

SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390
PERMIT SET - 4.9.2019

PROJECT TEAM

OWNER
PHIL'S SPEED SHOP LLC
910 TRAFFIC AVE
SUMNER, WA 98390
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PHONE: 253.863.8144
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STRUCTURAL
SWENSON SAY FAGET
934 BROADWAY, SUITE 100
TACOMA, WA 98402
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PROJECT INFORMATION

DESCRIPTION	REMOVAL OF EXTERIOR ENVELOPE. PROVIDE NEW EXTERIOR ENVELOPE INCLUDING SIDING, INSULATED ROOFING, STOREFRONT, AND DOORS. NEW MEZZANINE STRUCTURE WITH NEW LIGHTING, HVAC, AND PLUMBING. NEW CANOPY STRUCTURE AND DECK.
SITE ADDRESS	16008 60TH ST E SUMNER, WA 98390
PARCEL NUMBER	0520198006
ZONING	GC - GENERAL COMMERCIAL
JURISDICTION	CITY OF SUMNER
UTILITY PURVEYORS	SEWER : CITY OF SUMNER WATER: CITY OF SUMNER ELECTRIC: CITY OF SUMNER
CODES UTILIZED	2015 IBC W WAC AMMENDMENTS 2015 INTERNATIONAL FIRE CODE 2015 INTERNATIONAL MECHANICAL CODE 2015 UNIFORM PLUMBING CODE 2015 WASHINGTON STATE ENERGY CODE SUMNER MUNICIPAL CODE
PROJECT SITE ACCESS	60TH ST E, 160TH AVE E
PROJECT SITE AREA	68.955 SF
USE	AUTOMOTIVE SALES
OCCUPANCY	B
OCCUPANCY LOAD	110 OCC
CONSTRUCTION TYPE	VB
SPRINKLERED	YES
NUMBER OF STORIES	1 W/ MEZZANINE
BUILDING HEIGHT	18'-6"
BUILDING AREA FIRST FLOOR	9,480 SF
MEZZANINE	1,480 SF

ABBREVIATIONS

@	AT	HT	HEIGHT	PR	PAIR
AB	ANCHOR BOLT	HVAC	HEATING, VENTILATION, AIR	PT	PAINT
ADA	AMERICANS WITH DISABILITIES		CONDITIONING	QTY	QUANTITY
	ACT	HW	HOT WATER	R	THERMAL RESISTANCE
AL-SF	ALUMINUM STOREFRONT	HYD	HYDRANT	RCP	REFLECTED CEILING PLAN
BO B.O.	BOTTOM OF	IN	INCHES	RD	ROOF DRAIN
CL	CENTER LINE	INS/INSUL	INSULATION	REQ'D	REQUIRED
DIA	DIAMETER	LAV	LAVATORY	REV	REVISION
DN	DOWN	LB(S)	POUNDS	RM	ROOM
DR	DOOR	LF	LINEAR FEET	RO	ROUGH OPENING
DS	DOWNSPOUT	MATL	MATERIAL	SCHED	SCHEDULE
E	EAST	(MATL)		SF	STOREFRONT / SQUARE FOOT
EA	EACH	MAX	MAXIMUM	SIM	SIMILAR
EJ	EXPANSION JOINT	MECH	MECHANICAL	SQ	SQUARE
EQ	EQUAL / EQUIVALENT	MEP	MECHANICAL, ELECTRICAL,	SQFT	SQUARE FEET
ESMT	EASEMENT		PLUMBING	SS	STAINLESS STEEL
EXIST (E)	EXISTING	MFR	MANUFACTURER	STC	SOUND TRANSMISSION CLASS
FD	FLOOR DRAIN / FOOTING DRAIN	MIN	MINIMUM	STRUCT	STRUCTURE / STRUCTURAL
FE	FIRE EXTINGUISHER	MISC	MISCELLANEOUS	TEMP	TEMPORARY
FF	FACTORY FINISH / FINISH	N/A	NOT APPLICABLE	TO	TOP OF
	FLOOR	NO	NUMBER	TOS	TOP OF SLAB / TOP OF
FFE	FINISH FLOOR ELEVATION	NTS	NOT TO SCALE		STRUCTURE
FH	FIRE HYDRANT	O/	OVER	TS	TUBE STEEL
FLR	FLOOR	OC (oc)	ON CENTER	TYP	TYPICAL
FO	FACE OF / FINISHED OPENING	OCC	OCCUPANT	U/	UNDER
FT	FOOT	OCD	OVERHEAD COILING DOOR	UNO	UNLESS NOTED OTHERWISE
FTG	FOOTING	OCFI	OWNER FURNISHED, CONTRACTOR INSTALLED	VNR	VENEER
GA	GAUGE			VTR	VENT THRU ROOF
GALV	GALVANIZED	OFOI	OWNER FURNISHED, OWNER INSTALLED	W/ (w/)	WITH
GL	GLAZING / GLASS	OH	OVERHEAD	WC	WATER CLOSET
GWB	GYPSUM WALL BOARD	OLF	OCCUPANT LOAD FACTOR	WH	WATER HEATER
HC	HOLLOW CORE	OPP	OPPOSITE	WRB	WEATHER RESISTANT BARRIER
HM	HOLLOW METAL			WT	WEIGHT
HR	HOUR	PFSM	PRE-FINISHED SHEET METAL	WWF	WELDED WIRE FABRIC
HSS	HOLLOW STRUCTURAL SECTIONS	PPT	PRESERVATIVE PRESSURE TREATED	WWM	WELDED WIRE MESH

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SEPERATE PERMITS / DEFFERED SUBMITTALS

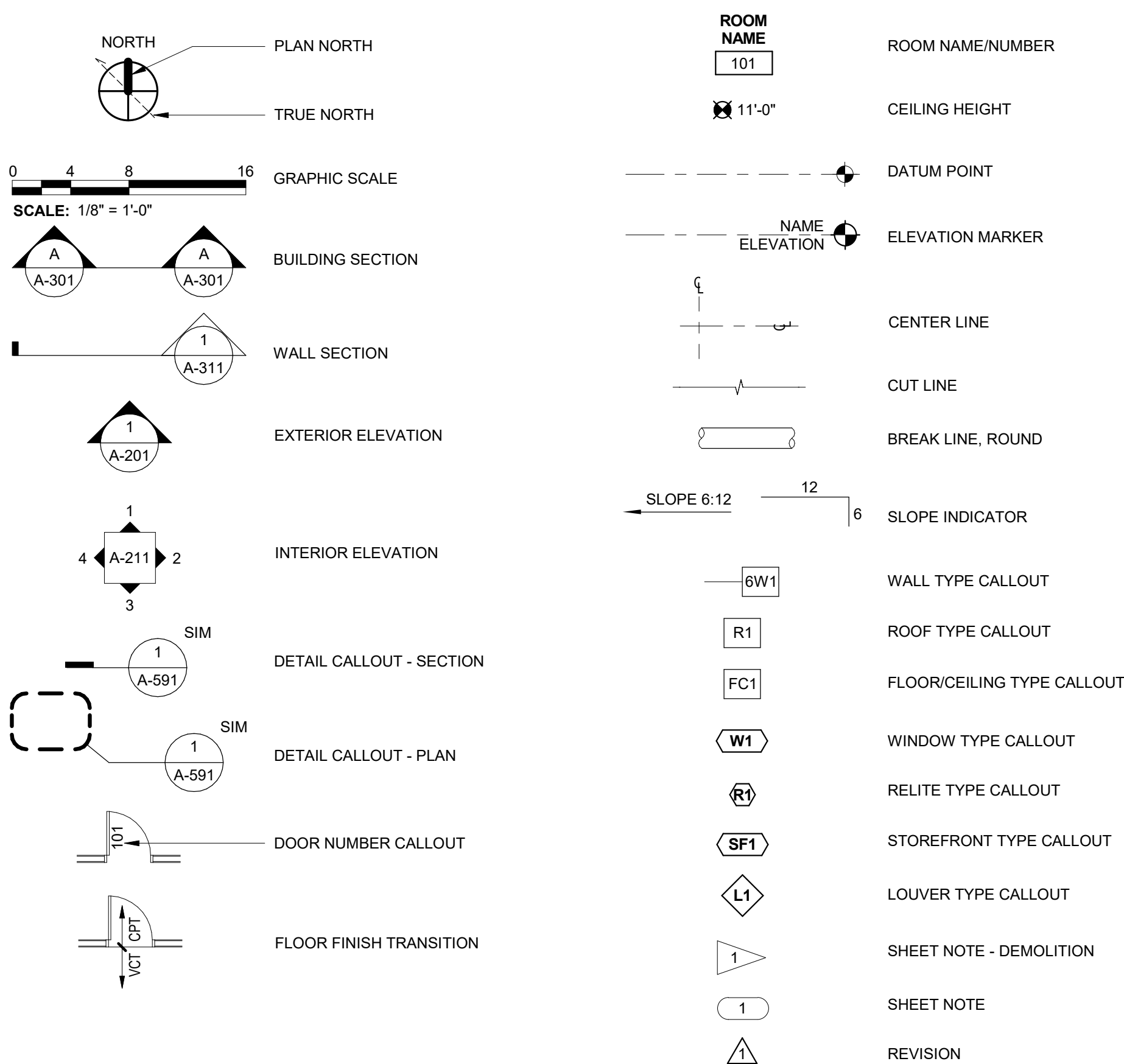
MECHANICAL
PLUMBING
FIRE SPRINKLER
FIRE ALARM
SIGNAGE

VICINITY MAP

NOT TO SCALE



ARCHITECTURAL SYMBOLS



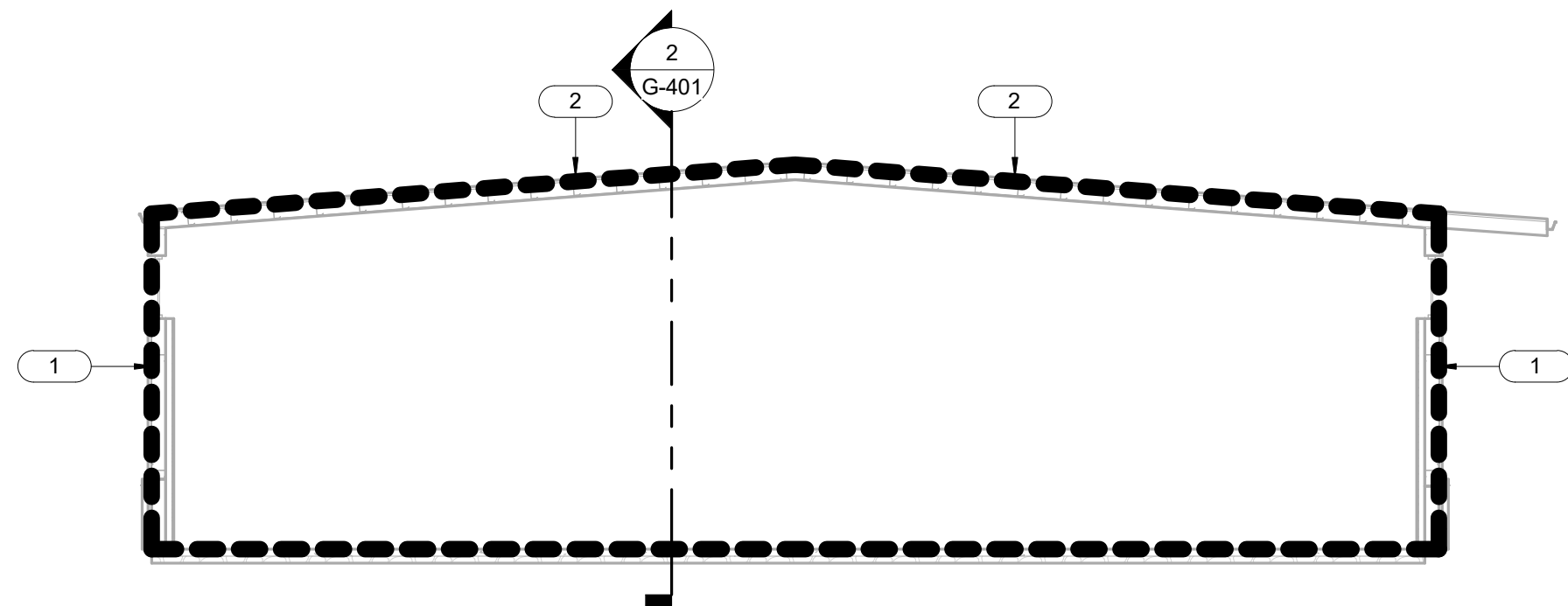
BUILDING AIR BARRIER SYSTEM PERFORMANCE REQUIREMENTS

1. PERFORMANCE OF BUILDING AIR BARRIER COMPONENTS SHALL MEET THE AIR LEAKAGE REQUIREMENTS OF THE 2012 WSEC SECTION C402.4 THE BUILDING ENVELOPE SHALL BE TESTED ACCORDING TO THE REQUIREMENTS OF WSEC C402.4.1, 2.3 AND AIR LEAKAGE SHALL NOT EXCEED 4.0 dm/m at a STRESS DIFFERENTIAL OF 0.3" WATER GAUGE. A REPORT INCLUDING TESTED SURFACE AREA, AIR LEAKAGE RATE, AIR PRESSURES ABOVE GRADE, AND AIR LEAKAGE RATES SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.
2. INSTALL A CONTINUOUS AIR BARRIER SYSTEM OVER THE ENTIRE EXTERIOR ENVELOPE (ROOF, WALLS, AND FLOOR) SEPARATING THE INTERIOR CONDITIONED AIR FROM THE EXTERIOR UNCONDITIONED AIR WITH AN AIR LEAKAGE RATE NOT EXCEEDING 0.4 CFM PER SQUARE FOOT OF EXTERIOR ENVELOPE AREA AT 75 ps or 3.0 Wg. THE CONTINUOUS BUILDING AIR BARRIER SYSTEM INCLUDES AIR BARRIER DETAILING AT PENETRATIONS, JOINTS, ROOFS, LOUVERS, AND BETWEEN ADJACENT DIFFERENT TYPES OF AIR BARRIER PENETRATIONS SHALL COMPLY WITH C402.4.3.

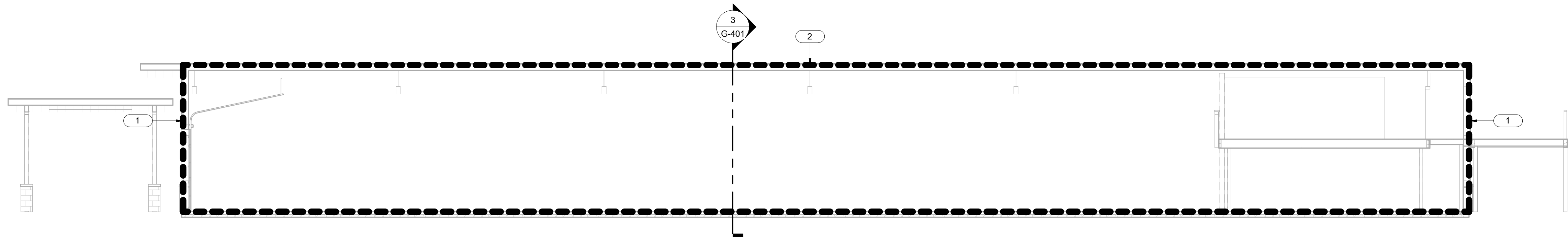
PROJECT GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH THE 2015 INTERNATIONAL BUILDING CODE, THE AMERICANS WITH DISABILITIES ACT, AND ALL APPLICABLE LOCAL CODES, ORDINANCES, AND STANDARDS.
2. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. THE CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
3. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK. IF QUESTIONS CANNOT BE RESOLVED IN THIS MANNER, CONTACT THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
4. AN APPROVED PUBLIC SAFETY KEY BOX SHALL BE INSTALLED ADJACENT THE MAIN ENTRANCE AND SHALL BE CLEARLY VISIBLE, MOUNTED WITHIN SIX FEET OF THE GRADE, AND APPROVED BY THE LOCAL JURISDICTION. THE KEY BOX SHALL CONTAIN KEYS THAT OPERATE EMERGENCY OVERRIDE SYSTEMS. KEYS SHALL BE CLEARLY MARKED AS FOR WHAT DOOR, ROOM, AREA OR LOCK THEY SERVE. THE KEY BOX SHALL CONTAIN KEYS TO OPEN DOORS OR OTHER ACCESS MEANS AT THE FOLLOWING LOCATIONS:
 - THE MAIN ENTRANCE
 - ROOMS CONTAINING CONTROL VALVES FOR AUTOMATIC SPRINKLER SYSTEMS
 - ROOMS CONTAINING FIRE ALARM SYSTEM CONTROL PANELS
 - ROOMS CONTAINING MAIN ELECTRICAL SERVICES PANELS
5. WHERE DEVICES OR ITEMS OR PARTS THEREOF ARE REFERRED TO IN SINGULAR IT IS INTENDED THAT SUCH SHALL APPLY TO AS MANY SUCH DEVICES, ITEMS OR PARTS AS ARE REQUIRED TO PROPERLY COMPLETE THE WORK.
6. FIELD MEASURE AND CONFIRM DIMENSIONS FOR OWNER PROVIDED EQUIPMENT AND FURNISHINGS.
7. PROVIDE STIFFENERS, BRACING, BACKING PLATES AND BLOCKING REQUIRED FOR SECURE INSTALLATION OF GRAB BARS, DOORS AND DOOR HARDWARE INCLUDING WALL-MOUNTED DOOR STOPS, HANDRAILS, WALL-MOUNTED SHELVES, MISCELLANEOUS EQUIPMENT, AND SUSPENDED MECHANICAL AND ELECTRICAL EQUIPMENT.
8. COORDINATE AND PROVIDE ALL BASE AND HOUSEKEEPING PADS FOR MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT.
9. LOCATE ACCESS DOORS IN ACCORDANCE WITH APPLICABLE CODES. SUBMIT PROPOSED LOCATIONS TO THE ARCHITECT FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION.
10. FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE AND TOPPING SLAB UNLESS OTHERWISE NOTED.
11. COORDINATE EXACT SIZE AND PLACEMENT OF EQUIPMENT BEING PROVIDED.
12. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE BUILDING STRUCTURE AND STRUCTURAL COMPONENTS UNTIL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
13. FIRE BLOCKING AND SMOKE BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH 2015 INTERNATIONAL BUILDING CODE.

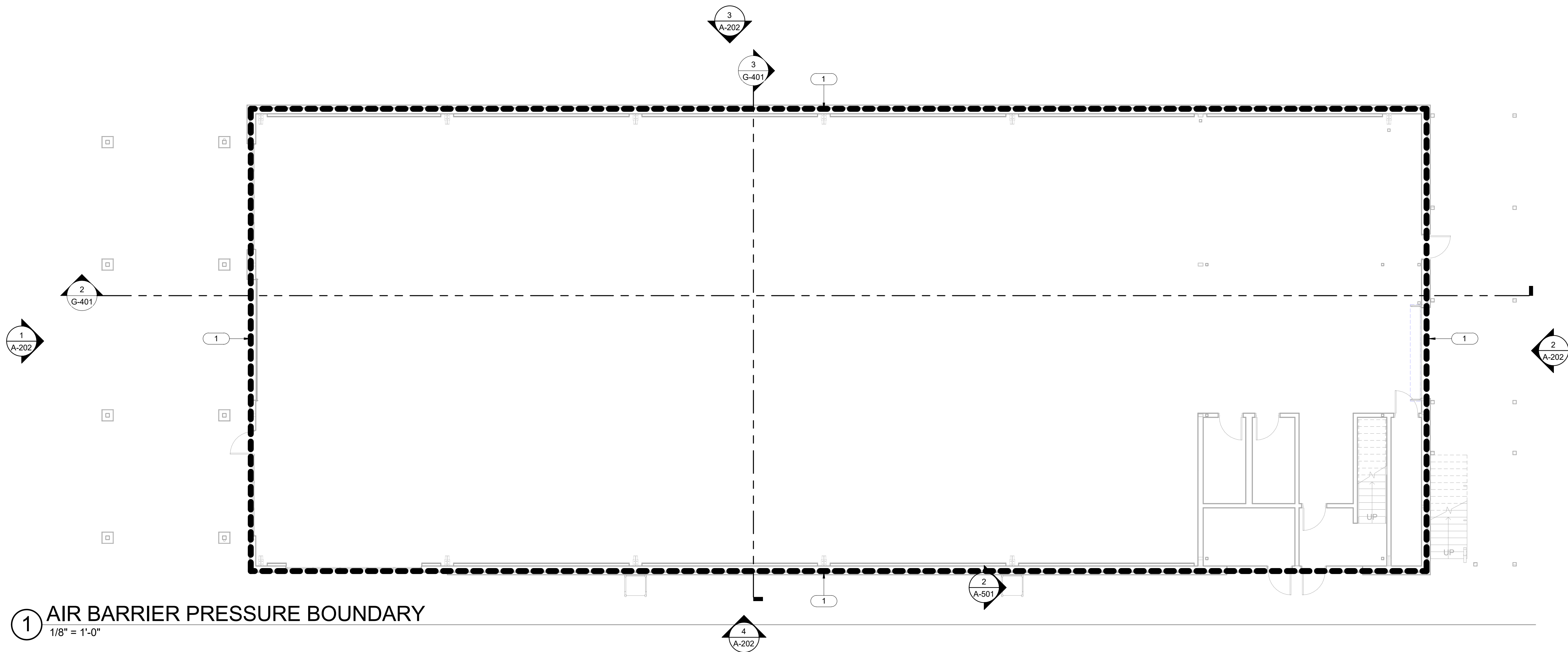
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3 AIR BARRIER PRESSURE BOUNDARY - BUILDING SECTION
1/8" = 1'-0"



2 AIR BARRIER PRESSURE BOUNDARY - BUILDING SECTION
1/8" = 1'-0"



1 AIR BARRIER PRESSURE BOUNDARY
1/8" = 1'-0"

GENERAL NOTES

THESE PLANS AND SECTIONS ARE DIAGRAMMATIC AND INTENDED ONLY TO SHOW WHOLE BUILDING AIR BARRIER SYSTEM PRESSURE BOUNDARY TO BE TESTED. REFER TO BUILDING PLANS, ASSEMBLIES, SECTIONS, AND DETAILS FOR ACTUAL AIR BARRIER SYSTEM LOCATIONS AND EXTENTS.

ZONE 1: ENVELOPE AREA

WALLS	7,490 SF
ROOF	9,674 SF
TOTAL	17,164 SF

BUILDING AIR BARRIER SYSTE PERFORMANCE REQUIREMENTS

INSTALL A CONTINUOUS BUILDING AIR BARRIER SYSTEM OVER THE ENTIRE EXTERIOR ENVELOPE (ROOF, WALLS, AND FLOOR) SEPARATING THE INTERIOR CONDITIONED AIR FROM THE EXTERIOR UNCONDITIONED AIR WITH AN AIR LEAKAGE RATE NOT EXCEEDING 0.40 CFM PER SQUARE FOOT OF EXTERIOR ENVELOPE AREA AT 75 Pa OR 0.3 Wg. THE CONNECTIONS TO ANY PENETRATIONS, WINDOWS, DOORS, LOUVERS, AND BETWEEN ADJACENT DIFFERENT TYPES OF AIR BARRIER SYSTEMS.

KEYNOTES

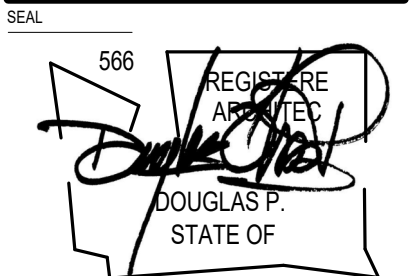
- 1 EXTERIOR WALL - SHEET APPLIED AIR AND WATER BARRIER SYSTEM
- 2 ROOF - SELF-ADHERED AIR/VAPOR BARRIER SYSTEM

LEGEND

----- BUILDING AIR BARRIER PRESSURE BOUNDARY

REVISIONS

DATE	4.9.2019
BCRA NO.	17204
DRAWN BY:	Author
REVIEWED BY:	
SHEET TITLE	AIR BARRIER PLAN AND SECTIONS



PROJECT:
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

REVISIONS

1	DESIGN REVIEW	03.27.2019

DATE
4.9.2019

BCRA NO.
17204

DRAWN BY: JM

REVIEWED BY:

SHEET TITLE
ARCHITECTURAL SITE
PLAN

SITE PLAN GENERAL NOTES

1. VERIFY EXISTING SITE FEATURES IN FIELD.

SITE PLAN LEGEND

- PROPERTY LINE
- BUILDING OUTLINE
- ROOF OUTLINE

APPROVED

City of Sumner Planning Department

By: *Scott Waller* 04/26/2019

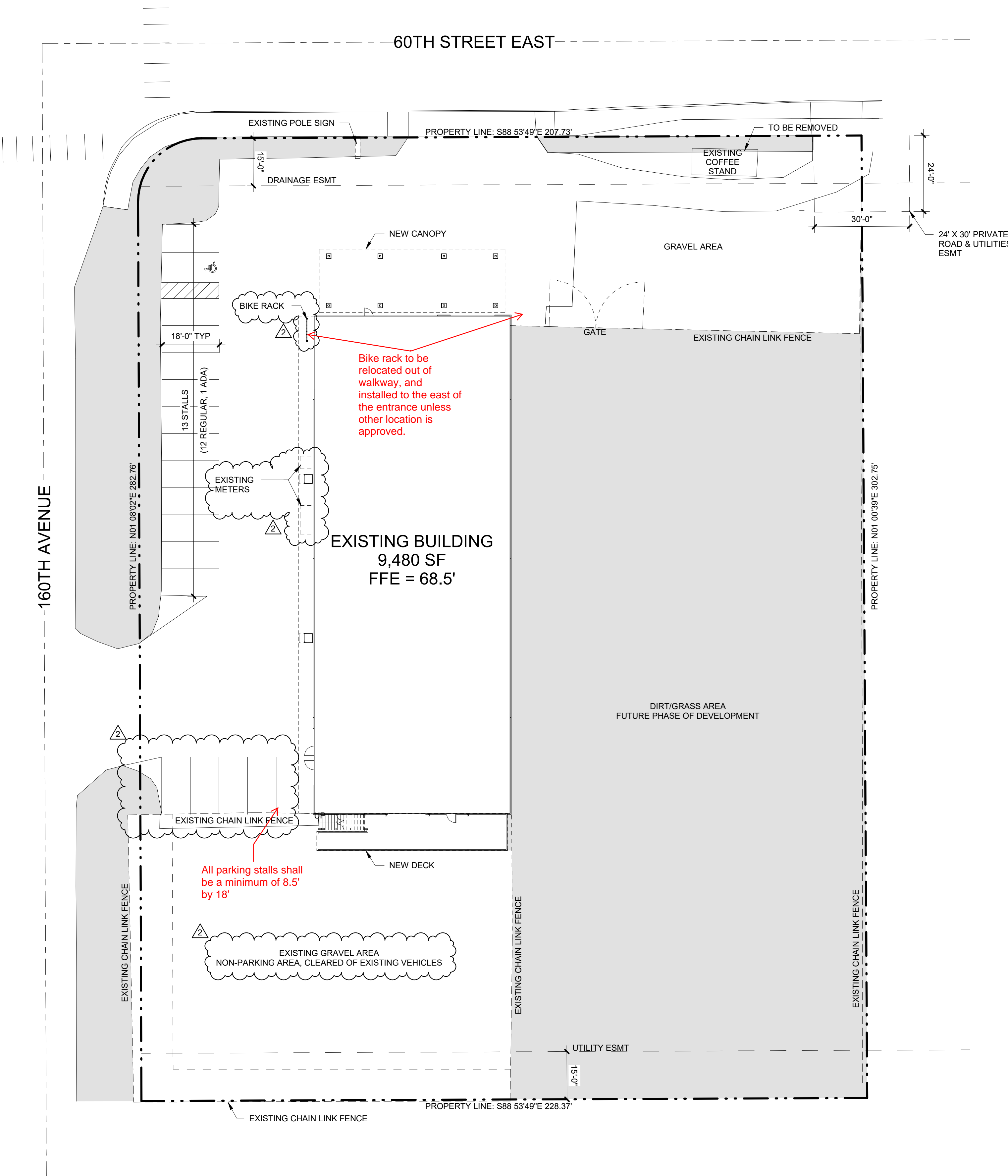
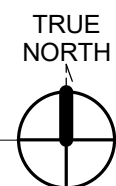
The approval of this plan is subject to additional conditions listed in land use permit No.

1 ARCHITECTURAL SITE PLAN

1" = 20'-0"

0 10 20 40

SCALE: 1" = 20'-0"




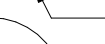
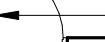
FLOOR PLAN GENERAL NOTES

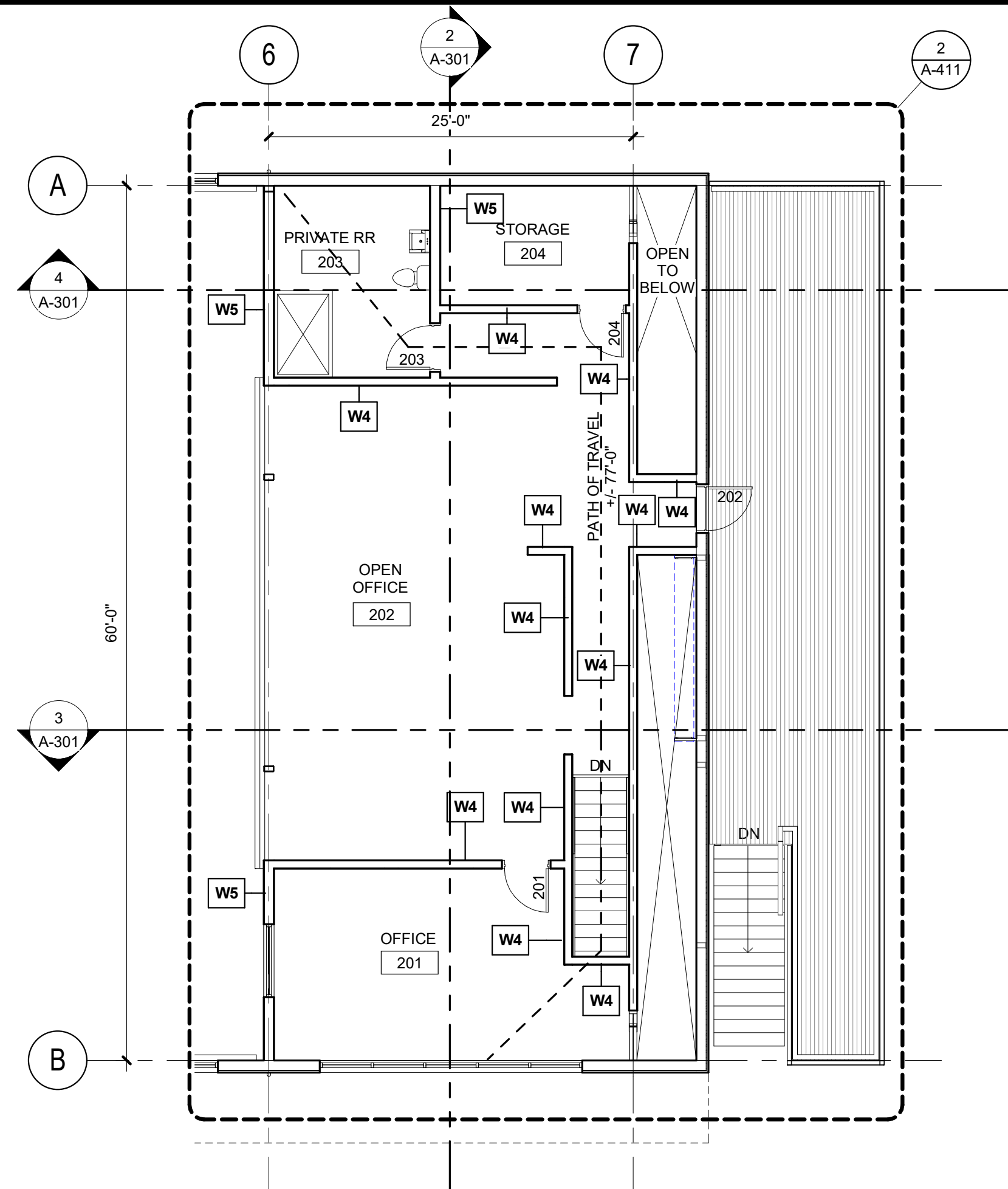
- 01 STRUCTURE / EDGE OF ROOF ABOVE.
- 02 COLUMN PER STRUCTURAL.
- 03 EXISTING STRUCTURE.

PER IBC CHAPTER 10 MEANS OF EGRESS

TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

BUSINESS AREAS	SF / 100 GROSS
FIRST FLOOR	9,480 SF / 100 = 95 OCC
MEZZANINE	1,480 SF / 100 = 15 OCC

	<p>WALL ASSEMBLY; REFER TO SHEETS A-621 AND A-622</p>
	<p>RELITE / WINDOW</p>
	<p>DOOR</p>
<p>■ ■ ■ ■ ■</p>	<p>ACOUSTIC INTERIOR WALL - CONTINUE TO STRUCTURE ABOVE</p>
<p>- - - - -</p>	<p>CONTINUE INTERIOR WALL TO STRUCTURE ABOVE</p>
<p>• • • • •</p>	<p>1 HOUR CONSTRUCTION - CONTINUE TO RATED ASSEMBLY ABOVE</p>
<p>♦ ♦ ♦ ♦ ♦</p>	<p>2 HOUR CONSTRUCTION - CONTINUE TO RATED ASSEMBLY ABOVE</p>
<p>→ FEB</p>	<p>FIRE EXTINGUISHER WITH BRACKET</p>
<p>○ DS</p>	<p>DOWNSPOUT - PVC PIPE</p>
<p>⌚ FD</p>	<p>FLOOR DRAIN PER MECHANICAL; DEPRESS DRAIN BODY 1/4"; WARP ADJACENT SLAB 8" FROM DRAIN BODY</p>
<p>⌚ FD</p>	<p>FLOOR DRAIN PER MECHANICAL DRAWINGS; DEPRESS DRAIN BODY; SLOPE SHOWER FLOOR TO DRAIN</p>

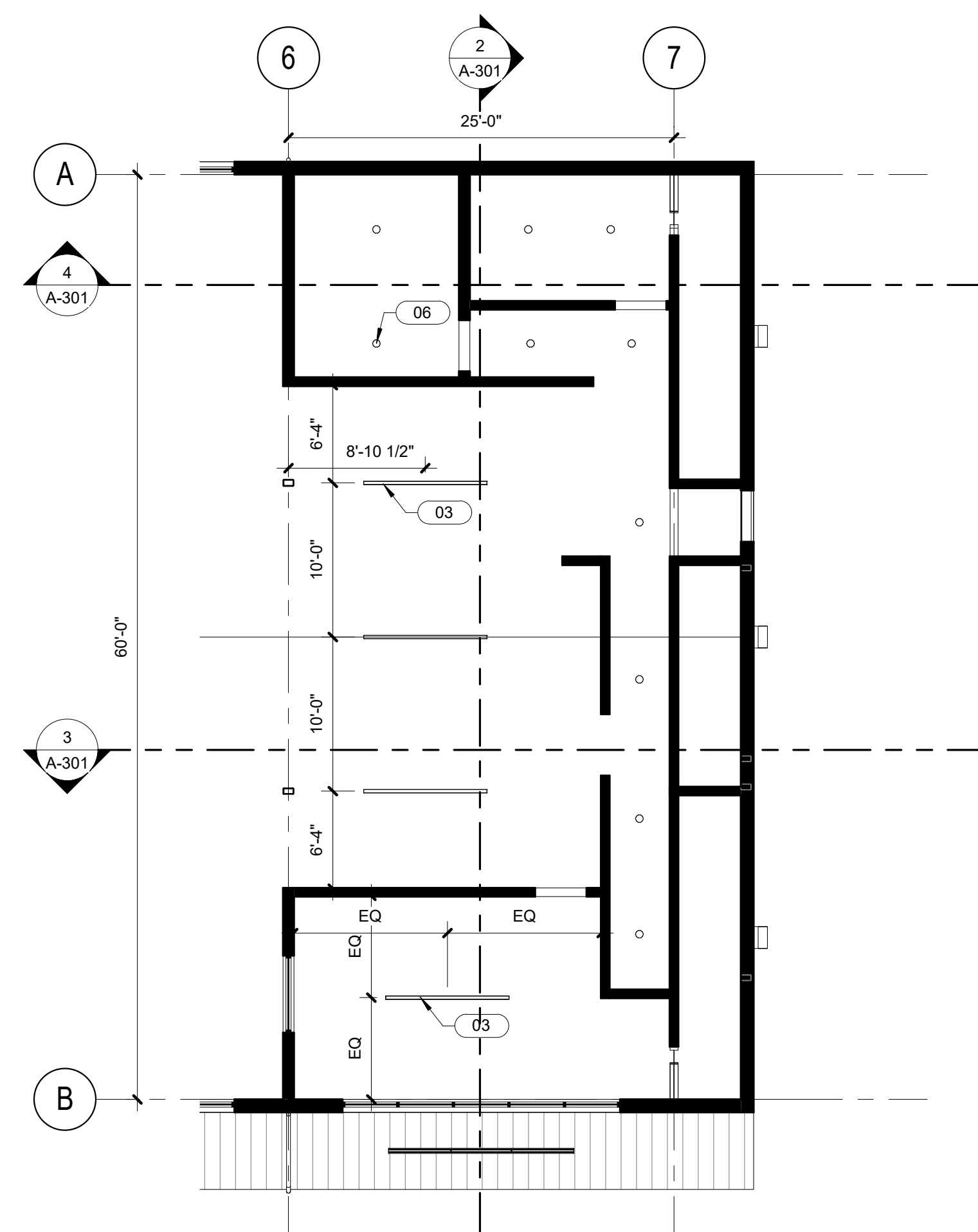
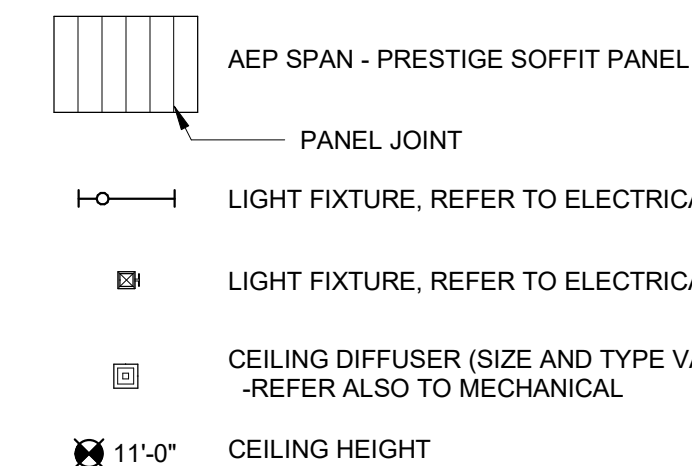
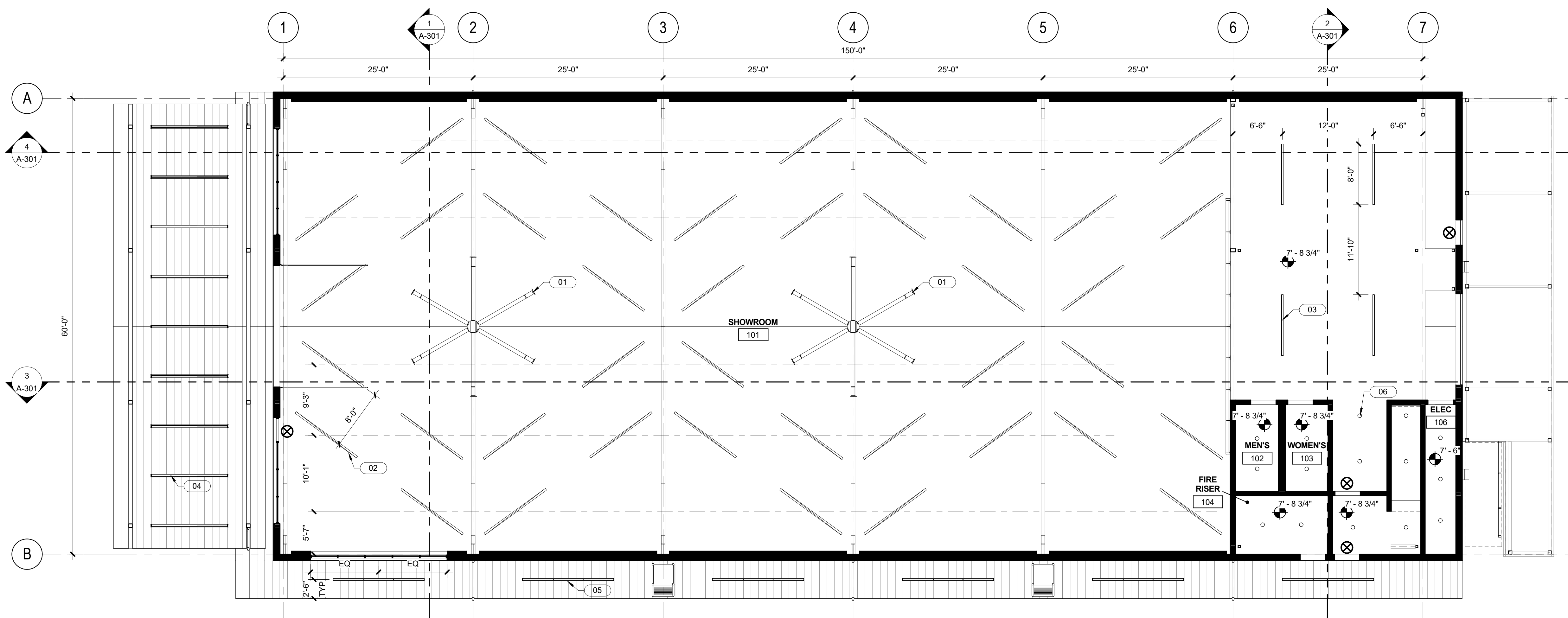
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1 FIRST FLOOR PLAN
1/8" = 1'-0"

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REFLECTED CEILING PLAN GENERAL NOTES

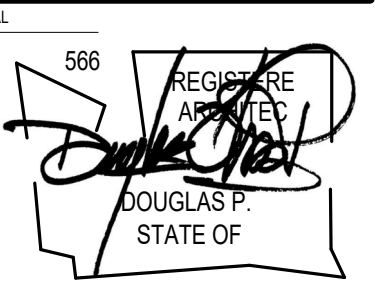
1. CENTER SUSPENDED CEILING GRIDS WITHIN OVERALL DIMENSION OF ROOM/AREA PER GRAPHIC REPRESENTATION AND PROVIDE EQUAL DIMENSIONS AT EDGE OF PERIMETER WALLS AND/OR SOFFITS, UNLESS NOTED OTHERWISE.
2. DIMENSIONS ARE TO FACE OF FINISH AND CENTERLINE OF FIXTURES, UNLESS NOTED OTHERWISE.
3. AT SUSPENDED ACOUSTICAL CEILINGS, CENTER LIGHT FIXTURES, DIFFUSERS, SPEAKERS, FIRE SPRINKLER HEADS, ALARMS, DETECTORS ETC. WITHIN TILES, UNLESS NOTED OTHERWISE.
4. PROVIDE ARMSTRONG BERC2 CLIP (OR APPROVED EQUIVALENT) IN LIEU OF 2" PERIMETER ANGLE PER ICC 3SR-1308 FOR CONNECTING GRID MEMBERS TO PERIMETER WALL.
5. REFER TO SHEET A-551 FOR TYPICAL SUSPENDED CEILING SEISMIC REQUIREMENTS.
6. PER ASCE 7-02 SECTION 9.6.2.6.2.2 ITEM C: PROVIDE LATERAL FORCE BRACING (VERTICAL STRUTS AND SLAY WIRES) FOR CEILINGS WITH AN AREA OF 1,000 SQUARE FEET OR MORE.
7. DESIGN AND PROVIDE ALL CEILING SECONDARY SUPPORT SYSTEMS SUSPENDED FROM PRIMARY STRUCTURE ABOVE. REFER TO #A-551 FOR MINIMUM CEILING PERFORMANCE REQUIREMENTS.
8. REFER ALSO TO STRUCTURAL FOR LOCATIONS OF WALL FRAMING THAT EXTENDS TO STRUCTURE ABOVE.
9. ALIGN FLOOR FRAMING AND ROOF FRAMING WITH SUSPENDED T-BAR GRID LAYOUT TO ACCOMMODATE THE CEILING, LIGHTING AND HVAC SYSTEMS.
10. ALL EXTERIOR LIGHTING SHALL INCLUDE DOWN SHIELDING OR CUT OFF TO PREVENT LIGHT POLLUTION.


$$1/8" = 1'-0"$$

$$\frac{1}{8}'' = 1'-0''$$


11,965 SF / 8,800 SF = 2 DOWNSPOUTS REQUIRED, 8 PROVIDED

1" / 1'-0" ← ROOF SLOPE & DIRECTION

2106 PACIFIC AVENUE, SUITE 300, TACOMA,
WA 98402-3000



TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

[illegible]BCRA 

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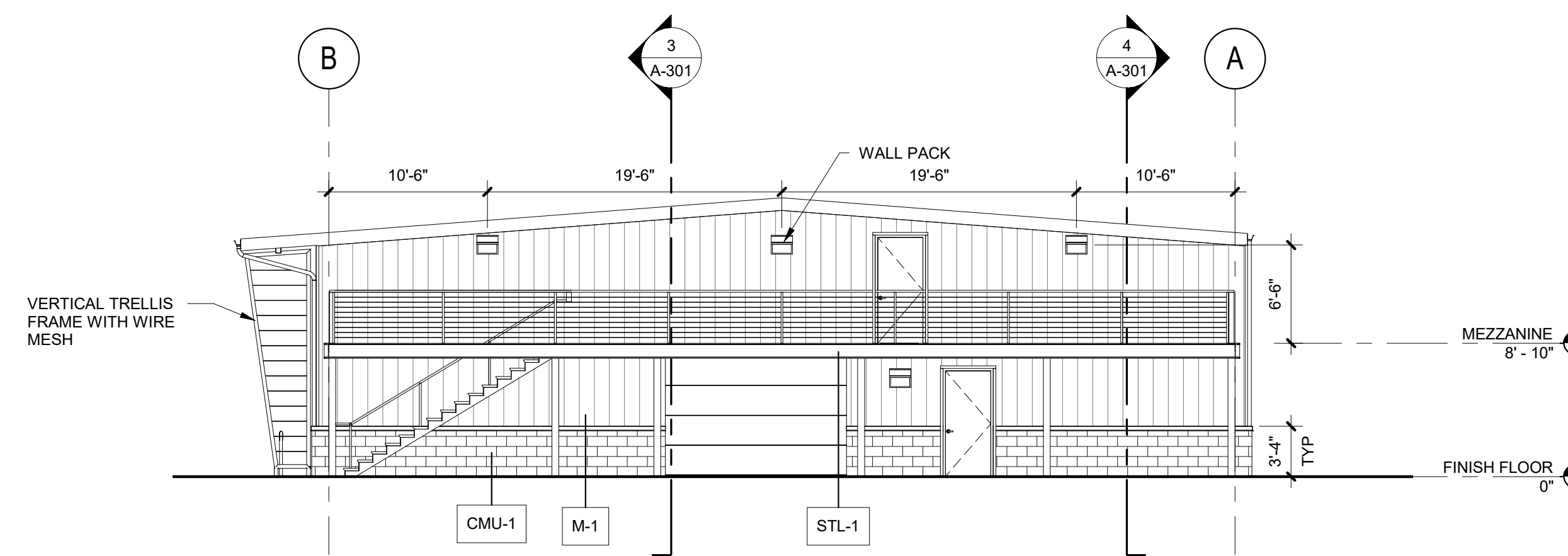
A-161

PERMIT SET

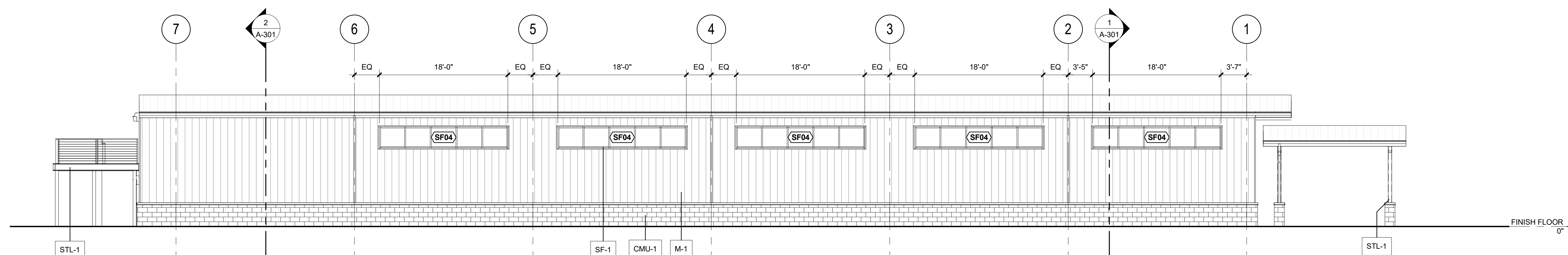
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M-1 METAL SIDING - AEP SPAN, PRESTIGE SERIES, "GRAY"
M-2 METAL SIDING - AEP SPAN, NU-WAVE, "COPPER"
SF-1 ALUMINUM STOREFRONT - AEP SPAN, "GRAY"
STL-1 STEEL MEMBER - PT TO MATCH M-1
CMU-1 CMU - MUTUAL MATERIALS. GROUND FACE, "CHARCOAL"

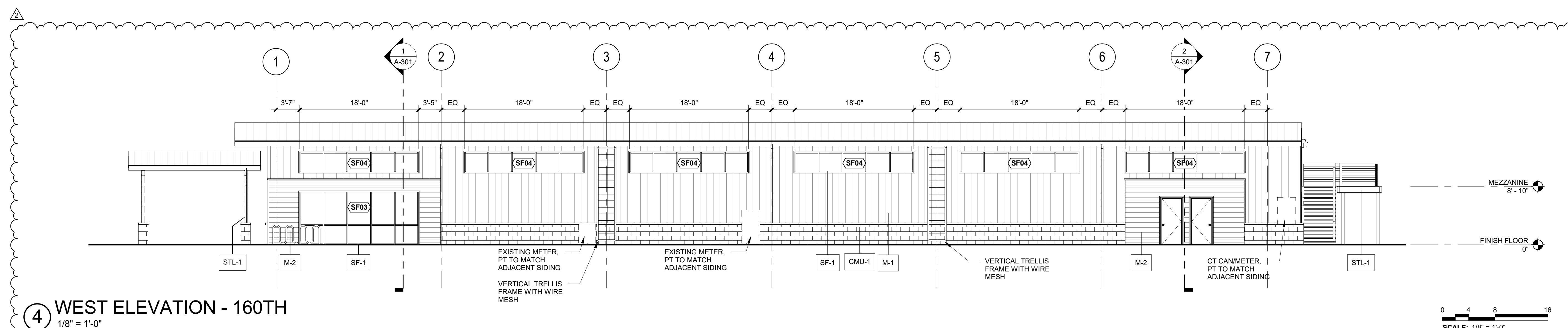
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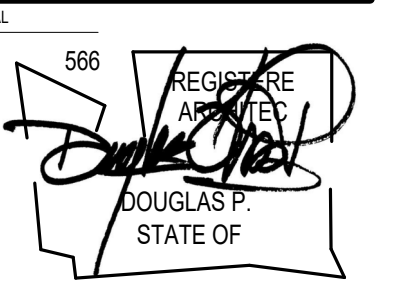
0 4 8
SCALE: 1/8" = 1'-0"



0 4 8
SCALE: 1/8" = 1'-0"

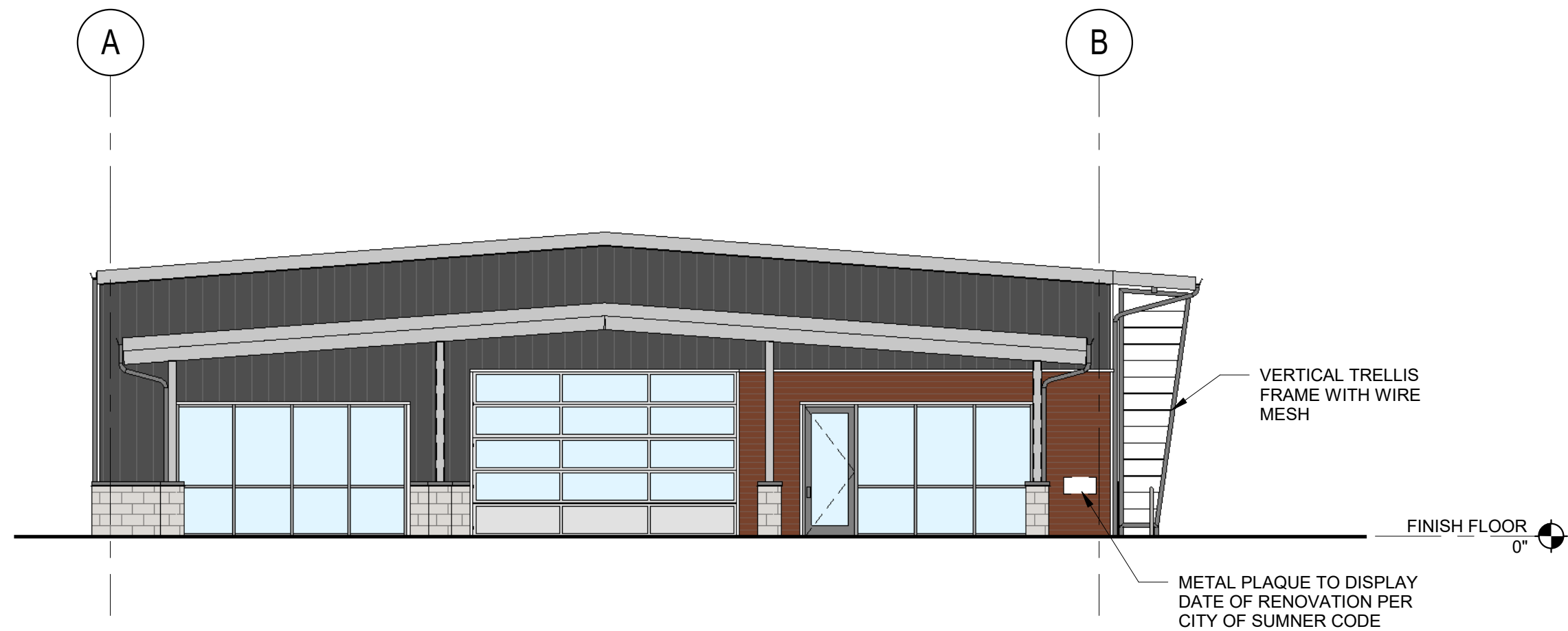


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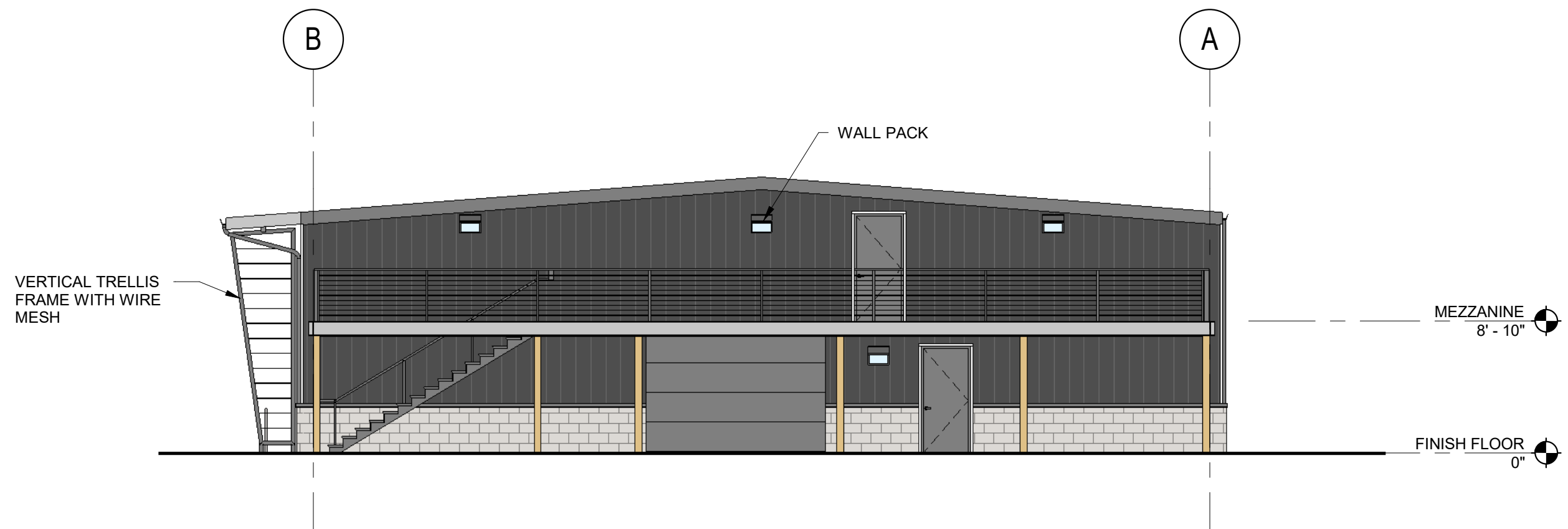
EXTERIOR MATERIALS

M-1 METAL SIDING - AEP SPAN, PRESTIGE SERIES, "GRAY"
M-2 METAL SIDING - AEP SPAN, NU-WAVE, "COPPER"
SF-1 ALUMINUM STOREFRONT - AEP SPAN, "GRAY"
STL-1 STEEL MEMBER - PT TO MATCH M-1
CMU-1 CMU - MUTUAL MATERIALS, GROUND FACE, "CHARCOAL"



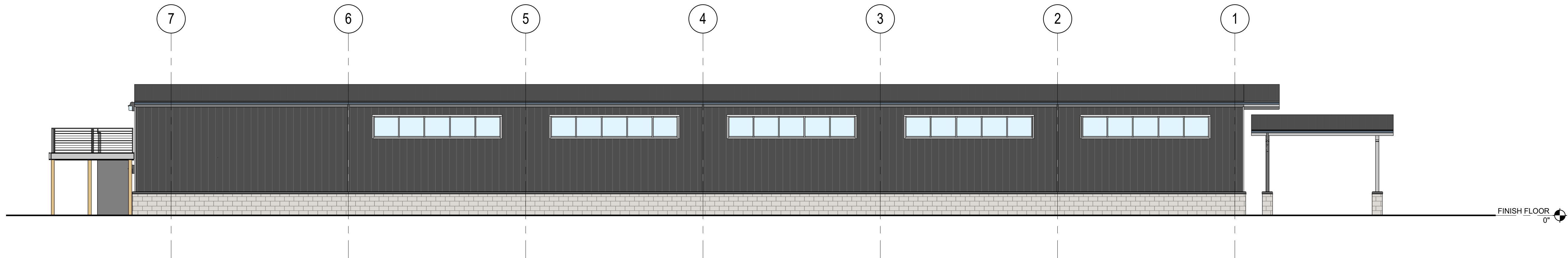
1 NORTH ELEVATION - 60TH - COLORED
1/8" = 1'-0"

0 4 8 16
SCALE: 1/8" = 1'-0"



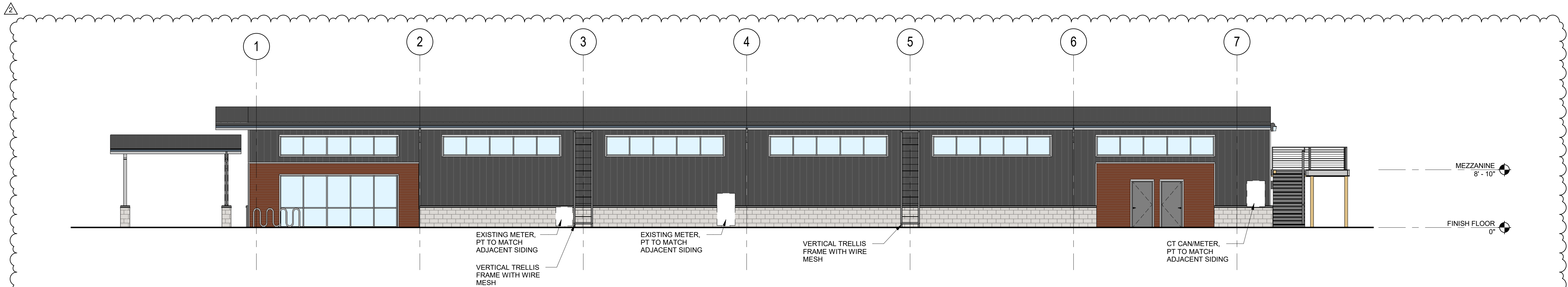
2 SOUTH ELEVATION - COLORED
1/8" = 1'-0"

0 4 8 16
SCALE: 1/8" = 1'-0"



3 EAST ELEVATION - COLORED
1/8" = 1'-0"

0 4 8 16
SCALE: 1/8" = 1'-0"



4 WEST ELEVATION - 160TH - COLORED
1/8" = 1'-0"

0 4 8 16
SCALE: 1/8" = 1'-0"

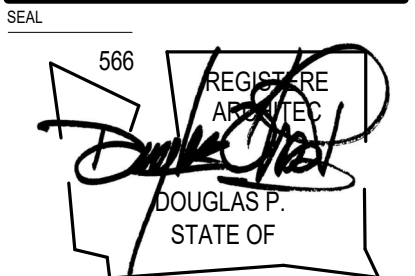
PROJECT:
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

REVISIONS		
1	DESIGN REVIEW	03.27.2019

DATE
4.9.2019
BCRA NO.
17204
DRAWN BY: Author
REVIEWED BY:
SHEET TITLE
EXTERIOR
ELEVATIONS -
COLORED

BCRA
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SHEET

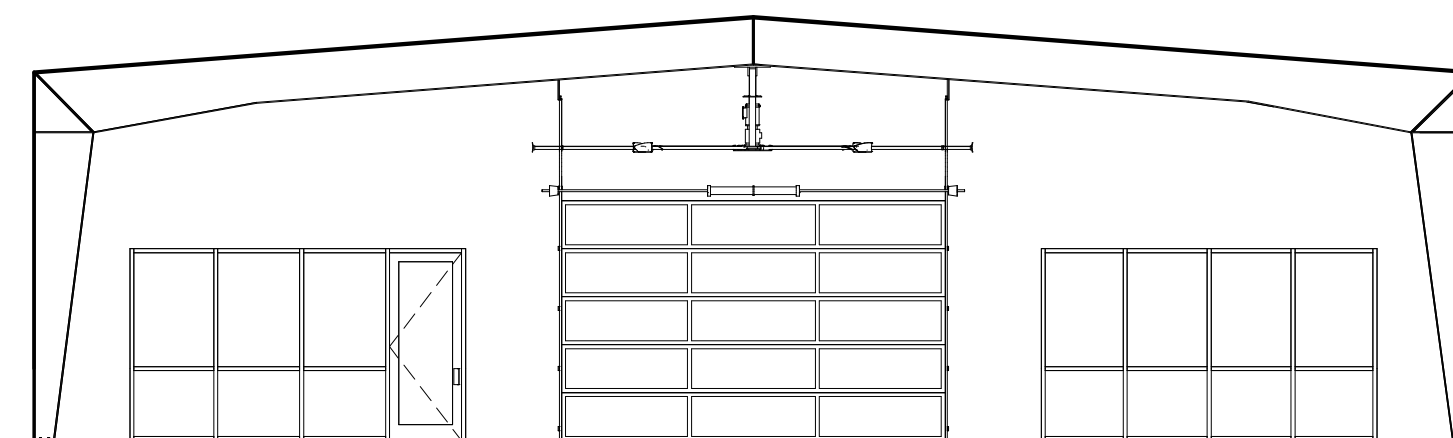
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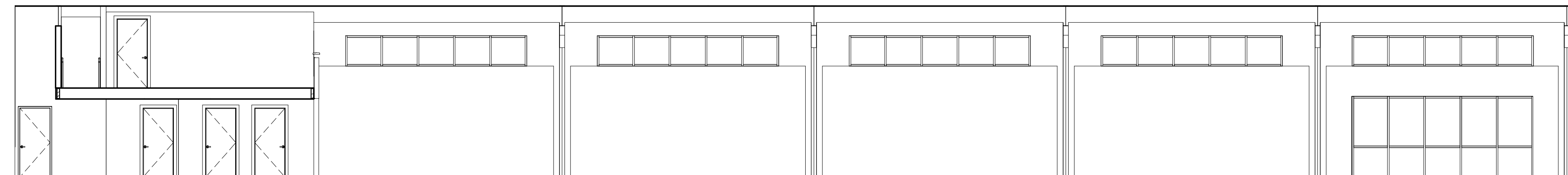
PROJECT:
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

REVISIONS

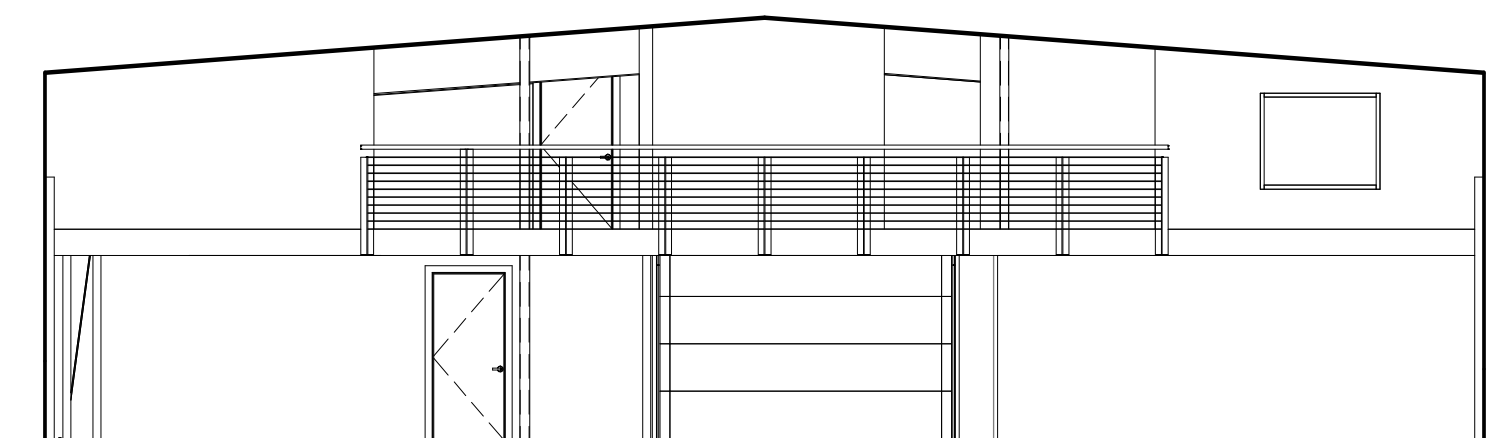
DATE
4.9.2019
BCRA NO.
17204
DRAWN BY: Author
REVIEWED BY:
SHEET TITLE
INTERIOR ELEVATIONS



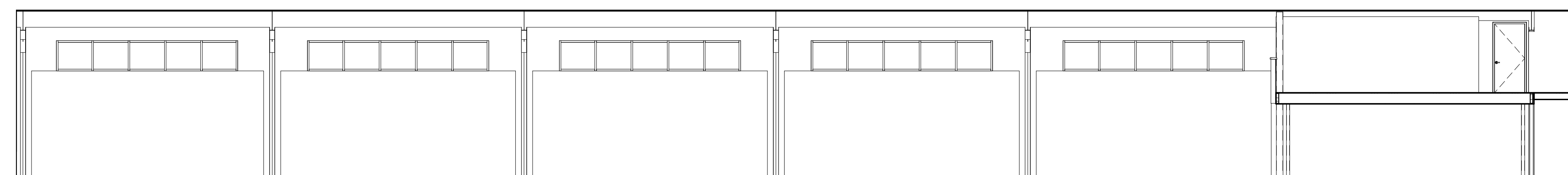
4 INTERIOR ELEVATION
1/8" = 1'-0"



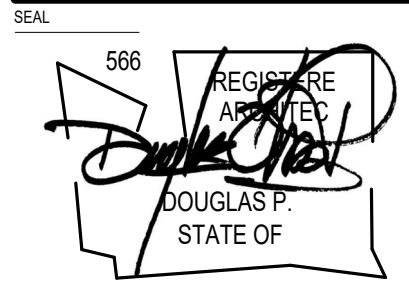
3 INTERIOR ELEVATION
1/8" = 1'-0"



2 INTERIOR ELEVATION
1/8" = 1'-0"



1 INTERIOR ELEVATION
1/8" = 1'-0"



PROJECT:
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

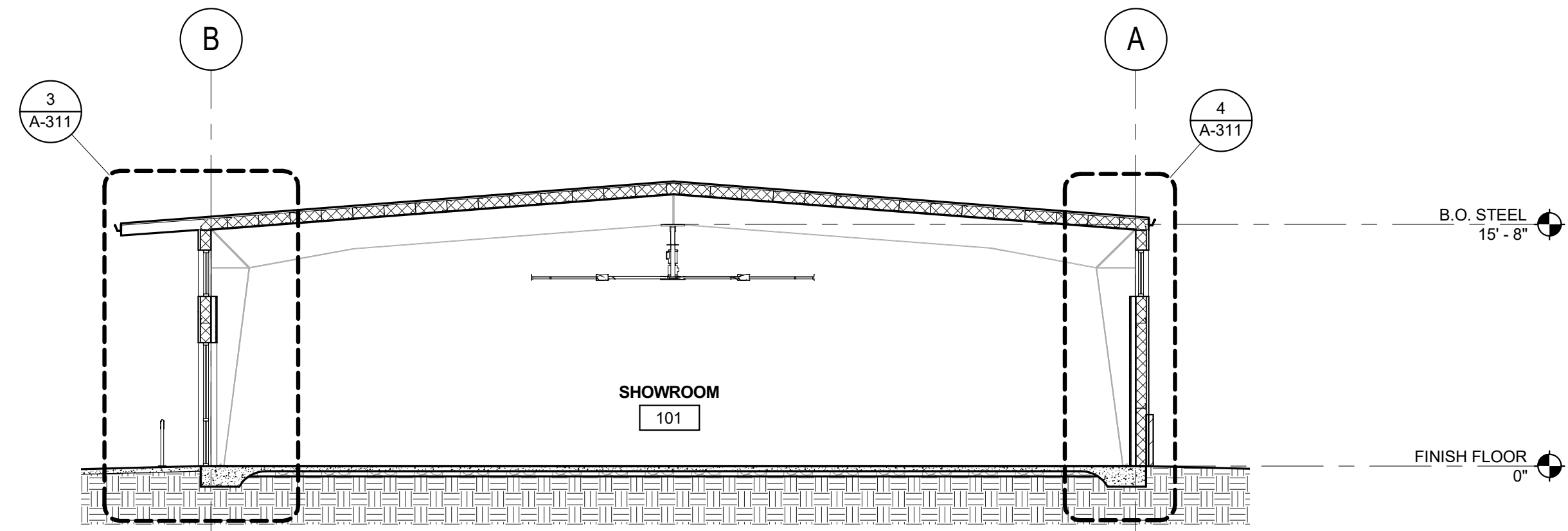
REVISIONS

DATE
4.9.2019
BCRA NO.
17204
DRAWN BY:
REVIEWED BY:
SHEET TITLE
BUILDING SECTIONS

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SHEET

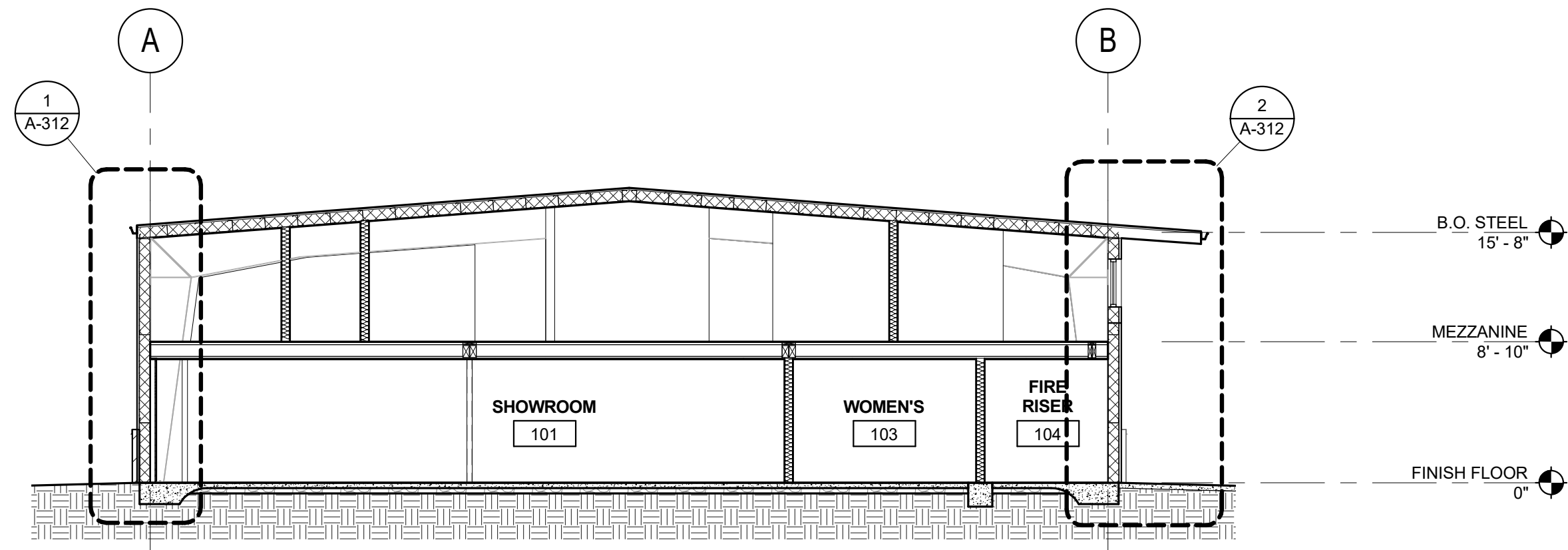
A-301

PERMIT SET



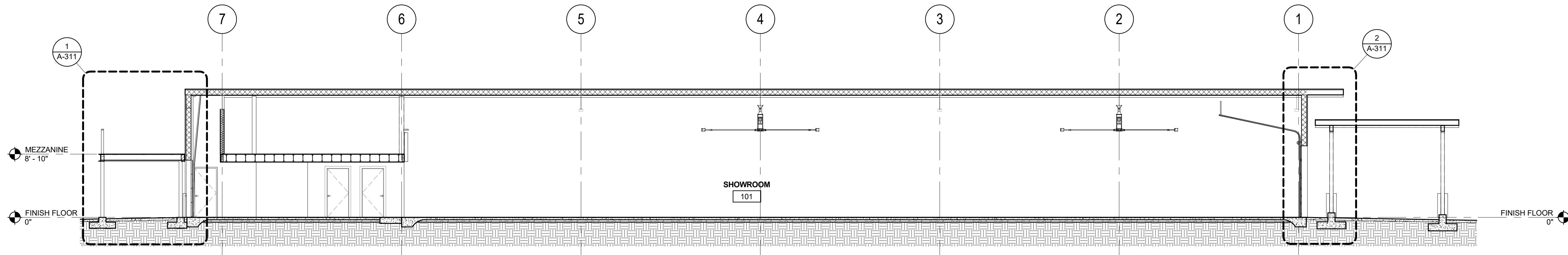
1 BUILDING SECTION
1/8" = 1'-0"

0 4 8 16
SCALE: 1/8" = 1'-0"



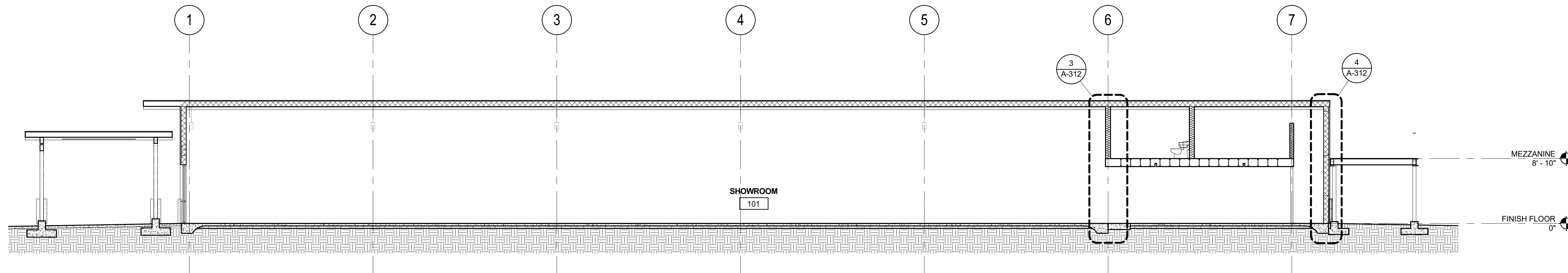
2 BUILDING SECTION
1/8" = 1'-0"

0 4 8 16
SCALE: 1/8" = 1'-0"



3 BUILDING SECTION
1/8" = 1'-0"

0 4 8 16
SCALE: 1/8" = 1'-0"



4 BUILDING SECTION
1/8" = 1'-0"

0 4 8 16
SCALE: 1/8" = 1'-0"

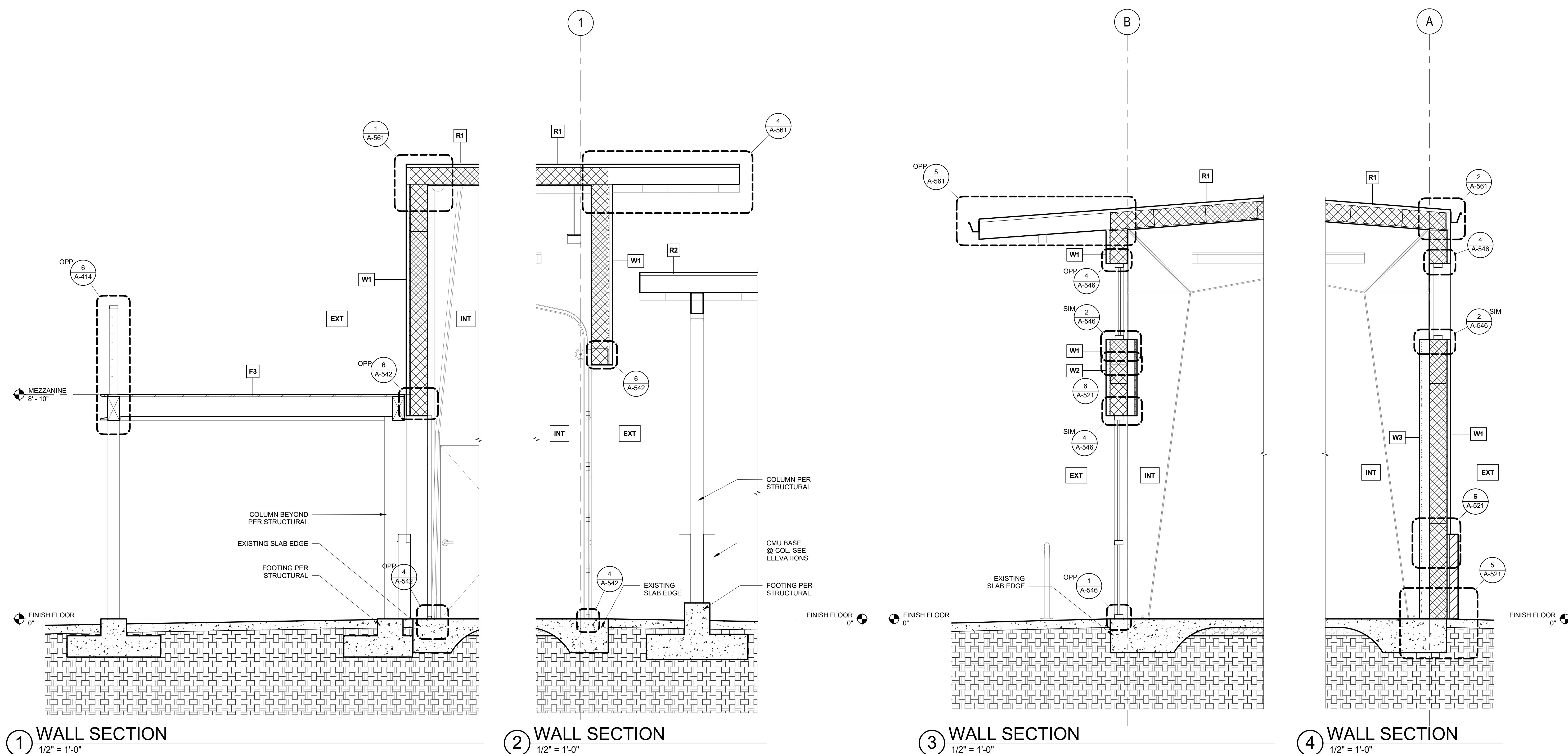
PROJECT
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

[illegible]

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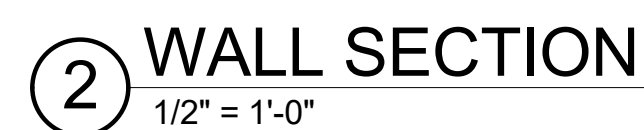
PROJECT
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

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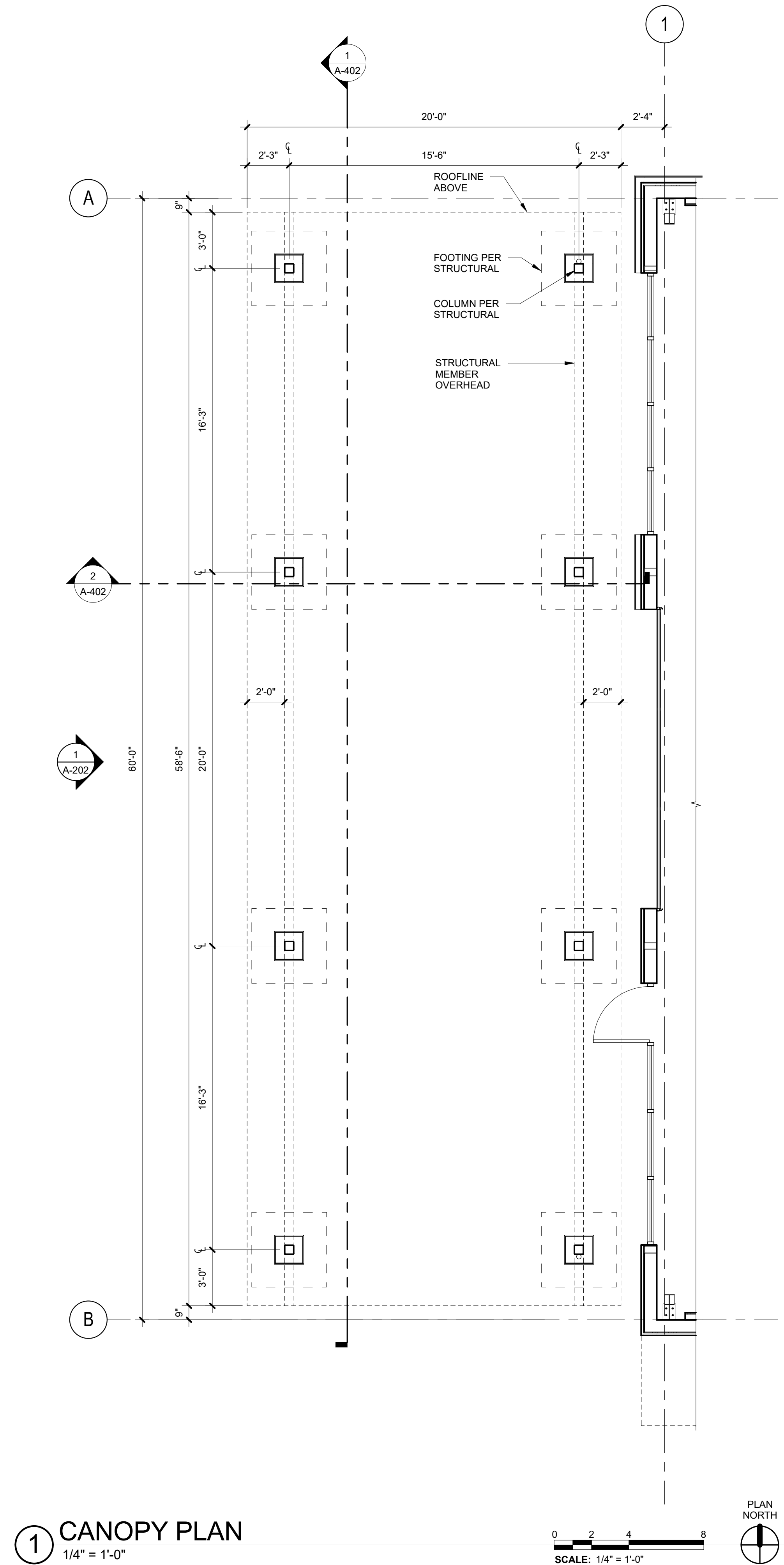
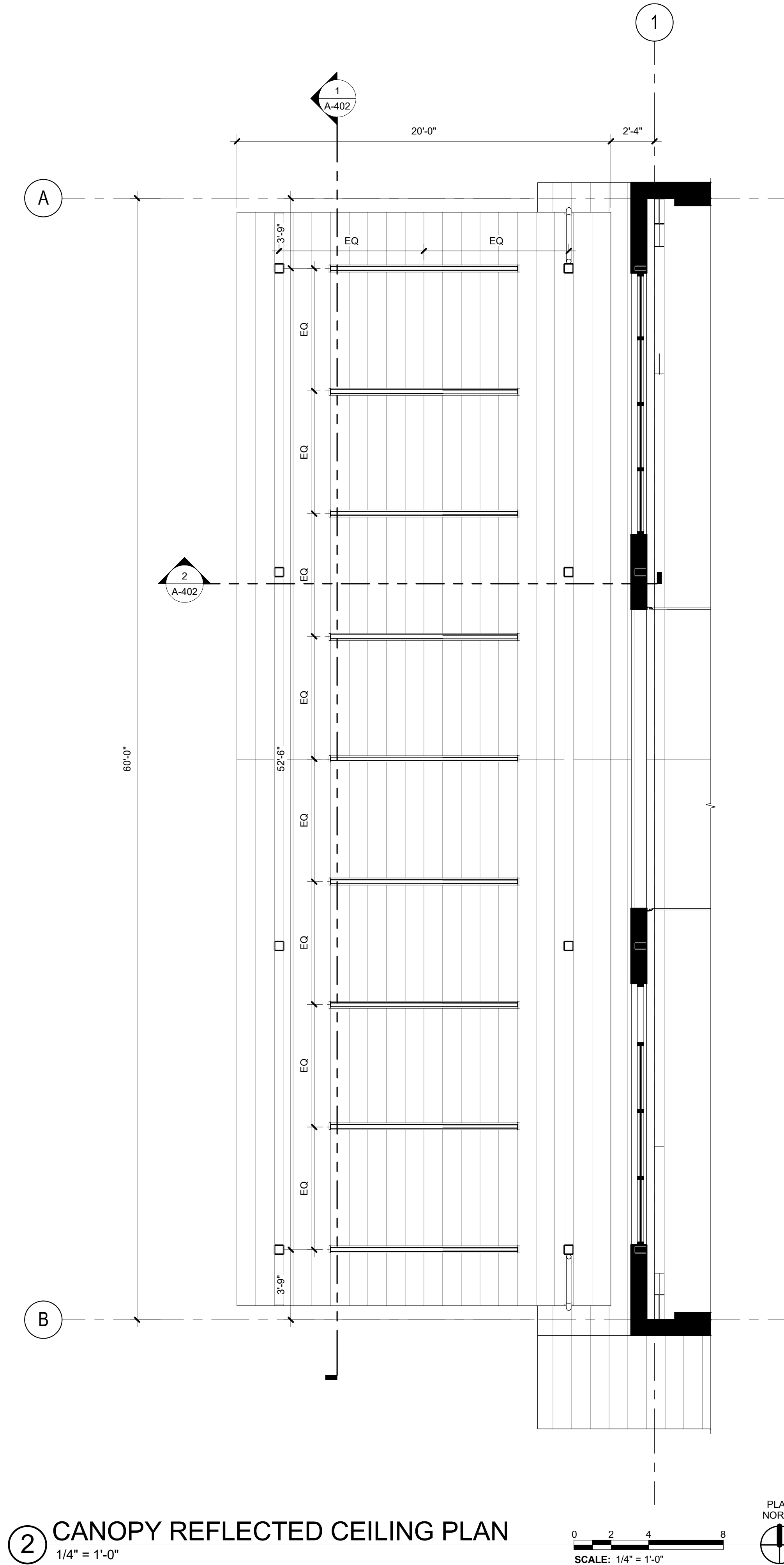
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A-312

PERMIT SET



24-3 4/9/2019 1:52:52 PM



SEAL

566

REGISTERED
ARCHITECT
DOUGLAS P.
STATE OF

PROJECT:
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

REVISIONS

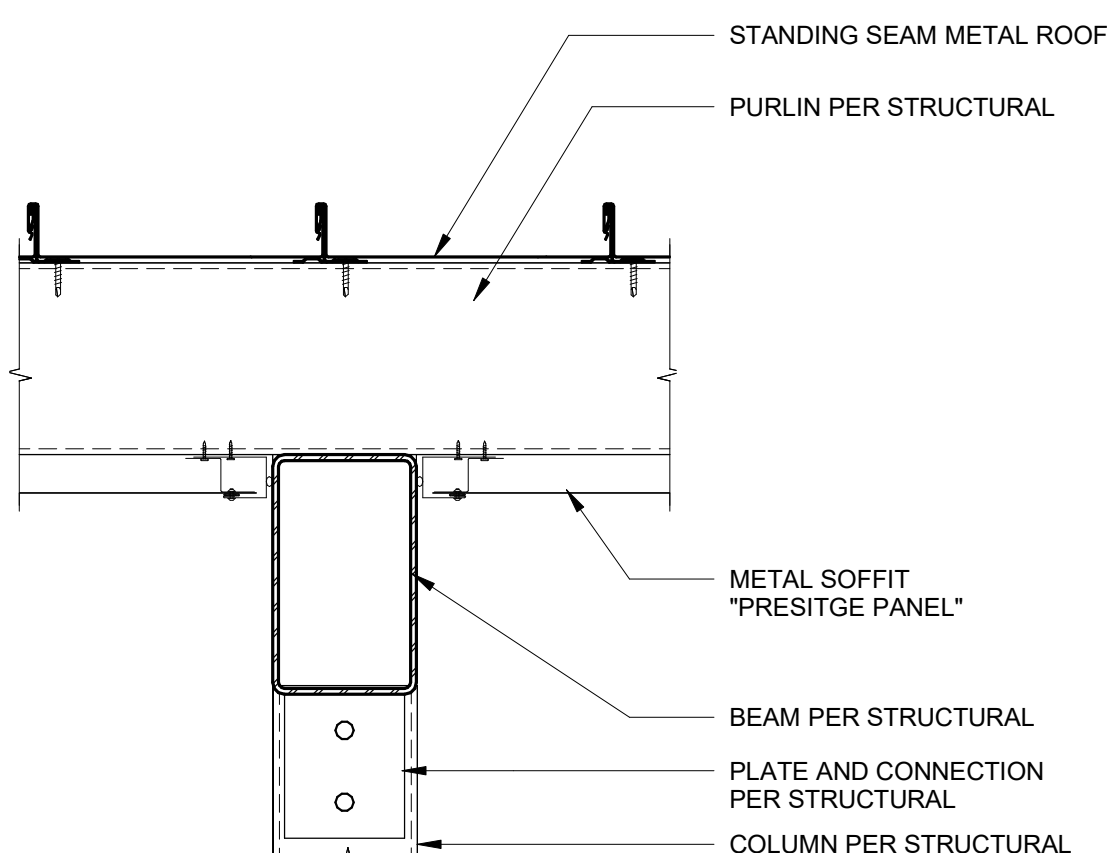
DATE
4.9.2019

BCRA NO.
17204

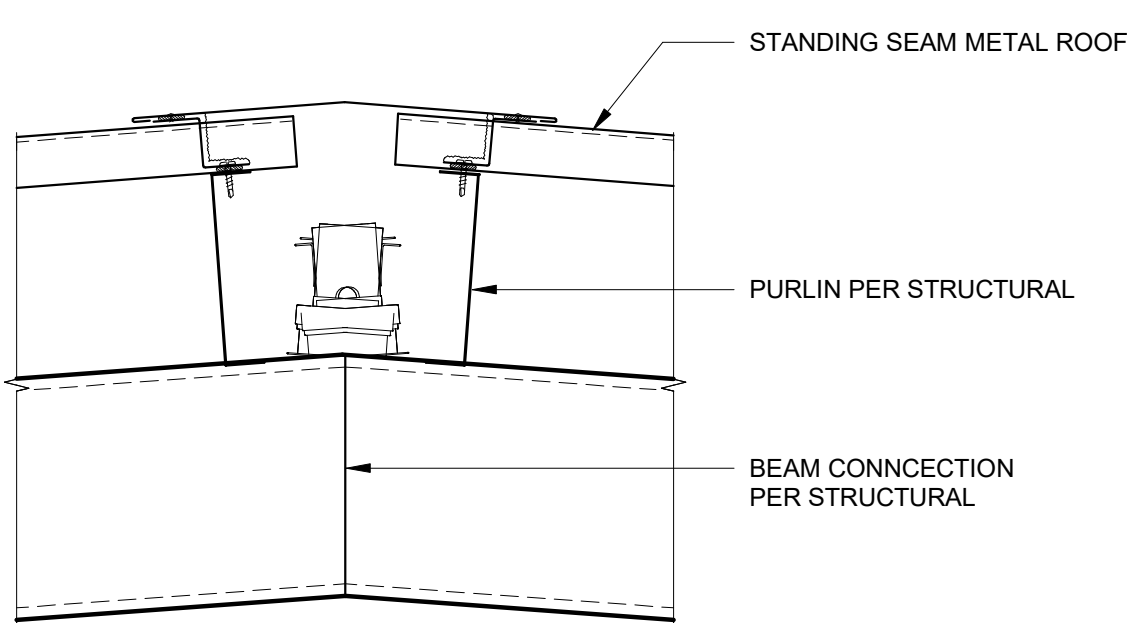
DRAWN BY: Author

REVIEWED BY:

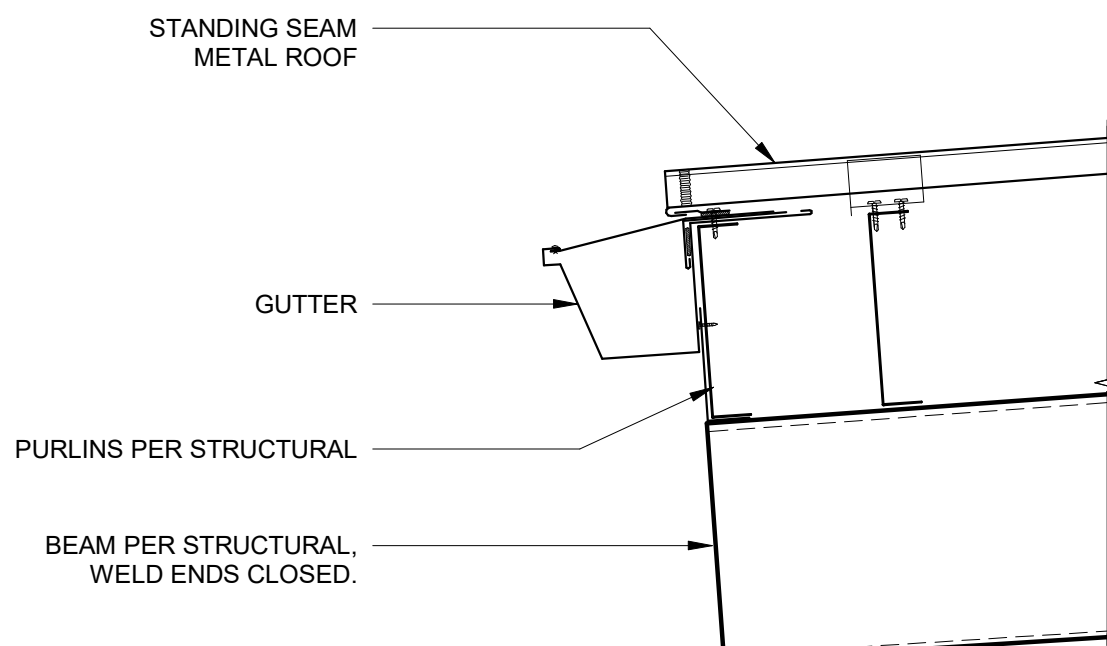
SHEET TITLE
ENLARGED CANOPY
SECTIONS



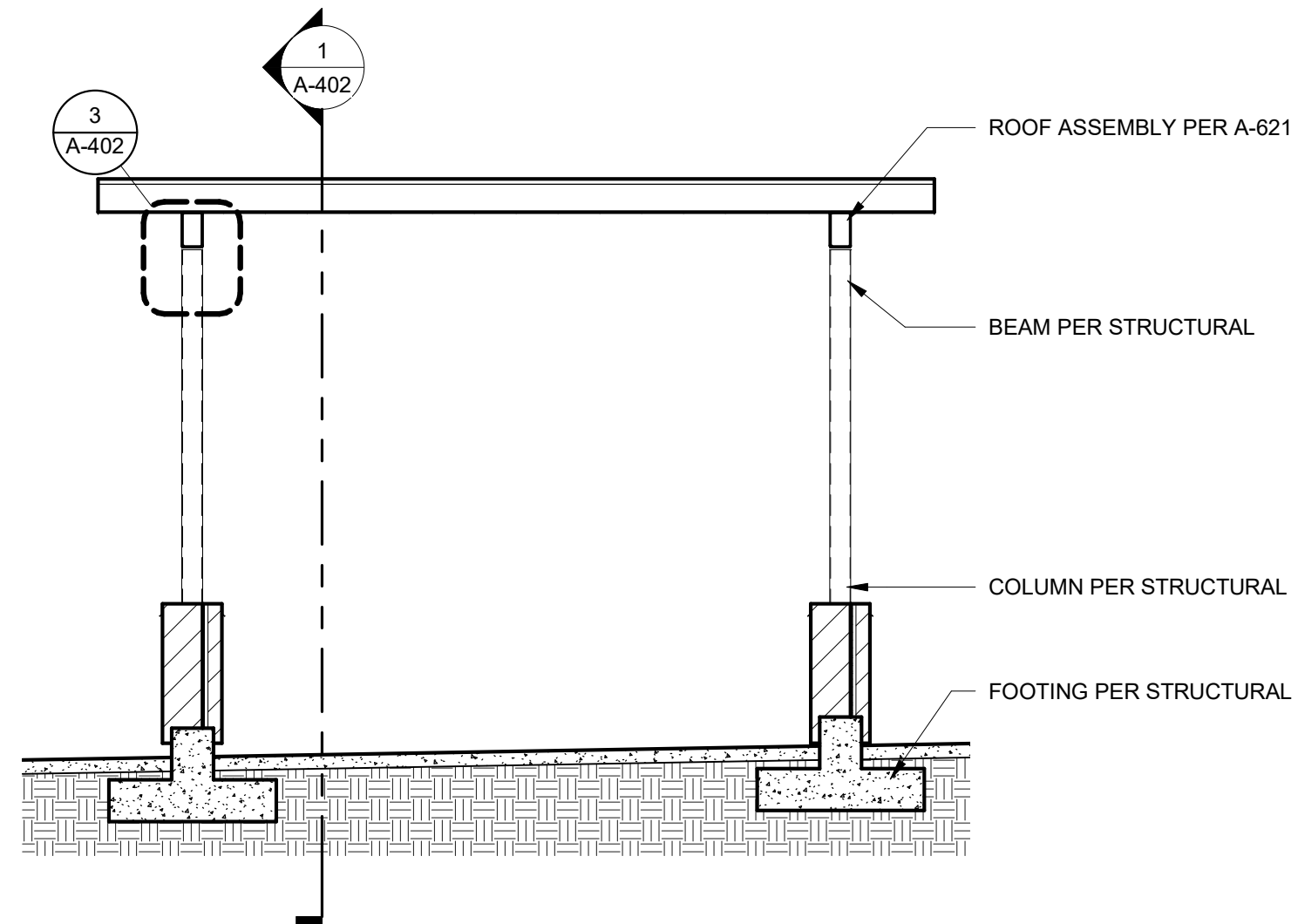
③ TYP BEAM TO COLUMN
1 1/2" = 1'-0"



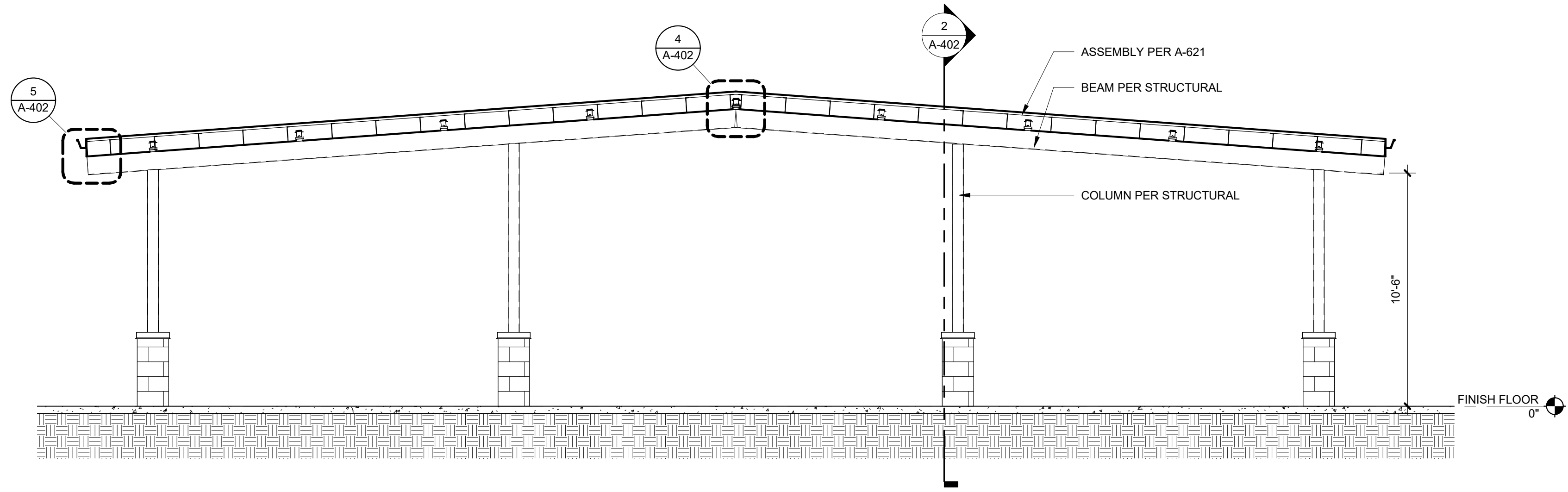
④ TYP BEAM @ RIDGE
1 1/2" = 1'-0"



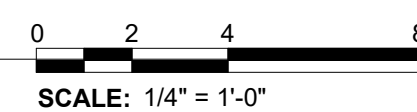
⑤ TYP GUTTER @ CANOPY
1 1/2" = 1'-0"



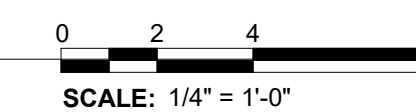
② CANOPY SECTION
1/4" = 1'-0"



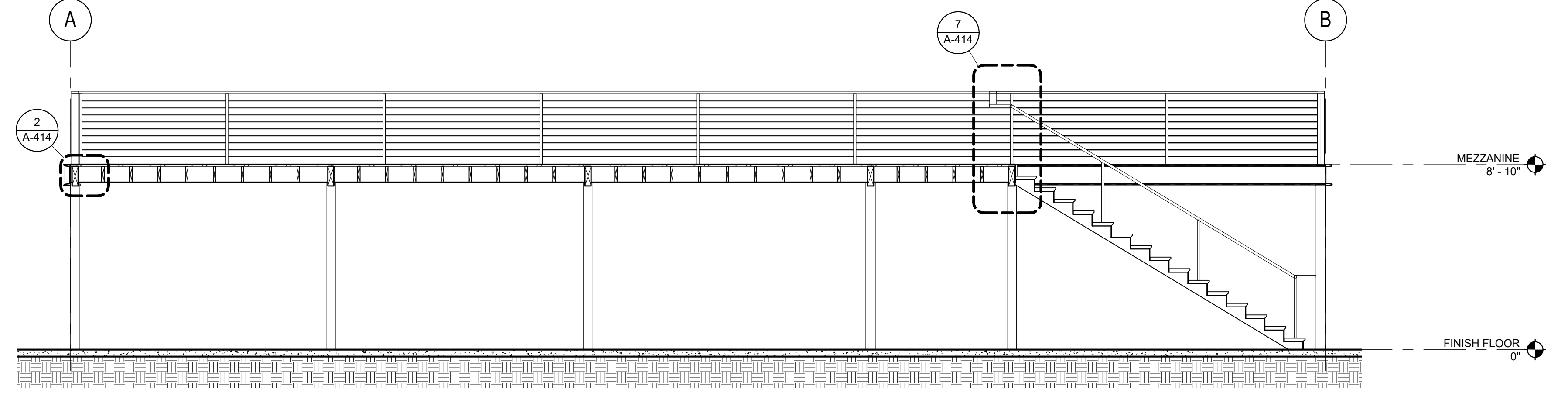
① CANOPY SECTION
1/4" = 1'-0"



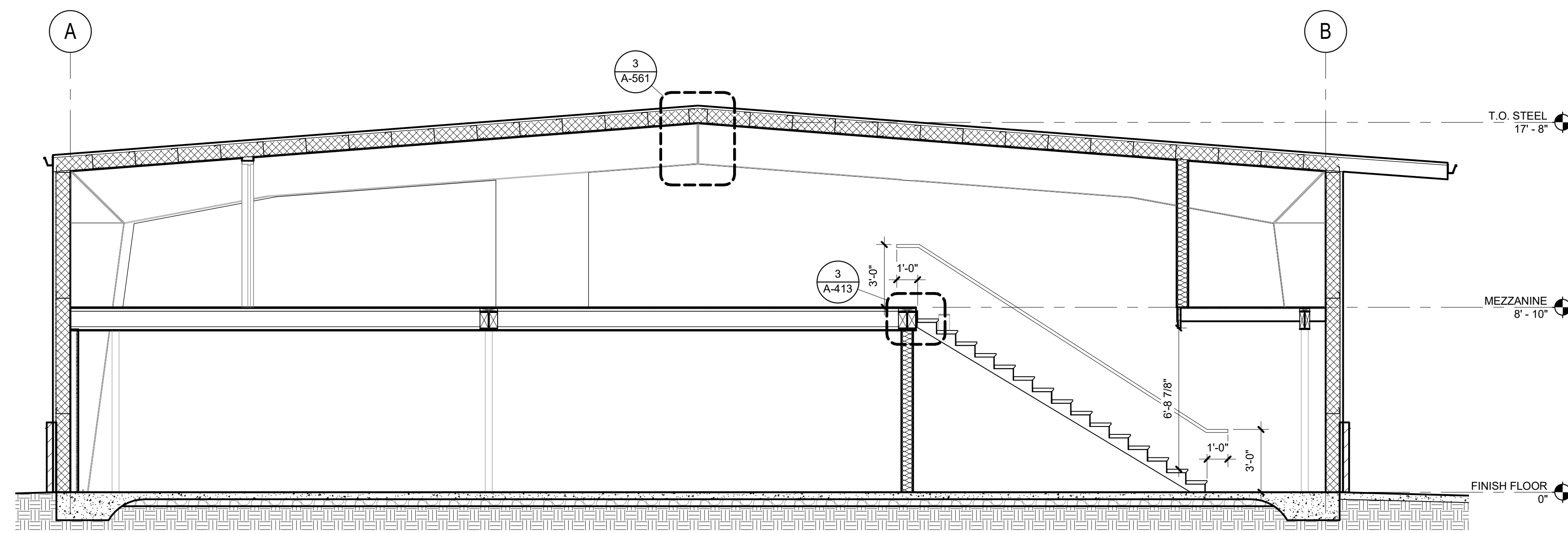
① ENLARGED FLOOR PLAN @ MEZZANINE
1/4" = 1'-0"



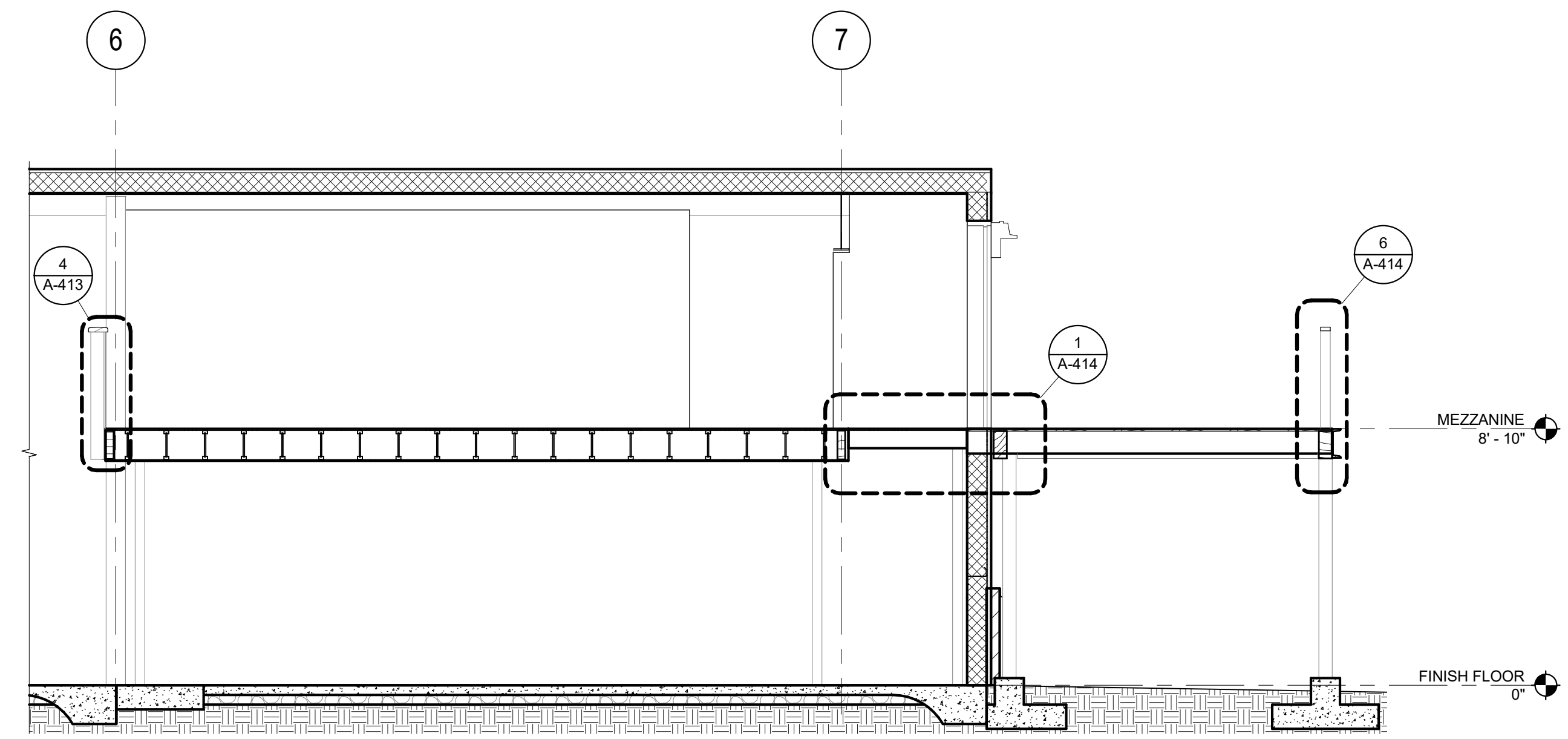
PLA
NOR



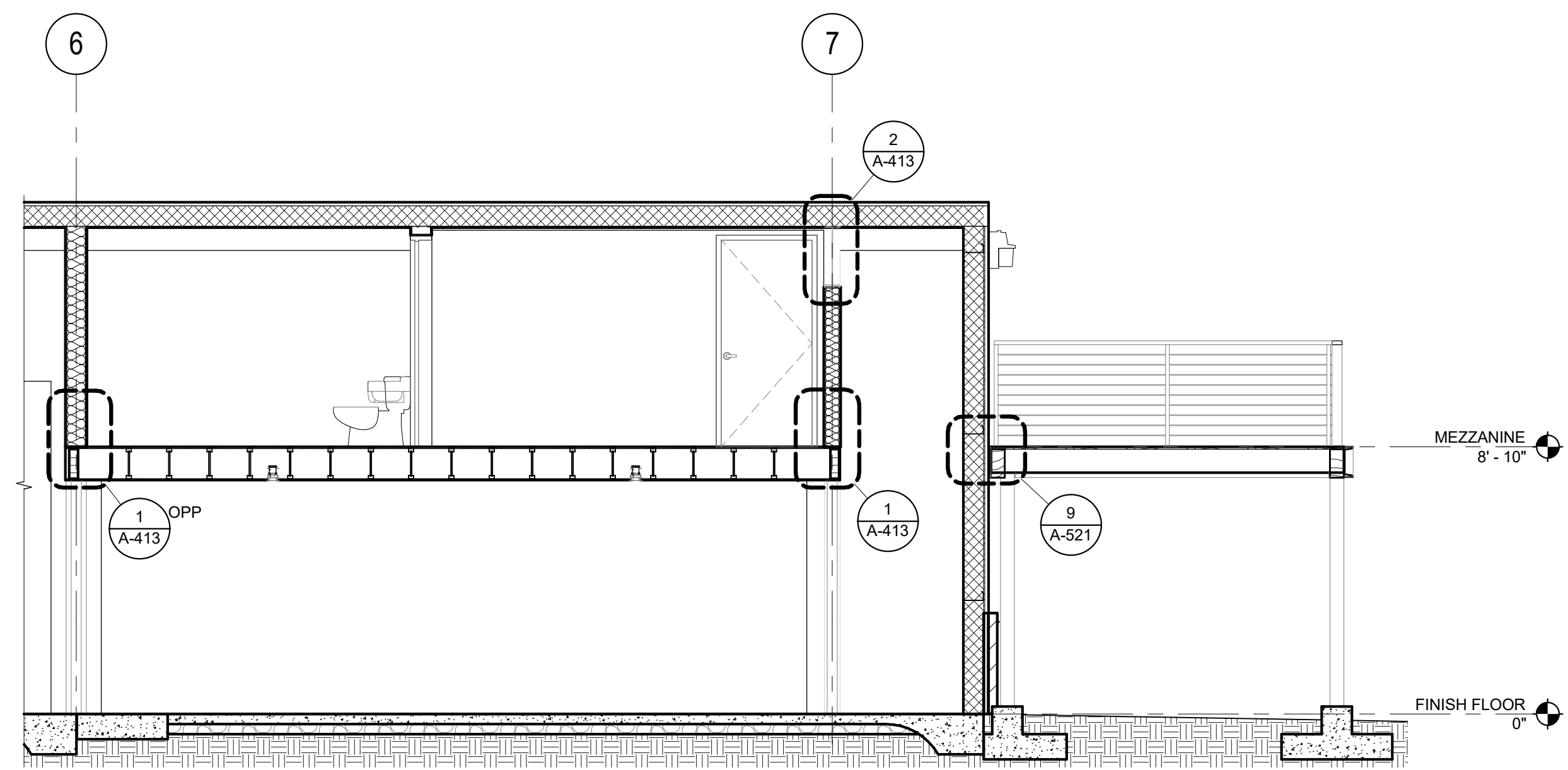
④ DECK SECTION
1/4" = 1'-0"



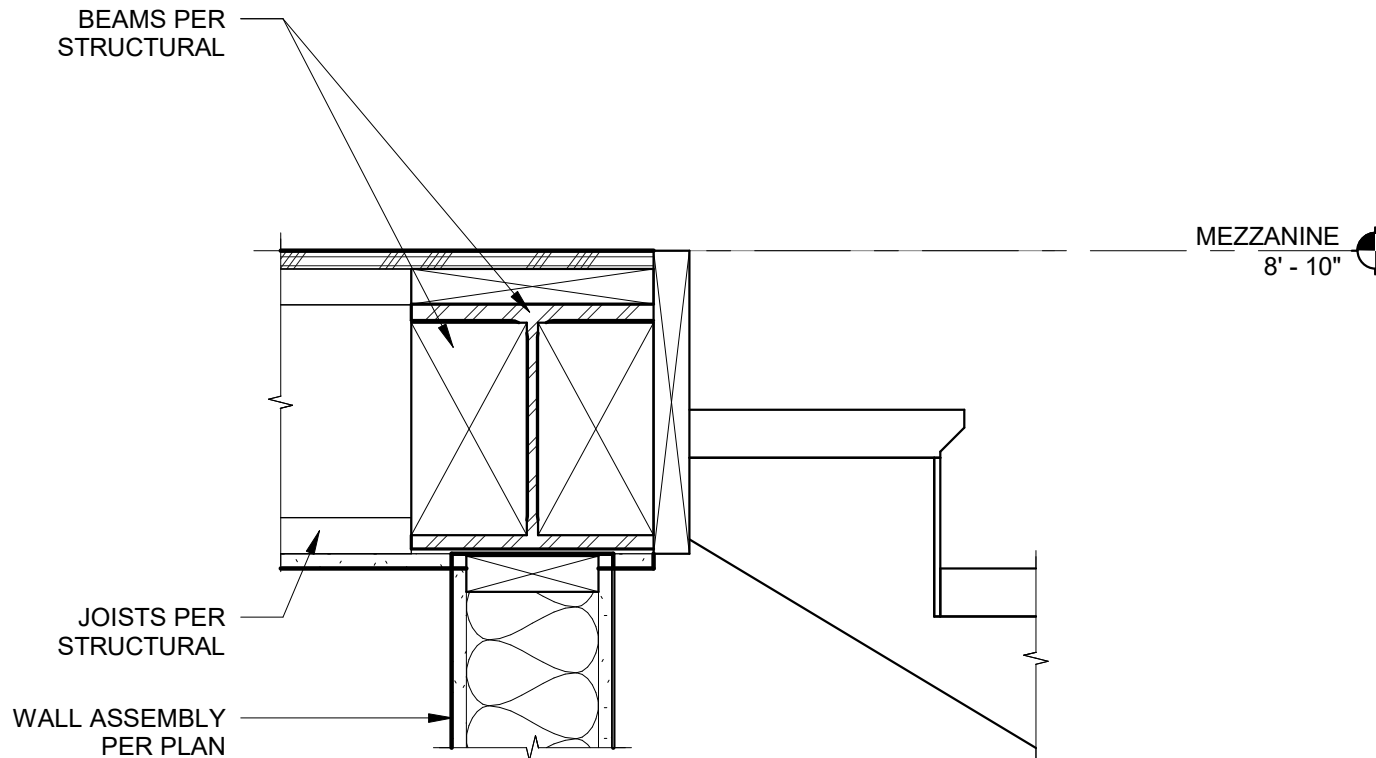
③ MEZZANINE SECTION
1/4" = 1'-0"



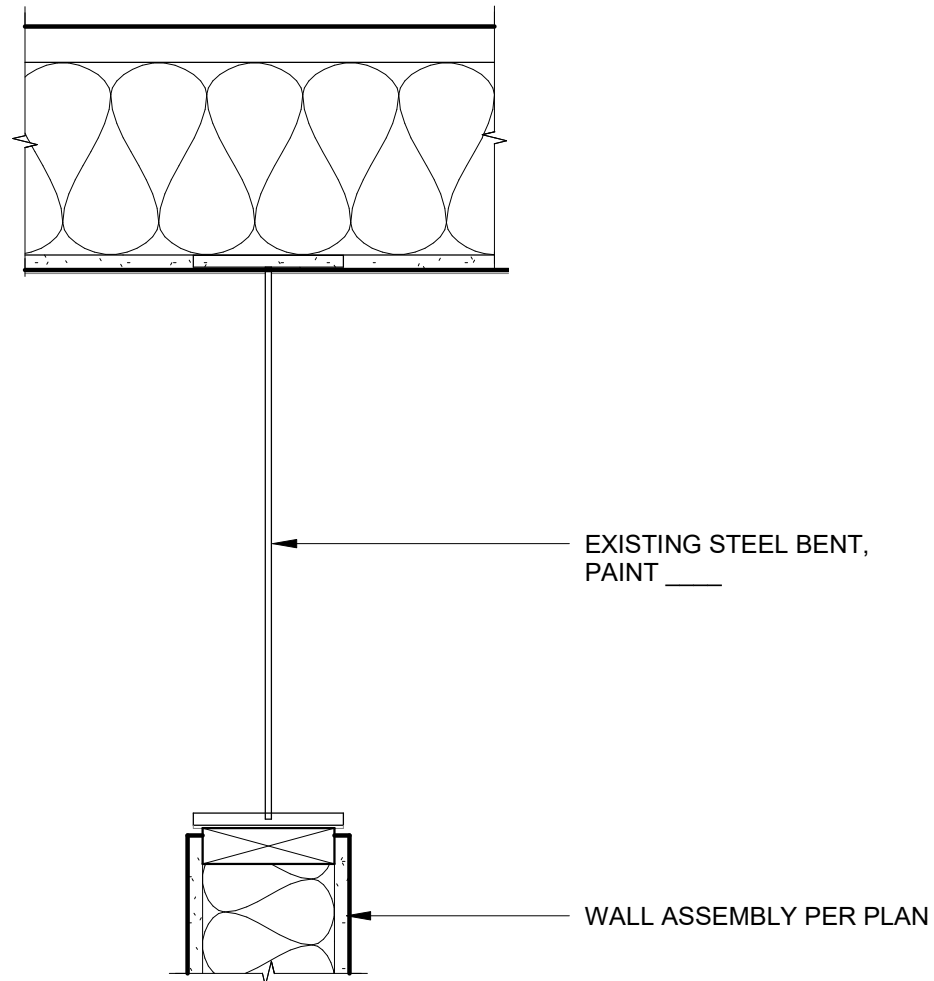
② MEZZANINE SECTION
1/4" = 1'-0"



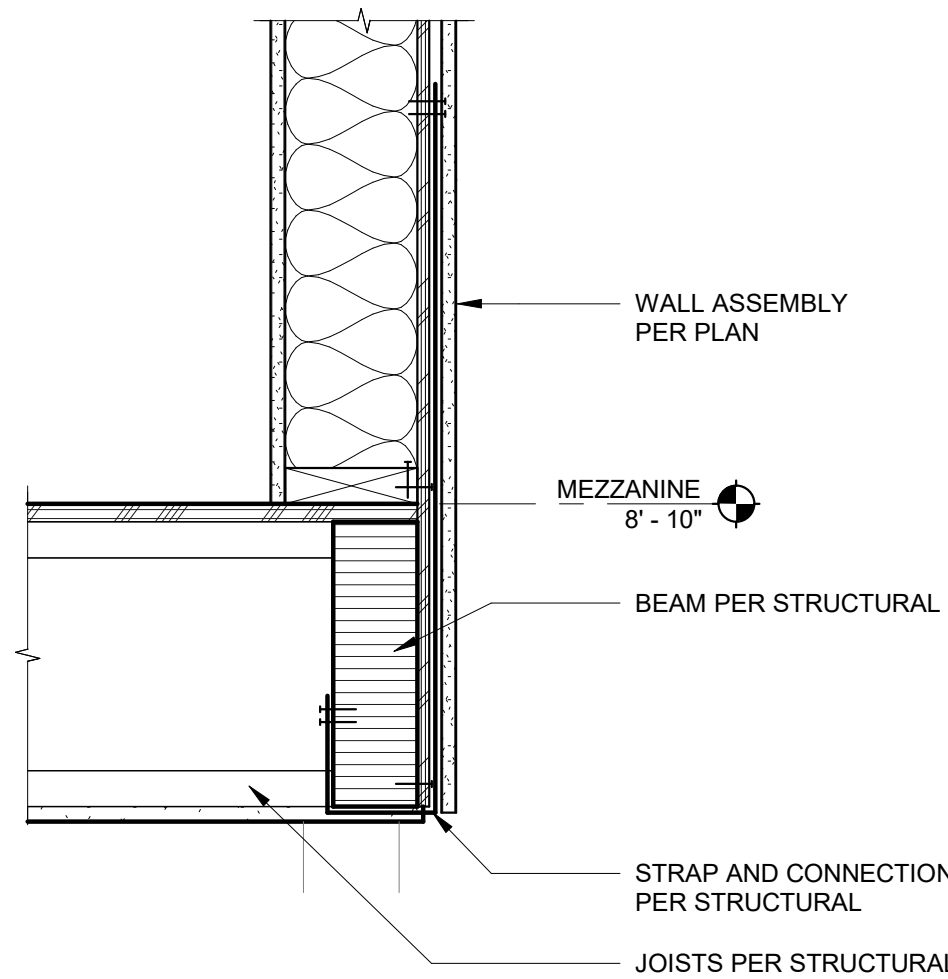
① MEZZANINE SECTION
1/4" = 1'-0"



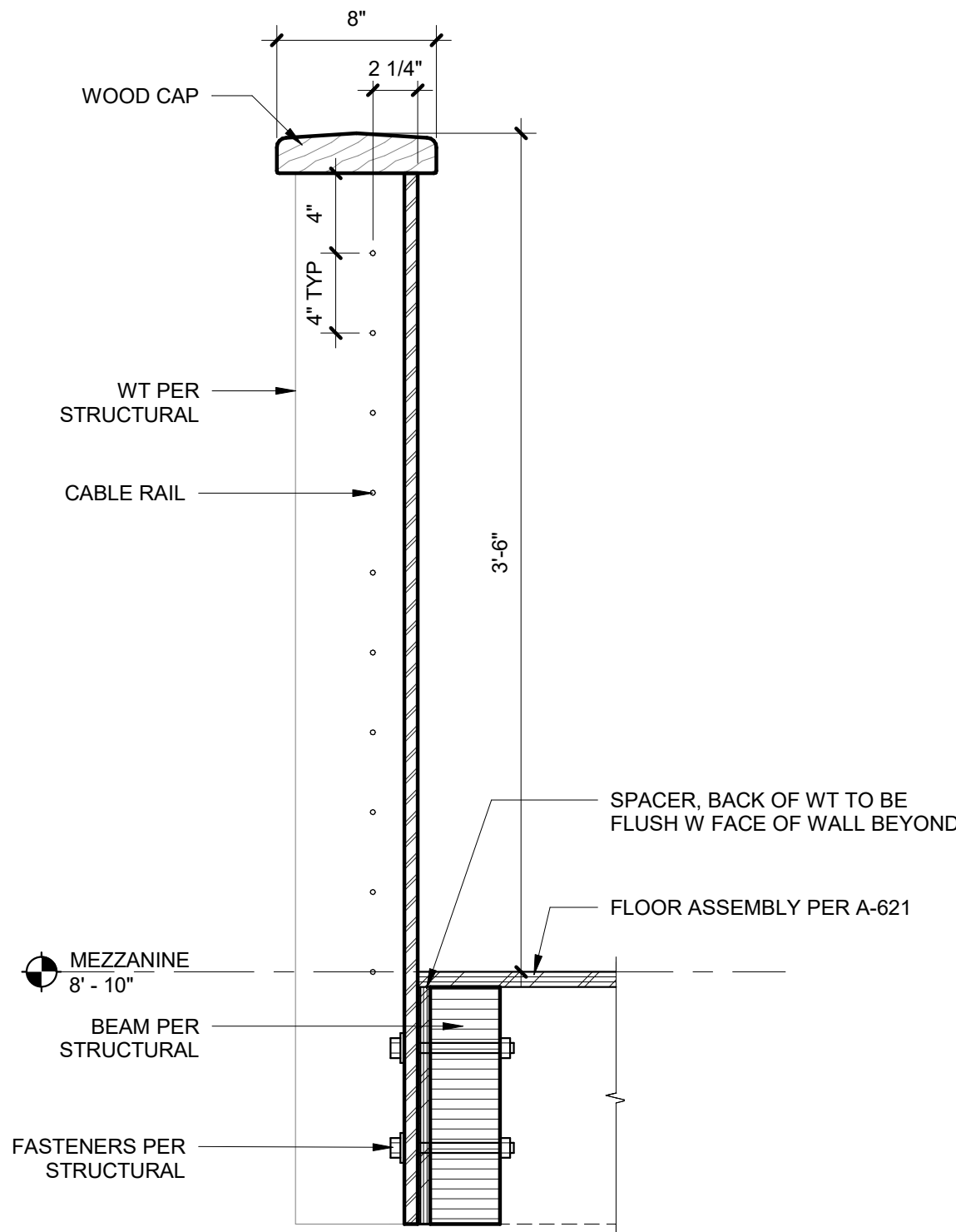
③ INTERIOR MEZZANINE STAIR
1 1/2" = 1'-0"



② TYP WALL @ EXISTING BENT
1 1/2" = 1'-0"

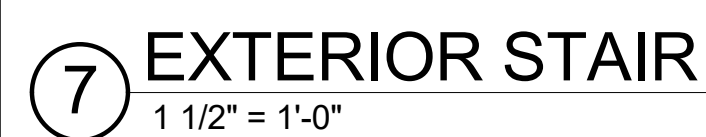


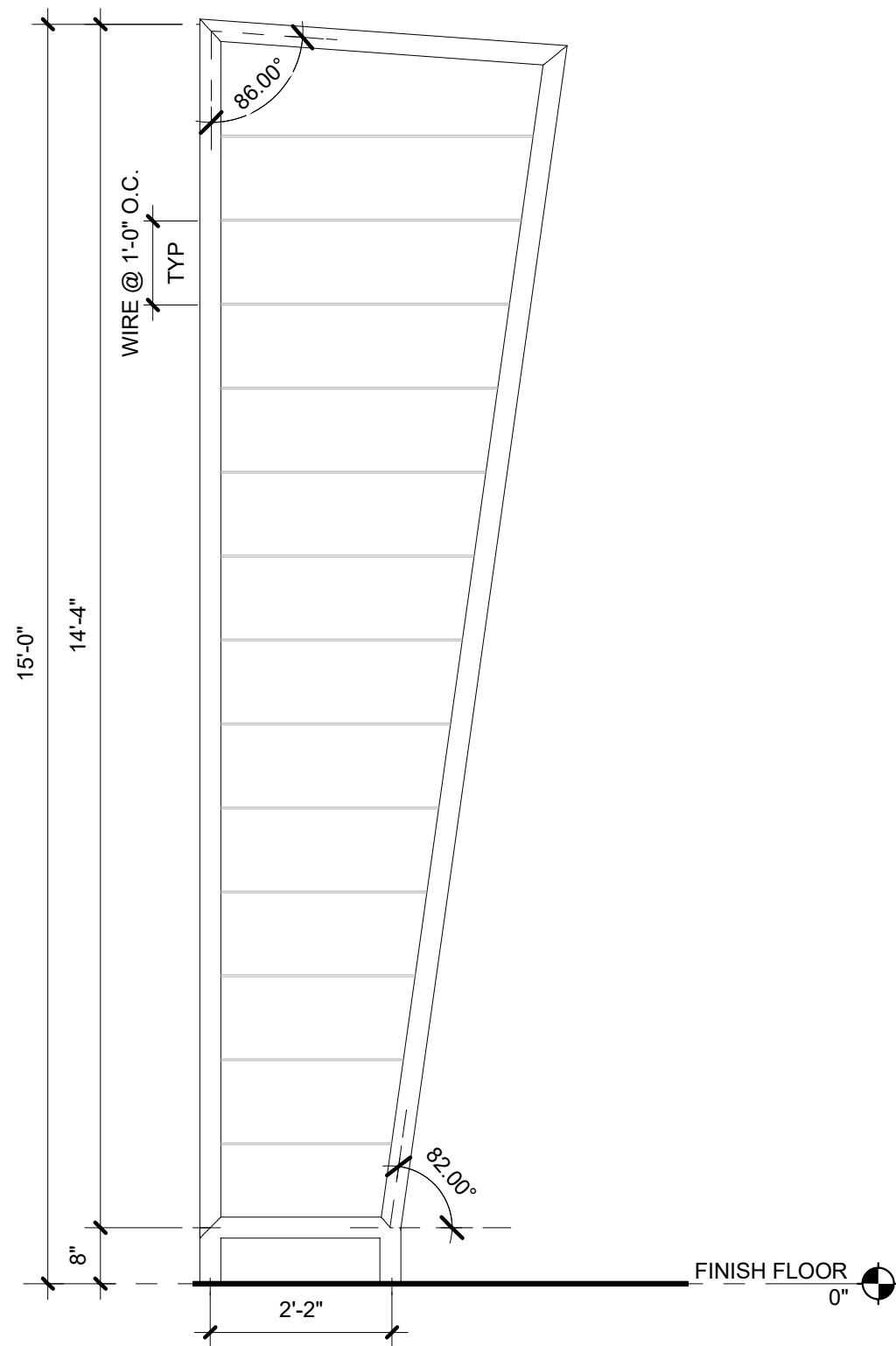
① TYP WALL @ MEZZANINE EDGE
1 1/2" = 1'-0"



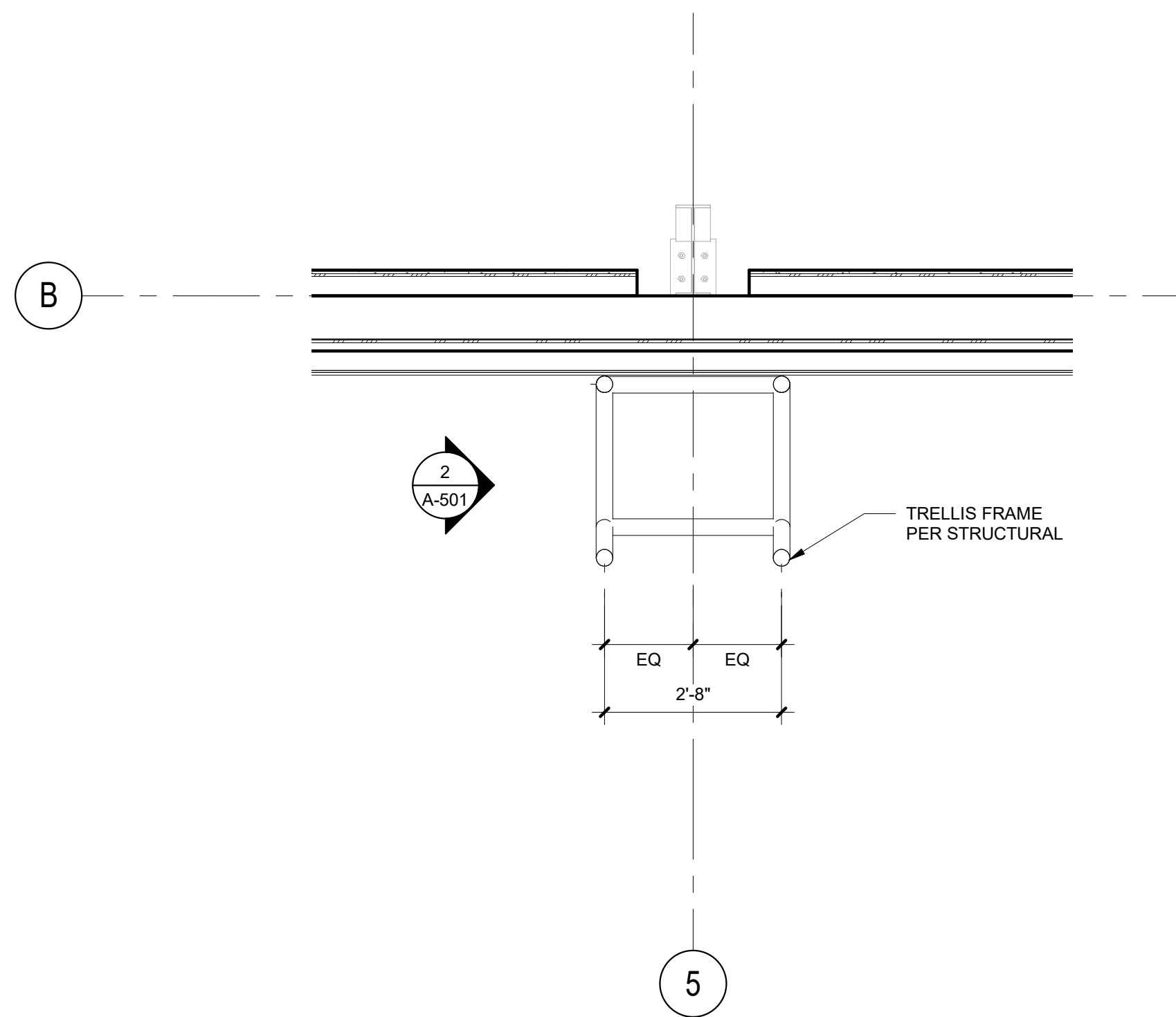
④ TYP INTERIOR GUARDRAIL SECTION
1 1/2" = 1'-0"

PROJECT
TENANT IMPROVEMENT
SUMNER SPEED SHOP
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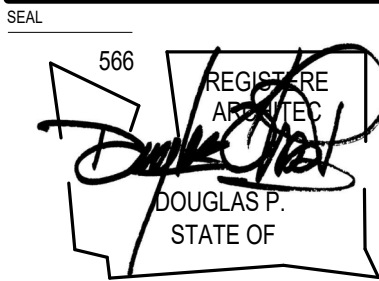
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② TRELLIS ELEVATION
1/2" = 1'-0"



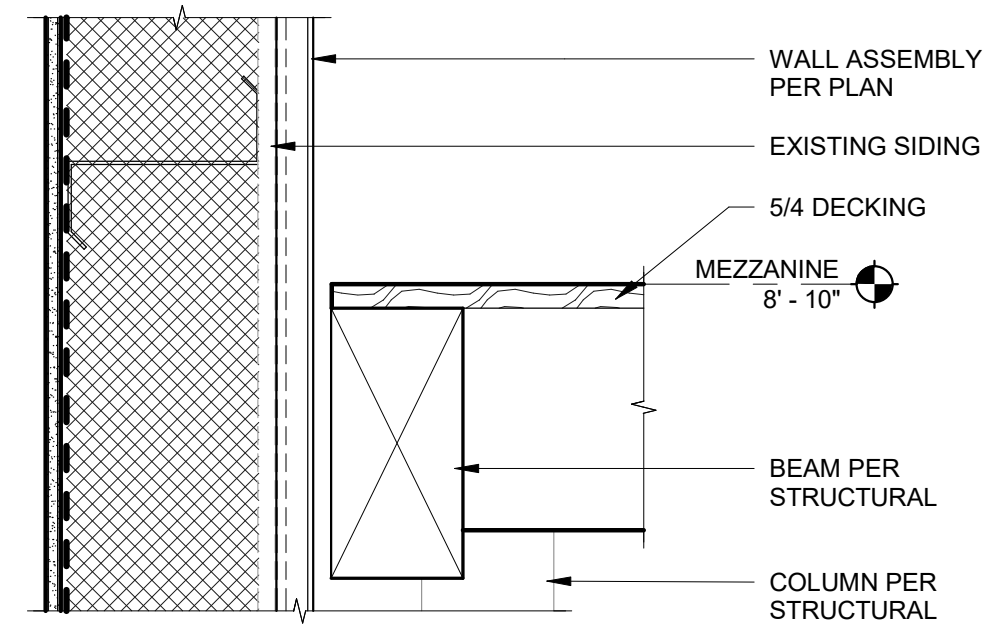
① TRELLIS PLAN
1/2" = 1'-0"



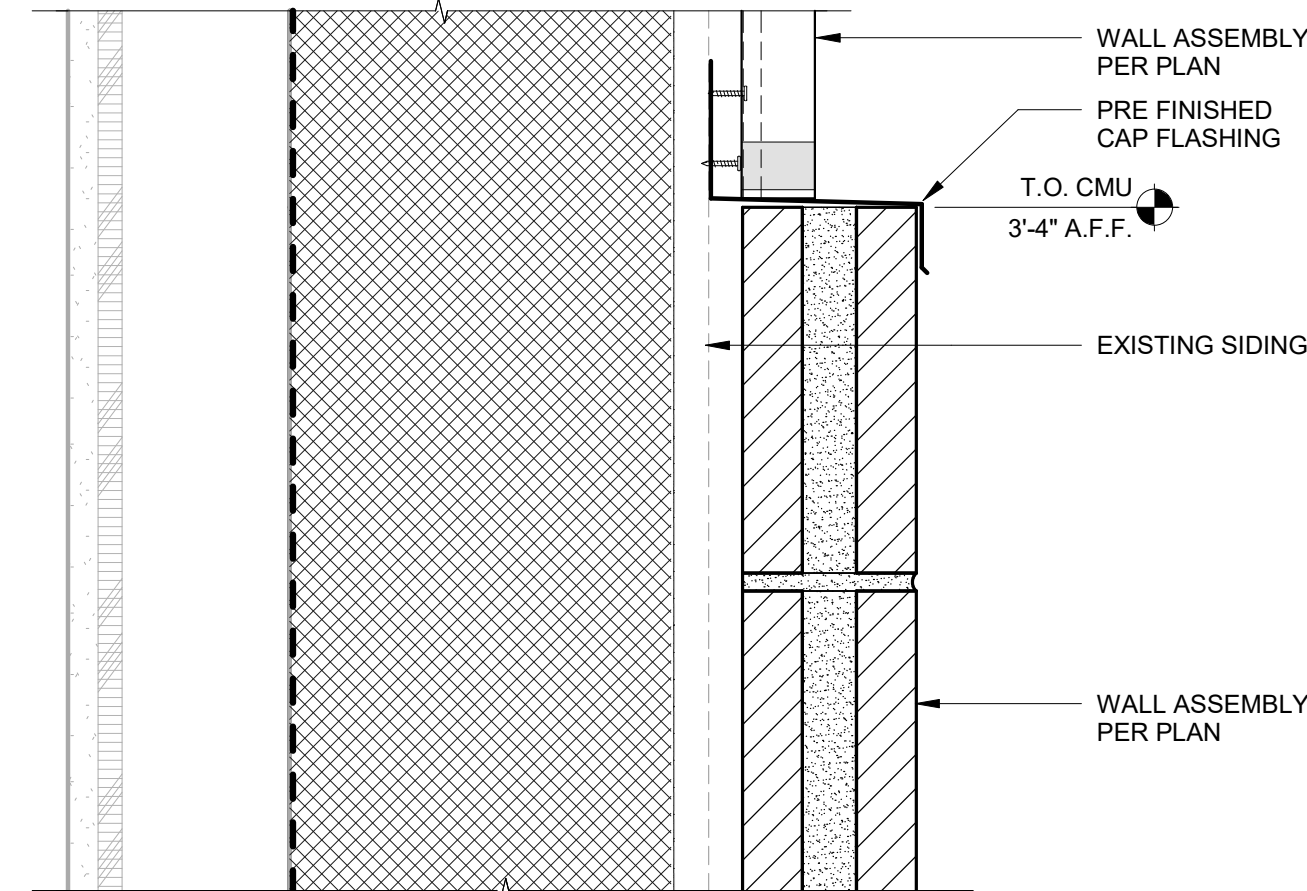
PROJECT:
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

REVISIONS	

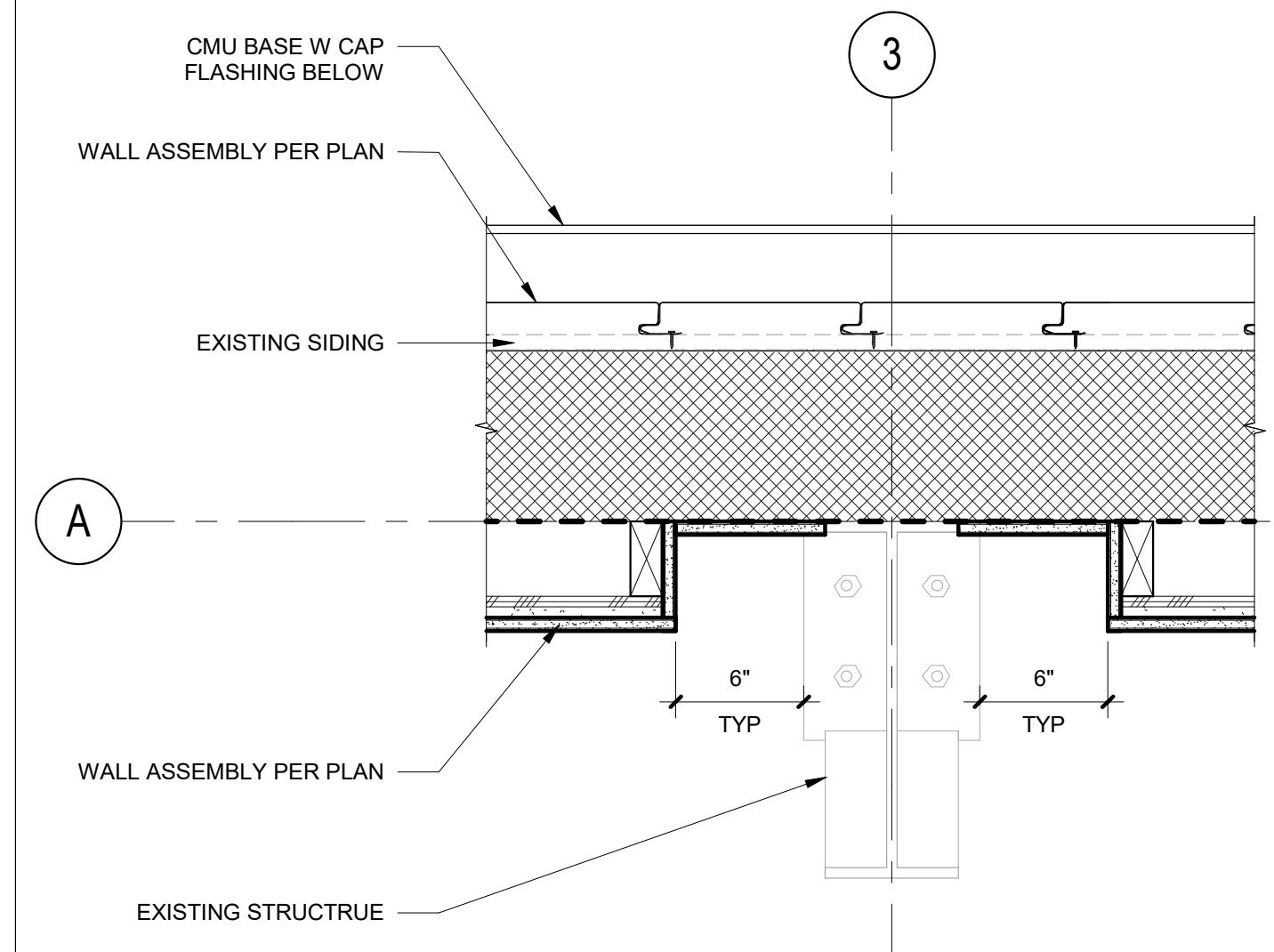
DATE
4.9.2019
BCRA NO.
17204
DRAWN BY: Author
REVIEWED BY:
SHEET TITLE
TRELLIS DETAILS



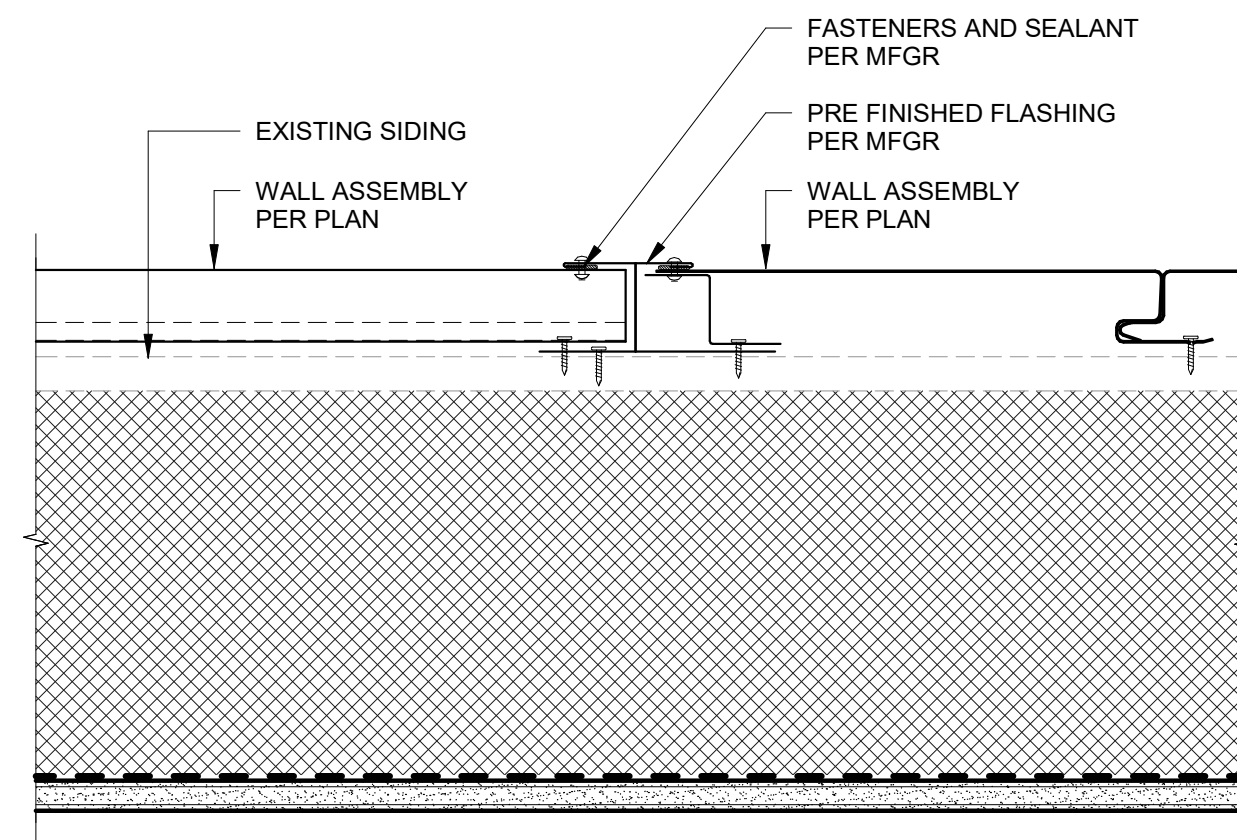
9 EXTERIOR WALL @ OUTDOOR DECK
1 1/2" = 1'-0"



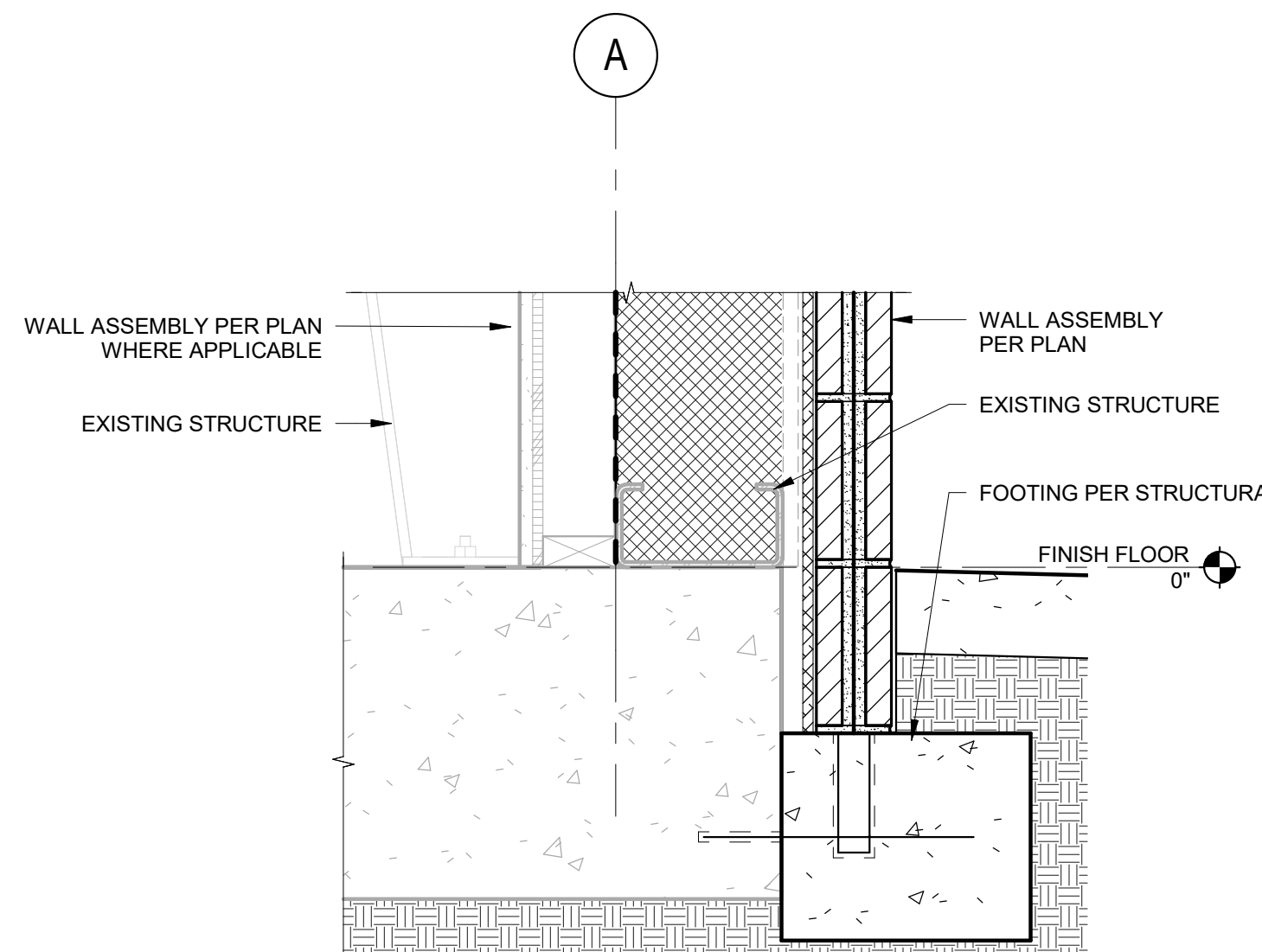
6 METAL SIDING TRANSITION - VERTICAL
3" = 1'-0"



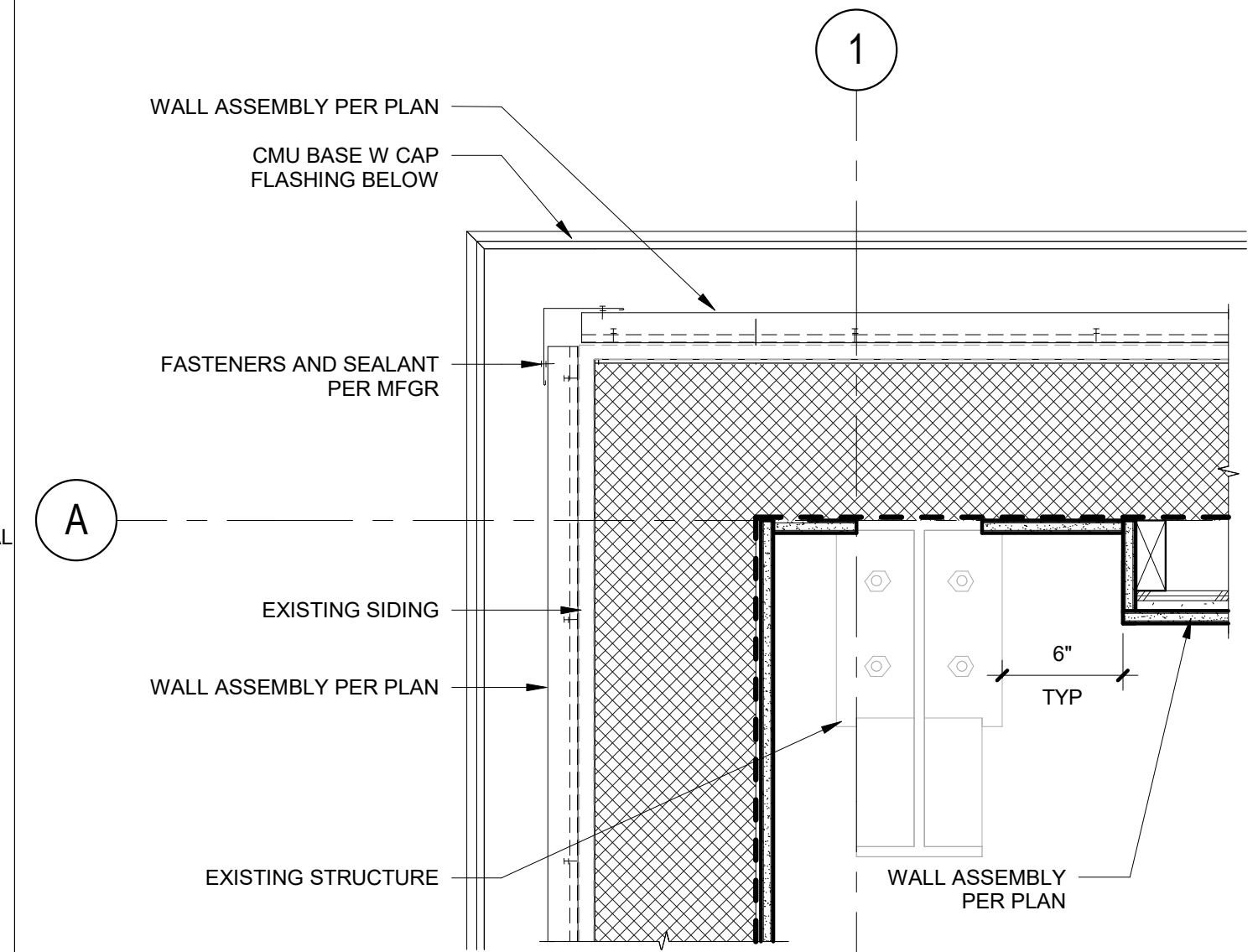
3 TYP SIDING @ EXTERIOR WALL
1 1/2" = 1'-0"



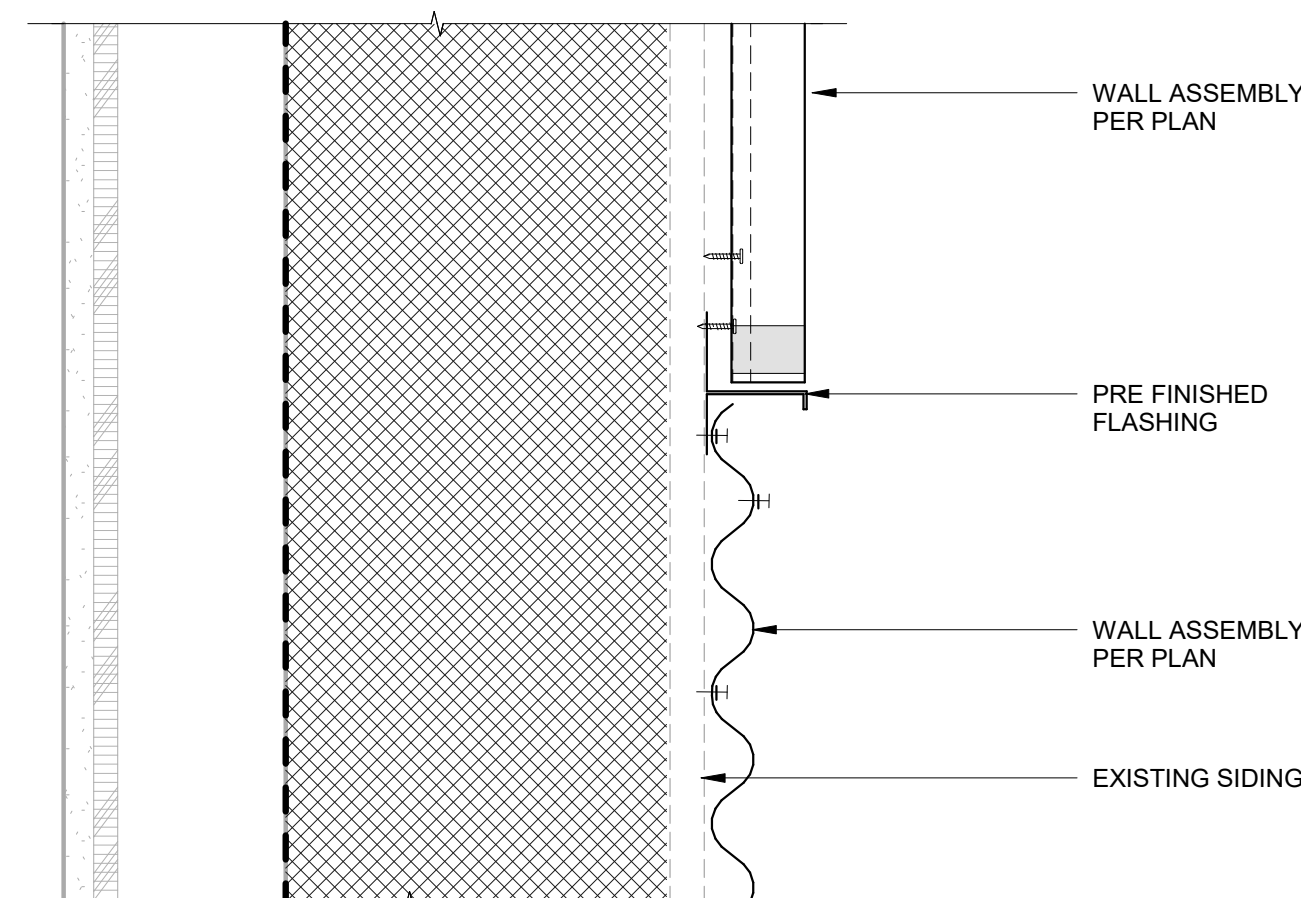
8 METAL SIDING TRANSITION - HORIZONTAL
3" = 1'-0"



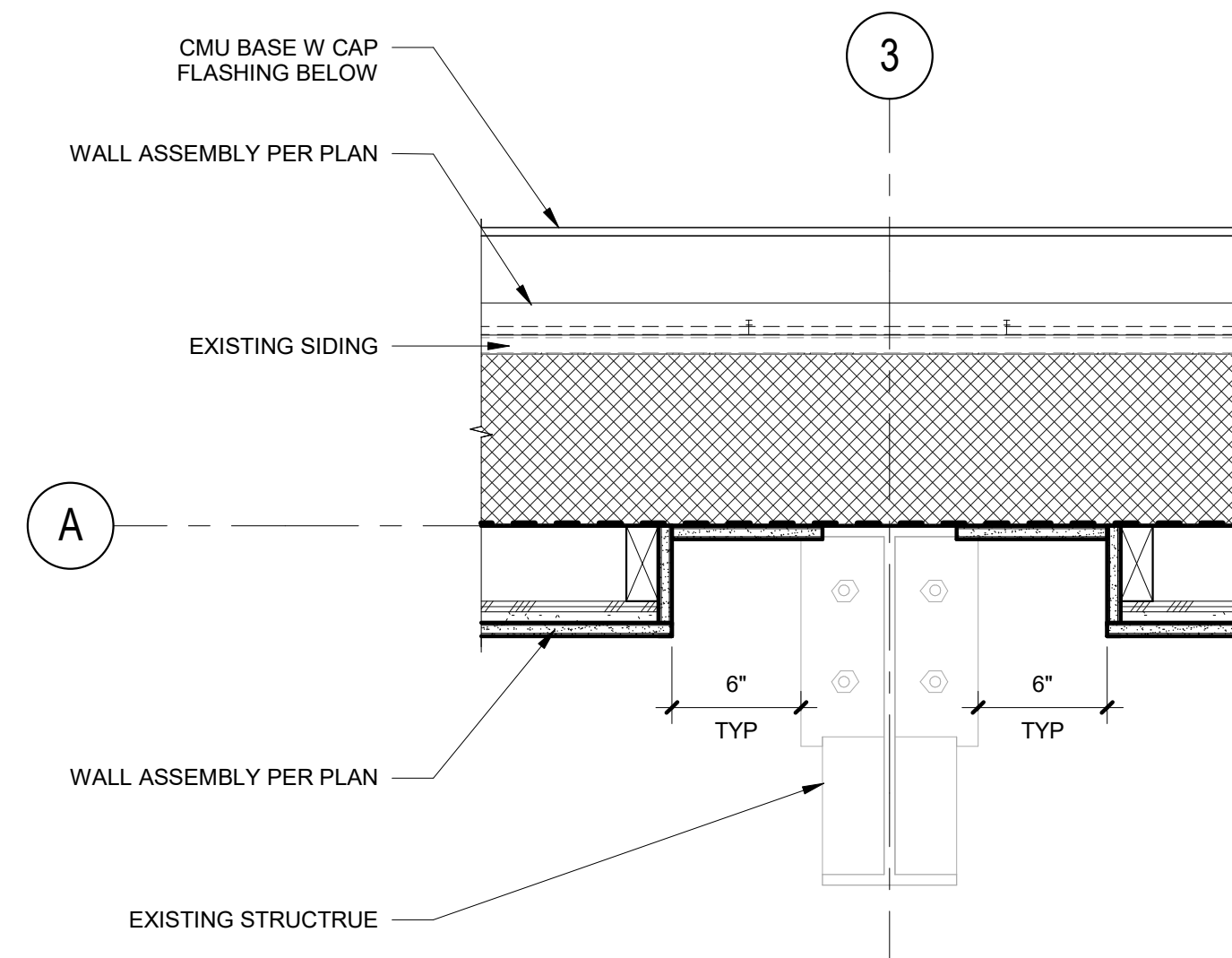
5 TYP CMU FOOTING
1 1/2" = 1'-0"



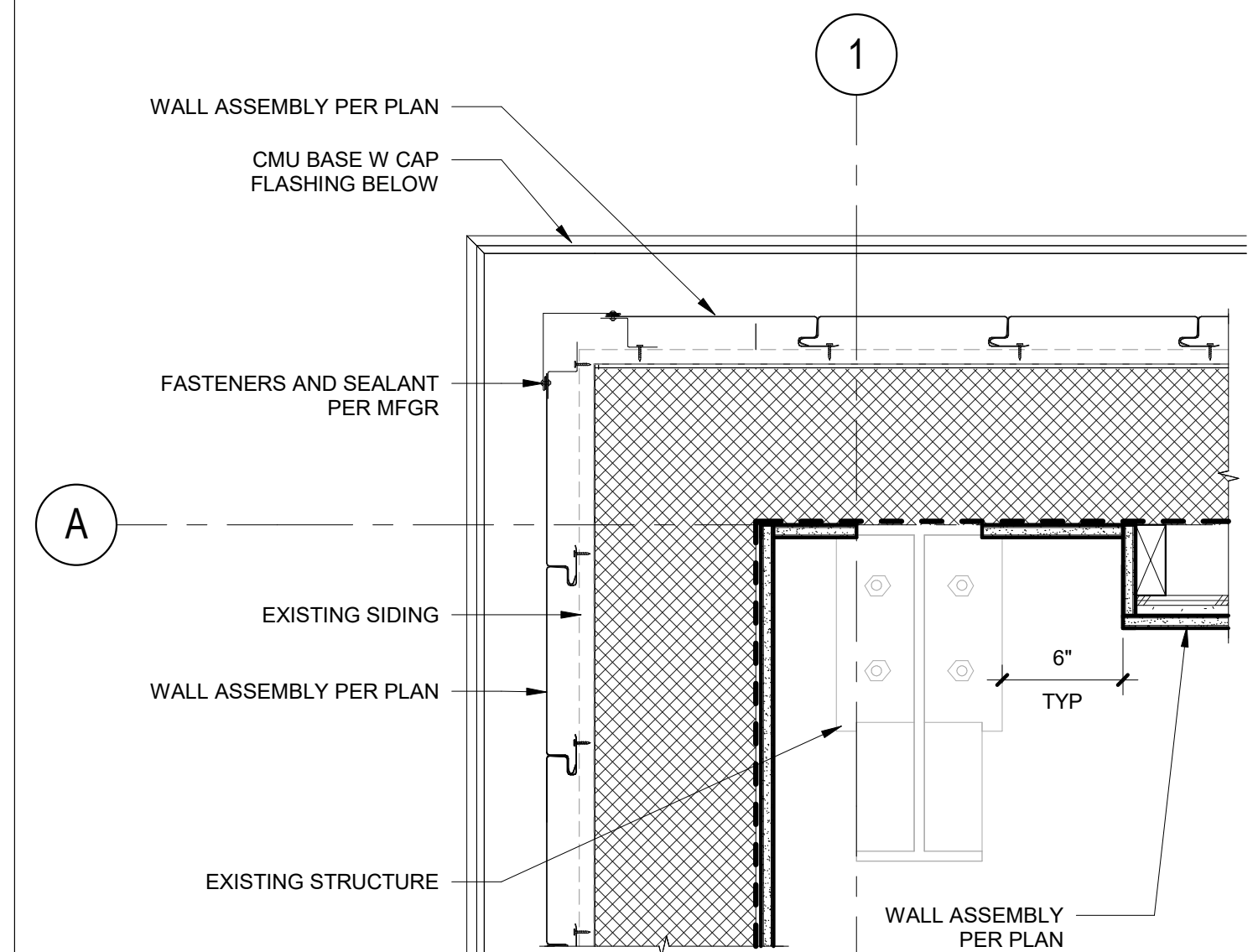
2 TYP SIDING @ EXTERIOR CORNER
1 1/2" = 1'-0"



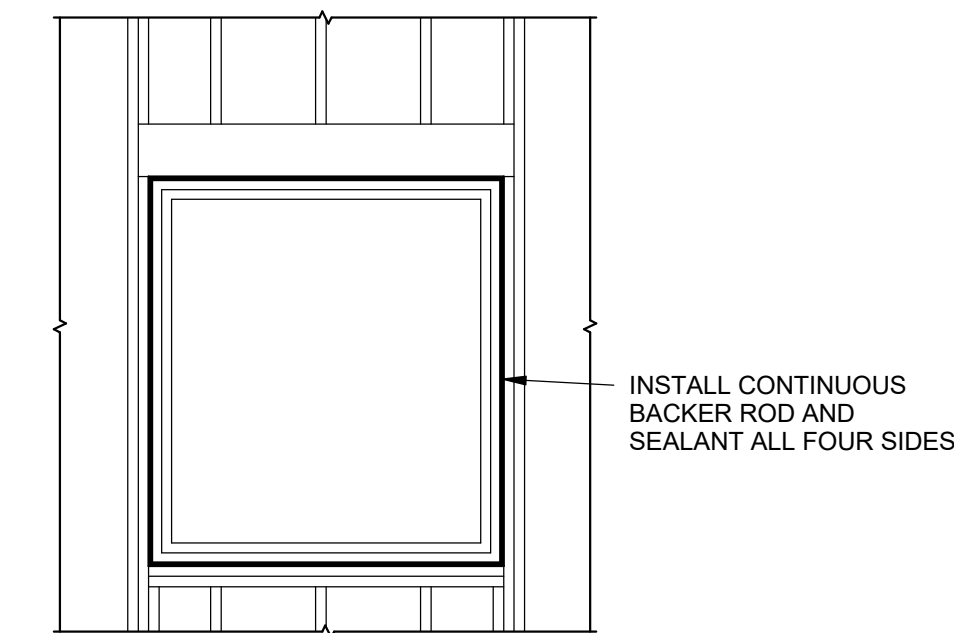
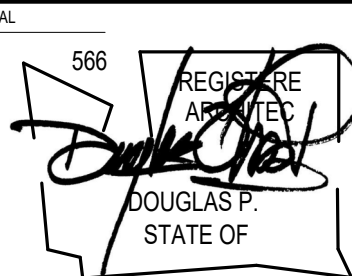
7 METAL SIDING TRANSITION - VERTICAL
3" = 1'-0"



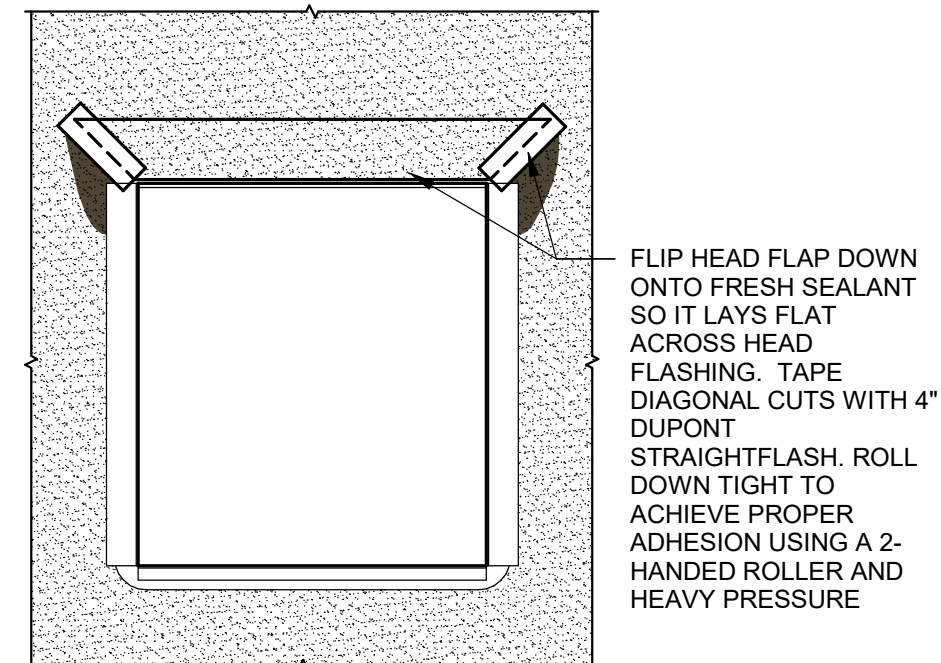
4 TYP SIDING @ EXTERIOR WALL
1 1/2" = 1'-0"



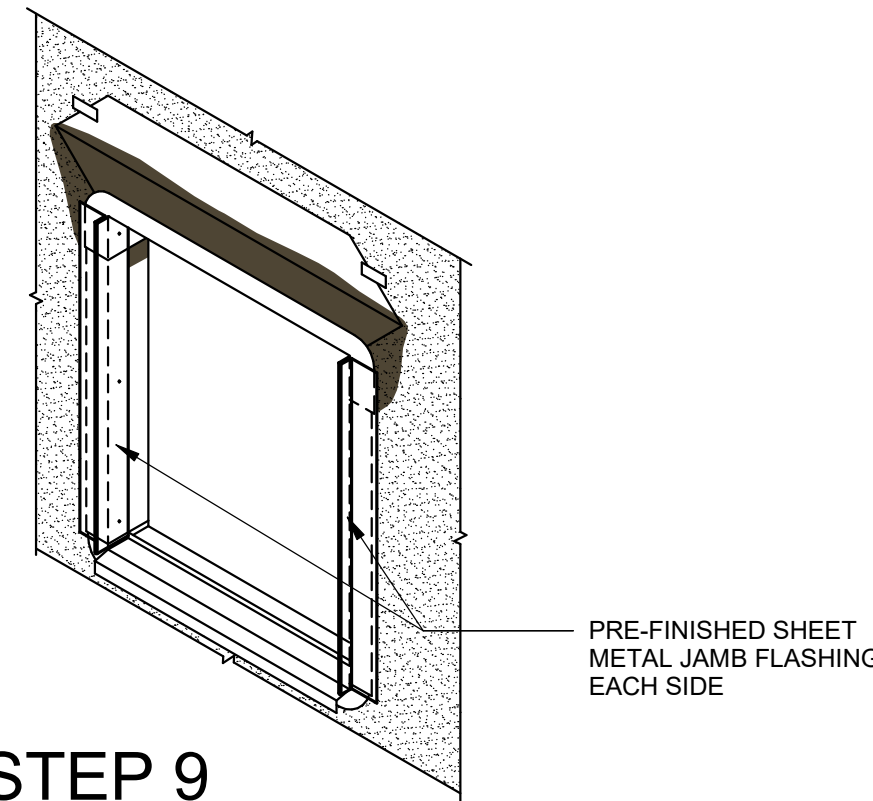
1 TYP SIDING @ EXTERIOR CORNER
1 1/2" = 1'-0"



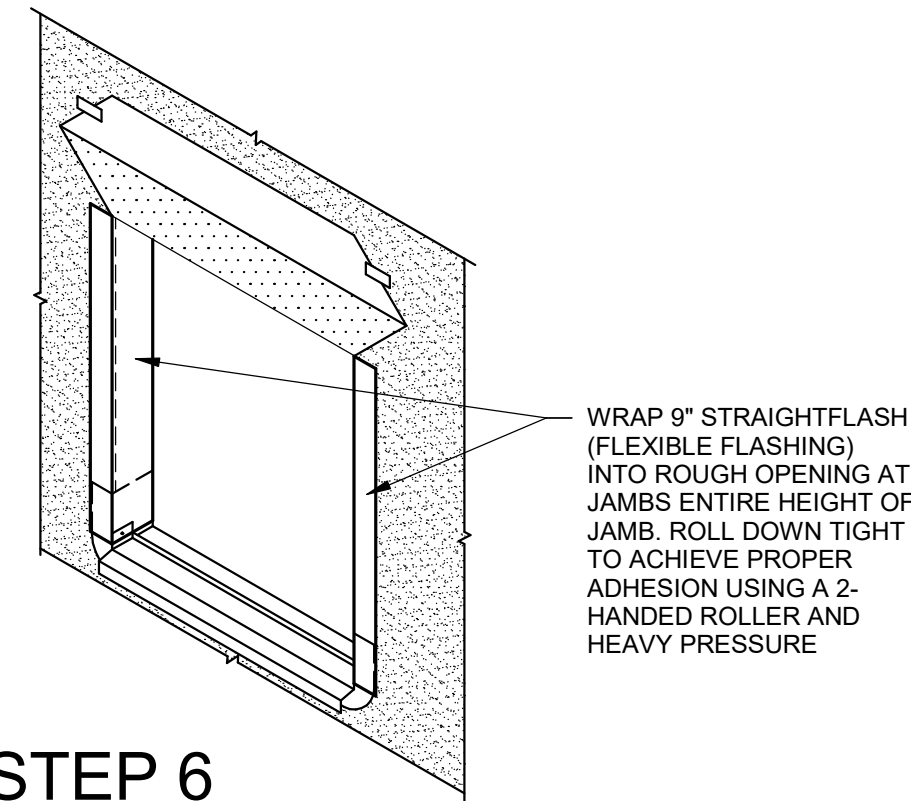
STEP 15 - INTERIOR VIEW



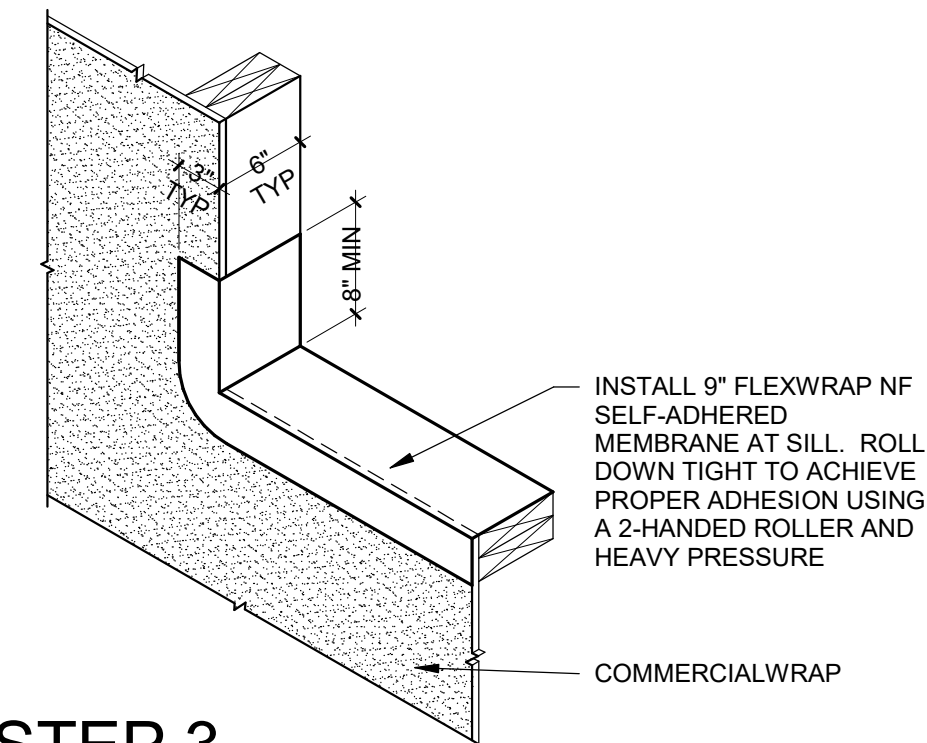
STEP 12



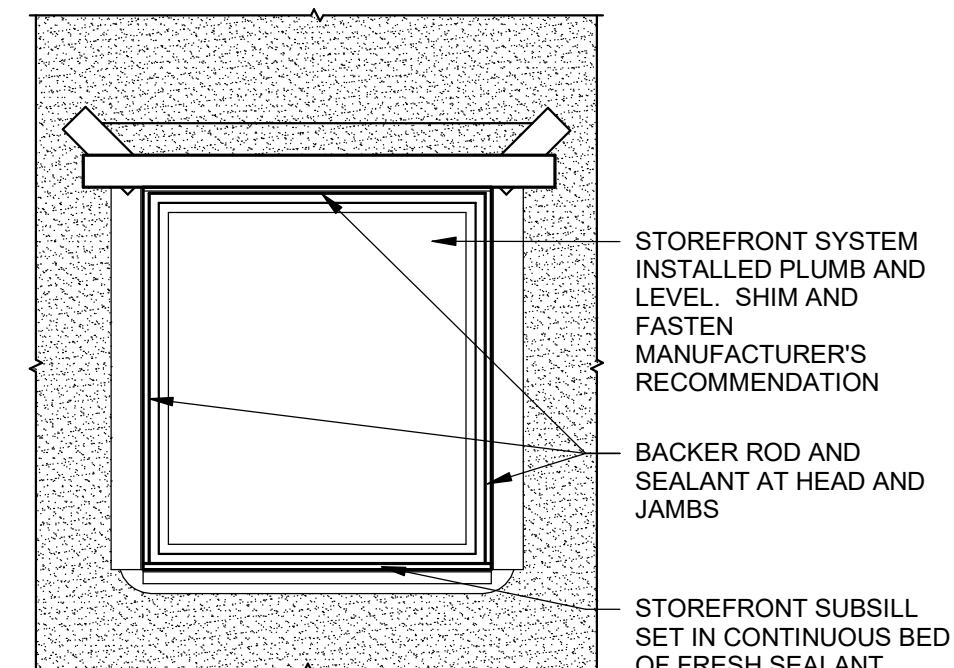
STEP 9



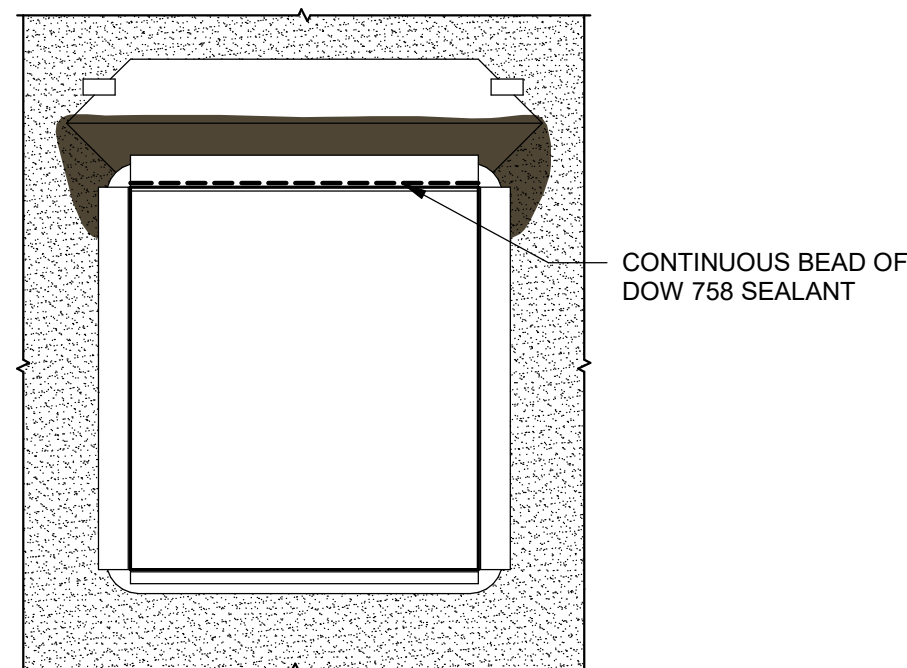
STEP 6



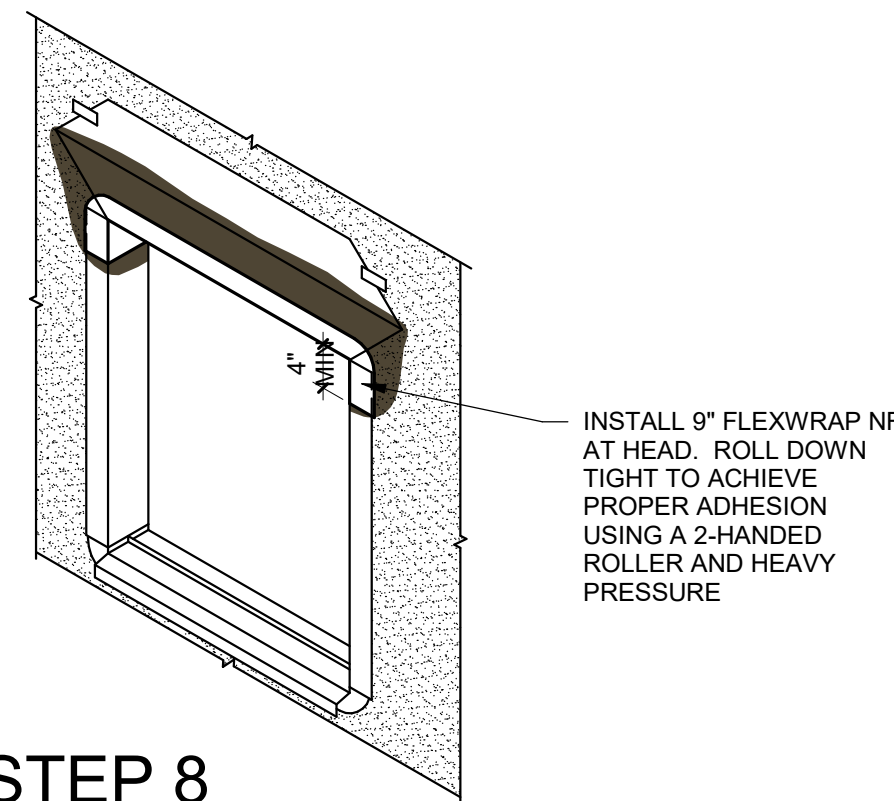
STEP 3



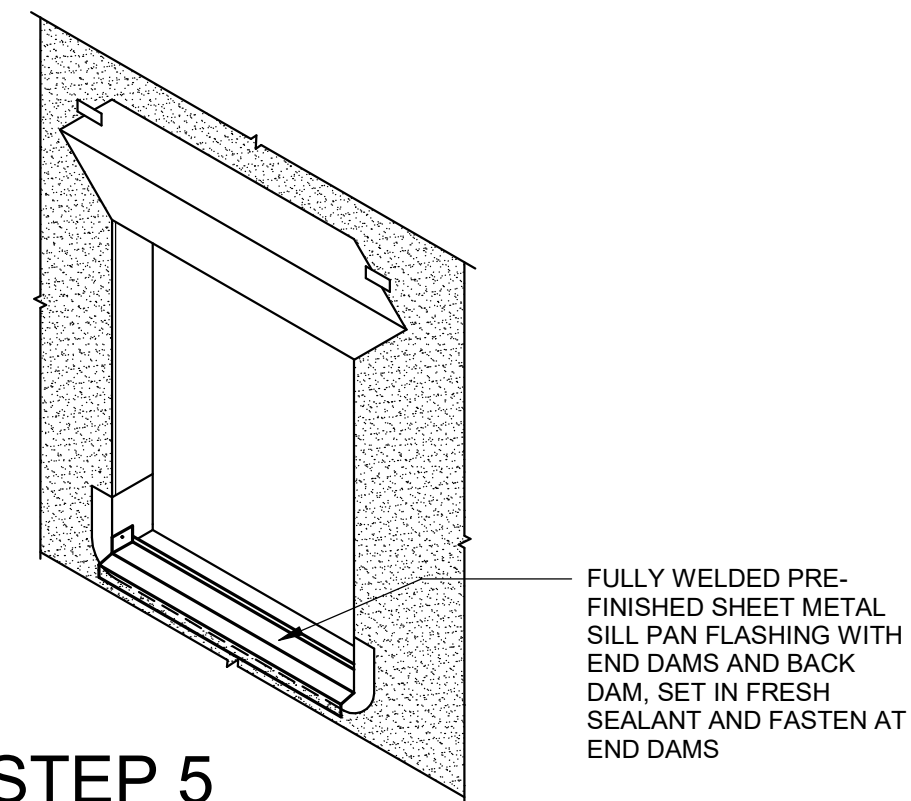
STEP 14



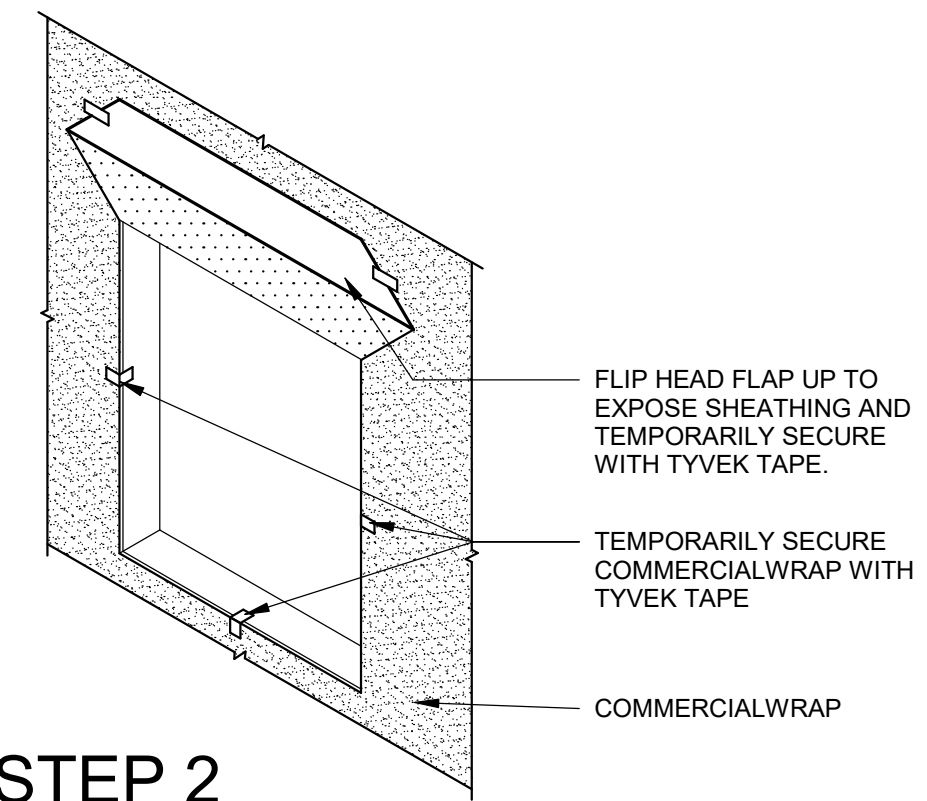
STEP 11



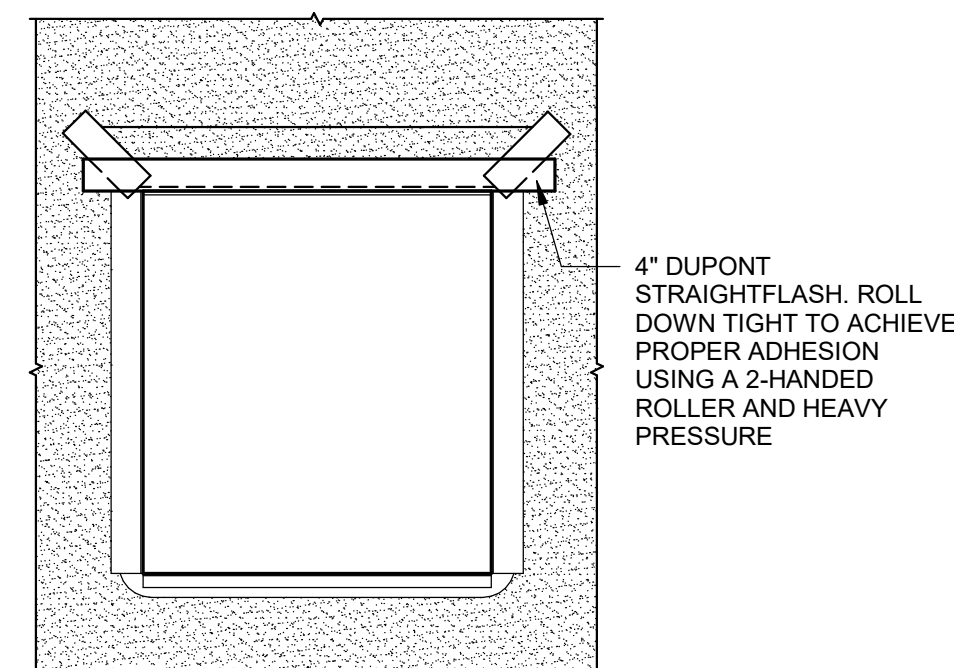
STEP 8



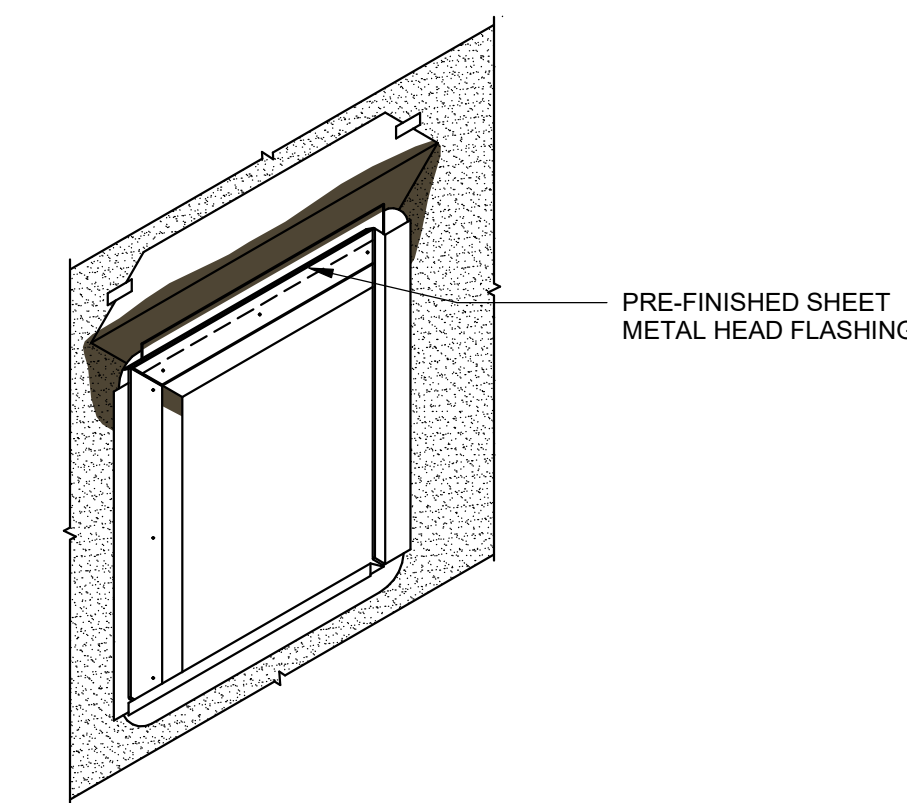
STEP 5



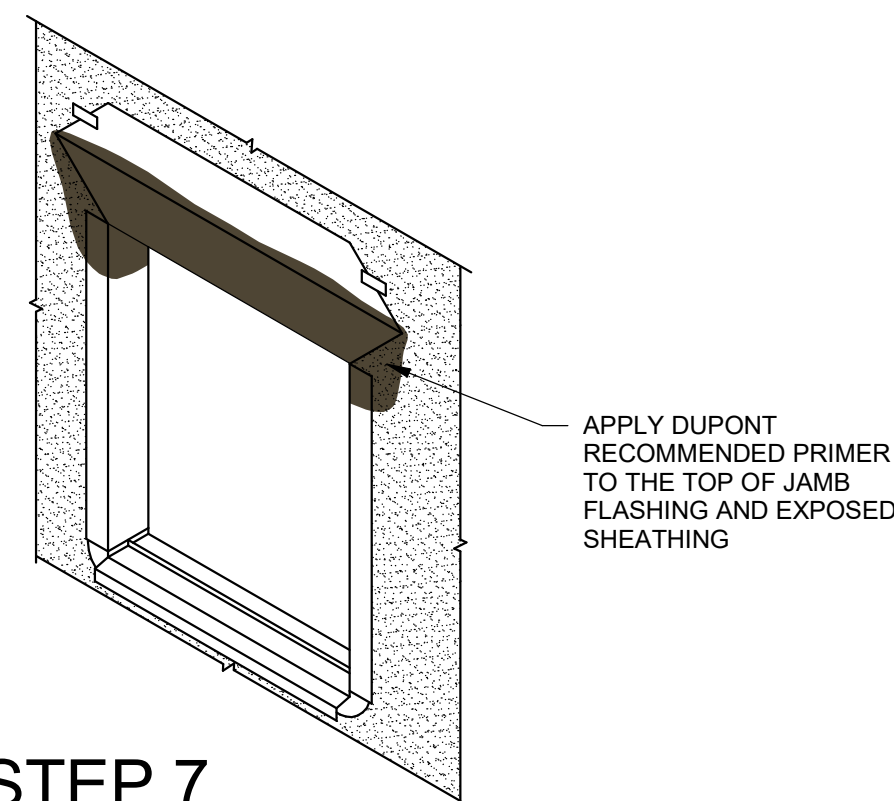
STEP 2



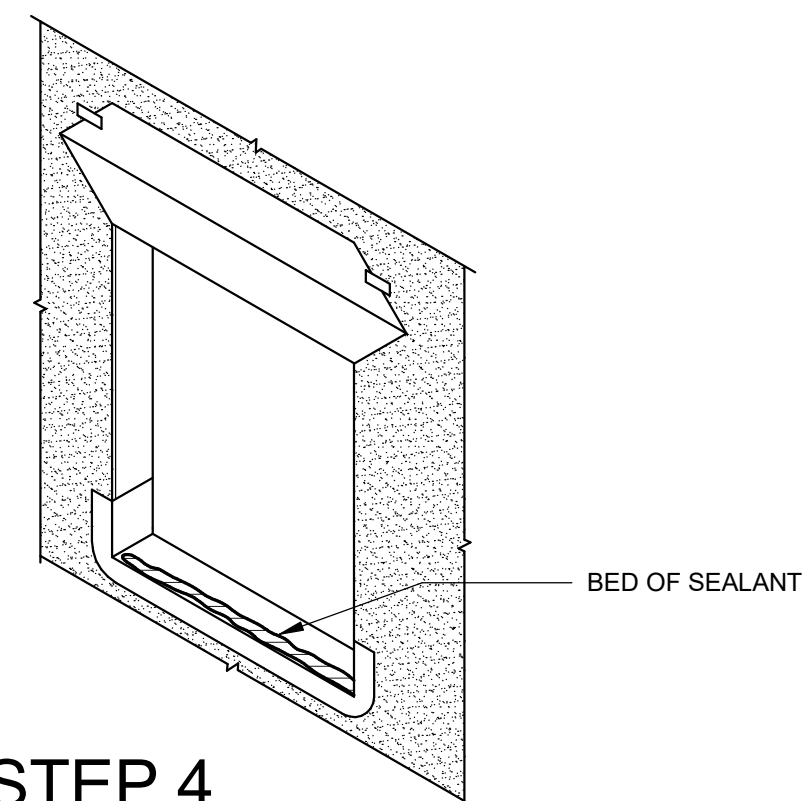
STEP 13



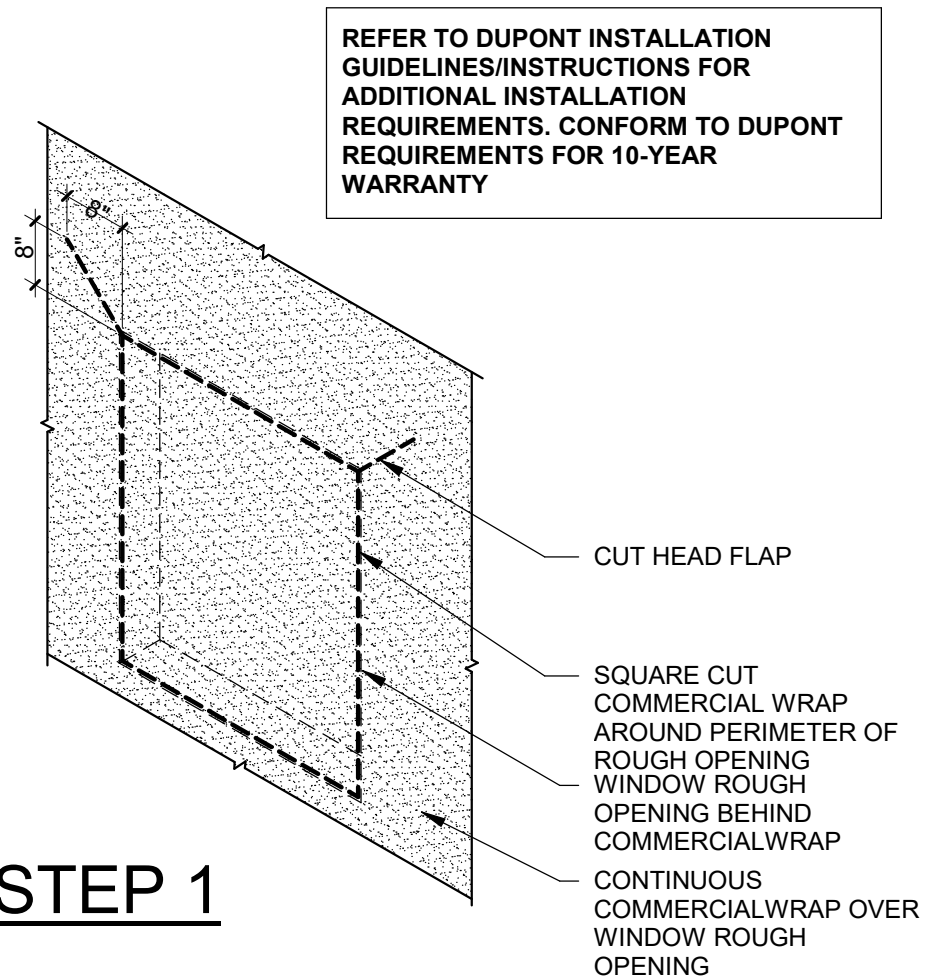
STEP 10



STEP 7



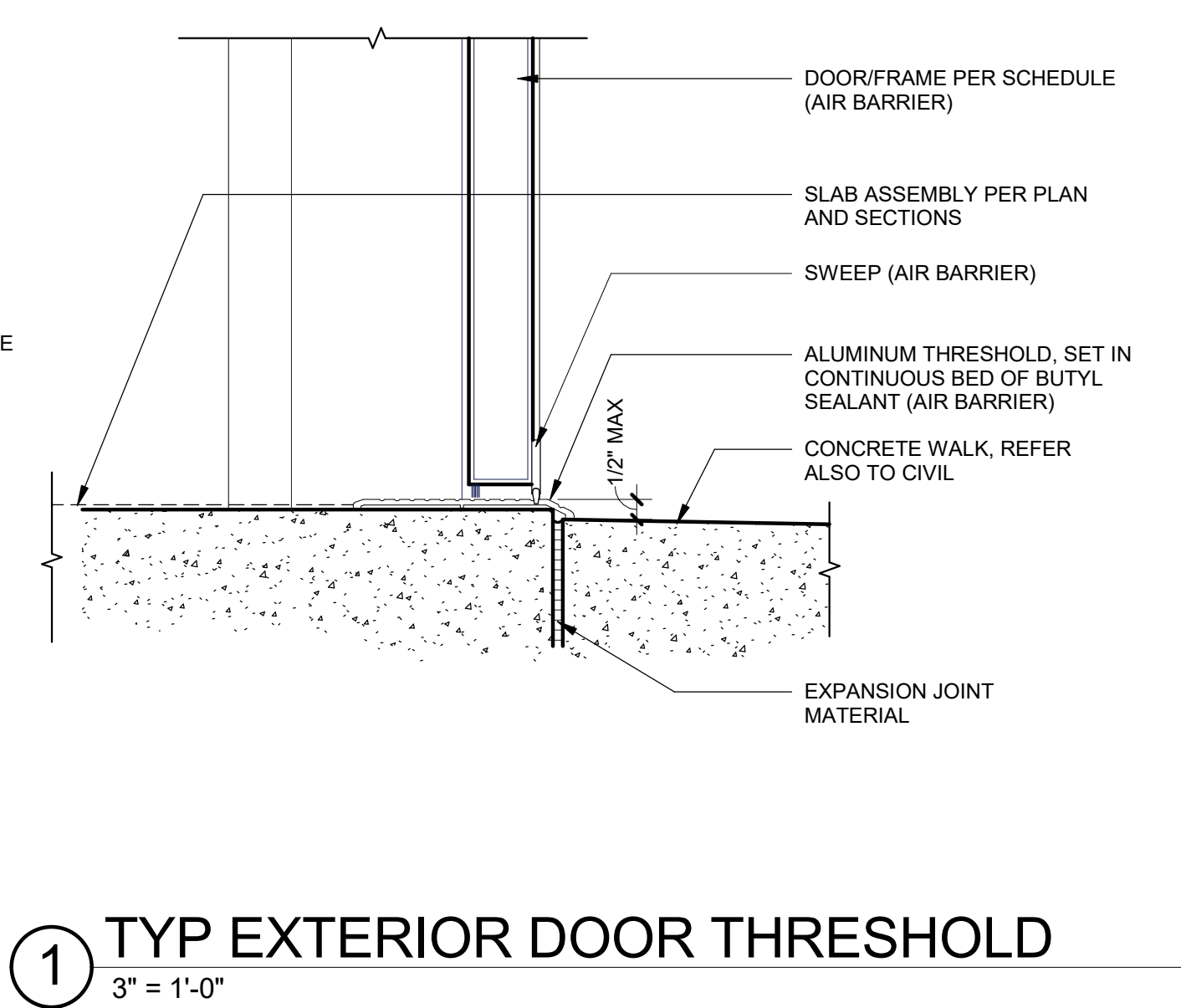
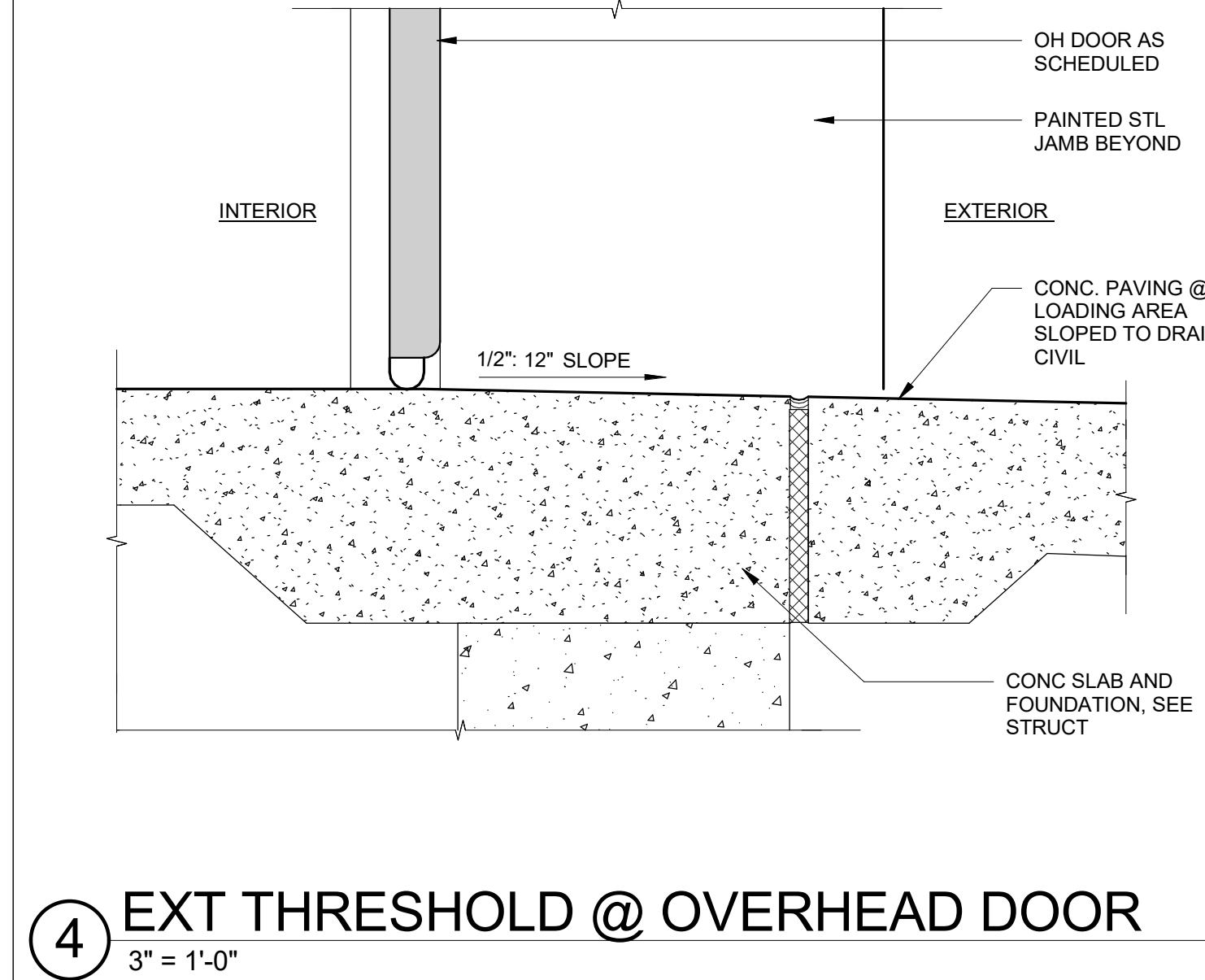
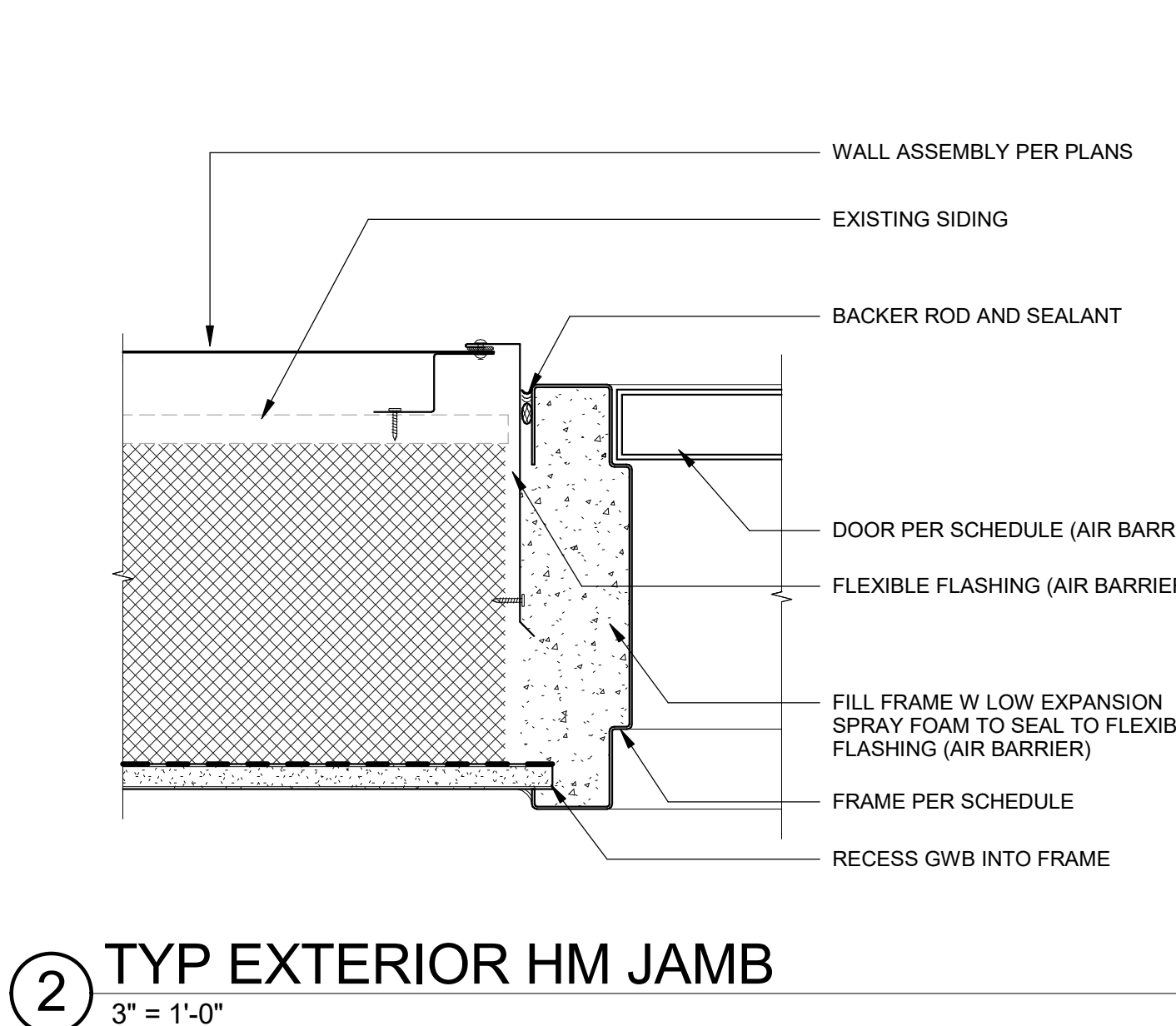
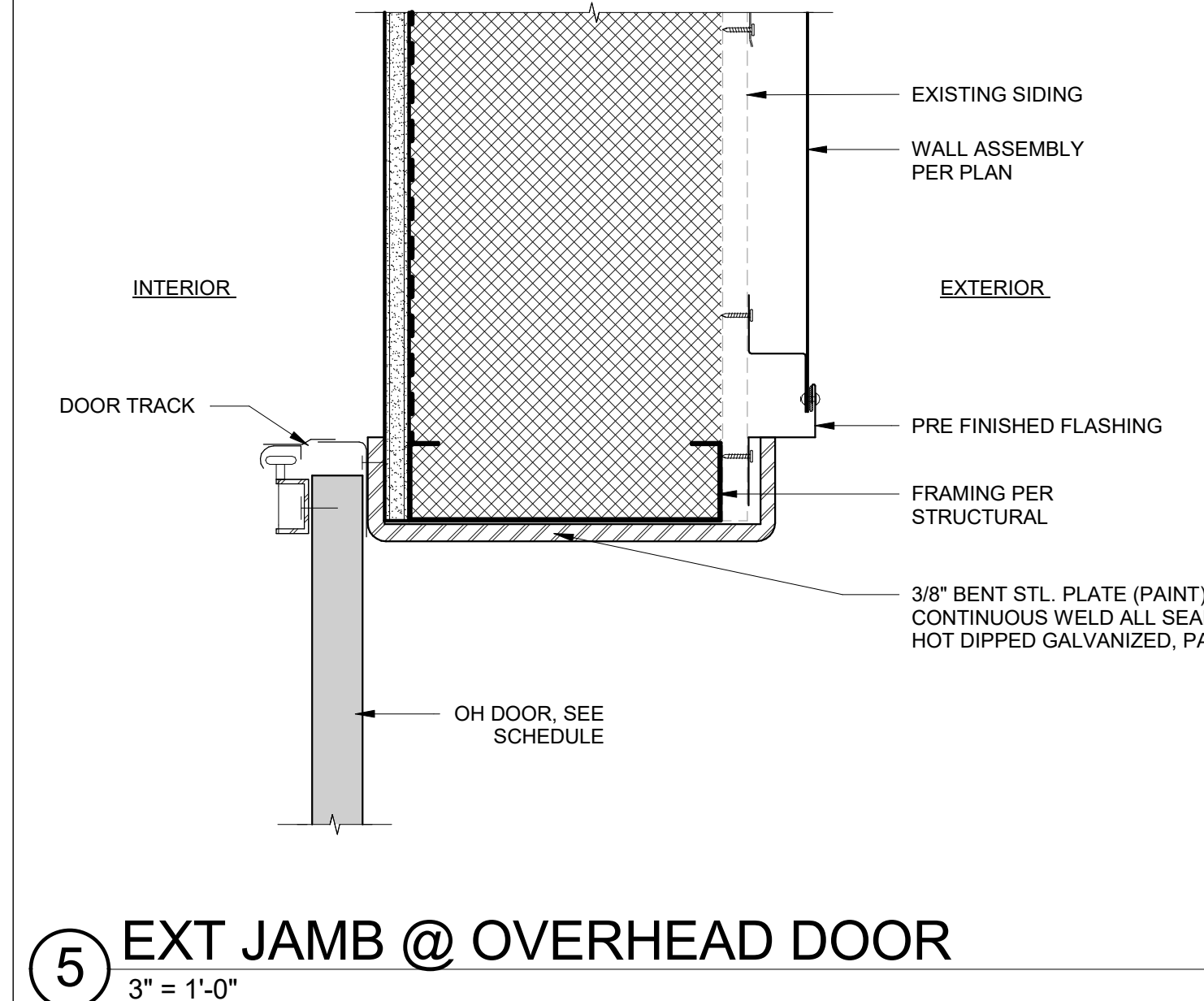
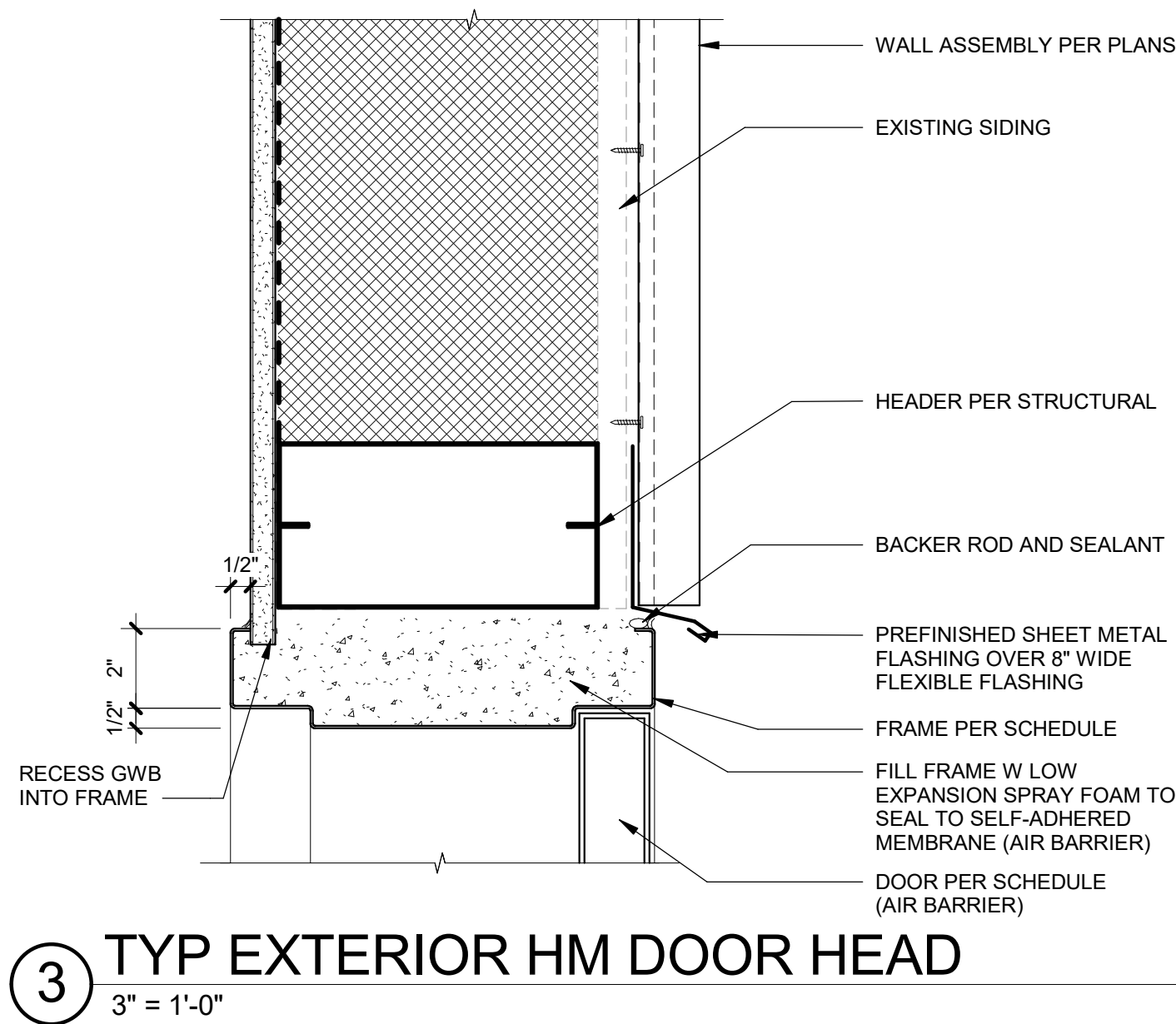
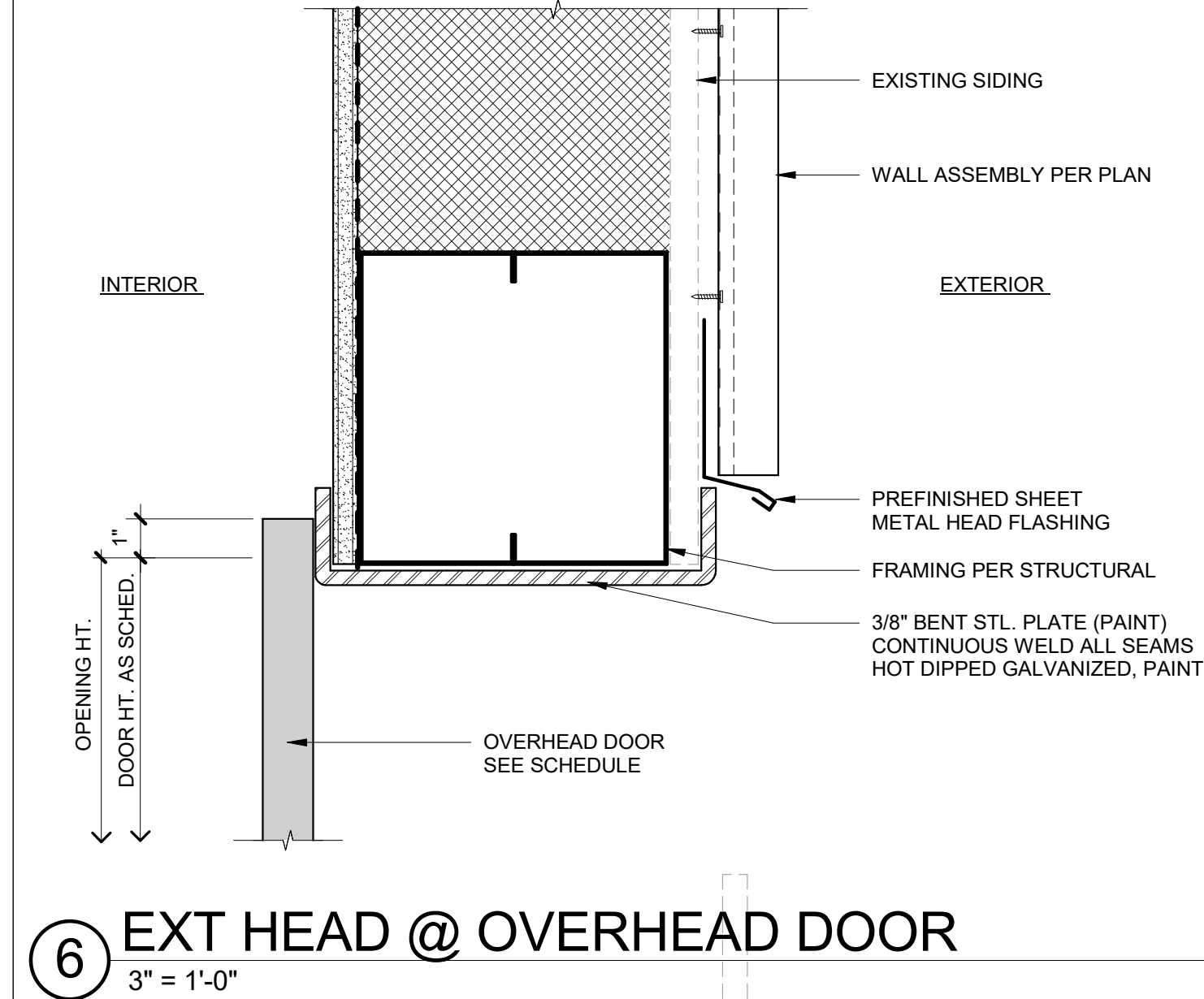
STEP 4



STEP 1

REVISIONS

24-3 4/9/2019 1:35:38 PM

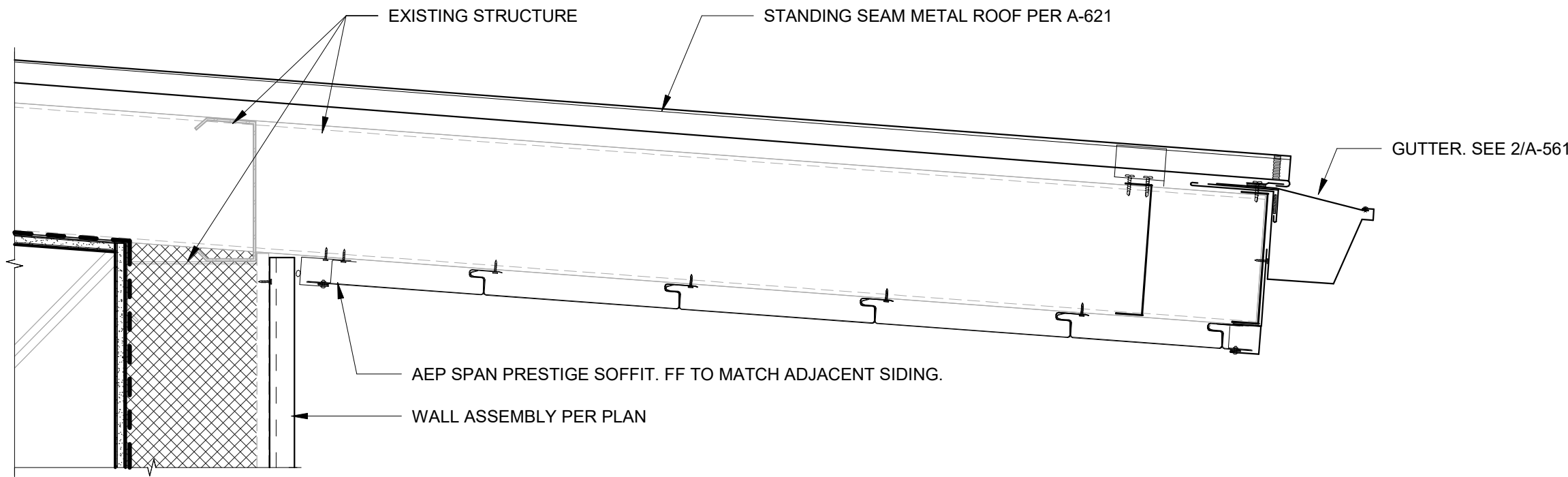


REVISIONS

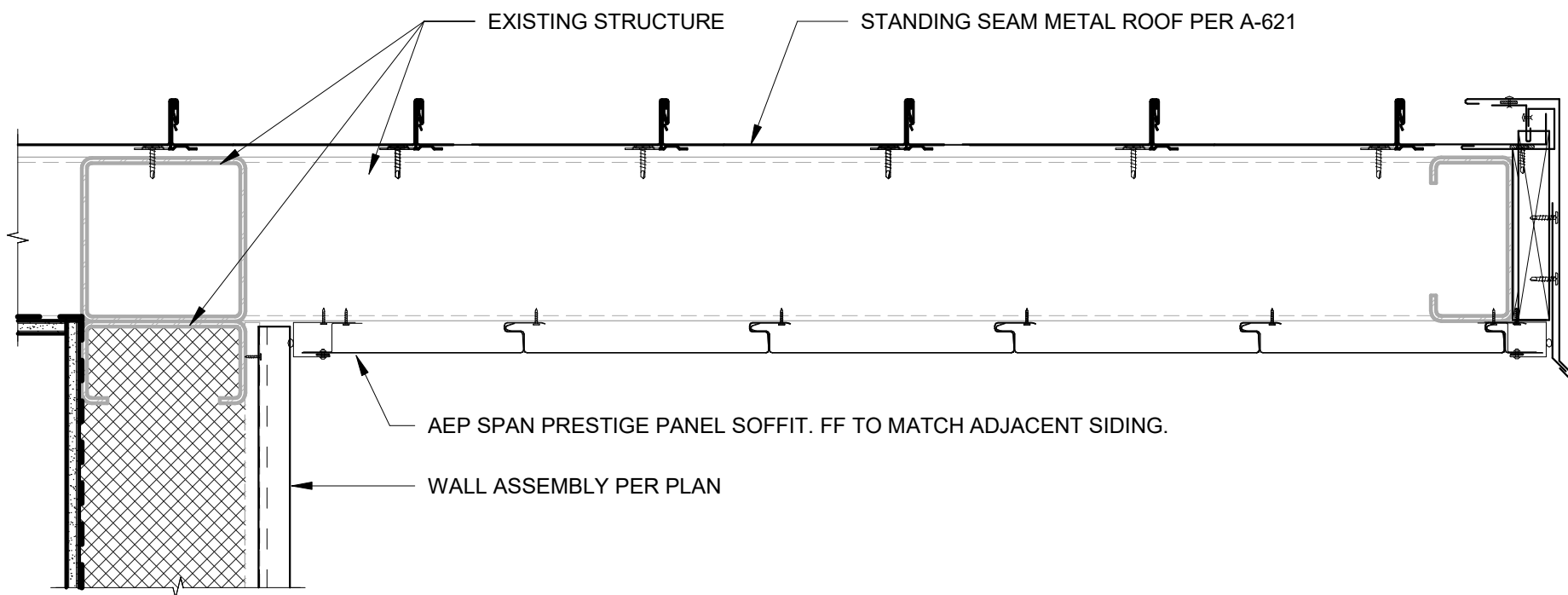
DATE	4.9.2019
BCRA NO.	17204
DRAWN BY:	Author
REVIEWED BY:	
SHEET TITLE	DOOR DETAILS



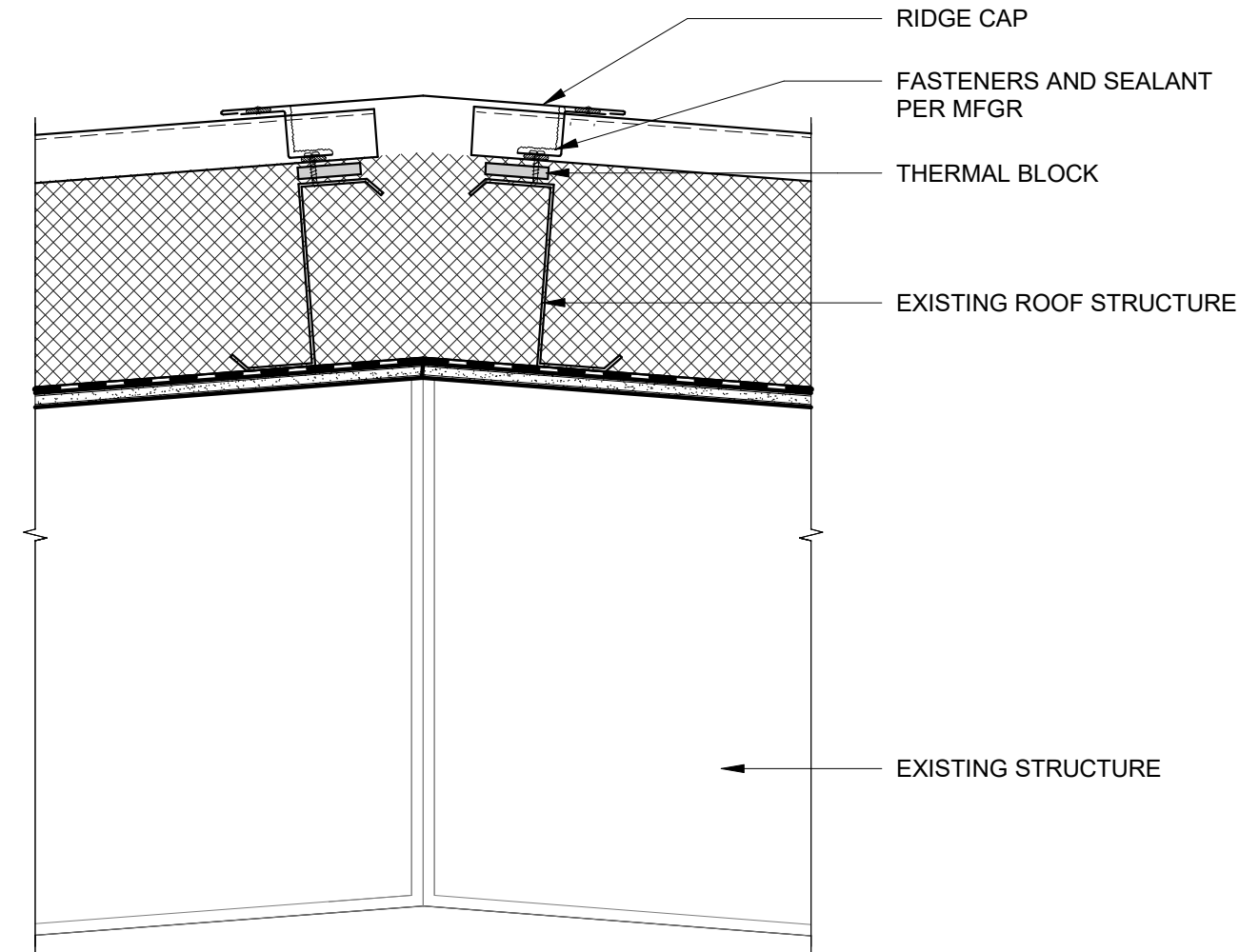
24-03 4/9/2019 1:56:45 PM



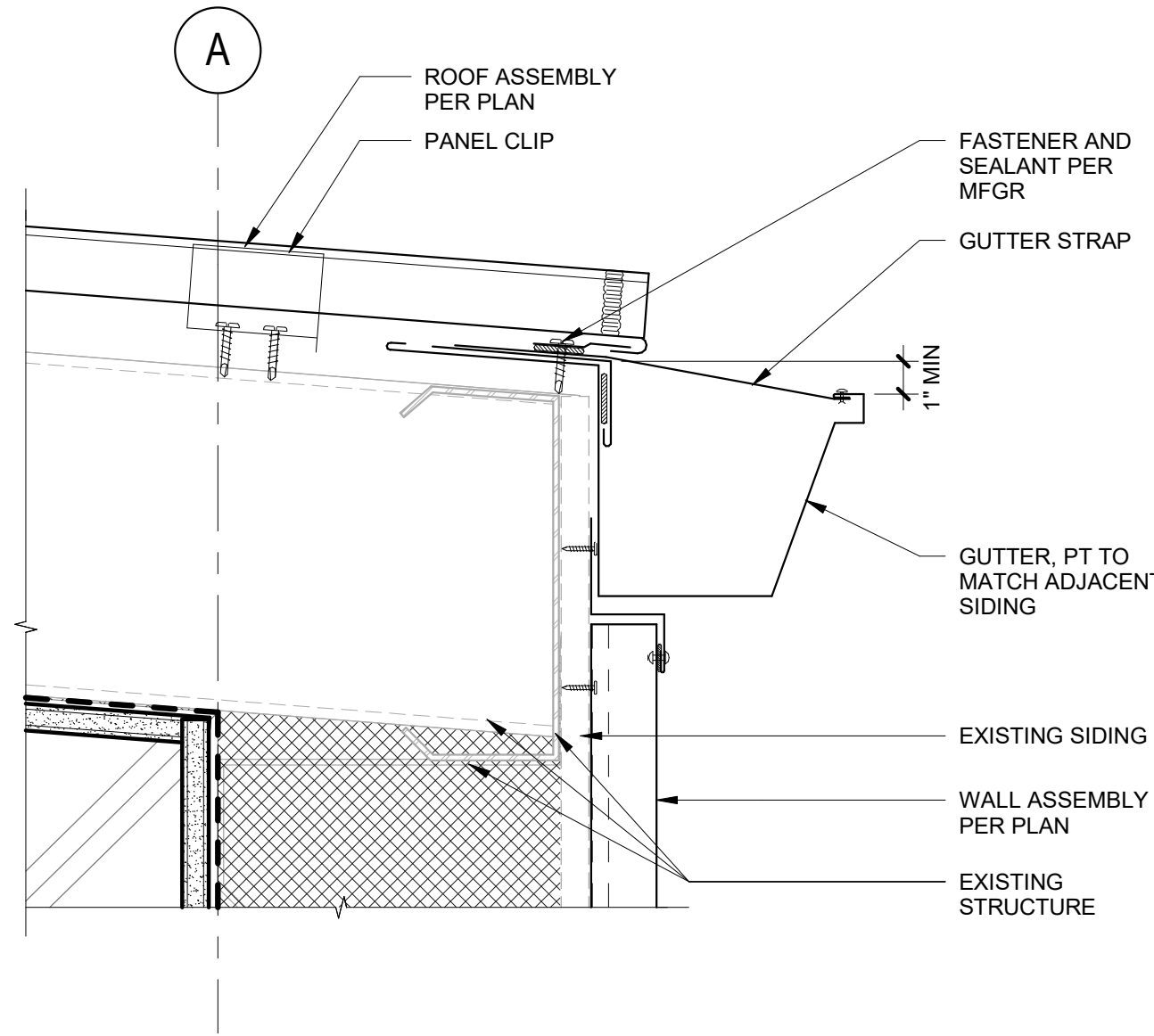
⑤ TYP OVERHANG @ SIDE WALL
1 1/2" = 1'-0"



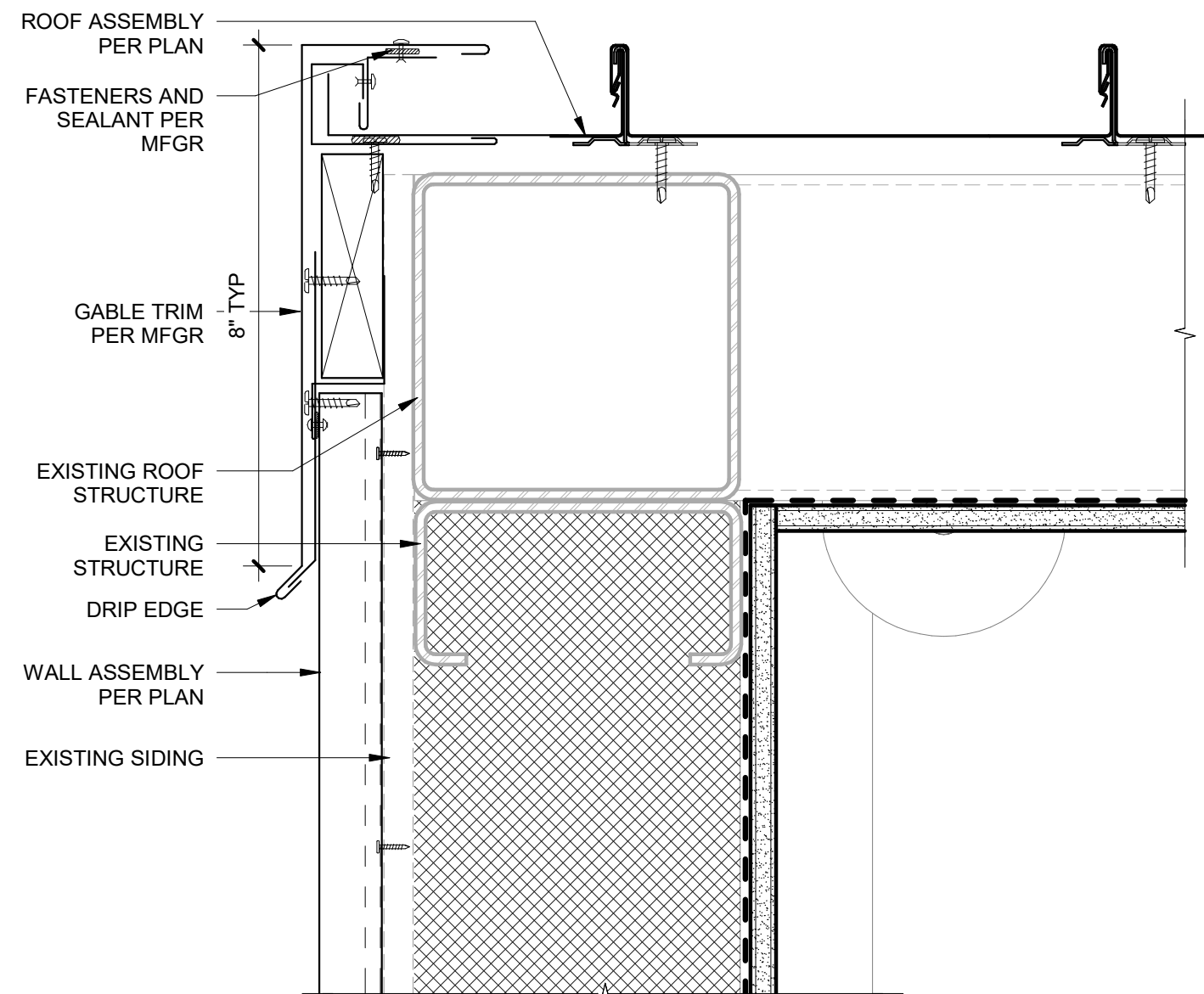
④ TYP OVERHANG @ GABLE END
1 1/2" = 1'-0"



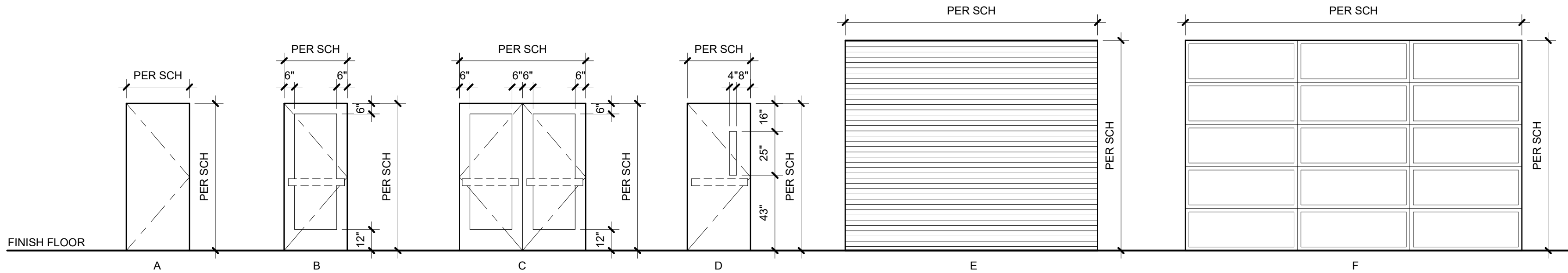
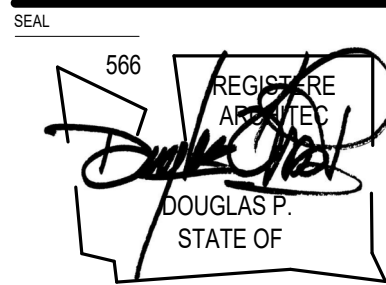
③ TYP ROOF DETAIL @ RIDGE
1 1/2" = 1'-0"



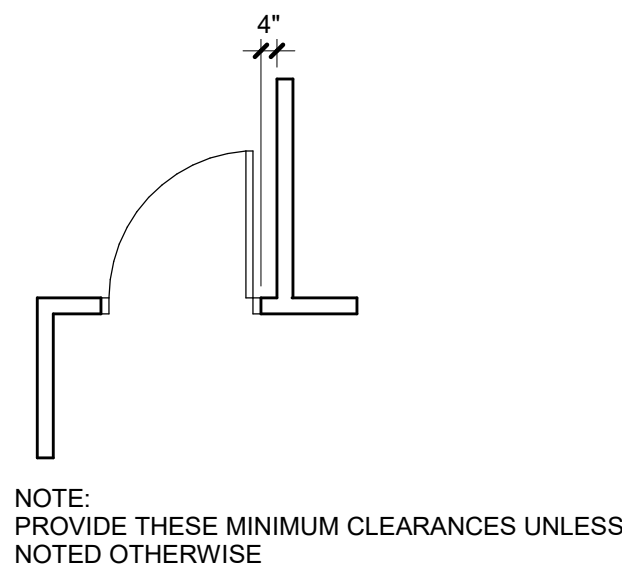
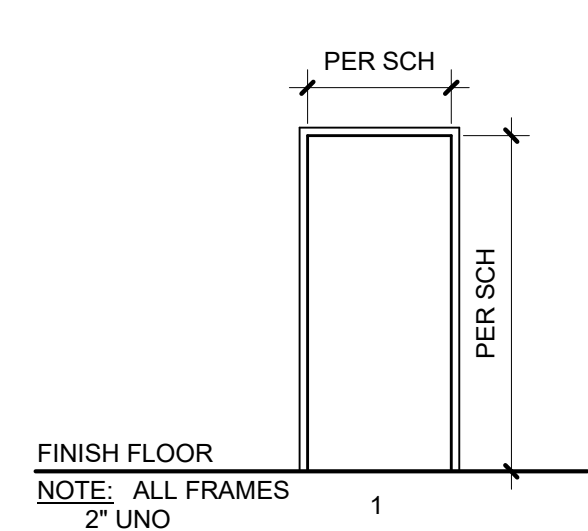
② TYP ROOF DETAIL @ GUTTER
3" = 1'-0"



① TYP ROOF DETAIL
3" = 1'-0"

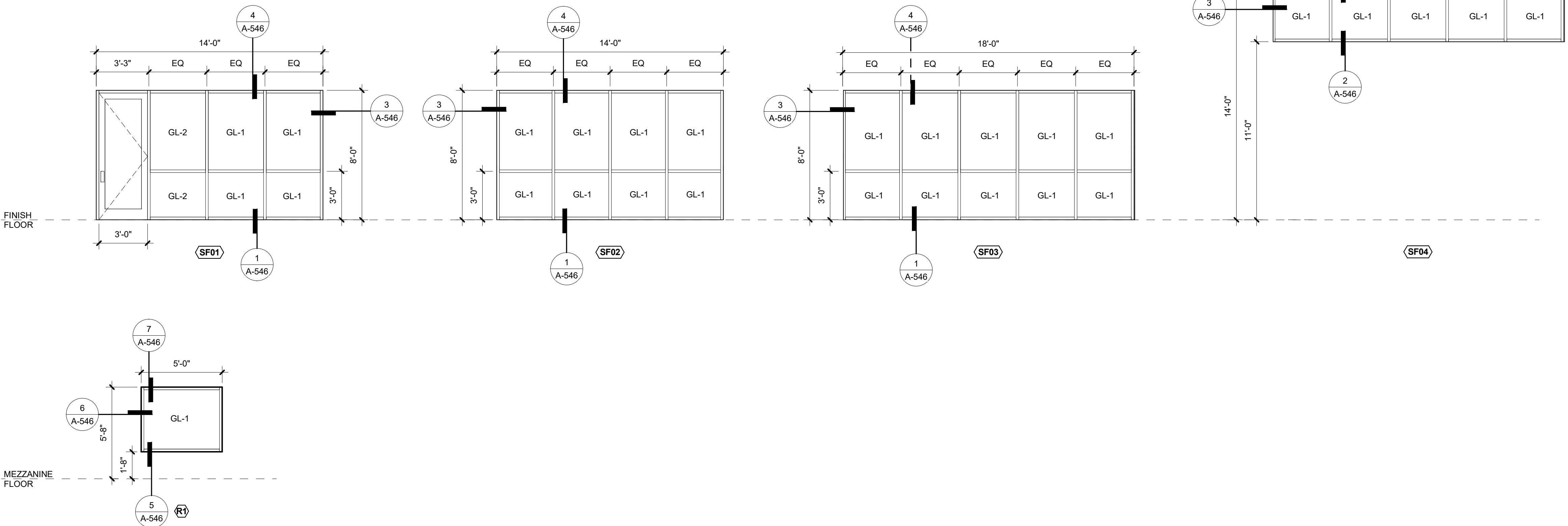


DOOR TYPES



FRAME TYPES

TYP DOOR CLEARANCES



DOOR SCHEDULE

DOOR NUMBER	DOOR							FRAME			FIRE RATING LABEL	HARDWARE GROUP	REMARKS	DOOR NUMBER
	WIDTH	HEIGHT	DEPTH	TYPE	MATERIAL	FINISH	GLAZING	TYPE	MATERIAL	FINISH				
101A	3' - 0"	7' - 10"	1 3/4"	B	AL	FF	GL-2		AL	FF			OVERHEAD SECTIONAL DOOR	101A
101B	16' - 0"	10' - 0"	1 3/4"	F	AL	FF	GL-2		AL	FF				101B
101C	3' - 0"	7' - 0"	1 3/4"	A	HM	FF		1	HM	PT				101C
101D	0"	0"	0"	E	AL	FF	GL-2		AL	FF			HI-LIFT OVERHEAD SECTIONAL DOOR	101D
101E	3' - 0"	7' - 0"	1 3/4"	A	HM	FF		1	HM	FF				101E
102	3' - 0"	6' - 10"	1 3/4"	A	WD	PT		1	WD	PT				102
103	3' - 0"	6' - 10"	1 3/4"	A	WD	PT		1	WD	PT				103
104	3' - 0"	7' - 0"	1 3/4"	A	HM	FF		1	HM	FF				104
105	3' - 0"	6' - 10"	1 3/4"	A	WD	PT		1	WD	PT				105
106	3' - 0"	6' - 10"	1 3/4"	A	WD	PT		1	WD	PT				106
107	0"	0"	0"											107
201	3' - 0"	6' - 10"	1 3/4"	A	WD	PT		1	WD	PT				201
202	3' - 0"	7' - 0"	1 3/4"	A	WD	PT		1	WD	PT				202
203	3' - 0"	6' - 10"	1 3/4"	A	WD	PT		1	WD	PT				203
204	3' - 0"	6' - 10"	1 3/4"	A	WD	PT		1	WD	PT				204

STOREFRONT GENERAL NOTES

1. STOREFRONT SYSTEMS TO BE THERMALLY BROKEN AL 2" X 4 1/2" FRAME WITH DARK BRONZE FINISH.
2. REFER TO A-XXX FOR STOREFRONT HEAD, JAMB, AND SILL DETAILS.
3. REFER TO PLANS AND ELEVATIONS FOR LOCATIONS AND QUANTITIES OF STOREFRONTS.
4. ALL EXTERIOR STOREFRONT ASSEMBLIES MUST MEET 2015 WASHINGTON STATE ENERGY CODE. MAXIMUM U-VALUE (.38) AND MAXIMUM SHGC (.40) OF GLAZING AND FRAME ASSEMBLIES.

DOOR SCHEDULE GENERAL NOTES

1. VERIFY ROUGH OPENING SIZE WITH DOOR MANUFACTURER.
2. MANUALLY OPERATED FLUSH BOLTS ARE NOT ALLOWED.
3. PROVIDE ACCESSIBLE HARDWARE ON ALL DOORS.
4. ALL EXTERIOR DOORS AND FRAMES MUST MEET WASHINGTON STATE ENERGY CODE MAXIMUM U-VALUE (.60 FOR GLAZED DOORS AND 0.37 FOR OPAQUE DOORS) AND MAXIMUM SHGC OF 0.40 FOR GLAZED DOORS.
5. ALL EXTERIOR DOORS AND FRAMES SHALL COMPLY WITH AIR BARRIER REQUIREMENTS.

STOREFRONT GLAZING TYPES

- GL-1 GLAZING TYPE 1: 1" INSULATING GLASS UNIT WITH 1/4" CLEAR LOW-E GLASS EXTERIOR PANE AND 1/4" CLEAR FLOAT GLASS INTERIOR PANE.
- GL-2 GLAZING TYPE 2: 1" INSULATING GLASS UNIT WITH 1/4" CLEAR TEMPERED SAFETY GLASS WITH LOW-E COATING.

DOOR SCHEDULE REMARKS

1. PROVIDE PANIC HARDWARE.

DOOR SCHEDULE ABBREVIATIONS

AL	ALUMINUM
AN	ANODIZED
FF	FACTORY FINISH
GL	GLAZING
HM	HOLLOW METAL
HW	HARDWARE
MFR	MANUFACTURER
OPP	OPPOSITE
PR	PAIR
PT	PAINT
SF	STOREFRONT
SHGC	SOLAR HEAT GAIN COEFFICIENT
STL	STEEL
STN	STAIN
WD	WOOD

PROJECT:
TENANT IMPROVEMENT
SUMNER SPEED SHOP
16008 60TH ST E
SUMNER, WA 98390

REVISIONS

DATE
4.9.2019

BCRA NO.
17204

DRAWN BY:

REVIEWED BY:

SHEET TITLE
**DOOR AND
STOREFRONT
SCHEDULE**

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ASSEMBLY TYPE AND DESCRIPTION	ASSEMBLY COMPONENTS - PLAN VIEW	RATED ASSEMBLY REQUIREMENTS REFER TO G-201 FOR LOCATIONS OF WALLS REQUIRING FIRE-RATED CONSTRUCTION
<div>F3</div> <div>OUTDOOR DECK</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>5/4 DECKING JOISTS PER STRUCTURAL</div> <div>EXTERIOR</div> <div>EXTERIOR</div>	
<div>F2</div> <div>MEZZANINE FLOOR</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>FLOOR FINISH MATERIAL SHEATHING PER STRUCTURAL FRAMING PER STRUCTURAL (1) LAYER TYPE 'X' GWB</div> <div>INTERIOR</div> <div>INTERIOR</div>	
<div>F1</div> <div>EXISTING FLOOR SLAB</div> <div>SCALE: 1 1/2" = 1'-0"</div>		
<div>R2</div> <div>STANDING SEAM METAL ROOF CANOPY</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>STANDING SEAM METAL ROOF CANOPY FRAMING PER STRUCTURAL METAL SOFFIT BEAM PER STRUCTURAL (BEYOND)</div> <div>EXTERIOR</div> <div>EXTERIOR</div>	
<div>R1</div> <div>STANDING SEAM METAL ROOF BUILDING</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>STANDING SEAM METAL ROOF EXISTING ROOF FRAMING SIMPLE SAVER SYSTEM R25+R11 STANDING SEAM W THERMAL BLOCK, U-0.031 FSK BARRIER (1) LAYER GWB</div> <div>EXTERIOR</div> <div>INTERIOR</div>	
ASSEMBLY TYPE AND DESCRIPTION	ASSEMBLY COMPONENTS - PLAN VIEW	RATED ASSEMBLY REQUIREMENTS REFER TO G-201 FOR LOCATIONS OF WALLS REQUIRING FIRE-RATED CONSTRUCTION
<div>W7</div> <div>EXTERIOR WALL WITH CMU SIDING</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>CMU VENEER 1" AIR CAVITY EXISTING SIDING EXISTING FRAMING AND FRAMING PER STRUCTURAL SIMPLE SAVER SYSTEM R-32.5 (PRE-INSTALLED), 5" SPACING, U-0.052, R-19.2 FSK BARRIER INTERIOR FINISH</div> <div>EXTERIOR</div> <div>INTERIOR</div>	
<div>W6</div> <div>INTERIOR 2X10 PLUMBING WALL</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>(1) LAYER 5/8" TYPE 'X' GWB 2X10 FRAMING WITH SOUND BATT INSULATION (1) LAYER 5/8" TYPE 'X' GWB</div> <div>INTERIOR</div> <div>INTERIOR</div>	
<div>W5</div> <div>INTERIOR 2X8 WALL</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>(1) LAYER 5/8" TYPE 'X' GWB 2X8 FRAMING WITH SOUND BATT INSULATION (1) LAYER 5/8" TYPE 'X' GWB</div> <div>INTERIOR</div> <div>INTERIOR</div>	
<div>W4</div> <div>INTERIOR 2X6 WALL</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>(1) LAYER 5/8" TYPE 'X' GWB 2X6 FRAMING WITH SOUND BATT INSULATION (1) LAYER 5/8" TYPE 'X' GWB</div> <div>INTERIOR</div> <div>INTERIOR</div>	
ASSEMBLY TYPE AND DESCRIPTION	ASSEMBLY COMPONENTS - PLAN VIEW	RATED ASSEMBLY REQUIREMENTS REFER TO G-201 FOR LOCATIONS OF WALLS REQUIRING FIRE-RATED CONSTRUCTION
<div>W3</div> <div>INTERIOR 2X4 WALL FURRED</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>(1) LAYER 5/8" TYPE 'X' GWB 3/4" PLYWOOD SHEATHING 2X4 FRAMING SHEATHING</div> <div>INTERIOR</div> <div>EXTERIOR</div>	
<div>W2</div> <div>EXTERIOR WALL WITH METAL SIDING</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>METAL SIDING EXISTING SIDING EXISTING FRAMING AND FRAMING PER STRUCTURAL SIMPLE SAVER SYSTEM R-32.5 (PRE-INSTALLED), 5" SPACING, U-0.052, R-19.2 FSK BARRIER INTERIOR FINISH</div> <div>EXTERIOR</div> <div>INTERIOR</div>	
<div>W1</div> <div>EXTERIOR WALL WITH METAL SIDING</div> <div>SCALE: 1 1/2" = 1'-0"</div>	<div>METAL SIDING EXISTING SIDING EXISTING FRAMING AND FRAMING PER STRUCTURAL SIMPLE SAVER SYSTEM R-32.5 (PRE-INSTALLED), 5" SPACING, U-0.052, R-19.2 FSK BARRIER INTERIOR FINISH</div> <div>EXTERIOR</div> <div>INTERIOR</div>	

INTERIOR WALL ASSEMBLY GENERAL NOTES

EXTERIOR WALL ASSEMBLY GENERAL NOTES

ACOUSTIC WALL ASSEMBLY GENERAL NOTES

CITY OF

SUMNER

WASHINGTON

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REGISTERED ARCHITECT

DOUGLAS P. STATE OF

PROJECT: TENANT IMPROVEMENT

SUMNER SPEED SHOP

16008 60TH ST E

SUMNER, WA 98390

DATE

4.9.2019

BCRA NO.

17204

DRAWN BY:

REVIEWED BY:

SHEET TITLE

ASSEMBLY TYPES

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General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, THE INTERNATIONAL BUILDING CODE (2015 EDITION). THIS STRUCTURE DOES NOT CONFORM TO PRESENT EARTHQUAKE CODE REQUIREMENTS. IT HAS BEEN ANALYZED AND REINFORCED FOR MINIMUM MAINTENANCE IN ACCORDANCE WITH INTERNATIONAL EXISTING BUILDING CODE, AND IS WITHIN THE CURRENT PRACTICE FOR THE RENOVATION OF EXISTING BUILDINGS OF THIS AGE AND TYPE OF CONSTRUCTION.
2. DESIGN LOADING CRITERIA: OFFICES:
FLOOR LIVE LOAD 50 PSF
ENVIRONMENTAL LOADS
SNOW Ce=1.0, Is=1.0, Ct=1.1, Pg=25 PSF, Pf=20 PSF
WIND Gcpi=0.18, 110 MPH, RISK CATEGORY II, EXPOSURE "B"
EARTHQUAKE . . . ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.
4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".
7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.
9. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

MANUFACTURED LUMBER (PSL'S, LSL'S, LVL'S)
PLYWOOD WEB JOISTS
REINFORCING STEEL (FOR BOTH CONCRETE AND MASONRY CONSTRUCTION)
STRUCTURAL STEEL

APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.

10. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING; THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

GEOTECHNICAL

11. FOUNDATION NOTES: ALLOWABLE SOIL PRESSURE AND LATERAL EARTH PRESSURE ARE ASSUMED AND THEREFORE MUST BE VERIFIED BY A QUALIFIED SOILS ENGINEER OR APPROVED BY THE BUILDING OFFICIAL. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH AT LEAST 18" BELOW ADJACENT FINISHED GRADE. UNLESS OTHERWISE NOTED, FOOTINGS SHALL BE CENTERED BELOW COLUMNS OR WALLS ABOVE.

ALLOWABLE SOIL PRESSURE. 2000 PSF

RENOVATION

12. DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 40 PSF.

13. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IF EXISTING CONDITIONS DETERMINED DURING WORK VARY FROM THE EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS.

14. CONTRACTOR SHALL CHECK FOR DRY ROT AT ALL AREAS OF NEW WORK. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.

CONCRETE

15. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF $f'_c = 3,000$ PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. REQUIRED CONCRETE STRENGTH IS BASED ON THE DURABILITY REQUIREMENTS OF SECTION 1904 OF THE IBC. DESIGN STRENGTH IS $f'_c = 2,500$ PSI.

16. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-14, TABLE 19.3.2.1 MODERATE EXPOSURE, F1.

17. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, FY = 60,000 PSI.

18. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER) . . . 1-1/2"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS 1-1/2"
SLABS AND WALLS (INT. FACE) . . . GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

19. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

ANCHORAGE

20. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.

21. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2508. MINIMUM BASE MATERIAL TEMPERATURE IS 50 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDD BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.

STEEL

22. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:

- A. AISC 360 AND SECTION 2205.2 OF THE INTERNATIONAL BUILDING CODE.
B. APRIL 14, 2010 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AMENDED AS FOLLOWS: AS NOTED IN THE CONTRACT DOCUMENTS, BY THE DELETION OF PARAGRAPH 4.4.1, AND REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3.1.

24. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, FY = 50 KSI. OTHER ROLLED SHAPES INCLUDING PLATES, SHALL CONFORM TO ASTM A36, FY = 36 KSI. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B, FY = 42 KSI (ROUND), FY = 46 KSI (SQUARE AND RECTANGULAR). CONNECTION BOLTS SHALL CONFORM TO ASTM A307.

25. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

26. ALL STEEL EXPOSED TO THE WEATHER OR IN CONTACT WITH GROUND SHALL BE CORROSION PROTECTED BY GALVANIZATION OR PROVIDED WITH EXTERIOR PAINT SYSTEM, UNLESS OTHERWISE NOTED.

27. SHOP PRIME ALL STEEL EXCEPT:

- A. STEEL ENCASED IN CONCRETE.
B. SURFACES TO BE WELDED.
C. MEMBERS TO BE GALVANIZED.
D. MEMBERS WHICH WILL BE CONCEALED BY INTERIOR FINISHES.
E. SURFACES TO RECEIVE OTHER SPECIAL SHOP PRIMERS.

28. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED.

29. METAL ROOF DECKING SHALL BE IN ACCORDANCE TO THE FOLLOWING: PROVIDE SIZE, TYPE, GAUGE, AND ATTACHMENT TO THE SUPPORTING STRUCTURE AS SHOWN ON THE PLANS. ARC SEAM AND SPOT (PUDDLE) WELDS FOR FIELD ASSEMBLY OF METAL DECK SHALL BE MADE WITH MINIMUM E60XX ELECTRODES. DECK ALTERNATES MUST BE CONNECTED ACCORDING TO PUBLISHED ICC-ES CRITERIA FOR DIAPHRAGM SHEARS SHOWN. PROVIDE TEMPORARY SHORING WHERE REQUIRED PER MANUFACTURER'S PUBLISHED CRITERIA.

- A. STEEL ROOF DECK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ANSI/SDI-RD1.0.

30. COLD-FORMED STEEL FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

- A. COLD FORMED STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON AISI S100-12, "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS," AND ON THE 2012 NORTH AMERICAN STANDARDS FOR COLD FORMED STEEL FRAMING, INCLUSIVE.

- B. THE CONTRACTOR SHALL PROVIDE A QUALITY CONTROL PROGRAM OVER ALL FABRICATION AND ERECTION ACTIVITY THROUGH THE USE OF AN INDEPENDENT TESTING AGENCY AND/OR A QUALIFIED REPRESENTATIVE OF THE STEEL MANUFACTURER. THE CONTRACTOR SHALL OBTAIN MILL CERTIFICATION FROM THE GAUGE STEEL MANUFACTURER OR SHALL SUBMIT TENSILE TESTS AND GALVANIZATION TESTS TO THE ENGINEER OF RECORD TO VERIFY THE ADEQUACY OF THE GAUGE MATERIALS.

- C. COLD-FORMED STEEL FRAMING MEMBERS INDICATED ON PLAN SHALL BE IN ACCORDANCE WITH THE "2015 IBC-SSMA PRODUCT TECHNICAL GUIDE" PUBLISHED BY THE STEEL STUD MANUFACTURERS ASSOCIATION, AND SHALL COMPLY WITH ICC-ES REPORT ESR-3064P.

DESIGNATION: 600 S 200 - 54
DEPTH MEMBER FLANGE MATERIAL
STYLE WIDTH THICKNESS(MILS)

- D. MATERIAL:

METAL FRAMING SHALL BE GALVANIZED UNLESS OTHERWISE NOTED, CONFORMING AS FOLLOWS:

ASTM A653, GRADE 50 FY = 50 KSI 12, 14, AND 16 GAUGE
ASTM A653, GRADE 33 FY = 33 KSI 18 AND 20 GAUGE

WHERE NOTED, PAINTED STUDS SHALL CONFORM TO: ASTM A570, GRADE E, FY=KSI. ALL 8 AND 10 GAGE MATERIAL SHALL CONFORM TO: ASTM A36, FY=36 KSI

- E. THE DESIGN OF INTERIOR COLD FORMED STEEL NON-BEARING WALLS, SOFFITS, CEILINGS AND OTHER MISCELLANEOUS FRAMING AND CONNECTIONS TO STRUCTURE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL DRAWINGS. DESIGN AND DETAILING SHALL BE UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON AND STAMPED DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

- F. ACCESSORIES SHALL BE OF THE TYPE, SIZE, AND SPACING SHOWN ON THE DRAWINGS OF A MINIMUM 16 GAUGE MATERIAL UNLESS OTHERWISE SPECIFIED. FASTENING OF COMPONENTS SHALL BE BY WELDING OR SCREWING OR BY OTHER MEANS OF FASTENING AS INDICATED ON THE DRAWINGS. PROVIDE MISCELLANEOUS CLIP ANGLES, LEDGERS, AND ACCESSORIES OF A MINIMUM 16 GAUGE OR THE THICKNESS OF THE MATERIAL BEING FASTENED, WHICHEVER IS GREATER, FOR CONNECTIONS AND BEARING CONDITIONS NOT OTHERWISE NOTED IN THE DRAWINGS. WELDS SHALL BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION: WIRE TYING OF COMPONENTS SHALL NOT BE PERMITTED. ALL WELDS SHALL BE TOUCHED UP WITH A ZINC-RICH PAINT.

- G. SCREWS: ALL SCREWS (REFERRED TO AS TEK) SHALL BE SELF-TAPPING SELF-DRILLING FASTENERS THAT ARE ZINC COATED AS MANUFACTURED BY HILTI KWIK-FLEX (ICC-ES ESR-2196), OR APPROVED EQUAL. THE MINIMUM SCREW SIZE/TYPE/POINT SHALL BE #8-18 (#2 POINT) OR #10-16 (#2 POINT) FOR USE IN 20 GAUGE THROUGH 16 GAUGE, AND #10-16 (#3 POINT) OR #12-14 (#2 OR #3 POINT) FOR HEAVIER THAN 16 GAUGE UNLESS NOTED OTHERWISE. SCREWS FOR SHEATHING CONNECTIONS SHALL BE OF THE PROPER SIZE AND TYPE FOR A POSITIVE SHEATHING-TO-METAL CONNECTION. ALL SCREW CONNECTIONS SHALL BE MADE FROM THE LIGHTER MATERIAL INTO THE HEAVIER MATERIAL UNLESS NOTED OTHERWISE. SCREWS SHALL HAVE A MINIMUM PROJECTION OF 3 THREADS THROUGH THE LAST MATERIAL JOINED AND SHALL HAVE MINIMUM EDGE DISTANCES AND CENTER-TO-CENTER SPACING OF 1-1/2 AND 3 SCREW DIAMETERS, RESPECTIVELY. ALL SCREWS SHALL CONFORM TO SAE J78 AND SHALL BE COATED WITH A CORROSIVE-RESISTANT COATING. THE SCREW MANUFACTURER SHALL PROVIDE VERIFICATION OF THE FASTENERS RESISTANCE TO HYDROGEN EMBRITTLEMENT, UPON REQUEST.

- H. WELDING OF COLD-FORMED METAL FRAMING SHALL CONFORM TO AWS D1.3 AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS QUALIFIED TO PRODUCE THE SPECIFIED CLASSES OF WELD.

- I. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR ALL STUD WALLS NOT SHOWN. EXTERIOR WALL STUDS SHALL BE MINIMUM 20 GAUGE (33 MILS) SPACED AT 16" O.C. UNLESS INDICATED OTHERWISE. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 800S162-54 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR MULTI-STUD OR STEEL COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS FULL WIDTH BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10' IN HEIGHT.

- J. ALL STUD WALLS SHALL HAVE THEIR BOTTOM TRACKS ATTACHED TO FRAMING BELOW WITH #8 SCREWS AT 24" O.C. OR ATTACHED TO CONCRETE WITH 0.145" DIAMETER DRIVE-PINS @ 24" O.C. UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE WELDED TO EACH OTHER IN ACCORDANCE WITH THE DETAILS. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND STRAP BRACING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES AND GYPSUM SHEATHING ON EXTERIOR SURFACES SCREWED TO ALL STUDS, TOP AND BOTTOM TRACKS AND BLOCKING WITH SCREWS AT 12" O.C. TRACK SECTIONS SHALL MATCH THE WALL STUD GAUGE, BE UN-PUNCHED AND HAVE AT LEAST 1-1/4" FLANGES.

- K. BRIDGING AND BRACING IS TO BE INSTALLED AT ALL COLD FORMED STEEL BEARING WALLS. BRIDGING AND BRACING SHALL BE INSTALLED AS SHOWN ON THE STRUCTURAL PLANS, OR THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON TO DESIGN AN ALTERNATE BRACING SYSTEM. IF AN ALTERNATE BRACING SYSTEM IS USED, THE CONTRACTOR SHALL SUBMIT STAMPED DRAWINGS AND CALCULATIONS TO THE ENGINEER OF RECORD, WHICH DEMONSTRATES THAT THE BRACING SYSTEM WAS DESIGNED TO PROVIDE PERMANENT WEAK AXIS BRACING OF THE STUDS UNDER CODE PRESCRIBED LOADS. DOCUMENTATION SHALL BE SUBMITTED FOR REVIEW PRIOR TO CONSTRUCTION.

WOOD

31. FRAMING LUMBER SHALL BE S-DRY, KD, OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD "GRADING RULES FOR WEST COAST LUMBER NO. 17", OR WMPA STANDARD, "WESTERN LUMBER GRADING RULES 2011". FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS (2X & 3X MEMBERS) HEM-FIR NO. 2
AND BEAMS MINIMUM BASE VALUE, Fb = 850 PSI

(4X MEMBERS) DOUGLAS FIR-LARCH NO. 1
MINIMUM BASE VALUE, Fb = 1000 PSI

BEAMS (INCL. 6X AND LARGER) DOUGLAS FIR-LARCH NO. 1
MINIMUM BASE VALUE, Fb = 1350 PSI

POSTS (4X MEMBERS) DOUGLAS FIR-LARCH NO. 2
MINIMUM BASE VALUE, Fc = 1350 PSI

(6X AND LARGER) DOUGLAS FIR-LARCH NO. 1
MINIMUM BASE VALUE, Fc = 1000 PSI

STUDS, PLATES & MISC. FRAMING: DOUGLAS-FIR-LARCH OR HEM-FIR NO. 2

32. MANUFACTURED LUMBER, PSL, LVL, AND LSL SHOWN ON PLAN ARE BASED PRODUCTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION IN ACCORDANCE WITH ICC-ES REPORT ESR-1387. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.0E) Fb = 2900 PSI, E = 2000 KSI, Fv = 290 PSI
LVL (2.0E) Fb = 2600 PSI, E = 2000 KSI, Fv = 285 PSI
LSL (1.55E) Fb = 2325 PSI, E = 1550 KSI, Fv = 310 PSI

ALTERNATE MANUFACTURED LUMBER MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

33. PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

34. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1 OR PS 2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.

WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

35. ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.

36. PRESERVATIVE TREATED WOOD SHALL BE TREATED PER AWPA STANDARD U1 TO THE USE CATEGORY EQUAL TO OR HIGHER THAN THE INTENDED APPLICATION. TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO AWPA UC3B. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO AWPA UC4A. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO AWPA UC4B.

37. FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

WOOD TREATMENT	CONDITION	PROTECTION
HAS NO AMMONIA CARRIER	INTERIOR DRY	G90 GALVANIZED
CONTAINS AMMONIA CARRIER	INTERIOR DRY	G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653
CONTAINS AMMONIA CARRIER	INTERIOR WET	TYPE 304 OR 316 STAINLESS
CONTAINS AMMONIA CARRIER	EXTERIOR	TYPE 304 OR 316 STAINLESS
AZCA	ANY	TYPE 304 OR 316 STAINLESS

INTERIOR DRY CONDITIONS SHALL HAVE WOOD MOISTURE CONTENT LESS THAN 19%. WOOD MOISTURE CONTENT IN OTHER CONDITIONS (INTERIOR WET, EXTERIOR WET, AND EXTERIOR DRY) IS EXPECTED TO EXCEED 19%. CONNECTORS AND THEIR FASTENERS SHALL BE THE SAME MATERIAL. COMPLY WITH THE TREATMENT MANUFACTURERS RECOMMENDATIONS FOR PROTECTION OF METAL.

38. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2017. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER FOR MAXIMUM LOAD CARRYING CAPACITY. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM)AS MEMBERS CONNECTED.

39. WOOD FASTENERS

- A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8d	2-1/2"	0.131"
16d BOX	3-1/2"	0.135"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.

- B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.



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General Structural Notes

SCALE: 3/4" = 1'-0" U.N.O.

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S1.1

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General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

WOOD CONT.

40. NOTCHES AND HOLES IN WOOD FRAMING:

A. NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.

B. IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.

C. NOTCHES AND HOLES IN MANUFACTURED LUMBER AND PREFABRICATED PLYWOOD WEB JOISTS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS UNLESS OTHERWISE NOTED.

41. WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, THE AITC "TIMBER CONSTRUCTION MANUAL" AND THE AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

B. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS @ 4" O.C. EACH SIDE JOINT.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @12" ON-CENTER. UNLESS OTHERWISE NOTED, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER. UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL)APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES)AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6" ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" ON-CENTER UNLESS OTHERWISE NOTED.



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General Structural
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SHEET TITLE:

Foundation
Plan

SCALE: 1/8" = 1'-0" U.N.O.

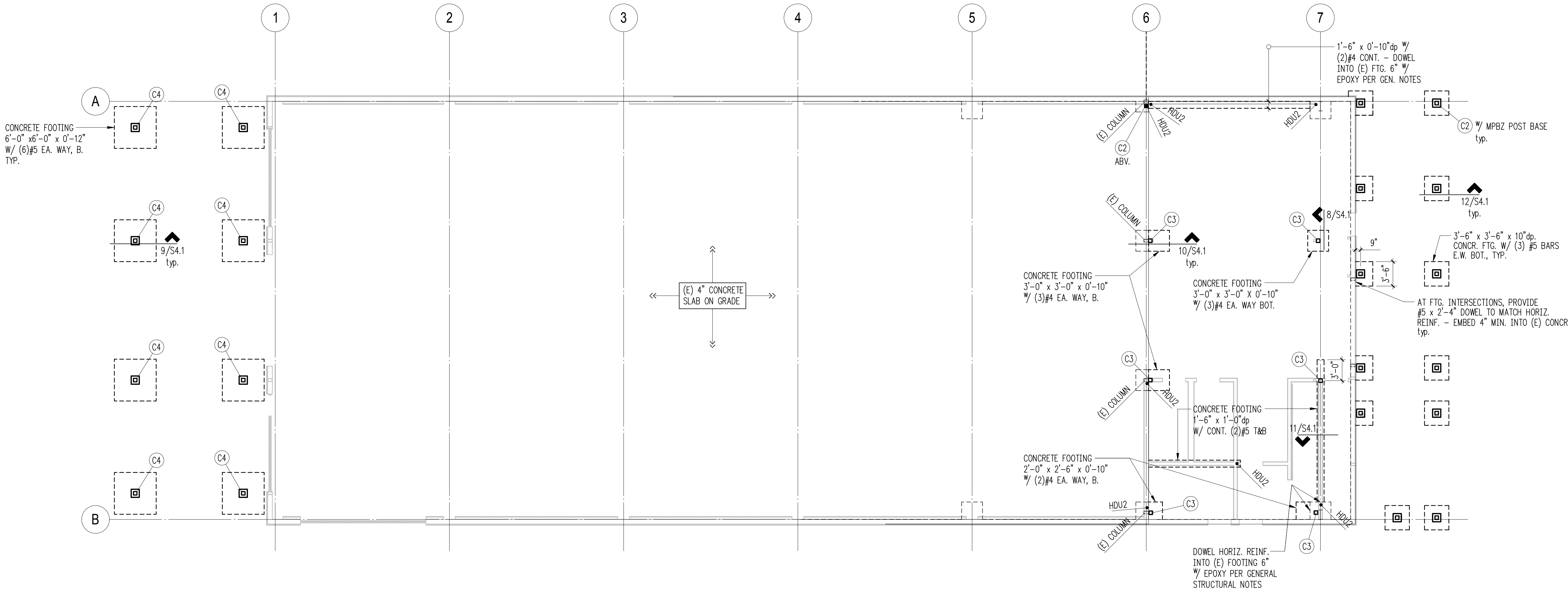
DATE: July 19th, 2018

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SHEET NO:

S2.1

NO: OF SHEETS:



Plan Notes

- DO NOT SCALE DRAWINGS. REFER ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- THE BOTTOM OF ALL NEW EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE.
- REFER GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Legend

- STRUCTURAL WALL ABOVE
- CONCRETE FOUNDATION
- HD
- HOLDOWN PER HOLDOWN SCHEDULE

Foundation Plan

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



Column Schedule

MARK	JOIST
C1	4x4
C2	6x6
C3	HSS 4x4x1/4
C4	HSS 6x6x1/4

Plan Notes

- DO NOT SCALE DRAWINGS. REFER ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- TYPICAL WOOD FLOOR FRAMING CONSISTS 3/4" T&G PLYWOOD, FACE GRAIN PERPENDICULAR TO SUPPORTS OVER JOISTS PER PLAN. NAIL SHEATHING WITH 8D AT 6"O.C. EDGES AND OVER SHEAR WALLS, 12"O.C. FIELD. SEE PLANS FOR ADDITIONAL JOIST REQUIREMENTS.
- ALL HEADERS SHALL BE (2) 2X8'S UNLESS NOTED OTHERWISE. AT CONTRACTOR'S OPTION, (2) 2X8'S MAY BE SUBSTITUTED WITH 4X8 OR 6X6.
- PROVIDE (2) BEARING STUDS EACH END OF ALL HEADERS AND BEAMS UNLESS NOTED OTHERWISE.
- PROVIDE 2x NAILERS ON BOTH SIDES OF HSS COLUMN WHEN EMBEDDED IN WALL - SEE 7/S5.1.
- REFER GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Legend

- STRUCTURAL WALL ABOVE
- STRUCTURAL WALL BELOW
- Cx COLUMN PER COLUMN SCHEDULE
- SW SHEARWALL PER SCHEDULE
- CMST14 x 4'-6" CENTERED ON (E) POST

Joist Schedule

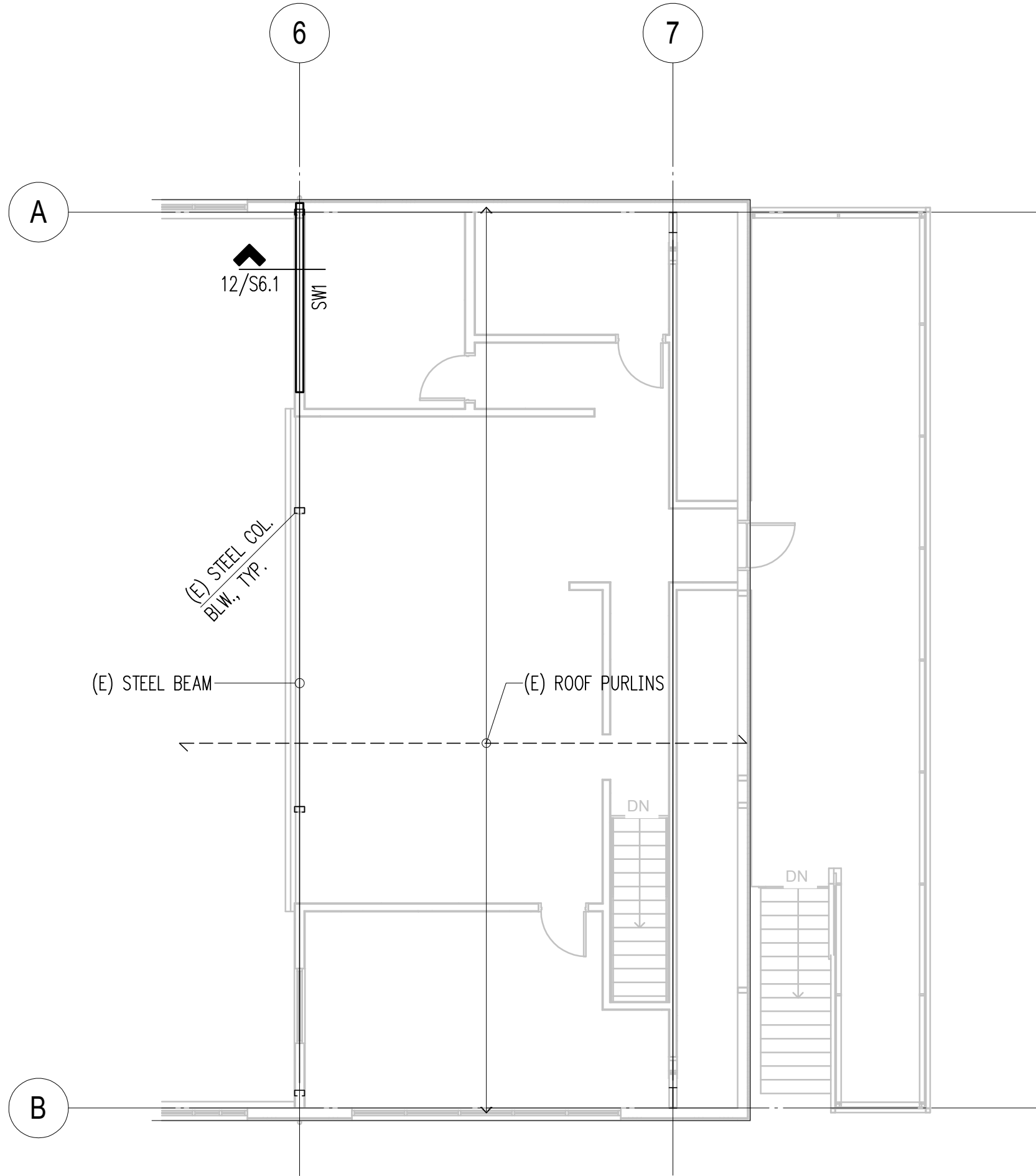
MARK	SIZE
J1	2x8 @ 16" oc
J2	P.T. 2x12 @ 16" oc
J3	11 7/8" TJI360 @ 16" oc

Beam Schedule

MARK	SIZE	HANGER
B1	LVL 1 3/4x11 7/8	HUS1.81/10
B2	LSL 3 1/2x11 7/8	HU412/HUCQ412
B3	4x8	LUS46
B4	P.T. 4x12	HU412
B5	P.T. 6x12	
B6	HSS 10x6x1/4	

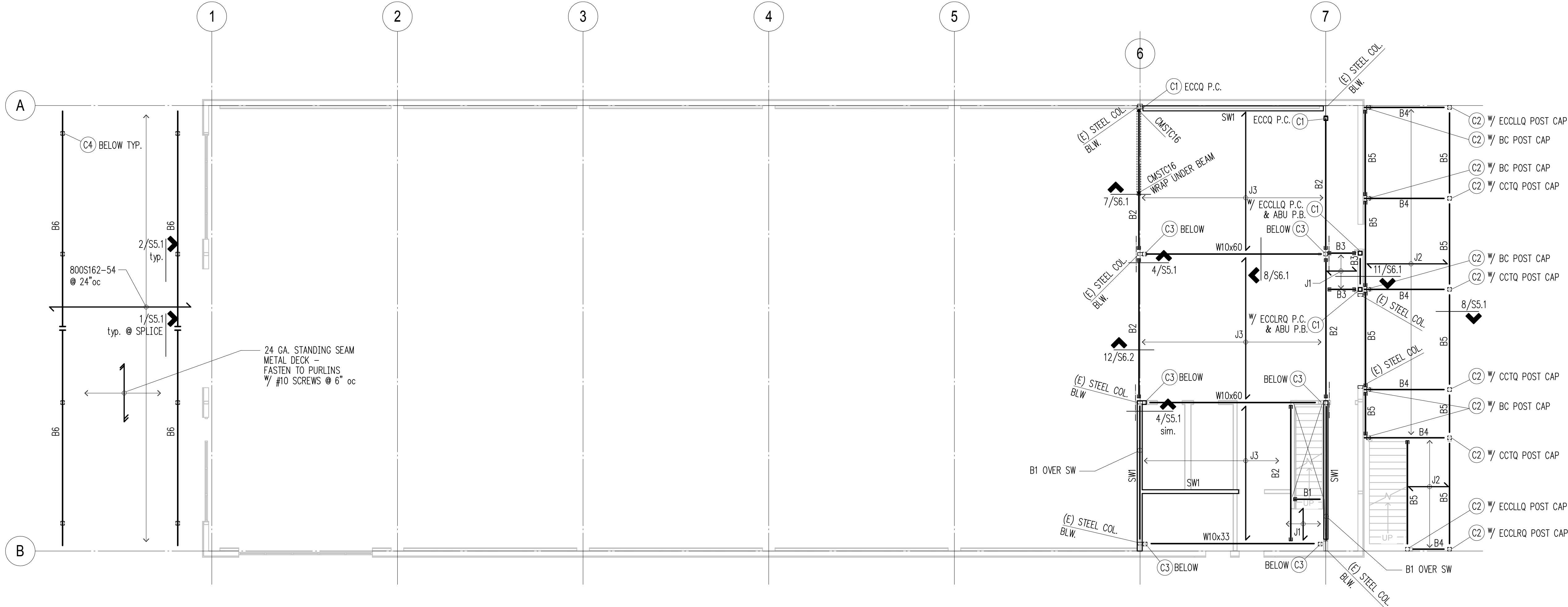
Column Schedule

MARK	JOIST
C1	4x4
C2	6x6
C3	HSS 4x4x1/4
C4	HSS 6x6x1/4



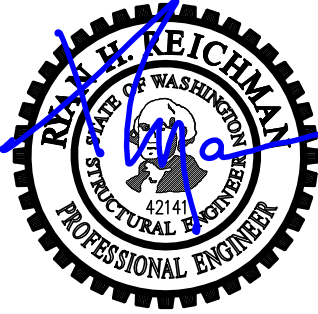
Partial Roof Framing Plan

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



Mezzanine, Deck, & Canopy Framing Plan

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



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SHEET TITLE:

Main Floor and
Mezzanine
Framing Plan

SCALE: 1/8" = 1'-0" U.N.O.

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S2.2



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Elevations

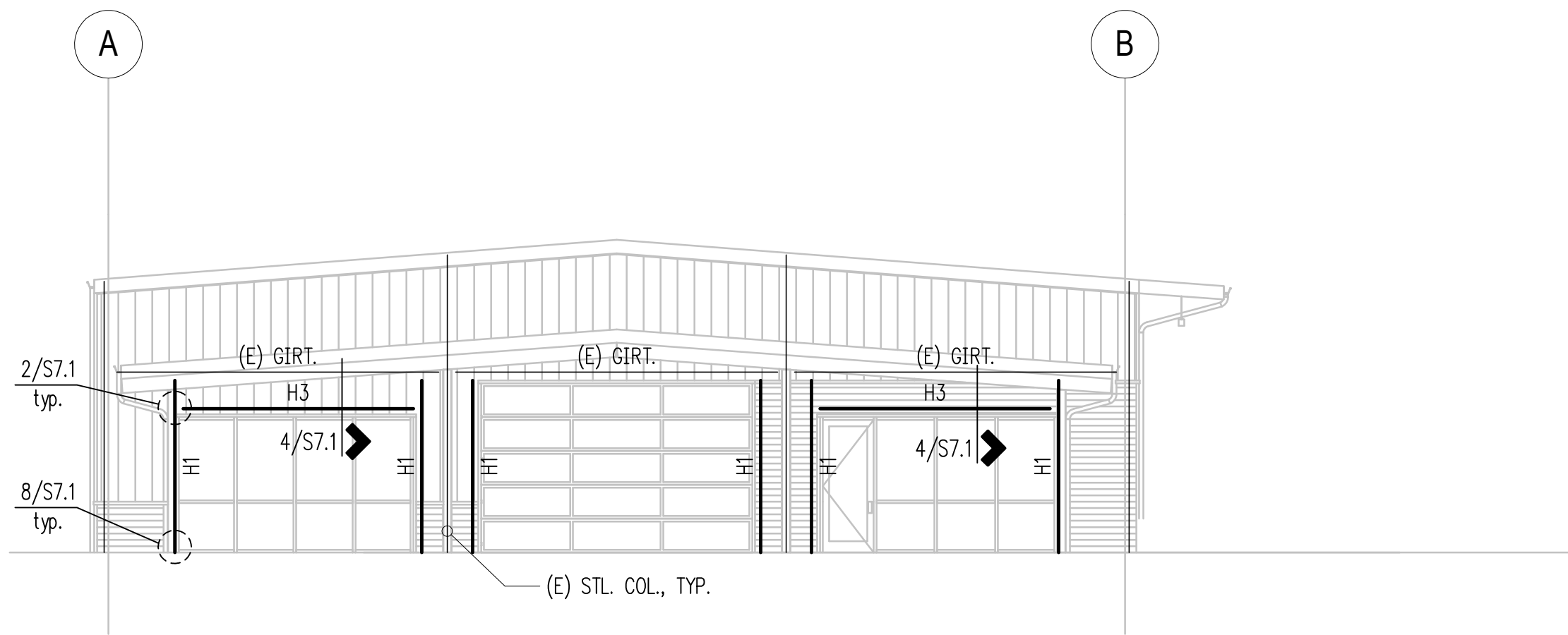
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S3.1

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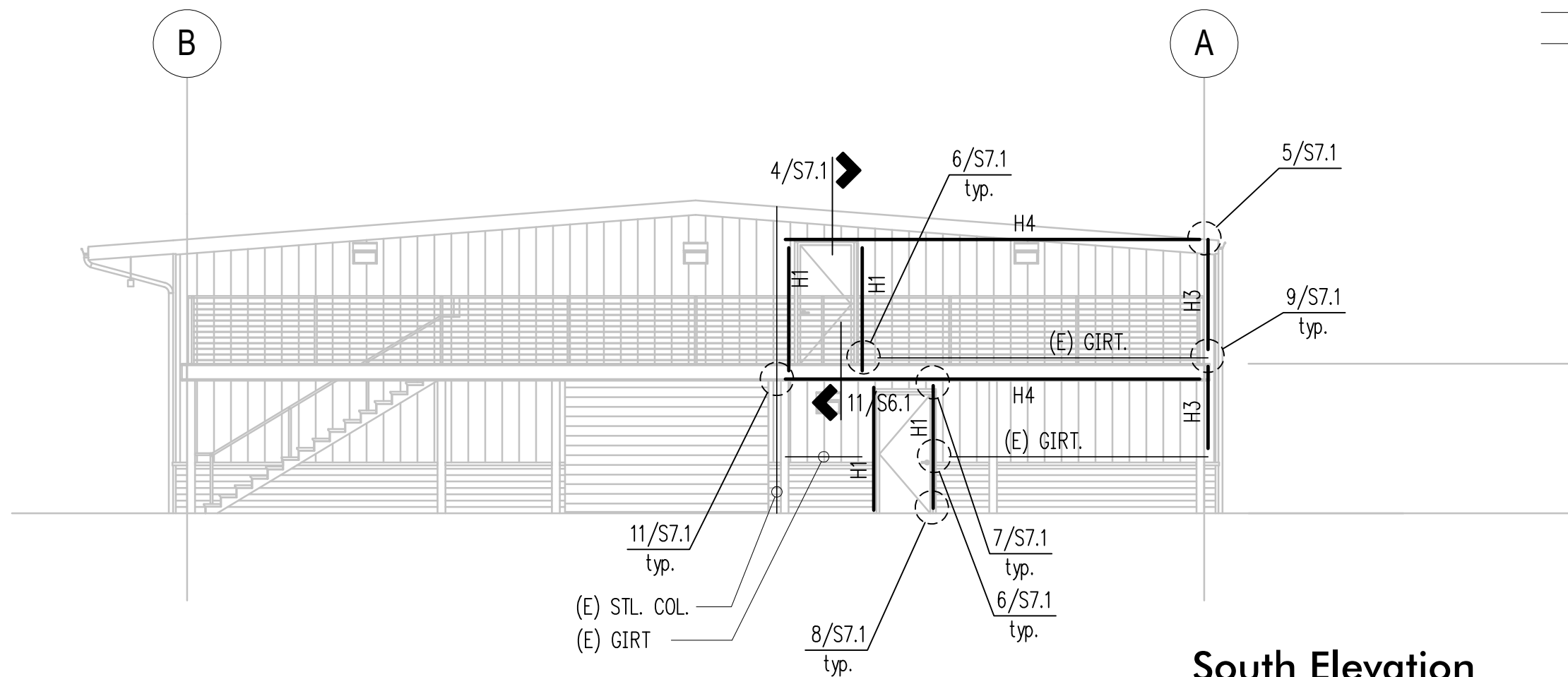
Cold Formed Beam Schedule

MARK	HEADER
H1	800S200-43
H2	(2) 600S300-54 BOXED
H3	(2) 800S200-43 BOXED
H4	(2) 800S200-68 BOXED



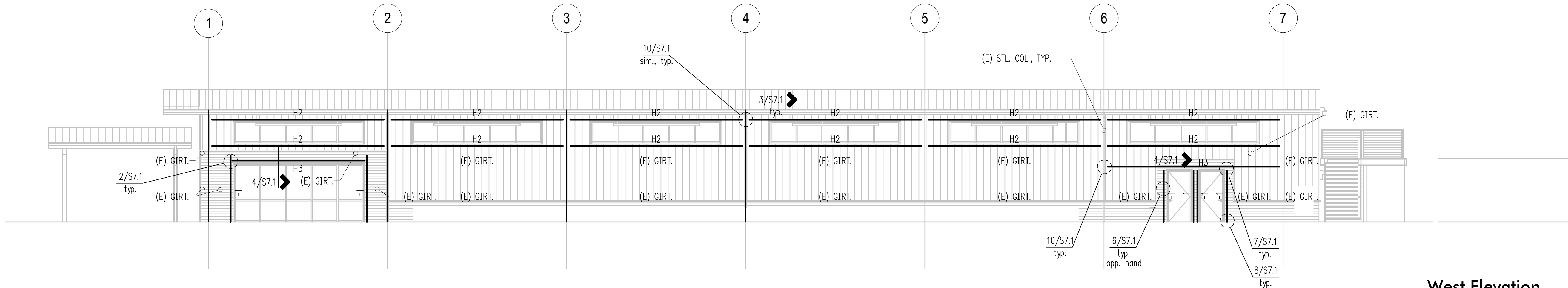
North Elevation

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



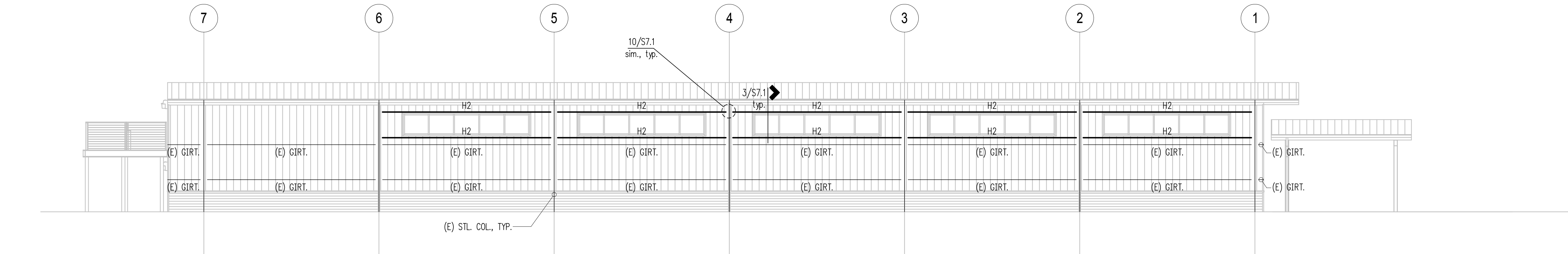
South Elevation

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



West Elevation

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



East Elevation

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

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SCALE: $\frac{3}{4}" = 1'-0"$ U.N.O.

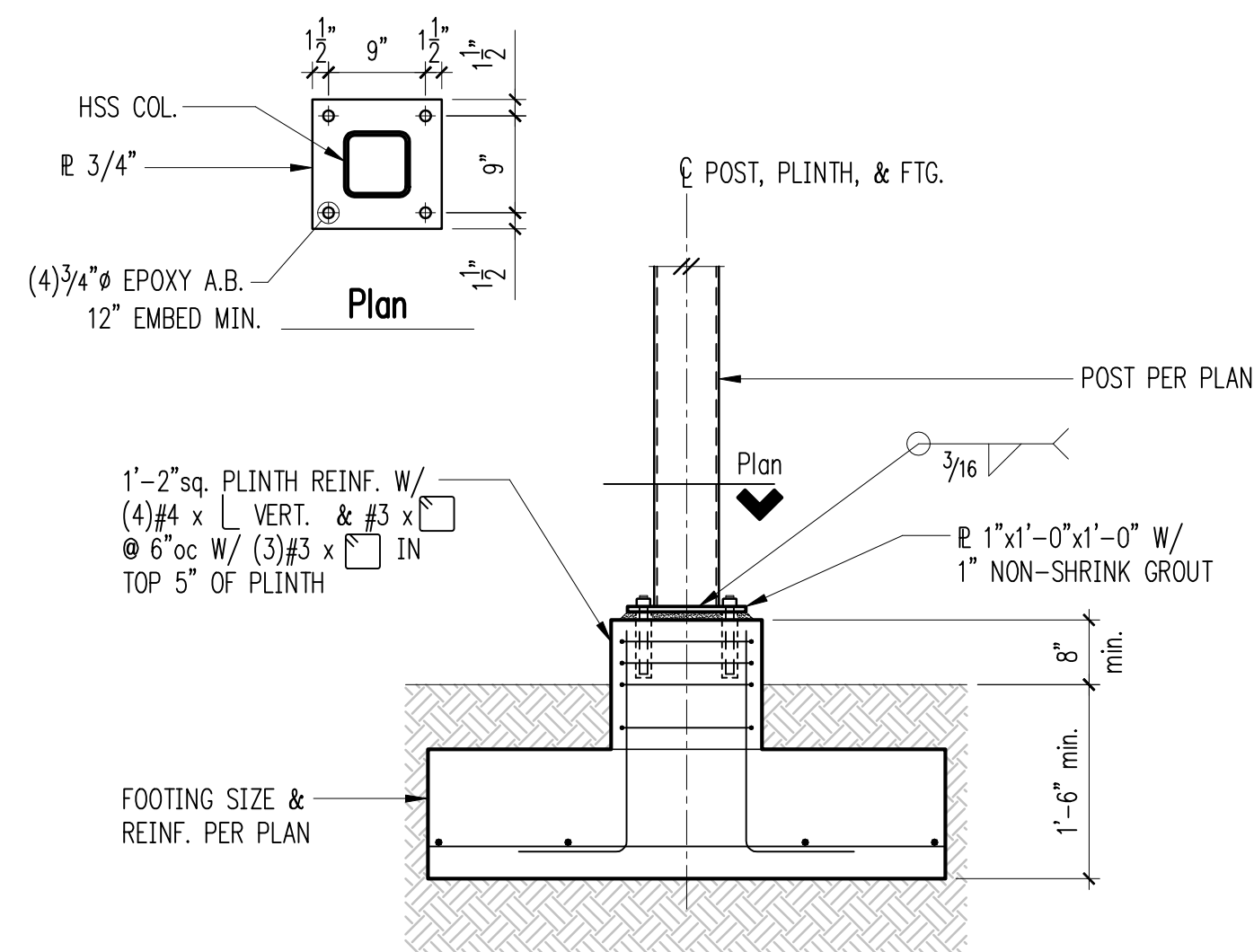
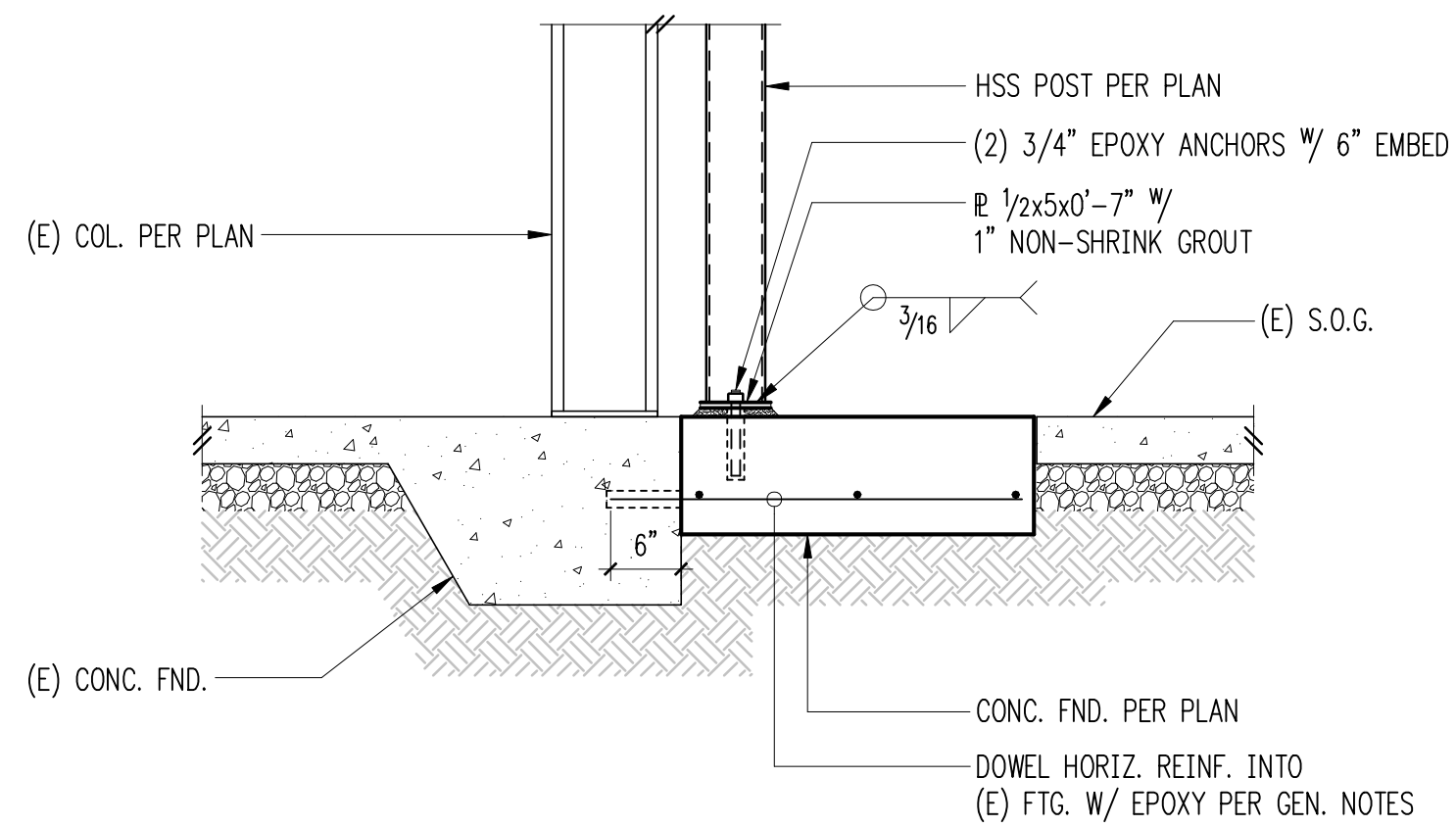
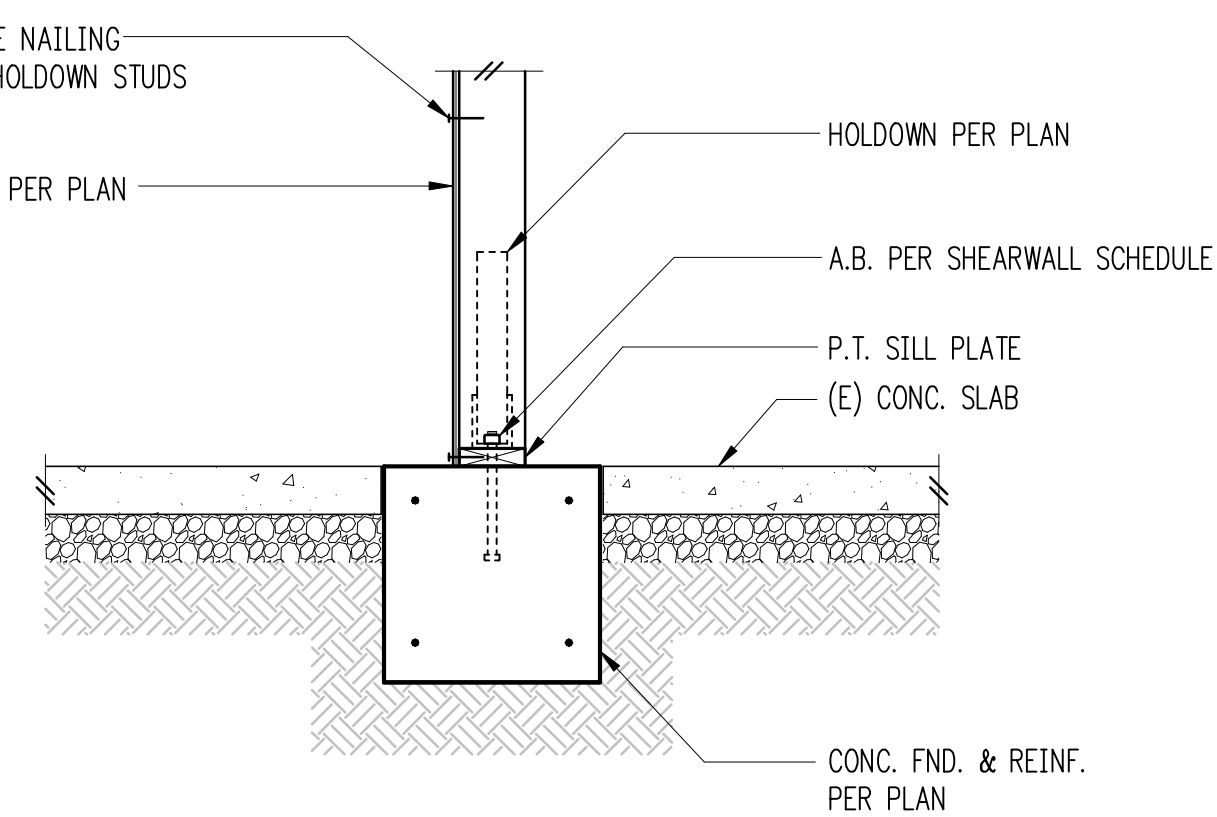
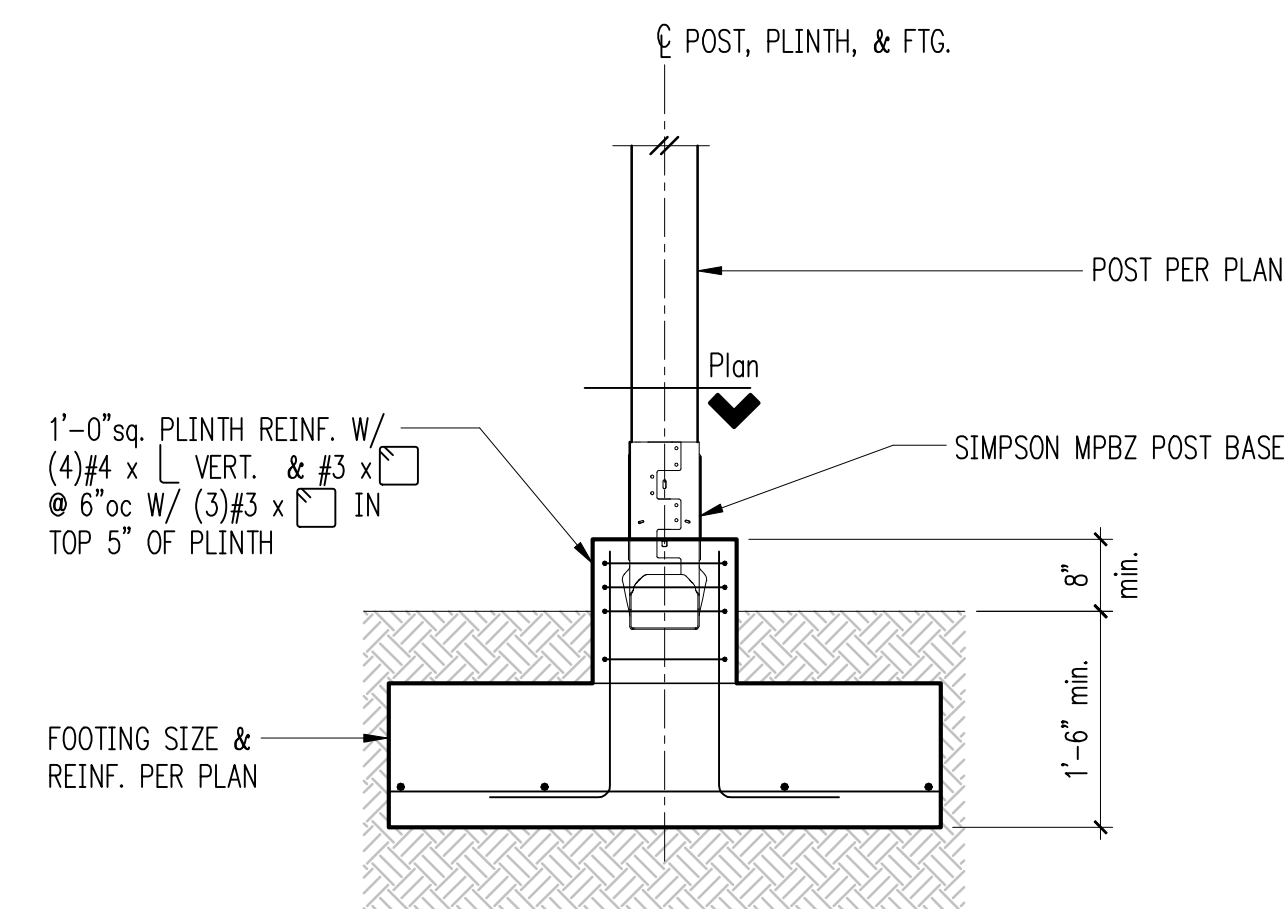
DATE: July 19th, 2018

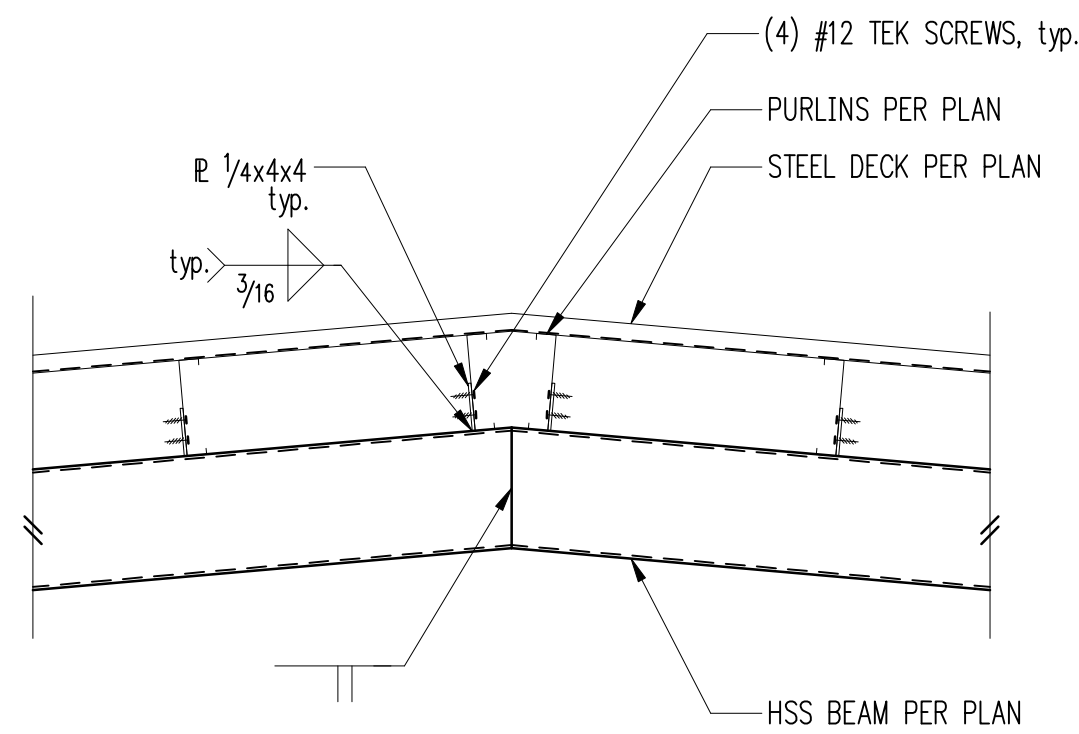
PROJECT NO: 00970-2018-05

SHEET NO:

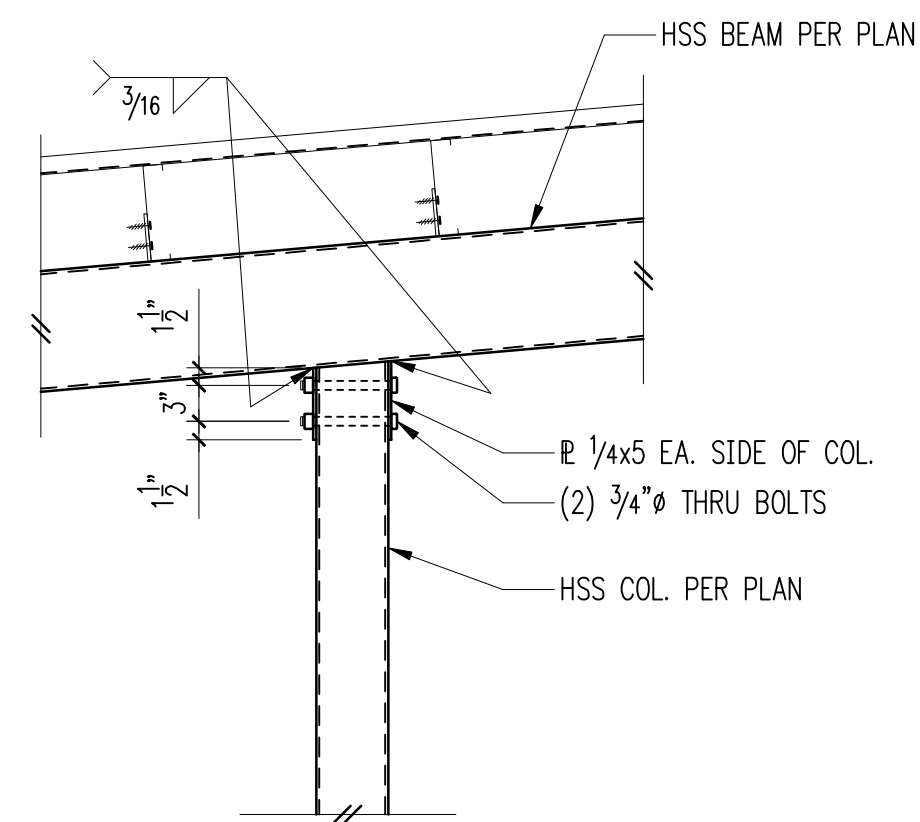
S4.1

NO: OF SHEETS:

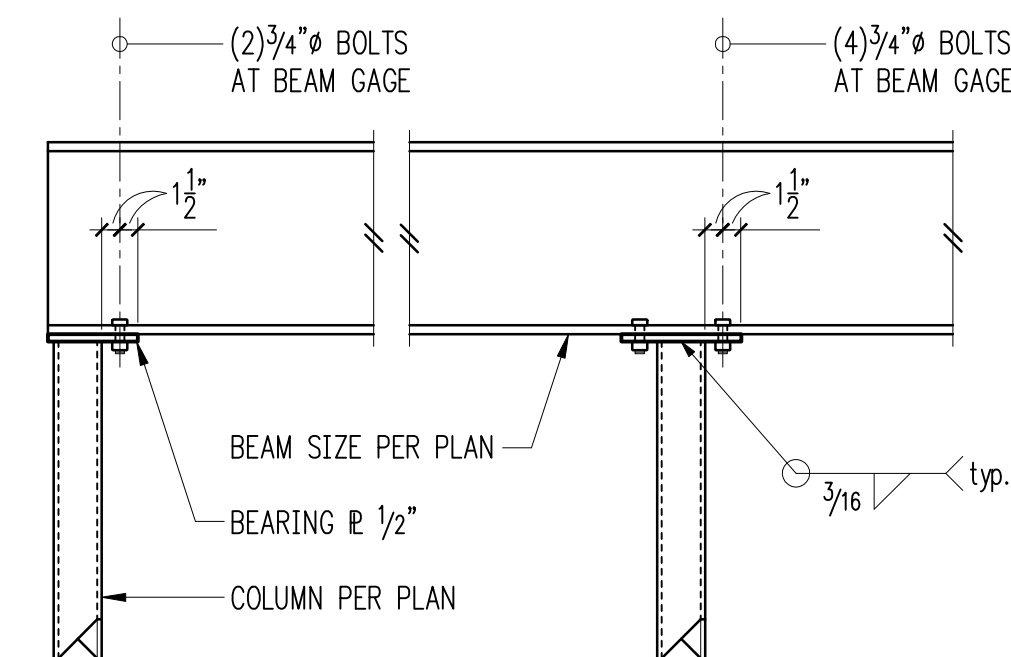




1



2



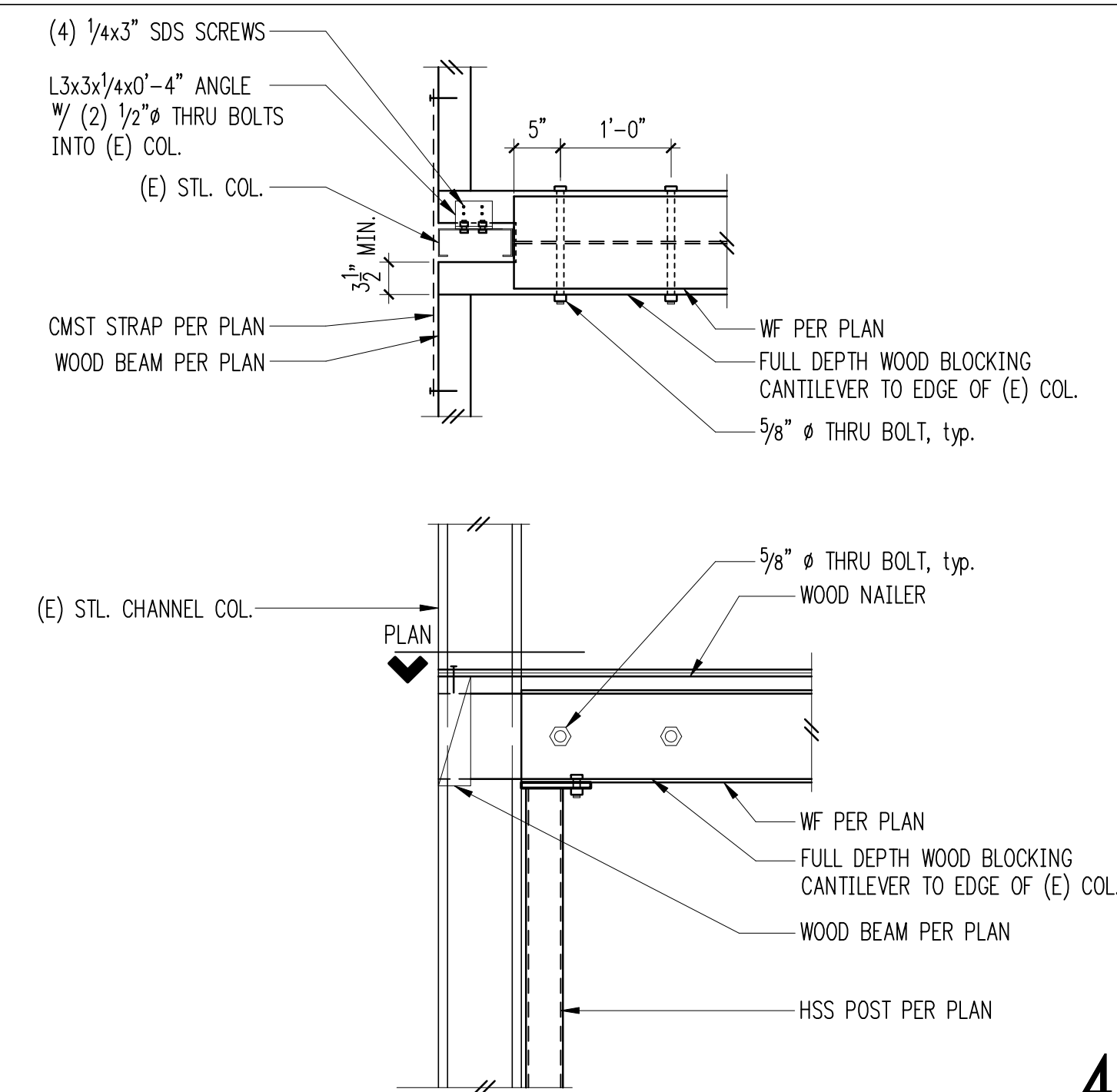
Where Beam Stops

Where Beam Continues

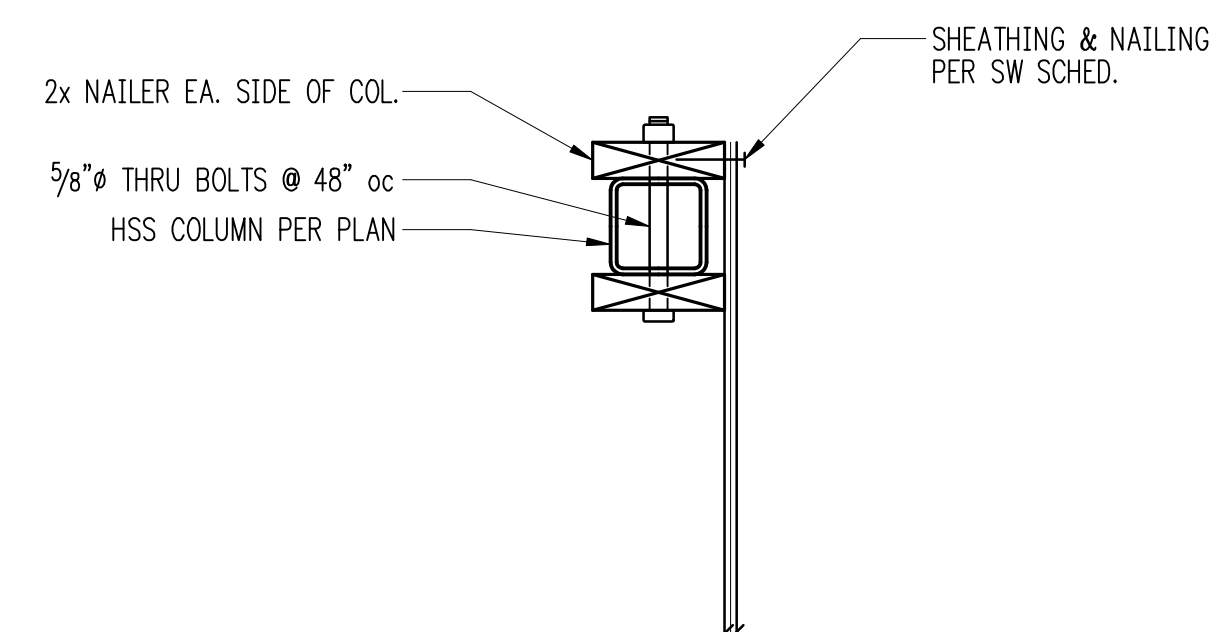
NOTE:
BEARING PLATE THICKNESS SHALL BE
 $\frac{3}{4}$ " WHERE DEPTH OF SUPPORTED
MEMBER EXCEEDS 24"

Typical Beam Bearing on HSS or Pipe Column

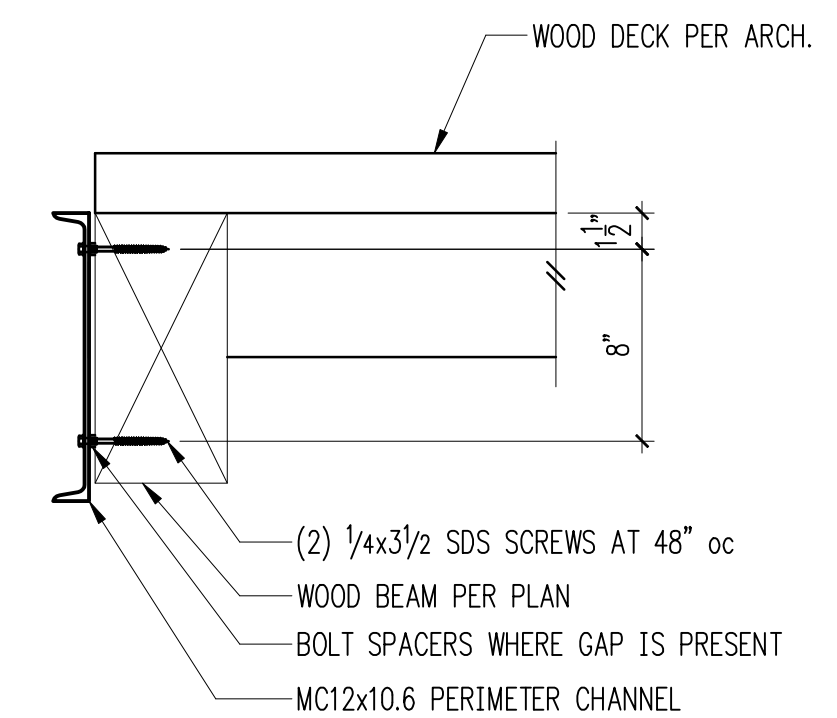
3



4


$$1\frac{1}{2}'' = 1'-0''$$

7


$$1\frac{1}{2}'' = 1'-0''$$

8

5

6

7

8

9

10

11

12



DRAWN:	TW
DESIGN:	JPJ
CHECKED:	RHR
APPROVED:	RHR

VISIONS:

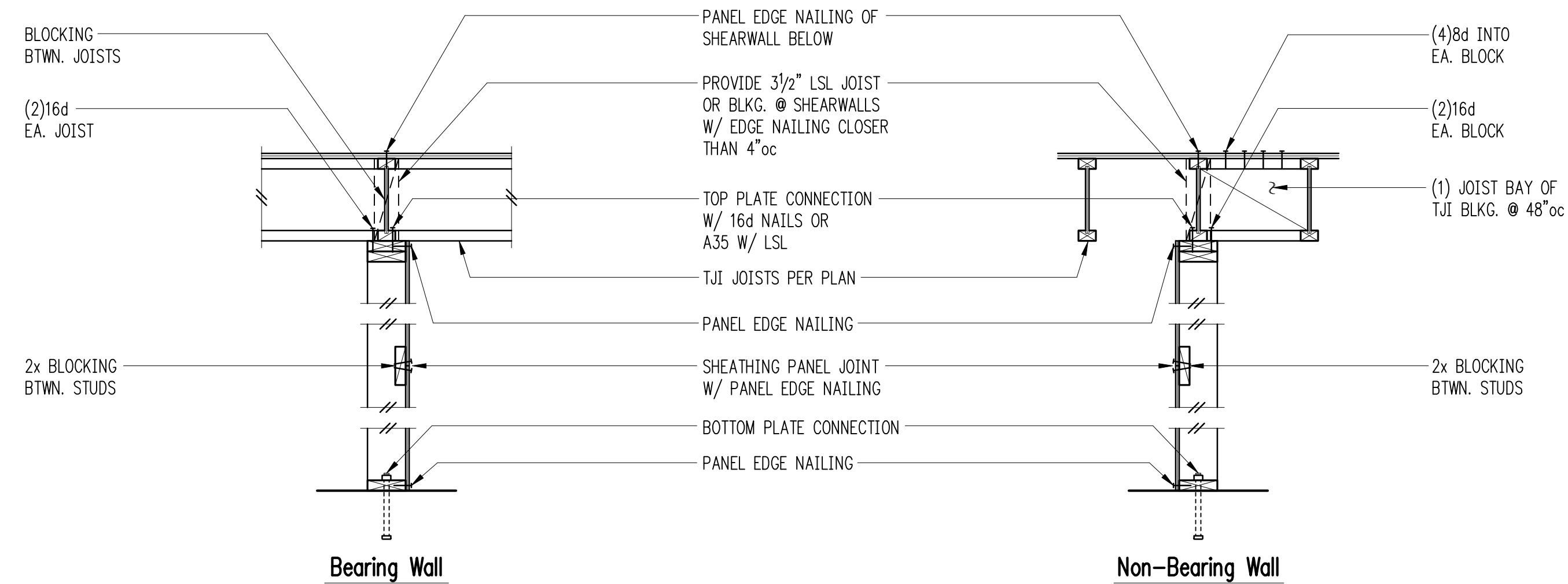
PROJECT TITLE:
Mumner Speed Shop
5008 60th Street E
Mumner WA 98390

ARCHITECT:
B. CRA
 106 Pacific Avenue Suite 300
 Tacoma WA 98402
 T 253.627.4367
 F 253.627.4395
www.bcradesign.com

<h1>Permit Set</h1>	
<hr/>	
MEET TITLE:	
<h2>Steel Framing Details</h2>	
<hr/>	
SCALE:	$\frac{3}{4}" = 1'-0"$ U.N.O.
DATE:	July 19th, 2018
PROJECT NO:	00970-2018-05
MEET NO:	

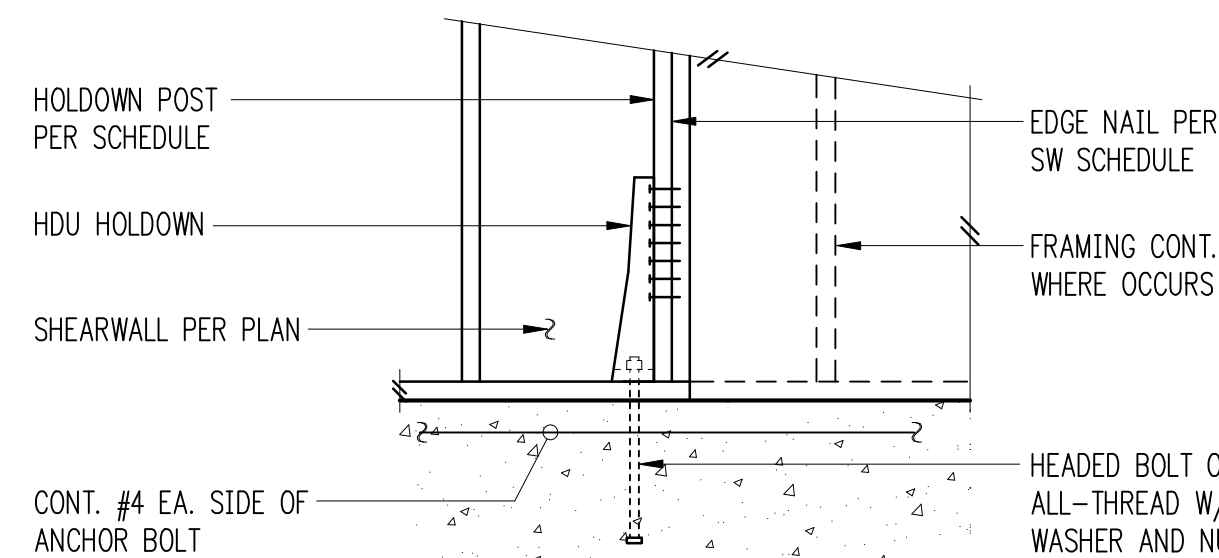
S5.1

OF SHEETS:



NOTE:
SEE SHEARWALL SCHEDULE FOR ALL NAILING AND
CONNECTIONS, NOT OTHERWISE NOTED

Typical Shearwall Construction 2

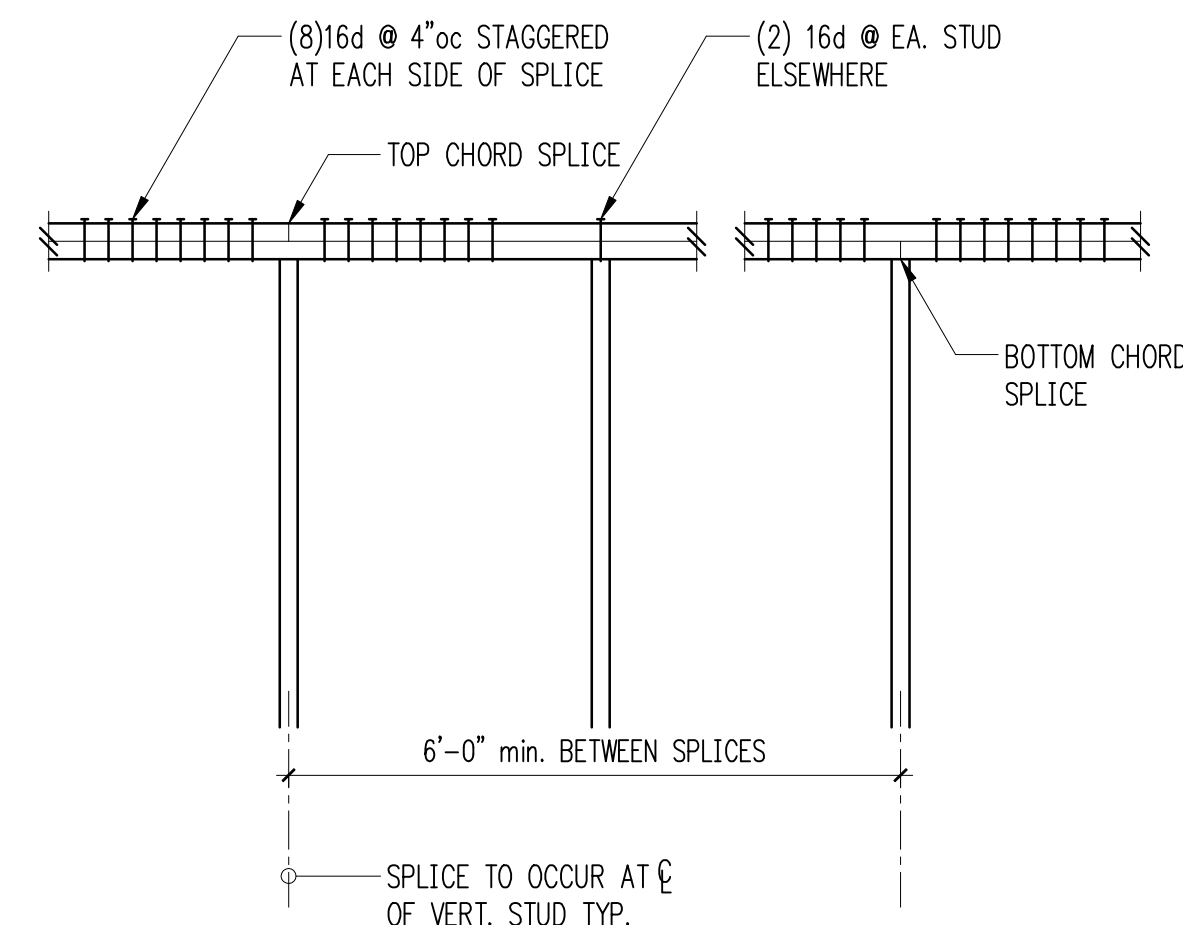


Holdown Schedule

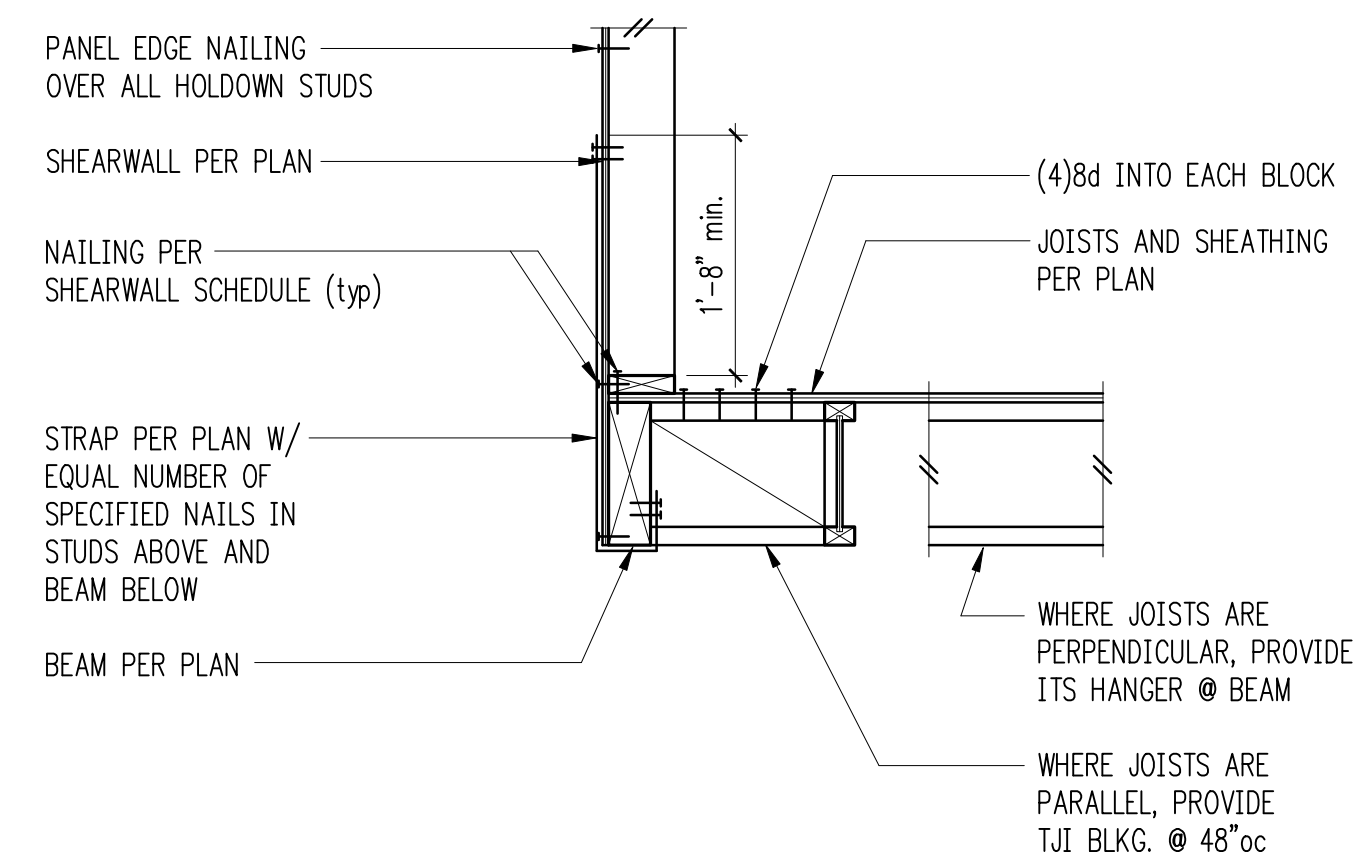
Plan Mark	Screws	Anchor Bolt	A.B. EMBED		Holdown Post ①	
			C.I.P	EPOXY P.I.②	if 2x4	if 2x6
HDU2-SDS2.5	(6)SDS 1/4"x2 1/2"	5/8" Ø	7"	7"	(2) 2x4	(2) 2x6

- ① MINIMUM SIZE OF POST AT END OF WALL UNLESS OTHERWISE NOTED ON FRAMING PLANS.
- ② USE EPOXY GROUT PER GENERAL STRUCTURAL NOTES

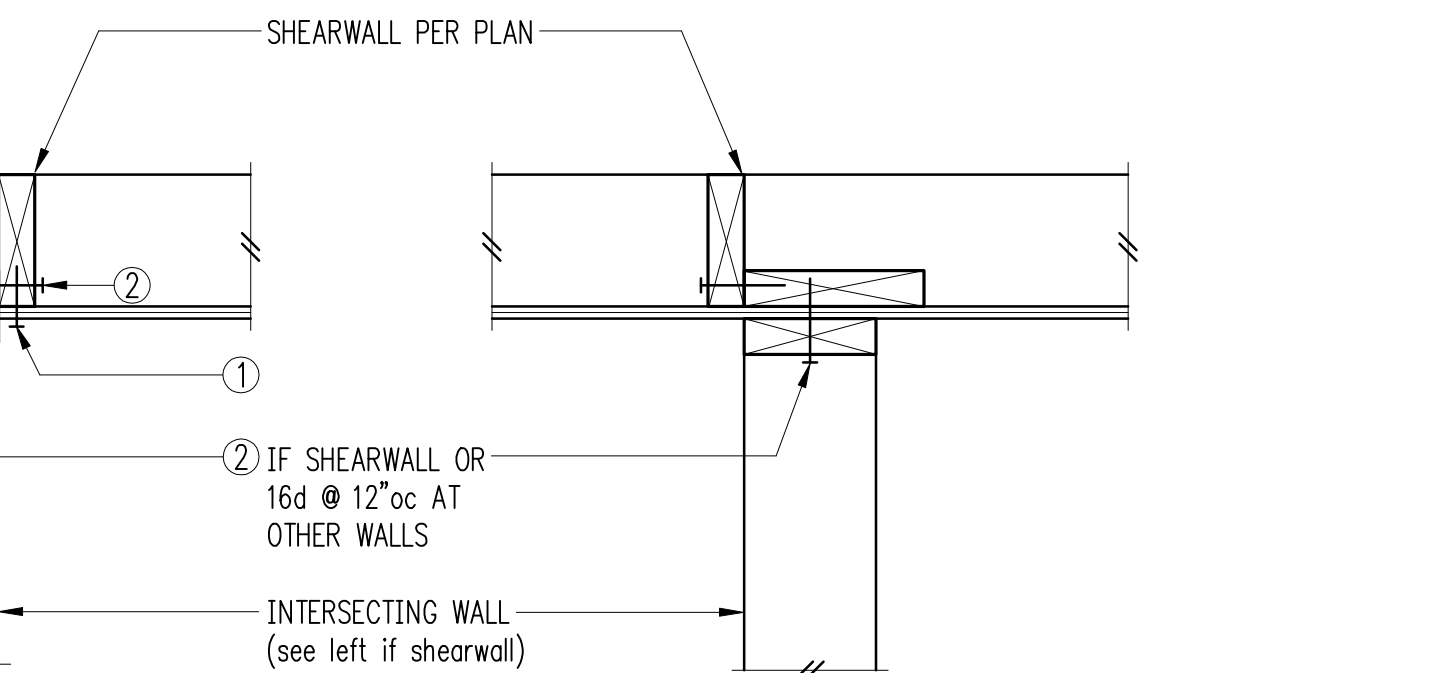
Typical HDU Holdown 5



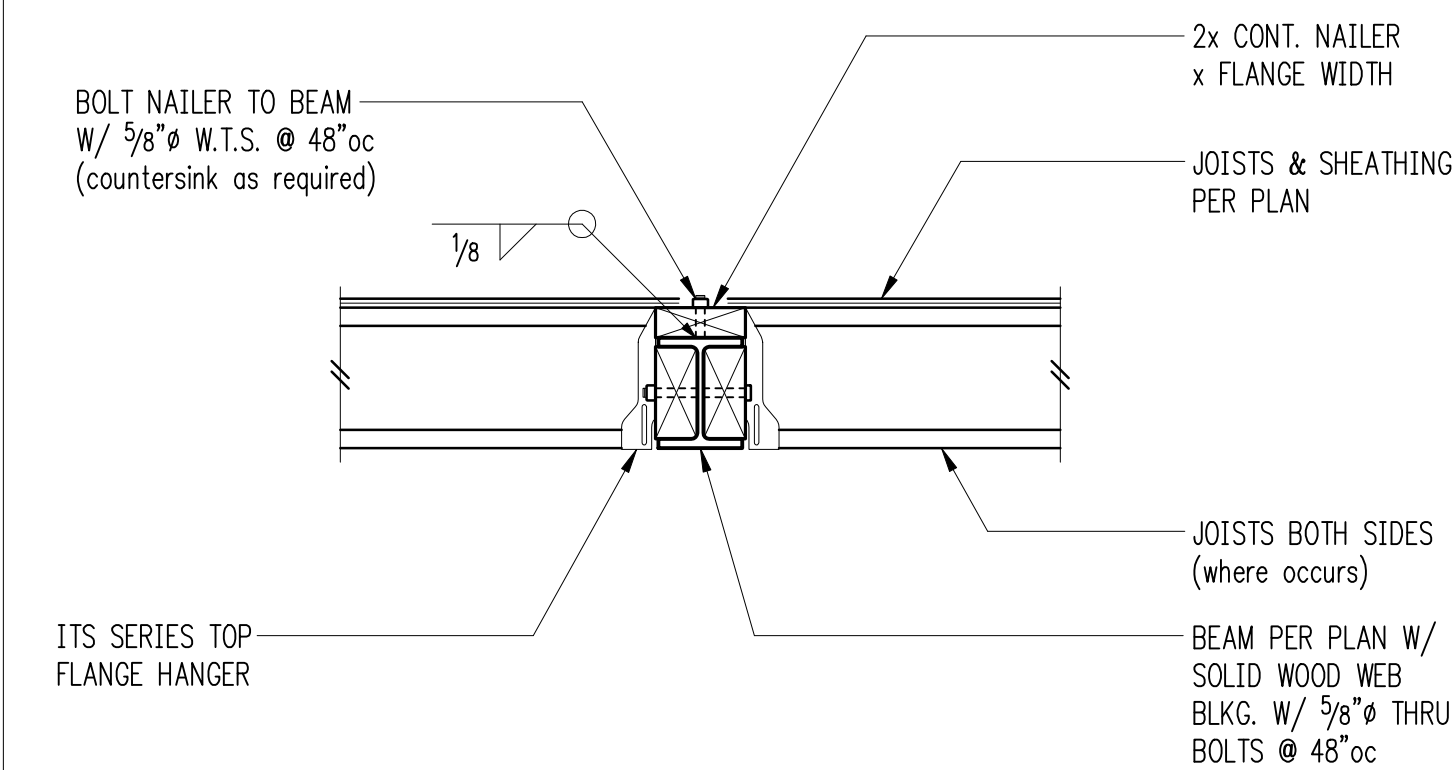
Typical Top Plate Splice 6



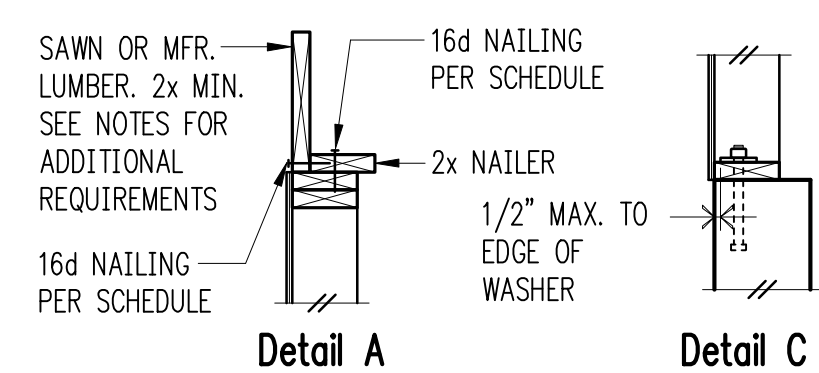
Exterior Floor Beam 7



Typical Shearwall Intersections 4



Joists Hung from Steel Beam 8

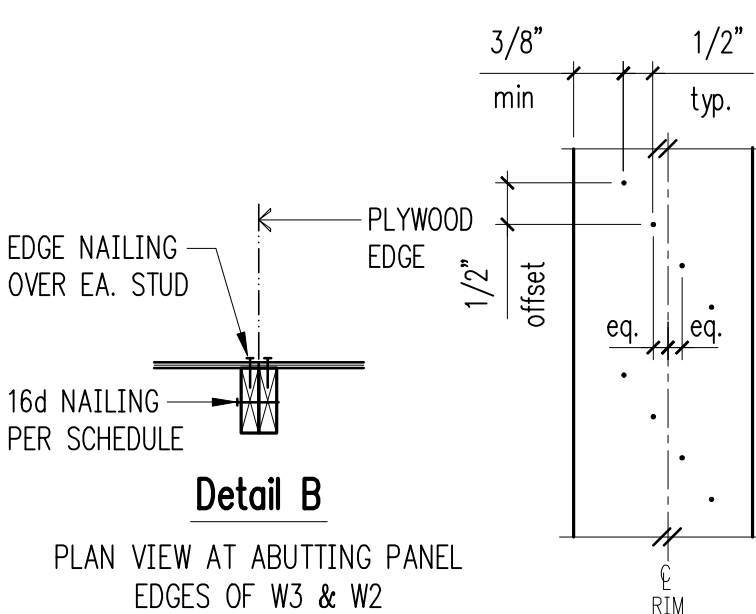


Shearwall Schedule ①②③⑤⑥⑦

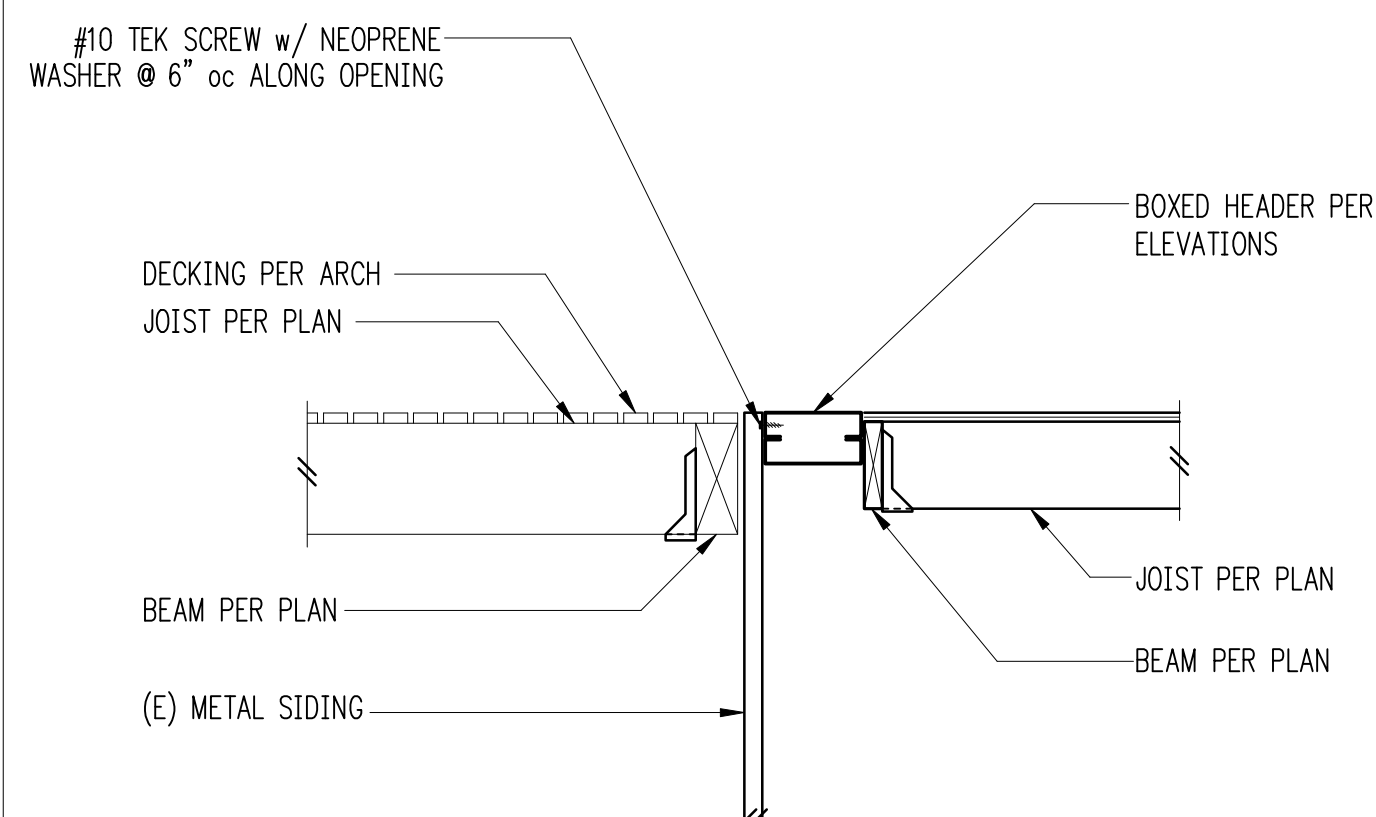
Mark	Sheathing	Panel Edge Nailing	Top Plate Connection		Base Plate Connection	
			if TJI	if Wood ⁽⁸⁾	at Wood ⁽¹⁰⁾	at Concrete
SW1	15/32" CDX PLYWOOD	8d @ 6"oc	16d @ 6"oc	A35 @ 24"oc	16d @ 6"oc	5/8" A.B. @ 48"oc
SW2	15/32" CDX PLYWOOD	8d @ 4"oc	16d @ 4"oc	A35 @ 16"oc	(2)rows 16d @ 6"oc	5/8" A.B. @ 32"oc
SW3 ⁽¹⁾	15/32" CDX PLYWOOD	8d @ 3"oc	(2)rows 16d @ 4"oc	A35 @ 12"oc	(2)rows 16d @ 6"oc	5/8" A.B. @ 24"oc
SW4 ⁽⁴⁾	15/32" CDX PLYWOOD	8d @ 2"oc	(2)rows 16d @ 4"oc	A35 @ 9"oc	(2)rows 16d @ 4"oc ⁽¹¹⁾	5/8" A.B. @ 16"oc

- ① BLOCK PANEL EDGES WITH 2x MIN. LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12"o.c.
- ② 8d NAILS SHALL BE 0.131"Ø x 2 1/2" (common) – 16d NAILS SHALL BE 0.135"Ø x 3 1/2" (box)
- ③ EMBED ANCHOR BOLTS AT LEAST 7". EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 4" EMBEDMENT. TITEN HD SCREW ANCHORS MAY BE SUBSTITUTED FOR ANCHOR BOLTS W/ 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x 1/4" MIN. PLATE WASHERS. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH SHEATHING. SEE DETAIL C.
- ④ 3x STUDS OR DOUBLE STUDS NAILED TOGETHER W/ BASE PLATE NAILING ARE REQUIRED AT ABUTTING PANEL EDGES OF SW3 AND SW2. SEE DETAIL B. WHERE 3x STUDS ARE USED FOR SW2, STAGGER NAILS AT ADJOINING PANEL EDGES.
- ⑤ TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SHEARWALLS AND ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING. SEE PLANS AND HOLDOWN SCHEDULE FOR ALTERNATE REQUIREMENTS.
- ⑥ ALL EXTERIOR WALLS SHALL BE SW1, UNLESS NOTED OTHERWISE.
- ⑦ 7/16" O.S.B. MAY BE SUBSTITUTED FOR 15/32" CDX.
- ⑧ LTP4's (HORIZONTAL ORIENTATION) W/ 8d COMMON MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
- ⑨ A 2x NAILER ATTACHED W/ BASE PLATE NAILING PER DETAIL A MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
- ⑩ AT MULTI-ROW NAILING, MINIMUM OFFSET BETWEEN ROWS AND ROW SPACING 1/2", SEE DETAIL D.
- ⑪ PROVIDE (3) ROWS 16d @ 6"oc AT LVL RIMS.

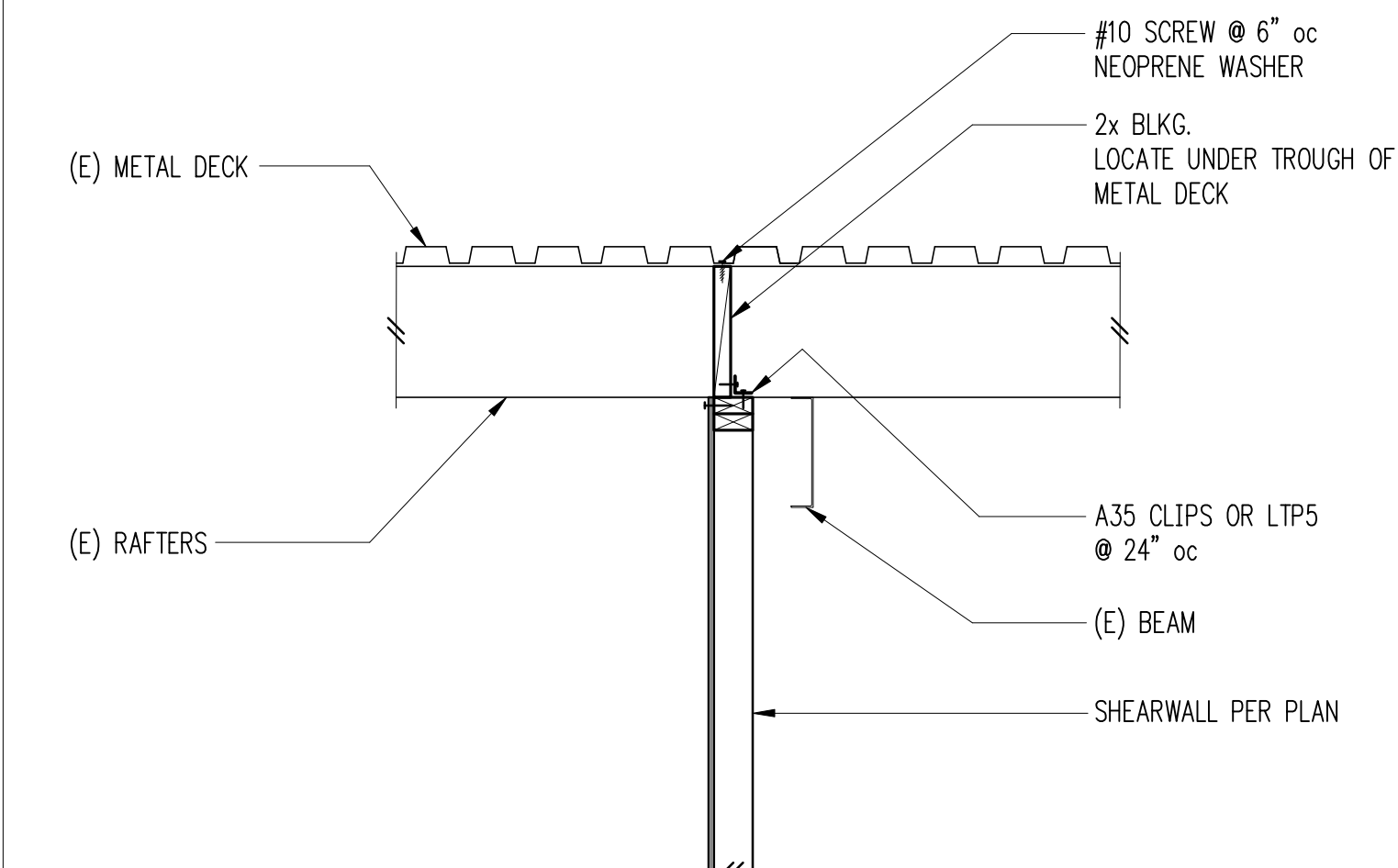
Shearwall Schedule - (Sheathed One Side)



10



11



12



DRAWN:	TW
DESIGN:	JPJ
CHECKED:	RHR
APPROVED:	RHR

REVISIONS:

DPD:

PROJECT TITLE: _____

Sumner Speed Shop

16008 60th Street E
Sumner WA 98390

ARCHITECT:

BCRA

2106 Pacific Avenue Suite 300
Tacoma WA 98402
PH 253.627.4367
FX 253.627.4395
www.bcradesign.com

ISSUE:

Permit Set

SHEET TITLE:

Wood Framing Details

SCALE: $3/4" = 1' - 0"$ U.N.O.

DATE: July 19th, 2018

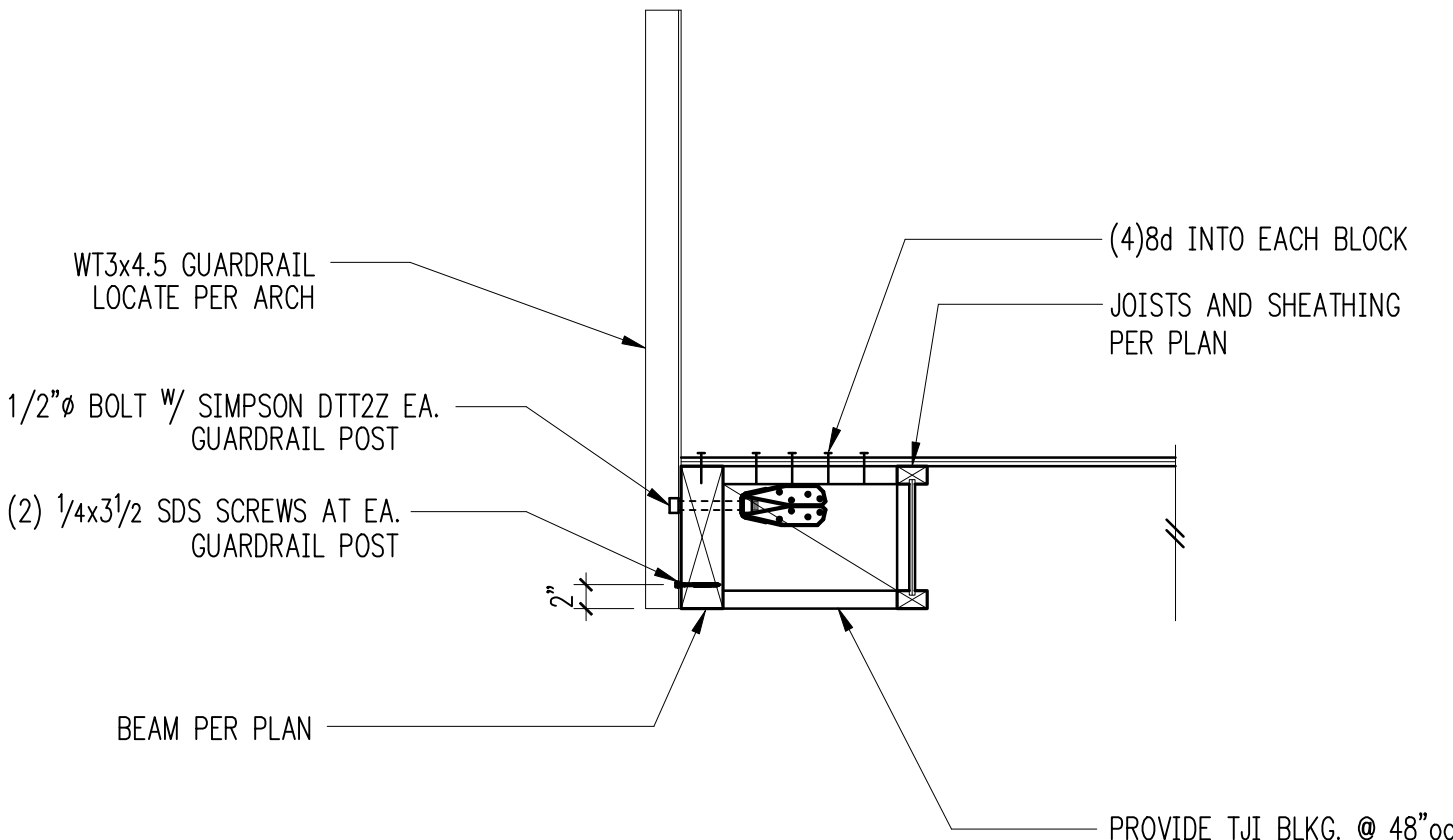
PROJECT NO: 00970-2018-05

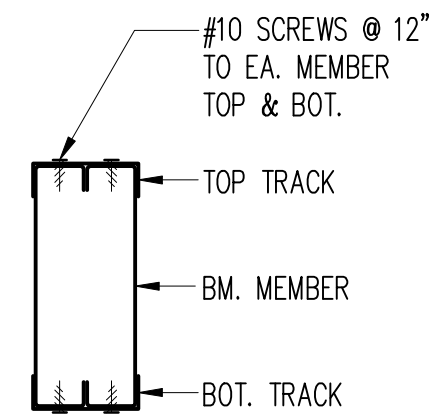
SHEET NO:

S6.1

NO: OF SHEETS:

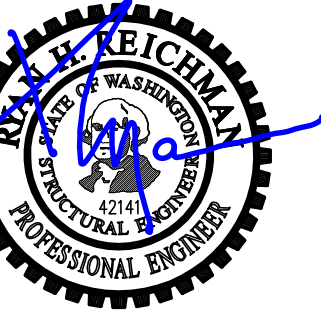
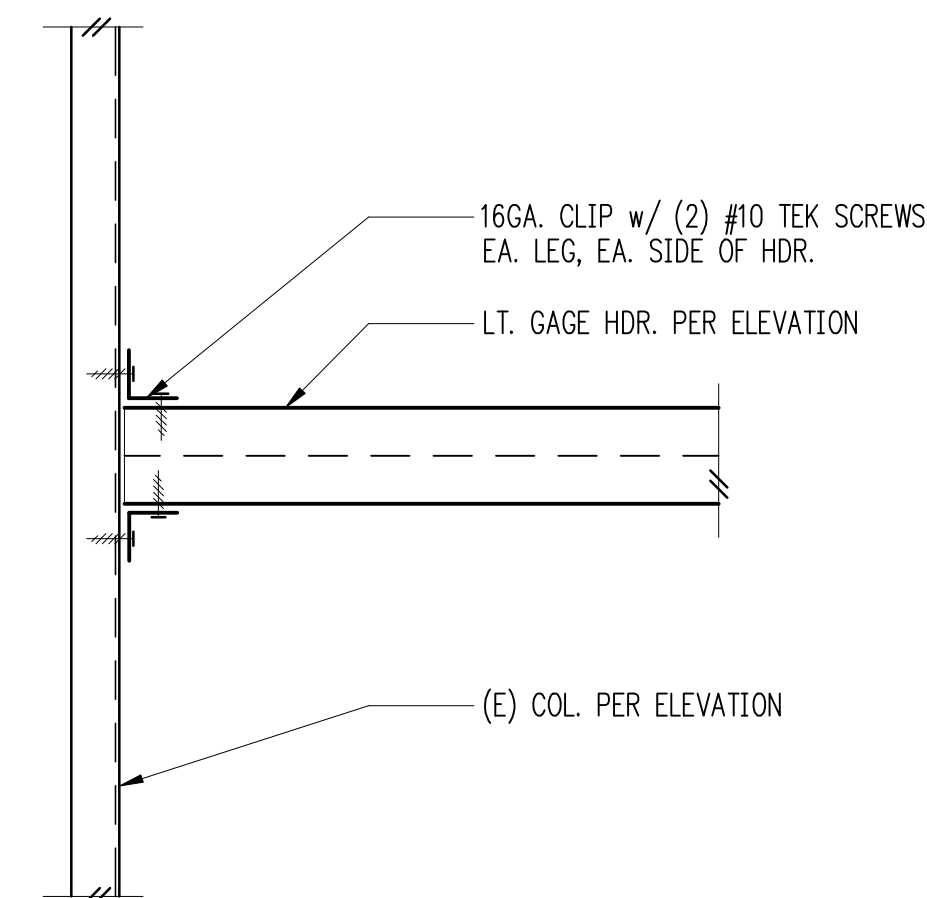
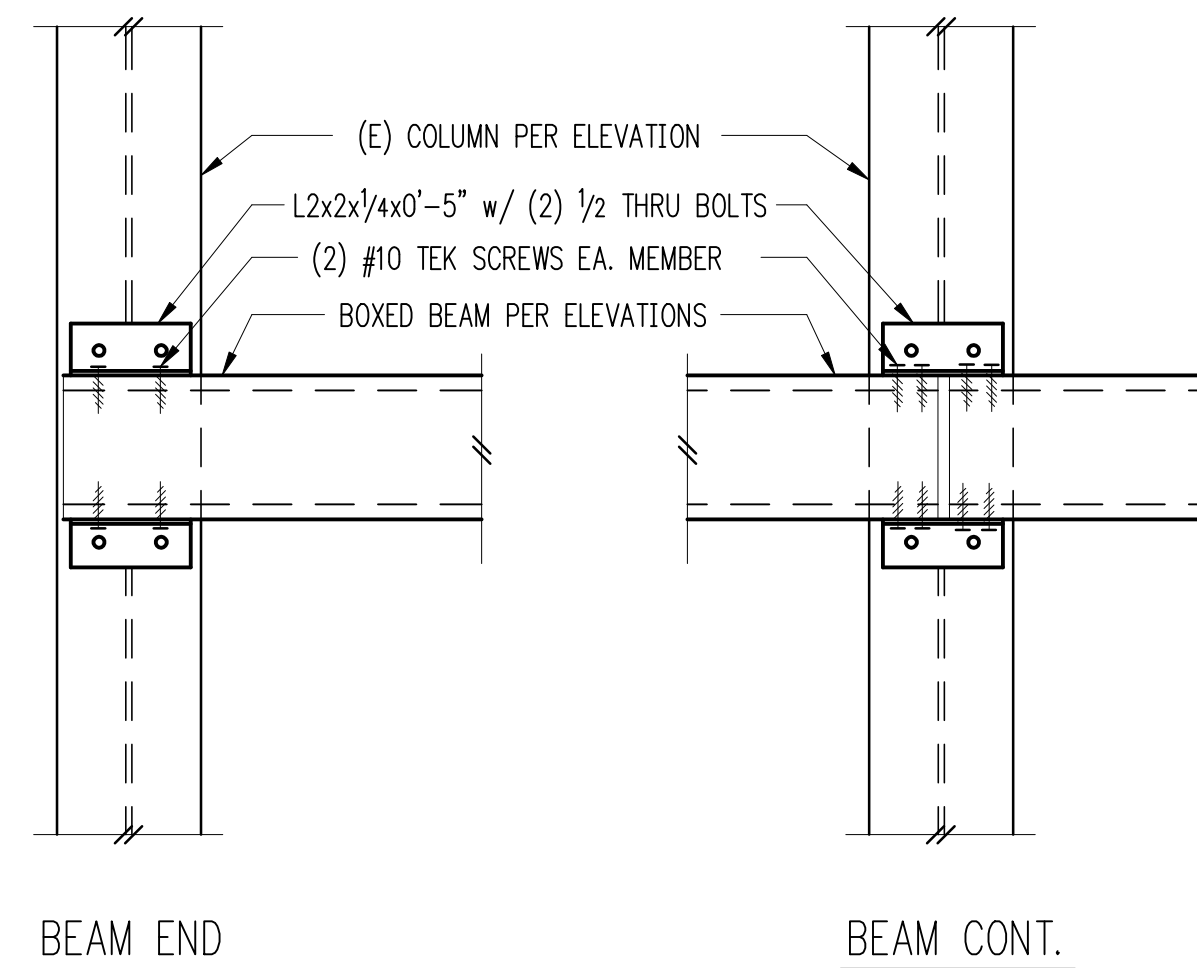
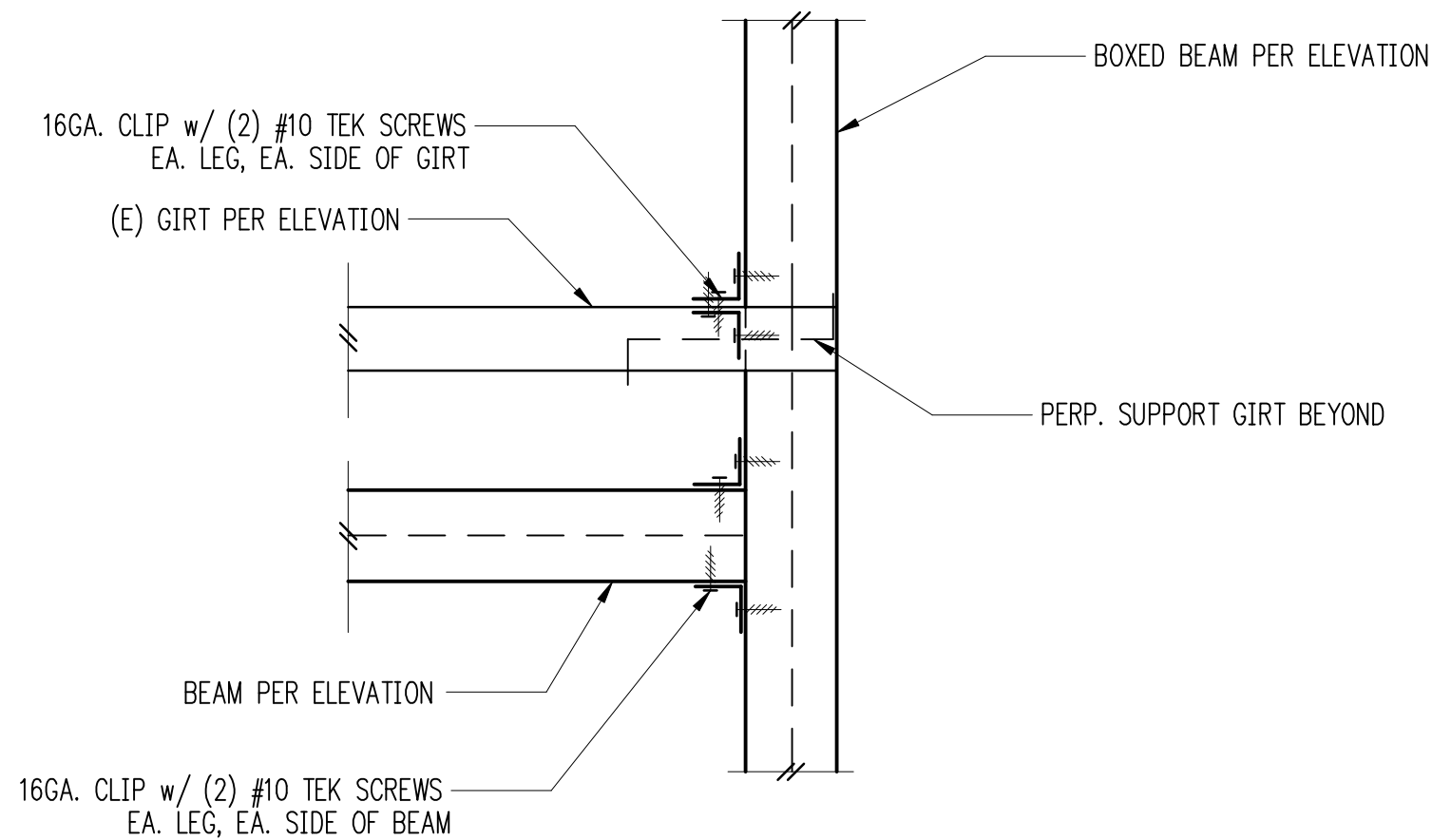
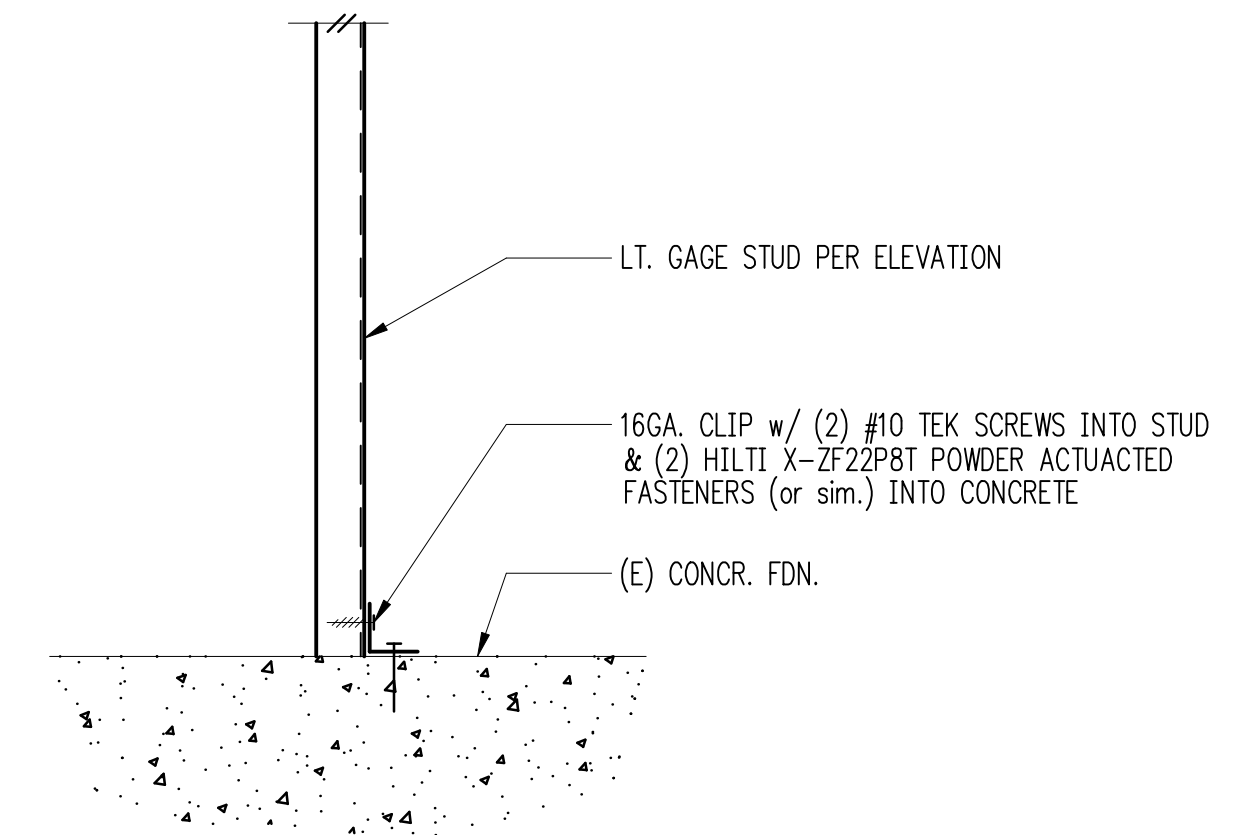
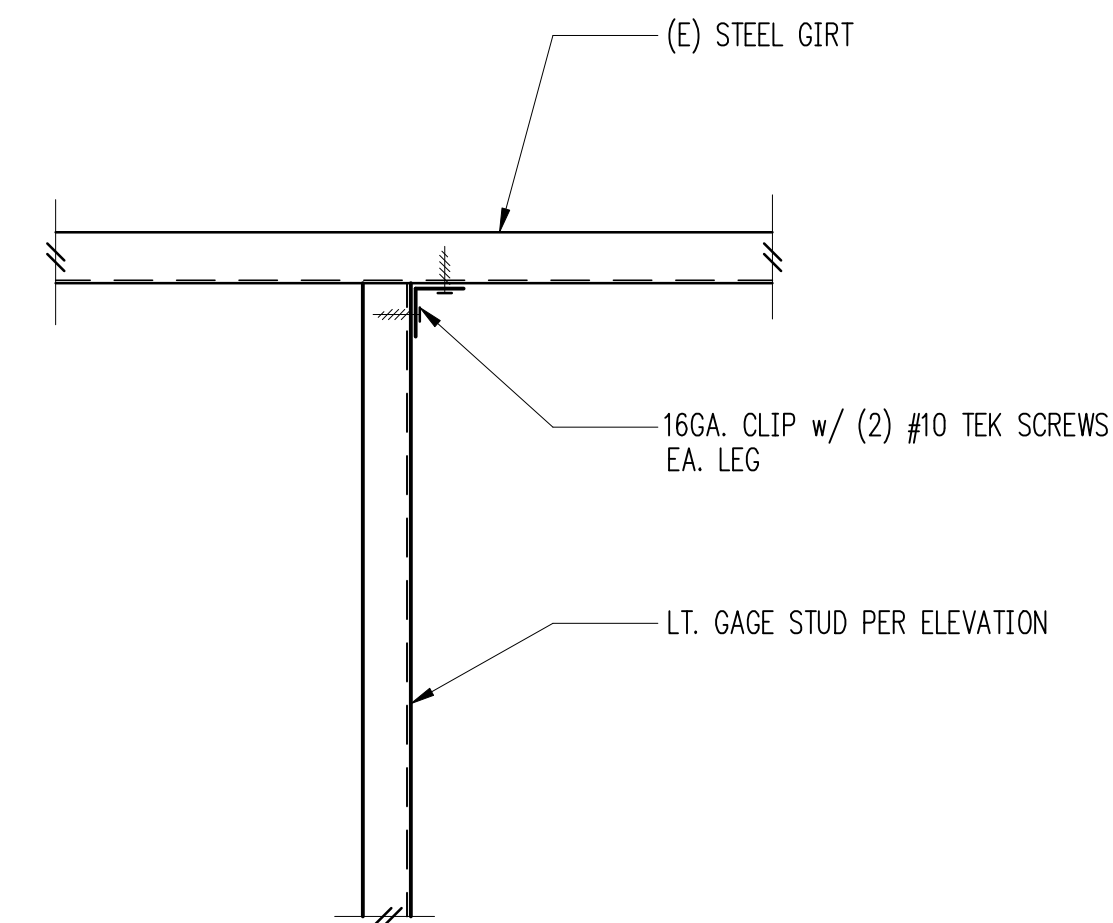
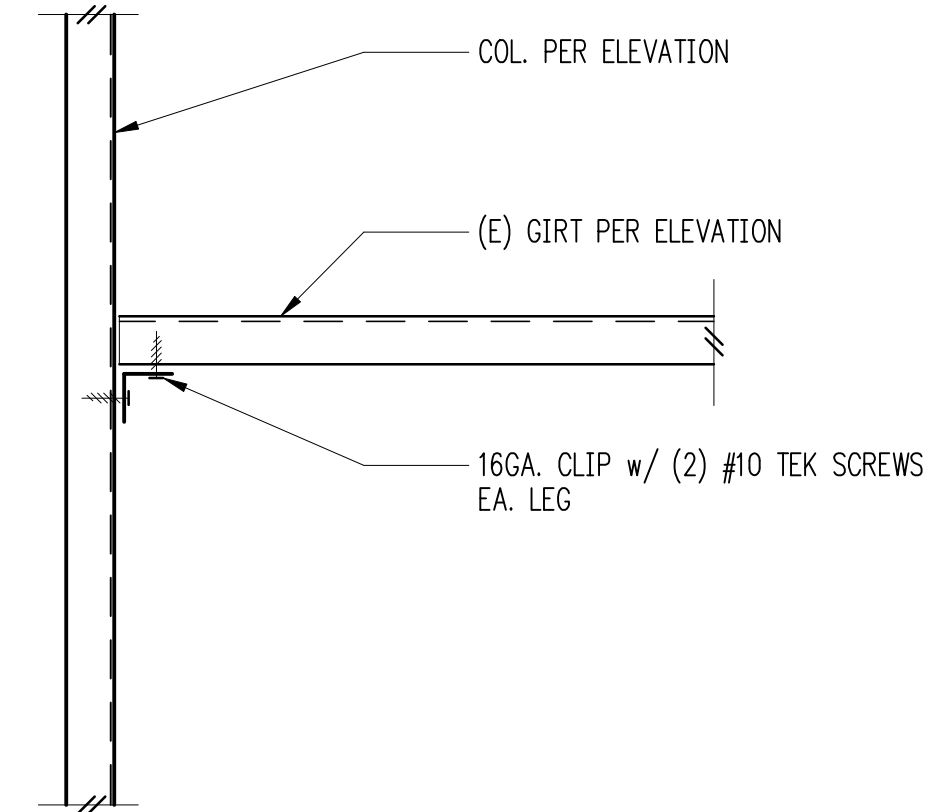
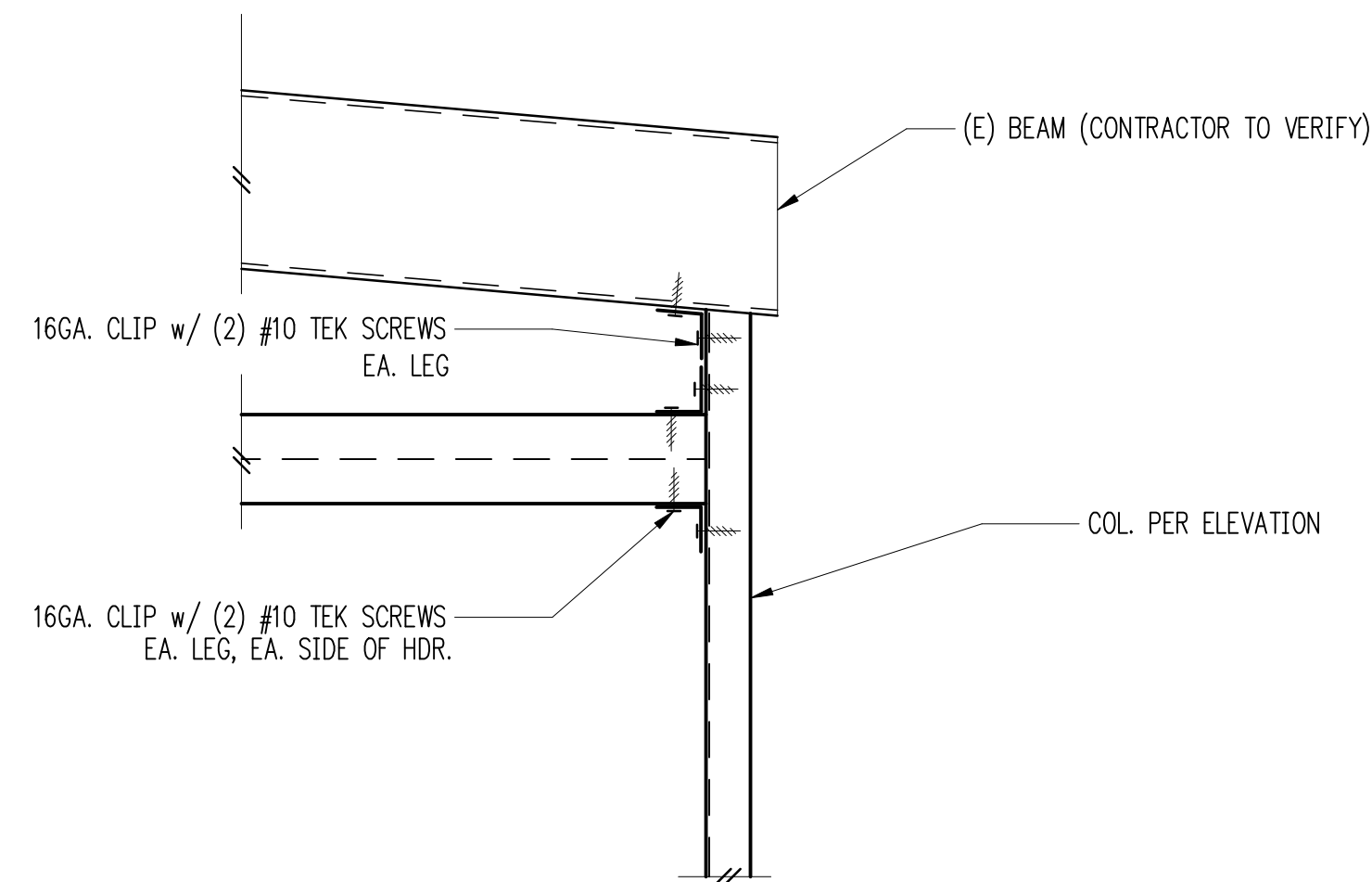
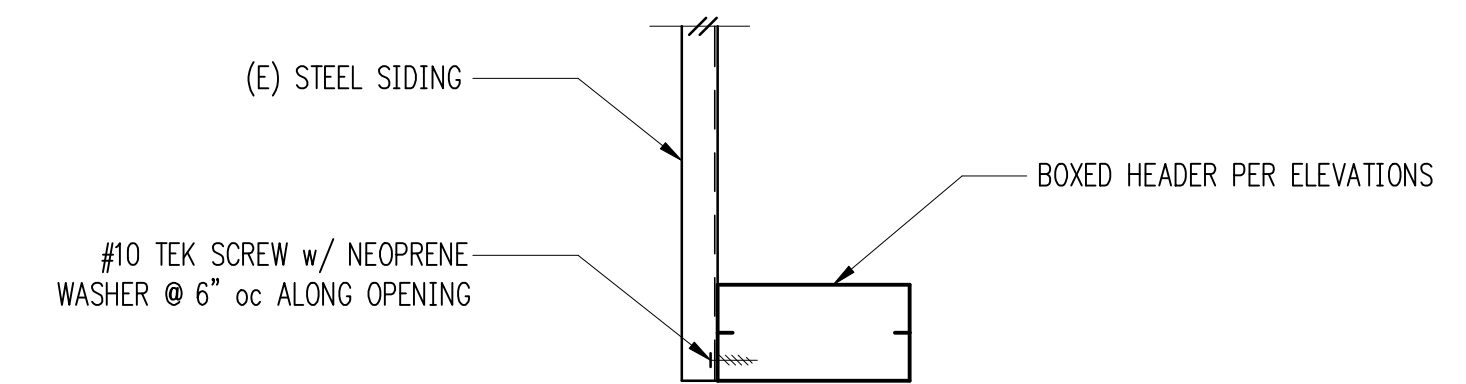
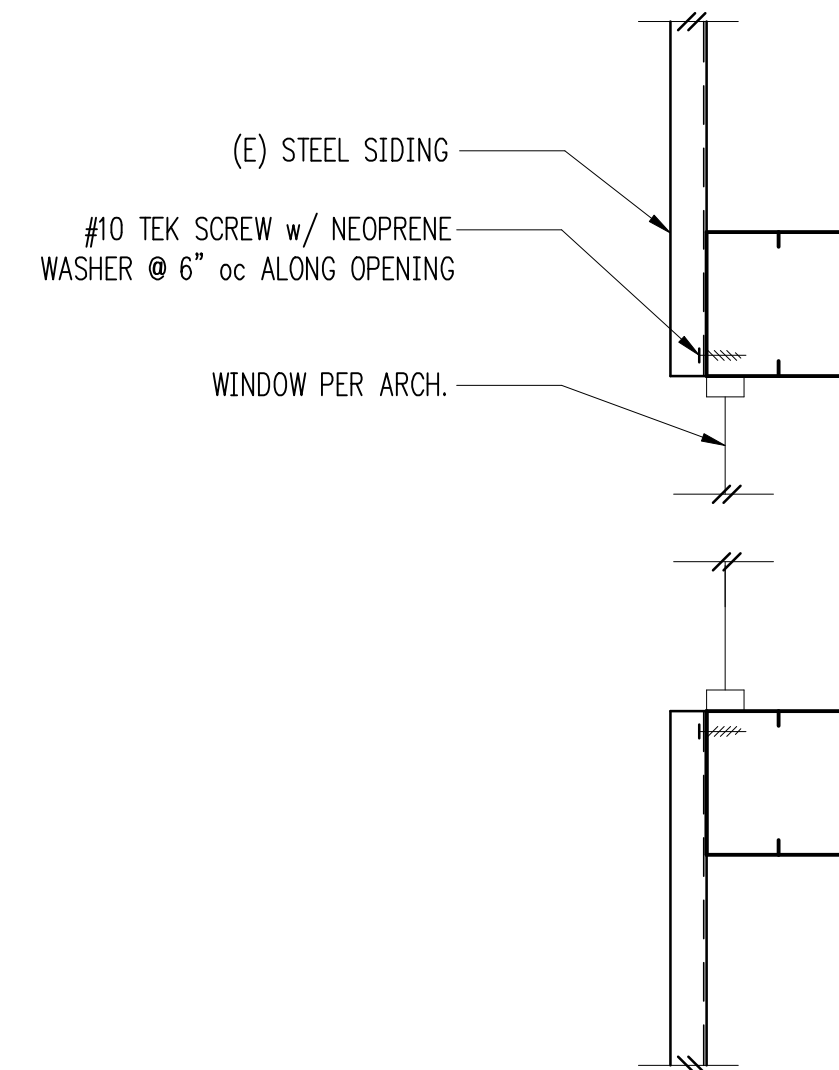
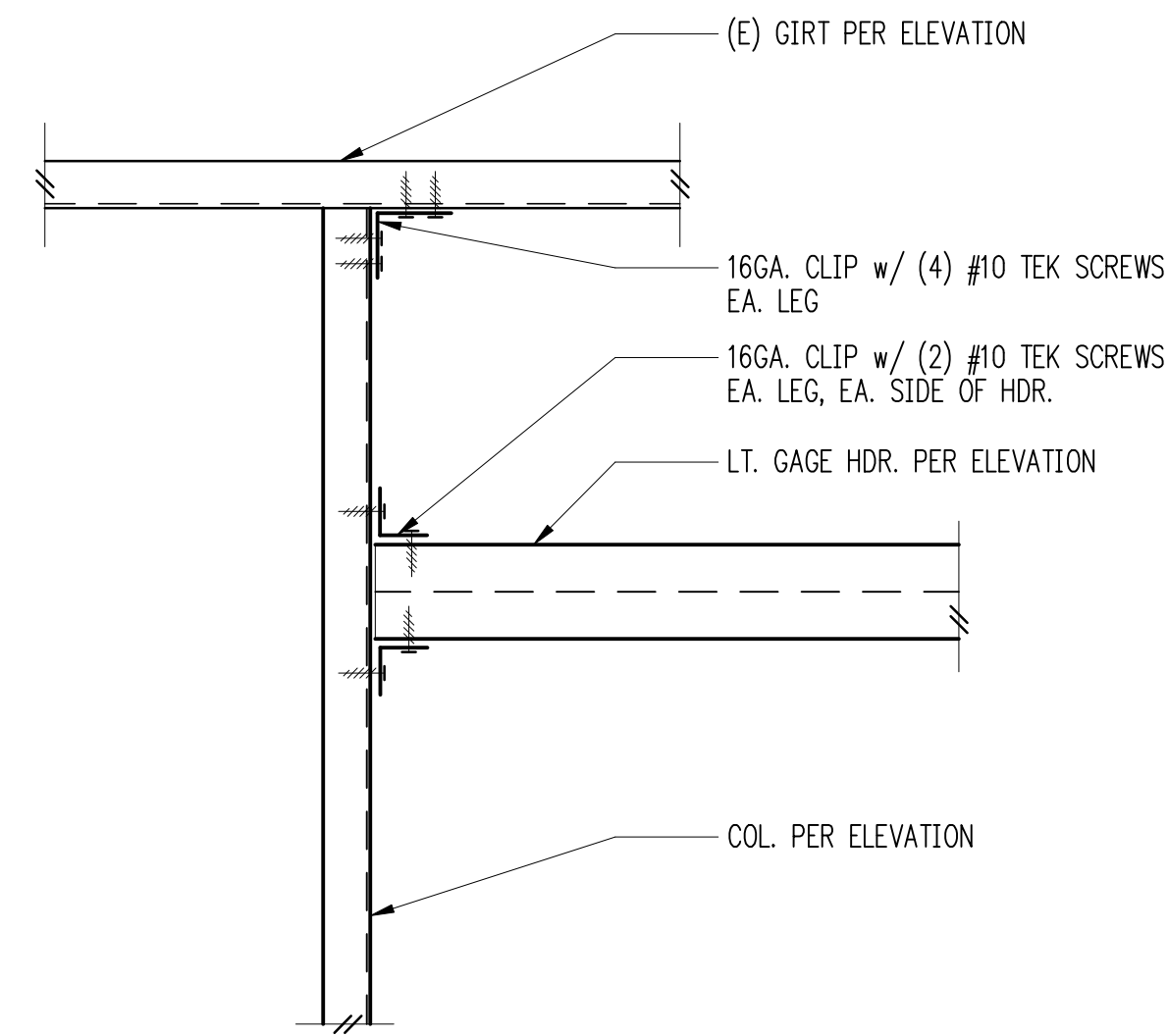
1	2	5	4
5	6	7	8
9	10	11	12





NOTES:

1. TOP AND BOTTOM TRACKS SHALL BE THE SAME GAUGE AS THE BEAM MEMBERS.



DRAWN:	TW
SIGN:	JPJ
CHECKED:	RHR
APPROVED:	RHR

VISIONS:

PD:

PROJECT TITLE:

umner Speed Shop

5008 60th Street E
Sumner WA 98390

ARCHITECT:

CRA
106 Pacific Avenue Suite 300
Tacoma WA 98402
H 253.627.4367
K 253.627.4395
www.bcradesign.com

SUE:

Permit Set

MEET TITLE:

Light Gage Details

SCALE: 1 1/2" = 1'-0" U.N.O.

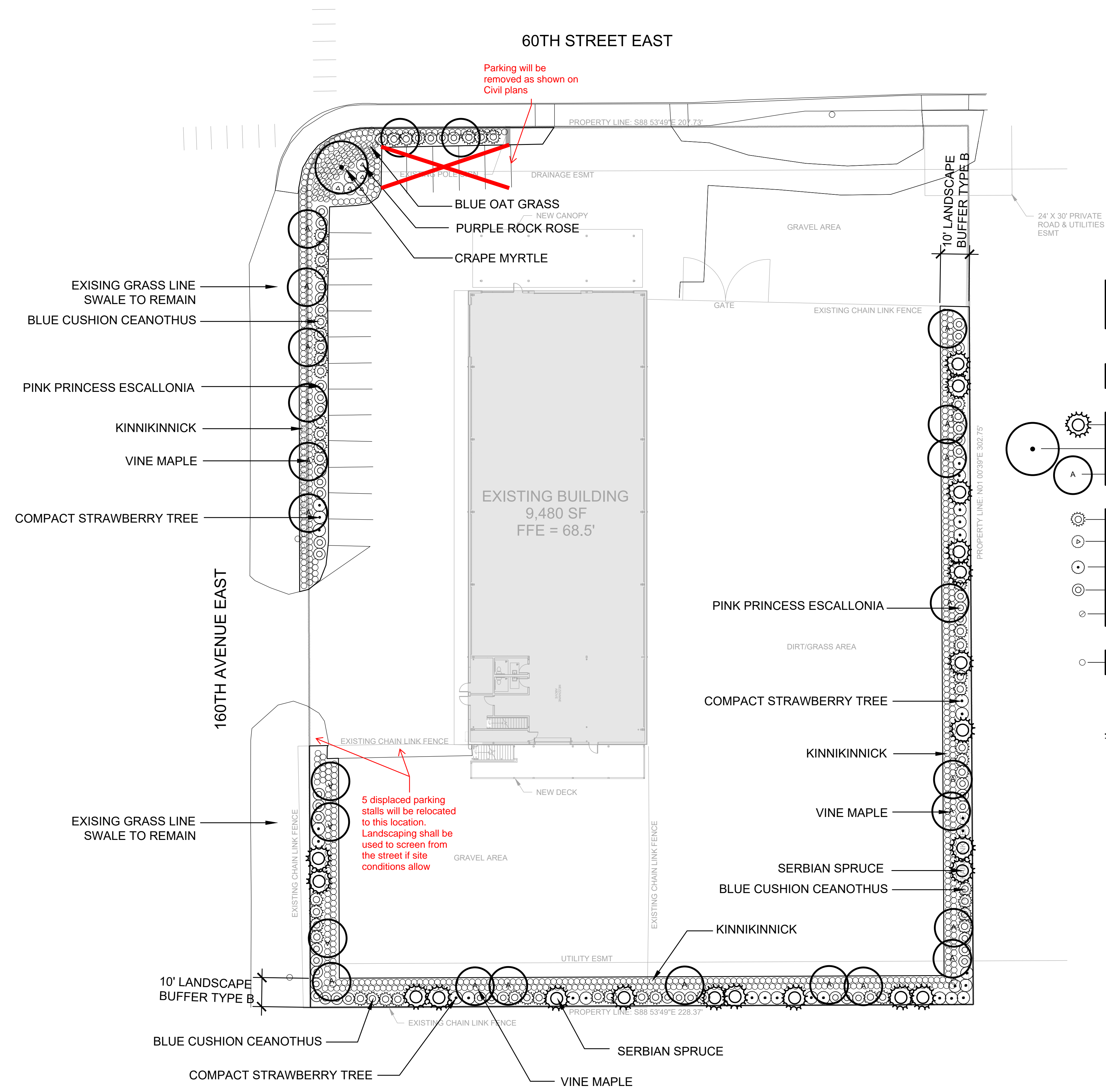
DATE: July 19th, 2018

PROJECT NO: 00970-2018-05

SHEET NO:

67.1

OF SHEETS:



APPROVED
City of Sumner Planning Department
By: *Scott Walker* 04/26/2019
The approval of this plan is subject to additional conditions listed in land use permit No.

100% OF PROPOSED PLANTS ARE DROUGHT TOLERANT SPECIES

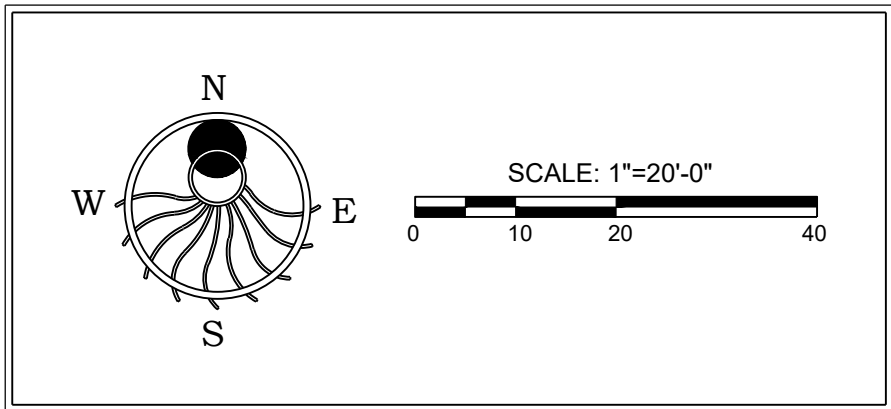
PLANT LEGEND

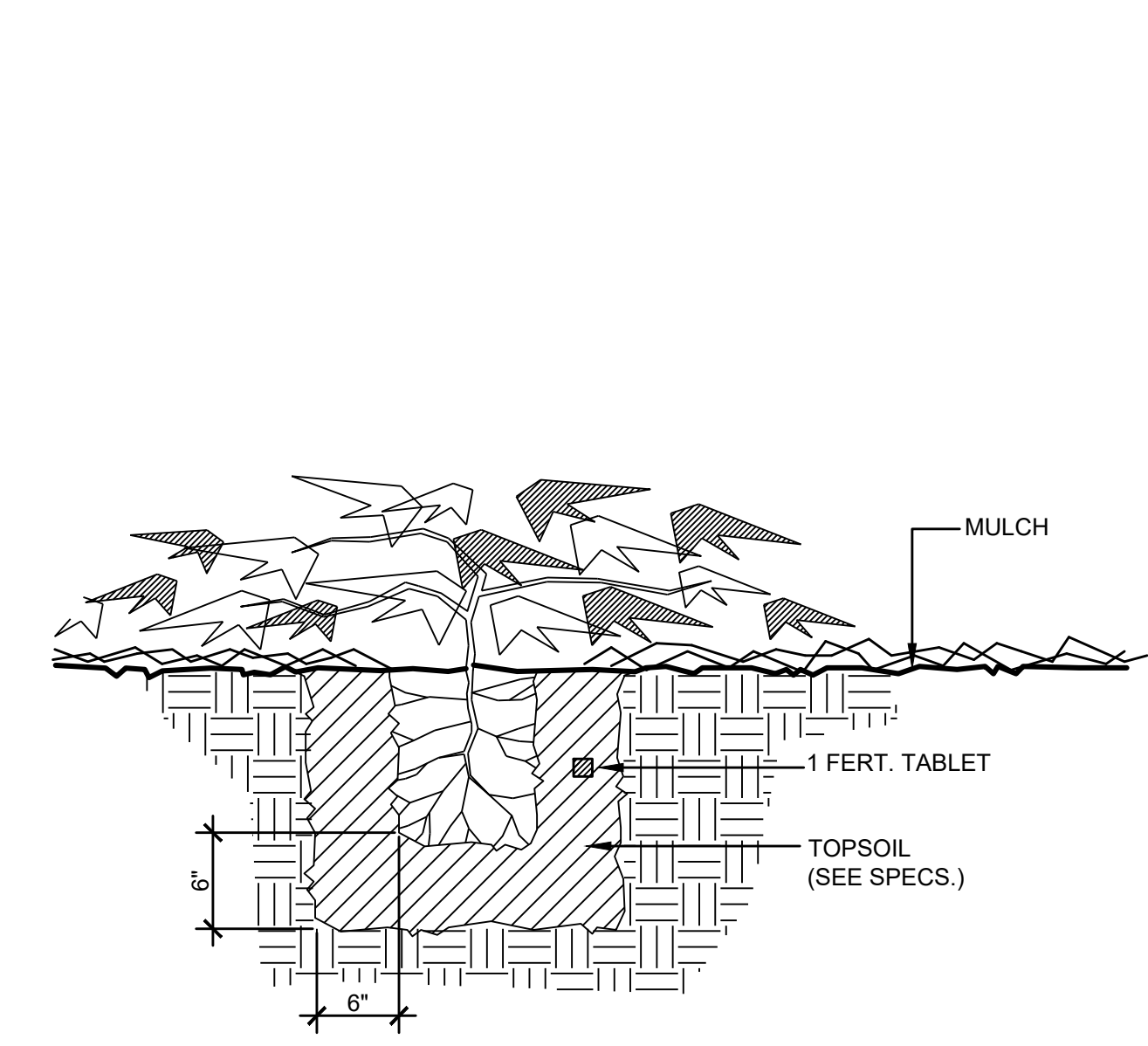
QTY	BOTANICAL NAME	COMMON NAME	SIZE & SPACING
TREES			
20	PICEA OMORIKA	SERBIAN SPRUCE	6-8' HEIGHT, SPACING PER PLAN
1	LAGERSTROEMIA INDICA	CRAPE MYRTLE	2" CAL., SINGLE TRUNK, GRAFT TO 5' HT.
25	ACER CIRCINATUM	VINE MAPLE	10-12' HT., MIN. 3 STEM GRAFT
SHRUBS			
52	CEANOTHUS 'BLUE CUSHION'	BLUE CUSHION CEANOTHUS	24"-30" MIN. HT., 4' O.C. SPACING
6	CISTUS PURPUREA	PURPLE ROCK ROSE	24"-30" MIN. HT., 4' O.C. SPACING
29	ARBUTUS UNEDO 'COMPACTA'	COMPACT STRAWBERRY BUSH	24"-30" MIN. HT., 4' O.C. SPACING
52	ESCALLONIA EXONIENSIS 'FRADESII'	PINK PRINCESS ESCALLONIA	24"-30" MIN. HT., 4' O.C. SPACING
52	HELIOTRICHON SEMPERVIRENS	BLUE OAT GRASS	1 GALLON, 24" O.C. SPACING
GROUND COVER			
750	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	4" POTS, 24" O.C. SPACING

REQUIRED LANDSCAPING MINIMUM

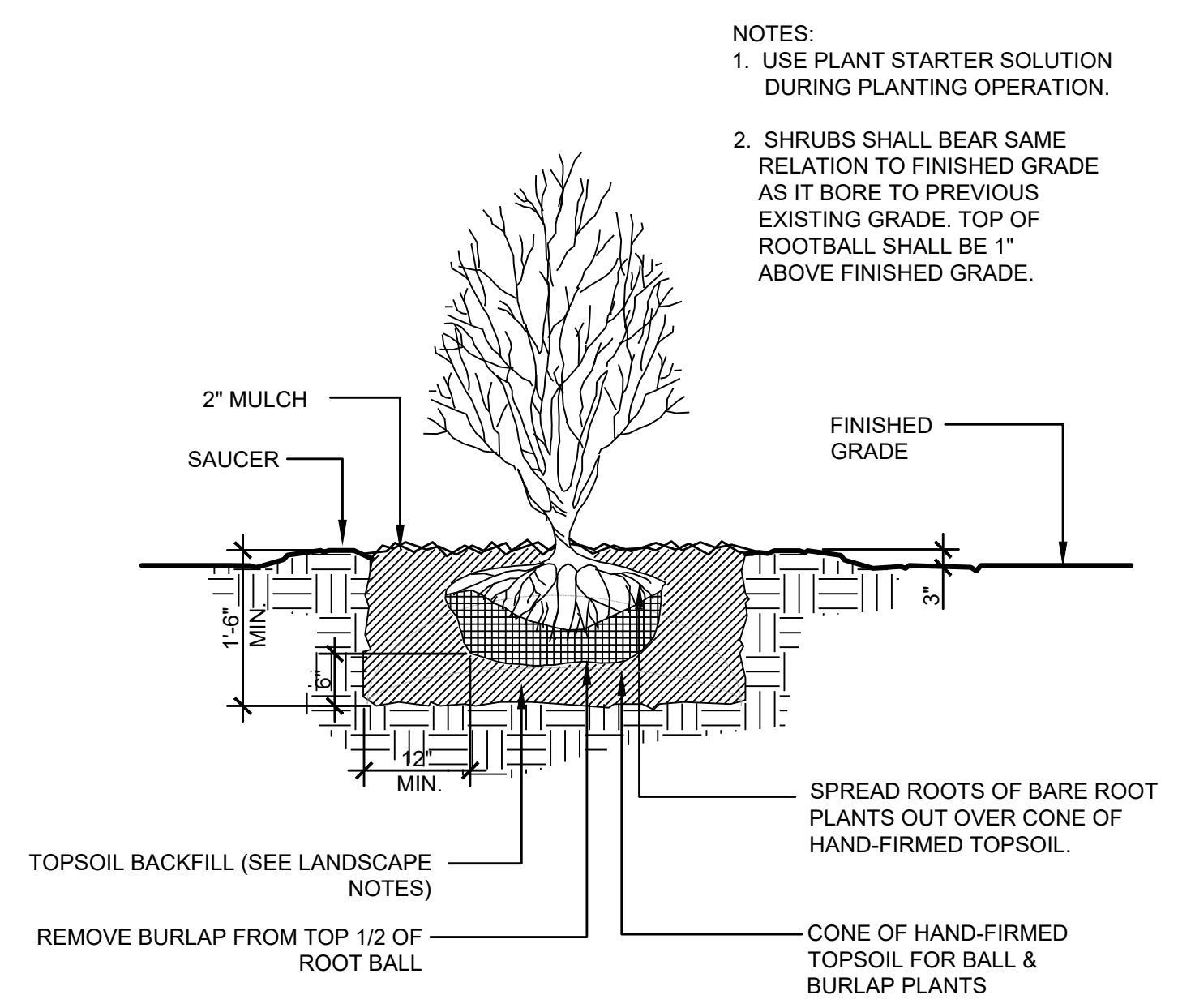
TOTAL SITE AREA = 68,955 SF
REQUIRED TOTAL SITE LANDSCAPE AREA (10% OF TOTAL SITE AREA) = 6,896 SF

TOTAL SITE LANDSCAPE AREA PROVIDED (ONLY INCLUDES AREAS OF NEW PLANTINGS OR EXISTING VEGETATION TO REMAIN) = 7,200 SF (10.4%)

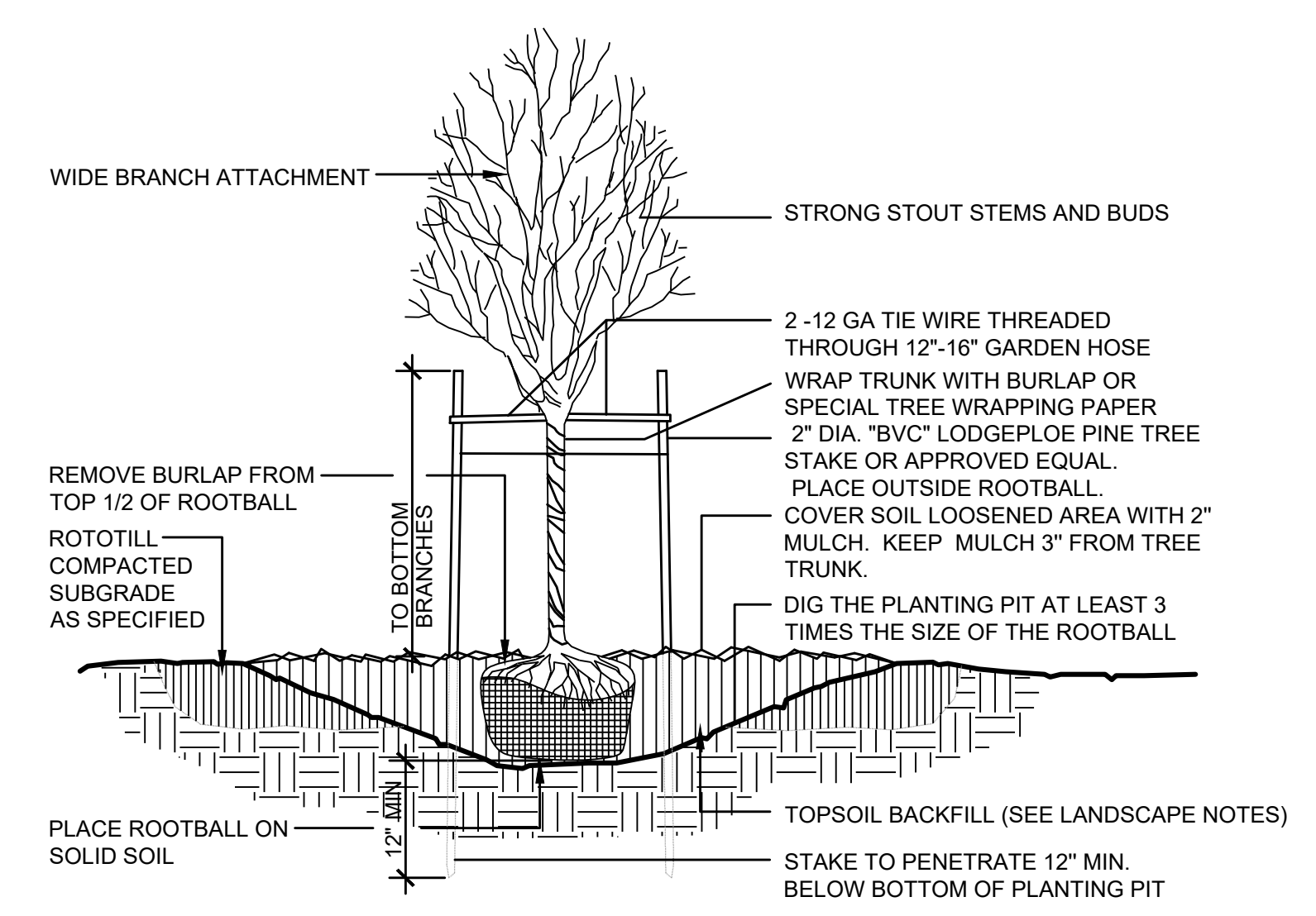




1 GROUNDCOVER PLANTING
NOT TO SCALE

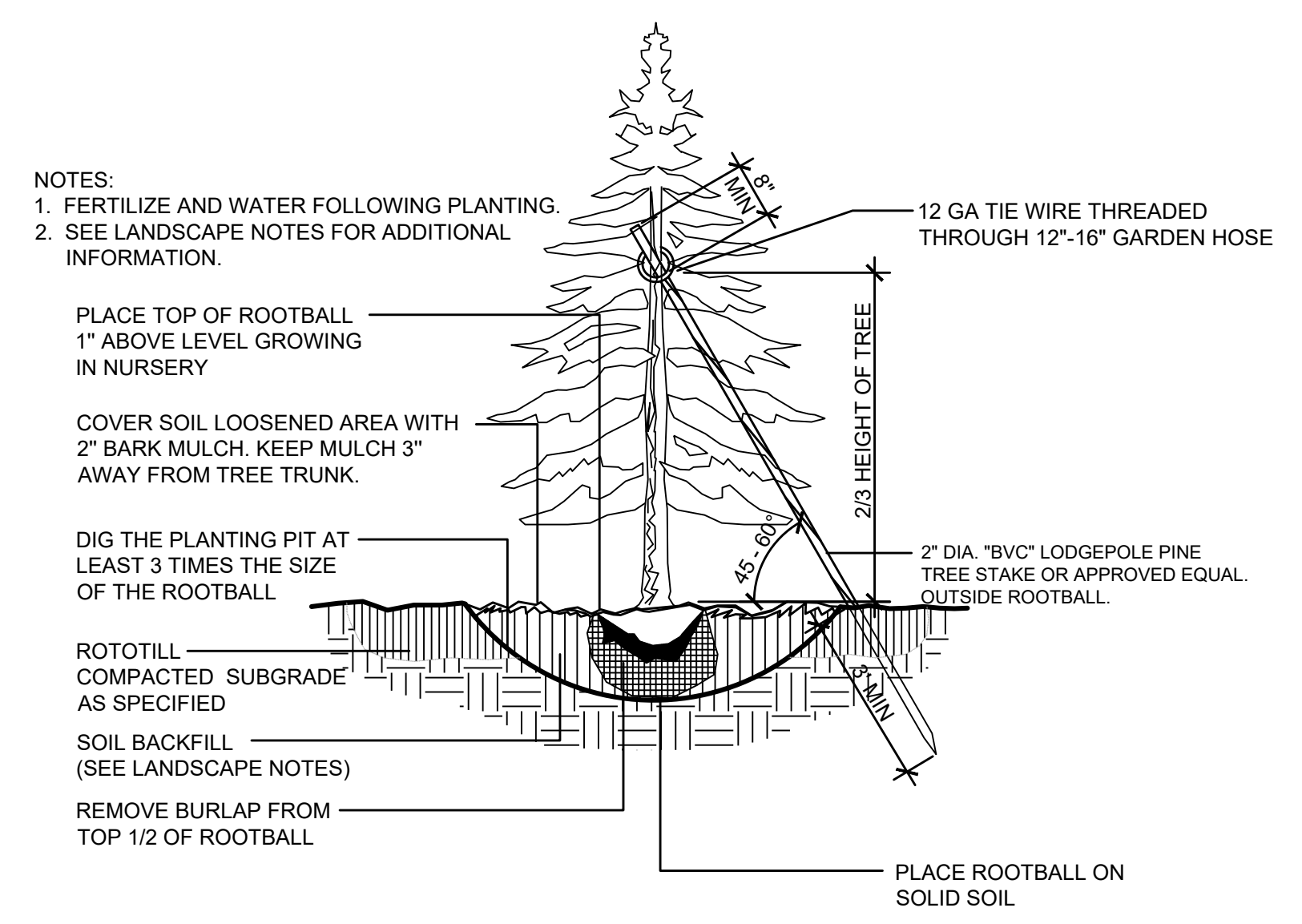


2 SHRUB PLANTING
NOT TO SCALE



NOTES:
1. FERTILIZE AND WATER FOLLOWING PLANTING.
2. SEE LANDSCAPE NOTES FOR ADDITIONAL INFORMATION.

3 DECIDUOUS TREE PLANTING with STAKING
NOT TO SCALE



4 EVERGREEN TREE PLANTING with STAKING
NOT TO SCALE

Envelope Summary

ENV

2015 WSEC Compliance Forms for Commercial Buildings including R2, R3, & R4 over 3 stories and all R1

Revised Oct 2017

Project Info Applicant Info. Provide contact information for individual who can respond to inquiries about information provided.	Project Title: Sumner Car Museum	Date: 07/19/2018
	Company Name: BCRA Design	For Building Department Use RECEIVED 04/09/2019 Community Development
	Company Address: 2106 Pacific Ave, Suite 300	
	Applicant Name: Jared Milne	
	Applicant Phone: 253.627.4367	
Applicant Email: jmilne@bcradesign.com		

Project Description	<input type="checkbox"/> New Building <input type="checkbox"/> Addition <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> No Envelope Scope
Envelope Project Scope Select all that apply.	<input checked="" type="checkbox"/> All Commercial <input type="checkbox"/> Group R - Commercial <input type="checkbox"/> Mixed Use - Commercial + Group R <input type="checkbox"/> Semi-heated <input type="checkbox"/> Refrigerated Cooler <input type="checkbox"/> Refrigerated Freezer <input type="checkbox"/> Equipment Building

Envelope Description Provide brief description of the project and relevant supporting documentation. If project includes multiple Target Insulation Allowance areas, and/or is demonstrating compliance as an Addition + Existing, Alteration + Existing, or Addition + Alteration + Existing project, provide a brief summary of the approach to whole building compliance.	
---	--

Air Barrier Testing Air barrier testing is required for all new construction projects. Testing criteria is 0.40 cfm/ft² under test pressure of 0.3 inch w.g. To comply with C406.9, demonstrate that measured air leakage of building envelope	<input checked="" type="checkbox"/> Air barrier testing per Section C402.5.1.2 included in project scope <input type="checkbox"/> Additional Efficiency Package Option - C406.9 Reduced Air Infiltration <input type="checkbox"/> Testing not required. Explanation: _____
--	--

Compliance Documentation Scope and Method

Scope of This Calculation	<input type="checkbox"/> New Building <input type="checkbox"/> Addition <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> No Envelope Scope
----------------------------------	---

Target Insulation Allowance Sets the title and calculations in the compliance forms. Selection required to enable forms.	<input checked="" type="radio"/> Fully Conditioned - Commercial, Group R, Mixed Use <input type="radio"/> Semi-heated <input type="radio"/> Refrigerated Cooler <input type="radio"/> Refrigerated Freezer If project includes more than one Target Insulation Allowance area, and/or if project includes addition and alteration areas complying independently, for each area complete an ENV-SUM form Rows 16-46 and either an ENV-PRESCRIPTIVE form, or ENV-UA + ENV-SHGC forms if demonstrating compliance via component performance.
--	---

Envelope Compliance Path Selection required to enable forms.	<input checked="" type="radio"/> Prescriptive <input type="radio"/> Component Performance
--	---

Component Performance Calculation Adjustments	<input type="checkbox"/> Change of Occupancy (C503.2) / Conditioning (C505) - 10% higher UA allowed <input type="checkbox"/> Additional Efficiency Package Option - C406.8 Enhanced Envelope - 15% lower UA required
--	---

Additions <input type="radio"/> Addition stand alone <input type="radio"/> Addition + Existing Addition stand alone - Complete Vertical Fenestration and Skylight Area Calculation. Enter total existing-to-remain wall, roof, vertical fenestration and skylight areas as EXISTING. Enter total addition envelope assembly areas as NEW. If resulting total building WWR exceeds 30% and/or SSR exceeds 5%, refer to C502.2.1 and C502.2.2 for prescriptive compliance alternatives. If complying via component performance, complete ENV-UA per instructions for addition stand alone projects. Addition + existing - Complete ENV-UA per instructions for addition + existing projects.
--

Alterations - Fenestration and Skylight <input type="checkbox"/> Replacement windows only, or resulting total building WWR ≤ original WWR <input type="checkbox"/> Total building WWR increased by alteration <input type="checkbox"/> Replacement skylights only, or resulting total building SRR ≤ original SRR <input type="checkbox"/> Total building SRR increased by alteration WWR and SRR not increased - Vertical Fenestration and Skylight Area Calculation not required. WWR and/or SRR increased - Complete Vertical Fenestration and Skylight Area Calculation. Enter total existing-to-remain wall, roof, vertical fenestration and skylight areas as EXISTING. Enter total altered envelope assembly areas as NEW. If resulting total building WWR exceeds 30% and/or SSR exceeds 5%, refer to C503.3.2 and C503.3.3 for prescriptive compliance alternatives. If complying via component performance, complete ENV-UA per instructions for alteration + existing projects.

Envelope Summary, pg. 2

ENV

2015 WSEC Compliance Forms for Commercial Buildings including R2, R3, & R4 over 3 stories and all R1

Revised Oct 2017

Project Title: Sumner Car Museum			Date: 07/19/2018		
Vertical Fenestration and Skylight Area Calculation <i>Prescriptive Path - Enter envelope sf values directly into this section of ENV-SUM for vertical fenestration, skylights, net walls and roof. For Additions and Alterations, refer to these sections in ENV-SUM for further instructions.</i> <i>Component Performance - When this Envelope Compliance Path is selected, write-protection of this section is enabled. Enter envelope sf values for all assemblies into the ENV-UA form. Envelope information from ENV-UA will auto-fill into this section of ENV-</i>		Total Vertical Fenestration Area (rough opening)	NET Exterior Above Grade Wall Area	Total Skylight Area (rough opening)	NET Exterior Roof Area
	New	978	7,490	0	0
	Existing	0	0	0	9,674
	Total	978	7,490	0	9,674
		Vertical Fenestration-to-Wall Ratio (WWR)	11.5%	Skylight-to-Roof Ratio (SRR)	
Vertical Fenestration Area Compliance		VERTICAL FENESTRATION AREA COMPLIES WITH MAXIMUM ALLOWANCE			
Skylight Area Compliance		NO SKYLIGHT PROPOSED. COMPLIES WITH MAXIMUM ALLOWANCE.			
Vertical Fenestration Alternates		<input type="radio"/> High performance fenestration U-factors and SHGC per C402.4.1.3 <input type="radio"/> Dedicated outdoor air system per C402.4.1.4 and C403.6			
Show locations of qualifying daylight zone (DLZ) areas and ft ² on project plans. For Daylight Zone Area Calculations - a) Sidelight areas include primary + secondary daylight zone areas. b) Include overlapping toplight and sidelight daylight zone areas under Toplight. c) Net floor area definition in Chapter 2.		<input type="radio"/> In buildings ≥ 3 stories, 25% or more of NET floor area is in DLZ per C402.4.1.1 <input type="radio"/> In buildings < 3 stories, 50% or more of CONDITIONED floor area is within DLZ per C402.4.1.1 Daylight Zone Calculations			
		Daylight Zone Fenestration Alternate Not Selected. No Calculations Required	Sidelight Daylight Zone Area	Toplight Daylight Zone Area	Percent Daylight Zone Area
Spaces in Single Story Building Requiring Skylights		List all enclosed spaces that exceed 2,500 ft ² , have ceiling height greater than 15 ft, and are space types required to comply with this provision. Indicate aperture with "AP" prefix (AP 1.1%)			
In these spaces a minimum of 50% of the floor area shall be within a skylight daylight zone (DLZ). Refer to C402.4.2 for requirements. SRR = Skylight to roof ratio		Space	Space Area (ft ²)	DLZ Area (ft ²)	SRR or Aperture
					Exception
Envelope Exemptions					
Low Energy and Semi-heated Spaces		Low energy spaces per C402.1.1 Item 1 are exempt from the thermal envelope provisions. Semi-heated spaces heated by systems other than electric resistance are exempt from wall insulation provision only per C402.1.1.1. Complete Low Energy and Semi-Heated Spaces table in MECH-SUM to verify eligibility based on installed peak heating and cooling capacity per sf.			
Equipment Buildings		Wall Insulation R-Value	Roof Insulation R-Value	Overall Average U-Factor	
Equipment buildings are exempt from the thermal envelope provisions per C402.1.2. The following shall be met to be eligible: building size ≤ 500 sf, average wall/roof U-factor ≤ U-0.20, electronic equipment load ≥ 7 watts/sf, heating system output capacity ≤ 17,000 btu/h. Cooling system capacity not limited.		Equipment Building Envelope			
		Electronic equipment power (watts/sf)			
		Heating system output capacity (Btu/hr)			
		Cooling capacity (Yes/No)			

Prescriptive Path, pg. 1

ENV-PRESCRIPTIVE

2015 WSEC Compliance Forms for Commercial Buildings including R2, R3, & R4 over 3 stories and all R1

Revised Oct 2017

Project Title:		Sumner Car Museum			Date		07/19/2018	
Target Insulation Allowance					For Building Department Use			
Fully Conditioned Space - Commercial, Group R, Mixed Use								
Fenestration Area as % gross above-grade wall area		11.5%	Max. Target:	30.0%				
Skylight Area as % gross roof area		0.0%	Max. Target:	5.0%				
Vertical Fenestration Alternates:					None Selected on ENV-SUM		User Note	
<i>Prescriptive compliance of envelope assemblies may be accomplished by providing insulation R-values per Table C402.1.3 or U-factors / F-factors per Tables C402.1.4 and C402.4. A single project may comply via R-values for some envelope assemblies and U-factors / F-factors for others. Note compliance method taken for each assembly in spaces provided.</i>								
Building Component			R-Value Method for Prescriptive Compliance			U-Factor/F-Factor Method for Prescriptive Compliance		
			Cavity Ins. R-Value	Continuous Ins. (CI) R-Value ¹	% Area of Metal Penetrations in CI ²	Assembly U-Factor	U-Factor Source ³	
Roofs	Deck	Provide plan/detail # of assembly and description						
	Mtl Bld ⁴	R1/A-621 - Standing seam metal roof w simple saver system (standing seam w thermal block, U-0.031)					0.031	
	Joist/Rtrr							
	Attic/Oth							
Opaque Walls - Above Grade ¹⁵	Steel							
	Mtl Bld.	W1/A-621 & W2/A-621 - Exterior wall w metal siding and simple saver system (5' spacing, U-0.052)					U-0.052	
	Wood/Oth ⁵							
	Mass ⁶							
Group R Walls ¹⁵	Transfer ⁷							
	Steel							
Below Grade Walls	Mass							
	Comm							
Floors	Mass							
	Framed ⁸							

Prescriptive Path, pg. 2

ENV-PRESCRI

2015 WSEC Compliance Forms for Commercial Buildings including R2, R3, & R4 over 3 stories and all R1

Revised Oct 2017

Project Title: Sumner Car Museum				Date: 07/19/2018	
Fenestration Area as % gross above-grade wall area 11.5% Max. Target: 30.0%				For Building Department Use	
Skylight Area as % gross roof area 0.0% Max. Target: 5.0%					
<i>If vertical fenestration or skylight area exceeds maximum allowed per C402.4.1, then the project must comply via Component Performance and provide ENV-UA and ENV-SHGC forms.</i>					

Building Component		R-Value Method for Prescriptive Compliance			U-Factor/F-Factor Method for Prescriptive Compliance		
		Perim. Ins. R-Value	Full Slab CI R-Value		F-Factor	F-Factor Source ¹⁰	
Slab-on-grade ⁹	Unheated						
	Heated						
Provide plan/detail # of assembly and description							
Provide ID from door schedule and description		Ins. R-Value			Assembly U-Factor	U-Factor Source ¹¹	
Opaque Doors	Swinging				0.370	Manufacturer data	
	Other						
		Solar Heat Gain Coefficient (SHGC)			U-Factor for Prescriptive Compliance		
Provide ID from window schedule and description		Projection Factor (PF) if applicable ¹²	Orientation (N or SEW) ¹³	Assembly SHGC ¹⁴	Assembly U-Factor	U-Factor Source ¹⁴	
Vertical Fenestration	Non-Metal						
	Metal, fixed	Typ storefront SF02 sheet A-611		N SEW	0.40 0.40	0.38 0.38	NFRC Certificate NFRC Certificate
		Typ storefront SF03, SF04 sheet A-611					
	Metal, entry	Overhead door, 101B, sheet A-611		N SEW	0.40 0.40	0.40 0.40	NFRC Certificate NFRC Certificate
Overhead door, 101D, sheet A-611							
	Typ storefront entry door, SF01 sheet A-611		N	0.40	0.60	NFRC Certificate	
Skylights	All Types						

Below a slab-on-grade or exposed floor, this floor shall be thermally broken from the surrounding floor area with the same amount of insulation as required for the floor above.

Miscellaneous - Refrigerated Spaces

Provide plan/detail # of assembly and description		Ins. R-Value			Assembly U-Factor	U-Factor Source
Freezer Floor ¹⁷						
Provide ID from window schedule and description		Cooler / Freezer	Double Pane Glass	Triple Pane Glass	Inert Gas Filled	Heat Reflective Treated Glass
Glazing ^{16,17}	In Door					
	Reach In					

- Note 1** - Insulation that is continuous except for fasteners may be entered here if the cross-sectional area of metal penetration through otherw continuous insulation is less than 0.12%.
- Note 2** - Alternate prescriptive continuous insulation R-values per Table C402.1.4, Footnote F may be used if the cross sectional area of metal penetrations exceeds 0.04% but is less than 0.12%. Calculations are required to use these alternate R-values.
- Note 3** - Opaque assembly U-factors shall come from Appendix A or calculated per approved method as specified in C402.1.5.1. Specify the table number or calculation page number.
- Note 4** - Thermal spacer blocking and liner system are required for prescriptive R-Value compliance in metal building roof assemblies. Note thermal spacer thickness and R-value in roof assembly description.
- Note 5** - Intermediate framing is required for prescriptive R-Value compliance in wood-framed wall assemblies.
- Note 6** - Proposed CMU mass walls in non-Group R that meet Table C402.1.4 Footnote C requirements can enter the target prescriptive U-value of 0.104.
- Note 7** - Mass transfer slab edges must be covered with an assembly having an overall U-factor of 0.2.
- Note 8** - Refer to Table C402.1.3, Footnote E for prescriptive R-Value requirement for steel floor joist assemblies.
- Note 9** - Prescriptive slab-on-grade insulation shall extend from top of slab to minimum length per an approved method as defined in C402.2.6.
- Note 10** - Slab-on-grade F-Factors shall come from Appendix A or calculated per approved method as specified in C402.1.5.1.
- Note 11** - Opaque door U-factors shall come from Appendix A or calculated per approved method as specified in C402.1.5.1. A door is defined as opaque if less than 50% of the door area has glazing.
- Note 12** - Refer to Equation C4-6 Projection Factor Calculation.
- Note 13** - N = Oriented within 45 degrees of true north, SEW = All other orientations.
- Note 14** - Fenestration assembly U-Factor and SHGC shall be the manufacturer's NFRC product rating, which includes the glazing and frame, or shall be the default value per Section C303.1.3.
- Note 15** - List all above-grade Group R mass walls and steel frame walls in Group R Walls section. List commercial above grade walls and all other Group R above grade walls in Opaque Walls - Above Grade.
- Note 16** - Refrigerated Coolers - All cooler roof, wall and door assemblies shall comply with the prescriptive R-values or U-factors per C410. Enter proposed information under the most similar assembly type. Slab edge insulation for slab-on-grade floors shall comply with C402. Floors that separate a cooler from a non-cooler space (unconditioned and conditioned) shall be insulated per C402. Vertical fenestration (not within cooler doors) shall comply with the prescriptive R-values or U-factors per C402. Enter only the opaque portion of refrigerated space doors. Windows within doors and reach-in display case doors shall comply with C410 prescriptive requirements.
- Note 17** - Refrigerated Freezers - All freezer roof, wall and door assemblies shall comply with the prescriptive R-values or U-factors per C410. Enter proposed information under the most similar assembly type. Freezer floor insulation shall comply with C410. Insulation is required under the entire freezer floor. If the freezer floor assembly rests on top of a standard floor, the vertical edge of the freezer floor shall be entered as and comply with the requirements for a freezer wall. If freezer floor insulation is installed as integral to or applied underneath a slab-on-grade or exposed floor, this floor shall be thermally broken from the surrounding floor area with the same amount of insulation as required for a freezer floor. Enter proposed thermal break information in the Freezer Floor section and note it as In-Floor Thermal Break. Enter only the opaque



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Structural Calculations For:

Sumner Speed Shop

16008 60th St E

Sumner, WA



Prepared for: BCRA, Jared Milne

Job #: 0970-2018-05

Date: July 19th, 2018

Review #1

BLD-2019-0146



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Criteria Sheet

Codes:

Structural: IBC 2015
ASCE 7-10
Wood: NDS 2015
Steel: AISC 14th ed.
Concrete: ACI 318-14

16008 60th ST E
Sumner, WA

Occupancy Category

Risk Category: II ASCE 7 Table 1.5-1

Seismic Load Summary:

Analysis Procedure: Equivalent Lateral Force Procedure
Lateral System: Light Framed Shear Walls
R: 6.50
Base Shear V = 9.9 k
S_s = 1.237
S_{DS} = 0.83
C_s = 0.128
C_d = 4
Ω_o = 2.5
S₁ = 0.472
S_{D1} = 0.48
I_E = 1.0

Wind Load Summary:

I_w = 1 V = 110
Exposure = B K_{zT} = 1.00

Dead Loads:

Roof
Roofing 2 psf
Framing 2 psf
Misc./Mech. 2 psf
Insulation 1 psf
7 psf
use 8 psf

Floor
Finish Floor 1 psf
3/4" Sheathing 2.3 psf
Joists @ 16" oc 2 psf
Misc./Mech. 2.4 psf
Ceiling Finish 2.3
10 psf

Live Loads:

Snow 25 psf
Floor 40 psf

Soils:

Allowable Bearing 1500 psf



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Project: Sumner Speed Shop Date: 6/26/2018

Project #:

Design: JPJ

Sheet: CRIT 1

Seismic Design

ASCE 7-10 Seismic Analysis
Equivalent Lateral Force Procedure

EXISTING BLDG. SEISMIC

Risk Category	II	I, II, or III, or IV per Table 1.5-1
Site Class	D	per soils report (D assumed, without soils report)

Ω_o	2.5	
S_S	1.237 g	2% in 50 yr, Latitude & Longitude lookup
S_1	0.472 g	2% in 50 yr, Latitude & Longitude lookup
h_n	16 ft	
R	6.50	Light Framed Shear Walls
I_e	1.0	Table 1.5-2
C_d	4	
C_t	0.02	Table 12.8-2
x	0.75	Table 12.8-2
T	0.16 sec	Eq. 12.8-7
T_0	0.12 sec	
T_S	0.58 sec	
k	1.000	
F_a	1.01	Table 11.4-1
F_v	1.53	Table 11.4-2
S_{MS}	1.24 g	Eq. 11.4-1
S_{M1}	0.72 g	Eq. 11.4-2
S_{DS}	0.83 g	Eq. 11.4-3
S_{D1}	0.48 g	Eq. 11.4-4
C_s	0.128	Eq. 12.8-2
	0.462	Eq. 12.8-3 need not exceed, $T < T_L$
	0.010	Eq. 12.8-5 or 12.8-6 minimum
C_s , design	0.128	
Bldg. Weight	77.8 k	
$V = C_s W$	9.9 k	Eq. 12.8-1, Strength Level Base Shear
$V = C_{s50} W$	6.9 k	Eq. 12.8-1 Allowable Stress Base Shear

$$T_a = C_t h_n^x \quad \text{Eq. 12.8.7}$$

$$S_{MS} = F_a S_S \quad \text{Eq. 11.4-1}$$

$$S_{M1} = F_v S_1 \quad \text{Eq. 11.4-2}$$

$$S_{DS} = 2/3 S_{MS} \quad \text{Eq. 11.4-3}$$

$$S_{D1} = 2/3 S_{M1} \quad \text{Eq. 11.4-4}$$

$$C_S = \frac{S_{DS}}{(R/I_e)} \quad \text{Eq. 12.8-2}$$

$$C_S = \frac{S_{D1}}{T(R/I_e)} \quad \text{Eq. 12.8-3}$$

$$C_S = \frac{S_{D1} T_L}{T^2 (R/I_e)} \quad \text{Eq. 12.8-4}$$

$$C_S \geq 0.044 S_{DS} I_e \quad \text{Eq. 12.8-5}$$

$$C_S \geq 0.01 \quad \text{Eq. 12.8-5}$$

$$C_{VX} = w_x h_x^k / \sum_{i=1}^n w_x h_i^k \quad \text{Eq. 12.8-12}$$

$$F_{px} = \sum_{i=x}^n F_i / \sum_{i=x}^n w_i w_{px} \quad \text{Eq. 12.10-1}$$

$$F_{px} \geq 0.2 S_{DS} I_e w_{px} \quad \text{Eq. 12.10-2}$$

$$F_{px} \leq 0.4 S_{DS} I_e w_{px} \quad \text{Eq. 12.10-3}$$

Vertical Distribution

ASD	$\rho = 1.0$					Story Shear		Diaphragm				
						ASD		Force (p not included)				
Level	h_x (ft)	W_x	h_x^k (ft)	$W_x h_x^k$	C_{vx} (%)	F_x (k)	ΣV (k)	$F_{px\text{calc}}$	$F_{px\text{min}}$	$F_{px\text{max}}$	$F_{px\text{design}}$	$\gamma = F_{px}/F_x$
Roof	16.0	77.76	16.0	1244.2	1.000	6.9	6.9	6.94	9.02	18.05	9.02	1.30
	Σ	77.8		1244.2		6.9						



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Date: 6/26/2018

Project #: _____

Design: JPJ

Sheet: CRIT 2

Seismic Design

ASCE 7-10 Seismic Analysis
Equivalent Lateral Force Procedure

Risk Category	II
Site Class	D

I, II, or III, or IV per Table 1.5-1
per soils report
(D assumed, without soils report)

MEZZANINE SEISMIC

Ω_o	2.5	
S_s	1.237 g	2% in 50 yr, Latitude & Longitude lookup
S_1	0.472 g	2% in 50 yr, Latitude & Longitude lookup
h_n	16 ft	
R	6.50	Light Framed Shear Walls
I_e	1.0	Table 1.5-2
C_d	4	
C_t	0.02	Table 12.8-2
x	0.75	Table 12.8-2
T	0.16 sec	Eq. 12.8-7
T_0	0.12 sec	
T_s	0.58 sec	
k	1.000	
F_a	1.01	Table 11.4-1
F_v	1.53	Table 11.4-2
S_{MS}	1.24 g	Eq. 11.4-1
S_{M1}	0.72 g	Eq. 11.4-2
S_{DS}	0.83 g	Eq. 11.4-3
S_{D1}	0.48 g	Eq. 11.4-4
C_s	0.128	Eq. 12.8-2
	0.462	Eq. 12.8-3 need not exceed, $T < T_L$
	0.010	Eq. 12.8-5 or 12.8-6 minimum
C_s , design	0.128	
Bldg. Weight	15.0 k	
$V = C_s W$	1.9 k	Eq. 12.8-1, Strength Level Base Shear
$V = C_{s,asd} W$	1.3 k	Eq. 12.8-1 Allowable Stress Base Shear

$$T_a = C_t h_n^x \quad \text{Eq. 12.8.7}$$

$$S_{MS} = F_a S_s \quad \text{Eq. 11.4-1}$$

$$S_{M1} = F_v S_1 \quad \text{Eq. 11.4-2}$$

$$S_{DS} = \frac{2}{3} S_{MS} \quad \text{Eq. 11.4-3}$$

$$S_{D1} = \frac{2}{3} S_{M1} \quad \text{Eq. 11.4-4}$$

$$C_s = \frac{S_{DS}}{(R/I_e)} \quad \text{Eq. 12.8-2}$$

$$C_s = \frac{S_{D1}}{T(R/I_e)} \quad \text{Eq. 12.8-3}$$

$$C_s = \frac{S_{D1} T_L}{T^2 (R/I_e)} \quad \text{Eq. 12.8-4}$$

$$C_s \geq 0.044 S_{DS} I_e \quad \text{Eq. 12.8-5}$$

$$C_s \geq 0.01 \quad \text{Eq. 12.8-5}$$

$$C_{VX} = w_x h_x^k / \sum_{i=1}^n w_x h_i^k \quad \text{Eq. 12.8-12}$$

$$F_{px} = \frac{\sum_{i=x}^n F_i}{\sum_{i=x}^n w_i w_{px}} \quad \text{Eq. 12.10-1}$$

$$F_{px} \geq 0.2 S_{DS} I_e w_{px} \quad \text{Eq. 12.10-2}$$

$$F_{px} \leq 0.4 S_{DS} I_e w_{px} \quad \text{Eq. 12.10-3}$$

Vertical Distribution

Level	h_x (ft)	W_x	h_x^* (ft)	$W_x h_x^*$	C_{vx} (%)	Story Shear ASD F_x (k)	ΣV (k)	$F_{px,calc}$	Diaphragm Force (p not included) $F_{px,min}$	$F_{px,max}$	$F_{px,design}$	$V = F_{px}/F_x$
Mezz	9.0	15	9.0	135.0	1.000	1.3	1.3	1.34	1.74	3.48	1.74	1.30
Σ		15.0		135.0		1.3						



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Project #: _____

Design: JPJ

Sheet: CRIT3

Wind Design

ASCE 7-10 Method 2 - Analytical Procedure

Wind Coefficients

Exposure B	
V= 110	mph
K _d = 0.85	Table 26.6-1
I _w = 1	Table 1.5-2
G= 0.85	26.9.4

Location and Building Dimensions

Calculate K _{zt} ?	NO	
K _{zt}	1	
Roof Angle	5	degrees
Ground to top of roof	20	ft
Bottom of roof to top of roof	2.5	ft
(mean roof height) h	18.75	ft

Pressure Coefficients from Figure 27.4-1:

Bldg Face	C _p
Windward Wall	0.8
Leeward Wall	-0.5
Windward Roof	0
Leeward Roof	-0.7

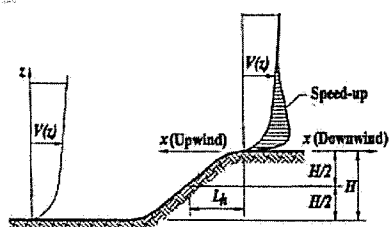
*Note= Cp values are conservative worst case values

Pressures:

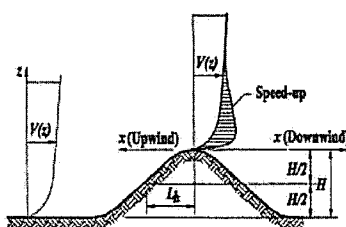
Strength

Allowable

Ht	K _z	q _z	P _{ww walls}	P _{lw walls}	P _{walls (psf)}	P _{walls (psf)}
0-15	0.57	15.01	10.21	6.94	17.14	10.29
15-20	0.62	16.32	11.10	6.94	18.04	10.82
20-25	0.66	17.38	11.82	6.94	18.75	11.25
25-30	0.7	18.43	12.53	6.94	19.47	11.68
30-40	0.76	20.01	13.61	6.94	20.54	12.33
41-50	0.81	21.33	14.50	6.94	21.44	12.86
51-60	0.85	22.38	15.22	6.94	22.16	13.29
61-70	0.89	23.43	15.93	6.94	22.87	13.72
71-80	0.93	24.49	16.65	6.94	23.59	14.15
81-90	0.96	25.28	17.19	6.94	24.13	14.48
91-100	0.99	26.07	17.73	6.94	24.66	14.80
			P _{ww roof}	P _{lw roof}	P _{roof (psf)}	P _{roof (psf)}
			0.00	9.71	9.71	5.83



ESCARPMENT



2-D RIDGE OR 3-D AXISYMMETRICAL HILL

$$K_{zt} = (1 + K_1 K_2 K_3)^2$$

$$K_1 = \text{Per Figure}$$

$$K_2 = (1 - |x|/\mu L_h)$$

$$K_3 = e^{-\gamma z/L_h}$$

$$K_{zt} = 1, \text{ if } H/L_h \leq 0.2$$

PER FIGURE 26.8-1



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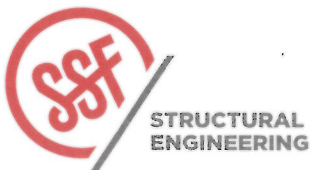
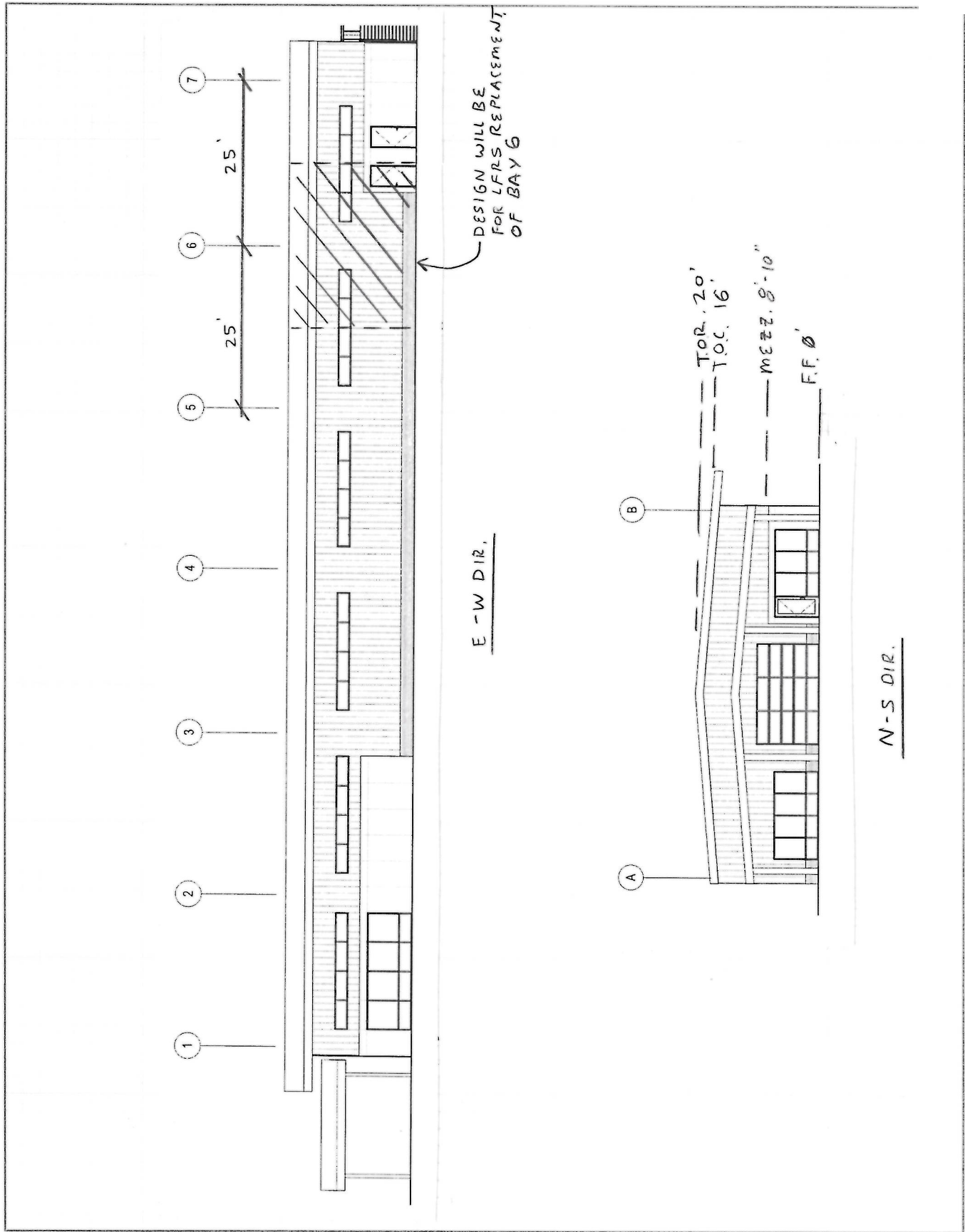
Project: Sumner Speed Shop

Date: 6/26/2018

Project #: _____

Design: JPJ

Sheet: CRIT 4



SUMNER SPEED SHOP

PROJECT

6/26/2018

DATE

PROJ. #

JPJ

DESIGN

LI

SHEET

LATERAL ANALYSIS

BUILDING N-S

SEISMIC:

$$V_s = 6.9^k \quad (ALL.)$$

$$W = 46^{#1}$$

$$F = 46^{#1}(25) = 1,125^k$$

WIND:

$$W = 10.8^{PSF} \left(\frac{16'}{2} \right) + 5.8^{PSF} (4') = 110^{#1}$$

$$F = 110^{#1}(25) = 2,750^k \leftarrow \text{FORCE TO BE RESISTED BY MEZZ. SW}$$

$$L = 12' \quad \text{S.W. LENGTH}$$

$$v = 2750^k / 12' = 230^{#1} \quad \text{UNIT SHEAR}$$

WIND CONTROLS

USE SW1

$$OT = 1840^k \leftarrow \text{USE CMST C16 STRAPS}$$

MEZZA IN N-S

$$V_s = 1.3^k \quad (ALL.)$$

$$F = 1.3^k / 2 + 1.1^k \quad \text{MEZZ. ROOF}$$

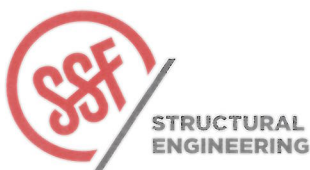
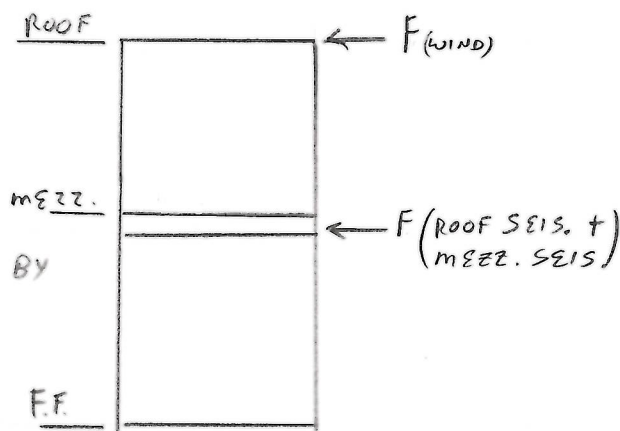
$$F = 1.75^k \quad \text{FORCE RESISTED BY 1ST FLOOR SW}$$

$$L = 20'$$

$$v = 1.75^k / 20' = 88^{#1}$$

USE SW1

$$OT = 993^k \leftarrow \text{USE HDU 2}$$



SUMNER SPEED SHOP

6/26/2018

PROJECT

DATE

PROJ. #

JPJ

DESIGN

L2

SHEET

LATERAL DESIGN

MEZZANINE E-W:

$$V_s = 1.3^k \quad (ALL.)$$

$$F = 1.3^k / 2 = 650^{\#}$$

$$L = 13' \quad \text{SW LENGTH}$$

$$V = 50^{\#}/' \quad \text{UNIT SHEAR}$$

USE SW 1

$$O.T. = 400^{\#} \leftarrow \text{USE HDU 2}$$

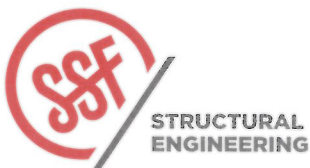
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SUMNER SPEED SHOP

PROJECT

DATE

PROJ. #

DESIGN

SHEET

6/26/2018

JPJ

L3

CHECK EXTERIOR DECK COL. 3 FDN.

$$DL = 7 \text{ PSF}$$

$$W = (7 \text{ PSF}) (45' \times 11' + 15' \times 6') = 4,095 \text{ \#}$$

$$R = 1 \frac{1}{4}$$

$$S_{DS} = 0.83, I = 1.0$$

$$C_s = S_{DS} / (R/I)$$

$$= 0.83 / 1.25$$

$$= 0.66$$

$$V = C_s \cdot W$$

$$= 0.66 (4,095 \text{ \#})$$

$$= 2,702 \text{ \#}$$

$$F = V/8 = 338 \text{ \#}$$

$$M = 338 \text{ \#} (9') = 3,042 \text{ \#-ft}$$

COLUMN:

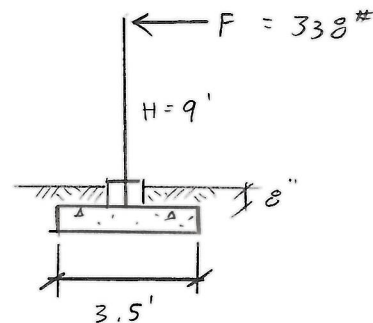
TRY HSS 4x4x1/4

$$S = 3.90 \text{ in}^3$$

$$I = 7.80 \text{ in}^4$$

$$f_b = 9360 \text{ PSI} < 27.5 \text{ KSI} \therefore \text{OK}$$

$$\Delta = 0.62'' \text{ OK}$$



FTG: TRY 3'-6" x 3'-6" x 10" FTG

$$P = 0.9 \left[\overset{\text{SOIL}}{7 \text{ PSF}} (15') (6') + 120 \text{ PCF} \left(\frac{8''}{12''} \right) (3.0')^2 + 150 \text{ PCF} \left(\frac{10''}{12''} \right) (3.5')^2 \right]$$

$$= 2,593 \text{ \#} \quad \text{AXIAL DEAD LOAD}$$

$$O.T. = 2,593 \text{ \#} (1.75') - 3,042 \text{ \#-ft} = 1,495 \text{ \#-ft} \therefore \text{O.T. OK}$$

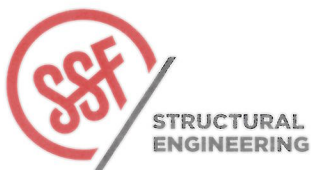
CHECK

BEARING
PRESSURE:

$$e_p = M/P = 3,042 \text{ \#-ft} / 2,593 \text{ \#} = 1.17' \quad e = 3'/6 = 0.5' \quad e_p > e$$

$$a = 1.5' - 1.17' = 0.33'$$

$$q = 2P / (3ab) = 2(2,228 \text{ \#}) / (3(0.33')(3.5')) = 1,286 \text{ PSF} < 1,500 \text{ PSF} \therefore \text{OK}$$



SUMNER SPEED SHOP

PROJECT

6/26/2018

DATE

PROJ. #

JPJ

DESIGN

L4

SHEET

2124 Third Ave, Suite 100, Seattle, WA 98121
934 Broadway, Suite 100, Tacoma, WA 98402

SEATTLE
TACOMA

ssfengineers.com

SWENSON SAY FAGET

CHECK EXTERIOR FRONT ENTRANCE COVER

$$DL = 10 \text{ PSF}$$

$$W = 10 \text{ PSF} (1165 \text{ FT}^2) = 11.7^{\text{K}}$$

$$R = 1\frac{1}{4}$$

$$S_{DS} = 0.83, I = 1.0$$

$$C_s = 0.66$$

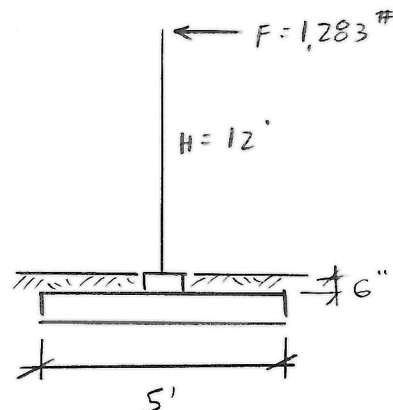
$$V = C_s \cdot W$$

$$= 0.66 (11.7^{\text{K}})$$

$$= 7.7^{\text{K}}$$

$$F = V/6 = 1283^{\#}$$

$$M = 1283^{\#} (12') = 15,396^{\#}\text{'}$$



COLUMN: TRY HSS 6x6x1/4

$$S = 9.54 \text{ in}^3$$

$$I = 28.6 \text{ in}^4$$

$$f_b = 19.36 \text{ KSI} < 27.5 \text{ KSI} \therefore \text{OK}$$

FTG: TRY 6'x6'x12" FT6.

$$P = 0.9 \left[(10^{\text{PSF}} \times 190^{\text{SF}})^{\text{ROOF}} + 120^{\text{PSF}} (6'/12')^2 (6')^2 + 150^{\text{PSF}} (6')^2 \right]^{\text{SOIL CONCR}}$$

$$= 8,514^{\#} \quad \text{AXIAL DEAD LOAD}$$

$$O.T. = 8,514^{\#} (3') - 15,396^{\#}\text{' } = 10,146^{\#} \therefore \text{OT OK}$$

$$e_p = M/P = 15,396^{\#}\text{' } / 8,514^{\#} = 1.8' \quad e = 5/6 = 0.83' \quad e_p > e$$

$$g = l/2 - e_p = 3' - 1.8' = 1.2'$$

$$g = 2(8,514^{\#}) / 3(1.2')(6') = 788 \text{ PSF} < 1500 \text{ PSF} \therefore \text{OK}$$

CHECK CONCR. PLINTH

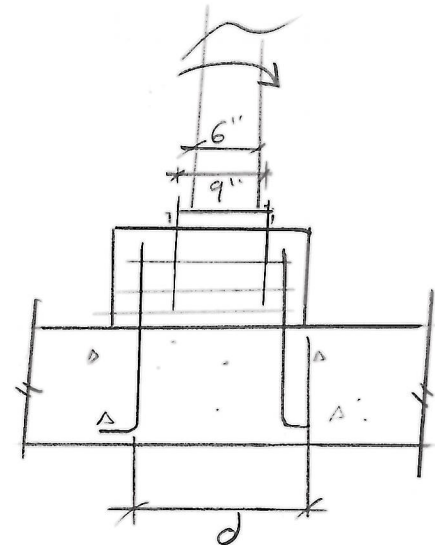
$$M = 15,396 \text{ #} \cdot \text{ft}$$

$$d = 12.5''$$

$$T = 14,780 \text{ #}$$

$$A_s \text{ REQD} = \frac{14,780}{0.9(60,000)} = 0.27''$$

USE (2) #4 BARS HOOKED



CHECK A.B. STEEL

$$M = 15,396 \text{ #} \cdot \text{ft}$$

$$d = 9''$$

$$T = 20,528 \text{ #}$$

$$(2) 3/4'' \text{ A.B.} = 29.8'' \therefore \text{OK}$$

EMBED 8" MIN. TO DEVELOP
VERTICAL REINF.

CHECK GIRT REPLACEMENT & NEW HEADERS

DEFINE WIND PRESSURE:

$$\text{WIND AREA} = (8') \left(\frac{14'}{2} \right) = 56 \text{ FT}^2$$

$$RF = 0.9 \quad \text{TABLE 30.7-2}$$

$$EAF = 0.677$$

$$K_{zt} = 1.0$$

$$P_{table} = 24.1 \text{ PSF}$$

$$\begin{aligned} P &= P_{table} (EAF) (RF) (K_{zt}) = 24.1 \text{ PSF} (0.677) (0.9) (1.0) = 14.7 \text{ PSF (ULT)} \\ &= 24.1 \text{ PSF} (0.677) (0.9) (1.0) \\ &= 14.7 \text{ PSF} \rightarrow \text{USE } 16 \text{ PSF (ULT)} \\ &\quad 9.6 \text{ PSF (ALL)} \end{aligned}$$

CHECK NORTH WALL HEADER

$$W = 16 \text{ PSF} (7') = 112 \text{ \#/ft}$$

$$L = 14'$$

PER ATTACHED CFS DESIGNER ANALYSIS, (2) 800-5200-43 BOXED OK

CHECK SOUTH WALL HEADER

$$W = 16 \text{ PSF} (6.5') = 104 \text{ \#/ft}$$

$$L = 24'$$

PER ATTACHED CFS DESIGNER ANALYSIS, (2) 800-5200-68 BOXED OK

CHECK E-W WINDOW HEADERS

$$W = 16 \text{ PSF} (1.5') = 24 \text{ \#/ft} \quad (\text{LOADED IN WEAK AXIS})$$

$$L = 25'$$

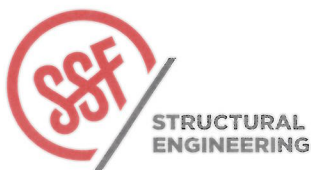
$$M = 1875 \text{ \#-ft}$$

$$I = 7.82 \text{ in}^4, C = 3''$$

$$f_b = \frac{1875 (12) (3'')}{7.82 \text{ in}^4} = 8,631 \text{ PSI}$$

$$\Delta = \frac{5 (24/12) (25 \times 12)^4}{384 (29000000) (7.82 \text{ in}^4)} = 0.93 \text{ in}$$

(2) 600S300-
54 BOXED
OK



SUMNER SPEED SHOP

6/28/2018

PROJECT

DATE

PROJ #

DESIGN

SHEET

JPS

L7

NORTH WALL HEADER

H2

Project Name: New WorkSpace

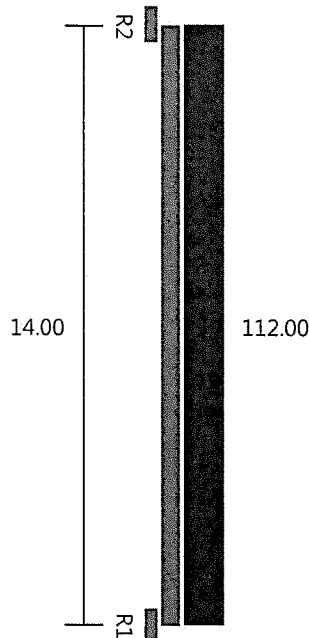
Page 1 of 1

Model: Beam/Stud -1

Date: 06/28/2018

Code: 2012 NASPEC [AISI S100-2012]

Simpson Strong-Tie® CFS Designer™ 1.5.0.0



Reactions and Connections

Number of Connectors Required at each Reaction: 2

Support	Reaction (lb)	Simpson Strong-Tie Connector	No. of Req'd screws to stud	No. of Req'd # 12-14 Anchors
R1	784.00	No Solutions	-	-
R2	784.00	SCB47.5	2	2

Total Vertical Shear Carried by Connectors (lb) : 0

Bridging Connectors - Design Method = AISI S100

Span/CantiLever	Simpson Strong-Tie Bridging Connector	Stress Ratio
Span	N/A	-

Shear and Web Crippling Checks

Bending and Shear (Unstiffened): 37.3% Stressed @R1

Bending and Shear (Stiffened): NA

Web Stiffeners Required?: Yes @R1,R2

Section : (2) 800S200-43 Boxed C Stud

Fy = 33.0 ksi

Maxo = 4256.9 Ft-Lb

Moment of Intertia, I = 10.60 in^4

Va = 2102.3 lb

Loads have not been modified for strength checks

Loads have been multiplied by 0.70 for deflection calculations

Reactions have been multiplied by 1.0 for opposite load direction for connection design

Flexural and Deflection Check

Span	Mmax Ft-Lb	Mmax/ Maxo	Mpos Ft-Lb	Bracing (in)	Ma(Brc) Ft-Lb	Mpos/ Ma(Brc)	Deflection (in)	Ratio
Span	2744.0	0.645	2744.0	60.0	4256.9	0.645	0.217	L/775

SOUTH WALL HEADER

H3

Project Name: New Workspace

Model: Beam/Stud -1

Code: 2012 NASPEC [AISI S100-2012]

Page 1 of 1

Date: 06/28/2018

Simpson Strong-Tie® CFS Designer™ 1.5.0.0

Reactions and Connections

Number of Connectors Required at each Reaction: 2

Support	Reaction (lb)	Simpson Strong-Tie Connector	No. of Req'd screws to stud	No. of Req'd # 12-14 Anchors
R1	1248.00	No Solutions	-	-
R2	1248.00	SCB47.5	2	2

Total Vertical Shear Carried by Connectors (lb) : 0

Bridging Connectors - Design Method = AISI S100

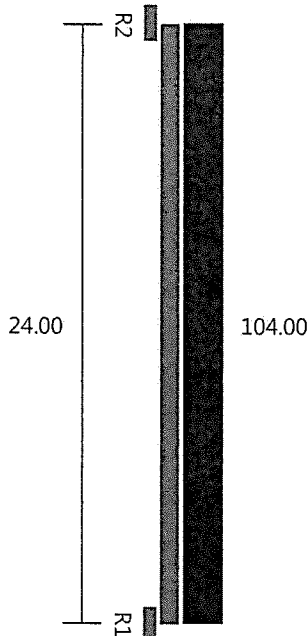
Span/CantiLever	Simpson Strong-Tie Bridging Connector	Stress Ratio
Span	N/A	-

Shear and Web Crippling Checks

Bending and Shear (Unstiffened): 14.8% Stressed @R2

Bending and Shear (Stiffened): NA

Web Stiffeners Required?: No



Section : (2) 800S200-68 Boxed C Stud

Maxo = 10868.2 Ft-Lb

Moment of Intertia, I = 16.28 in^4

Fy = 50.0 ksi

Va = 8441.5 lb

Loads have not been modified for strength checks

Loads have been multiplied by 0.70 for deflection calculations

Reactions have been multiplied by 1.0 for opposite load direction for connection design

Flexural and Deflection Check

Span	Mmax Ft-Lb	Mmax/ Maxo	Mpos Ft-Lb	Bracing (in)	Ma(Brc) Ft-Lb	Mpos/ Ma(Brc)	Deflection (in)	Ratio
Span	7488.0	0.689	7488.0	None	10868.2	0.689	1.132	L/255

VERTICAL DESIGN

① W10x60

$L = 23'$

$w = 1200 \#/\text{ft}$

$M = 79.4 \text{ k-ft}$

$R = 13.8 \text{ k}$

$f_b = 14.28 \text{ ksi}$

$\Delta = 0.76" = L/361$

② W10x33

$L = 23'$

$w = 600 \#/\text{ft}$

$M = 39.7 \text{ k-ft}$

$R = 6.9 \text{ k}$

$f_b = 13.6 \text{ ksi}$

$\Delta = 0.76" = L/362$

③ LSL 3 1/2 x 11 7/8

$L = 20'$

$P = 1,840 \text{ #} \left(\frac{2.5}{1} \right) = 4,600 \text{ #}$

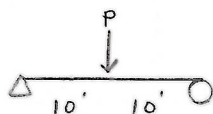
$M = 23,000 \text{ #-ft}$

$R = 2,300 \text{ #}$

$f_b = 3,355 \text{ psi}$

$f_v = 83 \text{ psi}$

$\Delta = 0.72" = L/332$



④ 4x8

$L = 12'$

$w = 150 \#/\text{ft}$

$M = 2,700 \text{ #-ft}$

$R = 900 \text{ #}$

$f_b = 1,057 \text{ psi}$

$f_v = 48 \text{ psi}$

$\Delta = 0.37" = L/389$

⑥ P.T. 6x12

$L = 13'$

$w = 480 \#/\text{ft}$

$M = 10,140 \text{ #-ft}$

$R = 3,120 \text{ #}$

$f_b = 1,049 \text{ psi}$

$\Delta = 0.30" = L/528$

⑤ P.T. 2x12 @ 16" o/c

$L = 12'$

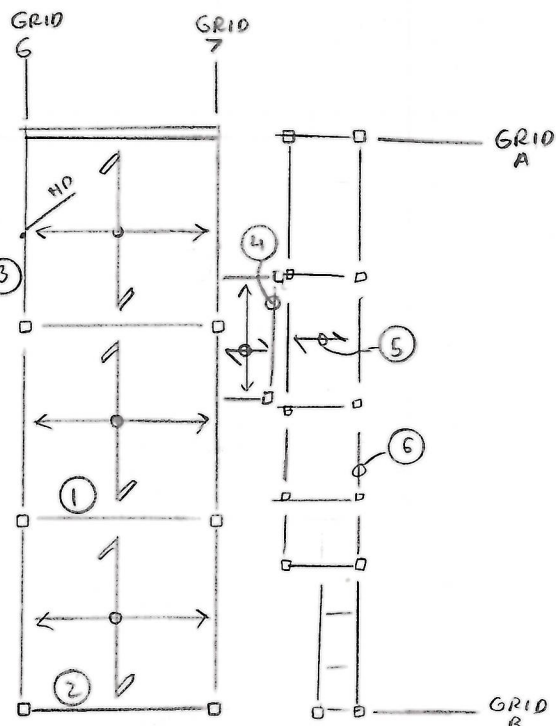
$w = 107 \#/\text{ft}$

$M = 1,926 \text{ #-ft}$

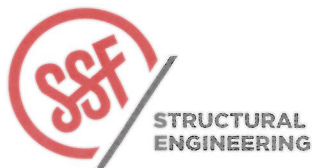
$R = 642 \text{ #}$

$f_b = 730 \text{ psi}$

$\Delta = 0.22" = L/667$



KEY PLAN



SUMNER SPEED SHOP

PROJECT

6/26/2018

DATE

PROJ. #

JPJ

DESIGN

V1

SHEET

VERTICAL DESIGN

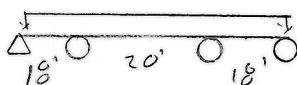
① HSS 10x6x1/4

$$L = 56'$$

$$W = 350 \text{ #/ft}$$

$$M = 12,610 \text{ #}$$

$$R = 7,350 \text{ #}$$



$$f_b = 7,800 \text{ PSI} < 27 \text{ ksi} \therefore \text{OK}$$

$$\Delta = 0.141" = L/$$

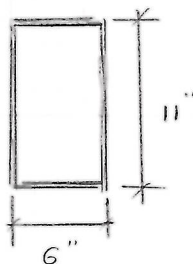
CHECK SPLICE WELD

$$I = 9 \cdot \frac{(3 \cdot B + H) H^2}{6}$$

$$= \frac{1}{4} \frac{(3(6) + 11)(11)^2}{6}$$

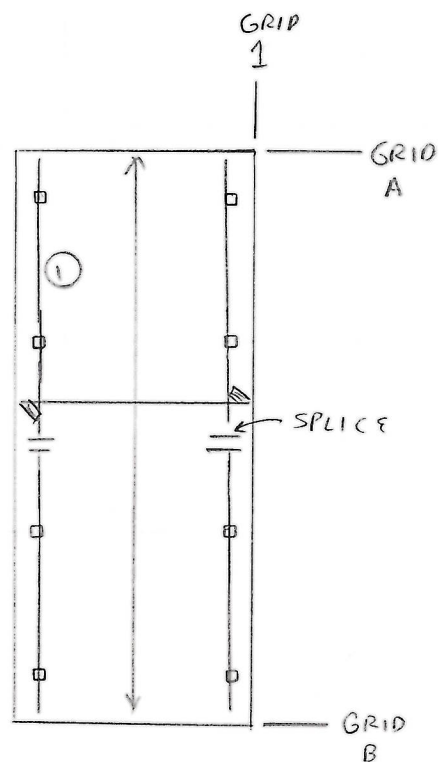
$$= 146 \text{ in}^4$$

$$C = H/2 = 5.5"$$

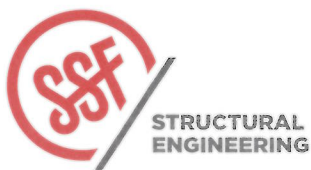


$$M_u = 4,890 \text{ #-ft}$$

$$f_t = \frac{M_u C}{I} = \frac{4,890 \text{ #-ft} (5.5") (12)}{146 \text{ in}^4} = 2,210 \text{ PSI OK}$$



KEY PLAN



SUMNER SPEED SHOP

PROJECT

6/27/2018

DATE

PROJ #

JPJ

DESIGN

V2

SHEET

CHECK INTERIOR FTGS

ISOLATED FTG ALONG GRID 7:

BEARING PRESSURE:

$$P = 13.8^k$$

$$q_{ALLOW} = 1500 \text{ PSF}$$

$$L = \sqrt{13.8^k / 1.5 \text{ KSF}}$$

$$= 3 \text{ FT} \leftarrow \therefore \text{USE } 3' \times 3' \text{ sq. FTG.}$$

SHEAR:

$$P_v = 21.16^k$$

$$V_{u1} = \frac{21.16^k}{1296 \text{ in}^2} (36") \left(\frac{36"}{2} - \frac{5"}{2} - 7" \right) \leftarrow \text{ONE WAY SHEAR}$$

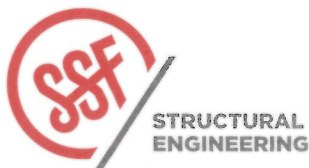
$$= 5.0^k$$

$$d = \frac{5000^{\#}}{0.75(2)\sqrt{2500}(36")}} = 1.85" < 7"$$

$$V_{u2} = (1296 \text{ in}^2 - (5" + 7")^2) \left(\frac{21.16^k}{1296 \text{ in}^2} \right) = 18,809^{\#}$$

$$d_1 = \frac{18,809^{\#}}{0.75(4)\sqrt{2500}(4(5" + 7"))}} = 2.6" < 7" \therefore \text{OK}$$

$$d_2 = \frac{18,809^{\#}}{0.75 \left(\frac{40(7")}{4(12")} + 2 \right) \sqrt{2500}(48")}} = 1.33" < 7" \therefore \text{USE } 10" \text{ dp. FTG.}$$



SPEED SHOP

PROJECT

7/11/2018

DATE

PROJ. #

JPJ

DESIGN

V3

SHEET

206.443.6212
253.284.9470

2124 Third Ave, Suite 100, Seattle, WA 98121
934 Broadway, Suite 100, Tacoma, WA 98402

SEATTLE
TACOMA

ssfengineers.com

SWENSON SAY FAGET

SPREAD FTG. GRID A, 7, 7

BEARING PRESSURE

$$P = 13.8^k$$

$$q_{ALLOW} = 1.5^k/sf$$

$$L = (13.8^k / 1.5^k/sf) / 1.5'$$

$$= 6.1'$$

SHEAR & MOMENT

$$P_v = 21.16^k$$

$$w = 21.16^k / 6' = 3.527^k/ft$$

$$V_v = 10.7^k$$

$$d = \frac{10,700^{\#}}{0.75(2)\sqrt{2500}(18'')} = 7.9'' \leftarrow \text{USE } 12'' \text{ THK FTG.}$$

$$M_v = 16^k \cdot ft$$

$$R_n = \frac{16^k \cdot ft (12)(1000)}{0.9(18'')(9'')^2} = 146$$

$$\rho = 0.0026$$

$$A_s' = 0.0026(18'')(12'') = 0.56'' \text{ USE (2) \#5 BARS T \& B}$$

