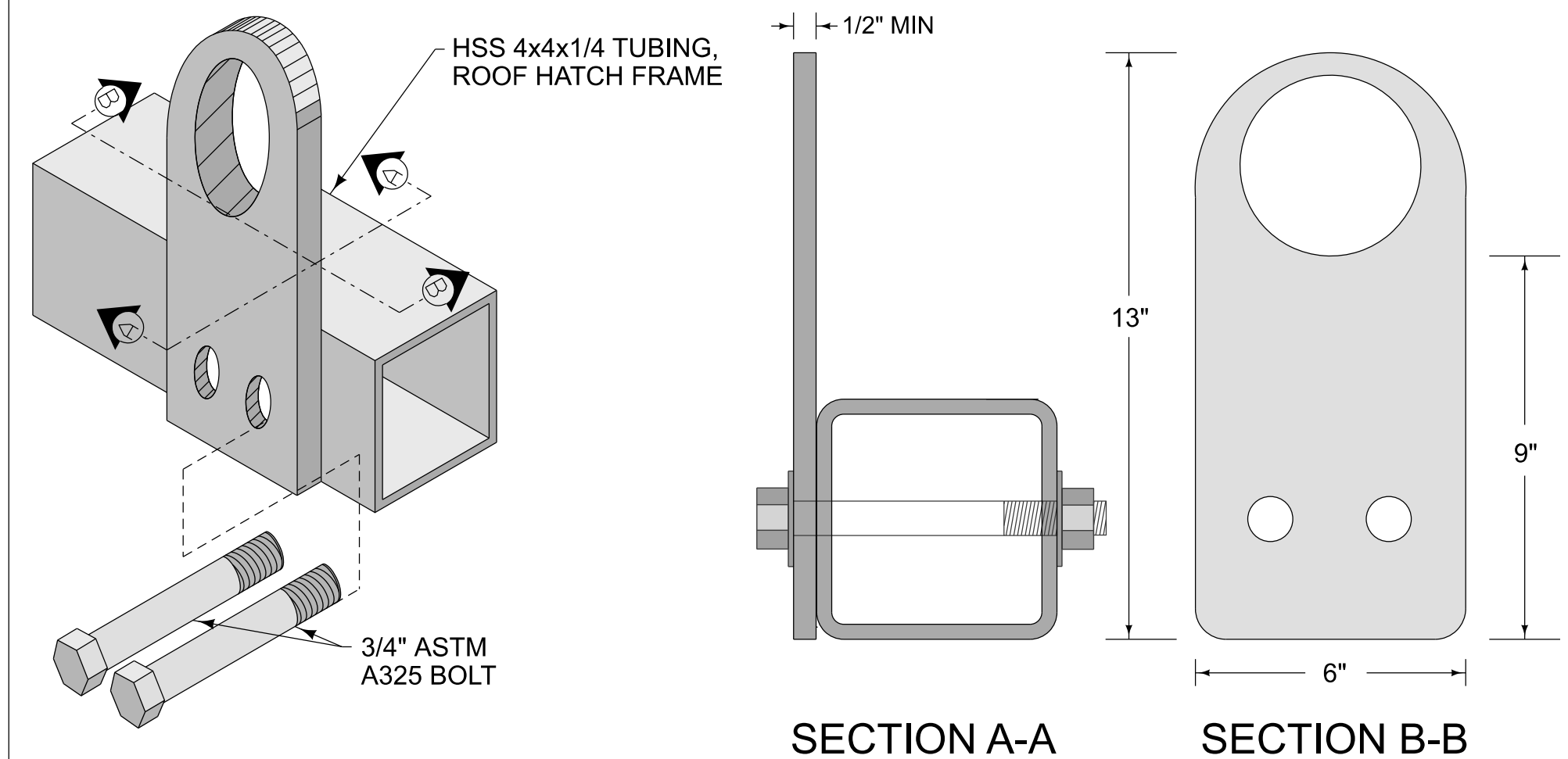
**03** **REMOVABLE ROOF HATCH INSULATION, MEMBRANE ATTACHMENT, AND FLASHING DETAIL.**  
SCALE: NONE



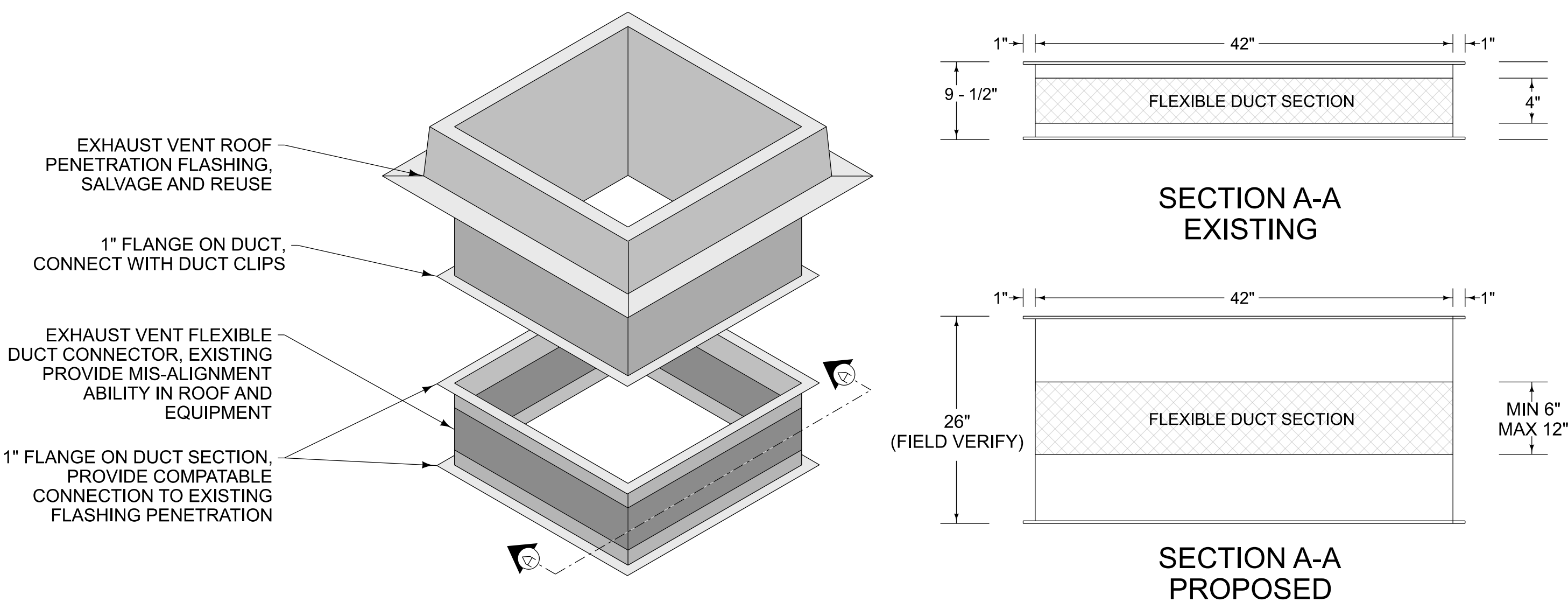
**04** **REMOVABLE ROOF HATCH, INSTALLATION ON FABRICATED HATCH OPENING FRAME DETAILS.**  
SCALE: NONE



**05** **REMOVABLE ROOF HATCH HOLD DOWN BASE PLATE BOLTED ANGLE**  
SCALE: NONE



**06** **REMOVABLE ROOF HATCH LIFTING BRACKET, PLACE BRACKETS AT EACH CORNER**  
SCALE: NONE



**07** **EXHAUST VENT, DUCT EXTENSION**  
SCALE: NONE



GENERAL STRUCTURAL NOTES

**TYPICAL NOTES:**  
These notes specify the requirements for the design represented in these documents. The construction and materials shall comply with all the pertinent codes and references, plans, and details, including (but not limited to) those shown in architectural, civil, mechanical and electrical drawings. The contractor is responsible for coordination of the structural work with the architectural, civil, mechanical, and electrical drawings.

The Contractor shall verify all dimensions and existing conditions in the field that affect construction prior to commencing work on the affected element or shop drawing submittals. Resolve any discrepancies with the Architect prior to construction.

The contract structural drawings and specifications represent the completed structure. The Contractor is responsible for bracing and shoring (without overstressing) all structural elements as necessary at any stage of construction until completion of the project. The Structural Engineer of Record is not responsible for the Contractor's means, methods, sequences or procedures of construction. Contractor shall recognize and consider effects of thermal movements of structural elements during construction period.

The Contractor is solely responsible for site safety including all temporary precautionary measures and safety programs. Site observation visits by the Structural Engineer of Record do not include review of the contractor's safety precautions.

Refer to architectural, mechanical and electrical drawings for locations, elevations, dimensions, and details of sleeves, inserts, openings, recesses, curbs, housekeeping pads, etc. that are not shown on the structural drawings and do not damage structural members.

Information shown in the structural drawings regarding existing conditions represents the current and general field conditions related to the new work, to the best of our knowledge. Report all discrepancies (unforeseen conditions) to the Architect for resolution prior to performing related new work.

Requests for information shall be submitted in writing and shall reference the part of the construction documents that is in question.

**SPECIAL INSPECTIONS:**  
Special inspections required by the building code and these documents shall be provided in addition to inspections to be performed by the city in which the project is located.

Contractor shall read and understand their duties in the specification and under the building code for special inspections and coordinate as necessary the Owner's responsibilities.

The Special Inspectors shall be provided by the Owner and shall use current structural drawings incorporating all revisions and approved shop drawings.

Special inspection reports are to be submitted promptly and within 24 hours to the Structural Engineer of Record and Contractor from the time when inspections are performed.

The General Contractor shall provide timely notice (minimum 24 hours) to the Special Inspector and sufficient time for the Inspector to perform their inspection.

For a schedule of Special Structural Inspections required by the building code for this project, see the Special Inspection Schedule.

STRUCTURAL TEST AND SPECIAL INSPECTION SCHEDULE:			
	Continuous	Periodic	None
1. STEEL CONSTRUCTION: Section 1705.2.1 and Table 1705.2.2			
1.1 Fabricator Documentation - Note (1)	☐	■	☐
1.2 High-Strength Bolting-Bearing Material	☐	■	☐
1.3 High-Strength Bolting-Slip-Critical and Material	☐	■	☐
1.4 Steel Material, Seismic - Section 1705.11.1	☐	■	☐
1.5 Welds: Full and Part Pen and Multi-Pass Fillet	☐	■	☐
1.6 Welds: Single Pass Fillet for All Sections	☐	■	☐
1.7 Frame Joint Detail Compliance	☐	■	☐

Notes:  
1. When the fabricator does not meet the requirements of 1704.2.5.2 and where applicable the exception in 1705.2, Special Inspection in the Fabricator's shop is required.

MATERIAL PROPERTIES:			
Structural Steel (Fy):			
Wide Flanges:	50,000 psi	ASTM A992	
Angles, Channels, Plates, and Bars	36,000 psi	ASTM A36	
Rectangular HSS	46,000 psi	ASTM A500, Grade B	
Round HSS	42,000 psi	ASTM A500, Grade B	
Steel Pipe	35,000 psi	ASTM A53, Grade B	

Structural Fasteners:			
Typical High-Strength Bolts	105,000 psi	ASTM A325	
Twist-off Tension Control Bolts	105,000 psi	ASTM 1852, Type 1	
Carbon Steel, Threaded Rods	36,000 psi	ASTM A36	
Anchor Rods, Grade 36 U.N.O.	36,000 psi	ASTM F1554	
Direct Tension Indicator Washers as noted on plan		ASTM F959	

**STRUCTURAL STEEL:**  
Structural steel shall be detailed, fabricated and erected in compliance with AISC Specification for the design, fabrication, erection of structural steel for building, and Code of Standard Practice, and OSHA steel erection standards.

All beams and girders shall be cambered at mid-span as indicated on the structural drawings. The cambers indicated shall be present in the beam in its erected position after completion of the end connections and shall be verified prior to placing concrete. Cambering tolerances shall be (-0", +1/2"). No center point cambering allowed.

Splicing structural members where not detailed on the drawings is prohibited without prior approval of the Structural Engineer of Record.

Modification of structural steel members in the field is not allowed without written approval by the Structural Engineer of Record.

All composite beams using the concrete slab as a compression flange are designed for unshored construction unless noted otherwise.

Anchor rods shall be minimum 3/4" diameter or as detailed in drawings.

**STRUCTURAL STEEL CONNECTIONS:**  
Welded connections shall be made in accordance with AWS D1.1 Structural Welding Code using E70XX electrodes unless noted otherwise. Weld sizes not shown or controlled by the required forces shall be AWS code minimum size. Welds shall be visually inspected for compliance with the AWS code visual inspection criteria. Welders shall be qualified in accordance with AWS D1.1 and shall be experienced in welding structural steel.

Full penetration welds shall be tested using NDT methods such as ultrasonic, magnetic particle or other methods referenced in the AWS code. Welds subject to NDT methods shall also have been found compliant with the AWS visual inspection criteria.

**STEEL ROOF DECK:**  
Manufacturer shall be a current member of the Steel Deck Institute (SDI).

Detail, manufacture and install steel roof deck and accessories in accordance with the SDI specifications and codes and OSHA requirements.

Steel roof deck shall be as noted on plan.

Welding shall be in accordance with AWS D1.3. Welders shall be qualified in accordance with AWS D1.3.

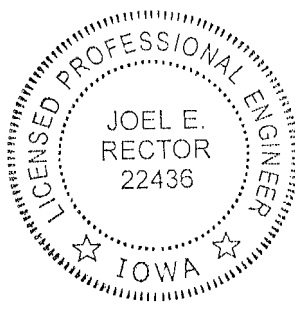
Where spray-on fireproofing of the deck is required, the Contractor shall verify that the deck finish is compatible with the proposed fireproofing material to ensure proper bonding of the fireproofing. Coordinate fireproofing locations and requirements with the architect.

All steel deck shall span a minimum of three spans, unless otherwise approved by the engineer. Deck ends are to be lapped over supports.

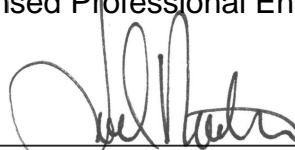
Contractor shall verify the location and extent of acoustical steel deck with the architectural drawings.

Reference drawings for detail on steel roof deck fastening requirements unless noted otherwise.

Provide reinforcement or frames for deck openings as indicated on the drawings.



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.



2/24/2023

(signature)

(date)

Joel E. Rector

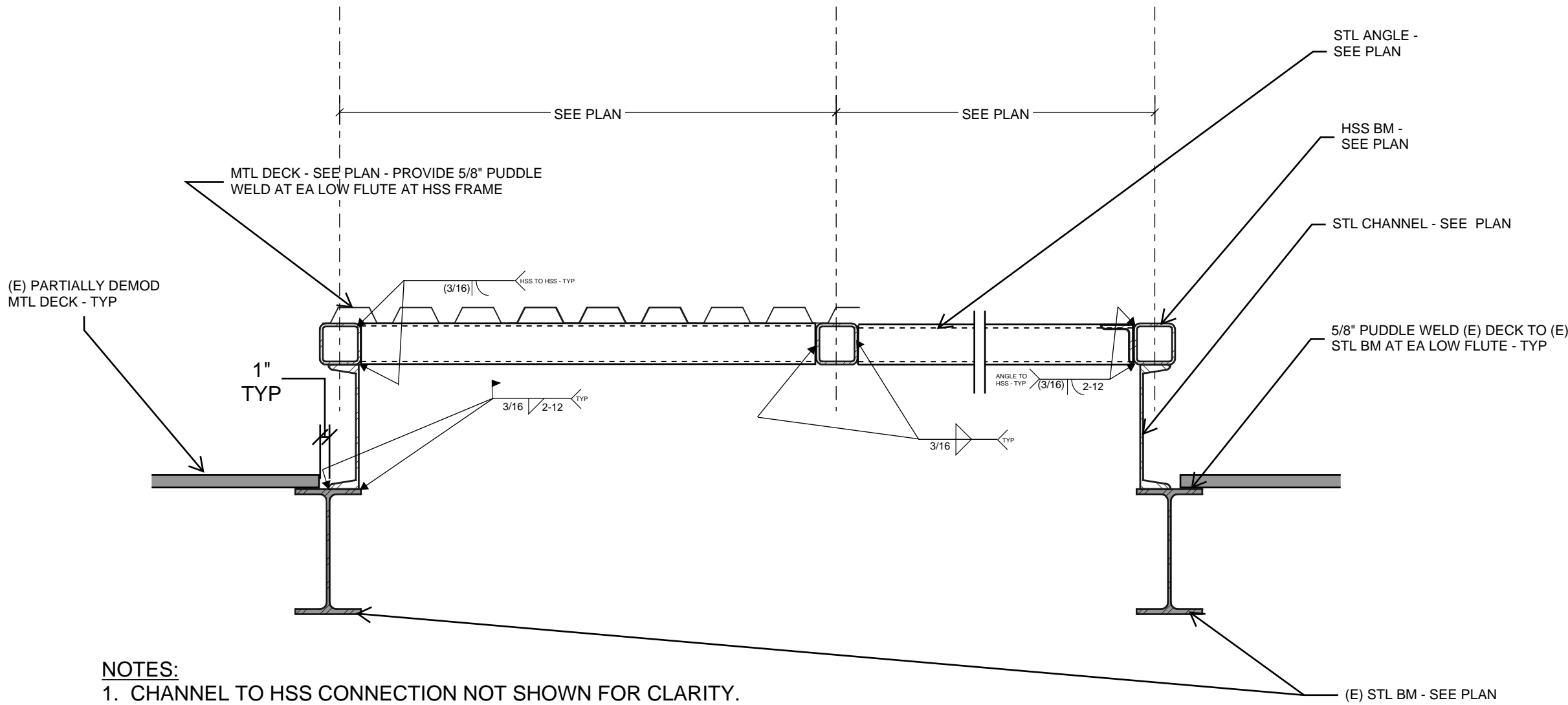
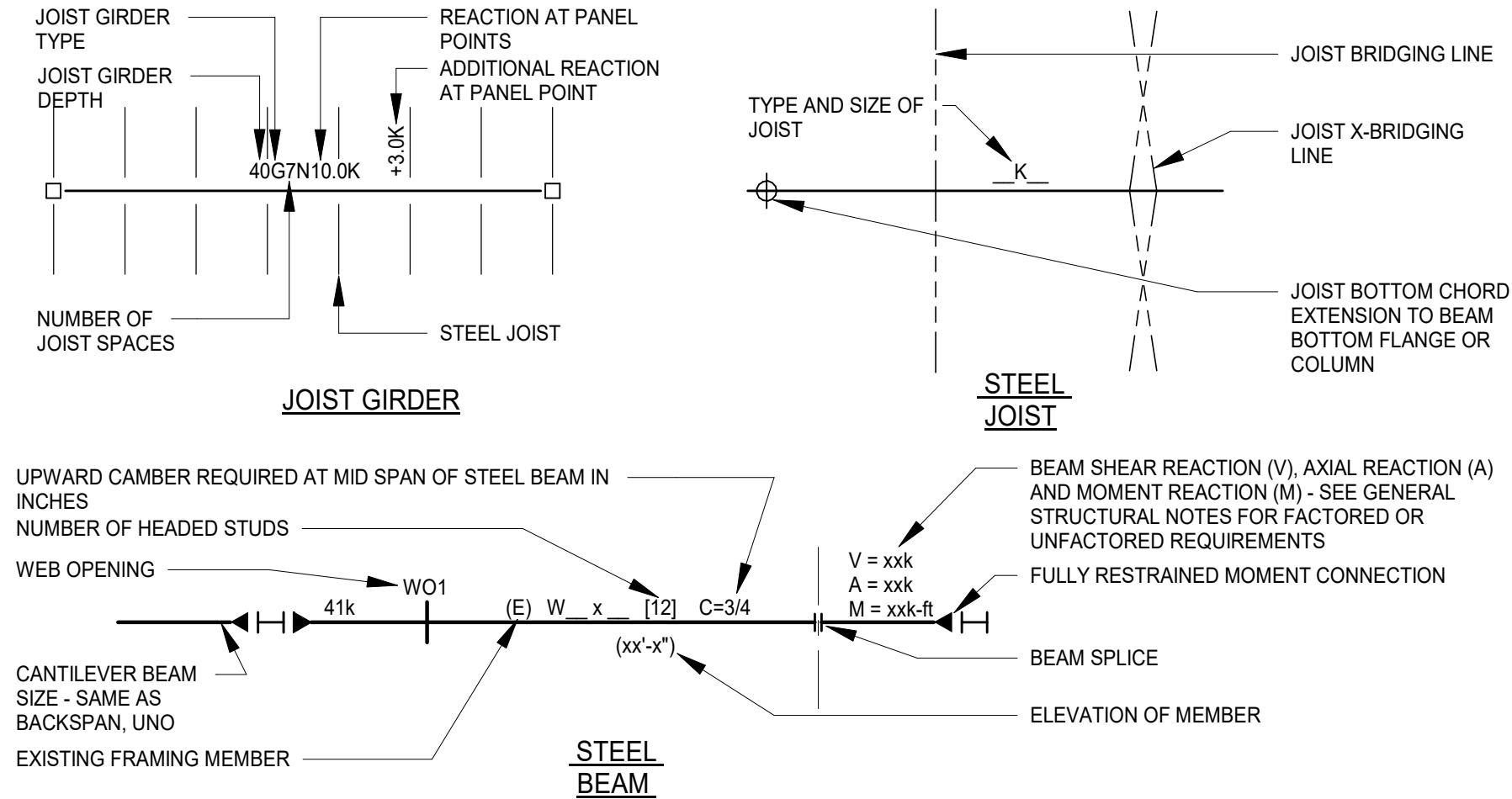
License number 22436

My license renewal date is December 31, 2023

SHEET LIST	
SHEET #	SHEET NAME
S-001	GENERAL NOTES AND DETAILS
SD-101	PARTIAL ROOF DEMO PLAN
S-101	PARTIAL ROOF PLAN
S-102	PARTIAL HIGH ROOF PLAN

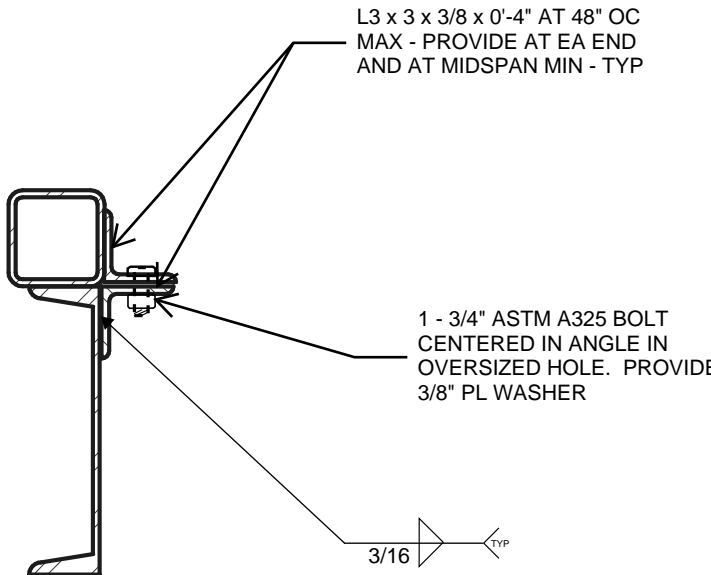
PLAN SYMBOLS LEGEND:

STEEL FRAMING SYSTEM:

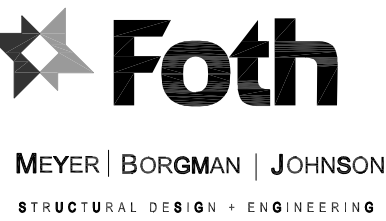


NOTES:  
1. CHANNEL TO HSS CONNECTION NOT SHOWN FOR CLARITY. SEE DETAIL 2/S-001 FOR MORE INFORMATION.

1  
S-001  
SECTION  
NOT TO SCALE



2  
S-001  
SECTION  
NOT TO SCALE



THE EASTERN IOWA AIRPORT  
TERMINAL BUILDING - HVAC COOLING ROOM  
INSTALL ROOF ACCESS HATCH

ARTHUR COLLINS PARKWAY  
Cedar Rapids, Iowa

ISSUED

DATE: February 24, 2023  
DESIGNED BY: MMC  
DRAWN BY: MMC  
CHECKED BY: JER

DO NOT SCALE DRAWINGS

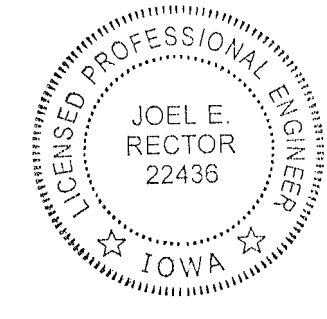
SHEET CONTENTS  
GENERAL  
NOTES AND  
DETAILS

SHEET NO.:

S-001



1 PARTIAL ROOF DEMOLITION PLAN  
SD-101 1/4" = 1'-0"



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.

(signature) 2/24/2023 (date)

Joel E. Rector  
License number 22436  
My license renewal date is December 31, 2023



THE EASTERN IOWA AIRPORT  
TERMINAL BUILDING - HVAC COOLING ROOM  
INSTALL ROOF ACCESS HATCH

ARTHUR COLLINS PARKWAY  
Cedar Rapids, Iowa

ISSUED

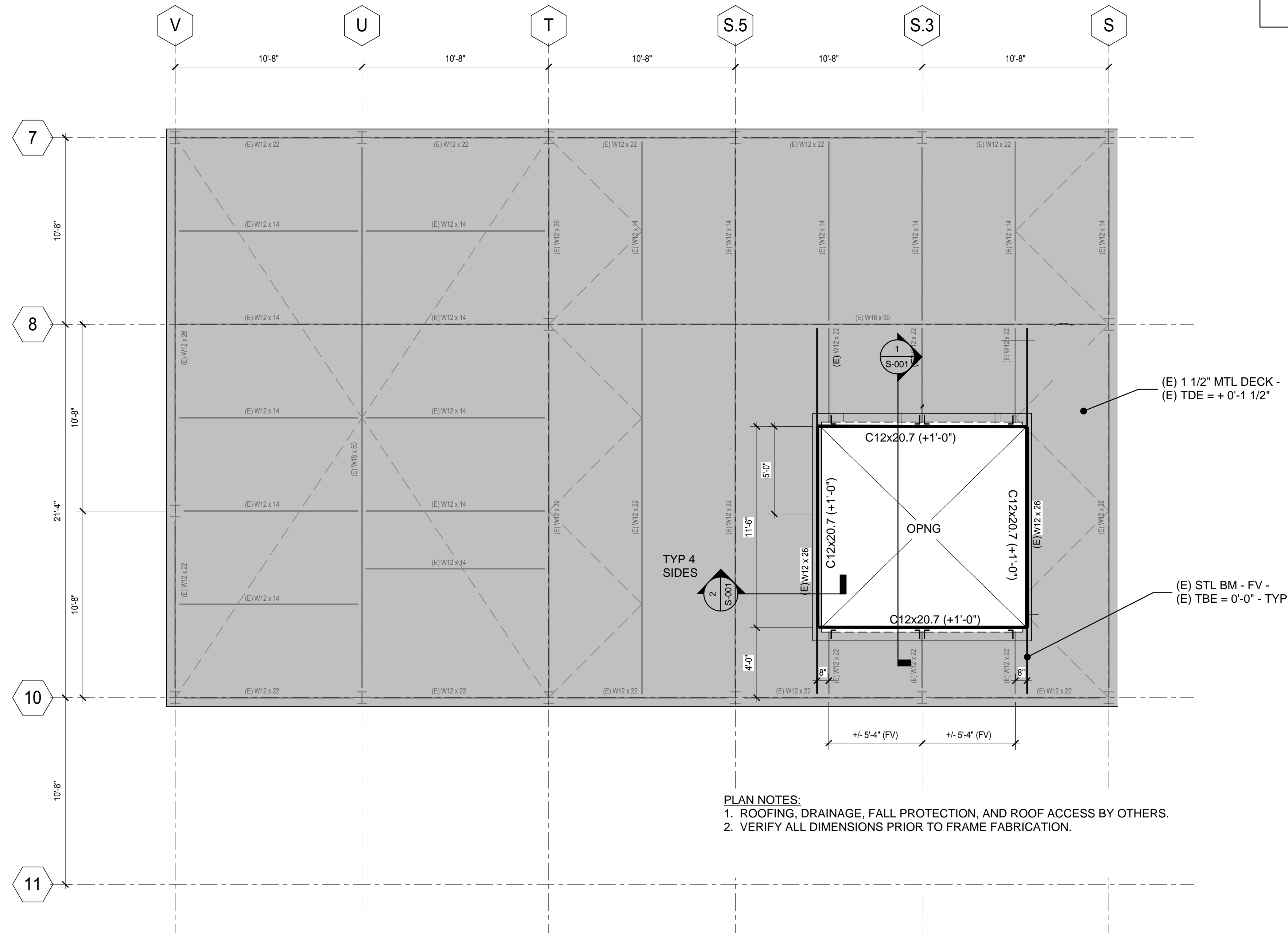
DATE: February 24, 2023  
DESIGNED BY: MMC  
DRAWN BY: MMC  
CHECKED BY: JER  
DO NOT SCALE DRAWINGS

SHEET CONTENTS  
PARTIAL  
ROOF DEMO  
PLAN

SHEET NO.:

SD-101

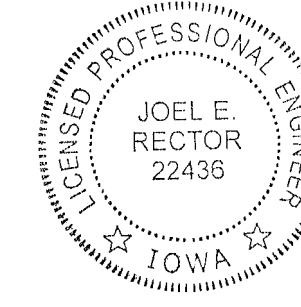




1  
S-101

PARTIAL ROOF PLAN

1/4" = 1'-0"



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.

(signature)

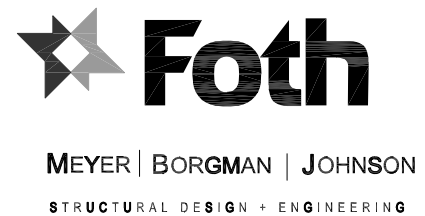
2/24/2023

(date)

Joel E. Rector

License number 22436

My license renewal date is December 31, 2023



THE EASTERN IOWA AIRPORT  
TERMINAL BUILDING - HVAC COOLING ROOM  
INSTALL ROOF ACCESS HATCH

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SHEET CONTENTS  
PARTIAL  
ROOF PLAN

SHEET NO.:

S-101





THE EASTERN IOWA AIRPORT  
TERMINAL BUILDING - HVAC COOLING ROOM  
INSTALL ROOF ACCESS HATCH

ARTHUR COLLINS PARKWAY  
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**SHEET CONTENTS**

**SHEET CONTENTS**

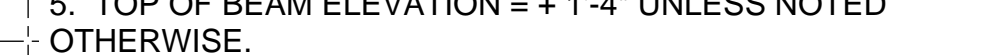
**SHEET CONTENTS**

SHEET CONTENTS

PARTIAL HIGH  
ROOF PLAN

SHEET NO.:

S-102



1 PART  
S-102 1/4" = 1'-0"

SDATES\$