

MARCO POLO - 101 W 33RD STREET

CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & PT OF 6 & PT OF ALLEY

FOR CONSTRUCTION

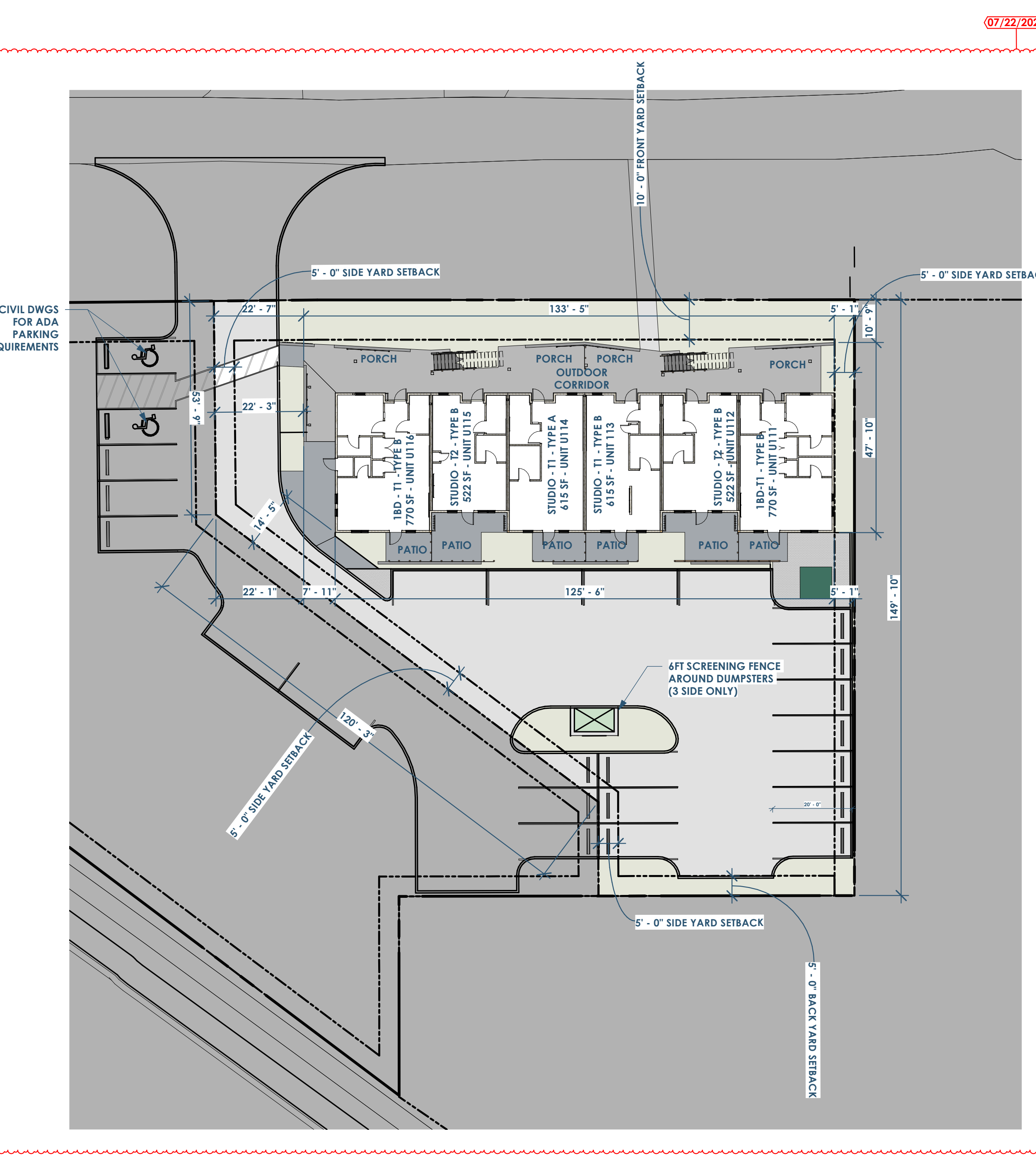
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68 SITE PLAN
G000 1" = 20'-0"

DEFERRED SUBMITTALS

DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED DURING THE INITIAL PERMIT APPLICATION, BUT INSTEAD ARE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD AFTER THE PERMIT HAS BEEN ISSUED. DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE THE PRIOR APPROVAL OF THE BUILDING OFFICIAL. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

- LIST OF DEFERRED SUBMITTALS**
- IRRIGATION
 - BUILDING SIGNAGE
 - FIRE SPRINKLERS
 - STAIRS AND RAILING DETAILING
 - METAL PLATE CONNECTED WOOD TRUSSES
 - FIELD MARKING OF AVAILABLE FAULT CURRENT
 - BACK FLOW TEST REPORT
 - THIRD PARTY INSPECTIONS



2A VICINITY MAP
G000 1" = 200'-0"

CODE INFORMATION	
APPLICABLE CODES:	<p>GENERAL:</p> <ul style="list-style-type: none"> • BUILDING/DWELLING CODE IBC 2015 & BRYAN, TX AMENDMENTS • ENERGY CONSERVATION: <ul style="list-style-type: none"> • INTERNATIONAL ENERGY CONSERVATION CODE 2015 & BRYAN, TX AMENDMENTS • PLUMBING: <ul style="list-style-type: none"> • PLUMBING CODE IMC 2015 & BRYAN, TX AMENDMENTS MECHANICAL: <ul style="list-style-type: none"> • MECHANICAL CODE IMC 2015 & BRYAN, TX AMENDMENTS ELECTRICAL: <ul style="list-style-type: none"> • ELECTRICAL CODE NEC 2020 & BRYAN, TX AMENDMENTS • FIRE/LIFE SAFETY CODE 2009 NFPA-1 & BRYAN, TX AMENDMENTS • FAIR HOUSING ACT • INTERNATIONAL FUEL GAS CODE 2015 & BRYAN, TX AMENDMENTS
CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION:	<p>SECTION 420 GROUPS R-2</p> <ul style="list-style-type: none"> • FIRE PARTITIONS IN ACCORDANCE WITH SECTION 708 • HORIZONTAL ASSEMBLIES IN ACCORDANCE WITH SECTION 711.
CHAPTER 5 CLASSIFICATION OF WORK:	NEW
504.3 HEIGHT IN FEET	R-2 - TYPE VB (SPRINKLERED): • ACTUAL: 35FT • ALLOWED: 40FT
504.4 NUMBER OF STORIES	R-2 - TYPE VB (SPRINKLERED): • ACTUAL: 3 • ALLOWED: 4
506.2 ALLOWABLE AREA DETERMINATION	<p>TABULAR PER FLOOR AREA LIMIT PER CHAPTER 5 = 7000 SQ.FT.</p> <ul style="list-style-type: none"> • ALLOW HEIGHT = 40 FT; ALLOW STORIES = 3 • NFA 13 SPRINKLERS
506.3 FRONTAGE INCREASE:	<p>COMPOSITE AREA INCREASE DUE TO FRONTAGE: FRONTAGE COEFFICIENT, IF 0.589</p> <ul style="list-style-type: none"> • PERIMETER: F 354 FT • FRONTAGE PERIMETER: F 304 FT • WEIGHTED AVERAGE DISTANCE FROM "F" = 228.75 FT • COMPUTE ALLOWABLE PER STORY AREA, AA = AT (NFA X IF) = 25120.94 SQ.FT. • MAXIMUM ALLOWABLE AREA = AA X 3 = 75362.83 SQ.FT. • MAXIMUM NUMBER OF STORIES FOR GROUP R WITH NFA 13R SPRINKLERS, PER SEC. 903.3.1.2 THIS CRITERIA IS MET, SO STORY LIMIT = 3 • THE REVERSED ALLOWABLE HEIGHT IS 40 FT.
508.3 NONSEPARATED OCCUPANCIES:	N/A
508.4 SEPARATED OCCUPANCIES	N/A
TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)	<p>FOR TYPE VB</p> <p>STRUCTURAL FRAME: 0 HR</p> <p>BEARING WALLS- EXTERIOR: 0 HR</p> <p>BEARING WALLS- INTERIOR: 0 HR</p> <p>NON-BEARING WALLS- EXTERIOR - (SEE TABLE 602)</p> <p>NON-BEARING WALLS- INTERIOR: 0 HR</p> <p>FLOOR CONSTRUCTION: 0 HR</p> <p>ROOF CONSTRUCTION: 0 HR</p>
TABLE 602 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE	TYPE-VB
708.3 FIRE-RESISTANCE RATING	CORRIDORS: 1/2HR RATED
711.2.4.3 DWELLING UNITS AND SLEEPING UNITS	INTERIOR EXIT STAIRWAYS AND RAMP AND EXIT PASSAGEWAYS: CLASS C
803.1.1 INTERIOR FINISH REQUIREMENTS BASED ON GROUP	INTERIOR EXIT STAIRWAYS AND RAMP AND EXIT PASSAGEWAYS: CLASS C
SPRINKLERS (SECTION 903 AUTOMATIC SPRINKLER SYSTEMS):	NFA13 SPRINKLER THROUGHOUT PROJECT (R-2)
SECTION 1020 CORRIDORS	CORRIDORS: 1/2HR RATED
SECTION 1004 OCCUPANT LOAD	SEE SECTION 1021 EGRESS BALCONIES FOR CORRIDOR RATING AT EXTERIOR WALL
1004.2.1 EGRESS BASED ON OCCUPANT LOAD AND COMMON PATH OF EGRESS TRAVEL DISTANCE:	TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT
SECTION 1017 EXIT ACCESS TRAVEL DISTANCE:	RESIDENTIAL: 200 GROSS
1020.4 DEAD ENDS:	FOR R-2 MAXIMUM COMMON PATH WITH SPRINKLER SYSTEM: 125FT
SECTION 1021 EGRESS BALCONIES	MAXIMUM OCCUPANT LOAD OF SPACE WITH ONE EXIT: 49
	FOR R-2: 250 (W/SPRINKLER)
	SOFT (WITH NFA13 SPRINKLERS)
	EXTERIOR EGRESS BALCONIES SHALL BE SEPARATED FROM THE INTERIOR OF THE BUILDING BY WALLS AND OPENING PROTECTIVES AS REQUIRED FOR CORRIDORS.
	SECTION 1020 CORRIDORS 1020.1 CONSTRUCTION
	CORRIDORS SHALL BE FIRE-RESISTANCE-RATED IN ACCORDANCE WITH TABLE 1020.1. THE CORRIDOR WALLS REQUIRED TO BE FIRE-RESISTANCE-RATED SHALL COMPLY WITH SECTION 708 FOR FIRE PARTITIONS.
	EXCEPTIONS: CORRIDORS ADJACENT TO THE EXTERIOR WALLS OF BUILDINGS SHALL BE PERMITTED TO HAVE UNPROTECTED OPENINGS ON UNRATED EXTERIOR WALLS WHERE UNRATED WALLS ARE PERMITTED BY TABLE 602 AND UNPROTECTED OPENINGS ARE PERMITTED BY TABLE 705.8.
2902.1 MINIMUM NUMBER OF FIXTURES:	CLASSIFICATION & OCCUPANCY:
	...
	R-2
	• WATER CLOSETS: 1 PER DWELLING
	• LAVATORIES: 1 PER DWELLING
	• BATHROOMS/ SHOWERS: 1 PER DWELLING

GENERAL NOTES

- GENERAL CONTRACTOR RESPONSIBLE FOR ALL FEES ASSOCIATED WITH PERMITS, APPLICATIONS, TAXES, AND CERTIFICATES OF INSPECTIONS.
- ANY CONSTRUCTION THAT DEVIATES FROM THE DRAWING IS UNAUTHORIZED, IF NOT AUTHORIZED BY THE ARCHITECT. IN SUCH AN EVENT, CONTRACTOR IS RESPONSIBLE FOR ANY REWORK THAT MIGHT BE REQUIRED.
- CONTRACTOR IS RESPONSIBLE FOR ALL THE RULES/REGULATIONS OF THE AUTHORITY HAVING JURISDICTION, INCLUDED, BUT NOT LIMITED TO ALL CITY, TOWNSHIP, COUNTY, STATE, AND FEDERAL CODES, STATUTES, AND ORDINANCES.
- CONTRACTORS SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO DETERMINE HOW NEW CONSTRUCTION IS COMPATIBLE WITH EXISTING CONDITIONS.
- CONTRACTOR TO NOTIFY ARCHITECT IF THERE ARE ANY OMISSIONS, CONFLICTS, OR DISCREPANCIES IN THE DRAWINGS BEFORE ANY CONSTRUCTION TAKES PLACE. A FAILURE TO SO WILL RESULT IN THE CONTRACTOR RESPONSIBLE FOR ANY REWORK.
- CONTRACTOR RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND TAKEOFFS BEFORE BIDDING AND/OR ORDERING MATERIALS. CONTRACTOR WILL NOTIFY ARCHITECT IF THERE ARE ANY DRAWING CONFLICTS AND AWAIT DIRECTION BEFORE COMMENCING.
- DO NOT SCALE THE DRAWINGS.
- ALL THROUGH AND MEMBRANE PENETRATIONS AT ALL FIRE/SMOKE RATED PARTITIONS/CEILING/FLOORS TO BE SEALED WITH A CODE COMPLIANT, U.L. APPROVED FIRE STOP.
- GENERAL CONTRACTOR TO COORDINATE THE SIZE/LOCATION OF ANY ACCESS PANELS AND/OR CLEAN OUTS WITH THE M/E/P CONTRACTOR AND ARCHITECT.
- ALL CONTRACTORS AND VENDORS TO FAMILIARIZE THEMSELVES WITH THE ENTIRE DRAWING SET. AS REQUIRED INFORMATION MAY BE ON MULTIPLE SHEETS AND ALTERNATE DISCIPLINES.
- ANY FURNITURE SHOWN IS FOR REFERENCE AND IS NOT IN THE CONTRACTOR. CONTRACTORS SHALL BE RESPONSIBLE FOR REPAIRING ANY PROPERTY DAMAGE THAT MAY HAVE RESULTED FROM THEIR WORK.
- OWNER RESPONSIBLE FOR ANY WORK NOT SPECIFICALLY CALLED OUT IN THE DRAWINGS.
- ANY CHANGE THAT RESULTS IN ADDITIONAL COST/TIME MUST TO APPROVED BY THE OWNER/ARCHITECT PRIOR TO CONSTRUCTION.
- DETAILS ARE TO BE INTERPRETED AS TYPICAL, THAT IS, UNLESS SPECIFICALLY CALLED OUT OTHERWISE, THE DETAIL IS TO BE APPLIED TO SIMILAR CONDITIONS THROUGHOUT THE PROJECT.
- ALL EXTERIOR FLATWORK AROUND THE BUILDING TO SLOPE A MINIMUM OF 2% AWAY FROM THE BUILDING.
- ANY PENETRATIONS IN THE EXTERIOR ENVELOPE TO BE SEALED TO PREVENT ANY AIR/WATER LEAKAGE PER IBC CODE REQUIREMENTS.
- ALL FINISH AND COLOR SELECTIONS TO BE VERIFIED WITH ARCHITECT UNLESS OTHERWISE NOTED, SLOPE FLOOR 2% TOWARD ANY DRAINS INDICATED ON THE DRAWINGS.
- CONTRACTOR SHALL KEEP THE CONSTRUCTION CLEAN-REMOVING ANY ACCUMULATION OF DEBRIS AND/OR UNUSED EQUIPMENT.
- CONTRACTOR TO BE RESPONSIBLE FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF ALL CONSTRUCTION WASTE.
- CONTRACTORS RESPONSIBLE FOR ANY TEMPORARY SHORING THAT MIGHT BE NECESSARY DURING CONSTRUCTION. ALL SHORING TO BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER RETAINED BY THE CONTRACTOR.
- GENERAL CONTRACTOR TO VERIFY WITH THE M/E/P CONTRACTORS ALL PIPE/DUCT LOCATION PRIOR TO FRAMING.
- MANUFACTURED MATERIAL/EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
- CONTRACTOR TO PROTECT ANY EXPOSED CONCRETE THAT IS MEANT TO BE A FINISHED SURFACE.
- GENERAL CONTRACTOR TO PROVIDE ARCHITECT AT LEAST (2) WEEKS WHEN REVIEWING ANY SHOP DRAWINGS AND/OR SUBSTITUTION REQUESTS.
- REVIEW OF SHOP DRAWINGS DOES NOT CONSTITUTE THE APPROVAL OF SAFETY REQUIREMENTS AND/OR CONSTRUCTION MEAN AND METHODS.
- THE PRESENCE OF THE ARCHITECT ON SITE DOES NOT CONSTITUTE APPROVAL OF THE WORK. THE CONTRACTOR SHALL CALL THE ARCHITECT'S ATTENTION TO ANYTHING SPECIFICALLY NEEDS THE ARCHITECT'S APPROVAL.
- ONLY ARCHITECTURAL AND STRUCTURAL DRAWINGS HAVE BEEN COORDINATED WITH THE ARCHITECT. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY WORK OUTSIDE THESE SCOPES (M/E/P, FOR EXAMPLE) THAT INTERFERES WITH THIS ARCHITECT DRAWING SET.
- GENERAL CONTRACTOR TO EDUCATE THE OWNER ON THE OPERATION AND MAINTENANCE OF ALL INSTALLED PRODUCT AND/OR EQUIPMENT.
- PRIOR TO SUBSTANTIAL COMPLETION, CONTRACTOR SHALL CLEAN SITE AND DELIVER ALL REQUIRED GUARANTEES, LIEN WAIVERS AND MAINTENANCE MANUALS.
- ARCHITECT NOT RESPONSIBLE FOR THE EXPLORATION, PRESENCE, HANDLING, AND/OR ADVERSE EXPOSURE OF ANY HAZARDOUS MATERIALS, IN ANY FROM, INCLUDING, BUT NOT LIMITED TO ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.
- ALL EXTERIOR STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANIZED, ALL NOTICING, DRILLING, WELDING AND BENDING DONE PRIOR TO DIPPING.
- ANY PRODUCT OR MATERIALS THAT ARE NOT CALLED OUT IN THE DRAWINGS, BUT REQUIRED FOR PROPER INSTALLATION AND PERFORMANCE OF THE WORK, SHALL BE PROVIDED BY THE CONTRACTOR.
- THE CONTRACTOR TO PROVIDE ALL THE NECESSARY BLOCKING AND/OR STRUCTURAL SUPPORT REQUIRE TO PROPERLY INSTALL MOUNTED ASSEMBLIES, INCLUDED BY NOT LIMITED TO GRAB BARS, PLUMBING FIXTURES, MILLWORK AND CASEWORK.
- MAINTAIN INGRESS AND EGRESS TO THE PROJECT SITE.
- ANY CHANGES TO THE PLANS DURING CONSTRUCTION NEED TO BE APPROVED BY THE ARCHITECT AND/OR ENGINEER OF RECORD AND THE CITY. THE CHANGES WILL NEED TO BE SUBMITTED AS AN AMENDED SET OF CONSTRUCTION DOCUMENTS. SEE SECTION 107.4 OF THE 2015 IBC.
- FIRE SPRINKLER/FIRE ALARM DRAWINGS NEED TO BE SUBMITTED TO THE FIRE MARSHAL'S OFFICE (414 LAWRENCE STREET, BRYAN, TEXAS, 77801 OR MARC MCKERON, FIRE MARSHAL, MCMCKERON@BRYANTX.GOV OR KIMBERLY FREDERICK, KFREDERICK@BRYANTX.GOV).
- FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, ETC. OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE IDENTIFIED WITH SIGNS OR STENCILING. SEE SECTION 703.5 OF 2015 IBC.
- PER IFC 906.1 ALL DWELLING UNITS SHOULD INCLUDE A MINIMUM RATED (1-A-10-B-C) FIRE EXTINGUISHER IN A CONSPICUOUS, READY ACCESS AREA. NO FIRE EXTINGUISHERS ARE REQUIRED IN THE COMMON AREAS.

FHA COMPLIANCE

- ELEVATORS: NO
- ADA UNITS (ALL ADA UNITS ARE LOCATED ON THE 1ST FLOOR)
- TYPE A ADA UNITS (5% OF 18 UNITS TOTAL) = 1 (1 UNIT IS PROVIDED ON THE 1ST FLOOR)
- TYPE B ADA UNITS = 5 (THE REMAINING UNITS ON THE 1ST FLOOR)
- ACCESSIBLE PARKING SPACES
- ACCESSIBLE SPACES REQUIRED: 2 PER 26-50 SPACES
- TOTAL SPACES PROVIDED: 2 SPACES

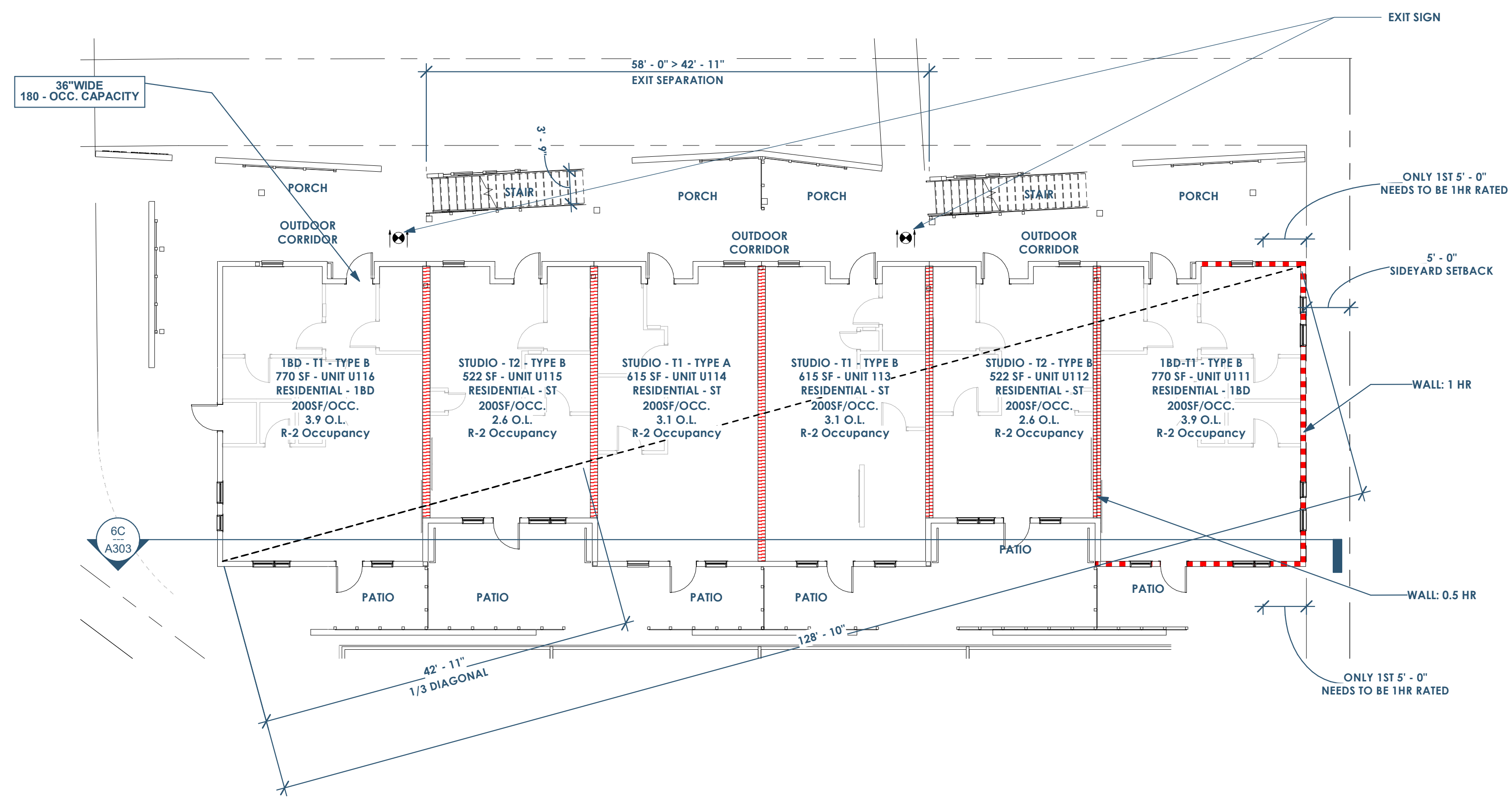
SHEET INDEX		
G000	COVER	07/22/22 - Permit Revisions
G001	CODE & LIFE SAFETY	07/22/22 - Permit Revisions
G002	CODE & LIFE SAFETY	07/22/22 - Permit Revisions
S0.0	TYPICAL GENERAL NOTES	07/22/22 - Permit Revisions
S0.01	STATEMENT OF SPECIAL INSPECTIONS	07/22/22 - Permit Revisions
S0.1	FOUNDATION PLAN	07/22/22 - Permit Revisions
S0.1A	TYPICAL WOOD ROOF TRUSS DETAILS	07/22/22 - Permit Revisions
S0.2	FRAMING PLAN - 2ND FLOOR	07/22/22 - Permit Revisions
S0.3	FRAMING PLAN - 3RD FLOOR	07/22/22 - Permit Revisions
S0.4	FRAMING PLAN - ROOF	07/22/22 - Permit Revisions
S3.0	FOUNDATION DETAILS	07/22/22 - Permit Revisions
S3.1	FOUNDATION DETAILS	07/22/22 - Permit Revisions
S4.0	TYPICAL WOOD FRAMING DETAILS	07/22/22 - Permit Revisions
S4.1	TYPICAL WOOD FRAMING WALL DETAILS	07/22/22 - Permit Revisions
S4.2	TYPICAL WOOD FLOOR TRUSS DETAILS	07/22/22 - Permit Revisions
S4.3	TYPICAL WOOD FRAMING LATERAL DETAILS	07/22/22 - Permit Revisions
S4.4	TYPICAL WOOD ROOF TRUSS DETAILS	07/22/22 - Permit Revisions
S4.5	TYPICAL STEEL DETAILS	07/22/22 - Permit Revisions
A101	FLOOR PLAN - 1ST	07/22/22 - Permit Revisions
A102	FLOOR PLAN - 2ND	07/22/22 - Permit Revisions
A103	FLOOR PLAN - 3RD	07/22/22 - Permit Revisions
A104	FLOOR PLAN - ROOF	07/22/22 - Permit Revisions
A150	REFLECTED CEILING PLANS	07/22/22 - Permit Revisions
A151	REFLECTED CEILING PLANS	07/22/22 - Permit Revisions
A200	BUILDING ELEVATION - NORTH/WEST	07/22/22 - Permit Revisions
A201	BUILDING ELEVATION - SOUTH/EAST	07/22/22 - Permit Revisions
A300	BUILDING SECTIONS	07/22/22 - Permit Revisions
A301	BUILDING SECTIONS	07/22/22 - Permit Revisions
A302	BUILDING SECTIONS	07/22/22 - Permit Revisions
A303	BUILDING SECTIONS	07/22/22 - Permit Revisions
A400	WALL SECTIONS	07/22/22 - Permit Revisions
A401	WALL SECTIONS	07/22/22 - Permit Revisions
A402	WALL SECTIONS	07/22/22 - Permit Revisions
A410	STAIR SECTIONS	07/22/22 - Permit Revisions
A411	STAIR SECTIONS	07/22/22 - Permit Revisions
A412	STAIR SECTIONS	07/22/22 - Permit Revisions
A470	UNIT PLANS - STUDIOS - LONG AND SHORT - (TYPE B ADA UNIT - 1ST FLOOR ONLY)	07/22/22 - Permit Revisions
A471	UNIT PLANS - (TYPE A ADA UNIT - 1ST FLOOR ONLY)	07/22/22 - Permit Revisions
A472	UNIT PLANS - 1BD - END UNITS	07/22/22 - Permit Revisions
A500	LARGE SCALE DETAILS	07/22/22 - Permit Revisions
A501	LARGE SCALE DETAILS	07/22/22 - Permit Revisions
A502	LARGE SCALE DETAILS	07/22/22 - Permit Revisions
A503	LARGE SCALE DETAILS	07/22/22 - Permit Revisions
A504	LARGE SCALE DETAILS	07/22/22 - Permit Revisions
A505	LARGE SCALE DETAILS	07/22/22 - Permit Revisions
A506	LARGE SCALE DETAILS	07/22/22 - Permit Revisions
A600	SCHEDULES	07/22/22 - Permit Revisions
A610	WALL - FIRE RATED ASSEMBLY DETAIL -U341	07/22/22 - Permit Revisions
A611	WALL - FIRE RATED ASSEMBLY DETAIL -U305	07/22/22 - Permit Revisions
A612	FLOOR - FIRE RATED ASSEMBLY DETAIL -L521	07/22/22 - Permit Revisions
A613	FLOOR - FIRE RATED ASSEMBLY DETAIL -L521 CONT.	07/22/22 - Permit Revisions
A614	FIRE STOP DETAILS - FLOOR	07/22/22 - Permit Revisions
A615	FIRE STOP DETAILS - FLOOR	07/22/22 - Permit Revisions
A616	FIRE STOP DETAILS - FLOOR	07/22/22 - Permit Revisions
A617	FIRE STOP DETAILS - WALLS	07/22/22 - Permit Revisions
A751	ADA - TYPE A AND B	07/22/22 - Permit Revisions
A800	PARTITION DETAILS - WOOD STUDS	07/22/22 - Permit Revisions
P100	PLUMBING PLAN TYPICAL UNIT	07/22/22 - Permit Revisions
P101	PLUMBING PLAN 1ST FLOOR	07/22/22 - Permit Revisions
P102	PLUMBING PLAN 2ND FLOOR	07/22/22 - Permit Revisions
P103	PLUMBING PLAN 3RD FLOOR	07/22/22 - Permit Revisions
P104	PLUMBING PLAN ROOF	07/22/22 - Permit Revisions
P200	PLUMBING RISERS	07/22/22 - Permit Revisions
P201	PLUMBING DETAILS	07/22/22 - Permit Revisions
P300	PLUMBING NOTES & SCHEDULES	07/22/22 - Permit Revisions
MEP100	MEP SITE PLAN	07/22/22 - Permit Revisions
MEP101	SITE LIGHTING LEVELS	07/22/22 - Permit Revisions
M100	MECHANICAL PLAN TYPICAL UNIT	07/22/22 - Permit Revisions
M101	MECHANICAL PLAN 1ST FLOOR	07/22/22 - Permit Revisions
M102	MECHANICAL PLAN 2ND FLOOR	07/22/22 - Permit Revisions
M103	MECHANICAL PLAN 3RD FLOOR	07/22/22 - Permit Revisions
M104	MECHANICAL PLAN ROOF	07/22/22 - Permit Revisions
M200	MECHANICAL DETAILS	07/22/22 - Permit Revisions
M300	MECHANICAL NOTES & SCHEDULES	07/22/22 - Permit Revisions
E100	ELECTRICAL POWER PLAN TYPICAL UNIT	07/22/22 - Permit Revisions
E101	ELECTRICAL POWER PLAN 1ST FLOOR	07/22/22 - Permit Revisions
E102	ELECTRICAL POWER PLAN 2ND FLOOR	07/22/22 - Permit Revisions
E103	ELECTRICAL POWER PLAN 3RD FLOOR	07/22/22 - Permit Revisions
E104	ELECTRICAL POWER PLAN ROOF	07/22/22 - Permit Revisions
E120	ELECTRICAL LIGHTING PLAN TYPICAL UNIT	07/22/22 - Permit Revisions
E121	ELECTRICAL LIGHTING PLAN 1ST FLOOR	07/22/22 - Permit Revisions
E122	ELECTRICAL LIGHTING PLAN 2ND & 3RD FLOOR	07/22/22 - Permit Revisions
E200	ELECTRICAL RISER & DETAILS	07/22/22 - Permit Revisions
E201	ELECTRICAL PANEL SCHEDULES	07/22/22 - Permit Revisions
E300	ELECTRICAL NOTES AND SCHEDULES	07/22/22 - Permit Revisions

COVER

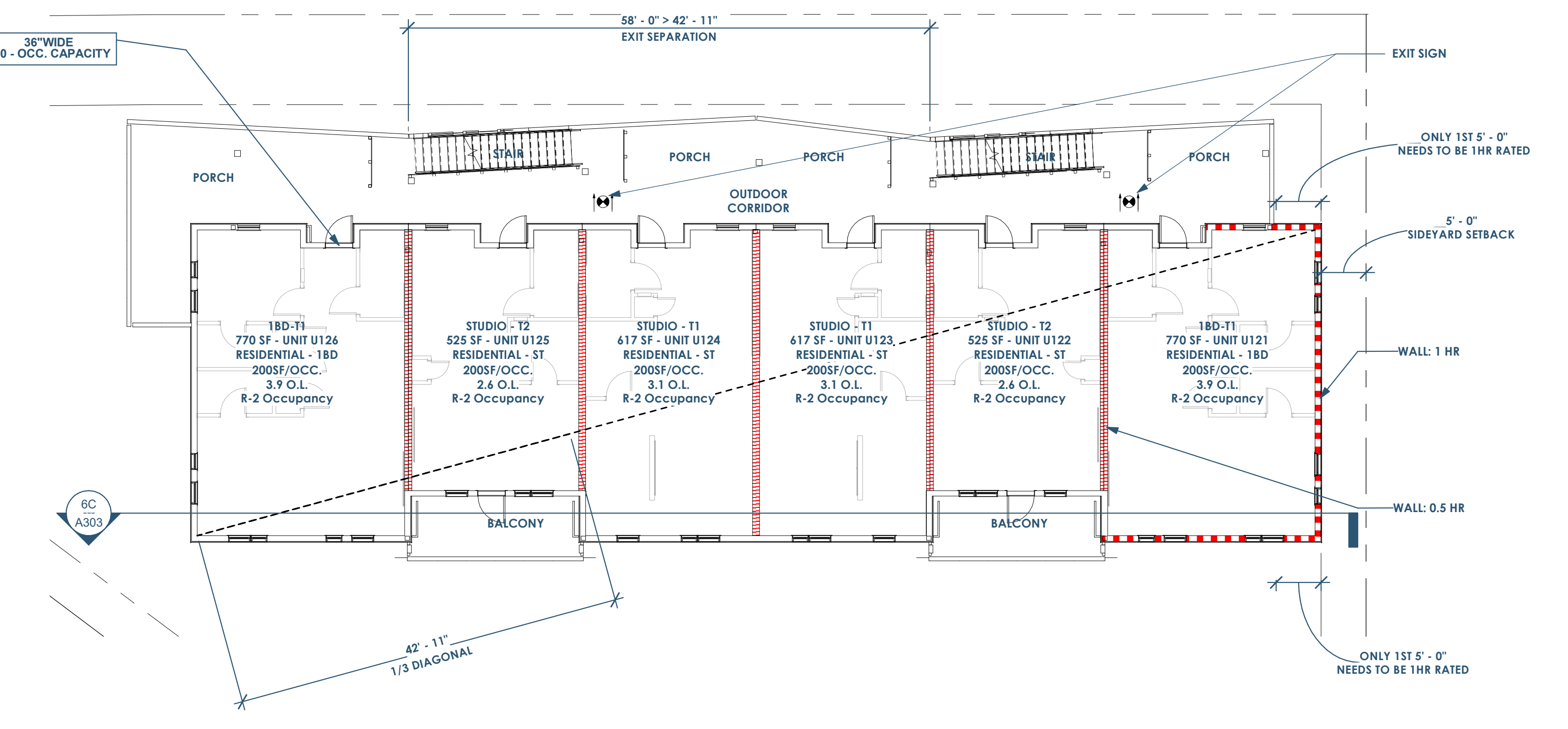
MARCO POLO - 101 W 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & PT OF 6 & PT OF ALLEY - BRYAN, TX 77803

G000

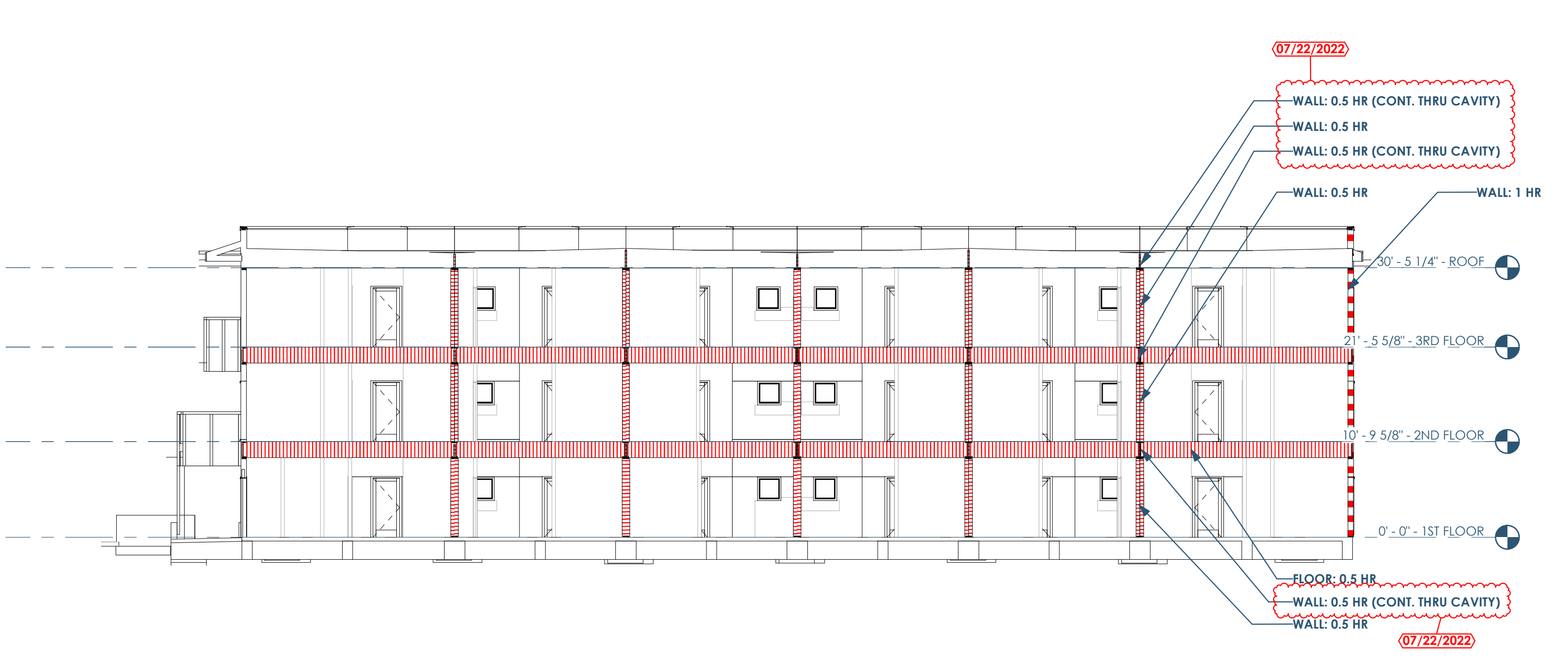
OCCUPANT LOAD (BASED ON TABLE 1004.1.2)						
Level	Name	Occupancy	Area	Function of Space	Area Allowance Per Occupant	Occupant Load
1ST FLOOR	OUTDOOR CORRIDOR	R-2	759 SF	CIRCULATION	200	4.0
1ST FLOOR	STAIR	R-2	84 SF	CIRCULATION	200	1.0
1ST FLOOR	STAIR	R-2	84 SF	CIRCULATION	200	1.0
1ST FLOOR	PATIO	R-2	84 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PATIO	R-2	149 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PATIO	R-2	98 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PATIO	R-2	96 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PATIO	R-2	141 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PATIO	R-2	90 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PORCH	R-2	145 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PORCH	R-2	97 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PORCH	R-2	94 SF	RESIDENTIAL	200	1.0
1ST FLOOR	PORCH	R-2	86 SF	RESIDENTIAL	200	1.0
1ST FLOOR	1BD - T1 - TYPE B	R-2	770 SF	RESIDENTIAL - 1BD	200	4.0
1ST FLOOR	1BD-T1 - TYPE B	R-2	770 SF	RESIDENTIAL - 1BD	200	4.0
1ST FLOOR	STUDIO - T1 - TYPE A	R-2	615 SF	RESIDENTIAL - ST	200	4.0
1ST FLOOR	STUDIO - T1 - TYPE B	R-2	615 SF	RESIDENTIAL - ST	200	4.0
1ST FLOOR	STUDIO - T2 - TYPE B	R-2	522 SF	RESIDENTIAL - ST	200	3.0
1ST FLOOR	STUDIO - T2 - TYPE B	R-2	522 SF	RESIDENTIAL - ST	200	3.0
1ST FLOOR: 19			5842 SF			38.0
2ND FLOOR	OUTDOOR CORRIDOR	R-2	613 SF	CIRCULATION	200	4.0
2ND FLOOR	STAIR	R-2	84 SF	CIRCULATION	200	1.0
2ND FLOOR	STAIR	R-2	84 SF	CIRCULATION	200	1.0
2ND FLOOR	BALCONY	R-2	123 SF	RESIDENTIAL	200	1.0
2ND FLOOR	BALCONY	R-2	123 SF	RESIDENTIAL	200	1.0
2ND FLOOR	PORCH	R-2	334 SF	RESIDENTIAL	200	2.0
2ND FLOOR	PORCH	R-2	107 SF	RESIDENTIAL	200	1.0
2ND FLOOR	PORCH	R-2	101 SF	RESIDENTIAL	200	1.0
2ND FLOOR	PORCH	R-2	131 SF	RESIDENTIAL	200	1.0
2ND FLOOR	1BD-T1	R-2	770 SF	RESIDENTIAL - 1BD	200	4.0
2ND FLOOR	1BD-T1	R-2	770 SF	RESIDENTIAL - 1BD	200	4.0
2ND FLOOR	STUDIO - T1	R-2	617 SF	RESIDENTIAL - ST	200	4.0
2ND FLOOR	STUDIO - T1	R-2	617 SF	RESIDENTIAL - ST	200	4.0
2ND FLOOR	STUDIO - T2	R-2	525 SF	RESIDENTIAL - ST	200	3.0
2ND FLOOR	STUDIO - T2	R-2	525 SF	RESIDENTIAL - ST	200	3.0
2ND FLOOR: 15			5524 SF			35.0
3RD FLOOR	OUTDOOR CORRIDOR	R-2	635 SF	CIRCULATION	200	4.0
3RD FLOOR	STAIR	R-2	84 SF	CIRCULATION	200	1.0
3RD FLOOR	STAIR	R-2	81 SF	CIRCULATION	200	1.0
3RD FLOOR	BALCONY	R-2	123 SF	RESIDENTIAL	200	1.0
3RD FLOOR	BALCONY	R-2	123 SF	RESIDENTIAL	200	1.0
3RD FLOOR	PORCH	R-2	224 SF	RESIDENTIAL	200	2.0
3RD FLOOR	PORCH	R-2	107 SF	RESIDENTIAL	200	1.0
3RD FLOOR	PORCH	R-2	101 SF	RESIDENTIAL	200	1.0
3RD FLOOR	PORCH	R-2	131 SF	RESIDENTIAL	200	1.0
3RD FLOOR	1BD-T1	R-2	770 SF	RESIDENTIAL - 1BD	200	4.0
3RD FLOOR	1BD-T1	R-2	770 SF	RESIDENTIAL - 1BD	200	4.0
3RD FLOOR	STUDIO - T1	R-2	618 SF	RESIDENTIAL - ST	200	4.0
3RD FLOOR	STUDIO - T1	R-2	618 SF	RESIDENTIAL - ST	200	4.0
3RD FLOOR	STUDIO - T2	R-2	525 SF	RESIDENTIAL - ST	200	3.0
3RD FLOOR	STUDIO - T2	R-2	525 SF	RESIDENTIAL - ST	200	3.0
3RD FLOOR: 15			5435 SF			35.0
Grand total: 49			16804 SF			108.0



6C LIFE SAFETY - 1ST FLOOR
1" = 10'-0"



6A LIFE SAFETY - 2ND FLOOR
1" = 10'-0"



3B LIFE SAFETY SECTION - EAST/WEST
3/32" = 1'-0"

RATED WALLS/FLOORS LEGEND

- RATED - 4 HR
- RATED - 3 HR
- RATED - 2 HR
- RATED - 1.5 HR
- RATED - 1 HR
- RATED - 0.5 HR

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Date	Description
06/10/2022	Issued for Permit
07/22/2022	Permit Revisions

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS & TESTING

- 1. SPECIAL INSPECTIONS AND STRUCTURAL TESTING SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER FOR THE ITEMS IDENTIFIED IN THIS SECTION AND IN OTHER AREAS OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS...
2. THE NAME AND CREDENTIALS OF THE SPECIAL INSPECTOR TO BE USED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL...
3. DATES OF THE SPECIAL INSPECTION:
A. THE SPECIAL INSPECTOR SHALL REVIEW ALL WORK LISTED BELOW FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AND THE IBC...
B. THE SPECIAL INSPECTOR SHALL FURNISH SPECIAL INSPECTION REPORTS TO THE E.O.C. CONTRACTOR, OWNER AND BUILDING OFFICIAL ON A WEEKLY BASIS...
C. ONCE CORRECTIONS HAVE BEEN MADE BY THE CONTRACTOR, THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL BONDED REPORT TO THE BUILDING OFFICIAL STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE IN CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AS WELL AS THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC...
4. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
A. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE OWNER AND THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF WORK...
B. THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE SPECIAL INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED...
C. ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT HAS BEEN OBSERVED BY THE SPECIAL INSPECTOR...
5. PLEASE SEE THE SPECIAL INSPECTION SCHEDULE FOR THE TYPES, FREQUENCIES AND FREQUENCIES OF SPECIAL ITEMS REQUIRING SPECIAL INSPECTIONS AND STRUCTURAL TESTS AS PART OF THIS PROJECT...
6. REFER TO ARCHITECTURAL AND/OR MEP DRAWINGS FOR ADDITIONAL SPECIAL INSPECTION REQUIRED, DUDLEY ENGINEERING HAS LISTED THE STRUCTURAL SPECIAL INSPECTIONS AND TESTING.

WIND-RESISTING COMPONENTS (1705.11.3)

- PERIODIC SPECIAL INSPECTION IS REQUIRED FOR FASTENING OF THE FOLLOWING SYSTEMS AND COMPONENTS:
1. ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS
2. EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: AFTER BUILDING CONSTRUCTION AND LANDSCAPING HAVE BEEN COMPLETED, FINAL GRADES SHALL BE VERIFIED TO DOCUMENT REQUIRED DRAINAGE; AFTER BUILDING CONSTRUCTION AND LANDSCAPING HAVE BEEN COMPLETED, DOWNPOUTS SHALL BE INSPECTED TO CONFIRM CONFORMANCE; GRADES AROUND THE STRUCTURE SHALL BE PERIODICALLY INSPECTED AND ADJUSTED AS PART OF THE BUILDING'S MAINTENANCE PROGRAM; PLUMBING LEAK 'HYDROSTATIC' TEST PERFORMED BY A LICENSED PLUMBER, TEST TO OCCUR AFTER ROUGH PLUMBING INSTALL; WHERE PAVING/FLATWORK ABOUT THE FOUNDATION, A MAINTENANCE PROGRAM SHALL BE ESTABLISHED TO EFFECTUALLY SEAL AND MAINTAIN JOINTS AND PREVENT SURFACE WATER INFILTRATION.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: VERIFY MATERIALS BELOW SHALL MEET FOUNDATION REQUIREMENTS TO ACHIEVE THE DESIGN BEARING CAPACITY; VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIALS; PERFORM CLASSIFICATION AND TESTING OF COMPACTED MATERIALS; VERIFY USE OF PROPER MATERIAL, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL; PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THE SITE HAS BEEN PREPARED PROPERLY.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: PREFABRICATED WOOD STRUCTURAL ELEMENTS (METAL PLATE CONNECTED WOOD TRUSSES FABRICATION AND INSTALLATION PROCEDURES NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION; HIGH-LOAD DIAPHRAGMS: A. INSPECT GRADE AND THICKNESS OF WOOD STRUCTURAL PANEL SHEATHING; B. VERIFY NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAIL OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THAT THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARKS AGREES WITH THE APPROVED BUILDING PLANS; METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING 60 FT OR GREATER: A. VERIFY THAT TEMPORARY INSTALLATION RESTRAINT BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE; INSPECTION OF NAILING, BOLTING, ANCHORING AND OTHER FASTENING COMPONENTS WITHIN THE SEISMIC / MAIN WIND FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, STACK STUDS, BRACES, SHEAR WALLS AND HOLD-DOWNS; MOISTURE CONTENT OF LOAD BEARING WOOD FRAMING: * MOISTURE CONTENT (JUST PRIOR TO INSTALLING SHEET ROCK) SHOULD BE AT OR BELOW USE SPECIFIC ATTENTION SHALL BE PAID TO MEMBERS ORIENTED WITH THEIR VERTICAL AXIS PERPENDICULAR TO THE VERTICAL PLANE (PLATES, JOISTS, TRUSS CHORDS, ETC.)

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: INSPECTION TASKS PRIOR TO WELDING (AS PER TABLE NE 4-1); WELDING PROCEDURE SPECIFICATION (WPS) AVAILABLE; MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE; MATERIAL IDENTIFICATION (TYPE / GRADE); WELDER IDENTIFICATION SYSTEM; REPAIR GROOVE WELDS; CONFIGURATION AND FINISH OF ACCESS HOLES; REPAIR FILLET WELDS; CHECK WELDING EQUIPMENT.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: INSPECTION TASKS DURING WELDING (AS PER TABLE NE 4-2); USE OF QUALIFIED WELDERS; CONTROL AND HANDLING OF WELDING CONSUMABLES; NO WELDING OVER CRACKED TACK WELDS; ENVIRONMENTAL CONDITIONS (WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE); WPS FOLLOWED; SIZE, LENGTH AND LOCATION OF WELDS; WELDS CLEANED; WELDS MEET VISUAL ACCEPTANCE CRITERIA; WELD / BASE-METAL FUSION; WELD PROFILES; WELD JOINT; POROSITY; ARC STRIKES; I-W AREA; BACING REMOVED AND WELD TACKS REMOVED (IF REQUIRED); REPAIR ACTIVITIES; DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT MEMBER.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: WPS FOLLOWED; SETTINGS ON WELDING EQUIPMENT; TRAVIS SPEED; SELECTED WELDING MATERIALS; SHELDING GAS TYPE / FLOW RATE; PRE-HEAT APPLIED; INTERPASS TEMPERATURES MAINTAINED (MINI MAX); PRESET CORRECTION (V, I, CH); WELDING TECHNIQUES; INTERPASS AND FINAL CLEANING; EACH PASS WITHIN PROBLE EMERSONS; EACH PASS MEET QUALITY REQUIREMENTS; WELDS CLEANED; SIZE, LENGTH AND LOCATION OF WELDS; WELDS MEET VISUAL ACCEPTANCE CRITERIA; CRACK PROHIBITION; WELD / BASE-METAL FUSION; CHAIR CROSS SECTION; WELD PROFILES; WELD JOINT; UNDERCUT; POROSITY; ARC STRIKES; I-W AREA; BACING REMOVED AND WELD TACKS REMOVED (IF REQUIRED); REPAIR ACTIVITIES; DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT MEMBER.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: NON-DESTRUCTIVE TESTING OF WELDED JOINTS; FILLET WELDS; MT TEST A MINIMUM OF 10% OF THE LENGTH OF EACH FILLET WELD EXCEEDING 5/16"; PERIODIC MT TESTING OF REPRESENTATIVE FILLET WELDS 5/16" AND LESS BUT NEED NOT EXCEED 10% OF ALL SUCH WELDS, EXCEPT AS REQUIRED FOR HIGH REJECTION RATES AS INDICATED IN THE FOLLOWING PARAGRAPH; INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS; PARTIAL JOINT PENETRATION (PJP) WELDS INCLUDING FLARE BEVEL WELDS; MT TEST A MINIMUM OF 25% OF THE LENGTH OF EACH PJP WELD EXCEEDING 5/16" EFFECTIVE (R/CAL); PERIODIC MT TESTING OF REPRESENTATIVE PJP WELDS 5/16" AND LESS BUT NEED NOT EXCEED 10% OF ALL SUCH WELDS, EXCEPT AS REQUIRED FOR HIGH REJECTION RATES AS INDICATED IN THE FOLLOWING PARAGRAPH; INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS; COMPLETE JOINT PENETRATION (CJP) WELDS; ALL CJP WELDS EXCEEDING 5/16" THICKNESS SHALL BE 100% UT TESTED PER AWS D1.1 CLAUSE 6 PART 1; THE TESTING LABORATORY SHALL REVIEW THE CJP JOINTS TO DETERMINE WHERE GROWERY OR ACCESSORY PRECLUDED THE USE OF STANDARD SCANNING PATTERNS FOR AWS D1.1 CLAUSE 6 PART 1; AT THESE LOCATIONS THE TESTING LABORATORY SHALL DEVELOP AND SUBMIT FOR APPROVAL A WRITTEN TESTING PROCEDURE IN ACCORDANCE WITH AWS D1.1 ANNEX E; PERIODIC MT TESTING OF REPRESENTATIVE CJP WELDS 5/16" AND LESS NOT TO EXCEED 10% OF ALL SUCH WELDS; INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: STRUCTURAL STEEL HIGH-STRENGTH BOLTS (TURN-OF-NUT); TURN-OF-NUT PRETENSIONING: THE INSPECTOR SHALL OBSERVE THE PRE-INSTALLATION VERIFICATION TESTING REQUIRED IN SECTION 8.2. SUBSEQUENTLY, IT SHALL BE ENSURED BY ROUTINE OBSERVATION THAT THE BOLTING CREW PROPERLY ROTATES THE TURNED ELEMENT RELATIVE TO THE TURNED ELEMENT BY THE AMOUNT SPECIFIED IN TABLE 8.2. AFTERWARDS, WHEN FASTENER ASSEMBLIES ARE MANIPULATED AFTER THE FINAL SETUP OF THE JOINT BUT PRIOR TO PRETENSIONING, VISUAL INSPECTION AFTER PRETENSIONING IS PERMITTED IN LIEU OF ROUTINE OBSERVATION. NO FURTHER EVIDENCE OF CONSUMABLES REQUIRED: A PRETENSION THAT IS GREATER THAN THE VALUE SPECIFIED IN TABLE 8.1 SHALL NOT BE CAUSE FOR REJECTION. A ROTATION THAT EXCEEDS THE REQUIRED VALUES INCLUDING TOLERANCE, SPECIFIED IN TABLE 8.1 SHALL NOT BE CAUSE FOR REJECTION.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: STRUCTURAL STEEL HIGH-STRENGTH BOLTS (ENIG-RIGHT) - INSPECTION TASKS PRIOR TO BOLTING; VERIFICATION AND INSPECTION; DOCUMENTATION AND ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.

Table with 4 columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC, REQUIRED. Rows include: STRUCTURAL STEEL HIGH-STRENGTH BOLTS (ENIG-RIGHT) - INSPECTION TASKS DURING BOLTING; VERIFICATION AND INSPECTION; DOCUMENTATION OF ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.

RENOVATION Wranglers logo; Owner: Renovation Wranglers, 102 E 26th St, Bryan, TX 77803; Architect of Record: LKB Architecture, 2929 Allen Pkwy Suite 200, Houston, TX 77019.

DUDLEY logo; Structural: Dudley, 6102 Imperial Loop Drive, College Station, TX 77845.

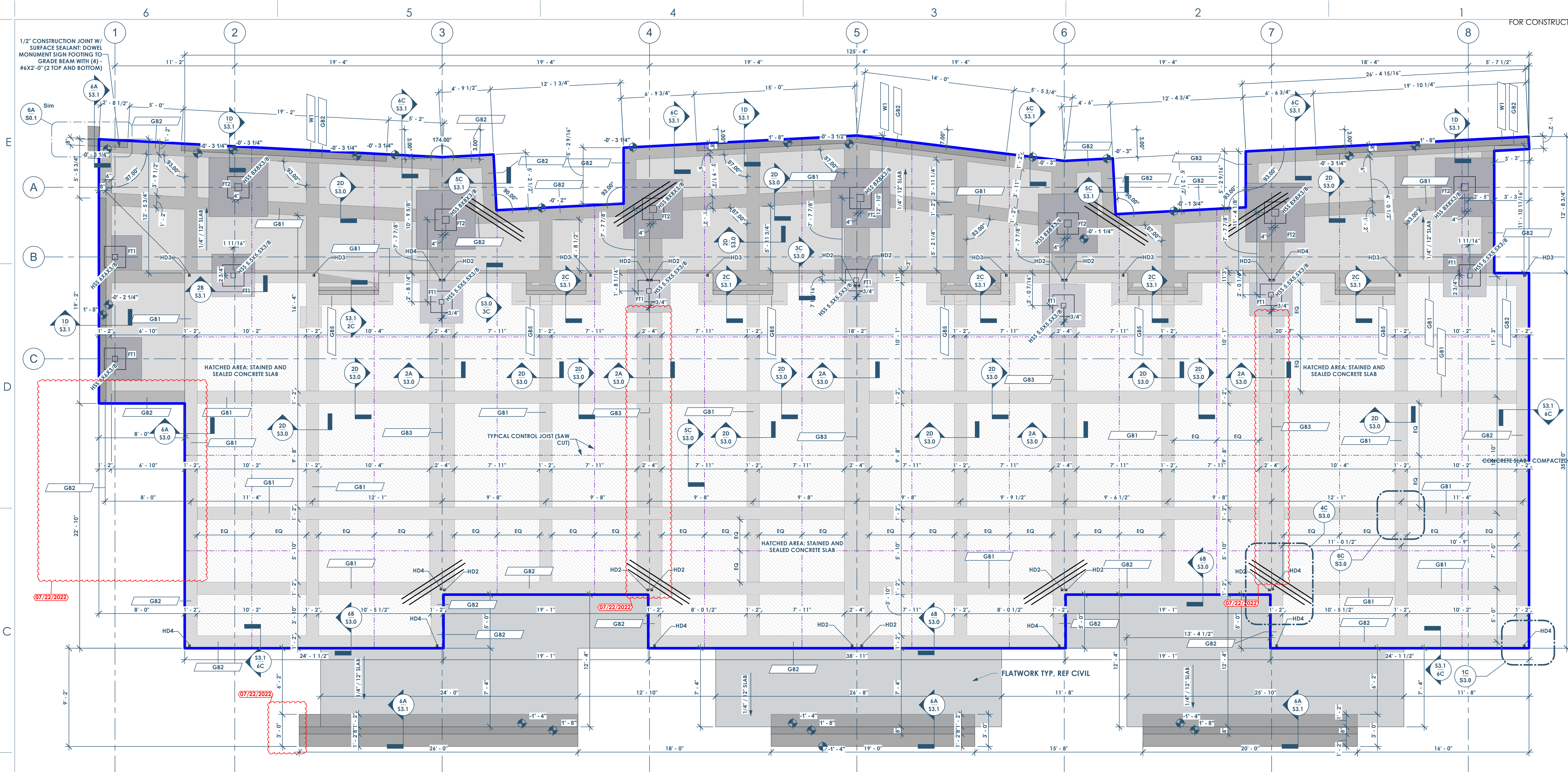
amc ENGINEERS logo; MEP: AMC Engineers, 508 E Jackson St # 552, Burnet, TX 78611.



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Table with 2 columns: Date, Description. Row 1: 06/02/2022, Review before Permit. Row 2: 07/22/2022, PERMIT REVISIONS.



48
S0.1 STRUCTURAL - FOUNDATION
1/4" = 1'-0"

SHEARWALL HOLDDOWN AT FOUNDATION						
TYPE MARK	TYPE	HARDWARE	END POST	ATTACHMENT TO END POST	ANCHORAGE TO FOUNDATION	CAPACITY
HD2	POST-INSTALLED HOLDDOWN	SIMPSON HTS	(2)-2X	(26) 0.148 X 3 NAILS	5/8" DIA. GR.36 ALL-THREAD WITH 8" EMBEDMENT WITH NUT AND WASHER	SEE SHEET S4.3 FOR DETAILS 4670
HD3	POST-INSTALLED HOLDDOWN	SIMPSON HDU8-SDS2.5	(3)-2X	(20) 1/4" X 2 1/2" SDS SCREWS	7/8" DIA. GR.36 ALL-THREAD WITH 17 1/2" EMBEDMENT WITH NUT AND WASHER	SEE SHEET S4.3 FOR DETAILS 6200
HD4	CAST IN PLACE	SIMPSON HDU14-SDS2.5	6X6	(36) 1/4" X 2 1/2" SDS SCREWS	1" DIA. GR.36 ANCHOR ROD WITH 18" EMBEDMENT	SEE SHEET S4.3 FOR DETAILS 10000

- STRUCTURAL CONNECTION NOTES:**
- MINIMUM EDGE DISTANCE TO CENTERLINE OF BOLT IS 3". AT CORNERS, THE OPPOSING EDGE DISTANCE MUST BE ≥ 6".
 - MINIMUM #4X36" LONG REINFORCING BAR LOCATED 3'-5" BELOW THE TOP OF THE SLAB IS REQUIRED TO BE CENTERED ON THE HOLDDOWN. AT CORNER, BEND THE BAR 90° AT THE CENTER.
 - REFERENCE MECHANICALLY LAMINATED BUILT-UP COLUMN FOR NAILING REQUIREMENTS FOR END POST.
 - SIMPSON ATR(REQUIRED Ø) WITH SIMPSON SET-3G IS AN ACCEPTABLE OPTION.

FOOTING SCHEDULE						
TYPE MARK	NAME	COUNT	WIDTH	LENGTH	DEPTH	TYPE COMMENTS
F1	CONCRETE STEEL COLUMN FOOTING - 4' X 4' X 2'-6"	9	4'-0"	4'-0"	2'-6"	SEE DETAIL 2B/S3.1 SEE DETAIL 2B/S3.1
F2	CONCRETE STEEL COLUMN FOOTING 5.5' X 5.5' X 2.5'	7	5'-6"	5'-6"	2'-6"	SEE DETAIL 2B/S3.1 SEE DETAIL 2B/S3.1

PTI PARAMETERS	
E _m - CENTER	4.8'
E _m - EDGE	2.0'
Y _m - CENTER	1.0"
Y _m - EDGE	1.25"
EFFECTIVE PLASTICITY INDEX	35
ALLOW. BEARING (PSF)	1,800 PSF
MIN. BEAM EMBEDMENT BELOW FINAL GRADE	18"
MIN PERIMETER BEAM EMBEDMENT BELOW FINAL GRADE	52"

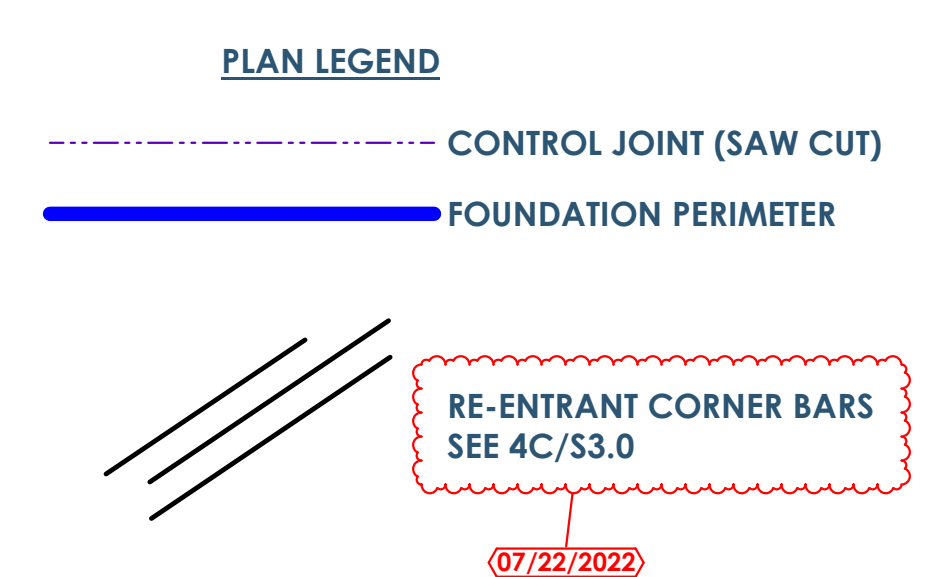
SLAB GEOMETRY	
AREA (SF)	5711 SF
PERIMETER (FT)	394 FT
SHAPE FACTOR (PERIMETER ² /AREA)	27.5

FOUNDATION SCHEDULE							
BEAM ID	DESCRIPTION	WIDTH	DEPTH	TOP BARS	BOTTOM BARS	STIRRUPS	COMMENTS
GB1	GRADE BEAM - INTERIOR - 14"	14"	30"	(3) - #6	(3) - #6	#3 @24" OC	
GB2	VERTICAL MOISTURE BARRIER	14"	30"	(3) - #6	(3) - #6	#3 @24" OC	
GB3	GRADE BEAM - INTERIOR - 28"	28"	30"	DOUBLE GB1	DOUBLE GB1	DOUBLE #3	(2) GB1 STIRRUP CAGES SIDE/SIDE - SEE DETAIL 2A/S3.0
GB4	8" CONCRETE FOUNDATION	8"	36"				SEE 6A/S3.1
GB5	TURNDOWN THICKENED SLAB	12"	12"	N/R	(2) - #4	N/R	SEE DETAIL 2C/S3.1
W1	8" CONCRETE (ARCHITECTURE FINISH) WALL	8"					SEE 1D/S3.1 FOR REINFORCING AND SIZE

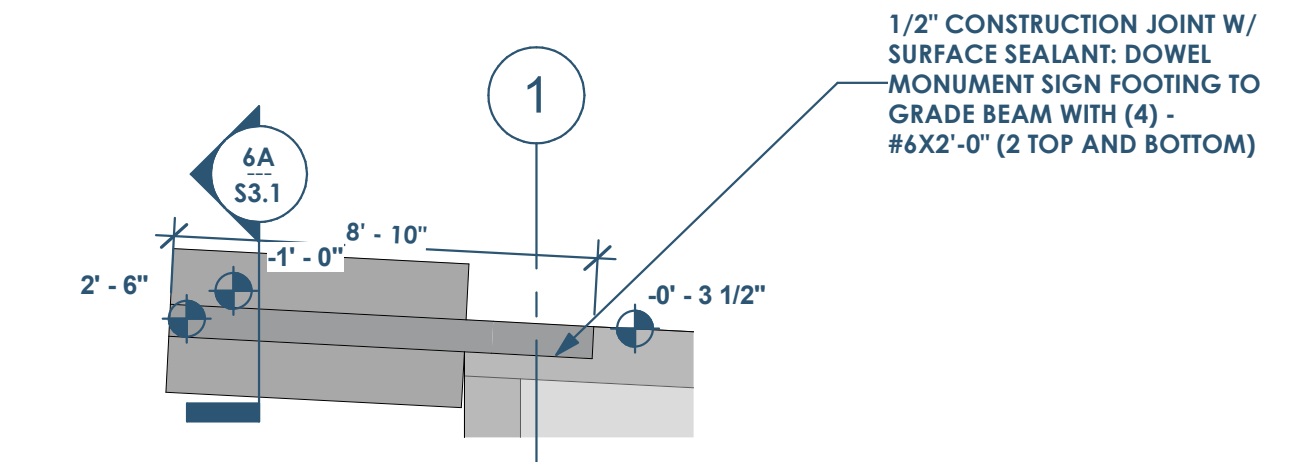
FOUNDATION NOTES

FOUNDATION TYPE: BRAB TYPE III - STIFFENED NON-STRUCTURAL SLAB-ON-GROUND
 SLAB THICKNESS: 5"
 SLAB REINFORCEMENT: #4 @ 16" OC EACH WAY - REF DETAIL
 DESIGN METHOD: ACI 318
 VAPOR RETARDER: MINIMUM 15 MIL (UNLESS THICKER REQ'D BY ARCHITECT)

- NOTES:**
- BEAMS ARE TYPE B1 UNO.
 - LOCATE THE FIRST STIRRUP A MAXIMUM OF 3" FROM FACE OF SUPPORT.
 - BEAM DEPTH INDICATED IN THE SCHEDULE IS A STRUCTURAL MINIMUM THAT THE BEAM REINFORCEMENT CAGE MAY BE BASED UPON. REFERENCE GEOTECHNICAL REPORT FOR MINIMUM GRADE BEAM EMBEDMENT BELOW ADJACENT FINAL GRADE OR FLATWORK/PAVEMENT.
 - N/R = NOT REQUIRED



- PLAN NOTES**
- VERIFY ALL EDGE OF FOUNDATION DIMENSIONS WITH FINAL ARCHITECTURE FLOOR PLANS.
 - FORM DIMENSIONS, SLAB DROPS, SLOPES, ETC. SHOWN AS AN AID TO CONTRACTOR ONLY. VERIFY EXACT DIMENSIONS AND LOCATIONS WITH ARCHITECT.
 - DIMENSIONS ARE TO OF GRADE BEAMS OR EDGE OF SLAB UNLESS NOTED OTHERWISE.
 - CONTROL JOINTS (SAW-CUTS) ARE RECOMMENDED TO REDUCE CRACKS IN THE SLAB, BUT ARE NOT REQUIRED FOR STRUCTURAL REQUIREMENTS. FOR THE RECOMMENDED MAXIMUM JOINT SPACING, REFERENCE DETAIL.
 - FOR FLATWORK OR PAVEMENT ABUTTING THE BUILDING FOUNDATION REFERENCE DETAIL.
 - CONCRETE IS ASSUMED TO RECEIVE A STEEL TROWEL FINISH UNLESS NOTED OTHERWISE. NOTIFY ENGINEER IF ARCHITECTUALLY EXPOSED CONCRETE (STAINED, POLISHED, ETC.) IS PLANNED FOR ADDITIONAL SHRINKAGE CRACKING MITIGATION METHODS.



6A
S0.1 STRUCTURAL - FOUNDATION - SIGN AREA
1/4" = 1'-0"

FOR CONSTRUCTION

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Date	Description
06/10/2022	Issued for Permit
07/22/2022	Permit Revisions

RENOVATION
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DUDDLEY
STRUCTURE

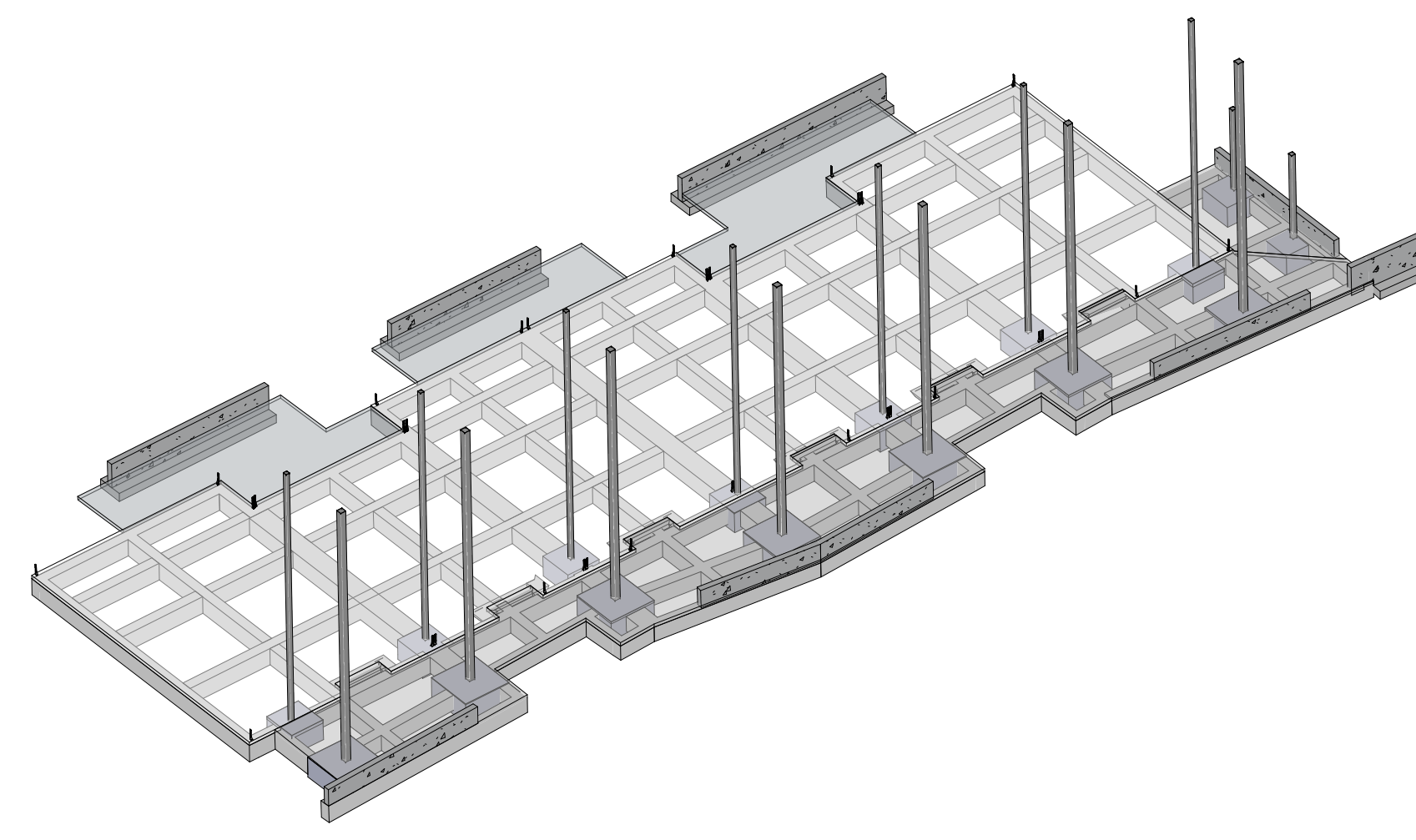
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amc
ENGINEERS

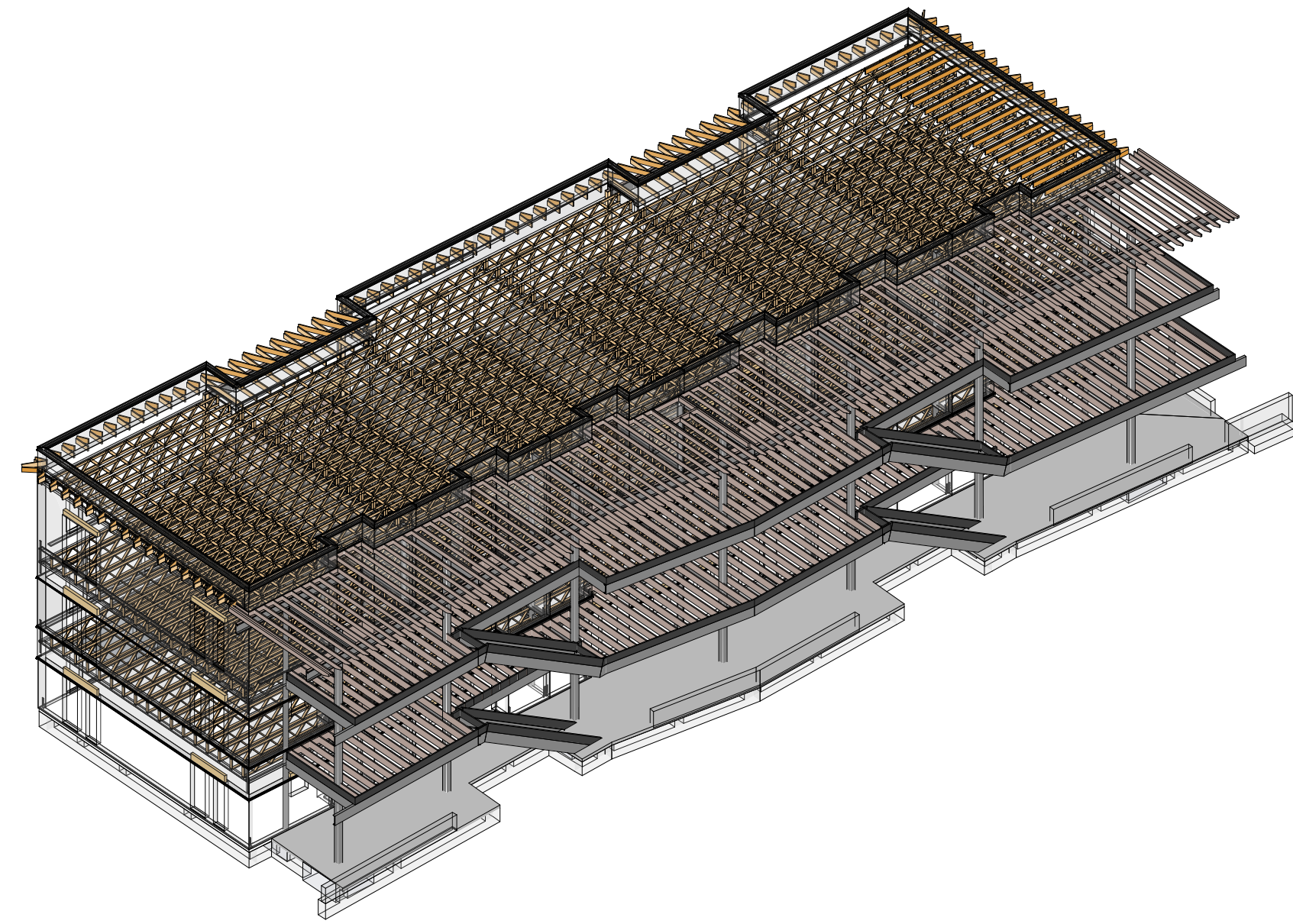
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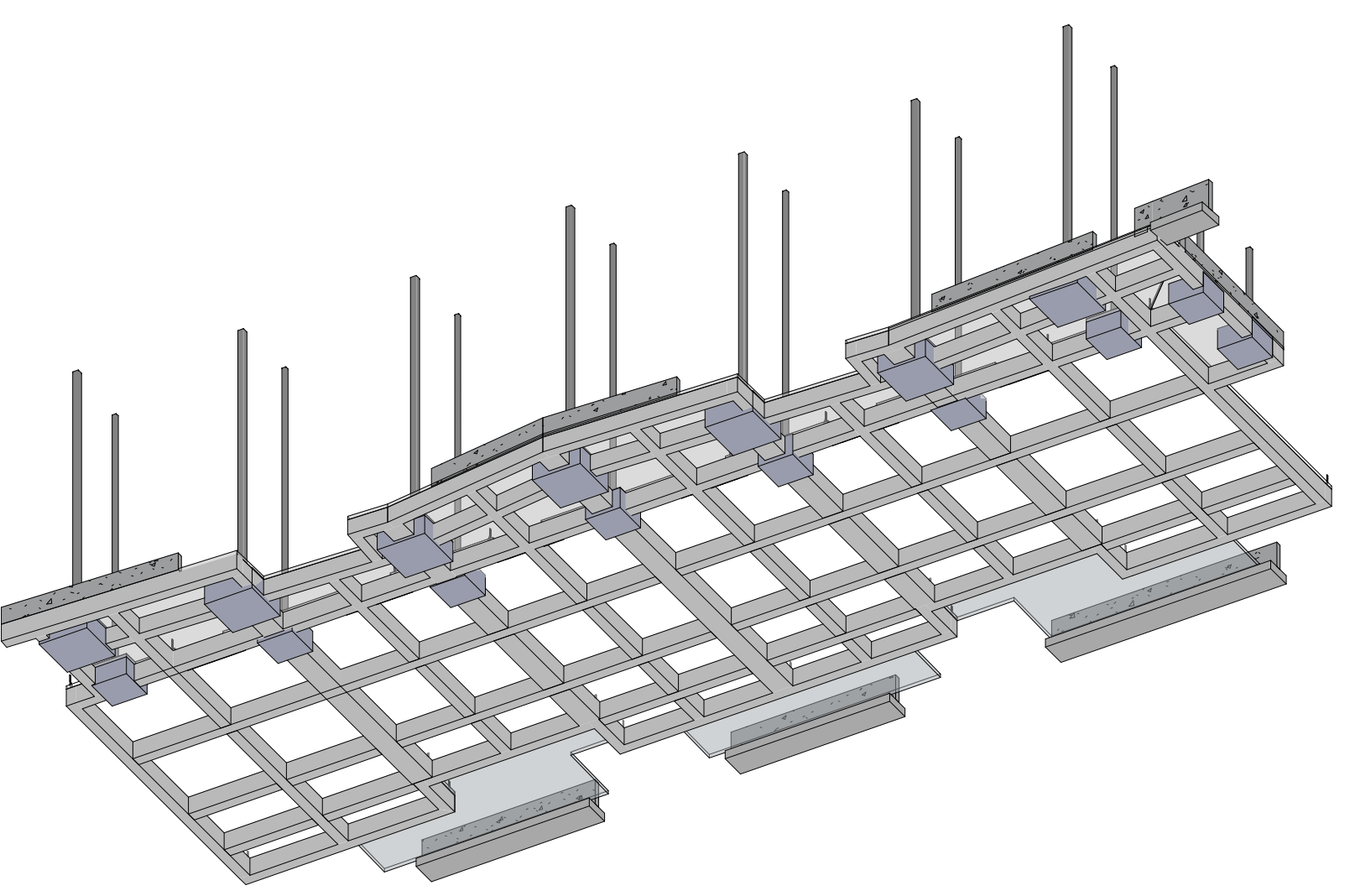
- SUBGRADE AND BUILDING PAD NOTES (PER GEOTECHNICAL REPORT):
- SUBGRADE IMPROVEMENT:
 - PROVIDE MINIMUM 2 FEET SELECT FILL TO TOP OF BUILDING PAD ELEVATION. THE SELECT FILL PAD MUST BE OF UNIFORM THICKNESS UNDO BY GEOTECHNICAL ENGINEER.
 - SITE PREPARATION:
 - SOFT SOILS SHOULD BE REMOVED UNTIL FIRM SOIL IS REACHED. THE SOFT SOILS CAN BE AERATED AND PLACED BACK IN SIX-INCH LOOSE LIFTS AND COMPACTED TO 95% AS SPECIFIED BY ASTM D-698. TREE STUMPS, TREE ROOTS, OLD SLABS, OLD FOUNDATIONS AND EXISTING PAVEMENTS SHOULD BE REMOVED FROM THE STRUCTURE AREA. IF THE TREE STUMPS AND ROOTS ARE LEFT IN PLACE, SETTLEMENT AND TERMITE INFESTATION MAY OCCUR. ONCE A ROOT SYSTEM IS REMOVED, A VOID IS CREATED IN THE SUBSOIL. IT IS RECOMMENDED TO FILL THESE VOIDS WITH STRUCTURAL FILL OR CEMENT-STABILIZED SAND AND COMPACT TO 95% AS SPECIFIED BY ASTM D-698.
 - ANY LOW-LYING AREAS INCLUDING RAVINES, DITCHES, SWAMPS, ETC. SHOULD BE FILLED WITH STRUCTURAL FILL AND PLACED IN EIGHT-INCH LIFTS. EACH LIFT SHOULD BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS SPECIFIED BY ASTM D-698.
 - THE EXPOSED SUBGRADE SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF SIX (6) INCHES FOUNDATION AREAS OR PER SUBGRADE IMPROVEMENT REQUIREMENTS. THE SUBGRADE SHOULD THEN BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY THE STANDARD MOISTURE DENSITY RELATIONSHIP (ASTM D-698). IN THE EVENT THAT THE UPPER SIX (6) INCHES CANNOT BE COMPACTED DUE TO EXCESSIVE MOISTURE, WE RECOMMEND THAT THESE SOILS BE EXCAVATED AND REMOVED OR CHEMICALLY STABILIZED TO PROVIDE A FIRM BASE FOR FILL PLACEMENT. PROOF-ROLLING SHOULD BE PERFORMED USING A HEAVY TIERED LOADED TRUCK OR PNEUMATIC RUBBER-TIRED WEIGHING 20 TONS.
 - THE SELECT FILL SOILS SHALL BE LIMITED TO THE FOOTPRINT OF THE FOUNDATION. IF OVERBUILD IS REQUIRED, INSTALL HORIZONTAL CLAY CAP TO COVER THE FILL OVERBUILD.
 - BEYOND THE PERIMETER OF THE STRUCTURE.
 - THE FLOOR SLAB SHOULD BE PLACED AS SOON AS POSSIBLE AFTER THE BUILDING PAD IS PREPARED. IF THE BUILDING PAD IS LEFT EXPOSED TO RAINFALL, PERCHED GROUNDWATER CONDITIONS MAY DEVELOP WHICH WILL UNDERMINE THE INTEGRITY OF THE FLOOR SLAB. ALL TRENCHES (WATER, CABLE, ELECTRICAL) SHOULD BE PROPERLY BACKFILLED AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY. SAND OR PERMEABLE MATERIALS SHOULD NOT BE USED AS BACKFILL. IMPROPERLY BACKFILLED AND IMPROPERLY COMPACTED TRENCH, IF LEFT EXPOSED WILL ALSO BE ANOTHER SOURCE FOR PERCHED GROUNDWATER CONDITIONS. IN GENERAL, PERCHED WATER TENDS TO BE TRAPPED WITHIN THE FILL. THE TRAPPED GROUNDWATER TENDS TO SOFTEN THE SUBGRADE. POSITIVE DRAINAGE SHOULD BE MAINTAINED ACROSS THE ENTIRE BUILDING PAD.
 - A QUALIFIED SOIL TECHNICIAN SHOULD MONITOR ALL EARTHWORK OPERATIONS. FIELD DENSITY TESTS SHOULD BE CONDUCTED ON EACH LIFT USING A NUCLEAR DENSITY GAUGE. THE GAUGE SHOULD BE CALIBRATED EVERY DAY. PRIOR TO FIELD DENSITY TESTS, A 50-POUND SAMPLE FROM THE SUBGRADE SOILS SHOULD BE OBTAINED. A SIMILAR SAMPLE SHOULD BE OBTAINED FROM THE FILL SOILS. A STANDARD MOISTURE DENSITY RELATIONSHIP (ASTM D-698) SHOULD BE PERFORMED ON EACH SAMPLE IN ORDER TO OBTAIN AN OPTIMUM MOISTURE CONTENT AND A MAXIMUM DRY DENSITY. THE FIELD DENSITY TESTS SHOULD BE COMPARED TO THESE RESULTS EVERY TIME THE SOILS ARE TESTED IN THE FIELD.
 - LOW SWELL POTENTIAL STRUCTURAL FILL (SELECT FILL)
 - LOW SWELL POTENTIAL SELECT FILL SHOULD CONSIST OF COHESIVE SOILS FREE OF ORGANICS OR OTHER DELETERIOUS MATERIALS AND SHOULD HAVE A PLASTICITY INDEX NOT LESS THAN 7 OR MORE THAN 20. SANDY CLAYS ARE RECOMMENDED FOR USE. THE LOW SWELL POTENTIAL SELECT FILL SHOULD BE CLEANED AND FREE OF ORGANIC MATTER OR OTHER DELETERIOUS MATERIAL. THE FILL SHOULD BE PLACED IN MAXIMUM SIX-INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR). THE MOISTURE CONTENT AT THE TIME OF COMPACTION SHOULD BE -2% $+3\%$ OF THE OPTIMUM VALUE AS DEFINED BY ASTM D 698. THE REFERENCED MOISTURE CONTENT AND DENSITY SHOULD BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
 - HORIZONTAL MOISTURE BARRIER
 - WHERE THE PERIMETER OF THE FOUNDATION DOES NOT HAVE LOW PERMEABILITY FLATWORK (SIDEWALK, PAVEMENT, PATIO, ETC.) ADJUTING THE FOUNDATION, A HORIZONTAL MOISTURE BARRIER VIA CLAY CAP AND VAPOR RETARDER MUST BE PROVIDED.
 - CLAY CAP: A MINIMUM 5" WIDE LOW PERMEABILITY CLAY "CAP" SHALL BE PLACED ALONG THE EXTERIOR OF THE FOUNDATION TO HELP MINIMIZE MOISTURE INFILTRATION INTO THE SELECT FILL SOIL PADS. THE LOW PERMEABILITY, 1-FOOT THICK CLAY "CAP" SHALL HAVE A MINIMUM PLASTICITY INDEX (PI) OF 30.
 - VAPOR RETARDER: BELOW THE CLAY CAP, A MIN 15 MIL VAPOR RETARDER MUST BE PROVIDED ON A MINIMUM 5% SLOPE. RETARDER MUST BE SECURED TO THE FOUNDATION.
 - DRAINAGE
 - ROOF DRAINAGE SHOULD BE COLLECTED BY A SYSTEM OF GUTTERS AND DOWN SPOUTS AND TRANSMITTED A MINIMUM DISTANCE OF 5' AWAY FROM THE FOUNDATION TO AN AREA WITH POSITIVE DRAINAGE AWAY FROM THE FOUNDATION. PREFERABLY TO A PAVED SURFACE WHERE WATER CAN DRAIN RAPIDLY AWAY FROM THE STRUCTURE, SIDEWALKS, PARKING AREAS, BUILDING ACCESS DRIVES, AND THE GENERAL GROUND SURFACE SHOULD BE SLOPED SO THAT WATER WILL DRAIN AWAY FROM THE STRUCTURE. WATER SHOULD NOT BE ALLOWED TO POND NEAR THE BUILDING FOUNDATIONS.
 - FINAL GRADES SHALL SLOPE A MINIMUM OF 5% FOR THE FIRST 10 FEET AWAY FROM THE FOUNDATION IN ALL DIRECTIONS. THIS SLOPE SHALL OCCUR IN THE SELECT FILL OR IN-SITU SOIL. MERELY SLOPING TOPSOIL IS NOT SUFFICIENT.
 - LANDSCAPING
 - AVOID THE USE OF METAL EDGING OR OTHER DAMMING DEVICES WITHIN FIVE FEET OF THE FOUNDATION. THE ROOTS OF TREES AND LARGE PLANTS REMOVE LARGE QUANTITIES OF WATER FROM THE SOIL. IF THESE TREES AND SHRUBS ARE NEAR THE FOUNDATION AND IF SUFFICIENT WATER IS NOT SUPPLIED, THE SOILS MAY SHRINK OR EXPANSE, CAUSING SUBSIDENCE IN THE FOUNDATION. DURING DRY PERIODS, ENOUGH WATER SHOULD BE SUPPLIED TO TREES TO MINIMIZE SHRINKING OF EXPANSIVE SOILS. AROUND THE MAJORITY OF THE IRRIGATION WATER SHOULD BE APPLIED WELL AWAY FROM THE FOUNDATION TO ATTRACT THE TREE ROOTS IN THAT DIRECTION. WHEN TREES MATURE TO THE POINT OF SHADING THE ENTIRE LOT, REGULAR PRUNING WILL BE NEEDED TO REDUCE THEIR WATER UPTAKE. LANDSCAPING PLANTS, SHRUBS, FLOWERS, ETC.) SHOULD NOT TRAP WATER AGAINST THE FOUNDATION. PROVIDE A SLOPE IN SOILS BELOW LANDSCAPE BEDDING AND IN THE BEDDING AWAY FROM THE FOUNDATION. ALTERNATIVELY, PROVIDE SWALES AROUND AND THROUGH THE LANDSCAPING TO DRAIN WATER AWAY. PROVIDE UNIFORM GROUND COVER AROUND THE FOUNDATION. THIS WILL HELP KEEP THE MOISTURE EVAPORATION RATE UNIFORM. IN AREAS THAT ARE NOT PLANTED, USE MULCH. EXTEND THE GROUND COVER AT LEAST FIVE FEET FROM THE FOUNDATION.
 - ANY ALL TREES SHALL BE PLANTED AT A MINIMUM DISTANCE EQUIVALENT TO THE HEIGHT OF THE TREE OR THE DRIP LINE PLUS 10 FEET WHICHEVER IS GREATER.
 - SOIL MOISTURE
 - EXPANSIVE SOILS HEAVE AND SUBSIDE DUE TO CHANGES IN MOISTURE CONTENT. CHANGES IN MOISTURE CONTENT CAN CAUSE VERY LARGE CHANGES IN SOIL VOLUME WHEN GOING FROM A DRY TO A SATURATED CONDITION, AND VICE VERSA. THIS MOVEMENT DOES NOT MEAN THE FOUNDATION IS IMPROPERLY DESIGNED OR THAT IT HAS FAILED. THE FOUNDATION DESIGN ENGINEER CANNOT CONTROL THE MOISTURE CONTENT OF THE SOIL, BUT OFTEN THE OWNER/TENANT CAN. UNIFORMITY IS THE KEY. UNIFORM MOISTURE CONTENT IN THE SOIL, UNIFORMLY MAINTAINED IN ALL AREAS AROUND THE FOUNDATION. IF CHANGES IN MOISTURE CONTENT ARE UNIFORM, THEN MOVEMENT OF THE FOUNDATION WILL BE UNIFORM AND LESS DISTRESS WILL BE CREATED IN THE STRUCTURE. IF CHANGES IN MOISTURE CONTENT ARE NON-UNIFORM, THEN THERE MAY BE DIFFERENTIAL MOVEMENT IN THE FOUNDATION. DIFFERENTIAL MOVEMENT CAN CAUSE GREATER (AND MORE OBVIOUS) DISTRESS IN THE STRUCTURE. LEAKING POOLS, LEAKING PLUMBING LINES, LEAKING DRAINS, DRIPPING FAUCETS, DRIPPING AIR CONDITIONING CONDENSATE LINES, AND MISDIRECTED WATER FROM CLOGGED AND BROKEN GUTTERS AND DOWNSPOUTS CAN CAUSE LOCAL HIGH MOISTURE CONTENTS THAT CAN RESULT IN DIFFERENTIAL MOVEMENT IN AREAS OF EXPANSIVE SOILS. THESE CONDITIONS SHOULD BE REMEDIED AS SOON AS POSSIBLE. TREES IN OR NEAR THE FOOTPRINT OF THE FOUNDATION, EITHER REMOVED OR PLANTED DURING CONSTRUCTION, CAUSE THE MAJORITY OF FOUNDATION PROBLEMS REQUIRING REPAIR IN THIS AREA. TREES REMOVED DURING CONSTRUCTION TEND TO CAUSE HEAVE OF EXPANSIVE SOILS DURING THE FIRST FEW YEARS. WITH INITIAL DISTRESS OFTEN EVIDENT AT THE TIME OF MOVE-IN, TREES PLANTED DURING OR AFTER CONSTRUCTION TEND TO CAUSE SUBSIDENCE OF EXPANSIVE SOILS. HOWEVER, SIGNIFICANT SUBSIDENCE DISTRESS WILL USUALLY NOT OCCUR FOR TEN TO TWENTY YEARS AS THE TREES MATURE.
 - CLIMATE
 - DURING PERIODS OF DRY WEATHER, THE SOIL AROUND THE FOUNDATION SHOULD BE IRRIGATED IF THE BUILDING IS LOCATED IN AN AREA WHERE EXPANSIVE SOILS ARE KNOWN TO OCCUR. THE MOST COMMONLY USED IRRIGATION SYSTEM IS ABOVEGROUND TINED SPRINKLERS WITH A MANUAL OVERRIDE SO THEY CAN BE TURNED OFF IN RAINY WEATHER. AN AUTOMATIC BELOWGROUND IRRIGATION SYSTEM THAT SENSES THE MOISTURE CONTENT OF THE SOIL MAY ALSO BE USED. TEND TO KEEP THE IRRIGATION SYSTEM SET ON "MANUAL", AND ONLY USE IN DRIER PERIODS WHEN WEEDING OF THE LAWN GRASSES AND OTHER VEGETATION OCCURS. THE IRRIGATION SHOULD BE DONE AT LEAST ONE TO TWO FEET AWAY FROM THE FOUNDATION, AND THEN LIGHTLY SO THAT TREE ROOTS ARE NOT ATTRACTED THERE. DO NOT ALLOW SPRINKLERS TO SPRAY WATER AGAINST THE STRUCTURE. IN EXTENDED DRY PERIODS, SHOULD THE SOIL CRACK AND PULL AWAY FROM THE FOUNDATION, DO NOT WATER DIRECTLY INTO THE GAP.
 - UTILITIES
 - CONNECTIONS FOR UTILITIES (PLUMBING, ELECTRICAL, GAS, ETC.) THAT ARE UNDERNEATH, GO THROUGH OR ARE ATTACHED TO THE FOUNDATION SHALL HAVE BE FLEXIBLE TO ACCOMMODATE FOUNDATION MOVEMENT OF AT LEAST 2". ALL DRAINAGE PIPING, AND GENERAL PLUMBING SYSTEMS ASSOCIATED WITH THE FOUNDATION OR IN PROXIMITY TO THE FOUNDATION SHALL BE LEAK TESTED FOLLOWING INSTALLATION AND ON AN ANNUAL BASIS.
 - ARCHITECTURAL FINISHES
 - TILE FLOORS SHALL BE JOINTED FREQUENTLY TO MINIMIZE CRACKING.
 - WALL COVERINGS SHALL BE JOINTED ON EACH SIDE OF DOOR AND WINDOW OPENINGS.
 - ALL ARCHITECTURAL FINISHES SHALL MIRROR CONTROL. EXPANSION OR CONSTRUCTION JOINTS IN THE FOUNDATION.



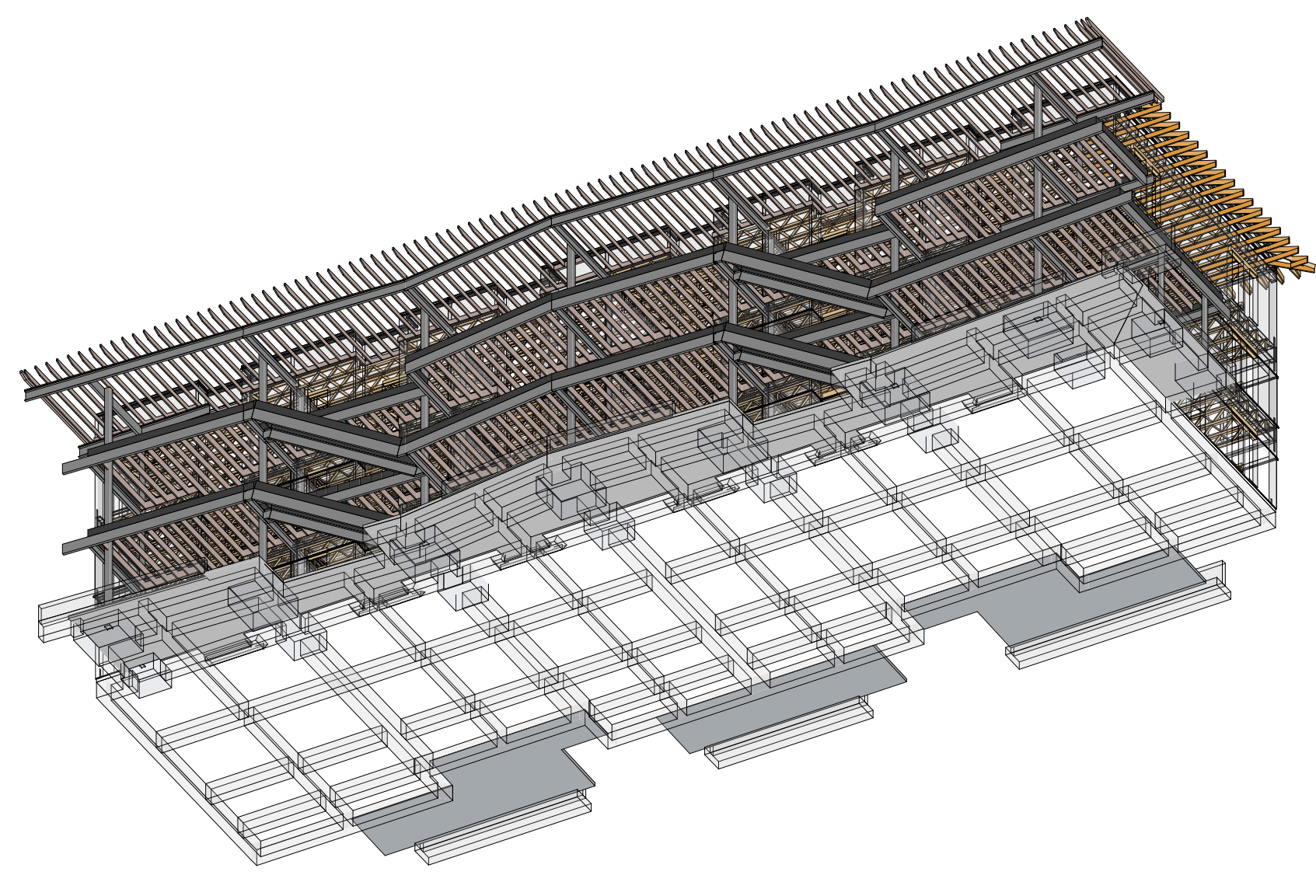
4D S0.1A STRUCTURAL FOUNDATION - 3D - 1



2D S0.1A STRUCTURAL FRAMING - 3D - 1



4B S0.1A STRUCTURAL FOUNDATION - 3D - 2

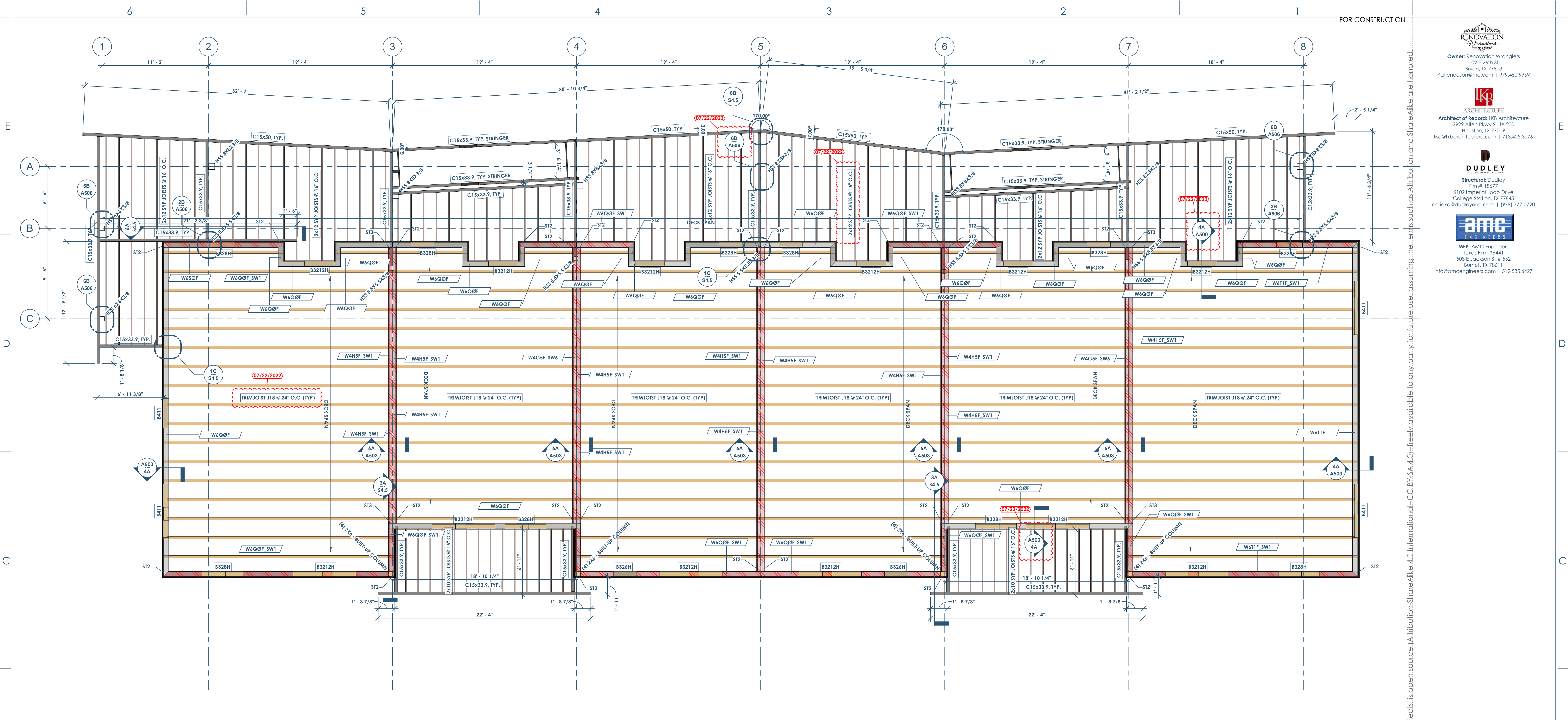


2B S0.1A STRUCTURAL FRAMING - 3D - 2

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Date	Description
04/10/2022	Issued for Permit
07/22/2022	Permit Revisions



6B SO.2 FRAMING PLAN - 2ND FLOOR 1/4" = 1'-0"

SHEAR WALL SCHEDULE					
SHEAR WALL TYPE	SHEATHING TYPE	PANEL EDGE NAILING	FIELD NAILING	ANCHORAGE	ALLOWABLE WIND SHEAR CAPACITY
SW1	7/16" WSP	6"	12"	(5/8" @ 40" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 3" OC - AT WOOD)	335 PLF
SW2	7/16" WSP	4"	12"	(5/8" @ 32" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 3" OC - AT WOOD)	490 PLF
SW3	7/16" WSP	3"	12"	(5/8" @ 24" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 2" OC - AT WOOD)	630 PLF
SW4	15/32" WSP	3"	12"	(5/8" @ 24" O.C. - AT CONCRETE) - (0.148" X 3" LONG NAILS @ 2" OC - AT WOOD)	840 PLF
SW5	15/32" WSP	2"	12"	(5/8" @ 24" O.C. - AT CONCRETE) - (0.148" X 3" LONG NAILS @ 2" OC - AT WOOD)	991 PLF
SW6	5/8" GYP WALLBOARD	7"	12"	(5/8" @ 48" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 12" OC - AT WOOD)	115 PLF
SW7	5/8" GYP WALLBOARD	4"	12"	(5/8" @ 48" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 12" OC - AT WOOD)	145 PLF

- SHEAR WALL NOTES:**
- ALL FASTENERS FOR WOOD STRUCTURAL PANEL SHALL BE FLAT HEAD NAILS CONSISTING OF THE FOLLOWING UNO:
 - A. 0.131" X 2 1/2" LONG
 - B. 0.148" X 3" LONG
 - FASTENERS FOR GYPSUM WALLBOARD SHALL BE ONE OF THE FOLLOWING:
 - A. 6d COOLER NAILS (0.092" X 1 7/8" LONG, 1/4" HEAD)
 - B. WALLBOARD NAIL (0.091" X 1 7/8" LONG, 1/4" HEAD)
 - C. 0.120" NAIL X 1-3/4" LONG, MIN 3/8" HEAD
 - D. NO. 6 TYPE S OR W DRYWALL SCREWS 1-1/4" LONG
 - ANCHORS INTO CONCRETE SHALL EITHER BE CAST-IN-PLACE J-BOLTS OR ADHESIVE ANCHORS WITH A MINIMUM EMBEDMENT OF 8". THE CONTRACTOR SHALL SUBMIT PROPOSED ADHESIVE ANCHOR ASSEMBLY FOR APPROVAL.
 - ALL PANEL EDGES SHALL BE BLOCKED.
 - WSP = WOOD STRUCTURAL PANEL. REF GENERAL NOTES FOR SPECIFICATIONS.
 - IF WALL IS SHEATHED ON BOTH SIDES, THEN SILL PLATE ANCHORAGE AND CONNECTION OF BOTTOM PLATE TO TOP PLATE SHALL BE DOUBLED.
 - PANELS MUST BE INSTALLED DIRECTLY TO FRAMING.
 - VALUES CALCULATED ARE FOR SOUTHERN PINE OR DOUGLAS-FIR LARCH FRAMING. CONTACT FOR IF OTHER SPECIES ARE USED.
 - PROVIDE 1/8" WIDE JOINTS IN SHEATHING TO ALLOW FOR SHRINKAGE AND EXPANSION OF THE PANELS.
 - SHEAR WALLS REFERENCED ARE FOR SHEAR WALLS BELOW FLOOR

WALL STUD SCHEDULE				
TOP OF WALL	MAX PLATE HT	EXTERIOR WALL	INTERIOR NON-LOAD BEARING	PARTY WALL
ROOF	8" - 11 5/8"	2X4 NO. 2 @ 16" O.C.	2X4 STUD @ 16" O.C.	2X4 STUD @ 16" O.C.
3RD	10" - 8"	2X4 NO. 2 @ 16" O.C.	2X4 STUD @ 16" O.C.	2X4 STUD @ 12" O.C.
2ND	10" - 9 5/8"	2X4 NO. 2 @ 16" O.C.	2X4 STUD @ 16" O.C.	2X4 STUD @ 8" O.C.

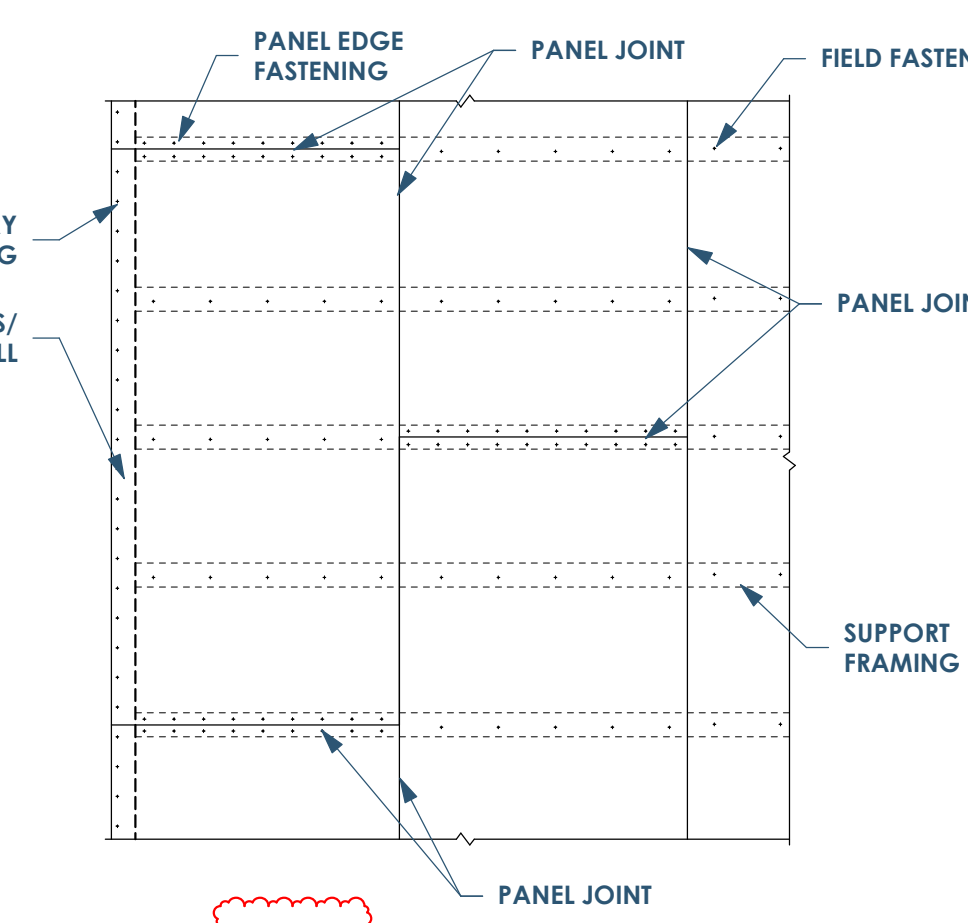
SHEARWALL HOLD-DOWNS AT ELEVATED FLOOR					
TYPE MARK	HOLD-DOWN HARDWARE	END LENGTH (IN)	FASTENERS	END POST	ALLOWABLE TENSION LOAD (LBF)
ST1	(1) SIMPSON CS18	12"	((11) 0.131 X 2 1/2" NAILS	(2) - 2X	1,370
ST2	(2) SIMPSON CS18	12"	((11) 0.131 X 2 1/2" NAILS	(2) - 2X	2,740
ST3	(2) SIMPSON CS14	19"	((18) 0.131 X 2 1/2" NAILS	(3) - 2X	4,980

- SHEARWALL & HOLD-DOWN NOTES:**
- MULTIPLE PILES OF END POSTS SHALL BE FASTENED TOGETHER PER THE MECHANICALLY BUILT-UP COLUMN NAILED DETAIL.
 - REFERENCE DETAIL 6A/S4.2 FOR TYPICAL HOLD-DOWN CONFIGURATIONS.
 - HOLD-DOWNS REFERENCED ARE FOR SHEAR WALLS ABOVE FLOOR

BEAM SCHEDULE				
BEAM TAG	BEAM SIZE	STUD PACK - NUMBER OF STUDS	FACE-MOUNT HANGER	TOP-FLANGE HANGER
B326H	(3)2X4	2	LUS26-2	HU26-2TF
B328H	(3)-2X3	2	LUS28-3	HU548TF
B3212H	(3)-2X12	3	HU210-3	HU212-3TF
B411	GL - 3 1/2" X 11 1/4"	3	HU5410	H83.56/11.25

- BEAM LEGEND NOTES:**
- "1" INDICATES MULTIPLE PLY DIMENSIONAL LUMBER BEAMS W/ 1/2" PLYWOOD SHEATHING. SEE 2A/S4.0
 - FOR KING AND JACK STUD REQUIREMENTS FOR EXTERIOR HEADERS REFER TO DETAIL 4C/S4.1
 - FOR KING AND JACK STUD REQUIREMENTS IN INTERIOR HEADERS REFER TO DETAIL 5B/S4.1
 - GL - GLULAM BEAMS SHALL BE ANTHONY POWER BEAM GLUE LAMINATED BEAMS OR APPROVED EQUAL.
 - STUD PACKS ARE REQUIRED WHEN BEAM IS BEARING ON A WALL ASSEMBLY. STUD PACKS MUST CONTINUE ALL THE WAY TO THE FOUNDATION UNLESS TRANSFERRED BY A BEAM.
 - ALL STUDS IN STUD PACK SHALL BE NO. 2 SOUTHERN PINE OR BETTER.
 - SHEATHING AND/OR DRYWALL MUST BE ATTACHED TO EACH INDIVIDUAL STUD IN THE STUD PACK.
 - ALL STUDS IN STUD PACK MUST BE FASTENED PER MECHANICALLY LAMINATED BUILT-UP COLUMN-NAILED - REFER TO 6A/S4.1

- SUBFLOOR NOTES:**
- THE SUBFLOOR SHALL BE MIN 3/4" APA RATED TONGUE AND GROOVE OSB STRUCTURAL SHEATHING WITH A FLOOR SPAN RATING OF 24.
 - FASTEN TO FRAMING SHALL CONSIST OF 8dX2" LONG WOOD SCREWS. ALTERNATIVELY, 0.131X2" NAILS MAY BE USED IF SCREWS ARE ADDED @ 12" O.C. MAX ADDITIONALLY.
 - THE SUBFLOOR SHALL BE GLUED TO THE SUPPORTING FRAMING WITH POLYURETHANE OR SOLVENT-BASED SUBFLOOR ADHESIVES CONFORMING TO APA-AFG-01 OR ASTM D 3498.
 - A. APPLY A 1/4" BEAD OF ADHESIVE TO THE TOP OF SUPPORTING MEMBERS. APPLY TWO BEADS WHERE PANELS JOINTS MEET.
 - B. APPLY ONLY ENOUGH ADHESIVE TO LAY ONE OR TWO PANELS AT A TIME TO KEEP THE ADHESIVE FROM CURING OR SKINNING.
 - C. FLOOR PANELS SHALL BE FULLY FASTENED WITHIN 10 MINUTES OF APPLYING ADHESIVE.
 - D. EXCESS ADHESIVE SHALL BE REMOVED IMMEDIATELY.
 - PANELS SHALL SPAN ACROSS 3 OR MORE SUPPORTING MEMBERS WITH THE LONG DIMENSION PERPENDICULAR TO THE FLOOR FRAMING. STAGGER END JOINT OF PANEL A MINIMUM OF 2"



- FLOOR PLAN NOTES:**
- TRIMMABLE METAL PLATE CONNECTED FLOOR TRUSS FRAMING:**
- TRIMMABLE METAL PLATE CONNECTED FLOOR TRUSS SHALL BE 18" DEEP AND SPACED AT 24" OC MAX UNLESS NOTED OTHERWISE. TRUSSES SHALL BE TRIMJOIST J18 TRIMMABLE JOIST OR APPROVED EQUIVALENT. LOADING CRITERIA SHALL BE AS:
 - TOP CHORD LIVE LOAD (TCLL): 40 PSF
 - TOP CHORD DEAD LOAD (TCDL): 10 PSF
 - BOTTOM CHORD LIVE LOAD (BCLL): 10 PSF (NON-CONCURRENT WITH TCLL)
 - BOTTOM CHORD DEAD LOAD (BCDL): 5 PSF
 - NON-LOAD BEARING WALL ABOVE: 100 PLF DL
 - LOAD-BEARING WALL ABOVE: SEE PLAN

- TRUSS DEFLECTION LIMITS: TRUSSES SHALL BE LIMITED TO THE FOLLOWING DEFLECTION LIMITS:
 - RATIO: LIVE LOAD (L/360) TOTAL LOAD (L/240)
 - MAXIMUM: 1/2"
- CAMBER SHALL BE BUILT INTO FLOOR TRUSSES TO COMPENSATE FOR VERTICAL DEAD LOAD DEFLECTION
 - FLOOR TRUSS: 0.85 X DEFLECTION FROM ACTUAL DEAD LOAD.
- THE TRUSS LAYOUT SHOWN ON THIS DRAWING REPRESENTS DIRECTION OF TRUSS SPAN ONLY. THE DRAWINGS SHALL NOT BE USED FOR PLACEMENT OF TRUSSES. REFER TO APPROVED TRUSS MFRS. DRAWINGS FOR PLACEMENT, DIMENSIONS, BRACING, AND CONNECTIONS.
- THE BOTTOM OF ALL DROP BEAMS OVER OPENINGS SHALL EQUAL THE TOP OF THE ROUGH OPENING.
- REFER TO TYPICAL ROOF UPLIFT LOAD PATH DETAIL FOR REQUIRED STRAPS, ANCHORS, ETC.
- DRAG TRUSSES SHALL BE PROVIDED DIRECTLY OVER INTERIOR WALLS AND SHALL BE DESIGNED FOR A TOTAL FORCE EQUAL TO THE LENGTH OF THE SHEAR WALL MULTIPLIED BY THE ALLOWABLE SHEAR VALUE PROVIDED IN THE SHEAR WALL SCHEDULE FOR THAT SHEAR TYPE.

- 2X DIMENSIONAL LUMBER FLOOR FRAMING:**
- FLOOR JOISTS ARE 2X12 @ 16" O.C. UNO.
 - THE BOTTOM OF ALL DROP BEAMS OVER OPENINGS SHALL EQUAL THE TOP OF THE ROUGH OPENING.
 - REFER TO TYPICAL ROOF UPLIFT LOAD PATH DETAIL FOR REQUIRED STRAPS, ANCHORS, ETC.

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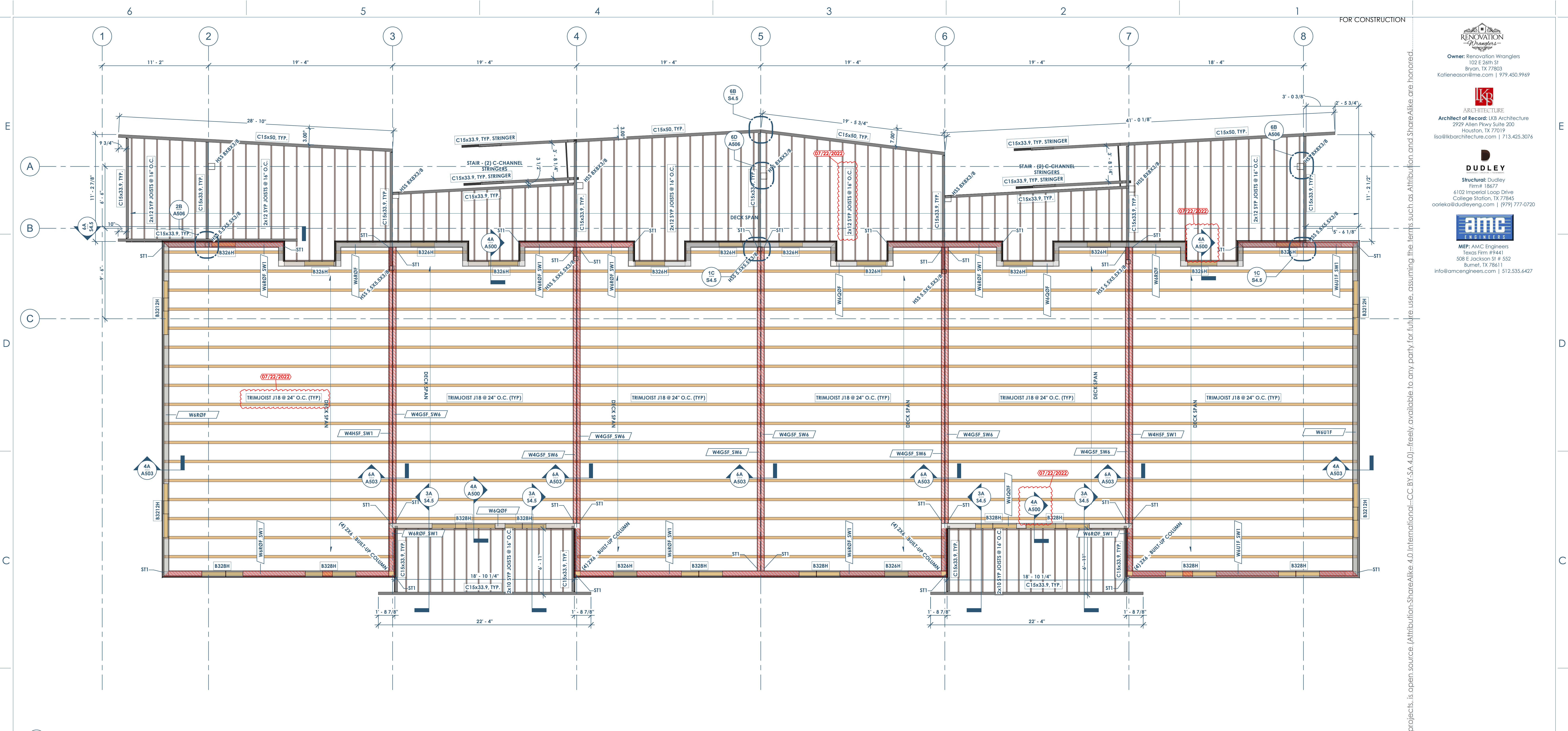
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6B 50.3 FRAMING PLAN - 3RD FLOOR 1/4" = 1'-0"

Table with 6 columns: SHEAR WALL TYPE, SHEATHING TYPE, PANEL NAILING, FIELD NAILING, ANCHORAGE, ALLOWABLE WIND SHEAR CAPACITY. Rows include SW1 through SW7 with various sheathing and nailing specifications.

- SHEAR WALL NOTES: 1. ALL FASTENERS FOR WOOD STRUCTURAL PANELS SHALL BE FLAT HEAD NAILS... 2. FASTENERS FOR GYPSUM WALLBOARD SHALL BE ONE OF THE FOLLOWING... 3. ANCHORS INTO CONCRETE SHALL EITHER BE CAST-IN-PLACE J-BOLTS OR ADHESIVE ANCHORS... 4. ALL PANEL EDGES SHALL BE BLOCKED... 5. WSP = WOOD STRUCTURAL PANEL. REF GENERAL NOTES FOR SPECIFICATIONS... 6. IF WALL IS SHEATHED ON BOTH SIDES, THEN SILL PLATE ANCHORAGE AND CONNECTION OF BOTTOM PLATE TO TOP PLATE SHALL BE DOUBLED... 7. PANELS MUST BE INSTALLED DIRECTLY TO FRAMING... 8. VALUES CALCULATED ARE FOR SOUTHERN PINE OR DOUGLAS-FIR LARCH FRAMING... 9. PROVIDE 1/8" WIDE JOINTS IN SHEATHING TO ALLOW FOR SHRINKAGE AND EXPANSION OF THE PANELS... 10. SHEAR WALLS REFERENCED ARE FOR SHEAR WALLS BELOW FLOOR.

Table with 5 columns: TYPE MARK, HOLD-DOWN HARDWARE, END LENGTH (IN), FASTENERS, END POST, ALLOWABLE TENSION LOAD (LBF). Rows include ST1, ST2, and ST3.

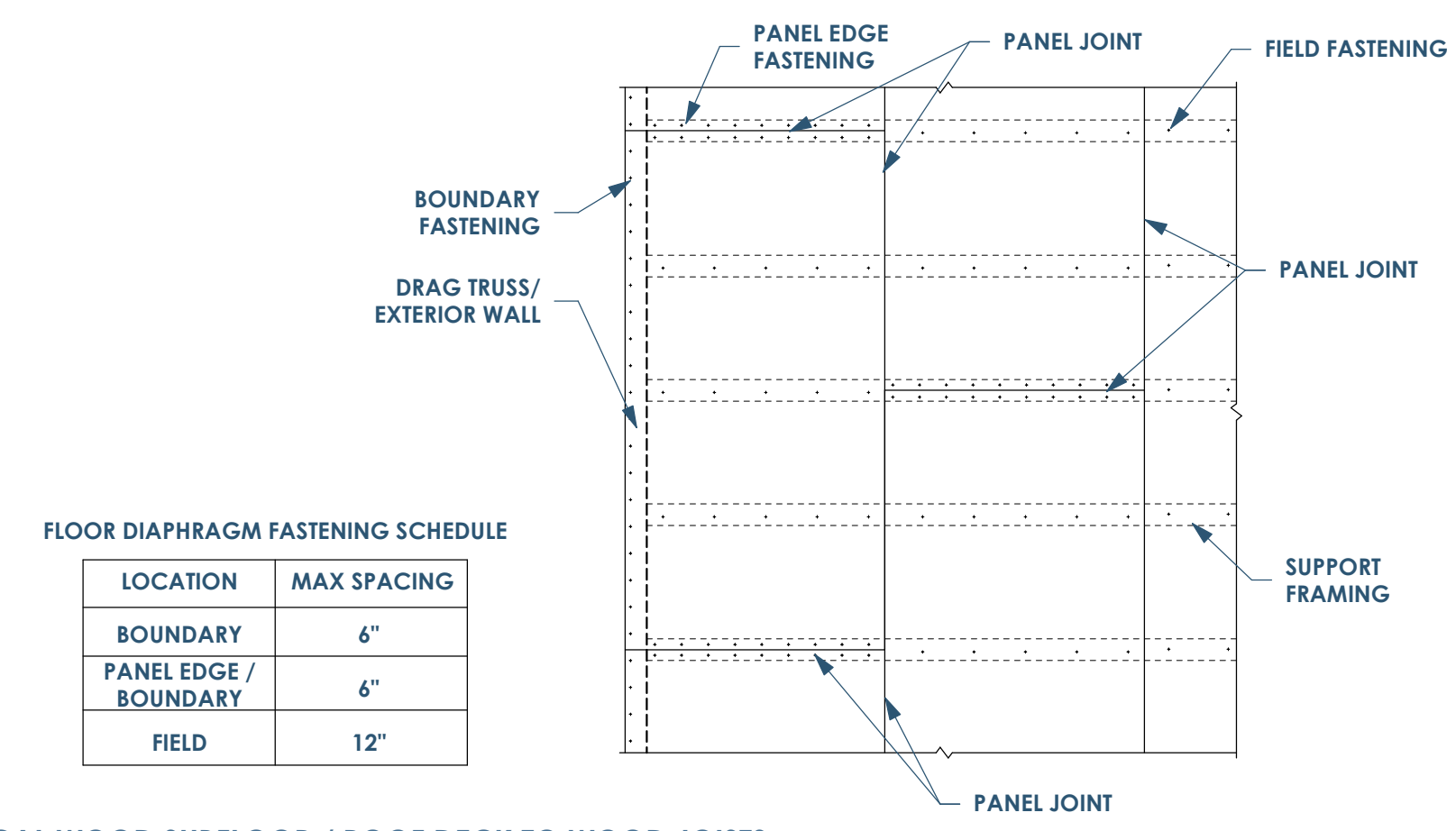
- SHEARWALL & HOLD-DOWN NOTES: 1. MULTIPLE PILES OF END POSTS SHALL BE FASTENED TOGETHER PER THE MECHANICALLY BUILT-UP COLUMN NAILED DETAIL... 2. REFERENCE DETAIL 6A/S4.2 FOR TYPICAL HOLD-DOWN CONFIGURATIONS... 3. HOLD-DOWNS REFERENCED ARE FOR SHEAR WALLS BELOW FLOOR.

Table with 5 columns: BEAM TAG, BEAM SIZE, STUD PACK - NUMBER OF STUDS, FACE-MOUNT HANGER, TOP-FLANGE HANGER. Rows include B326H, B328H, B321H, and B411.

- BEAM LEGEND NOTES: 1. "H" INDICATES MULTIPLE PLY DIMENSIONAL LUMBER BEAMS W/ 1/2" PLYWOOD SHEATHING... 2. FOR KING AND JACK STUD REQUIREMENTS FOR EXTERIOR HEADERS REFER TO DETAIL 4C/S4.1... 3. FOR KING AND JACK STUD REQUIREMENTS IN INTERIOR HEADERS REFER TO DETAIL 5B/S4.1... 4. GL - GULLIAM BEAMS SHALL BE ANTHONY POWER BEAM GLUE LAMINATED BEAMS OR APPROVED EQUAL... 5. STUD PACKS ARE REQUIRED WHEN BEAM IS BEARING ON A WALL ASSEMBLY... 6. ALL STUDS IN STUD PACK SHALL BE NO.2 SOUTHERN PINE OR BETTER... 7. SHEATHING AND/OR DRYWALL MUST BE ATTACHED TO EACH INDIVIDUAL STUD IN THE STUD PACK... 8. ALL STUDS IN STUD PACK MUST BE FASTENED PER MECHANICALLY BUILT-UP COLUMN-NAILED - REFER TO 6A/S4.1

Table with 4 columns: TOP OF WALL, MAX PLATE HT, EXTERIOR WALL, INTERIOR NON-LOAD BEARING, PARTY WALL. Rows include ROOF, 3RD, and 2ND floor levels.

- SUBFLOOR NOTES: 1. THE SUBFLOOR SHALL BE MIN 3/4" APA RATED TONGUE AND GROOVE OSB STRUCTURAL SHEATHING WITH A FLOOR SPAN RATING OF 24... 2. FASTEN TO FRAMING SHALL CONSIST OF #8x2" LONG WOOD SCREWS... 3. THE SUBFLOOR SHALL BE GLUED TO THE SUPPORTING FRAMING WITH POLYURETHANE OR SOLVENT-BASED SUBFLOOR ADHESIVES... 4. PANELS SHALL SPAN ACROSS 3 OR MORE SUPPORTING MEMBERS WITH THE LONG DIMENSION PERPENDICULAR TO THE FLOOR FRAMING...



TYPICAL WOOD SUBFLOOR / ROOF DECK TO WOOD JOISTS

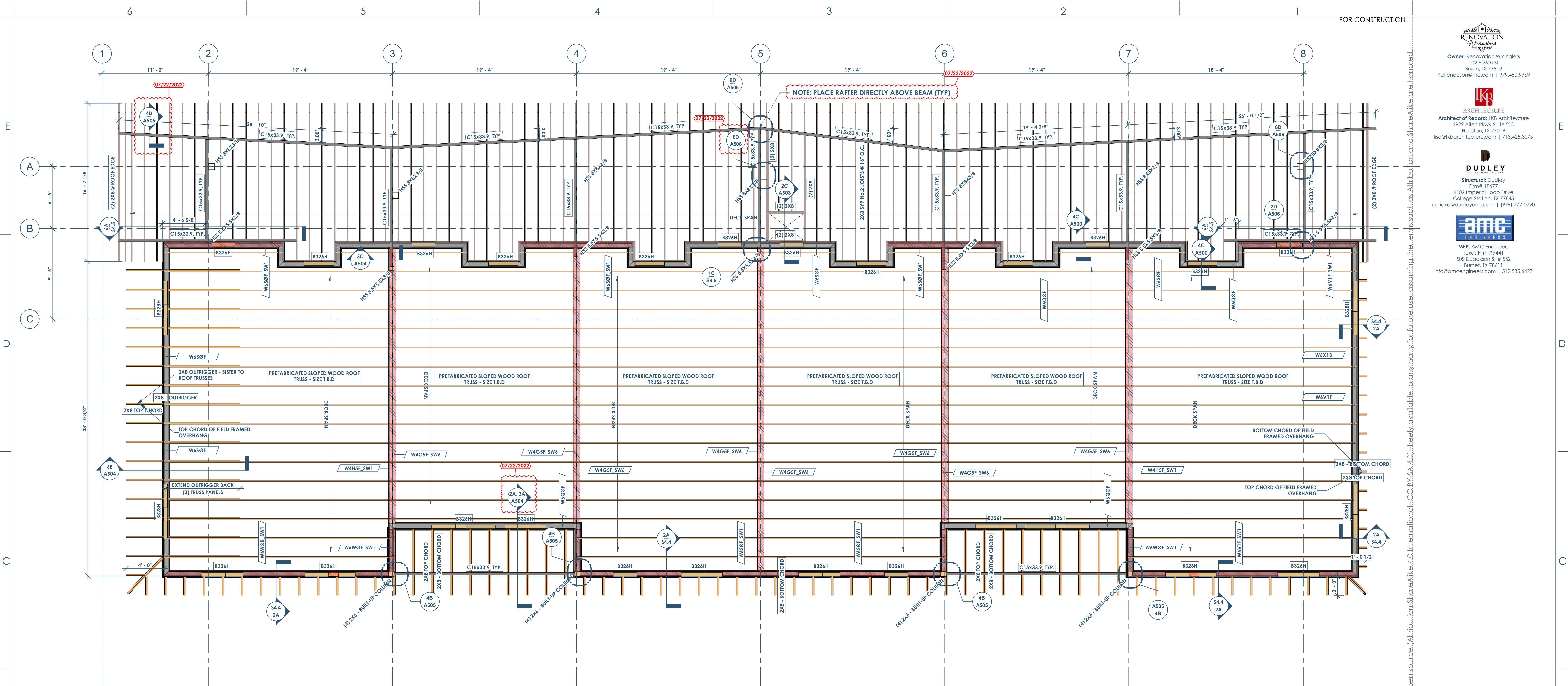
- FLOOR PLAN NOTES: TRIMMABLE METAL PLATE CONNECTED FLOOR TRUSS FRAMING: 1. TRIMMABLE METAL PLATE CONNECTED FLOOR TRUSS SHALL BE 18" DEEP AND SPACED AT 24" OC MAX UNLESS NOTED OTHERWISE... 2. TRUSS DEFLECTION LIMITS: TRUSSES SHALL BE LIMITED TO THE FOLLOWING DEFLECTION LIMITS: RATIO: LIVE LOAD (L/360) TOTAL LOAD (L/240) MAXIMUM: 1/2"

- 3. CAMBER SHALL BE BUILT INTO FLOOR TRUSSES TO COMPENSATE FOR VERTICAL DEAD LOAD DEFLECTION... 4. THE TRUSS LAYOUT SHOWN ON THIS DRAWING REPRESENTS DIRECTION OF TRUSS SPAN ONLY... 5. THE BOTTOM OF ALL DROP BEAMS OVER OPENINGS SHALL EQUAL THE TOP OF THE ROUGH OPENING... 6. REFER TO TYPICAL ROOF UPLIFT LOAD PATH DETAIL FOR REQUIRED STRAPS, ANCHORS, ETC... 7. DRAG TRUSSES SHALL BE PROVIDED DIRECTLY OVER INTERIOR WALLS AND SHALL BE DESIGNED FOR A TOTAL FORCE EQUAL TO THE LENGTH OF THE SHEAR WALL MULTIPLIED BY THE ALLOWABLE SHEAR VALUE PROVIDED IN THE SHEAR WALL SCHEDULE FOR THAT SHEAR TYPE.

2X DIMENSIONAL LUMBER FLOOR FRAMING: 1. FLOOR JOISTS ARE 2X12 @ 16" O.C. UNO. 2. THE BOTTOM OF ALL DROP BEAMS OVER OPENINGS SHALL EQUAL THE TOP OF THE ROUGH OPENING. 3. REFER TO TYPICAL ROOF UPLIFT LOAD PATH DETAIL FOR REQUIRED STRAPS, ANCHORS, ETC.

Project information including: Owner: Renovation Wranglers, Architect of Record: LKB Architecture, and contact information for Dudley and AMC Engineers.

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68
S0.4
FRAMING PLAN - ROOF
1/4" = 1'-0"

SHEAR WALL SCHEDULE					
SHEAR WALL TYPE	SHEATHING TYPE	PANEL EDGE NAILING	FIELD NAILING	ANCHORAGE	ALLOWABLE WIND SHEAR CAPACITY
SW1	7/16" WSP	6"	12"	(5/8" Ø @ 40" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 3" OC - AT WOOD)	335 PLF
SW2	7/16" WSP	4"	12"	(5/8" Ø @ 32" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 3" OC - AT WOOD)	490 PLF
SW3	7/16" WSP	3"	12"	(5/8" Ø @ 24" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 2" OC - AT WOOD)	630 PLF
SW4	1 5/32" WSP	3"	12"	(5/8" Ø @ 24" O.C. - AT CONCRETE) - (0.148" X 3" LONG NAILS @ 2" OC - AT WOOD)	840 PLF
SW5	1 5/32" WSP	2"	12"	(5/8" Ø @ 24" O.C. - AT CONCRETE) - (0.148" X 3" LONG NAILS @ 2" OC - AT WOOD)	991 PLF
SW6	5/8" GYP WALLBOARD	7"	12"	(5/8" Ø @ 48" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 12" OC - AT WOOD)	115 PLF
SW7	5/8" GYP WALLBOARD	4"	12"	(5/8" Ø @ 48" O.C. - AT CONCRETE) - (0.131" X 3" LONG NAILS @ 12" OC - AT WOOD)	145 PLF

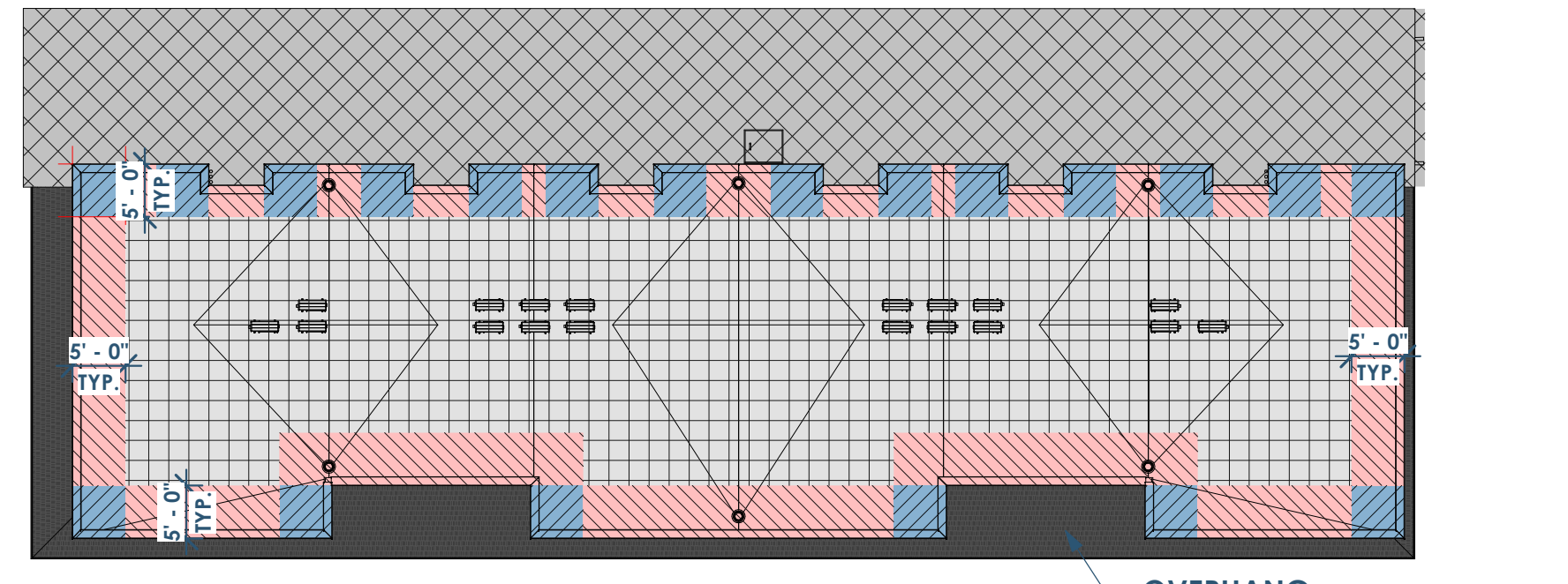
- SHEAR WALL NOTES:**
- ALL FASTENERS FOR WOOD STRUCTURAL PANEL SHALL BE FLAT HEAD NAILS CONSISTING OF THE FOLLOWING UNO:
 - 0.131" Ø X 3" LONG
 - 0.148" Ø X 3" LONG
 - FASTENERS FOR GYPSUM WALLBOARD SHALL BE ONE OF THE FOLLOWING:
 - 6d COOLER NAILS (0.092" X 1 7/8" LONG, 1/4" HEAD)
 - WALLBOARD NAIL (0.0915" X 1 7/8" LONG, 19/64" HEAD)
 - 12d NAIL X 1 3/4" LONG, MIN 3/8" HEAD
 - NO. 6 TYPE S OR W DRYWALL SCREWS 1-1/4" LONG
 - ANCHORS INTO CONCRETE SHALL EITHER BE CAST-IN-PLACE J-BOLTS OR ADHESIVE ANCHORS WITH A MINIMUM EMBEDMENT OF 8". THE CONTRACTOR SHALL SUBMIT PROPOSED ADHESIVE ANCHOR ASSEMBLY FOR APPROVAL.
 - ALL PANEL EDGES SHALL BE BLOCKED.
 - WSP = WOOD STRUCTURAL PANEL. REF GENERAL NOTES FOR SPECIFICATIONS.
 - IF WALL IS SHEATHED ON BOTH SIDES, THEN SILL PLATE ANCHORAGE AND CONNECTION OF BOTTOM PLATE TO TOP PLATE SHALL BE DOUBLED.
 - PANELS MUST BE INSTALLED DIRECTLY TO FRAMING.
 - VALUES CALCULATED ARE FOR SOUTHERN PINE OR DOUGLAS-FIR LARCH FRAMING. CONTACT EOR IF OTHER SPECIES ARE USED.
 - PROVIDE 1/8" WIDE JOINTS IN SHEATHING TO ALLOW FOR SHRINKAGE AND EXPANSION OF THE PANELS.
 - SHEAR WALLS REFERENCED ARE FOR SHEAR WALLS BELOW FLOOR.

- ROOF FRAMING NOTES:**
- METAL PLATE CONNECTED ROOF TRUSS FRAMING:**
- METAL PLATE CONNECTED WOOD TRUSSES SHALL BE SPACED @ 24" OC UNLESS NOTED OTHERWISE. LOADING CRITERIA SHALL BE AS FOLLOWS:
 - TOP CHORD LIVE LOAD (TCLL): 20 PSF
 - REF MECHANICAL DRAWINGS FOR RTUS.
 - TOP CHORD DEAD LOAD (TCDL): 5 PSF - SINGLE-PLY MEMBRANE ROOF (NOT INCLUDING SELF-WEIGHT)
 - BOTTOM CHORD LIVE LOAD (BCLL): 10 PSF (NON-CONCURRENT WITH TCLL)
 - BOTTOM CHORD DEAD LOAD (BCDL): 5 PSF
 - TOP CHORD WIND LOAD. REF COMPONENTS AND CLADDING SCHEDULE
 - TRUSS DEFLECTION LIMITS: TRUSSES SHALL BE LIMITED TO THE FOLLOWING DEFLECTION LIMITS:
 - PITCHED ROOF TRUSS: LIVE LOAD (L/240) TOTAL LOAD (L/180)
 - SHALLOW (< 4:12) PITCHED ROOF TRUSS: LIVE LOAD (L/240) TOTAL LOAD (L/240)
 - PITCHED ROOF TRUSS: 1.00 X DEFLECTION FROM ACTUAL DEAD LOAD.
 - DRAG TRUSSES SHALL BE PROVIDED DIRECTLY OVER INTERIOR SHEAR WALLS AND SHALL BE DESIGNED FOR A TOTAL FORCE EQUAL TO THE LENGTH OF THE SHEAR WALL MULTIPLIED BY THE ALLOWABLE SHEAR VALUE PROVIDED IN THE SHEAR WALL SCHEDULE FOR THAT SHEAR WALL TYPE.
 - TRUSS RESTRAINT/BRACING METHODS SHALL BE IN ACCORDANCE WITH BC31-B3 UNLESS NOTED OTHERWISE.

- ROOF DECKING NOTES:**
- ROOF DECKING SHALL BE 3/4" APA RATED SHEATHING (SPAN RATING 48/24).
 - PANELS SHALL SPAN 3 MORE RAFTERS IN THE .ONG DIMENSION.
 - PANEL CLIPS:
 - SINGLE-PLY OR MODIFIED BITUMEN ROOFING SYSTEMS:
 - LOW SLOPE ROOF (LESS THAN OR EQUAL TO 2:12)
 - DECKING SHALL HAVE PANEL EDGE CLIPS (H-CLIPS) LOCATED MIDWAY BETWEEN EACH SUPPORT.
 - SLOPE GREATER THAN 2:12
 - DECKING SHALL HAVE PANEL EDGE CLIPS (H-CLIPS) LOCATED MIDWAY BETWEEN EACH SUPPORT FOR ANY SPAN GREATER THAN 12.2' O.C.
 - ANY OTHER TYPE OF ROOFING SYSTEM
 - DECKING SHALL HAVE PANEL EDGE CLIPS (H-CLIPS) LOCATED MIDWAY BETWEEN EACH SUPPORT.

ROOF DECKING FASTENING		
ZONE	PANE EDGE / BOUNDARY	FIELD
ZONE 1	@ 6" O.C. MAX	@ 12" O.C. MAX
ZONE 2	@ 6" O.C. MAX	@ 6" O.C. MAX
ZONE 3	@ 4" O.C. MAX	@ 6" O.C. MAX
ZONE 3 OVERHANG	@ 3" O.C. MAX	@ 6" O.C. MAX

- ROOF DECKING FASTENING NOTES:**
- ALL NAILS SHALL BE 0.131" Ø X 2 1/2"; RING SHANK NAILS
 - REFER TO THE COMPONENTS AND CLADDING WIND PRESSURE MAP ON THE
 - GENERAL NOTES FOR ZONE LOCATIONS.
 - EDGE SPACING ALSO APPLIES OVER THE TOP OF SHEARWALLS.

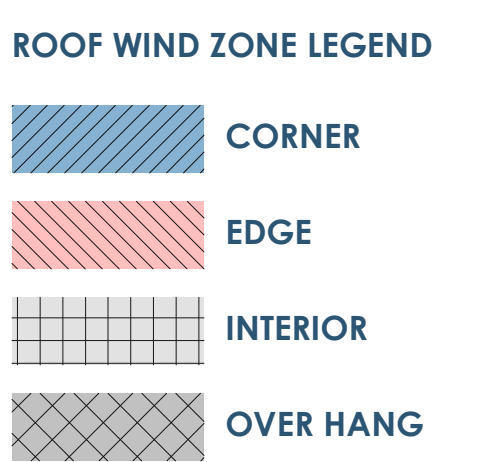


6A
S0.4
FLOOR PLAN - ROOF WIND ZONE
1/16" = 1'-0"

BEAM SCHEDULE				
BEAM TAG	BEAM SIZE	STUD PACK - NUMBER OF STUDS	FACE-MOUNT HANGER	TOP-FLANGE HANGER
B326H	(3)2X6	2	LU26-2	HU26-2TF
B328H	(3)-2X8	2	LU26-3	HU548TF
B3212H	(3)-2X12	3	HU210-3	HU212-3TF
B411	GL - 3 1/2" X 11 1/4"	3	HHU5410	HB3.56/11.25

- BEAM LEGEND NOTES:**
- 'H' INDICATES MULTIPLE PLY DIMENSIONAL LUMBER BEAMS W/ 1/2" PLYWOOD SHEATHING. SEE 2A/S4.0
 - FOR KING AND JACK STUD REQUIREMENTS FOR EXTERIOR HEADERS REFER TO DETAIL 4C/S4.1
 - FOR KING AND JACK STUD REQUIREMENTS IN INTERIOR HEADERS REFER TO DETAIL 5B/S4.1
 - GULIAM BEAMS SHALL BE ANTHONY POWER BEAM GLUE LAMINATED BEAMS OR APPROVED EQUAL
 - STUD PACKS ARE REQUIRED WHEN BEAM IS BEARING ON A WALL ASSEMBLY. STUD PACKS MUST CONTINUE ALL THE WAY TO THE FOUNDATION UNLESS TRANSFERRED BY A BEAM.
 - ALL STUDS IN STUD PACK SHALL BE NO.2 SOUTHERN PINE OR BETTER.
 - SHEATHING AND/OR DRYWALL MUST BE ATTACHED TO EACH INDIVIDUAL STUD IN THE STUD PACK.
 - ALL STUDS IN STUD PACK MUST BE FASTENED PER MECHANICALLY LAMINATED BUILT-UP COLUMN-NAILED - REFER TO 6A/S4.1

WALL STUD SCHEDULE				
TOP OF WALL	MAX PLATE HT	EXTERIOR WALL	INTERIOR NON-LOAD BEARING	PARTY WALL
ROOF	8" - 11 5/8"	2X6 NO.2 @ 16" O.C.	2X4 STUD @ 16" O.C.	2X4 STUD @ 16" O.C.
3RD	10" - 8"	2X6 NO.2 @ 16" O.C.	2X4 STUD @ 16" O.C.	2X4 STUD @ 12" O.C.
2ND	10" - 9 5/8"	2X6 NO.2 @ 16" O.C.	2X4 STUD @ 16" O.C.	2X4 STUD @ 8" O.C.



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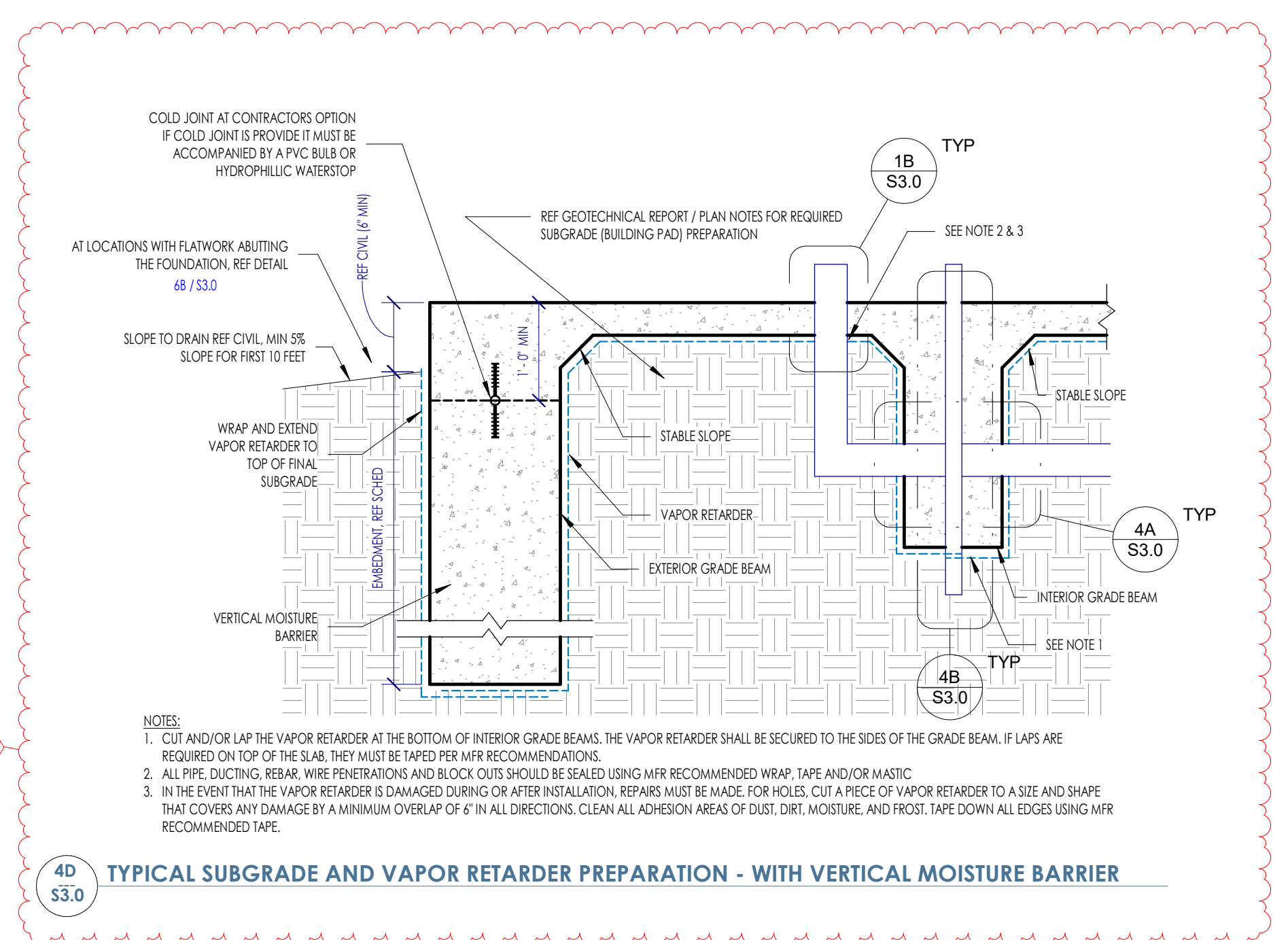
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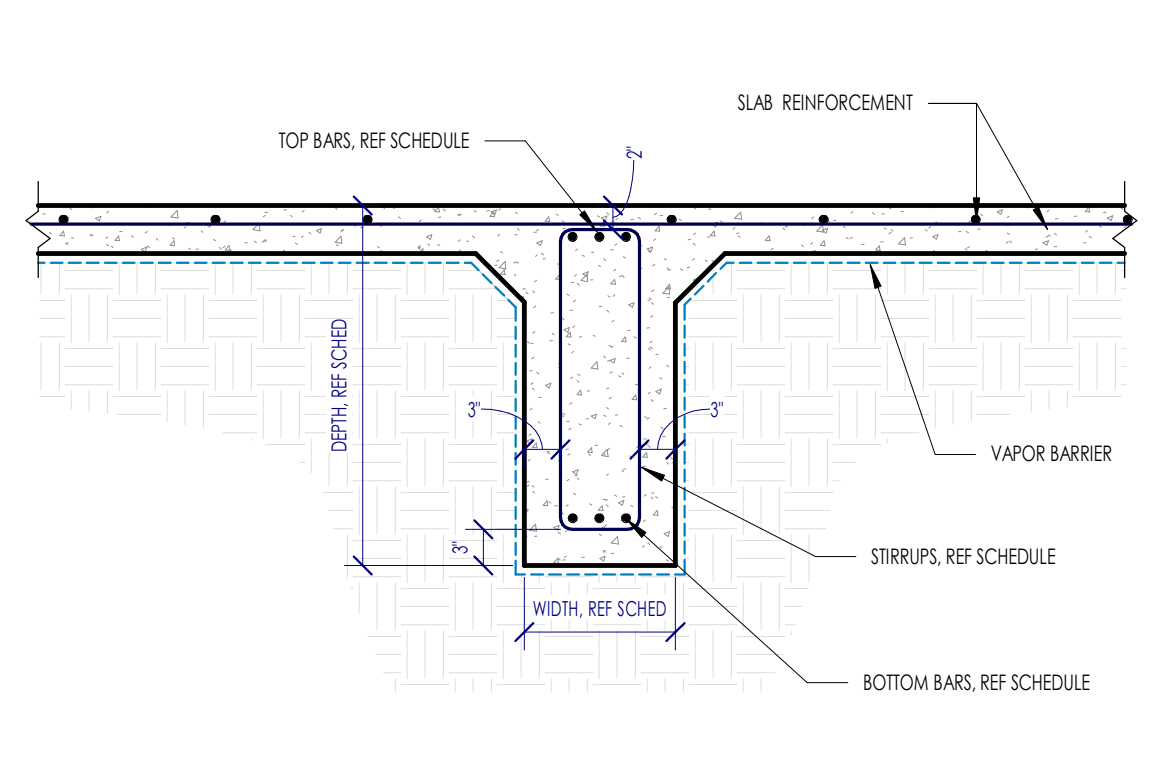
Date	Description
06/10/2022	Issued for Permit
07/22/2022	Permit Revisions

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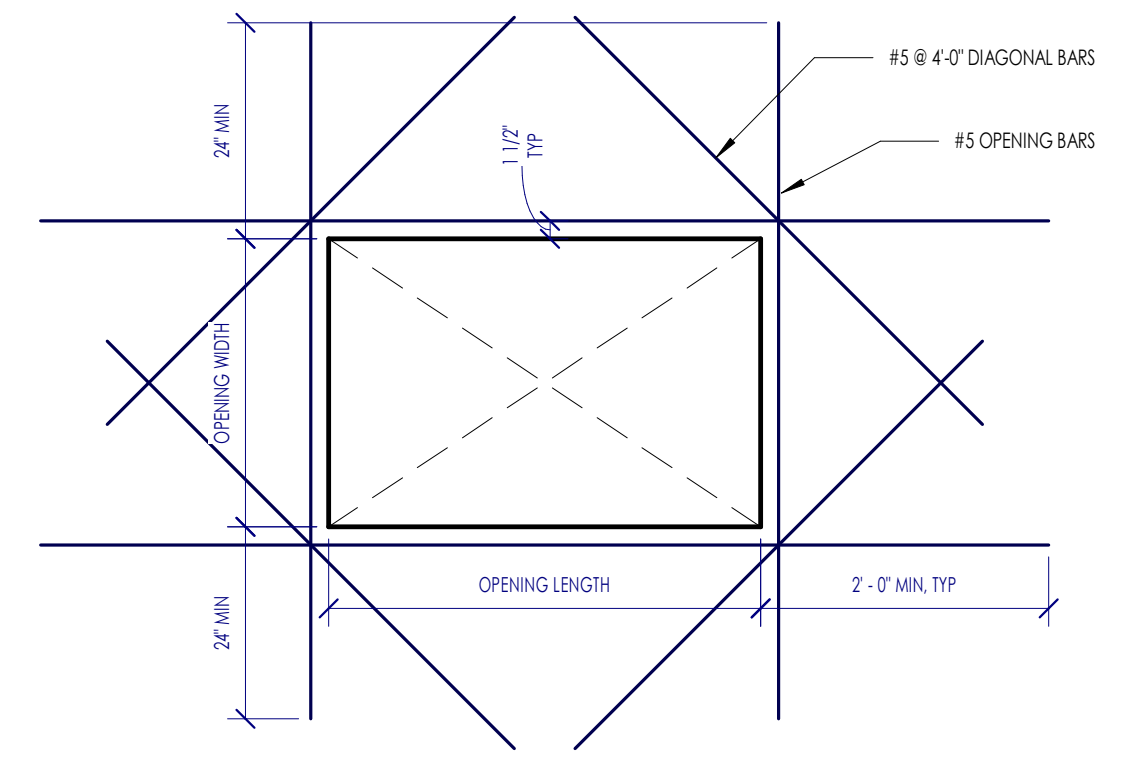


07/22/2022

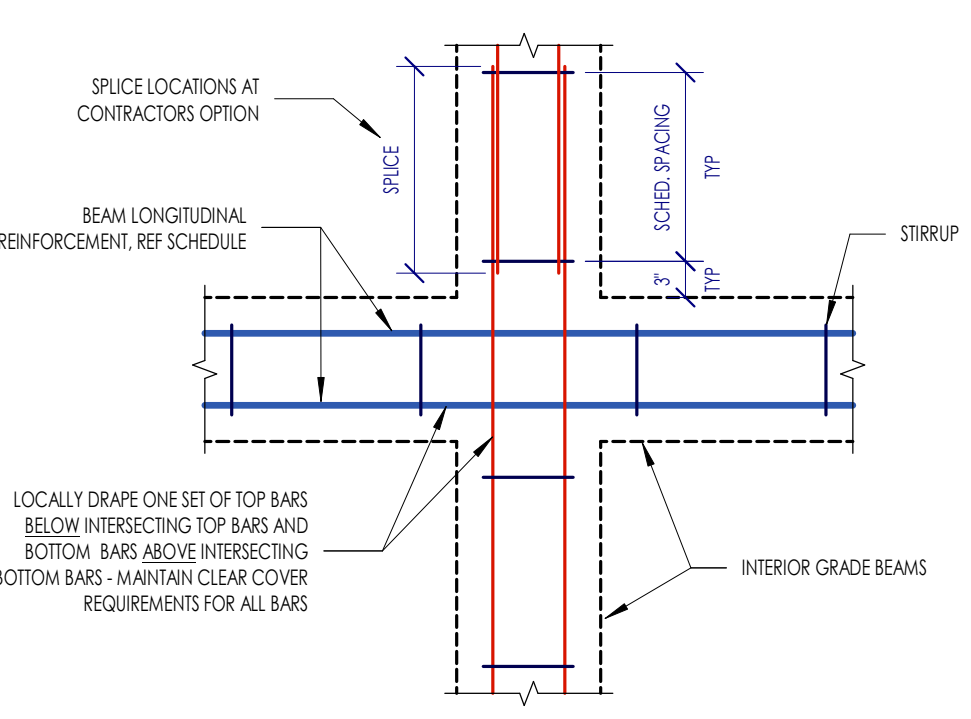
4D S3.0 TYPICAL SUBGRADE AND VAPOR RETARDER PREPARATION - WITH VERTICAL MOISTURE BARRIER



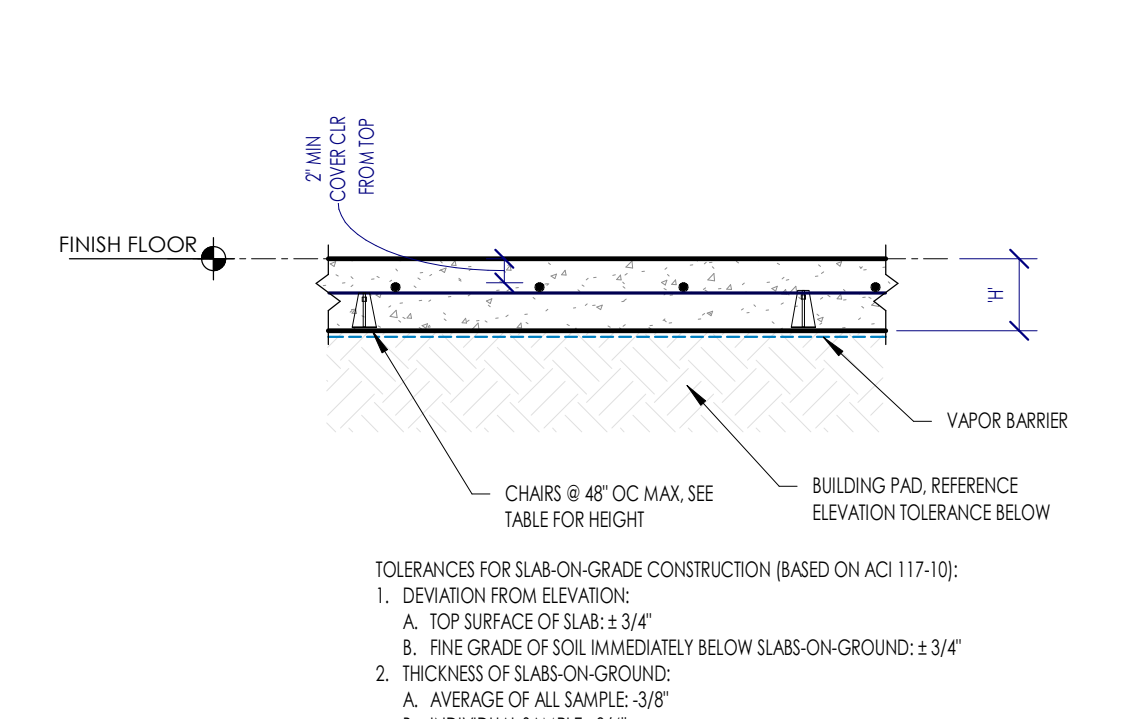
4D S3.0 TYPICAL INTERIOR GRADE BEAM



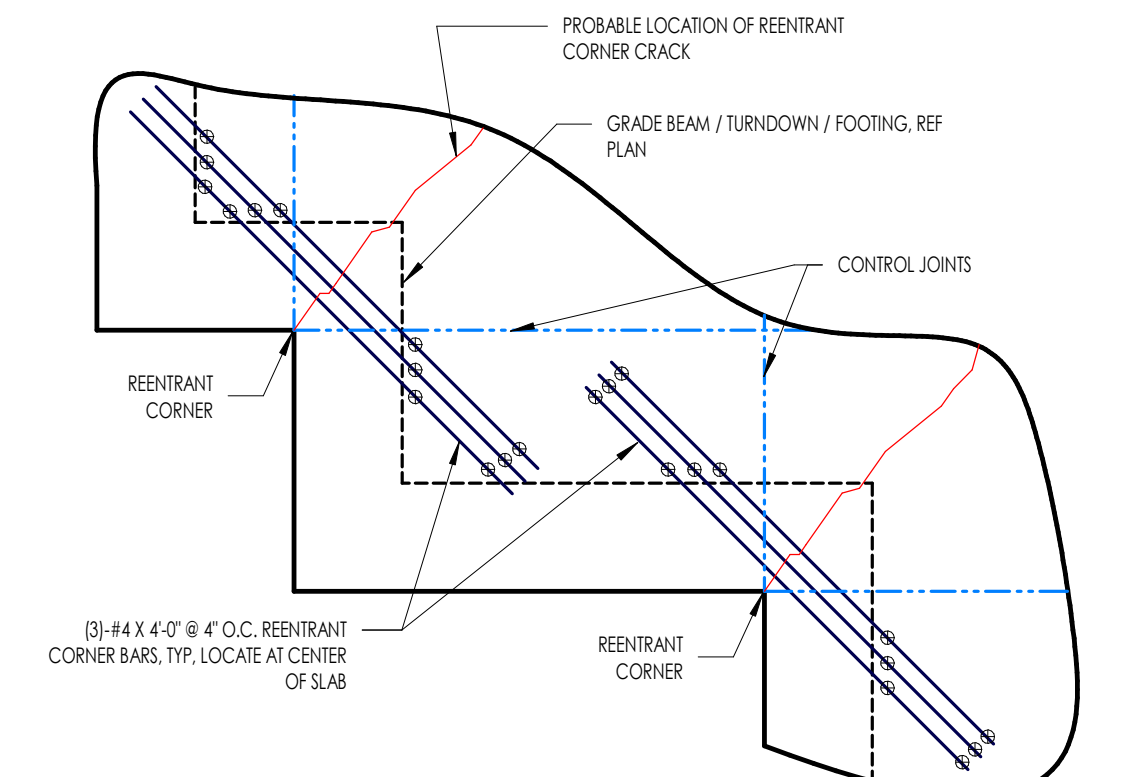
1D S3.0 TYPICAL REINFORCEMENT AT SLAB BLOCKOUT



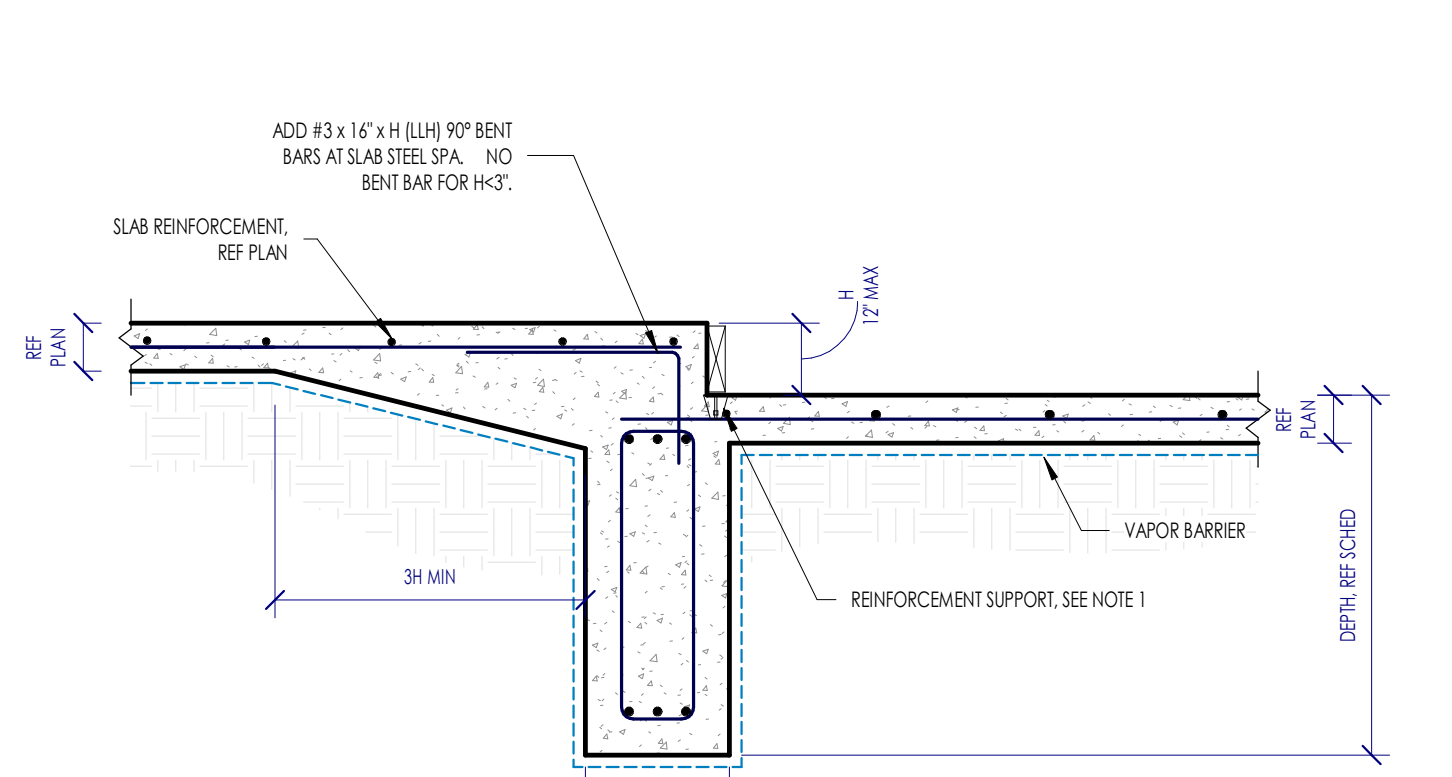
6C S3.0 TYPICAL INTERIOR BEAM INTERSECTION



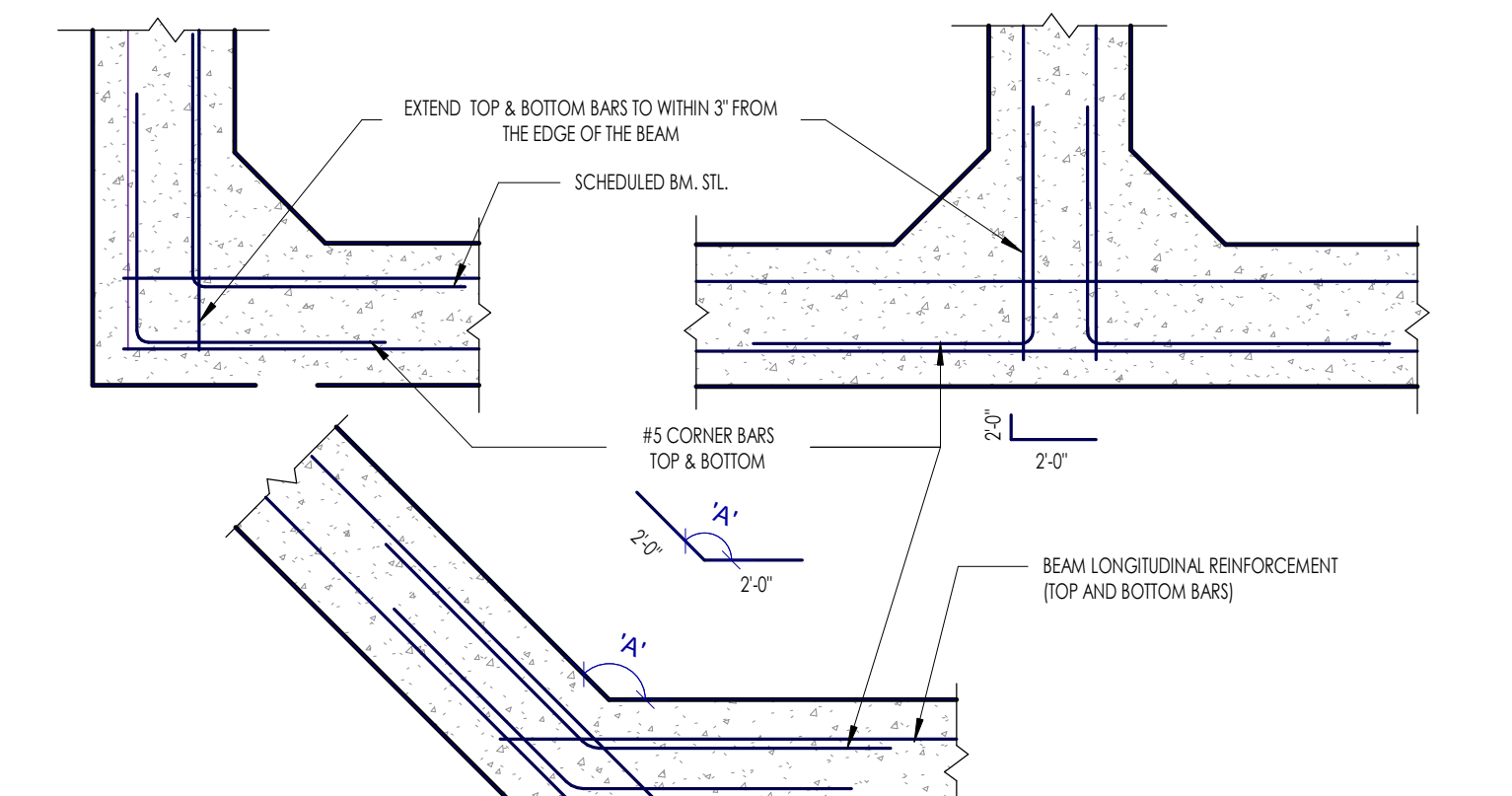
5C S3.0 TYPICAL SLAB-ON-GRADE SECTION



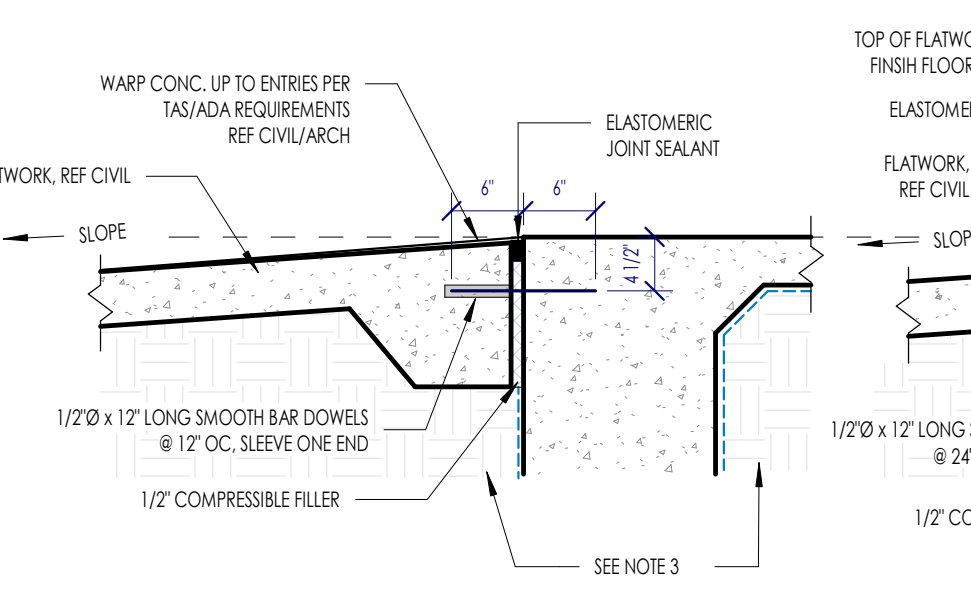
4C S3.0 TYPICAL REINFRANT CORNER BARS



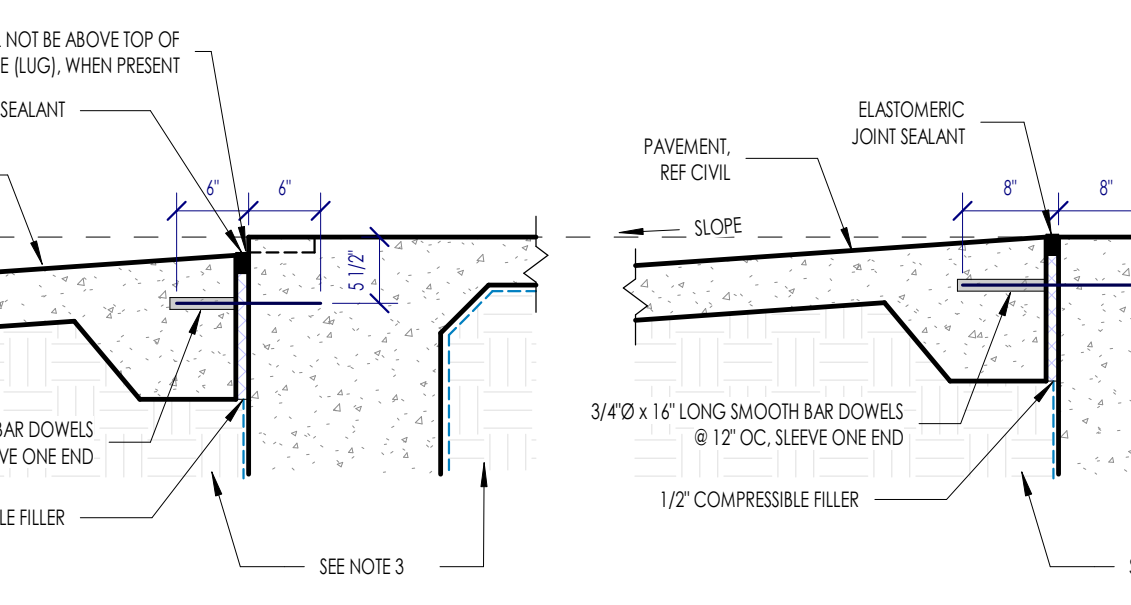
3C S3.0 TYPICAL SLAB DROP AT GRADE BEAM



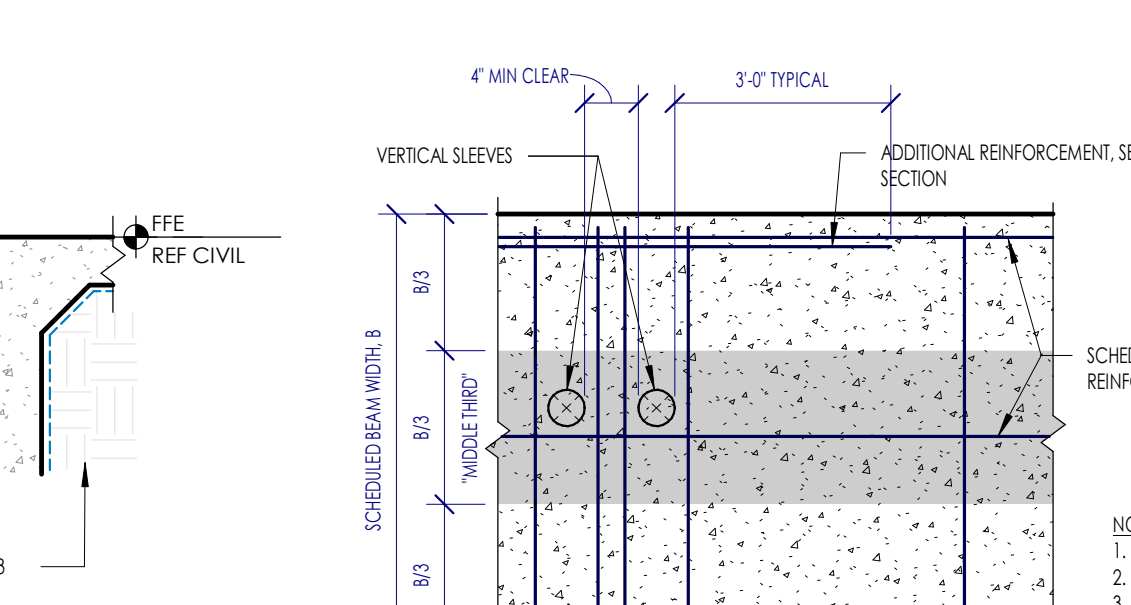
1C S3.0 TYPICAL CORNER BARS



4B S3.0 TYPICAL FLATWORK/PAVEMENT DOWELS AT BUILDING

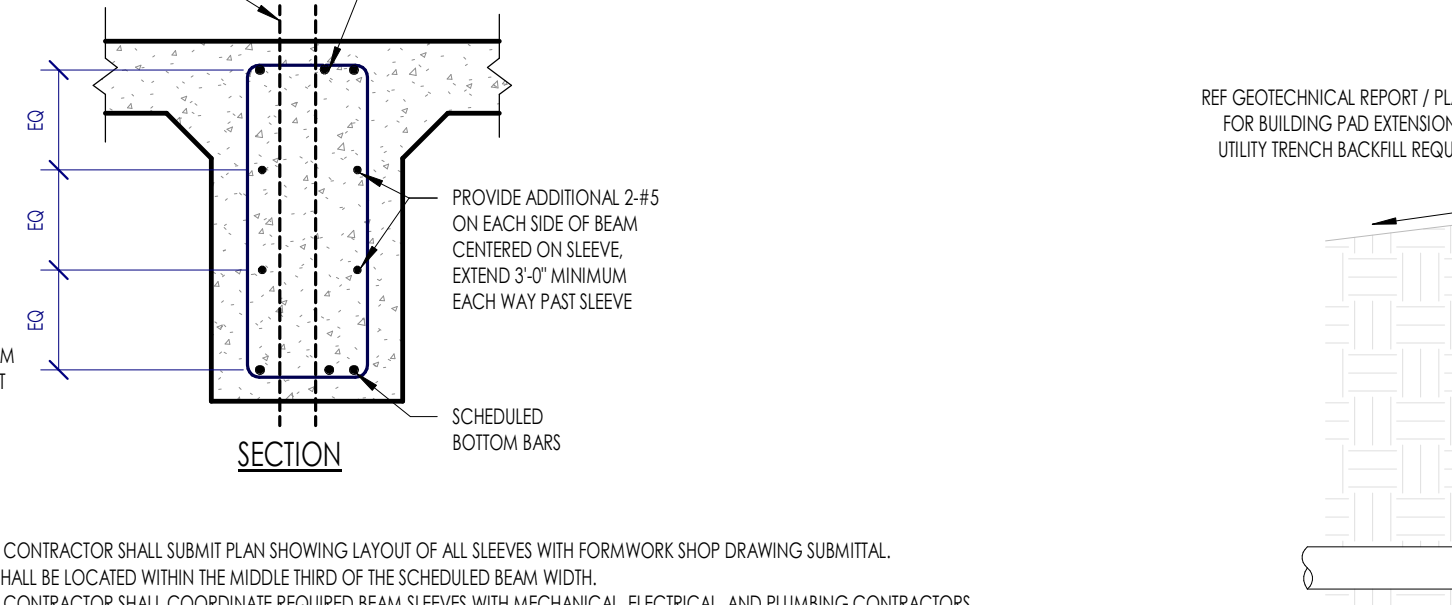


FLATWORK NOT AT ENTRY DOOR

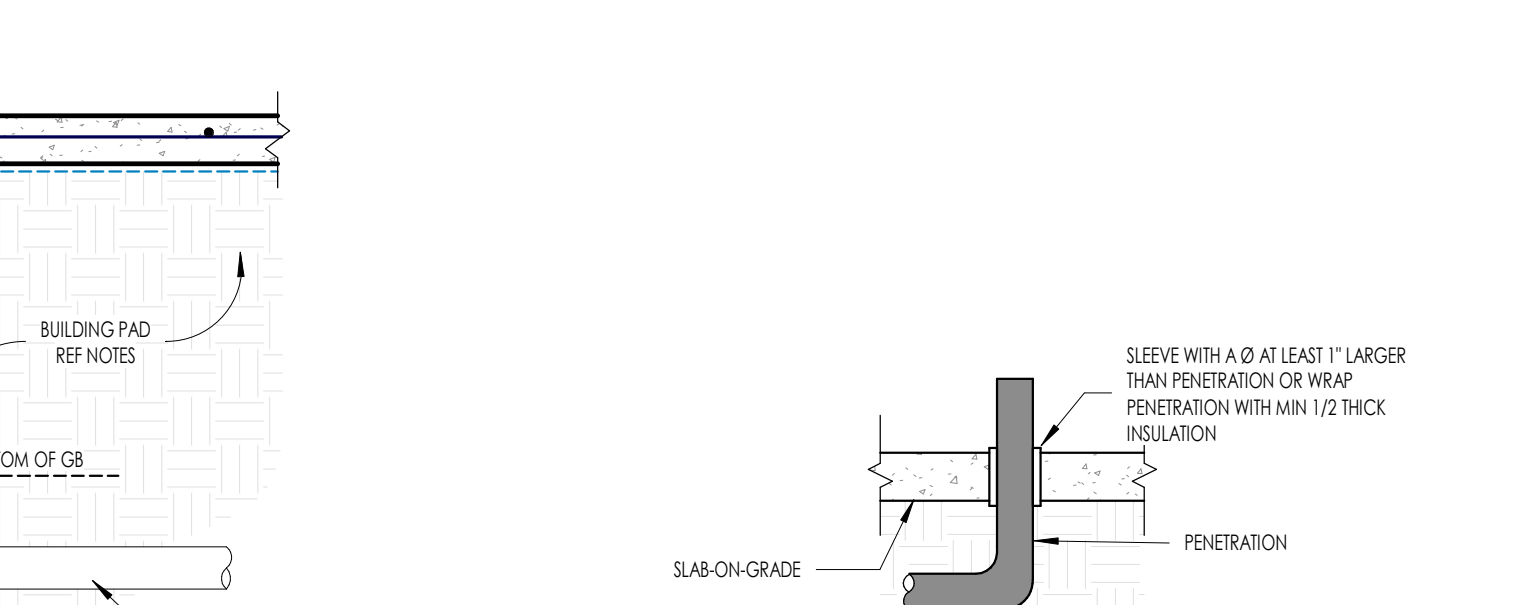


AT PAVEMENT (DRIVE-IN)

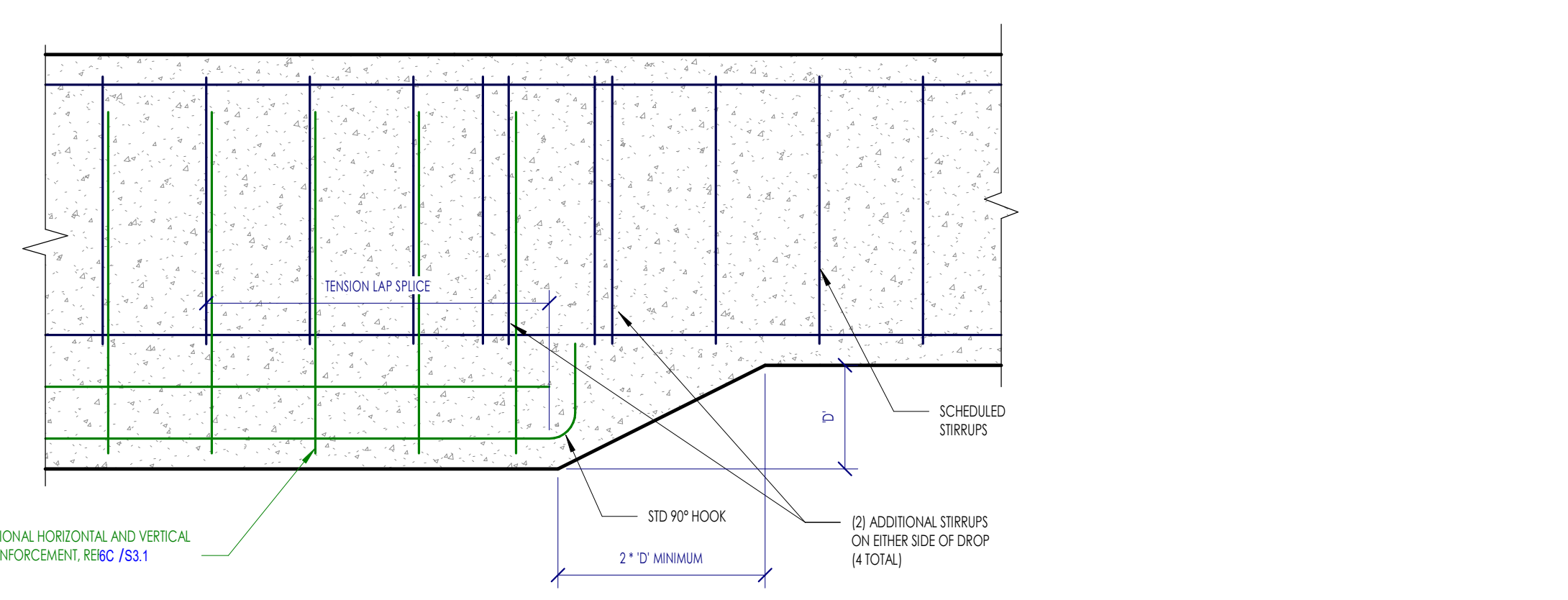
4B S3.0 TYPICAL VERTICAL PENETRATION IN GRADE BEAM



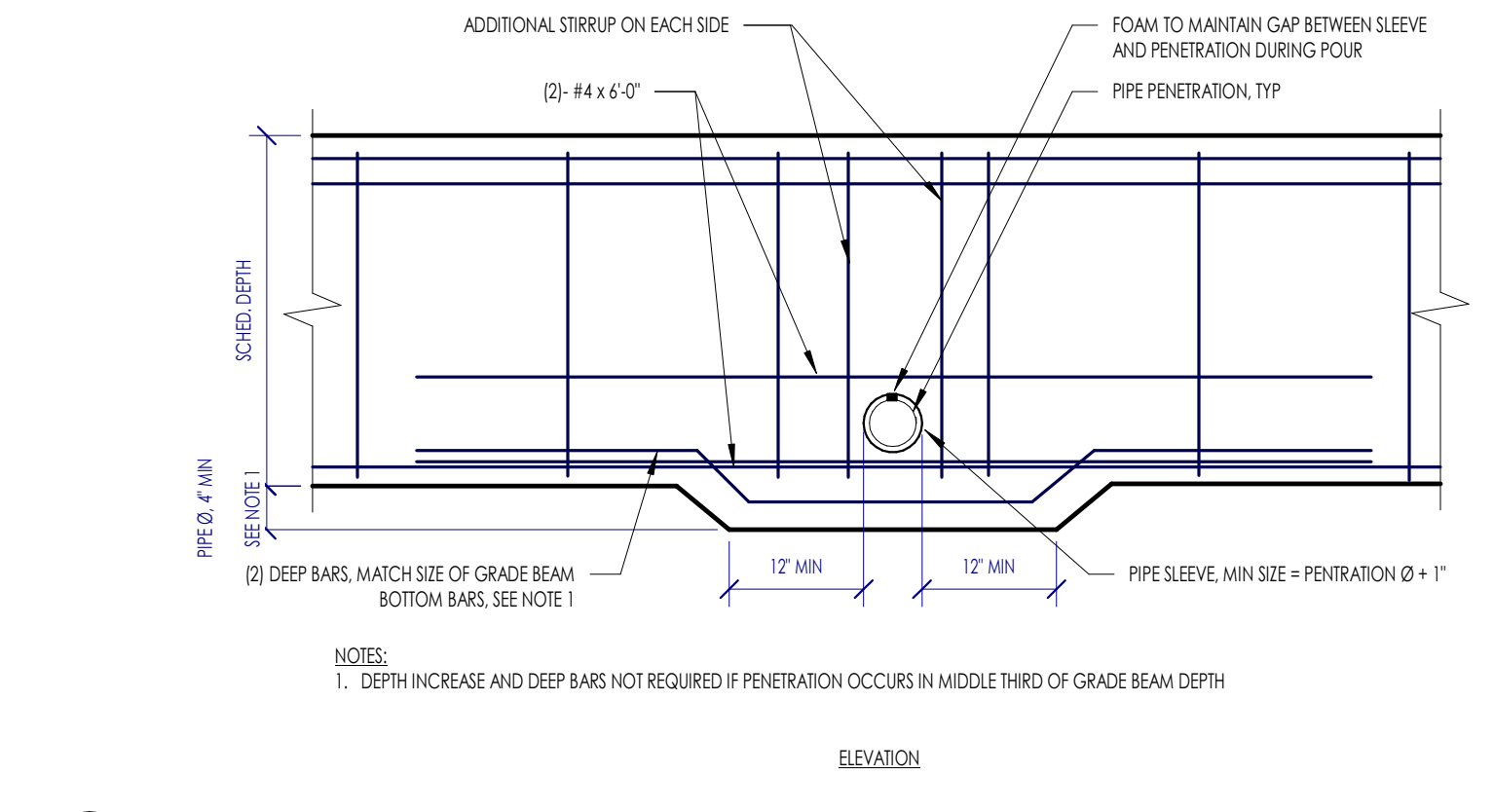
4B S3.0 TYPICAL VERTICAL PENETRATION IN GRADE BEAM



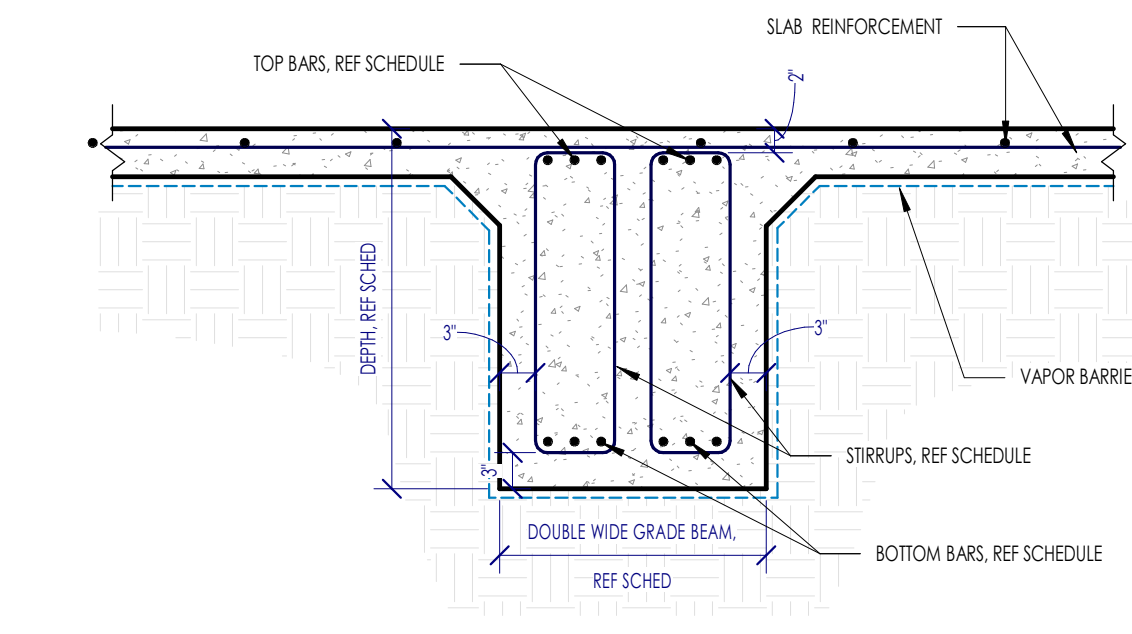
2B S3.0 TYPICAL UTILITY TRENCH UNDER BUILDING PAD BENTONITE PLUG AT EXTERIOR BEAM



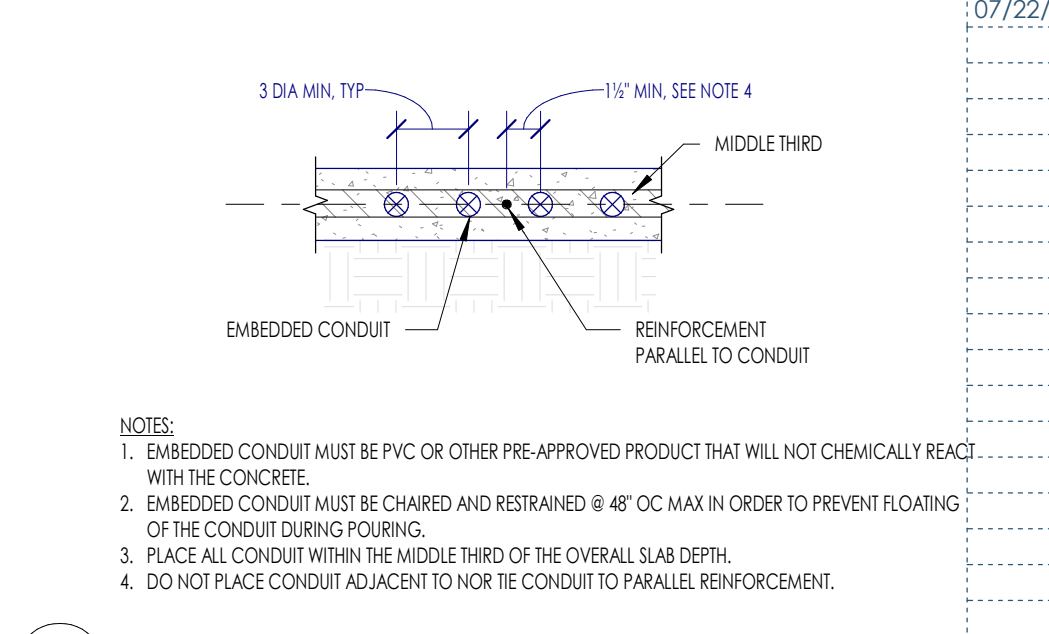
6A S3.0 TYPICAL DROP TRANSITION IN GRADE BEAM - VERTICAL MOISTURE BARRIER



4A S3.0 TYPICAL HORIZONTAL PENETRATION IN BEAM



2A S3.0 TYPICAL DOUBLE WIDE INTERIOR GRADE BEAM



1A S3.0 TYPICAL CONDUITS EMBEDDED IN SLAB-ON-GRADE

Table with 2 columns: Date, Description. Row 1: 06/02/2022, Review before Permit. Row 2: 07/22/2022, PERMIT REVISIONS.

E

D

C

B

A

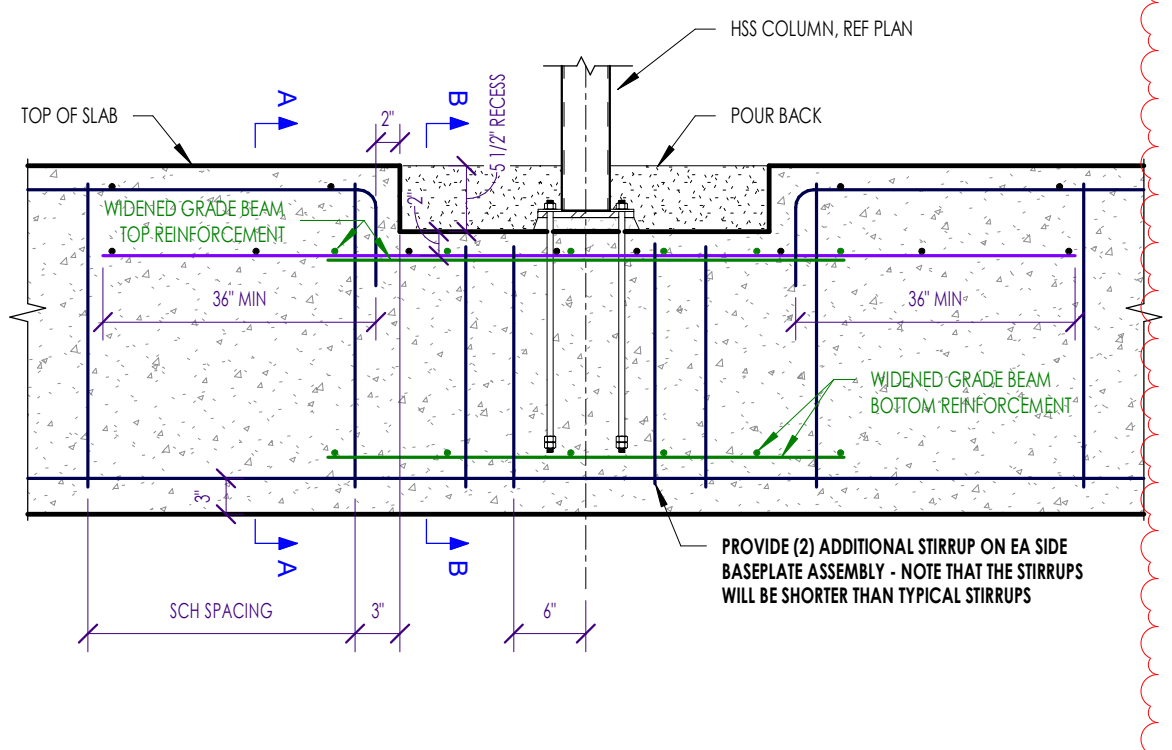
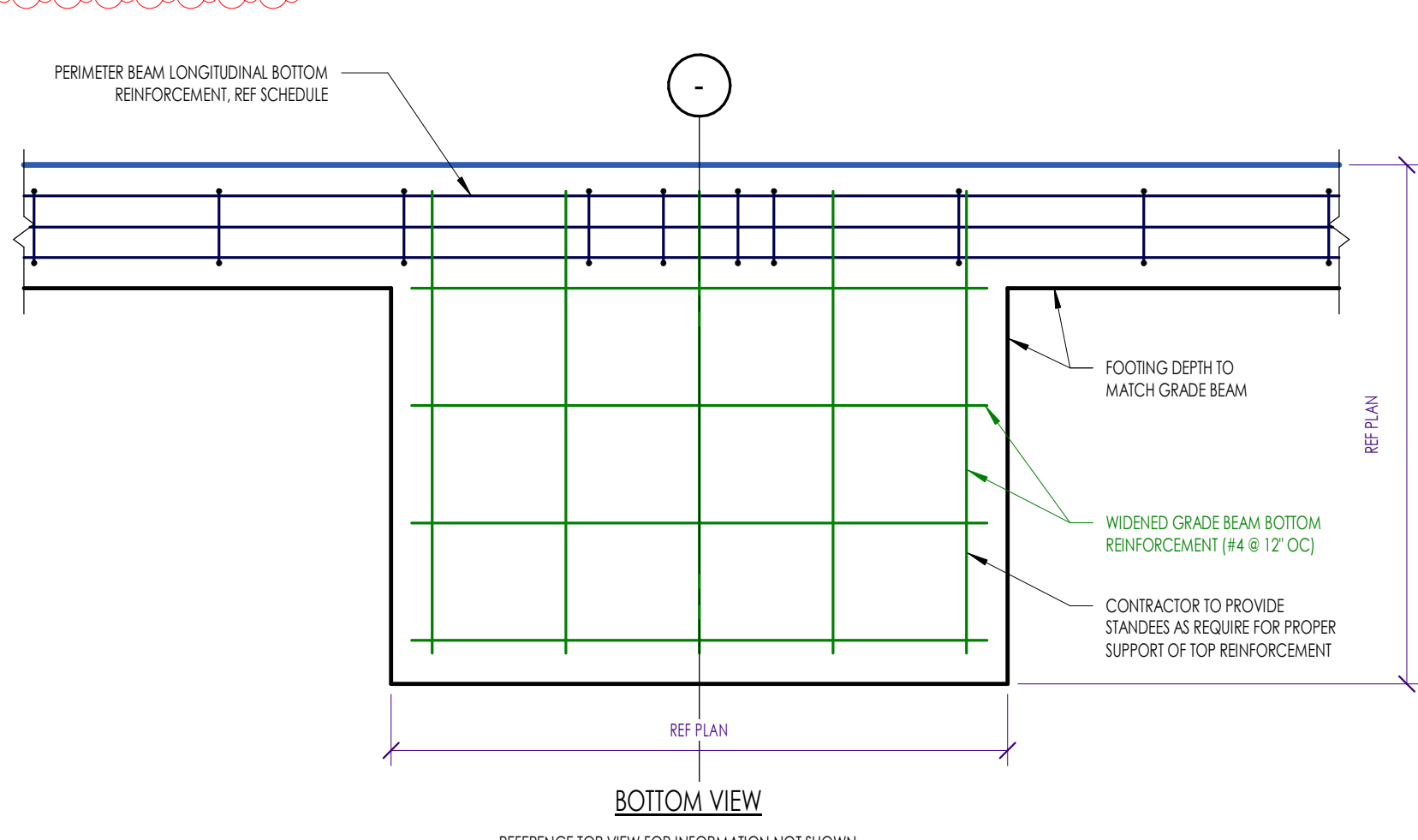
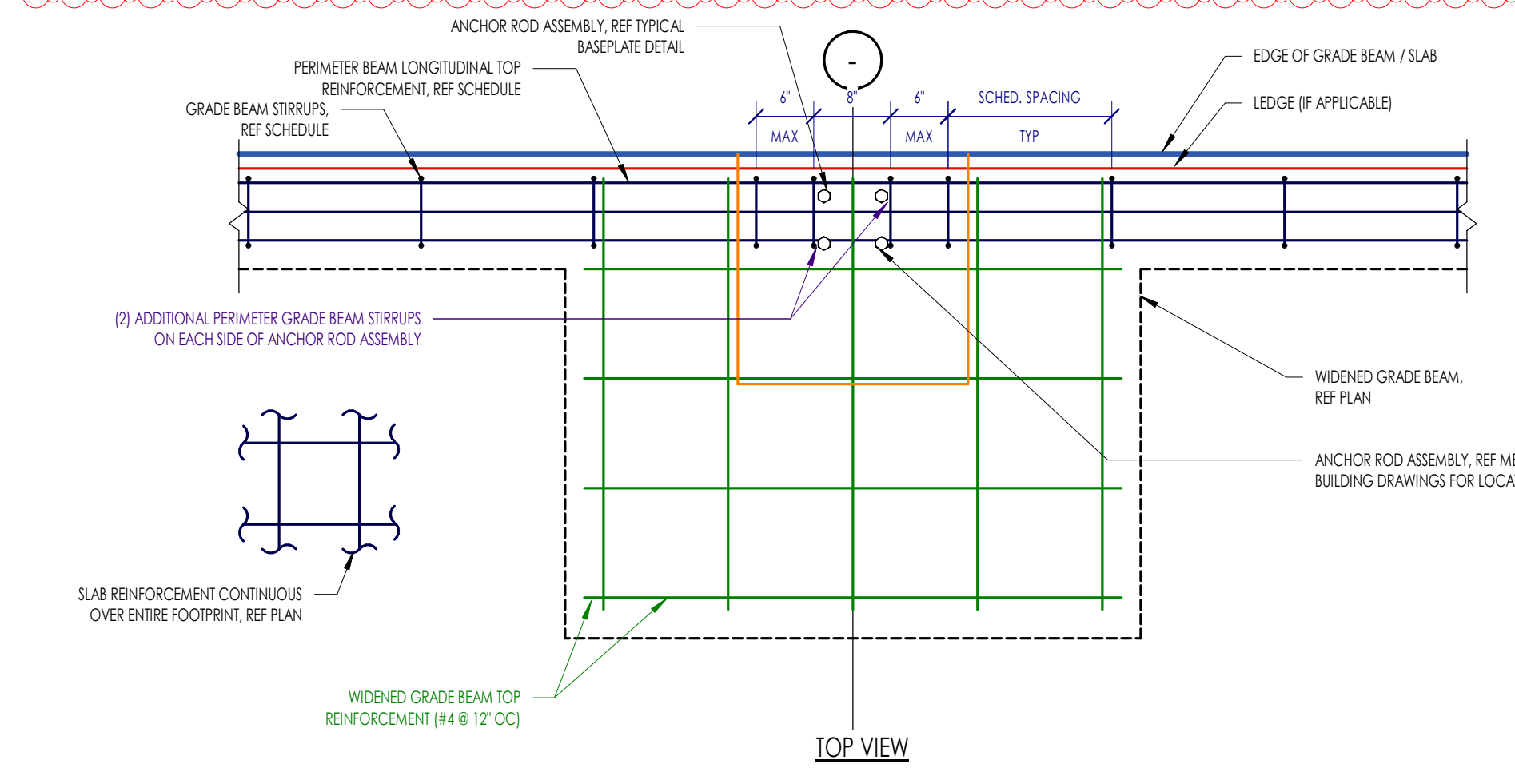
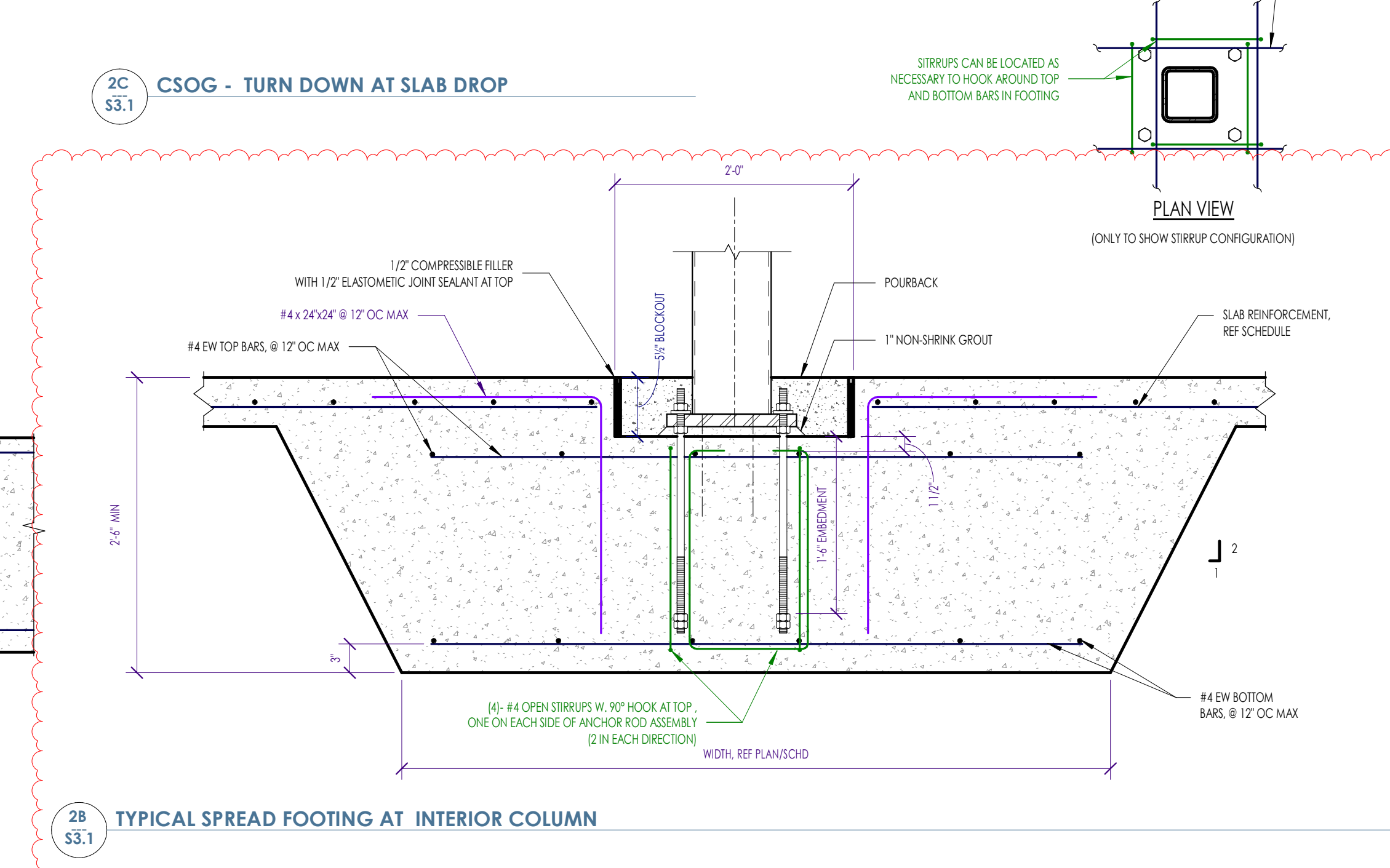
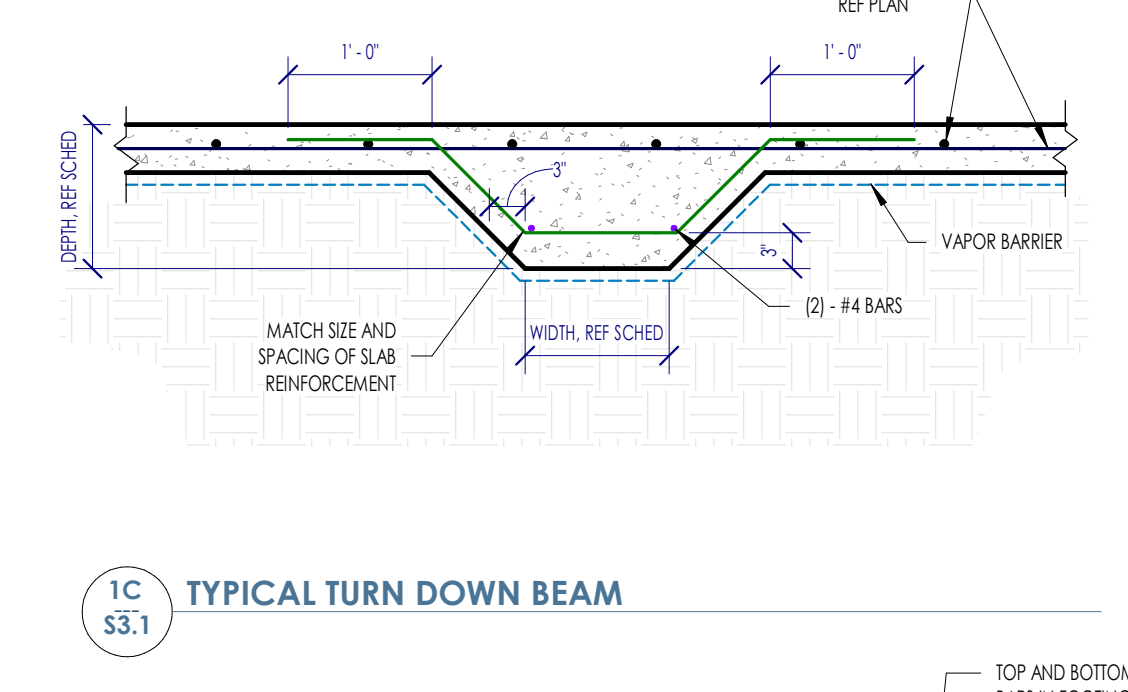
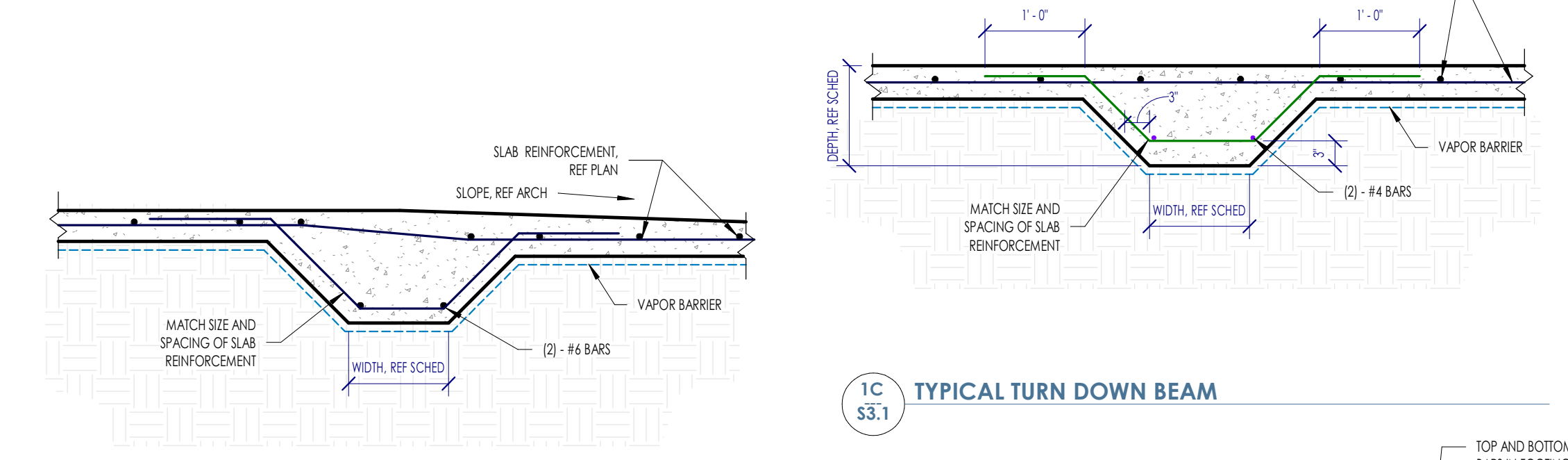
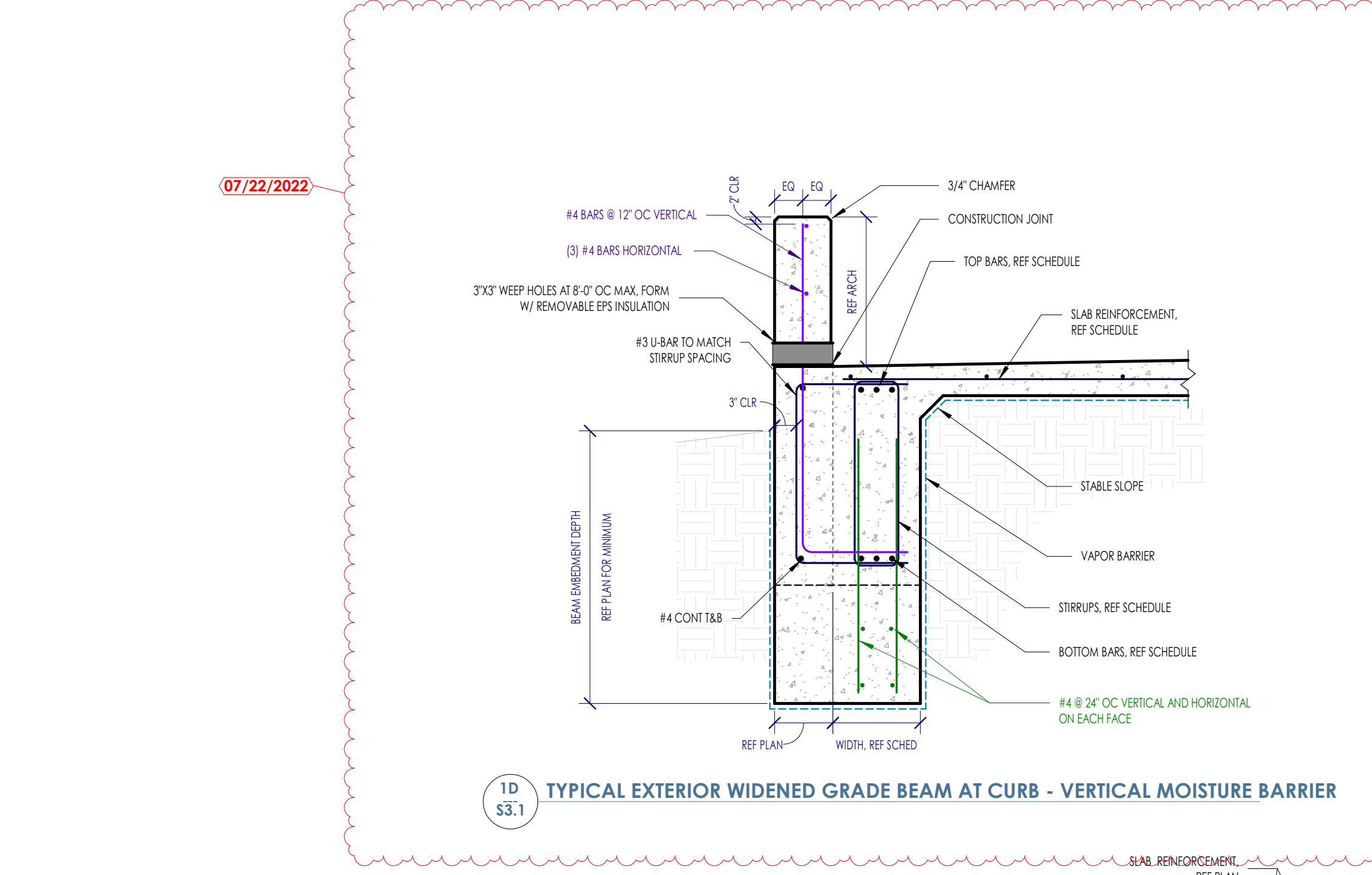
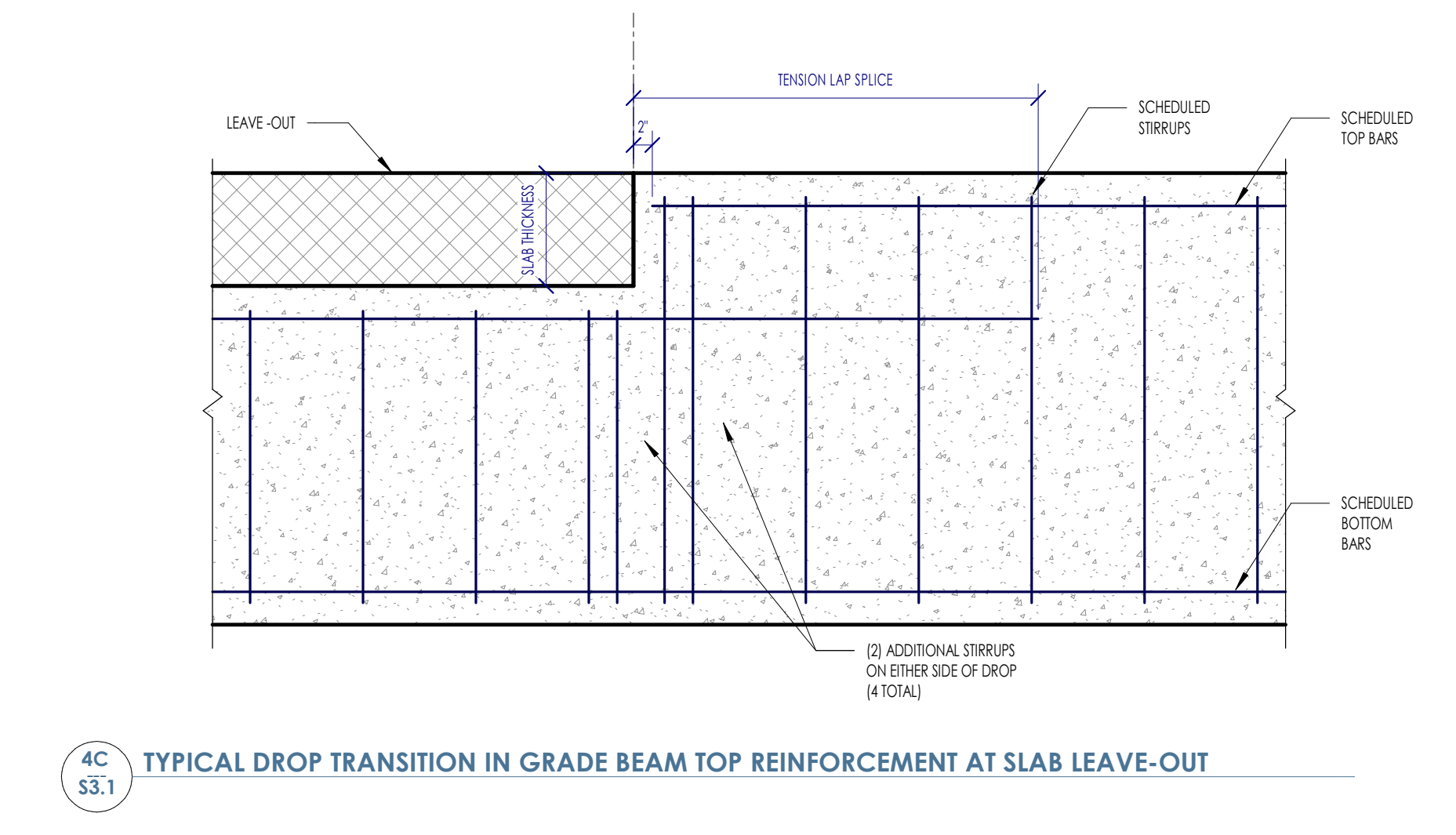
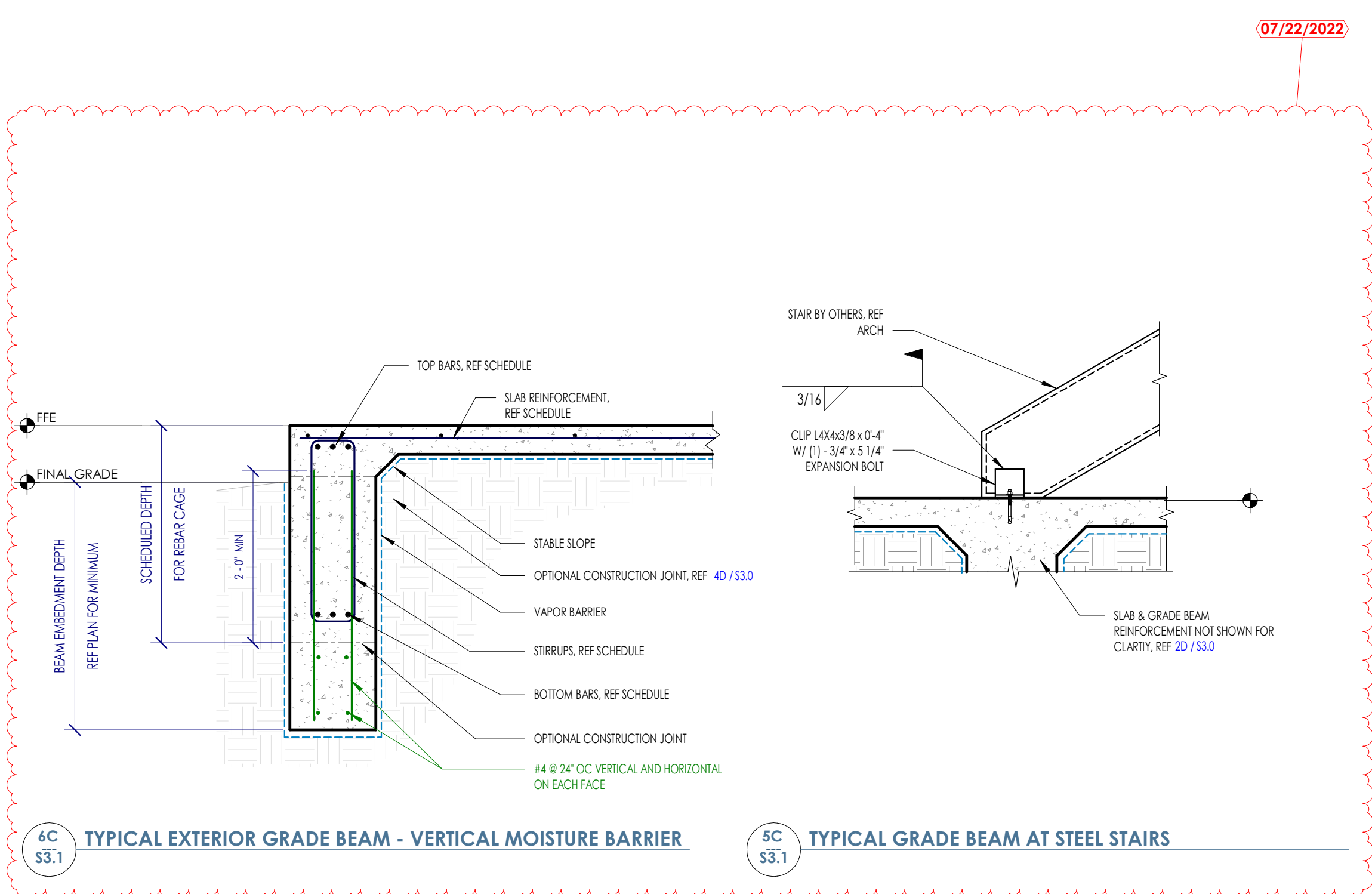
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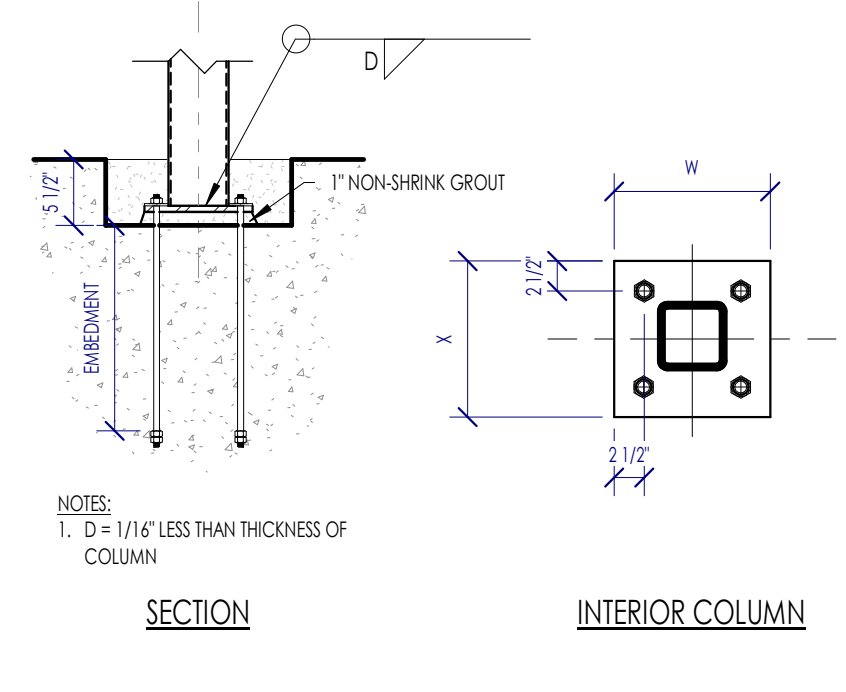
C

B

A



COLUMN	BASE PLATE DIMENSIONS			CONDITION	ANCHOR BOLTS		
	X	W	T		NO./TYPE	DIA.	EMBEDMENT
HSS58X53	13"	13"	1"	INTERIOR	4/A	1"	1'-0"
HSS58X48	14"	14"	1"	INTERIOR	4/A	1"	1'-0"



ANCHOR ROD DIAMETER	HOLE DIAMETER	SQUARE PLATE WASHER SIZE	PLATE WASHER THICKNESS	TYPE B ANCHOR PLATE
5/8"	1 3/16"	1 1/2"	1/4"	PL17X10-4
3/4"	1 5/16"	2"	1/4"	PL17X10-4
7/8"	1 9/16"	2 1/2"	5/16"	PL17X10-4
1"	1 13/16"	3"	3/8"	PL19X10-5
1 1/2"	2 5/16"	3 1/2"	1/2"	PL19X10-5

NOTES:
1. ALL TYPE A ANCHOR RODS SHALL BE F1554 GRADE 36.
2. ALL TYPE B ANCHOR RODS SHALL BE F1554 GRADE 55.1.
3. PLATE WASHERS MUST BE WELDED TO THE BASE PLATE WITH MINIMUM 3/16" FLLET WELD ALL AROUND.
4. EMBEDMENT DEPTH ARE PRELIMINARY. FINAL EMBEDMENT TO BE PROVIDED AFTER REVIEW OF METAL BUILDING REACTIONS.
5. ALL ANCHOR ROD HOLES SHALL ADHERE TO AISC DESIGN GUIDE 01, TABLE 2.3.
6. THE DOUBLE NUT MAY BE OMITTED IF THE NUT IS TACK WELDED TO THE ROD.

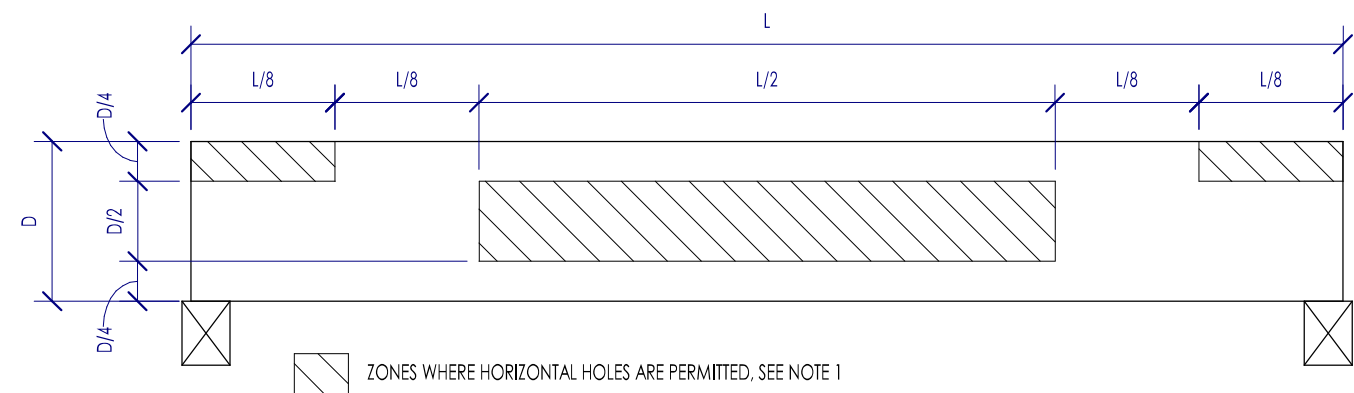
Date	Description
06/02/2022	Review before Permit
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TYPICAL FASTENING SCHEDULE			
CONNECTION ID	CONNECTION TYPE	FASTENING	FASTENING ORIENTATION
1	JOIST TO BIL OR GIRDER	(B) - 0.131"Ø X 3"	TOENAIL
2	SOLE PLATE TO JOIST OR BLOCCING	0.148"Ø X 3" X NAILS @ 12" OC NAILS	FACE NAIL
3	TOP PLATE TO STUD	(B) - 0.131"Ø X 3" NAILS	END NAIL
4	STUD TO SOLE PLATE - OPTION 1	(7) - 1/4" COMMON (2) - 0.131"Ø X 3" NAILS	END NAIL
5	STUD TO SOLE PLATE - OPTION 2	(4) 0.131"Ø X 3" NAILS	TOENAIL
6	DOUBLE MULTIPLE STUDS	REFERENCE DETAIL: 3A/S4.0	FACE NAIL
7	DOUBLE TOP PLATES	0.131"Ø X 3" NAILS @ 12" OC	FACE NAIL
8	DOUBLE TOP PLATE SPICE	REFERENCE DETAIL: 3A/S4.0	FACE NAIL
9	BLOCCING BETWEEN JOISTS/RAPERS TO TOP PLATE	(B) - 0.131"Ø X 3" NAILS	TOENAIL
10	HM JOIST TO TOP PLATE	0.131"Ø X 3" NAILS @ 6" OC	TOENAIL
11	CEILING JOIST TO TOP PLATE	(B) - 0.131"Ø X 3" NAILS	TOENAIL
12	CEILING JOIST LAP OVER PARTITION	(4) - 0.131"Ø X 3" NAILS	FACE NAIL
13	CEILING JOIST TO PARALLEL RAPERS	(4) - 0.131"Ø X 3" NAILS	FACE NAIL
14	RAFTER TO TOP PLATE	(B) - 0.131"Ø X 3" NAILS	TOENAIL
15	BUILT-UP CORNER STUDS	0.131"Ø X 3" NAILS @ 14" OC	FACE NAIL
16	BUILT-UP BEAMS	REFERENCE DETAIL: 2A/S4.0	FACE NAIL
17	COLLAR TIE TO RAFTER	(4) - 0.131"Ø X 3" NAILS	FACE NAIL
18	JACK RAFTER TO HP	(4) - 0.131"Ø X 3" NAILS	TOENAIL
19	RAFTER TO RIDGE BOARD/BEAM	(B) - 0.131"Ø X 3" NAILS	TOENAIL
20	BLOCCING BT STUDS	(B) - 0.131"Ø X 3" NAILS EACH SIDE	TOENAIL

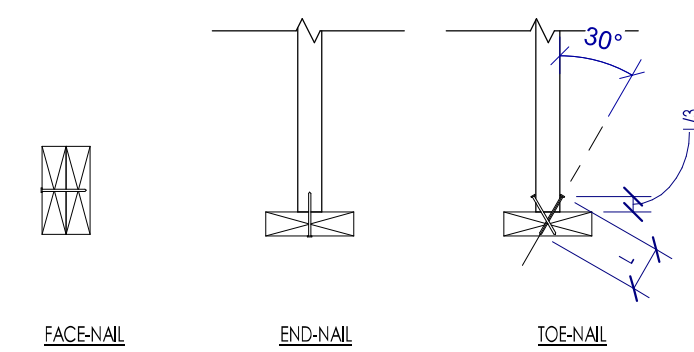
NOTES:
1. THESE CONNECTIONS ARE TO BE APPLIED UNLESS NOTED OTHERWISE IN PLAN, SECTION, ELEVATION OR DETAIL VIEWS.

6D S4.0 TYPICAL WOOD FASTENING SCHEDULE

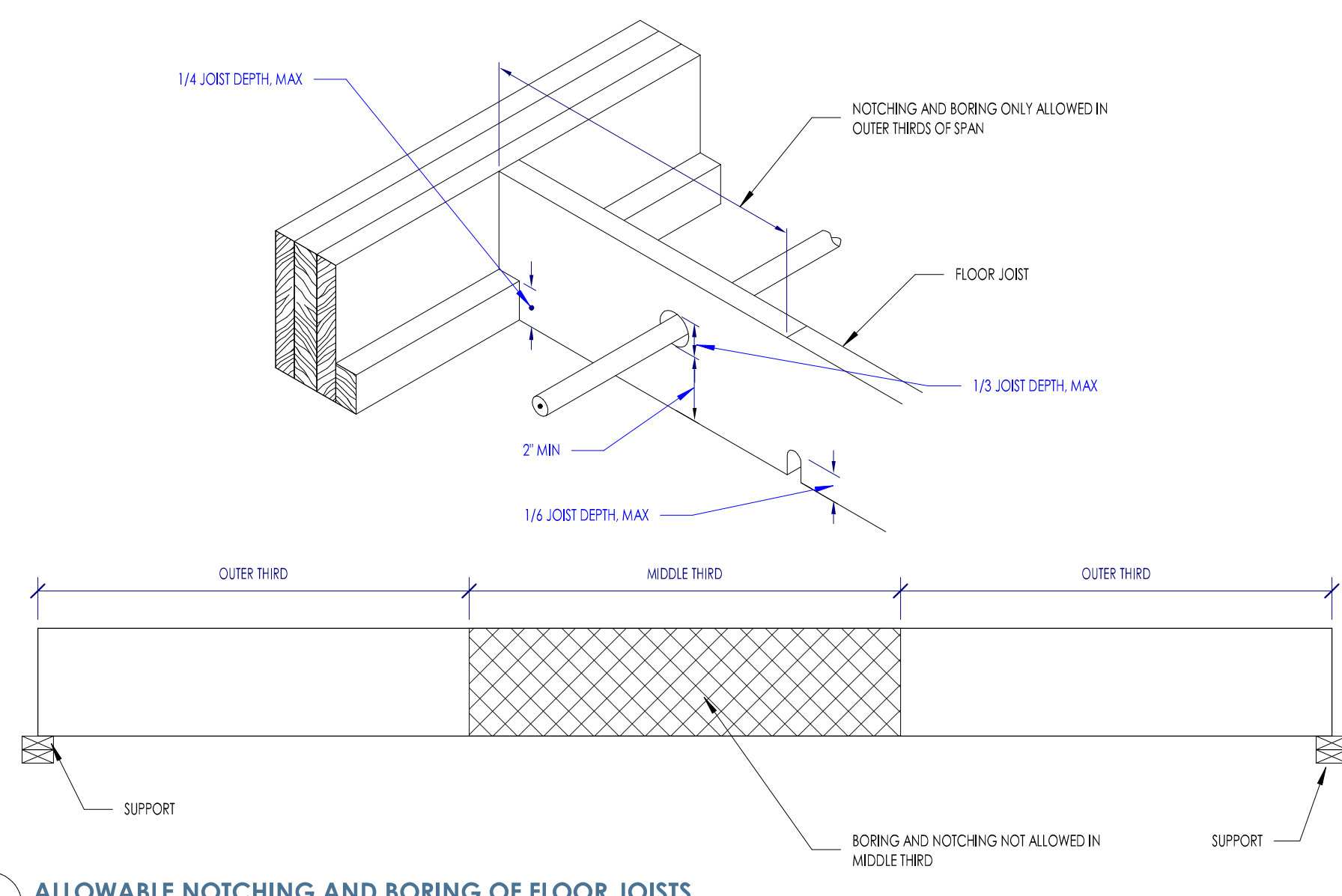


NOTES:
1. HOLE SIZE: THE HOLE DIAMETER SHALL NOT EXCEED 1/4" OR D/10, WHICHEVER IS SMALLER.
2. SPACING: FOR LARGER HOLE DIAMETERS OR FOR HOLES OUTSIDE OF THE PERMITTED ZONES, WRITTEN PERMISSION MUST BE OBTAINED FROM THE ECR.
3. LIMITATIONS: THE ABOVE CRITERIA ONLY APPLY TO SIMPLY SUPPORTED, UNIFORMLY LOADED, GLUE LAMINATED BEAMS. FOR BEAMS THAT ARE EITHER CONTINUOUS ACROSS MULTIPLE SPANS OR THAT ARE SUPPORTING NON-UNIFORM LOADS, WRITTEN PERMISSION MUST BE OBTAINED FROM THE ECR.

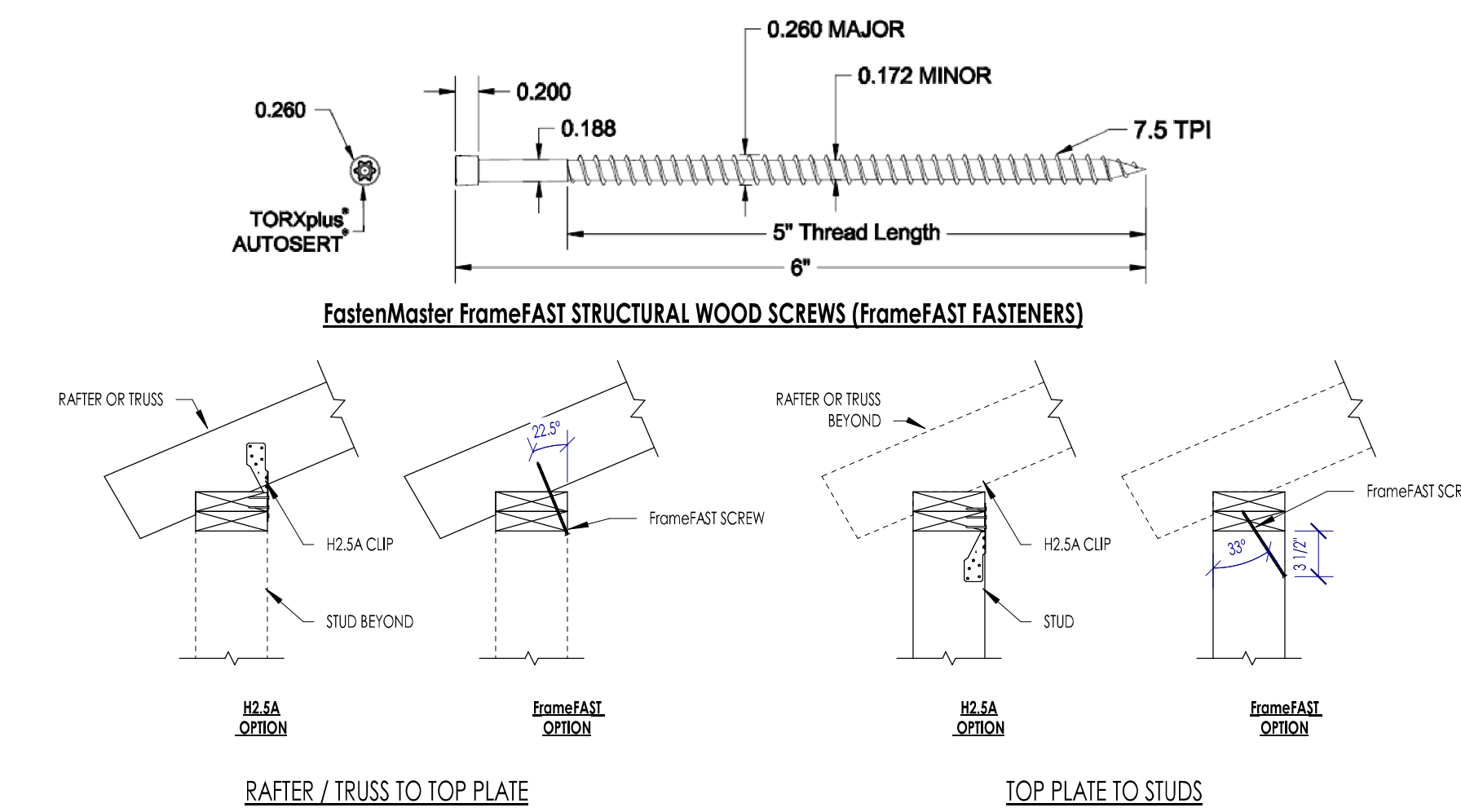
4E S4.0 ALLOWABLE HORIZONTAL HOLE LOCATIONS IN GLUE LAMINATED TIMBER BEAMS



4D S4.0 TYPICAL NAILING CONFIGURATIONS

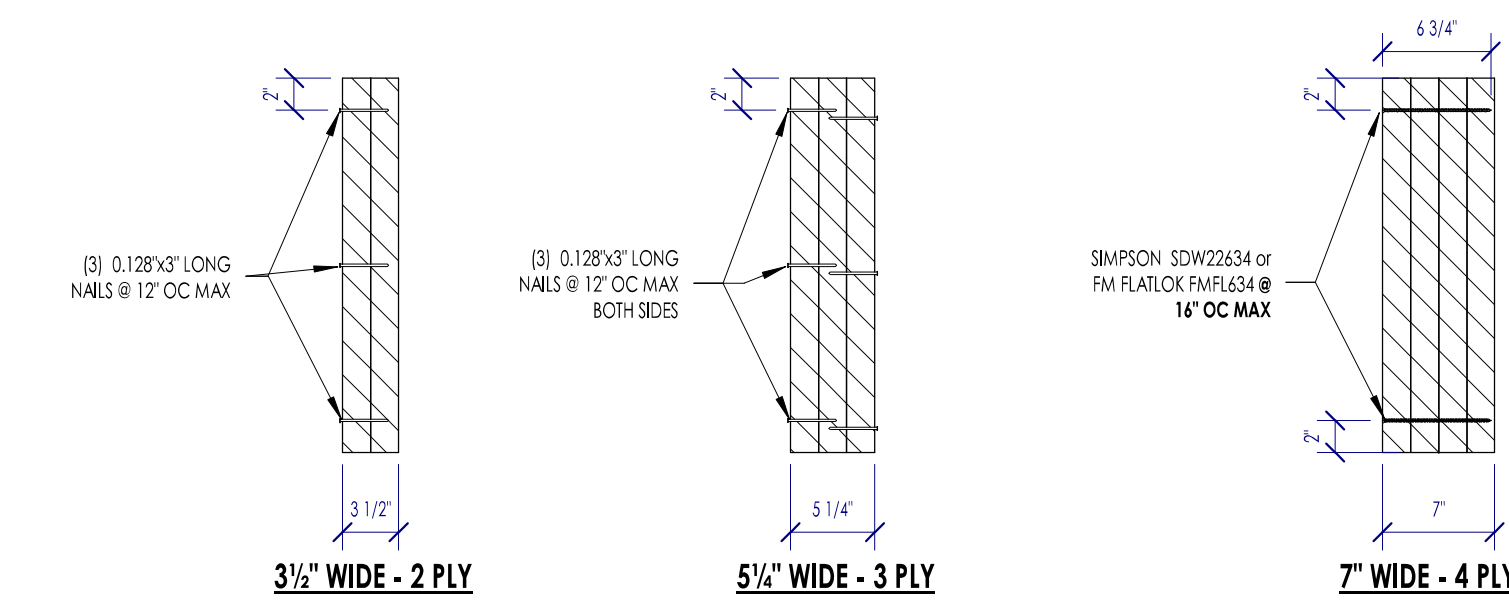


6C S4.0 ALLOWABLE NOTCHING AND BORING OF FLOOR JOISTS



4C S4.0 ALLOWABLE SUBSTITUTION OF H2.5A CLIPS WITH FrameFAST SCREWS - UPLIFT LOAD PATH

NOTES:
1. FastenMaster FrameFAST STRUCTURAL WOOD SCREWS (FrameFAST FASTENERS) MAY BE SUBSTITUTED 1 FOR 1 WITH H2.5A CLIPS.



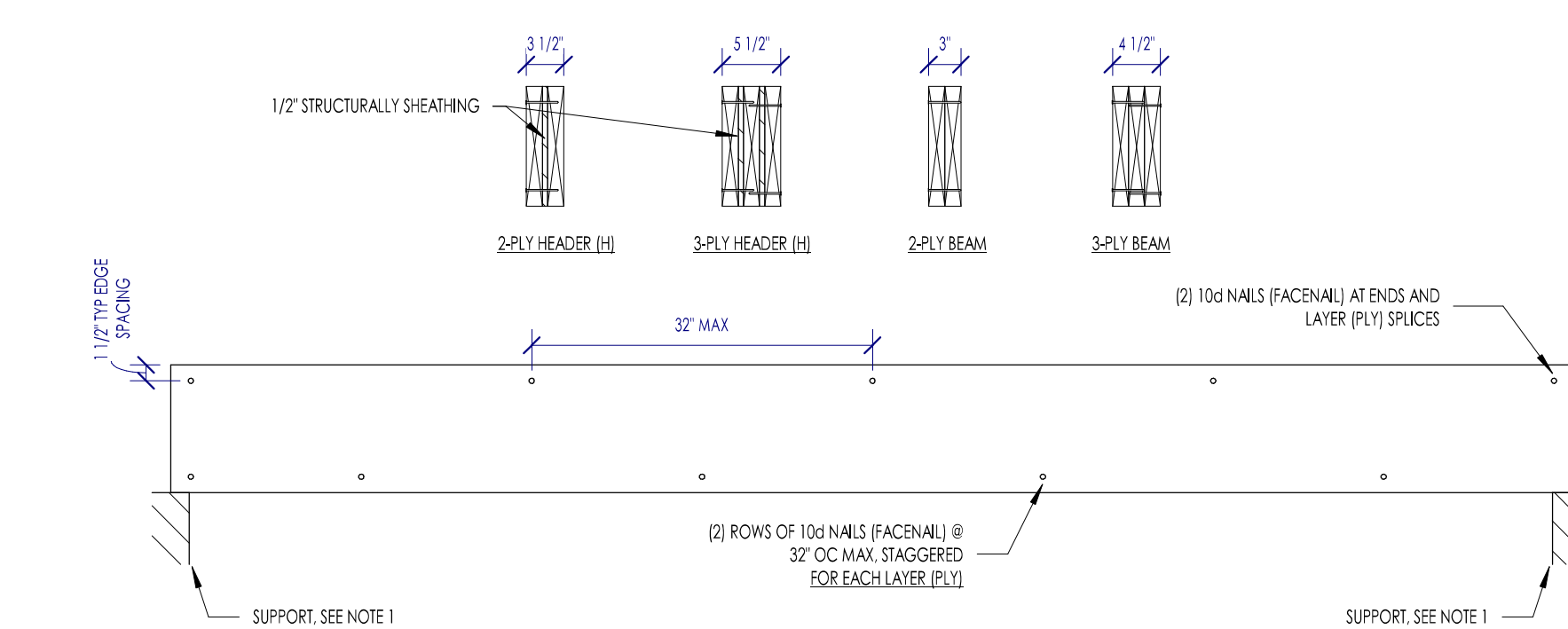
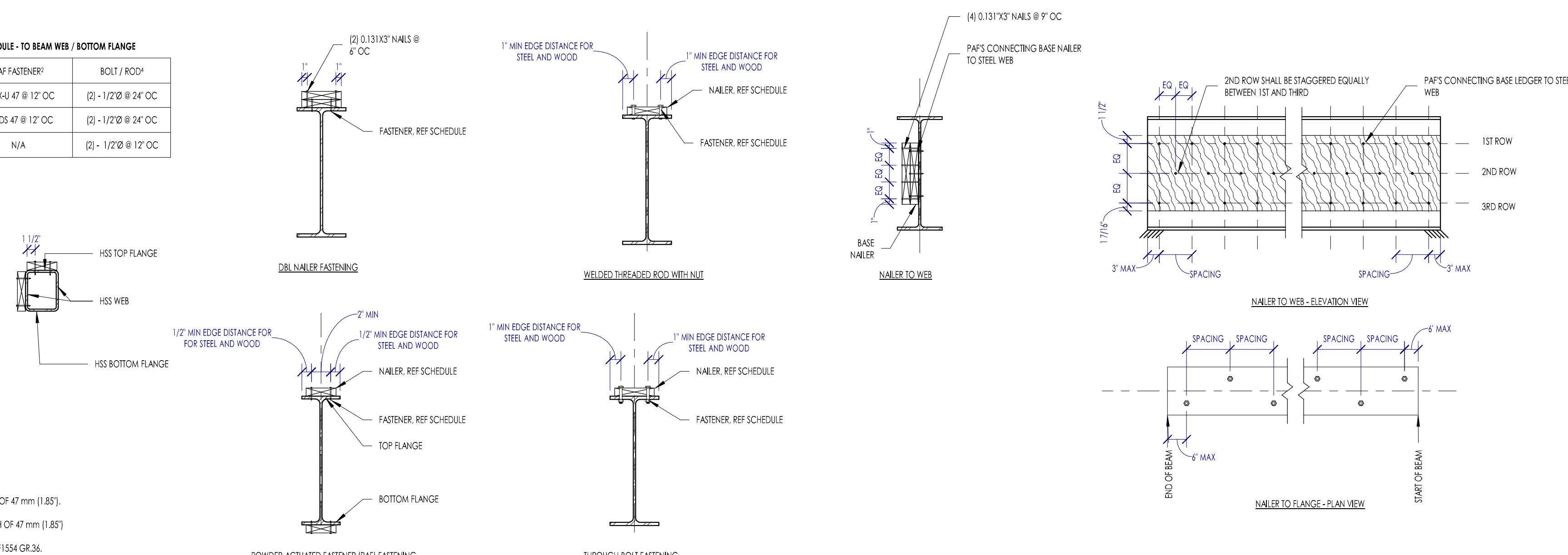
2C S4.0 TYPICAL LVL MULTIPLE PLY FASTENING REQUIREMENTS

FASTENER SCHEDULE - TO BEAM TOP FLANGE			FASTENER SCHEDULE - TO BEAM WEB / BOTTOM FLANGE		
L _f (ft)	PAF FASTENER	BOLT / ROD*	L _f (ft)	PAF FASTENER	BOLT / ROD*
≤ 0.35	3/4" Ø 12" OC	1/2"Ø @ 24" OC	≤ 0.35	(B) - 3/4" Ø 12" OC	(B) - 1/2"Ø @ 24" OC
0.35 < L _f ≤ 0.44	1/2" Ø 12" OC	1/2"Ø @ 24" OC	0.35 < L _f ≤ 0.44	(B) - 1/2" Ø 12" OC	(B) - 1/2"Ø @ 24" OC
L _f > 0.44	N/A	1/2"Ø @ 12" OC	L _f > 0.44	N/A	(B) - 1/2"Ø @ 12" OC

NAILER SCHEDULE - TO BEAM FLANGE		NAILER SCHEDULE - TO BEAM WEB	
b _f (ft)	NAILER SIZE	d (ft)	NAILER SIZE
≤ 5.5	2x4	≤ 5	2x4
5.5 < b _f ≤ 7.25	2x6	5 < d ≤ 6.75	2x6
b _f > 7.25	2x8	6.75 < d ≤ 8.75	2x8
		8.75 < d ≤ 10.25	2x10
		10.75 < d ≤ 15	(2) - 2x8
		15 < d ≤ 19	(2) - 2x10
		19 < d ≤ 23	(2) - 2x12
		d > 23	(3) - 2x8

NOTES:
1. ALL FASTENERS SHALL BE STAGGERED.
2. FASTENER DESCRIPTIONS: ALL FASTENERS ARE POWDER-ACTUATED FASTENERS MFR'D BY HELIX, INC.
A. 3/4" Ø 12"
α. UNIVERSAL KNURLED SHANK FASTENER WITH A SHANK DIAMETER OF 0.157" AND A SHANK LENGTH OF 47 mm (1.85")
B. 1/2" Ø 12"
α. HEAVY DUTY SMOOTH SHANK FASTENER WITH A SHANK DIAMETER OF 0.177" AND A SHANK LENGTH OF 47 mm (1.85")
3. FASTENER INSTALLATION SHALL FOLLOW ALL SPECIFICATIONS PER THE MFR.
4. THROUGH BOLTS SHALL BE GALVANNEED ASTM A507 BOLTS. THROUGH RODS SHALL BE GALVANNEED ASTM F1554 GR.36.

4A S4.0 WOOD NAILER TO TOP OF STRUCTURAL STEEL



2A S4.0 TYPICAL NAILING BUILT-UP BEAMS, GIRDERS & HEADERS

NOTES:
1. UNLESS NOTED OTHERWISE ON PLAN, REFER TO THE FOLLOWING DETAILS FOR FASTENER FRAMING:
A. SUPPORT FOR HEADERS IN EXTERIOR WALLS: 4C/2A.1
B. SUPPORT FOR HEADERS IN INTERIOR WALLS: 5B/14.1
C. SUPPORT FOR BEAMS & GIRDERS SUPPORTED BY WALL - REFERENCE BEAM SCHEDULE

TYPICAL WOOD FRAMING DETAILS

MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & PT OF 6 & PT OF ALLEY - BRYAN, TX 77803

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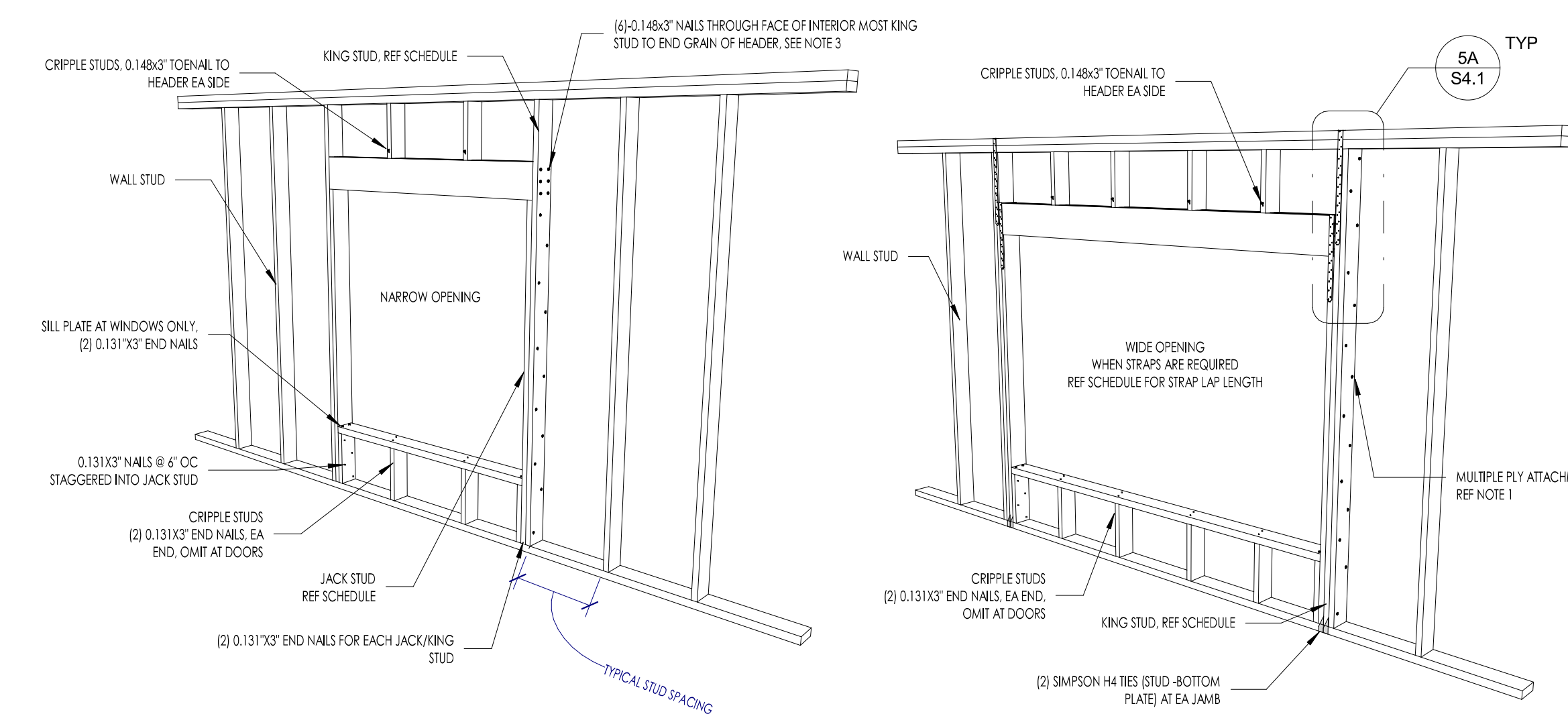
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LICENSED PROFESSIONAL ENGINEER
7/22/2022

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Date	Description
06/02/2022	Review before Permit
07/22/2022	PERMIT REVISIONS

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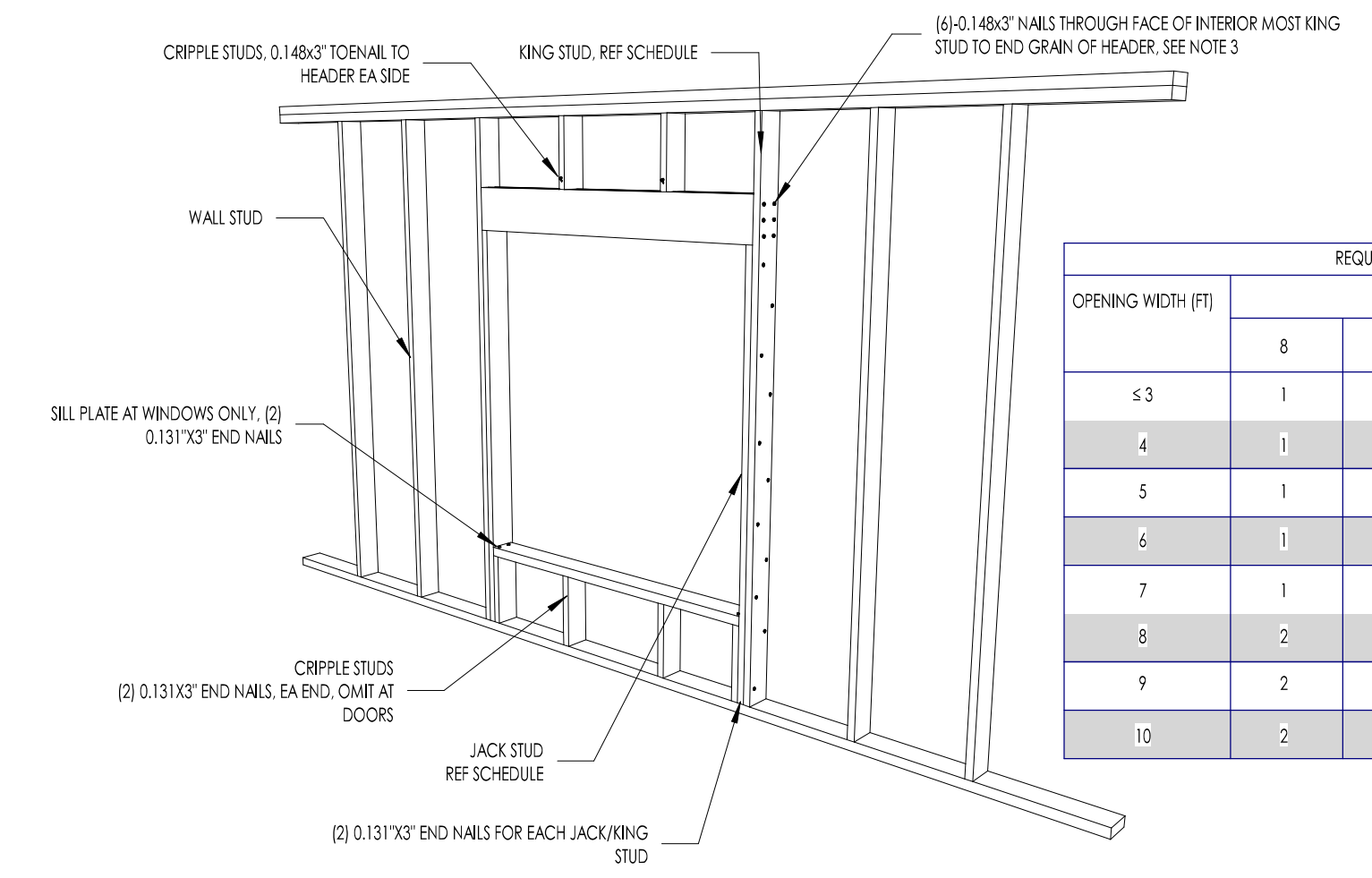
2X4 STUD WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS				NO. JACK STUDS	STRAP LAP LENGTH (IN)
	8	9	10	12		
≤3	1	1	1	2	2	1
4	1	1	2	2	2	1
5	2	2	2	3	3	1
6	2	2	3	3	3	1
7	2	2	3	3	4	1
8	3	3	3	4	4	2
9	3	3	4	4	4	2
10	3	3	4	4	4	2

2X6 STUD WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS				NO. JACK STUDS	STRAP LAP LENGTH (IN)
	8	9	10	12		
≤3	1	1	1	1	1	1
4	1	1	1	1	1	1
5	1	1	1	1	2	1
6	1	1	1	2	2	1
7	1	1	2	2	2	1
8	1	1	2	2	2	2
9	1	2	2	2	2	2
10	1	2	2	2	3	2

- NOTES:**
- MULTIPLE PILES MUST BE ATTACHED PER THE MECHANICALLY LAMINATED BUILT-UP COLUMN, NAILED DETAIL.
 - TABLES BASED OFF A NOMINAL WIND PRESSURE OF 20 PSF AND GRAVITY LOADING OF 20 PLF.
 - NAILED MUST BE CONFIRMED ON THE ORIGINAL PILES OF THE HEADER.
 - N/R = NOT REQUIRED. IF N/R, THEN REFERENCE NARROW OPENING DIAGRAM FOR CONNECTION REQUIREMENTS, OTHERWISE REFERENCE THE WIDE OPENING DIAGRAM.



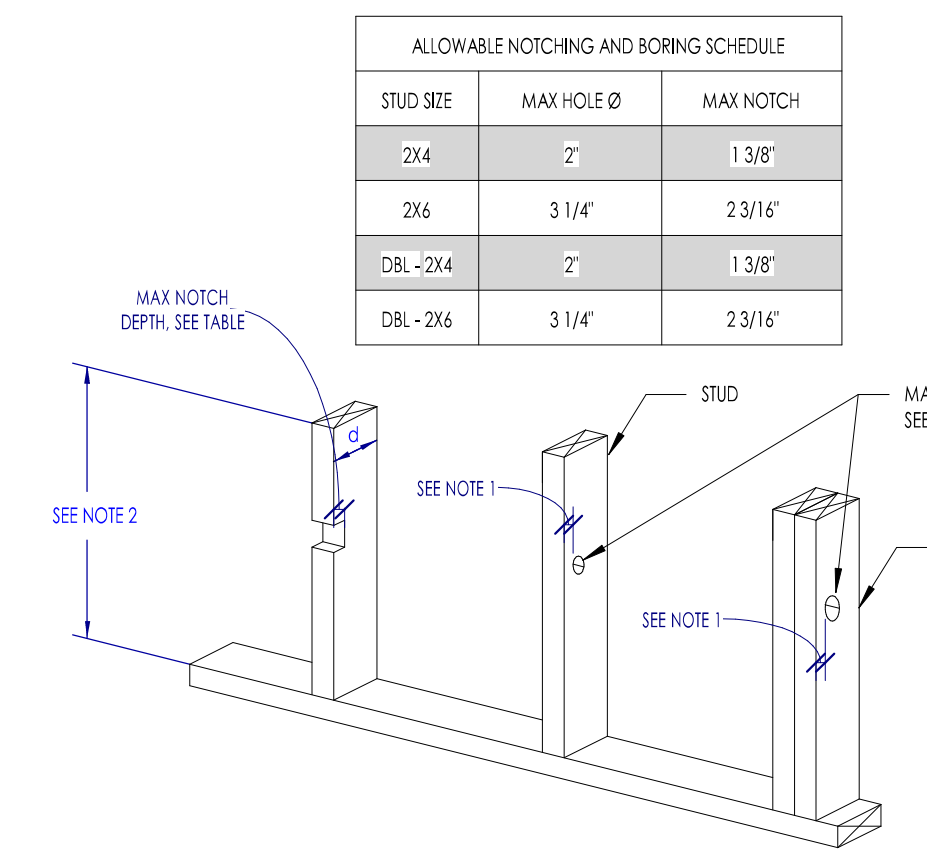
LOAD BEARING WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS				NO. JACK STUDS
	8	9	10	12	
≤3	1	1	1	1	1
4	1	1	1	1	1
5	1	1	2	2	1
6	1	1	2	2	1
7	1	1	2	2	3
8	2	2	2	3	2
9	2	2	3	3	2
10	2	2	3	3	2

NON-LOAD BEARING WALL

OPENING WIDTH (FT)	REQUIRED NO. OF KING STUDS				NO. JACK STUDS	HEADER SIZE
	8	9	10	12		
≤3	1	1	1	1	1	2X4 STUD WALL 2X6 STUD WALL
4	1	1	1	1	1	2X4 STUD WALL 2X6 STUD WALL
5	1	1	1	2	2	2X4 STUD WALL 2X6 STUD WALL
6	1	1	2	2	2	2X4 STUD WALL 2X6 STUD WALL
7	1	1	2	2	3	2X4 STUD WALL 2X6 STUD WALL
8	2	2	2	3	3	2X4 STUD WALL 2X6 STUD WALL
9	2	2	3	3	3	2X4 STUD WALL 2X6 STUD WALL
10	2	2	3	3	3	2X4 STUD WALL 2X6 STUD WALL

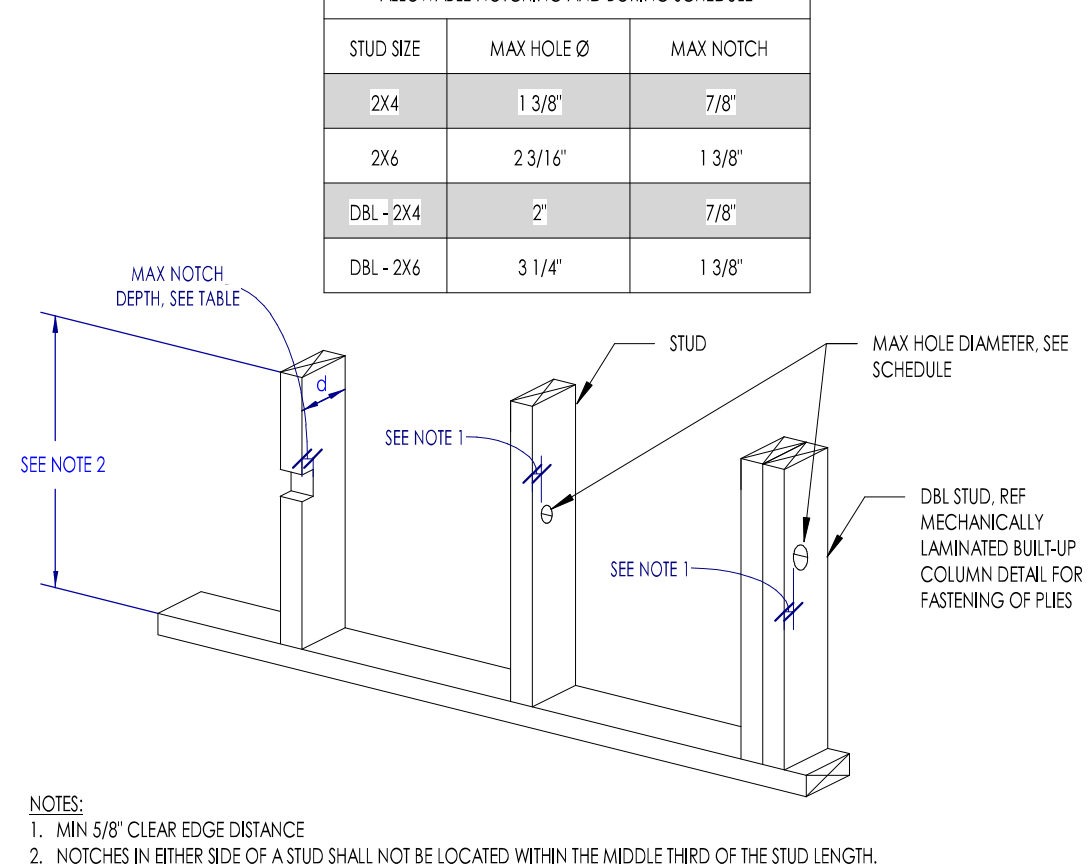
- NOTES:**
- LOAD BEARING WALLS AND ASSOCIATED HEADERS ARE INDICATED ON PLAN.



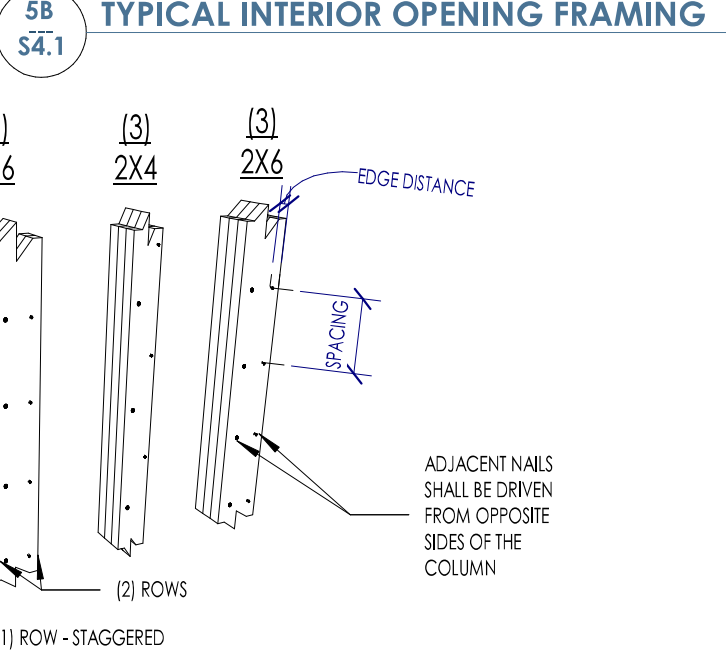
ALLOWABLE NOTCHING AND BORING SCHEDULE

STUD SIZE	MAX HOLE Ø	MAX NOTCH
2X4	2"	1.318"
2X6	3.114"	2.316"
DL-2X4	2"	1.318"
DL-2X6	3.114"	2.316"

- NOTES:**
- MIN 5/8" CLEAR EDGE DISTANCE.
 - NOTCHES IN EITHER END OF A STUD SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE STUD LENGTH.
 - NOTCHES AND BORINGS SHALL NOT OCCUR IN THE SAME CROSS SECTION.



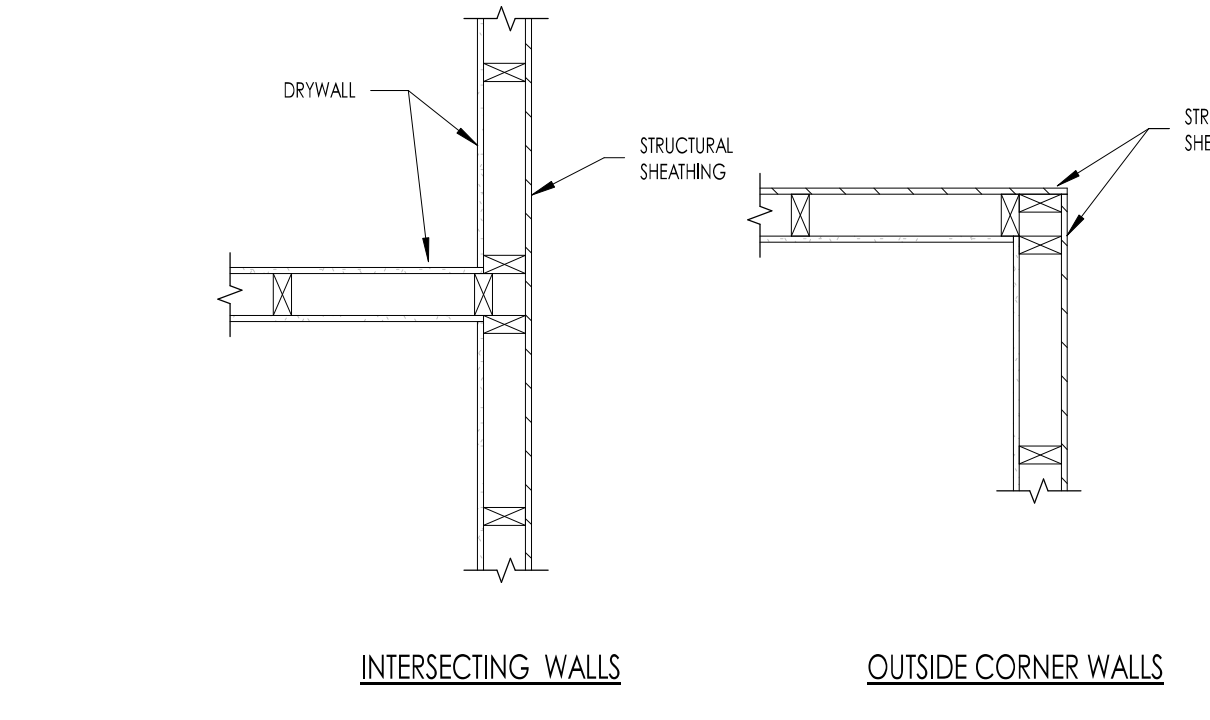
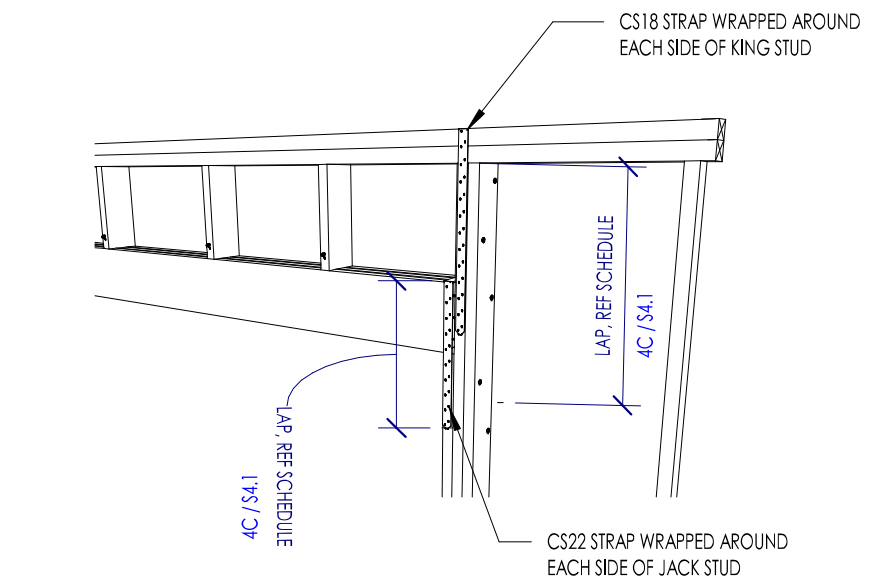
- NOTES:**
- MIN 5/8" CLEAR EDGE DISTANCE.
 - NOTCHES IN EITHER END OF A STUD SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE STUD LENGTH.
 - NOTCHES AND BORINGS SHALL NOT OCCUR IN THE SAME CROSS SECTION.



Mechanically Laminated Built-Up Column (Stud Pack) - Nailed

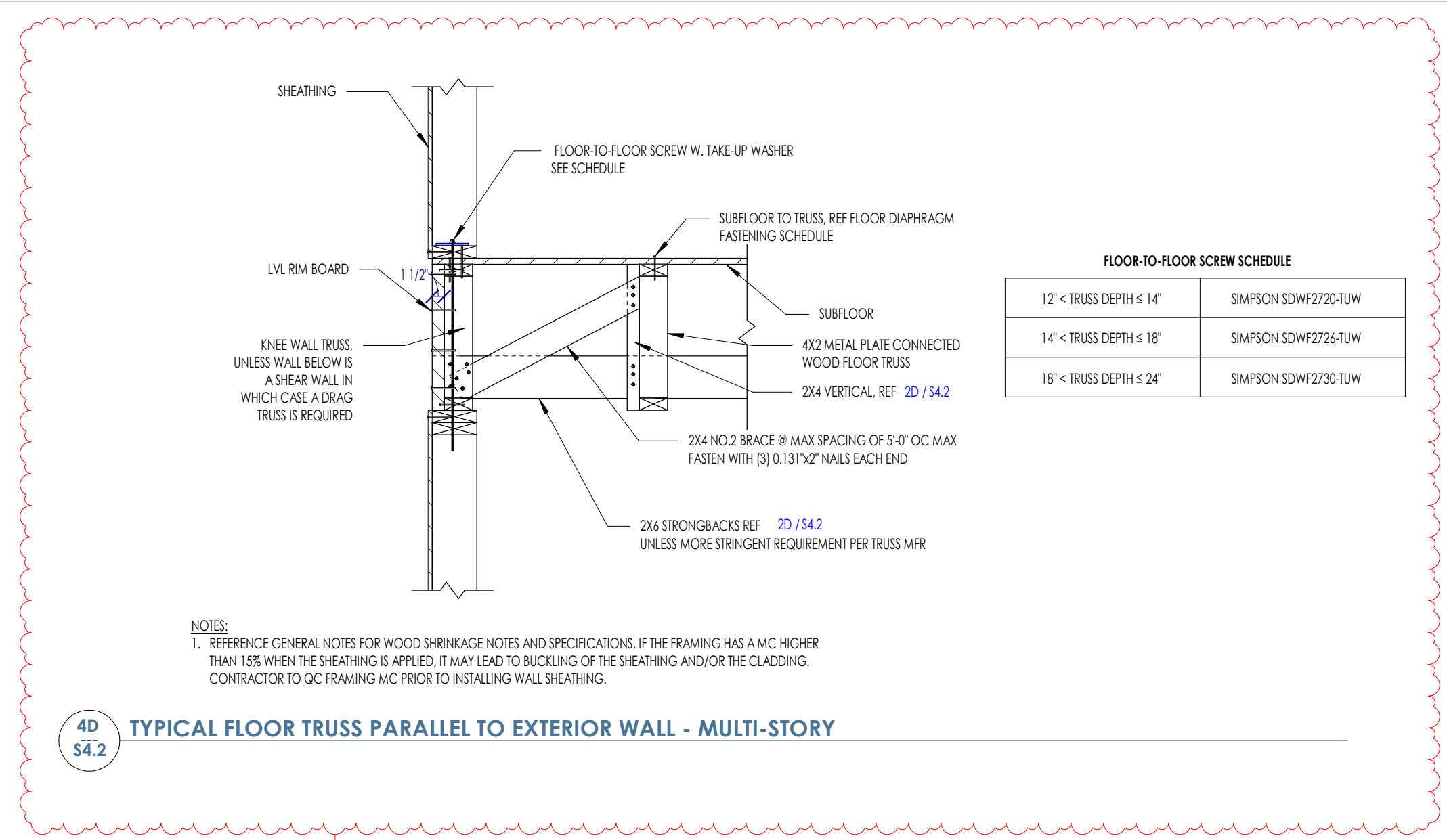
BUILT-UP SECTION	NAIL SIZE	SPACING	NO. ROWS	NOTES
(1)-2X4	0.131 x 2"	6"	1	STAGGERED
(2)-2X6	0.131 x 3"	8"	2	STAGGERED
(3)-2X4	0.131 x 4"	6"	1	STAGGERED
(3)-2X6	0.131 x 4"	8"	2	STAGGERED

- NOTES:**
- END DISTANCE: THE FIRST FASTENERS SHALL BE LOCATED 2" FROM THE END OF THE COLUMN ON EACH END.
 - EDGE DISTANCE: 3/4" EDGE DISTANCE ± 1/8"



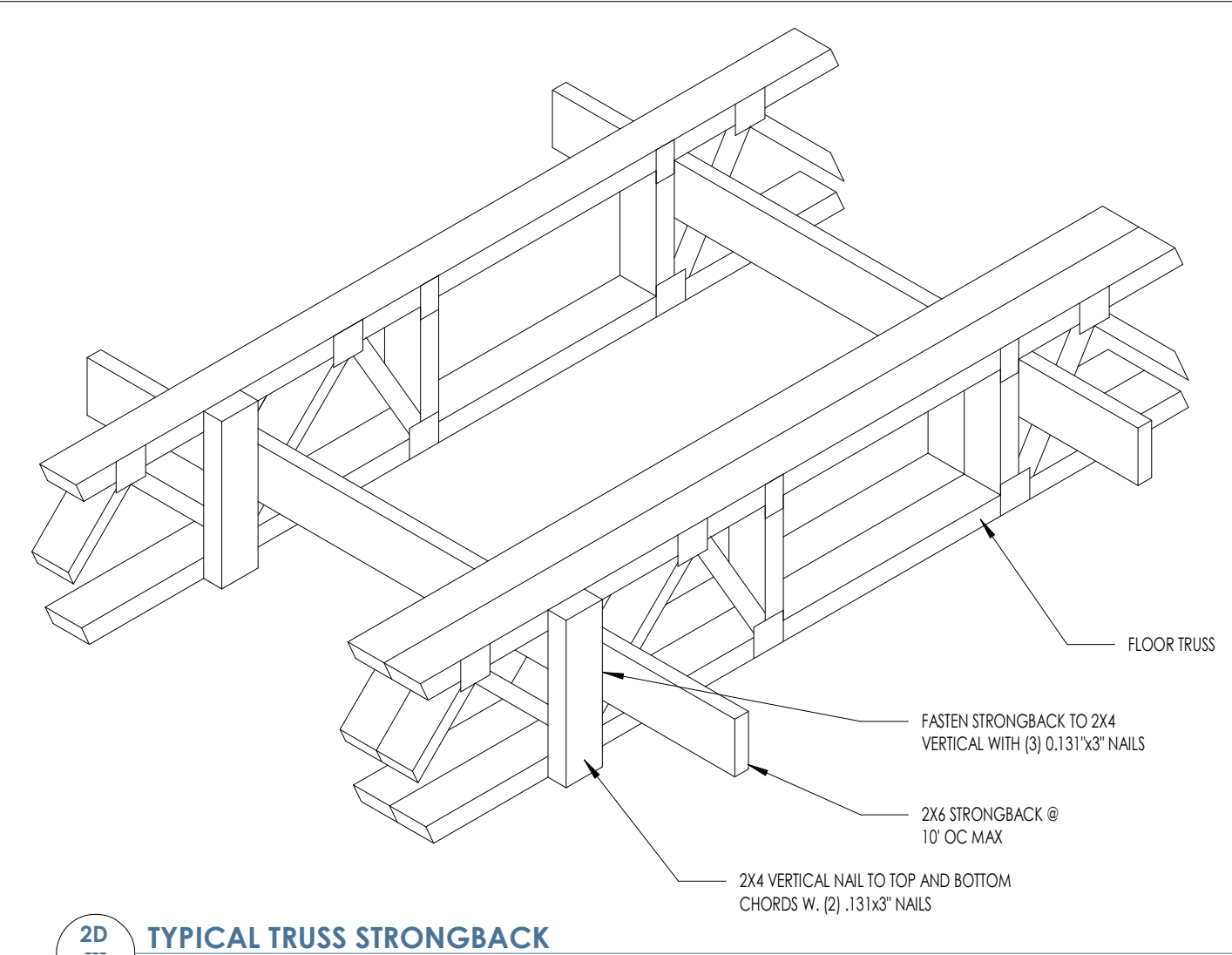
- NOTES:**
- CASE 1 - EXTERIOR WALLS THAT ARE NOT SHEAR WALLS.
 - CASE 2 - INTERIOR LOAD BEARING WALLS THAT ARE NOT SHEAR WALLS.
 - FOR WALLS THAT ARE INDICATED TO BE SHEAR WALLS, REFER TO THE SHEAR WALL SCHEDULE FOR ANCHORAGE REQUIREMENTS.
 - SIMPSON 1/2" Ø x 6" THICK END SCREW ANCHORS ARE AN ACCEPTABLE ALTERNATIVE TO THE J-BOLTS.

Date	Description
06/02/2022	Review before Permit
07/22/2022	PERMIT REVISIONS

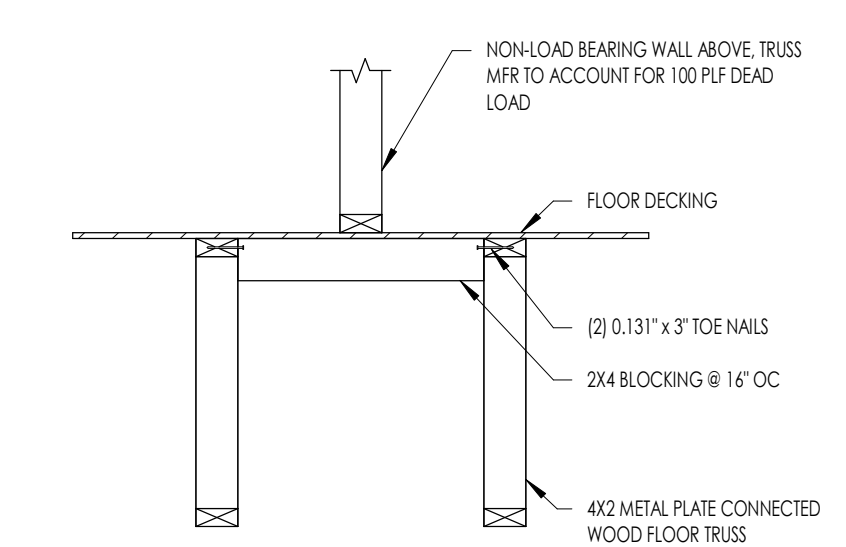


4D S4.2 TYPICAL FLOOR TRUSS PARALLEL TO EXTERIOR WALL - MULTI-STORY

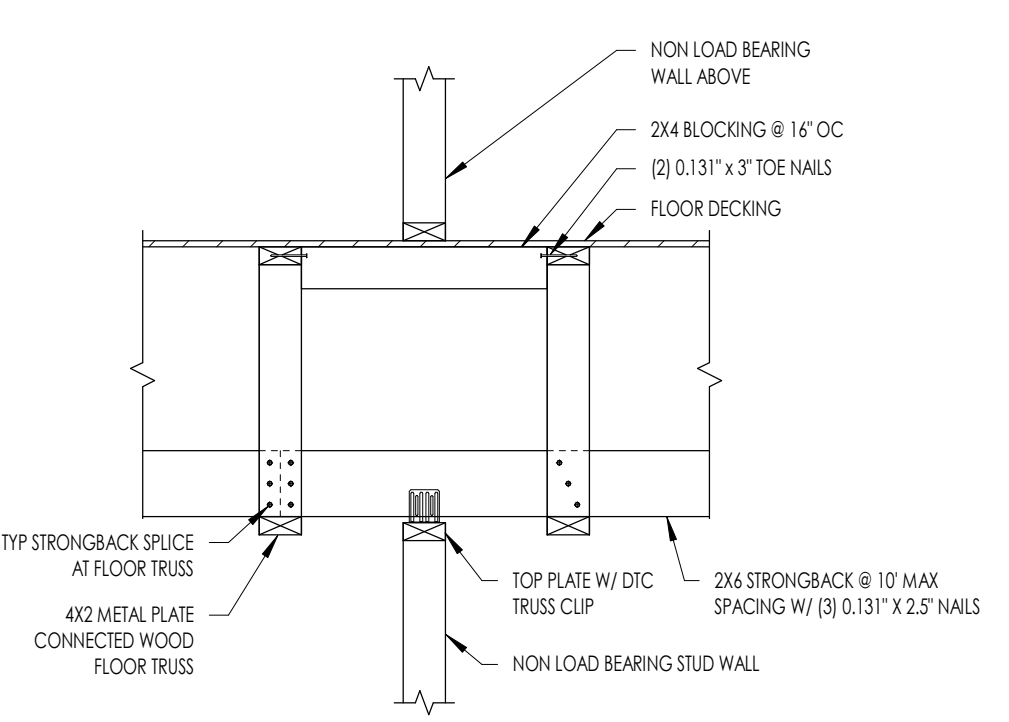
07/22/2022



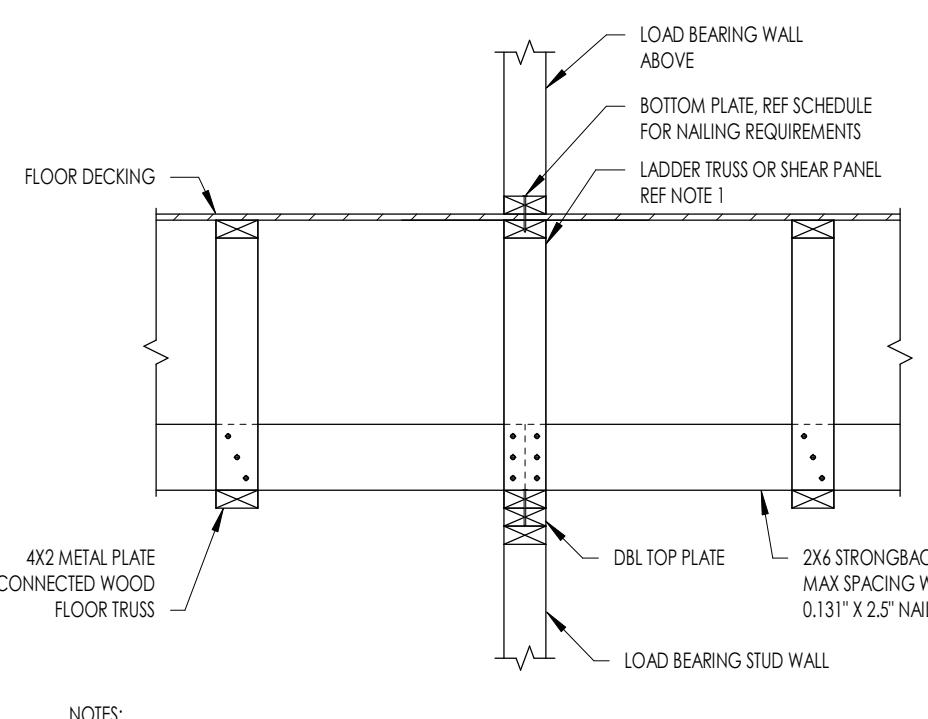
2D S4.2 TYPICAL TRUSS STRONGBACK



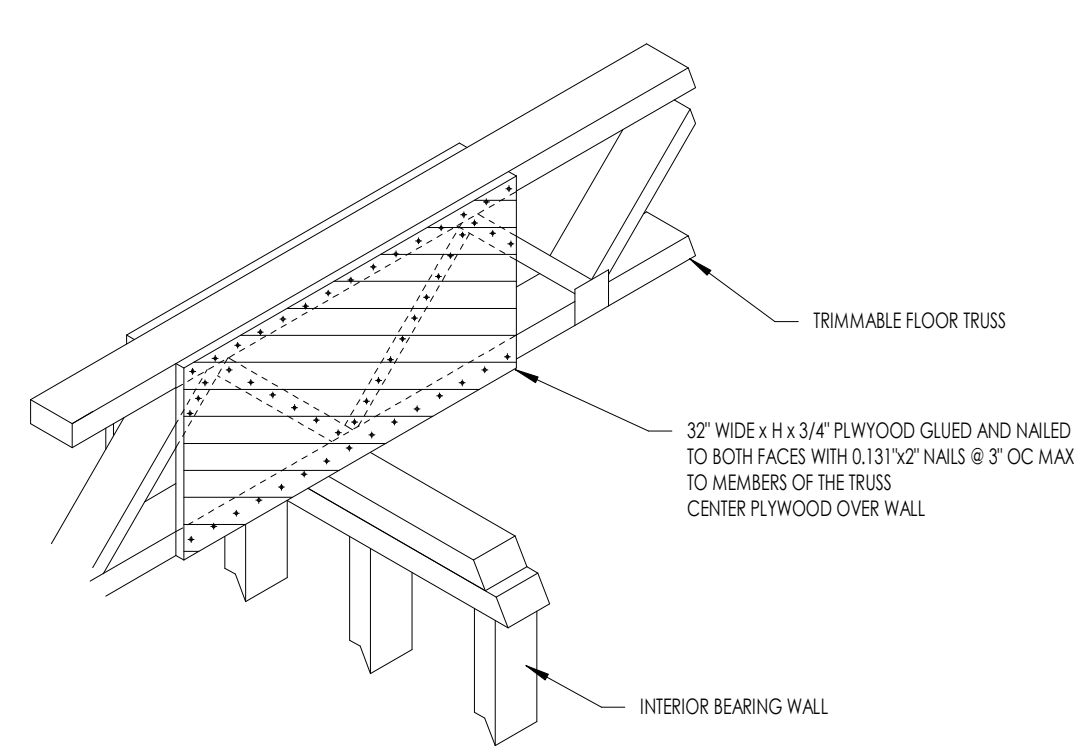
2C S4.2 TYPICAL NON-LOAD BEARING WALL PARALLEL TO FLOOR TRUSS



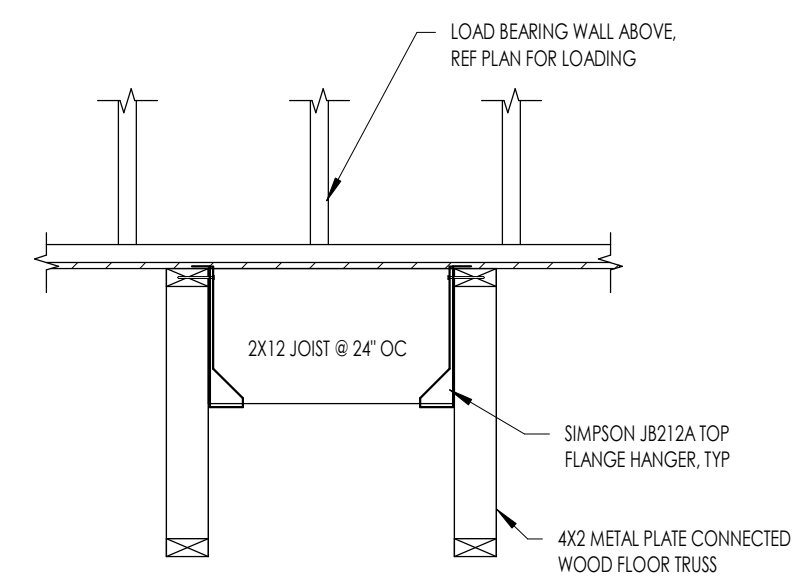
5C S4.2 TYPICAL NON-LOAD BEARING WALL PARALLEL TO FLOOR TRUSSES



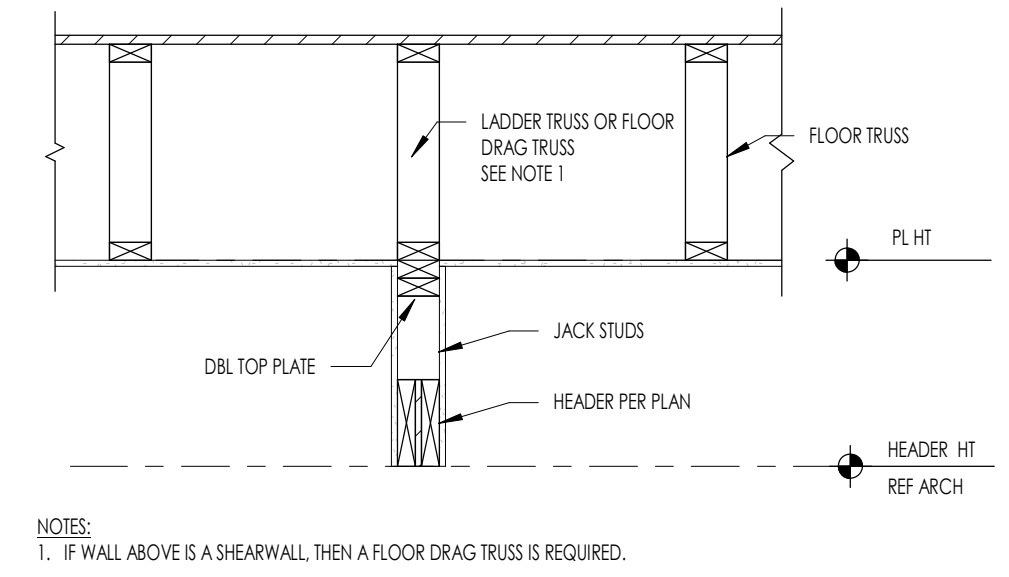
1C S4.2 TYPICAL LOAD BEARING WALL PARALLEL TO FLOOR TRUSSES



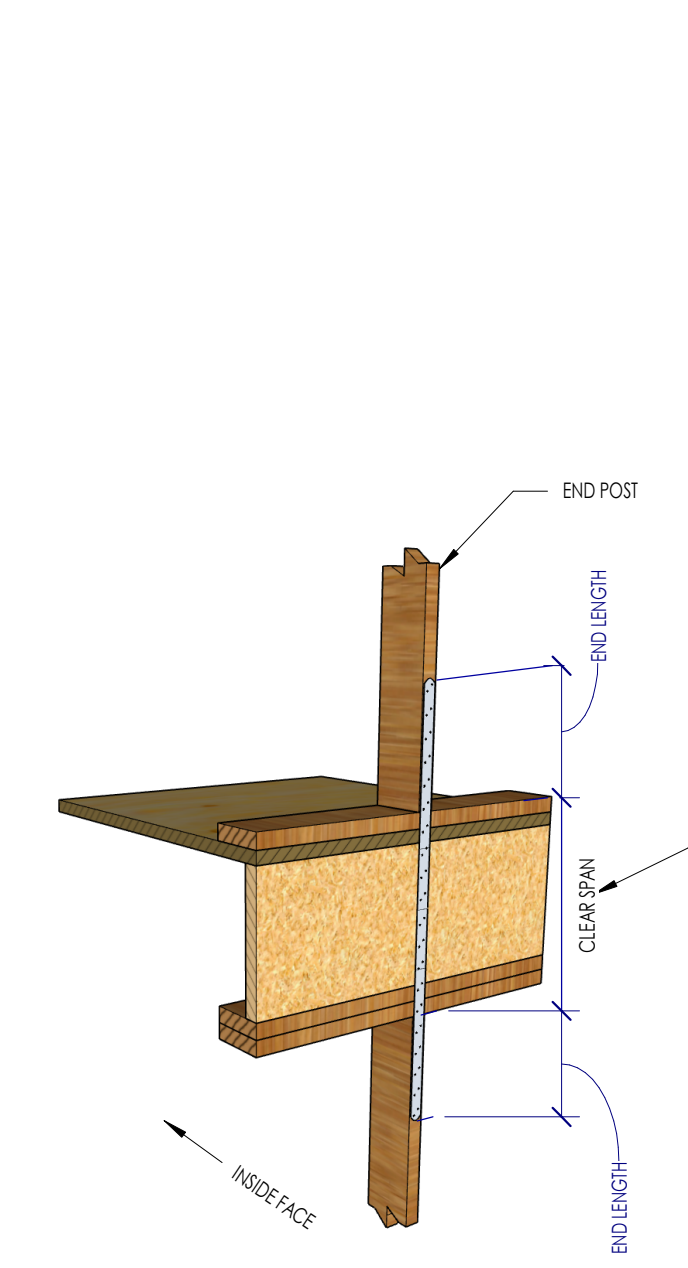
1B S4.2 TYPICAL TRIMMABLE TRUSS STIFFENING AT INTERIOR SUPPORT



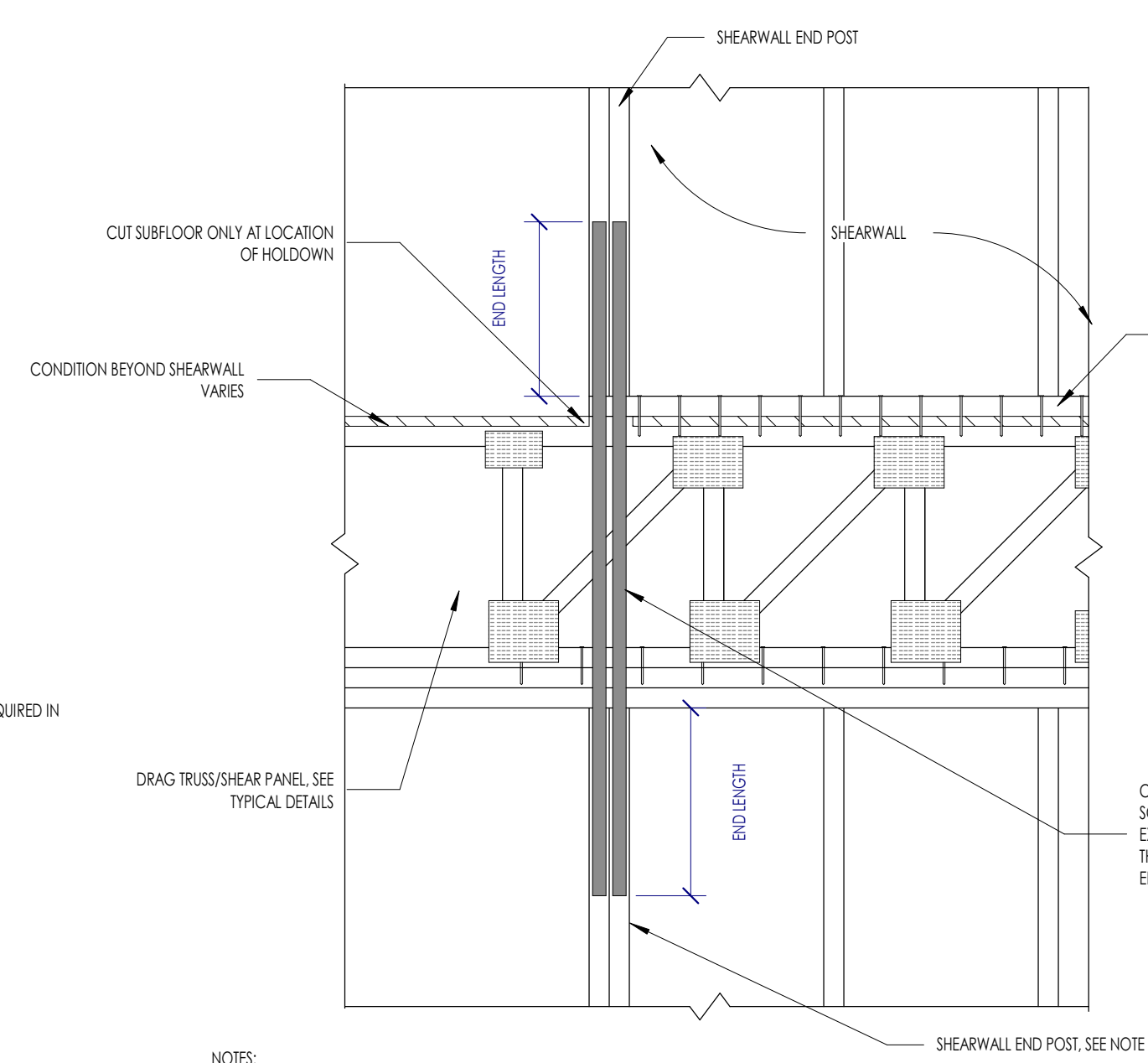
3B S4.2 TYPICAL LOAD BEARING WALL PERP. TO FLOOR TRUSS



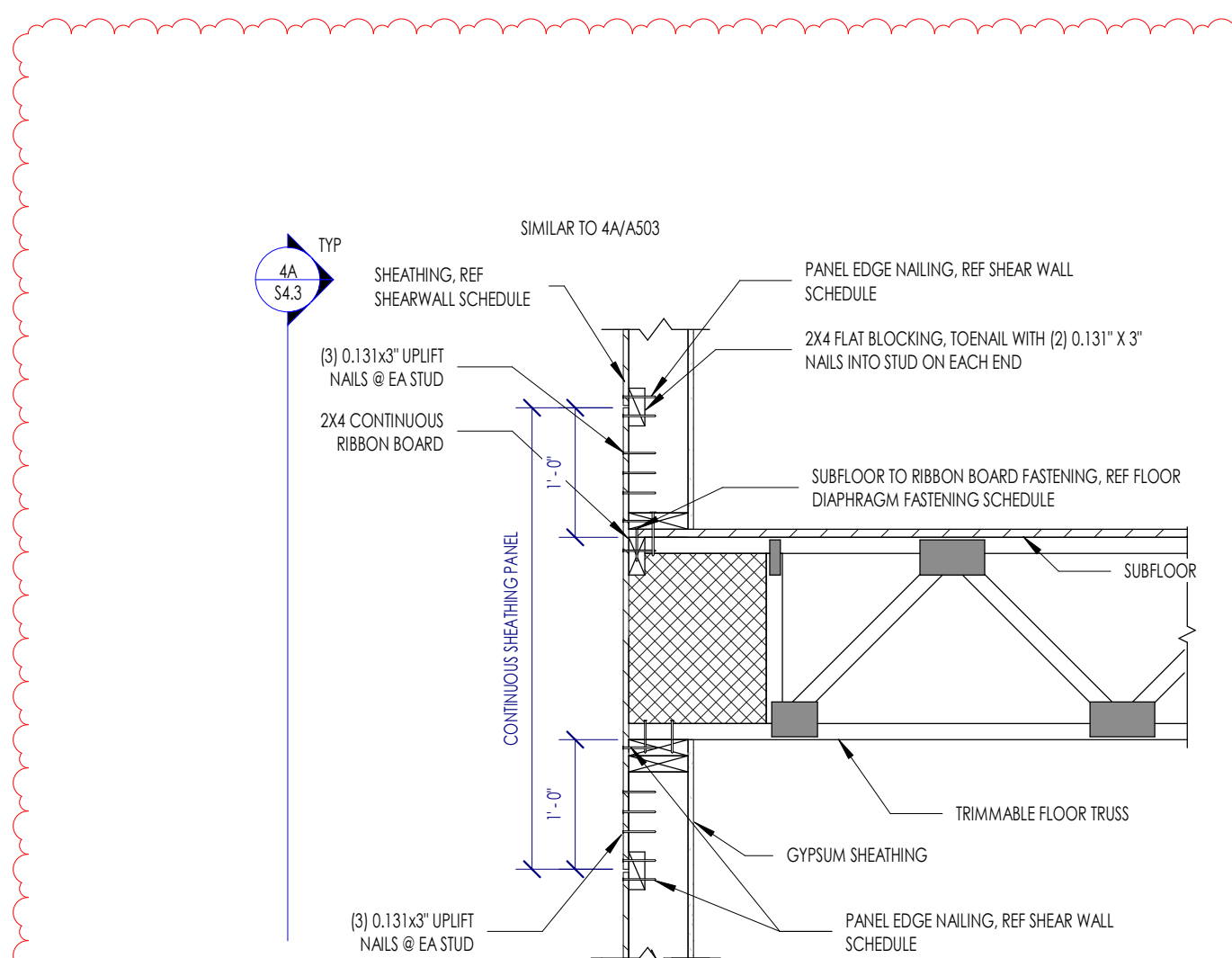
2B S4.2 TYPICAL LOAD BEARING HEADER PARALLEL TO FLOOR TRUSSES



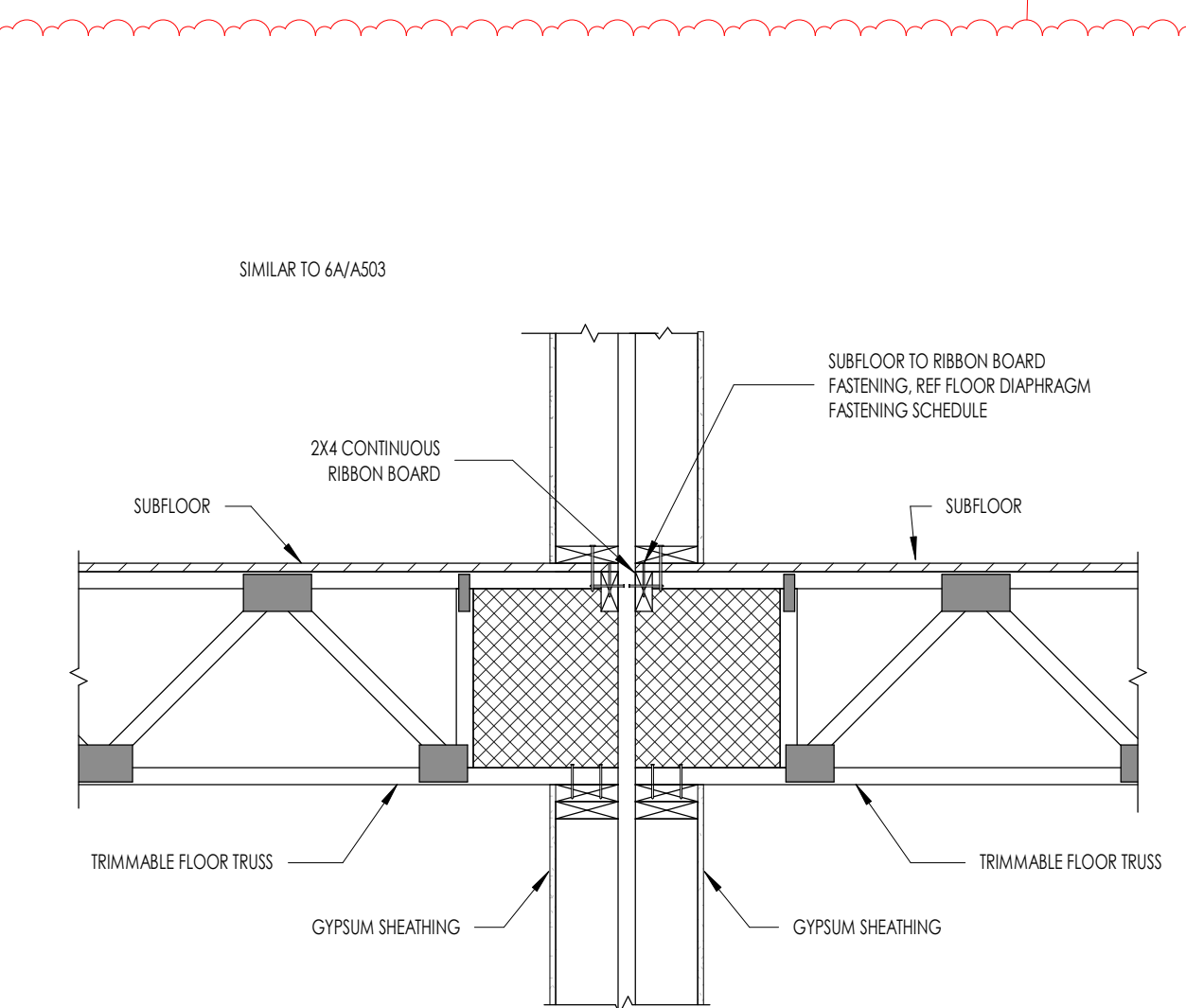
6A S4.2 TYPICAL SHEARWALL HOLDDOWN AT ELEVATED FLOOR



HOLDOWN AT INTERIOR SHEAR WALL



3A S4.2 061760 FLOOR - TRIMMABLE TRUSS BOTTOM CHORD BEARING ON EXTERIOR WALL



2A S4.2 TYPICAL INTERIOR BOTTOM CHORD BEARING AT PARTY WALL

07/22/2022

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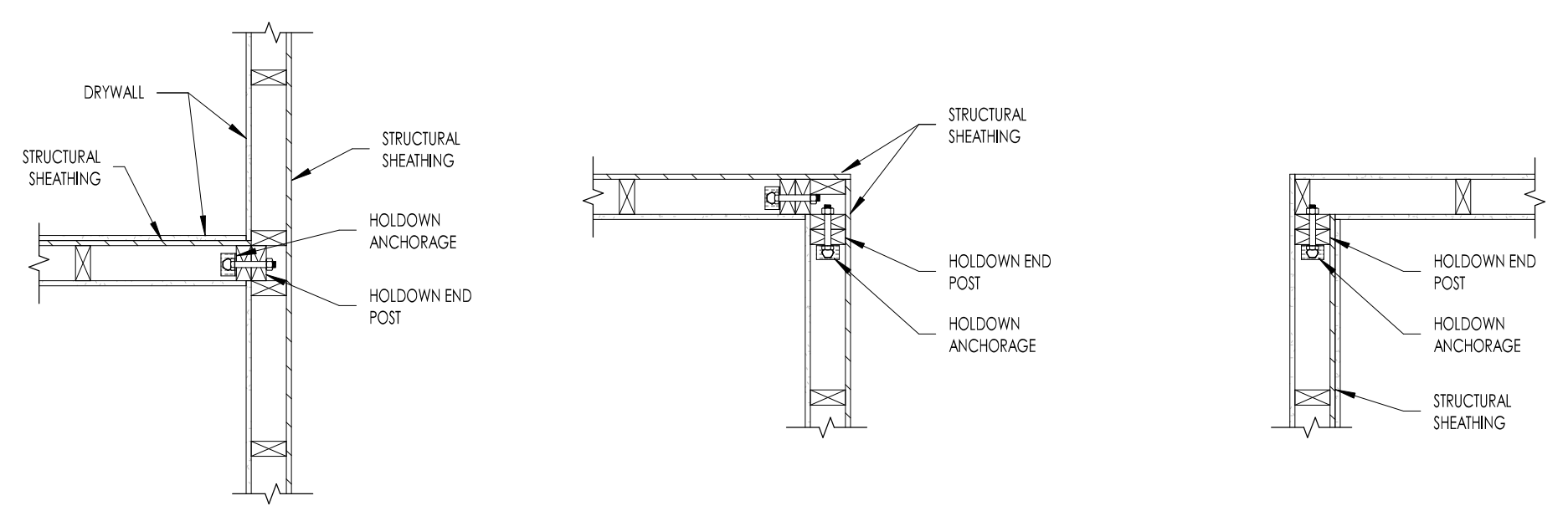
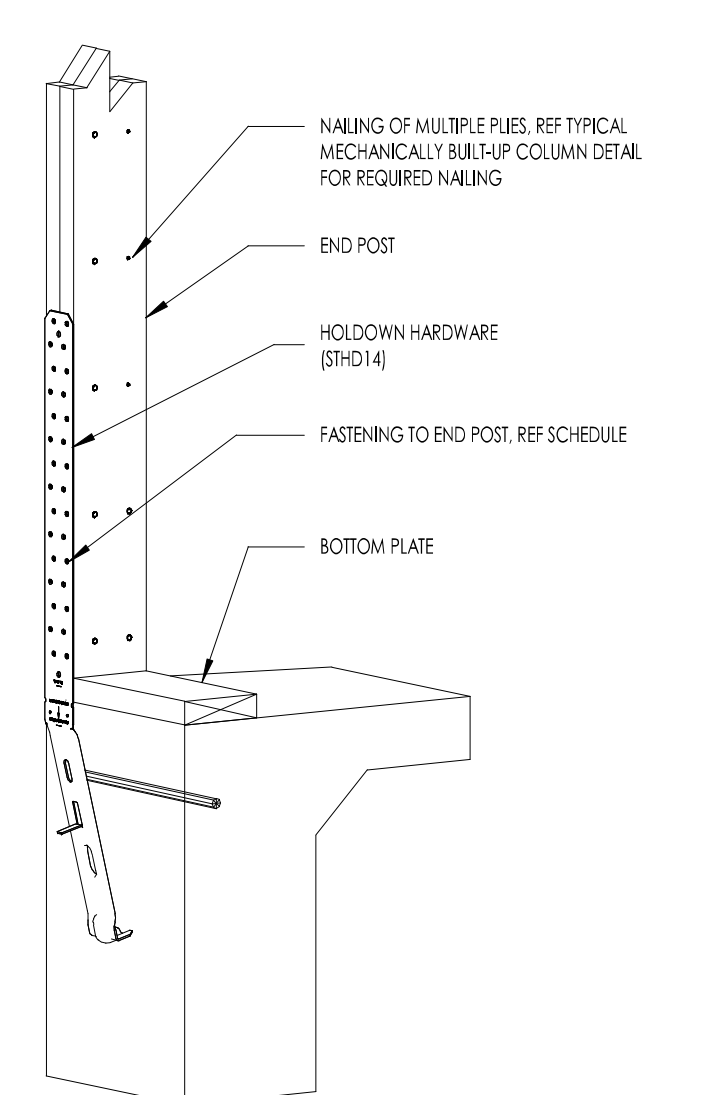
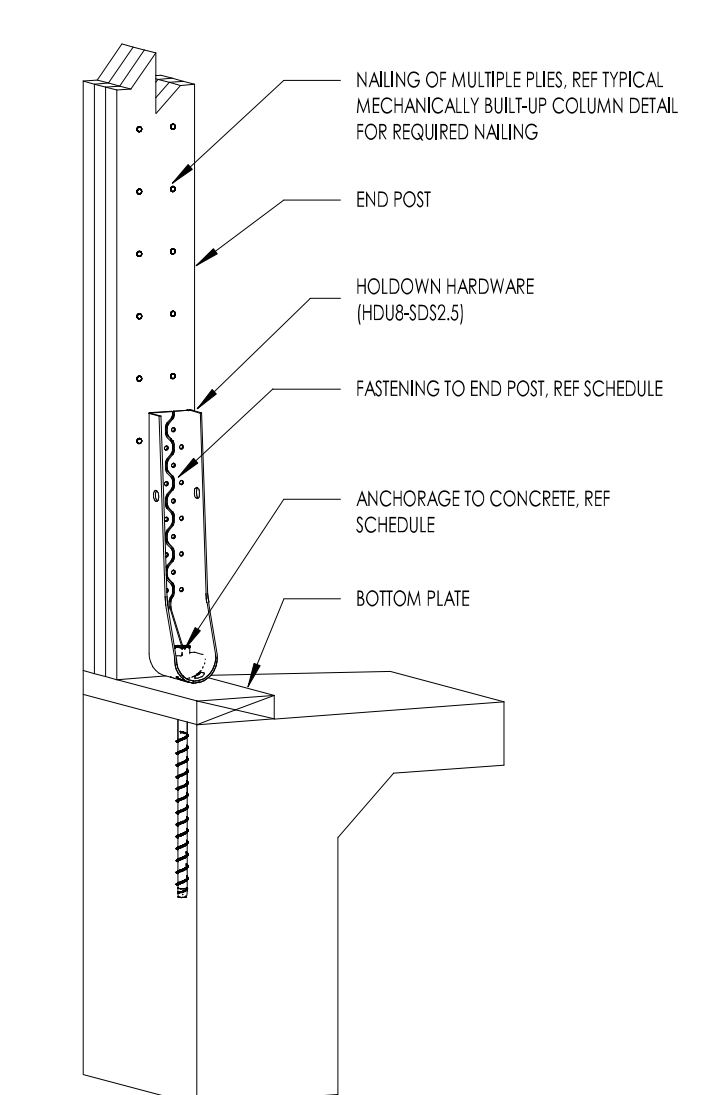
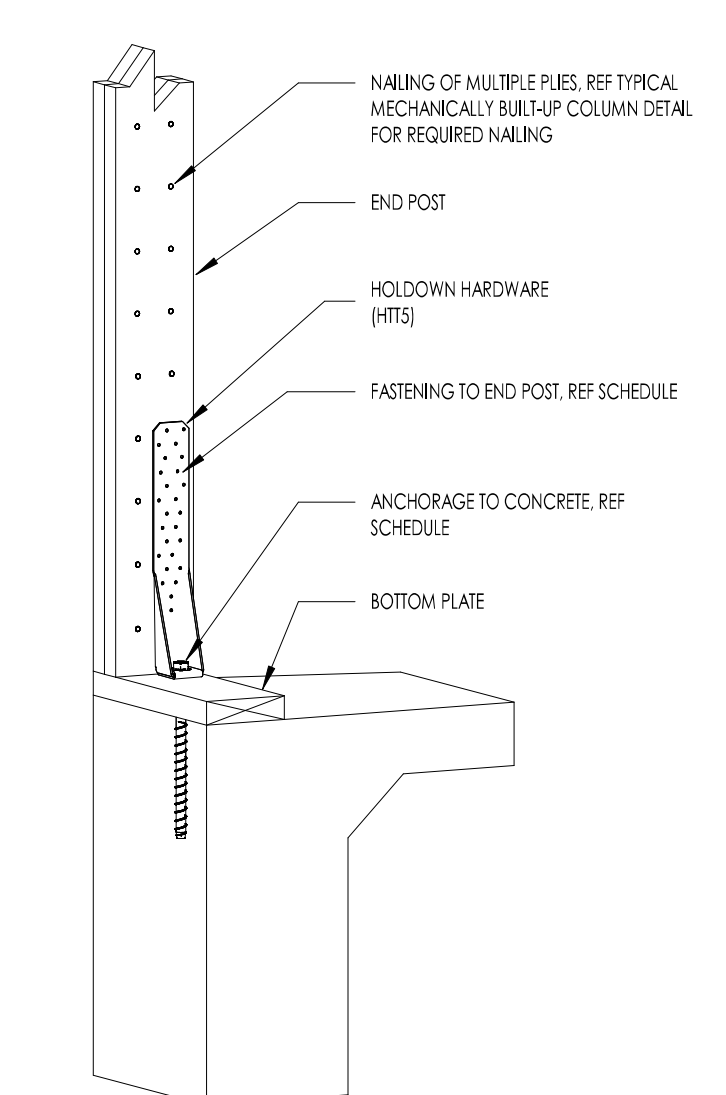
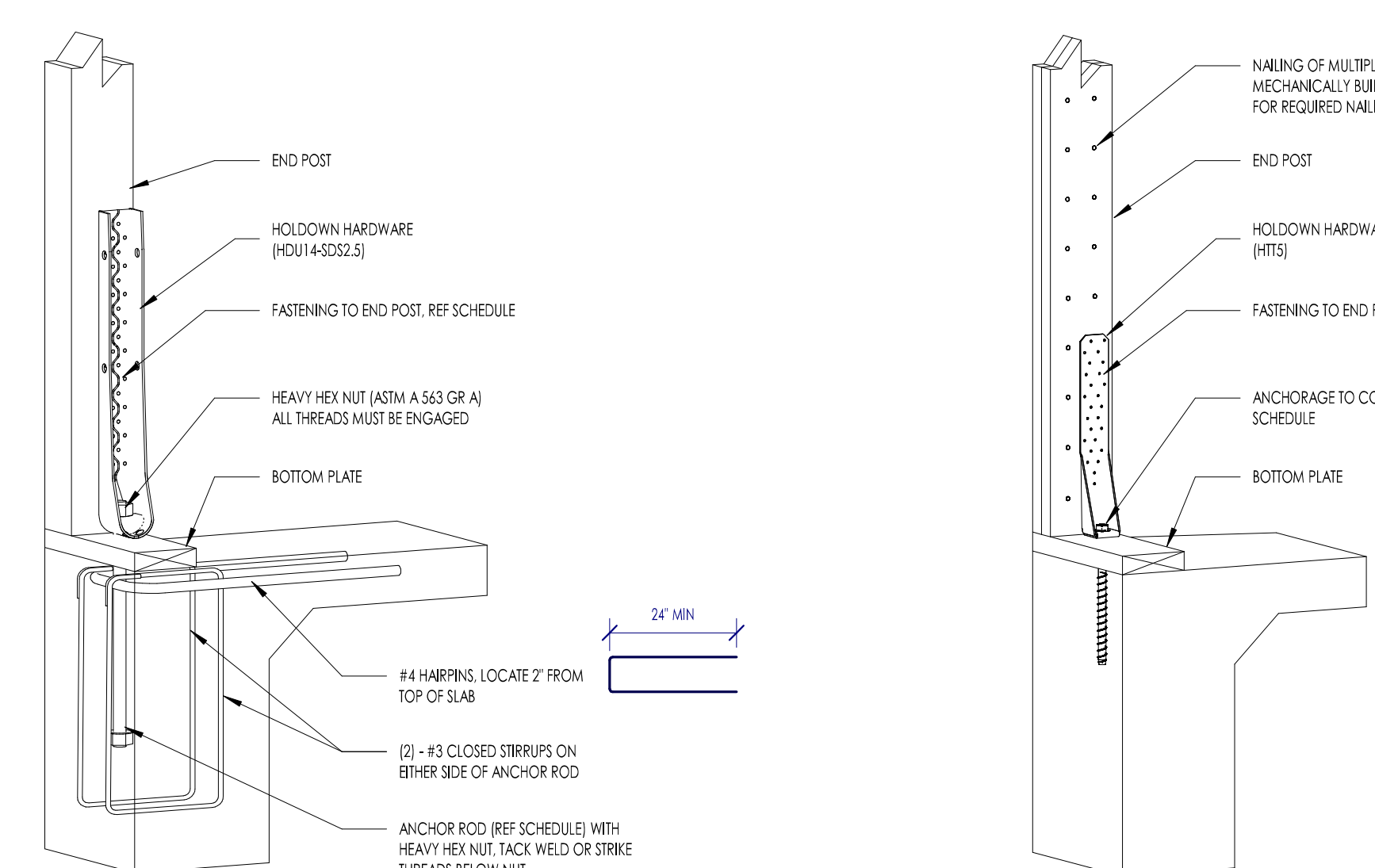
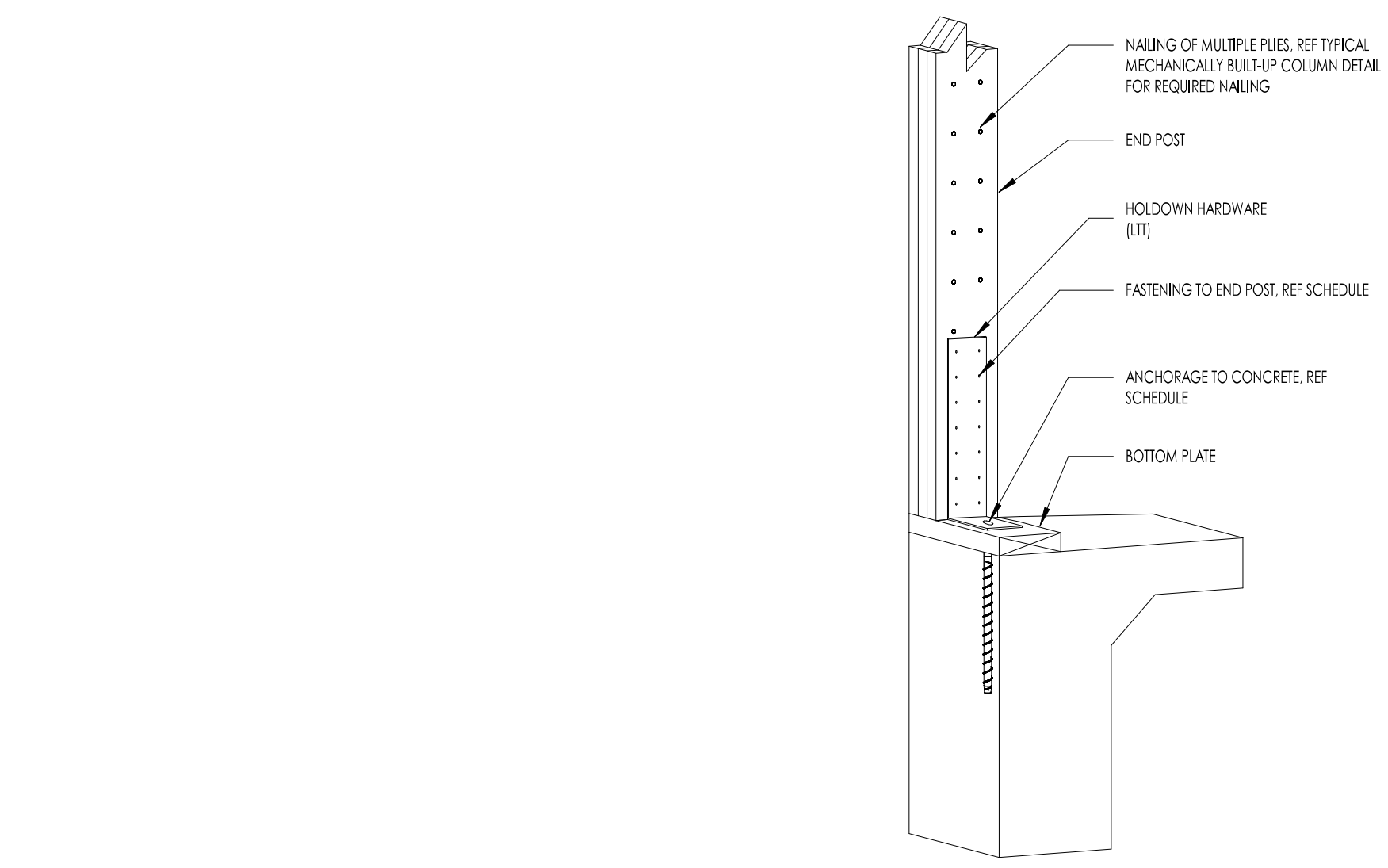
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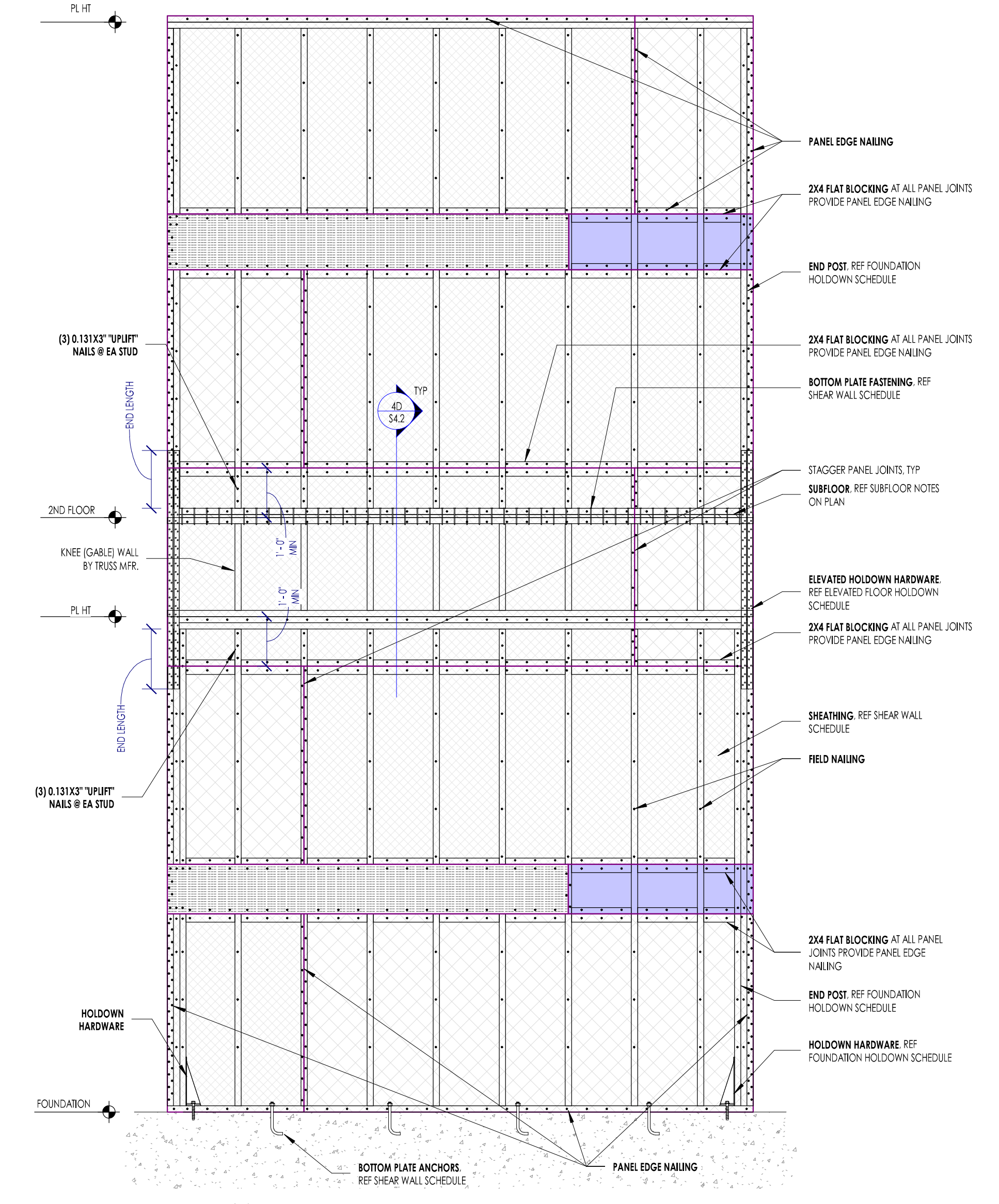
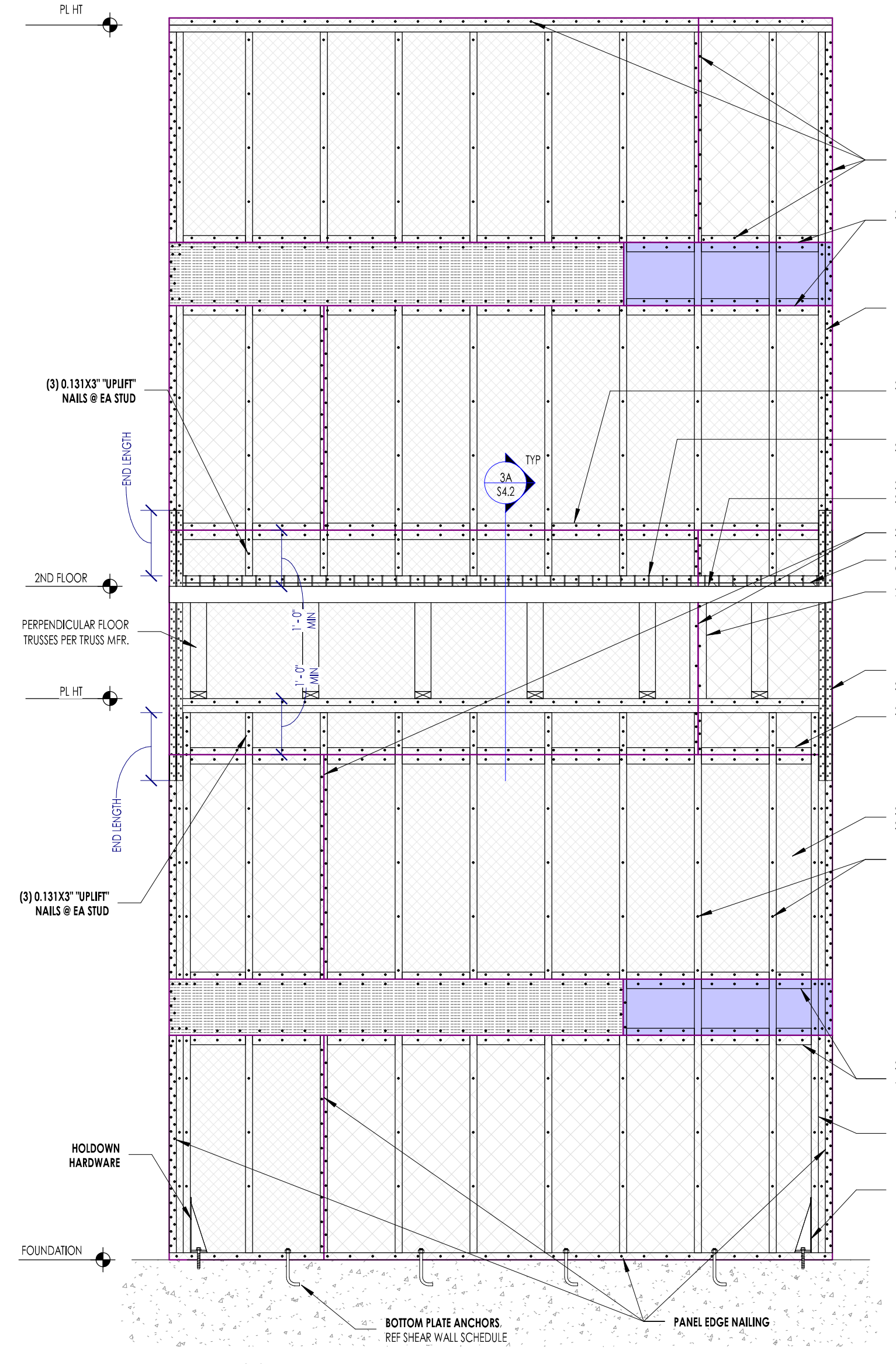
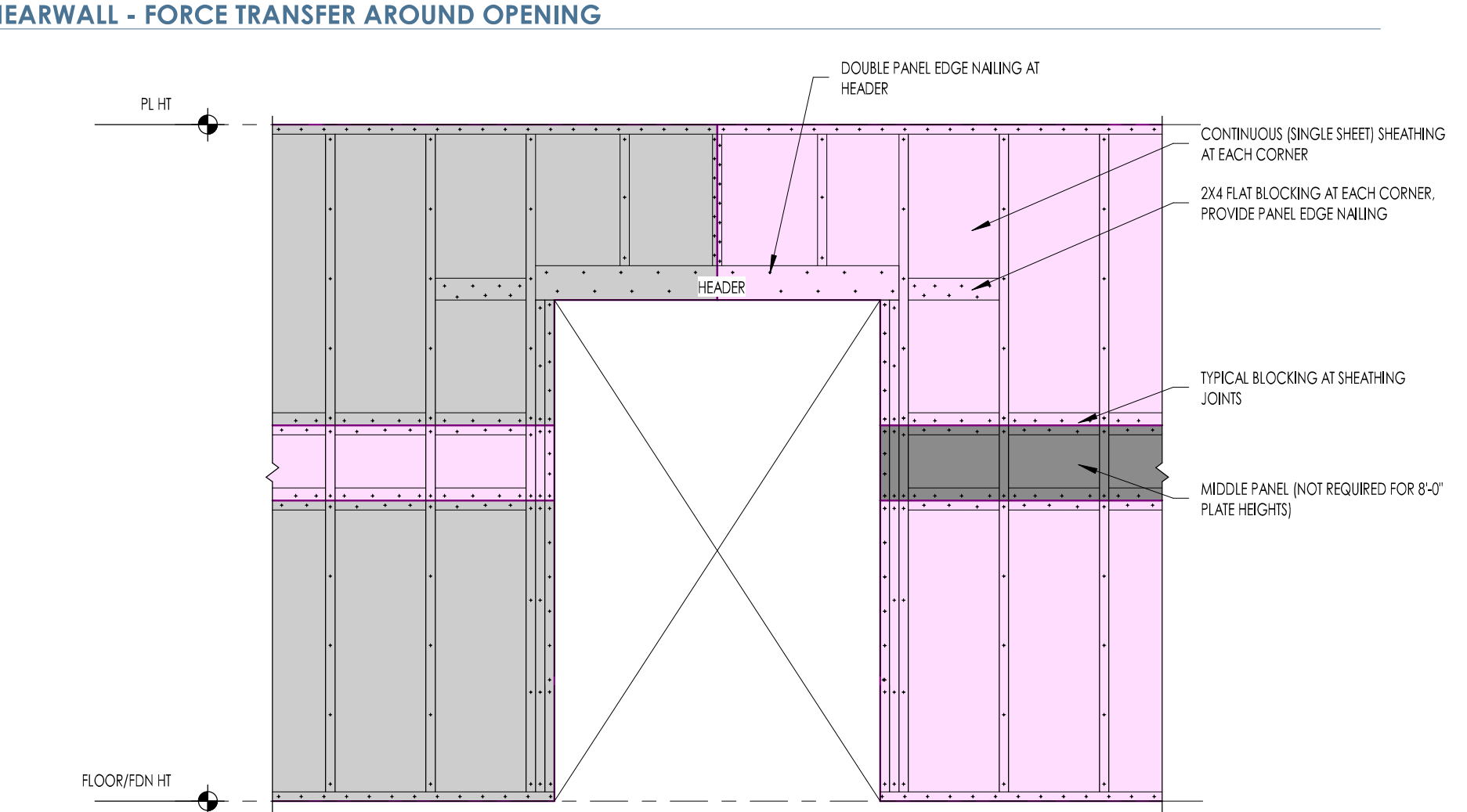
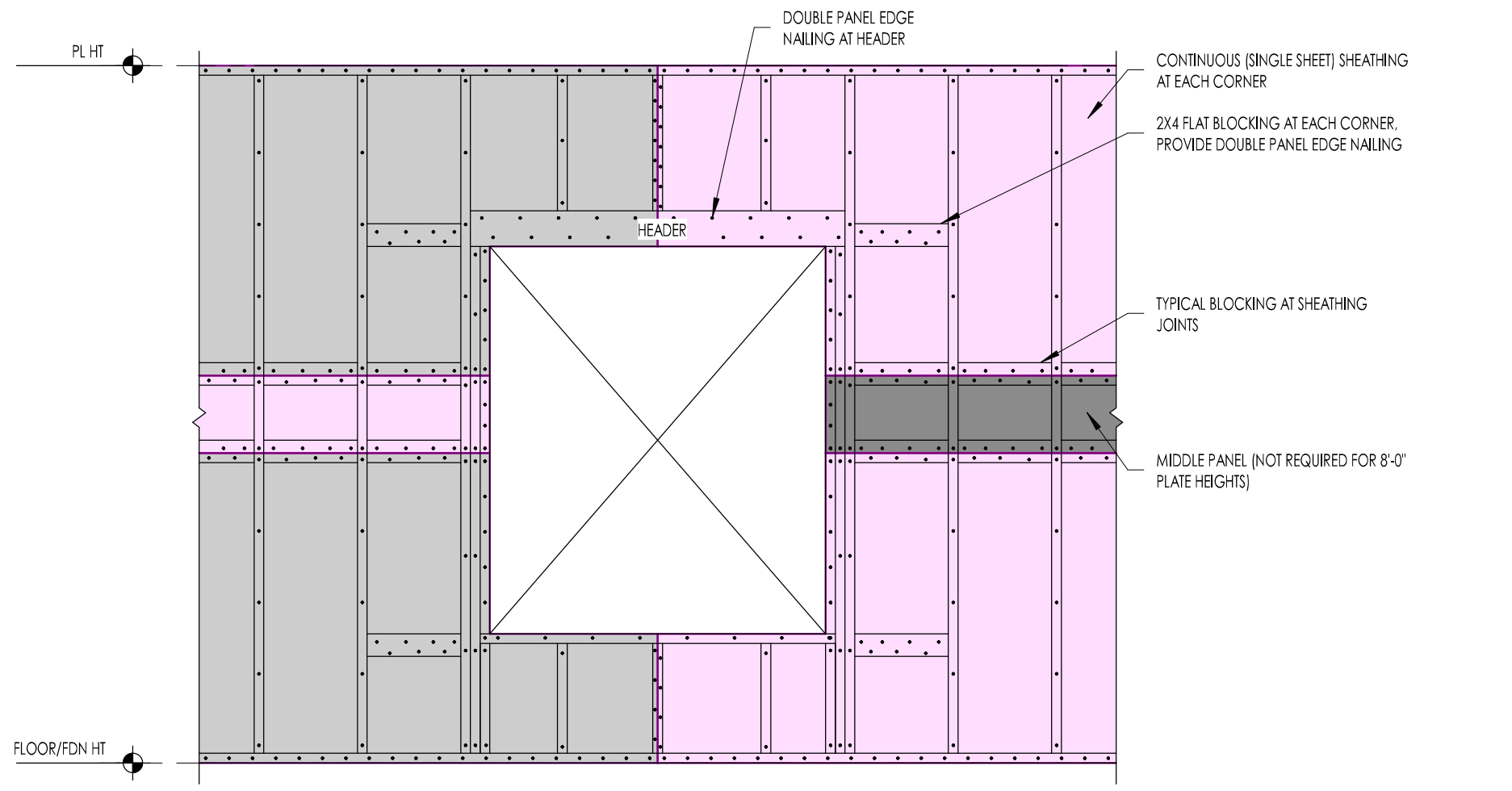
Date	Description
06/02/2022	Review before Permit
07/22/2022	PERMIT REVISIONS

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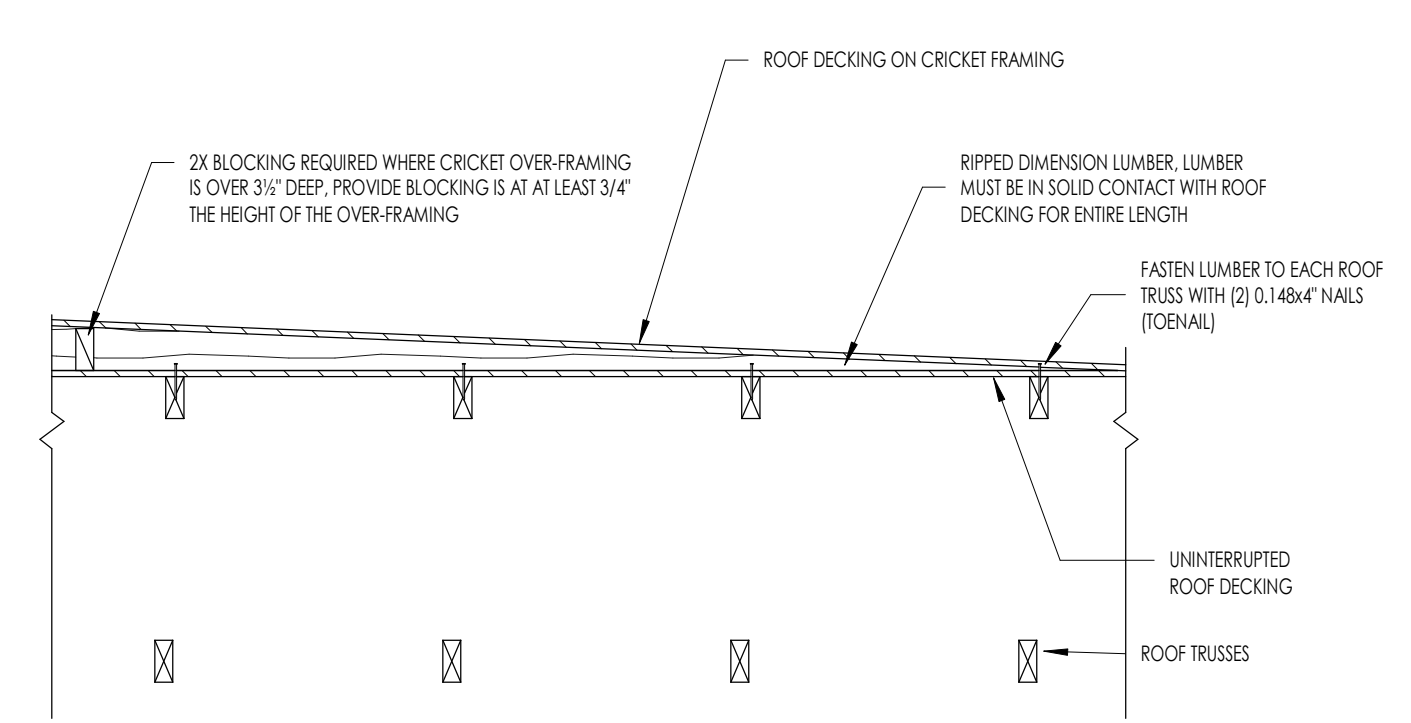


6C SHEAR WALL - END POST CONFIGURATIONS

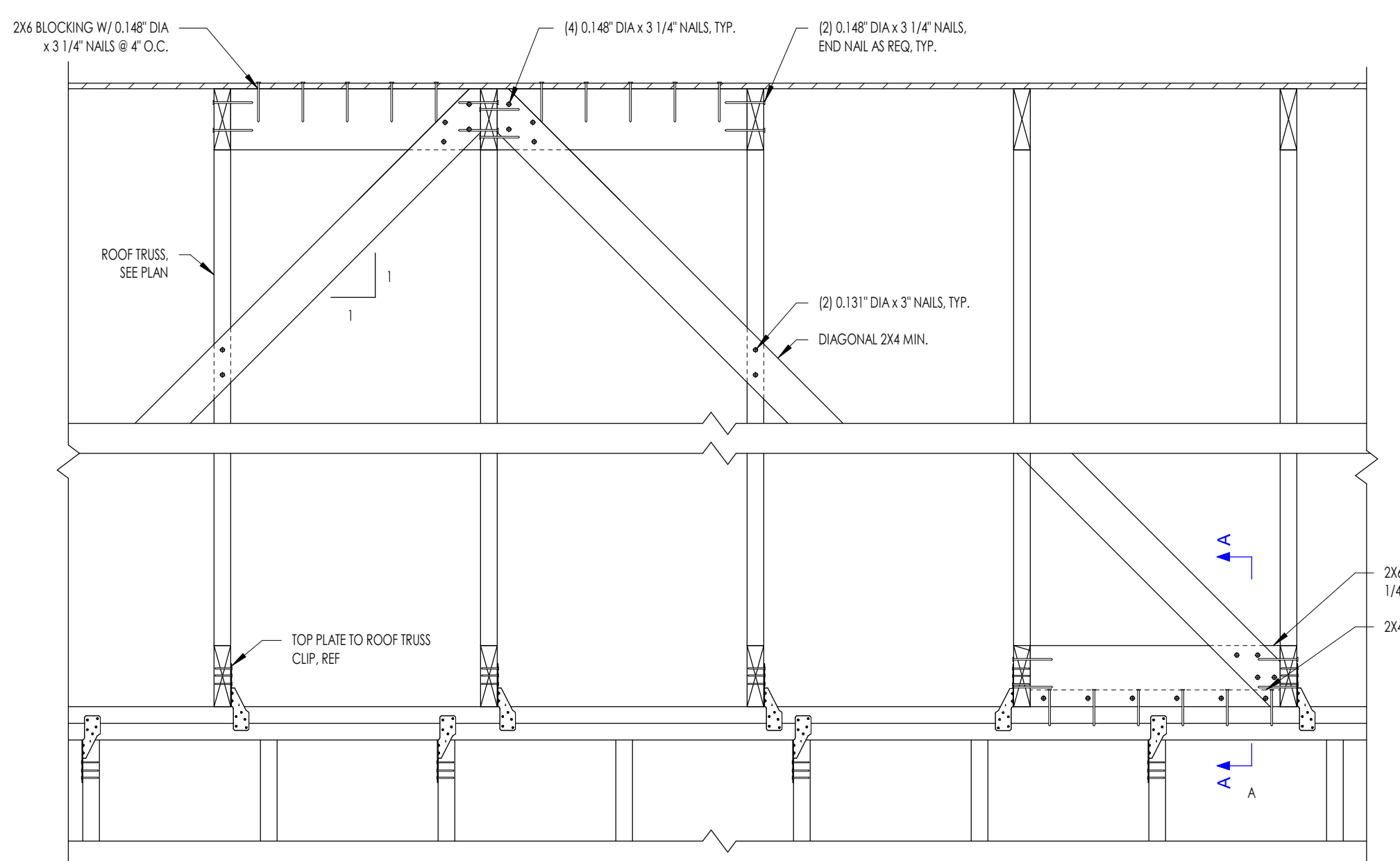


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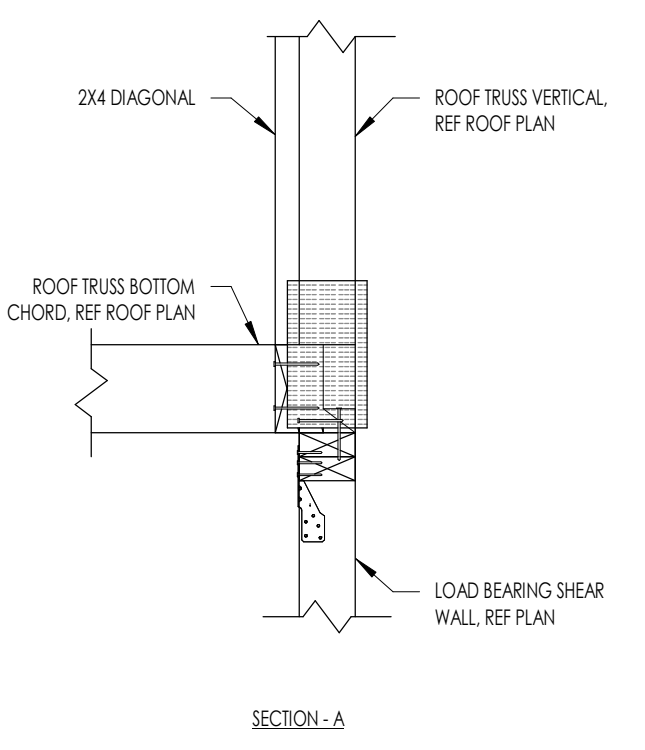
Date	Description
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07/22/2022	PERMIT REVISIONS



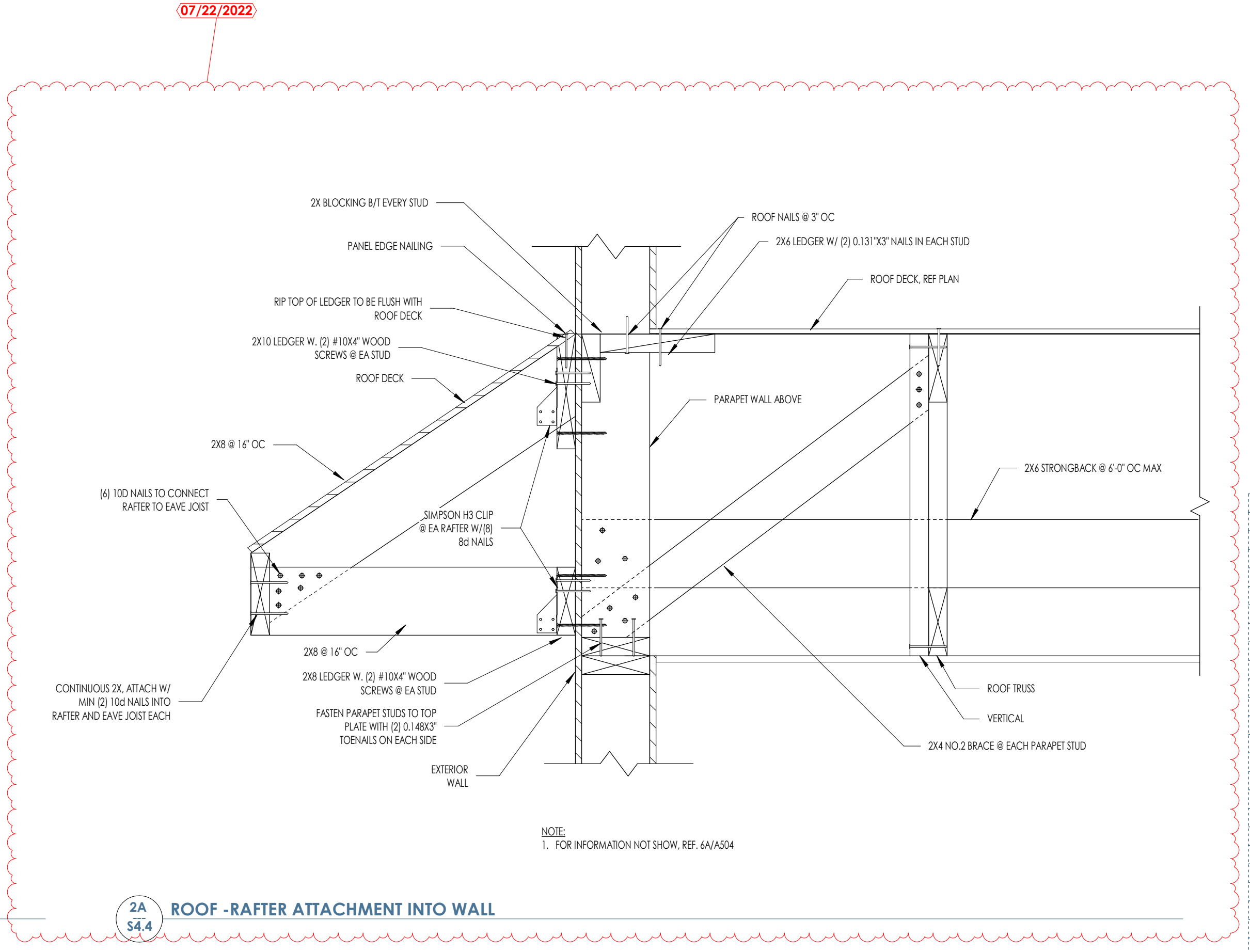
6A S4.4 TYPICAL CRICKET FRAMING AT ROOF



5A S4.4 061760 ROOF - BRACING AT INTERIOR SHEAR WALL



2A S4.4 ROOF - RAFTER ATTACHMENT INTO WALL



TYPICAL WOOD ROOF TRUSS DETAILS

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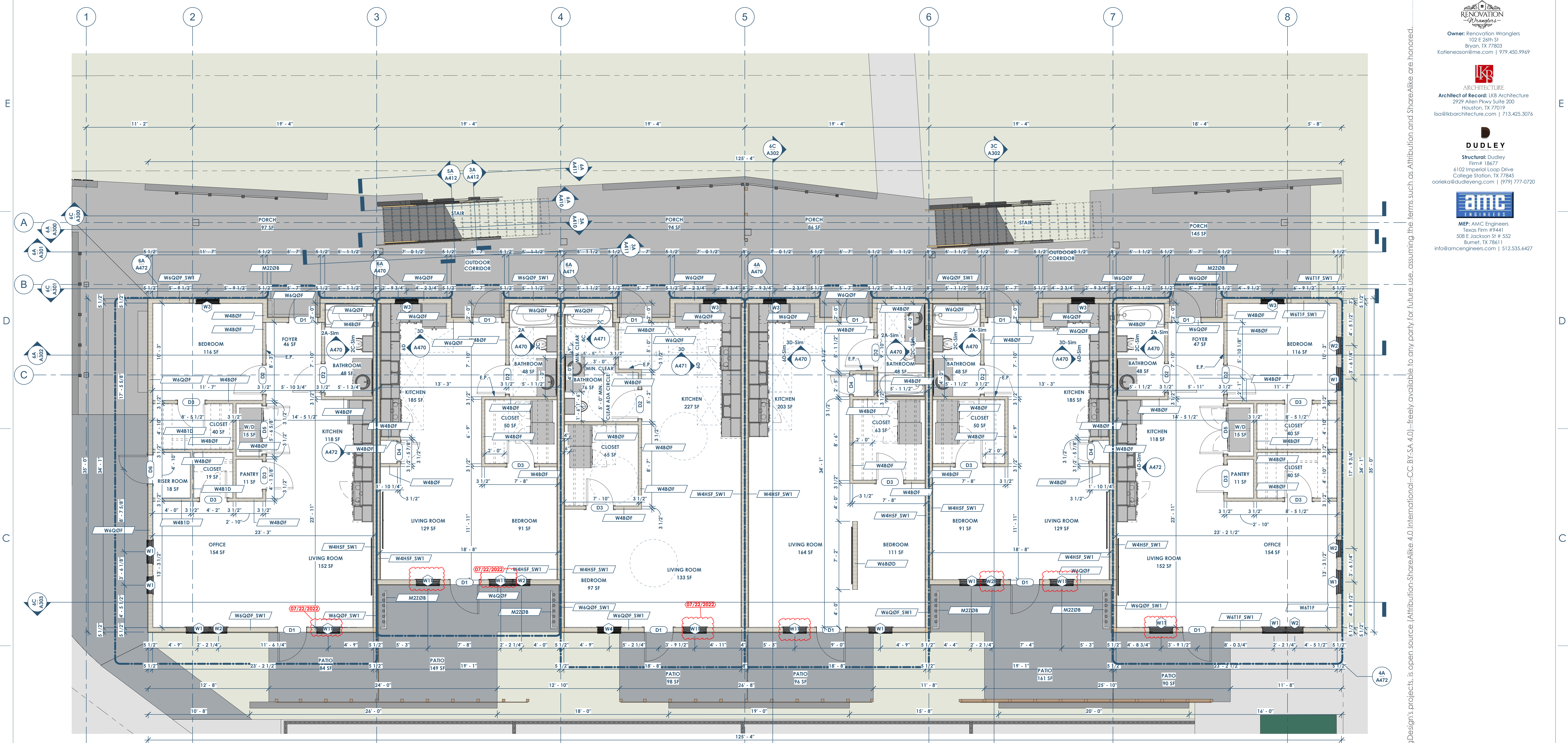
LKB ARCHITECTURE
 Architect of Record: LKB Architecture
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 isa@lkbarchitecture.com | 713.425.3076

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 Structural: Dudley
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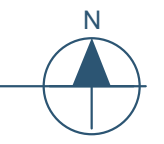
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Date	Description
06/02/2022	Review before Permit
07/22/2022	PERMIT REVISIONS



68
A101 FLOOR PLAN - 1ST FLOOR
1/4" = 1'-0"



- FLOOR PLAN NOTES
- SEE A800 FOR PARTITION TYPES
 - SEE A600 FOR DOOR AND WINDOW TYPES
 - REFERENCE A751 FOR ACCESSIBILITY COMPLIANCE REQUIREMENTS
 - ALL FINISHES TO BE PROVIDED BY OWNER
 - MILLWORK AND APPLIANCES TO BE PROVIDED BY OWNER

Date	Description
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07/22/2022	Permit Revisions

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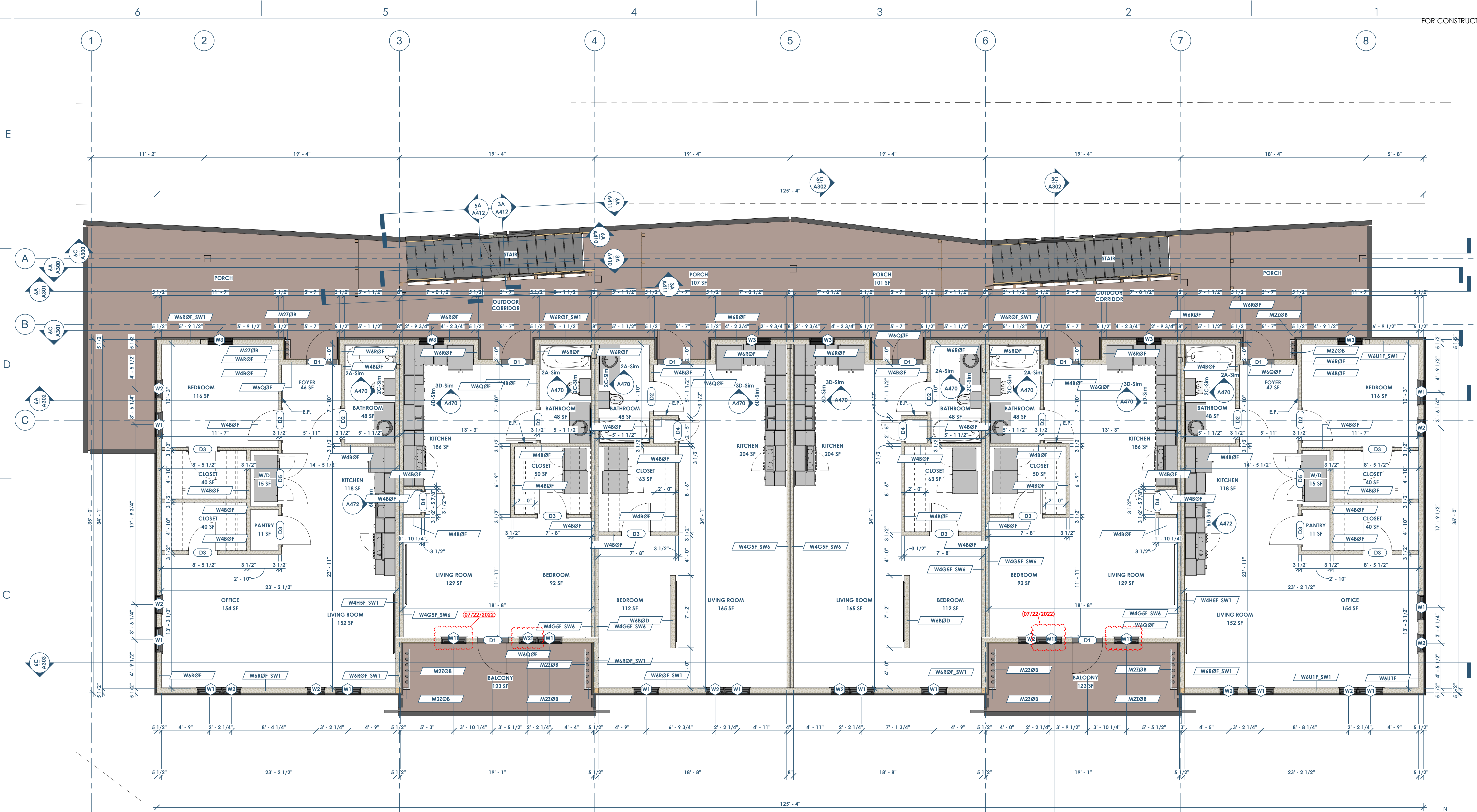
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Renovation Wranglers
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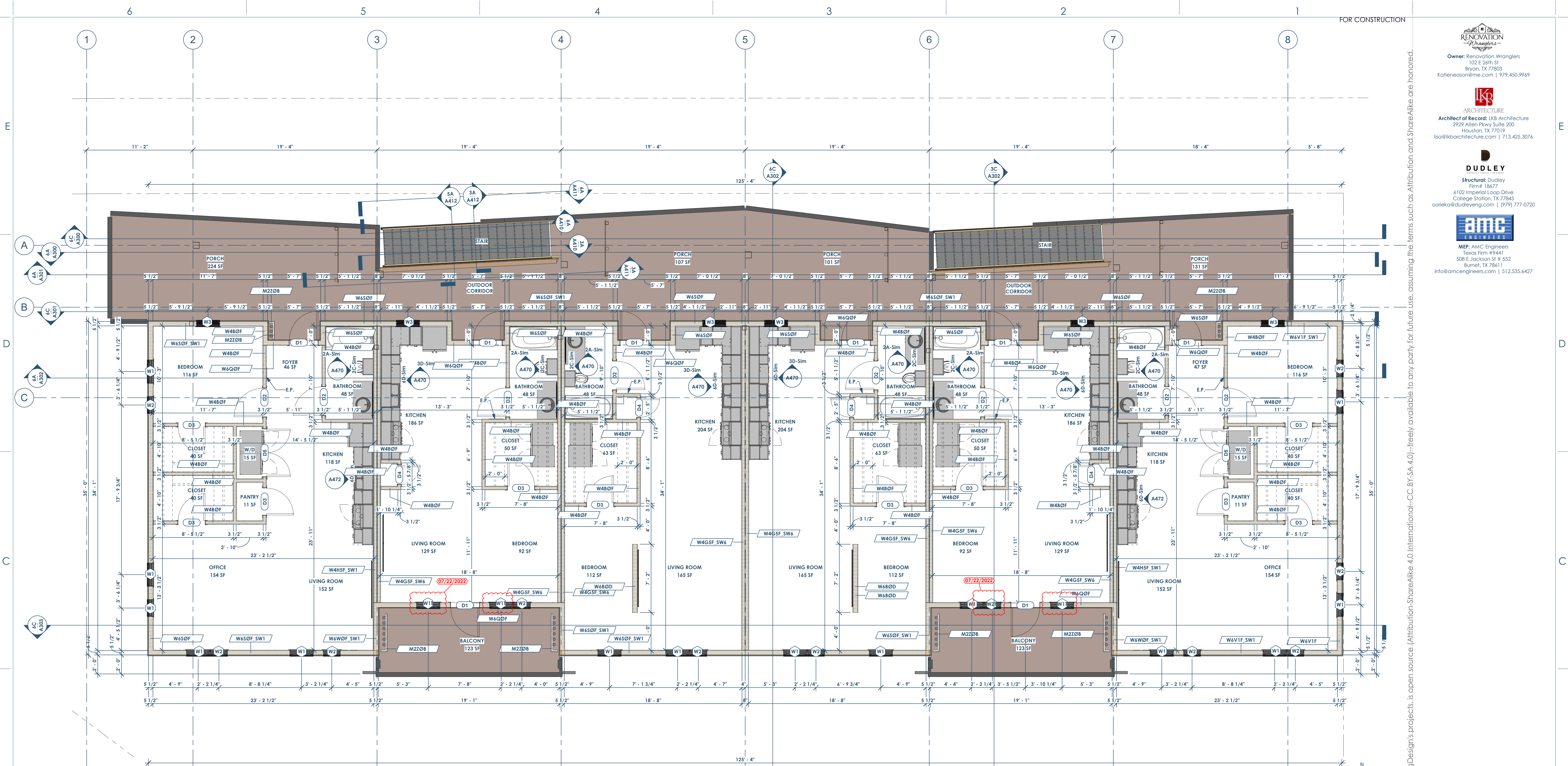
68 A102 FLOOR PLAN - 2ND FLOOR
1/4" = 1'-0"

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- FLOOR PLAN NOTES
- SEE A800 FOR PARTITION TYPES
 - SEE A600 FOR DOOR AND WINDOW TYPES
 - REFERENCE A751 FOR ACCESSIBILITY COMPLIANCE REQUIREMENTS
 - ALL FINISHES TO BE PROVIDED BY OWNER
 - MILLWORK AND APPLIANCES TO BE PROVIDED BY OWNER

Date	Description
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68 A103 FLOOR PLAN - 3RD FLOOR
1/4" = 1'-0"

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- FLOOR PLAN NOTES
- SEE A600 FOR PARTITION TYPES
 - SEE A600 FOR DOOR AND WINDOW TYPES
 - REFERENCE A751 FOR ACCESSIBILITY COMPLIANCE REQUIREMENTS
 - ALL FINISHES TO BE PROVIDED BY OWNER
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LKB
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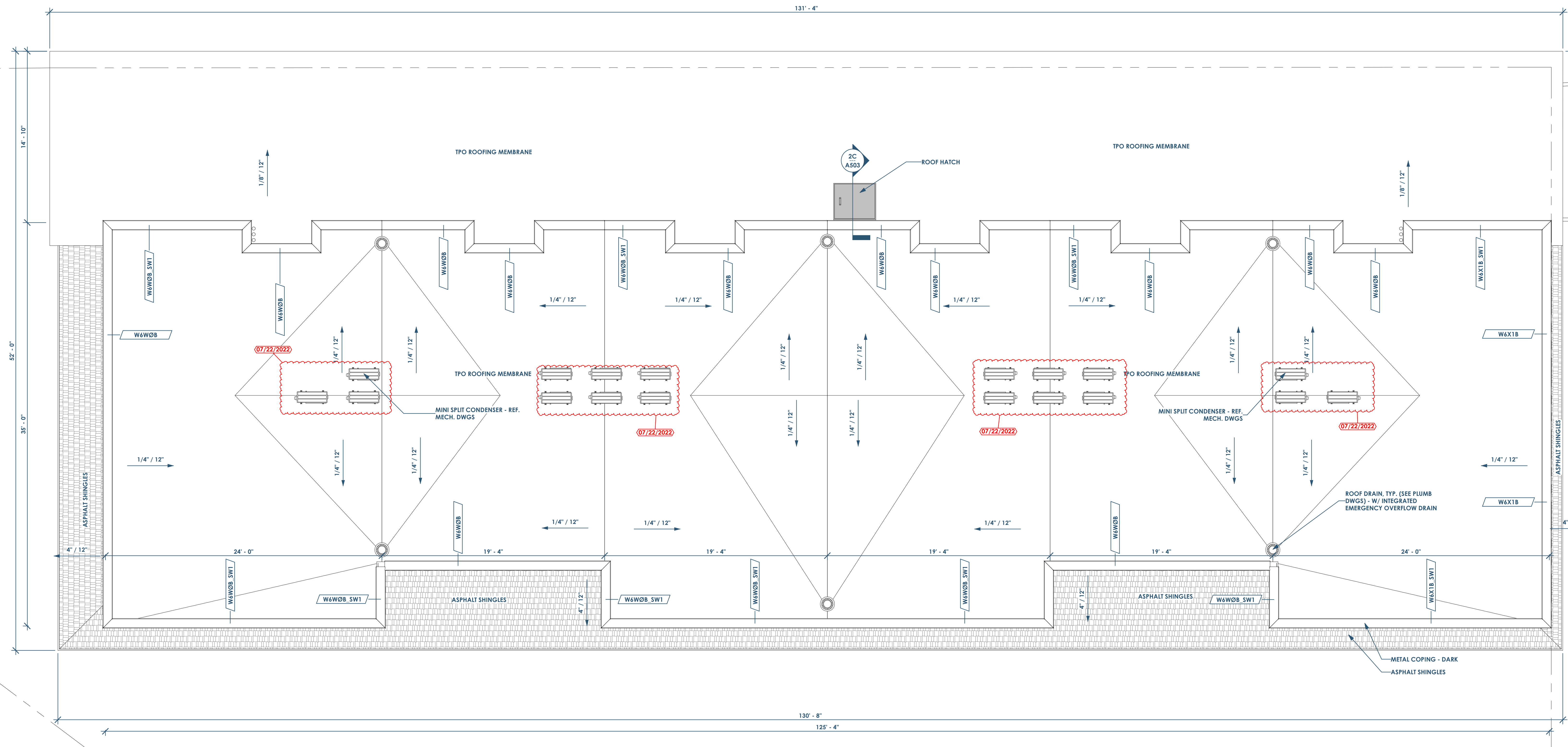
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68 A104 FLOOR PLAN - ROOF 1/4" = 1'-0"

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RENOVATION
Wranglers

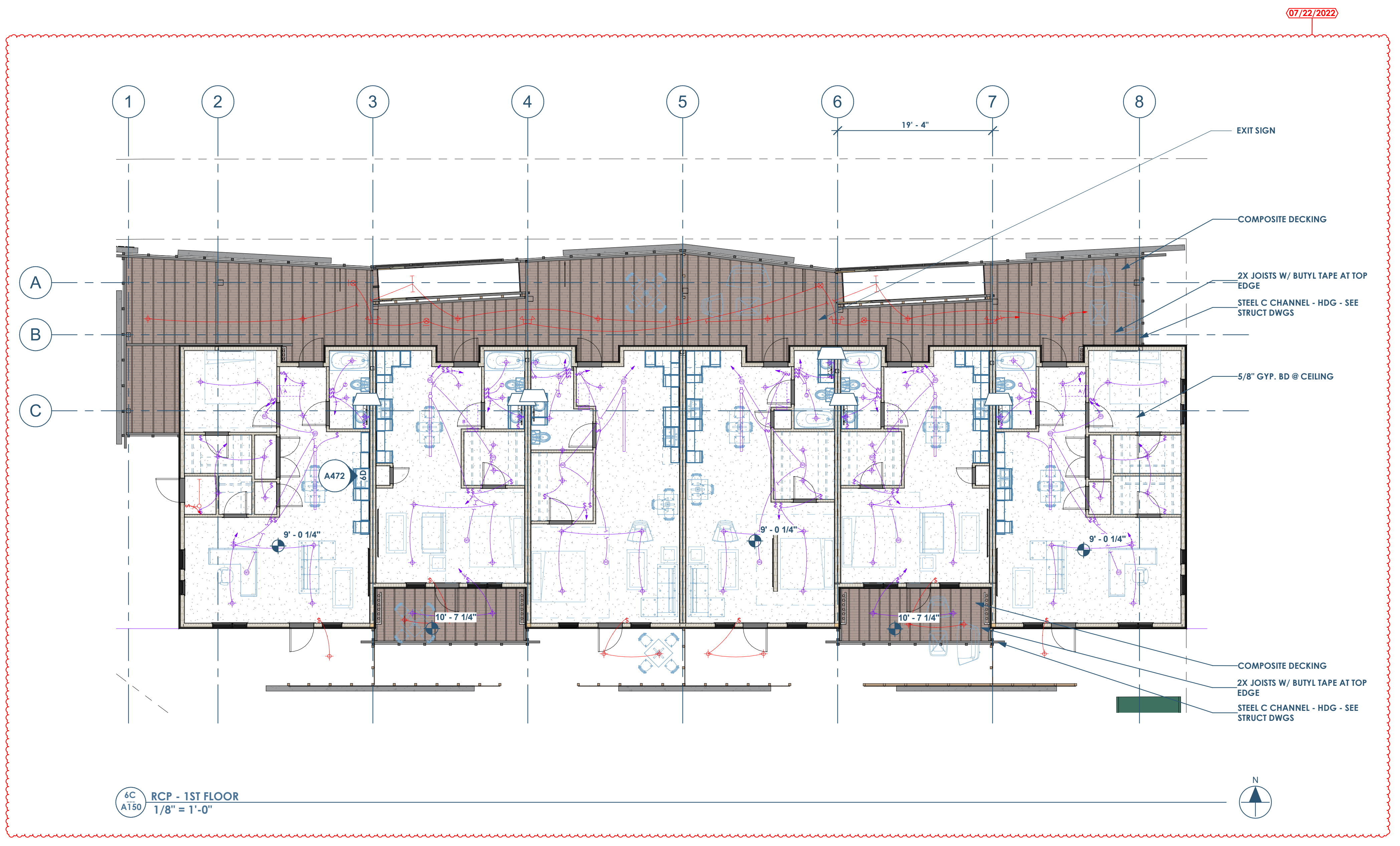
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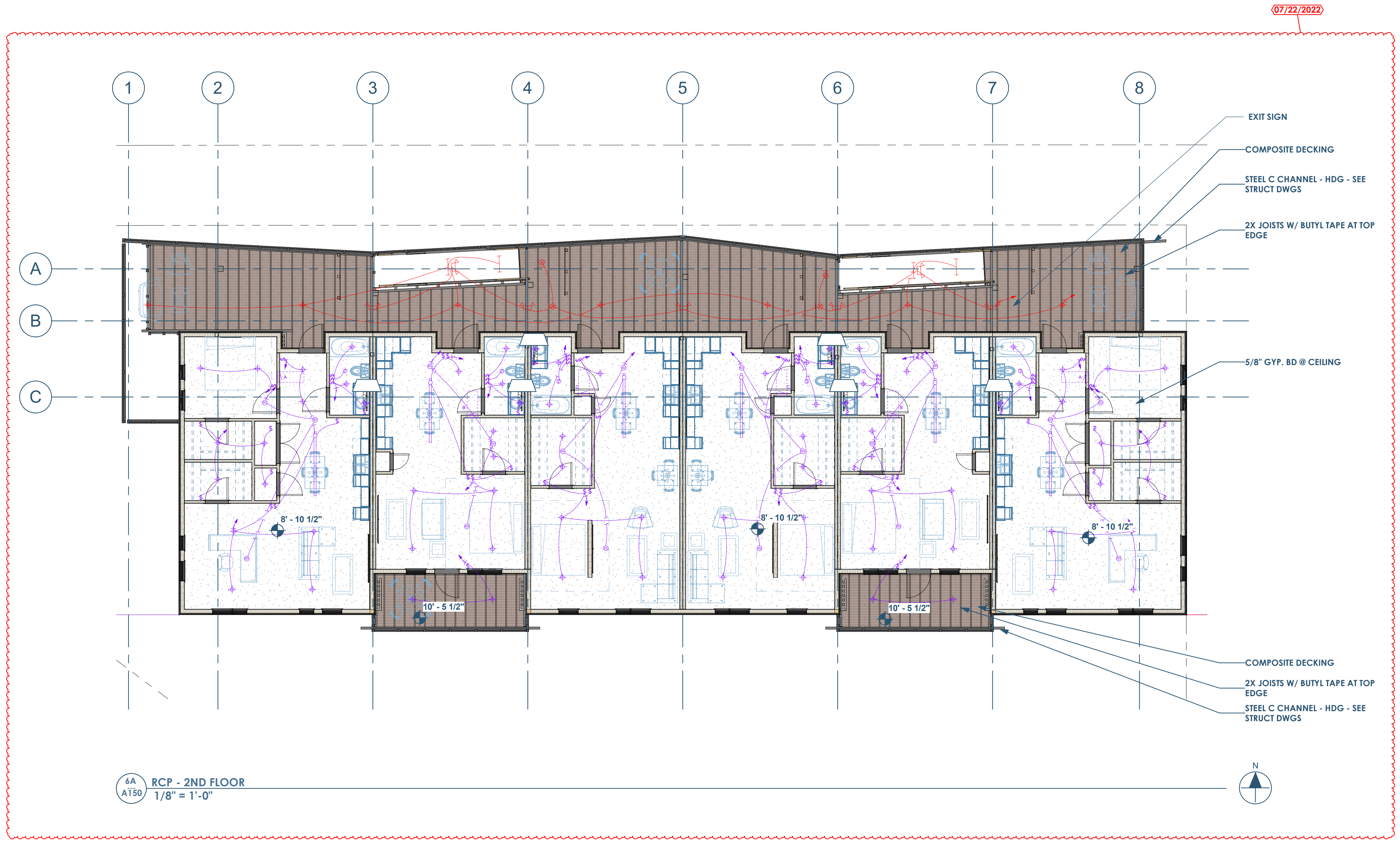
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4C RCP - 1ST FLOOR
1/8" = 1'-0"



4A RCP - 2ND FLOOR
1/8" = 1'-0"

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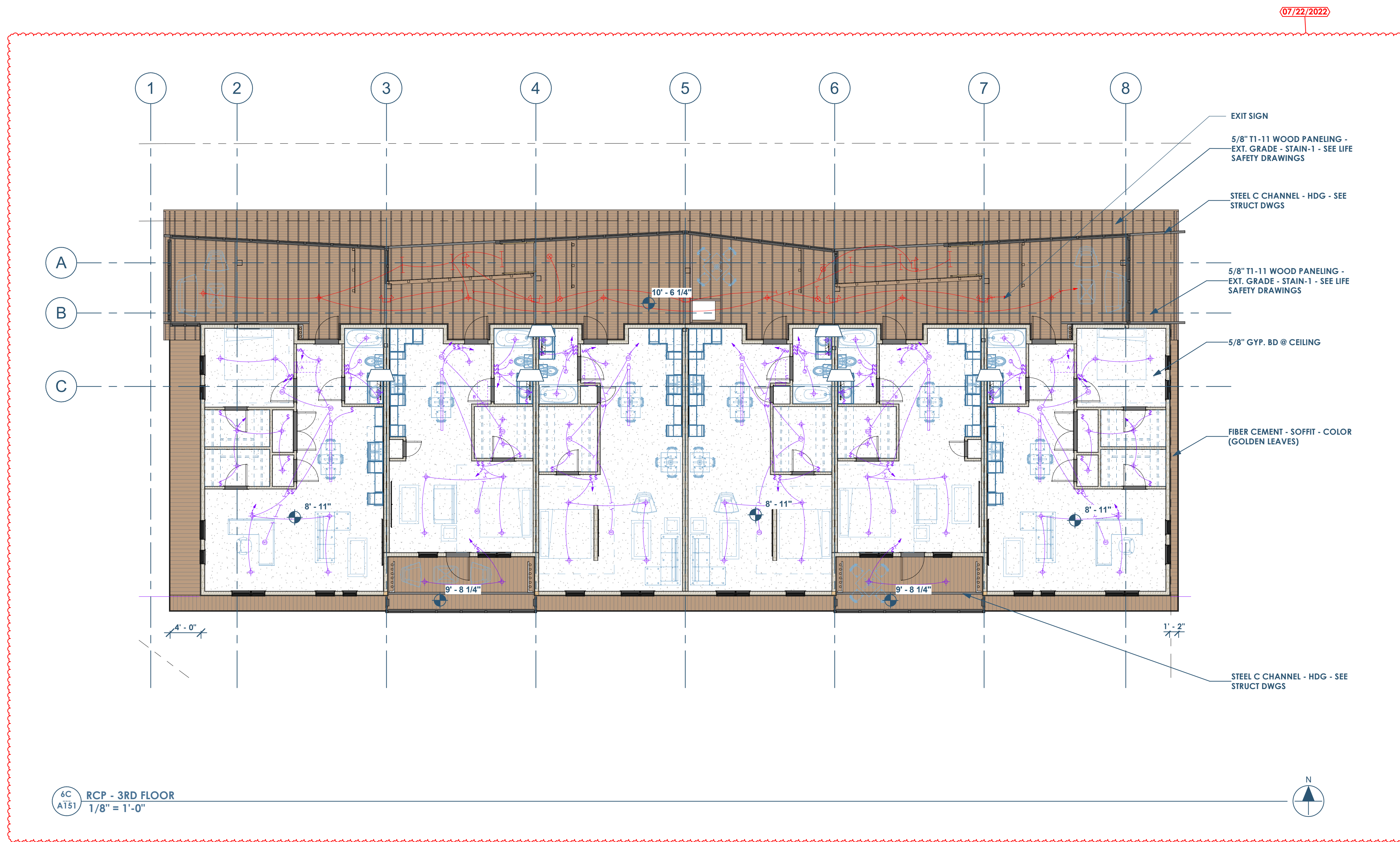
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RCP - 3RD FLOOR
1/8" = 1'-0"

07/22/2022

GENERAL NOTES - REFLECTED CEILING PLAN
• SEE E120 - E122 FOR LIGHTING PLAN DETAILS

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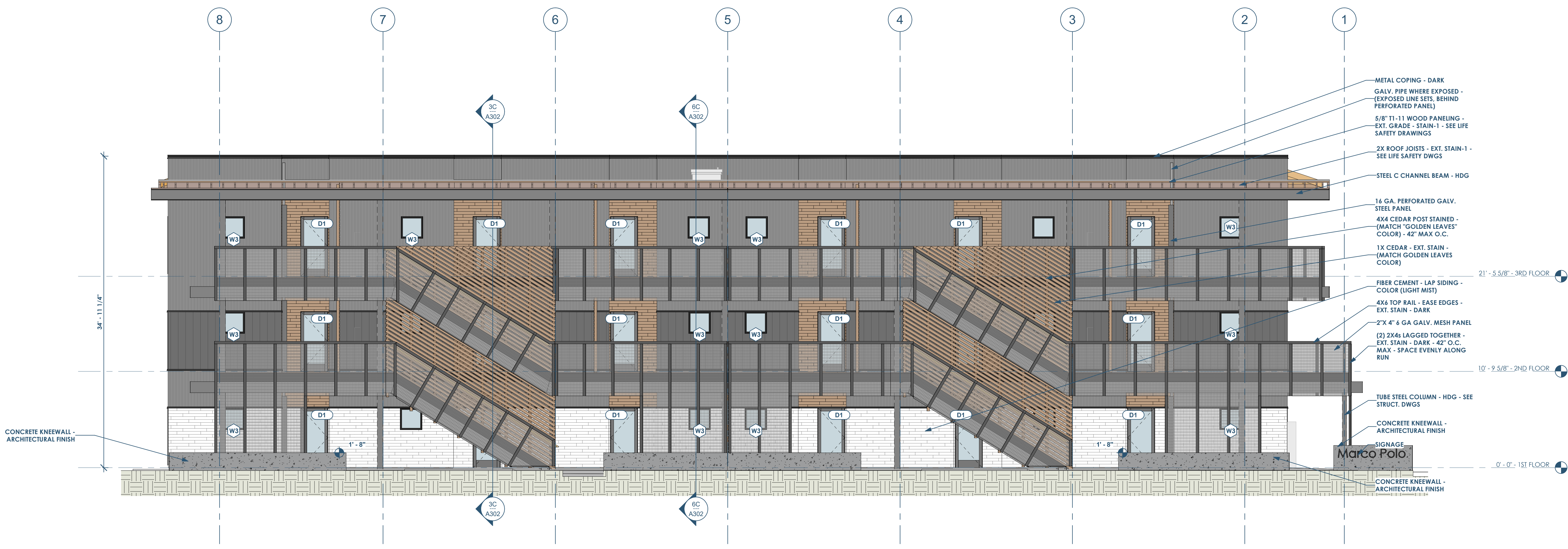
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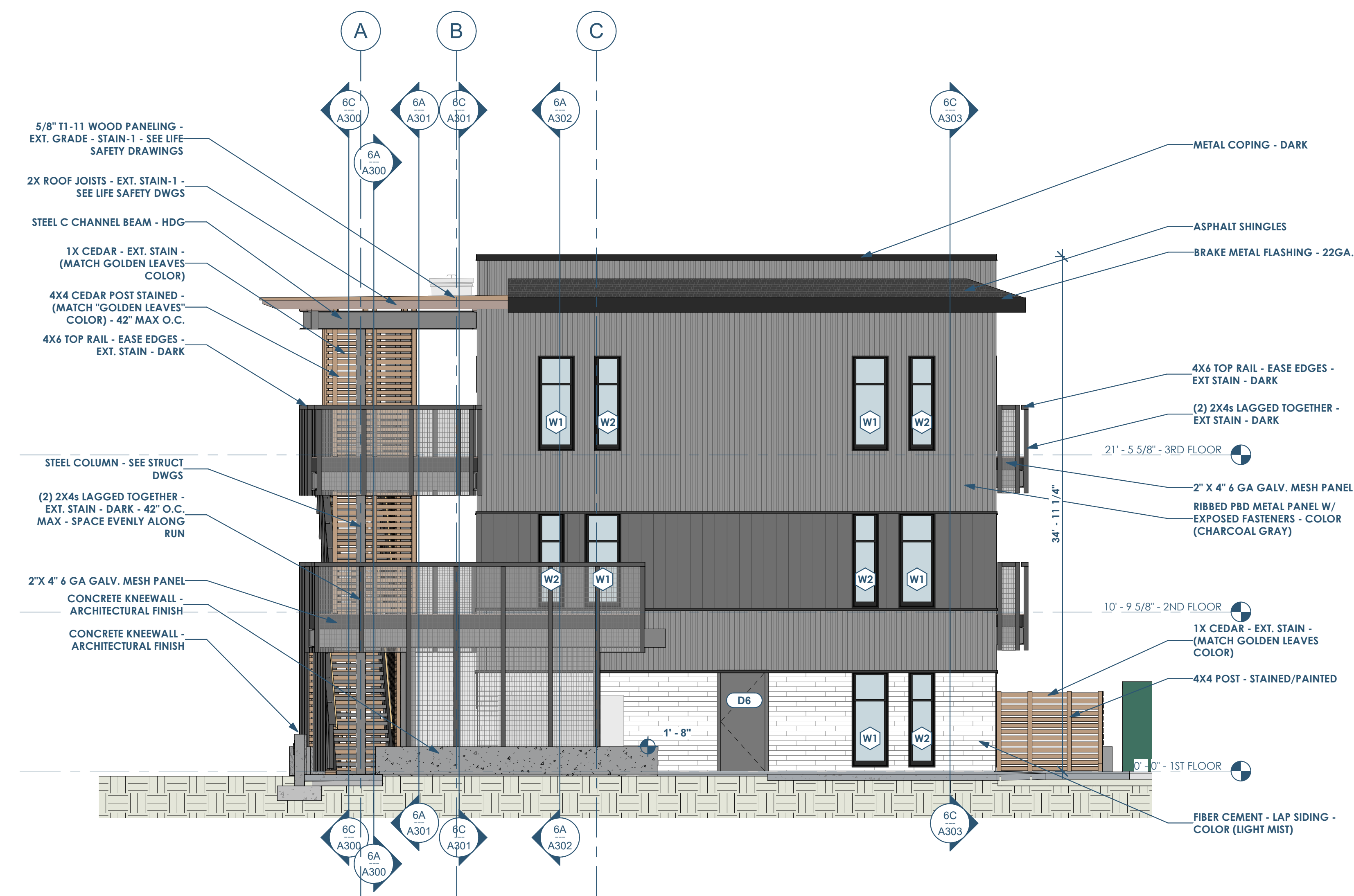
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4C
A200 BUILDING ELEVATION - NORTH
3/16" = 1'-0"

SIMPLIFIED WINDOW SCHEDULE					
TYPE MARK	TYPE	COUNT	WIDTH	HEIGHT	TYPE COMMENTS
W1	SINGLE HUNG - TYPE 2	33	2' - 5 5/8"	4' - 4 7/8"	
W1T	SINGLE HUNG - TYPE 2 - TEMPERED	13	2' - 5 5/8"	6' - 4 7/8"	TEMPERED GLAZING
W2	SINGLE HUNG - TYPE 1	28	2' - 5 5/8"	4' - 4 7/8"	
W2T	SINGLE HUNG - TYPE 1 - TEMPERED	3	1' - 5 5/8"	6' - 4 7/8"	TEMPERED GLAZING
W3	FIXED PICTURE - TYPE 1	18	2' - 5 1/2"	2' - 5 1/2"	
W4	CASEMENT - TYPE 1	1	2' - 5 5/8"	4' - 7"	ADA REACH REQUIREMENTS FOR TYPE A UNITS
W5	FIXED PICTURE - TYPE 2	1	2' - 5 5/8"	1' - 10"	

07/22/2022



5A
A200 BUILDING ELEVATION - WEST
3/16" = 1'-0"

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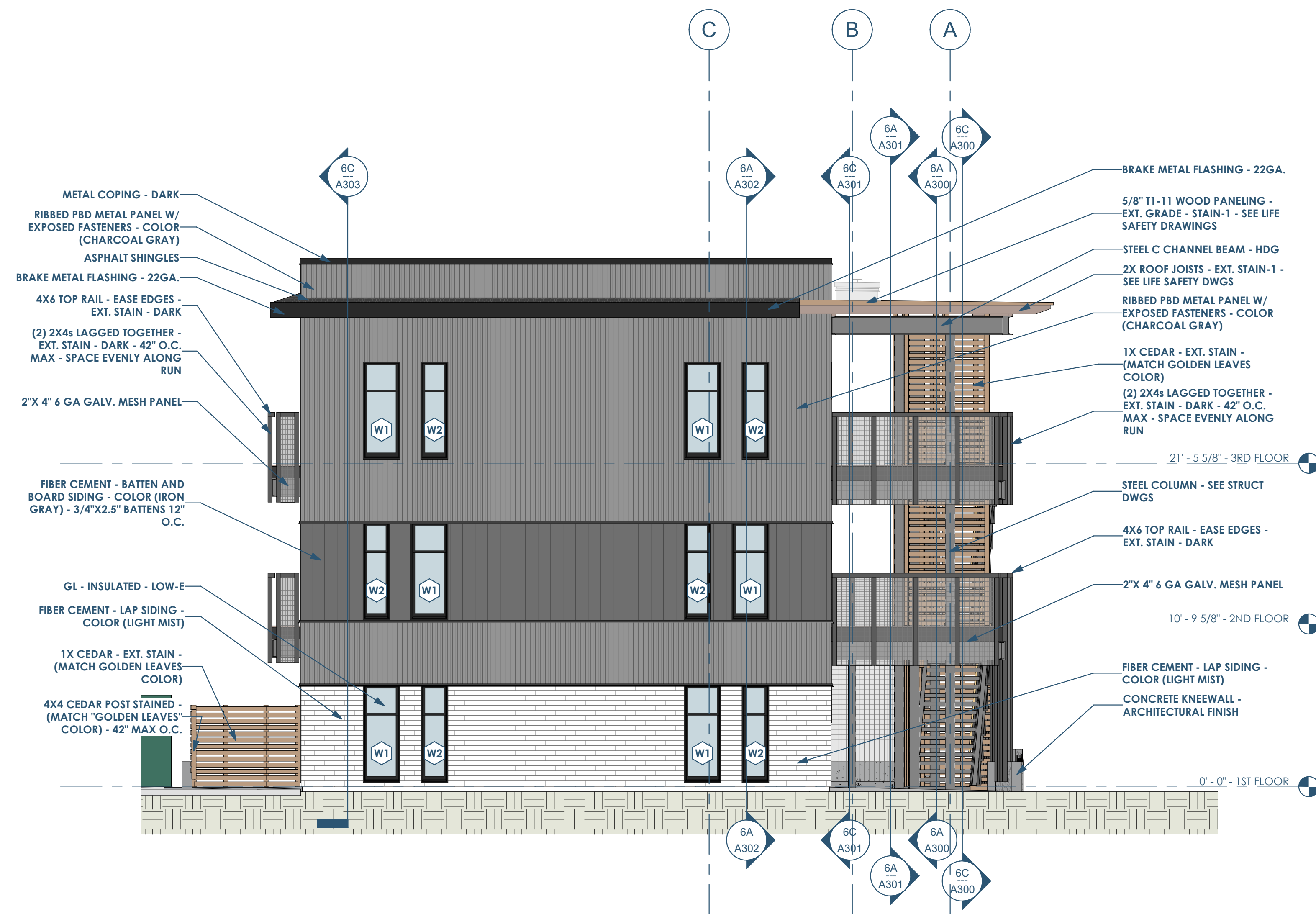
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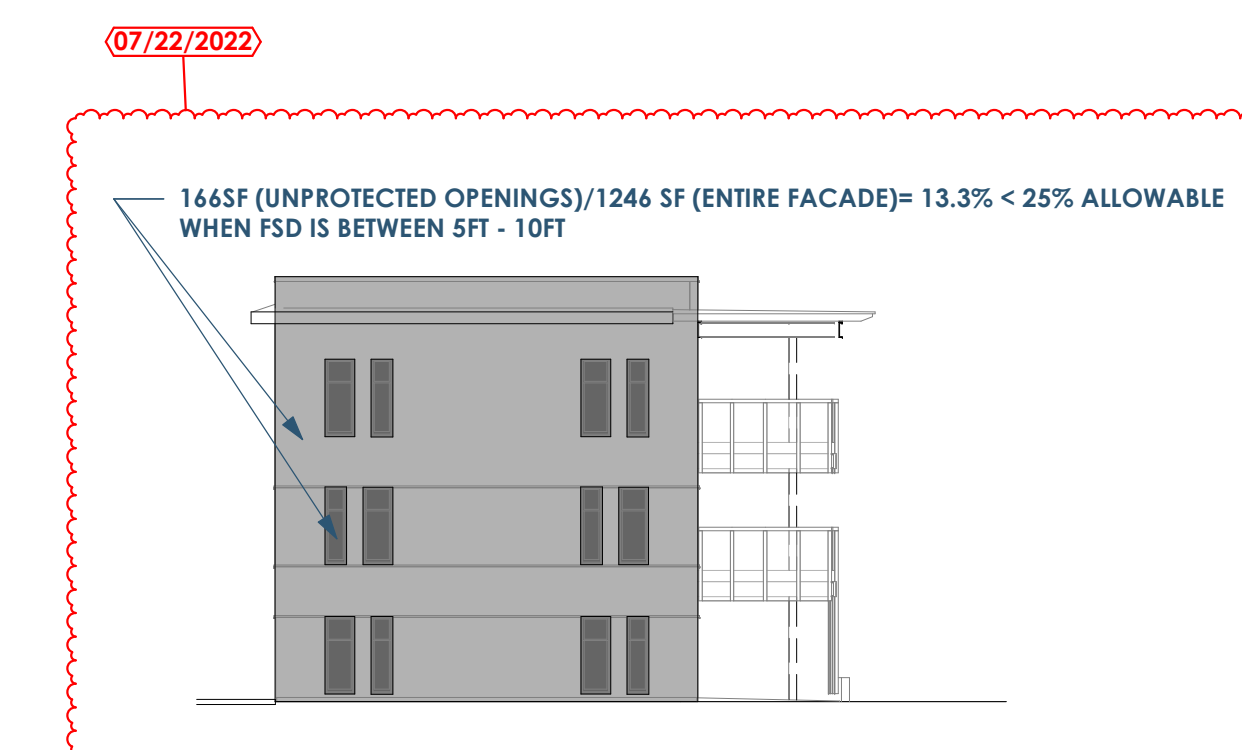


6C A201 BUILDING ELEVATION - SOUTH
3/16" = 1'-0"

SIMPLIFIED WINDOW SCHEDULE					
TYPE MARK	TYPE	COUNT	WIDTH	HEIGHT	TYPE COMMENTS
W1	SINGLE HUNG - TYPE 2	33	2'-5 5/8"	4'-4 7/8"	
W11	SINGLE HUNG - TYPE 2 - TEMPERED	13	2'-5 5/8"	4'-4 7/8"	TEMPERED GLAZING
W2	SINGLE HUNG - TYPE 1	28	1'-9 5/8"	4'-4 7/8"	TEMPERED GLAZING
W21	SINGLE HUNG - TYPE 1 - TEMPERED	3	1'-9 5/8"	4'-4 7/8"	TEMPERED GLAZING
W3	FIXED PICTURE - TYPE 1	18	2'-5 1/2"	2'-5 1/2"	
W4	CASEMENT - TYPE 1	1	2'-5 5/8"	4'-7"	ADA REACH REQUIREMENTS FOR TYPE A UNITS
W5	FIXED PICTURE - TYPE 2	1	2'-5 5/8"	1'-10"	



6A A201 BUILDING ELEVATION - EAST
3/16" = 1'-0"



2B A201 DIAGRAMMATIC ELEVATION - EAST
1/16" = 1'-0"

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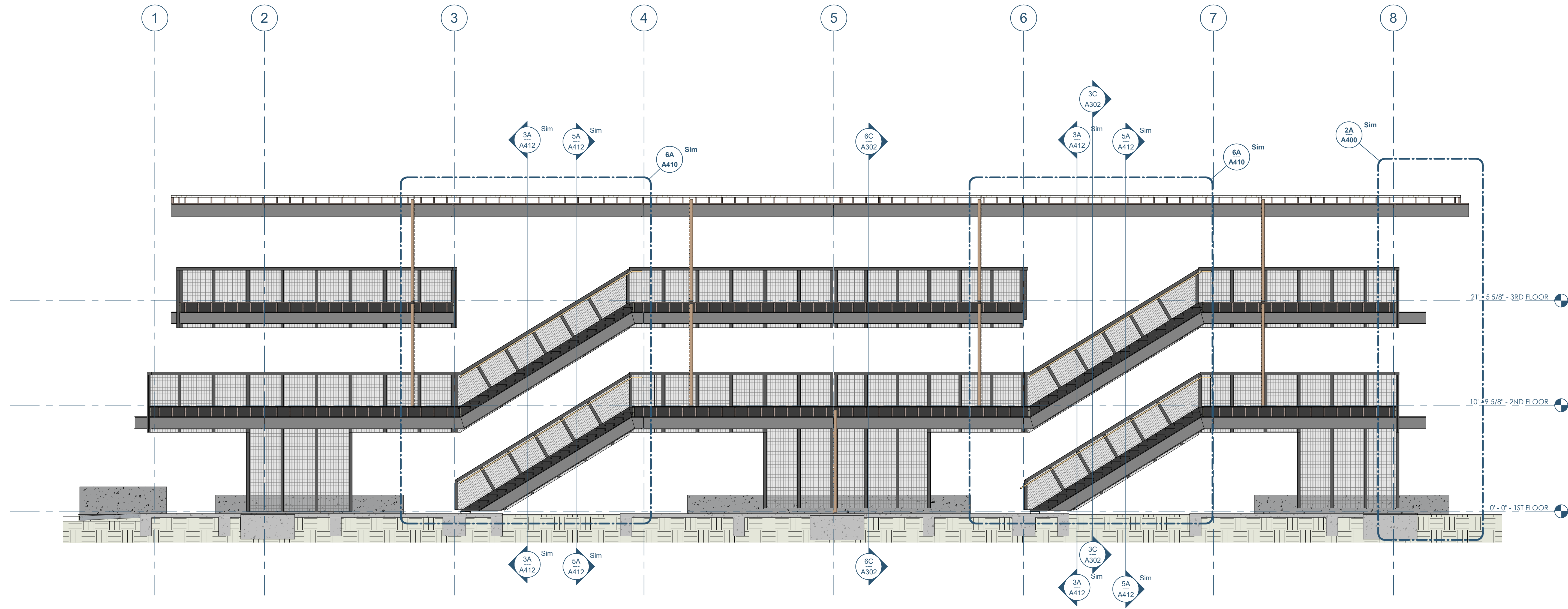
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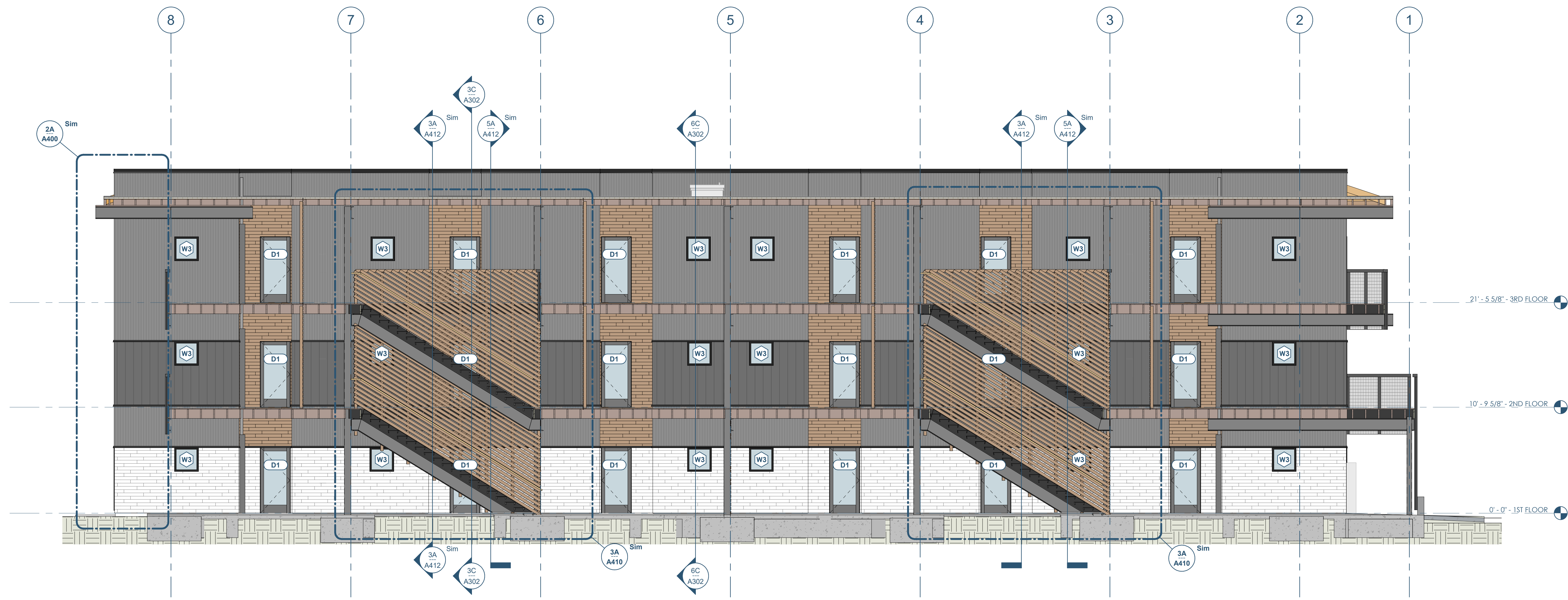
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Date	Description
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6C
A300 BUILDING SECTION - THROUGH STAIRS - LOOKING NORTH
3/16" = 1'-0"



6A
A300 BUILDING SECTION - THROUGH STAIRS - LOOKING SOUTH
3/16" = 1'-0"

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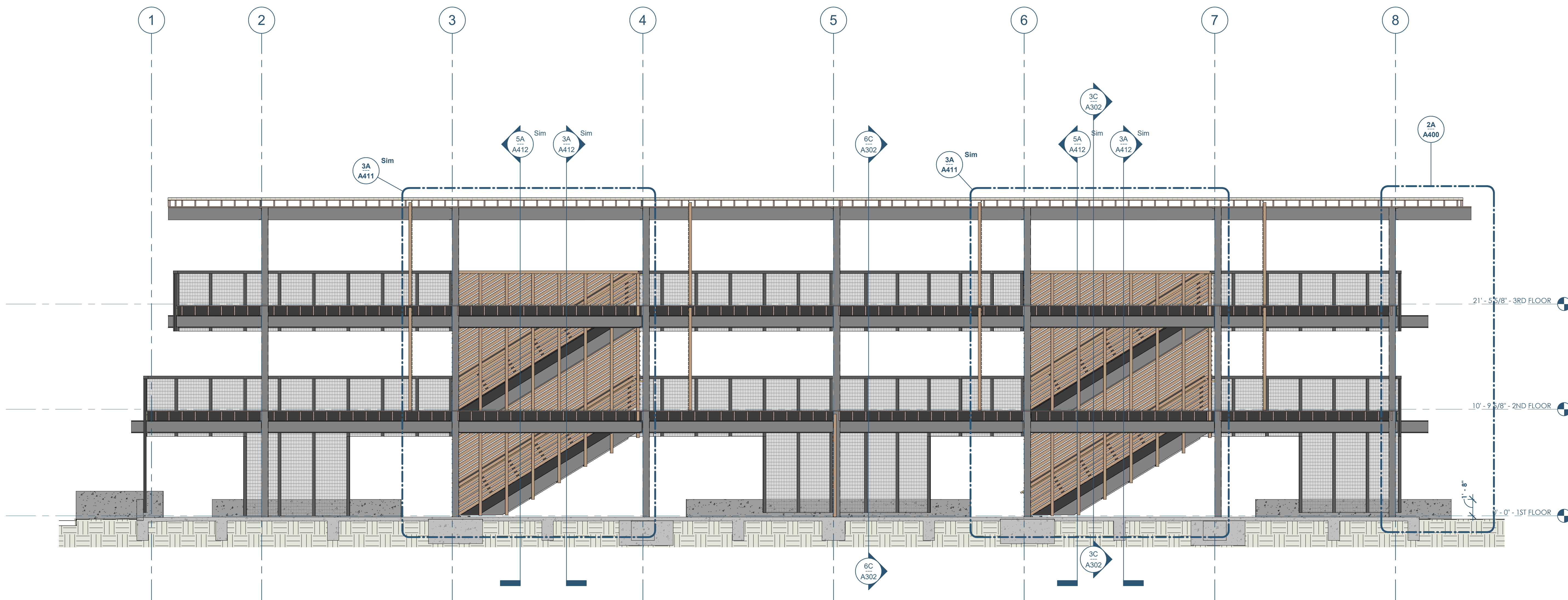
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4C A301 BUILDING SECTION - THRU BALCONY - LOOKING SOUTH
3/16" = 1'-0"



6A A301 BUILDING SECTION - THRU BALCONY - LOOKING NORTH
3/16" = 1'-0"

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Date	Description
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07/22/2022	Permit Revisions

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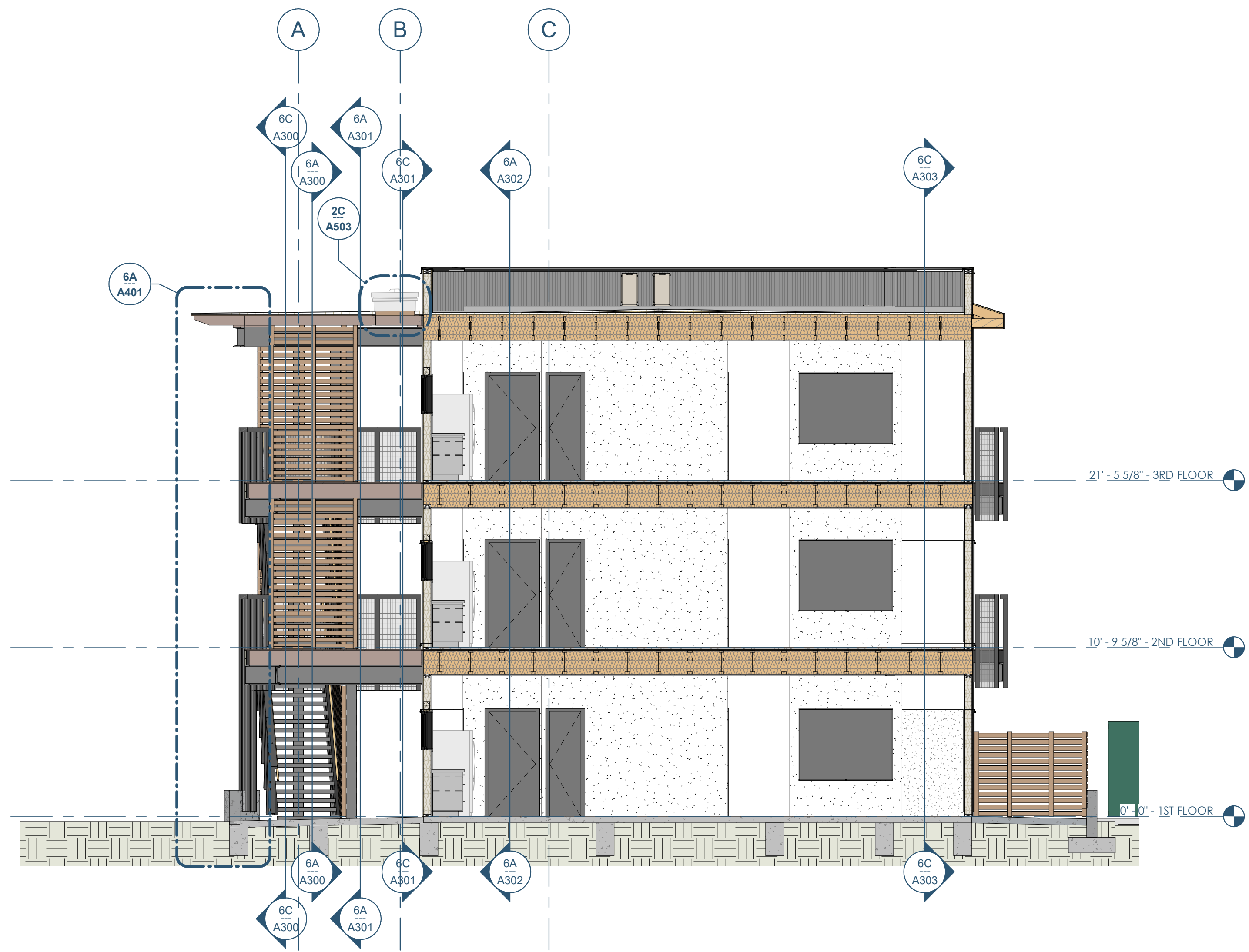
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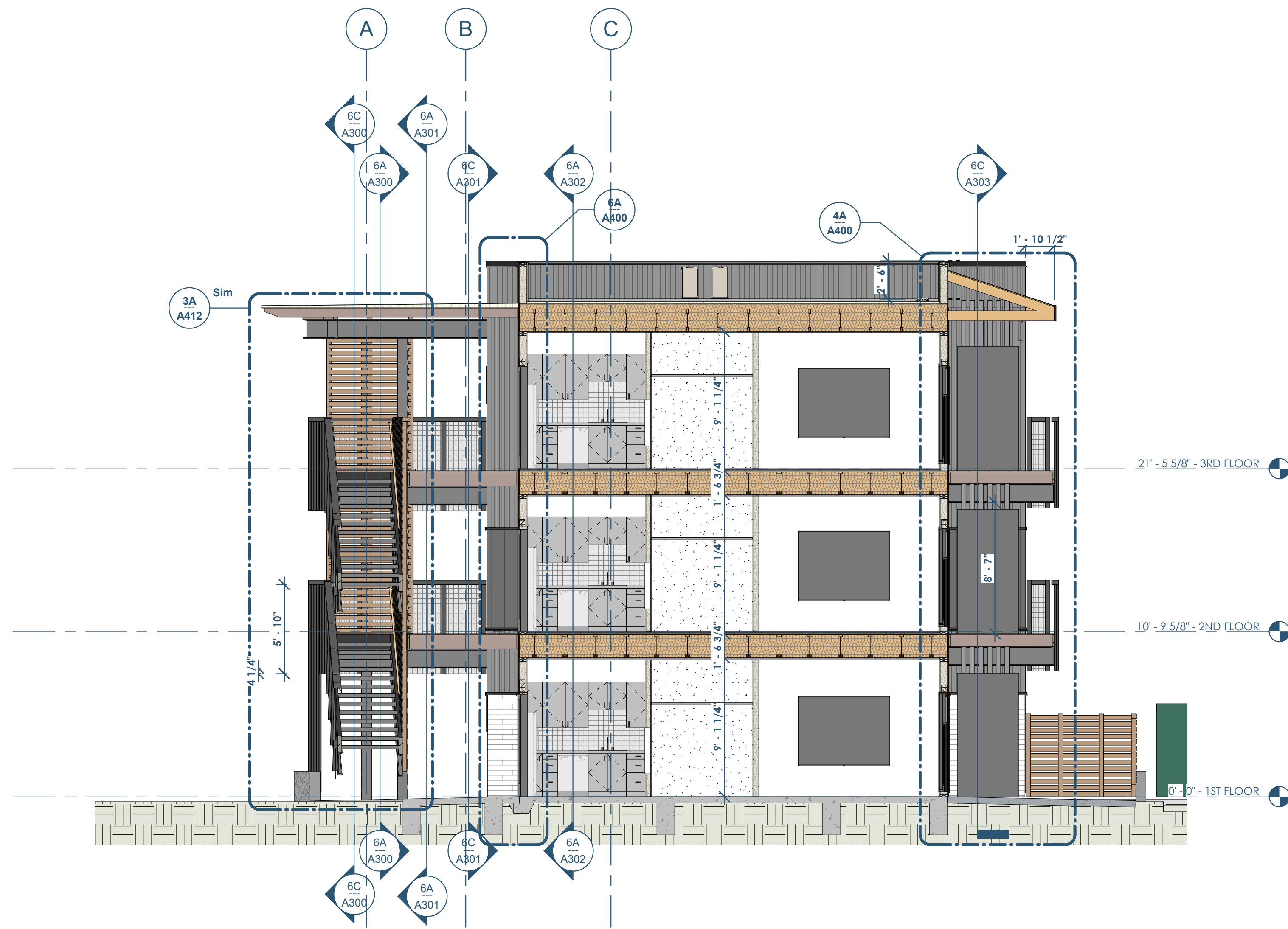
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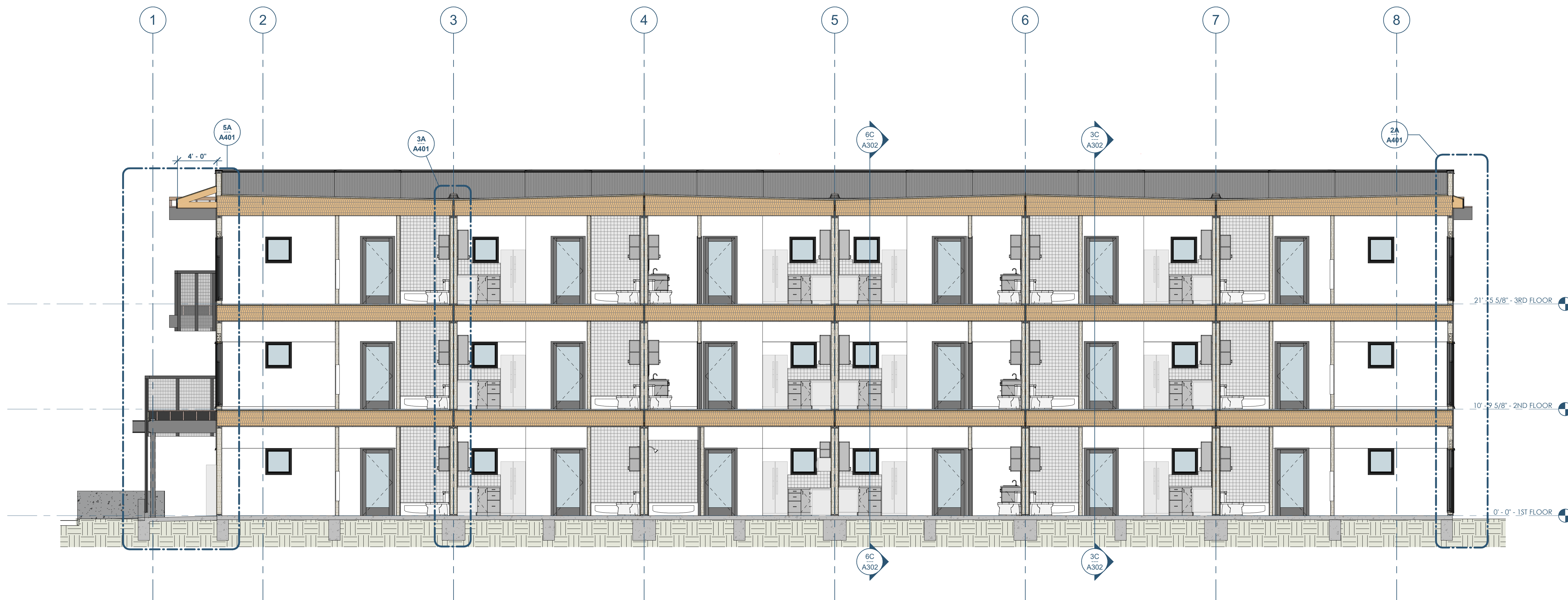
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4C A302 BUILDING SECTION - THRU LARGE STUDIO - LOOKING EAST
3/16" = 1'-0"



3C A302 BUILDING SECTION - THRU SMALL STUDIO - LOOKING EAST
3/16" = 1'-0"



6A A302 BUILDING SECTION - EAST/WEST - LOOKING NORTH
3/16" = 1'-0"

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Date	Description
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6C A303 BUILDING SECTION - EAST/WEST - AT SOUTH BALCONIES - LOOKING SOUTH
 3/16" = 1'-0"

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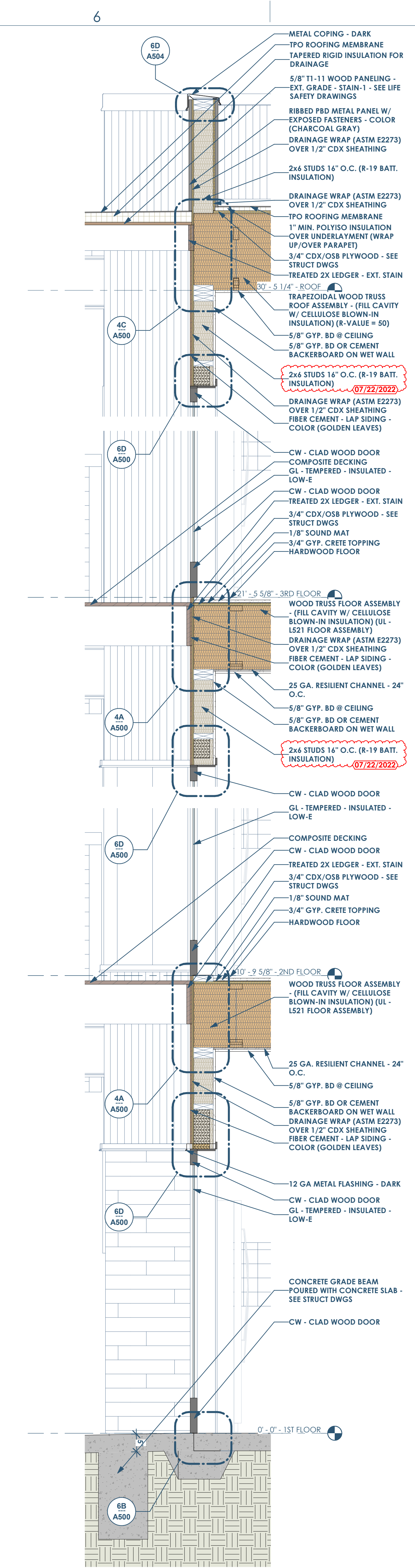
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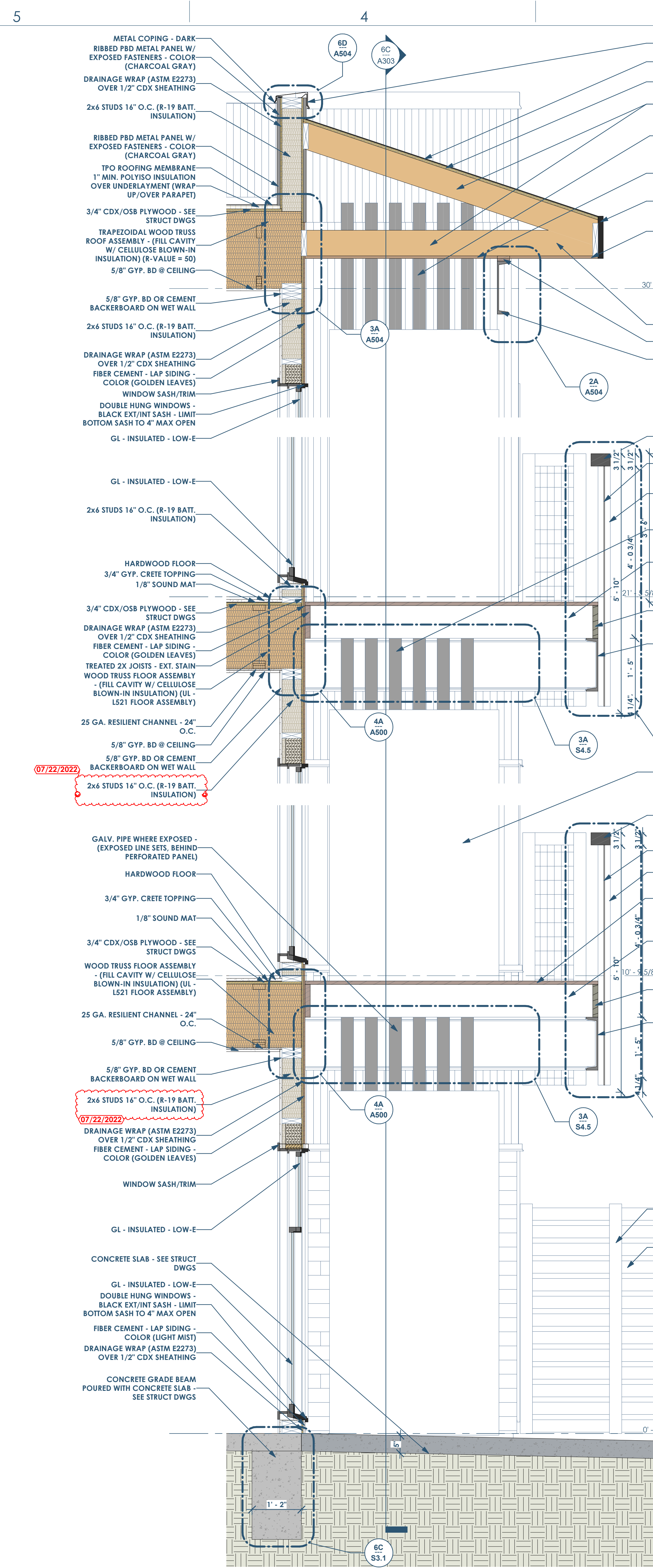
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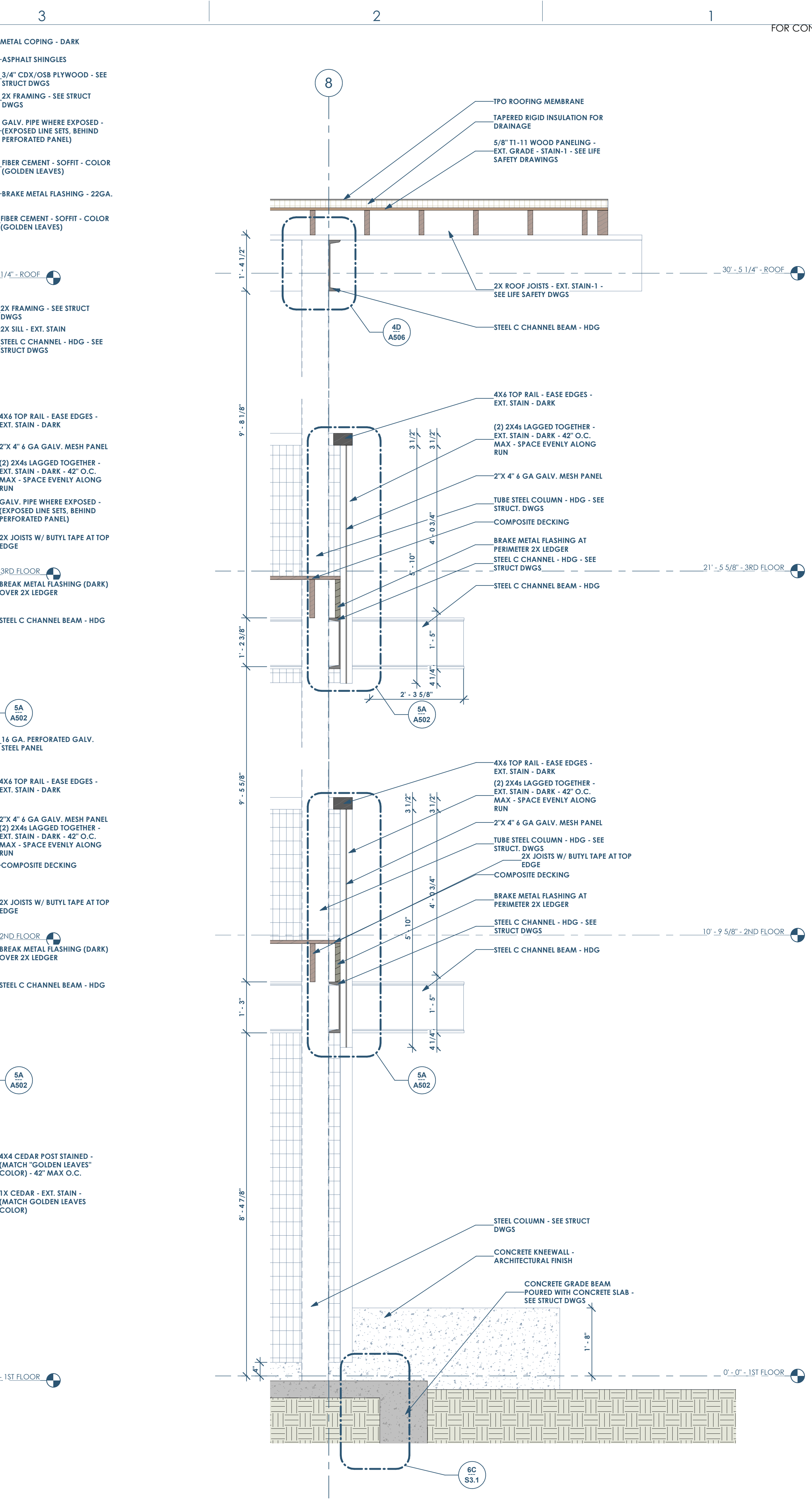
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4A WALL SECTION - THRU SMALL STUDIO - LOOKING EAST - @ PARAPET WALL
3/4" = 1'-0"

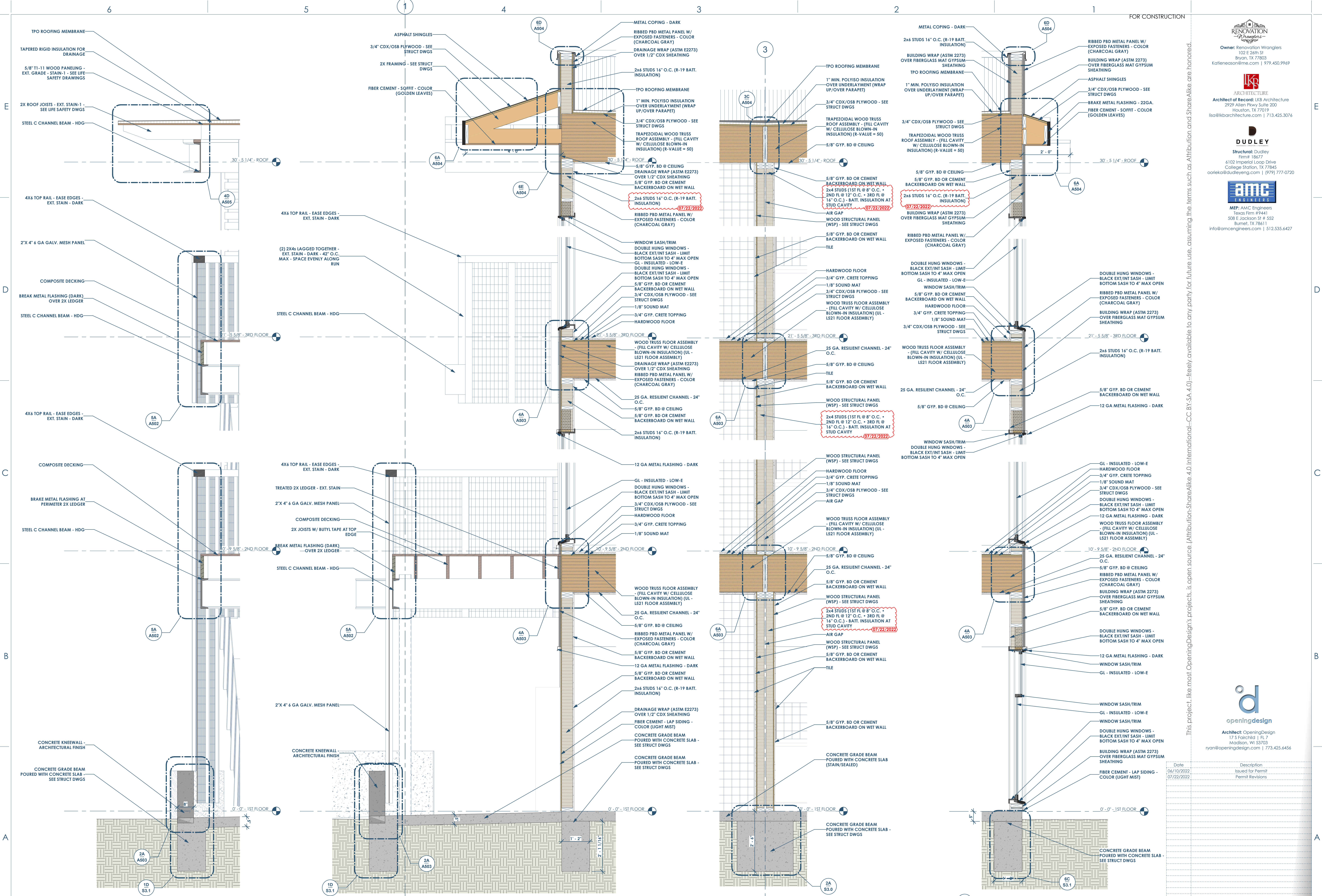


4A WALL SECTION - SOUTH BALCONY
3/4" = 1'-0"



2A WALL SECTION - THRU BALCONY - RAILING
3/4" = 1'-0"

Date	Description
06/10/2022	Issued for Permit
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6A BUILDING SECTION - THRU LARGE STUDIO - LOOKING EAST - DECO RAILING 3/4" = 1'-0" 5A WALL SECTION - EAST/WEST - BALCONY DECK 3/4" = 1'-0" 4A WALL SECTION - EAST/WEST2 - @ UNITS PARTITION WALL 3/4" = 1'-0" 3A WALL SECTION - EAST/WEST2 - @ UNITS PARTITION WALL 3/4" = 1'-0" 2A BUILDING SECTION - EAST/WEST - LOOKING SOUTH - TRU WINDOWS 3/4" = 1'-0" 1A WALL SECTIONS

MARCO POLO - 101 W 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & PT OF 6 & PT OF ALLEY - BRYAN, TX 77803

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MEP: AMC Engineers
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Architect: OpeningDesign
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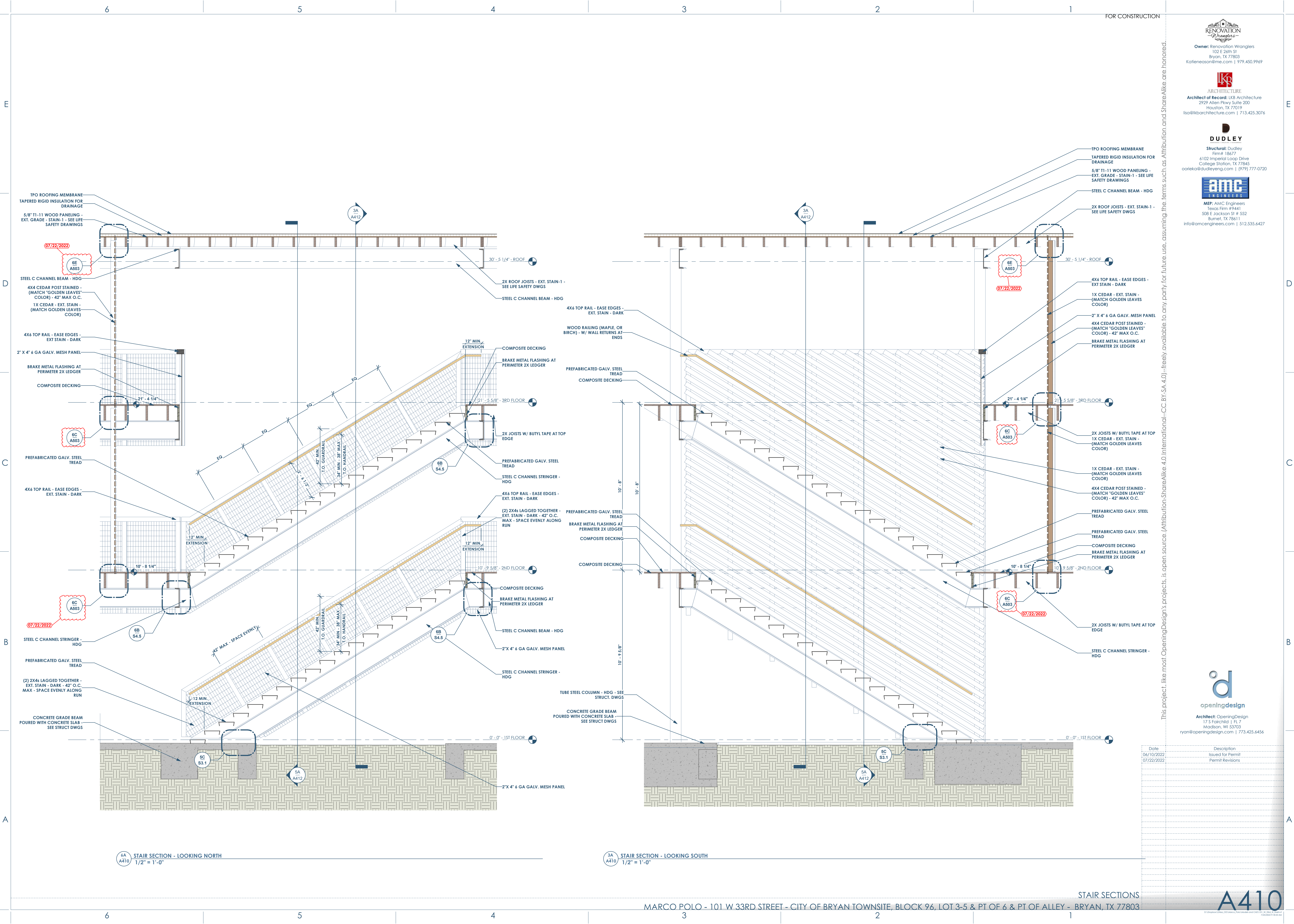
Owner: Renovation Wranglers
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Kateneason@wranglers.com | 979.450.9969

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6A A410 STAIR SECTION - LOOKING NORTH
1/2" = 1'-0"

3A A410 STAIR SECTION - LOOKING SOUTH
1/2" = 1'-0"

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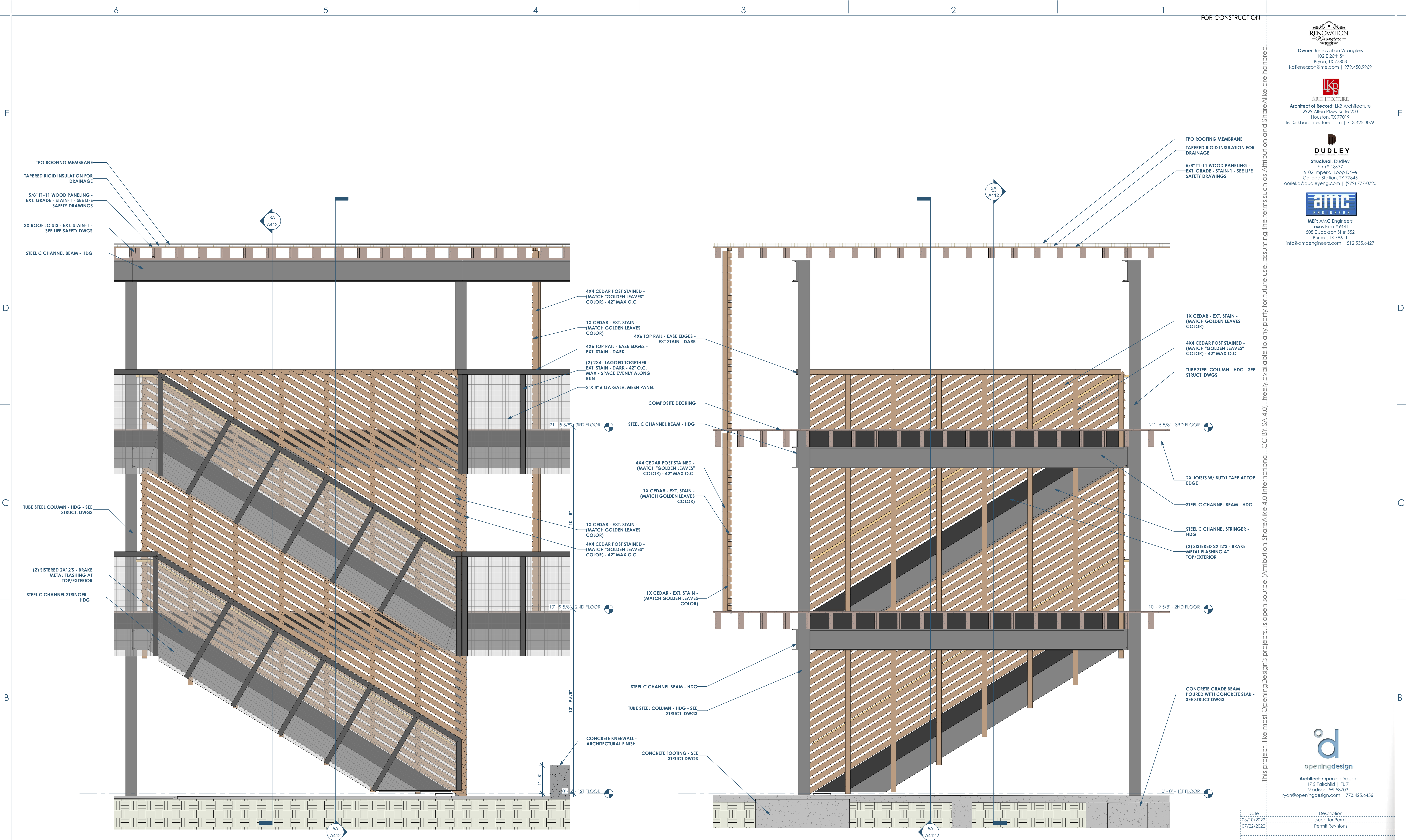
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RENOVATION Wranglers
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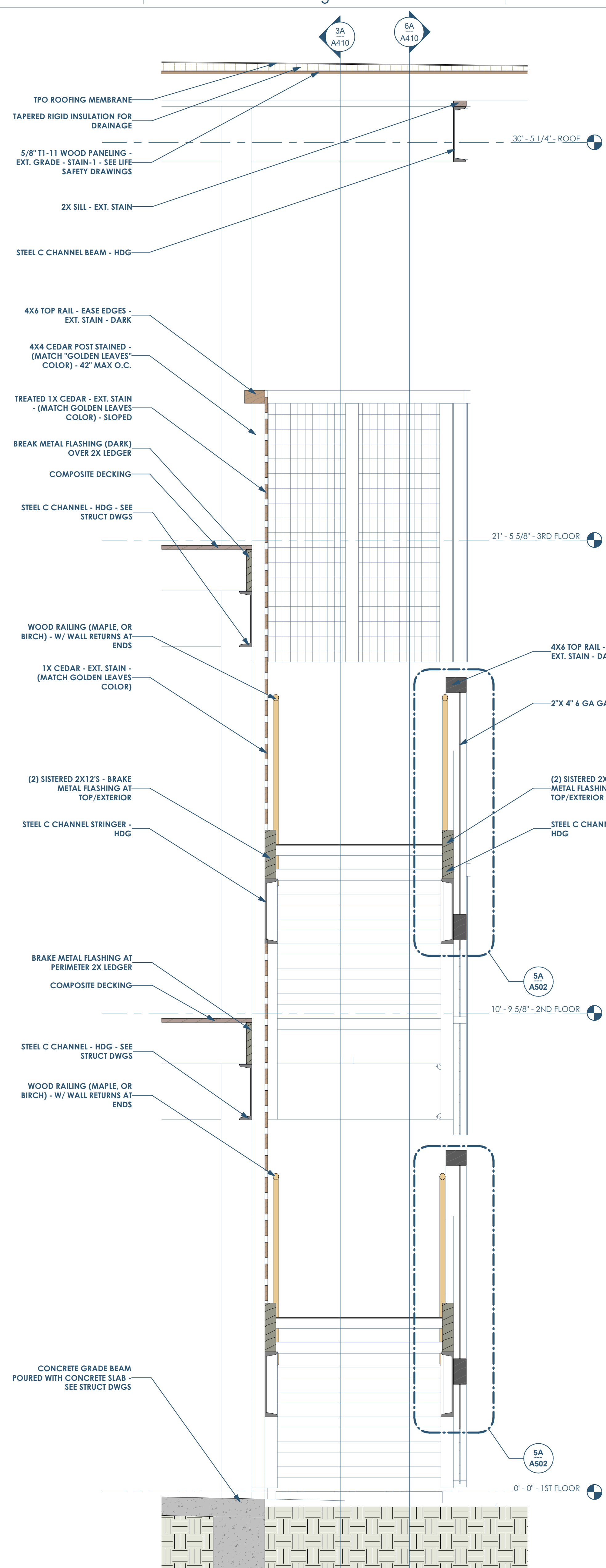
amc ENGINEERS
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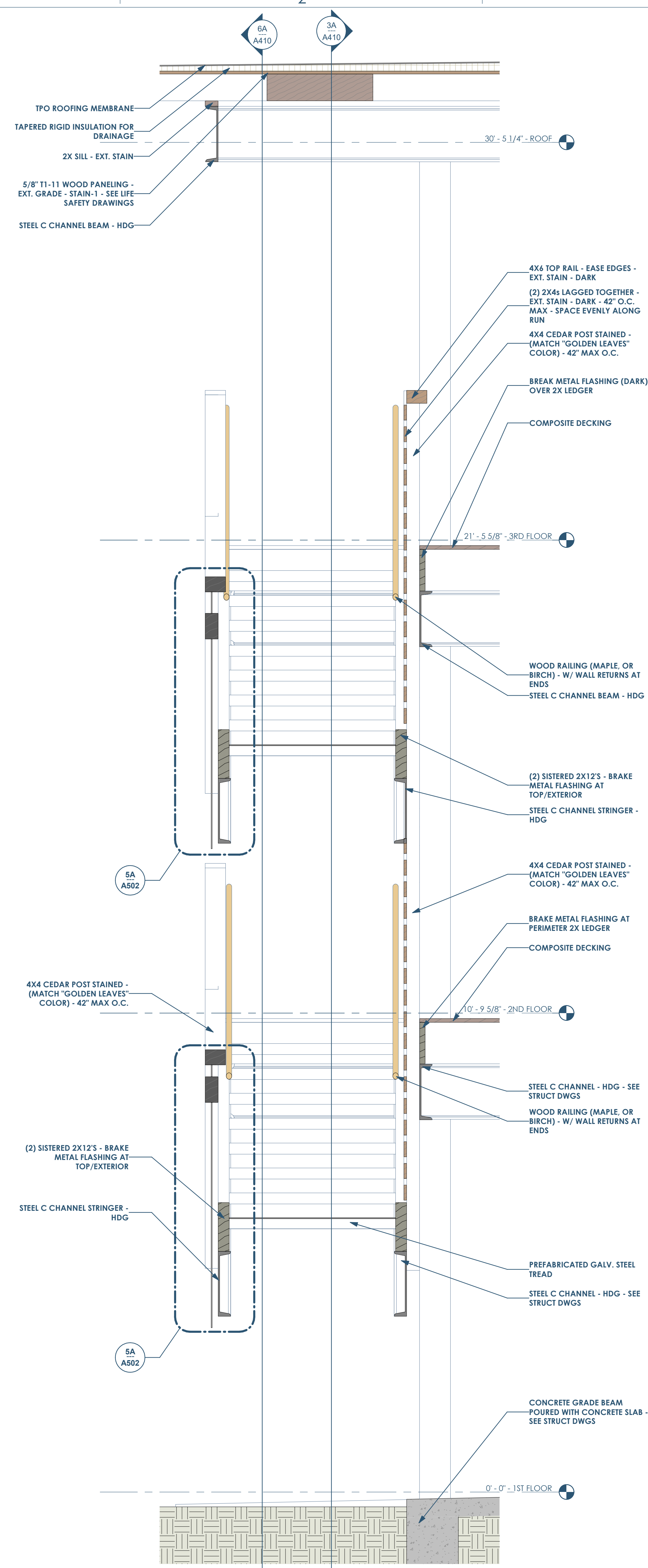
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SA A412 STAIR SECTION - LOOKING WEST
3/4" = 1'-0"



SA A412 STAIR SECTION - LOOKING EAST
3/4" = 1'-0"

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RENOVATION
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Engineers

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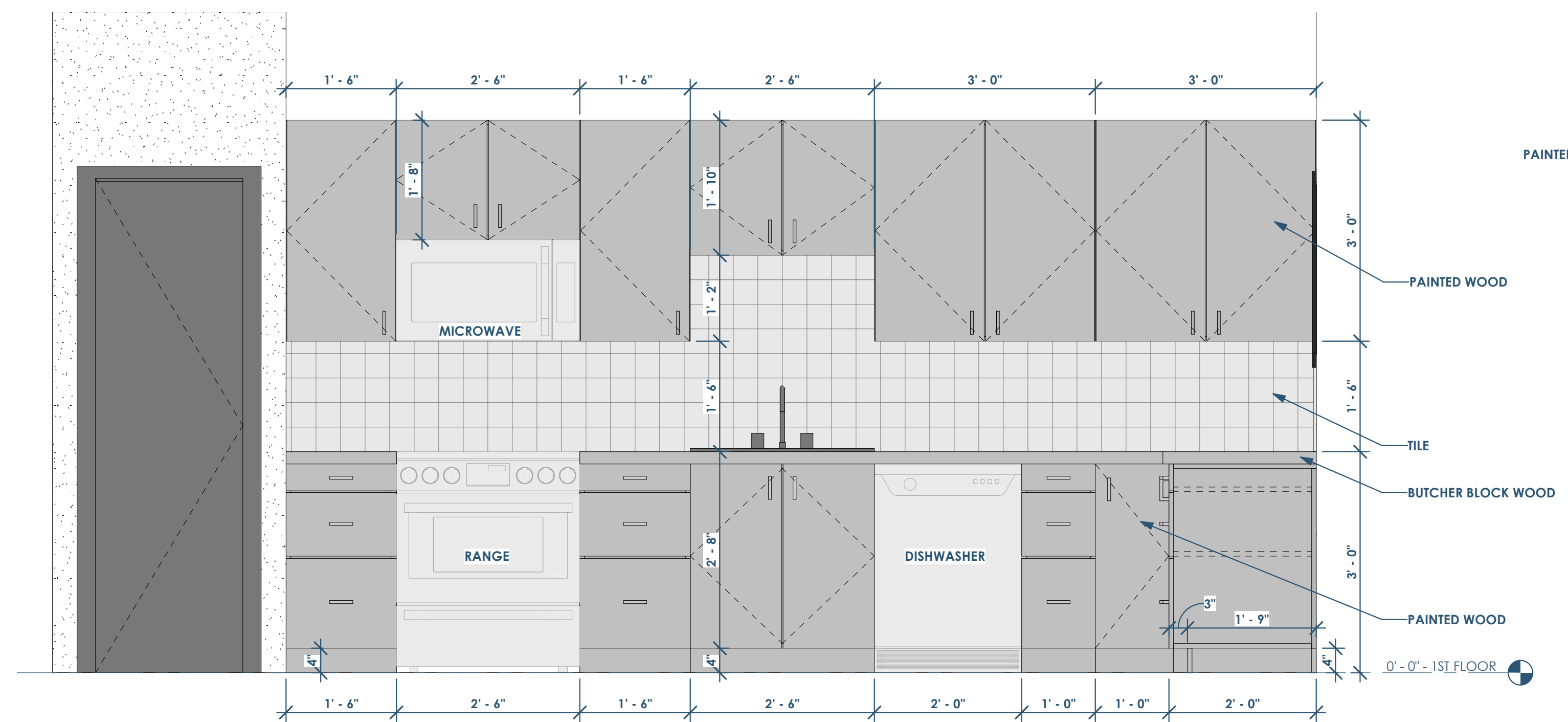
RENOVATION Wranglers
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LKB ARCHITECTURE
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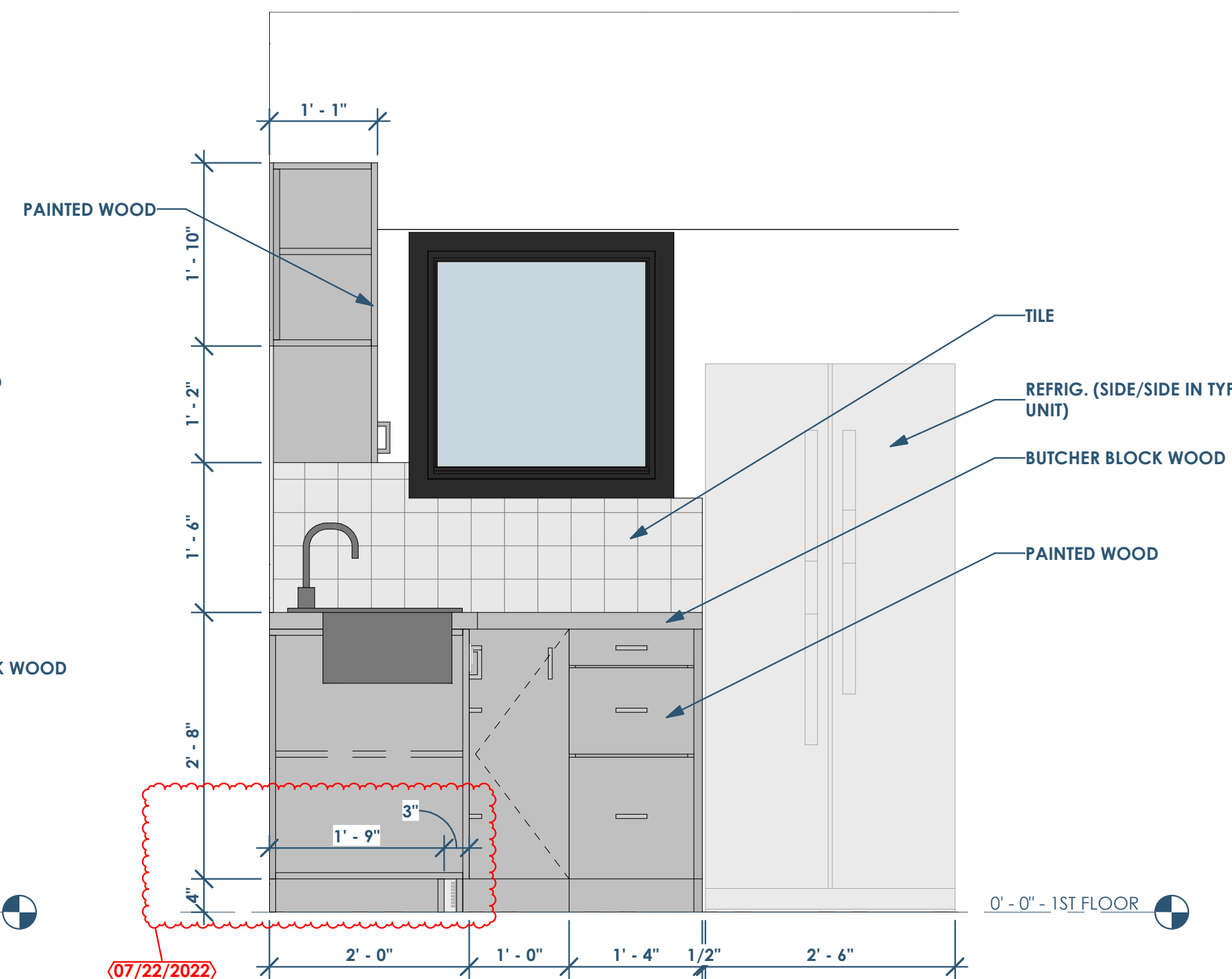
DUDLEY
 Structural: Dudley
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amc ENGINEERS
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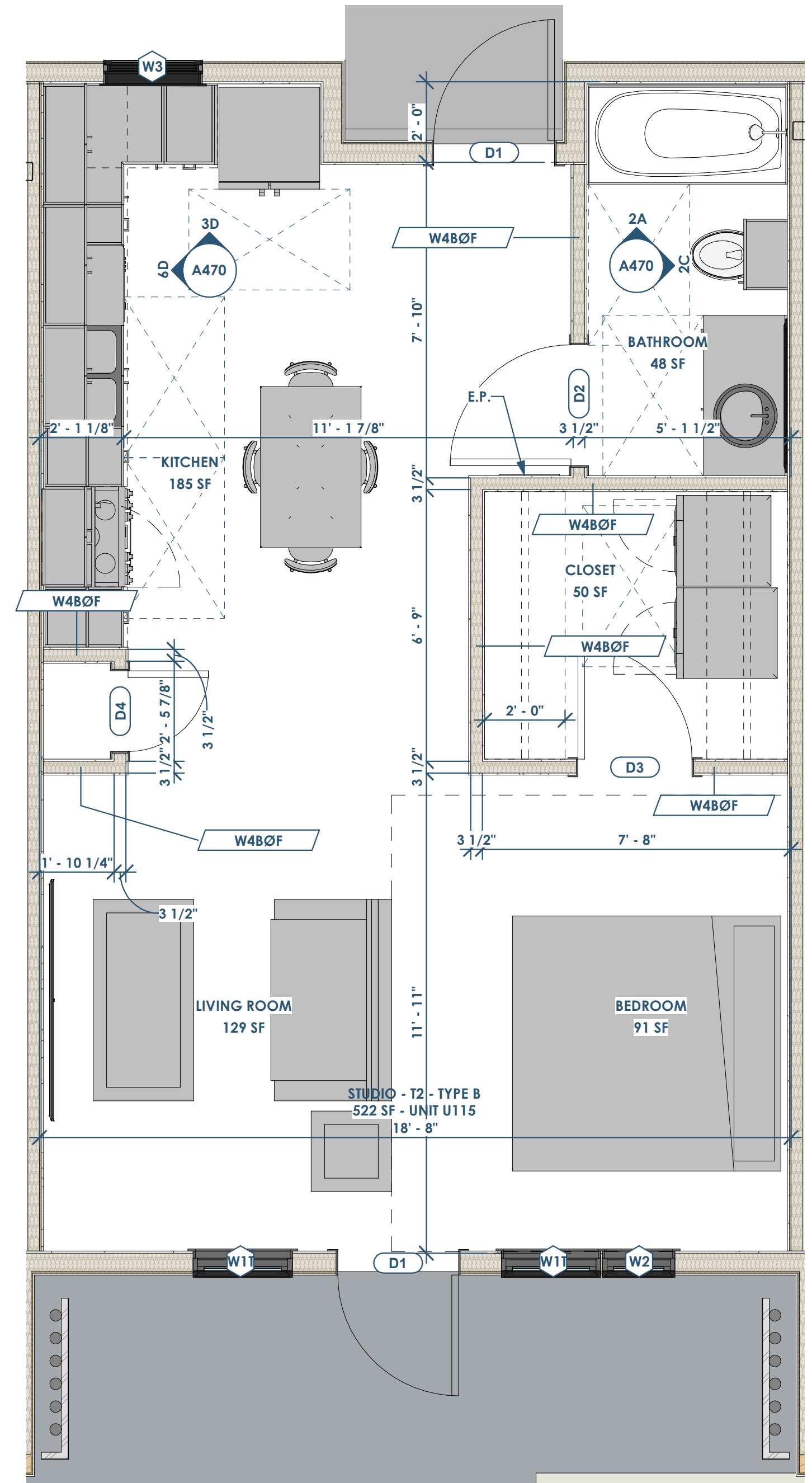
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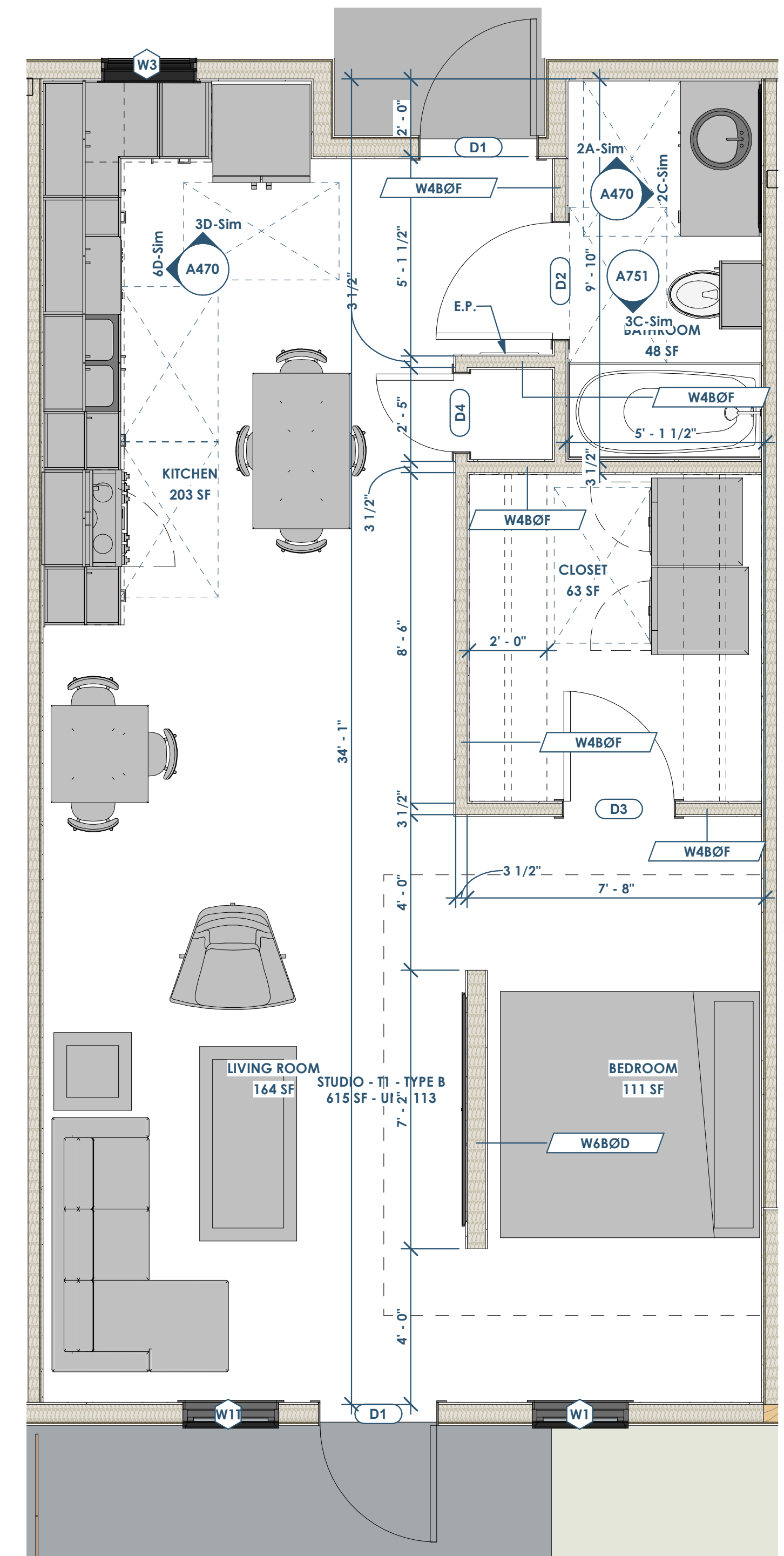
4D ELEVATION - 1 BD - KITCHEN
3/4" = 1'-0"



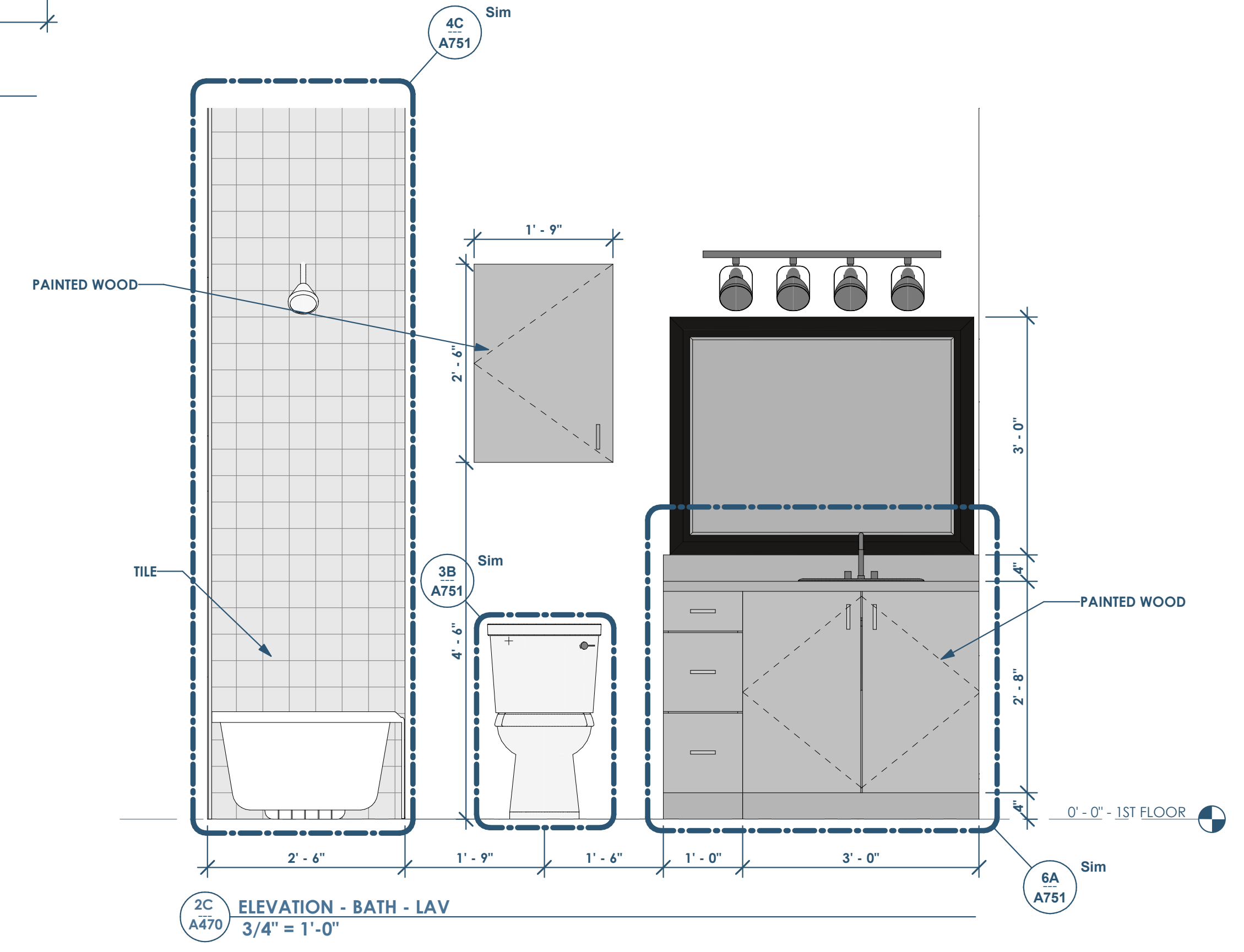
3D ELEVATION - 1 BD - KITCHEN - FRIDGE
3/4" = 1'-0"



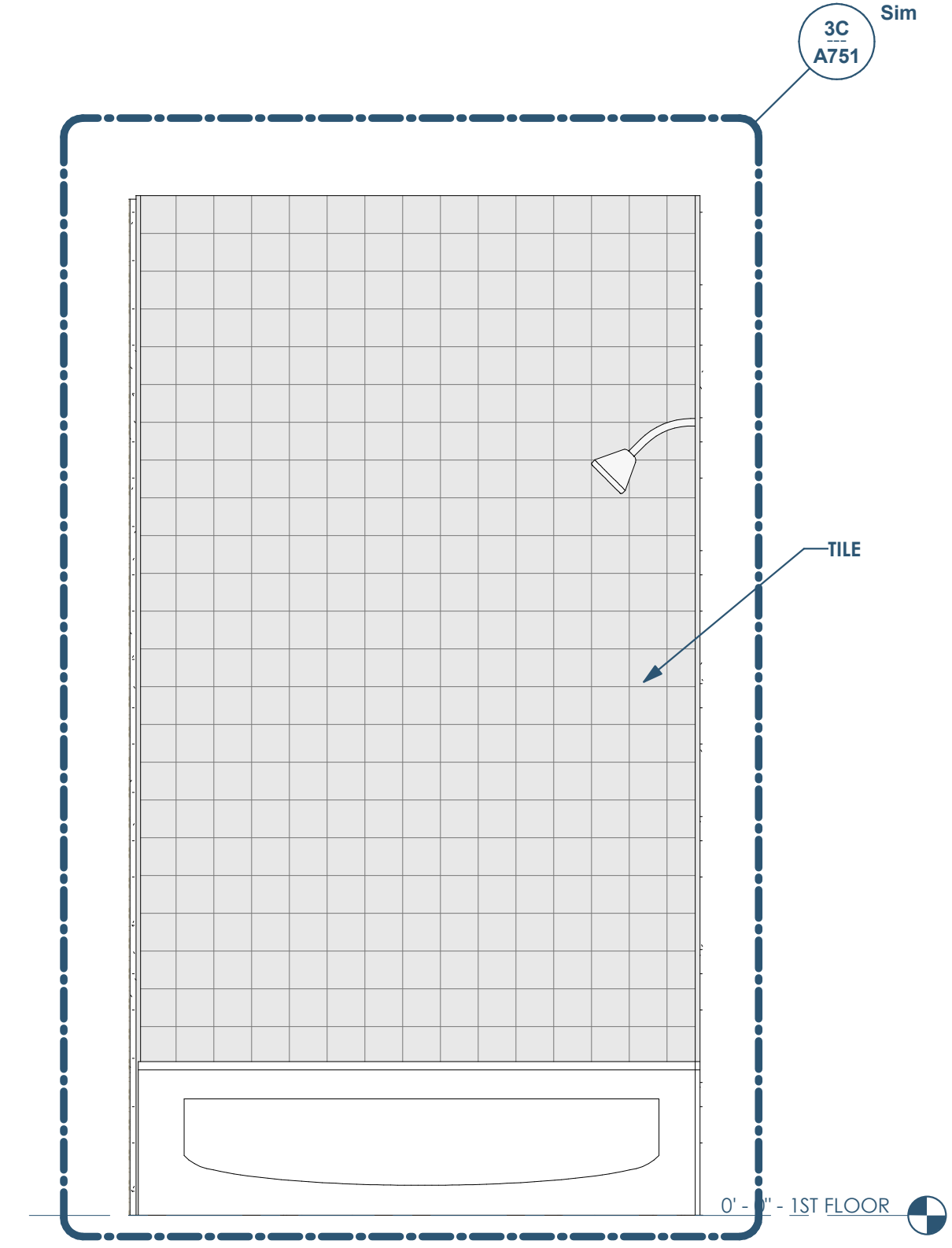
6A UNIT PLAN - 1BD SHORT (TYPE B ADA UNIT - 1ST FLOOR ONLY)
3/8" = 1'-0"



4A UNIT PLAN - 1BD LONG (TYPE B ADA UNIT - 1ST FLOOR ONLY)
3/8" = 1'-0"



2C ELEVATION - BATH - LAV
3/4" = 1'-0"



2A ELEVATION - BATH - SHOWER
3/4" = 1'-0"

- FLOOR PLAN NOTES
- SEE A800 FOR PARTITION TYPES
 - SEE A600 FOR DOOR AND WINDOW TYPES
 - REFERENCE A751 FOR ACCESSIBILITY COMPLIANCE REQUIREMENTS
 - ALL FINISHES TO BE PROVIDED BY OWNER
 - MILLWORK AND APPLIANCES TO BE PROVIDED BY OWNER

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openingdesign
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RENOVATION
Wranglers

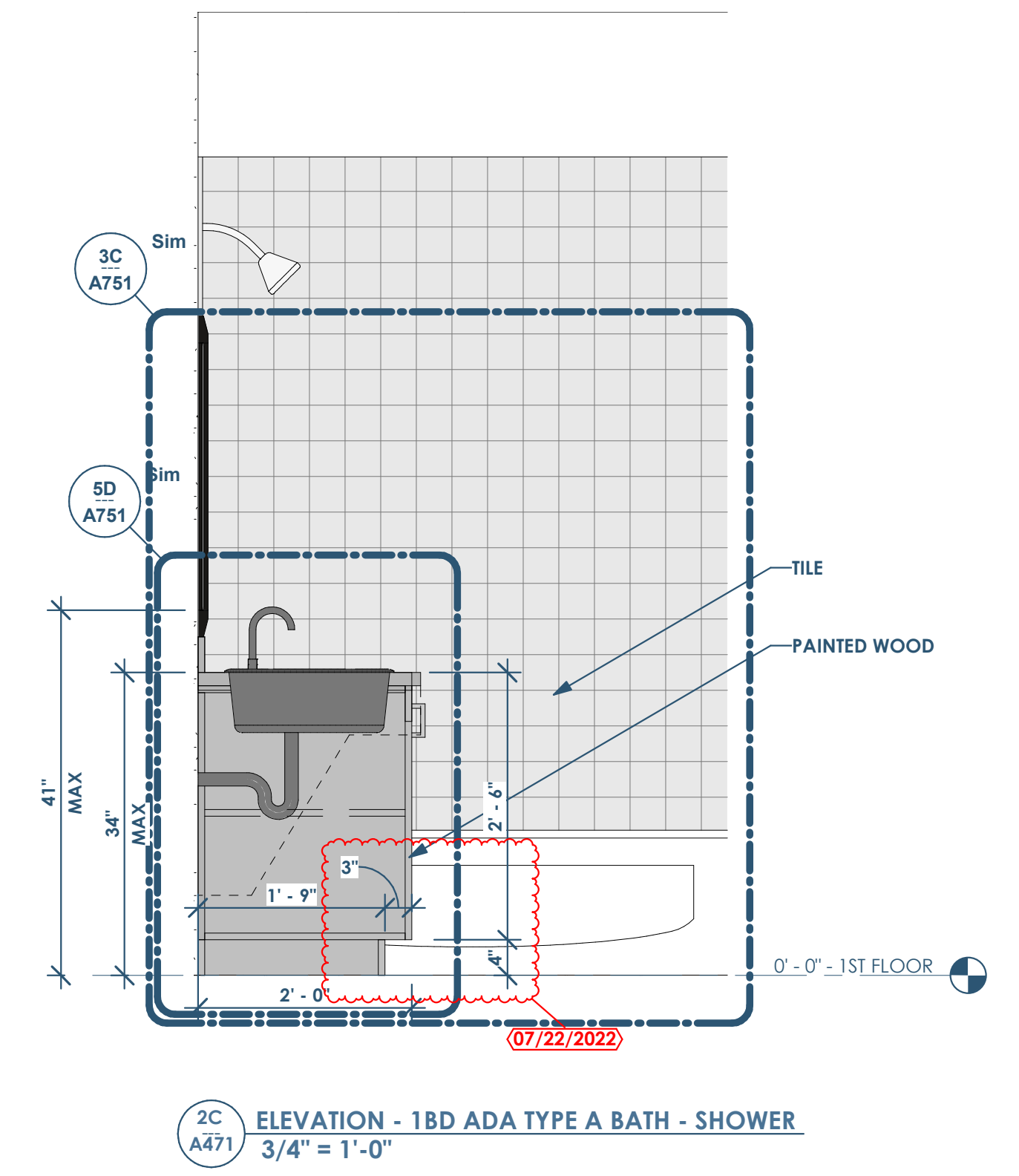
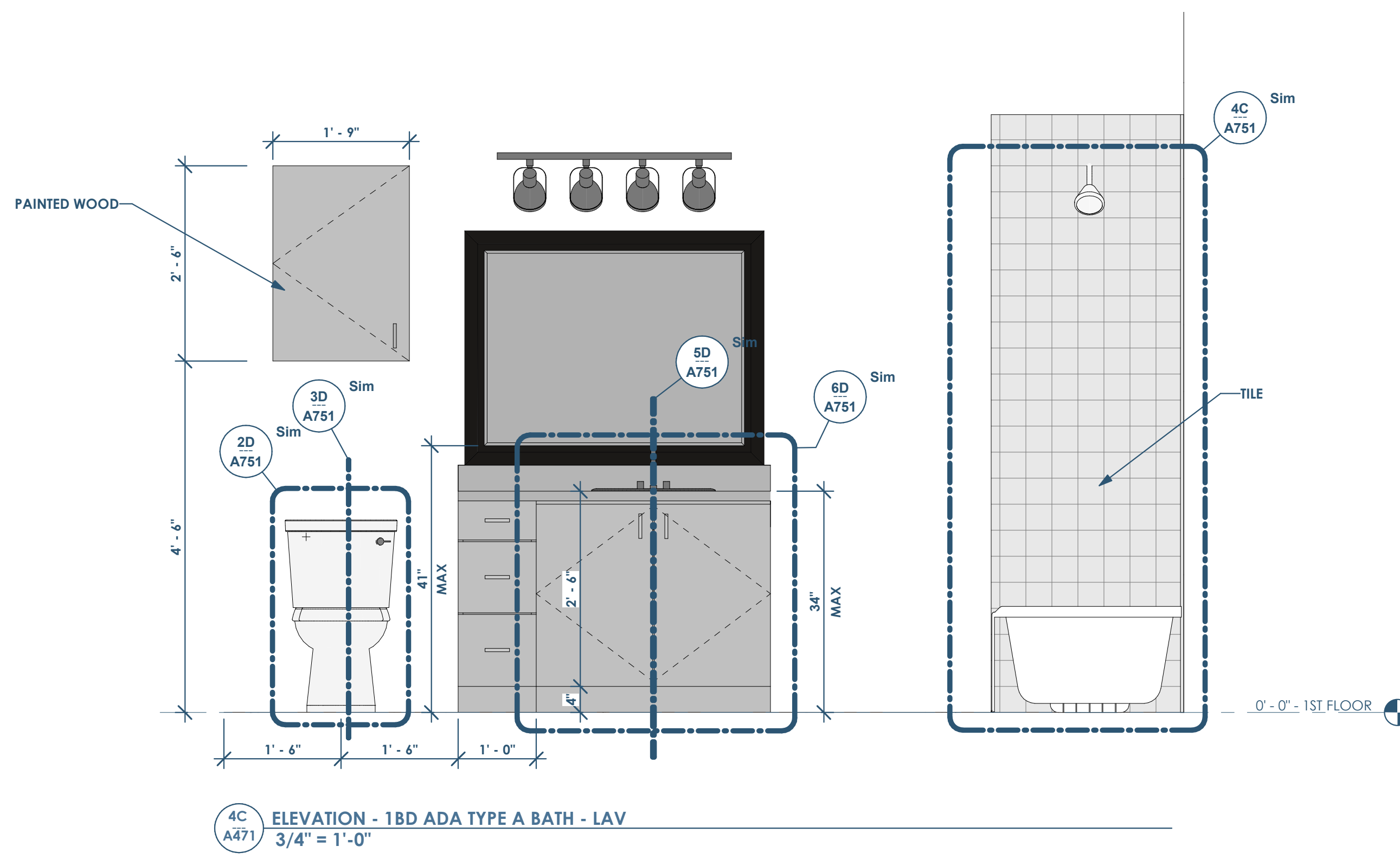
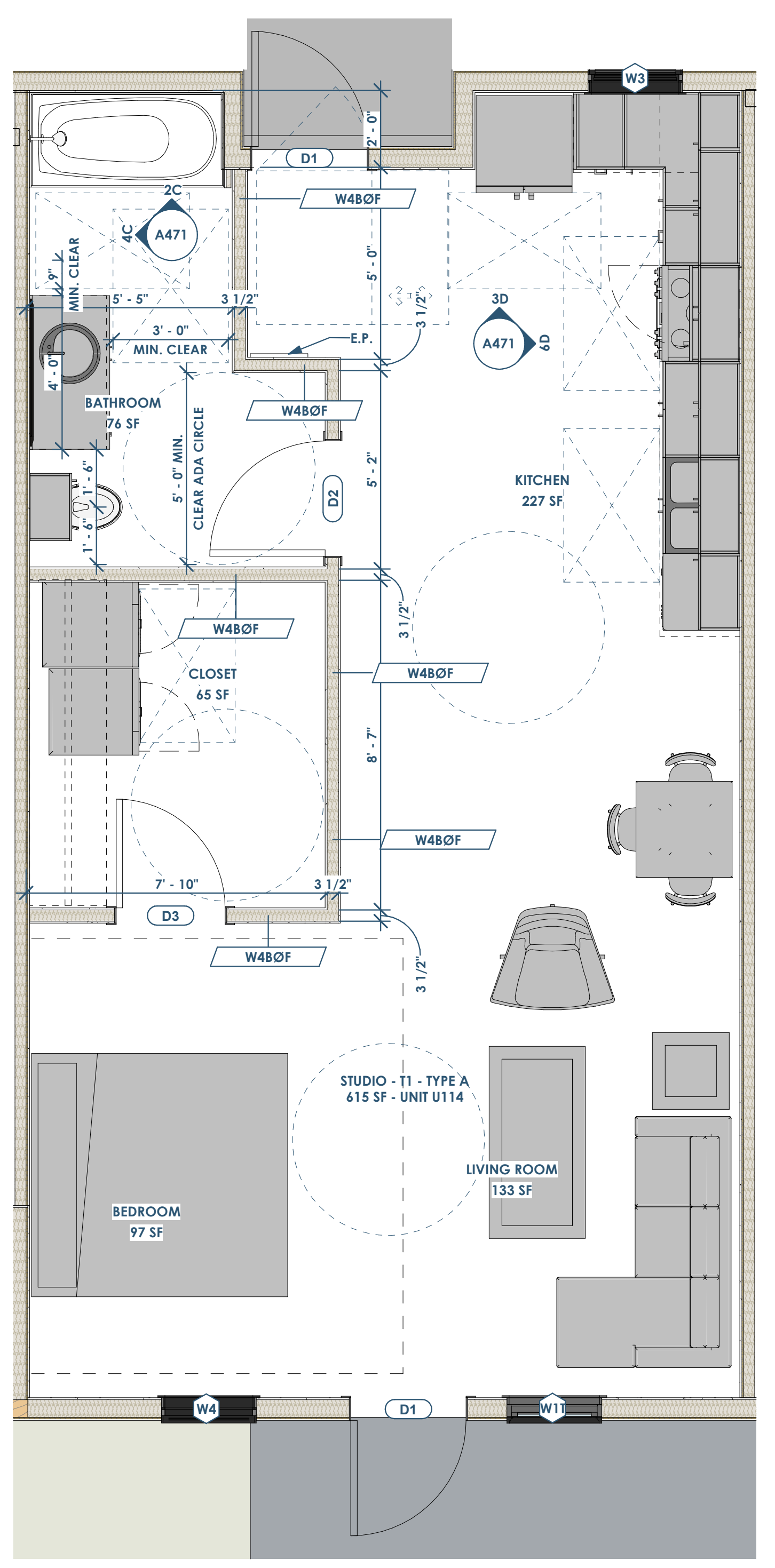
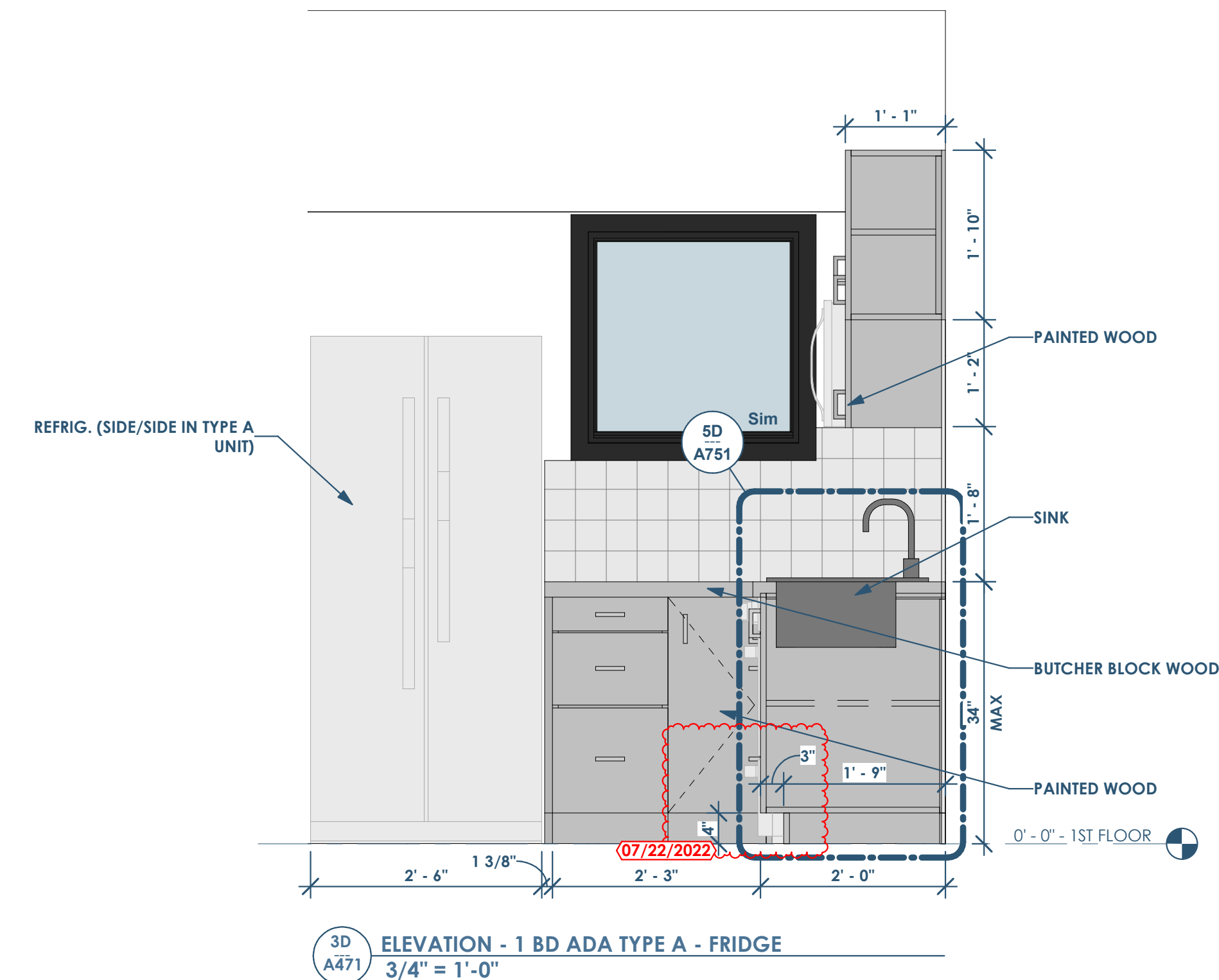
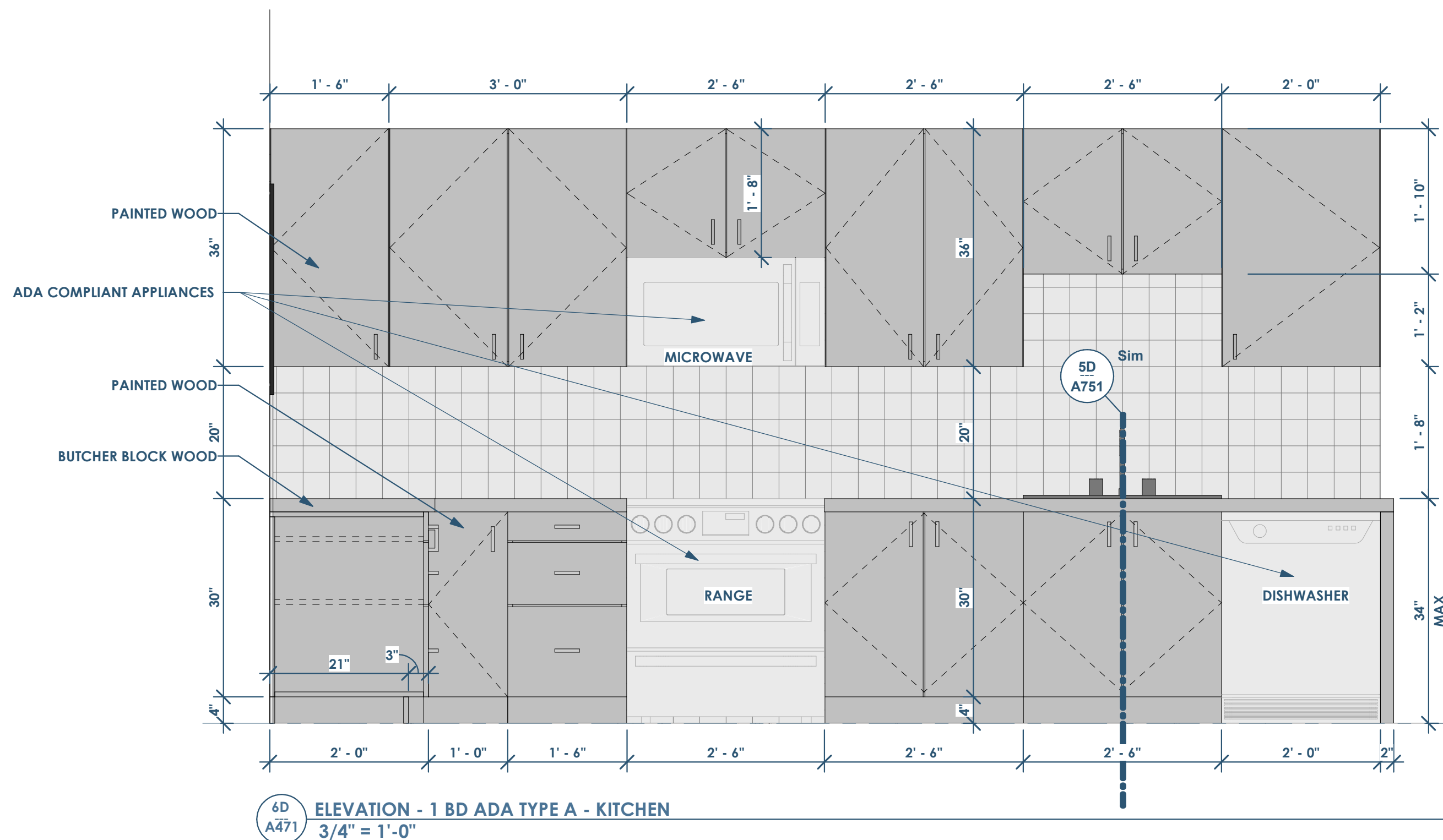
Owner: Renovation Wranglers
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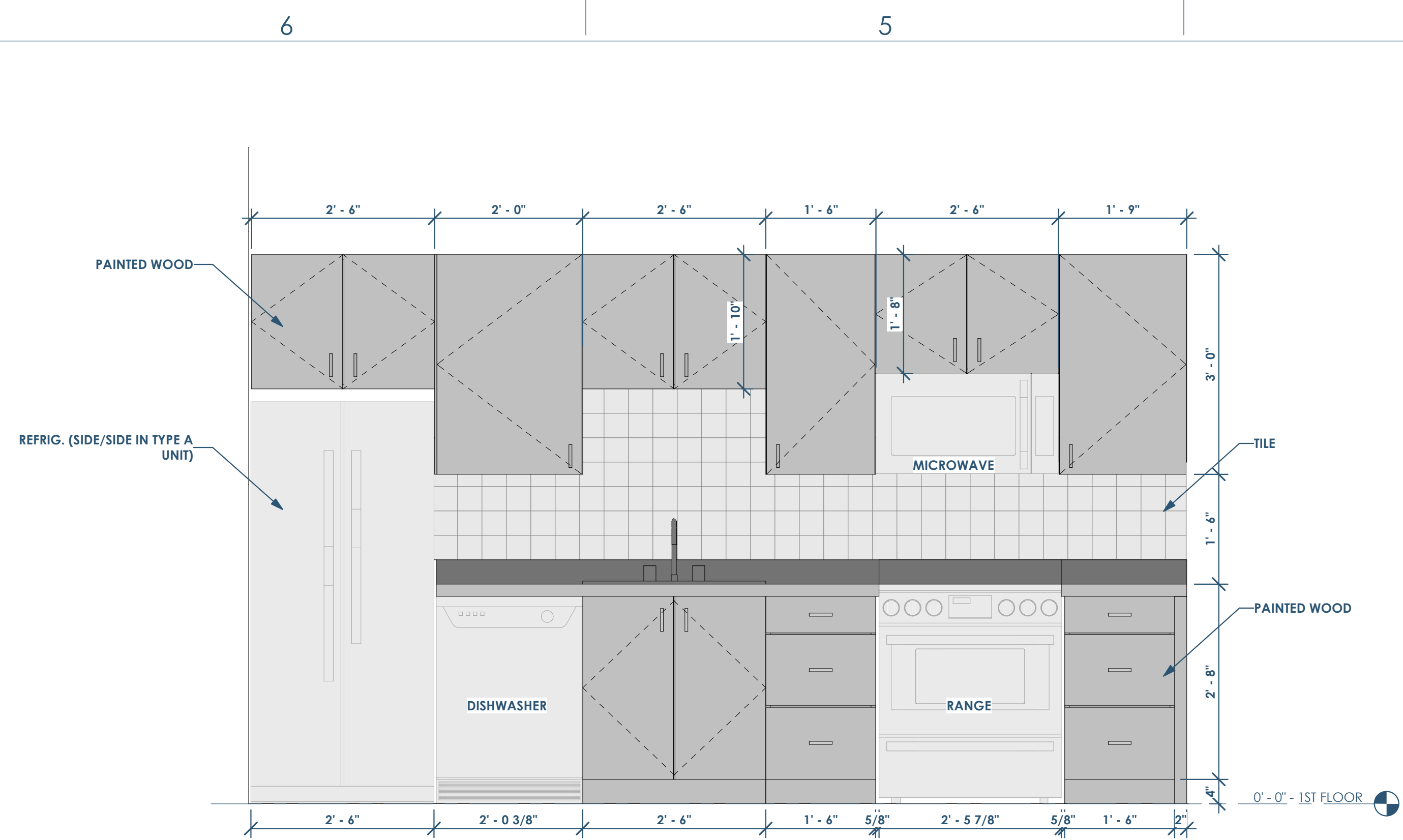


- FLOOR PLAN NOTES**
- SEE A800 FOR PARTITION TYPES
 - SEE A600 FOR DOOR AND WINDOW TYPES
 - REFERENCE A751 FOR ACCESSIBILITY COMPLIANCE REQUIREMENTS
 - ALL FINISHES TO BE PROVIDED BY OWNER
 - MILLWORK AND APPLIANCES TO BE PROVIDED BY OWNER

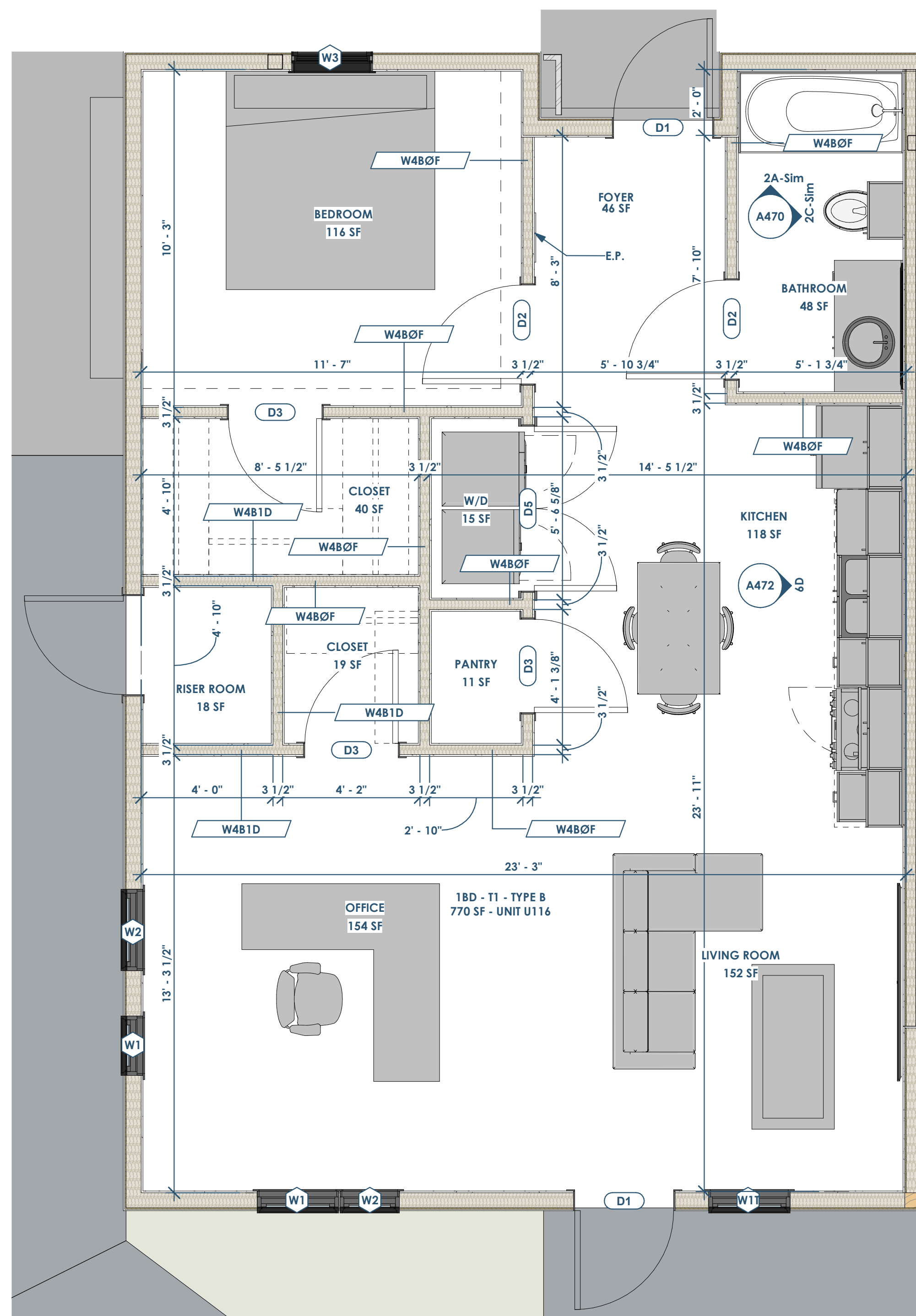
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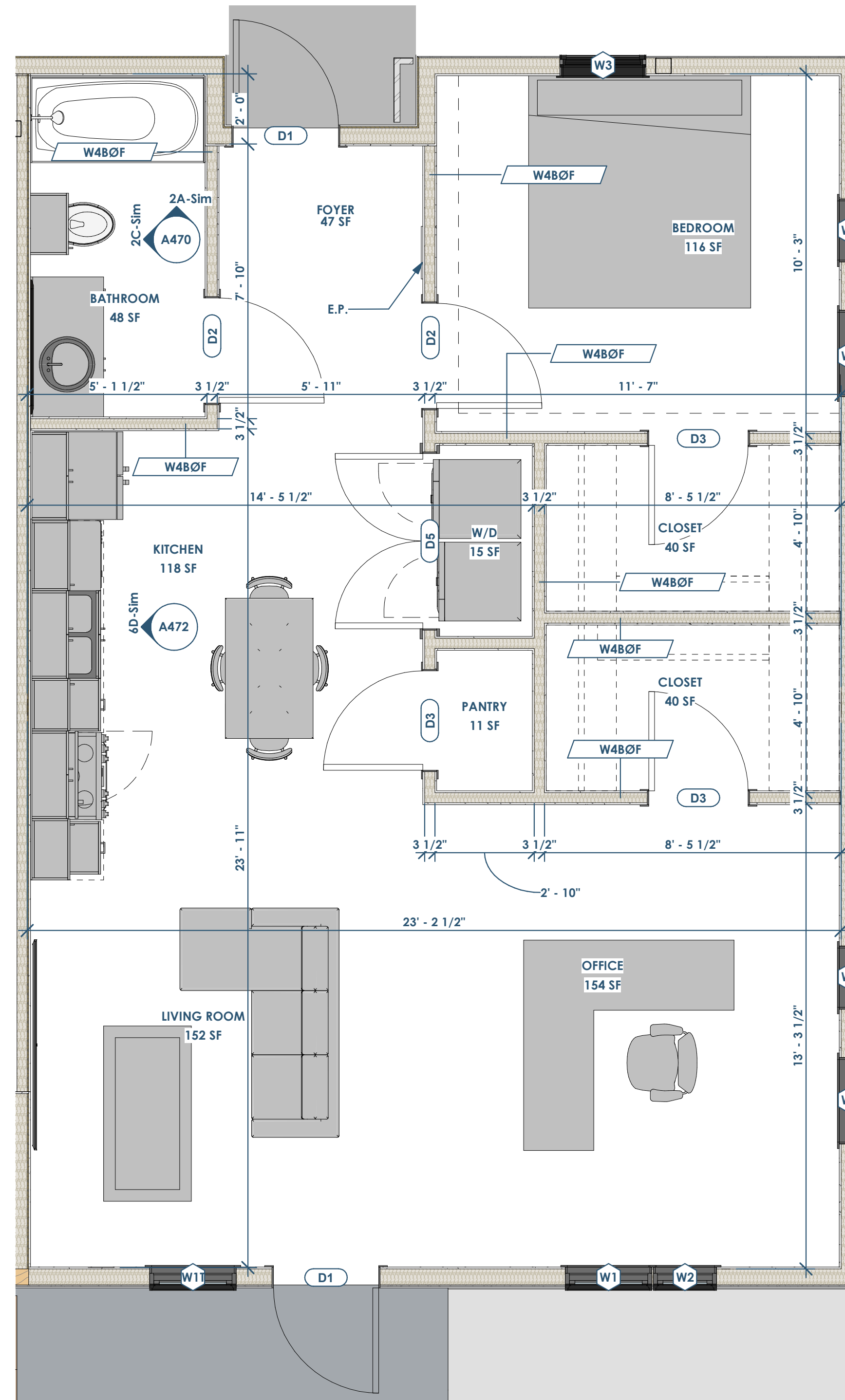
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Madison, WI 53703
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4D
A472 ELEVATION - END UNIT - KITCHEN
3/4" = 1'-0"



6A
A472 UNIT PLAN - END UNIT W/ RISER ROOM (TYPE B ADA UNIT - 1ST FLOOR ONLY)
3/8" = 1'-0"



4A
A472 UNIT PLAN - END UNIT (TYPE B ADA UNIT - 1ST FLOOR ONLY)
3/8" = 1'-0"

- FLOOR PLAN NOTES
- SEE A800 FOR PARTITION TYPES
 - SEE A600 FOR DOOR AND WINDOW TYPES
 - REFERENCE A751 FOR ACCESSIBILITY COMPLIANCE REQUIREMENTS
 - ALL FINISHES TO BE PROVIDED BY OWNER
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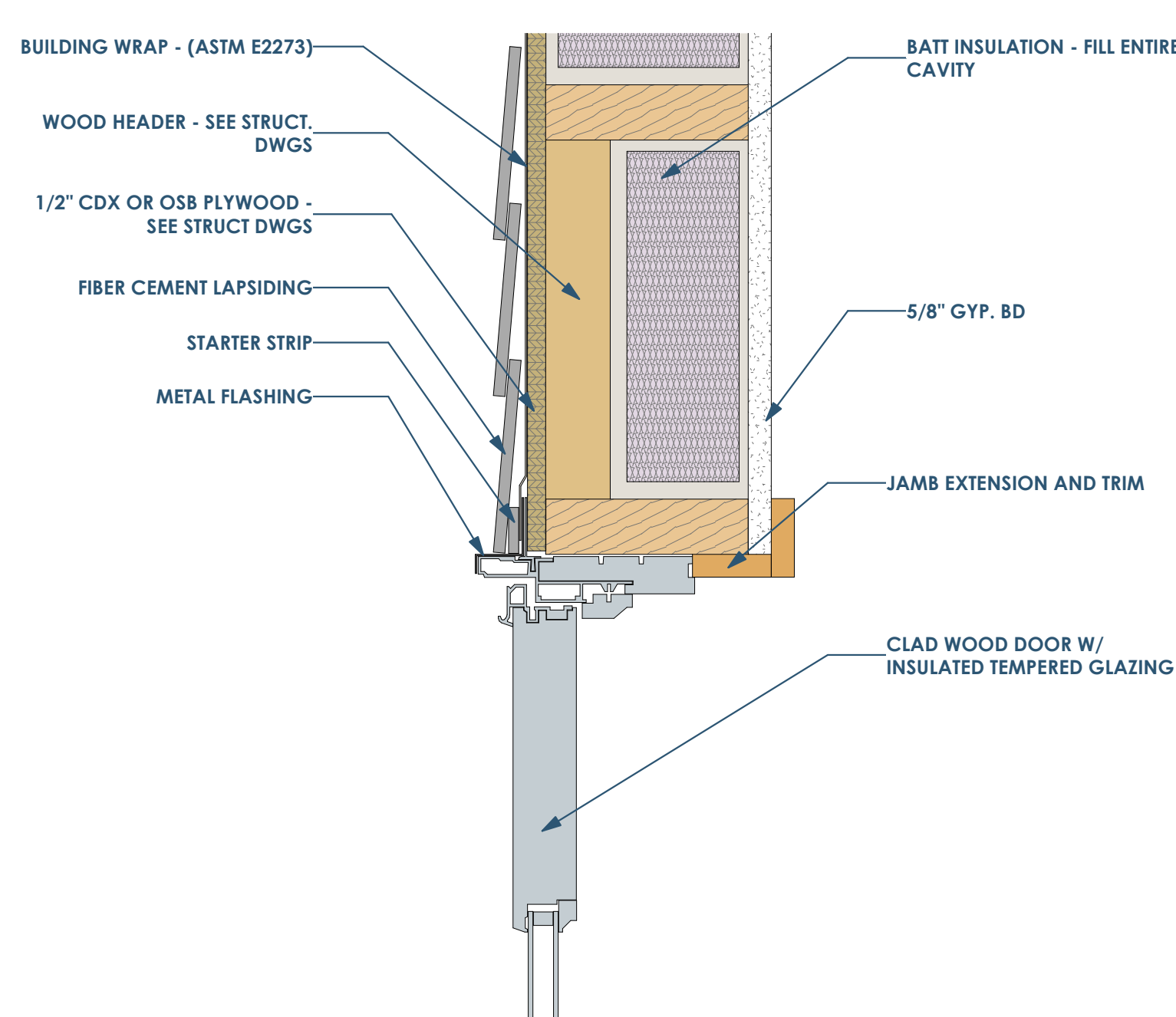
ARCHITECTURE
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Structural: Dudley
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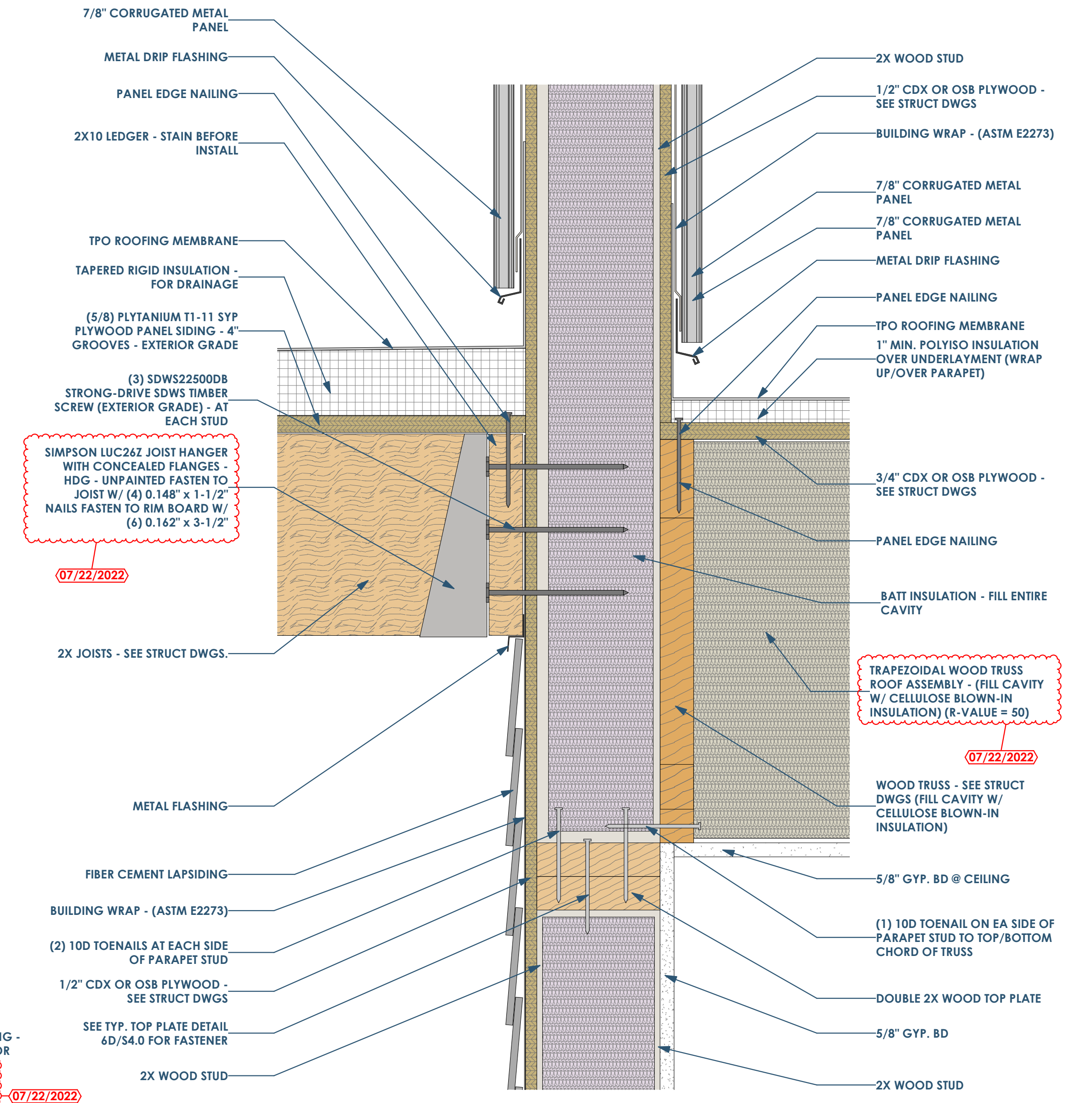
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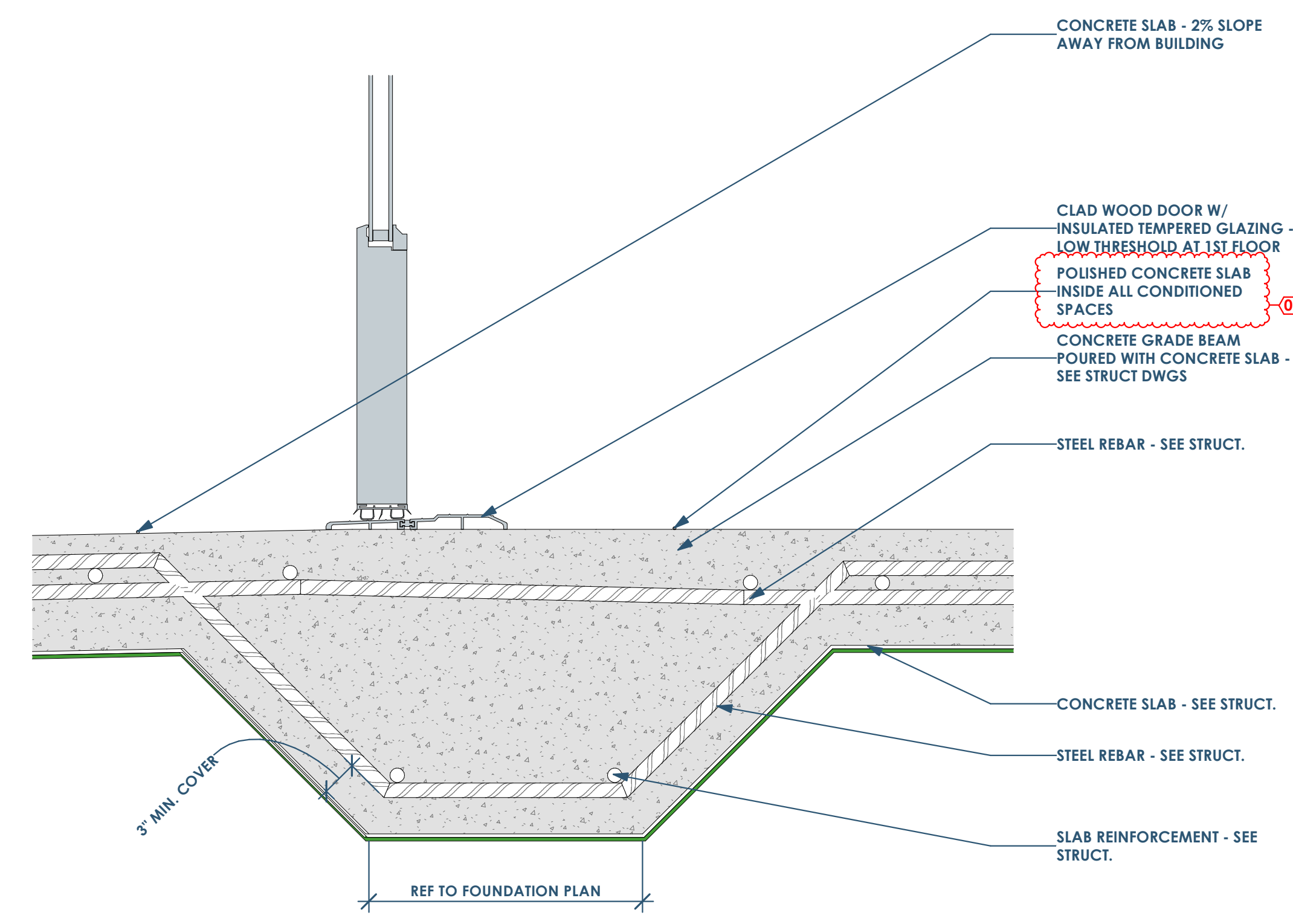
A472



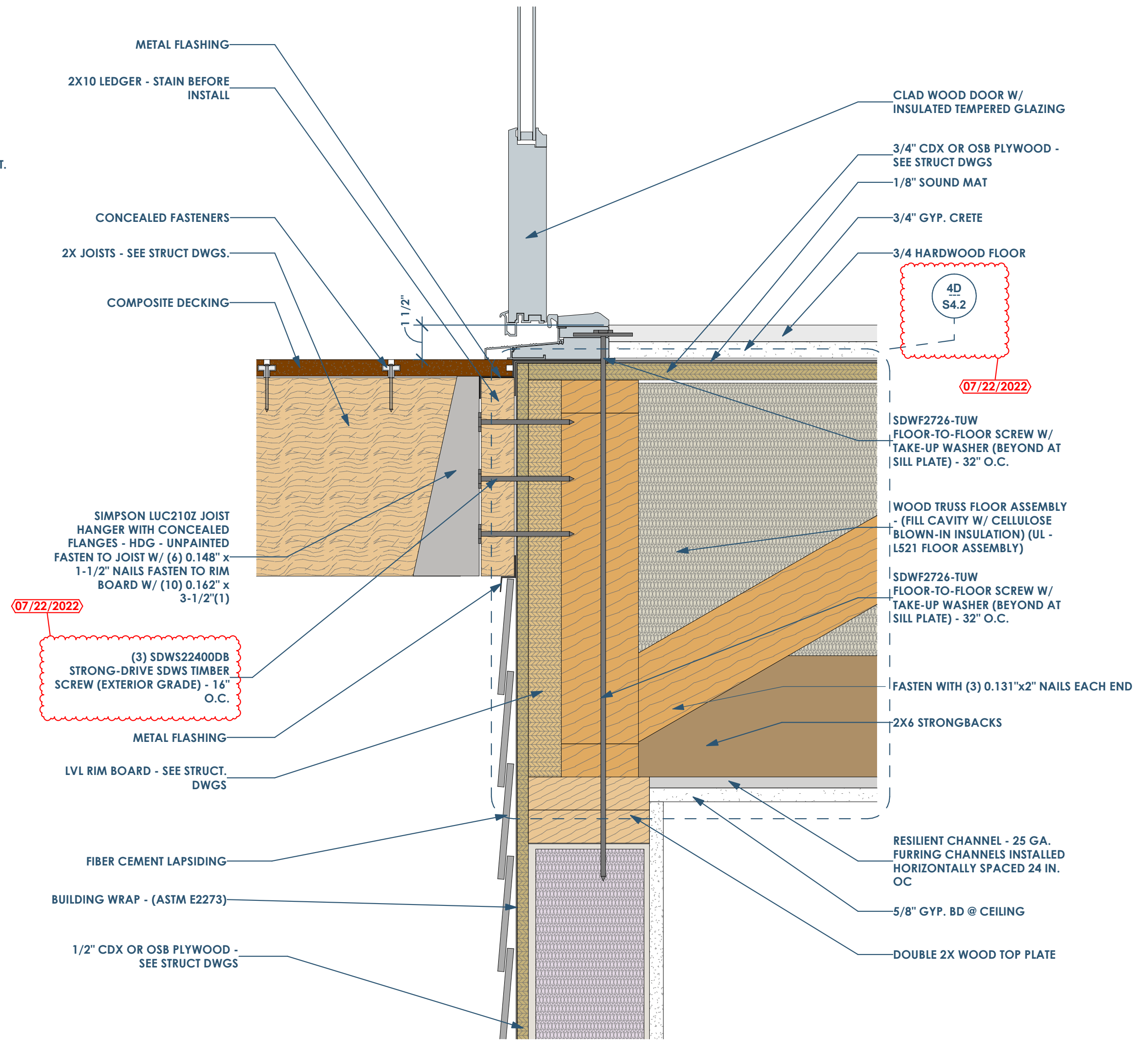
6D
A500
SECTION DETAIL AT DOOR HEADER
3" = 1'-0"



4C
A500
SECTION DETAIL AT PORCH ROOF AND PARAPET
3" = 1'-0"



6B
A500
SECTION DETAIL AT DOOR SILL - 1ST FLOOR
3" = 1'-0"



4A
A500
SECTION DETAIL AT UNIT DOOR SILL (2ND OR 3RD FLOOR)
3" = 1'-0"

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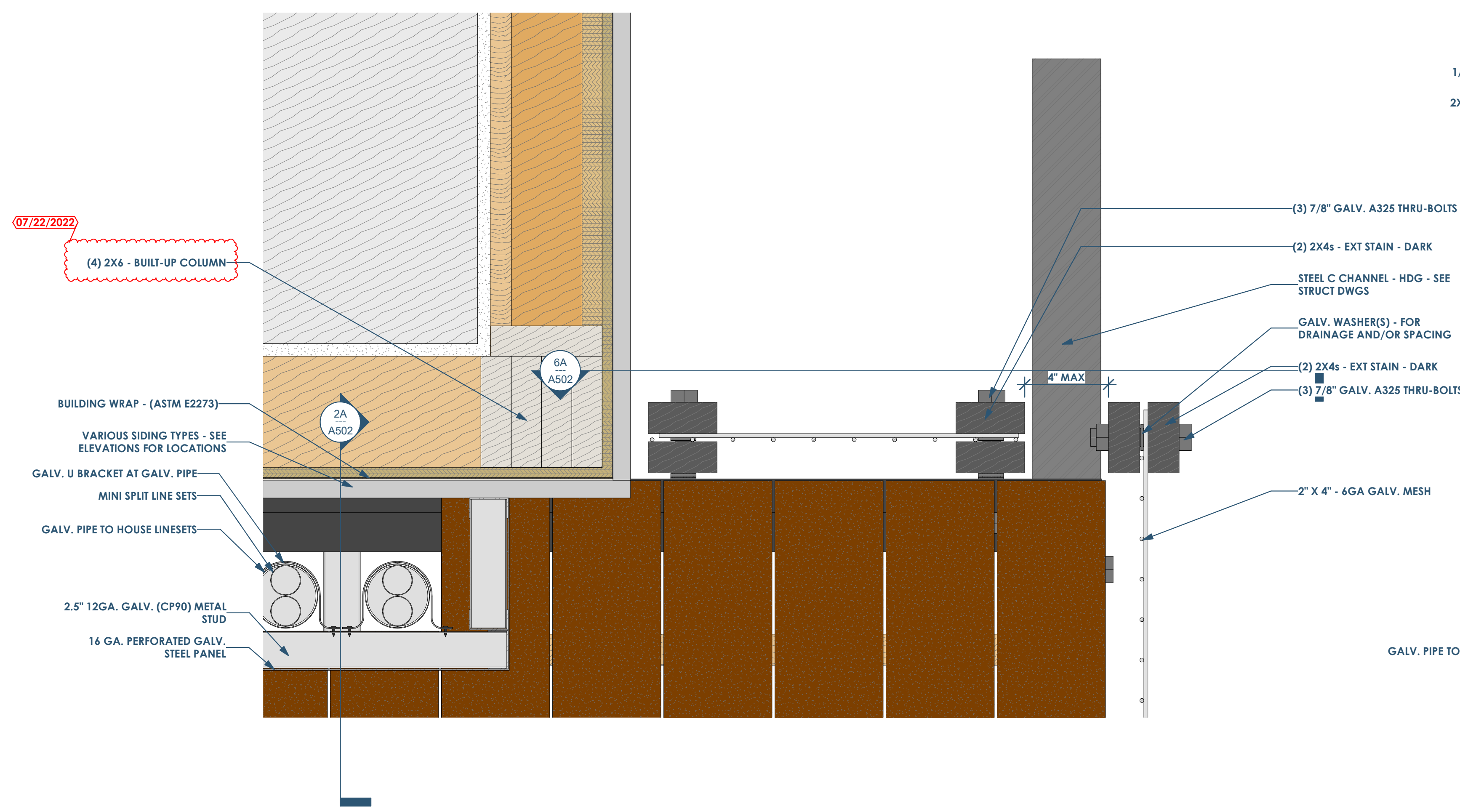
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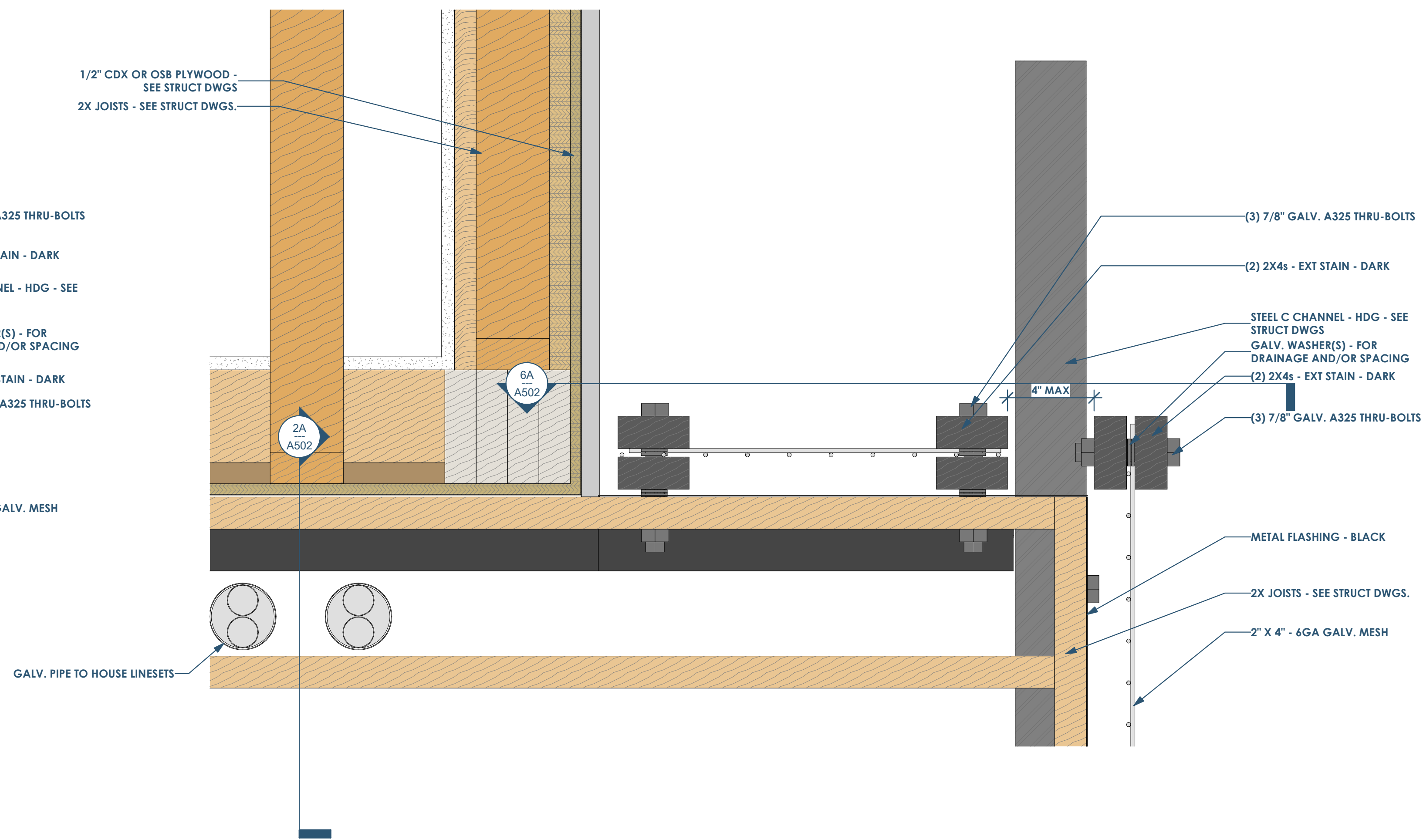
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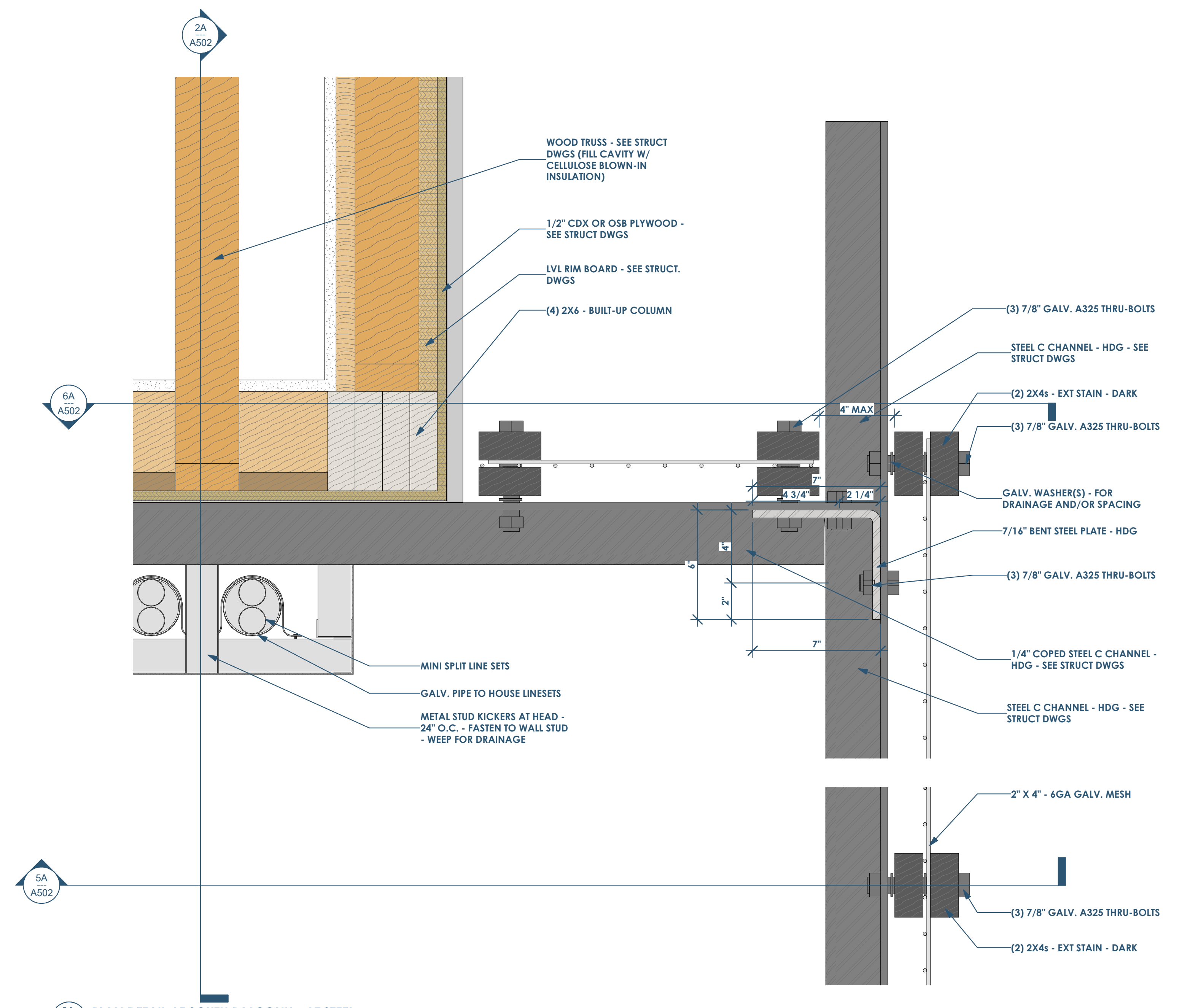
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6C A501 PLAN DETAIL AT SOUTH BALCONY - ABOVE DECKING
3" = 1'-0"



3C A501 PLAN DETAIL AT SOUTH BALCONY - AT LEDGER
3" = 1'-0"



3A A501 PLAN DETAIL AT SOUTH BALCONY - AT STEEL
3" = 1'-0"

Renovation Wranglers
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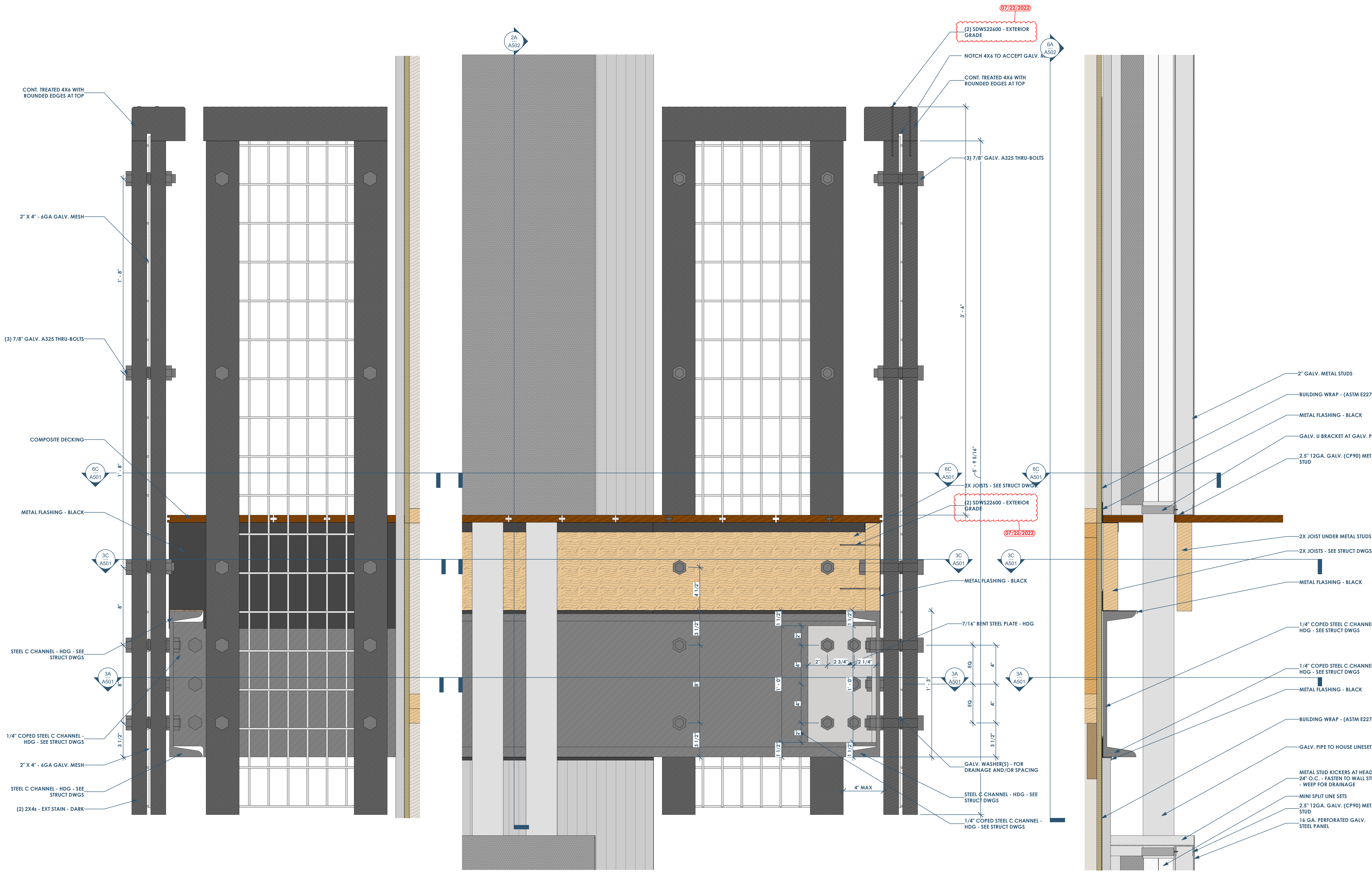
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6A SECTION (ELEVATION) DETAIL AT SOUTH BALCONY - LOOKING EAST OR WEST
3" = 1'-0"

5A SECTION DETAIL AT SOUTH BALCONY - LOOKING EAST OR WEST
3" = 1'-0"

2A SECTION AT BALCONY 4
3" = 1'-0"

RENOVATION
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LKB
ARCHITECTURE

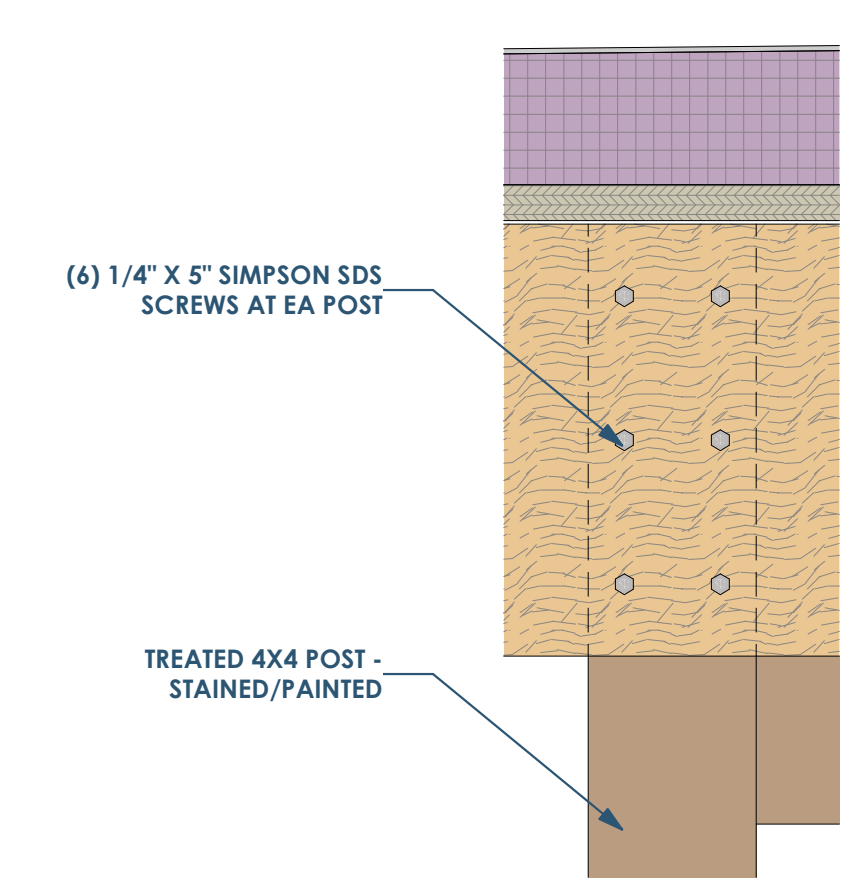
Architect of Record: LKB Architecture
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Houston, TX 77019
isa@lkbarchitecture.com | 713.425.3076

DUDLEY
STRUCTURE

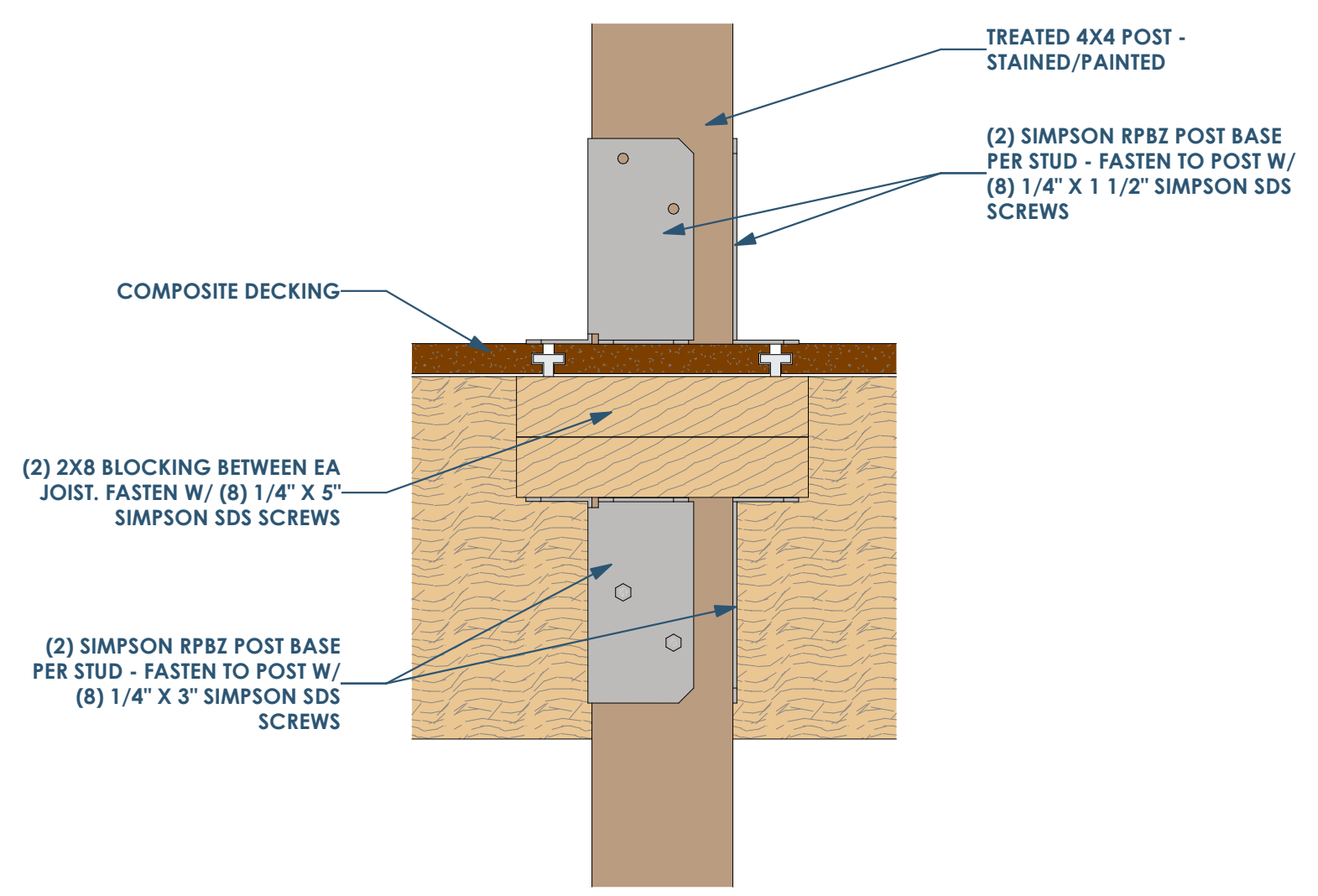
Structural: Dudley
Firm # 18677
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amc
ENGINEERS

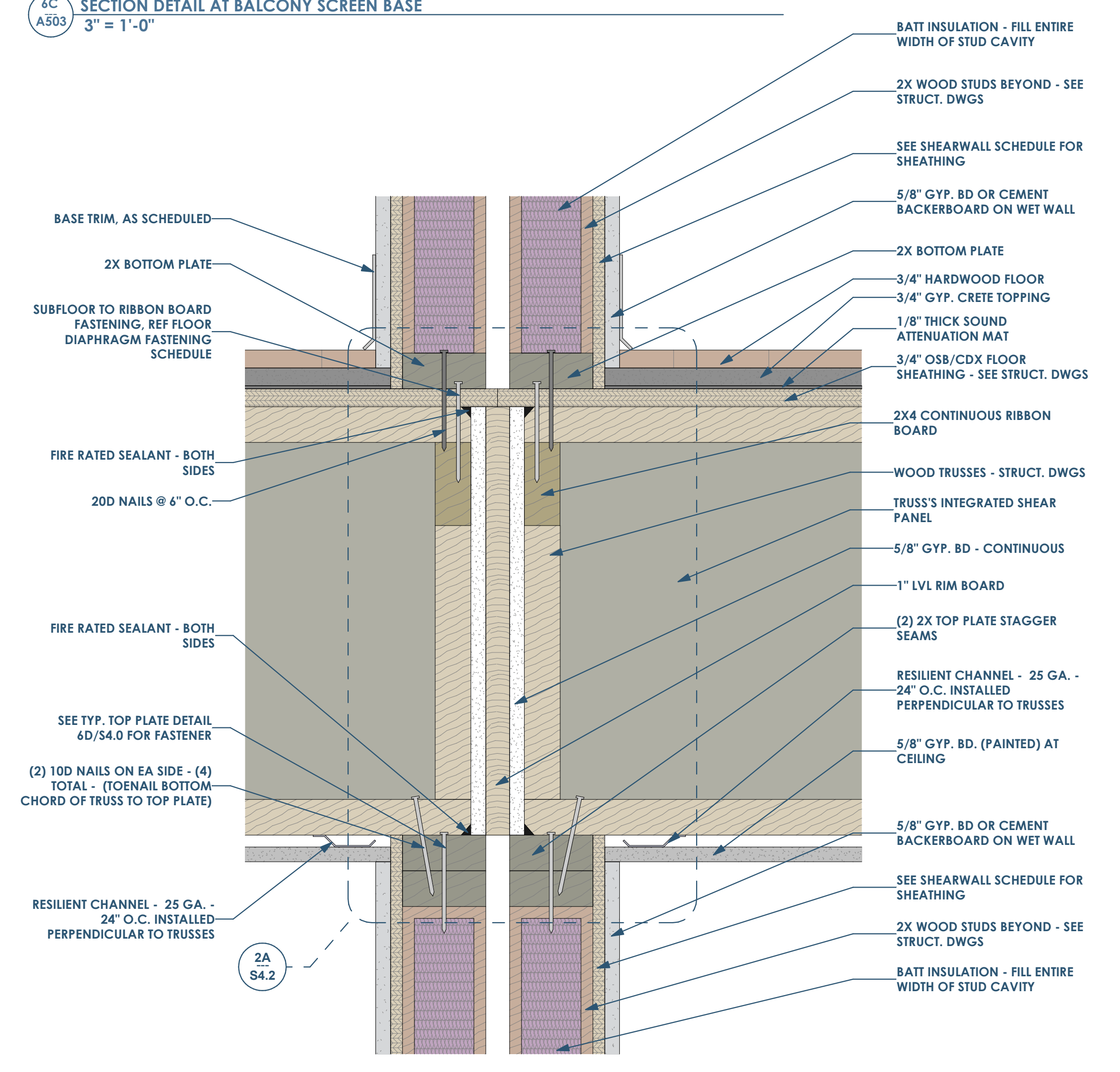
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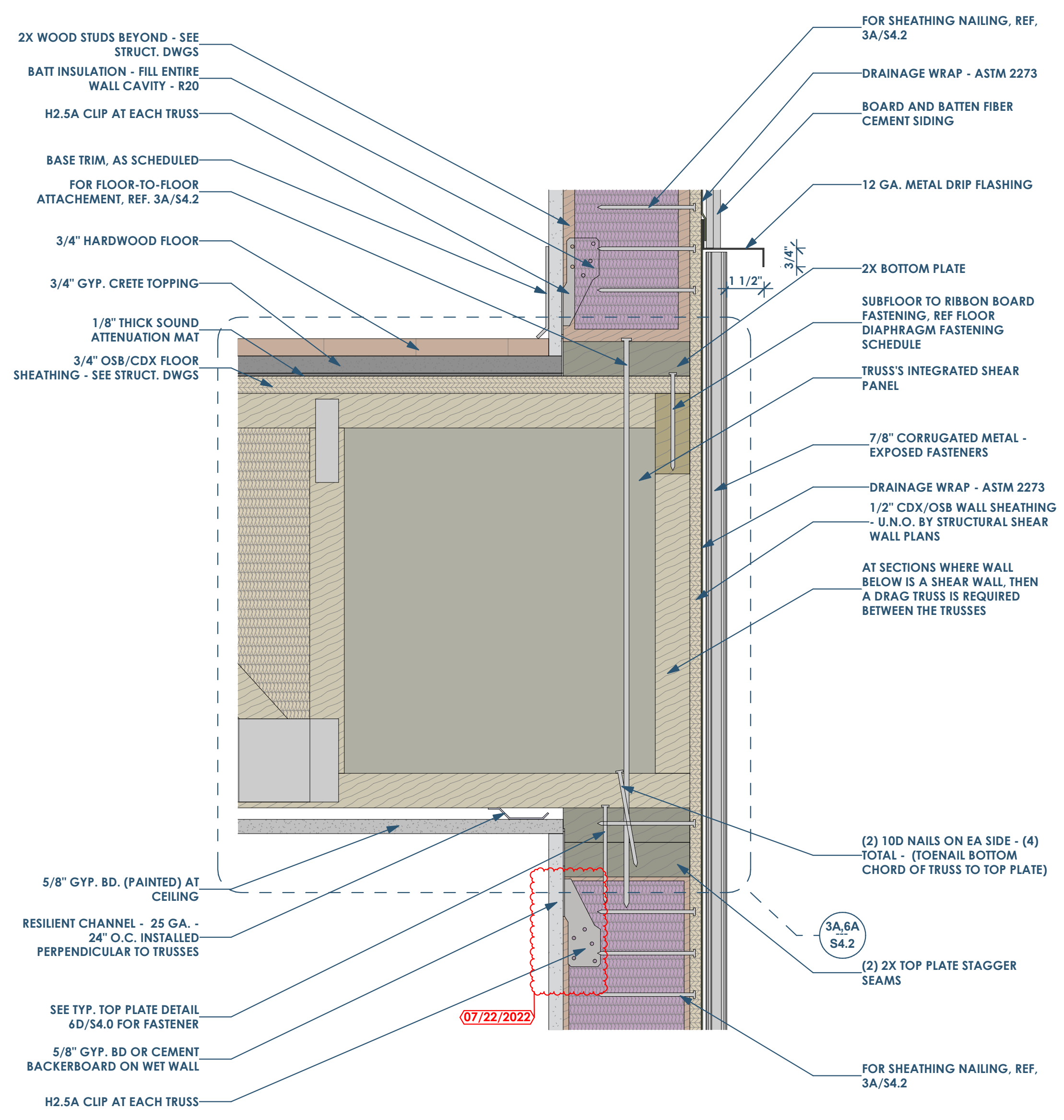
4E A503 SECTION DETAIL AT BALCONY SCREEN HEAD
3" = 1'-0"



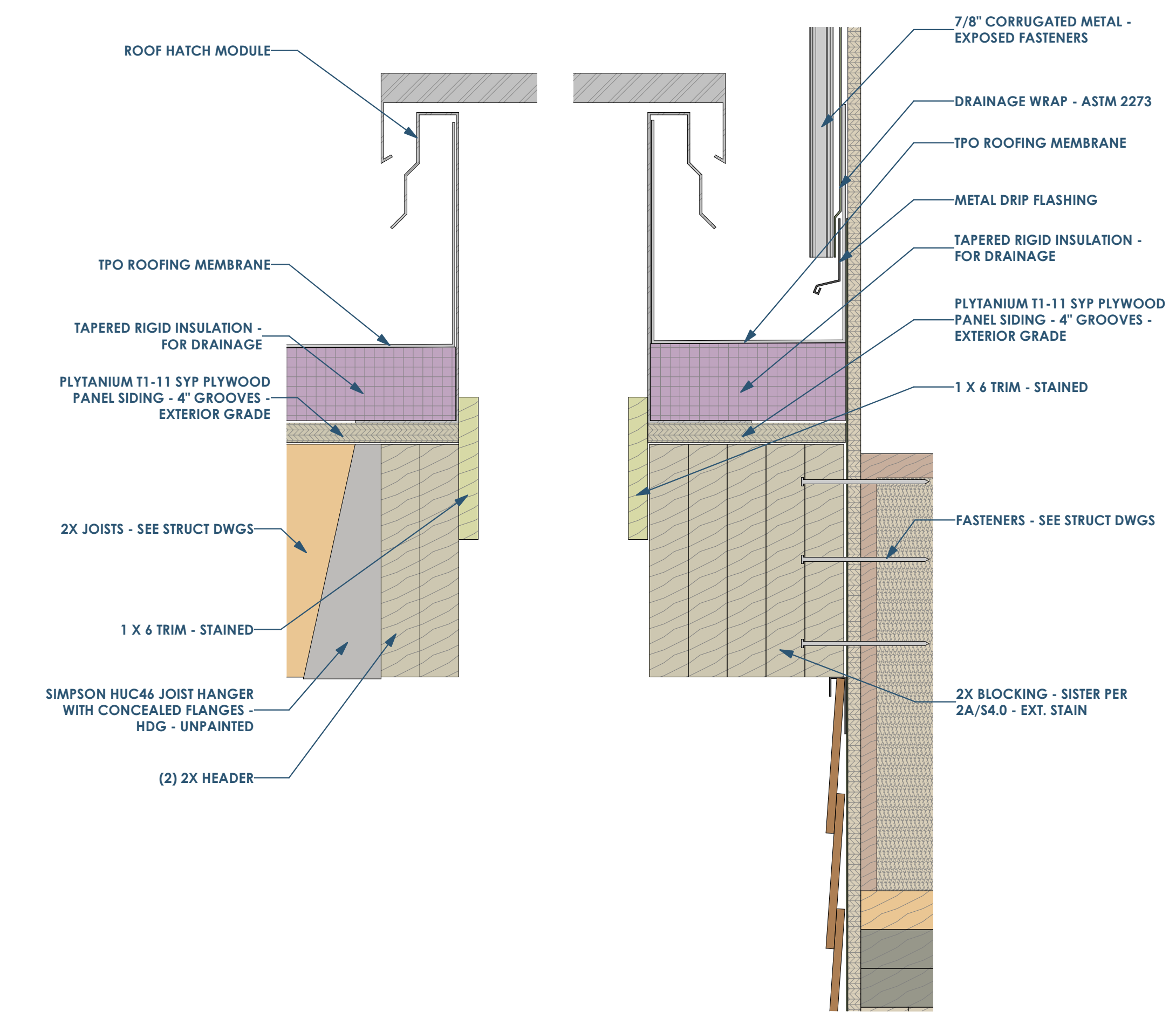
6C A503 SECTION DETAIL AT BALCONY SCREEN BASE
3" = 1'-0"



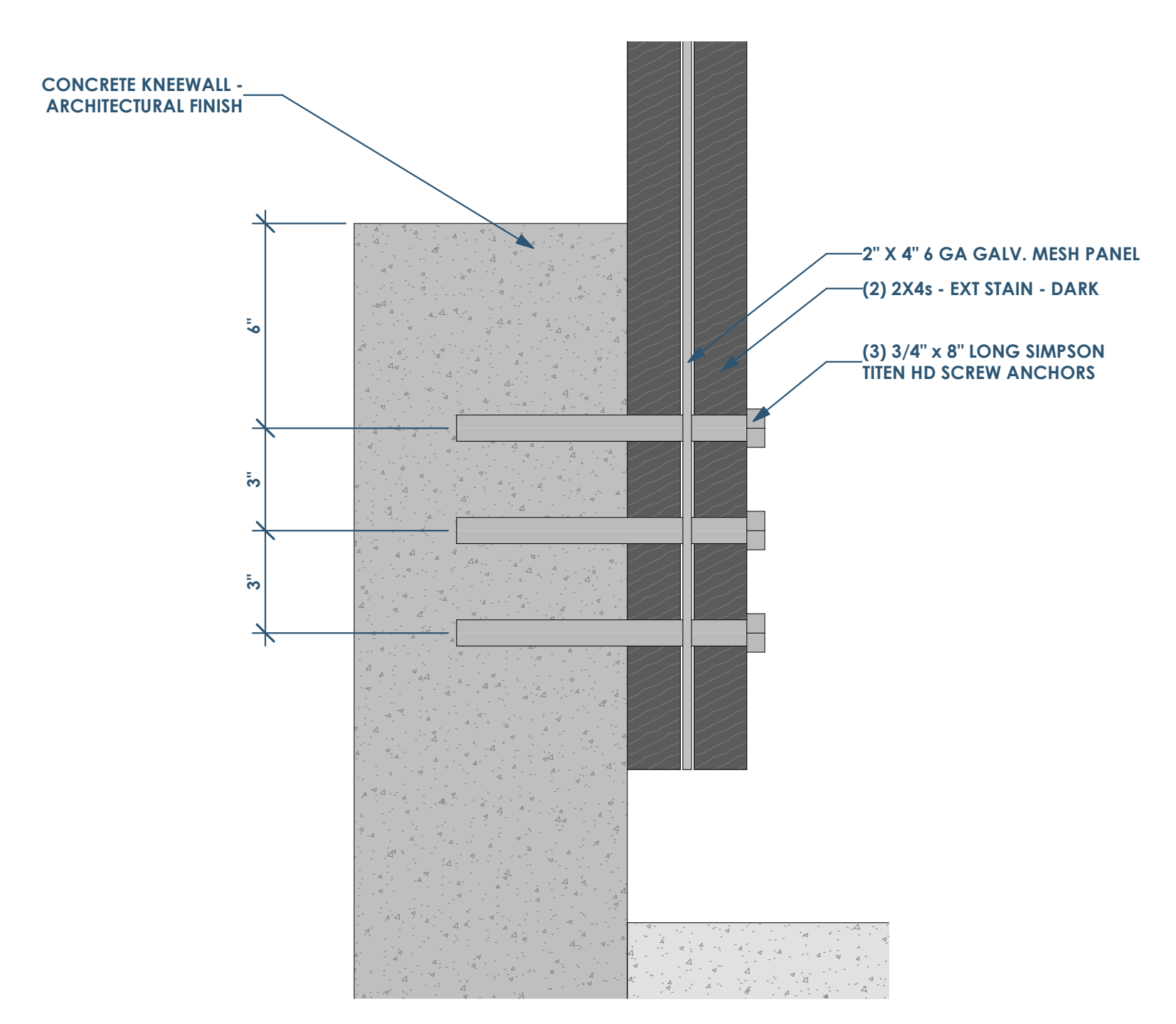
6A A503 SECTION DETAIL - PARTY WALL AND FLOOR TRUSS
3" = 1'-0"



4A A503 SECTION DETAIL - EXTERIOR WALL & FLOOR TRUSS
3" = 1'-0"



2C A503 SECTION DETAIL - ROOF HATCH
3" = 1'-0"



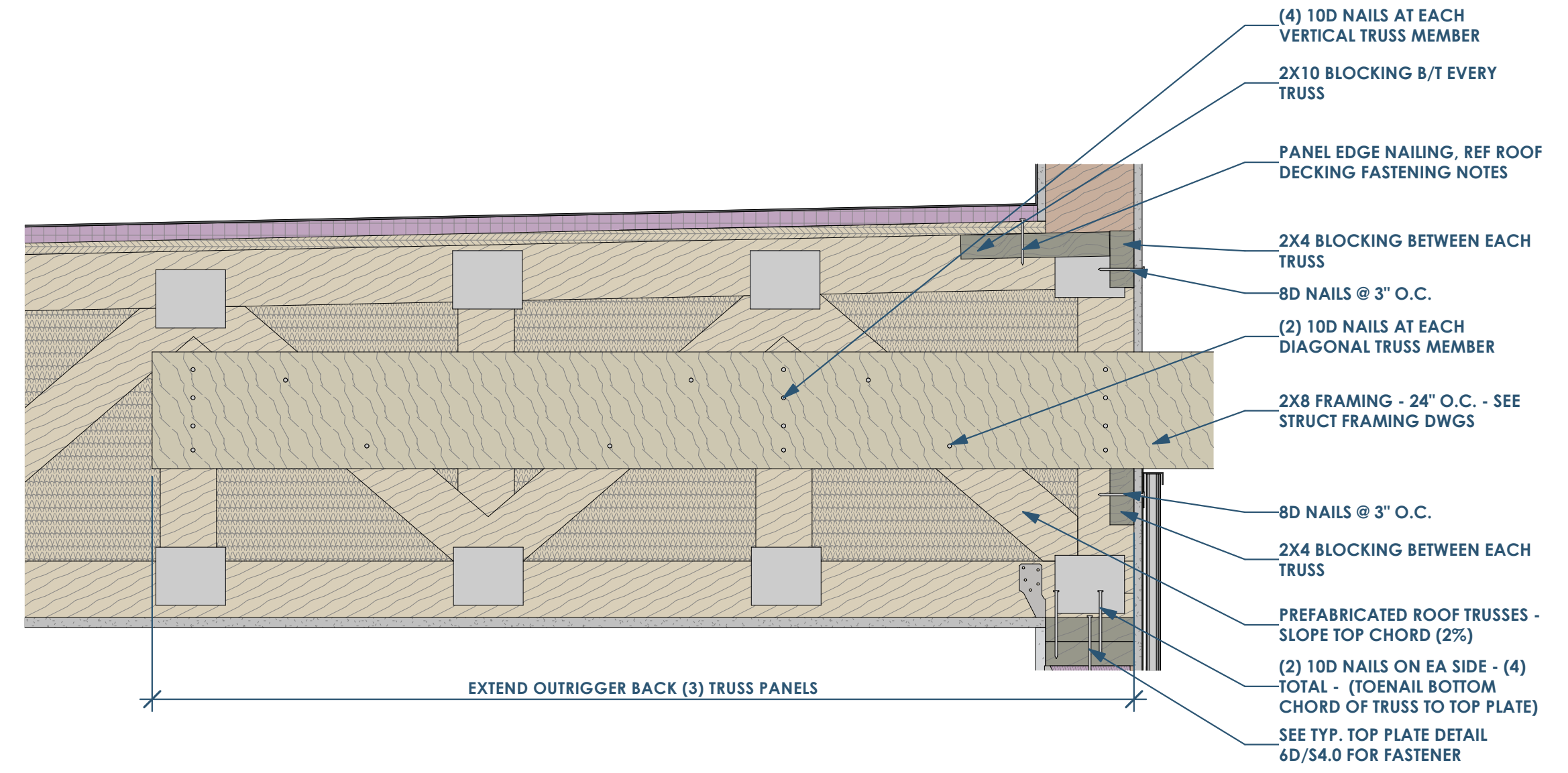
2A A503 SECTION DETAIL - AT CONCRETE KNEEWALL
3" = 1'-0"

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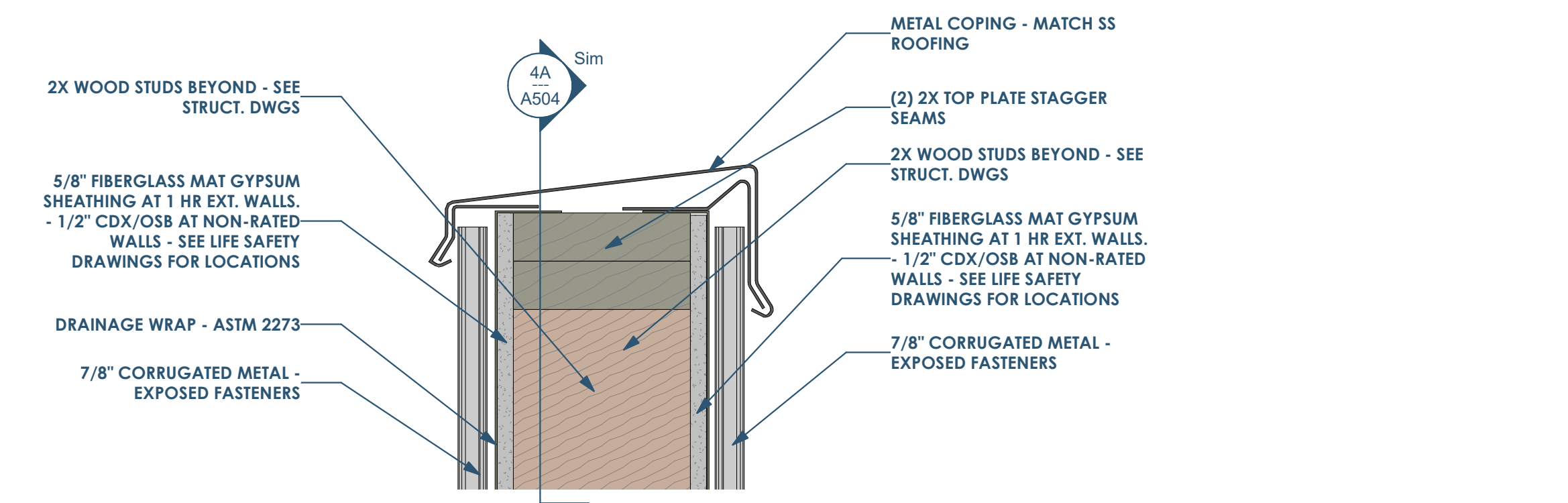
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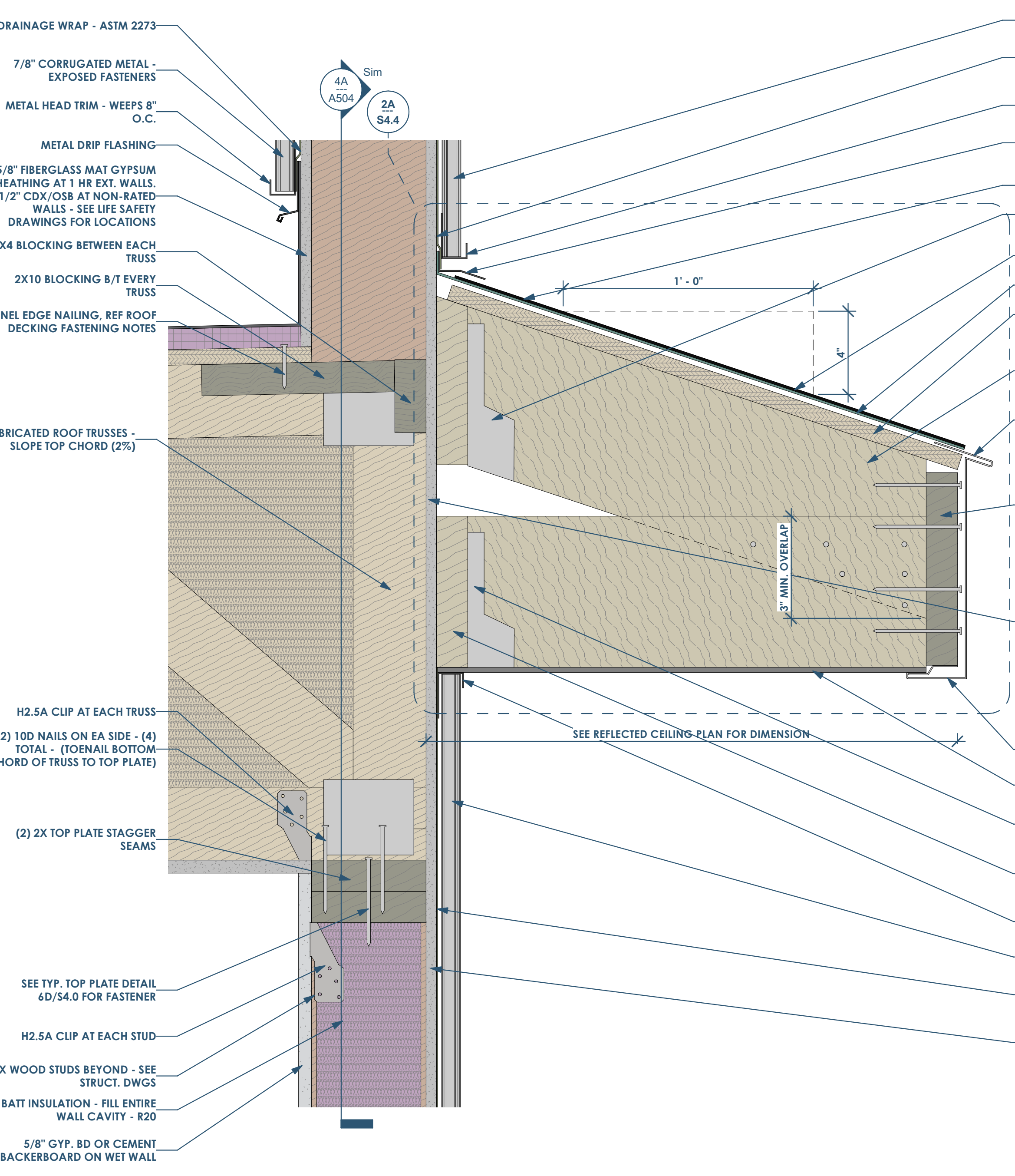
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SECTION DETAIL AT OUTRIGGER
1 1/2" = 1'-0"



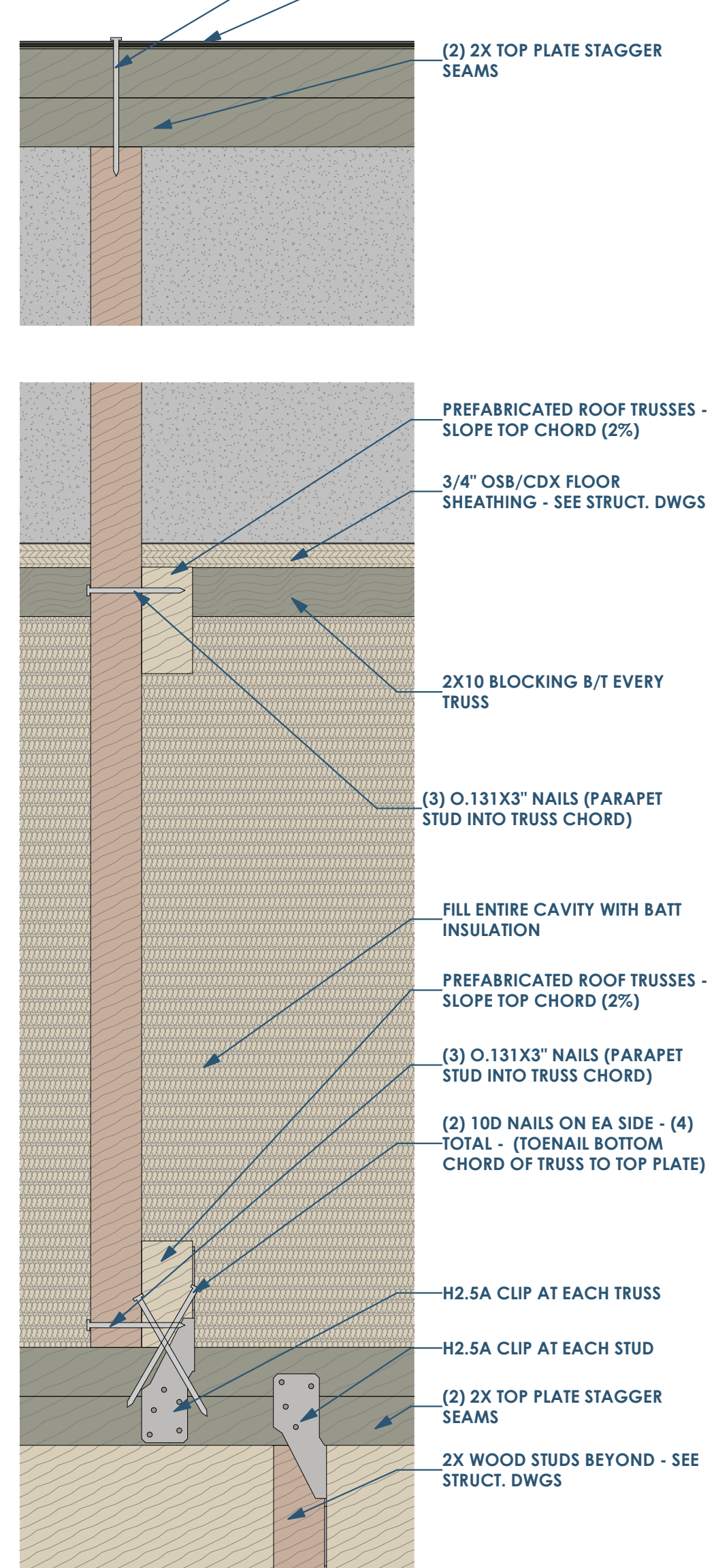
SECTION DETAIL - TOP OF PARAPET
3" = 1'-0"



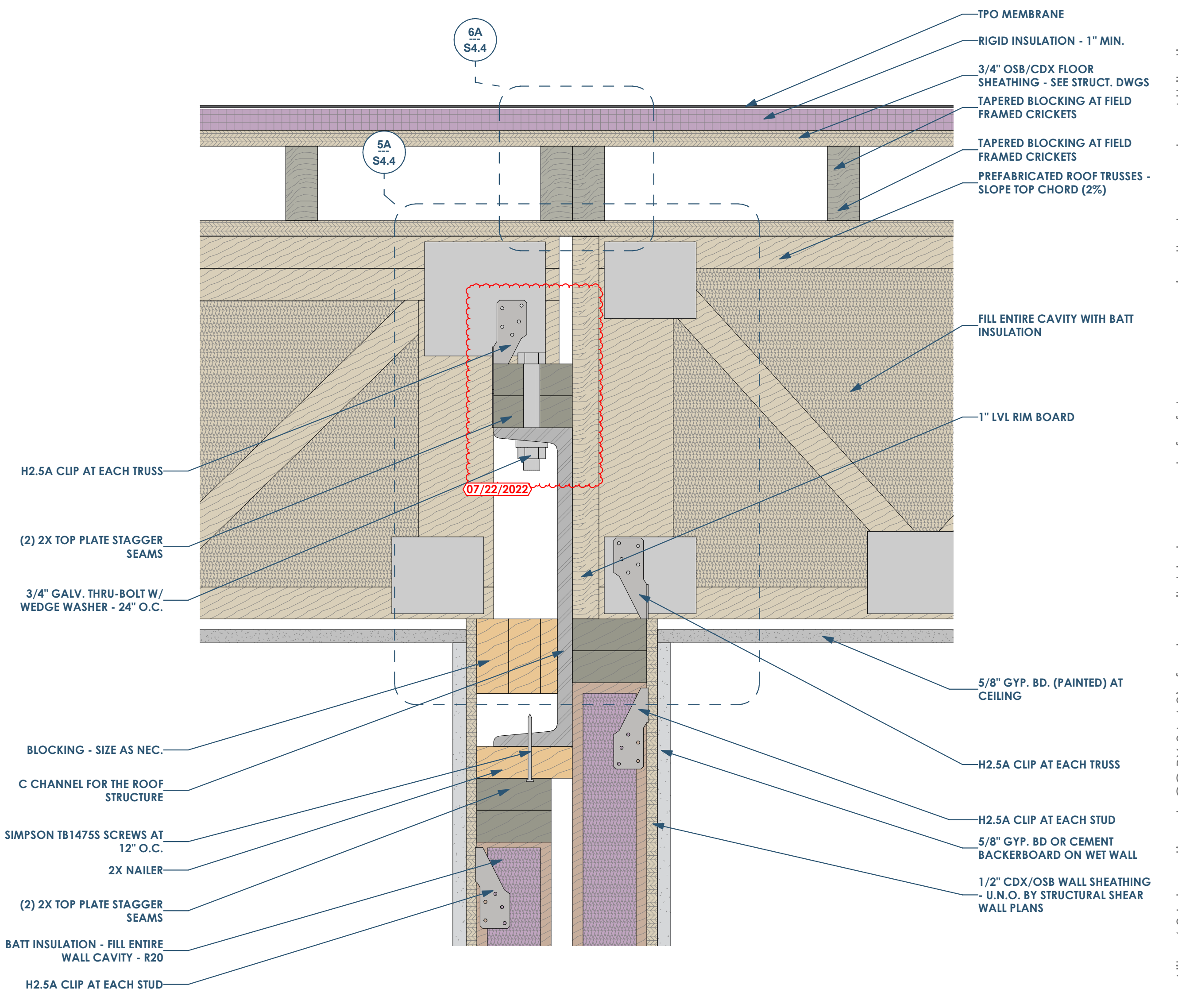
SECTION DETAIL - ROOF AND SOFFIT
3" = 1'-0"



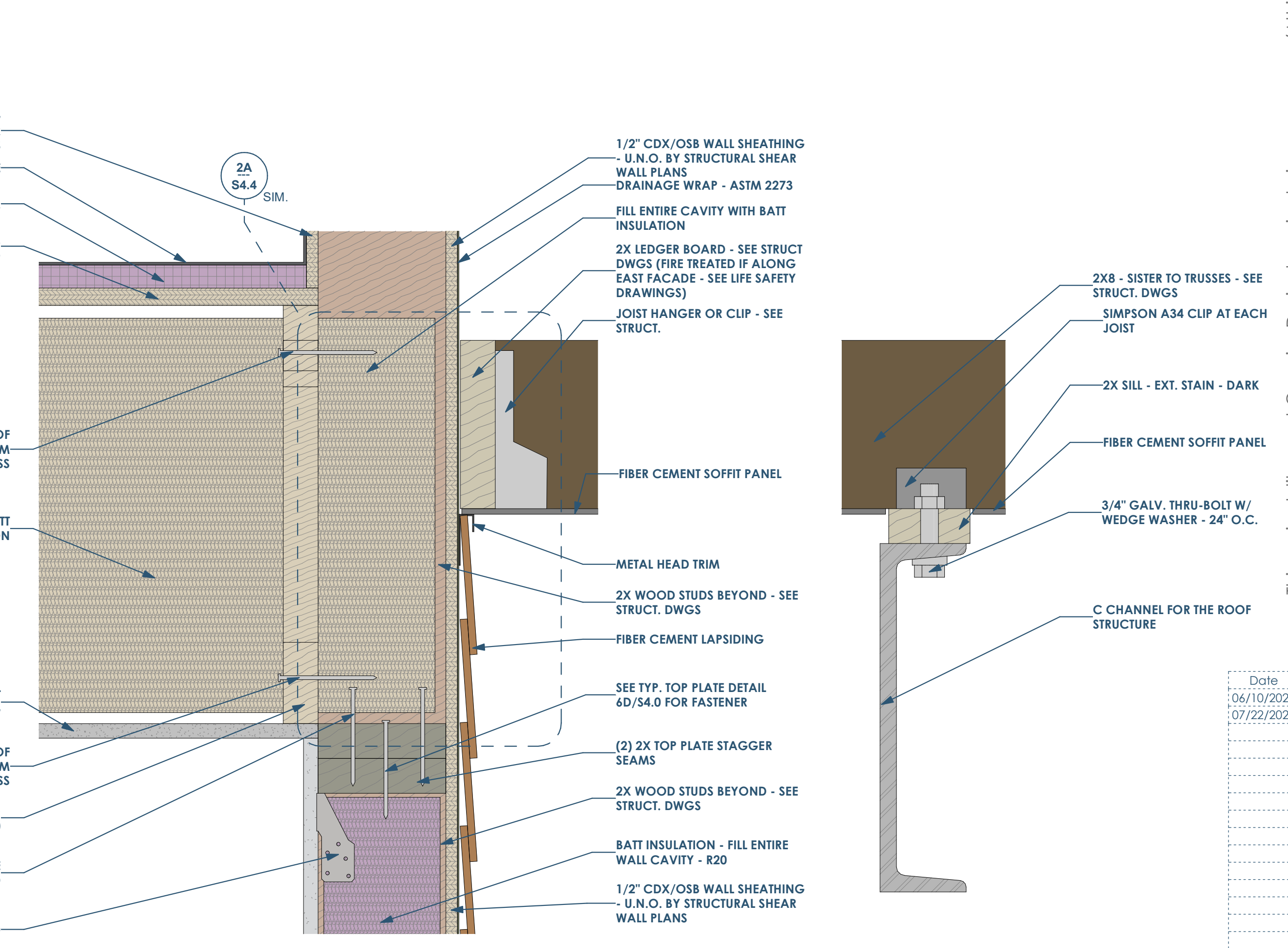
SECTION DETAIL - AT PARAPET WALL
3" = 1'-0"



SECTION DETAIL - AT SOFFIT AND ALCOVE
3" = 1'-0"



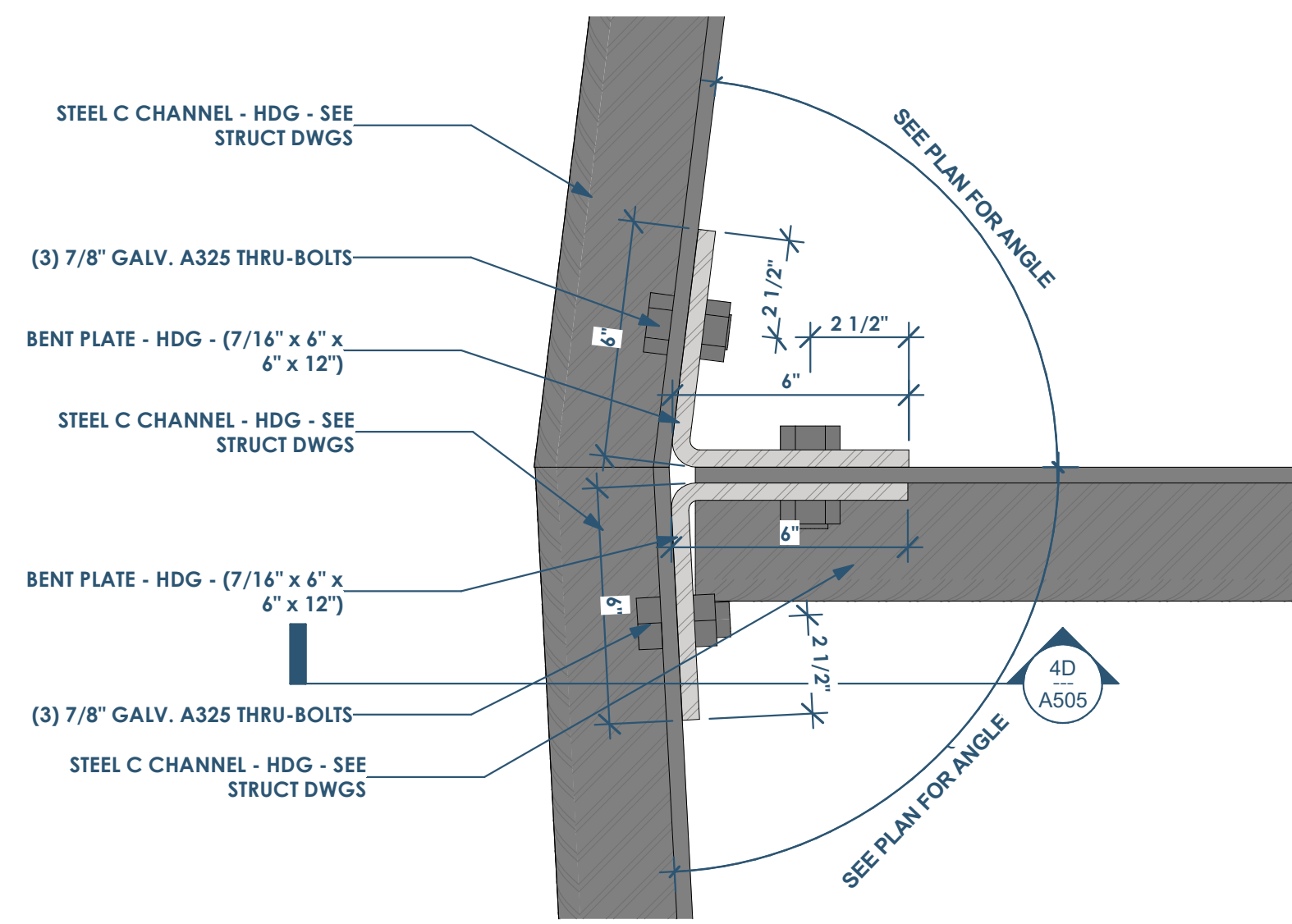
SECTION DETAIL - AT ROOF BEAM
3" = 1'-0"



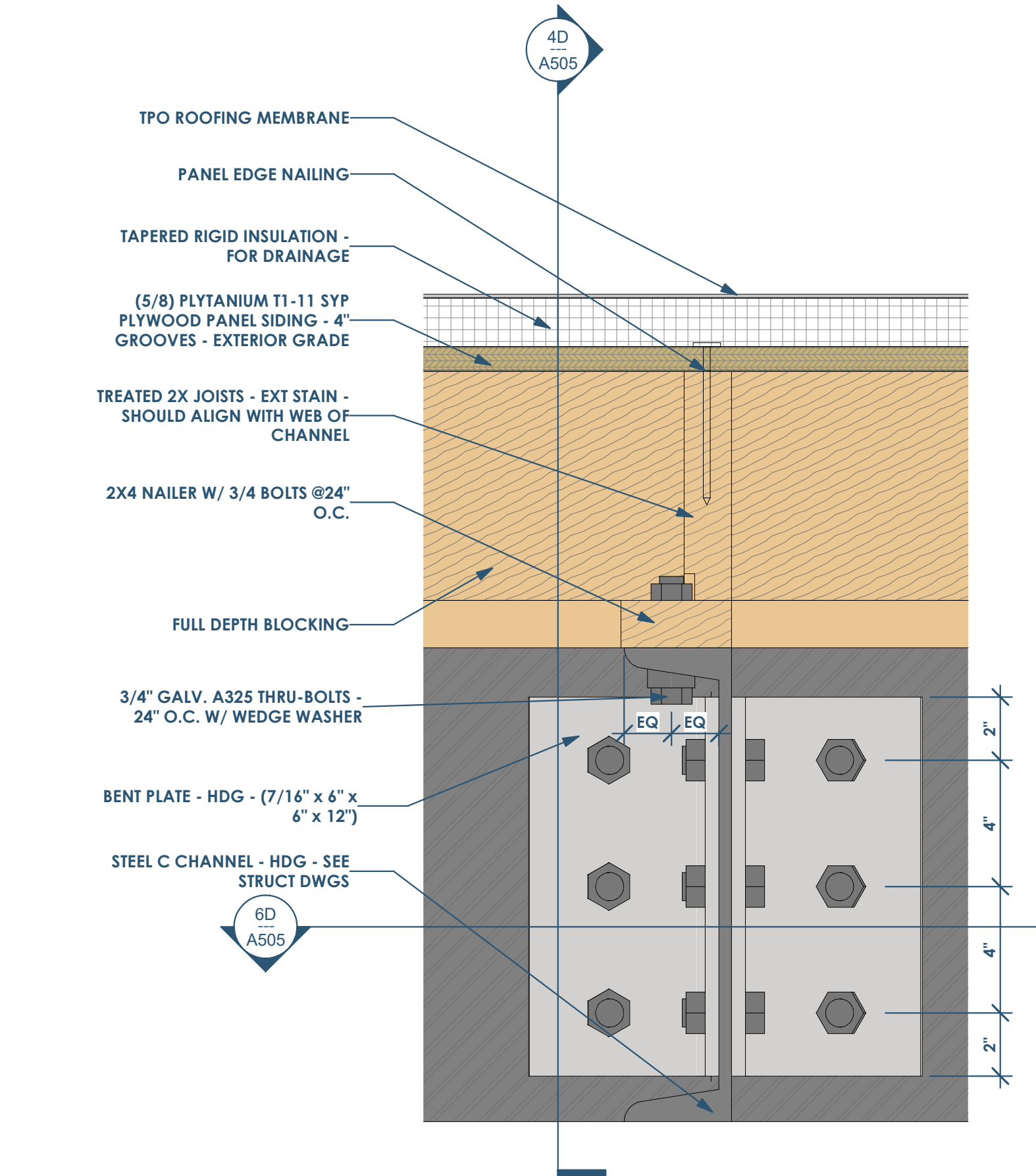
SECTION DETAIL - ALCOVE AT ROOF BEAM
3" = 1'-0"

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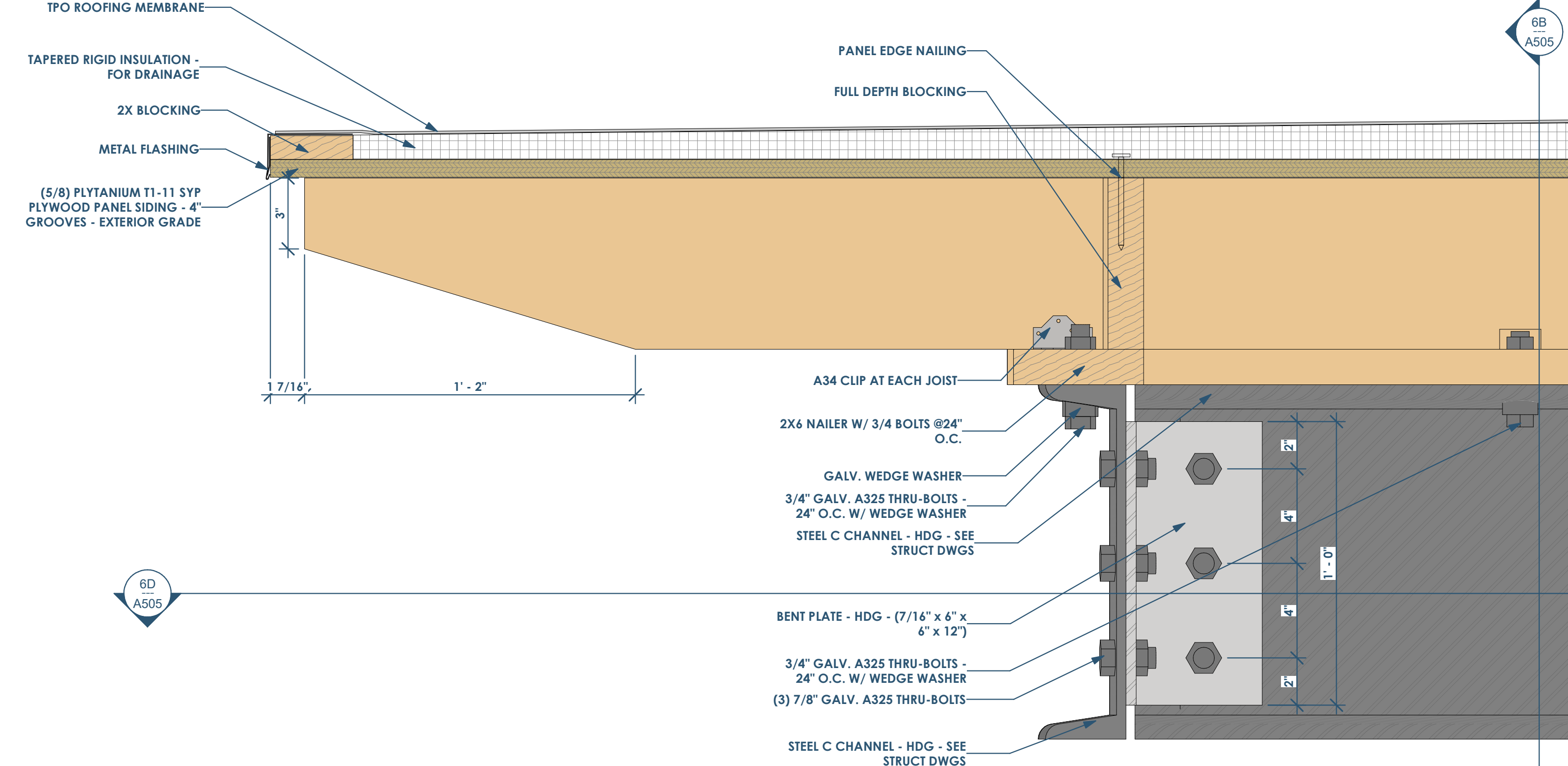
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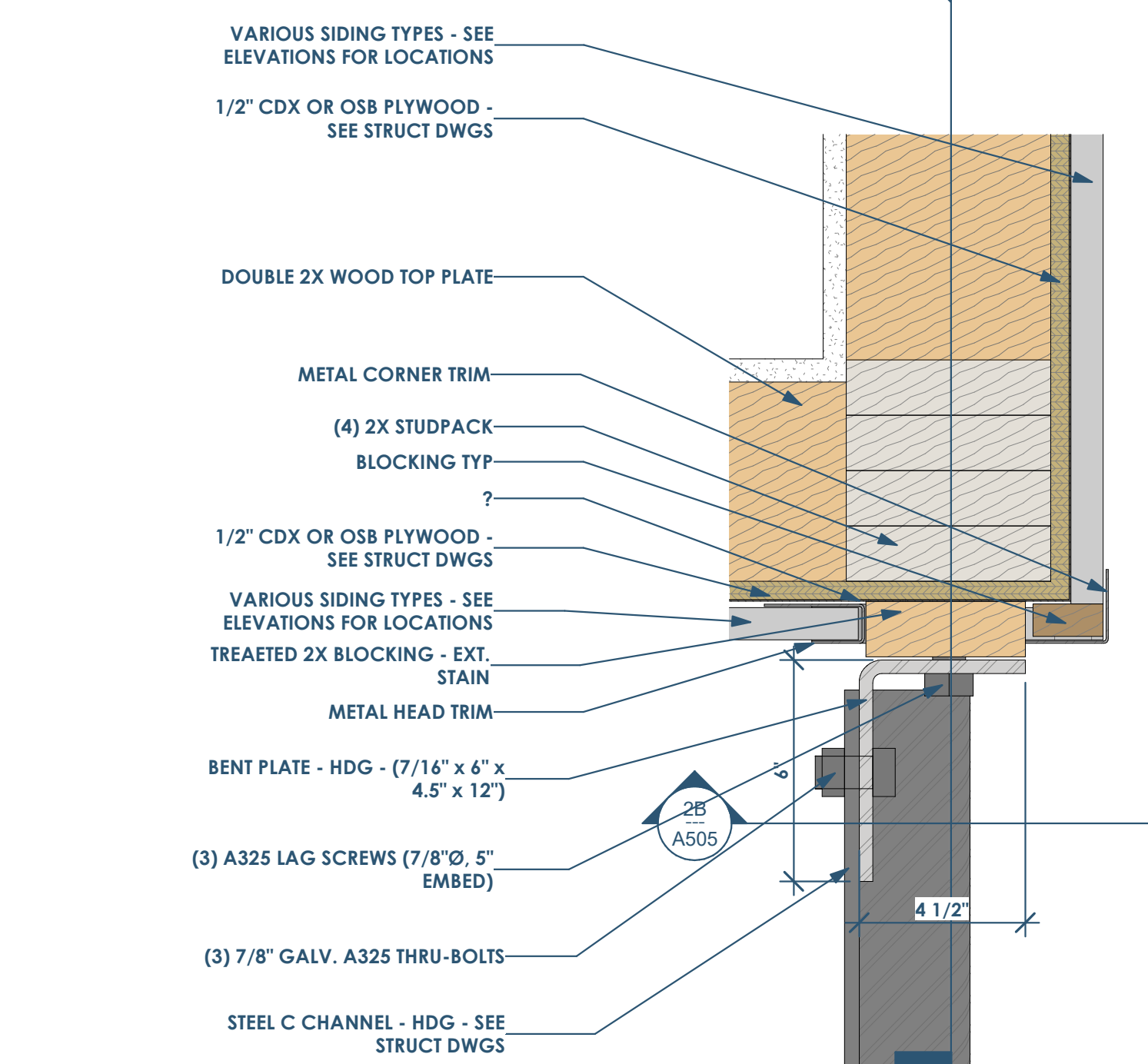
4D A505 DETAIL - ROOF - C CHANNEL PLAN 3" = 1'-0"



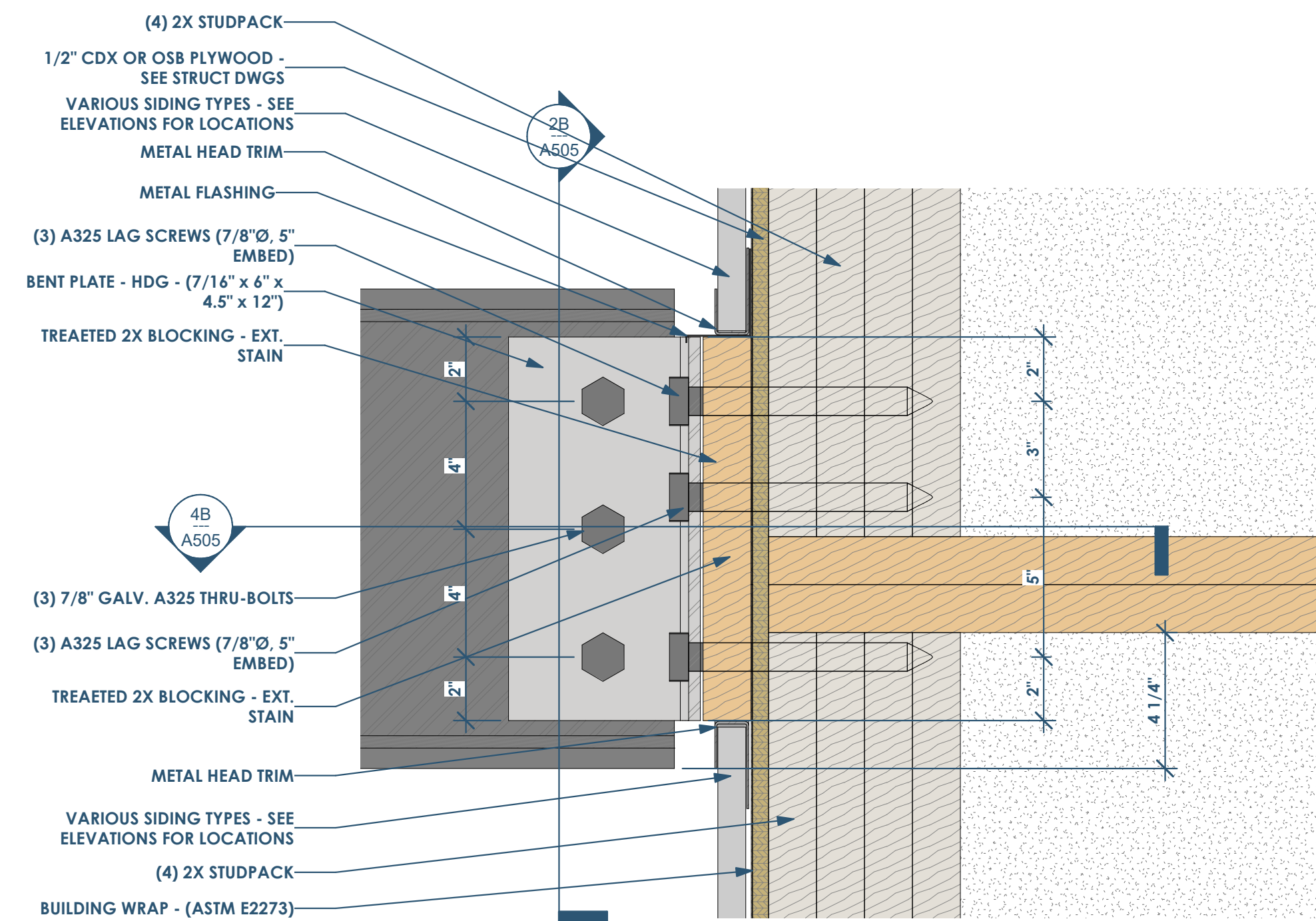
4B A505 DETAIL - ROOF - C CHANNEL SECTION 1 3" = 1'-0"



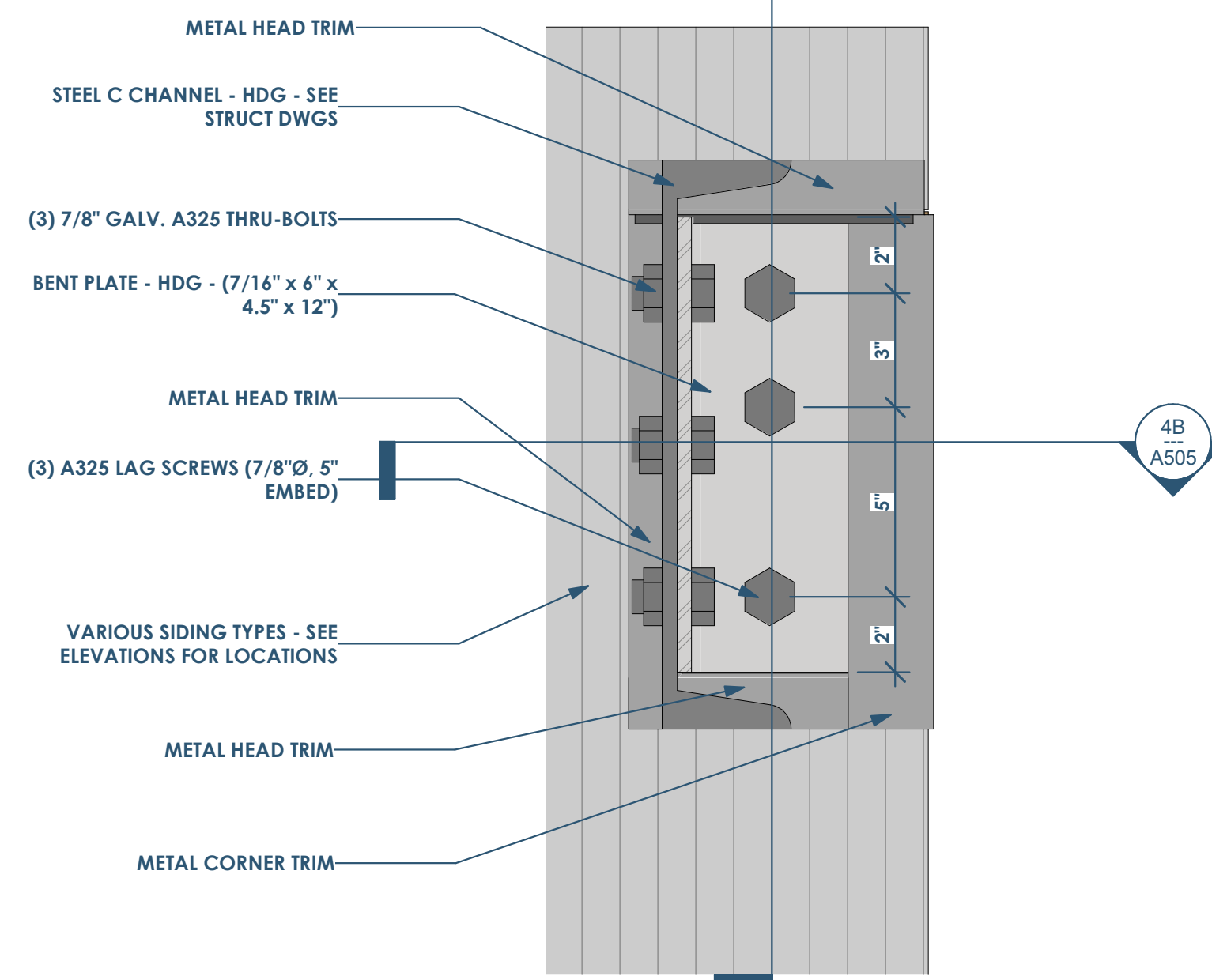
4D A505 DETAIL - ROOF - C CHANNEL SECTION 2 3" = 1'-0"



4B A505 DETAIL - ROOF 2 - C CHANNEL SECTION 1 3" = 1'-0"



4A A505 DETAIL - ROOF 2 - C CHANNEL SECTION 2 3" = 1'-0"



2B A505 DETAIL - ROOF 2 - C CHANNEL - SECTION 2 3" = 1'-0"

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Date	Description
04/10/2022	Issued for Permit
07/22/2022	Permit Revisions

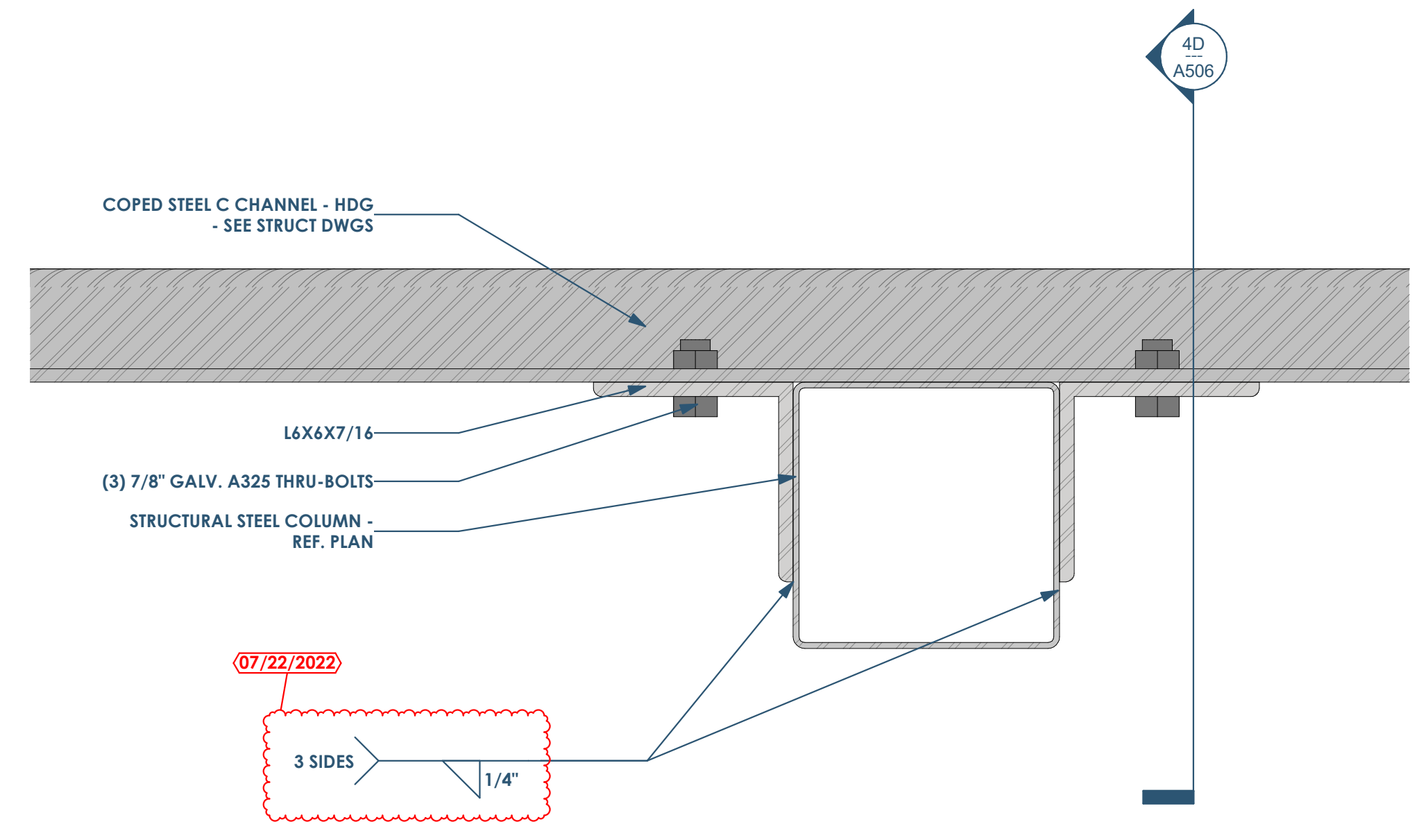
RENOVATION Wranglers
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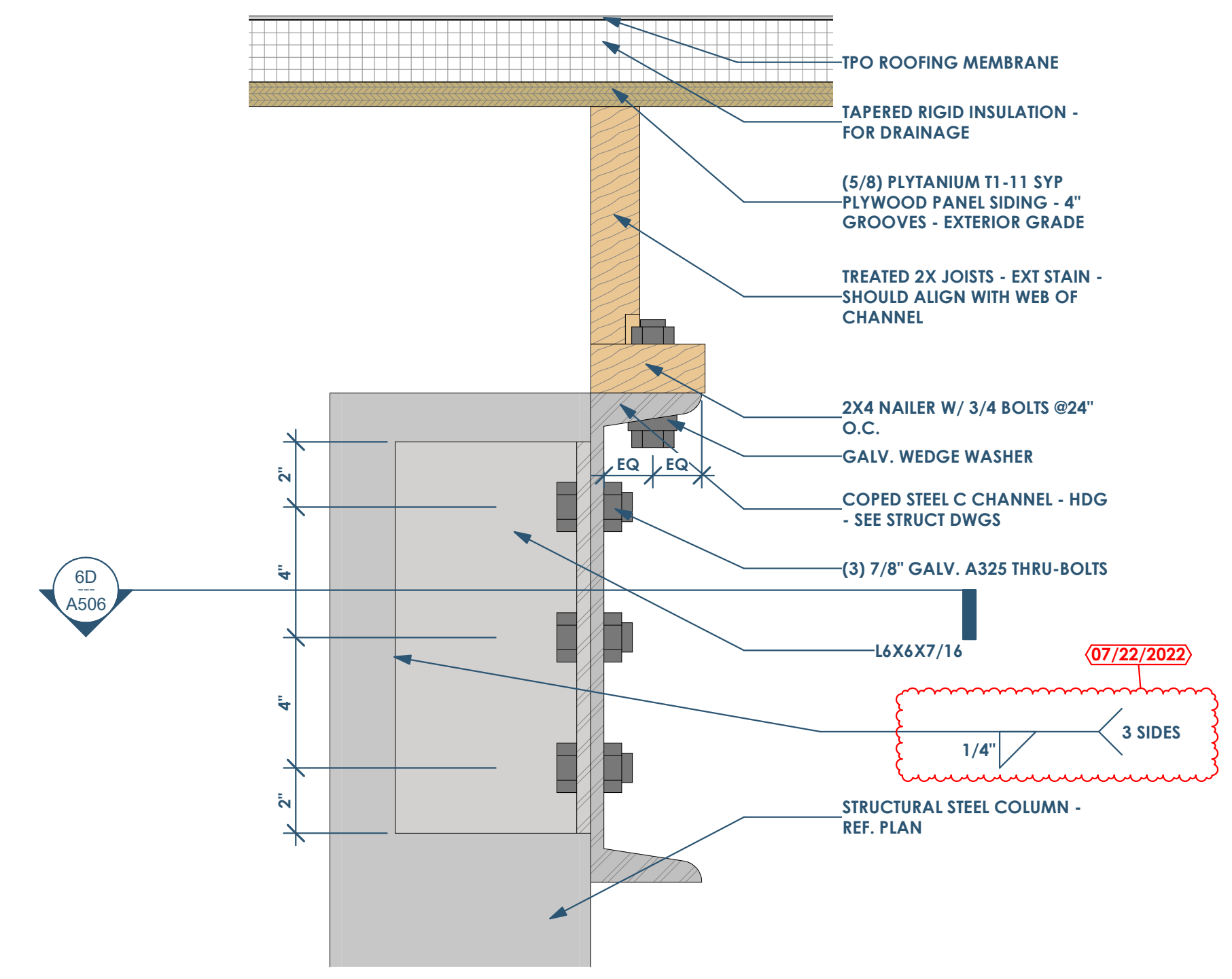
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amc ENGINEERS
 MEP: AMC Engineers
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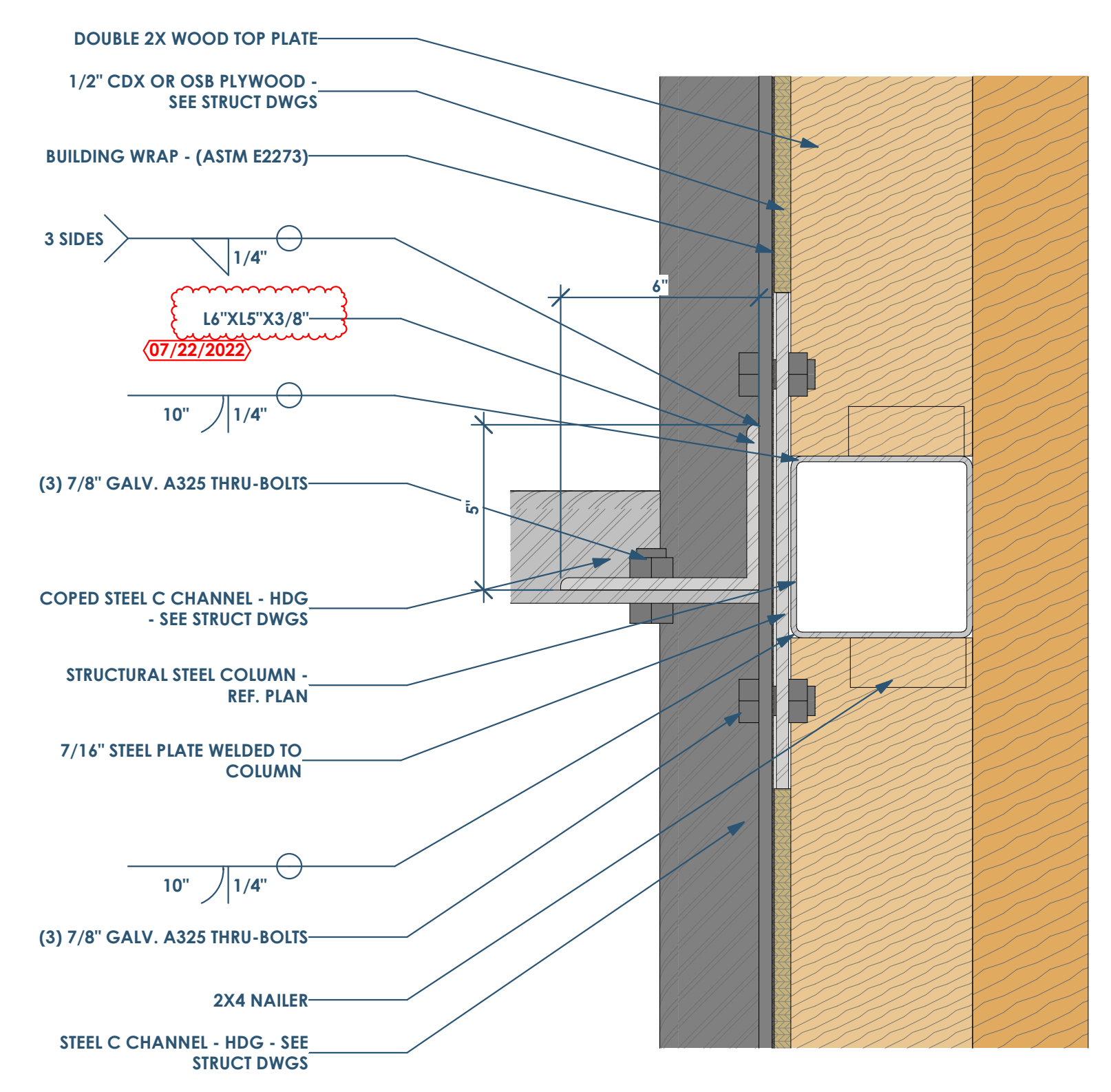
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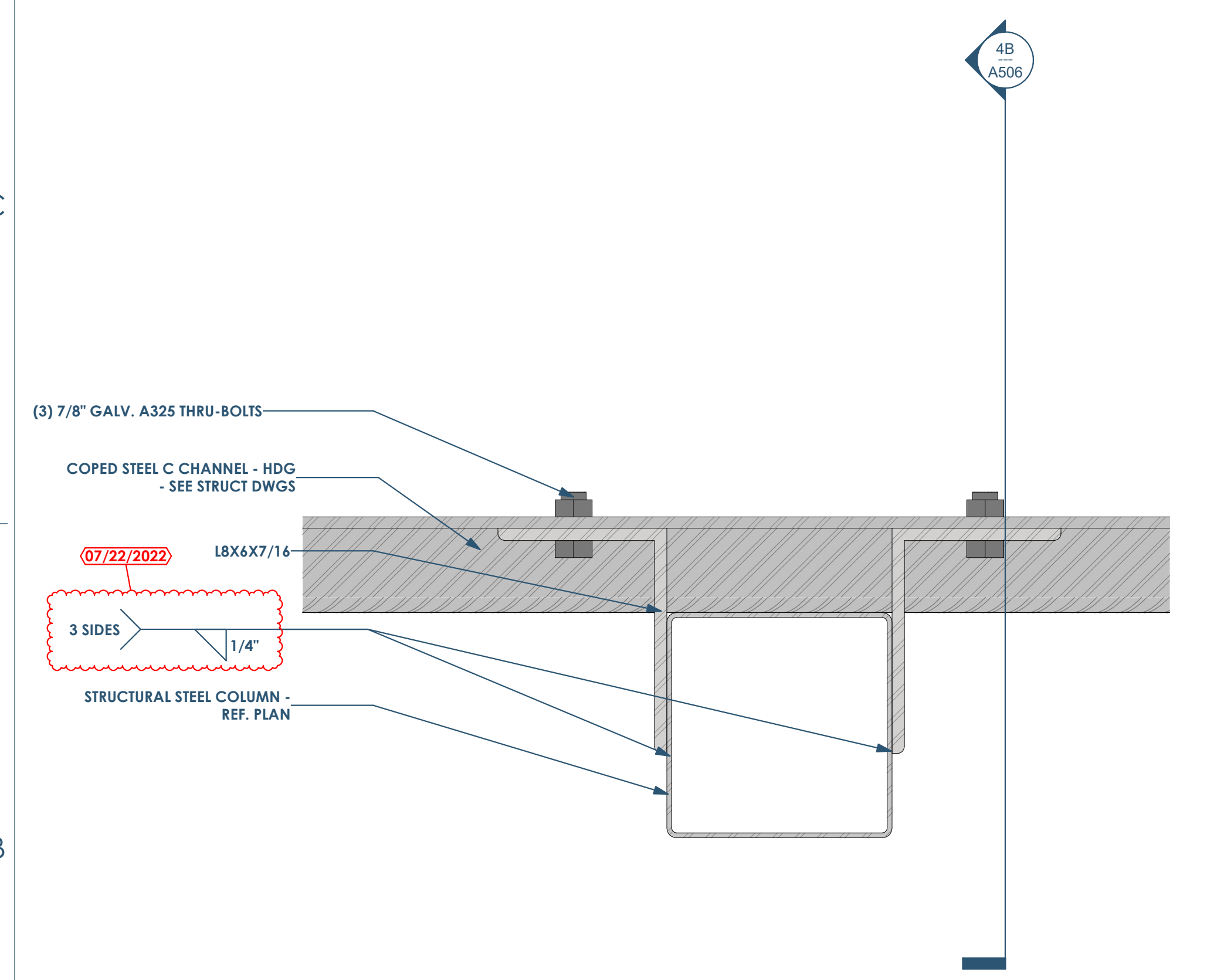
4D A506 PLAN DETAIL C CHANNEL TO COLUMN - AT ROOF
3" = 1'-0"



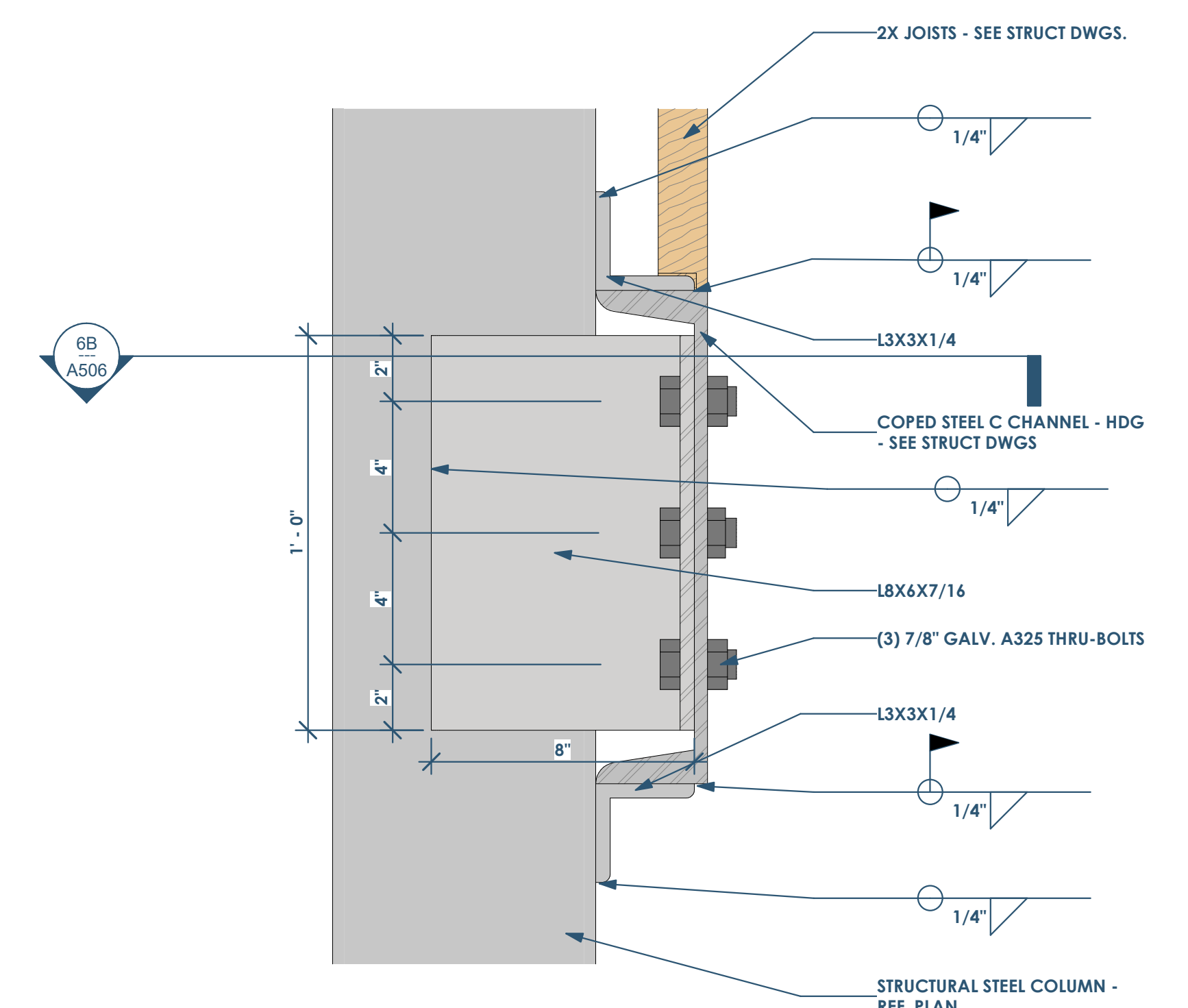
4D A506 SECTION DETAIL C CHANNEL TO COLUMN - AT ROOF
3" = 1'-0"



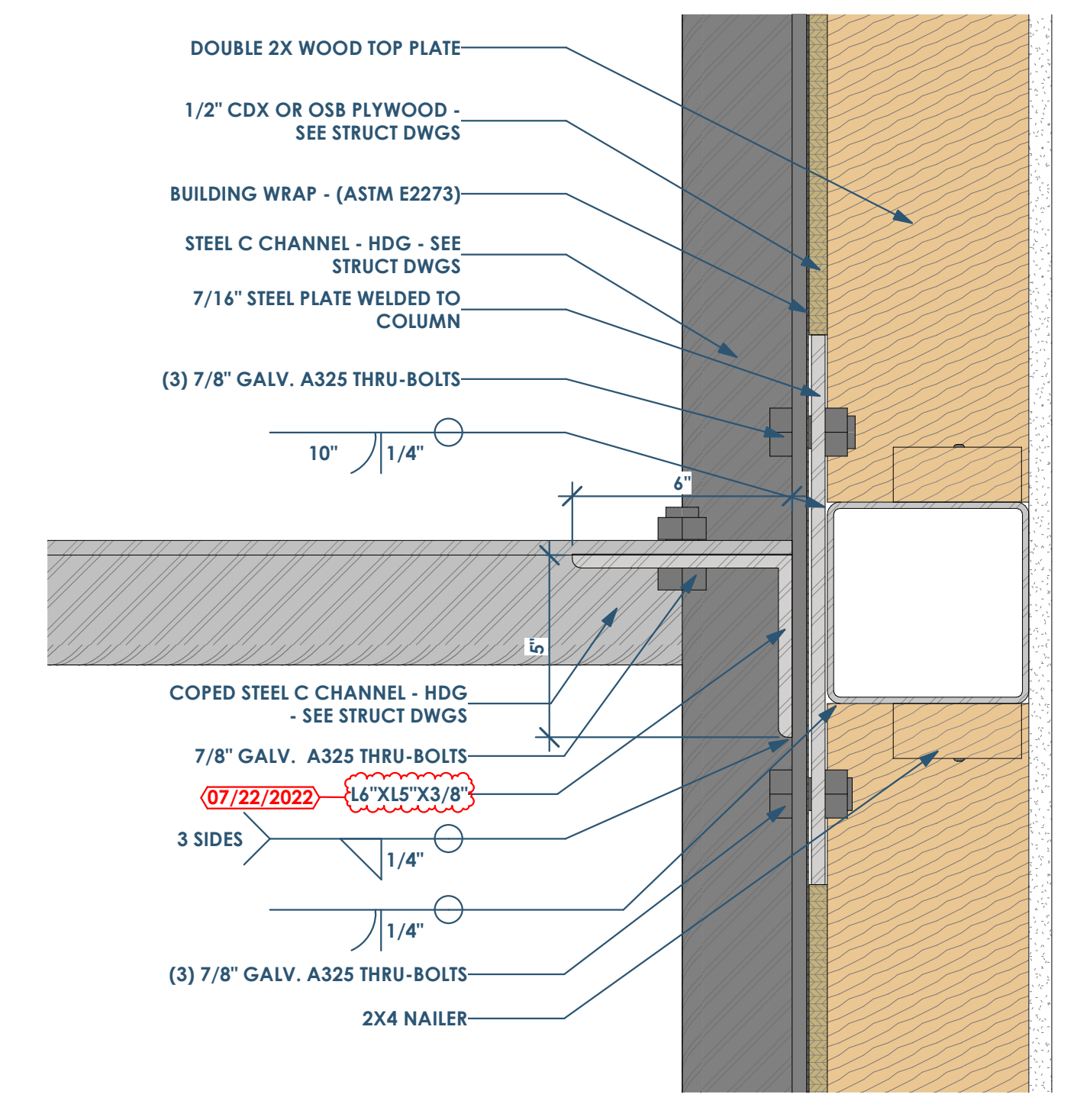
2D A506 PLAN DETAIL C CHANNEL TO COLUMN AT WALL - ROOF
3" = 1'-0"



6B A506 PLAN DETAIL C CHANNEL TO COLUMN - 3RD AND 2ND FLOORS
3" = 1'-0"



6B A506 SECTION DETAIL C CHANNEL TO COLUMN - AT ROOF 2ND AND 3RD FLOORS
3" = 1'-0"

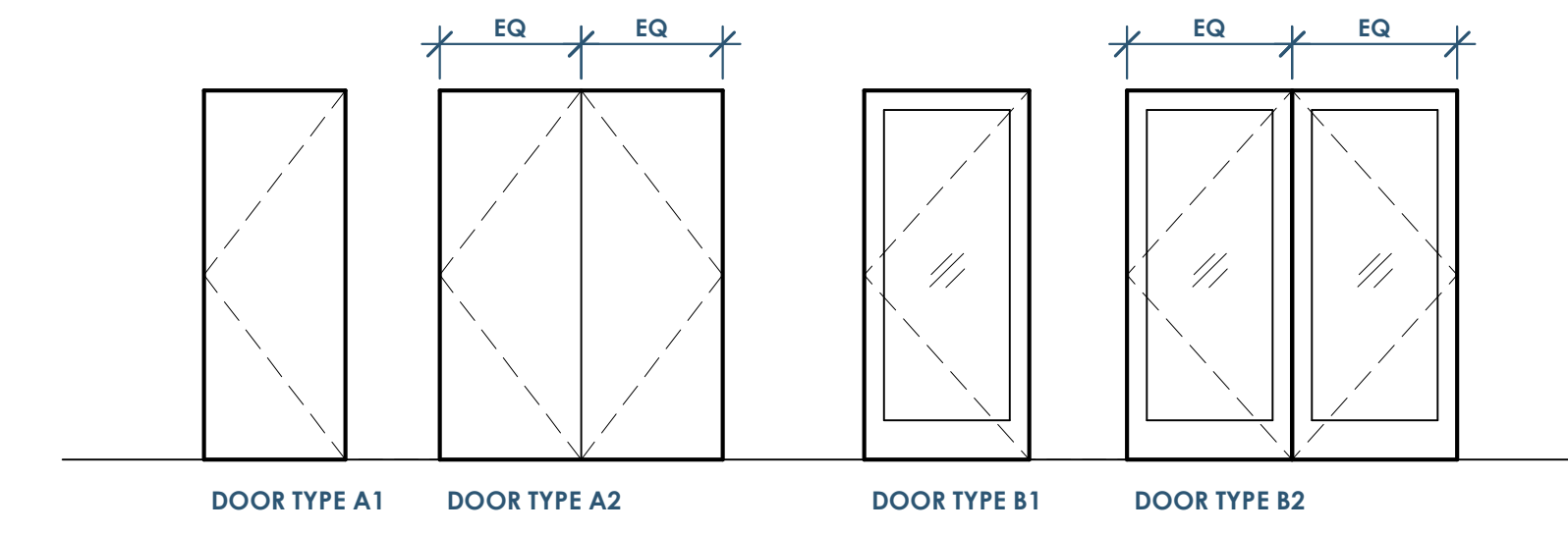


2B A506 PLAN DETAIL C CHANNEL TO COLUMN AT WALL - 3RD AND 2ND FLOORS
3" = 1'-0"

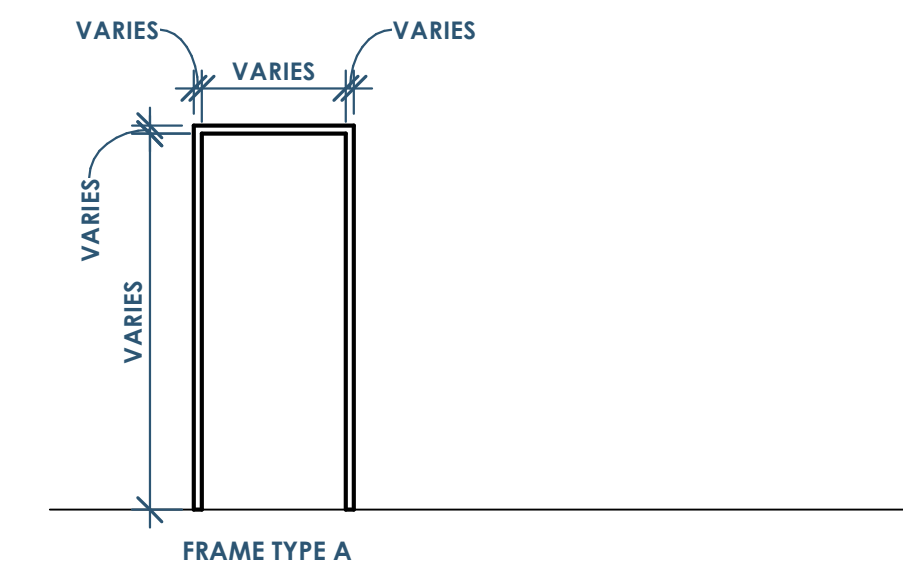
Date	Description
04/10/2022	Issued for Permit
07/22/2022	Permit Revisions

DOOR SCHEDULE - TYPE											
TYPE MARK	COUNT	TYPE	WIDTH	HEIGHT	FIRE RATING	DOOR TYPE	DOOR MATERIAL	FRAM TYPE	FRAME MATERIAL	GLAZING	TYPE COMMENTS
D1	28	SINGLE - LITE - MUNTINS - 3-0 x 6-8	3'-0"	6'-8"		B1	CW - CLAD WOOD DOOR	A	CW - CLAD WOOD DOOR	GL - TEMPERED - INSULATED - LOW-E	
D2	24	SINGLE - FLUSH - 3-0 x 6-8	3'-0"	6'-8"		A1	WD - HOLLOW CORE	A	WD	-	
D3	30	SINGLE - FLUSH - 2-10 x 6-8	2'-10"	6'-8"		A1	WD - HOLLOW CORE	A	WD	-	
D4	11	SINGLE - FLUSH - 2-0 x 6-8	2'-0"	6'-8"		A1	WD - HOLLOW CORE	A	WD	-	
D5	6	DOUBLE - FLUSH - 5-0 x 6-8	5'-0"	6'-8"		A2	WD - HOLLOW CORE	A	WD	-	
D6	1	SINGLE - HOLLOW METAL - 3-0 x 6-8	3'-0"	6'-8"		A1	HM	A	HM	N/A	

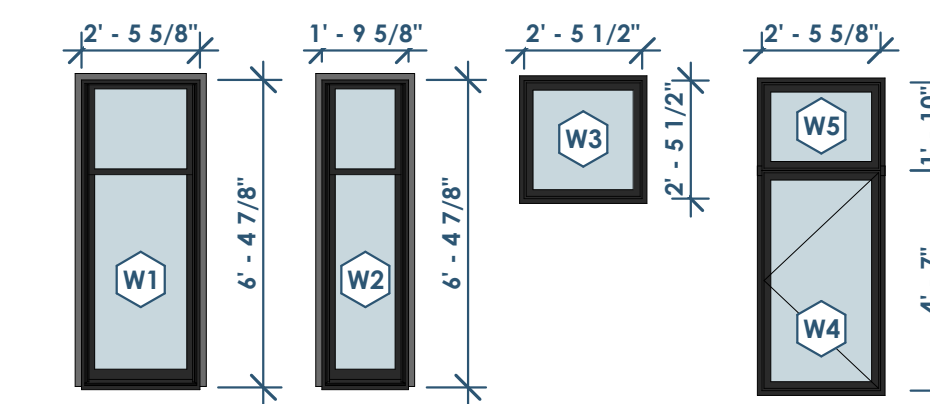
SIMPLIFIED WINDOW SCHEDULE						
PHASE CREATED	TYPE MARK	COUNT	TYPE	WIDTH	HEIGHT	TYPE COMMENTS
1ST PHASE	W1	33	SINGLE HUNG - TYPE 2	2'-5 5/8"	6'-4 7/8"	TEMPERED GLAZING
1ST PHASE	W1T	13	SINGLE HUNG - TYPE 2 - TEMPERED	2'-5 5/8"	6'-4 7/8"	TEMPERED GLAZING
1ST PHASE	W2	28	SINGLE HUNG - TYPE 1	1'-9 5/8"	6'-4 7/8"	TEMPERED GLAZING
1ST PHASE	W2T	3	SINGLE HUNG - TYPE 1 - TEMPERED	1'-9 5/8"	6'-4 7/8"	TEMPERED GLAZING
1ST PHASE	W3	18	FIXED PICTURE - TYPE 1	2'-5 1/2"	2'-5 1/2"	ADA REACH REQUIREMENTS FOR TYPE A UNITS
1ST PHASE	W4	1	CASEMENT - TYPE 1	2'-5 5/8"	4'-7"	
1ST PHASE	W5	1	FIXED PICTURE - TYPE 2	2'-5 5/8"	1'-10"	



2E
A600
DOORS - PANEL TYPES
1/4" = 1'-0"



2D
A600
DOORS - FRAME TYPES
1/4" = 1'-0"



2C
A600
WINDOW TYPES
1/4" = 1'-0"

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Date	Description
04/10/2022	Issued for Permit
07/22/2022	Permit Revisions

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UL Product IQ™

BXUV.U341

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-Resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variations

See General Information for Fire-Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variations

Design No. U341
 August 19, 2020

Bearing Wall Rating — 1 Hr.
Finish Rating — Min 20 min.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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surface of Classified veneer baseboard with joints reinforced with paper tape.

4. **Sheathing** — (Optional) — Septum may be sheathed with min 7/16 in. thick wood structural panels min grade "C-D" or "Sheathing" or min 1/2 in. thick **Mineral and Fiber Boards***.
 See **Mineral and Fiber Boards** (CER2) category for names of Classified companies.

5. **Batts and Blankets*** — 3-1/2 in. max thickness glass or mineral fiber batt insulation. **Optional** when sheathing (Item 4) is used on both halves of wall.
 See **Batts and Blankets** (BZJ2) category for list of Classified companies.

5A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product.
U'S GREENFIBER L L C — IN5735, IN5736, IN5736 and IN5736LD for use with wet or dry application. IN5515LD, IN5451D, IN5735, IN5736LD, and IN5736LD are to be used for dry application only.

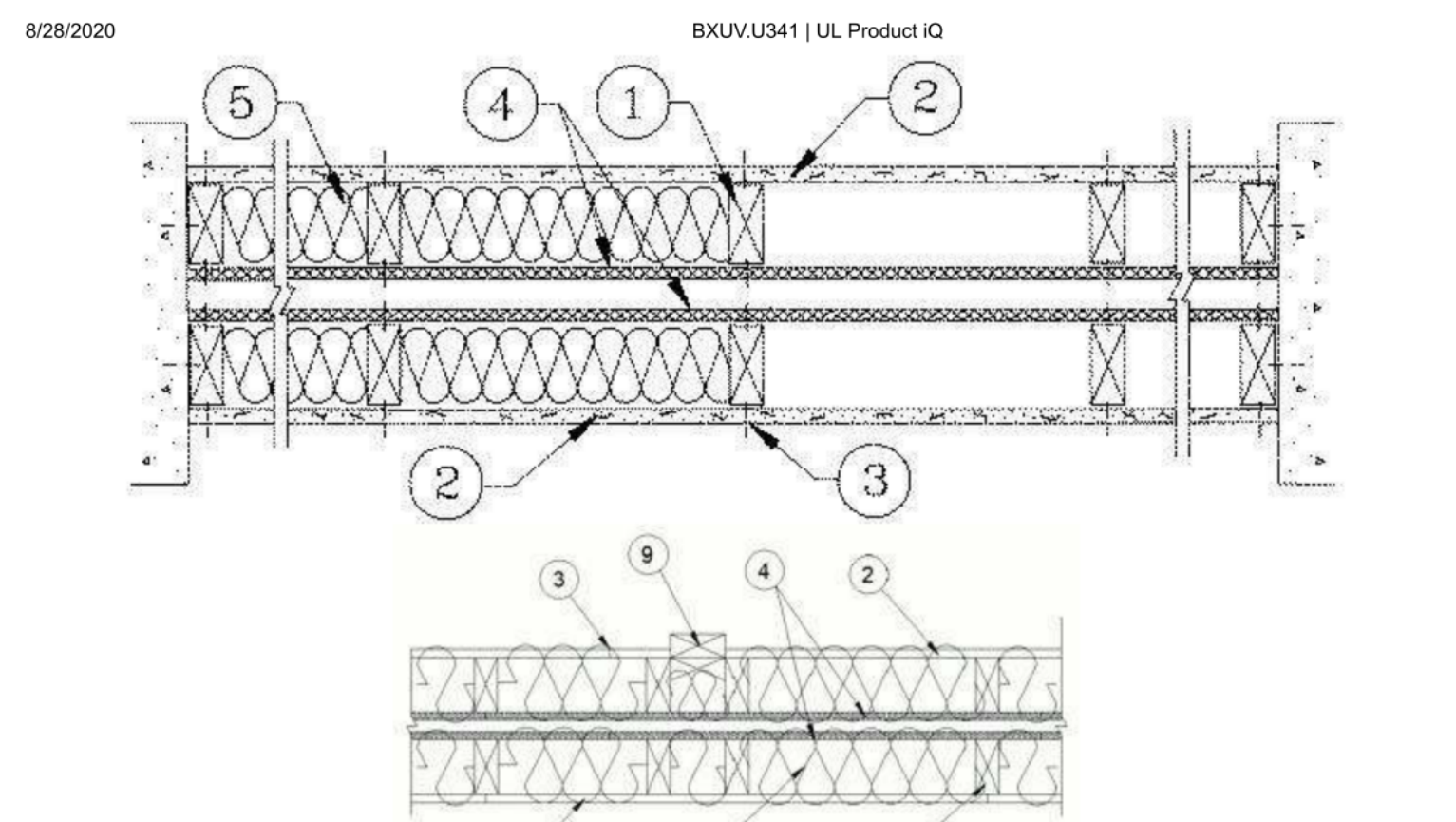
5B. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) when Sheathing (Item 4) is used on both halves of wall - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

5C. **Batts and Blankets*** — (Required for use with Wall and Partition Facings and Accessories, Item 2A. Use of Sheathing, Item 4, does not nullify requirement of Item 5C for use with Item 2A) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5D. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) and Item 5A when Sheathing (Item 4) is used on both halves of wall - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft³.
INTERNATIONAL CELLULOSE CORP — Cellar-It

5E. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) - Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft³.
APPLAGATE HOLDINGS L L C — Applagate Advanced Stabilized Cellulose Insulation

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HORIZONTAL SECTION

1. **Wood Studs** — Nom 2 by 4 in., spaced 24 in. OC, max. Cross braced at mid-height and effectively firestopped at top and bottom of wall. No min. air space between stud rows except to accommodate attachment of sheathing, where required. See Items 4 and 5.

2. **Gypsum Board*** — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U505. Nom 5/8 in. thick 4 ft wide. Gypsum board applied horizontally or vertically, unless specified below, and nailed to studs and bearing plates 7 in. OC with 6d cement coated nails, 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam head. As an alternate, No. 6 bugle head drywall screws, 1-7/8 in. long, may be substituted for the 6d cement coated nails.
 When **Steel Framing Members*** (Item 6-C) are used, wallboard attached to furring channels with 1 in. long Type 5 bugle-head steel screws spaced 12 in. OC.
 When used in widths other than 48 in., gypsum board to be installed horizontally.
AMERICAN GYPSUM CO (View Classification) — CNKX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CNKX.R19374

CABOT MANUFACTURING ULC (View Classification) — CNKX.R25370

CERTAINTED GYPSUM INC (View Classification) — CNKX.R3660

CSC INC (View Classification) — CNKX.R19751

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (View Classification) — CNKX.R18482

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CNKX.R2717

LOADMASTER SYSTEMS INC (View Classification) — CNKX.R1809

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fitted into clips. R51C-1 clip for use with 2-9/16 in. wide furring channels. R51C-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types R51C-1, R51C-1 (2.75).

6A. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
 a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.
 b. **Steel Framing Members*** — Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6B. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
 a. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.
 b. **Steel Framing Members*** — Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC, and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDDO BUILDING SYSTEMS — RESILMOUNT Sound Insulation Clips - Type A237R

6C. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
 A. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 6Cb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.
 B. **Steel Framing Members*** — Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOUL AMERICA — Type SonusClip

6D. **Steel Framing Members*** — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:
 a. **Resilient Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Phillips Modified Truss screws spaced 2-1/2 in. in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 2.
 b. **Steel Framing Members*** — Used to attach resilient channels (Item 6Da) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

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8/28/2020 BXUV/U341 | UL Product IQ

NATIONAL GYPSUM CO (View Classification) — CNKX.R3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CNKX.R27094

PANEL REY S A (View Classification) — CNKX.R21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CNKX.R19262

THAI GYPSUM PRODUCTS PCL (View Classification) — CNKX.R27517

UNITED STATES GYPSUM CO (View Classification) — CNKX.R1319

USG BORAL DRYWALL SFZ LLC (View Classification) — CNKX.R38438

USG BORAL DRYWALL SFZ LLC (View Classification) — CNKX.R38438

USG MEXICO S A DE CV (View Classification) — CNKX.R16089

2A. **Gypsum Board*** — (As an alternate to Item 2, not shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically to studs and bearing plates on one side of the assembly with 1-5/8 in. long Type 5 screws spaced 12 in. OC at perimeter of panels and 8 in. OC in the field. Horizontal joints of vertically applied panels need not be backed by studs. Panel joints covered with paper tape and two layers of joint compound. Screwheads covered with two layers of joint compound. Batts and Blankets placed in stud cavity as described in Item 5C. Not evaluated for use with Steel Framing Members, Furring Channels or Fiber, Sprayed.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-530 (finish rating 23 min).

2B. **Gypsum Board*** — (As an alternate to Item 2, not shown) — Any 5/8 in. thick gypsum panels that are eligible for use in Design Nos. L501, G512 or U505, supplied by the Classified companies listed below shown in the **Gypsum Board*** (CNKX) category. Applied horizontally or vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally.
UNITED STATES GYPSUM CO

USG BORAL DRYWALL SFZ LLC
USG MEXICO S A DE CV

2C. **Gypsum Board*** — (As an alternate to Item 2, Not Shown) — 5/8 in. thick gypsum panels applied horizontally or vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in. OC, gypsum board to be installed horizontally.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AGX-C, LightRock

CERTAINTED GYPSUM INC — Type C, Type X or Type X-1

NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL

THAI GYPSUM PRODUCTS PCL — Type C or Type X

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6E. **Steel Framing Members*** — (Optional, Not Shown) — Used as an alternate method to attach resilient channels to wall studs. A resilient sound insulation accessory shall be used at each attachment point of the resilient channels and spaced max 24 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions.
PAC INTERNATIONAL L L C — Type RC-1 Boost

7. **Wall and Partition Facings and Accessories*** — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

8. **Mineral and Fiber Board*** — (Optional, Not Shown) — For optional use as an additional layer on one or both sides of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing as described in Item 2. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

9. **Non-Bearing Wall Partition Intersection** — (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC, vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC, vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC, vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.
 (Optional, Not Shown) Alternate Construction For Use On One Side Of The Wall.

10. **Mineral and Fiber Board*** — For use with Items 10A-10D) — Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

10A. **Glass Fiber Insulation** — (For use with Item 10) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJ2) categories for names of Classified companies.

10B. **Batts and Blankets*** — (As an alternate to Item 10B, For use with Item 10), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.
THERMAFIBER INC — Type SAFR, SAFR FF

10C. **Adhesive** — (For use with Item 10) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

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2D. **Gypsum Board*** — (As an alternate to Items 2, 2A, 2B and 2C) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed as described in Item 2. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — GreenGlass Type X, Type DGG.

2E. **Gypsum Board*** — (As an alternate to Items 2 through 2D) — 5/8 in. thick, 4 ft wide, paper surfaced applied vertically only and secured as described in Item 2.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board.

2F. **Gypsum Board*** — (As an alternate to Items 2 through 2E) - Installed as described in Item 2, 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC. Not for use with Item #6.
NATIONAL GYPSUM CO — Type S5W8

2G. **Gypsum Board*** — (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types QuietRock ES.

2H. **Gypsum Board*** — (As an alternate to Items 2 through 2G) — Installed as described in Item 2, 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally fastened to the studs and plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.
CERTAINTED GYPSUM INC — Type SilentFX

2I. **Wall and Partition Facings and Accessories*** — (As an alternate to Items 2 through 2H) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock S27.

2J. **Gypsum Board*** — (As an alternate to 5/8 in. Type FSW in Item 2) — 2 layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal joints on the same side need not be staggered. Inner layer attached with fasteners, as described in Item 2, spaced 24 in. OC. Outer layer attached per Item 2.
NATIONAL GYPSUM CO — Type FSW.

2K. **Gypsum Board*** — (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-W2, Type LGFLX

3. **Joints and Nailheads** — Gypsum board joints of outer layer covered with tape and joint compound. Nail heads of outer layer covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire

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10D. **Gypsum Board*** — (For use with Item 10) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 10). Secured to outermost studs and bearing plates with 2 in. long Type 5 screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.
AMERICAN GYPSUM CO — Type AG-C

CERTAINTED GYPSUM INC — Type C

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types S, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Type CTypes C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE CV — Types C, IP-X2, IPC-AR

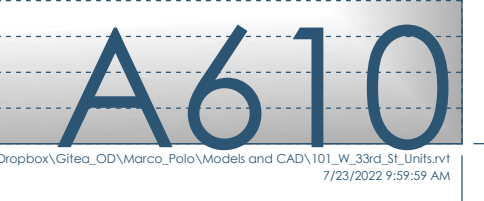
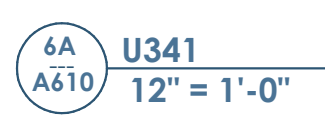
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-08-19

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Date	Description
06/10/2022	Issued for Permit
07/22/2022	Permit Revisions

UL Product IQ®

BXUV.L521 - Fire-resistance Ratings - ANSI/UL 263

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• Only products which bear UL's Mark are considered Certified.

Fire-resistance Ratings - ANSI/UL 263

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-5101 Certified for Canada

See General Information for Fire-Resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances

See General Information for Fire-Resistance Ratings - CAN/ULC-5101 Certified for Canada Design Criteria and Allowable Variances

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Alternate Floor Mat Materials* — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of the metal lath. When metal lath is used, floor topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II

Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mats.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill High Strength, Gyp-Span Radiant

Trusses — Parallel chord trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Min truss depth is 12 in. when no Ceiling Damper* is used and 18 in. when a Ceiling Damper* is used. Truss members secured together with min 0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx. 7/8 in. centers with four rows of teeth per inch of plate width.

Air Duct* — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

Ceiling Damper* — For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.

C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

Alternate Ceiling Damper* — For use with min 18 in. deep trusses. Max nom area shall be 196 sq in. with the length not to exceed 26 in. and the width not to exceed 14 in. Max height of damper shall be 7 in. Aggregate damper openings shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.

C&S AIR PRODUCTS — Model RD-521-8T

POTTORFF — Model CFD-521-8T

Alternate Ceiling Damper* — For use with min 18 in. deep trusses. Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.

C&S AIR PRODUCTS — Models RD-521-8P, RD-521-NP

POTTORFF — Models CFD-521-8P, CFD-521-NP

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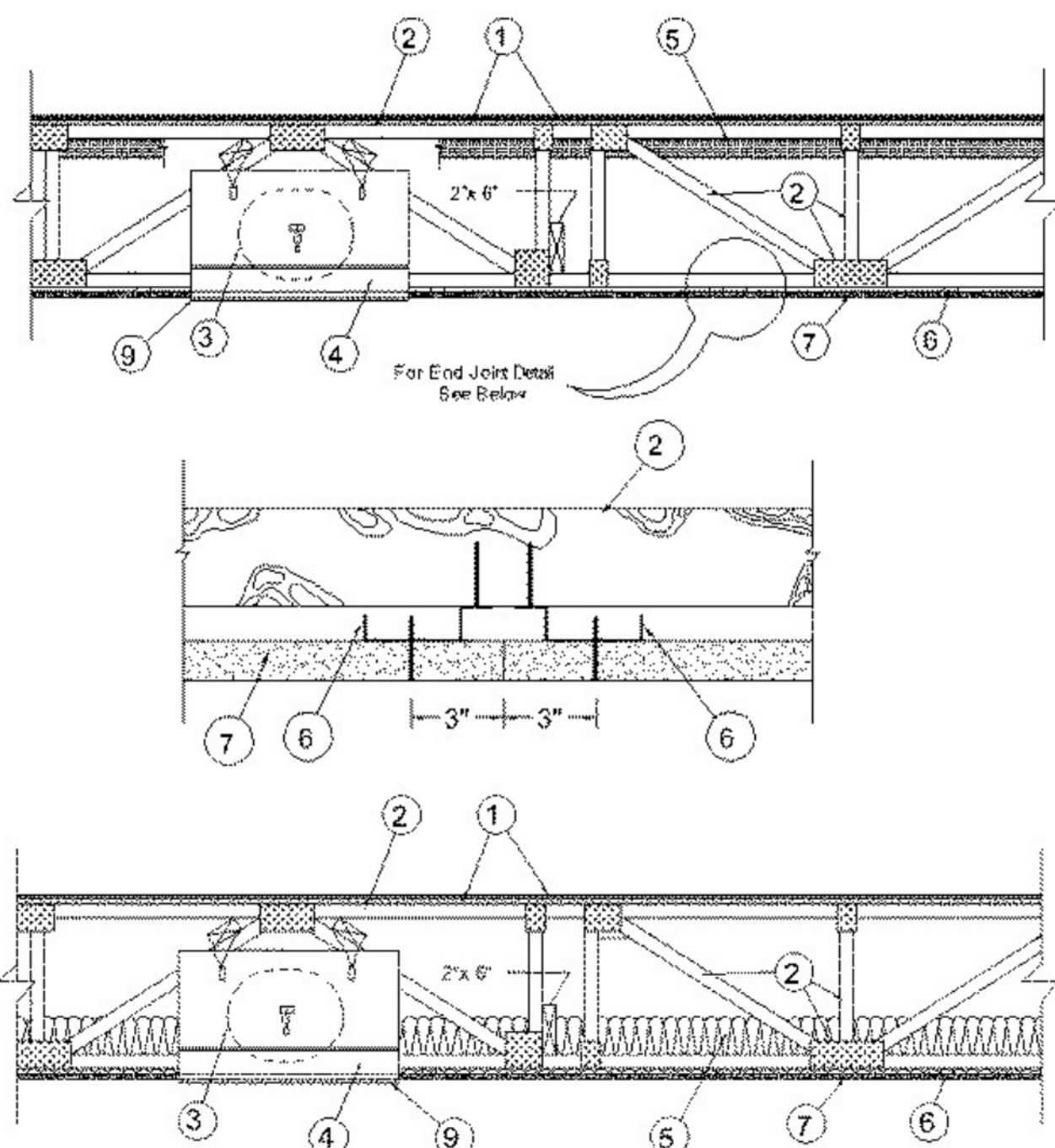
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6A A612 L521 12" = 1'-0"



Alternate Insulation Placement

- 1. Flooring System — The flooring system shall consist of one of the following:
System No. 1
Subflooring — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Vapor Barrier* — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.
Finish Floor* — Min 1 by 4 in. T & G lumber installed perpendicular to trusses, or min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor." Face grain of plywood or strength axis of panel to be perpendicular to joints with joints staggered.
System No. 2
Subflooring — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

- Vapor Barrier* — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.
Finish Flooring* — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD
LATICRETE SUPERCAP L L C — Types LRK, HSLRK
USG MEXICO S A DE CV — Types LRK, HSLRK, CSD
Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25
Alternate Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding minimum thickness of floor topping over floor mat.
GRASSWORX L L C — SC Types

System No. 3 (For Use with Item 7A Only)
Finish Floor* — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and 2-1/2 in. long nails, spaced 12 in. OC along each truss and 8 in. OC at the perimeter.

System No. 4
Structural Cement-Fiber Units* — Nom 3/4 in. thick, with long edges tongue and grooved. Long dimension of panels to be perpendicular to wood trusses with end joints staggered a min of 2 ft and centered over the trusses. Panels secured to wood trusses with 1-5/8 in. long, No. 8, self-countersinking wood screw spaced a max of 12 in. OC in the field with a screw located 1 in. and 2 in. from each edge, and 8 in. OC on the perimeter with a screw located 2 in. from each edge, located 1/2 in. from the end edges of the panel.
UNITED STATES GYPSUM CO — Types STRUCTO-CRETE, USGSP

Finish Flooring* — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

LATICRETE SUPERCAP L L C — Types LRK, HSLRK

USG MEXICO S A DE CV — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

System No. 5
Structural Cement-Fiber Units* — Nom 3/4 in. thick, with long edges tongue and grooved. Long dimension of panels to be perpendicular to wood trusses with end joints staggered a min of 2 ft and centered over the trusses. Panels secured to wood trusses with 1-5/8 in. long, No. 8, self-countersinking wood screw spaced a max of 12 in. OC in the field with a screw located 1 in. and 2 in. from each edge, and 8 in. OC on the perimeter with a screw located 2 in. from each edge, located 1/2 in. from the end edges of the panel.
UNITED STATES GYPSUM CO — Types STRUCTO-CRETE, USGSP

accordance with installation instructions.

BROAN-NUTONE L L C — Model RDWMT

Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDWMT2

Batts and Blankets* — (Optional) — Glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. When the resilient channels (Item 6) or furring channels (Item 6A) are spaced 24 in. OC, no insulation shall be installed in the concealed space. When the resilient channels (Item 6) or furring channels (Item 6A) are spaced 16 in. OC, the insulation shall be a max of 3-1/2 in. thick, and shall be secured against the subflooring with staples at 12 in. OC or held suspended in the concealed space with 0.090 in. diam galv steel wires attached to the wood trusses at 12 in. OC. When the resilient channels (Item 6) or furring channels (Item 6A) are spaced a max of 12 in. OC or when the Steel Framing Members (Item 6B) are used, there is no limit in the overall thickness of insulation, and the insulation can be secured against the subflooring, held suspended in the concealed space or draped over the resilient or furring channels (or Steel Framing Members) and gypsum panel membrane. When Steel Framing Members (Item 6C) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6C) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members (Item 6C). The finished rating has only been determined when the insulation is secured to the subflooring.

Fiber, Sprayed* — (Dry Dense Packed 100% Borate Formulation) — (Optional) — As an alternate to Item 5. When used, the resilient channel and gypsum board attachment is modified as specified in Items 6 and 7 and wire mesh (Item 10) shall be attached to the furring channels to facilitate installation of the material. The finished rating when Fiber, Sprayed is used has not been determined. The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product. When Item 5A (Fiber, Sprayed) is used, two layers of gypsum board required as described in Item 7. Not evaluated for use with Item 6B, 6C, 6E, 6F, 6G, 6H or 6I.
U S GREENFIBER L L C — IN573S, IN574S, IN5750LD, IN5765LD, IN5773LD, & SANCTUARY to be used with dry application only.

Fiber, Sprayed* — (Loose Fill 100% Borate Formulation) — (Optional) — As an alternate to Items 5 and 5A. The finished rating when Fiber, Sprayed is used has not been determined. The fiber is applied without water or adhesive at a minimum dry density of 0.5 lb/ft³ and at a max thickness of 3-1/2 in., in accordance with the application instructions supplied with the product. Wire mesh (Item 10) shall be attached to the furring channels to facilitate installation of the material. When Item 5B (Fiber, Sprayed) is used, two layers of gypsum board required as described in Item 7. Not evaluated for use with Item 6B, 6C, 6E, 6F, 6G, 6H or 6I.
U S GREENFIBER L L C — IN573S, IN574S, IN5750LD, IN5765LD, IN5773LD, & SANCTUARY to be used with dry application only.

Foamed Plastic* — (As alternate to Item 5, 5A, or 5B. Not Shown) — Spray foam insulation applied directly to the underside of the plywood subflooring. Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft³ density, while maintaining a minimum 8-1/2 in. clearance between the spray foam insulation and the gypsum board (Item 7). Spray foam insulation is limited for use with minimum 18 in. deep trusses (Item 2). When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) spaced maximum 3 in. away from gypsum butt joints. Gypsum board (Item 7) to be installed using minimum 1-1/4 in. long Type 5 screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 4 through 4K) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Not evaluated for use with Items 5 through 5B, or 6A through 6I.
SES FOAM INC — Suresaai

Cavity Insulation - Batts and Blankets* or Fiber, Sprayed* — (As described above in Items 5 through 5B) — (For Use with Item 7A, Not Shown) — Min. 3-1/2 in. thickness with no limit on maximum thickness fitted in the concealed space, draped over the resilient channel (Item 6H)/gypsum board (Item 7A) ceiling membrane.

Foamed Plastic* — (As alternate to Item 5, 5A, or 5C. Not Shown) — Spray foam insulation applied directly to the underside of the plywood subflooring. Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft³ or 2.0 lb/ft³ density, depending on the product installed. Spray foam insulation is limited to use with minimum 18 in. deep trusses (Item 2).

System No. 6
Subflooring — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier* — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Floor Mat Materials* — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19 mm).
HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials* — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38 mm).
HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250

Alternate Floor Mat Materials* — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32 mm).
HACKER INDUSTRIES INC — FIRM-FILL SCM 400

Alternate Floor Mat Materials* — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38 mm).
HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750

Metal Lath (Optional) — (Optional) — For use with 3/8 in. (10 mm), or greater, floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1 in. (25 mm) over the floor mat.
Finish Flooring* — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mats).
HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Gyp-Span Radiant

System No. 7
Subflooring — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier* — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Floor* — Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft.
HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 8
Subflooring — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier* — (Optional) - Nom 0.030 in. thick commercial asphalt saturated felt.

Floor Mat Materials* — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. Floor topping thickness a min 1 in. over the floor mat.
HACKER INDUSTRIES INC — Type Hacker Sound-Mat

When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) spaced maximum 3 in. away from gypsum butt joints. Gypsum board (Item 7) to be installed using minimum 1-1/4 in. long Type 5 screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 4 through 4H) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Not evaluated for use with Items 5 through 5B, or 6A through 6I.
BASF CORP — EnerLite® NM, EnerLite® G, FE178®, Spraylite® 178, Spraylite® 81206, Wallite® 200, Wallite® US, Wallite® US-N, and Wallite® HP

Foamed Plastic* — (As alternate to Item 5, 5A, 5B, 5C or 5E, Not Shown) — Spray foam insulation applied directly to the underside of the plywood subflooring. Spray foam insulation installed to a maximum thickness of 17 in. at a nominal 0.5 lb/ft³ density, while maintaining a minimum 1-1/2 in. clearance between the spray foam insulation and the gypsum board (Item 7). Spray foam insulation is limited for use with minimum 18 in. deep trusses (Item 2). When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) spaced maximum 3 in. away from gypsum butt joints. Gypsum board (Item 7) to be installed using minimum 1-1/4 in. long Type 5 screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 4 through 4K) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Not evaluated for use with Items 5 through 5B, or 6A through 6I.
SES FOAM INC — EasySeal5

Foamed Plastic* — (As alternate to Item 5 - not to be used in combination with any alternates to Item 5) — Spray foam insulation applied directly to the underside of the plywood subflooring. Spray foam insulation installed to a maximum thickness of 11 in. at a nominal 0.5 lb/ft³ - 2.5 lb/ft³ density, while maintaining a minimum 7 in. clearance between the spray foam insulation and the gypsum board (Item 7). Spray foam insulation is limited for use with minimum 18 in. deep trusses (Item 2). When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board spaced maximum 3 in. away from gypsum butt joints. Gypsum board to be installed using minimum 1-1/4 in. long Type 5 screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 4 through 4K) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Only for use with Item 6 not evaluated for use with alternates to Item 6.

CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCK, SealTite Pro Tri-Tri 21, SealTite Pro One Zero, Foamulate Closed Cell, Foamulate COX, Foamulate 70, and Foamulate HFO.

Resilient Channels* — Formed from min 25 MSG galv steel installed perpendicular to trusses. When there is no insulation installed in the concealed space the resilient channels are spaced 24 in. OC. When insulation (Item 5) is secured to the underside of the subfloor the resilient channels are spaced 16 in. OC. When insulation, Items 5, 5A or 5B is applied over the resilient channel/gypsum panel ceiling membrane, or when Item 5C, 5E or 5F is applied to underside of subflooring, the resilient channels are spaced 12 in. OC. Channels secured to each truss with 1-1/4 in. long Type 5 bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint as shown in the above illustration. Additional channels shall extend min 6 in. beyond each side edge of panel.

Steel Framing Members* — (Not Shown) — As an alternate to Item 6.
Furring Channels* — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to wood structural members. When insulation, Items 5, 5A or 5B is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item 6. Ends of adjoining channels overlapped 2 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.

Steel Framing Members* — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. R5C-1 and R5C-1 (2.75) clips secured to alternating trusses with No. 8 x 1-1/2 in. coarse drywall screw through the center grommet. R5C-V and R5C-V (2.75) clips secured to alternating trusses with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. R5C-Si-X secured to alternating trusses with No. 10, X 3-1/2 in. coarse screw. Furring channels are friction fitted into clips. R5C-1, R5C-V and R5C-Si-X clips for use with 2-9/16 in. wide furring channels. R5C-1 (2.75) and R5C-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that

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Table with 2 columns: Date, Description. Row 1: 04/19/2022, Issued for Permit. Row 2: 07/22/2022, Permit Revisions.

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supports the gypsum board butt joints, as described in Item 7. When **Fiber-Sprayed** (Item 5B) is used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board shall be installed as described in Item 7.

PAC INTERNATIONAL L L C — Types R5C-1, R5C-V, R5C-1 (2.75), R5C-V (2.75), R5C-SI-X

6B. Steel Framing Members — (Not Shown) — As an alternate to Item 6, main runners, cross tees, cross channels and wall angle as listed below.
a. Main Runners — Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven in the side of trusses at least 5 in. above the bottom flange.

b. Cross Tees or Channels — Nom 4 ft long cross tees, with 15/16 in. or 1-1/2 in. wide face, or nom 4 ft long cross channels, with 1-1/2 in. wide face, either spaced 16 in. OC, installed perpendicular to the main runners. Additional cross tees or channels used 8 in. from each side of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

c. Wall Angle or Channel — Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to wall at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.
CGC INC — Type DGL or RX

USG INTERIORS LLC — Type DGL or RX

6C. Steel Framing Members — (Not Shown) — As an alternate to Item 6.
a. Furring Channels — Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max. 16 in. OC, perpendicular to trusses and Cold Rolled Channels (Item 6C). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Batts and Blankets draped over furring channels as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 7.

b. Cold Rolled Channels — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6C). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. Blocking — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6C) location.

d. Steel Framing Members — Hangers spaced 48 in. OC, max along truss, and secured to the Blocking (Item 6C) on alternating trusses with a single 5/16 in. by 2 in. hex head lag bolt or four #6 1-1/4 in. drywall screws through mounting holes) on the hanger bracket. The two 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling bolt height adjusted such that furring channels are flush with bottom of trusses before gypsum board installation. Spring gauge of hanger chosen per manufacturer's instructions.
KINETICS NOISE CONTROL INC — Type ICW

6D. Steel Framing Members — (Not Shown) — As an alternate to Item 6.
a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC, perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.

b. Steel Framing Members — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC, and secured to

the bottom chord of alternating trusses with two No. 8 x 2-1/2 in. course drywall screws, one through the hole at each end of the clip. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the furring channel that supports one end of the gypsum board butt joints, as described in Item 7. Two layers of gypsum board required as described in Item 7. Not evaluated for use with Item 5B.

KINETICS NOISE CONTROL INC — Type IsoMax

6E. Steel Framing Members — (Not Shown) — As an alternate to Item 6.
a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC, perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire near each end of overlap.

b. Steel Framing Members — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC, and secured to the bottom chord of alternating trusses with one No. 8 x 2-1/2 in. course drywall screw through center grommet. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels are spaced 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7. Not evaluated for use with Item 5B.

PLTTEQ INC — Type Genie Clip

6F. Steel Framing Members — (Not Shown) — As an alternate to Items 6, furring channels and Steel Framing Members as described below.
a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC, perpendicular to joists. Channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Supplemental furring channels at base layer and outer layer gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to joists as described in Item b.

b. Steel Framing Members — Used to attach furring channels (Item a) to the trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the joists with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold furring channel that supports the gypsum board butt joints as described in Item 7.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6G. Steel Framing Members — (Not Shown) — As an alternate to Item 6 — Not for use with Items 5, 5A or 5B — Main runners nom 12 ft long, spaced 72 in. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Cross tees, nom 6 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional 6 ft long cross tees required at each gypsum board end joint with butted gypsum board end joints centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

USG INTERIORS LLC — Type DGL or RX

6H. Resilient Channels — For Use With Item 7A - Formed from min 25 MSG galv steel installed perpendicular to trusses and spaced 16 in. OC. Channels secured to each truss with 1-5/8 in. long Type 5 bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint. Additional channels shall extend min 6 in. beyond each side edge of panel. Insulation, Item 5D is applied over the resilient channel/gypsum panel ceiling membrane.

6i. Steel Framing Members — (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members as described below.
a. Furring Channels — Formed of No. 25 MSG galvanized steel, 2-1/2 in. wide by 7/8 in. deep, spaced 16 in. OC, perpendicular to trusses. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b.

b. Steel Framing Members — Used to attach furring channels (Item 6a) to the trusses (Item 2). Clips spaced 48 in. OC on alternating trusses and secured to the bottom chord of the trusses with one 2-1/2 in. course drywall screw through the center grommet in accordance with the manufacturer's installation instructions. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the furring channel that supports one end of the gypsum board butt joints as described in Item 7.

REGUPOL AMERICA — Type SonoClip

6j. Steel Framing Members — (Not Shown) — Used to attach resilient channels (Item 6) to trusses (Item 2). Clips spaced 48 in. OC on adjacent trusses, and secured to trusses with one No. 8 x 2-1/2 in. course drywall screw through center grommet hole. Channels secured to clips with one #10 x 1/2 in. pan-head self-drilling screw. Ends of adjoining channels overlapped 6 in. and secured together with two #8 15 x 1/2 in. Phillips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board butt joints require additional resilient channels spaced 3 in. from the butt joint on either side. One edge of the extra channels will extend to an adjacent truss where it is secured with a clip.
KEENE BUILDING PRODUCTS CO INC — Type RC - Assurance Clip

6K. Steel Framing Members — (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members as described below.

a. Furring Channels — Hat channels formed of No. 25 MSG galv steel, nom 2-23/32 in. wide by 7/8 in. deep. When there is no insulation installed in the concealed space the resilient channels are spaced 24 in. OC. When insulation (Item 5) is secured to the underside of the subfloor the resilient channels are spaced 16 in. OC. When insulation, Items 5, 5A or 5B is applied over the resilient channel/gypsum panel ceiling membrane, or when Item 5C, 5E or 5F is applied to underside of subflooring, the resilient channels are spaced 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.

b. Steel Framing Members — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC with No. 8 x 2-1/2 in. course drywall screw through the center grommet. Furring channels are friction fitted into clips. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

CLARKDIERTRICH BUILDING SYSTEMS — Type ClarkDiertrich Sound Clip

6. Furring Channels — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to the trusses. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 7), each extending a min of 6 in. beyond both side edges of the board.

b. Cold Rolled Channels — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6D) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. Blocking — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6D) location, with 16d nails or minimum 2-1/2 in. screws.

d. Steel Framing Members — Spaced 48 in. OC, max along truss, and secured to the truss on alternating trusses with two, #10 x 1-1/2 in. screws through mounting holes on the hanger bracket.
PAC INTERNATIONAL L L C — Type R5C-SI-CRC E2 Clip

6M. Steel Framing Members — (Not Shown) — As an alternate to Item 6.
a. Furring Channels — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to trusses and friction fit into Steel Framing Members (Item 6M). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 7). Butt joint channels held in place by blocking.

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from base layer end joints. Butted side joints of outer layer to be offset min. 18 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6C) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Ca). Base layer attached to the furring channels using 1 in. long Type 5 bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type 5 bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6D) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels. Base layer attached to the furring channels using 1 in. long Type 5 bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered min 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 4 in. OC, and be attached to underside of the truss with one IsoMax clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long Type 5 bugle-head steel screws spaced 12 in. OC in the field. The end of the outer layer boards at the butt joint shall be attached to the base layer boards with 1-5/8 in. long Type G screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min 18 in. from butted side joints of base layer. Outer layer shall be finished as described in Item 8. When **Steel Framing Members** (Item 6E) are used, one layer of nom 5/8 in. thick, 4 ft wide are installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels using 1 in. long No. 6 Type 5 bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered minimum 2 ft, within the assembly. Additional furring channels constructed as per Item 6E shall be used to support each end of each gypsum board. These additional furring channels shall be attached to underside of the truss with Genie clips as described in Item 6E. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long No. 6 Type 5 bugle-head steel screws spaced 12 in. OC in the field. The outer layer boards at the butt joint shall be attached to the base layer boards with No. 10, 1-1/2 in. long drywall screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min of 24 in. from base layer end joints. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6F) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type 5 bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel.

When alternate **Steel Framing Members** (Item 6G) are used, gypsum board sheets installed with long dimension (side joints) perpendicular to the 8 ft long cross tees with the end joints staggered min 4 ft and centered between cross tees which are spaced 8 in. OC. Gypsum board side joints may occur beneath or between main runners. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide pieces of gypsum board are to be laid atop the cross tee flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the cross tees at opposite corners of the backer strip with hold down clips to prevent the backer strips from being uplifted during screw attachment of the gypsum board sheets. Gypsum board fastened to cross tees with 1 in. drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.

When **Steel Framing Members** (Item 6I) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1-1/4 in. long, fine thread, #6 Type 3 bugle-head steel screws spaced 8 in. OC along butt joints and in the field of the board. Gypsum board butted end joints shall be staggered minimum 24 in. and occur 3 in. from the continuous furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonoClip at every truss involved with the butt joint.

When **Steel Framing Members** (Item 6J) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to resilient channels. Gypsum board secured to resilient channels with nom 1 in. long Type 5 bugle-head steel screws spaced 8 in. OC in the field of the board and located 3/4 in. from side joints and 3 in. end joints. Gypsum board joints are to be staggered by a minimum of 24 in.

When **Steel Framing Members** (Item 6J) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Adjacent butt joints staggered minimum 48 in. OC.

When **Steel Framing Members** (Item 6M) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Butt joints staggered minimum 24 in. OC.

CGC INC — Types C, IP-X2, IPC-AR

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE CV — Types C, IP-X2, IPC-AR

7A. Gypsum Board — For use with Items 5D and 6H. Nom 5/8 in. thick, 48 in. wide gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type 5 bugle head steel screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. Finish Rating with this ceiling system is 20 min.
CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

8. Finishing System — (Not Shown) — Vinyl dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

9. Grille — Grille installed in accordance with the installation instructions provided with the ceiling damper.

10. Wire Mesh — (Not Shown) — For use with Item 5A and 5B — 1 in. 20 gauge galvanized poultry netting installed between the furring channels and gypsum board. The poultry netting is attached with washers and 1/2 in. washer head screws, spaced 24 in. OC, to the furring channels. The **Fiber-Sprayed** (Item 5A or 5B) is installed through cut-openings in the poultry netting, in-between trusses. The cut-openings in the poultry netting shall be staggered at a maximum of 6 ft.

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13 of 14

5/19/2022, 8:54 PM14 of 14

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6A A613 L521 2 12" = 1'-0"



Owner: Renovation Wranglers 102 26th St Bryan, TX 77803

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ARCHITECTURE Architect of Record: UKB Architecture 2929 Allen Pkwy Suite 200 Houston, TX 77019 isa@ukbarchitecture.com | 713.425.3076



Structural: Dudley Firm # 18277 6102 Imperial Loop Drive College Station, TX 77845 oofelka@dudleyeng.com | (979) 777-0720



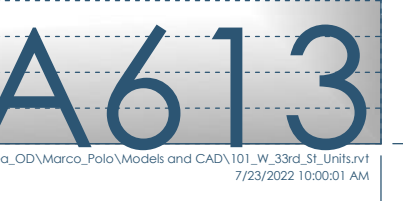
MEP: AMC Engineers Texas Firm #9441 508 E Jackson St # 552 Burnet, TX 78611 info@amcengineers.com | 512.535.6427

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Table with 2 columns: Date, Description. Row 1: 04/10/2022, Issued for Perm. Row 2: 07/22/2022, Permit Revisions.



5/26/22, 11:33 AM iqluprospector.com_en/profile_XHEZ.F-C-3012 - Through-penetration Firestop Systems | UL Product IQ

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XHEZ.F-C-3012 - Through-penetration Firestop Systems

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XHEZ - Through-penetration Firestop Systems
XHEZ7 - Through-penetration Firestop Systems Certified for Canada

See General Information for Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems Certified for Canada

System No. F-C-3012

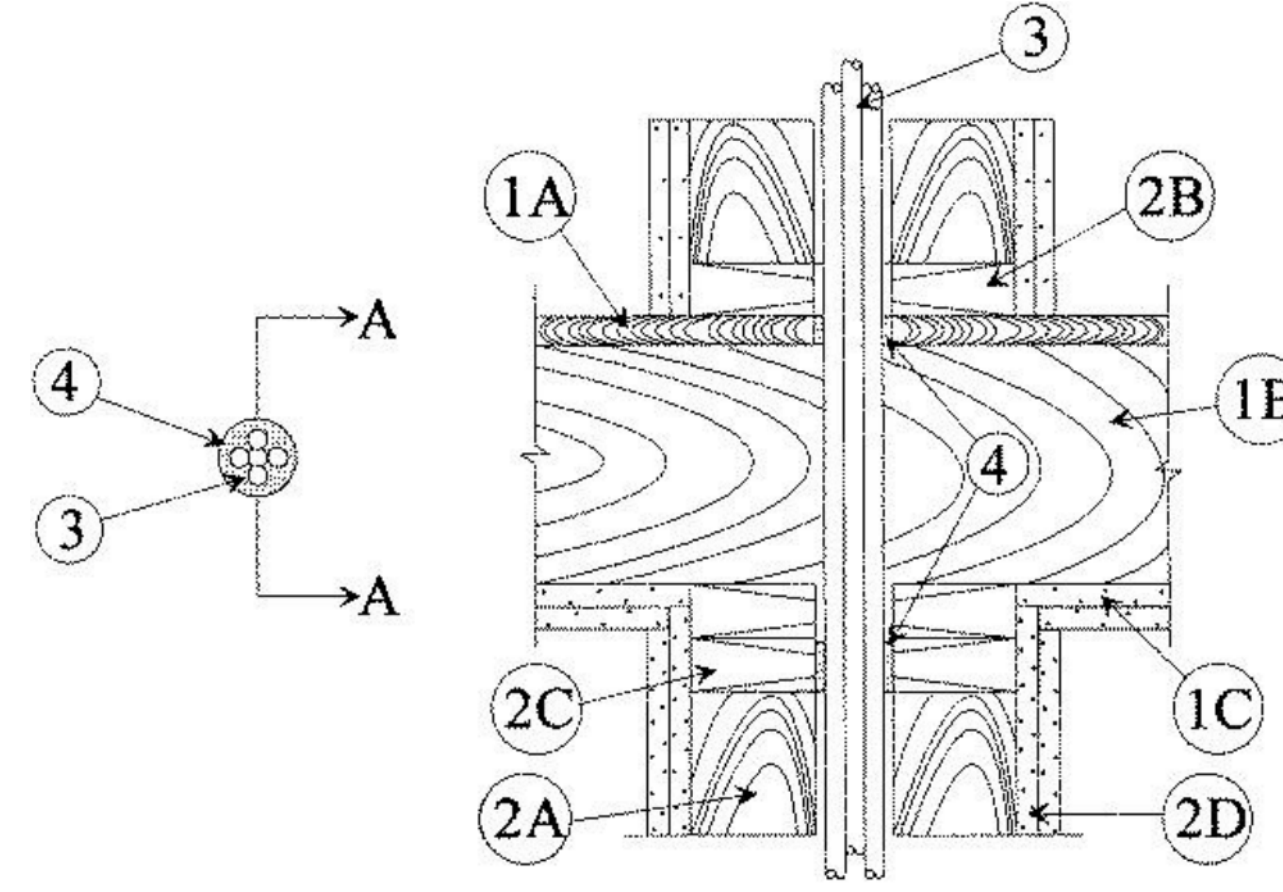
April 06, 2018

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 0, 1 and 1-3/4 Hr (See Item 3)	FT Ratings — 0, 1 and 1-3/4 Hr (See Item 3)
	FH Ratings — 1 and 2 Hr (See Item 1)
	FTH Ratings — 0, 1 and 1-3/4 Hr (See Item 3)

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SECTION A-A

1. **Floor-Ceiling Assembly** — The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

A. **Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

B. **Wood Joists*** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.

C. **Furring Channels** — (Not Shown) — (As required) — Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.

D. **Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

The F Rating of the firestop system is equal to the rating of the floor-ceiling assembly.

2. **Chase Wall** — (Optional) — The through penetrant (Item 3) may be routed through a fire-rated or non-rated single, double or staggered wood stud/gypsum wallboard chase wall. The chase wall shall be constructed to include the following construction features:

A. **Studs** — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. **Sole Plate** — Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr rated assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

C. **Top Plate** — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr rated assembly is 2-1/2 in. (64 mm)

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or 2 in. (51 mm), respectively.

D. **Gypsum Board*** — One or two layers of min 1/2 in. (13 mm) gypsum board.

3. **Cables** — In 1 hr fire-rated assemblies, aggregate cross-sectional area of cables in opening to be max 45 percent of the cross-sectional area of the opening (max 2 in. (51 mm) diam bundle). Cables to be rigidly supported on both sides of floor assembly. Any combination of the following types and sizes of copper conductors may be used:

A. RG 59 coaxial cable with single copper conductor, cellular polyethylene cellular foam insulation and polyvinyl chloride (PVC) jacket.

B. Max 8/C No. 22 AWG telephone cable with polyvinyl chloride (PVC) jacketing.

C. Max 2/C No. 12 AWG cable with polyvinyl chloride (PVC) insulation and jacketing.

D. Max 3/C with ground No. 2/0 AWG aluminum or copper Type SER cable with polyvinyl chloride (PVC) insulation.

E. Max 3/C with ground No. 2/0 AWG Type NM cable with polyvinyl chloride (PVC) insulation.

F. Max 3/C No. 12 AWG MC (BX) cable with polyvinyl chloride (PVC) insulation.

G. Max 1 in. diam metal clad TEK cable with PVC jacket.

H. Max 4/C with ground No. 300 kcmil (or smaller) aluminum SER cable with PVC insulation and jacket.

I. **Through Penetrating Product*** — Any cables, **Metal-Clad Cable*** or **Armored Cable*** currently Classified under the **Through Penetrating Products** category.

See **Through Penetrating Product** (XHLV) category in the Fire Resistance Directory for names of manufacturers.

The **T Rating** is 1 and 1-3/4 hr for 1 and 2 hr rated assemblies, respectively, for cables 3A through 3G. The **T Rating** is 0 hr for cables 3H and 3I.

4. **Fill, Void or Cavity Material* — Sealant** — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material also applied within the annulus, flush with bottom surface of ceiling or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-611A Sealant or FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

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Last Updated on 2018-04-06

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FIRE STOP - FLOOR - FRAMED - ELECTRIC CABLE - F 1HR&2HR - T 1HR&2HR - L NA - HILTI - XHEZ.F-C-3012
12" = 1'-0"

5/26/22, 11:38 AM iqluprospector.com_en/profile_XHEZ.F-C-8009 - Through-penetration Firestop Systems | UL Product IQ

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XHEZ.F-C-8009 - Through-penetration Firestop Systems

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XHEZ - Through-penetration Firestop Systems
XHEZ7 - Through-penetration Firestop Systems Certified for Canada

See General Information for Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems Certified for Canada

System No. F-C-8009

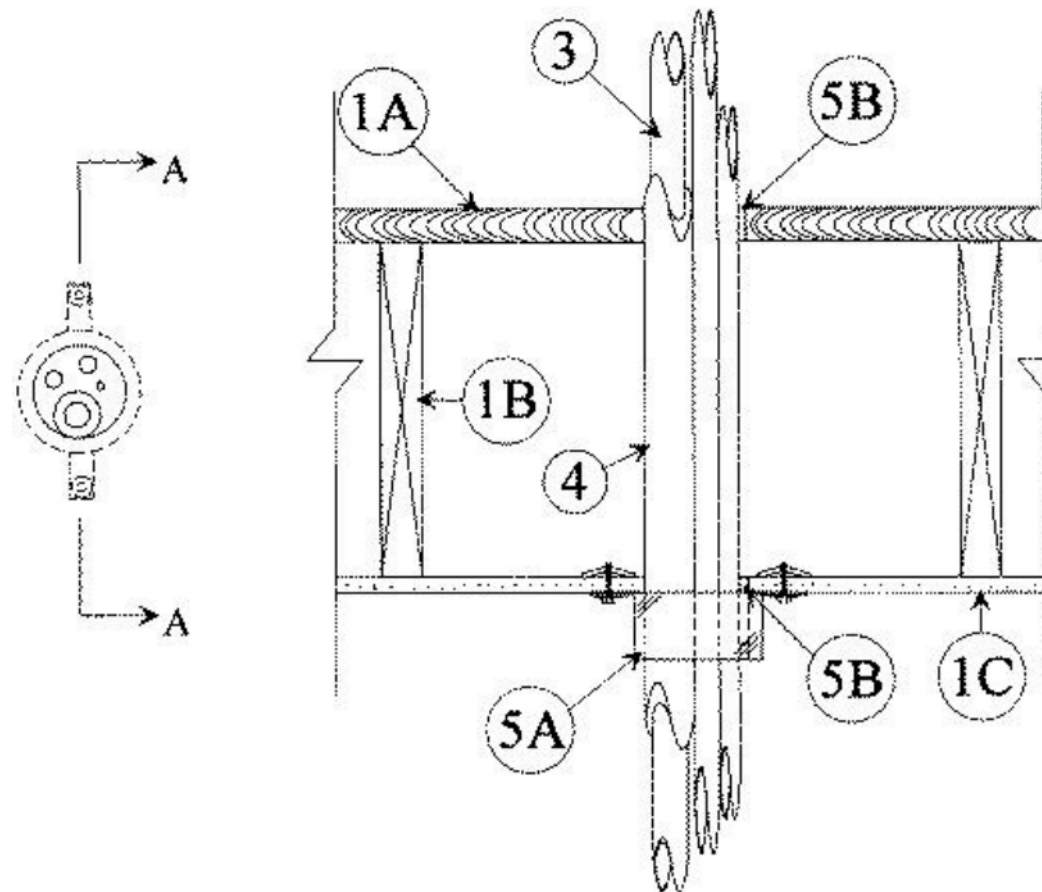
January 21, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 Hr	F Rating — 1 Hr
T Rating — 1 Hr	FT Rating — 1 Hr
	FH Rating — 1 Hr
	FTH Rating — 1 Hr

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SECTION A-A

System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. **Floor-Ceiling Assembly** — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:

A. **Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of opening is 3 in. (76 mm).

B. **Wood Joists*** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.

C. **Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening in ceiling (when chase wall (Item 2) is not provided) is 3 in. (76 mm).

2. **Chase Wall** — (Optional, Not Shown) — The through penetrant (Item 3) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Nom 2 by 6 in. (51 by 152 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. **Sole Plate** — Nom 2 by 6 in. (51 by 152 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening shall be 3 in. (76 mm).

C. **Top Plate** — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates or 2 sets of parallel nom 2 by 4 in. (51 by 102 mm) lumber, tightly butted. Max diam of opening is 3 in. (76 mm).

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D. **Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

3. **Through Penetrants** — Pipe, cable and tubing to be bundled and rigidly supported on both sides of floor assembly. A non annular space of min 0 in. (point contact) to max 1/2 in. (13 mm) is required within the firestop system. The following types and sizes of pipe, cable and tubing are to be used in the firestop system in sufficient quantities to fill the firestop device:

A. **Cable** — Type PTF thermoset cable, 5/C No. 18 AWG copper conductor, plastic insulation and jacket.

B. **Polyvinyl Chloride (PVC) Pipe** — Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

C. **Copper Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) Type L (or heavier) copper tubing.

D. **Copper Tubing** — Nom 1/2 in. (13 mm) diam (or smaller) Type L (or heavier) copper tubing.

4. **Tube Insulation — Plastics*** — Nom 1/2 in. (13 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Insulation to be installed only on one through reverant having a max nom diam of 3/4 in. (19 mm).

See **Plastics*** (QMFZZ) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability Classification of 94-5VA may be used.

5. **Firestop System** — The firestop system shall consist of the following:

A. **Firestop Device*** — **Firestop Collar** — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the penetrants and secured to underside of gypsum wallboard ceiling using the anchor hooks provided with the collar. The anchor hooks are to be secured to the surface of the ceiling with min 3/16 in. diam min 2-1/2 in. long toggle bolts.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 64-3 90/3°N, CP 64-3 63/2°N, CP 64-3 50/1-1/2°N

B. **Fill, Void or Cavity Material* — Sealant** — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or lower top plate. Caulk to be forced into interstices of penetration group to max extent possible at top surface of floor or sole plate and bottom surface of ceiling or lower top plate.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-611A, FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

*Bearing the UL Recognized Component Mark

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FIRE STOP - FLOOR - FRAMED - GROUPINGS - F 1HR&2HR - T 1HR&2HR - L NA - HILTI - XHEZ.F-C-8009
12" = 1'-0"

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Wranglers
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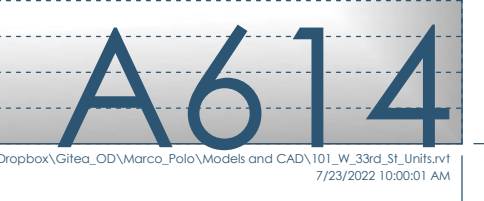
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Date	Description
04/10/2022	Issued for Permit
07/22/2022	Permit Revisions



RENOVATION Wranglers
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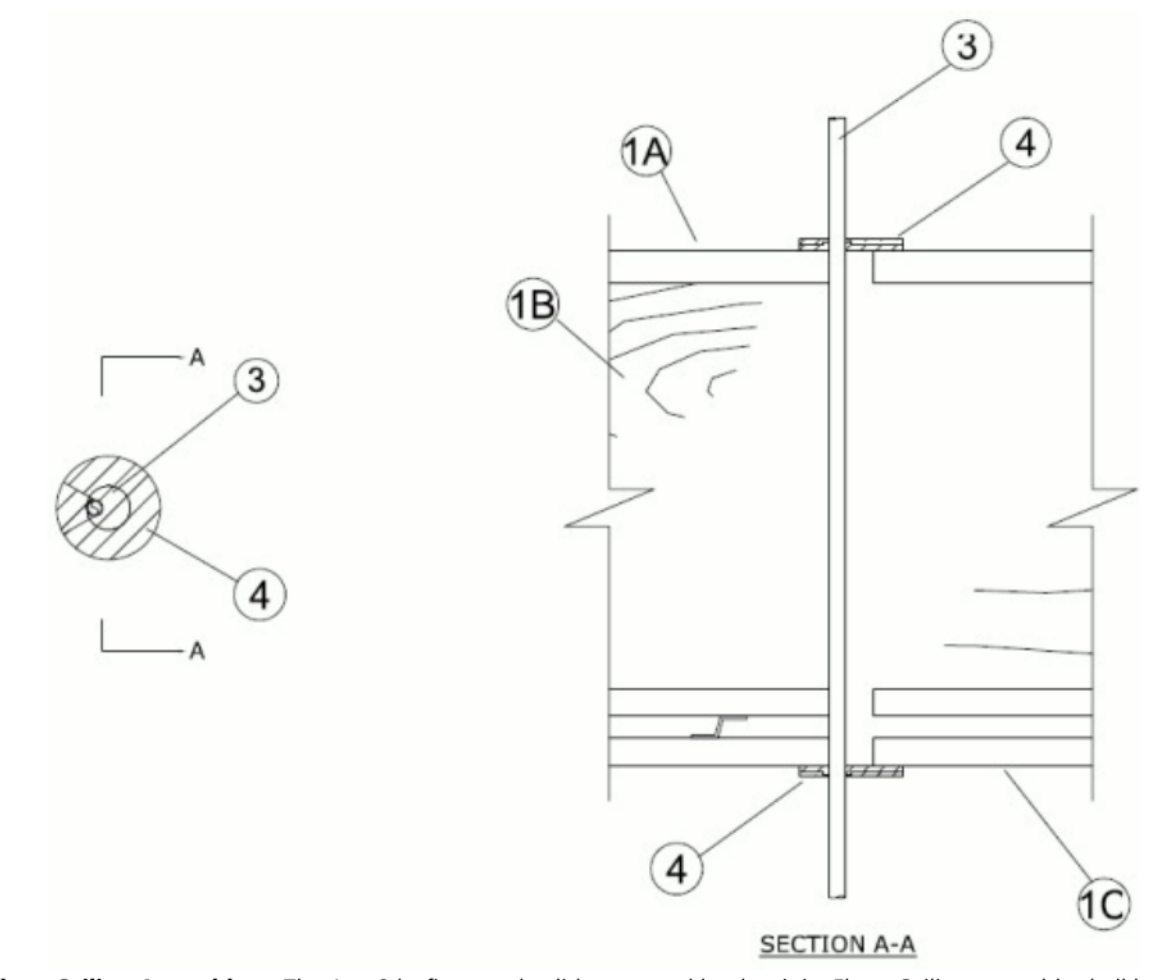
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D. Gypsum Board* — Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

3. Through Penetrant* — Max one metallic pipe, tubing or conduit installed either concentrically or eccentrically within the firestop system. The annular space between penetrant and periphery of the opening shall be min 0 in. (point contact). Pipe or tubing to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of pipes, tubing or conduit may be used:

- A. Steel Pipe** — Nom 3/4 in. (19 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
- B. Iron Pipe** — Nom 3/4 in. (19 mm) diam (or smaller) cast or ductile iron pipe.
- C. Copper Tubing** — Nom 1/2 in. (13 mm) diam (or smaller) Type L and Type K (or heavier) copper tubing.
- D. Copper Pipe** — Nom 1/2 in. (13 mm) diam (or smaller) Regular (or heavier) copper pipe.
- E. Conduit** — Nom 3/4 in. (19 mm) diam (or smaller) rigid or flexible steel conduit.
- F. Conduit** — Nom 3/4 in. (19 mm) diam (or smaller) electrical metallic tubing (EMT).

4. Fill, Void or Cavity Material* — Nom 60 mm diam by 3 mm thick putty disc with one seam at radius. Paper-backer of disc to be removed and disc firmly pressed around the penetrant lapping nom 5 mm onto penetrant to completely cover opening and firmly pressed to lay onto the floor and ceiling (or plates) around periphery of opening. Disc seam to be firmly pressed and sealed tight. Disc to be installed at both sides of opening in floor-ceiling assembly.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-D 1" Firestop Putty Disc

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Last Updated on 2020-04-29

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XHEZ - Through-penetration Firestop Systems
 XHEZ7 - Through-penetration Firestop Systems Certified for Canada

See General Information for Through-penetration Firestop Systems
 See General Information for Through-penetration Firestop Systems Certified for Canada

System No. F-C-1168
 April 29, 2020

ANSI/UL1479 (ASTM E814)	CAN/ULC 5115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1 and 2 Hr (See Item 1)	FT Ratings — 1 and 2 Hr (See Item 1)
L Rating at Ambient — Less than 1 CFM/Opening	FH Ratings — 1 and 2 Hr (See Item 1)
L Rating at 400 F — Less than 1 CFM/Opening	FTH Ratings — 1 and 2 Hr (See Item 1)
	L Rating at Ambient — Less than 1 CFM/Opening
	L Rating at 400 F — Less than 1 CFM/Opening

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6C A615 FIRE STOP - FLOOR - FRAMED - METALLIC PIPE, CONDUIT OR TUBING - F_1HR&2HR - T_1HR&2HR - L_NA - HILTI - XHEZ.F-C-1168 12" = 1'-0"

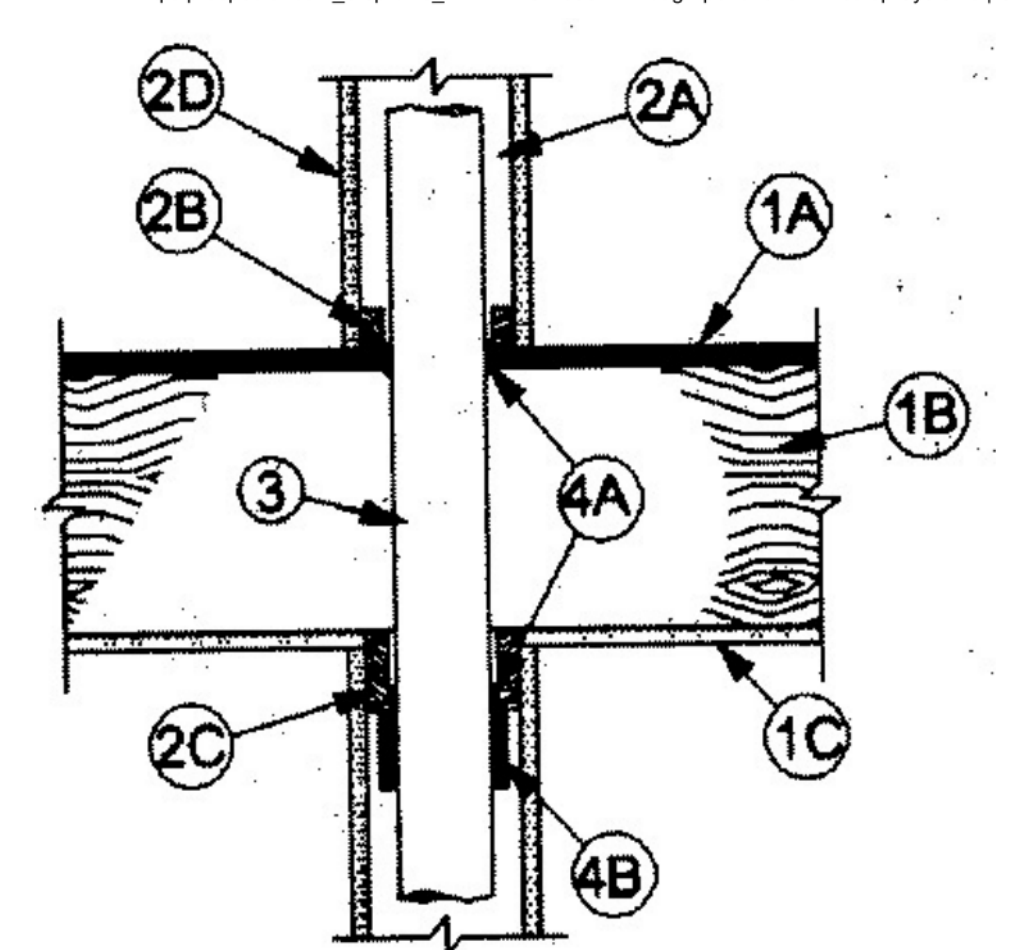
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C. Top Plate* — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) (or larger) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening shall be 1 in. (25 mm) larger than the nom diam of through-penetrant (item 3).

D. Gypsum Board* — One or two layers of min 1/2 in. (13 mm) gypsum board.

3. Through-Penetrants* — One nom 1-1/2 in. (38 mm), 2 in. (51 mm), 3 in. (76 mm) or 4 in. (102 mm) diam nonmetallic pipe to be installed within the firestop system. Diam of opening through flooring system and through sole and top plates of chase wall to be max 2-1/8 in. (54 mm), 2-5/8 in. (67 mm), 4 in. (102 mm) or 5 in. (127 mm) for nom 1-1/2 in. (38 mm), 2 in. (51 mm), 3 in. (76 mm) or 4 in. (102 mm) diam nonmetallic pipe sizes, respectively. Pipe to be rigidly supported on both sides of the floor-ceiling assembly. The T Rating is dependent on the size of the through-penetrant. For 2 hr rated assemblies, the T Rating is 2 hr for 1-1/2 in. (38 mm) diam (and smaller) pipes and 1-1/2 hr for pipes greater than 1-1/2 in. (38 mm) diam. For 1 hr rated assemblies, the T Rating is 1 hr for 1-1/2 in. (38 mm) diam (and smaller) pipes, 3/4 hr for 2 in. (51 mm) diam pipes and 0 hr for pipes greater than 2 in. (51 mm) diam. The following types of nonmetallic pipes may be used:

- A. Polyvinyl Chloride (PVC) Pipe** — Schedule 40 solid-core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
- B. Chlorinated Polyvinyl Chloride (CPVC) Pipe** — SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
- C. Acrylonitrile Butadiene Styrene (ABS) pipe** — Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
- D. Flame Retardant Polypropylene (FRPP) Pipe** — Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

4. Firestop System* — The details of the firestop system shall be as follows:

- A. Fill, Void or Cavity Material*** — Sealant — Min 3/4 in. (19 mm) thickness of fill material to be installed within the annular space between the pipe and the flooring (item 1A) or sole plate. Min 5/8 in. (16 mm) thickness applied within the annular space. Flush with the bottom surface of ceiling or lower top plate.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant FS-ONE MAX Intumescent Sealant.
- B. Firestop Device*** — Firestop Collar — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to underside of ceiling or chase wall top plate (item 2C) using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 1-1/2 (38 mm) and 2 in. (51 mm) diam pipes and 3 anchor hooks for 2 in. (76 mm) diam pipes). The anchor hooks are to be secured to the ceiling with min 3/16 in. (5 mm) diam steel toggler bolts or to the chase wall top plate with min No. 12 by min 1 in. (25 mm) long steel wood screws in conjunction with steel washers.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 643 50/1.5"N, CP643 63/2"N, CP 643 90/3"N or CP643 110/4"N Firestop Collar

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Last Updated on 2018-04-06

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XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-C-2030
 April 06, 2018

F Ratings — 1 and 2 Hr (See tem 1)
T Ratings — 0, 3/4, 1, 1-1/2 and 2 Hr (See Item 3)

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System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

- Floor-Ceiling Assembly** — The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. **The F Rating of the firestop system is equal to the rating of the floor-ceiling and wall assemblies.** The general construction features of the floor-ceiling assembly are summarized below.
 - A. Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Diam of opening shall be 1 in. (25 mm) larger than the nom diam of through-penetrant (item 3).
 - B. Joists** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with end firestopped.
 - C. Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Diam of opening shall be 1 in. (25 mm) larger than the nom diam of through-penetrant (item 3).
 - D. Furring Channels** — (Not Shown) (As required) - Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.
- Chase Wall** — (Optional) - The through penetrant (item 3) may be routed through a fire-rated or non-rated single, double or staggered wood stud/gypsum wallboard chase wall. The chase wall shall be constructed to include the following construction features:
 - A. Studs** — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
 - B. Sole Plate** — Nom 2 by 6 in. (51 by 152 mm) (or larger) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening shall be 1 in. (25 mm) larger than the nom diam of through-penetrant (item 3).

6A A615 FIRE STOP - FLOOR - FRAMED - NONMETALLIC PIPE CONDUIT TUBING - F_1HR&2HR - T_1HR&2HR - L_NA - HILTI - XHEZ.F-C-2030 12" = 1'-0"

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Date	Description
06/10/2022	Issued for Permit
07/22/2022	Permit Revisions

5/26/22, 11:14 AM iquprospector.com/en/profile/XHEZ.W-L-3441 - Through-penetration Firestop Systems | UL Product IQ

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XHEZ.W-L-3441 - Through-penetration Firestop Systems

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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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XHEZ - Through-penetration Firestop Systems

XHEZ7 - Through-penetration Firestop Systems Certified for Canada

See General Information for Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems Certified for Canada

System No. W-L-3441

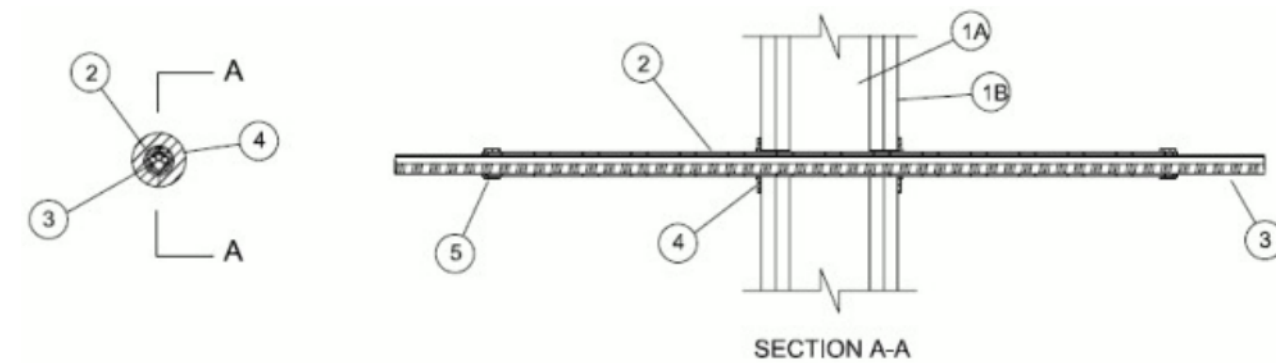
April 29, 2020

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1 and 2 Hr (See Item 1)	FT Ratings — 1 and 2 Hr (See Item 1)
L Rating at Ambient — Less than 1 CFM/Opening	FH Ratings — 1 and 2 Hr (See Item 1)
L Rating at 400 F — Less than 1 CFM/Opening	FTH Ratings — 1 and 2 Hr (See Item 1)
	L Rating at Ambient — Less than 5.1 L/s/m ² /Opening
	L Rating at 204 C — Less than 5.1 L/s/m ² /Opening

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1. **Wall Assembly** — The 1 or 2 fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

B. **Gypsum Board** — Nom 5/8 in. (16 mm) thick gypsum board, with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory. Opening may be round, rectangular or irregular with a max diam or dimension of 1-1/8 in. (19 mm).

The Ratings of the firestop system are equal to the fire rating of the wall assembly.

2. **Metallic Sleeve** — Nom 1 in. (25 mm) diam (or smaller) rigid steel conduit installed flush with wall surfaces. The annular space between steel sleeve and periphery of opening shall be min 0 in. (point contact) to max 1/8 in. (3 mm). When opening dimension exceeds 1 in. (25 mm), max annular space is 3/8 in. (10 mm). The sleeve shall extend up to 12 in. (305 mm) beyond one or both wall surfaces. As an option, sleeve may extend continuously beyond one wall surface. The conduit sleeve shall be secured to the adjacent stud within the wall cavity with a steel conduit strap attached to web of stud with min two no. 8 sheet metal screws with washers or shall be rigidly supported on those sides of the wall where the sleeve is extended. As an option, the sleeve may be provided with a plastic grommet at the ends of the sleeve.

3. **Cables** — Within the sleeve (Item 2), the cables may represent a 0 to 100 percent visual fill. Cables to be tightly bundled within the sleeve and rigidly supported on both sides of wall assembly. Any combination of the following types of cables may be used:

- A. Max 3/C No. 8 AWG NM copper conductor cable (Romex) with PVC insulation and jacket.
- B. Type RG 6/U coaxial cable with fluorinated ethylene or PVC insulation and jacketing.
- C. Max 24 fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation.
- D. Max 4 pr No. 22 AWG (or smaller) Cat 5 or Cat 6 computer cables with PVC or plenum rated insulation and jacketing.
- E. Maximum 3/C No. 10 AWG copper conductor metal-clad cable.
- F. **Through Penetrating Product*** — Max two copper conductor No. 18 AWG (or smaller) Power or Non-Power Limited Fire Alarm Cable with or without a jacket under a metal armor.
- G. Max 7/C-No. 12 AWG copper conductor control cable with PVC or XLPE insulation and jacket.
- H. Max 100 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with PVC or plenum rated insulation and jacketing.

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4. **Fill, Void or Cavity Material*** — Nom 60 mm diam by 3 mm thick putty disc with one seam at radius. Paper-backer of disc to be removed and disc firmly pressed around the sleeve at each surface of wall to lap min 5 mm onto sleeve and firmly pressed to lap onto the wall around periphery of opening. Disc seams to be firmly pressed and sealed tight. Discs to be installed at both sides of wall opening.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-D 1" Firestop Cable Disc

5. **Fill, Void or Cavity Material*** — Nom 60 mm diam by 3 mm thick putty disc with one seam at radius. Paper-backer of disc to be removed and disc firmly pressed around the cable/cable bundle at exit from each end of sleeve, lapping min 5 mm onto cables to completely cover opening and firmly pressed to lap onto the sleeve periphery. Disc seam to be firmly pressed and sealed tight. Discs to be installed at both sides of wall opening.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 or FS-ONE MAX Intumescent Sealant

6. **Fill, Void or Cavity Material*** — Sealant — As an alternate to Item 4, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the sleeve/wall interface. Fill material installed symmetrically on both sides of the wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 or FS-ONE MAX Intumescent Sealant

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Last Updated on 2020-04-29

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6C A616 FIRE STOP - WALLS - FRAMED WALLS - ELECTRIC CABLE - F 1HR&2HR - T 1HR&2HR - L 5 - HILTI - XHEZ.W-L-3441 12" = 1'-0"

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XHEZ.W-L-1095 - Through-penetration Firestop Systems

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XHEZ - Through-penetration Firestop Systems

XHEZ7 - Through-penetration Firestop Systems Certified for Canada

See General Information for Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems Certified for Canada

System No. W-L-1095

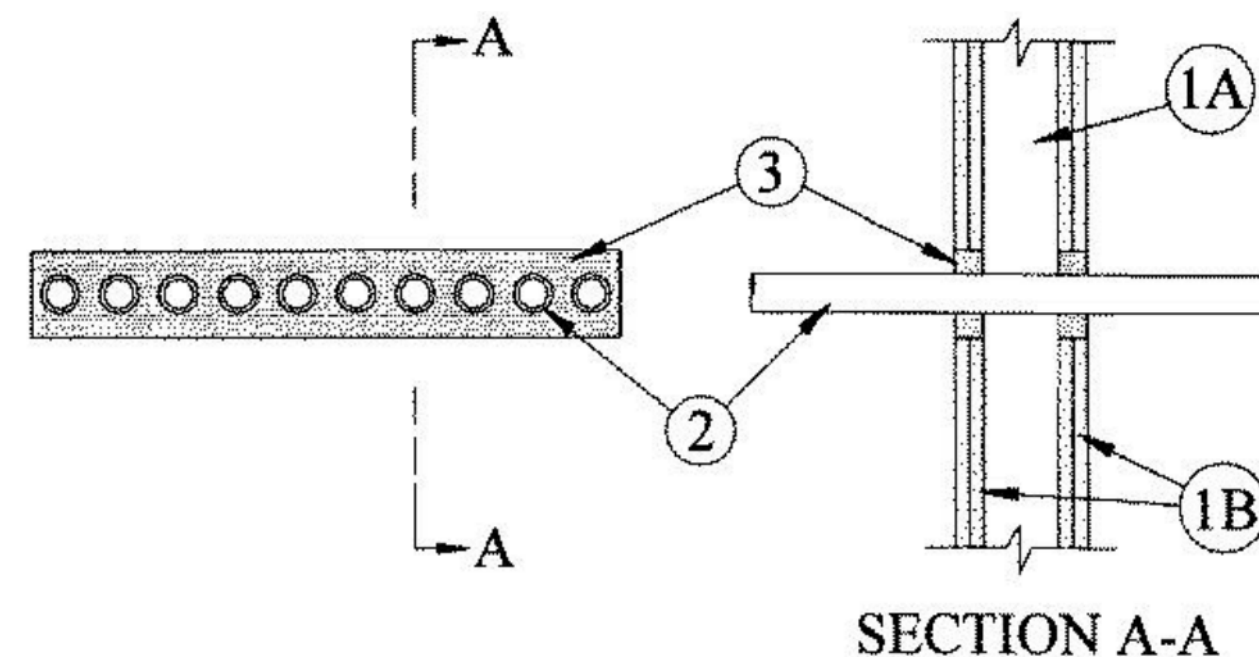
January 21, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 & 2 Hr (See Item 1)	F Ratings — 1 & 2 Hr (See Item 1)
T Ratings — 1 & 2 Hr (See Item 3)	FT Ratings — 1 & 2 Hr (See Item 3)
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Ratings — 1 & 2 Hr (See Item 1)
L Rating At 400 F — 4 CFM/sq ft	FTH Ratings — 1 & 2 Hr (See Item 3)
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft

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1. **Wall Assembly** — The 1 or 2 h fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.

B. **Gypsum Board** — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max size of opening 2-5/8 in. (67 mm) by 18 in. (457 mm). The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Electric Metallic Tubing (EMT)** — One or more nom 1 in. (25 mm) diam steel electric tubing. The annular space shall be min 1/2 in. (13 mm) to a max 1 in. (25 mm). Conduit to be rigidly supported on both sides of wall assembly.

3. **Fill, Void or Cavity Material*** — Sealant — For 2 h F Rating, min 1-1/4 in. (32 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 1 h F Rating, min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

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Last Updated on 2015-01-21

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6A A616 FIRE STOP - WALLS - FRAMED WALLS - METALLIC PIPE, CONDUIT OR TUBING - F 1HR&2HR - T 1HR&2HR - L 5 - HILTI - XHEZ.W-L-1095 12" = 1'-0"

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Date	Description
04/10/2022	Issued for Permit
07/22/2022	Permit Revisions

5/26/22, 11:04 AM iq.ulprospector.com_en/profile_XHEZ.W-L-2649 - Through-penetration Firestop Systems | UL Product IQ

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XHEZ.W-L-2649 - Through-penetration Firestop Systems

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Through-penetration Firestop Systems XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. W-L-2649

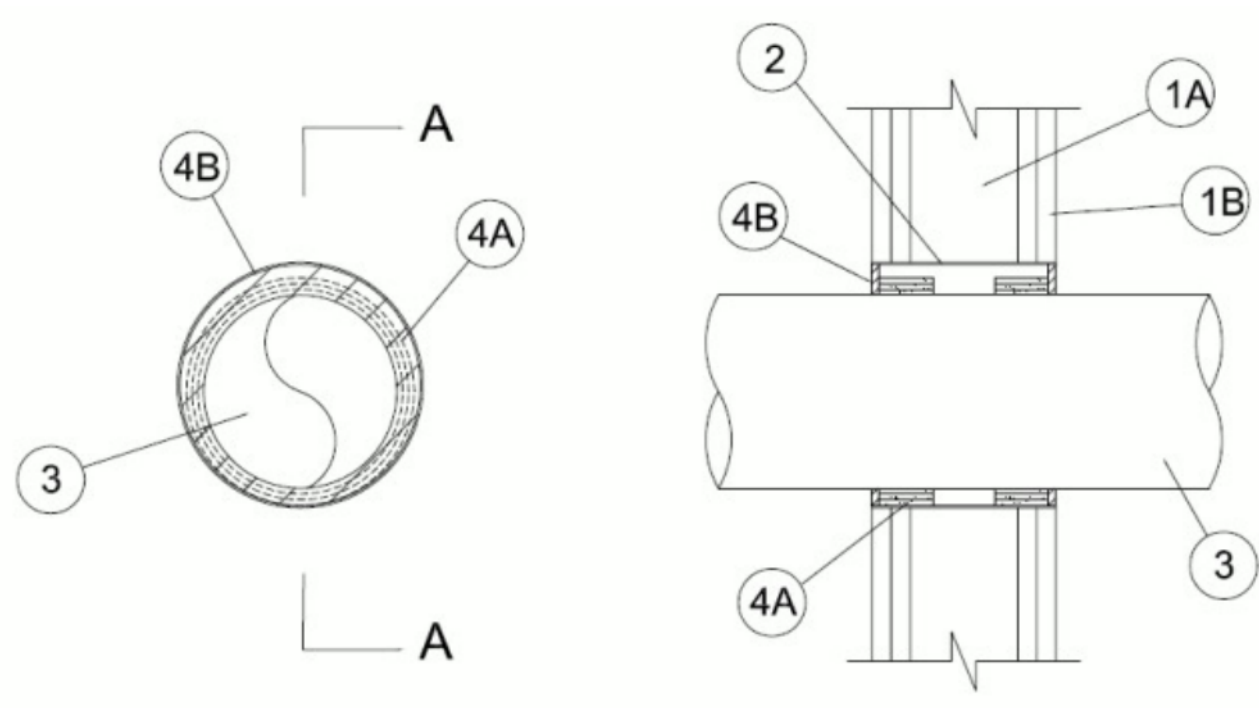
August 2, 2021

F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1 and 2 Hr (See Item 1)
L Rating At Ambient - 1.2 CFM/sq ft
L Rating At 400°F - Less Than 1 CFM/sq ft

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SECTION A-A

The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

- 1. Wall Assembly** — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
- 2. Gypsum Board*** — One or two layers of nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design. Maximum diam of opening is 8 in. (203 mm).
- 3. Steel Sleeve** — Cylindrical sleeve fabricated from min 0.016 in. (0.41 mm) thick galv sheet steel (28 gauge or heavier) and having a min 1 in. (25 mm) lap along the longitudinal seam. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil. The ends of the steel sleeve shall be flush with each surface of the wall. Gypsum board compound shall be used at ends of sleeve to finish any gaps between sleeve and cut edge of gypsum board at both sides of wall.
- 3. Through Penetrants** — One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Annular space within the firestop system is dependent upon the max diam and type of penetrant used as tabulated in Item 4A. Pipe to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes may be used:
A. Polypropylene Random (PP-R) Pipe — Nom 6 in. (160 mm) diam (or smaller) Cosmoplast PP-R SDR 6 pipe for use in closed (process or supply) piping systems.
B. Polypropylene Random (PP-R) Pipe — Nom 6 in. (160 mm) diam (or smaller) Coprac PP-R SDR 6 pipe for use in closed (process or supply) piping systems.
C. Polypropylene Random (PP-R) Pipe — Nom 6 in. (160 mm OD) diam (or smaller) Aquatherm Greenpipe PP-R SDR 7.4 and SDR 11 pipe for use in closed (process or supply) piping systems.
D. High Density Polyethylene (HDPE) Pipe — Nom 6 in. (152 mm) diam (or smaller) SDR11 HDPE pipe for use in closed (process or supply) piping systems.

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- E. Polypropylene (PP-RCT) Pipe** — Nom 6 in. (160 mm OD) diam (or smaller) Aquatherm Bluepipe PP-R SDR 9 or 11 pipe for use in closed (process or supply) piping systems.
 - F. Polypropylene (PP-RCT) Pipe** — Nom 6 in. (160 mm OD) diam (or smaller) Nupi Americas Niron pipe PP-R SDR 7.3, 9 or 11 pipe for use in closed (process or supply) piping systems.
 - G. Polypropylene (PP-RCT) Pipe** — Nom 6 in. (160 mm OD) diam (or smaller) Aquatechnik NA Fusion-Tech pipe PP-R SDR 7.4 or 11 pipe for use in closed (process or supply) piping systems.
 - H. Polypropylene (PP-RCT) Pipe** — Nom 6 in. (160 mm OD) diam (or smaller) Uponor pipe PP-R SDR 9 or 11 pipe for use in closed (process or supply) piping systems.
- 4. Firestop System** — The firestop system shall consist of the following:
A. Fill, Void or Cavity Material* — Wrap Strip — Nom 3/16 in. (4.8 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Layers of wrap strip are continuously wrapped around the pipe with ends tightly butted and held in place with tape. Wrap strip installed within the opening at each side of wall and recessed from both surfaces of wall to accommodate the required thickness of sealant (item 4B). The number of layers for a given size penetrant is shown in table below:
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W45/1-3/4" Firestop Wrap Strip

Max Pipe Size, in. (mm)	Max Opening Diam, in. (mm)	Annular Space Min, in. (mm)	Annular Space Max, in. (mm)	Number of Layers
3 (90)	4-1/2 (114)	3/16 (4.8)	3/4 (19)	1
4 (110)	6 (152)	3/8 (10)	1-1/8 (29)	2
6 (160)	8 (203)	9/16 (14)	1-3/16 (30)	3

Metric dimensions shown for pipes (items 3A, 3B and 3C) in parenthesis are actual metric OD's marked on pipe.

- 8. Fill, Void or Cavity Material* — Sealant** — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For L Rating, the sealant shall extend over the edge of sleeve and lap onto the gypsum wall surface at both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2021-08-02

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6C A617 FIRE STOP - WALLS - FRAMED WALLS - NONMETALLIC PIPE CONDUIT, TUBING - F 1HR&2HR - T 1HR&2HR - L 5 - HILTI - XHEZ.W-L-2649
12" = 1'-0"

5/29/22, 8:39 AM iq.ulprospector.com_en/profile_XHEZ.W-L-8081 - Through-penetration Firestop Systems | UL Product IQ

UL Product IQ®

XHEZ.W-L-8081 - Through-penetration Firestop Systems

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHEZ - Through-penetration Firestop Systems XHEZ7 - Through-penetration Firestop Systems Certified for Canada

See General Information for Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems Certified for Canada

System No. W-L-8081

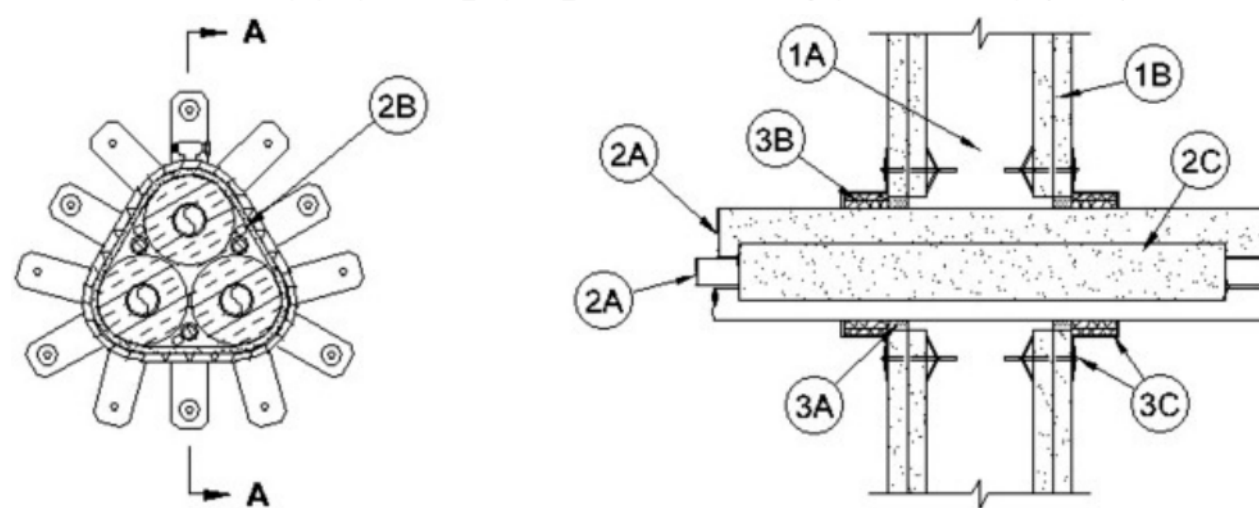
January 28, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Item 1)	F Rating — 1 and 2 Hr (See Item 1)
T Rating — 0 and 1 Hr (See Item 1)	FT Rating — 0 and 1 Hr (See Item 1)
	FH Rating — 1 and 2 Hr (See Item 1)
	FTH Rating — 0 and 1 Hr (See Item 1)

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5/29/22, 8:39 AM iq.ulprospector.com_en/profile_XHEZ.W-L-8081 - Through-penetration Firestop Systems | UL Product IQ



Section A-A

The hourly F, FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T, FT, FTH Ratings of the firestop system are 0 hr for 1 hr fire rated wall assemblies and 1 hr for 2 hr fire rated wall assemblies.

- 1. Wall Assembly** — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
 - 2. Gypsum Board*** — Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 6 in. (152 mm).
- The hourly F, FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T, FT, FTH Ratings of the firestop system are 0 hr for 1 hr fire rated wall assemblies and 1 hr for 2 hr fire rated wall assemblies.
- 2. Air Conditioning (AC) Line Set** — Max of three AC line sets bundled within the opening. Each line set consists of one metallic pipe, one insulated metallic pipe and one electrical cable. The aggregate cross-sectional area of the penetrants does not exceed 84 percent of the cross-sectional area of the wall opening. The annular space between the penetrants and the periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Penetrants to be rigidly supported on both sides of wall assembly.
 - 2A. Metallic Pipes** — The following types and sizes of metallic pipes, conduits or tubing may be used:
A. Steel Pipe — Nom 1 in. (25 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
B. Iron Pipe — Nom 1 in. (25 mm) diam (or smaller) cast or ductile iron pipe.
C. Conduit — Nom 1 1/2 in. (38 mm) diam (or smaller) steel conduit or EMT.
D. Copper Pipe or Tube — Nom 1 in. (25 mm) diam (or smaller) Type 1 (or heavier) copper tube or Regular (or heavier) copper pipe.
 - 2B. Cables** — Max 4 pair No. 18 AWG (or smaller) thermostat cable with PVC insulation and jacket.
 - 2C. Pipe Covering** — The following pipe covering shall be used with the metallic pipes (Types 2A, 2B and 2D only) having a nom diam greater than 1/2 in. (13 mm):
A. Tube Insulation - Plastics* — Nom 1 in. (25 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing.
 See **Plastics (QMF22)** category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

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5/29/22, 8:39 AM iq.ulprospector.com_en/profile_XHEZ.W-L-8081 - Through-penetration Firestop Systems | UL Product IQ

- 3. Firestop System** — The details of the firestop system shall be as follows:
A. Fill, Void or Cavity Material* - Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. Fill material forced into grouped penetrant interstices to max extent possible within opening.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

- 8. Fill, Void or Cavity Material*** — Wrap Strip — Nom 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Wrap strip is continuously wrapped around the outer circumference of bundled penetrants two times with ends butted and held in place with tape. Wrap strip installed flush with both surfaces of wall assembly.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W25/1-3/4" Wrap Strip

- C. Steel Collar** — Steel collar fabricated from coils of precut min 0.016 in. (0.41 mm) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be min 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs on 1-3/4 in. (44 mm) centers for securement to both surfaces of wall. In addition, collars contain preformed retainer tabs 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, located opposite the anchor tabs. Collar shall be tightly wrapped over the wrap strip, overlapping min 1 in. (25 mm) at seam and compressed with a min 1/2 in. (13 mm) wide by 0.028 in. (0.71 mm) thick stainless steel band at collar mid-height. Every other anchor tab of collar secured to surface of wall with min 1-1/2 in. (38 mm) long drywall or laminate screws with min 3/4 in. (19 mm) steel washers.
- * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Bearing the UL Recognized Component Marking

Last Updated on 2015-01-28

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6A A617 WALLS - FRAMED WALLS - GROUPINGS - F 1HR&2HR - T 1HR&2HR - L NA - HILTI - XHEZ.W-L-8081
12" = 1'-0"

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RENOVATION
Wranglers
Engineers

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kate@renovations.com | 979.450.9969

ARCHITECTURE
Architect of Record: LKB Architecture
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Houston, TX 77019
isa@lkbarchitecture.com | 713.425.3076

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Date	Description
04/10/2022	Issued for Permit
07/22/2022	Permit Revisions

RENOVATION
Wranglers
ENGINEERS

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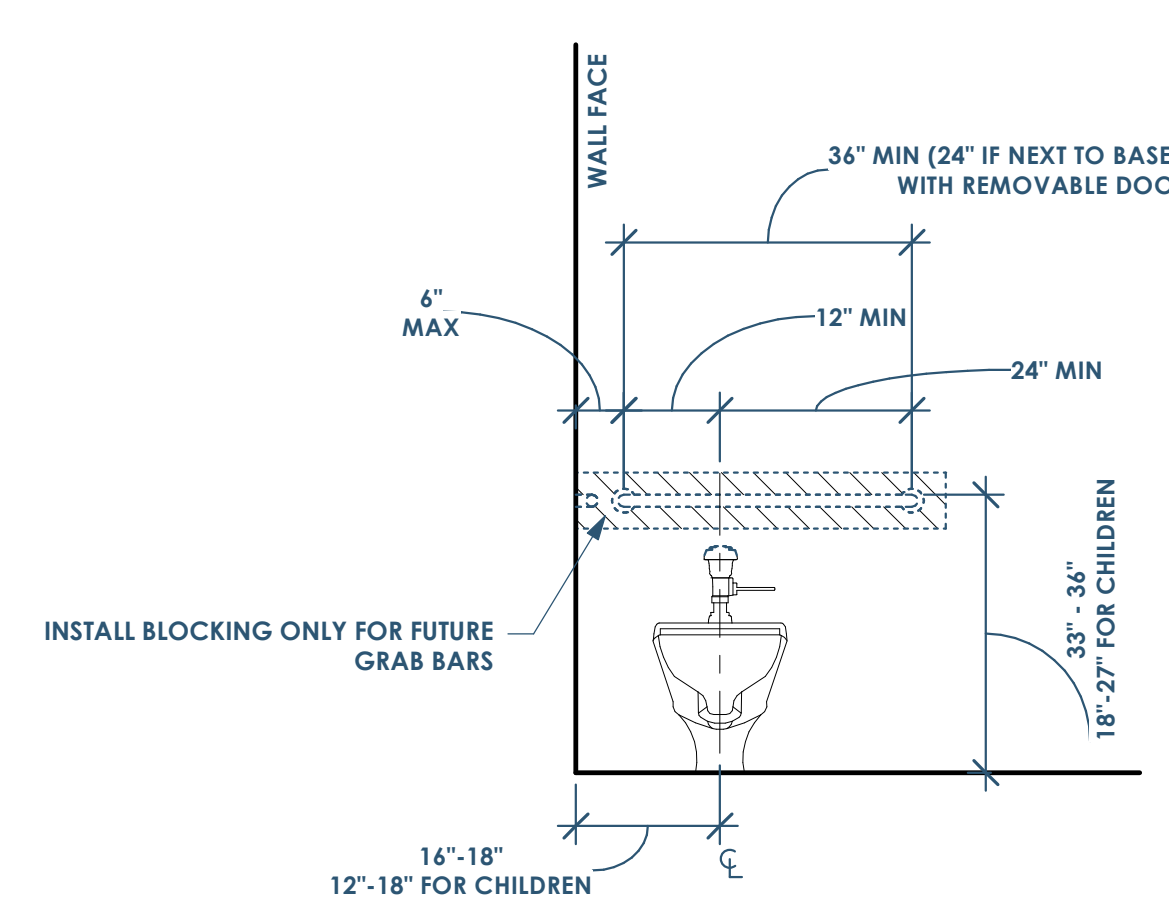
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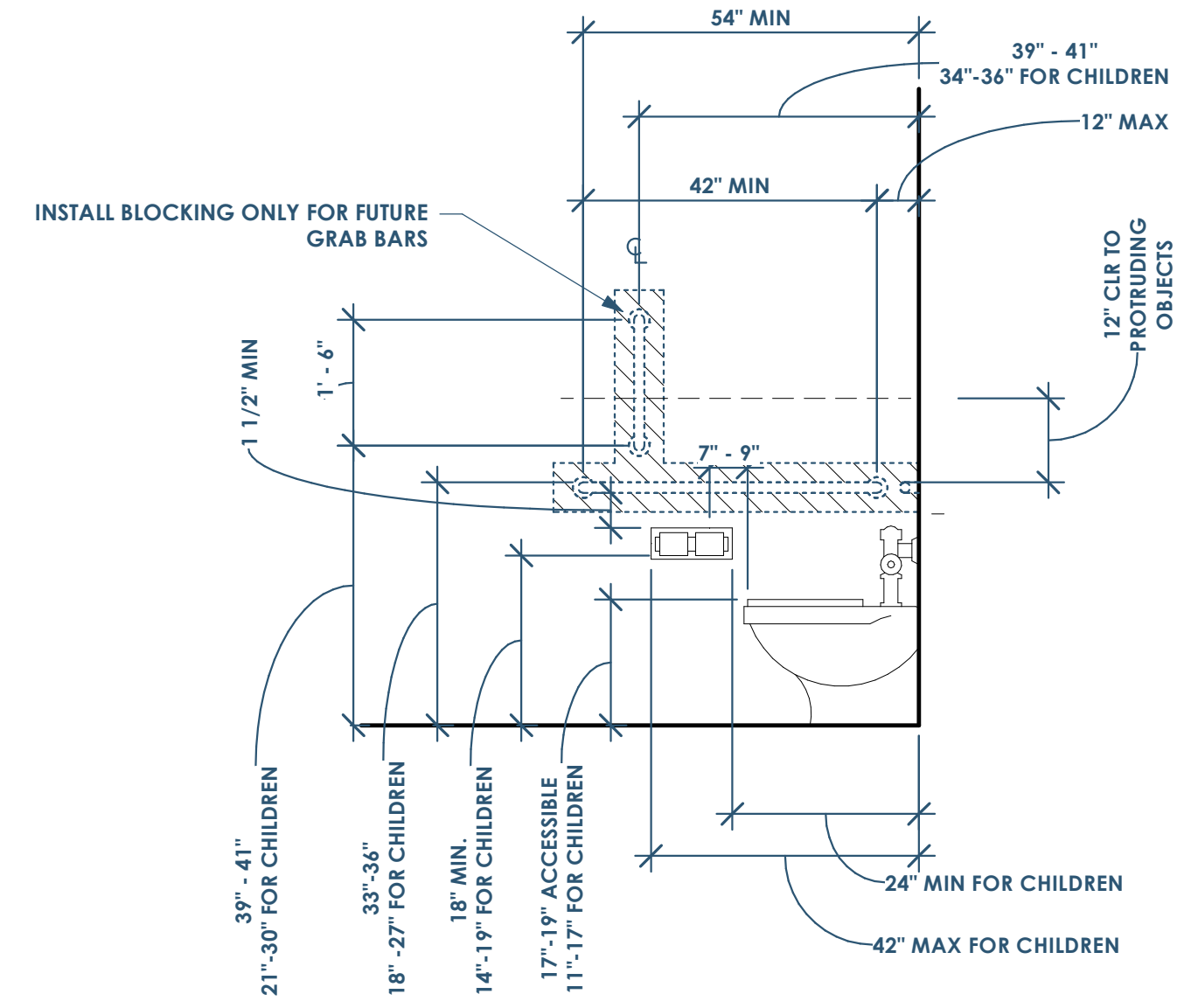
Date	Description
06/10/2022	Issued for Permit
07/22/2022	Permit Revisions

GENERAL NOTES:

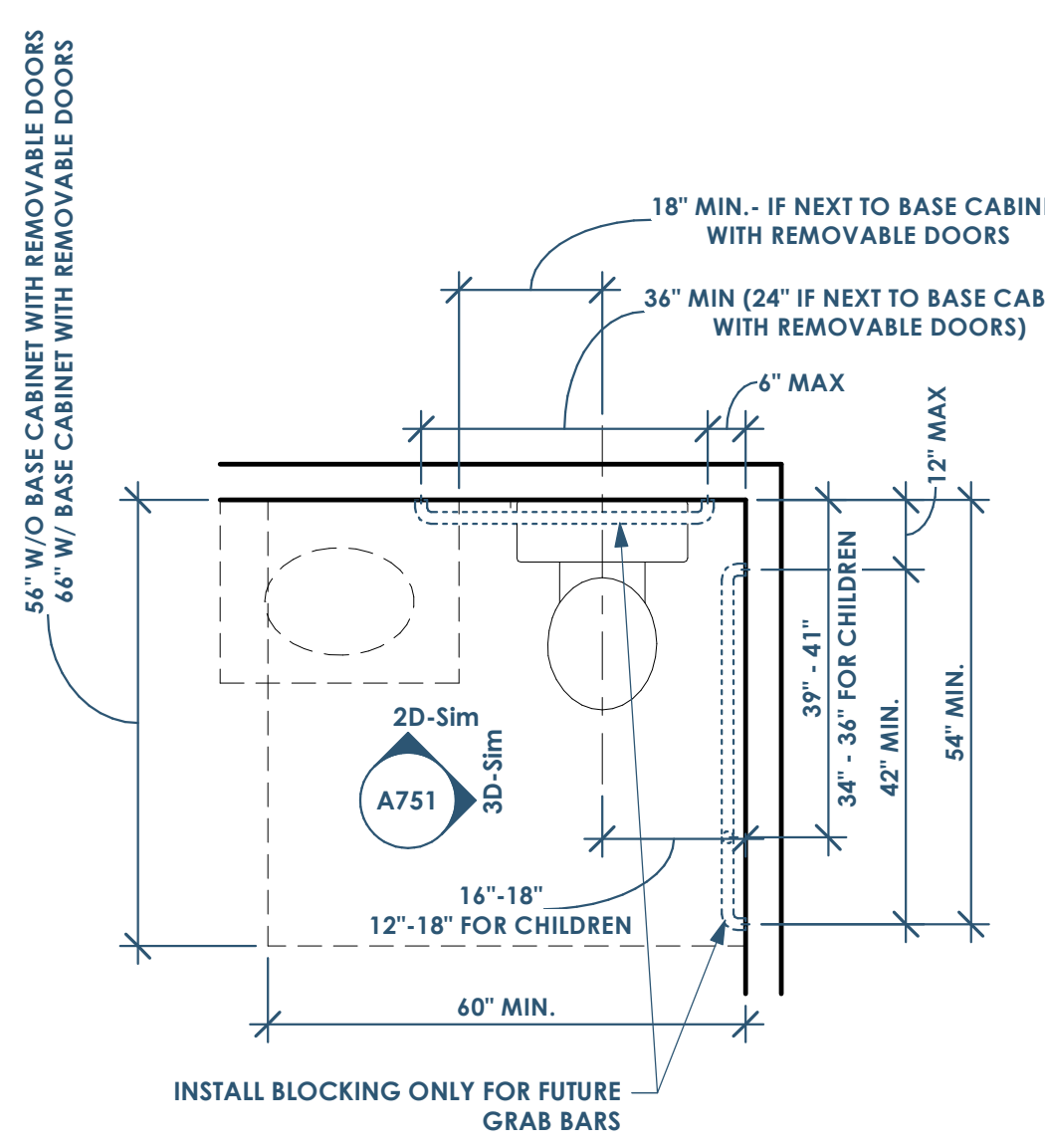
- NOTE: PER IBC1210.2.2 WALLS AND PARTITIONS WITHIN 2 FEET (610MM) OF SERVICE SINKS, URINALS AND WATER CLOSETS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE, TO A HEIGHT OF NOT LESS THAN 4 FEET (1219 MM) ABOVE THE FLOOR, AND EXCEPT FOR STRUCTURAL ELEMENTS, THE MATERIAL USED IN SUCH WALLS SHALL BE OF A TYPE THAT IS NOT ADVERSELY AFFECTED BY MOISTURE
- THESE ADA CLEARANCES AND GRAB BAR BLOCKING ARE ONLY REQUIRED FOR THE 1ST FLOOR UNITS



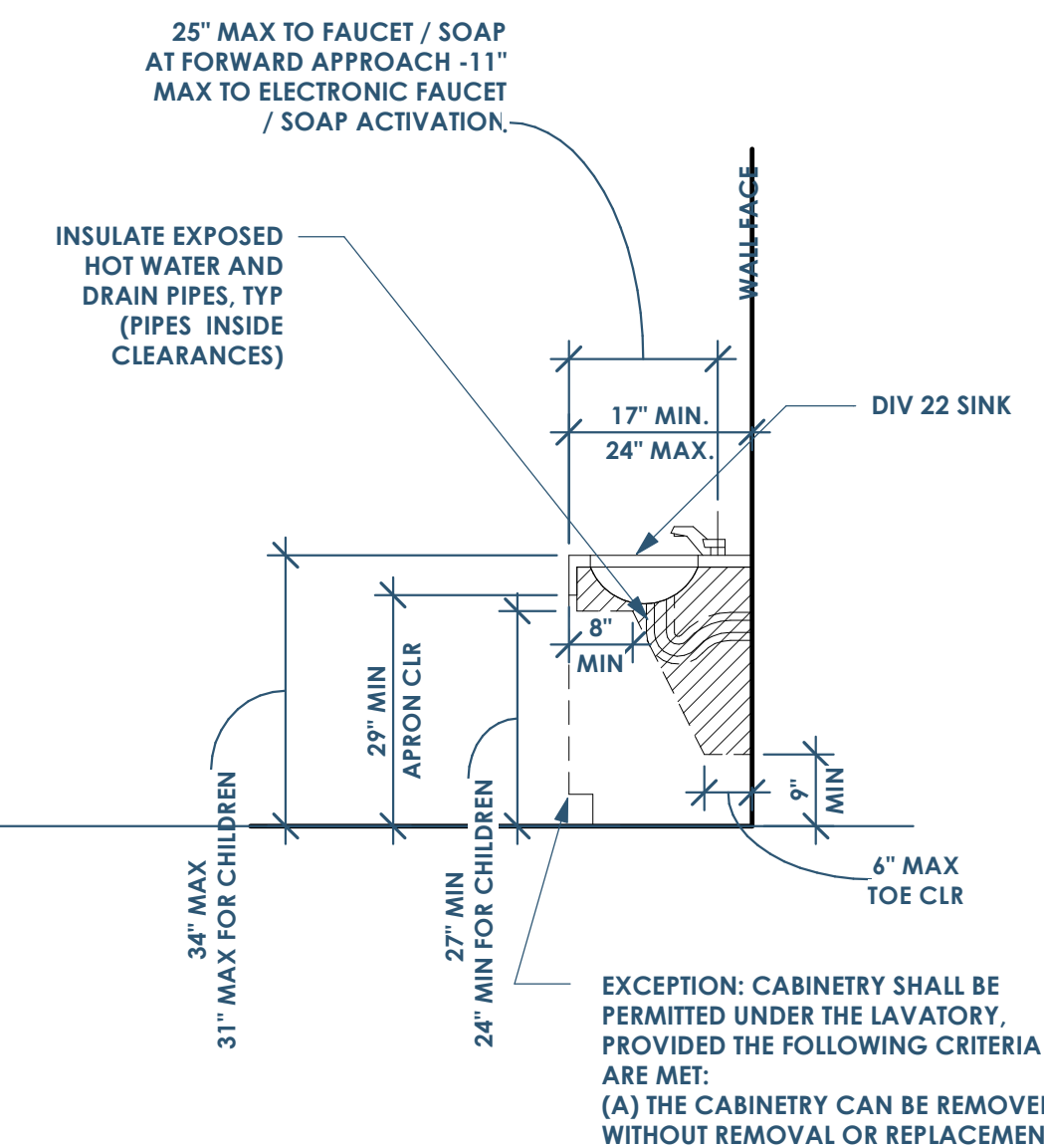
2D ADA - TYPE A - WATER CLOSET - FRONT
1/2" = 1'-0"



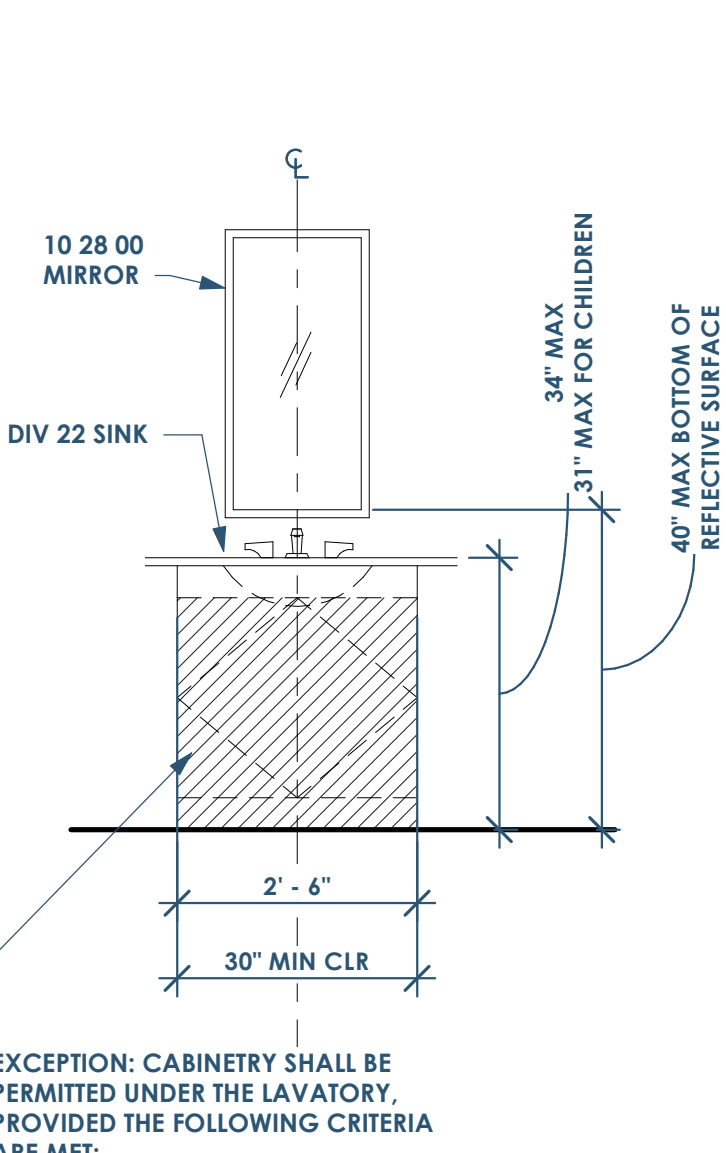
3D ADA - TYPE A - WATER CLOSET - SIDE
1/2" = 1'-0"



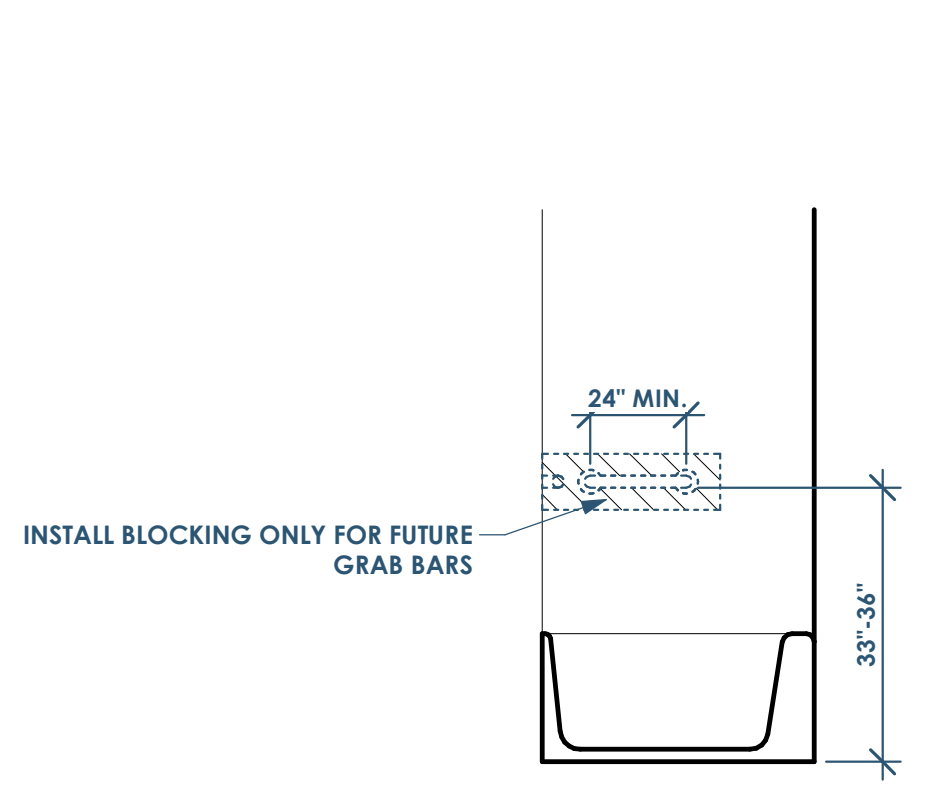
4D ADA - TYPE A - WATER CLOSET - FLOOR PLAN (OR TYPE B FRONT APPROACH)
1/2" = 1'-0"



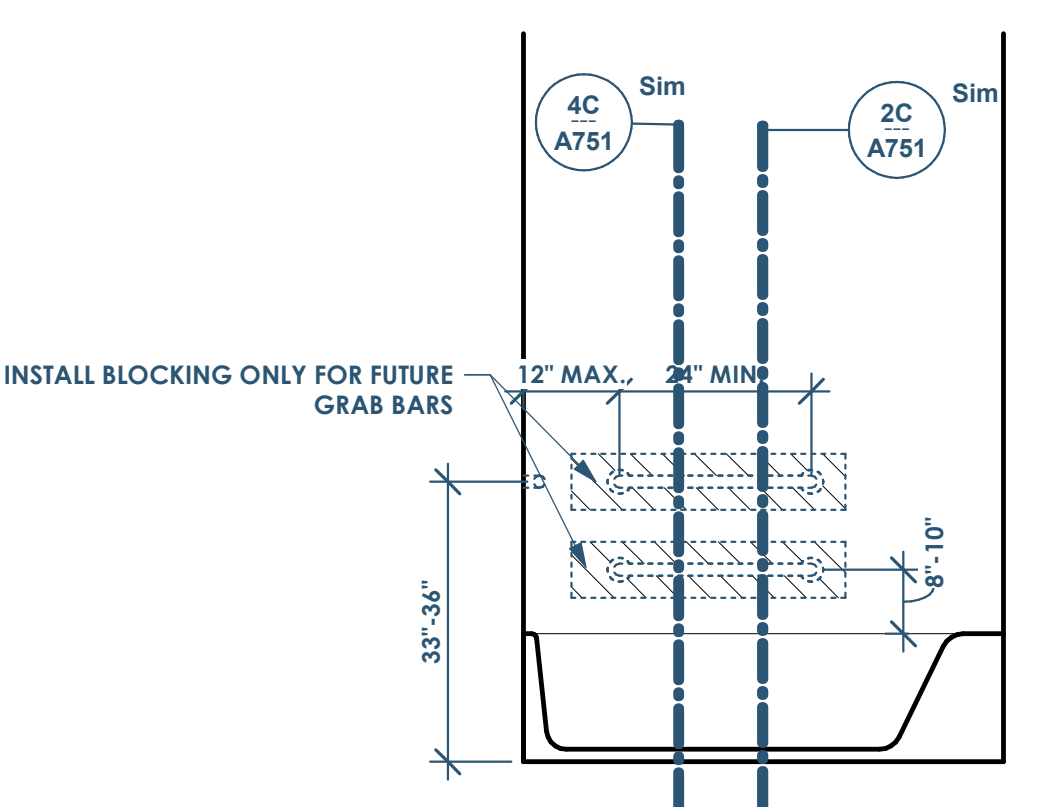
5D ADA - TYPE A - LAVATORY - SIDE (OR TYPE B FRONT APPROACH)
1/2" = 1'-0"



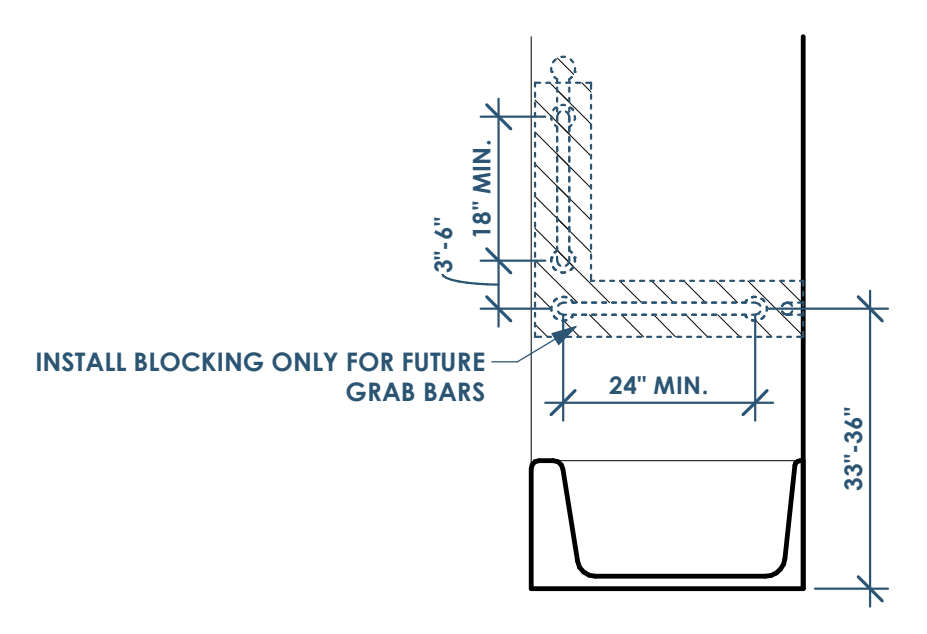
6D ADA - TYPE A - LAVATORY - FRONT (OR TYPE B FRONT APPROACH)
1/2" = 1'-0"



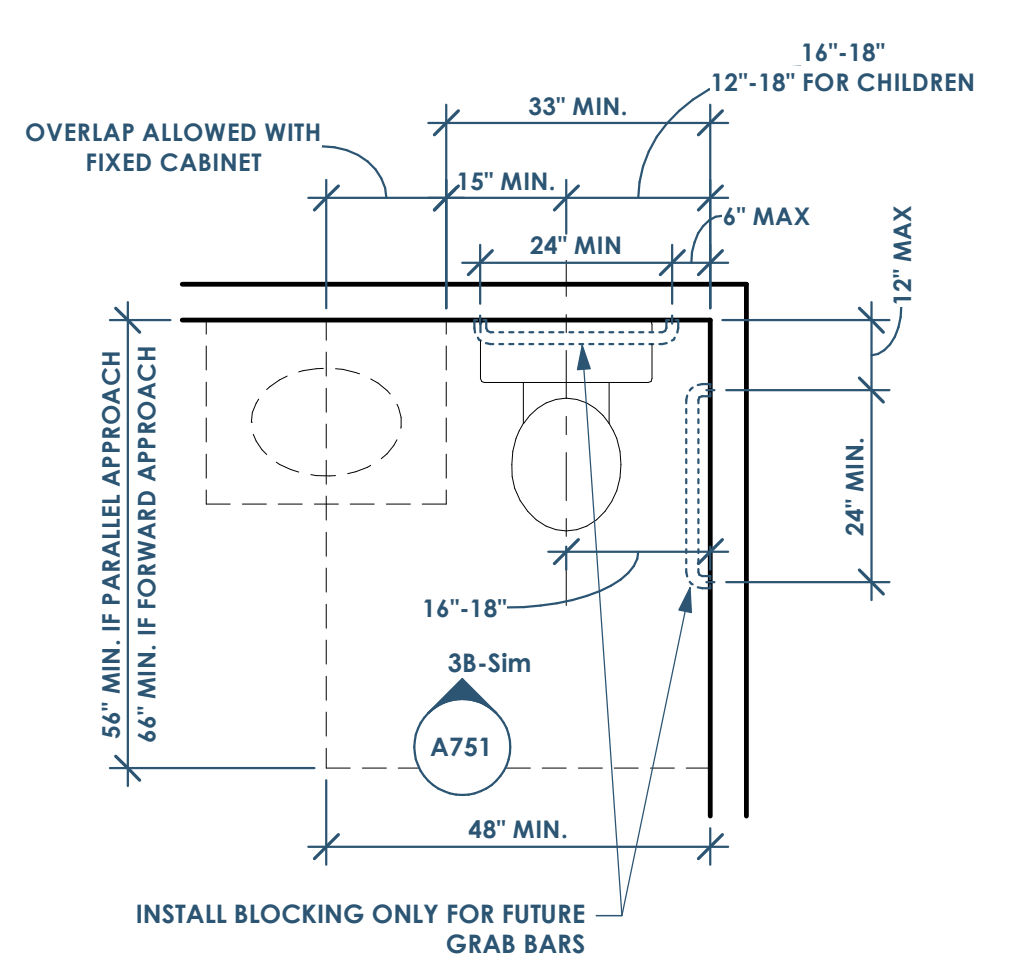
2C ADA - TYPE A & B - BATH - NON-CONTROL SIDE
1/2" = 1'-0"



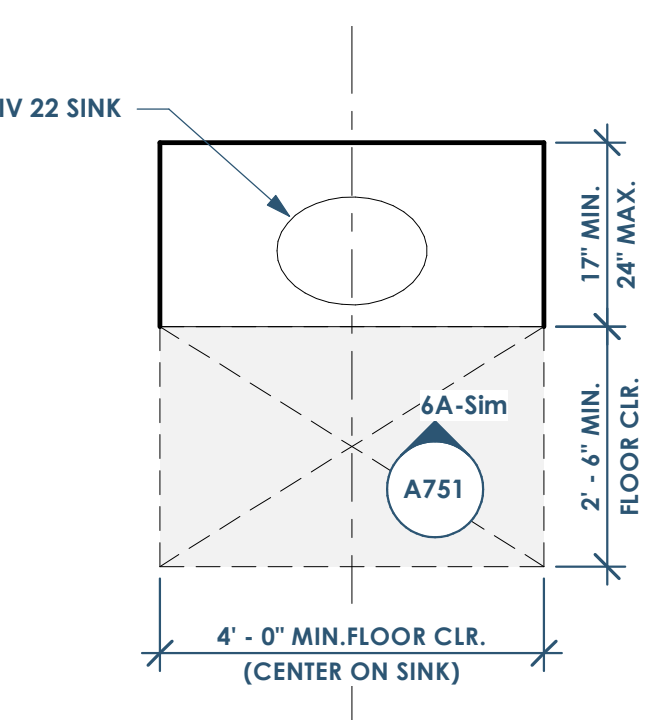
3C ADA - TYPE A & B - BATH - FRONT
1/2" = 1'-0"



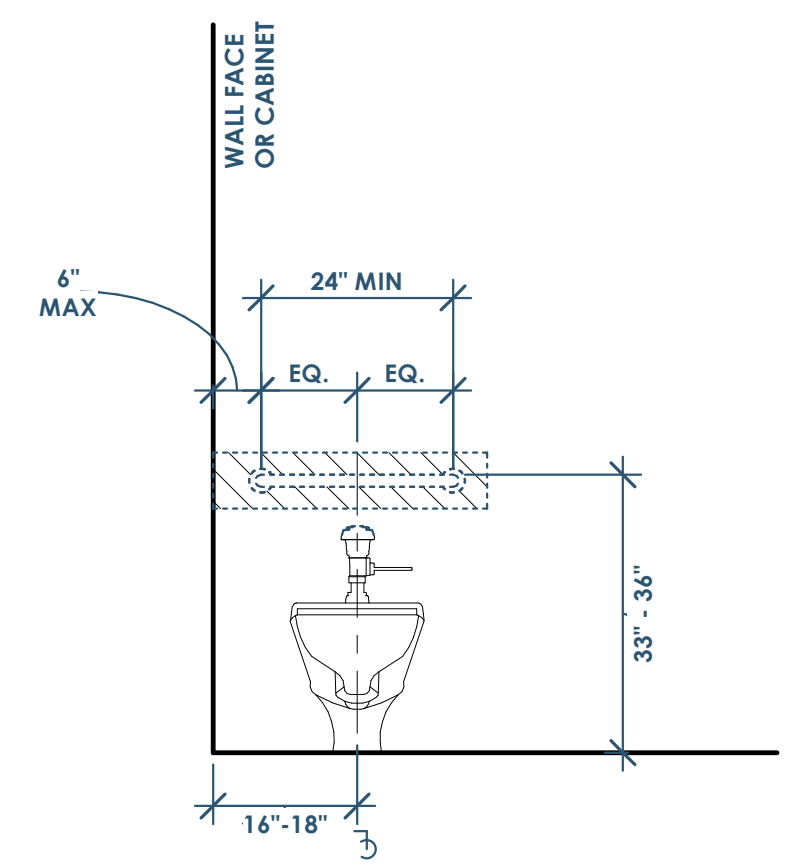
4C ADA - TYPE A & B - BATH - CONTROLS SIDE
1/2" = 1'-0"



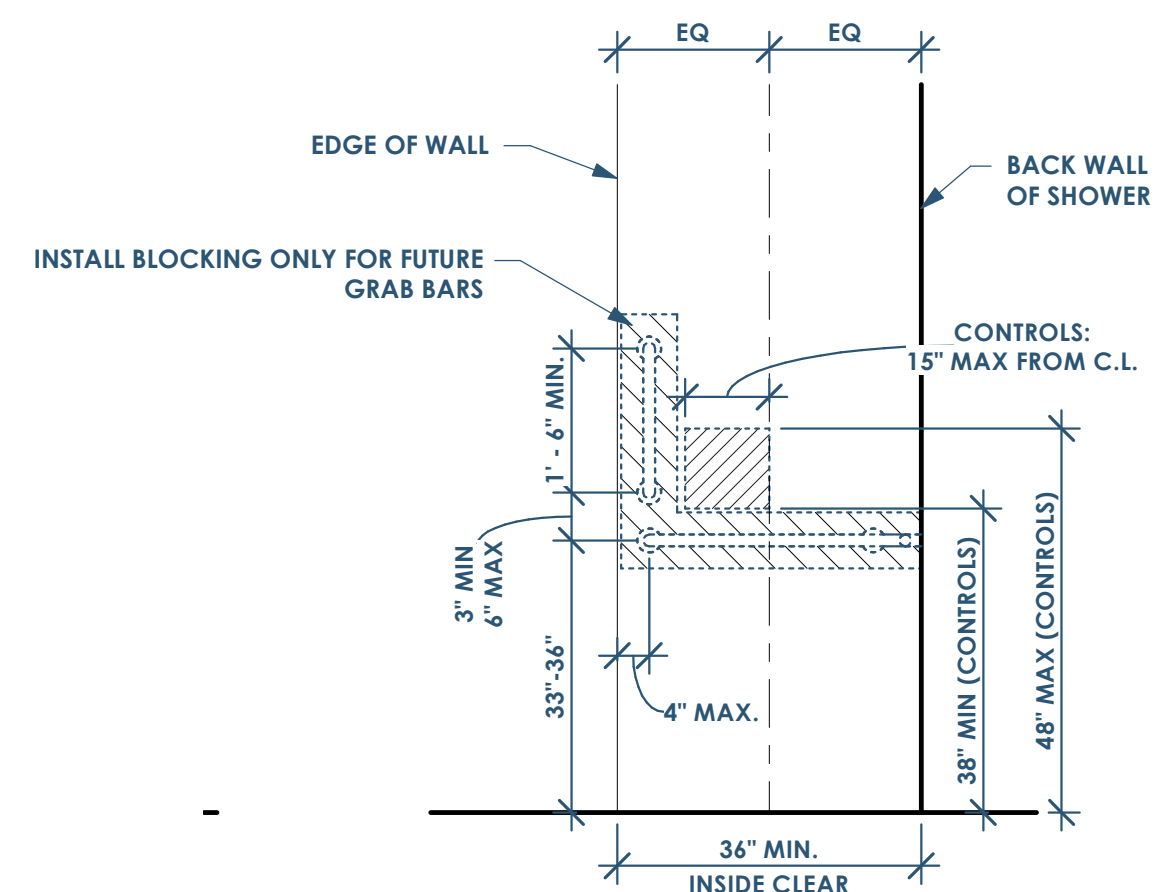
5B ADA - TYPE B - WATER CLOSET - FLOOR PLAN
1/2" = 1'-0"



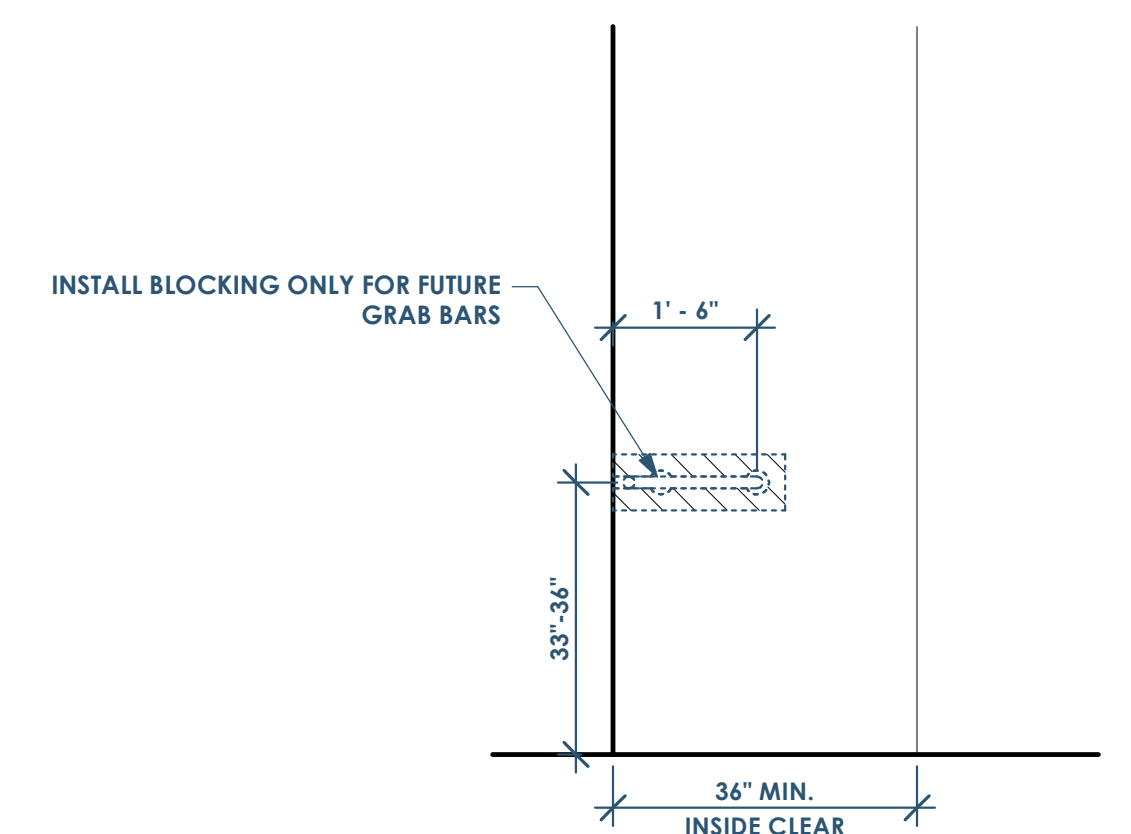
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1/2" = 1'-0"



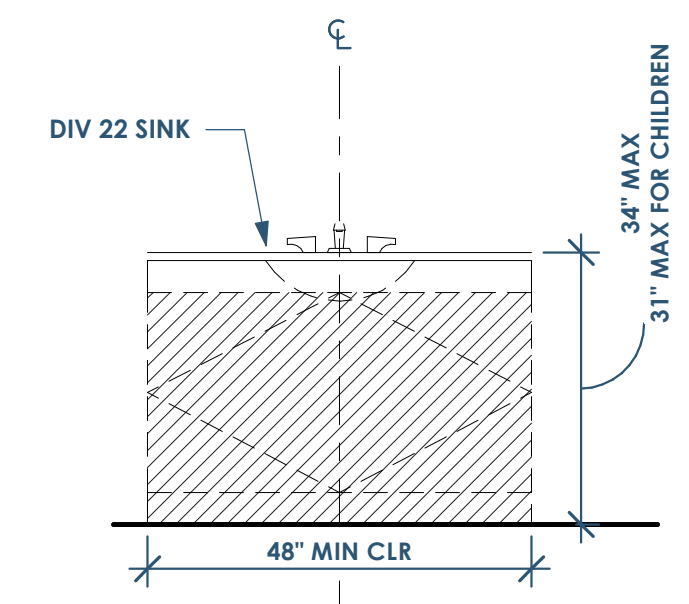
3B ADA - TYPE B - WATER CLOSET - FRONT
1/2" = 1'-0"



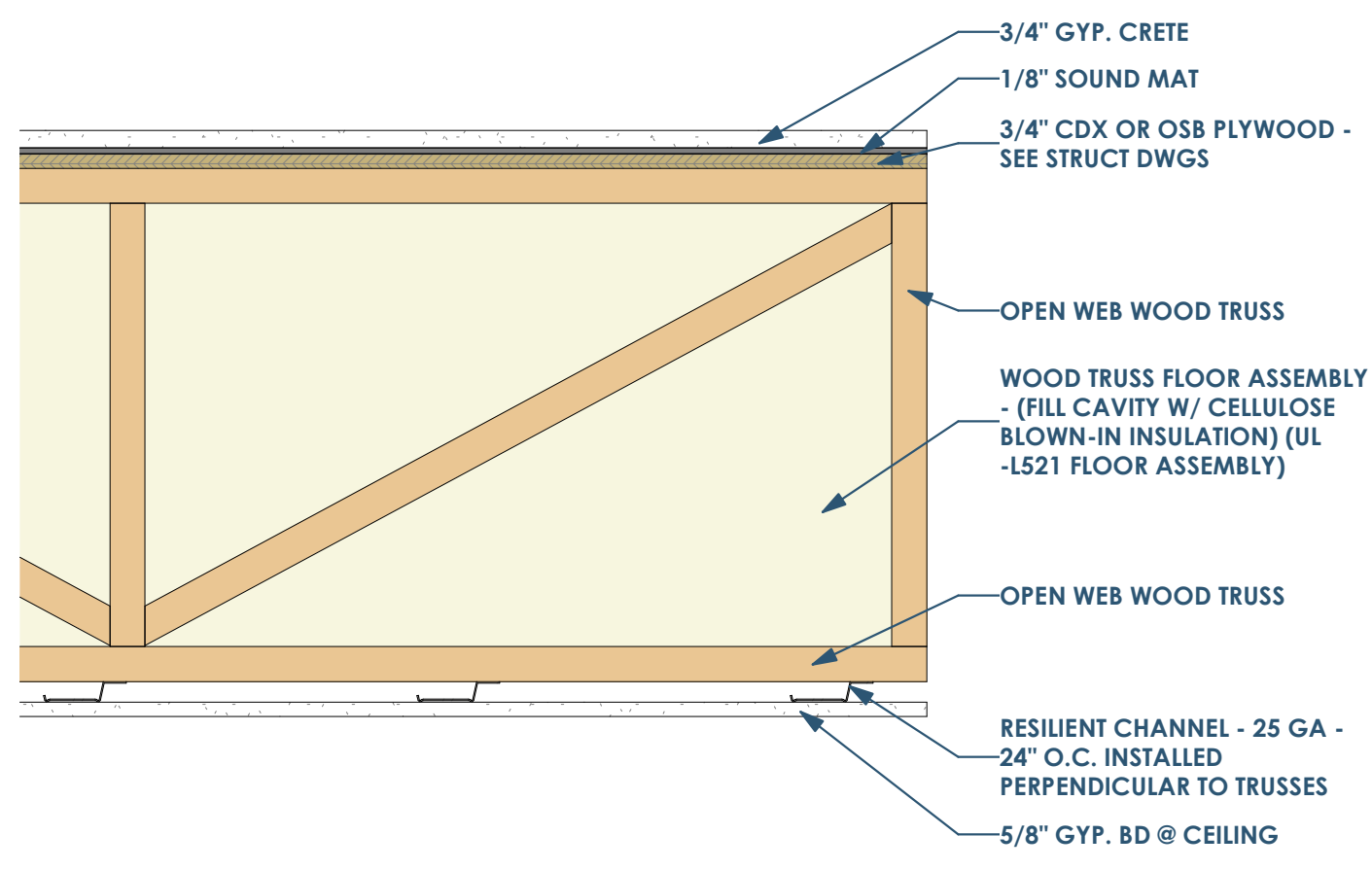
4A ADA - TYPE A & B - SHOWER - SIDE
1/2" = 1'-0"



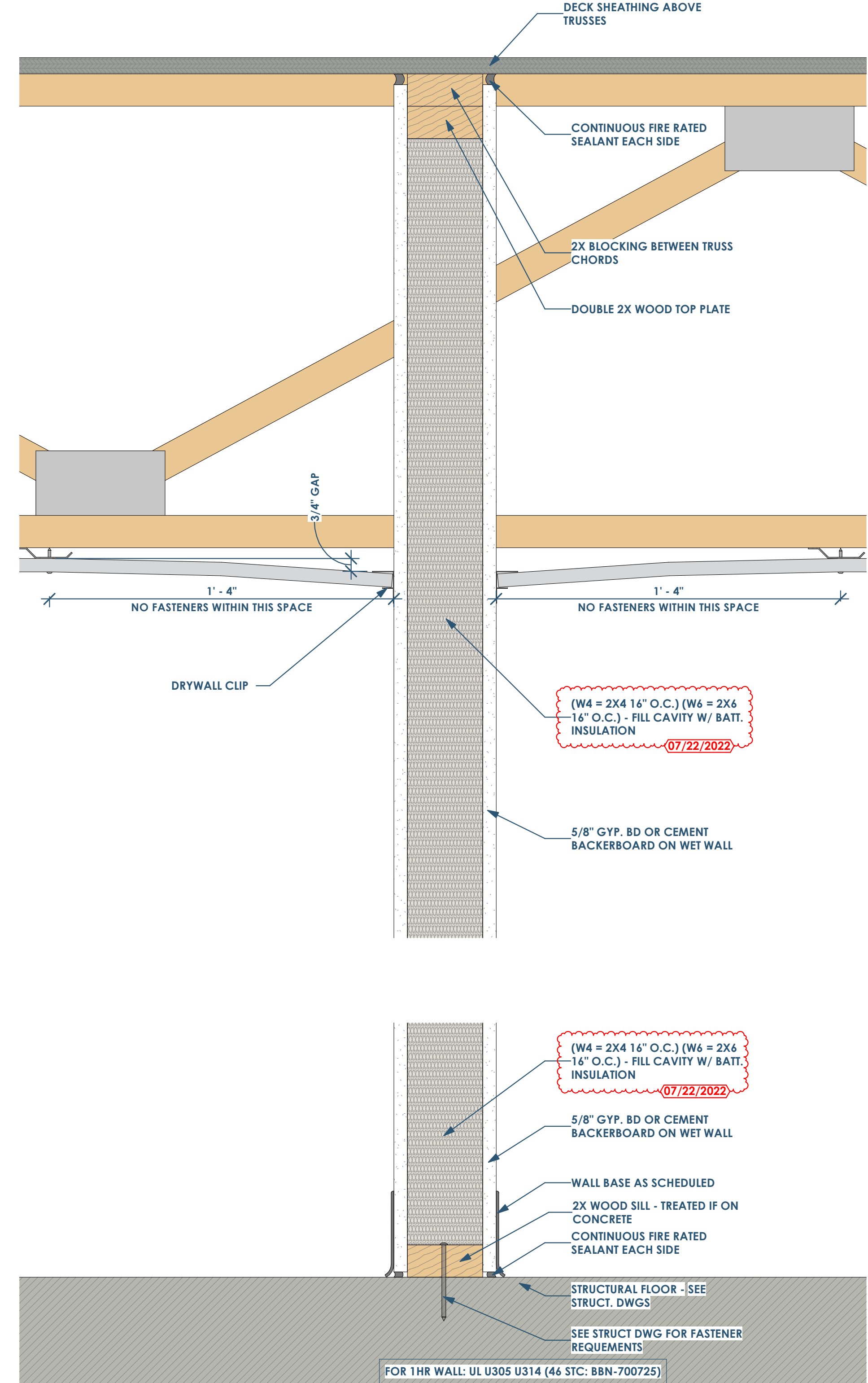
3A ADA - TYPE A & B - SHOWER - BACK
1/2" = 1'-0"



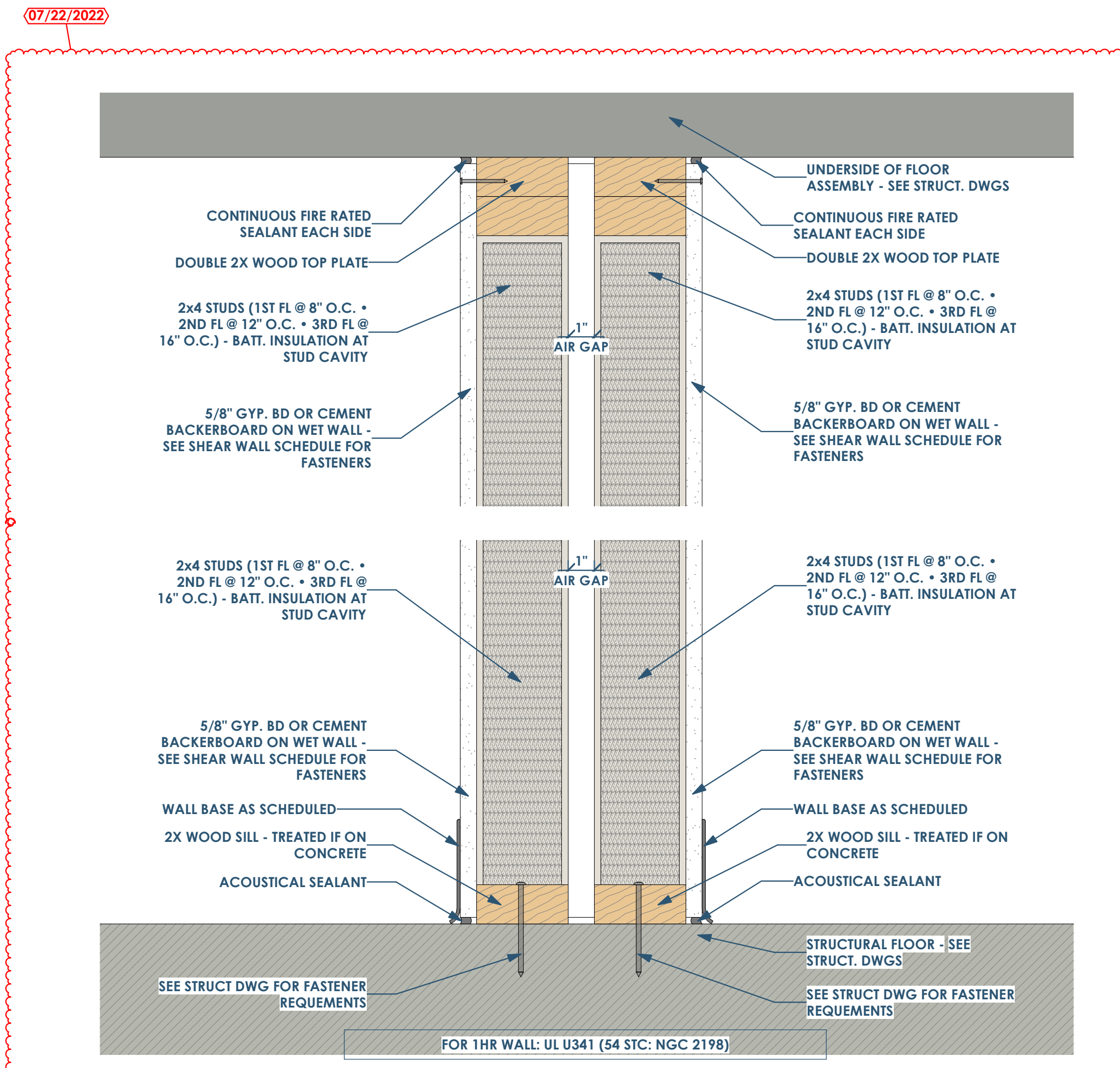
6A ADA - TYPE B - LAVATORY - FRONT
1/2" = 1'-0"



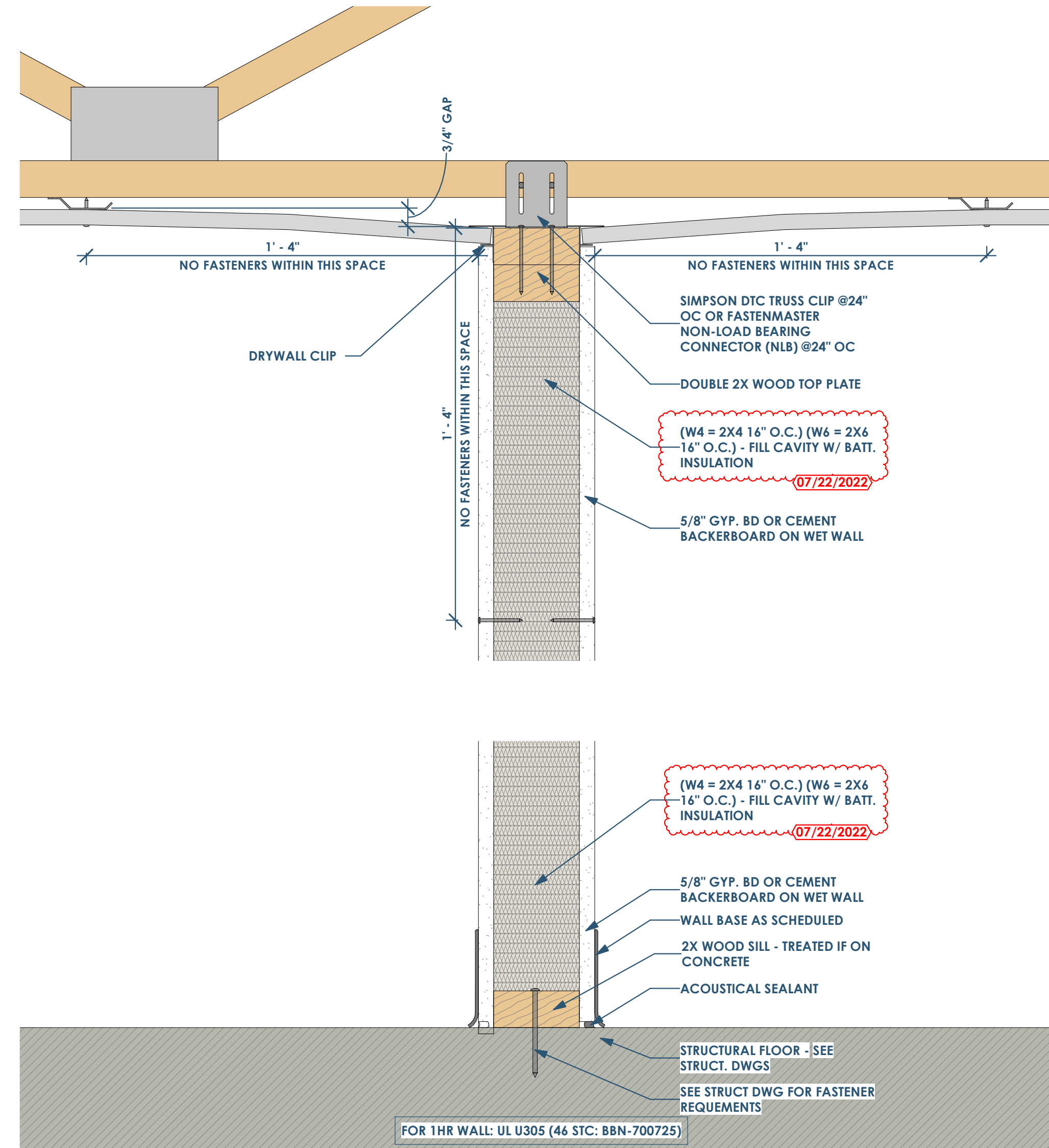
65
A800 FLOOR/CEILING ASSEMBLY - L521
1 1/2\"/>



6A
A800 W481D FULL HEIGHT - TO DECK - PARTITION (1 HR RATED)
3\"/>



5C
A800 W4G5F PARTY WALL - 1 HR RATED WALL (ONLY NEEDS TO BE 1/2 HR RATED)
3\"/>



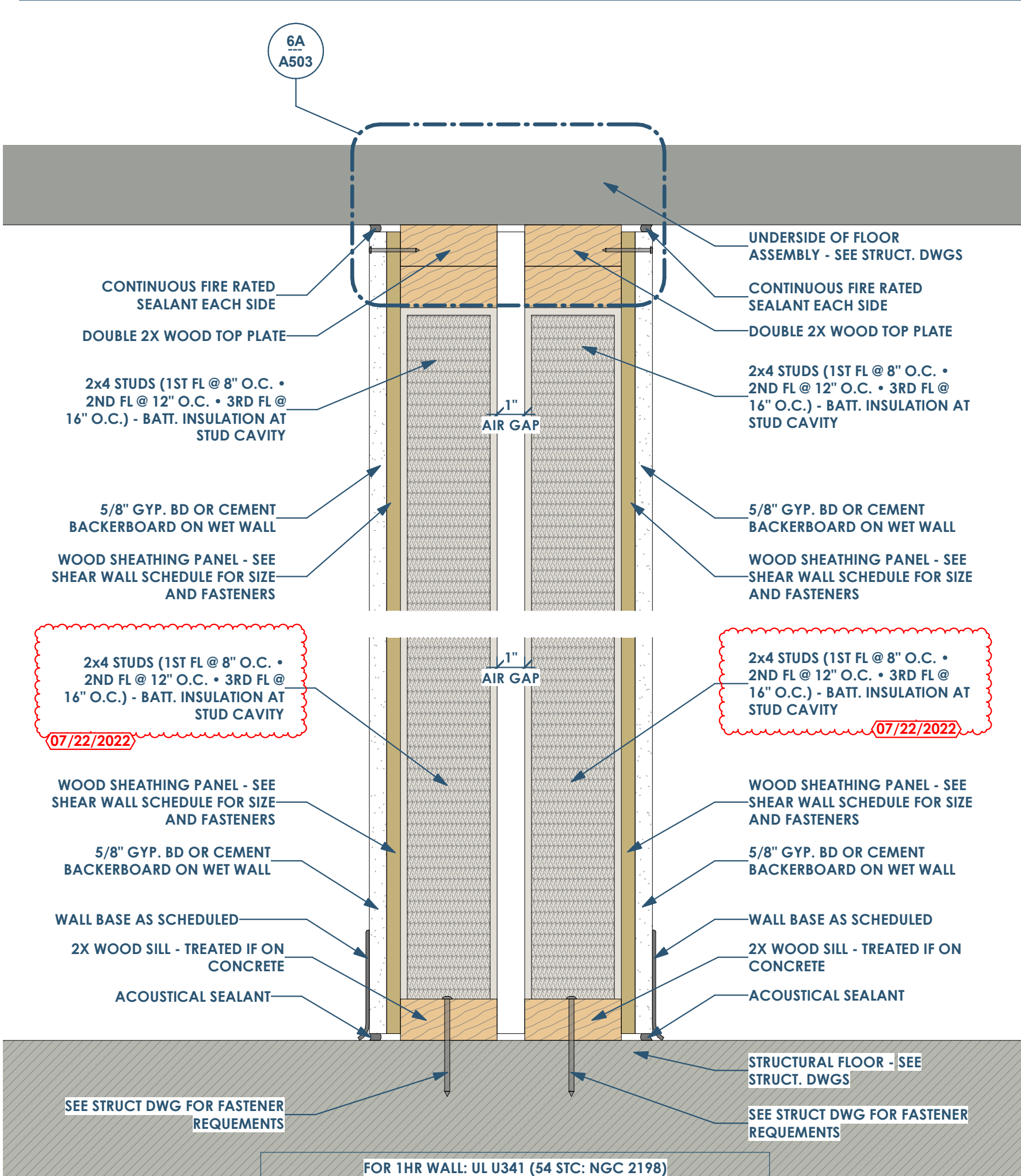
5A
A800 W480F, W680F FULL HEIGHT PARTITION
3\"/>

PARTITION TAG NOMENCLATURE

- 1ST LETTER = CORE MATERIAL
• W= WOOD
• M= METAL
• C= CONCRETE
• B= MASONRY BLOCK
2ND LETTER = SIZE OF CORE
• WOOD: NOMINAL STUD SIZES (EX: 4 = 3 1/2")
• METAL STUD: (EX 358 = 3 5/8")
• CONCRETE: ACTUAL WALL THICKNESS (EX: 8 = 8")
• MASONRY: NOMINAL BRICK MODULES (EX: 8 = 7 5/8")
3RD LETTER = LAYER MATERIAL

Table with columns: LAYER 3, LAYER 2, LAYER 1, CORE, LAYER 1, LAYER 2, LAYER 3, IF FIRE RATED - UL NUMBER. Rows A through Z detailing various wall and ceiling assemblies.

- 4TH NUMBER: FIRE RATING
• 0=0 HOUR
• 1=1 HOUR
• 2=2 HOUR
• 3=3 HOUR
• 5=5 HOUR
5TH (AND BEYOND) LETTERS = MODIFIERS
• A= PARTIAL HEIGHT PARTITION (WALL LAYER 1, 2, & 3 TO EXTEND 4" ABOVE FINISHED CEILING HEIGHT)
• B= PARTIAL HEIGHT WALL (WALL LAYER 1, 2, & 3 TO TERMINATE AT OR BELOW HUNG CEILING)
• D= FULL HEIGHT TO UNDERSIDE OF STRUCTURAL DECK/SHEATHING (CORE AND WALL LAYER 1, 2, & 3 TO TERMINATE AT STRUCTURAL DECK)
• F= FULL HEIGHT TO THE BOTTOM OF STRUCTURE
• K= KNEE WALL PARTITION
• R= FURRED OUT WALL



2A
A800 W4H5F PARTY WALL - 1 HR RATED WALL (ONLY NEEDS TO BE 1/2 HR RATED)
3\"/>

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Table with columns: Date, Description, Issued for Permit, Permit Revisions.