



**Additions and Renovations
Platt Technical High School
Milford, CT**

ADDENDUM NO. 5

August 15, 2019

The original Specifications and Drawings dated May 24, 2019, Addendum No.1 dated July 23, 2019, Addendum No.2 dated July 29, 2019, Addendum No.3 dated August 2, 2019 and Addendum No.4 dated August 9, 2019 for the above-captioned project are amended as stated in this Addendum. This Addendum consists of twelve (12) pages, plus the following attachments.

ATTACHMENTS

PROJECT MANUAL

Section 08 51 13 – PROJECTED / FIXED ALUMINUM WINDOWS (9 pages)
Section 23 51 00 – BREECHINGS, CHIMNEYS AND STACKS (6 pages)

ARCHITECTURAL SKETCHES

RA5-03, RA5-04 (2 pages)

ARCHITECTURAL DRAWINGS

A6-3-10, A6-3-20 (2 pages)

STRUCTURAL SKETCHES

RS5-001, RS5-002, RS5-003, RS5-004, RS5-005, RS5-006, RS5-007 (7 pages)

STRUCTURAL DRAWINGS

S1-1-2E, S1-1-3E, S1-1-ME, S1-1-MF, S4-2-1 (5 pages)

MECHANICAL DRAWINGS

M1-1-MF, M1-2-1F, M3-1-3, M5-1-3, M5-1-4 (5 pages)

ELECTRICAL DRAWINGS

E2-1-1F, E2-2-1F, E5-1-2, E5-1-3, E8-1-5 (5 pages)

BIDDER QUESTION LOG (SEE ATTACHMENT), dated 8-15-2019.

REVISED BID DATE: Bids Due at 2:00 pm on August 29, 2019.



AMENDMENTS TO ADDENDUM NO.3

DIVISION 08 – OPENINGS

ADD 5-001 ADDENDUM NO.3, Page 4, ITEM ADD 3-011 – SECTION 08 41 10 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

ADD the following sentence after Article 2.1, Paragraph A, Sub-paragraph 2a.1:
“U-Value for Exterior Storefront: 0.039 U-Value.”

AMENDMENTS TO ADDENDUM NO.4

DIVISION 08 – OPENINGS

ADD 5-002 ADDENDUM NO.4, Page 7, ITEM ADD 4-032 – SECTION 08 45 23 – FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

Article 1.3, Paragraph G, REPLACE the last sentence with the following:
“The resulting system design may include but not limited to Aluminum I-beams, Heavy TB I-beams and Aluminum Integral Stiffeners.”

ADD 5-003 ADDENDUM NO.4, Page 7, ITEM ADD 4-037 – SECTION 08 45 23 – FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

Article 2.3, Paragraph D, Sub-paragraph 2, REVISE the Basis of Design to be:
“Basis of Design, Kalwall’s Hurricane High Impact Face Sheet designed to meet Large Missile Windborne Debris.”

AMENDMENTS TO PROJECT MANUAL

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

ADD 5-004 SECTION 00 01 10 – TABLE OF CONTENTS

Page 4, Under Division 08, ADD “Section 08 51 13, Projected / Fixed Aluminum Windows.”

ADD 5-005 SECTION 00 01 15 – LIST OF DRAWING SHEETS

Page 7, REPLACE Title for drawing A6-3-10 to the following:
Drawing A6-3-10: “TRANSLUCENT WALL PANEL / WINDOW AND LOUVER TYPES”

ADD 5-006 SECTION 00 11 16 – INVITATION TO BID

Page 1, third paragraph: REVISE Bid Due Date to “2:00 pm on August 29, 2019.”

ADD 5-007 SECTION 00 11 16 – INVITATION TO BID

Page 4, Item 12, Payment and Performance Bond, ADD the following instruction:
“Bond obligee is ‘The Morganti Group, Inc.’”

ADD 5-008 SECTION 00 41 10 – BID PACKAGE SUBMITTAL REQUIREMENTS

BID PACKAGE No.02, Site Work: Page 2, ADD Section 01 56 39, Temporary Tree and Plant Protection.



ADD 5-009 SECTION 00 41 10 – BID PACKAGE SUBMITTAL REQUIREMENTS
BID PACKAGE No.08, Windows: Page 2, ADD Section 08 51 13, Projected / Fixed Aluminum Windows under Division 8, Openings.

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

ADD 5-010 SECTION 07 54 00 – THERMOPLASTIC MEMBRANE ROOFING

Page 7, Article 1.9, Paragraph B:

Replace the 2nd sentence which reads

“The warranty shall be a 25-year no dollar limit (NDL), non-prorated total system labor and material warranty, for wind speed as required by Code or as indicated on the Drawings.”

With the following:

“The warranty shall be a 25-year no dollar limit (NDL), non-prorated total system labor and material warranty. Provide a Wind Addenda to the Warranty for 120 mph maximum gusts.”

DIVISION 08 – OPENINGS

ADD 5-011 SECTION 08 41 10 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

Article 1.2, DESCRIPTION OF WORK, Paragraph A, ADD the following item No 8:

“8. Door hardware necessary for achieving impact rating.”

Article 2.6 – DOOR HARDWARE: ADD Paragraph C:

“Furnish and install the necessary door hardware that was tested as part of the impact-rated assembly. This includes continuous aluminum hinges, concealed vertical exit rods, panic exit devices, thresholds, and gasketing. The impact testing shall be in accordance with ASTM E1886 (Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials) and ASTM A1996 (Standard Specification for Performance of Exterior Windows, Glazed Curtain Walls, Doors and Storm Shutters Impacted by Wind Borne Debris in Hurricanes).”

ADD 5-012 SECTION 08 41 10 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

Article 1.2, Paragraph B, Sub-paragraph 3, DELETE the words after “DOOR HARDWARE” and replace with the following:

“for coordination with other hardware requirements.”

ADD 5-013 SECTION 08 41 10 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

Article 1.2, Paragraph B, ADD Sub-paragraph 4 per the following:

“4. Section 07 08 00 – COMMISSIONING OF BUILDING ASSEMBLIES for commissioning requirements related to this Section.



ADD 5-014

SECTION 08 44 10 – GLAZED ALUMINUM CURTAIN WALLS

Article 1.2, DESCRIPTION OF WORK, Paragraph A, ADD the following item No 6:

“6. Door hardware necessary for achieving impact rating.”

Article 2.3 – DOOR HARDWARE: ADD Paragraph C:

“Furnish and install the necessary door hardware that was tested as part of the impact-rated assembly. This includes continuous aluminum hinges, concealed vertical exit rods, panic exit devices, thresholds and gasketing. The impact testing shall be in accordance with ASTM E1886 (Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials) and ASTM A1996 (Standard Specification for Performance of Exterior Windows, Glazed Curtain Walls, Doors and Storm Shutters Impacted by Wind Borne Debris in Hurricanes).”

ADD 5-015

SECTION 08 44 10 – GLAZED ALUMINUM CURTAIN WALLS

Article 1.2, Paragraph B, ADD Sub-paragraph 4 & 5 per the following:

- “4. Section 07 08 00 – COMMISSIONING OF BUILDING ASSEMBLIES for commissioning requirements related to this Section.
5. Section 08 71 00 – DOOR HARDWARE for coordination with other hardware requirements.”

ADD 5-016

SECTION 08 44 10 – GLAZED ALUMINUM CURTAIN WALLS

Page 9, Article 2.1, ADD Paragraph “E” per the following:

“E. U-Value: 0.40 U-Value.”

ADD 5-017

SECTION 08 45 23 – FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

Page 1, Article 1.2, After the words “Description of Work” ADD the following words:

“(Also known as ‘Translucent Wall Panel’ and ‘Insulated Translucent Wall Panel System’ on the drawings.)”

ADD 5-018

SECTION 08 45 23 – FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

Page 2, Article 1.3, Paragraph D, Sub-paragraph 1, DELETE the words “Limited to 1/60 of clear span” and REPLACE with “Limited to 1/120 of clear span.”

ADD 5-019

SECTION 08 45 23 – FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

Page 6, Article 2.3, Paragraph A, DELETE the words “ICBO ES AC04” and REPLACE with “AC-177.”

Page 6, Article 2.3, Paragraph A, Sub-Paragraph 10, DELETE the date “2009” AND REPLACE with “2012”

Page 6, Article 2.3, Paragraph C, Sub-Paragraph 2, REPLACE with the following:

“2. Grid Pattern: Shoji grid pattern: 8” x 20”

ADD 5-020

SECTION 08 45 23 – FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

Page 6, Article 2.4, DELETE the Article, Operable Windows, in its entirety.

ADD 5-021

SECTION 08 45 23 – FIBERGLASS-SANDWICH-PANEL ASSEMBLIES

Page 8, Article 2.6, Paragraph C, REPLACE Sub-Paragraph 1 with the following:

“1. Color and Gloss: Custom Color as selected by Architect, including vibrant and metallics.”

ADD 5-022

SECTION 08 51 13 – PROJECTED / FIXED ALUMINUM WINDOWS

ADD this Section, attached, in its Entirety.



SECTION 08 71 00 – DOOR HARDWARE

Article 8.1, DOOR HARDWARE SETS:

DELETE Hardware Sets 1 through 5 and replace with the following:

Set: 1.0

Doors: A131, S3.1

2	Continuous Hinge	By Aluminum Assembly Manufacturer		OT
1	Concealed Vert Rod Exit	By Aluminum Assembly Manufacturer		OT
1	Exit Device (nightlatch)	By Aluminum Assembly Manufacturer		OT
3	Permanent Core	Medeco X4	26	MC
2	Door Closer	UNI7500	689	NO
1	Threshold	By Aluminum Assembly Manufacturer		OT
1	Perimeter Gasketing	By Aluminum Assembly Manufacturer		OT
1	ElectroLynx Harness - Frame	QC-C1500P		MK
1	ElectroLynx Harness - Door	QC-CXXX (Size as required)		MK
1	Electric Power Transfer	EL-CEPT		SU
1	Wiring Diagram	by Security System Supplier		OT
2	Position Switch	by Security System Supplier		OT
1	Card Reader	by Security System Supplier		OT
1	Power Supply	by Security System Supplier		OT

Notes: Door closed & locked at all times. Presenting valid credential outside shunts door position switches & allows for authorized entrance. Operating inside touchpad activates request to exit switch shunting door contact and allowing authorized egress at all times. With loss of power door remains locked.

Set: 1.1

Doors: A105.1

1	Continuous Hinge	By Aluminum Assembly Manufacturer		OT
1	Exit Device (nightlatch)	By Aluminum Assembly Manufacturer		OT
2	Permanent Core	Medeco X4	26	MC
1	Door Closer	UNI7500	689	NO
	Threshold	By Aluminum Assembly Manufacturer		OT
1	Perimeter Gasketing	By Aluminum Assembly Manufacturer		OT
1	ElectroLynx Harness - Frame	QC-C1500P		MK
1	ElectroLynx Harness - Door	QC-CXXX (Size as required)		MK
1	Wiring Diagram	by Security System Supplier		OT
1	Position Switch	by Security System Supplier		OT
1	Card Reader	by Security System Supplier		OT
1	Power Supply	by Security System Supplier		OT

Notes: Door closed & locked at all times. Presenting valid credential outside shunts door position switches & allows for authorized entrance. Operating inside touchpad activates request to exit switch shunting door contact and allowing authorized egress at all times. With loss of power door remains locked.

Set: 2.0

Doors: A133.8, E114, E133, S5.2

2 Continuous Hinge	By Aluminum Assembly Manufacturer		OT
1 Concealed Vert Rod Exit	By Aluminum Assembly Manufacturer		OT
1 Exit Device (nightlatch)	By Aluminum Assembly Manufacturer		OT
3 Permanent Core	Medeco X4	26	MC
2 Door Closer	UNI7500	689	NO
1 Threshold	By Aluminum Assembly Manufacturer		OT
1 Perimeter Gasketing	By Aluminum Assembly Manufacturer		OT
1 ElectroLynx Harness - Frame	QC-C1500P		MK
1 ElectroLynx Harness - Door	QC-CXXX (Size as required)		MK
1 Wiring Diagram	by Security System Supplier		OT
1 Position Switch	by Security System Supplier		OT
1 Card Reader	by Security System Supplier		OT
1 Power Supply	by Security System Supplier		OT

Notes: Door closed & locked at all times. Presenting valid credential outside shunts door position switches & allows for authorized entrance. Operating inside touchpad activates request to exit switch shunting door contact and allowing authorized egress at all times. With loss of power door remains locked.

Set: 2.1

Doors: B157.1, B162.1

2 Continuous Hinge	By Aluminum Assembly Manufacturer		OT
1 Concealed Vert Rod Exit	By Aluminum Assembly Manufacturer		OT
1 Exit Device (nightlatch)	By Aluminum Assembly Manufacturer		OT
3 Permanent Core	Medeco X4	26	MC
1 Door Closer	UNI7500	689	NO
1 Door Operator	6060 / 6070	689	NO
1 Threshold	By Aluminum Assembly Manufacturer		OT
1 Mullion Gasketing	5110BL		PE
1 Perimeter Gasketing	by Aluminum Assembly Manufacturer		OT
2 ElectroLynx Harness - Frame	QC-C1500P		MK
2 ElectroLynx Harness - Door	QC-CXXX (Size as required)		MK
1 Wiring Diagram	by Security System Supplier		OT
2 Position Switch	by Security System Supplier		OT
2 Door Switch	501		NO
1 Card Reader	by Security System Supplier		OT
1 Power Supply	by Security System Supplier		OT



Notes: . Door closed & locked at all times. Presenting valid credential outside shunts door position switches, activates outside operator paddle & allows for authorized entrance. Operating inside touchpad or inside operator paddle shunts door contact and allows authorized egress at all times. With loss of power door remains locked.

Set: 3.0

Doors: B157.2, B157.3

2	Continuous Hinge	By Aluminum Assembly Manufacturer		OT
1	Concealed Vert Rod Exit	By Aluminum Assembly Manufacturer		OT
1	Exit Device (nightlatch)	By Aluminum Assembly Manufacturer		OT
3	Permanent Core	Medeco X4	26	MC
2	Door Closer	UNI7500	689	NO
1	Threshold	By Aluminum Assembly Manufacturer		OT
1	Perimeter Gasketing	by Aluminum Assembly Manufacturer		OT
1	ElectroLynx Harness - Frame	QC-C1500P		MK
1	ElectroLynx Harness - Door	QC-CXXX (Size as required)		MK
1	Wiring Diagram	by Security System Supplier		OT
1	Position Switch	by Security System Supplier		OT
1	Power Supply	by Security System Supplier		OT

Notes: Exit devices supplied with electric latch retraction feature to allow for remote dogging of touchpads.

Set: 4.0

Doors: B159.1, S1.2, S2.1

2	Continuous Hinge	By Aluminum Assembly Manufacturer		OT
1	Concealed Vert Rod Exit	By Aluminum Assembly Manufacturer		OT
1	Exit Device (nightlatch)	By Aluminum Assembly Manufacturer		OT
3	Permanent Core	<u>Medeco X4</u>	26	MC
2	Door Closer	<u>UNI7500</u>	689	NO
1	Threshold	By Aluminum Assembly Manufacturer		OT
1	Perimeter Gasketing	by Aluminum Assembly Manufacturer		OT
1	ElectroLynx Harness - Frame	<u>QC-C1500P</u>		MK
1	ElectroLynx Harness - Door	<u>QC-CXXX (Size as required)</u>		MK
1	Wiring Diagram	by Security System Supplier		OT
1	Position Switch	<u>by Security System Supplier</u>		OT



Set: 5.0

Doors: A101.1, C156

1	Continuous Hinge	By Aluminum Assembly Manufacturer		OT
1	Exit Device (nightlatch)	By Aluminum Assembly Manufacturer		OT
2	Permanent Core	Medeco X4	26	MC
1	Door Closer	UNI7500	689	NO
1	Threshold	By Aluminum Assembly Manufacturer		OT
1	Perimeter Gasketing	by Aluminum Assembly Manufacturer		OT
1	ElectroLynx Harness - Frame	QC-C1500P		MK
1	ElectroLynx Harness - Door	QC-CXXX (Size as required)		MK
1	Position Switch	by Security System Supplier		OT

DIVISION 10 – SPECIALTIES

ADD 5-024 Section 10 28 00 – TOILET ACCESSORIES

Page 2, Article 2.2, Paragraph A, After the first sentence ADD the following:

“In addition to where indicated on the Architectural Drawings, provide a coat hook at the following rooms: A112, A117, A123, B111, B103, B134, three at B108, C101, C102, C104, C105, C106, C107, C108, C120, C121, C125, four at C127, C145, C150, C151, C152, C153, C154, D107, D108, D109, two at D123, E148, two at F109, two at F116, B209, three at B213, two at B204, two at C209, two at C212, two at D208, two at D211, and two at E238.”

DIVISION 22 – PLUMBING

ADD 5-025 Section 22 05 03 –PIPES AND TUBES FOR PLUMBING PIPING AND EQUIPMENT

Page 5 Articles 2.1: DOMESTIC WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING: Revise as follows:

- A. Ductile Iron Pipe 4” and larger: AWWA C151 C104
 - 1. Fittings: AWWA C110, ductile iron, standard thickness.
 - 2. Joints: AWWA C111, rubber gasket with rods.
 - 3. Jackets: AWWA C105 polyethylene jacket Double layer, half lapped, 10 mil polyethylene tape.
- B. Delete Paragraph B completely.
- C. Delete Paragraph C completely.

ADD 5-026 Section 22 05 03 –PIPES AND TUBES FOR PLUMBING PIPING AND EQUIPMENT

Page 5 Articles 2.2: DOMESTIC WATER PIPING ABOVE GRADE: Revise as follows:

- B. Delete Paragraph B.
- C. 3. a. 1). Delete subparagraph completely.
- C. 3. a. 2). Delete subparagraph completely.
- C. 3. a. 3). Delete subparagraph completely.

ADD 5-027 Section 22 05 03 –PIPES AND TUBES FOR PLUMBING PIPING AND EQUIPMENT

Page 6, Article 2.5: CHEMICAL RESISTANT SEWER PIPING: Replace all paragraphs with:

- A. Acid waste piping and fittings shall be schedule 40 dimensions per ASTM F1673 and shall be of PVDF material. Fitting layouts shall conform to ASTM D3311 and ASTM F1673. The PVDF material shall conform to ASTM D3222.



B. Joining Methods:

1. No-Hub Mechanical Joint®: Pipe and fittings will be joined using the No-Hub method, utilizing all plain end fittings joined with No-Hub couplings. Each No-Hub coupling will have an outer band of 300 series stainless steel with 5/16" bolts, nuts and washers plated to meet a 100-hour salt spray test per ASTM B117. The No-Hub joint will conform to the requirements of ASTM F1673.
2. Electrofusion: The system will utilize the same plain end fittings as the No-Hub system, but are to be joined using the CF couplings. The machine will be used to produce a hermetically sealed joint. The joints will conform to ASTM 1290, Technique 1.

ADD 5-028

Section 22 15 00 –GENERAL SERVICE COMPRESSED –AIR SYSTEMS

Page 4, Article 2.1 A: COMPRESSED AIR PIPING: Delete paragraph A. completely and replace with:

- A. Steel Pipe: ASTM A53, Schedule 40 black.
 1. Fittings: ASME B16.3, malleable iron, or ASTM A234/A234M, forged steel welding type.
 2. Joints: Threaded or Pressure-Sealed for pipe 2 inch and smaller; welded for pipe 2-1/2 inches and larger.

ADD 5-029

Section 22 15 00 –GENERAL SERVICE COMPRESSED –AIR SYSTEMS

Page 7, Articles 2.10: AIR COMPRESSOR: delete paragraphs C and G:

- C. Delete subparagraph completely.
- G. Delete subparagraph completely.

DIVISION 23 – HEATING VENTILATION AND AIR CONDITIONING

ADD 5-030

Section 23 34 00 – HVAC FANS AND DUST COLLECTORS

Page 8, Article 2.9, Delete Article 2.9, Hose Reels completely and replace with:

"2.9 HOSE REEL RAIL SYSTEM

- A. Manufacturers:
 1. Plymovent HRR or approved equal as manufactured by AQC or Viking.
- B. System shall be Plymovent's Hose Reel on a Rail system (HRR) with three (3) spring recoil hose reels on a VSR Extraction Rail. System shall allow an operator to slide the hose reel to any location along the rail length. Rail shall be installed wall to wall; nominal 110' length.
- C. Provide with three (3) SER-450 hose reels with four-inch diameter hoses, thirty (30) feet long.
- D. Provide each hose reel with:
 1. Tailgate adapters: Neoprene rubber, standard size adapter.
 2. Tailgate adapters: Provide (2) extra, spare neoprene rubber adapters; (1) standard size and (1) large oval.
 3. Direct mounted switch to signal fan on-off."

ADD 5-031

Section 23 09 93 – SEQUENCE OF OPERATIONS FOR HVAC CONTROLS

Page 5, Article 3.7, at paragraph N, delete reference to VEF-2. For VEF-1 add wording: "Fan shall also be capable of starting through a wall mounted switch".

ADD 5-032

Section 23 51 00 – BREECHINGS, CHIMNEYS AND STACKS

Reissued in it's entirely. Includes changes made in Addendum No. 1 and further clarifications. The changes and clarifications correspond with Drawing M1-1-E issued in Addendum No. 1.



AMENDMENTS TO DRAWINGS

GENERAL

- ADD 5-033 INFO 1-0 – LIST OF DRAWINGS**
Drawing A6-3-10: REVISE drawing name to “TRANSLUCENT WALL PANEL / WINDOW AND LOUVER TYPES.”

ARCHITECTURAL

- ADD 5-034 A3-2-4 – WALL SECTIONS**
Section 1: ADD clarification notes on Outrigger Detail for Gymnasium Bleacher per revision Sketch RA5-03.
- ADD 5-035 A3-2-5 – WALL SECTIONS**
Section 4: ADDED Outrigger Detail for Gymnasium Bleacher per revision Sketch RA5-04.
- ADD 5-036 A6-3-10 – TRANSLUCENT WALL PANEL / WINDOW AND LOUVER TYPES**
(previously titled Translucent Wall Panel and Louver Types)
Separated the operable window portion of the Translucent Wall Panels and assigned it to the Aluminum Window System per revision tag RA5-1. Refer to Specification Section 08 51 13, Projected - Fixed Aluminum Windows, included within this Addendum. This occurs at Translucent Wall Panel/Window Types P1 through Type P10.
- ADD 5-037 A6-3-20 – TRANSLUCENT WALL PANEL AND LOUVER DETAILS**
Detail 1: Revised sill detail from Translucent Wall Panel to Window System per revision tag RA5-2.
Detail 10: ADD Detail 10, Translucent Wall Panel Sill / Window Head Detail, per revision tag RA5-2.
Detail 11: ADD Detail 11, Window Jamb Detail, per revision tag RA5-2.

STRUCTURAL

- ADD 5-038 DRAWING S1-1-1F – FOUNDATION PLAN – AREA F**
ADD “Sim.” To section designation “F1/S3-2-2” on grid “3” between “Z” and “AA.8”. Note that the precast concrete bearing wall along grid “3” is to be 1’-3” thick and the supporting concrete foundation wall where shown is to be 1’-8” thick.
- ADD 5-039 DRAWING S1-1-2A – SECOND FLOOR FRAMING PLAN – AREA A**
ADD bleacher restraint framing – refer to Sketch RS5-006.
- ADD 5-040 DRAWING S1-1-2E – SECOND FLOOR AND ROOF FRAMING PLAN – AREA E**
On the Second Floor and Roof Framing Plan Notes:
Note 1, CHANGE the top of concrete slab elevation FROM 118’-0” TO 117’-0”
For Note 2, CHANGE the top of precast elevation FROM 117’-8” TO 116’-8”
- ADD 5-041 DRAWING S1-1-2E – SECOND FLOOR AND LOW ROOF FRAMING PLAN – AREA E**
ADD section designations per Revision RS5-7.
REVISE plan notes #1 and #2 per Revision RS5-8.
ADD plan notes #14 and #15 per Revision RS5-9.



- ADD 5-042 DRAWING S1-1-3E – ROOF FRAMING PLAN – AREA E**
 REVISE two designations per Revision RS5-1.
 ADD section designations per Revision RS5-2.
 REVISE plank designations per Revision RS5-3.
 REVISE plan notes #1 and #2 per Revision RS5-4.
 ADD plan notes #10 and #11 per Revision RS5-5.
 REVISE dimensions per Revision RS5-6.
- ADD 5-043 DRAWING S1-1-3E – ROOF FRAMING PLAN – AREA E**
 On the Roof Framing Plan Notes:
 Note 1, CHANGE the top of concrete slab elevation FROM 132'-3" TO 131'-3"
 For Note 2, CHANGE the top of precast elevation FROM 131'-11" TO 130'-11"
- ADD 5-044 DRAWING S1-1-3F – ROOF FRAMING PLAN – AREA F**
 Plan notes are revised – refer to Sketch RS5-001.
- ADD 5-045 DRAWING S1-1-ME – MEZZANINE FRAMING PLAN – AREA E**
 ADD wall girts per Revision 12.
- ADD 5-046 DRAWING S1-1-MF – MEZZANINE FRAMING PLAN – AREA F**
 ADD wall girts per Revision 13.
- ADD 5-047 DRAWING S2-3-1– PRECAST WALL ELEVATIONS**
 ADD wall elevation per Revision 11.
- ADD 5-048 DRAWING S2-4-1– PRECAST BEAM AND TEE SCHEDULE**
 REVISE Schedule – refer to Sketch RS5-004.
- ADD 5-049 DRAWING S2-4-2– PRECAST PLANK SCHEDULE**
 REVISE Schedule – refer to Sketches RS5-002 and RS5-003.
- ADD 5-050 DRAWING S4-1-1– STRUCTURAL SECTIONS**
 ADD sections "S7" – refer to Sketch RS5-007.
- ADD 5-051 DRAWING S4-1-5– STRUCTURAL SECTIONS**
 REVISE sections "S1" – refer to Sketch RS5-005.
- ADD 5-052 DRAWING S4-2-1– STRUCTURAL SECTIONS**
 REVISE sections "S5" and "S6" per Revision "10".
 ADD sections "S7" and "S8" per Revision "14".

MECHANICAL

- ADD 5-053 DRAWING M1-1-MF – MEZZANINE MECHANICAL PLAN AREA F**
 Removed exhaust air ductwork and accessories related to VEF-1 and the vehicle exhaust system / hose reels located in Auto Mechanics. Added hose reel rail system to serve VEF-1 per Revision RM5-1.
- Removed exhaust air ductwork and accessories related to VEF-2 and the vehicle exhaust system / hose reels located in Auto Collision F115 per Revision RM5-2.

- ADD 5-054 DRAWING M1-2-1F – ROOF MECHANICAL PLAN AREA F**
Updated exhaust ductwork related to VEF-1 per Revision RM5-3.
Remove VEF-2 and associated ductwork and accessories per Revision RM5-4.

- ADD 5-055 DRAWING M3-1-3 – MECHANICAL SCHEDULES**
Updated data related to VEF-1 and deleted VEF-2 from Fan Schedule per Revision RM5-5

- ADD 5-056 DRAWING M5-1-3 – MECHANICAL CONTROLS**
Added high level water alarm in primary condensate drain pans for air handling units per Revision RM5-6.

- ADD 5-057 DRAWING M5-1-4 –MECHANICAL CONTROLS**
Removed controls for VEF-2 per Revision RM5-7.

ELECTRICAL

- ADD 5-058 DRAWING E2-1-1F – FIRST FLOOR ELECTRICAL POWER PLAN AREA F**
Revised power to the scissor lift (AT-02) on plans and added electrical power key note EP4 associated with power to the control console for the lift, typical of drawing E2-1-1F per Revision RE5-1.

- ADD 5-059 DRAWING E2-2-1F – ROOF ELECTRICAL POWER PLAN AREA F**
Removed VEF-2 from roof power plans per Revision RE5-2.

- ADD 5-060 DRAWING E5-1-2 – ELECTRICAL SCHEDULES**
Revised VEF-1 and removed VEF-2 within the motor circuit schedule per Revision RE5-3.

- ADD 5-061 DRAWING E5-1-3 – ELECTRICAL TRADE SHOP EQUIPMENT SCHEDULES**
Added note to remarks for item AT02 in the Laboratory + Shop Equipment Schedule – Auto Mech per Revision RE5-4.

- ADD 5-062 DRAWING E8-1-5 – ELECTRICAL PANELBOARDS**
Updated load information for VEF-1 in panelboard MEP1-1 per Revision RE5-5.
Removed VEF-2 from panelboard MEP1-1 and replaced with a spare circuit breaker per Revision RE5-6.

E N D O F A D D E N D U M N O . 5



1. GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

1. Projected out and fixed aluminum architectural windows complete with hardware, related components, and all pertinent accessories as shown on drawings and/or specified in this Section.
2. Exterior perimeter sealant and compressible back-up beads between storefront framing members and abutting dissimilar materials.
3. Operable vents, screens, and hardware within window systems.
4. Pre-finished miscellaneous or custom-formed closures, flashings, and other aluminum brake shapes in conjunction with aluminum windows.

- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:

1. Section 03 45 00 – ARCHITECTURAL PRECAST CONCRETE for embedding the PVC or plastic inserts furnished by this Section.
2. Section 05 50 00 – METAL FABRICATIONS for steel angle at head of window.
3. Section 07 08 00 COMMISSIONING OF BUILDING ASSEMBLIES.
4. Section 07 27 00 – AIR BARRIERS for membrane flashing at perimeter of aluminum windows.
5. Section 07 92 00 - JOINT SEALANTS for installation of joint sealants installed with aluminum-framed systems and for sealants to the extent not specified in this Section.
6. Section 08 41 00 – ALUMINU-FRAMED ENTRANCES AND STOREFRONTS for entrance and storefront systems.
7. Section 08 44 10 - GLAZED ALUMINUM CURTAIN WALLS for curtain-wall systems that mechanically retain glazing on four sides.

- C. Work Provided under this Section but specified elsewhere:

1. Glass units specified in Section 08 80 00 – GLAZING.

- D. Sustainable Design Intent: Comply with project requirements intended to achieve sustainable design, measured and documented according to the Connecticut Building Standard Guidelines Compliance Manual for High Performance Buildings. Refer to Section 018113, SUSTAINABLE DESIGN REQUIREMENTS for these conditions.

1.3 LABORATORY TESTING AND PERFORMANCE REQUIREMENTS

A. Test Units

1. Air, water, and structural test unit shall conform to requirements set forth in ASTM E 283, ASTM E 331, and ASTM E 330 with manufacturer's standard locking/operating hardware and glazing configuration.

2. Thermal test unit sizes shall be 24" (609.6 mm) x 60" (1524 mm). Unit shall consist of a projected vent.

B. Test Procedures and Performances

- a. Windows shall conform to all AAMA/WDMA/CSA 101/I.S.2/A440-08 requirements for the window type referenced. In addition, the following specific performance requirements shall be met.
- b. Life Cycle Testing
 - a. Test in accordance with AAMA 910. There shall be no damage to fasteners, hardware parts, support arms, activating mechanisms, or any other damage that would cause the window to be inoperable. Air infiltration and water resistance tests shall not exceed specified requirements.
- c. Air Infiltration Test
 - a. With ventilators closed and locked, test unit in accordance with ASTM E 283 at a static air pressure difference of 6.24 psf (299 Pa).
 - b. Air infiltration shall not exceed .10 cfm/SF (.50 l/s•m²) of unit.
- d. Water Resistance Test
 - a. With ventilators closed and locked, test unit in accordance with ASTM E 331/ASTM E 547 at a static air pressure difference of 12.0 psf (574 Pa).
 - b. There shall be no uncontrolled water leakage.
- e. Uniform Load Deflection Test
 - a. With ventilators closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 90.23 psf, positive and negative pressure.
 - b. No member shall deflect over L/175 of its span.
- f. Uniform Load Structural Test
 - a. With ventilators closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 135.34 psf, both positive and negative.
 - b. At conclusion of test there shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms, nor any other damage that would cause the window to be inoperable.
- g. Forced Entry Resistance
 - a. Windows shall be tested in accordance to ASTM F 588 or AAMA 1302.5 and meet the requirements of performance level 10.
- h. Condensation Resistance Test (CRF)
 - a. Test unit in accordance with AAMA 1503.1.
 - b. Condensation Resistance Factor (CRF) shall not be less than 66 (frame) when glazed with .28 center of glass U-Factor.
- i. Thermal Transmittance Test (Conductive U-Factor)
 - a. With ventilators closed and locked, test unit in accordance with NFRC 100-2010.
 - b. Conductive thermal transmittance (U-Factor) shall not be more than .45 BTU/hr•ft²•°F when glazed with .24 center of glass U-Factor.

¹U-Factor and Condensation Resistance (CR) are based on a nominal size of 59" (1500 mm) x 24" (600 mm) using NFRC-100, and 500 - 2010.

²Intercept® Spacer. ³Based on AAMA 1503.1

- C. Project Wind Loads: The window system shall be engineered and fabricated to withstand the wind pressure, both positive and negative required by the 2016 Connecticut State Building Code and FM Global. Whichever is more stringent shall apply.
 - a. Wind Pressure: Values are based on FM Global Data Sheet 1-28, Section 2.7, for use of ASCE 7-10 values modified to allowable pressures with a safety factor of 2.0. Refer to Structural drawing S0-0-1 (*modified in Addendum No. 1*).
- D. Test criteria for large missile impact per FM Global Data Sheet 1-28 requirements:
 - a. Large Missile Lever (C or D) Impact Test conducted on test units in accordance with TAS 201 or ASTM E 1886/E 1996. Upon completion of the missile impact tests, the test units shall be tested in accordance with TAS 203 or ASTM E 1996 cyclic load test.

1.4 FIELD TESTING AND PERFORMANCE REQUIREMENTS

- A. Windows shall be field tested in accordance with AAMA 502, "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors," using Test Method A.
 - 1. Test one additional window or two percent of the window installation, whichever is greater, for air infiltration and water penetration as specified.
 - 2. Testing shall be by an AAMA accredited testing agency acceptable by the Architect and window manufacturer and employed by the [Trade Contractor](#). Cost for all successful tests, both original and retest shall be paid by the [Trade Contractor](#). All unsuccessful tests, both original and retest, shall be paid by the [Trade Contractor](#). The Owner may employ his own testing agency to conduct additional tests at his own cost.
 - 3. Air infiltration field tests shall be conducted at the same uniform static test pressure as the laboratory test unit. The Maximum allowable rate of air leakage shall not exceed 1.5 times the laboratory test unit for hardware and glazing types consistent with the laboratory test unit. Performance values may be reduced due to deviations from the laboratory test unit such as product size, configuration, hardware selected, and glazing configuration. The field test air leakage rate shall not exceed 1.5 times the maximum allowable laboratory performance specified in the testing criteria listed above for any configuration.
 - 4. Water penetration field tests shall be conducted at a static test pressure of 2/3 of the laboratory test performance values for hardware and glazing types consistent with the laboratory test unit. Performance values may be reduced due to deviations from the laboratory test unit such as product size, configuration, hardware selected, and glazing variations. The field test water test pressure shall not be less than 2/3 of the minimum allowable laboratory performance specified in the testing criteria listed above for any configuration.

1.5 QUALITY ASSURANCE

- A. Provide test reports from AAMA accredited laboratories certifying the performance as specified in 1.05.

- B. Test reports shall be accompanied by the window manufacturer's letter of certification, stating the tested window meets or exceeds the referenced criteria for the appropriate window type.

1.6 REFERENCE

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Division 01 Section "References".
1. ANSI/AAMA 101-97 - Voluntary Specifications for Aluminum and Poly (Vinyl Chloride)(PVC) Prime Windows and Glass Doors.
 2. AAMA 2605 - Specification for High Performance Organic Coatings on Architectural Extrusions and Panels.
 3. AAMA 902.2 - Voluntary Specification for Sash Balances
 4. AAMA 1503.1 - Specification for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
 5. ASCA 96 - Voluntary Specification for Performance of Organic Coatings on Architectural Aluminum Curtainwall, Extrusions and Miscellaneous Aluminum Components.
 6. ASTM B209 - Aluminum and Aluminum-Alloy Sheet and Plate.
 7. ASTM B221 - Aluminum-alloy Extruded Bar, Rod, Wire, Shape, and Tube.
 8. ASTM E283 - Rate of Air Leakage through Exterior Entrance and vestibule, Curtains Walls and Doors.
 9. ASTM E330 Structural Performance of Exterior Entrance and vestibule, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
 10. ASTM E331 - Test method of Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
 11. ASTM E405 - Wear Testing Rotary Operators for Windows.
 12. FS RR-W-356 - Wire Fabric.
 13. CPSC 16 CFR 1201 - Safety Standards for Architectural Glazing Materials.
 14. 2016 Connecticut State Building Code.
 15. Connecticut Building Standard Guidelines Compliance Manual for High Performance Buildings.

1.7 SUBMITTALS

- A. Contractor shall submit shop drawings; finish samples, test reports, and warranties
1. Samples of materials as may be requested without cost to owner, i.e., metal, glass, fasteners, anchors, frame sections, mullion section, corner section, etc.
- B. An NFRC Component Modeling Approach (CMA) generated label certificate shall be provided by the manufacturer. The label certificate shall be project specific and will contain the thermal performance ratings of the manufacturer's framing combined with the specified glass, and the glass spacer used in the fabrication of the glass, at NFRC standard test size as defined in table 4-3 in NFRC 100-2010.

1.8 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of structural supports for aluminum-framed systems by field measurements before fabrication and indicate measurements on Shop Drawings.
1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating aluminum-framed systems

without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.9 WARRANTIES

- A. Warranty shall be prepared and submitted in accordance with Section 01780 – Closeout Submittals.
1. Total System Warranty: The responsible trade contractor shall assume full responsibility and warrant for two year the satisfactory performance of the total storefront system installation. This includes the glass (including insulated units), glazing, anchorage and setting system, sealing, flashing, and other similar items as it relates to air, water and structural adequacy as called for in the specifications and approved shop drawings.
 2. Glass Warranty: Glass manufacturer's 10 year written warranty covering glass against defects in materials and workmanship, including failure of seals, and replacement of the same.
 3. Finish Warranty: 20 years against deterioration of finish to an extent visible to the unaided eye.
- B. Warranty Period: Warranty period shall be commencing from the date of Substantial Completion. Any deficiencies due to such elements not meeting the specifications shall be corrected by the responsible trade contractor at his expense during the warranty period.

2. PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- a. EFCO, a Pella Company.
 - b. Kawneer North America.
 - c. Oldcastle Building Envelope.
- B. Basis of Design: Series 321X, Thermal, Impact Rated, projected out (swing-out) and fixed windows as manufactured by EFCO Corp.

2.2 MATERIALS

- A. Aluminum:
1. Extruded aluminum shall be 6063-T6 alloy and tempered.
- B. Glass
1. Insulating-Glass Units: Provide insulating glass units as indicated on drawings and described in Section 088000 – GLAZING.
- C. Weather Stripping:
1. Provide two rows of compression type full-perimeter weather stripping for each operable sash and ventilator; of neoprene / EPDM alloy or santoprene.

- D. Hardware: Provide the following operating hardware:
1. Window-Operating Hardware: Cam-Type Operators that has meet Impact Testing. Wickets as required to access hardware.
 - a. As selected by Architect from manufacturer's full range of types and styles.
 - b. Limiter: Include devices to limit opening size to less than 4 inches.
 2. Hinges: Concealed four- or six-bar friction hinges located on each jamb near top rail; two per ventilator.
 3. Insect Screens: Provide removable insect screen on each operable exterior sash, with screen frame finished to match window unit, complying with SMA 1004 or SMA 1201, and as follows:
 - a. Aluminum Wire Fabric: 18-by-18 mesh of 0.013-inch- (0.3-mm-) diameter, coated aluminum wire.
- E. Thermal Barrier:
1. All exterior aluminum shall be separated from interior aluminum by a rigid, structural thermal barrier. For the purposes of this specification, a structural thermal barrier is defined as a system that shall transfer shear during bending and, therefore, promote composite action between the exterior and interior extrusions.
 2. The thermal barrier shall be thermal struts, consisting of glass reinforced polyamide nylon, mechanically crimped in raceways extruded in the exterior and interior extrusions.
 3. The intermediate rails shall be poured and debridged thermal barrier made of two-part polyurethane.
- F. PVC or Plastic inserts: As recommended by Manufacturer for precast architectural concrete application.

2.3 SEALANT

- A. Sealant and backing materials.
1. Sealant used within system: As recommended by manufacturer.
 2. Exterior Perimeter Sealant: Multi-component gun-grade polyurethane sealant Low modulus type, non-sagging, conforming to FS TT-S-000227E, Type II, Class A, and ASTM C 920, Type M, Class 25, Grade NS, use NT, M, A and O with a minimum movement capability of ± 50 percent, equal to the following:
 - a. Mameco International, Inc., product "Vulkem 922".
 - b. Sonneborn Building Products Inc., Minneapolis MN.; product, "Sonolastic NP2".
 - c. Tremco, Beachwood OH.; product, "Dymeric".
 - d. Pecora Corporation, Harleysville PA.; product "Dynatrol II".
 3. Compressible joint bead back-up: Compressible closed cell polyethylene, extruded polyolefin foam or polyurethane foam rod, 1/3 greater in diameter than width of joint. Provide one of the following, or equal:
 - a. Sonneborn Building Products Inc., Minneapolis MN.; product "Sonofoam".
 - b. Applied Extrusion Technologies, Inc., Middletown DE., product "Sof Rod".
 4. Primers: Furnish and install joint primers of the types, and to the extent,

recommended by the respective sealant manufacturers for the specific joint materials and joint function.

5. Bond-breaker tape, and temporary masking tape: Of types as recommended by the manufacturer of the specific sealant and caulking material used at each application, and completely free from contaminants which would adversely affect the sealant and caulking materials.
6. Concealed Butyl Sealant: At concealed interface locations between storefront system and air & vapor barrier system as indicated on Drawing, butyl rubber sealant equal to "201" as manufactured by Inland Inc. shall be used.
 - a. Multi-purpose, waterproof and weather resistant rubber based sealant that cures using a solvent release system.
 - b. Withstand joint movement of +/-10% without loss of water tightness.
 - c. Remains soft and pliable, "self-healing" when cut.
 - d. Conforms with federal specification TT-S-001657 and ASTM C1085.
7. Exterior perimeter sealants for transitions between Aluminum Framing and Air/Vapor Barrier System shall be compatible with Air and Vapor Barrier System.

2.4 FABRICATION

A. General

1. All aluminum frame and vent extrusions shall have a minimum wall thickness of 0.125 (3mm).
2. Depth of frame and vents shall not be less than 3 1/4" deep.
3. Mechanical fasteners, welded components, and hardware items shall not bridge thermal barriers. Thermal barriers shall align at all frame and vent corners

B. Frame

1. Frame components shall be mortise and tenon. Other means of mechanically fastening, i.e. screws shall not be permitted.

2.5 ALUMINUM FINISHES

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- C. High-Performance Organic Finish (3-Coat Fluoropolymer): AA-C12C40R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: conversion coating; Organic Coating: manufacturer's standard 3-coat, thermocured system consisting of specially formulated inhibitive primer, fluoropolymer color coat, and clear fluoropolymer topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with AAMA 2605 and with coating and resin manufacturers' written instructions.
 1. Color: Prior to fabrication, obtain Architect's approval on color sample. Color shall be selected by Architect during Submittal Procedures from PPG Duranar XL Coating group (3-coat system: primer, color & clear coat).
 - a. Metallic color.

3. EXECUTION

3.1 INSPECTION

A. Inspect all rough openings and surfaces and verify that they are in proper condition to receive the work of this Section. Beginning of installation means acceptance of project conditions.

1. Verify wall openings and adjoining air and vapor seal materials are ready to receive work of this Section.
2. Before proceeding with installation work, inspect all project conditions and all work of other trades to assure that all such conditions and work are suitable to satisfactorily receive the work of this Section and notify the Contractor in writing of any which are not. Do not proceed further until corrective work has been completed.

3.2 INSTALLATION

A. Use only skilled tradesmen with work done in accordance with approved shop drawings and specifications.

B. Windows shall be securely anchored in place to a straight, plumb and level condition, without distortion. Weather stripping contact and hardware movement shall be checked, and final adjustments made for proper operation and performance of units.

C. Apply sealing materials to provide a weather tight installation at all joints within the window system and at the exterior opening perimeters.

D. Sealing materials specified shall be used in strict accordance with the manufacturer's printed instructions and shall be applied only by mechanics specially trained or experienced in their use. All surfaces must be clean and free of foreign matter before applying sealing materials. Sealing compounds shall be tooled to fill the joint and provide a smooth finished surface.

3.3 ANCHORAGE

A. Adequately anchor to maintain positions permanently when subjected to normal thermal movement, specified building movement, and specified wind loads.

3.4 FIELD QUALITY CONTROL

A. The work of this Section is subject to full building commissioning testing performed by the Owner's Commissioning Agent. Sub-contractor shall cooperate and coordinate with the Commissioning Agent in acquiring required test data. Refer to Section 07 08 00 COMMISSIONING OF BUILDING ASSEMBLIES.

B. Testing and inspecting of representative areas to determine compliance of installed systems with specified requirements. Do not proceed with installation of the next area until test results for previously completed areas show compliance with requirements.

C. Repair or remove work where test results and inspections indicate that it does not comply with specified requirements.

D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.5 PROTECTION AND CLEANING

A. Clean all window system promptly after installation, exercising care to avoid damage. Thoroughly clean all metal and glass surfaces free from dirt, handling marks, packing tapes, and foreign matter; remove excess sealant. Remove labels from glass surfaces, and clean and polish same.

B. Touch-up all scratches, abrasions, and other defects in the prefinished metal surfaces with shop-coat finish material, supplied with the various items to be furnished hereunder.

C. Sub-Contractor shall advise the Installer of protective treatment and other precautions required by him through the remainder of construction to ensure that the work of this Section will be without damage or deterioration at the time of Substantial Completion of the Contract.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Breeching and vents.
 2. Combustion air intake.
 3. Breeching and vents for boilers and water heaters.
 4. Combustion air intake piping for boilers and water heaters.
 5. Breeching and vents and induced draft fans for appliances and equipment at the Plumbing Shop and HVAC Shop (Addendum No. 1).
 6. Breeching and vents for fuel fired heaters.
- B. Related Sections:
1. Section 23 04 00 – General Conditions for Mechanical Trades
 2. Section 22 34 00 - Fuel-Fired Domestic Water Heaters: Water heaters using breeching, chimneys, and stacks.
 3. Section 23 52 32 – Condensing Boilers

1.2 REFERENCES

- A. American National Standards Institute:
1. ANSI Z21.66 - Automatic Vent Damper Devices for Use with Gas-Fired Appliances.
 2. ANSI Z21.67 - Mechanically Actuated Automatic Vent Damper Device.
 3. ANSI Z21.68 - Thermatically Actuated Automatic Vent Damper Devices.
 4. ANSI Z95.1 - Oil Burning Equipment, Installation.
- B. ASTM International:
1. ASTM A240/A240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
 2. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 3. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 4. A1011/A1011M-07 Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength
 5. ASTM C401 - Standard Classification of Alumina and Alumina-Silicate Castable Refractories.
- C. National Fire Protection Association:
1. NFPA 31 - Standard for the Installation of Oil-Burning Equipment.
 2. NFPA 54 - National Fuel Gas Code.
 3. NFPA 82 - Standard on Incinerators and Waste and Linen Handling Systems and Equipment.
 4. NFPA 211 - Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances.
- D. Sheet Metal and Air Conditioning Contractors:
1. SMACNA - Guide for Steel Stack Construction.
 2. SMACNA - HVAC Duct Construction Standard - Metal and Flexible.
- E. Underwriters Laboratories Inc.:
1. UL 103 - Factory-Built Chimneys for Residential Type and Building Heating Appliances.
 2. UL 127 - Factory-Built Fireplaces.
 3. UL 378 - Draft Equipment.
 4. UL 441 - Gas Vents.
 5. UL 641 - Type L Low-Temperature Venting Systems.
 6. UL 959 - Medium Heat Appliance Factory Built Chimneys.

1.3 DEFINITIONS

- A. Breeching: Vent Connector.
- B. Chimney: Primarily vertical shaft enclosing at least one vent for conducting flue gases outdoors.
- C. Smoke Pipe: Round, single wall vent connector.
- D. Vent: Portion of a venting system designed to convey flue gases directly outdoors from a vent connector or from an appliance when a vent connector is not used.
- E. Vent Connector: Part of a venting system that conducts the flue gases from the flue collar of an appliance to a chimney or vent, and may include a draft control device.

1.4 DESIGN REQUIREMENTS

- A. Design stacks above the roof for per local wind loading velocities

1.5 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittals procedures.
- B. Shop Drawings: Indicate general construction, dimensions, weights, support and layout of breeching. Submit layout drawings indicating plan view and elevations
- C. Product Data: Submit data indicating factory built chimneys, including dimensional details of components and flue caps, dimensions and weights, electrical characteristics and connection requirements.
- D. Calculations: Submit flue vent calculations based upon submitted product data and shop drawings.
- E. Product Data: Submit data on fans and accessories including fan curves with specified operating point plotted, power, RPM, and electrical characteristics and connection requirements.
- F. Manufacturer's Installation Instructions: Submit assembly, support details, and connection requirements.

1.6 QUALITY ASSURANCE

- A. Provide factory built vents and chimneys used for venting natural draft appliances complying with NFPA 211 for fuel fired and NFPA 54 for gas fires and UL listed and labeled.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years documented experience approved by manufacturer.

1.8 PRE-INSTALLATION MEETINGS

- A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum two weeks prior to commencing work of this section.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements.
- B. Maintain water integrity of roof during and after installation of chimney or vent.

1.10 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.11 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.

PART 2 PRODUCTS

2.1 CENTRAL BOILER ROOM: FLUE VENTS FOR BOILERS B-1, B-2 and B-3 AND WATER HEATERS WH-1 and WH-2 SERVING THE BUILDING. **These are the flue vents serving the boilers and water heaters shown in the Boiler Room on Drawing M2-3-1A. (Addendum No. 5)**

- A. Manufacturers:
 - 1. Metal-Fab Inc. Model Corr/Guard
 - 2. Other acceptable manufacturers offering equivalent products.
 - a. Metalbestos
 - b. CB Exhaust Solutions.
- B. Flue shall be positive pressure, double wall metal stack, UL 1738 listed for a high efficiency, condensing, Category IV boiler.
- C. Fabricate with 1 inch (25 mm) annular space. Inner wall shall be constructed of AL29-4C, minimum.015" thickness. Outer wall shall be constructed of Type 304 stainless steel, minimum.018" thickness
- D. Accessories, UL labeled:
 - 1. Ventilated Wall Thimble: Consists of wall penetration, vent flashing with spacers and storm collar.
 - 2. Stack Cap: Consists of conical rainshield with inverted cone for partial rain protection with low flow resistance.
 - 3. Fittings: Elbows, wyes, expansion sections, barometric dampers, and accessories as required for a complete installation.
 - 4. Joints: Seal with sealant as recommended by manufacturer.

2.2 PLUMBING SHOP AND HVAC SHOP: FLUE VENTS FOR ALL APPLIANCES SERVED BY INDUCED DRAFT FANS IDF-2 AND IDF-3 (Addendum No. 1). **These are the flue vents serving the appliances as identified on the floor plans as by served by IDF-2 and IDF-3 on Drawing M1-1-1E. (Addendum No. 5)**

- A. Manufacturers:
 - 1. Metal-Fab Inc. Model I PIC
 - 2. Other acceptable manufacturers offering equivalent products.
 - a. Metalbestos
 - b. CB Exhaust Solutions
 - c. Cheminee.
 - d. Security Chimneys International.
- B. Flue shall be positive pressure, double wall metal stack, tested to UL 103 and UL listed for use with building heating equipment, in compliance with NFPA.

- C. Fabricate with 1 inch minimum mineral wool insulation between walls. Construct inner jacket of minimum .035" thick Type 304 stainless steel. Construct outer jacket of minimum .025" thick aluminized steel.
- D. Accessories, UL labeled:
 - 1. Ventilated Roof Thimble: Consists of roof penetration, vent flashing with spacers and storm collar.
 - 2. Stack Cap: Consists of conical rainshield with inverted cone for partial rain protection with low flow resistance.
 - 3. Fittings: Elbows, wyes, expansion sections, barometric dampers, and accessories as required for a complete installation.
 - 4. Joints: Seal with sealant as recommended by manufacturer.

2.3 PLUMBING SHOP: FLUE VENTS FOR ALL APPLIANCES SERVED BY INDUCED DRAFT FAN IDF-1 (Addendum No. 1). These are the flue vents serving the appliances as identified on the floor plans as by served by IDF-1 on Drawing M1-1-1E. (Addendum No. 5).

- A. Manufacturers:
 - 1. Metal-Fab Inc. Model Corr/Guard
 - 2. Other acceptable manufacturers offering equivalent products.
 - a. Metalbestos
 - b. CB Exhaust Solutions.
- B. Flue shall be positive pressure, double wall metal stack, UL 1738 listed for a high efficiency, condensing, Category IV boiler.
- C. Fabricate with 1 inch (25 mm) annular space. Inner wall shall be constructed of AL29-4C, minimum.015" thickness. Outer wall shall be constructed of Type 304 stainless steel, minimum.018" thickness
- D. Accessories, UL labeled:
 - 1. Ventilated Wall Thimble: Consists of wall penetration, vent flashing with spacers and storm collar.
 - 2. Stack Cap: Consists of conical rainshield with inverted cone for partial rain protection with low flow resistance.
 - 3. Fittings: Elbows, wyes, expansion sections, barometric dampers, and accessories as required for a complete installation.
 - 4. Joints: Seal with sealant as recommended by manufacturer.

2.4 PLUMBING SHOP AND HVAC SHOP: FLUE VENTS AND COMBUSTION AIR INTAKE FOR CONDENSING APPLIANCES. These are the flue vents and combustion air intakes serving appliances as identified on the floor plans as "flues by serving condensing appliances" but not flues served by an IDF (Addendum No. 5).

- A. PVC Pipe: ASTM D1785, Schedule 40, polyvinyl chloride (PVC) material.
 - 1. Fittings: ASTM D2466, Schedule 40, PVC.
 - 2. Joints: ASTM D2855, solvent weld with ASTM D2564 solvent cement. Prime joints with a contrasting color.

2.5 FLUE VENTS (DOUBLE WALL; INSULATED) FOR GAS FIRED INFRA-RED HEATERS

- A. Manufacturers:
 - 1. Metal-Fab Inc. Model I PIC
 - 2. Other acceptable manufacturers offering equivalent products.
 - a. Metalbestos
 - b. CB Exhaust Solutions
 - c. Cheminee.
 - d. Security Chimneys International.
- B. Flue shall be positive pressure, double wall metal stack, tested to UL 103 and UL listed for use with building heating equipment, in compliance with NFPA.

- C. Fabricate with 1 inch minimum mineral wool insulation between walls. Construct inner jacket of minimum .035" thick Type 304 stainless steel. Construct outer jacket of minimum .025" thick aluminized steel.
- D. Accessories, UL labeled:
 - 1. Ventilated Roof Thimble: Consists of roof penetration, vent flashing with spacers and storm collar.
 - 2. Stack Cap: Consists of conical rainshield with inverted cone for partial rain protection with low flow resistance.
 - 3. Fittings: Elbows, wyes, expansion sections, barometric dampers, and accessories as required for a complete installation.
 - 4. Joints: Seal with sealant as recommended by manufacturer.

2.6 COMBUSTION AIR INTAKE PIPING UNLESS NOTED OTHERWISE ABOVE

- A. Galvanized steel: Refer to Spec Section 23 3100.

2.7 INDUCED DRAFT FANS

- A. Manufacturers:
 - 1. ENERVEX
 - 2. Other acceptable manufacturers offering equivalent products.
 - a. Tjerlund.
 - b. Twin City Fan
- B. Fans shall be designed to be part of a chimney – flue stack system.
- C. Where fan is top vertical discharge, fan shall be hinged to allow access to the stack.
- D. Induced draft fans shall be provided with motors with thermal overload protection, disconnect switch, modulating draft control, relay modules, duct adapters and balancing baffles at each branch.
- E. Induced draft fan control panel shall include the following components:
 - 1. Fan speed control through integral VFD.
 - 2. LCD display
 - 3. BACNET interface
 - 4. Appliance interlock shutdown.
 - 5. Stack probe sensors
 - 6. Outdoor air sensor.
 - 7. 120 volt / 1 phase power.
 - 8. **Balancing dampers at each branch to individual appliances. (Addendum No. 1).**

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install in accordance with NFPA AND SMACNA Guide for Steel Stack Construction.
- B. Install breeching with minimum of joints. Align accurately at connections, with internal surfaces smooth.
- C. Support breeching from building structure, rigidly with suitable ties, braces, hangers and anchors to hold to shape and prevent buckling. Support vertical breeching, chimneys, and stacks at 12 foot spacing, to adjacent structural surfaces, or at floor penetrations. Refer to SMACNA HVAC Duct Construction Standards - Metal and Flexible for equivalent duct support configuration and size.
- D. Pitch breeching with positive slope up from fuel-fired equipment to chimney or stack.
- E. Coordinate installation of dampers and clean-outs.

- F. Maximum Vent Horizontal Distance: 75 percent of vent vertical distance.
- G. Where appliance requires draft hood or barometric control device, install manufacturer furnished listed devices in accordance with manufacturer's instructions and applicable code.
- H. Install vent dampers, locating close to draft hood collar, and secured to breeching.
- I. Level and plumb chimney and stacks.
- J. Clean breeching, chimneys, and stacks during installation, removing dust and debris.
- K. Install slip joints allowing removal of appliances without removal or dismantling of breeching, breeching insulation, chimneys, or stacks.
- L. At appliances, provide slip joints permitting removal of appliances without removal or dismantling of breeching, breeching insulation, chimneys, or stacks
- M. Provide minimum length of breeching to connect appliance to chimney.
- N. Extend vent above roof in accordance with applicable code.

END OF SECTION 23 51 00

**ADDITIONS AND RENOVATIONS
PLATT TECHNICAL HIGH SCHOOL**

Revision to Wall Section 1/A3-2-4

**Addendum
No. 5**

RA5-03

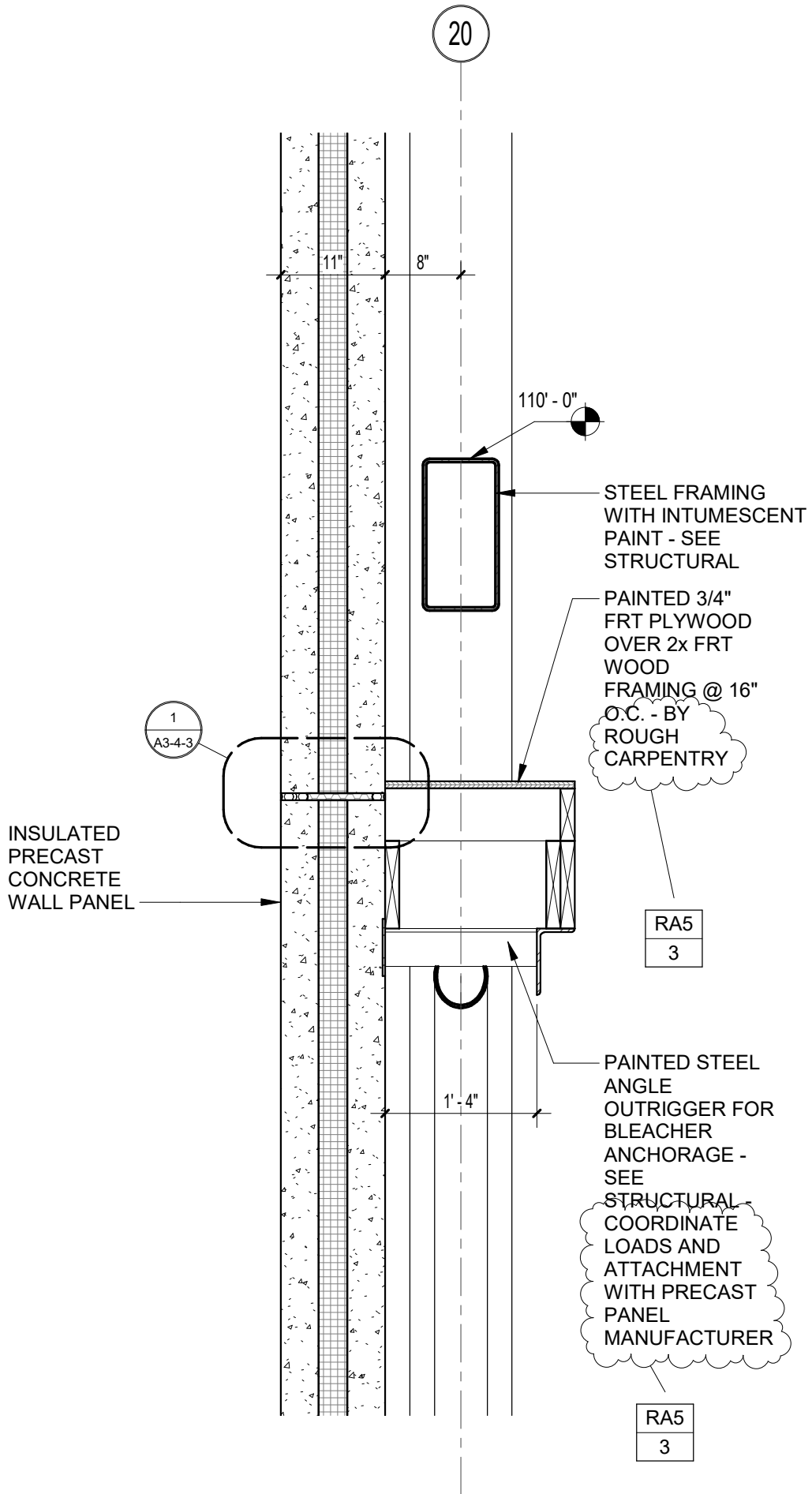
REF. DWG No.
Author

DCS Project No.
BI-RT-878 CM-R

OSCGR Project No.
900-0013

Scale: 3/4" = 1'-0"

Date: 08/15/2019



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**ADDITIONS AND RENOVATIONS
PLATT TECHNICAL HIGH SCHOOL**

Revision to Wall Section 4/A3-2-5

**Addendum
No. 5**

RA5-04

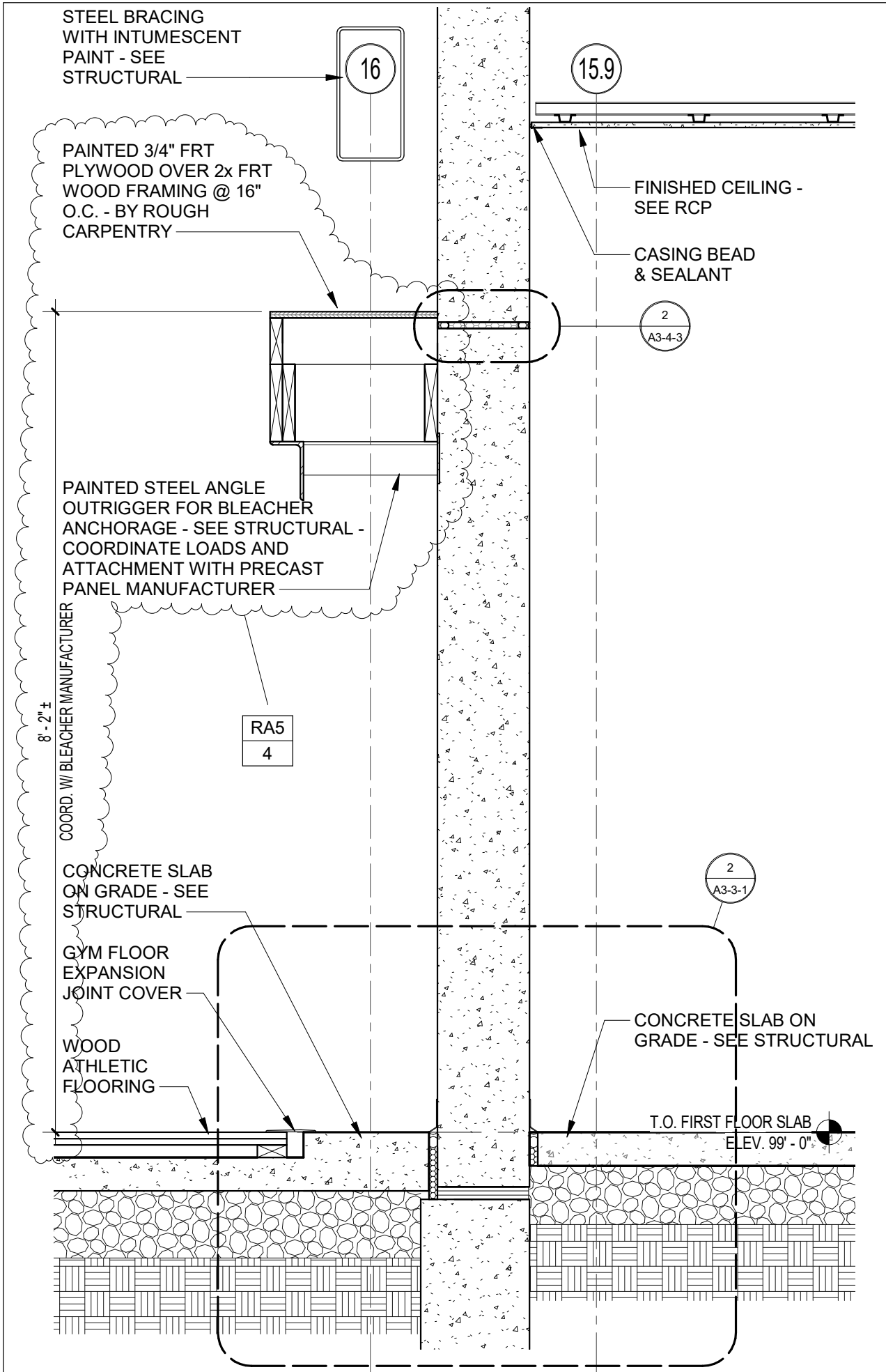
REF. DWG No.
Author

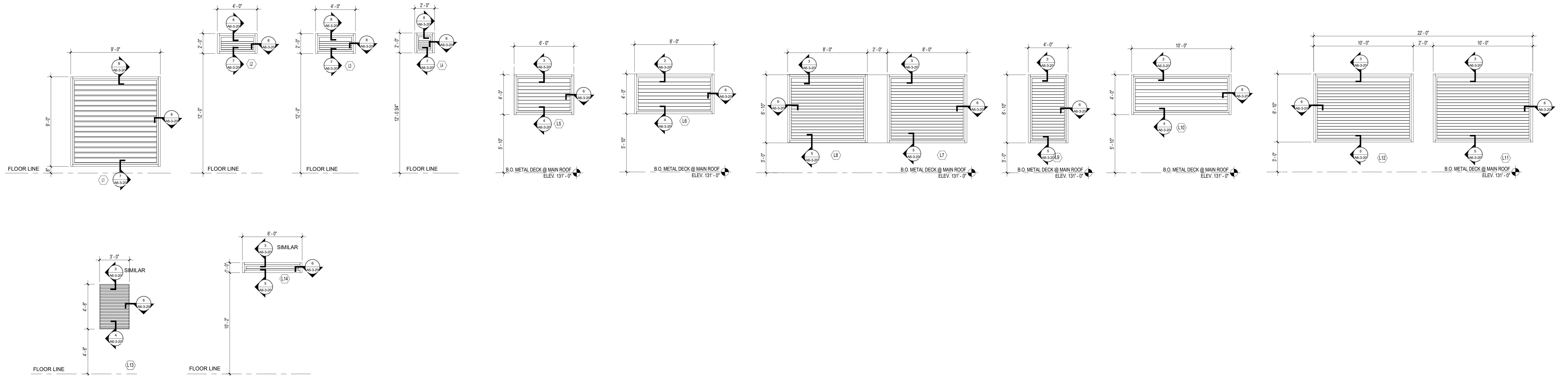
DCS Project No.
BI-RT-878 CM-R

OSCGR Project No.
900-0013

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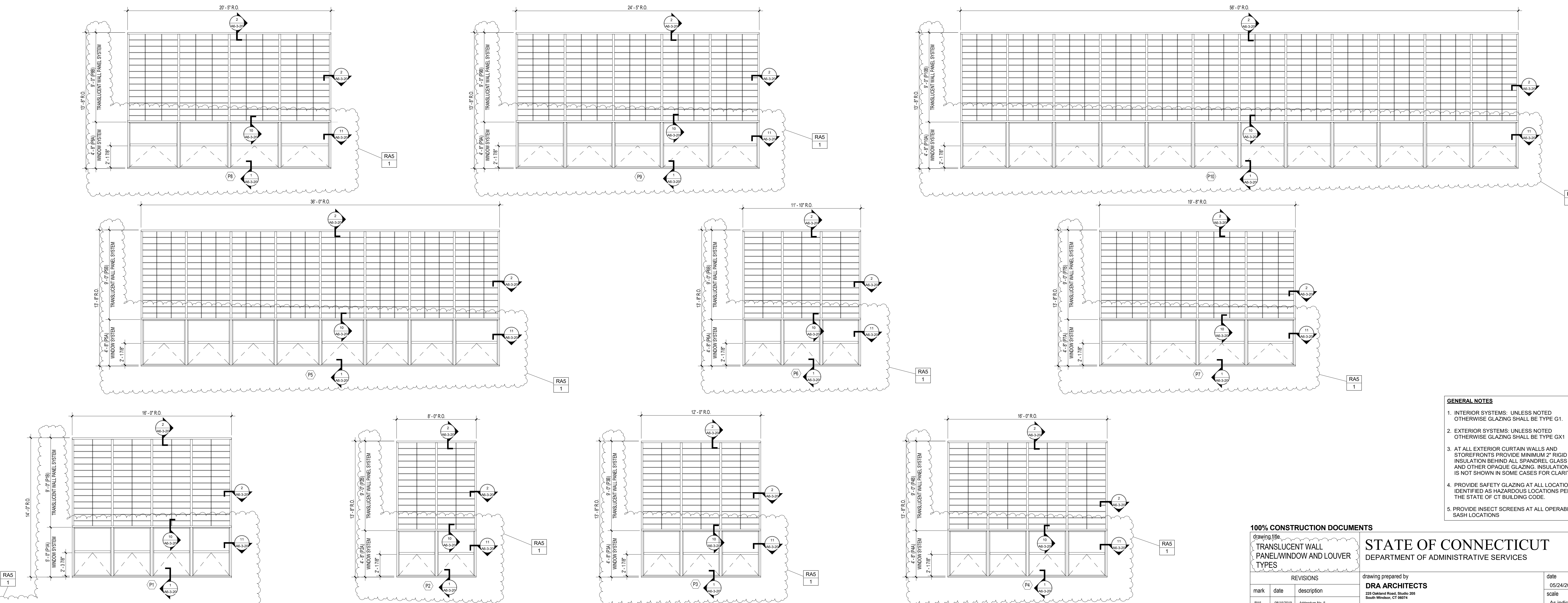
Date: 08/15/2019





2 LOUVER TYPES

1/4" = 1'-0"



1 TRANSLUCENT WALL PANEL/WINDOW TYPES

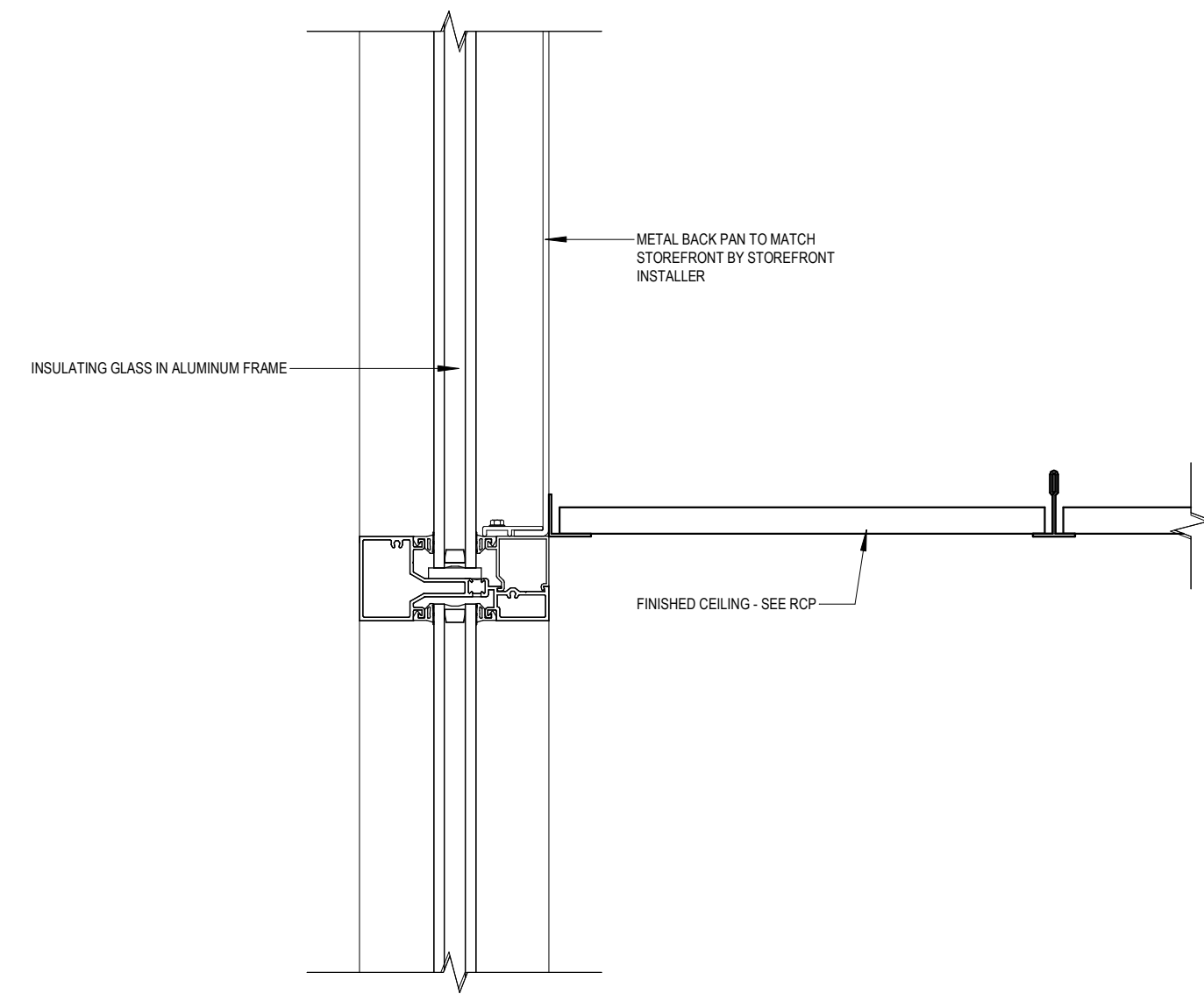
1/4" = 1'-0"

- GENERAL NOTES**
1. INTERIOR SYSTEMS, UNLESS NOTED OTHERWISE SHALL BE TYPE G1.
 2. EXTERIOR SYSTEMS, UNLESS NOTED OTHERWISE SHALL BE TYPE GX1
 3. AT ALL EXTERIOR CURTAIN WALLS AND STOREFRONTS PROVIDE MINIMUM 2" RIGID INSULATION BEHIND ALL SPANDREL GLASS AND OTHER OPAQUE GLAZING. INSULATION IS NOT SHOWN IN SOME CASES FOR CLARITY.
 4. PROVIDE SAFETY GLAZING AT ALL LOCATIONS IDENTIFIED AS HAZARDOUS LOCATIONS PER THE STATE OF CT BUILDING CODE.
 5. PROVIDE INSECT SCREENS AT ALL OPERABLE SASH LOCATIONS

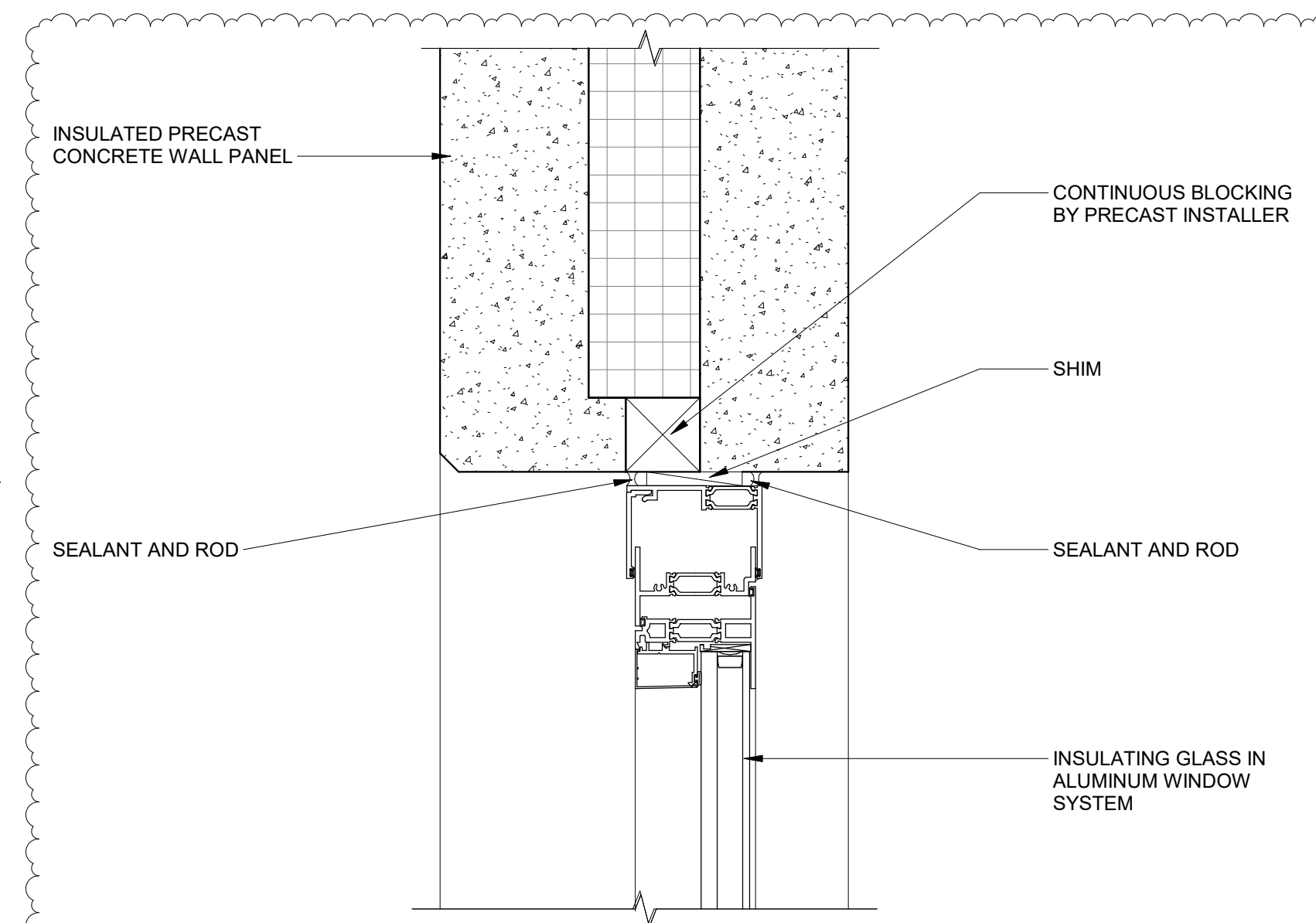
REVISIONS		date
mark	description	
RAS	08/15/2019 Addendum No. 5	

drawing title TRANSLUCENT WALL PANEL/WINDOW AND LOUVER TYPES		date 05/24/2019
drawing no. A6-3-10		scale As Indicated
author		drawn by
approved by		approved by
drawing no.		drawing no.

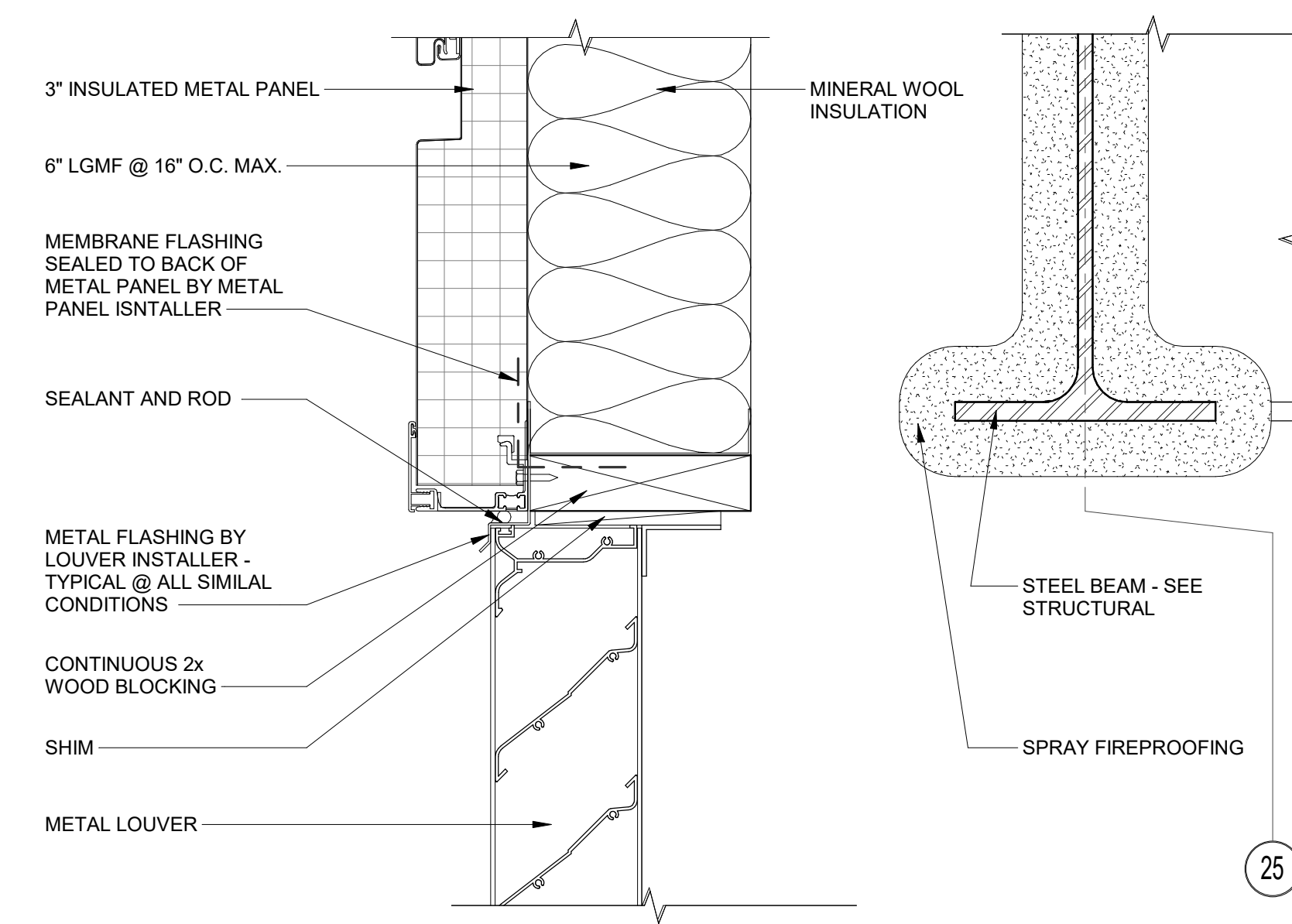
drawing title STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES		
drawing prepared by DRA ARCHITECTS 320 Colburn Road, Ste 200 South Windsor, CT 06074		
project Renovations & Additions to Platt Technical High School 600 Orange Avenue, Milford, CT 06461	CAD no. DCS project no. B1-RF-076 CM-R	OSGCR project no. 900-0013



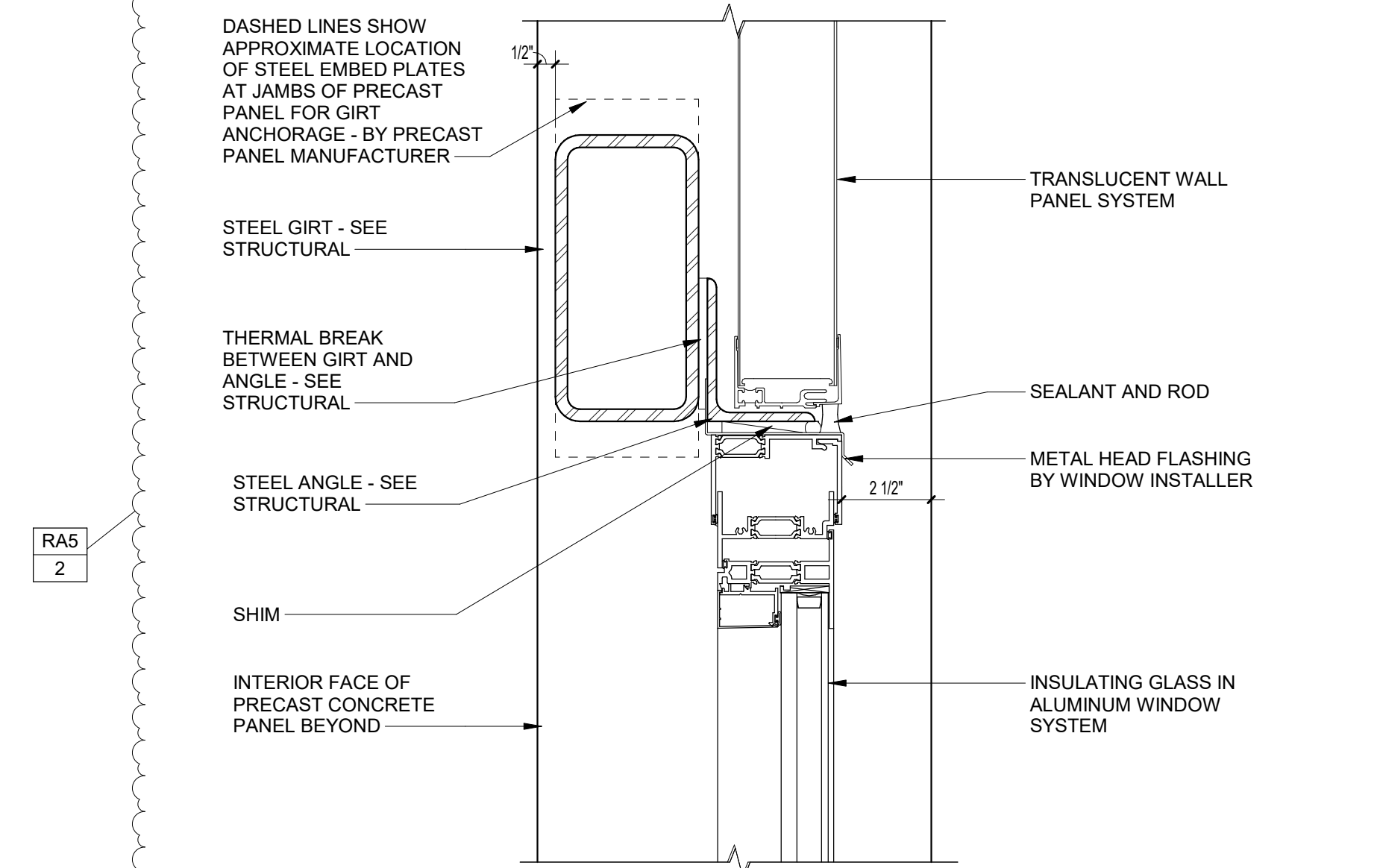
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3" = 1'-0"



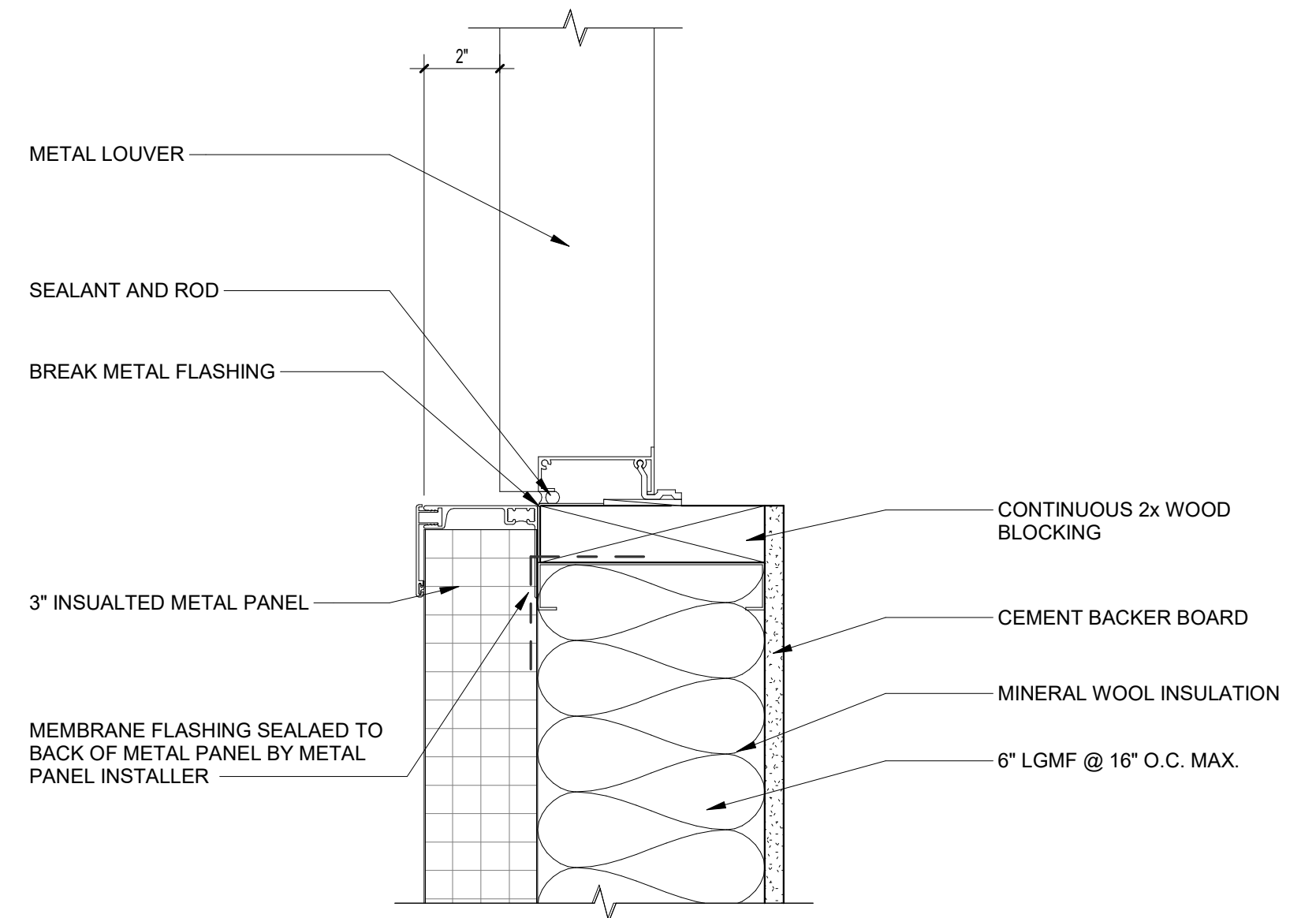
11 WINDOW JAMB DETAIL
3" = 1'-0"



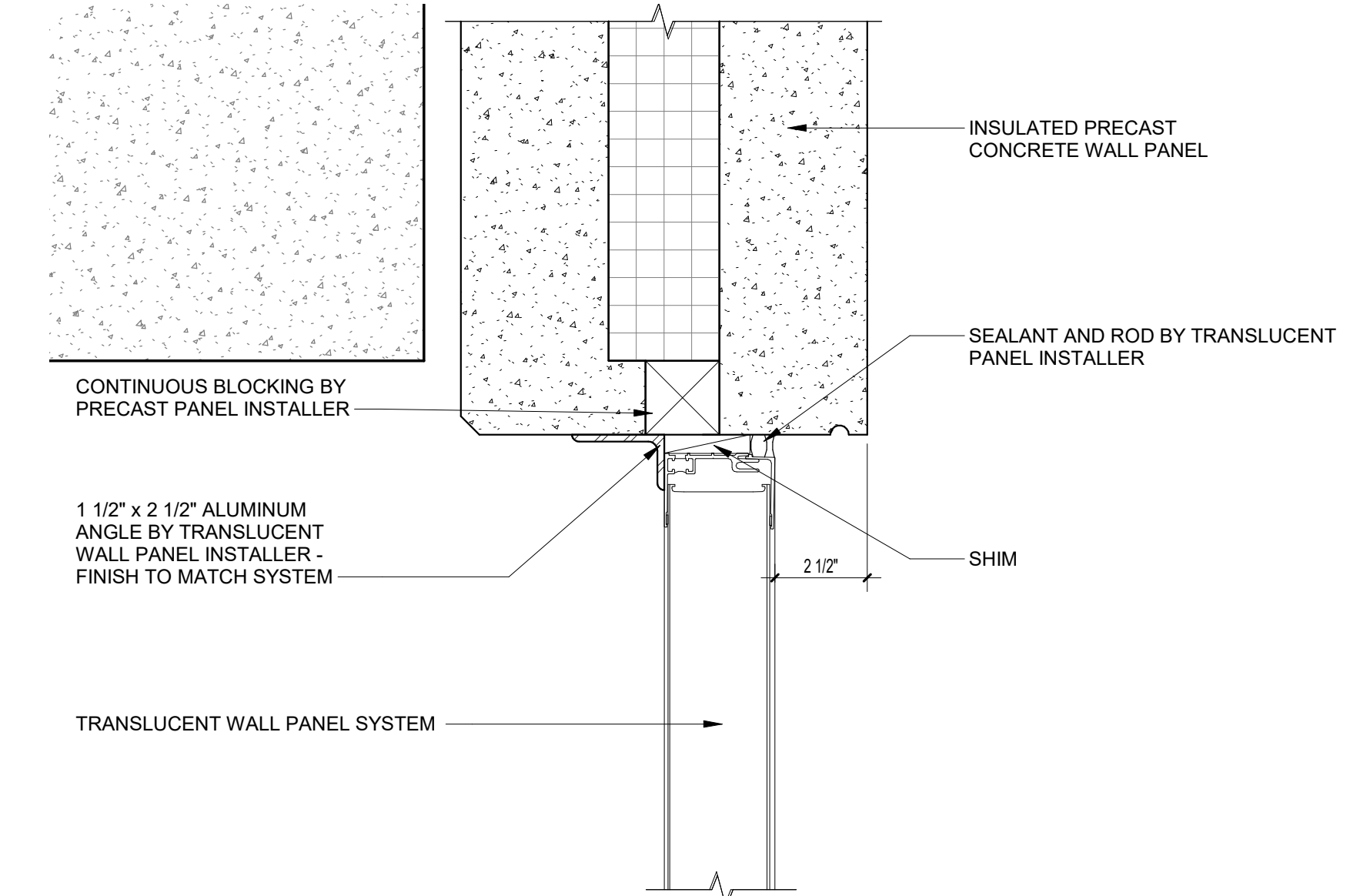
3 LOUVER HEAD DETAIL
3" = 1'-0"



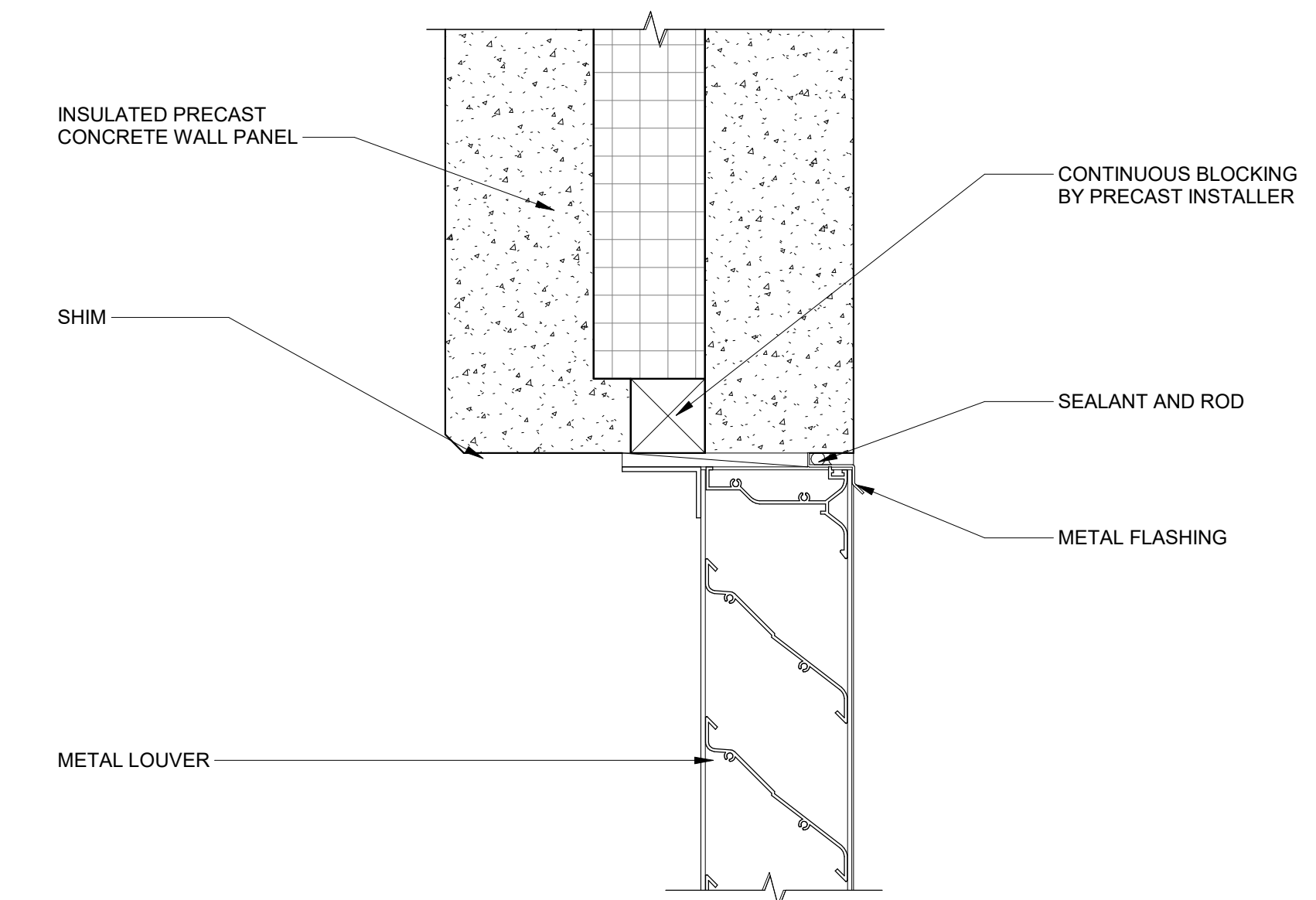
10 TRANSLUCENT WALL PANEL SILL/WINDOW HEAD DETAIL
3" = 1'-0"



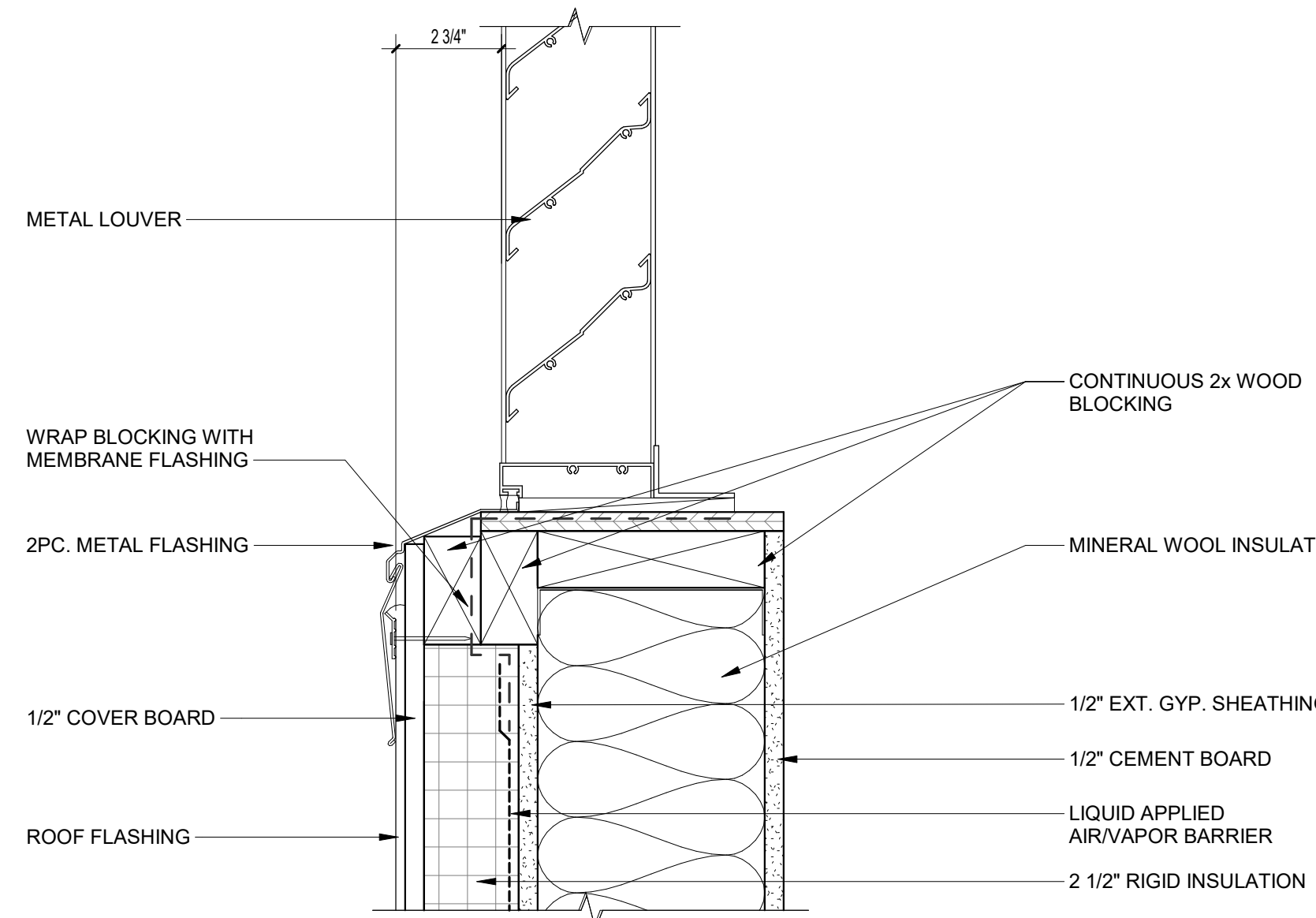
6 LOUVER JAMB DETAIL
3" = 1'-0"



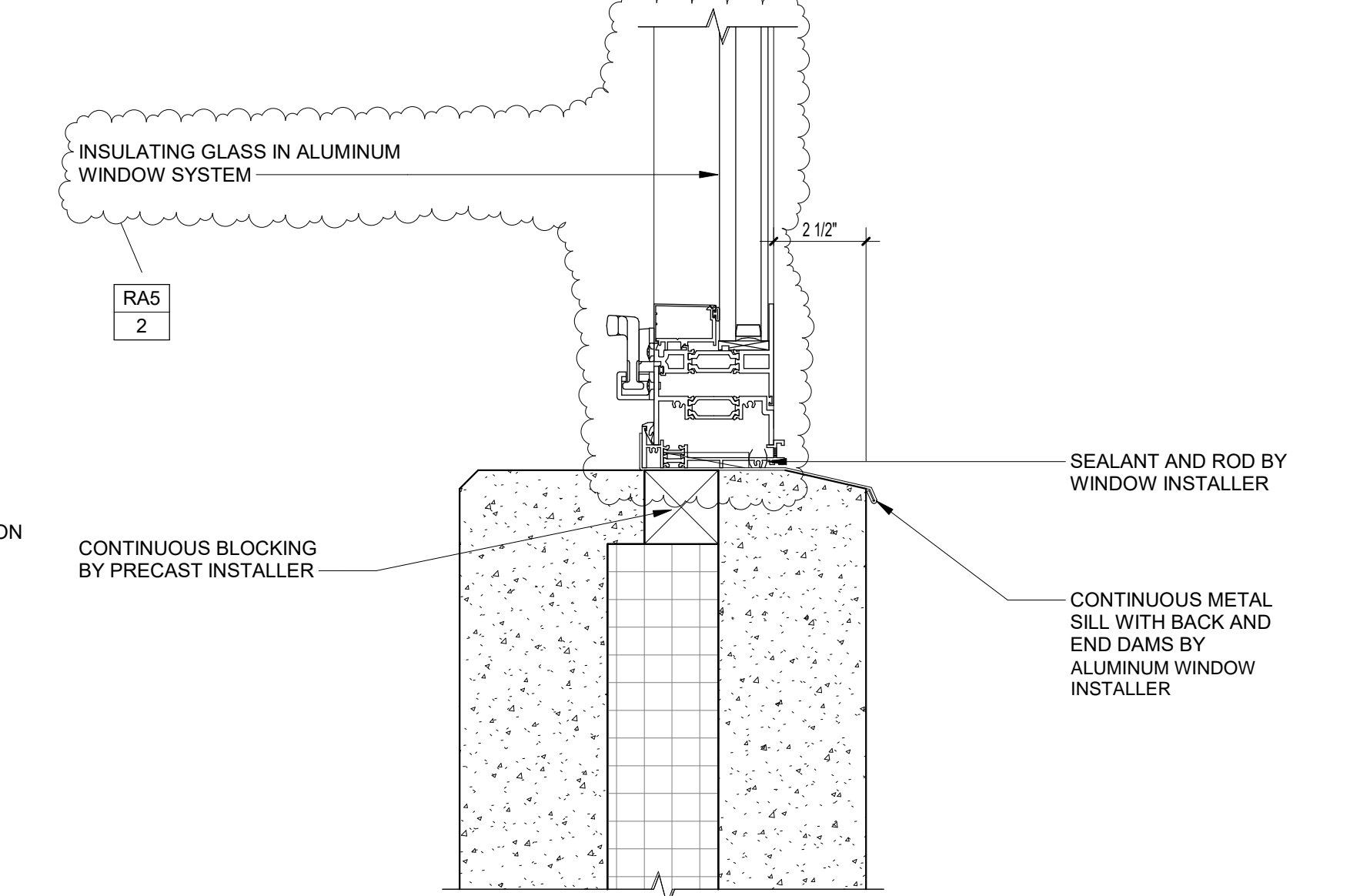
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3" = 1'-0"



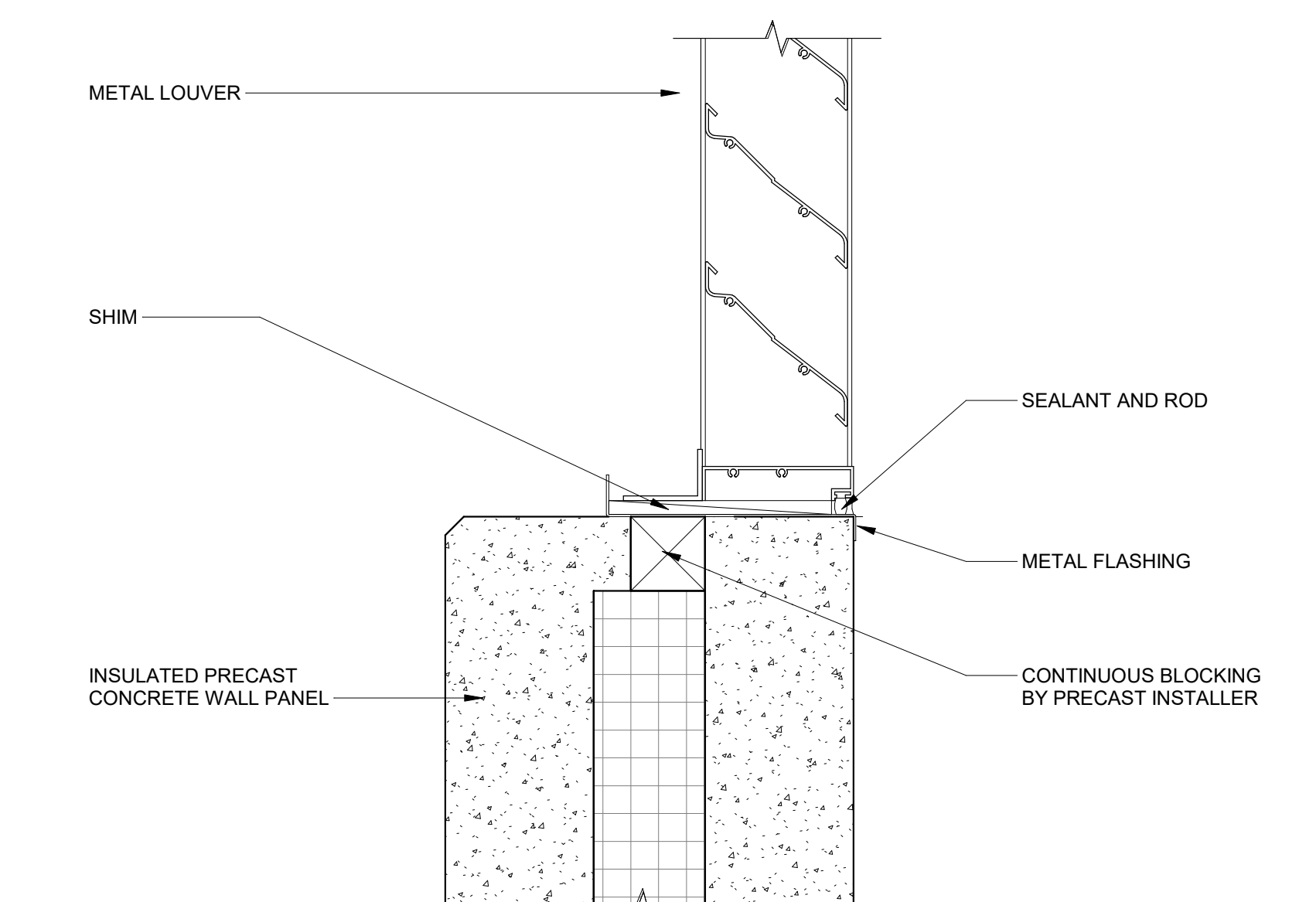
8 LOUVER HEAD/JAMB DETAIL
3" = 1'-0"



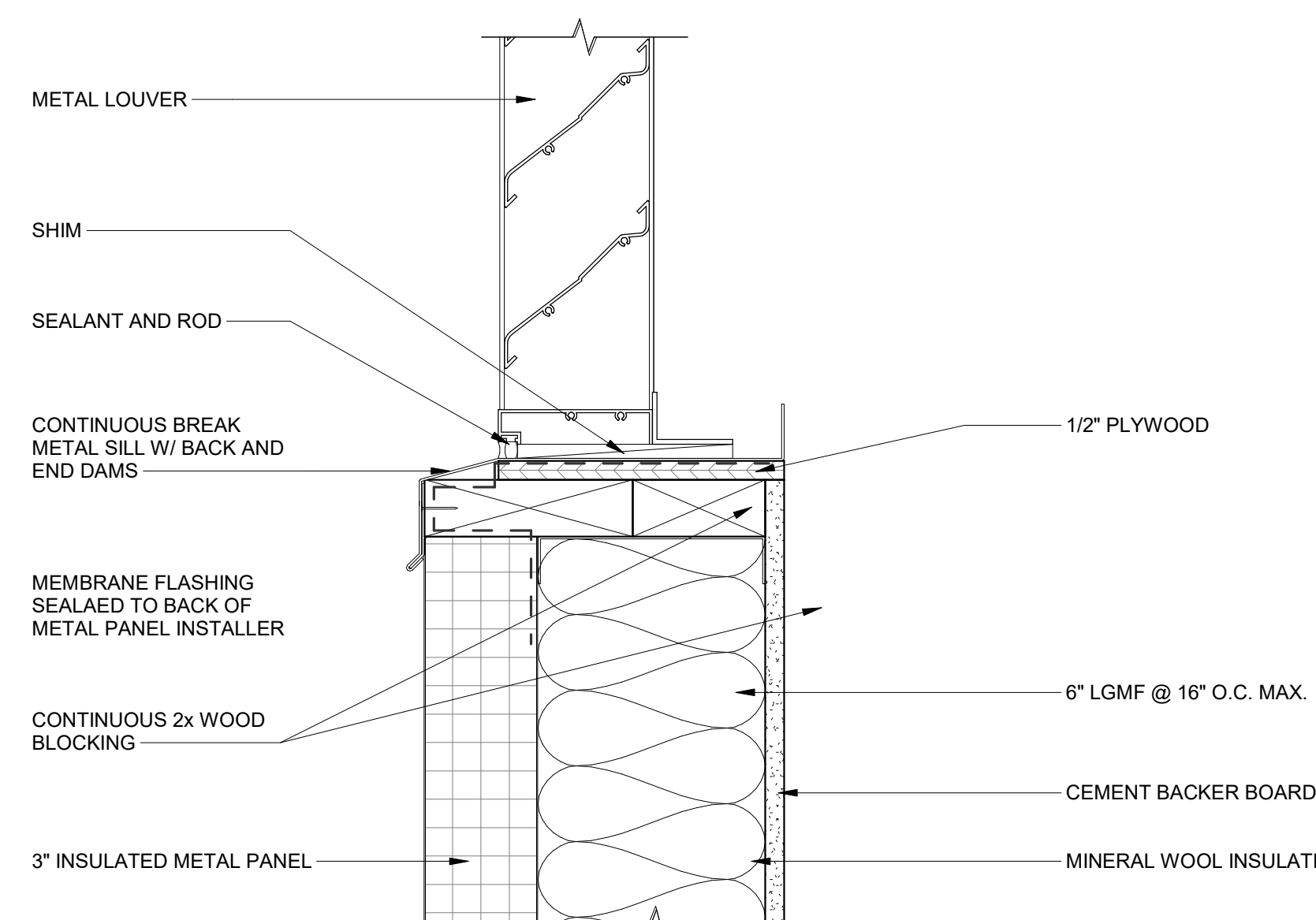
5 LOUVER SILL DETAIL
3" = 1'-0"



1 WINDOW SILL DETAIL
3" = 1'-0"



7 LOUVER SILL DETAIL
3" = 1'-0"



4 LOUVER SILL DETAIL
3" = 1'-0"

NOTE: ALL WOOD BLOCKING AND PLYWOOD TO BE FIRE TREATED

100% CONSTRUCTION DOCUMENTS			STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
drawing title TRANSLUCENT WALL PANEL AND LOUVER DETAILS			drawing prepared by DRA ARCHITECTS 225 Guilford Road, Ste 200 South Windsor, CT 06074	
date 08/15/2019			date 05/24/2019	
description Addendum No. 5			scale 3" = 1'-0"	
project Renovations & Additions to Platt Technical High School 600 Orange Avenue, Milford, CT 06461			drawn by Author	
CAD no.			approved by Approver	
DCS project no. BIRT-076 CM-R			drawing no. A6-3-20	
OSGCR project no. 900-0013				

LOW ROOF FRAMING PLAN NOTES:

1. TOP OF CONCRETE TOPPING SLAB SHALL BE AT ELEVATION 121'-7" (+23'-7" A.F.F.). CONCRETE TOPPING SLAB SHALL VARY FROM A MAXIMUM 4" THICKNESS TO A MINIMUM 2" THICKNESS TO ACCOMMODATE A MAXIMUM 2" CAMBER IN PRECAST MEMBERS. REINFORCEMENT TO CONSIST OF 6x6-W4.0xw4.0 WELDED WIRE FABRIC.
2. TOP OF PRECAST MEMBERS SHALL BE AT ELEVATION 120'-3" (+23'-3" A.F.F.).
3. ALL PRECAST CONCRETE COMPONENTS SHALL BE DESIGNED TO RESIST SELF WEIGHT AND SUPERIMPOSED LOADS AS REQUIRED BY THE STATE OF CONNECTICUT BUILDING CODE. PRECAST COMPONENT DESIGNS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF CONNECTICUT AND ALL SUBMISSIONS SHALL BEAR REGISTRATION SEAL OF THE PRECAST COMPONENT ENGINEER.
4. PRECAST/PRESTRESSED DOUBLE TEE MEMBERS SHALL HAVE 34" OVERALL DEPTH WITH MAXIMUM 12'-0" FLANGE WIDTH, RIBS TO BE 30" TALL WITH 6'-0" CENTER/CENTER SPACING. FLANGES TO HAVE 4" THICKNESS.
5. "PDT-*" INDICATES PRECAST PRESTRESSED DOUBLE TEE. SEE DOUBLE TEE SCHEDULE ON DRAWING S2-4-1 FOR ADDITIONAL REQUIREMENTS.
6. "PB-*" INDICATES PRECAST/PRESTRESSED CONCRETE BEAM SEE PRECAST/PRESTRESSED BEAM SCHEDULE ON DRAWING S2-4-1. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
7. "PW-*" INDICATES PRECAST/PRESTRESSED CONCRETE WALL PANEL. SEE DRAWINGS S2-3-1 AND S2-3-2 FOR ADDITIONAL INFORMATION AND REQUIRMENTS.
8. ALL ANCHORS, INSERTS, PLATES AND OTHER STEEL ACCESSORIES REQUIRED FOR CONNECTION OF PRECAST COMPONENTS ARE TO BE PROVIDED BY PRECAST SUPPLIER - TYPICAL.
9. ALL CONTRACTORS TO COORDINATE ALL WORK WITH PRECAST SUPPLIER.
10. PROVIDE PRECAST MOMENT FRAME ALONG GRID 1 TO RESIST ULTIMATE LATERAL SEISMIC FORCES OF ±100 KIPS DISTRIBUTED UNIFORMLY.
11. SEE DRAWING S2-5-1 FOR SEISMIC LOADS TO BE TRANSFERRED TO PRECAST WALLS.

ADDENDUM
#5

RS5-001

REF. DWG No.
S1-1-2FDCS Project No.
BI-RT-878 CM-R
OSCGR Project No.Scale: 1/8" = 1'-0"
Date: 08/14/2019

PRECAST PLANK SCHEDULE

DESIGNATION	DESIGNATION	TYPE	THICKNESS	PLANK DIMENSIONS				UNIFORM LOAD			REMARKS
				A	B	C	D	PLANK DEAD LOAD (PSF)	SUPERIMPOSED DEAD LOAD (PSF)	APPLIED LIVE LOAD (PSF)	
	"PL-206"	C	8"	21'-6"	20'-2 1/2"	8"	7 1/2"	56 PSF	82	35	SEE LOADING "A"
	"PL-207"	E	8"	19'-9 1/2"	18'-5 1/2"	8"	8"	56 PSF	82	35	SEE LOADING "A"
ROOF	"PL-301"	C	8"	20'-0"	18'-4"	1'-0"	8"	56 PSF	82	35	
	"PL-302"	B	8"	12'-4"	10'-10"	9"	9"	56 PSF	82	100	
	"PL-303"	C	8"	12'-4"	11'-0 1/2"	7 1/2"	8"	56 PSF	82	35	
	"PL-304"	B	8"	11'-1"	10'-0"	6"	7"	56 PSF	82	100	

ADDITIONS AND RENOVATIONS
PLATT TECHNICAL HIGH SCHOOL
REVISED PRECAST PLANK SCHEDULE

ADDENDUM
#5

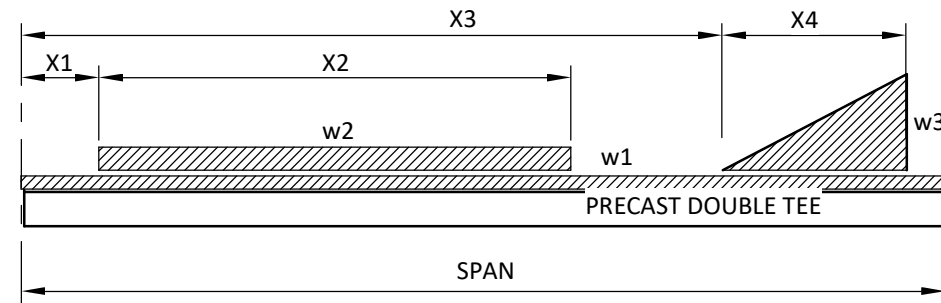
RS5-002

REF. DWG No.
Author

DCS Project No.
BI-RT-878 CM-R
OSGCR Project No.

Scale: 3/4" = 1'-0"
Date: 08/14/2019

PRECAST DOUBLE TEE SCHEDULE



"PDT" MARK	WIDTH "A" (FT.)	LEFT GRID	LEFT CONNECTION		RIGHT GRID	RIGHT CONNECTION		SPAN FT.	w1 K/FT		w2 K/FT				w3 K/FT				REMARKS	
			TYPE	DIM. "B" (FT.)		TYPE	DIM. "B" (FT.)		Dead	Live	X1 (FT)	X2 (FT)	Dead	Live	X3 (FT)	X4 (FT)	Dead	Live		
"PDT-301"	12'-0"	8	A	2'-0"	9	A	2'-0"	48'-0"	2.00	0.420	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-301A"	11'-1"	8	A	2'-0"	9	A	2'-0"	48'-0"	1.85	0.390	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-302"	12'-0"	8	A	2'-0"	9	A	2'-0"	48'-0"	2.00	0.420	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-303"	12'-0"	5	A	2'-0"	6	A	2'-0"	48'-6"	2.00	0.420	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-303A"	11'-1"	5	A	2'-0"	6	A	2'-0"	48'-6"	1.85	0.390	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-304"	12'-0"	3.6	B	1'-0"	5	A	2'-0"	47'-5"	2.00	0.420	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-305"	12'-0"	3.9	B	1'-3"	5	A	2'-0"	38'-1 1/2"	2.00	0.420	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-305A"	11'-1"	3.9	B	1'-3"	5	A	2'-0"	38'-1 1/2"	1.85	0.390	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-306"	12'-0"	7	B	1'-0"	9	A	2'-0"	58'-6"	2.00	0.420	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-306A"	10'-11"	7	B	1'-0"	9	A	2'-0"	58'-6"	1.83	0.390	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-306B"	12'-0"	7	B	1'-0"	9	A	2'-0"	58'-6"	2.00	0.420	11'	40'	0.800	0.500	---	---	---	---	---	ROOF MEMBER
"PDT-307"	12'-0"	5	A	2'-0"	9	A	2'-0"	58'-0"	2.00	0.420	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-307A"	10'-11"	5	A	2'-0"	9	A	2'-0"	58'-0"	2.00	0.420	---	---	---	---	---	---	---	---	---	ROOF MEMBER
"PDT-307B"	12'-0"	7	A	2'-0"	9	A	2'-0"	58'-0"	2.00	0.420	11'	40'	0.800	0.800	---	---	---	---	---	ROOF MEMBER

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ADDITIONS AND RENOVATIONS
PLATT TECHNICAL HIGH SCHOOL
REVISED PRECAST PLANK SCHEDULE

ADDENDUM
#5

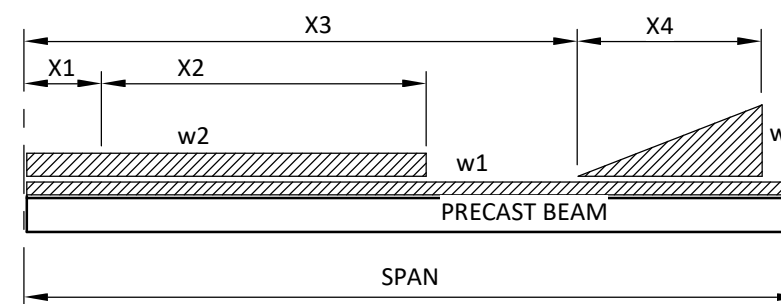
RS5-003

REF. DWG No.
Author

DCS Project No.
BI-RT-878 CM-R
OSCGR Project No.

Scale: 3/4" = 1'-0"
Date: 08/14/2019

PRECAST BEAM SCHEDULE

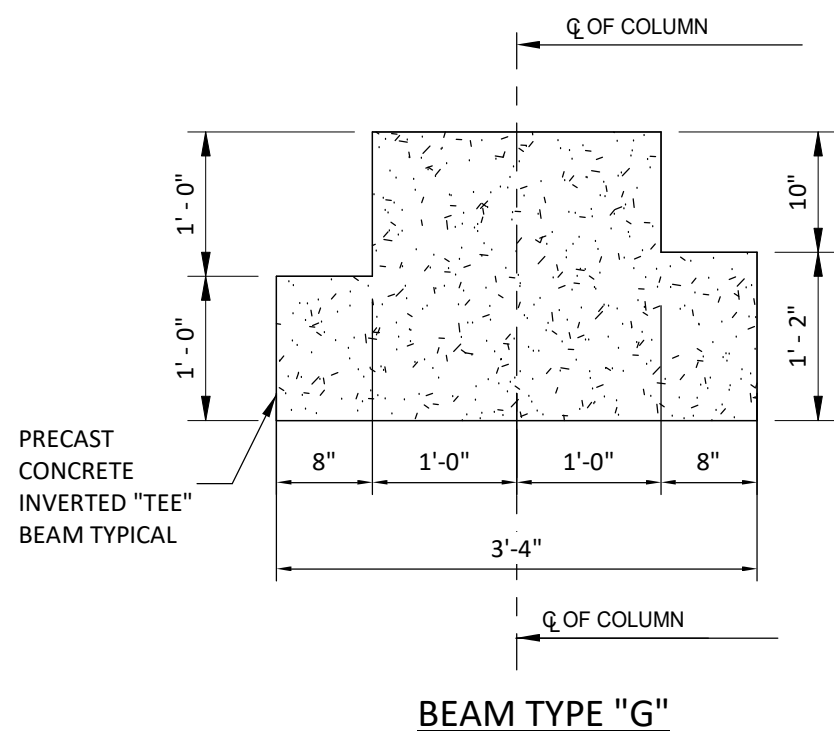


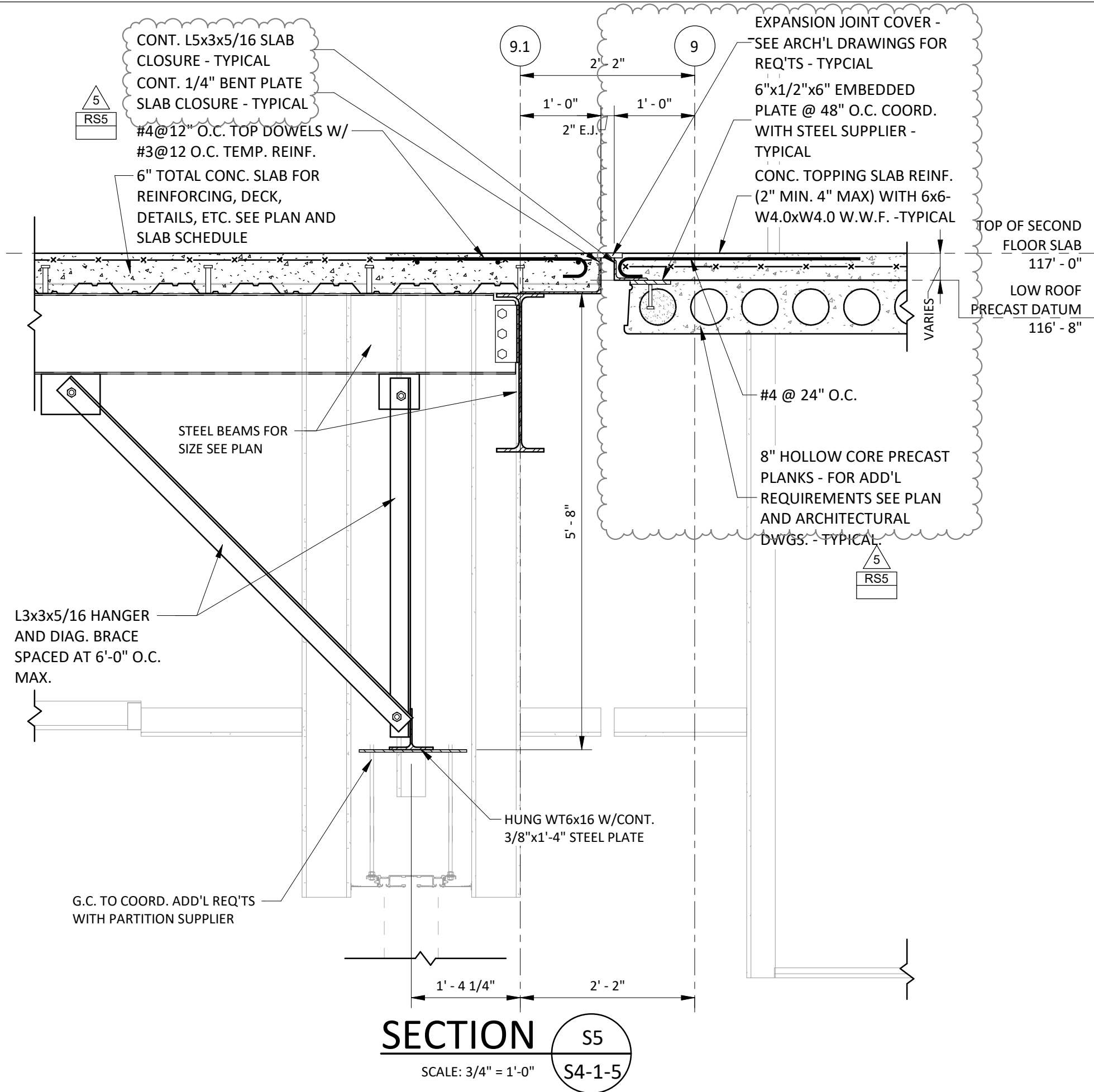
AREA "E" MEZZANINE

BEAM MARK	BEAM TYPE	GRID LOCATION	LEFT GRID	RIGHT GRID	SPAN FT.	w1 K/FT		w2 K/FT				w3 K/FT				REMARKS	
						Dead	Live	X1 (FT)	X2 (FT)	Dead	Live	X3 (FT)	X4 (FT)	Dead	Live		
"PB-M10"	G	5	W	Y	24'-0"	4.1	3.8	---	---	---	---	---	---	---	---	---	

NOTES:

1. ALL FLOOR LIVE LOADS SHOWN MAY BE REDUCED IN ACCORDANCE WITH THE REQUIREMENTS OF CONNECTICUT STATE BUILDING CODE.
2. SPANDREL BEAMS AT EXTERIOR WALLS SHALL HAVE MAXIMUM LONG TERM DEFLECTION LIMITED TO SPAN/480.
3. ALL BEAMS SHALL HAVE 5000 PSI, NORMAL WEIGHT CONCRETE.
4. SUBMIT SEALED CALCULATIONS FOR ALL BEAM DESIGNS INCLUDING CONNECTIONS.





CONT. L5x3x5/16 SLAB CLOSURE - TYPICAL
 CONT. 1/4" BENT PLATE SLAB CLOSURE - TYPICAL
 #4@12" O.C. TOP DOWELS W/ #3@12 O.C. TEMP. REINF.

EXPANSION JOINT COVER - SEE ARCH'L DRAWINGS FOR REQ'TS - TYPICAL
 6"x1/2"x6" EMBEDDED PLATE @ 48" O.C. COORD. WITH STEEL SUPPLIER - TYPICAL
 CONC. TOPPING SLAB REINF. (2" MIN. 4" MAX) WITH 6x6-W4.0xW4.0 W.W.F. -TYPICAL

TOP OF SECOND FLOOR SLAB 117' - 0"
 LOW ROOF PRECAST DATUM 116' - 8"

STEEL BEAMS FOR SIZE SEE PLAN

L3x3x5/16 HANGER AND DIAG. BRACE SPACED AT 6'-0" O.C. MAX.

5' - 8"

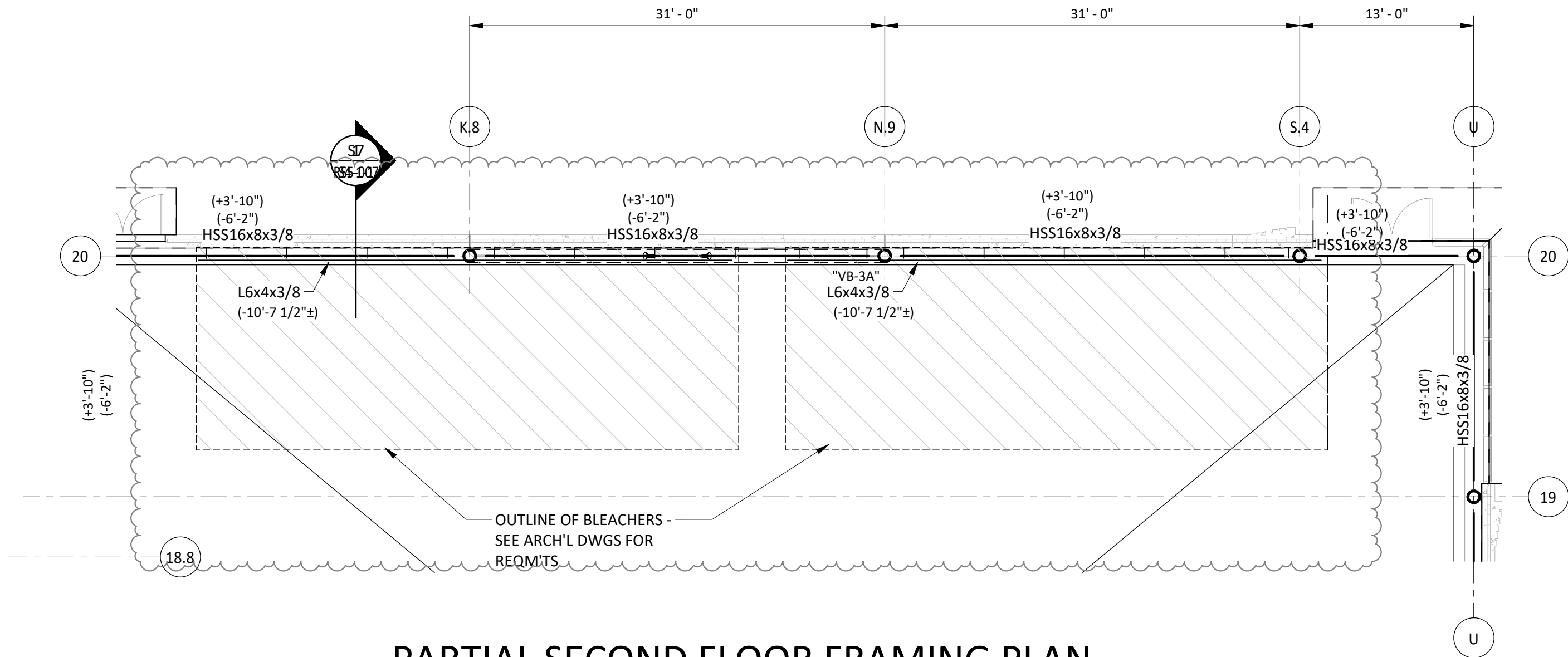
#4 @ 24" O.C.
 8" HOLLOW CORE PRECAST PLANKS - FOR ADD'L REQUIREMENTS SEE PLAN AND ARCHITECTURAL DWGS. - TYPICAL

HUNG WT6x16 W/CONT. 3/8"x1'-4" STEEL PLATE

G.C. TO COORD. ADD'L REQ'TS WITH PARTITION SUPPLIER

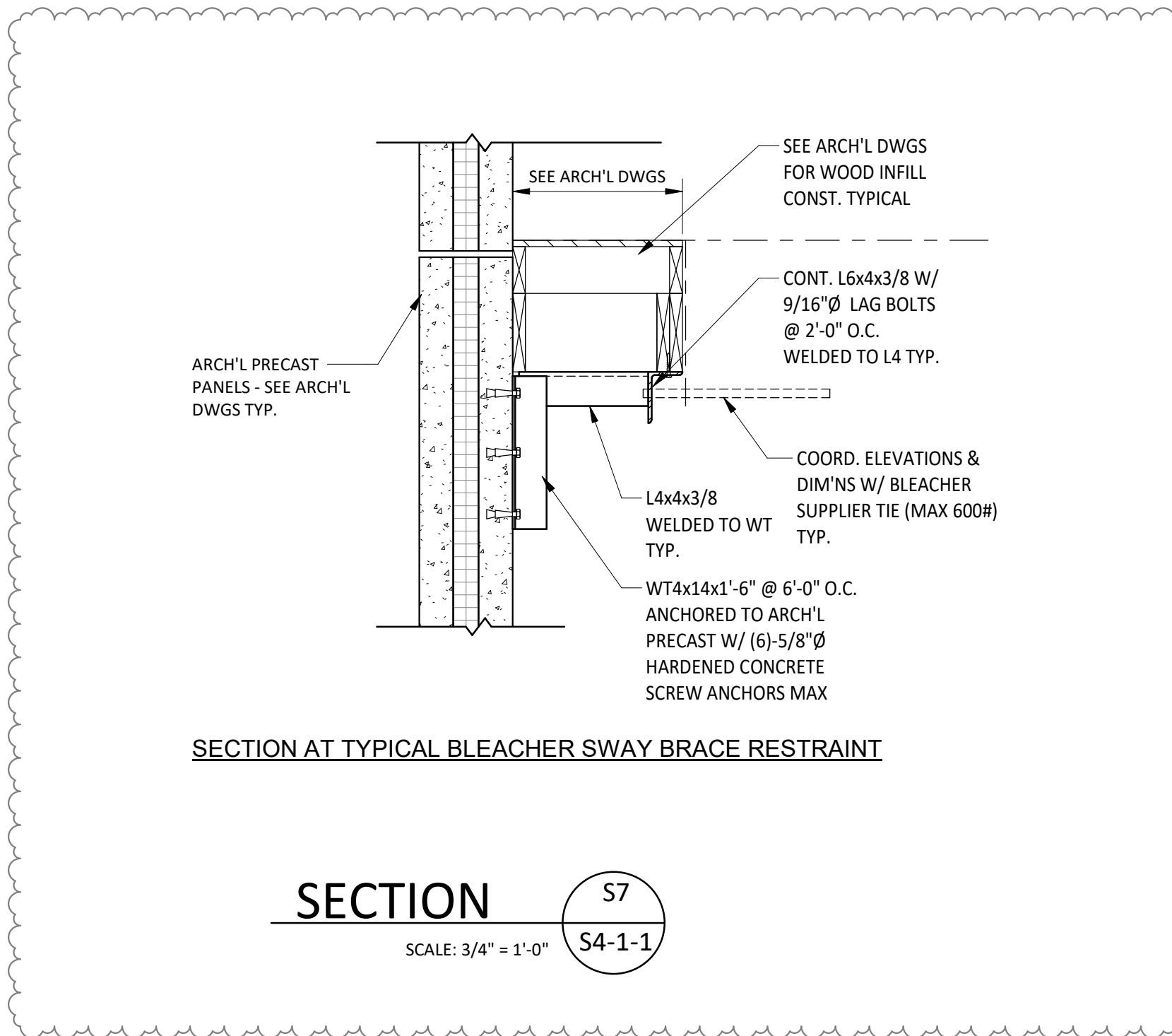
1' - 4 1/4" 2' - 2"

SECTION S5
 SCALE: 3/4" = 1'-0"
S4-1-5



PARTIAL SECOND FLOOR FRAMING PLAN

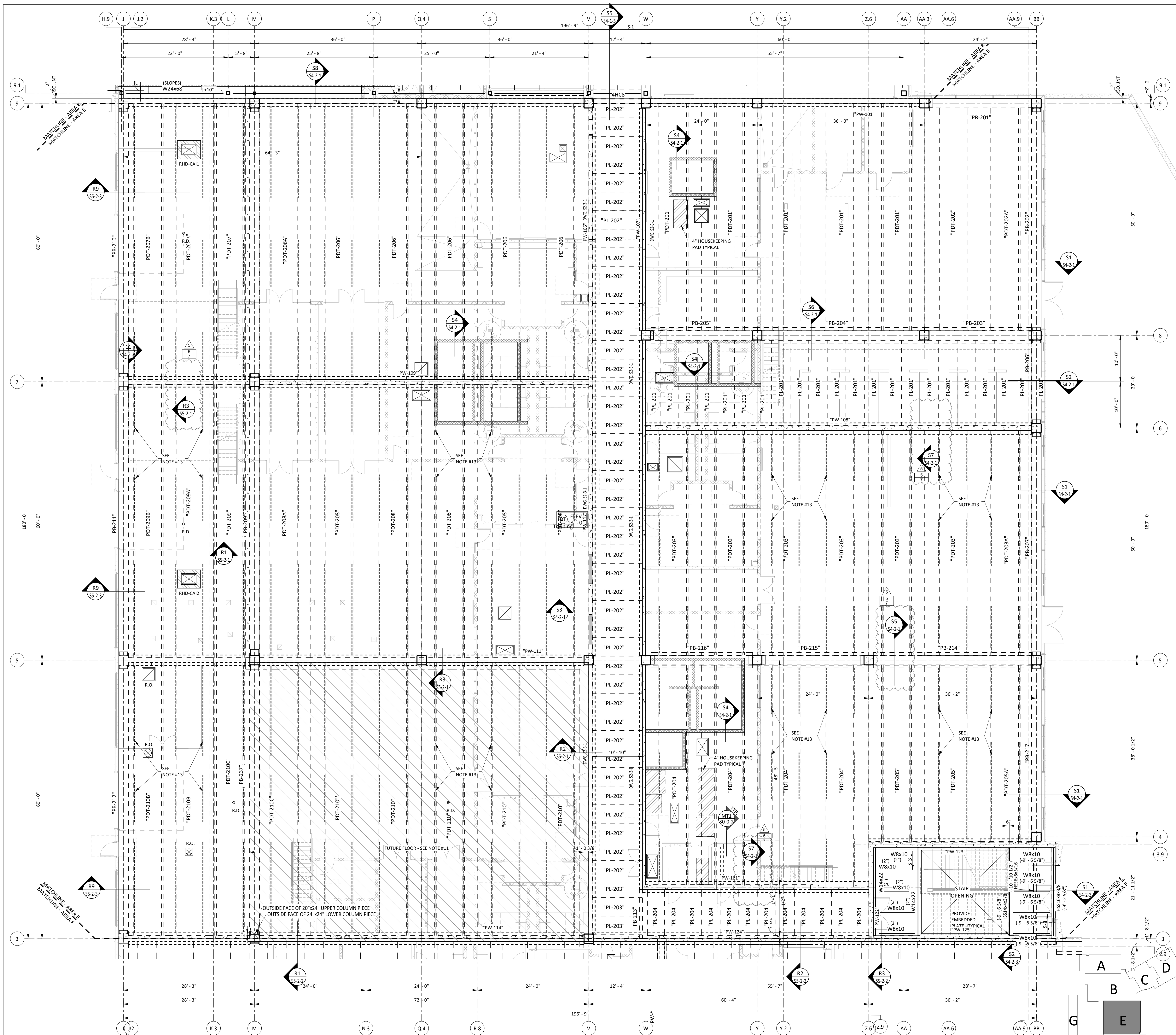
SCALE: 1/8" = 1'-0"



SECTION

S7
S4-1-1

SCALE: 3/4" = 1'-0"



- SECOND FLOOR AND ROOF FRAMING PLAN NOTES:**
- TOP OF CONCRETE TOPPING SLAB SHALL BE AT ELEVATION 118'-0" (+20'-0" A.F.F.). CONCRETE TOPPING SLAB SHALL VARY FROM A MAXIMUM 4" THICKNESS TO A MINIMUM 2" THICKNESS TO ACCOMMODATE A MAXIMUM 2" CAMBER IN PRECAST MEMBERS. REINFORCEMENT TO CONSIST OF 6X6-W4.0XW4.0 WELDED WIRE FABRIC.
 - TOP OF PRECAST MEMBERS SHALL BE AT ELEVATION 116'-8" (+19'-8" A.F.F.).
 - ALL PRECAST CONCRETE COMPONENTS SHALL BE DESIGNED TO RESIST SELF WEIGHT AND SUPERIMPOSED LOADS AS REQUIRED BY THE STATE OF CONNECTICUT BUILDING CODE. PRECAST COMPONENT DESIGNS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF CONNECTICUT AND ALL SUBMISSIONS SHALL BEAR REGISTRATION SEAL OF THE PRECAST COMPONENT ENGINEER.
 - PRECAST/PRESTRESSED DOUBLE TEE MEMBERS SHALL HAVE 34" OVERALL DEPTH WITH MAXIMUM 12'-0" FLANGE WIDTH, RIBS TO BE 30" TALL WITH 6'-0" CENTER/CENTER SPACING. FLANGES TO HAVE 4" THICKNESS.
 - "PDT-#" INDICATES PRECAST PRESTRESSED DOUBLE TEE. SEE DOUBLE TEE SCHEDULE ON DRAWING S2-1-5 FOR ADDITIONAL REQUIREMENTS.
 - "PB-#" INDICATES PRECAST/PRESTRESSED CONCRETE BEAM. SEE PRECAST/PRESTRESSED BEAM SCHEDULE ON DRAWING S2-4-1. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
 - "PW-#" INDICATES PRECAST/PRESTRESSED CONCRETE WALL PANEL. SEE DRAWING S2-3-1 AND 2-3-2 FOR INFORMATION AND ADDITIONAL REQUIREMENTS.
 - ALL ANCHORS, INSERTS, PLATES AND OTHER STEEL ACCESSORIES REQUIRED FOR CONNECTION OF PRECAST COMPONENTS ARE TO BE PROVIDED BY PRECAST SUPPLIER - TYPICAL.
 - ALL CONTRACTORS TO COORDINATE ALL WORK WITH PRECAST SUPPLIER.
 - ALL FLOOR AREAS TO BE DESIGNED FOR 100 PSF LIVE LOAD. LIVE LOADS MAY BE REDUCED IN ACCORDANCE WITH FLOOR AREA AS PERMITTED BY STATE BUILDING CODE.
 - HATCHED AREA INDICATES ANTICIPATED EXTENT OF FUTURE FLOOR AREA WHICH IS TO BE DESIGNED FOR A 100 PSF LIVE LOAD.
 - $\frac{1}{2} \times \frac{3}{8}$ INDICATES SPAN OF 4" CONCRETE SLAB (TOTAL DEPTH) COMPRISED OF 2 1/2" CONCRETE TOPPING REINF. WITH 6X6-W2.9XW2.9 ON 1 1/2" DEEP, 20 GAUGE, GALVANIZED COMPOSITE METAL DECK. SEE SLAB SCHEDULE ON DRAWING S1-1-2 FOR MORE INFORMATION.
 - INDICATES DOUBLE TEE STEM ANCHORS - SEE ARCHITECTURAL DRAWING FOR REQUIREMENTS AND EXTENTS.
 - SEE DRAWING S2-5-1 FOR SEISMIC LOADS TO BE TRANSFERRED TO PRECAST WALLS.
 - PRECAST SUPPLIER TO PROVIDE EMBEDDED PLATES FOR FIELD WELDED CONNECTION FOR STEEL BEAMS TYPICAL.

- FIREPROOFING NOTES:**
- EXPOSED TO VIEW STEEL GIRTO AT STAIR 5 TO RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - WIDE FLANGE BEAMS SUPPORTING FLOOR LANDING ABOVE, AT STAIR 5, TO RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.

SECOND FLOOR AND LOW ROOF FRAMING PLAN - AREA E
SCALE: 1/8" = 1'-0"

100% CONSTRUCTION DOCUMENTS

drawing
SECOND FLOOR AND ROOF FRAMING PLAN - AREA E

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing
SZEWCAZK ASSOCIATES
300 Main Street
Avon, CT 06001

projec
**ADDITIONS AND RENOVATIONS
PLATT TECHNICAL HIGH SCHOOL**
600 Orange Avenue
Middletown, CT 06461

CAD
DCS project
BL-RT-076 CM-R

OSCGR project
900-0113

dat
05/24/2019

scales
As indicated

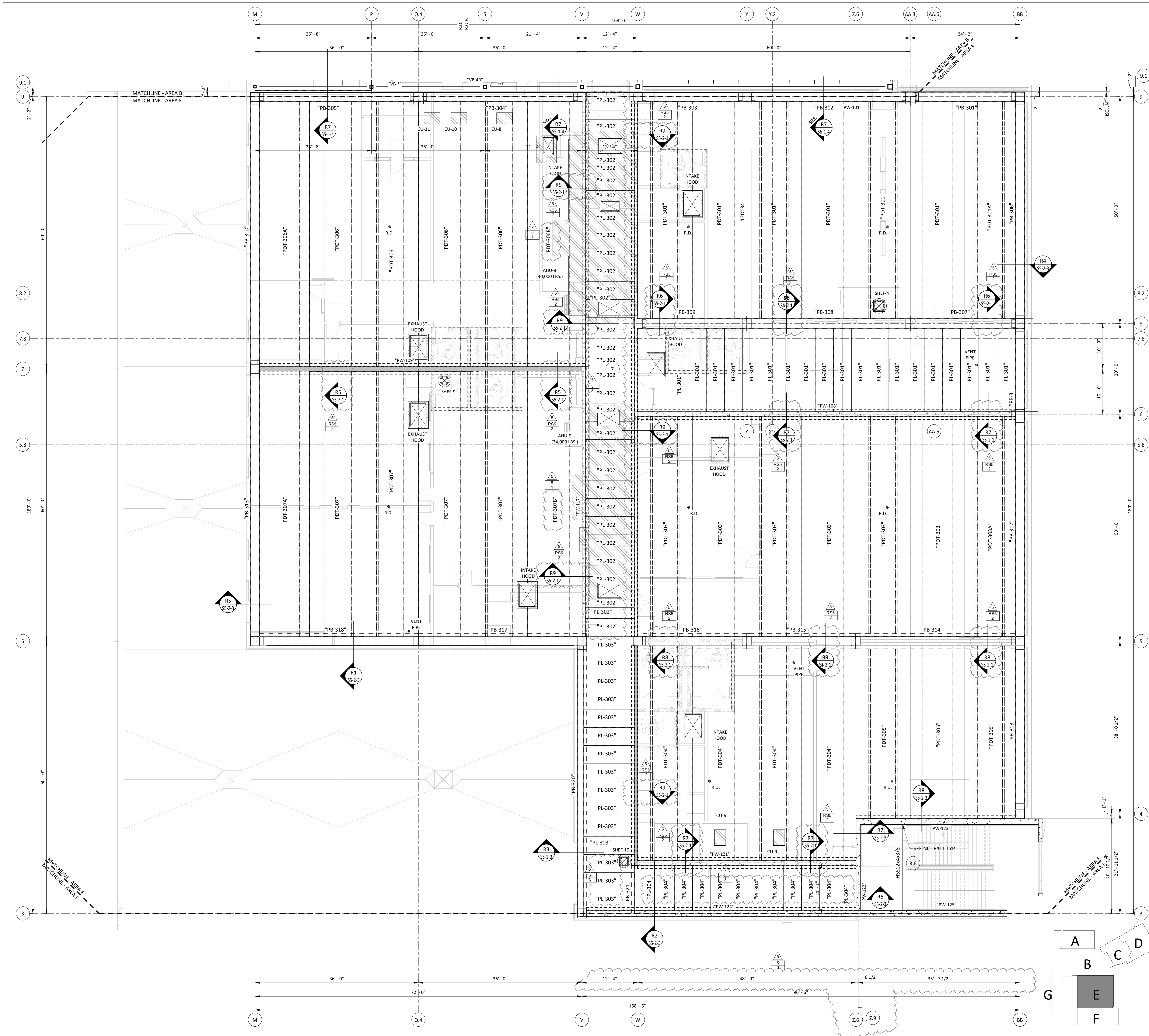
drawn
JNZ

approved
PJC

drawing
S1-1-2E

REVISIONS	
mar	date
5	06/14/2019
	ADDENDUM #5





ROOF FRAMING PLAN - AREA E

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

ROOF FRAMING PLAN NOTES:

1. TOP OF CONCRETE TOPPING SLAB SHALL BE AT ELEVATION 132'-3" (+14'-3" A.F.F.). CONCRETE TOPPING SLAB SHALL VARY FROM A MAXIMUM 4" THICKNESS TO A MINIMUM 2" THICKNESS TO ACCOMMODATE A MAXIMUM 2" CAMBER IN PRECAST MEMBERS. REINFORCEMENT TO CONSIST OF 6x6-W4.0xW4.0 WELDED WIRE FABRIC.
2. TOP OF PRECAST MEMBERS SHALL BE AT ELEVATION 130'-11" (+13'-11" A.F.F.).
3. ALL PRECAST CONCRETE COMPONENTS SHALL BE DESIGNED TO RESIST SELF WEIGHT AND SUPERIMPOSED LOADS AS REQUIRED BY THE STATE OF CONNECTICUT BUILDING CODE. PRECAST COMPONENT DESIGNS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF CONNECTICUT AND ALL SUBMISSIONS SHALL BEAR REGISTRATION SEAL OF THE PRECAST COMPONENT ENGINEER.
4. PRECAST/PRESTRESSED DOUBLE TEE MEMBERS SHALL HAVE 34" OVERALL DEPTH WITH MAXIMUM 12'-0" FLANGE WIDTH. RIBS TO BE 30" TALL WITH 6'-0" CENTER/CENTER SPACING. FLANGES TO HAVE 4" THICKNESS.
5. "PDT-*" INDICATES PRECAST PRE STRESSED DOUBLE TEE. SEE DOUBLE TEE SCHEDULE ON DRAWING S2-4-1 FOR ADDITIONAL REQUIREMENTS.
6. "PB-*" INDICATES PRECAST/PRESTRESSED CONCRETE BEAM SEE PRECAST/PRESTRESSED BEAM SCHEDULE ON DRAWING S2-4-1. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
7. "PW-*" INDICATES PRECAST/PRESTRESSED CONCRETE WALL PANEL SEE ELEVATION ON DRAWING S2-3-1 AND S2-3-2 FOR INFORMATION AND ADDITIONAL REQUIREMENTS.
8. ALL ANCHORS, INSERTS, PLATES AND OTHER STEEL ACCESSORIES REQUIRED FOR CONNECTION OF PRECAST COMPONENTS ARE TO BE PROVIDED BY PRECAST SUPPLIER - TYPICAL.
9. ALL CONTRACTORS TO COORDINATE ALL WORK WITH PRECAST SUPPLIER.
10. SEE DRAWING S2-3-1 FOR SEISMIC LOADS TO BE TRANSFERRED TO PRECAST WALLS.
11. PRECAST SUPPLIER TO PROVIDE EMBEDDED PLATES FOR FIELD WELDED CONNECTION FOR STEEL BEAMS TYPICAL.



100% CONSTRUCTION DOCUMENTS

drawing
ROOF FRAMING PLAN - AREA E

REVISIONS		
mar	date	description
5	06/14/2019	ADDENDUM #5

STATE OF CONNECTICUT
 DEPARTMENT OF ADMINISTRATIVE SERVICES

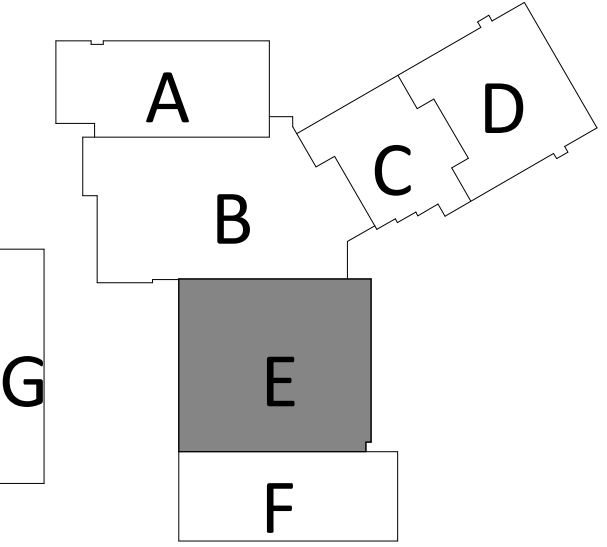
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SZEWCAZAK ASSOCIATES
 300 Main Street
 Avon, CT 06001

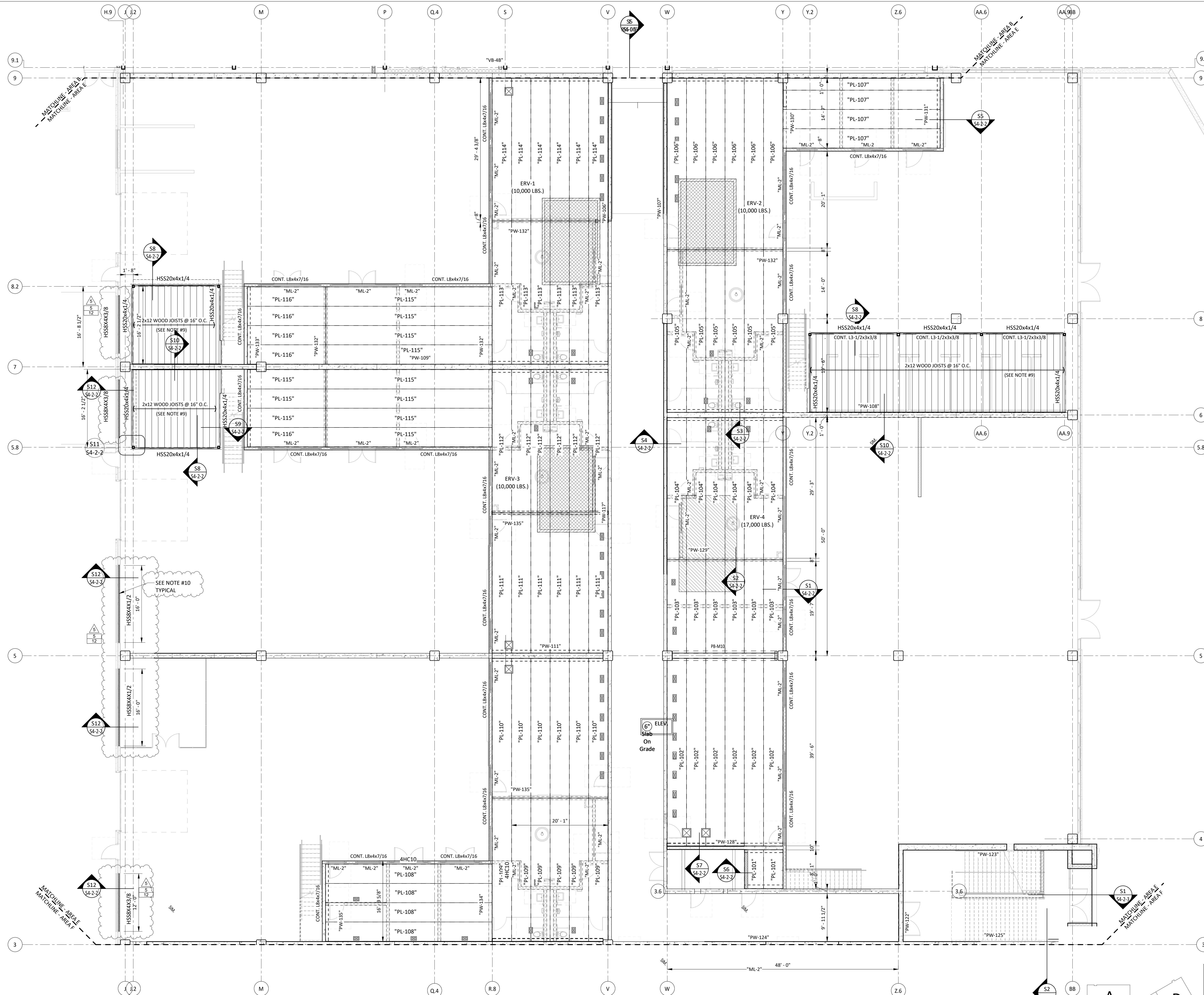
projec
**ADDITIONS AND RENOVATIONS
 PLATT TECHNICAL HIGH SCHOOL**
 600 Orange Avenue
 Middletown, CT 06461

CAD
 DCS project
 BR-07-02-CM-R

OSCGR project
 900-0113

dat
 05/24/2019
 scale
 As indicated
 drawn
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 approved
 psc
 drawing
S1-1-3E

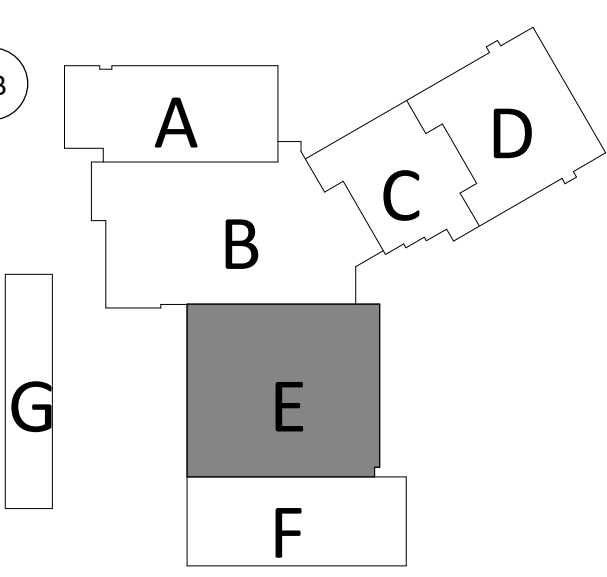




- MEZZANINE FLOOR FRAMING PLAN NOTES:**
- TOP OF FINISH FLOOR SLAB SHALL BE AT ELEVATION 106'-8" (+9'-8").
 - TOP OF CONCRETE FLOOR PLANK SHALL BE AT ELEVATION 106'-6" (+9'-6").
 - "PL-xx" INDICATES 10" (U.O.N.) DEEP PRECAST, PRESTRESSED CONCRETE PLANKS. ALL PRECAST PLANKS SHALL USE 5000 PSI, NORMAL WEIGHT CONCRETE.
 - EACH PLANK SHALL BE LEVELED WITH ADJACENT PLANK AND HAVE SHEAR KEYS GROUDED SOLID. TOPS OF ALL CONCRETE PLANKS SHALL BE ROUGHENED TO RECEIVE A MINIMUM 2" CONCRETE TOPPING.
 - ALL CONCRETE PLANKS SHALL HAVE A MINIMUM ALLOWABLE LIVE LOAD = 125 PSF.
 - ALL CONCRETE PLANKS SHALL BEAR ON A MINIMUM OF 3" ON ALL SUPPORTS.
 - EACH CONCRETE PLANK SHALL BE PROVIDED WITH AN INTEGRAL STEEL WELD PLATE AT ALL PLANK CORNERS AND SHALL BE WELDED TO STEEL SUPPORT FRAMING MEMBERS.
 - G.C. TO COORDINATE EXACT LOCATIONS AND EXTENTS OF PENETRATIONS IN CONCRETE PLANKS WITH CONCRETE SUPPLIER AND MECHANICAL EQUIPMENT SUPPLIER, TYPICAL.
 - FRAMING TO CONSIST OF TWO (2) LAYERS OF 3/4" FIRE-RATED, TONGUE AND GROOVE PLYWOOD SHEATHING ON FIRE RETARDANT TREATED WOOD FLOOR JOISTS (LIVE LOAD=40 PSF). SEE PLAN FOR JOIST SIZE AND SPACING.
 - SEE DRAWING "S2-3-1" FOR TYPICAL WALL GIRT ELEVATION.

- FIREPROOFING NOTES:**
- HSS COLUMNS AND HSS TUBE BEAMS SUPPORTING MEZZANINES AT E101 (PLUMBING), E114 (ELECTRICAL), AND E120 (HVAC) TO RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - HSS BEAMS AT STAIR 5 TO RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.

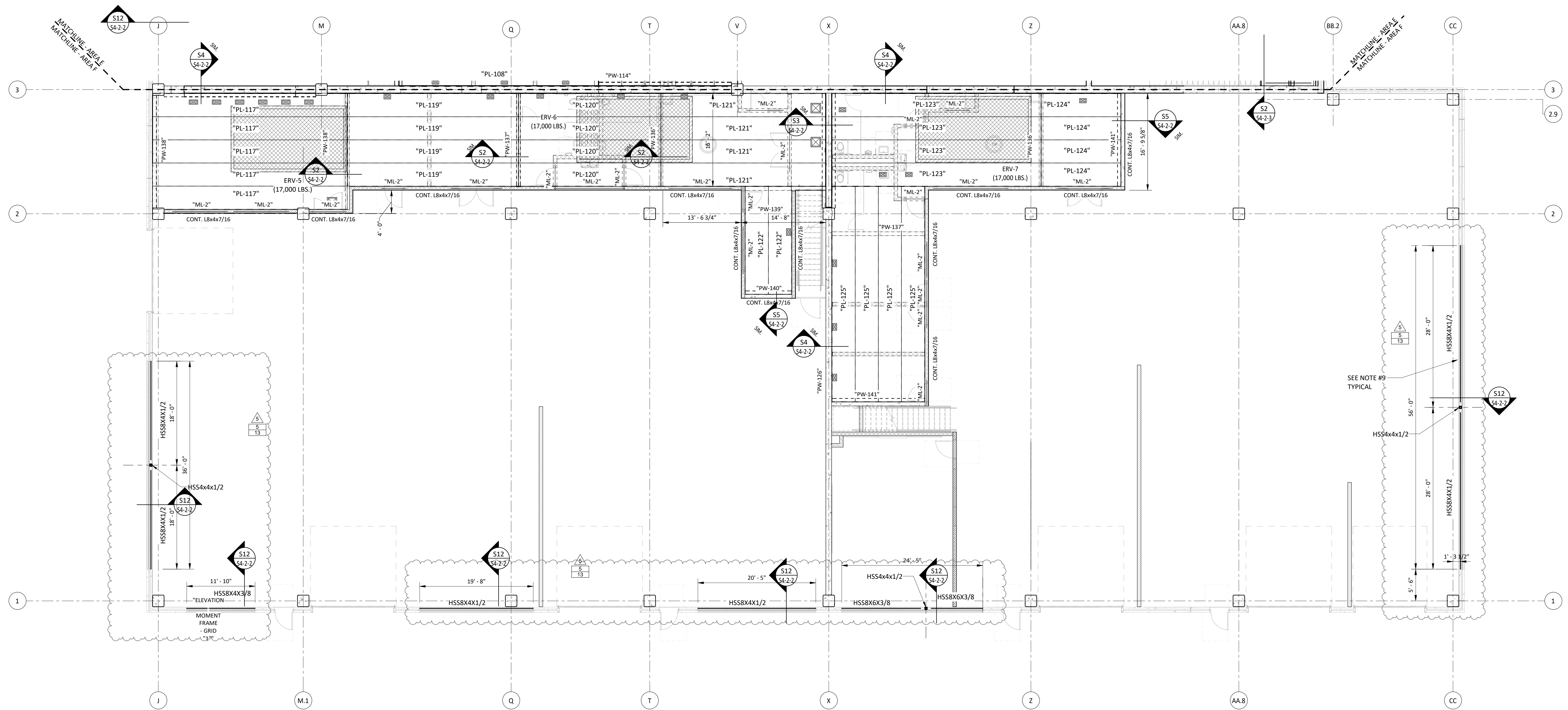
MEZZANINE FRAMING PLAN - AREA E
SCALE: 1/8" = 1'-0"



100% CONSTRUCTION DOCUMENTS

drawing			STATE OF CONNECTICUT		
MEZZANINE FRAMING PLAN - AREA E			DEPARTMENT OF ADMINISTRATIVE SERVICES		
REVISIONS			drawing		
mar	date	description	SZEWCAZAK ASSOCIATES		
4	06/09/2019	ADDENDUM #4	300 River Street Avon, CT 06001		
5	08/14/2019	ADDENDUM #5	projec		
			ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL 600 Orange Avenue Middletown, CT 06461		
			CAD	DCS project BLRT-076 CM-R	OSCGR project 900-0113
			approved		
			drawing		
			S1-1-ME		

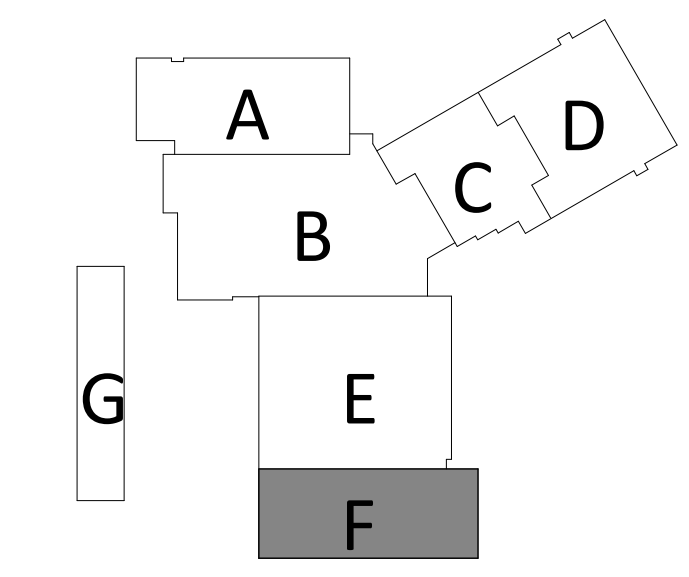
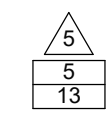




MEZZANINE FRAMING PLAN - AREA F
SCALE: 1/8" = 1'-0"

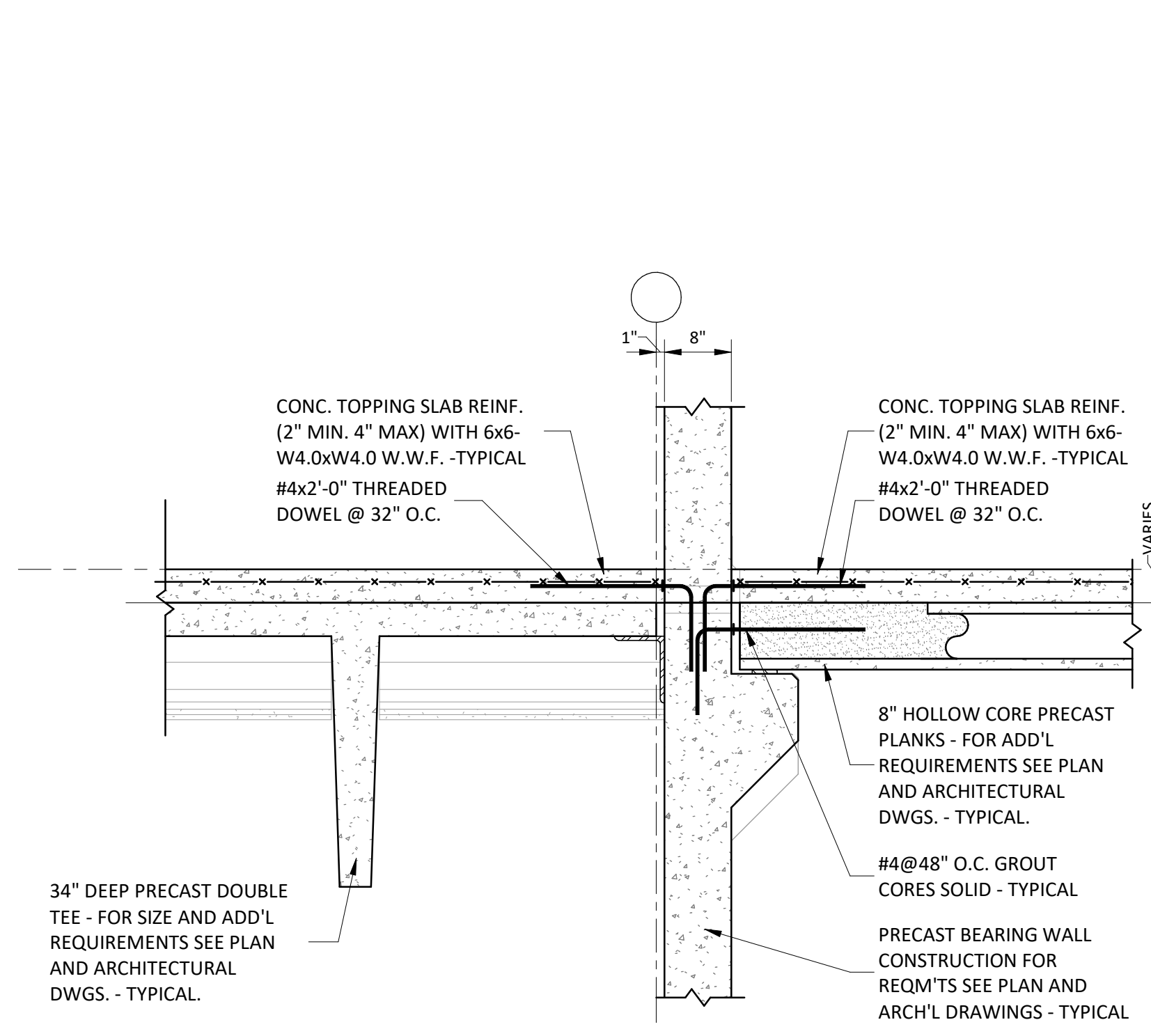
MEZZANINE FLOOR FRAMING PLAN NOTES:

1. TOP OF FINISH FLOOR SLAB SHALL BE AT ELEVATION 107'-4" (+10'-4").
2. TOP OF CONCRETE FLOOR PLANK SHALL BE AT ELEVATION 107'-2" (+10'-2").
3. "PL-#" INDICATES 10" (U.O.N.) DEEP PRECAST, PRESTRESSED CONCRETE PLANKS. ALL PRECAST PLANKS SHALL USE 5000 PSI, NORMAL WEIGHT CONCRETE.
4. EACH PLANK SHALL BE LEVELED WITH ADJACENT PLANK AND HAVE SHEAR KEYS GROUTED SOLID. TOPS OF ALL CONCRETE PLANKS SHALL BE ROUGHENED TO RECEIVE A MINIMUM 2" CONCRETE TOPPING.
5. ALL CONCRETE PLANKS SHALL HAVE A MINIMUM ALLOWABLE LIVE LOAD = 125 PSF.
6. ALL CONCRETE PLANKS SHALL BEAR ON A MINIMUM OF 3" ON ALL SUPPORTS.
7. EACH CONCRETE PLANK SHALL BE PROVIDED WITH AN INTEGRAL STEEL WELD PLATE AT ALL PLANK CORNERS AND SHALL BE WELDED TO STEEL SUPPORT FRAMING MEMBERS.
8. G.C. TO COORDINATE EXACT LOCATIONS AND EXTENTS OF PENETRATIONS IN CONCRETE PLANKS WITH CONCRETE SUPPLIER AND MECHANICAL EQUIPMENT SUPPLIER, TYPICAL.
9. SEE DRAWING "S2-3-1" FOR TYPICAL WALL GIRT ELEVATION.

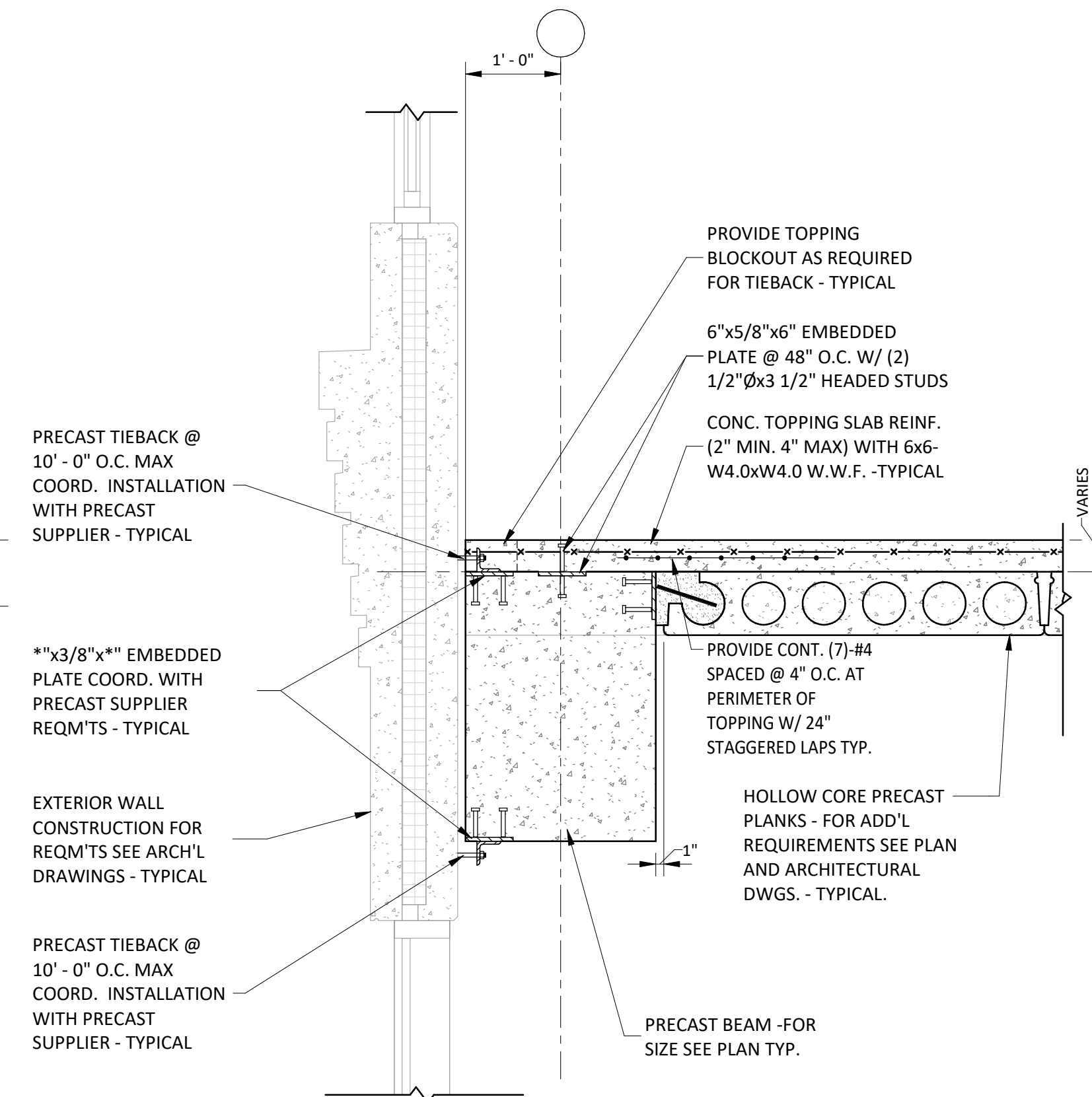


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drawing SZEWCZAK ASSOCIATES 300 River Street Avon, CT 06001		drawing date 05/24/2019	
REVISIONS		description	
mar	4	06/09/2019	ADDENDUM #4
	5	06/14/2019	ADDENDUM #5
projec ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL 600 Orange Avenue Middletown, CT 06461		approved PSC drawing S1-1-MF	
CAD	DCS project BART-076 CM-R	OSCGR project 990-0013	

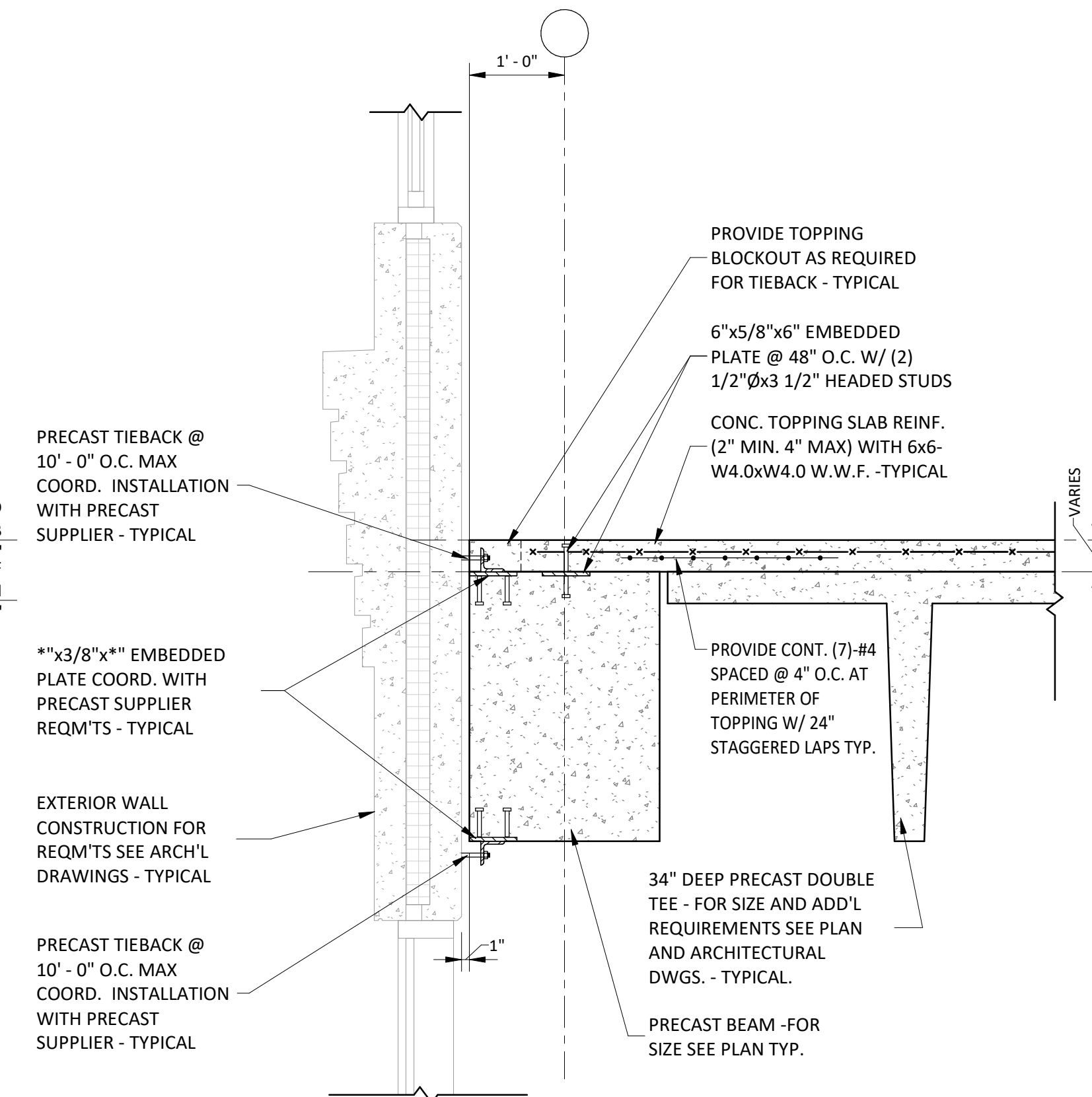




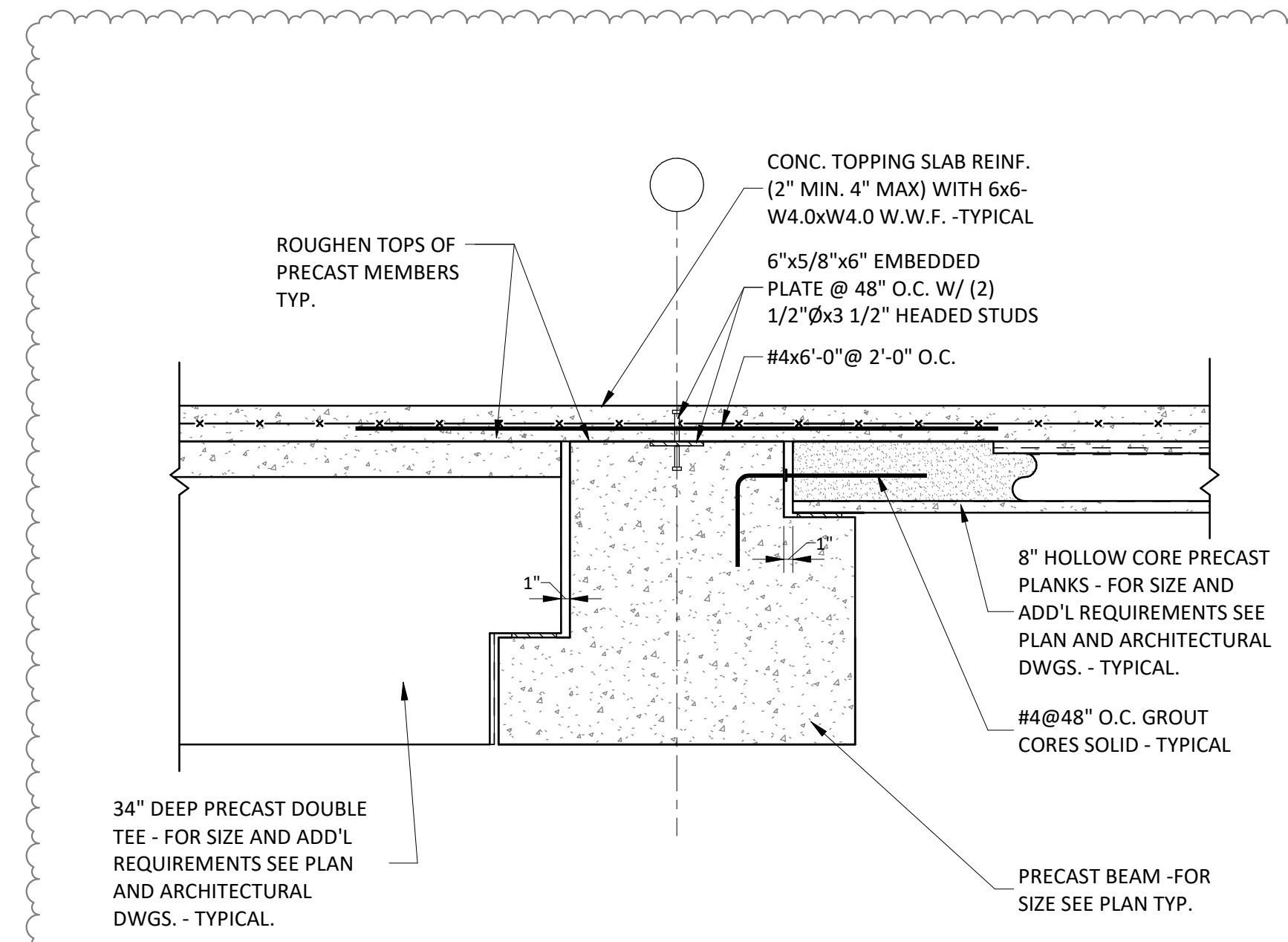
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SCALE: 3/4" = 1'-0"
S4-2-1



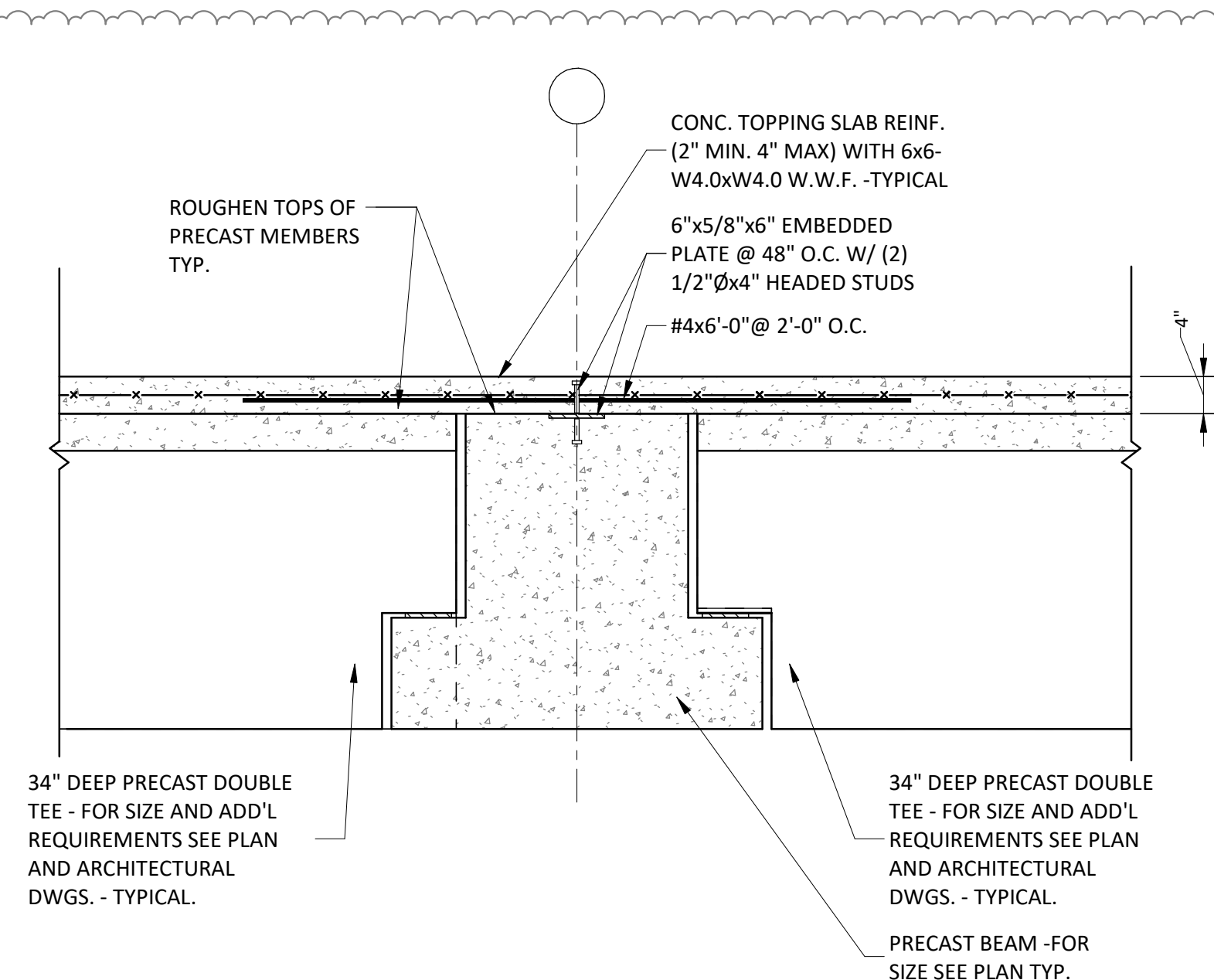
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S4-2-1



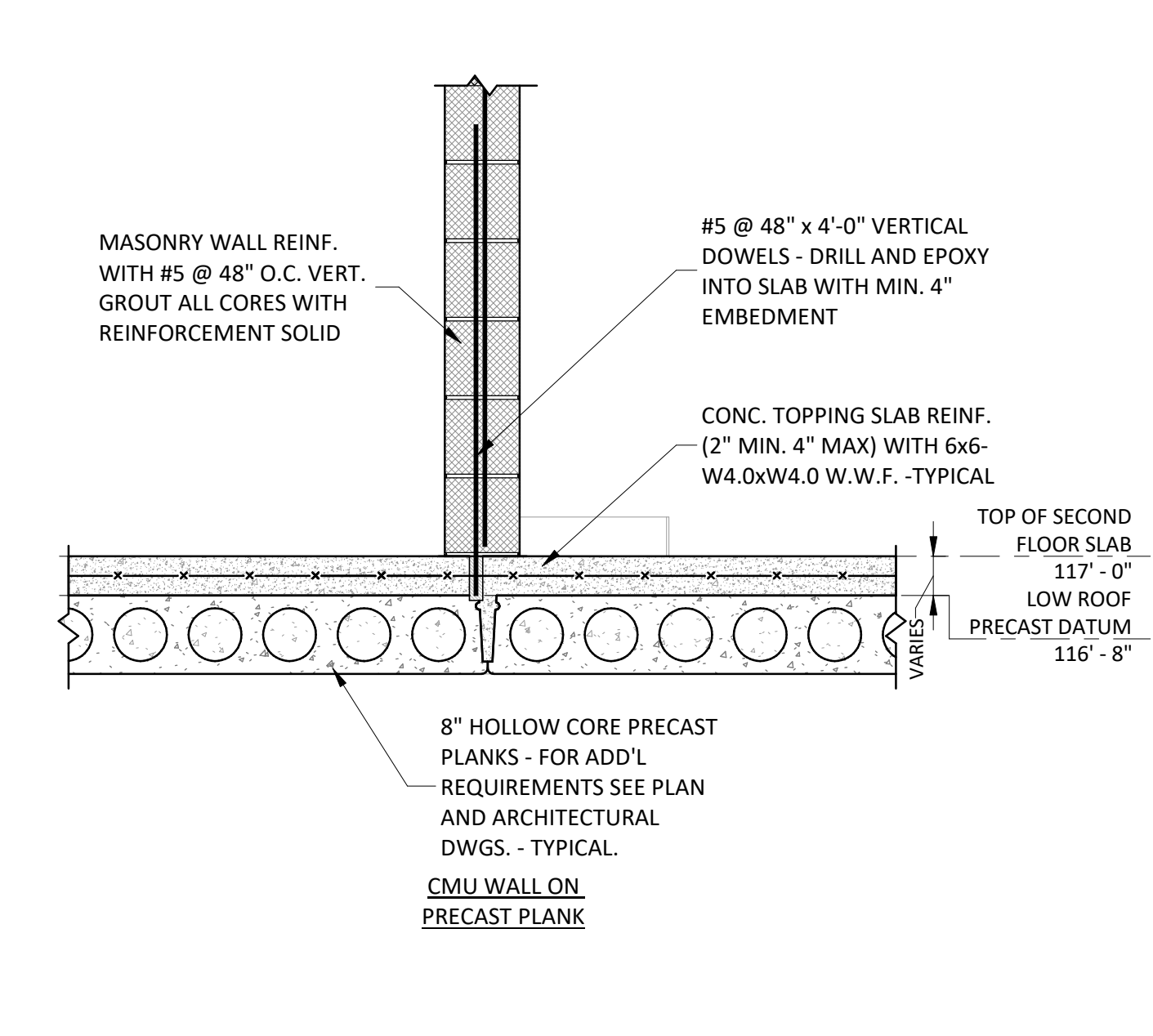
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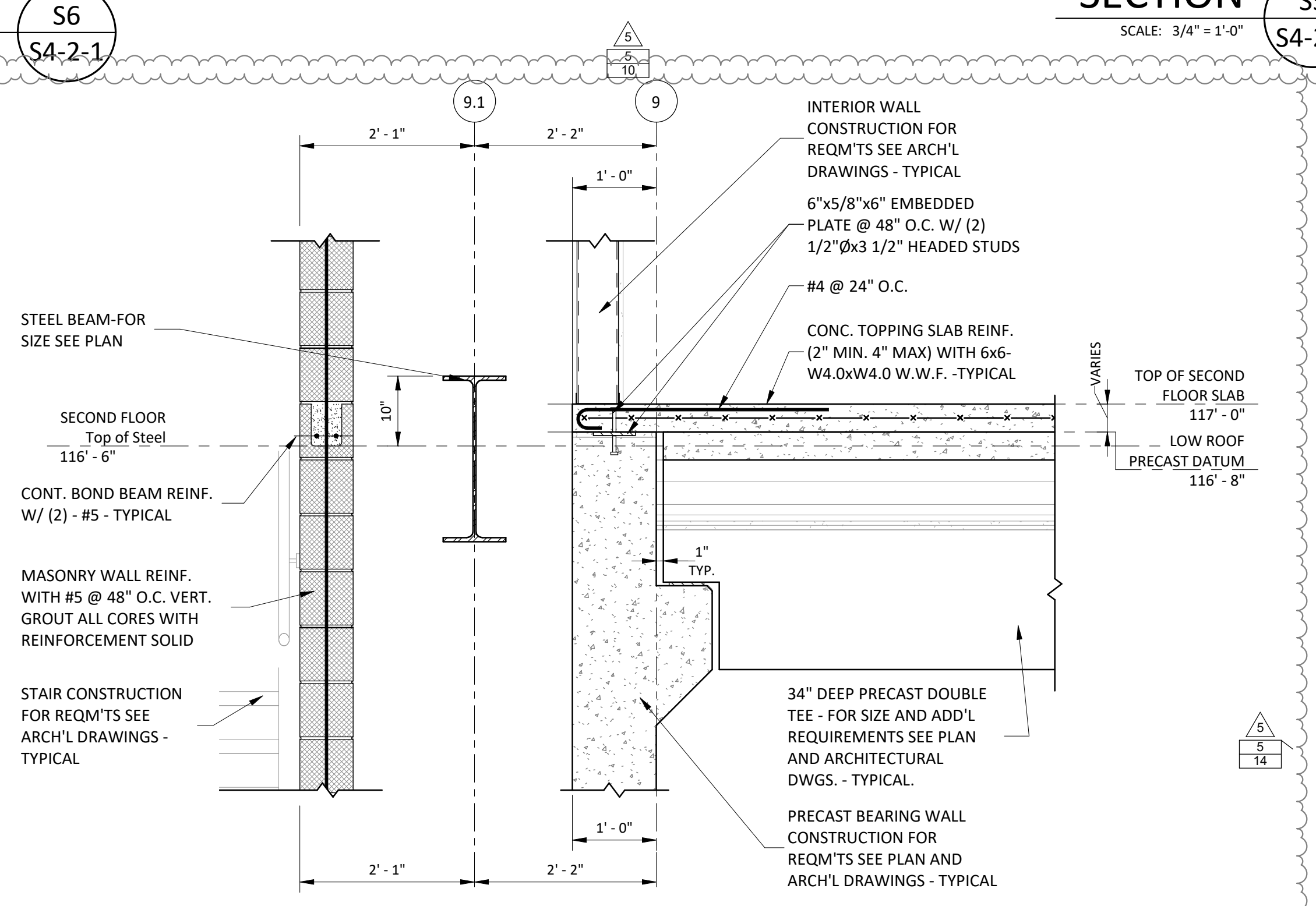
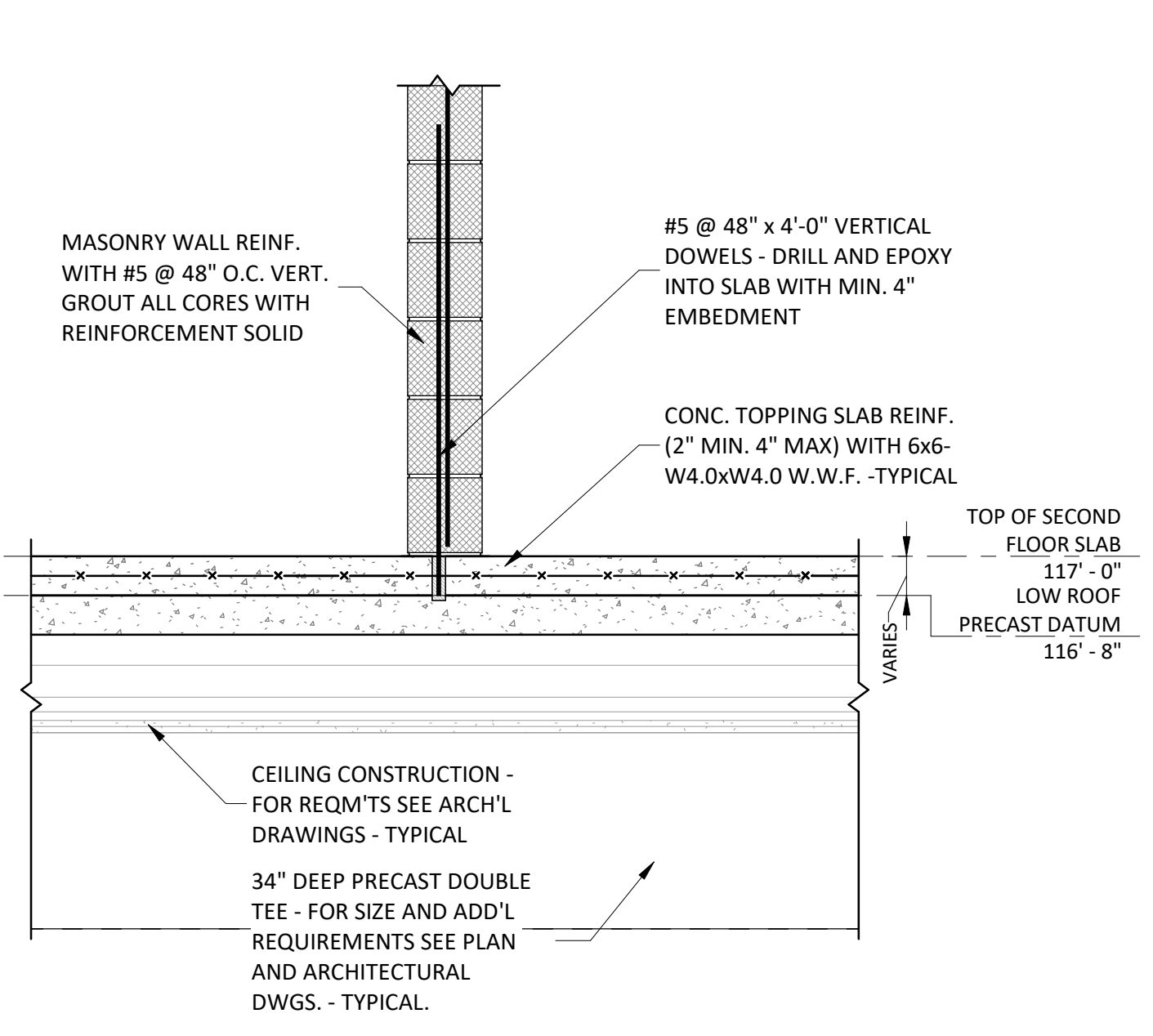
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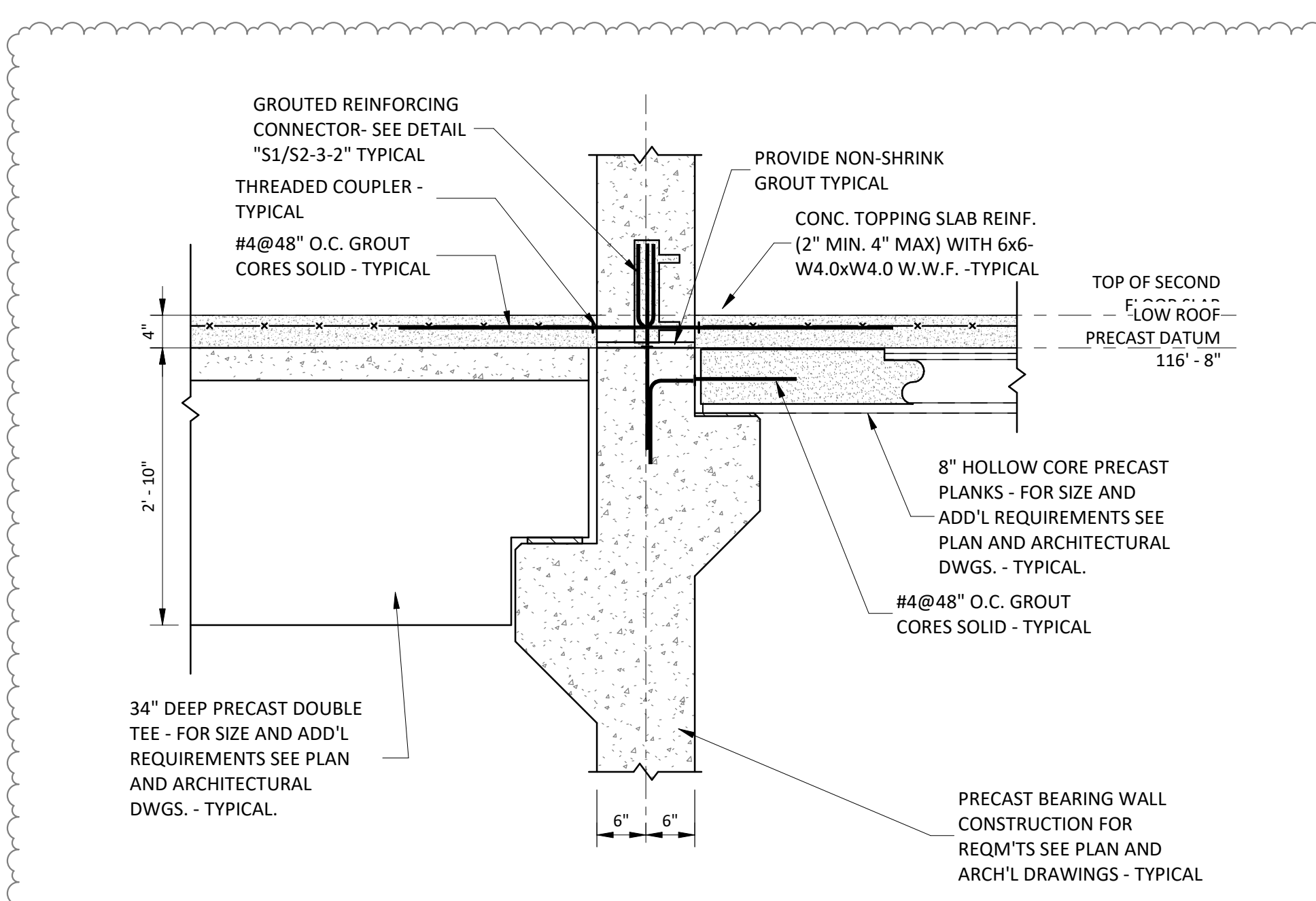
SECTION S5
SCALE: 3/4" = 1'-0"
S4-2-1



SECTION S4
SCALE: 3/4" = 1'-0"
S4-2-1



SECTION S8
SCALE: 3/4" = 1'-0"
S4-2-1



SECTION S7
SCALE: 3/4" = 1'-0"
S4-2-1



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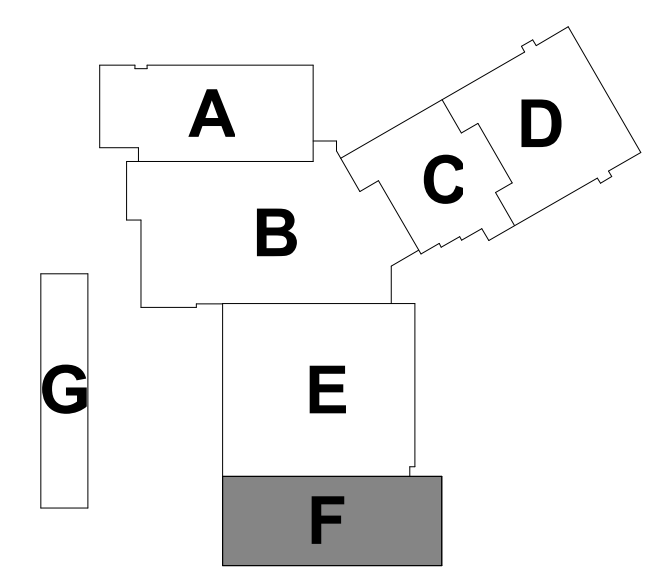
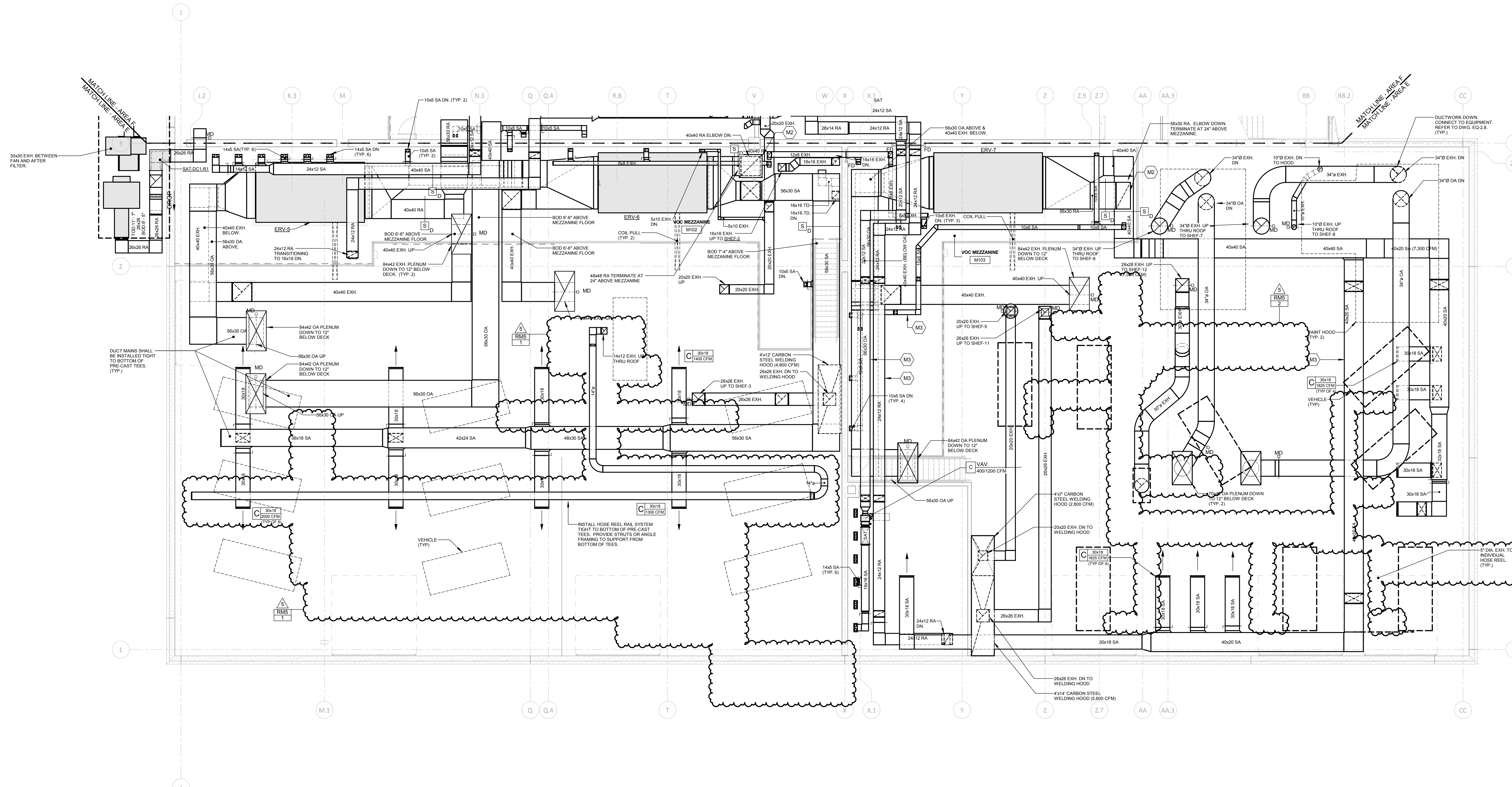
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drawing	SZEWCAZK ASSOCIATES 200 Main Street Avon, CT 06011	date	05/24/2019
scale	3/4" = 1'-0"	drawn	Author
projec	ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL 600 Orange Avenue Middletown, CT 06461	approved	Approver
CAD	DCS project BIRT-076 CM-R	drawing	S4-2-1

MECHANICAL NOTES

- SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
- SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
- SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
- REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS ON GENERAL CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION.
- PROVIDE CLEARANCE ADJACENT TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED TO PROPERLY MAINTAIN EQUIPMENT. PROVIDE MINIMUM 42" CLEARANCE IN FRONT OF EQUIPMENT, PIPE DROPS, ETC. CLEARANCES SHALL BE IDENTIFIED ON COORDINATION SHOP DRAWINGS.
- PROVIDE REMOTELY CONTROLLED VOLUME DAMPERS AT ALL SHEETROCK AND METAL CEILINGS AND WHERE VOLUME DAMPERS ARE NOT ACCESSIBLE THRU ACCESSIBLE CEILINGS WITH STANDARD STEP LADDER.
- VOLUME DAMPERS SHALL BE INSTALLED MINIMUM 8'-0" FROM EACH DIFFUSER, GRILLE AND REGISTER WHERE EVER POSSIBLE. FLEXIBLE CONNECTIONS SHALL NOT EXCEED 8'-0" IN LENGTH.
- NOT ALL BRANCH PIPING TO DEVICES ARE SHOWN. PROVIDE BRANCH PIPING TO ALL DEVICES PER DETAILS AND SCHEDULES. PIPE BRANCHES SHALL BE MINIMUM 3/4" DIAMETER UNLESS NOTED OTHERWISE.
- ALL PENETRATIONS THROUGH FULL HEIGHT CORRIDOR WALLS SHALL BE SEALED. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF WALLS AND REQUIREMENTS FOR SEALING.
- DUCTWORK AND PIPING LAYOUTS DO NOT SHOW ALL TRANSITIONS AND OFFSETS THAT WILL BE REQUIRED. PROVIDE COORDINATION DRAWINGS AND OFFSET DUCTWORK AND PIPING AS REQUIRED.

MECHANICAL DUCTWORK KEY NOTES

- M1 OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
- M2 TERMINATE DUCT WITH FLANGED CONNECTION AND 1/2"x1/2" GALVANIZED STEEL MESH.
- M3 INSTALL THIS SECTION OF DUCT IN SPACE BETWEEN PRE-CAST TEES.
- M4 PROVIDE 60"x42" PLENUM AT CONNECTION TO ROOF HOOD. PLENUM SHALL TERMINATE 12" BELOW ROOF DECK.



REVISIONS		date
mark	description	date
5	06/15/2019 ADDENDUM NO. 5	05/24/2019

drawing title	MEZZANINE MECHANICAL PLAN AREA F	scale	As Indicated
drawing date	06/15/2019	drawn by	msk
approved by	msw	drawing no.	M1-1-MF

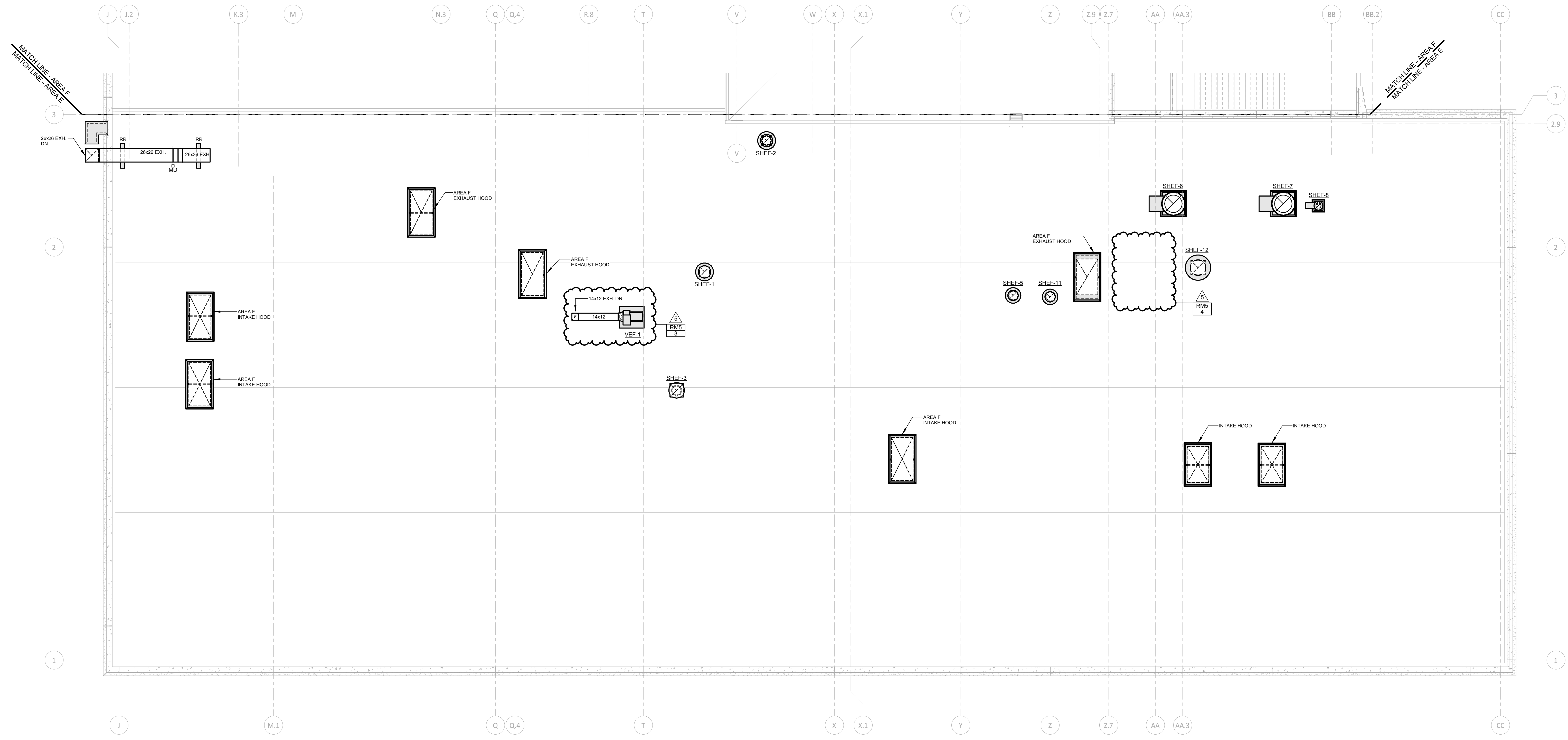
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drawing prepared by	Consulting Engineering Services, Inc.	date	05/24/2019
project	ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL	scale	As Indicated
CAD no.	DCS project no. B1-R7-076 CM-R	drawn by	msk
OSGCR project no.	990-0013	approved by	msw

MECHANICAL NOTES

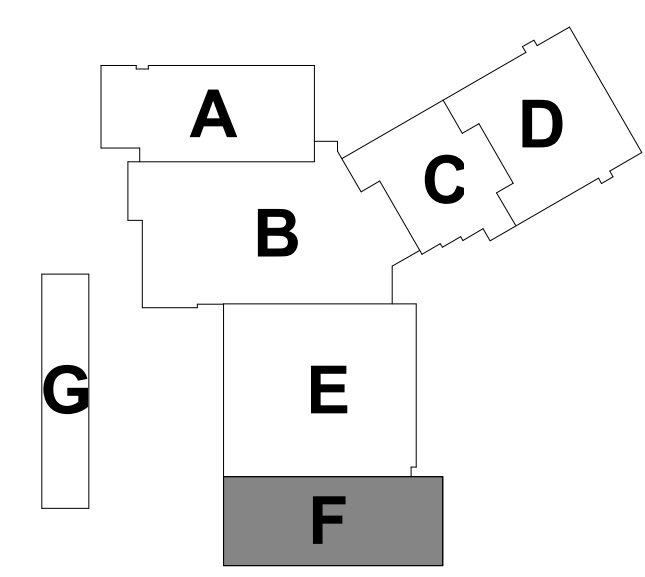
- SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
- SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
- SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
- REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS ON GENERAL CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION.
- PROVIDE CLEARANCE ADJACENT TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED TO PROPERLY MAINTAIN EQUIPMENT. PROVIDE MINIMUM 42" CLEARANCE IN FRONT OF EQUIPMENT, PIPE DROPS, ETC. CLEARANCES SHALL BE IDENTIFIED ON COORDINATION SHOP DRAWINGS.
- PROVIDE REMOTELY CONTROLLED VOLUME DAMPERS AT ALL SHEETROCK AND METAL CEILING AND WHERE VOLUME DAMPERS ARE NOT ACCESSIBLE THRU ACCESSIBLE CEILING WITH STANDARD STEP LADDER.
- VOLUME DAMPERS SHALL BE INSTALLED MINIMUM 8'-0" FROM EACH DIFFUSER, GRILLE AND REGISTER WHERE EVER POSSIBLE. FLEXIBLE CONNECTIONS SHALL NOT EXCEED 8'-0" IN LENGTH.
- NOT ALL BRANCH PIPING TO DEVICES ARE SHOWN. PROVIDE BRANCH PIPING TO ALL DEVICES PER DETAILS AND SCHEDULES. PIPE BRANCHES SHALL BE MINIMUM 3/4" DIAMETER UNLESS NOTED OTHERWISE.
- ALL PENETRATIONS THROUGH FULL HEIGHT CORRIDOR WALLS SHALL BE SEALED. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF WALLS AND REQUIREMENTS FOR SEALING.
- DUCTWORK AND PIPING LAYOUTS DO NOT SHOW ALL TRANSITIONS AND OFFSETS THAT WILL BE REQUIRED. PROVIDE COORDINATION DRAWINGS AND OFFSET DUCTWORK AND PIPING AS REQUIRED.

MECHANICAL DUCTWORK KEY NOTES

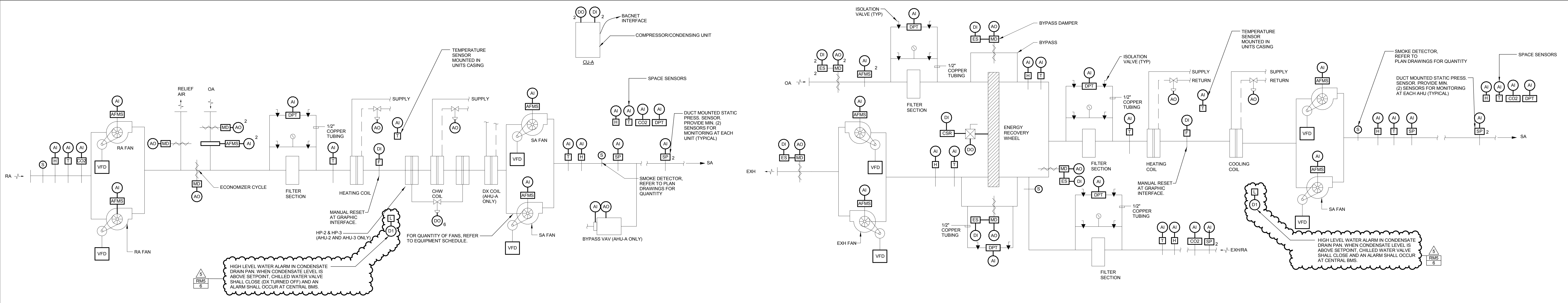
- (M1) OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
- (M2) TERMINATE DUCT WITH FLANGED CONNECTION AND 1/2"x1/2" GALVANIZED STEEL MESH.
- (M3) INSTALL THIS SECTION OF DUCT IN SPACE BETWEEN PRE-CAST TEES.
- (M4) PROVIDE 60"x42" PLENUM AT CONNECTION TO ROOF HOOD. PLENUM SHALL TERMINATE 12" BELOW ROOF DECK.



1 ROOF MECHANICAL PLAN - AREA F
1/8" = 1'-0"

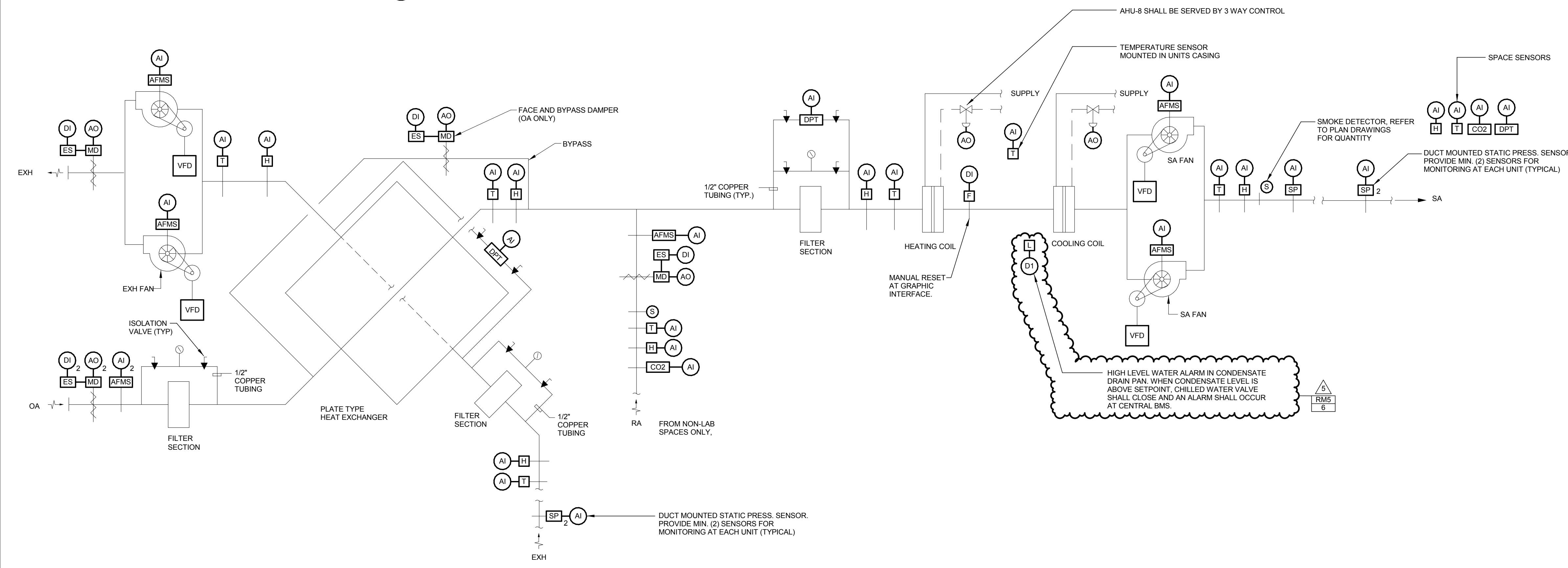


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drawing title ROOF MECHANICAL PLAN AREA F		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
drawing prepared by Consulting Engineering Services, Inc. 811 Middle St., Middletown, CT 06457		date 05/24/2019	
REVISIONS		scale As Indicated	
mark	date	description	drawn by ark
5	06/15/2019	ADDENDUM NO. 5	approved by scw
project ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL 600 Orange Avenue Middletown, CT 06461		drawing no. M1-2-1F	
CAD no.	DCS project no. B4-RF-076 CM-R	OSGCR project no. 990-0013	

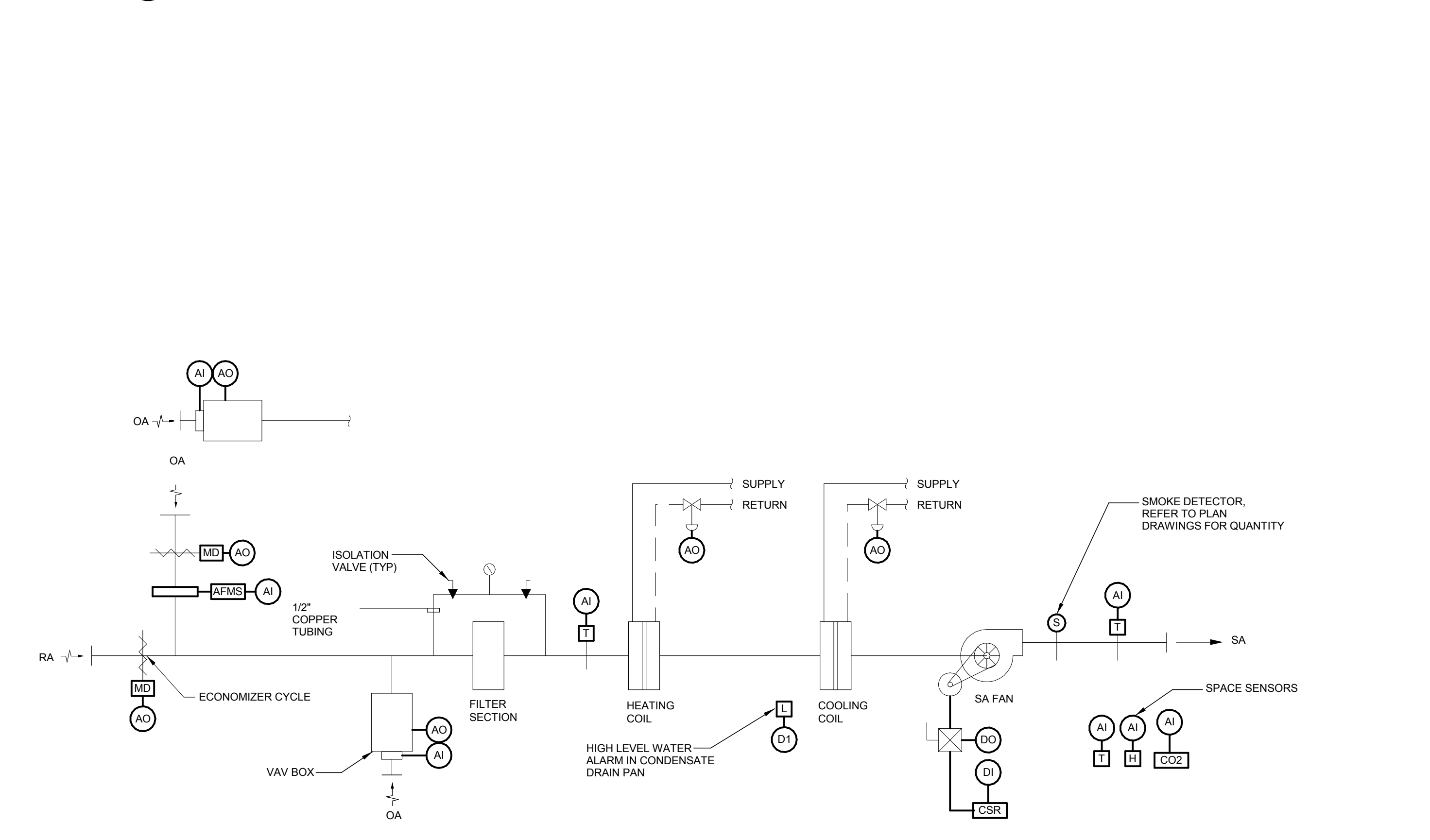


1 TYPICAL AIR HANDLING UNIT CONTROL DIAGRAM
SCALE: N.T.S.

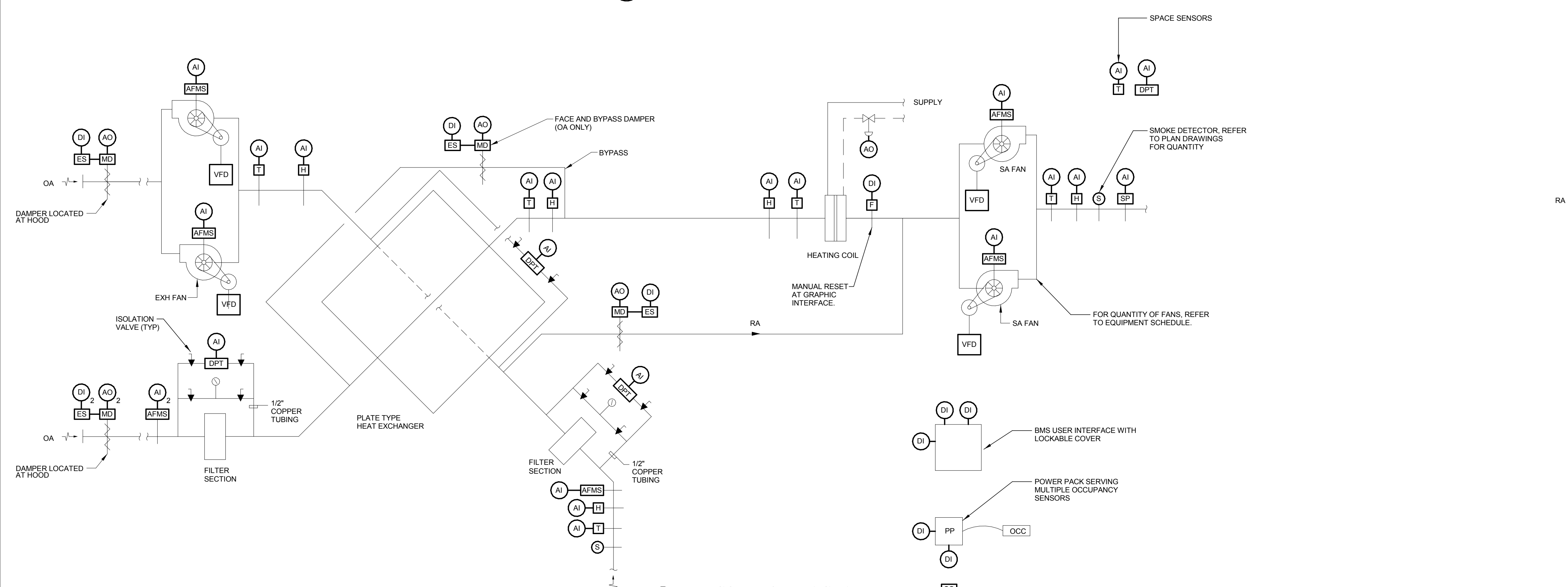
2 DOAS-1, AHU-1 AND AHU-7 CONTROL DIAGRAM
SCALE: N.T.S.



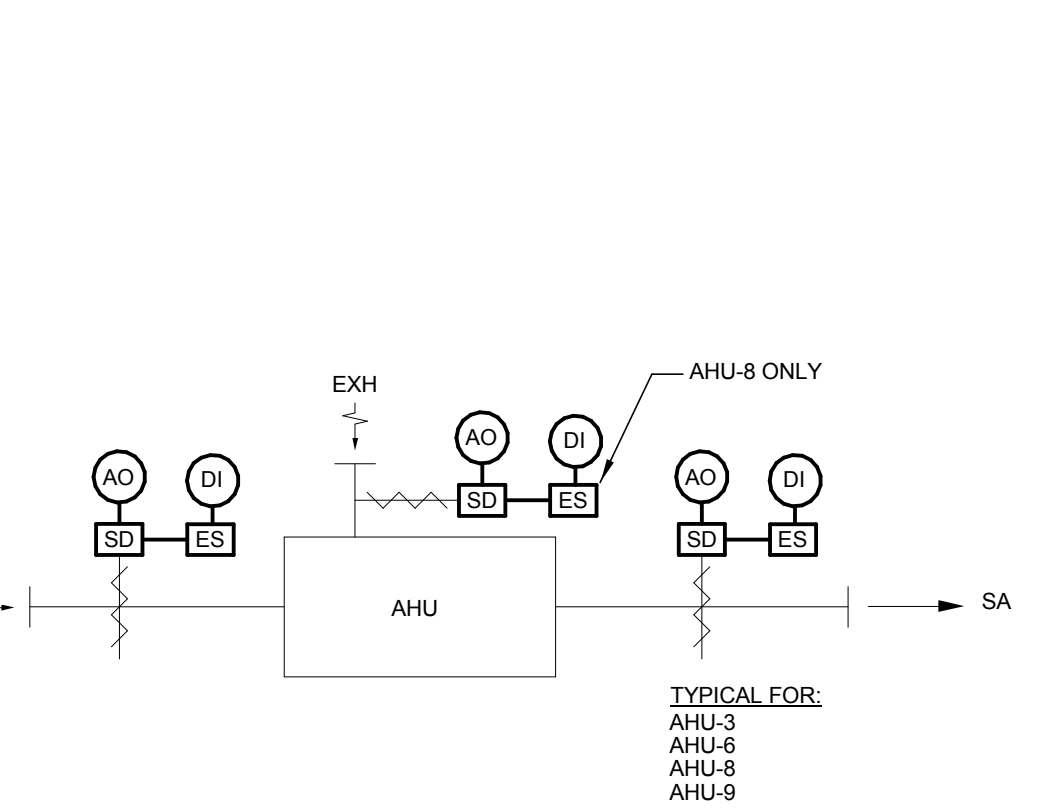
3 AHU-5 AND AHU-8 CONTROL DIAGRAM
SCALE: N.T.S.



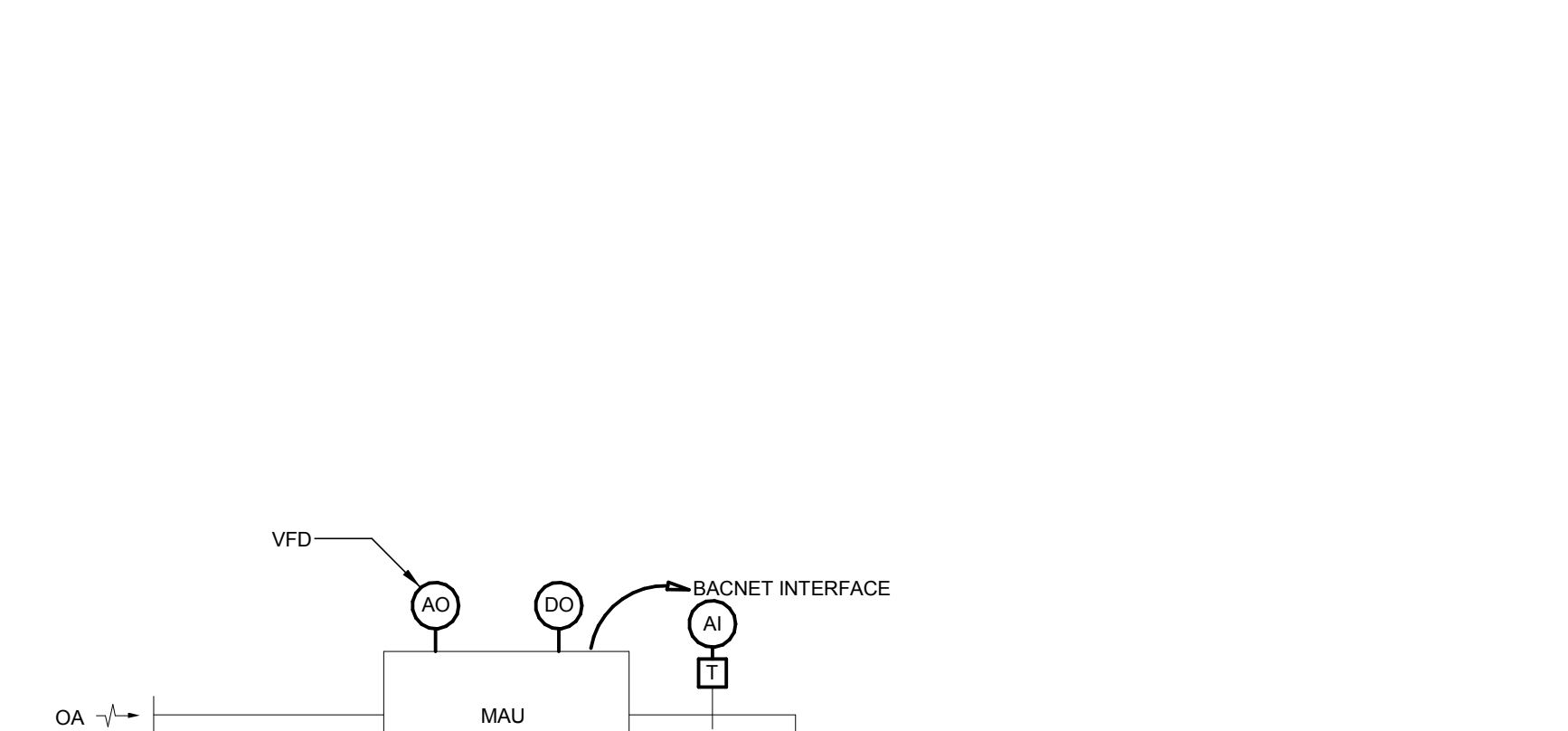
4 FCU CONTROL DIAGRAM
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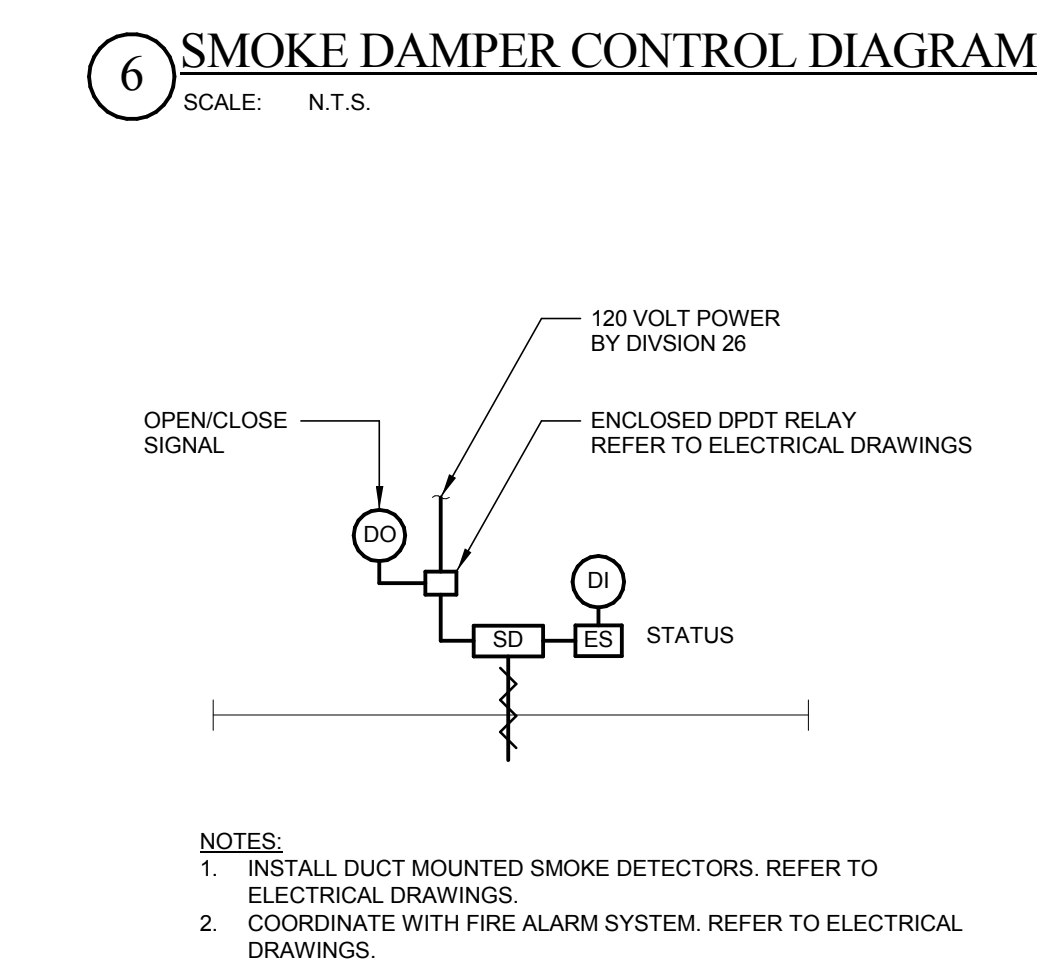
5 ERV CONTROL DIAGRAM
SCALE: N.T.S.



6 SMOKE DAMPER CONTROL DIAGRAM
SCALE: N.T.S.



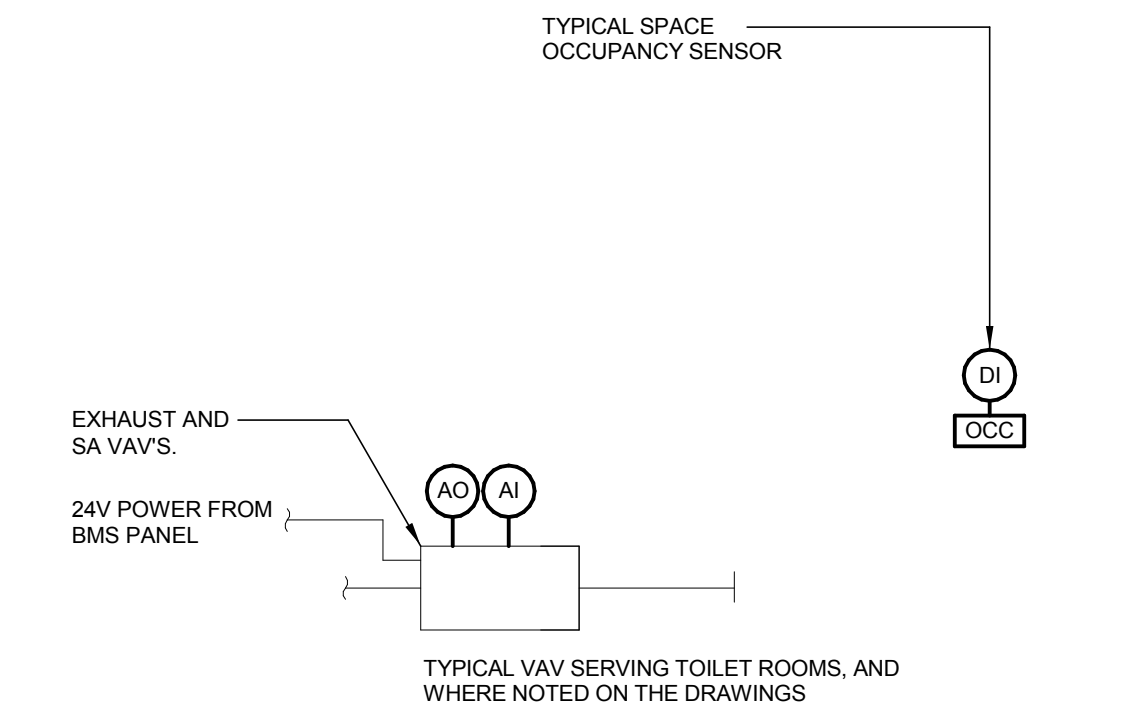
7 GAS FIRED MAKE-UP AIR UNIT
SCALE: N.T.S.



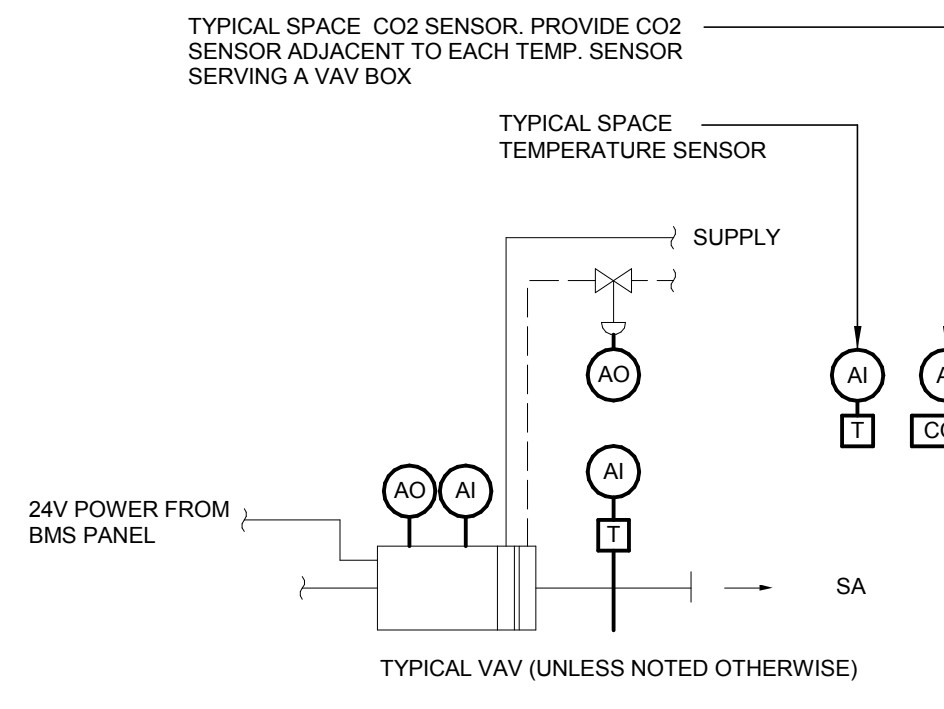
8 SMOKE DAMPER CONTROL DIAGRAM
N.T.S.

100% CONSTRUCTION DOCUMENTS			drawing title	
MECHANICAL CONTROLS			STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
drawing title			date	
MECHANICAL CONTROLS			05/24/2019	
drawing prepared by			scale	
Consulting Engineering Services, Inc.			1/8" = 1'-0"	
811 Middle St., Middletown, CT 06457			drawn by	
project			approved by	
ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL			saw	
400 Orange Avenue Middletown, CT 06461			drawing no.	
CAD no.			MS-1-3	
DCS project no. BART-076 CM-R			OSGCR project no. 990-0013	

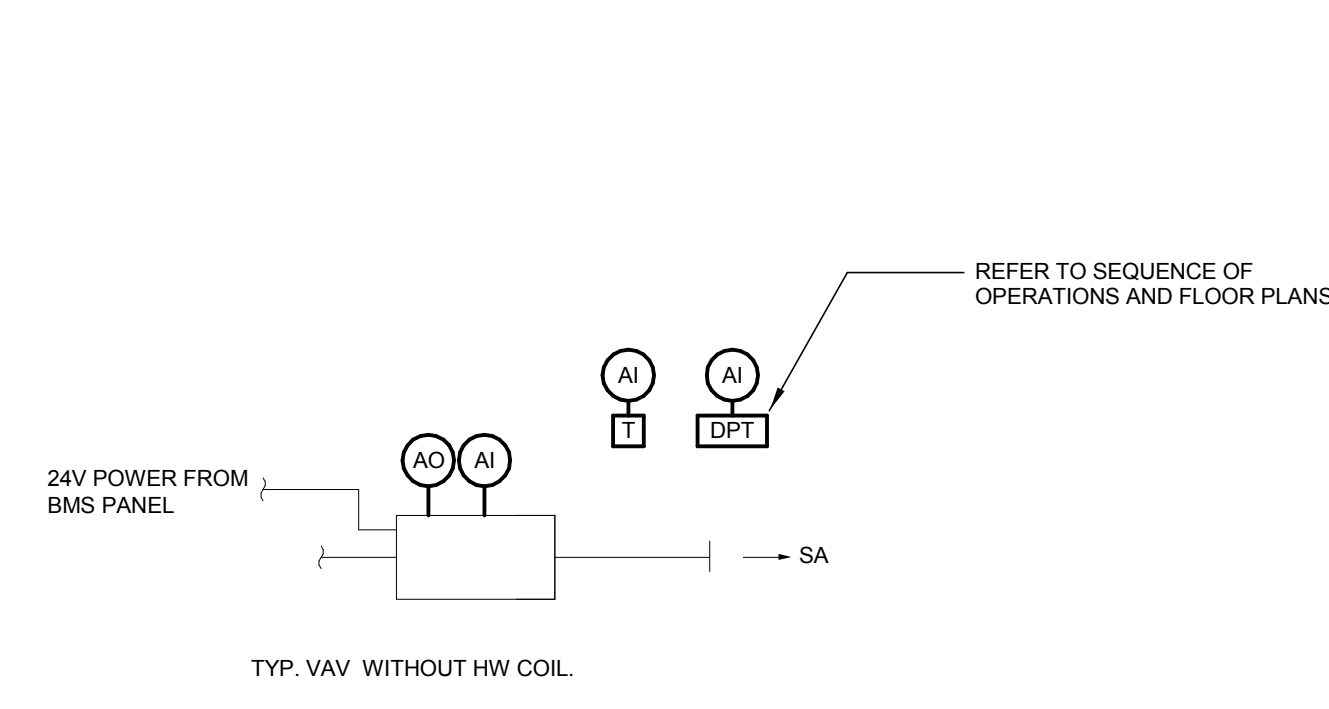
NOTES:
1. INSTALL DUCT MOUNTED SMOKE DETECTORS. REFER TO ELECTRICAL DRAWINGS.
2. COORDINATE WITH FIRE ALARM SYSTEM. REFER TO ELECTRICAL DRAWINGS.



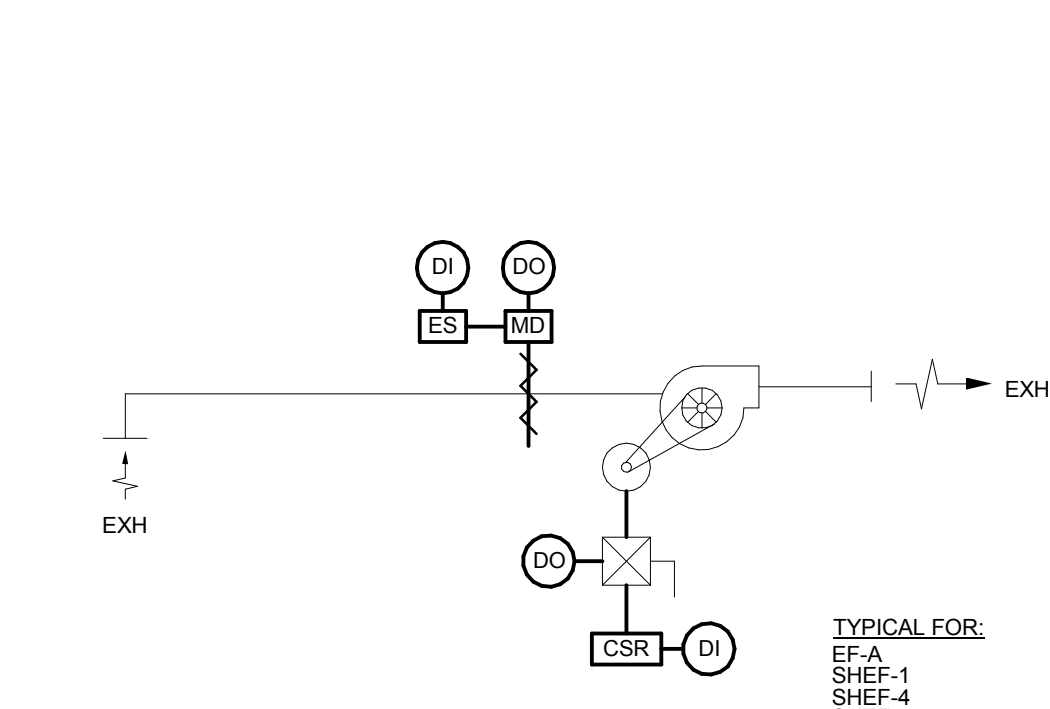
1 VAV CONTROL DIAGRAM-OCCUPANCY SENSOR
N.T.S.



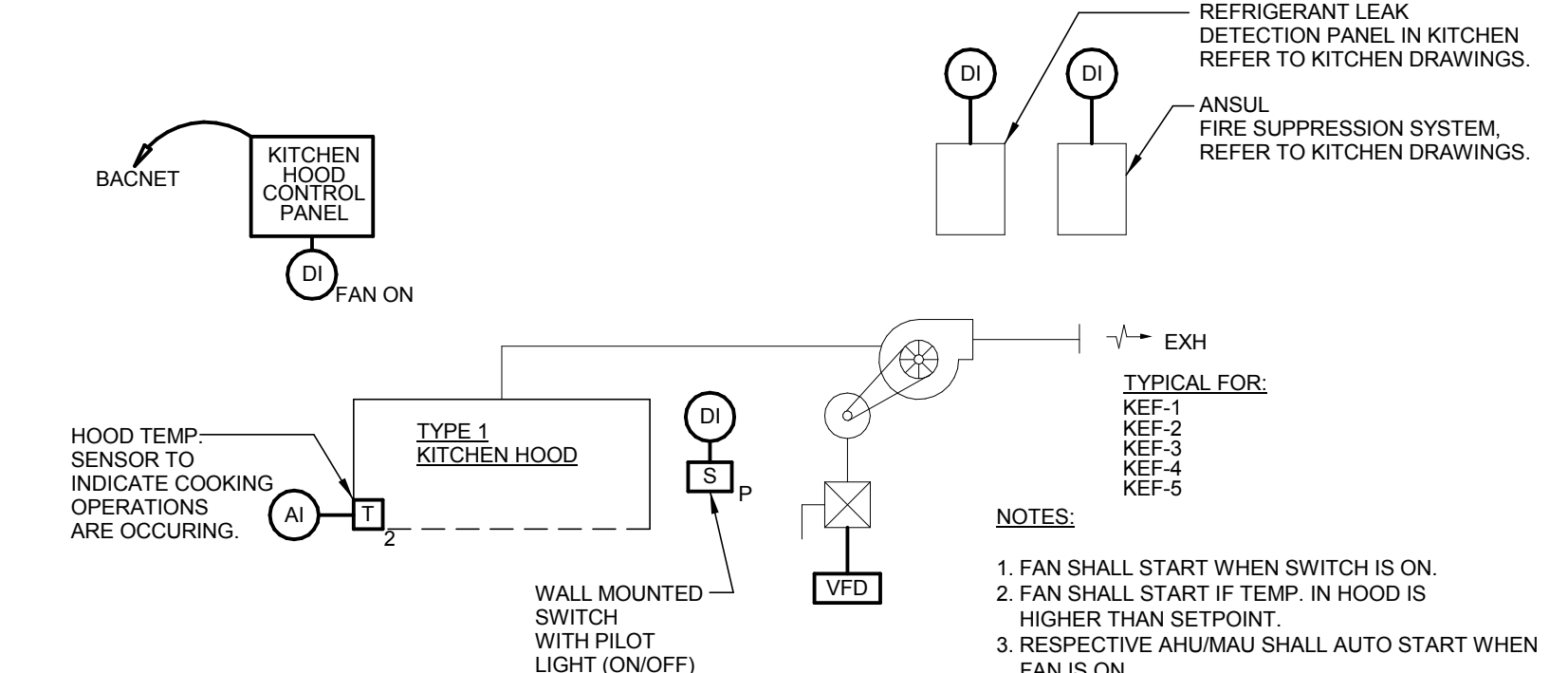
2 VAV CONTROL DIAGRAM
N.T.S.



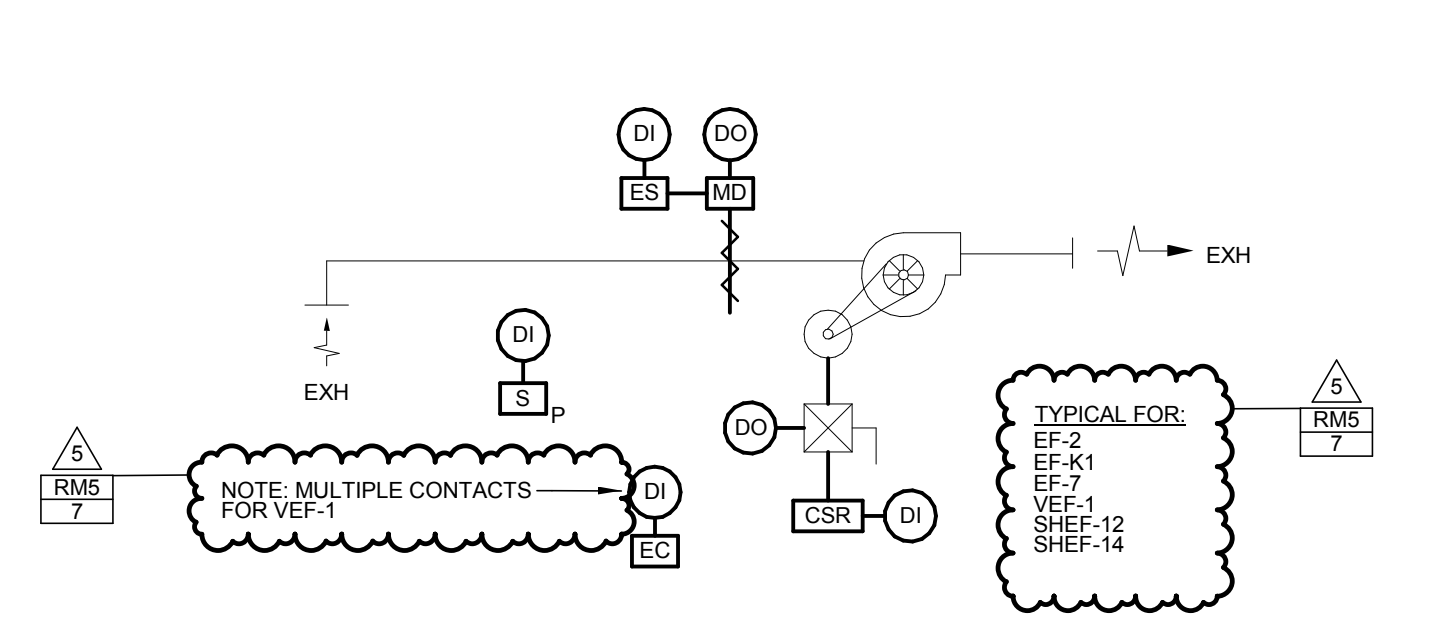
3 VAV CONTROL DIAGRAM
N.T.S.



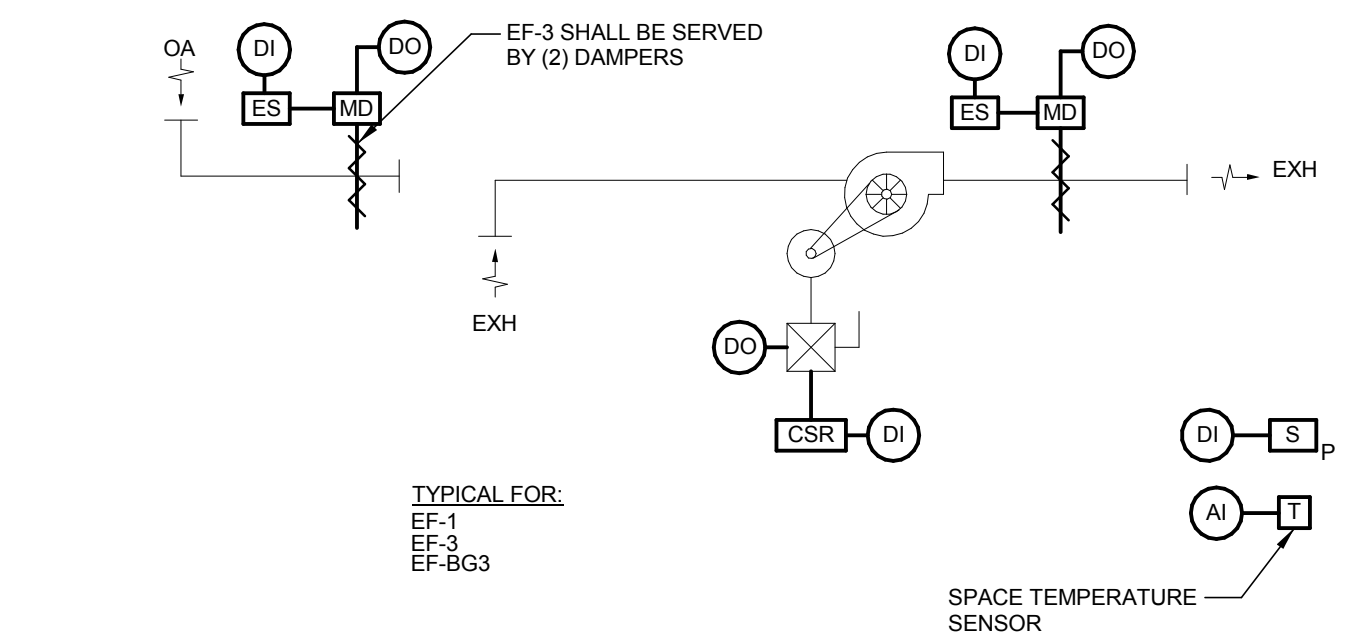
4 FAN CONTROL DIAGRAM - TIME OF DAY
N.T.S.



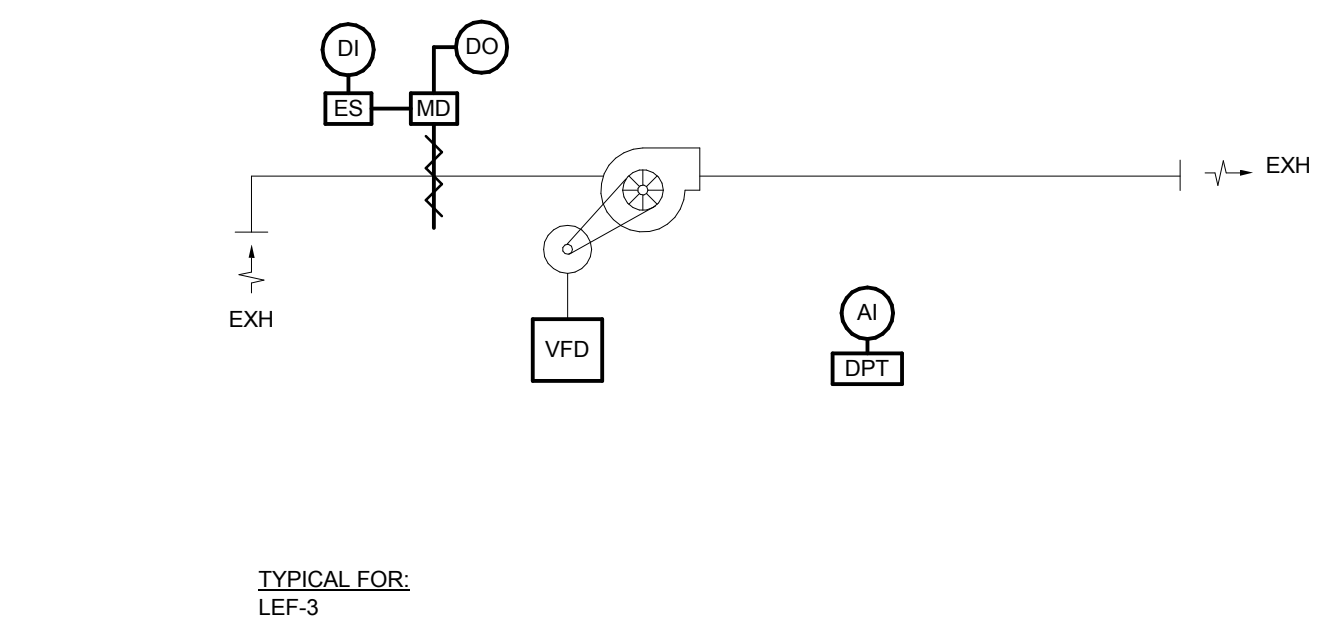
5 KITCHEN HOOD CONTROL DIAGRAM
N.T.S.



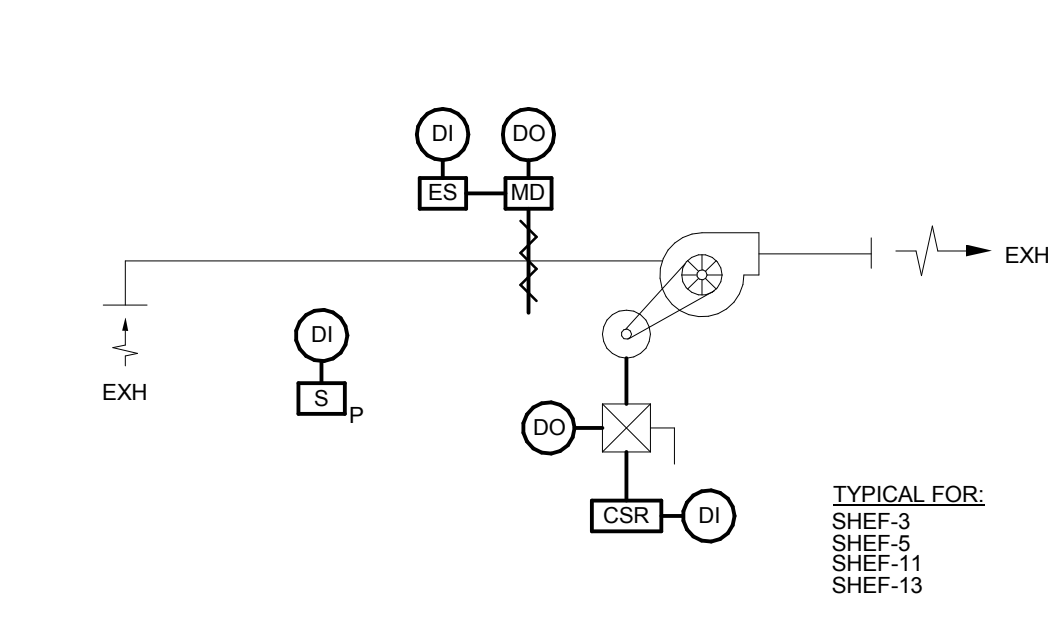
6 FAN CONTROL DIAGRAM - SWITCH/EQUIP. CONTACT
N.T.S.



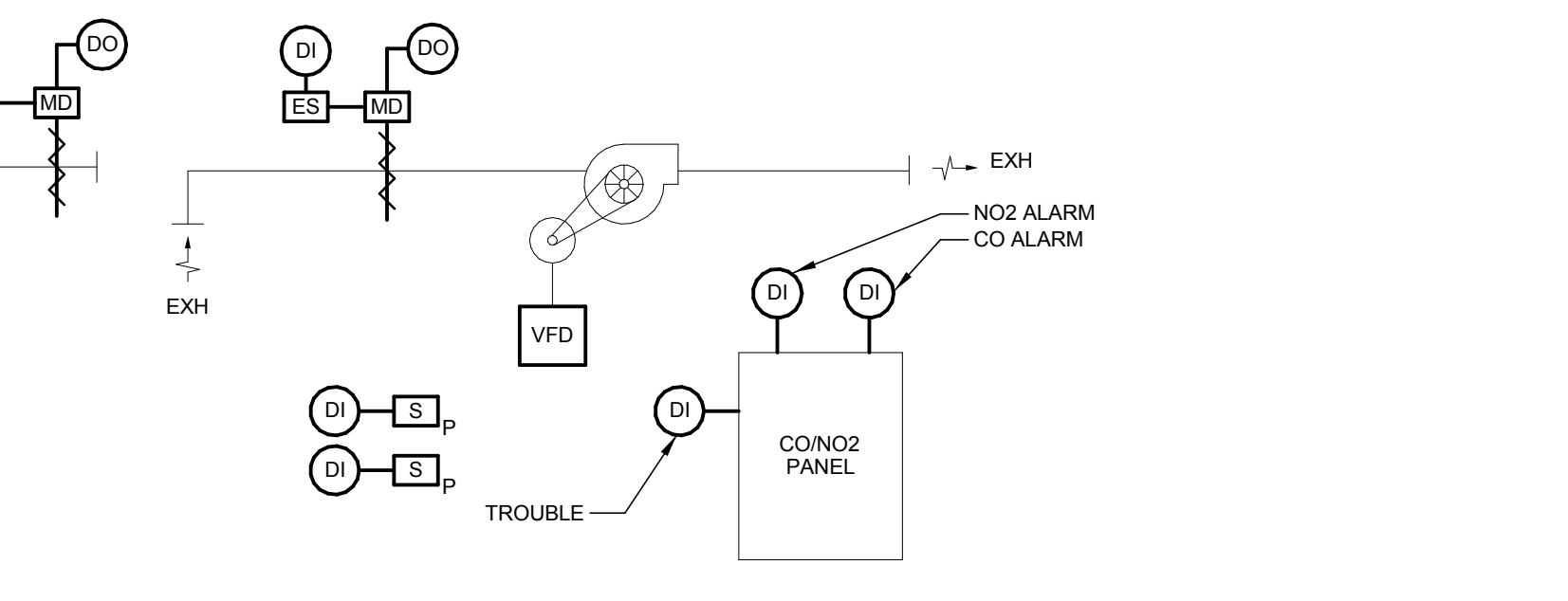
7 FAN CONTROL DIAGRAM - TEMP/SWITCH CONTROL
N.T.S.



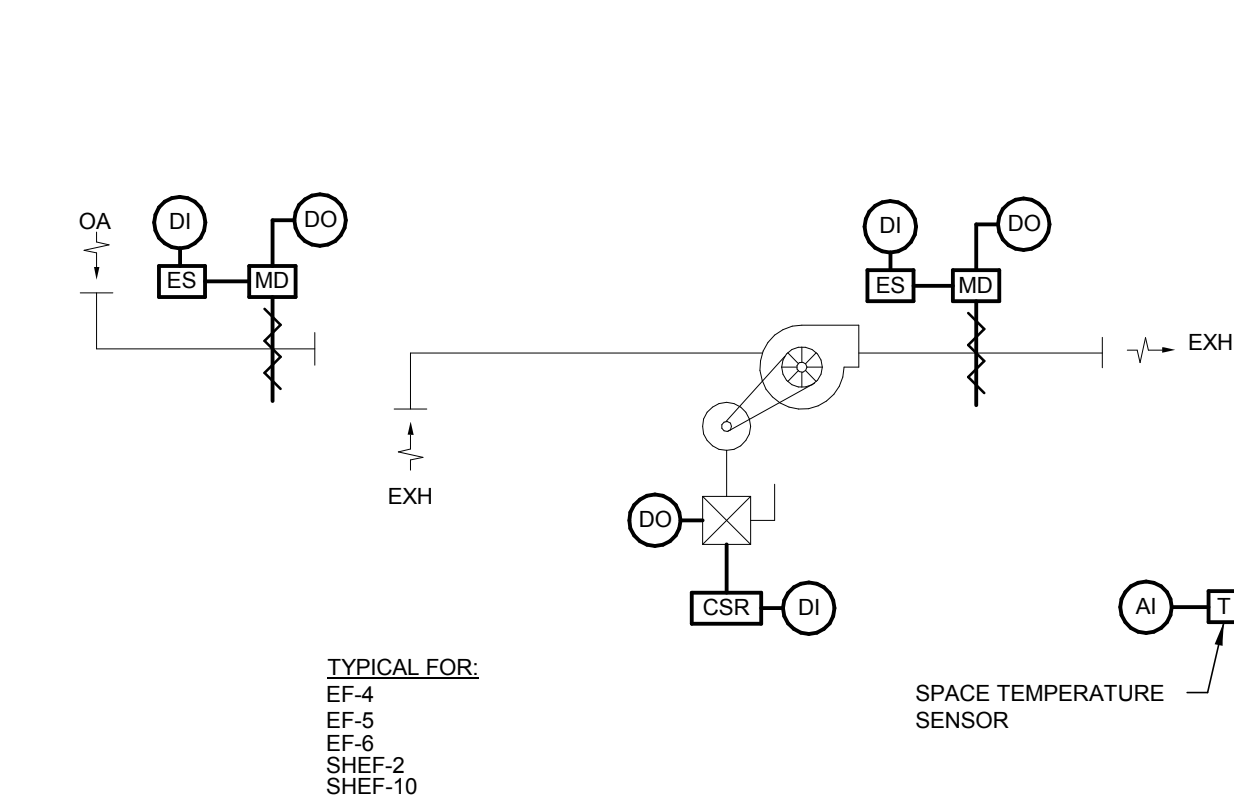
8 FAN CONTROL DIAGRAM - LEF-3
N.T.S.



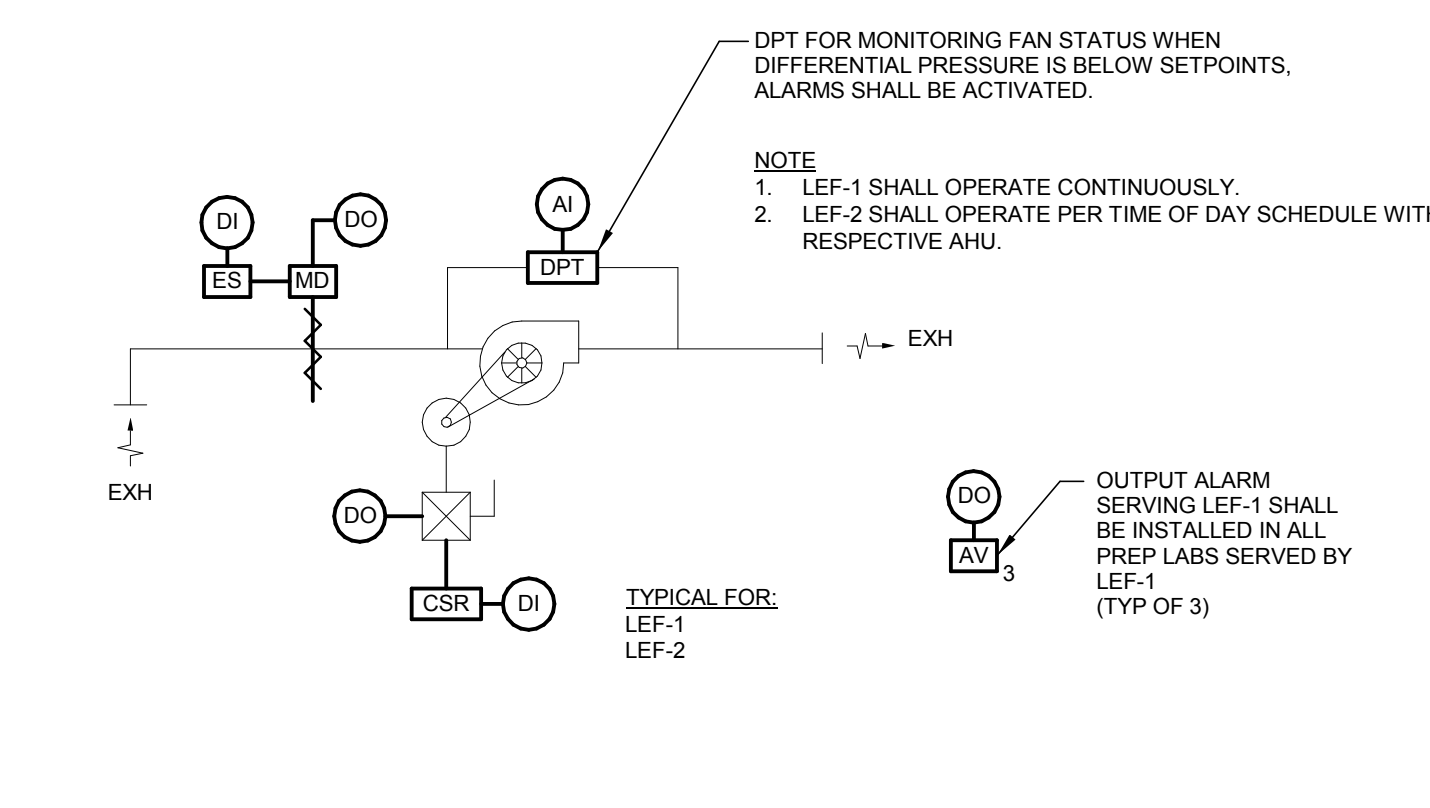
9 FAN CONTROL DIAGRAM - SWITCH OPERATED
N.T.S.



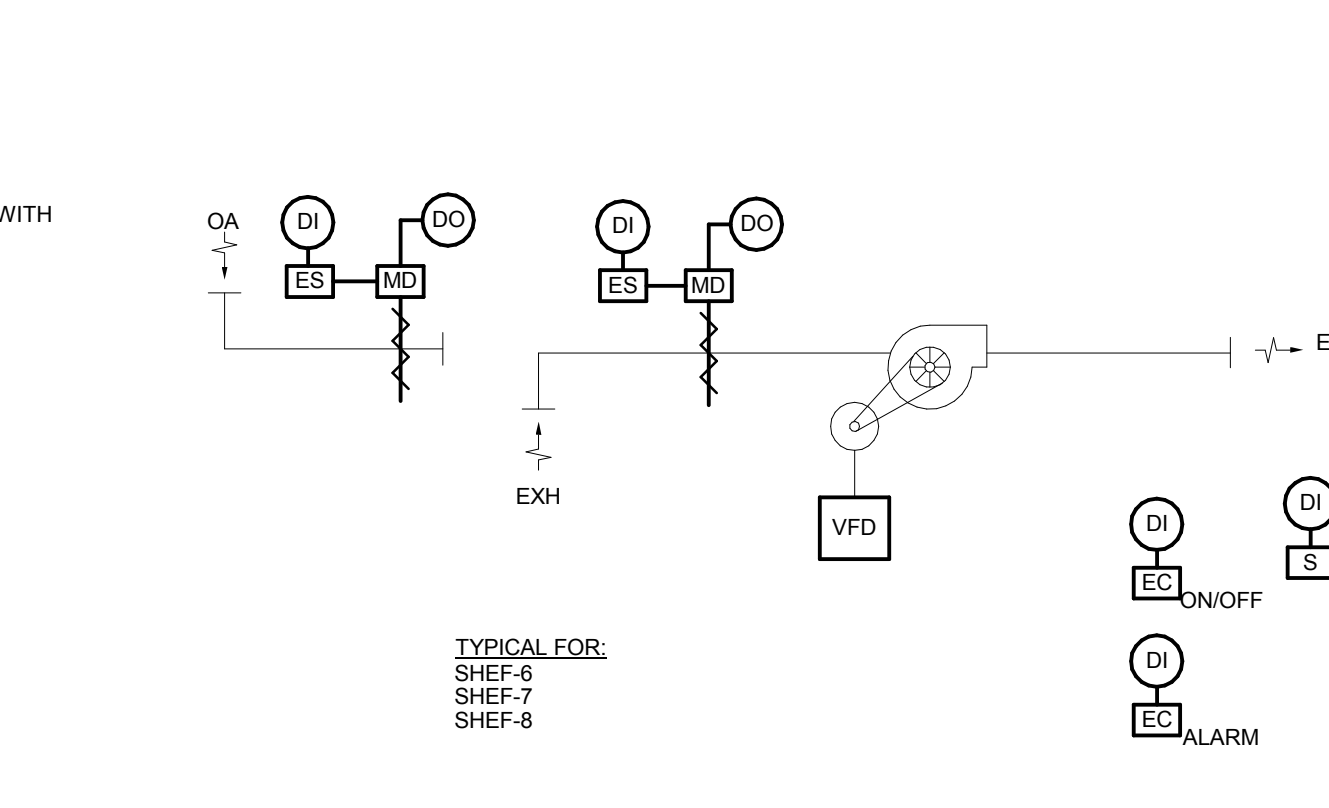
10 EF-BG1 AND EF-BG2 FAN CONTROL DIAGRAM
N.T.S.



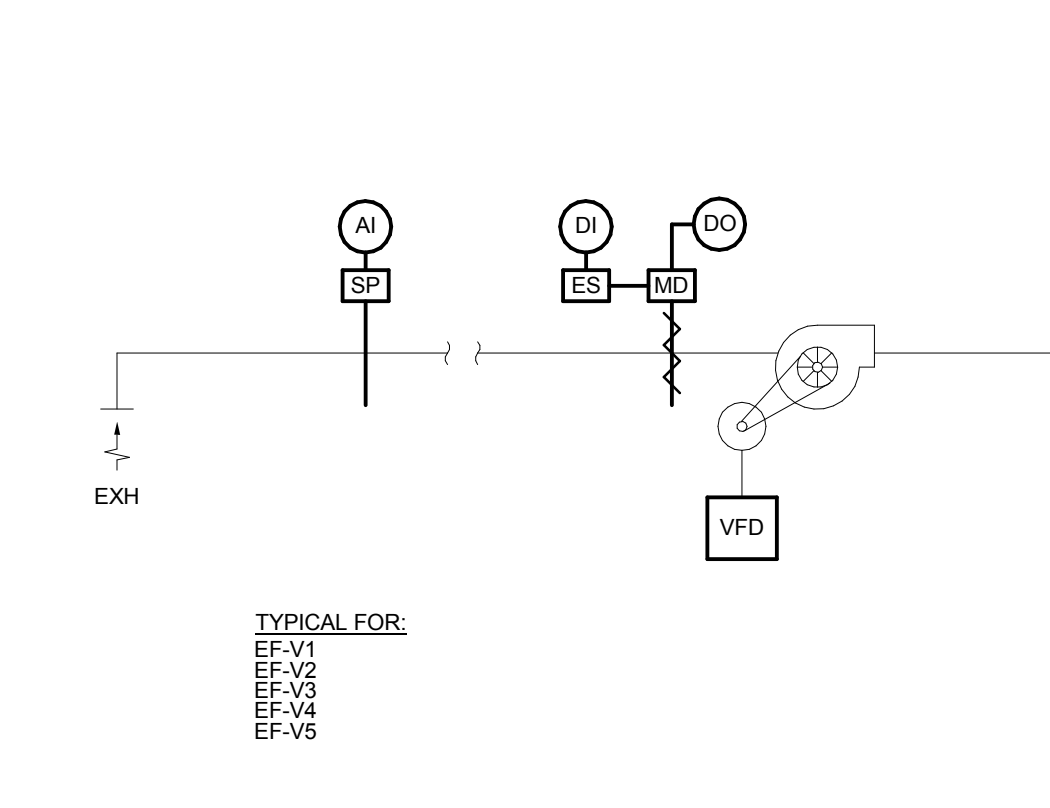
11 FAN CONTROL DIAGRAM - TEMPERATURE CONTROL
N.T.S.



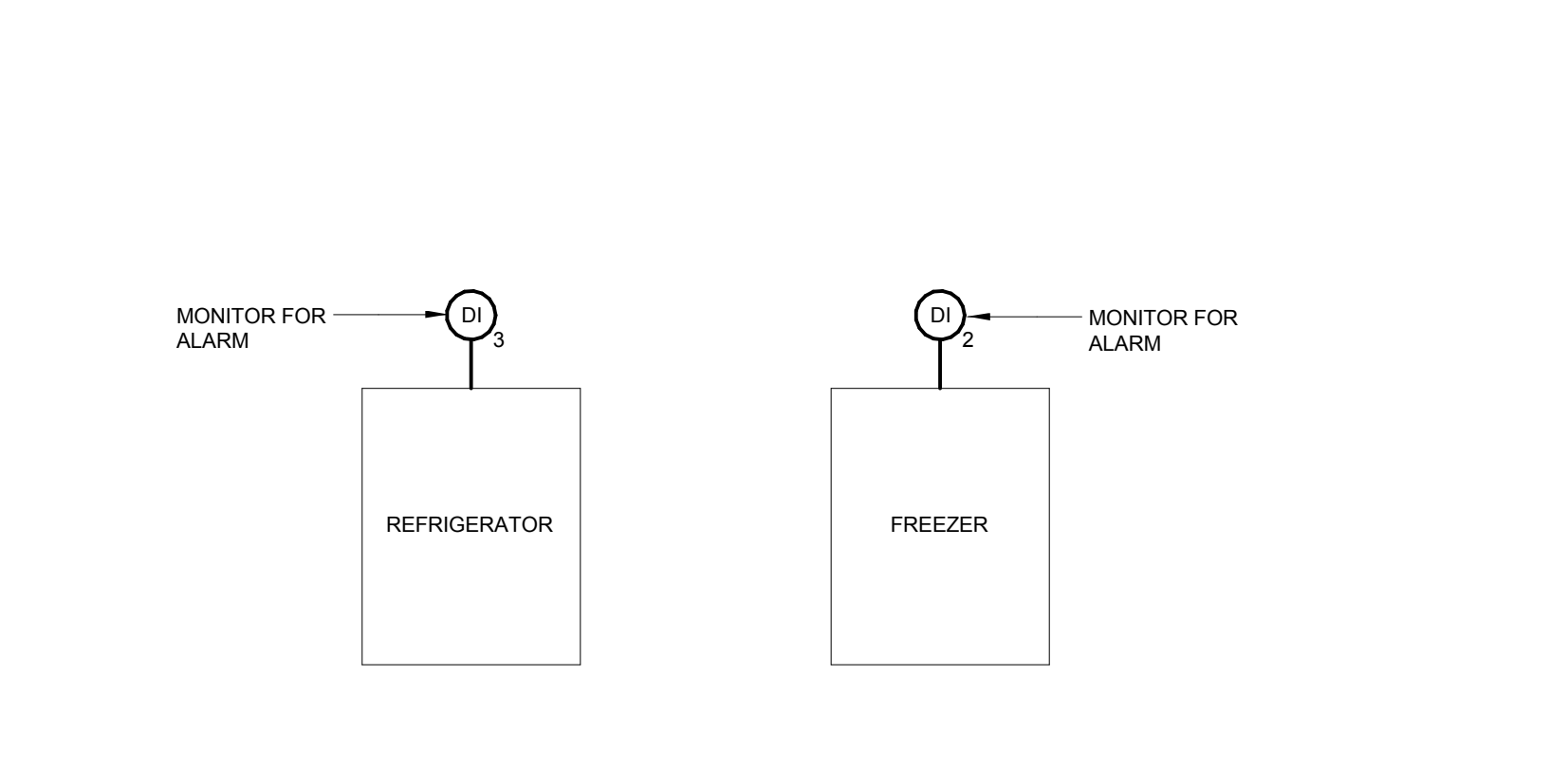
12 FAN CONTROL DIAGRAM - LAB EXHAUST FAN
N.T.S.



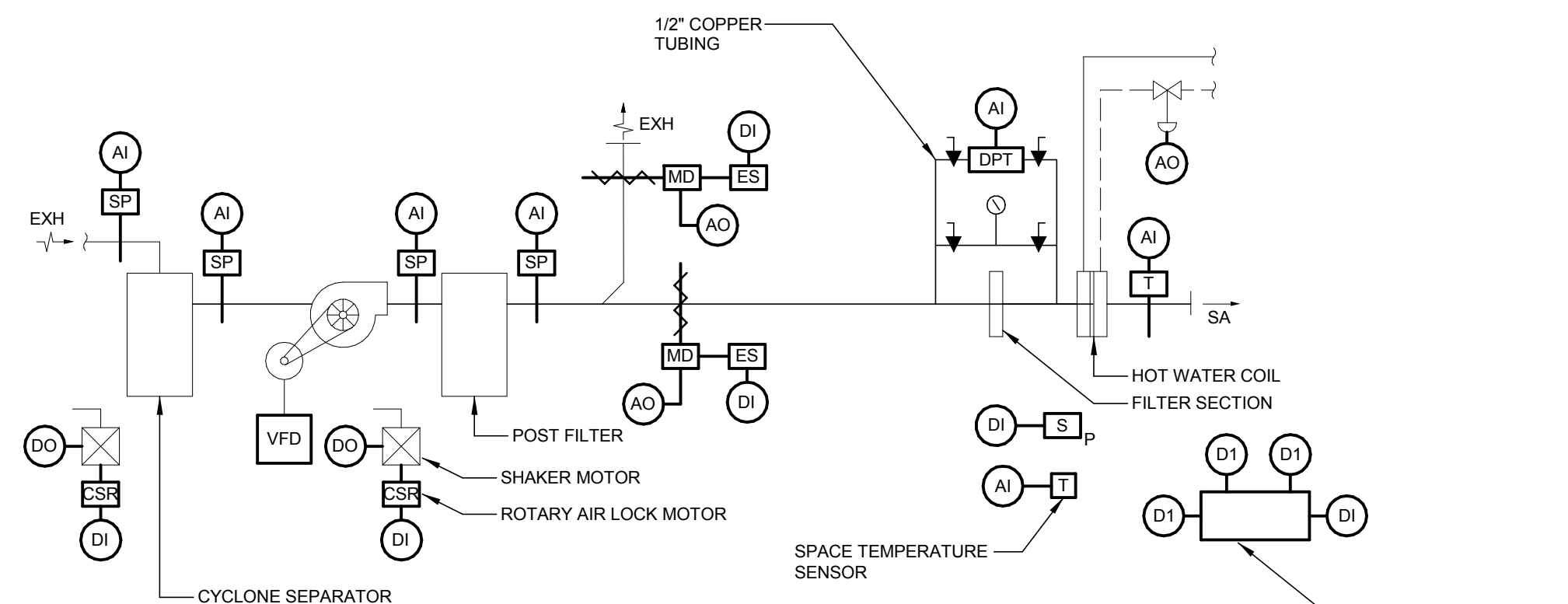
13 FAN CONTROL DIAGRAM - SPRAY BOOTHS
N.T.S.



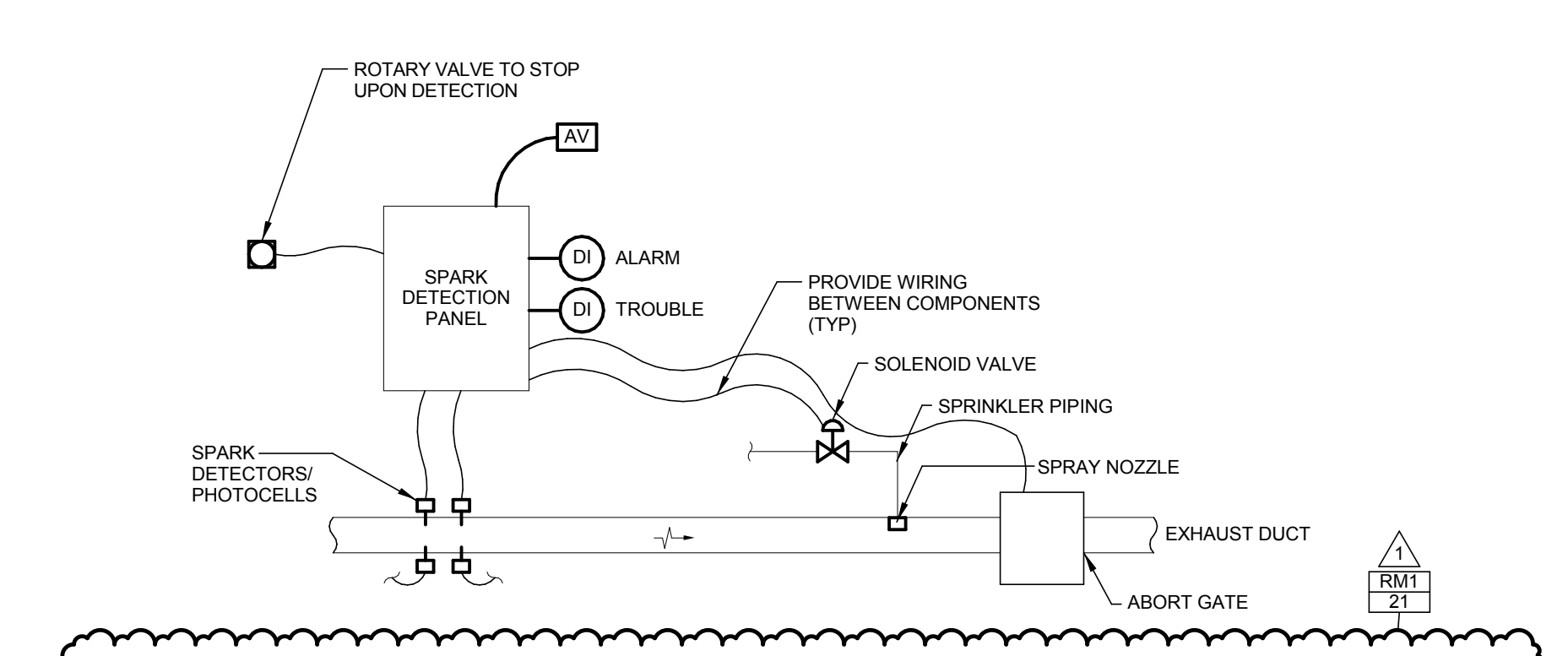
14 FAN CONTROL DIAGRAM - VARIABLE FLOW CONTROL
N.T.S.



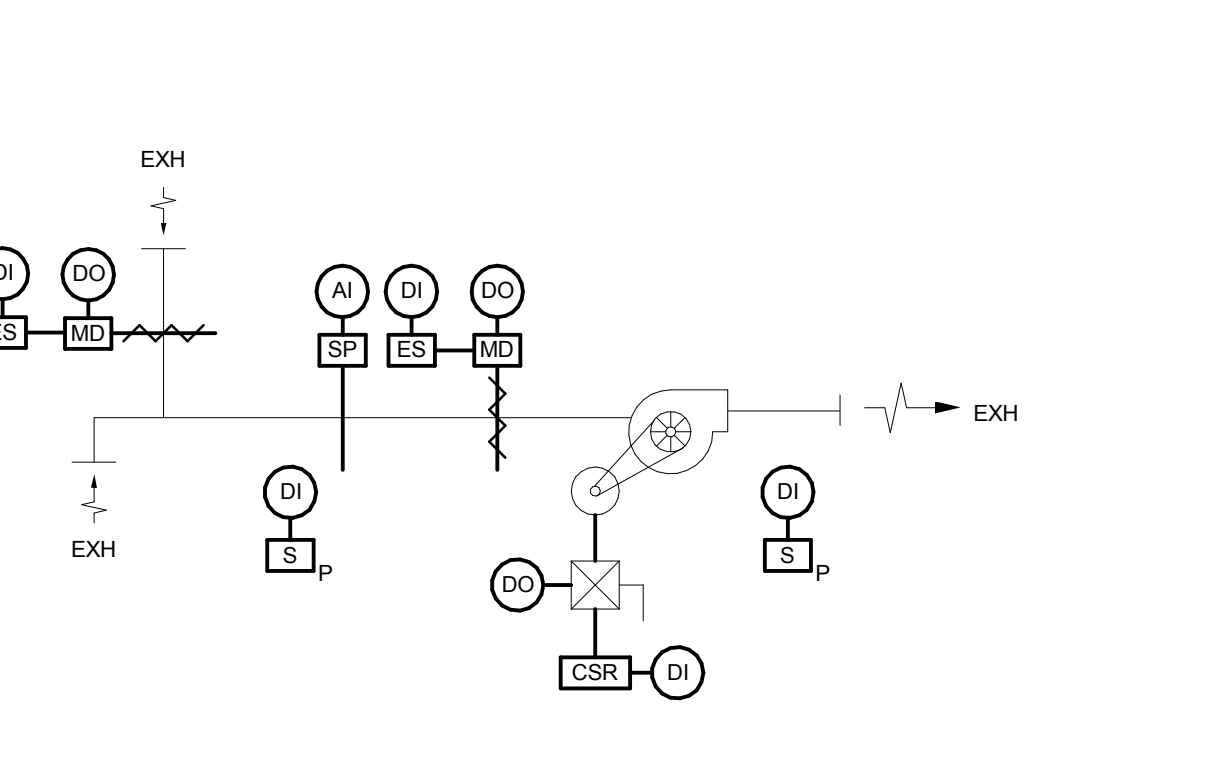
15 KITCHEN EQUIPMENT ALARMS
N.T.S.



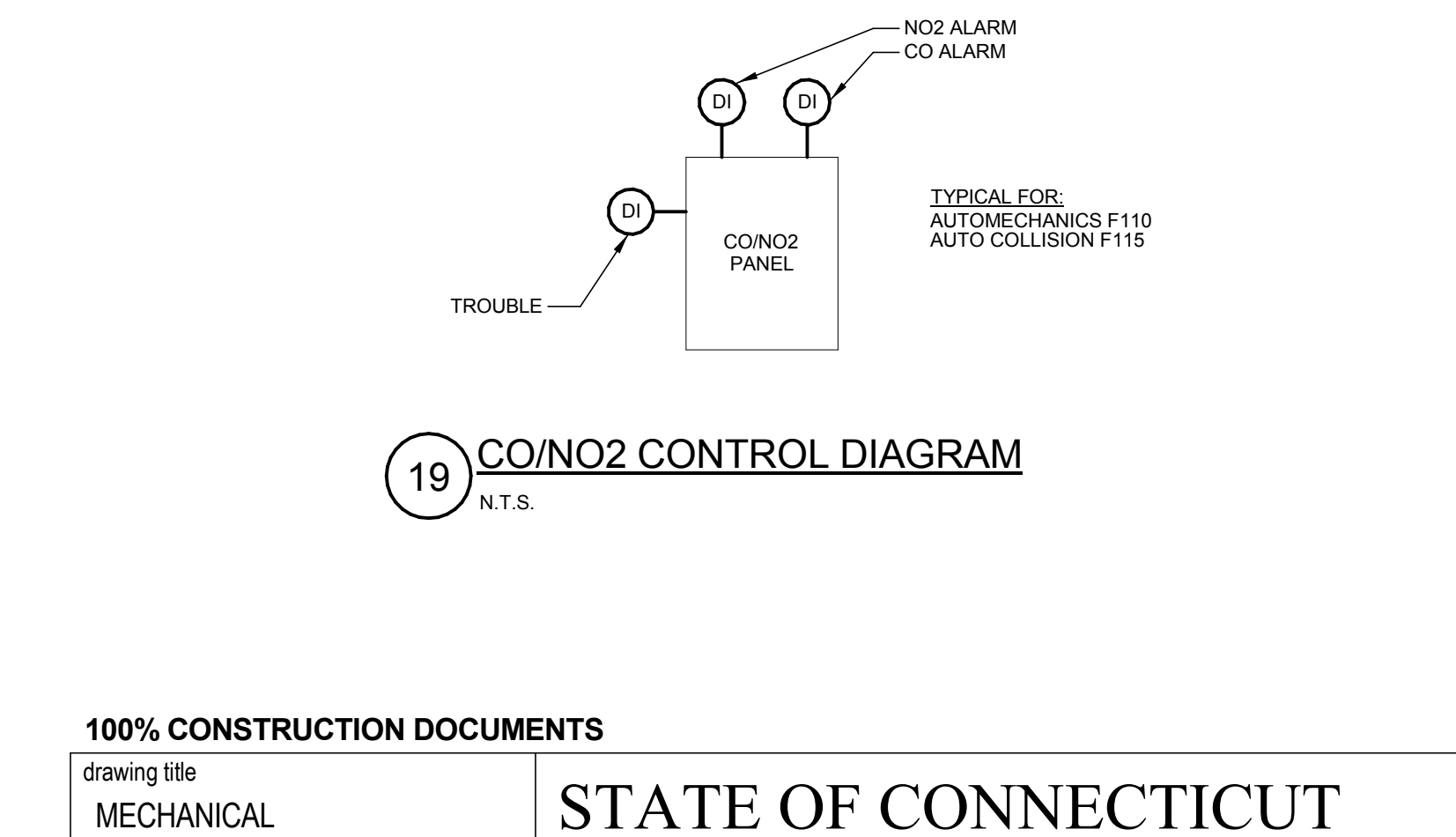
16 DUST COLLECTION DC-1 AND DC-2 CONTROL DIAGRAM
N.T.S.



17 DC-1 & DC-2 SPARK DETECTION/EXTINGUISHING CONTROL DIAGRAM
N.T.S.



18 SHEF-4 CONTROL DIAGRAM - SWITCH OPERATED
N.T.S.



19 CO/NO2 CONTROL DIAGRAM
N.T.S.

100% CONSTRUCTION DOCUMENTS			STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
drawing title	MECHANICAL CONTROLS		drawing prepared by	date
mark	date	description	Consulting Engineering Services, Inc.	05/24/2019
1	07/23/2019	ADDENDUM NO. 1	811 Middle St., Middletown, CT 06457	scale
5	08/15/2019	ADDENDUM NO. 5		1/8" = 1'-0"
			project	approved by
			ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL	Approver
			600 Orange Avenue Middletown, CT 06461	drawing no.
			CAD no.	MS-1-4
			DCS project no.	
			BLRT-076 CM-R	
			OSCRG project no.	
			900-0113	

LIGHTNING PROTECTION KEY NOTES

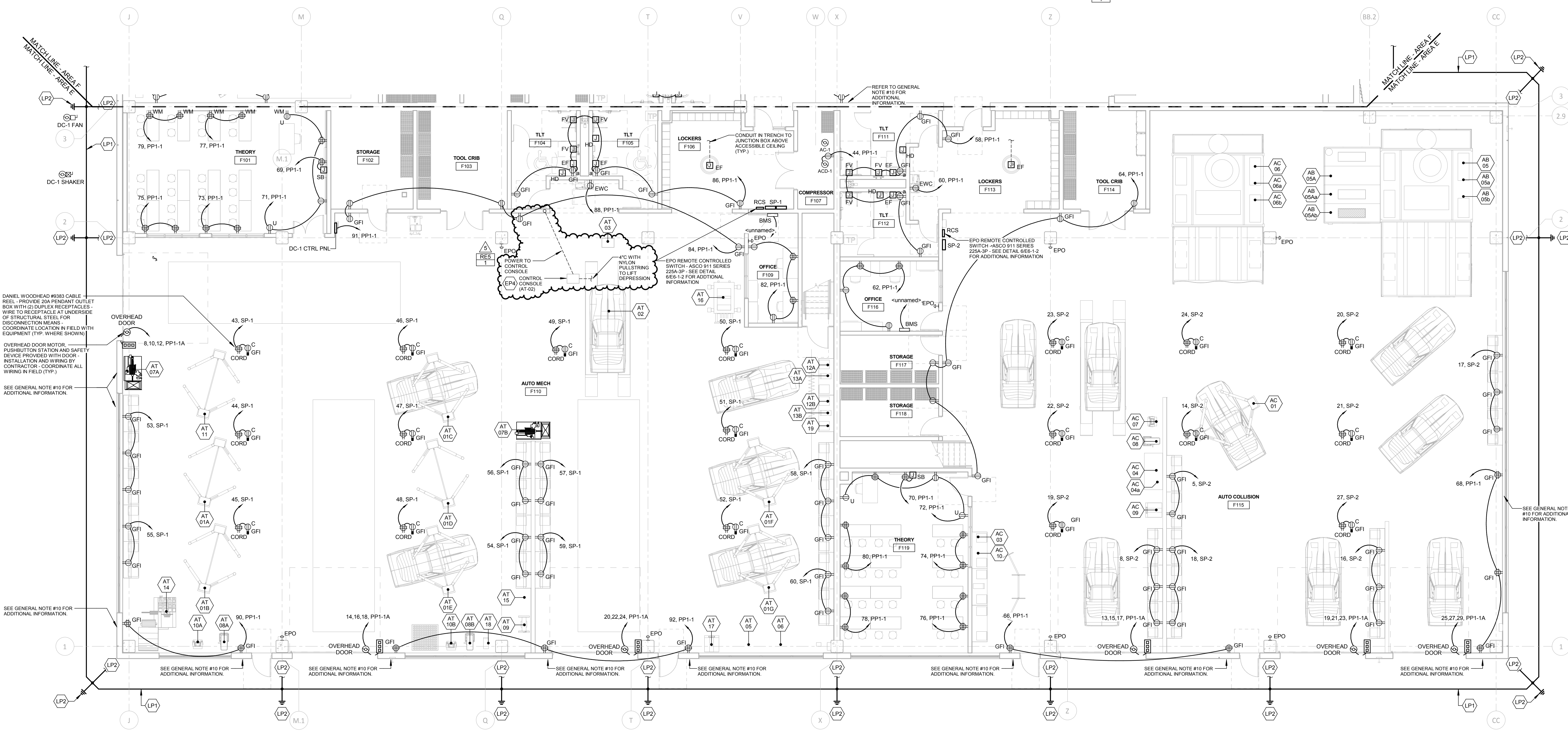
- (LP1) PROVIDE A GROUND RING CONDUCTOR (COUNTERPOISE) EXTENDING AROUND THE PERIMETER OF THE BUILDING. BURY COUNTERPOISE NOT LESS THAN 30 INCHES BELOW GRADE AND 5 FEET FROM BUILDING FOUNDATION. USE #40 AWG FOR COUNTERPOISE AND FOR TAP TO BUILDING STEEL. COUNTERPOISE CONDUCTOR TRENCH SHALL BE FILLED WITH 1" OF ERICO G.E.M. ABOVE AND BELOW CONDUCTOR (TYPICAL WHERE SHOWN).
- (LP2) LIGHTNING PROTECTION DOWNLEAD FROM THE LIGHTNING PROTECTION SYSTEM ON THE ROOF TO A GROUND ROD. GROUND RODS SHALL BE LOCATED IN COUNTERPOISE TRENCH AND SHALL BE ATTACHED TO COUNTERPOISE WITH A TYPE DV (CONDUCTOR-TO-ROD) BY ERICO AND AN X8 (CONDUCTOR-TO-CONDUCTOR) CONNECTION BY ERICO. TOP OF GROUND ROD SHALL NOT BE LESS THAN 24" BELOW GRADE. THE CONDUCTOR THAT ATTACHES THE ROD TO THE COUNTERPOISE SHALL BE RUN CONTINUOUS TO THE ROOF LIGHTNING PROTECTION SYSTEM, (TYPICAL WHERE SHOWN).

KEY NOTES - ELECTRICAL POWER

- (EP1) LAB CASEWORK, FIRST FLOOR: GFI RECEPTACLES INTEGRAL TO FURNITURE. PROVIDE JUNCTION BOX IN FLOOR AT FURNITURE CHASE LOCATION. PROVIDE 1" CONDUIT IN FLOOR FROM JUNCTION BOX TO ABOVE ACCESSIBLE CEILING. ROUTE FMC FROM JUNCTION BOX THROUGH FURNITURE TO GFI RECEPTACLE LOCATIONS. COORDINATE LOCATION OF JUNCTION BOX IN FIELD. SEE EQUIPMENT CONSULTANT'S DETAILED CASEWORK DRAWINGS FOR ADDITIONAL INFORMATION.
- (EP2) LAB CASEWORK, SECOND FLOOR: GFI RECEPTACLES INTEGRAL TO FURNITURE. PROVIDE JUNCTION BOX BELOW FLOOR WITH 3/4" CONDUIT SLEEVE THROUGH FLOOR AND TRANSITION TO PNC AT FLOOR. ROUTE FMC THROUGH FURNITURE TO GFI RECEPTACLE LOCATIONS. COORDINATE LOCATION OF JUNCTION BOX IN FIELD. SEE EQUIPMENT CONSULTANT'S DETAILED CASEWORK DRAWINGS FOR ADDITIONAL INFORMATION.
- (EP3) ELECTRICAL DEVICES ALONG THIS WALL SHALL BE MOUNTED IN PRECAST PANELS. REFER TO GENERAL NOTE #10 FOR ADDITIONAL INFORMATION.
- (EP4) CONTROL CONSOLE FOR ALIGNMENT LIFT. PROVIDE 200V 1-PHASE POWER TO CONSOLE AS SCHEDULED. FEED POWER TO CONTROL CONSOLE FROM BELOW WITH CONDUIT UNDER SLAB AND UP NEAREST WALL AS SHOWN. ROUTE 4" C WITH NYLON PULL STRING BENEATH CONSOLE TO LIFT DEPRESSION WITHIN FLOOR. CONDUIT FOR HYDRAULIC LINES AND INTRINSICALLY SAFE CONTROL WIRING PROVIDED BY LIFT MANUFACTURER. TYPICAL CONTROL CONSOLE LOCATION SHOWN. COORDINATE FINAL LOCATION IN FIELD.

GENERAL NOTES - ELECTRICAL POWER

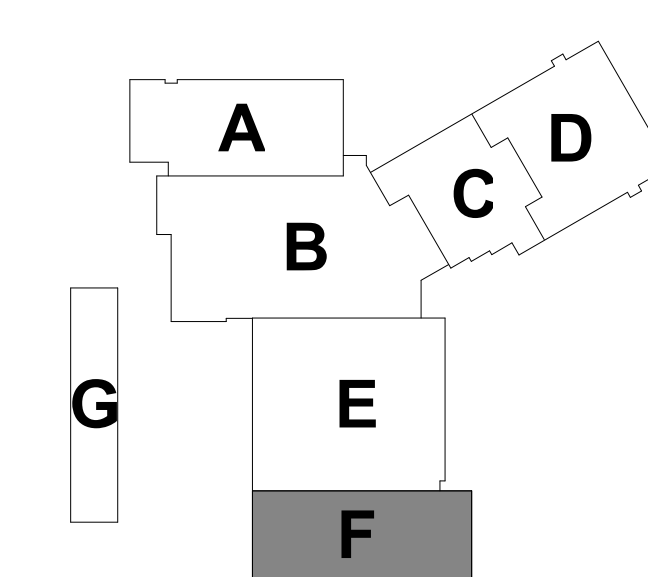
1. ALL CIRCUITS SHALL BE 2#12#12G, 34°C, TO NEW 20A-1P CIRCUIT BREAKER IN PANEL INDICATED UNLESS NOTED OTHERWISE.
2. ALL 120VAC BRANCH CIRCUITS EXCEEDING 150' IN LENGTH SHALL BE 2#10#10G, 34°C, UNLESS NOTED OTHERWISE.
3. ALL DEVICES SHALL BE LABELED WITH SOURCE PANEL AND CIRCUIT NUMBER(S).
4. REFER TO ARCHITECTS REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING MOUNTED ELECTRICAL DEVICES.
5. REFER TO DRAWING E5-1-1 FOR ELECTRICAL SYMBOLS, LEGENDS, AND ABBREVIATIONS.
6. REFER TO DRAWING E5-1-2 FOR MOTOR CIRCUIT SCHEDULE.
7. ALL RECEPTACLES LOCATED WITHIN 6' OF A SOURCE OF WATER SHALL BE GFCI TYPE.
8. ALL RECEPTACLE BRANCH CIRCUIT HOMERUNS SERVING A SPACE SHALL BE IN CONDUIT. REFER TO SPECIFICATIONS FOR ALLOWABLE USE OF MC CABLE.
9. ALL PANELBOARD FEEDERS SHALL BE IN CONDUIT.
10. IN ALL LOCATIONS WHERE AN ELECTRICAL DEVICE IS MOUNTED ON A PRECAST WALL, PROVIDE BACKBOXES, CONDUIT, CONCEALED WIRING AND TERMINATIONS WITHIN PRECAST CONCRETE PANELS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11. IN ALL LOCATIONS WHERE AN ELECTRICAL DEVICE IS MOUNTED ON AN ALUMINUM STORE FRONT, PROVIDE BACKBOXES, CONDUIT, CONCEALED WIRING AND TERMINATIONS WITHIN STORE FRONT. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
12. REFER TO "EQ" SERIES DRAWINGS AND ELECTRICAL TRADE SHOP EQUIPMENT SCHEDULES ON DRAWING E5-1-3 FOR ADDITIONAL WIRING AND DEVICE LOCATIONS AND REQUIREMENTS.



1 FIRST FLOOR ELECTRICAL POWER PLAN - AREA F
1/8" = 1'-0"

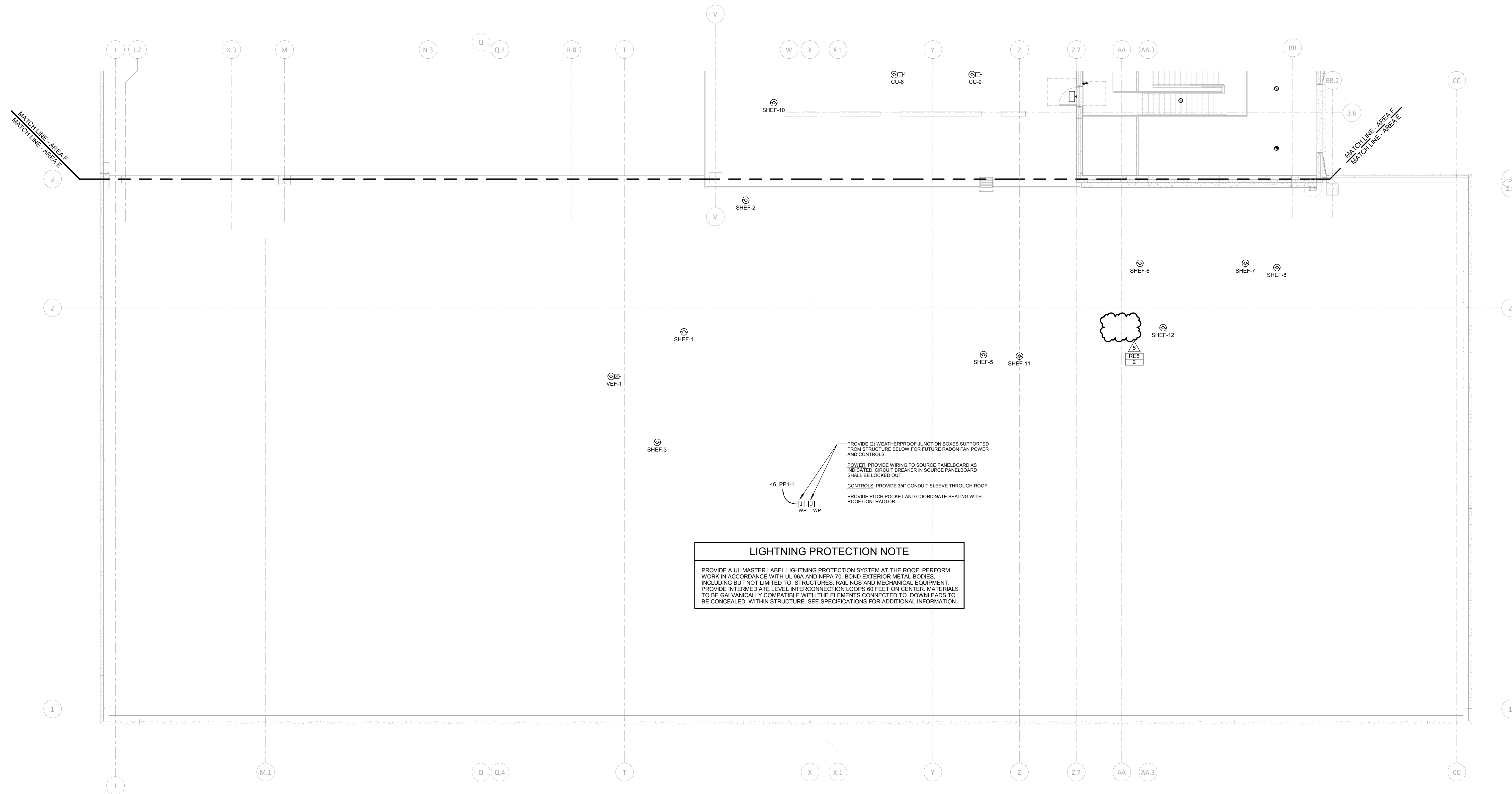
REVISIONS		DATE		DESCRIPTION	
5	06/15/2019	ADDENDUM NO. 5			

drawing title		FIRST FLOOR ELECTRICAL POWER PLAN AREA F	
drawing no.		E2-1-1F	
project		ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL	
CAD no.		DCS project no. BR-RT-076 CM-R	
date		05/24/2019	
scale		As Indicated	
drawn by		vsm	
approved by		esm	
drawing no.		E2-1-1F	



GENERAL NOTES - ELECTRICAL POWER

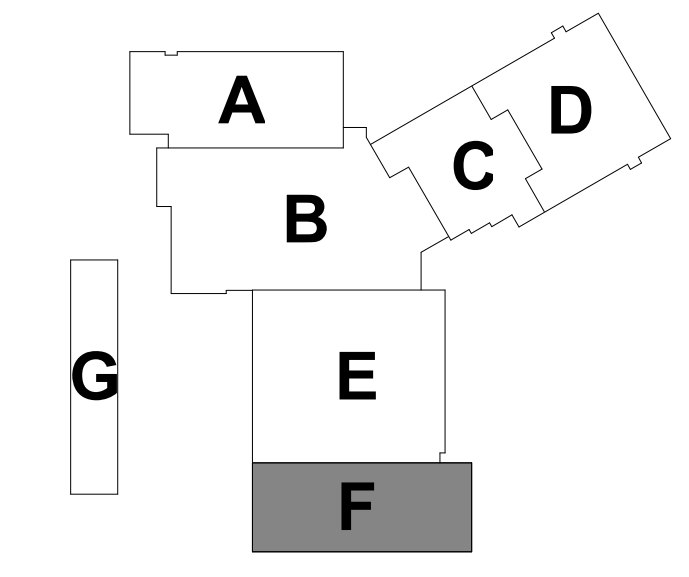
- ALL CIRCUITS SHALL BE 2#12,#12G, 3/4" C. TO NEW 20A-1P CIRCUIT BREAKER IN PANEL INDICATED UNLESS NOTED OTHERWISE.
- ALL 120VAC BRANCH CIRCUITS EXCEEDING 150' IN LENGTH SHALL BE 2#10,#10G, 3/4" C. UNLESS NOTED OTHERWISE.
- ALL DEVICES SHALL BE LABELED WITH SOURCE PANEL AND CIRCUIT NUMBER(S).
- REFER TO ARCHITECTS REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING MOUNTED ELECTRICAL DEVICES.
- REFER TO DRAWING ES-1-1 FOR ELECTRICAL SYMBOLS, LEGENDS, AND ABBREVIATIONS.
- REFER TO DRAWING ES-1-2 FOR MOTOR CIRCUIT SCHEDULE.
- ALL RECEPTACLES LOCATED WITHIN 6' OF A SOURCE OF WATER SHALL BE GFCI TYPE.
- ALL RECEPTACLE BRANCH CIRCUIT HOMERUNS SERVING A SPACE SHALL BE IN CONDUIT. REFER TO SPECIFICATIONS FOR ALLOWABLE USE OF MC CABLE.
- ALL PANELBOARD FEEDERS SHALL BE IN CONDUIT.
- IN ALL LOCATIONS WHERE AN ELECTRICAL DEVICE IS MOUNTED ON A PRECAST WALL, PROVIDE BACKBOXES, CONDUIT, CONCEALED WIRING AND TERMINATIONS WITHIN PRECAST CONCRETE PANELS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- IN ALL LOCATIONS WHERE AN ELECTRICAL DEVICE IS MOUNTED ON AN ALUMINUM STORE FRONT, PROVIDE BACKBOXES, CONDUIT, CONCEALED WIRING AND TERMINATIONS WITHIN STORE FRONT. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- REFER TO "EO" SERIES DRAWINGS AND ELECTRICAL TRADE SHOP EQUIPMENT SCHEDULES ON DRAWING ES-1-3 FOR ADDITIONAL WIRING AND DEVICE LOCATIONS AND REQUIREMENTS.



LIGHTNING PROTECTION NOTE

PROVIDE A UL MASTER LABEL LIGHTNING PROTECTION SYSTEM AT THE ROOF. PERFORM WORK IN ACCORDANCE WITH UL 96A AND NFPA 70. BOND EXTERIOR METAL BODIES INCLUDING BUT NOT LIMITED TO STRUCTURES, RAILINGS AND MECHANICAL EQUIPMENT. PROVIDE INTERMEDIATE LEVEL INTERCONNECTION LOOPS 60 FEET ON CENTER. MATERIALS TO BE GALVANICALLY COMPATIBLE WITH THE ELEMENTS CONNECTED TO. DOWNLEADS TO BE CONCEALED WITHIN STRUCTURE. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

1 ROOF ELECTRICAL POWER PLAN - AREA F
1/8" = 1'-0"



100% CONSTRUCTION DOCUMENTS

drawing title ROOF ELECTRICAL POWER PLAN AREA F		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
drawing prepared by Consulting Engineering Services, Inc. 811 Middle St., Middletown, CT 06457		date 05/24/2019	
REVISIONS		scale As Indicated	
mark	date	description	drawn by
5	06/15/2019	ADDENDUM NO. 5	VM
project ADDITIONS AND RENOVATIONS PLATT TECHNICAL HIGH SCHOOL 600 Orange Avenue Meriden, CT 06461		approved by RSE	
CAD no.	DCS project no. BR-RT-076 CM-R	OSGCR project no. 990-0013	drawing no. E2-2-1F

Addendum	Item	Question / Assumption	DWG REF in Question and/or Answer	SPEC REF in Question and/or Answer	RESPONSE
ADD-5	5-01	Does the work shown on C-630 with details on C-631 fall in the SB1 Bid?			The work shown on sheets C-630 and C-631 pertains to Supplemental Bid No. 1.
ADD-5	5-02	The specified Efco D300 Aluminum door for the interior Storefronts are 1 ¾" door thickness . The door schedule for some of the interior door list the door thickness as 2" . Can you confirm that all interior Aluminum doors are 1 ¾" thick ?		Bid Package No.8 Windows	Refer to Addendum No.3, Item ADD 3--019 & ADD3-011. Door Series is a 2" thick door.
ADD-5	5-03	Please verify that all gas piping, valves, fittings & regulators will be furnished and installed by the plumbing contractor up to and including connection to HVAC mechanical equipment?		Bid Package No. 15 Plumbing Bid Package No.16 HVAC	Natural gas and propane piping is shown on Plumbing Drawings and is specified in Section 221123. If piping is shown on Mech drawings, it is for coordination purposes.
ADD-5	5-04	Curtainwall supplier in regards to UValue & building code: The specs do not call out the thermal requirements, only that they must meet the values required by code. Do you know what UValue will be required by the building code? The basis of design is the equivalent of our standard curtainwall and I just want to make sure we are not going to have any issues meeting the UValue with it.		Curtainwall	Refer to Addendum No.5.
ADD-5	5-05	Precast Wall Elevations indicate the Top of Slab @ Shop Level @ el. 97'-0" and the Mezzanine Level @ el. 106'-6" which match the elevations noted on the Structural layout drawings. However there appears to be a discrepancy between the drawings in the elevation of the Roof Precast Datum elevation and the Low Roof Precast Datum elevation. a. Precast wall elevations show Low Roof Precast Datum Elevation @ el. 116'-8" and Structural layout drawing S1-1-2E indicates the top of precast members @ el. 117'-8". <i>Please advise.</i> b.Precast wall elevations show Roof Precast Datum Elevation @ el. 130'-11" and Structural layout drawing S1-1-3E indicates top of precast members @ el. 131'-11". <i>Please advise.</i>	S2-3-1 S2-3-2	Pre-cast	Refer to Addendum No.5.
ADD-5	5-06	<u>Equal or Substitution Request: Section 11 68 43.03, Baseball & Softball Scoreboards</u> Electro-Mech Scoreboard LX1620 submitted for consideration as an equal to OES Scoreboards Model 7928.		11 68 43.03 Baseball & Softball Scoreboards	Specification to remain with the three scoreboard manufactures as specified.

Addendum	Item	Question / Assumption	DWG REF in Question and/or Answer	SPEC REF in Question and/or Answer	RESPONSE
ADD-5	5-07	<u>Equal or Substitution Request: Section 11 68 43.06, Football Scoreboard</u> Electro-Mech Scoreboard LX3340 submitted for consideration as an equal to Daktronics FB-2018.		11 68 43.06 Multisport Scoreboards	Specification to remain with the three scoreboard manufactures as specified.
ADD-5	5-08	<u>Equal or Substitution Request: Section 11 66 43, Basketball Scoreboards</u> Electro-Mech Scoreboard LX2665-1ft & LX 2160 submitted for consideration as an equal to Daktronics BB-2155 & BB-2114.		11 66 43 Scoreboards	Specification to remain with the three scoreboard manufactures as specified.
ADD-5	5-09	Please confirm that the Dust Collector systems (Dust Collectors, Fans & Cyclone Separators) shown on M1-1-1E, M1-1-ME, M1-1-MF & M1-2-1E are to be furnished and installed by the HVAC Contractor with any and all electrical work performed by the Electrical Contractor?	M1-1-1E M1-1-ME M1-1-MF M1-2-1	23 34 00	Duct collectors and accessories are shown on the Mechanical Drawings and specified in Sections 233100 and 232400. Electrical power to support the equipment (i.e. motors and power to control panels) is shown on the Electrical Drawings. Control wiring for the equipment is shown on Drawing M5-1-1 through M5-1-4.
ADD-5	5-10	Please verify that the Food Service Contractor will be furnishing and installing all Kitchen Hoods, and the HVAC Contractor/sheet metal subcontractor is only responsible for furnishing and installing any ductwork tie-ins to the kitchen hoods?			Mechanical Drawings and specifications outline scope of work for ductwork; the hoods are not specified in Division 23.
ADD-5	5-11	For clarity purposes amongst the sheet metal subcontractors and the HVAC piping contractors, could you clarify which specific flues/combustion air systems should be installed using Schedule 40 PVC? All other spec'd material would be by the sheet metal contractor, but trying to organize the few PVC systems that would be installed by the HVAC Contractor? Some of the spec'd condensing appliances (PVC) seem to also correlate to the spec'd vent/combustion air for IDF fans (double wall S.S. & galvanized per other spec paragraph).	HVAC		Refer to Addendum No. 5.
ADD-5	5-12	Addendum 3 has updated the scope for Platt to impact. The Addendum continued to call out the doors as Thermal. However, if we are using impact systems the doors need to be switched to impact as well. The impact doors testing does include the specified hardware, which we will need to provide in order for the testing to be applicable but as you know the hardware sets include custom hardware. Would you like for		08 41 10 08 44 10	Refer to Addendum No.5.

Addendum	Item	Question / Assumption	DWG REF in Question and/or Answer	SPEC REF in Question and/or Answer	RESPONSE
ADD-5	5-13	The Addendum continued to call out the doors as Thermal, but if we are using impact systems we will need to switch the doors to impact as well. The impact doors testing does include specified hardware, which we will need to provide in order for the testing to be applicable but as you know the hardware sets include custom hardware. Would you like for us to provide tested hardware, or just preps for the custom hardware sets and qualify? Tested hardware is attached.		08 41 10 08 44 10	Refer to Addendum No.4 and No.5
ADD-5	5-14	Drawing A4-1-4 Toilet Accessory Schedule CH -Coat Hook It calls for hooks to be installed in all offices, please clarify which offices.	A4-1-4		Refer to Addendum No.5
ADD-5	5-15	Alternate # 2 Free Standing Garage Building and all associated Utilities: Section 13 34 19 refers to Alternate #2 Free Standing Garage Building, 1.2 A.1 D. Doors & Frames. Question: Are the Overhead Doors included in the General Trades Scope of work? Which trade is handling the Prewire connections or is the Electrical package responsible for the prewire aspect?		13 34 19	Yes, the Overhead Doors are included with the General Trades Bid Package. Electrical Bid Package Sub-contractor to Electrical shown on Electrical Drawings for these doors. General Trades to provide all other Electrical work required to complet the doors to ensure they are functional. ELECTRICAL BID PACAKGE SUBCONTRACTOR TO ELECTRICAL
ADD-5	5-16	Please confirm that the fire protection subcontractor provides all tamper, flow and electric bells only and the electrical subcontractor provides all 120 VAC and fire alarm wiring from those devises.			The scope as described is correct.

Addendum	Item	Question / Assumption	DWG REF in Question and/or Answer	SPEC REF in Question and/or Answer	RESPONSE
ADD-5	5-17	<p>Section 075400 1.9.B, warranty is specified for “wind speed as required by Code or as indicated on the Drawings.”</p> <p>The are NO requirement for manufacturer’s warranties in the building code</p> <p>“On the Drawings” would bring you back to Dwg S0-0, (criteria used for ASCE 7-10 calculations – code related)DESIGN PARAMETERS - LIVE, WIND, SNOW, AND EARTHQUAKE that correctly notes 135 mph v.ult for code related DESIGN windspeed (from Appendix N in current CT code for Risk Category III Building)</p> <p>Since no membrane roof manufacturers offer 135 mph warranties as standard, and since the design/installation enhancements would be cost-prohibitive, I doubt this was the intent</p> <p>Also important to recognize that every low slope roof manufacturer’s warranty has a hurricane disclaimer, that essentially means that any winds over 72 mph become an insurance claim rather than compensation via manufacturer’s warranty</p> <p>If possible, can a reasonable an attainable windspeed warranty be added to Warranty Section 1.9.B in next (last) Addendum? (note: none of this would impact the FM wind requirements, that will overlay whatever the manufacturer’s warranty requirements are – contractor needs to cover both)</p>		07 54 00	Refer to Addendum No.5.
ADD-5	5-18	<p>Re: Precast wall thickness along grid line ‘3’</p> <p><u>Addendum #3</u> - Indicates p/c wall along grid line ‘3’ to be 12” thick - indicated in Detail F1 on drawing S3-2-2.</p> <p><u>Addendum #4</u> – Indicates p/c wall along grid line ‘3’ to be 15” thick - indicated in Details R1, R2, R3 on drawing S5-2-2 & Detail R2 on drawing S5-2-3.</p>		Pre-cast	Refer to Addendum No.5
ADD-5	5-19	<p>Per the information on S0-0-1 Wind Data Box Ultimate Basic Velocity Pressure we will use 38.8 PSF for the wind load. Advise if incorrect.</p>		08 45 23 Fiberglass-Sandwich-Panel Assemblies	Structural drawing S0-0-1 was re-issued in Addendum No.1. The chart entitled "Components and Cladding Design Wind Pressures (PSF) Magnified Loads for Use with FM 1-28 Designs " applies to wall cladding materials, such as Fiberglass Sandwich-Panel Assemblies.

Addendum	Item	Question / Assumption	DWG REF in Question and/or Answer	SPEC REF in Question and/or Answer	RESPONSE
ADD-5	5-20	<p>Kalwall is not able to provide sash and glazing and meet FM Global. Therefore do you want the translucent panel for the entire RO, or will you provide a separate RO for just the panels at approximately 9' 7-1/2" h with sash and glazing by others? (sash and glazing will not be provided for mock-up either). Note also that the maximum span will be approximately 10' for a 38.8 PSF wind load, therefore if we are to span the entire 13'-8" RO height we will need to unitize the 4' – ½" panel. The maximum Shoji grid is 8" x 20"; 24" x 12" grid size will not be allowed with FM requirements.</p>		08 45 23 Fiberglass-Sandwich-Panel Assemblies	Refer to Addendum No.5
ADD-5	5-21	<p>Note that the change of face sheets in Addendum #4 will void out the Hi-impact and Missile D changes given in Addendum #3.</p>		08 45 23 Fiberglass-Sandwich-Panel Assemblies	Refer to Addendum No.5
ADD-5	5-22	<p>Since AC-177 is not listed as the acceptance panel criteria we will use L/60 for the deflection as noted in the spec.</p>		08 45 23 Fiberglass-Sandwich-Panel Assemblies	Refer to Addendum No.5