

**RESIDENTIAL RENOVATION**  
**566-568 6TH AVENUE (BLOCK/LOT: 1548/034)**  
**SAN FRANCISCO, CALIFORNIA 94118**

**GENERAL BUILDING INFORMATION**

- THE CONTRACTOR SHALL VISIT THE SITE AND BE FULLY COGNIZANT OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING ANY PROPOSITIONS OR BIDS. IF ANY ASBESTOS, KNOWN MATERIALS CONTAINING ASBESTOS OR ANY MATERIALS CLASSIFIED BY THE EPA AS HAZARDOUS MATERIALS ARE DISCOVERED, THEN THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE OWNER, AS REQUIRED, FOR THE REMOVAL OF THESE CONDITIONS, PRIOR TO THE BEGINNING OF THIS PROJECT. IF THE CONTRACTOR PARTICIPATES IN ANY PORTION OF THE REMOVAL PROCESS IN HIS COORDINATION WITH THE OWNER, THEN THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A WRITTEN STATEMENT RELEASING THE OWNER OF ANY FUTURE LIABILITY FROM THE CONTRACTOR, HIS EMPLOYEES AND ANY SUBCONTRACTORS HIRED BY THE CONTRACTOR RELATED TO THIS WORK. THESE DRAWINGS AND SPECIFICATIONS DO NOT REPRESENT AN ASSESSMENT OF THE PRESENCE OR AN ASSESSMENT OF THE ABSENCE OF ANY TOXIC OR HAZARDOUS MATERIALS ON THIS PROJECT SITE. THE OWNERS ARE SOLELY RESPONSIBLE FOR SUCH AN ASSESSMENT AND SHOULD BE CONSULTED FOR ANY QUESTIONS THEREIN. IF THE CONTRACTOR DISCOVERS ANY TOXIC OR HAZARDOUS MATERIALS, AS DEFINED BY THE APPROPRIATE GOVERNING AUTHORITIES, IN THE COURSE OF HIS WORK, HE MUST NOTIFY THE OWNERS IN WRITING, AS PER THE GUIDELINES BY ALL GOVERNING AUTHORITIES. THE CONTRACTOR SHALL RESOLVE THE APPLICABLE REGULATIONS AND PROCEDURES WITH THE OWNER AT THE TIME OF DISCOVERY.
- ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, LAWS, ORDINANCES AND LOCAL MUNICIPAL REGULATIONS AND AMENDMENTS RELATED TO THIS PROJECT, INCLUDING BUT NOT LIMITED TO: STATE OF CALIFORNIA ADMINISTRATIVE CODE TITLE 24, THE 2018 CALIFORNIA BUILDING CODE (CBC) INCLUDING THE HISTORICAL BUILDING CODE, THE LATEST EDITION OF THE UNIFORM FEDERAL ACCESSIBILITY STANDARDS INCLUDING THE FEDERAL FAIR HOUSING ACT, THE 2018 CALIFORNIA FIRE CODE, THE 2018 CALIFORNIA ENERGY CODE, THE 2013 CALIFORNIA ELECTRICAL CODE, THE 2018 CALIFORNIA MECHANICAL CODE, THE 2018 CALIFORNIA PLUMBING CODE, INCLUDING ALL AMENDMENTS AS ADOPTED IN ORDINANCE 1856 - 2013. THIS PROJECT WILL COMPLY WITH THE 2018 CALIFORNIA ENERGY EFFICIENCY STANDARDS.
- THE CONTRACTOR SHALL COORDINATE AND BE RESPONSIBLE FOR ALL WORK BY HIS SUBCONTRACTORS AND THEIR COMPLIANCE WITH ALL THESE GENERAL NOTES. THE CONTRACTOR SHALL IDENTIFY ANY CONFLICTS BETWEEN THE WORKS OF THE SUBCONTRACTORS, AS DIRECTED BY THESE DRAWINGS, DURING THE LAYOUT OF THE AFFECTED TRADES. THE CONTRACTOR SHALL REVIEW THESE CONDITIONS WITH THE ARCHITECT FOR DESIGN CONFORMANCE BEFORE BEGINNING ANY INSTALLATION.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED DIMENSIONS AND CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT AT ONCE UPON THE DISCOVERY OF ANY CONFLICTS OR DISCREPANCIES BETWEEN THE AFOREMENTIONED AND THE DRAWINGS AND SPECIFICATIONS OF THIS PROJECT. THE CONTRACTOR SHOULD FOLLOW DIMENSIONS AND SHOULD NOT SCALE THESE DRAWINGS. IF DIMENSIONS ARE REQUIRED BUT NOT SHOWN, THEN THE CONTRACTOR SHALL REQUEST THE DIMENSIONS FROM THE ARCHITECT BEFORE BUILDING ANY PART OF THE PROJECT, WHICH REQUIRES THE MISSING DIMENSIONS.
- ANY CHANGES, ALTERNATIVES OR MODIFICATIONS TO THESE DRAWINGS AND SPECIFICATIONS MUST BE APPROVED IN WRITING BY THE ARCHITECT AND OWNER, AND ONLY WHEN SUCH WRITTEN APPROVAL CLEARLY STATES THE AGREED COST OR CREDIT OF THE CHANGE, ALTERNATIVE OR MODIFICATION TO THIS PROJECT. FOR INFORMATION, DRAWINGS OR OTHER DOCUMENTS, NOT SHOWN OR INCLUDED IN THE PERMIT OR CONSTRUCTION DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL REQUEST THE MISSING INFORMATION, DRAWINGS OR DOCUMENTS FROM THE ARCHITECT BEFORE STARTING OR PROCEEDING WITH THE CONSTRUCTION AFFECTED BY THE MISSING INFORMATION, DRAWINGS OR DOCUMENTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL UTILITY CONNECTIONS, UTILITY COMPANIES REQUIREMENTS AND INCLUDE ANY RELATED COSTS ASSOCIATED WITH THIS REQUIREMENT IN THE PROPOSAL OR BID. THE CONTRACTOR IS ALSO RESPONSIBLE FOR WRITING LETTERS OF CONFORMANCE REGARDING OPERATIVE AGREEMENTS FOR THIS PROJECT BETWEEN THE CONTRACTOR AND THE LOCAL FIRE DEPARTMENT, THE LOCAL WATER AGENCY, THE LOCAL NATURAL GAS PROVIDER, THE LOCAL ELECTRICITY PROVIDER, THE LOCAL TELEPHONE SERVICE PROVIDERS, THE LOCAL CABLE TV PROVIDER, THE OWNER'S SECURITY SERVICE PROVIDER AND ANY UNNAMED UTILITY TYPE SERVICE PROVIDER. THE CONTRACTOR SHALL PROVIDE COPIES OF ANY SUCH AGREEMENTS TO THE ARCHITECT AND OWNER, IF REQUIRED OR REQUESTED.
- THE CONTRACTOR IS FULLY RESPONSIBLE TO ENACT THE APPROPRIATE SAFETY PRECAUTIONS REQUIRED TO MAINTAIN A SAFE WORKING ENVIRONMENT. THE CONTRACTOR SHALL ALSO INDEMNIFY AND HOLD HARMLESS THE OWNER, THE ARCHITECT, THEIR CONSULTANTS AND EMPLOYEES FROM ANY PROBLEMS, WHICH RESULT FROM THE CONTRACTOR'S PERFORMANCE OF THE WORK RELATED TO THE SAFETY OF THE CONSTRUCTION SITE. THE CONTRACTOR SHALL CARRY THE APPROPRIATE WORKMAN'S COMPENSATION AND LIABILITY INSURANCE, AS REQUIRED BY THE LOCAL GOVERNMENT AGENCY HAVING JURISDICTION FOR THIS ISSUE, AS WELL AS COMPLY WITH THE GENERALLY ACCEPTED INDUSTRY STANDARDS OF PRACTICE FOR A PROJECT OF THIS SCOPE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WITH THE OWNER, IF HE WILL BE REQUIRED TO CARRY FIRE INSURANCE OR OTHER TYPES OF INSURANCE, AS WELL AS, MAKING THE OWNER AND/OR THE ARCHITECT ADDITIONALLY INSURED OF THEIR POLICIES FOR THE DURATION OF THE PROJECT. HE SHOULD ALSO ASSIST THE OWNER IN IDENTIFYING THE AMOUNT OF COVERAGE REQUIRED FOR THEIR CO-INSURANCE NEEDS.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN AND ORDERLY JOB SITE ON A DAILY BASIS. THE CONTRACTOR SHALL NOT UNREASONABLY ENCUMBER THE SITE WITH MATERIALS OR EQUIPMENT. THE CONTRACTOR SHALL NOT ENDANGER EXISTING STRUCTURES AND ANY NEWLY CONSTRUCTED STRUCTURE BY OVERLOADING THE AFOREMENTIONED WITH MATERIALS OR EQUIPMENT. THE CONTRACTOR SHALL PROTECT ALL EXISTING CONSTRUCTION TO REMAIN AND NEW CONSTRUCTION AFTER IT IS INSTALLED. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY ENCLOSURES OR PROTECTION, AS NEEDED, TO PROTECT THE EXISTING STRUCTURE AND ANY NEWLY CONSTRUCTED STRUCTURES FROM THE ILL EFFECTS OF WEATHER FOR THE DURATION OF THE ENTIRE CONSTRUCTION PROCESS.
- THE CONTRACTOR SHALL WARRANTY ACCORDING TO STATE CONSTRUCTION LAW ALL WORK DONE BY HIM, HIS EMPLOYEES AND HIS SUBCONTRACTORS AGAINST ALL VISIBLE DEFECTS OR ERRORS THAT BECOME APPARENT WITHIN THE FIRST YEAR AFTER THE COMPLETION OF THE PROJECT, AS ACCEPTED BY THE OWNER. THE CONTRACTOR SHALL, ADDITIONALLY, WARRANTY ALL DEFECTS AND ERRORS NOT VISIBLE, BUT CONTAINED WITHIN THE CONSTRUCTED WORK, FOR A PERIOD OF TEN YEARS FROM THE COMPLETION OF THE PROJECT, ALSO ACCORDING TO STATE CONSTRUCTION LAW. ANY AND ALL DEFECTS AND ERRORS THAT DO BECOME APPARENT SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO COST TO THE OWNER FOR MATERIALS OR LABOR. ALTERATIONS OR CHANGES TO THIS WARRANTY MUST BE MUTUALLY AGREED TO IN WRITING BY BOTH THE CONTRACTOR AND THE OWNER.
- THE CONTRACTOR SHALL ASSUME THAT SITE MEETINGS WITH THE OWNER, THE ARCHITECT AND THE CONTRACTOR PRESENT SHALL BE HELD ONCE EVERY WEEK, UNLESS THEY ARE MUTUALLY CHANGED OR CANCELLED. THE CONTRACTOR SHALL KEEP WRITTEN NOTES OF ALL RELEVANT INFORMATION DISCUSSED AT THESE MEETINGS AND PROVIDE COPIES TO THE OWNER AND THE ARCHITECT, UNLESS DIFFERING ARRANGEMENTS ARE RESOLVED WITH THE ARCHITECT AND THE OWNER. THE ARCHITECT SHALL PROVIDE ANY REQUESTED SKETCHES OR ANY REQUESTED INFORMATION THAT IS REQUIRED AND REQUESTED DURING THESE MEETINGS. THE OWNER AND THE CONTRACTOR SHALL ALSO PROVIDE ANY REQUESTED INFORMATION THAT IS REQUIRED DURING THESE MEETINGS.
- THE ARCHITECT OR THE OWNER CAN WRITE AND ISSUE FIELD ORDERS FOR CHANGES TO THE DRAWINGS AND SPECIFICATIONS, AS REQUESTED BY OWNER OR THE CONTRACTOR. IF ADDITIONAL (OR DELETION OF) COST TO THE PROJECT IS REQUIRED, THEN THESE FIELD ORDERS SHALL BECOME THE BASIS OF A CHANGE ORDER.
- THE CONTRACTOR SHALL WRITE AND ISSUE ALL CHANGE ORDERS, WHICH SHALL INCLUDE A COST BREAKDOWN FOR ALL THE WORK DESCRIBED IN SUCH A CHANGE ORDER. ANY CHANGE ORDER WILL NOT BE BINDING TO THE OWNER UNTIL BOTH THE CONTRACTOR AND THE OWNER HAVE SIGNED IT.

**PROJECT INFORMATION**

**BUILDING INFORMATION:**

BLOCK: 1548  
 LOT: 034  
 (E) & (N) OCCUPANCY: R-3  
 (E) NUMBER OF STORIES: 3  
 (N) NUMBER OF STORIES: 4  
 (E) & (N) TYPE OF CONSTRUCTION: V-B  
 (E) & (N) # OF DWELLING UNITS: 2  
 TOTAL OCCUPANT LOAD: 19 ((1965 SF + 1850 SF) / 200)

ZONING / PLANNING INFORMATION:  
 HEIGHT: 40-X  
 ZONING: RH-3  
 AMOUNT OF EXCAVATION: 37.5 CUBIC YARDS  
 HISTORICAL CLASSIFICATION: B

CONDITIONED (HABITABLE) AREA:  
 (E) 566 6TH AVENUE = 1365 SQ. FT.  
 (P) 566 6TH AVENUE = 1965 SQ. FT. (600 SQ. FT INCREASE)  
 (E) 568 6TH AVENUE = 1265 SQ. FT.  
 (P) 568 6TH AVENUE = 1850 SQ. FT. (585 SQ. FT INCREASE)

APPLICABLE CODES:  
 2019 CALIFORNIA BUILDING CODE WITH LOCAL AMENDMENTS  
 2019 CALIFORNIA MECHANICAL CODE WITH LOCAL AMENDMENTS  
 2019 CALIFORNIA ELECTRICAL CODE WITH LOCAL AMENDMENTS  
 2019 CALIFORNIA PLUMBING CODE WITH LOCAL AMENDMENTS  
 2019 GREEN BUILDING CODE WITH LOCAL AMENDMENTS  
 2019 CALIFORNIA ENERGY CODE  
 2019 CALIFORNIA FIRE CODE WITH LOCAL AMENDMENTS

**FIRE DEPARTMENT NOTES**

- MAINTAIN ALL REQUIRED MEANS OF EGRESS, FIRE SPRINKLERS (IF ANY) AND LIFE SAFETY AT ALL TIMES.
- MAINTAIN THE REQUIRED SEPARATION, FIRE RATED CONSTRUCTIONS AND SMOKE BARRIERS.
- SEAL ALL PENETRATIONS WITH APPROVED METHODS AND MATERIALS EQUAL TO EXISTING FIRE RATINGS.

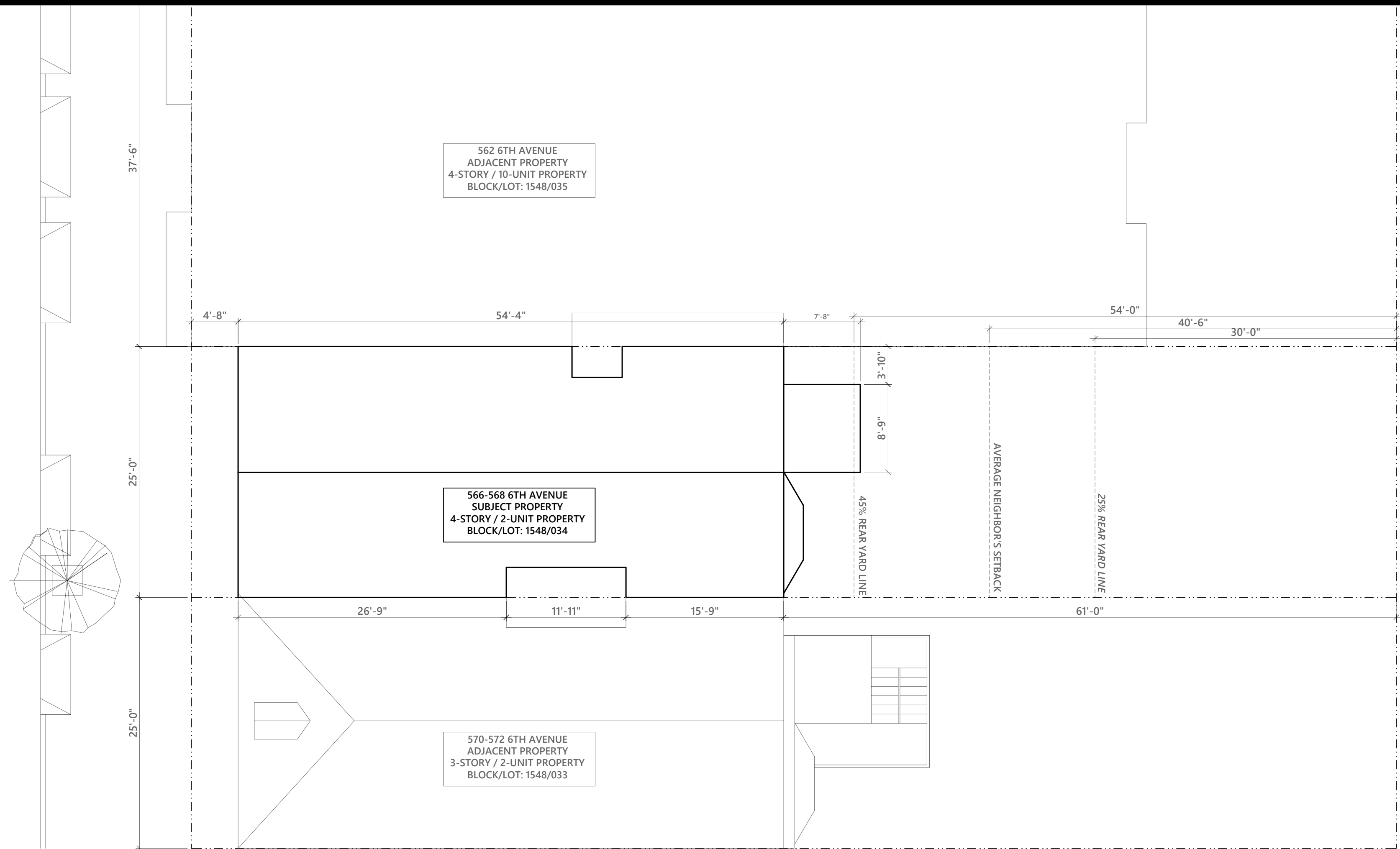
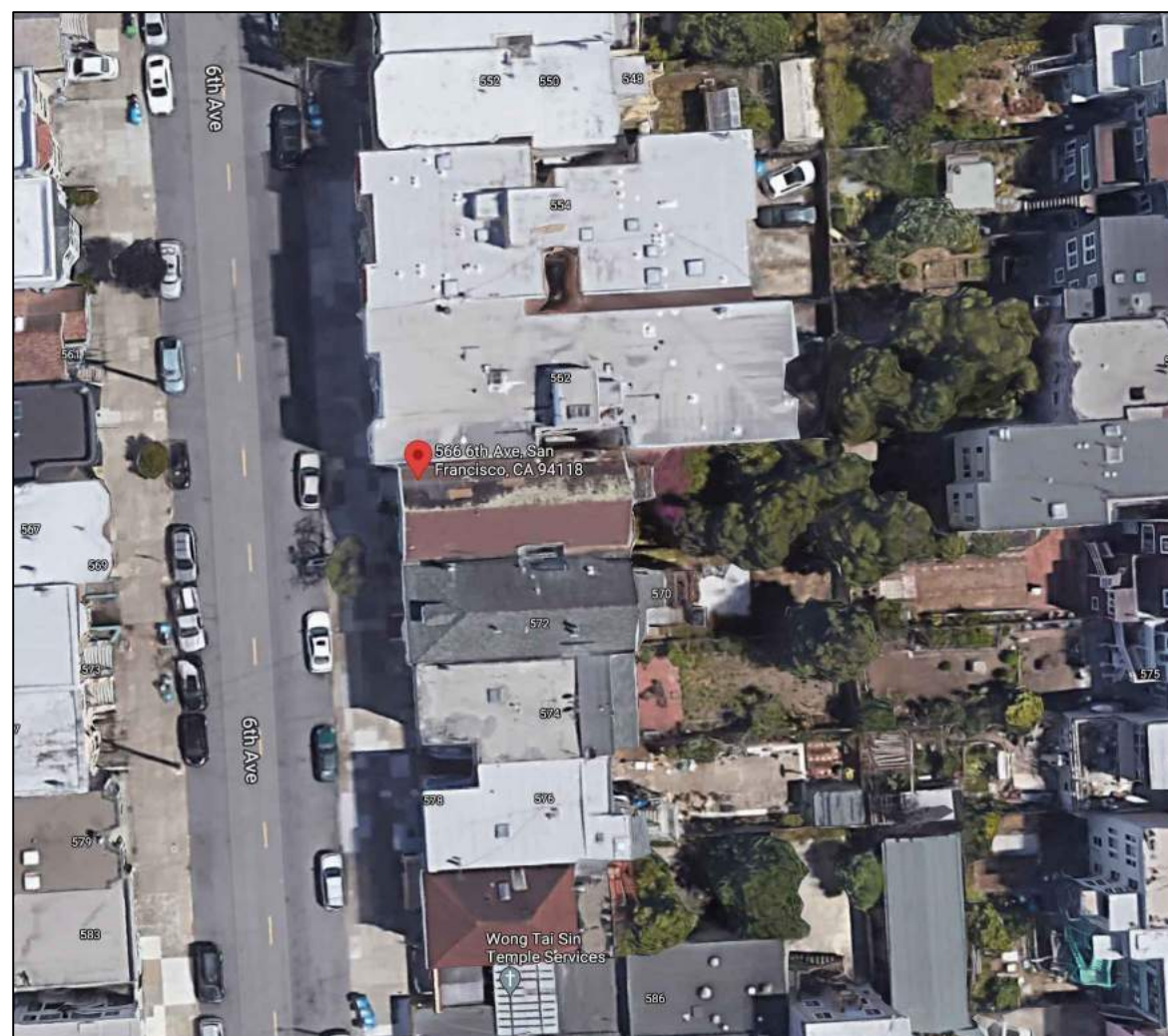
**SHEET INDEX**

- A0.0 - TITLE SHEET, DRAWING INDEX, GENERAL INFO, SITE PLAN.  
 A1.1 - EXISTING/DEMO & PROPOSED GROUND FLOOR PLAN  
 A1.2 - EXISTING/DEMO & PROPOSED SECOND FLOOR PLAN  
 A1.3 - EXISTING/DEMO & PROPOSED THIRD FLOOR PLAN  
 A1.4 - EXISTING/DEMO & PROPOSED ATTIC PLAN  
 A1.5 - EGRESS PLANS  
 A2.1 - EXISTING/DEMO & PROPOSED FRONT/REAR ELEVATION  
 A2.2 - EXISTING/DEMO & PROPOSED SIDE (SOUTH) ELEVATION  
 A2.3 - EXISTING/DEMO & PROPOSED SIDE (NORTH) ELEVATION
- S1 - TITLE SHEET, DRAWING INDEX, GENERAL BUILDING/STRUCTURAL INFO  
 S2 - GROUND FLOOR FOUNDATION & 2ND FLOOR FRAMING PLAN  
 S3 - THIRD & ATTIC FRAMING PLAN  
 S4 - ROOF FRAMING PLAN  
 S5.1 - CONCRETE STRUCTURAL DETAILS  
 S5.2 - CONCRETE STRUCTURAL DETAILS  
 S6.1 - WOOD STRUCTURAL DETAILS  
 S6.2 - WOOD STRUCTURAL DETAILS  
 S6.3 - WOOD STRUCTURAL DETAILS  
 S6.4 - WOOD STRUCTURAL DETAILS  
 SSW1 - SIMPSON STRONG WALL STRUCTURAL DETAILS  
 SSW2 - SIMPSON STRONG WALL STRUCTURAL DETAILS
- T1 - TITLE-24 ENERGY REPORT (566 6TH AVENUE)  
 T2 - TITLE-24 ENERGY REPORT (568 6TH AVENUE)  
 T3 - TITLE-24 ENERGY REPORT (BUILDING)  
 T4 - TITLE-24 ENERGY INSPECTIONS  
 T5 - S.F. GREEN BUILDING FORM

**SCOPE OF WORK**

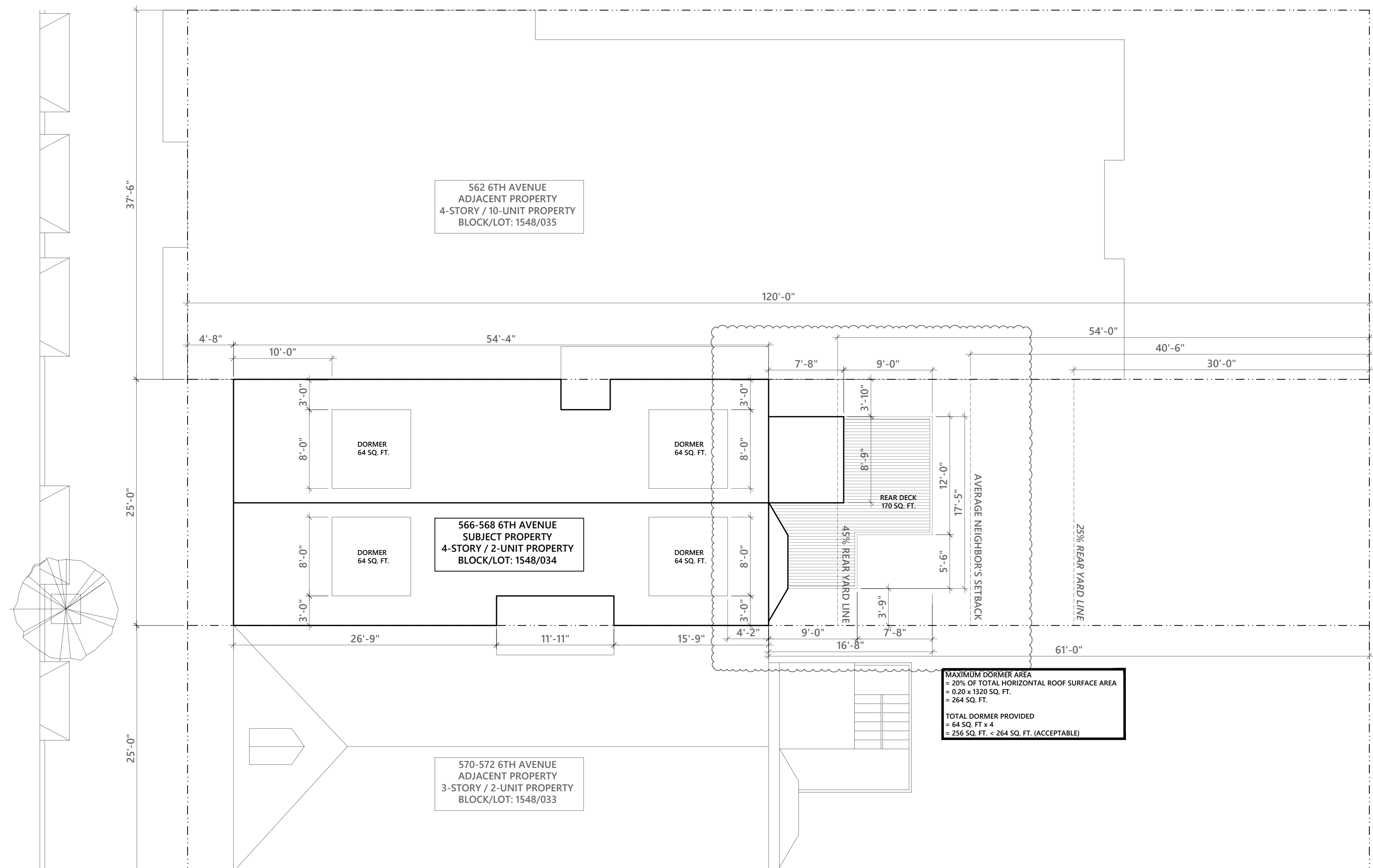
REMODEL OF (2) UNITS. ROOMS DOWN OF LOWER UNIT (568 6TH AVE) AT REAR OF GROUND FLOOR.  
 ADD ATTIC HABITABLE SPACE TO UPPER UNIT (566 6TH AVE) WITH DORMERS.  
 KITCHEN/BATHROOM REMODEL FOR BOTH UNITS.  
 GROUND FLOOR INFILL UNDER REAR POPOUT.  
 BUILDING REQUIRED TO BE FULLY SPRINKLERED PER NFPA13R (UNDER DEFERRED PERMIT)

**AERIAL VIEW**



**EXISTING SITE/ROOF PLAN**

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



**PROPOSED SITE/ROOF PLAN**

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



#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
 TITLE SHEET, SHEET INDEX  
 GENERAL INFORMATION  
 EXISTING/PROPOSED SITE PLAN

SHEET NUMBER

**A0**





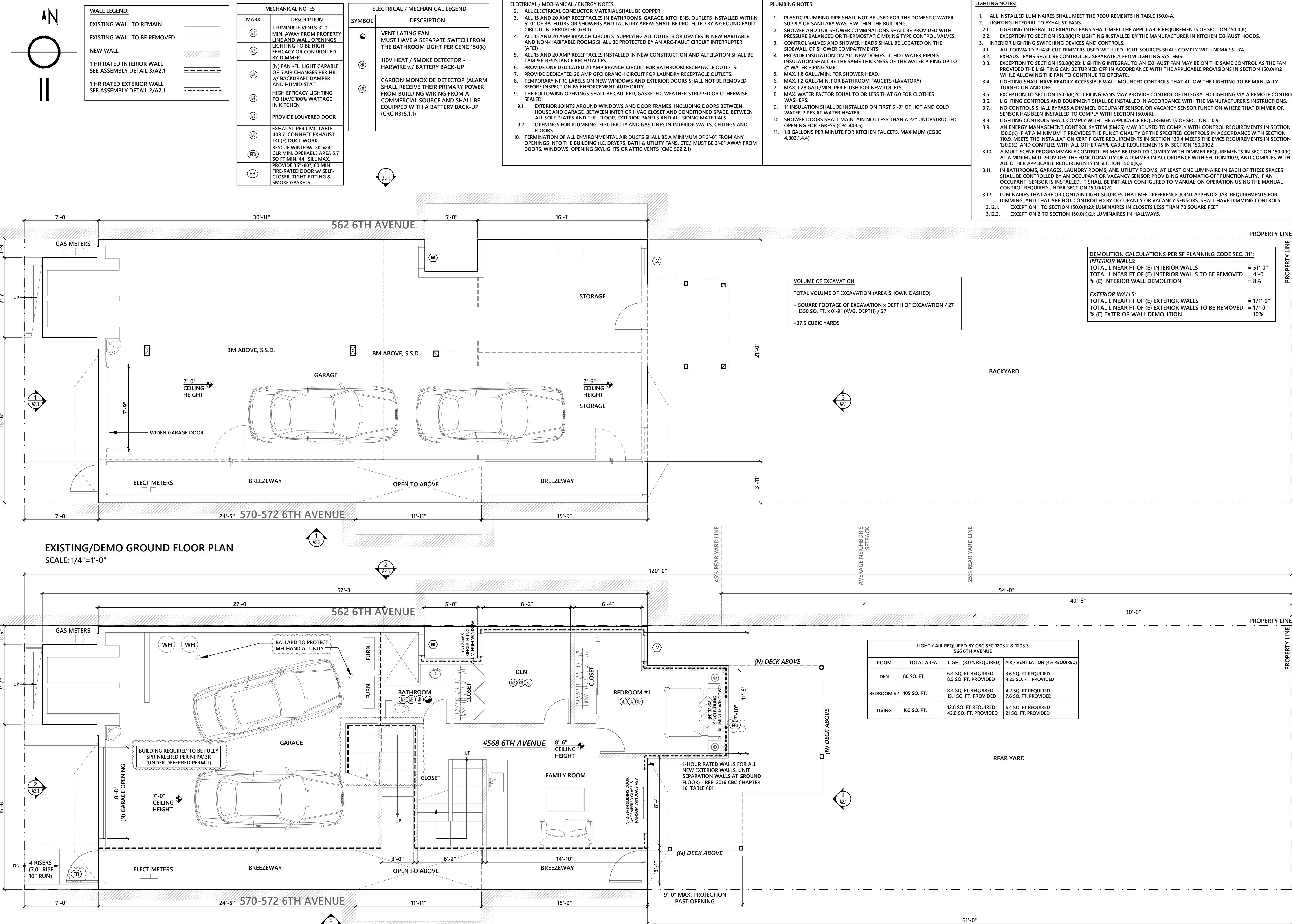
#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**EXISTING & PROPOSED  
GROUND FLOOR PLAN**

SHEET NUMBER

**A1.1**

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.



**EXISTING/DEMO GROUND FLOOR PLAN**  
SCALE: 1/4"=1'-0"

**PROPOSED GROUND FLOOR PLAN**  
SCALE: 1/4"=1'-0"

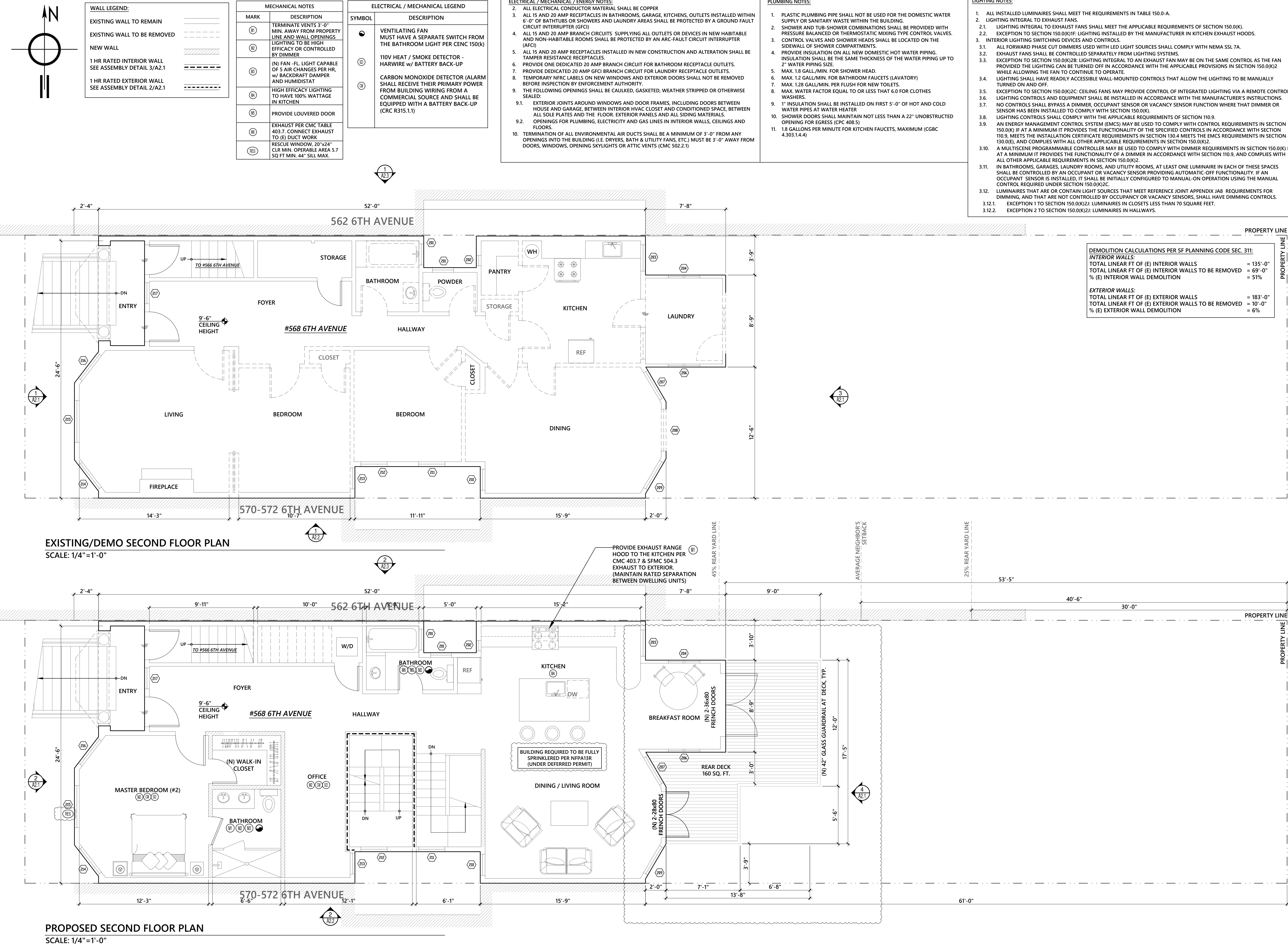


#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**EXISTING & PROPOSED  
SECOND FLOOR PLAN**

SHEET NUMBER  
**A1.2**

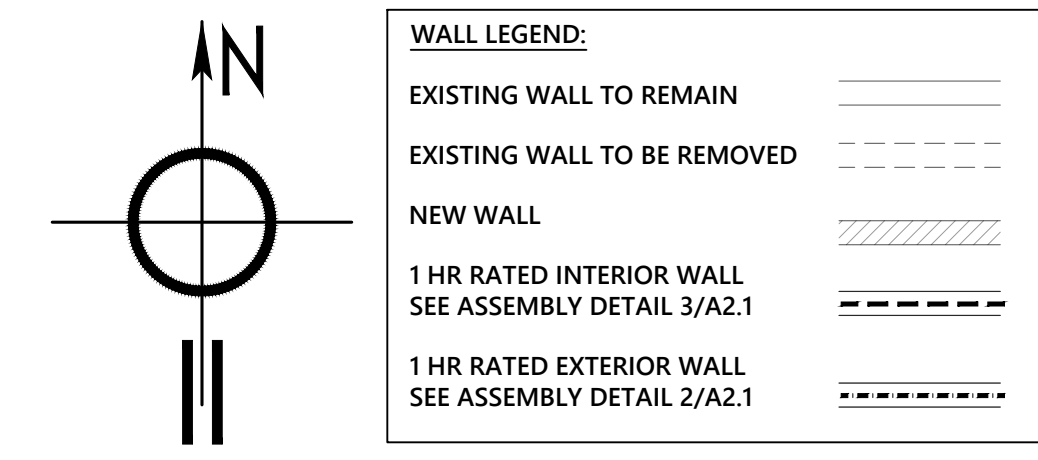
ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.



**EXISTING/DEMO SECOND FLOOR PLAN**  
SCALE: 1/4"=1'-0"

**PROPOSED SECOND FLOOR PLAN**  
SCALE: 1/4"=1'-0"





MARK	DESCRIPTION
(10)	TERMINATE VENTS 3'-0" MIN. AWAY FROM PROPERTY LINE AND WALL OPENINGS LIGHTING TO BE HIGH EFFICACY OR CONTROLLED BY DIMMER
(10)	(N) FAN - FL LIGHT CAPABLE OF 5 AIR CHANGES PER HR, W/ BACKDRAFT DAMPER AND HUMIDISTAT
(10)	HIGH EFFICACY LIGHTING TO HAVE 100% WATTAGE IN KITCHEN
(10)	PROVIDE LOUVERED DOOR
(10)	EXHAUST PER CMC TABLE 403.7. CONNECT EXHAUST TO (E) DUCT WORK
(10)	RESCUE WINDOW, 20"x24" CLR MIN. OPERABLE AREA 5.7 SQ FT MIN. 44" SILL MAX.

SYMBOL	DESCRIPTION
(V)	VENTILATING FAN MUST HAVE A SEPARATE SWITCH FROM THE BATHROOM LIGHT PER CMC 150(K)
(S)	110V HEAT / SMOKE DETECTOR - HARWIRE W/ BATTERY BACK-UP
(C)	CARBON MONOXIDE DETECTOR (ALARM SHALL RECEIVE THEIR PRIMARY POWER FROM BUILDING WIRING FROM A COMMERCIAL SOURCE AND SHALL BE EQUIPPED WITH A BATTERY BACK-UP (CRC R315.1.1))

**ELECTRICAL / MECHANICAL / ENERGY NOTES:**

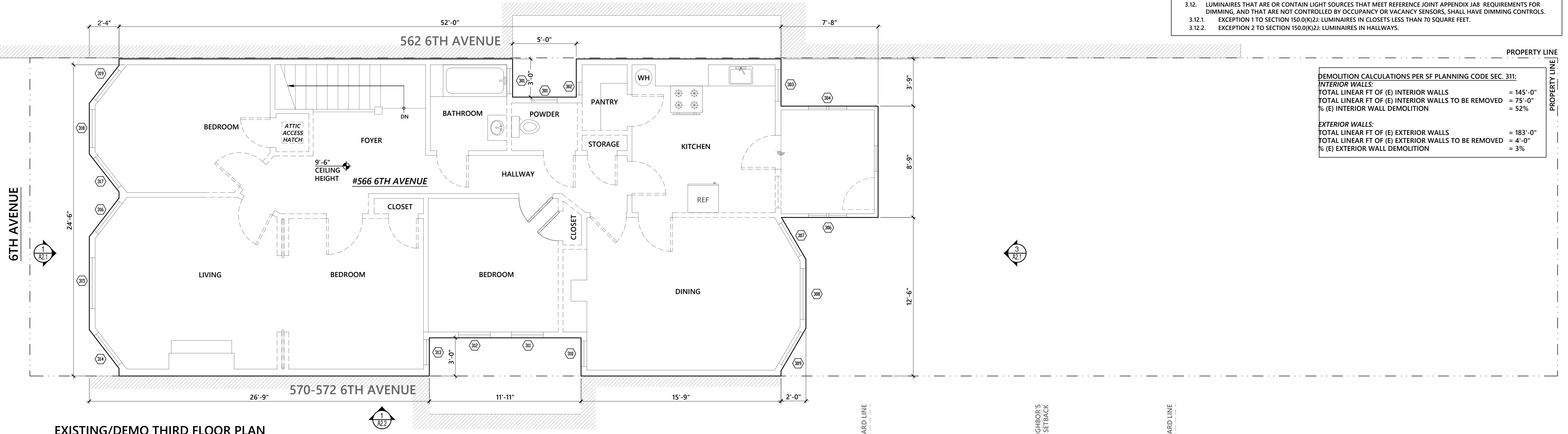
- ALL ELECTRICAL CONDUCTOR MATERIAL SHALL BE COPPER
- ALL 15 AND 20 AMP RECEPTACLES IN BATHROOMS, GARAGE, KITCHENS, OUTLETS INSTALLED WITHIN 6'-0" OF BATHTUBS OR SHOWERS AND LAUNDRY AREAS SHALL BE PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER (GFCI)
- ALL 15 AND 20 AMP BRANCH CIRCUITS SUPPLYING ALL OUTLETS OR DEVICES IN NEW HABITABLE AND NON-HABITABLE ROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER (AFCI)
- ALL 15 AND 20 AMP RECEPTACLES INSTALLED IN NEW CONSTRUCTION AND ALTERATION SHALL BE TAMPER RESISTANCE RECEPTACLES.
- PROVIDE ONE DEDICATED 20 AMP BRANCH CIRCUIT FOR BATHROOM RECEPTACLE OUTLETS.
- PROVIDE DEDICATED 20 AMP GFCI BRANCH CIRCUIT FOR LAUNDRY RECEPTACLE OUTLETS.
- TEMPORARY NFRC LABELS ON NEW WINDOWS AND EXTERIOR DOORS SHALL NOT BE REMOVED BEFORE INSPECTION BY ENFORCEMENT AUTHORITY.
- THE FOLLOWING OPENINGS SHALL BE CAULKED, GASKETED, WEATHER STRIPPED OR OTHERWISE SEALED:
- EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, INCLUDING DOORS BETWEEN HOUSE AND GARAGE, BETWEEN INTERIOR HVAC CLOSET AND CONDITIONED SPACE, BETWEEN ALL SOLE PLATES AND THE FLOOR, EXTERIOR PANELS AND ALL SIDING MATERIALS.
- OPENINGS FOR PLUMBING, ELECTRICITY AND GAS LINES IN INTERIOR WALLS, CEILINGS AND FLOORS.
- TERMINATION OF ALL ENVIRONMENTAL AIR DUCTS SHALL BE A MINIMUM OF 3'-0" FROM ANY OPENINGS INTO THE BUILDING (I.E. DRYERS, BATH & UTILITY FANS, ETC.) MUST BE 3'-0" AWAY FROM DOORS, WINDOWS, OPENING SKYLIGHTS OR ATTIC VENTS (CMC 502.2.1)

**PLUMBING NOTES:**

- PLASTIC PLUMBING PIPE SHALL NOT BE USED FOR THE DOMESTIC WATER SUPPLY OR SANITARY WASTE WITHIN THE BUILDING.
- SHOWER AND TUB-SHOWER COMBINATIONS SHALL BE PROVIDED WITH PRESSURE BALANCED OR THERMOSTATIC MIXING TYPE CONTROL VALVES. CONTROL VALVES AND SHOWER HEADS SHALL BE LOCATED ON THE SIDEWALL OF SHOWER COMPARTMENTS.
- PROVIDE INSULATION ON ALL NEW DOMESTIC HOT WATER PIPING. INSULATION SHALL BE THE SAME THICKNESS OF THE WATER PIPING UP TO 2" WATER PIPING SIZE.
- MAX. 1.8 GALL./MIN. FOR SHOWER HEAD.
- MAX. 1.2 GALL./MIN. FOR BATHROOM FAUCETS (LAVATORY)
- MAX. 1.28 GALL./MIN. PER FLUSH FOR NEW TOILETS
- MAX. WATER FACTOR EQUAL TO OR LESS THAN 6.0 FOR CLOTHES WASHERS.
- INSULATION SHALL BE INSTALLED ON FIRST 5'-0" OF HOT AND COLD WATER PIPES AT WATER HEATER
- SHOWER DOORS SHALL MAINTAIN NOT LESS THAN A 22" UNOBSTRUCTED OPENING FOR EGRESS (CFC 408.5)
- 1.8 GALLONS PER MINUTE FOR KITCHEN FAUCETS, MAXIMUM (CGBC 4.303.1.4.4)

**LIGHTING NOTES:**

- ALL INSTALLED LUMINAIRES SHALL MEET THE REQUIREMENTS IN TABLE 150.0-A.
- LIGHTING INTEGRAL TO EXHAUST FANS.
- LIGHTING INTEGRAL TO EXHAUST FANS SHALL MEET THE APPLICABLE REQUIREMENTS OF SECTION 150.0(K).
- EXCEPTION TO SECTION 150.0(K)(1): LIGHTING INSTALLED BY THE MANUFACTURER IN KITCHEN EXHAUST HOODS.
- INTERIOR LIGHTING SWITCHING DEVICES AND CONTROLS.
- ALL FORWARD PHASE CUT DIMMERS USED WITH LED LIGHT SOURCES SHALL COMPLY WITH NEMA SSL 7A.
- EXHAUST FANS SHALL BE CONTROLLED SEPARATELY FROM LIGHTING SYSTEMS.
- EXCEPTION TO SECTION 150.0(K)(2): LIGHTING INTEGRAL TO AN EXHAUST FAN MAY BE ON THE SAME CONTROL AS THE FAN PROVIDED THE LIGHTING CAN BE TURNED OFF IN ACCORDANCE WITH THE APPLICABLE PROVISIONS IN SECTION 150.0(K)(2) WHILE ALLOWING THE FAN TO CONTINUE TO OPERATE.
- LIGHTING SHALL HAVE READILY ACCESSIBLE WALL-MOUNTED CONTROLS THAT ALLOW THE LIGHTING TO BE MANUALLY TURNED ON AND OFF.
- EXCEPTION TO SECTION 150.0(K)(2): CEILING FANS MAY PROVIDE CONTROL OF INTEGRATED LIGHTING VIA A REMOTE CONTROL.
- LIGHTING CONTROLS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- NO CONTROLS SHALL BYPASS A DIMMER, OCCUPANT SENSOR OR VACANCY SENSOR FUNCTION WHERE THAT DIMMER OR SENSOR HAS BEEN INSTALLED TO COMPLY WITH SECTION 150.0(K).
- LIGHTING CONTROLS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF SECTION 110.9.
- AN ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MAY BE USED TO COMPLY WITH CONTROL REQUIREMENTS IN SECTION 150.0(K) IF AT A MINIMUM IT PROVIDES THE FUNCTIONALITY OF THE SPECIFIED CONTROLS IN ACCORDANCE WITH SECTION 110.9, MEETS THE INSTALLATION CERTIFICATE REQUIREMENTS IN SECTION 130.4 MEETS THE EMCS REQUIREMENTS IN SECTION 150.0(E), AND COMPLIES WITH ALL OTHER APPLICABLE REQUIREMENTS IN SECTION 150.0(K)(2).
- A MULTISCENE PROGRAMMABLE CONTROLLER MAY BE USED TO COMPLY WITH DIMMER REQUIREMENTS IN SECTION 150.0(K) IF AT A MINIMUM IT PROVIDES THE FUNCTIONALITY OF A DIMMER IN ACCORDANCE WITH SECTION 110.9, AND COMPLIES WITH ALL OTHER APPLICABLE REQUIREMENTS IN SECTION 150.0(K)(2).
- IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS, AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES SHALL BE CONTROLLED BY AN OCCUPANT OR VACANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY. IF AN OCCUPANT SENSOR IS INSTALLED, IT SHALL BE INITIALLY CONFIGURED TO MANUAL-ON OPERATION USING THE MANUAL CONTROL REQUIRED UNDER SECTION 150.0(K)(2).
- LUMINAIRES THAT ARE OR CONTAIN LIGHT SOURCES THAT MEET REFERENCE JOINT APPENDIX JA8 REQUIREMENTS FOR DIMMING, AND THAT ARE NOT CONTROLLED BY OCCUPANCY OR VACANCY SENSORS, SHALL HAVE DIMMING CONTROLS.
- EXCEPTION 1 TO SECTION 150.0(K)(2): LUMINAIRES IN CLOSETS LESS THAN 70 SQUARE FEET.
- EXCEPTION 2 TO SECTION 150.0(K)(2): LUMINAIRES IN HALLWAYS.



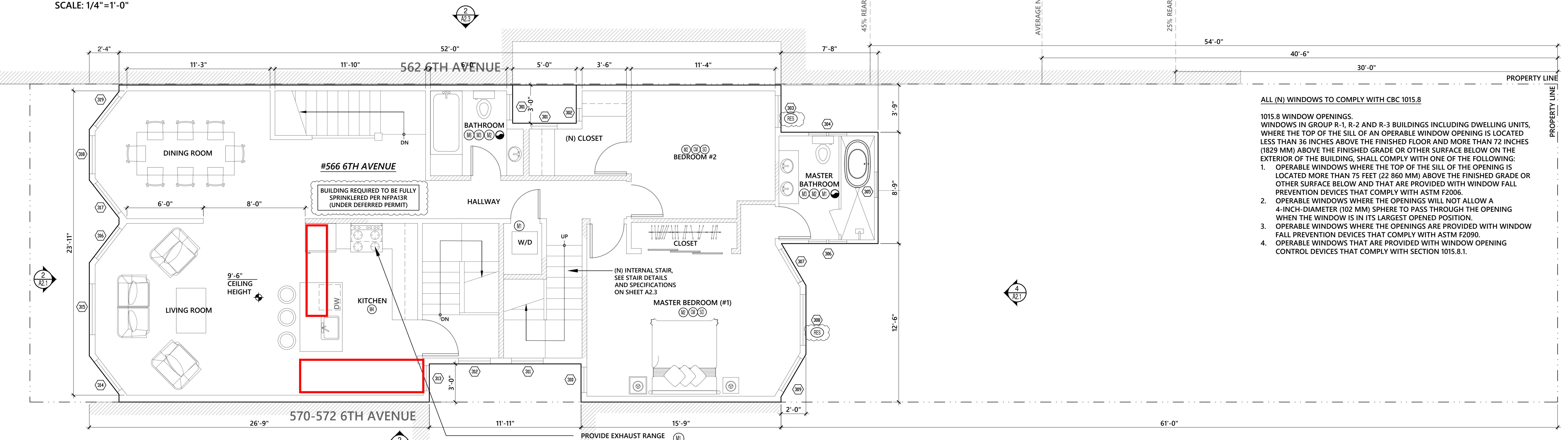
**DEMOLITION CALCULATIONS PER SF PLANNING CODE SEC. 311:**

**INTERIOR WALLS:**

- TOTAL LINEAR FT OF (E) INTERIOR WALLS = 145'-0"
- TOTAL LINEAR FT OF (E) INTERIOR WALLS TO BE REMOVED = 75'-0"
- % (E) INTERIOR WALL DEMOLITION = 52%

**EXTERIOR WALLS:**

- TOTAL LINEAR FT OF (E) EXTERIOR WALLS = 183'-0"
- TOTAL LINEAR FT OF (E) EXTERIOR WALLS TO BE REMOVED = 4'-0"
- % (E) EXTERIOR WALL DEMOLITION = 3%



**ALL (N) WINDOWS TO COMPLY WITH CBC 1015.8**

**1015.8 WINDOW OPENINGS.** WINDOWS IN GROUP R-1, R-2 AND R-3 BUILDINGS INCLUDING DWELLING UNITS, WHERE THE TOP OF THE SILL OF AN OPERABLE WINDOW OPENING IS LOCATED LESS THAN 36 INCHES ABOVE THE FINISHED FLOOR AND MORE THAN 72 INCHES (1829 MM) ABOVE THE FINISHED GRADE OR OTHER SURFACE BELOW ON THE EXTERIOR OF THE BUILDING, SHALL COMPLY WITH ONE OF THE FOLLOWING:

- OPERABLE WINDOWS WHERE THE TOP OF THE SILL OF THE OPENING IS LOCATED MORE THAN 75 FEET (22 860 MM) ABOVE THE FINISHED GRADE OR OTHER SURFACE BELOW AND THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH ASTM F2006.
- OPERABLE WINDOWS WHERE THE OPENINGS WILL NOT ALLOW A 4-INCH-DIAMETER (102 MM) SPHERE TO PASS THROUGH THE OPENING WHEN THE WINDOW IS IN ITS LARGEST OPENED POSITION.
- OPERABLE WINDOWS WHERE THE OPENINGS ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH ASTM F2090.
- OPERABLE WINDOWS THAT ARE PROVIDED WITH WINDOW OPENING CONTROL DEVICES THAT COMPLY WITH SECTION 1015.8.1.

PROVIDE EXHAUST RANGE HOOD TO THE KITCHEN PER CMC 403.7 & SFMC 504.3 EXHAUST TO EXTERIOR. (MAINTAIN RATED SEPARATION BETWEEN DWELLING UNITS)

#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**EXISTING & PROPOSED  
 THIRD FLOOR PLAN**

SHEET NUMBER  
**A1.3**

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR REPRODUCED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.





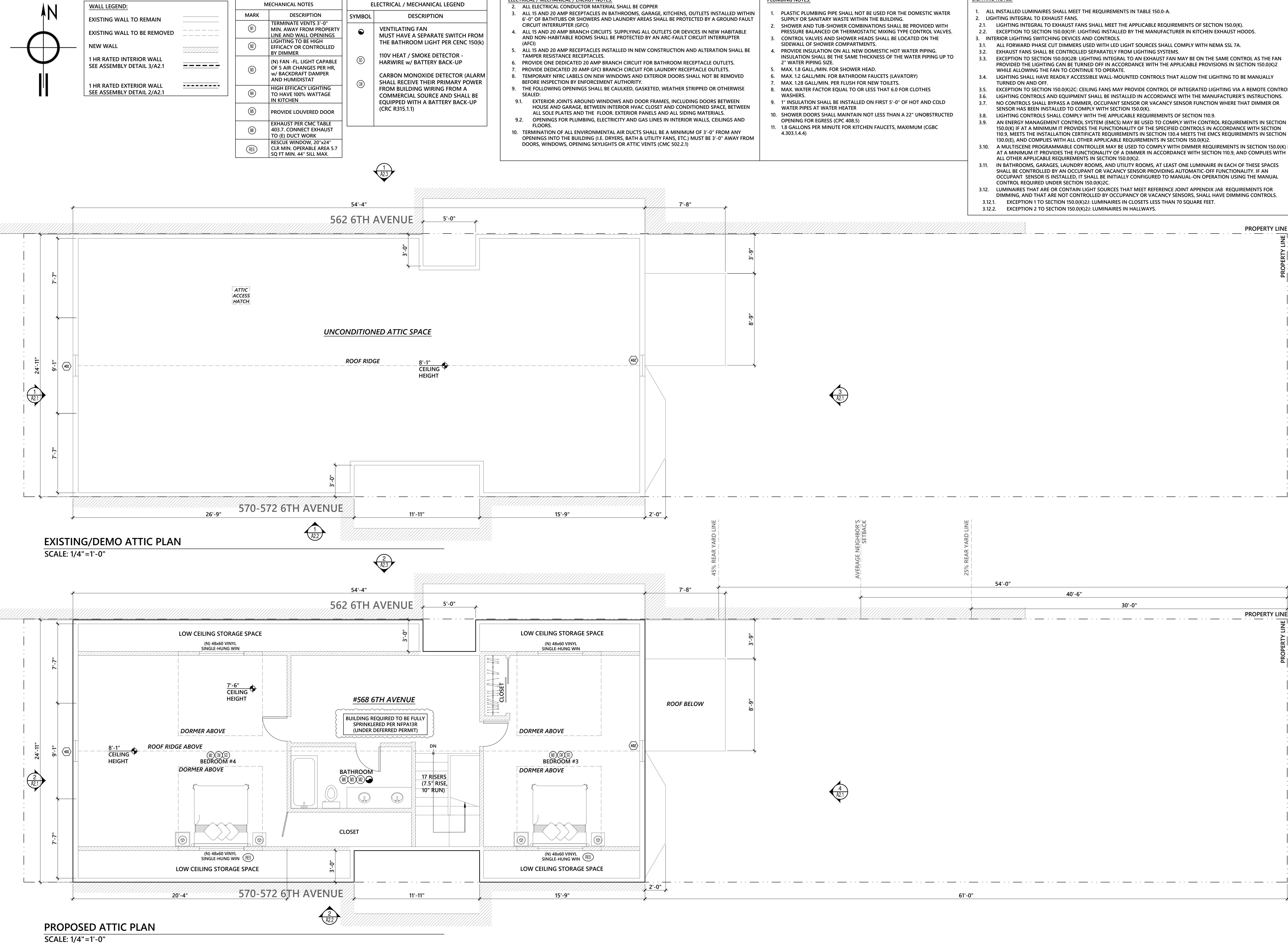
#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**EXISTING & PROPOSED  
ATTIC PLAN**

SHEET NUMBER

**A1.4**

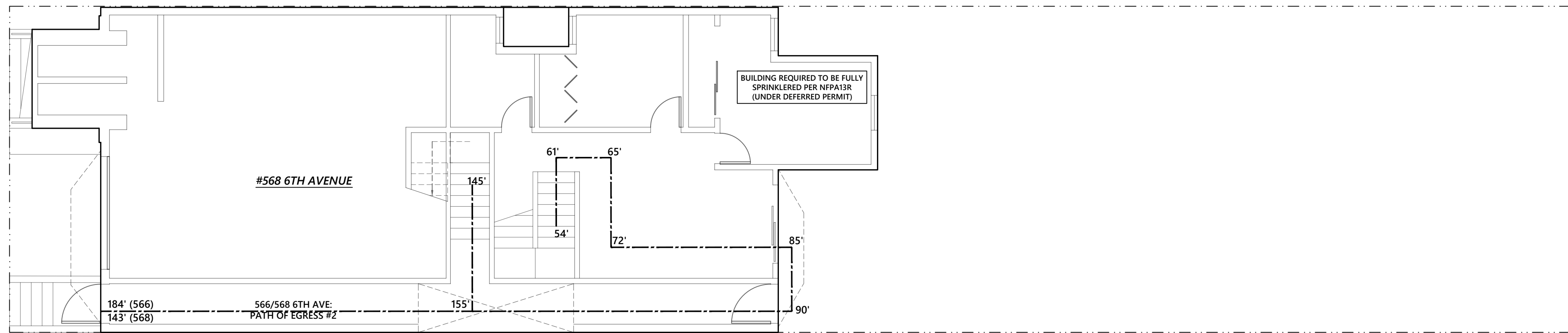
ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.



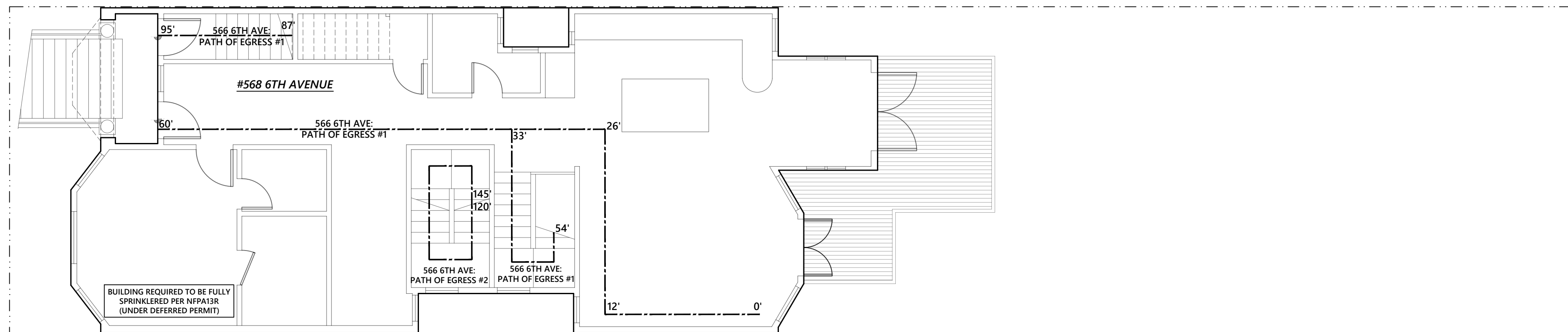
**EXISTING/DEMO ATTIC PLAN**  
SCALE: 1/4"=1'-0"

**PROPOSED ATTIC PLAN**  
SCALE: 1/4"=1'-0"

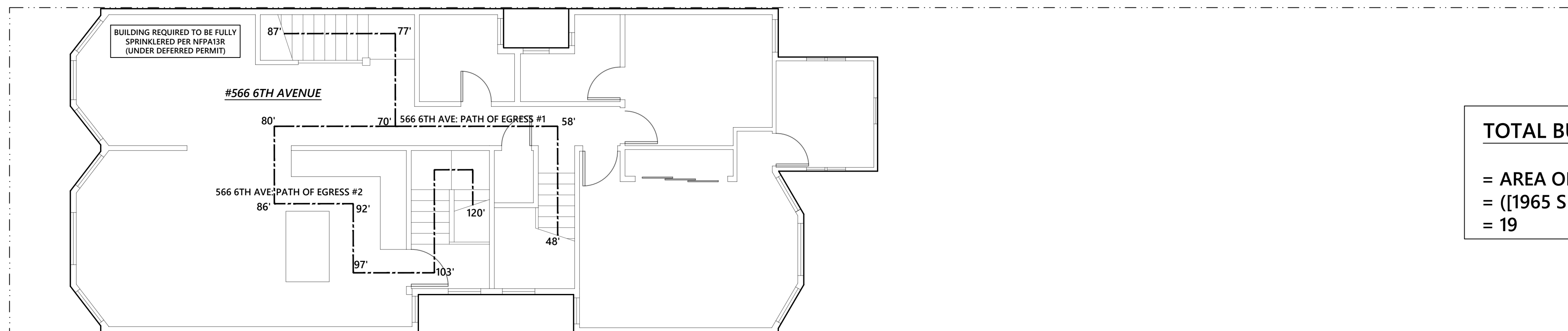




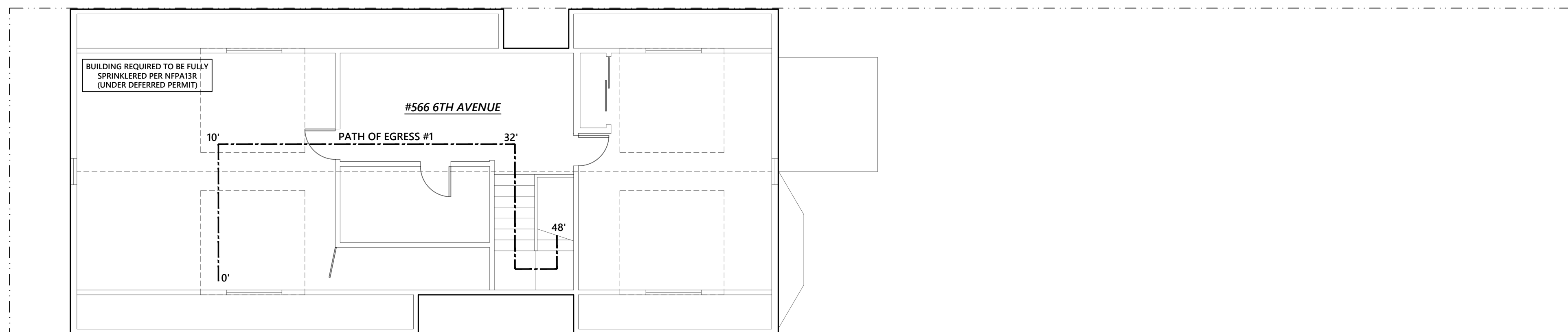
**PROPOSED GROUND FLOOR EGRESS PLAN**  
SCALE: 1/4"=1'-0"



**PROPOSED SECOND FLOOR EGRESS PLAN**  
SCALE: 1/4"=1'-0"



**PROPOSED THIRD FLOOR EGRESS PLAN**  
SCALE: 1/4"=1'-0"



**PROPOSED ATTIC EGRESS PLAN**  
SCALE: 1/4"=1'-0"

**TOTAL BUILDING OCCUPANT LOAD = 19**

= AREA OF 566 6TH AVE + AREA OF 566 6TH AVE / 200  
 = ((1965 SF + 1850 SF) / 200)  
 = 19

**EXIT PASSAGEWAY NOTES**

**1024.2 WIDTH AND CAPACITY**  
 THE REQUIRED CAPACITY OF EXIT PASSAGEWAYS SHALL BE DETERMINED AS SPECIFIED IN SECTION 1005.1 BUT THE MINIMUM WIDTH SHALL BE NOT LESS THAN 44 INCHES (1118 MM), EXCEPT THAT EXIT PASSAGEWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL BE NOT LESS THAN 36 INCHES (914 MM) IN WIDTH. THE MINIMUM WIDTH OR REQUIRED CAPACITY OF EXIT PASSAGEWAYS SHALL BE UNOBSTRUCTED.

**1024.3 CONSTRUCTION**  
 EXIT PASSAGEWAY ENCLOSURES SHALL HAVE WALLS, FLOORS AND CEILINGS OF NOT LESS THAN A 1-HOUR FIRE-RESISTANCE RATING, AND NOT LESS THAN THAT REQUIRED FOR ANY CONNECTING INTERIOR EXIT STAIRWAY OR RAMP. EXIT PASSAGEWAYS SHALL BE CONSTRUCTED AS FIRE BARRIERS IN ACCORDANCE WITH SECTION 707 OR HORIZONTAL ASSEMBLIES CONSTRUCTED IN ACCORDANCE WITH SECTION 711, OR BOTH.

**1024.4 TERMINATION**  
 EXIT PASSAGEWAYS ON THE LEVEL OF EXIT DISCHARGE SHALL TERMINATE AT AN EXIT DISCHARGE. EXIT PASSAGEWAYS ON OTHER LEVELS SHALL TERMINATE AT AN EXIT.

**1024.5 OPENINGS**  
 EXIT PASSAGEWAY OPENING PROTECTIVES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 716, EXCEPT AS PERMITTED IN SECTION 402.8.7. OPENINGS IN EXIT PASSAGEWAYS OTHER THAN UNPROTECTED EXTERIOR OPENINGS SHALL BE LIMITED TO THOSE NECESSARY FOR EXIT ACCESS TO THE EXIT PASSAGEWAY FROM NORMALLY OCCUPIED SPACES AND FOR EGRESS FROM THE EXIT PASSAGEWAY. WHERE AN INTERIOR EXIT STAIRWAY OR RAMP IS EXTENDED TO AN EXIT DISCHARGE OR A PUBLIC WAY BY AN EXIT PASSAGEWAY, THE EXIT PASSAGEWAY SHALL COMPLY WITH SECTION 1023.3.1.

**1024.7 VENTILATION**  
 EQUIPMENT AND DUCTWORK FOR EXIT PASSAGEWAY VENTILATION AS PERMITTED BY SECTION 1024.6 SHALL COMPLY WITH ONE OF THE FOLLOWING:

THE EQUIPMENT AND DUCTWORK SHALL BE LOCATED EXTERIOR TO THE BUILDING AND SHALL BE DIRECTLY CONNECTED TO THE EXIT PASSAGEWAY BY DUCTWORK ENCLOSED IN CONSTRUCTION AS REQUIRED FOR SHAFTS.

WHERE THE EQUIPMENT AND DUCTWORK IS LOCATED WITHIN THE EXIT PASSAGEWAY, THE INTAKE AIR SHALL BE TAKEN DIRECTLY FROM THE OUTDOORS AND THE EXHAUST AIR SHALL BE DISCHARGED DIRECTLY TO THE OUTDOORS, OR THE AIR SHALL BE CONVEYED THROUGH DUCTS ENCLOSED IN CONSTRUCTION AS REQUIRED FOR SHAFTS.

WHERE LOCATED WITHIN THE BUILDING, THE EQUIPMENT AND DUCTWORK SHALL BE SEPARATED FROM THE REMAINDER OF THE BUILDING, INCLUDING OTHER MECHANICAL EQUIPMENT, WITH CONSTRUCTION AS REQUIRED FOR SHAFTS.

IN EACH CASE, OPENINGS INTO THE FIRE-RESISTANCE-RATED CONSTRUCTION SHALL BE LIMITED TO THOSE NEEDED FOR MAINTENANCE AND OPERATION AND SHALL BE PROTECTED BY OPENING PROTECTIVES IN ACCORDANCE WITH SECTION 716 FOR SHAFT ENCLOSURES.

EXIT PASSAGEWAY VENTILATION SYSTEMS SHALL BE INDEPENDENT OF OTHER BUILDING VENTILATION SYSTEMS.

**FIRE RATED DOOR NOTES**

**1010.1.1 SIZE OF DOORS**

THE REQUIRED CAPACITY OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 32 INCHES (813 MM). CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP WITH THE DOOR OPEN 90 DEGREES (1.57 RAD). WHERE THIS SECTION REQUIRES A MINIMUM CLEAR WIDTH OF 32 INCHES (813 MM) AND A DOOR OPENING INCLUDES TWO DOOR LEAVES WITHOUT A MULLION, ONE LEAF SHALL PROVIDE A CLEAR OPENING WIDTH OF 32 INCHES (813 MM). THE MAXIMUM WIDTH OF A SWINGING DOOR LEAF SHALL BE 48 INCHES (1219 MM) NOMINAL. MEANS OF EGRESS DOORS IN A GROUP 1-2 OR 1-2.1 OCCUPANCY USED FOR THE MOVEMENT OF BEDS AND STRETCHER PATIENTS SHALL PROVIDE A CLEAR WIDTH NOT LESS THAN 44 INCHES (1118 MM). THE HEIGHT OF DOOR OPENINGS SHALL BE NOT LESS THAN 80 INCHES (2032 MM).

**1010.1.3 DOOR OPENING FORCE**

THE FORCE FOR PUSHING OR PULLING OPEN INTERIOR SWINGING EGRESS DOORS, OTHER THAN FIRE DOORS, SHALL NOT EXCEED 5 POUNDS (22 N). THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR IN A CLOSED POSITION. FOR OTHER SWINGING DOORS, AS WELL AS SLIDING AND FOLDING DOORS, THE DOOR LATCH SHALL RELEASE WHEN SUBJECTED TO A 15-POUND (67 N) FORCE. THE DOOR SHALL BE SET IN MOTION WHEN SUBJECTED TO A 30-POUND (133 N) FORCE. THE DOOR SHALL SWING TO A FULL-OPEN POSITION WHEN SUBJECTED TO A 15-POUND (67 N) FORCE.

**1010.1.9.1 HARDWARE**

DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE BY CHAPTER 11 SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.

**1010.1.9.2 HARDWARE HEIGHT**

DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL BE INSTALLED 34 INCHES (864 MM) MINIMUM AND 48 INCHES (1219 MM) MAXIMUM ABOVE THE FINISHED FLOOR. LOCKS USED ONLY FOR SECURITY PURPOSES AND NOT USED FOR NORMAL OPERATION ARE PERMITTED AT ANY HEIGHT.

**1010.1.9.5 BOLT LOCKS**

MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS ARE NOT PERMITTED.



#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**EGRESS PLANS**

SHEET NUMBER  
**A1.5**

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.





**1 EXISTING FRONT (WEST) ELEVATION**  
 SCALE: 1/4"=1'-0"



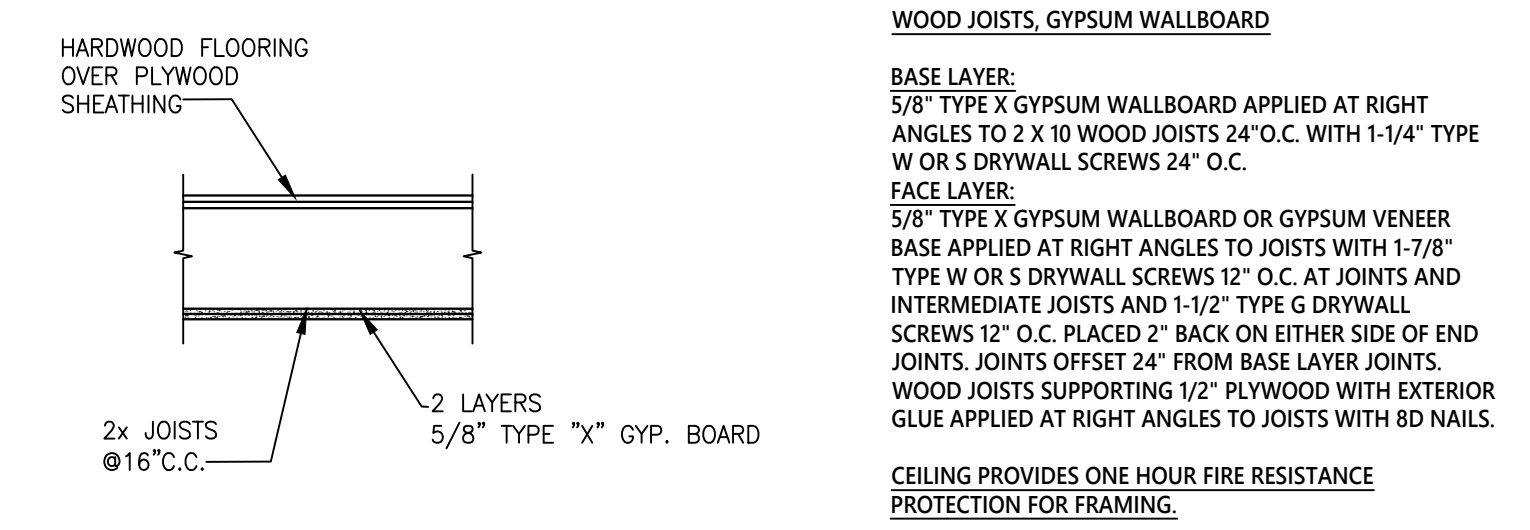
**2 PROPOSED FRONT (WEST) ELEVATION**  
 SCALE: 1/4"=1'-0"



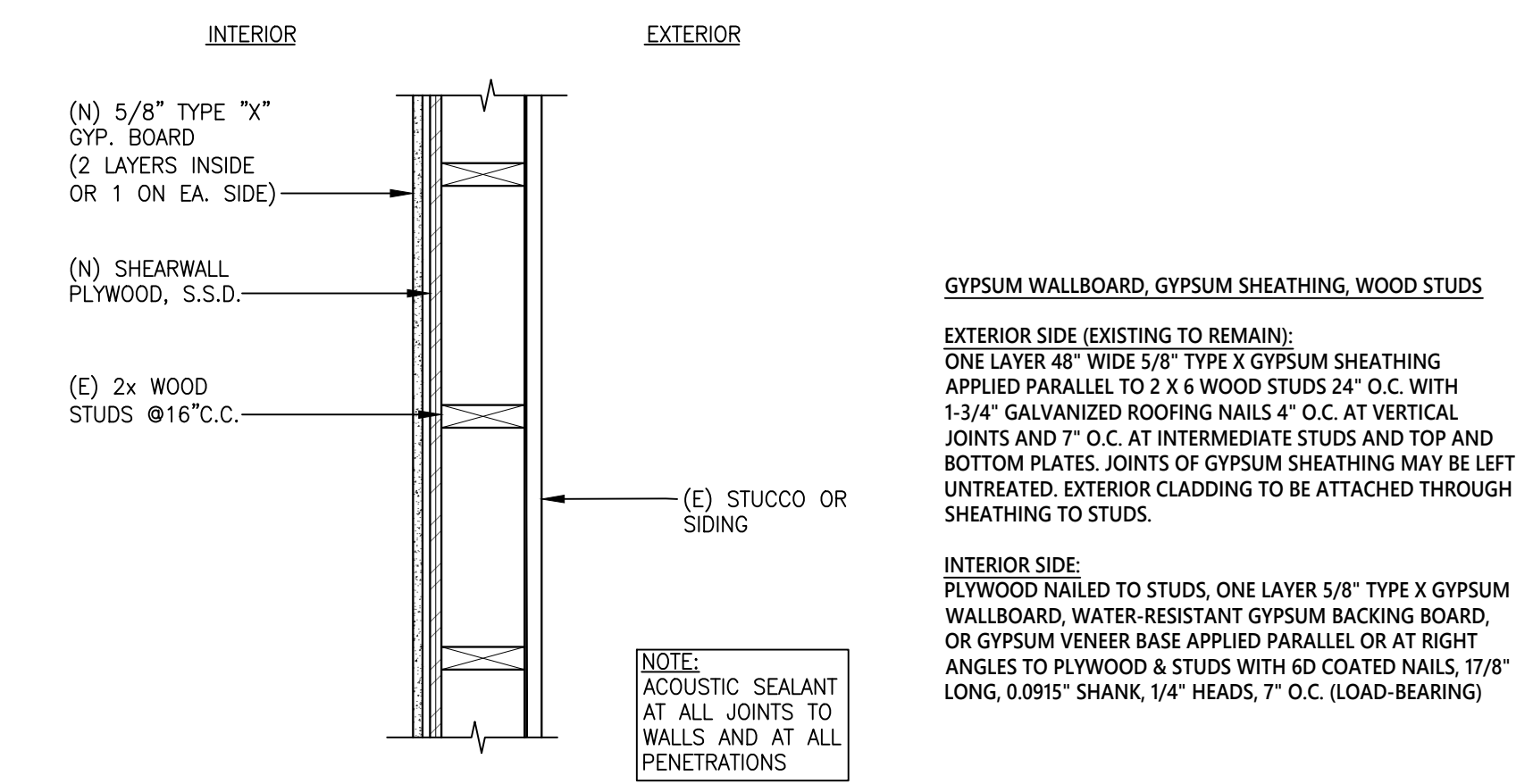
**3 EXISTING REAR (EAST) ELEVATION**  
 SCALE: 1/4"=1'-0"



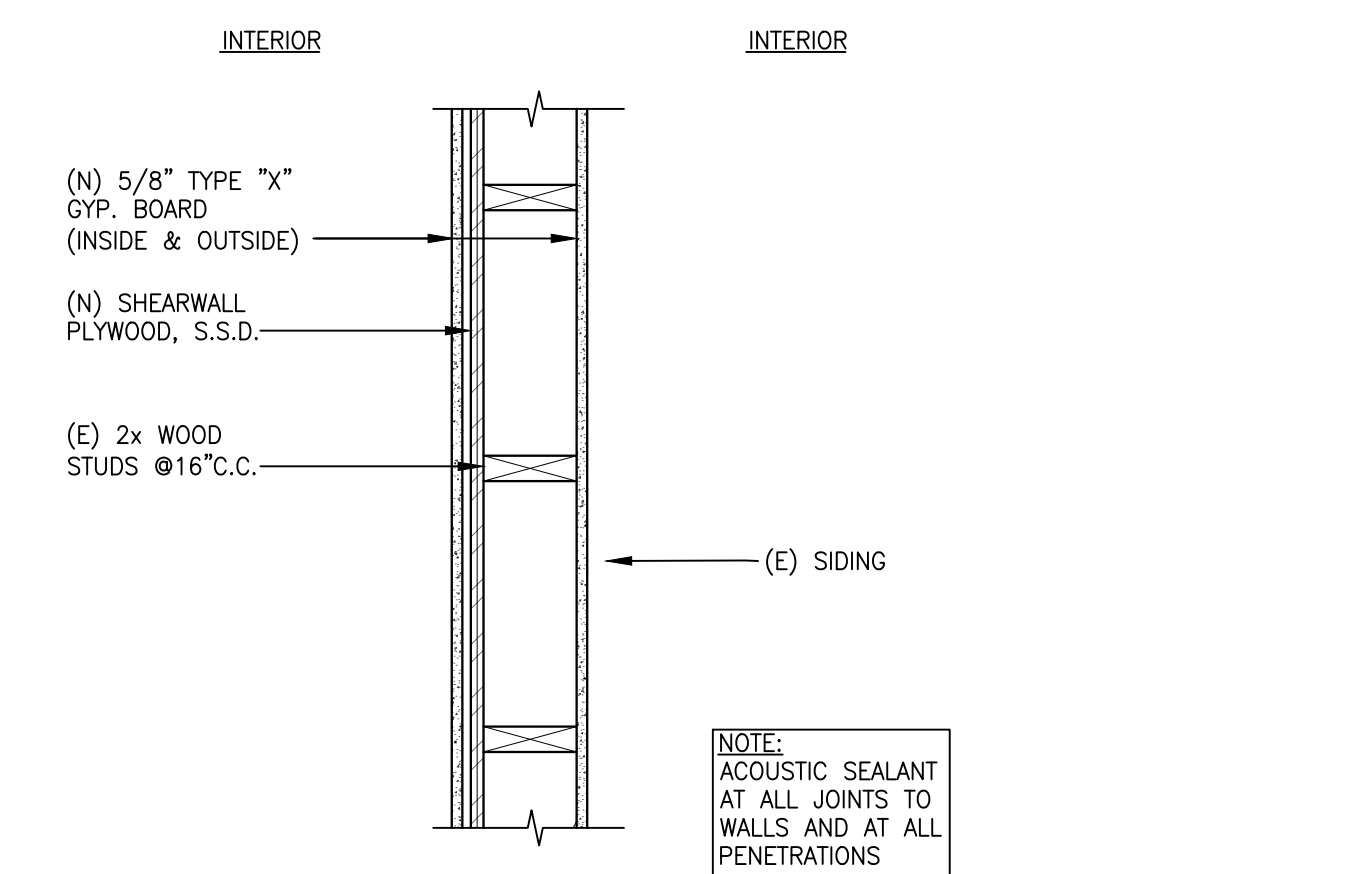
**4 PROPOSED REAR (EAST) ELEVATION**  
 SCALE: 1/4"=1'-0"



**1 HR FIRE RATED FLOOR ASSEMBLY (LIVING OVER GARAGE)**  
 REF: GA FILE NO. FC 5406  
 SCALE: N.T.S.



**1 HR FIRE RATED EXTERIOR ASSEMBLY**  
 REF: GA FILE NO. WP 8105 (UL U309)  
 SCALE: N.T.S.

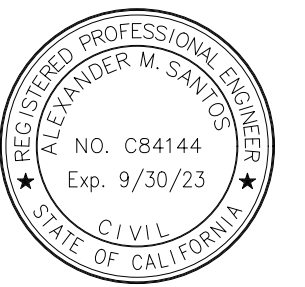


**1 HR FIRE RATED INTERIOR ASSEMBLY**  
 SCALE: N.T.S.

#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

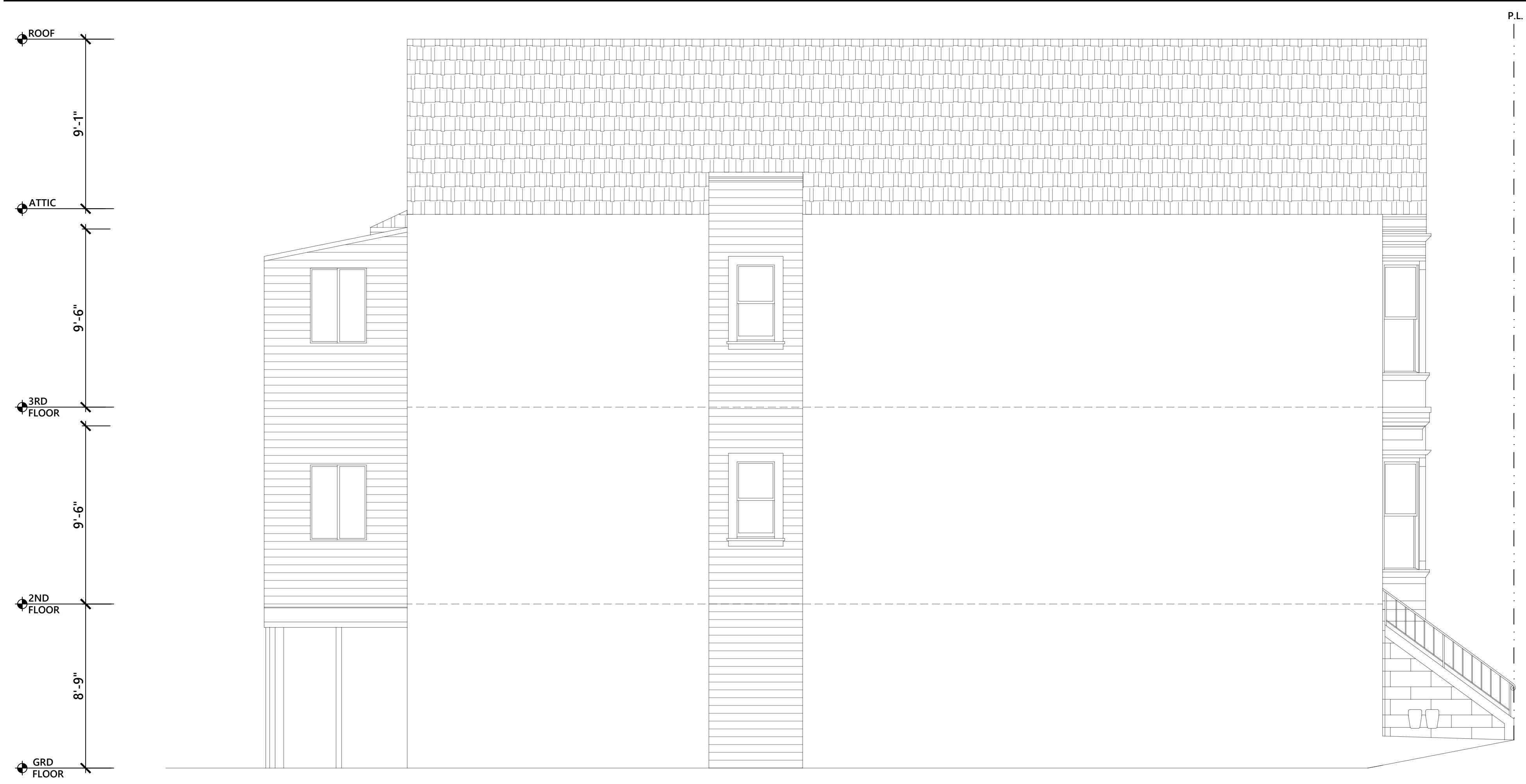
SHEET TITLE:  
**EXISTING & PROPOSED FRONT & REAR ELEVATIONS**

SHEET NUMBER  
**A2.1**

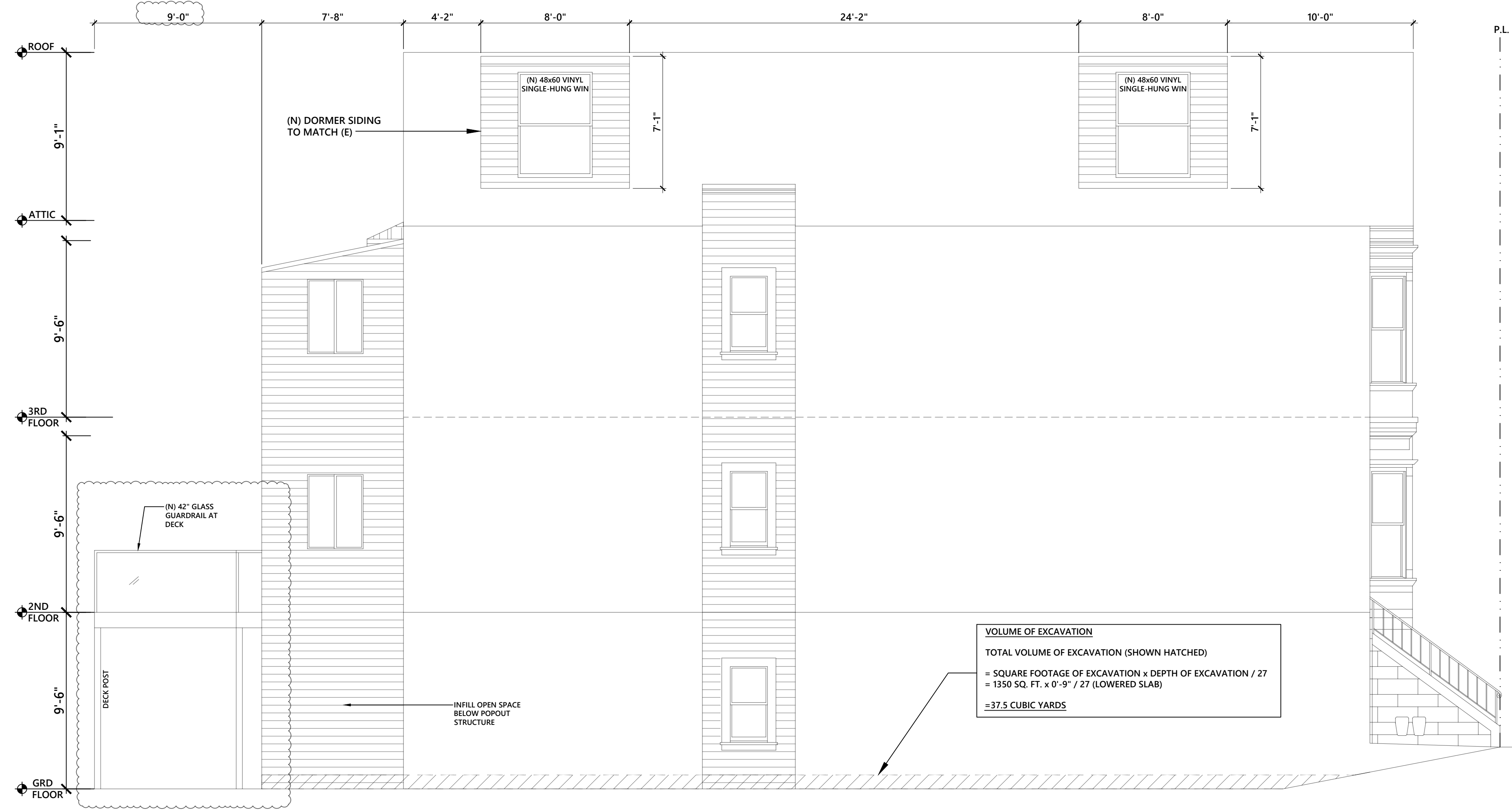






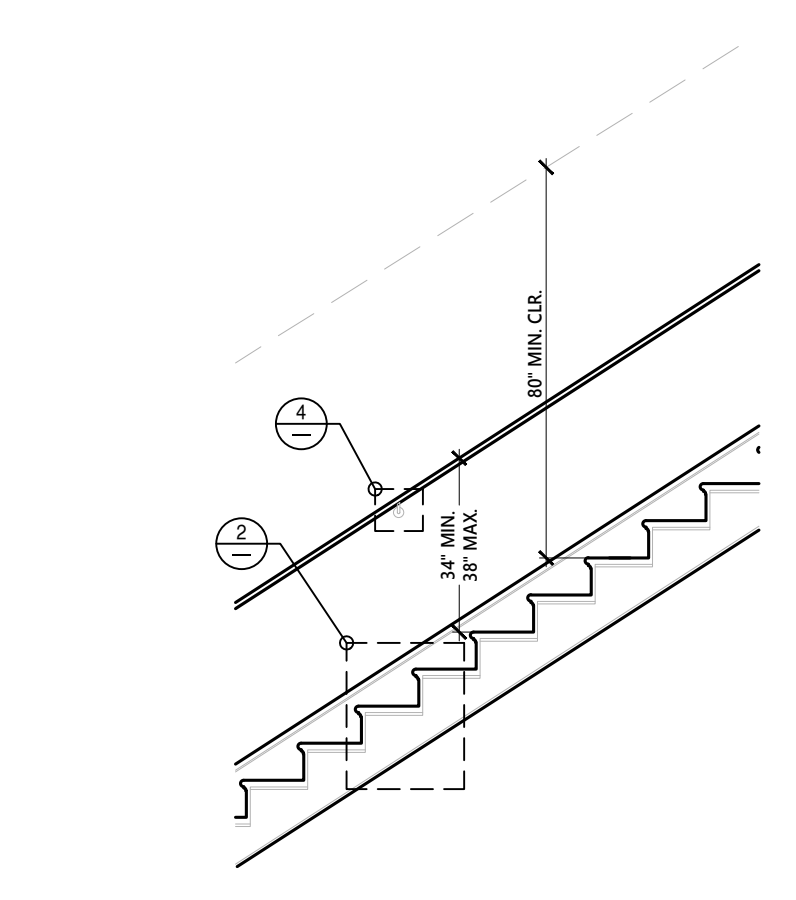


**1 EXISTING SIDE (NORTH) ELEVATION**  
 SCALE: 1/4" = 1'-0"

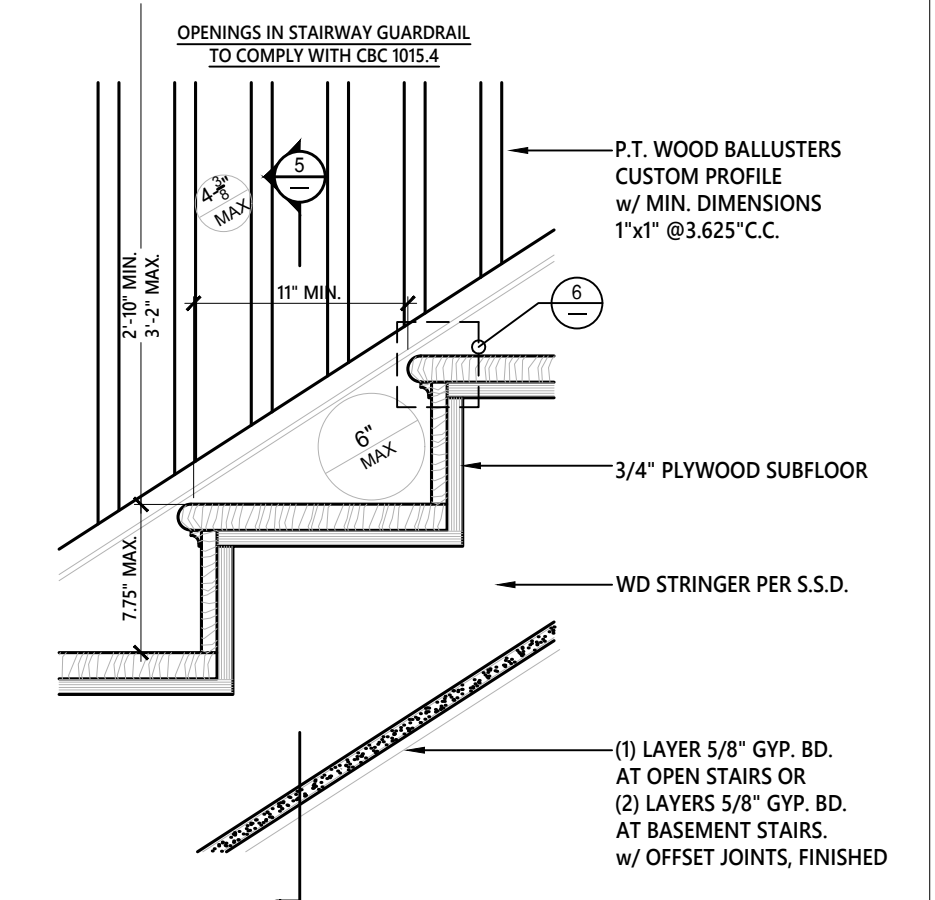


**2 PROPOSED SIDE (NORTH) ELEVATION**  
 SCALE: 1/4" = 1'-0"

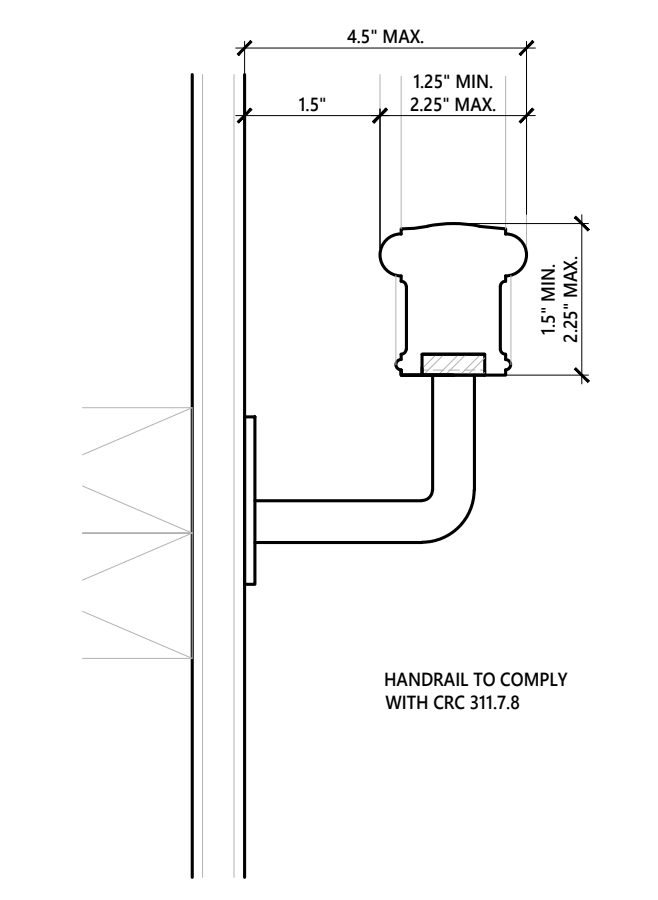
**VOLUME OF EXCAVATION**  
 TOTAL VOLUME OF EXCAVATION (SHOWN HATCHED)  
 = SQUARE FOOTAGE OF EXCAVATION x DEPTH OF EXCAVATION / 27  
 = 1350 SQ. FT. x 0'-9" / 27 (LOWERED SLAB)  
 = 37.5 CUBIC YARDS



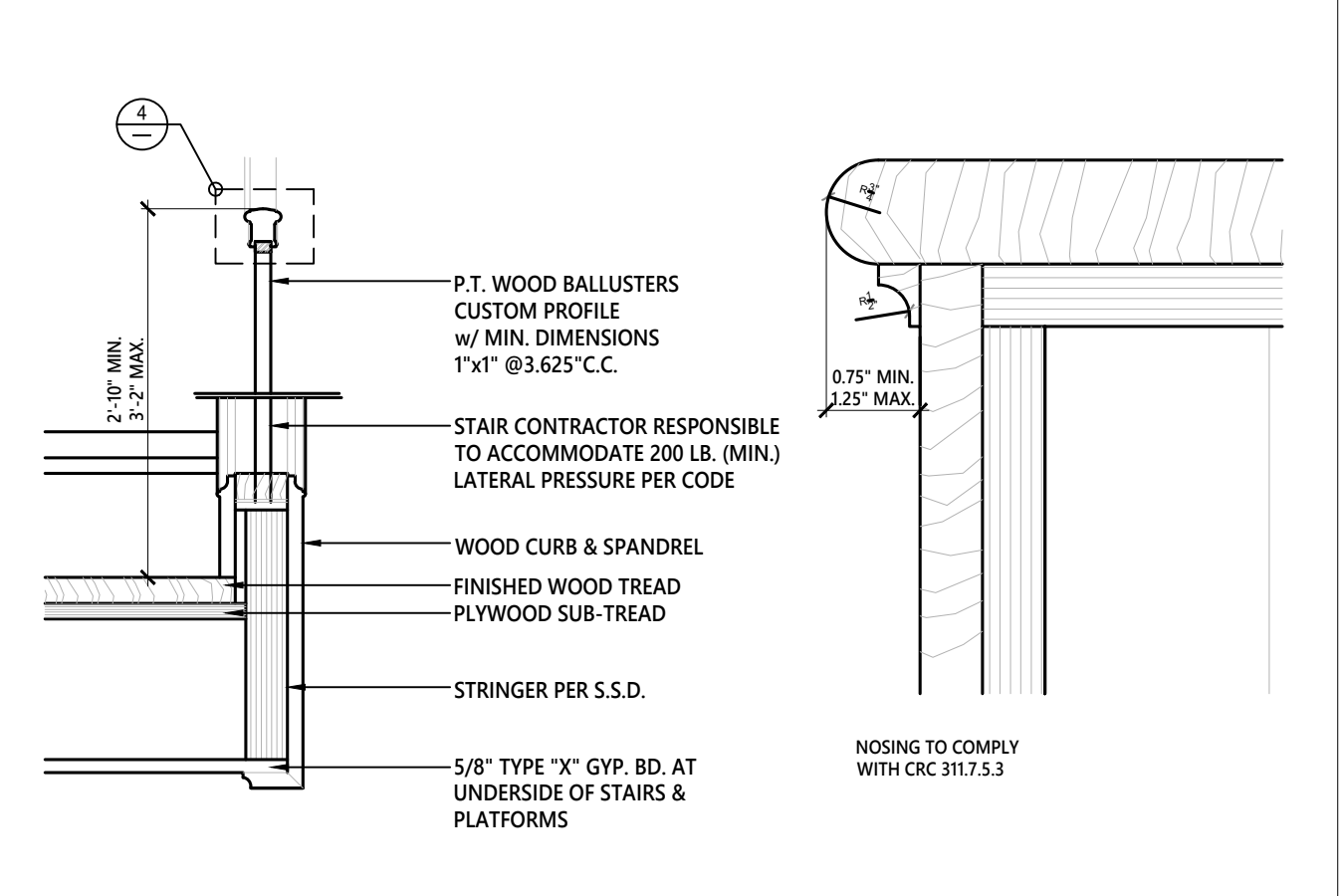
**1 TYPICAL INTERIOR STAIR SECTION**  
 SCALE: 3/4" = 1'-0"



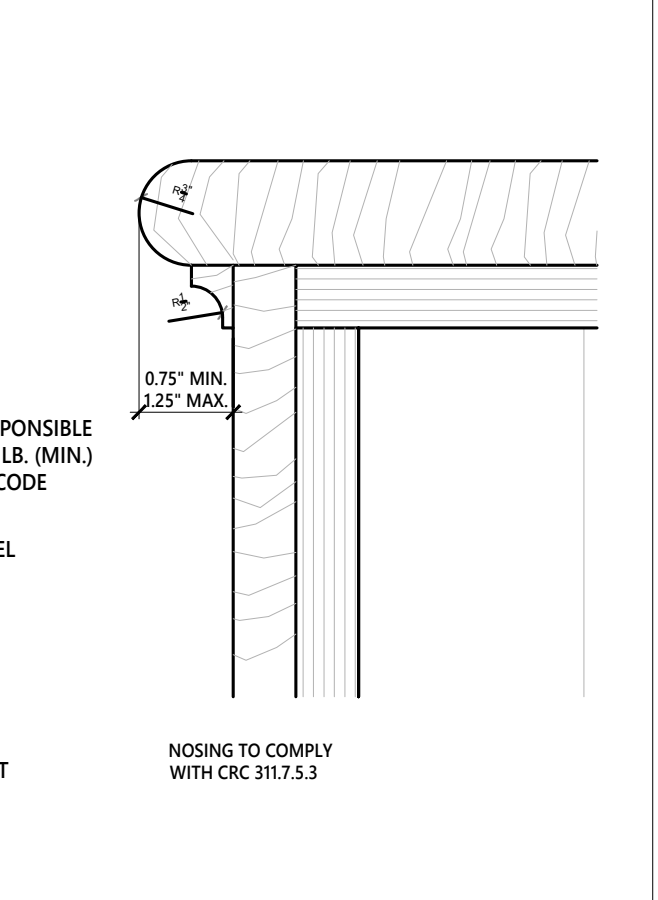
**2 TYPICAL INTERIOR STAIR DETAIL**  
 SCALE: 3/4" = 1'-0"



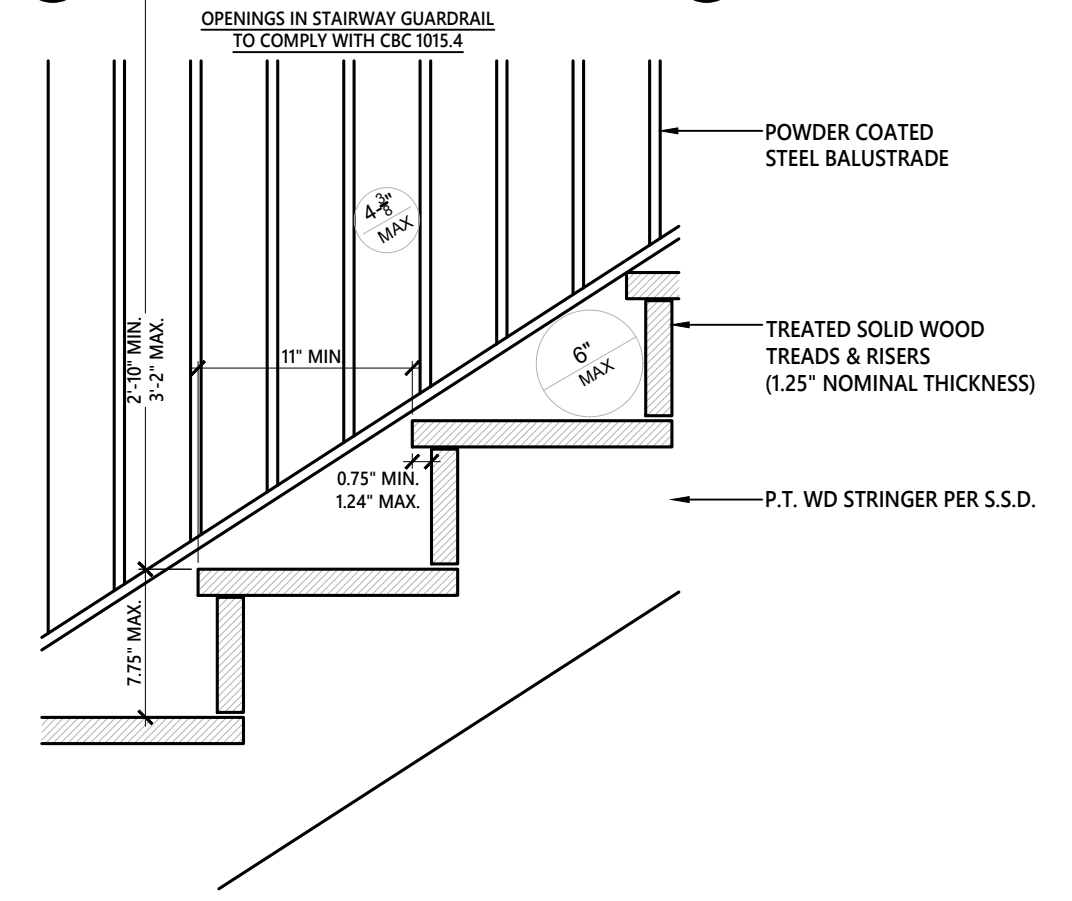
**4 TYPICAL STAIR HANDRAIL DETAIL**  
 SCALE: 3/4" = 1'-0"



**5 TYPICAL STRINGER SECTION DETAIL**  
 SCALE: 3/4" = 1'-0"



**6 TYPICAL NOSING STAIR DETAIL**  
 SCALE: 3/4" = 1'-0"



**3 TYPICAL EXTERIOR STAIR DETAIL**  
 SCALE: 3/4" = 1'-0"

- STAIR NOTES:**
- EGRESS STAIRWAYS SHALL NOT BE LESS THAN 36" IN CLEAR WIDTH AT ALL POINTS ABOVE PERMITTED HANDRAIL HEIGHT AND BELOW REQUIRED HEADROOM HEIGHT.
  - HANDRAILS SHALL NOT PROJECT MORE THAN 4.5" ON EITHER SIDE.
  - ENSURE MIN. 6'-8" HEADROOM IS PROVIDED THROUGHOUT STAIR AREA MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING.
  - VERTICAL RISE OF A FLIGHT OF STAIRS SHALL BE MAX. 147".
  - STAIR TREADS AND RISERS SHALL COMPLY WITH CBC 1011. VERIFY ANY AND ALL DEVIATIONS WITH ARCHITECT.
  - NOSING SHALL COMPLY WITH CBC 1011. NOSING PROJECTION SHALL BE MIN. 0.75" MIN. 1.25" MAX.
  - THE MINIMUM NOSING PROJECTION IS NOT REQUIRED WHERE TREAD DEPTH IS NO LESS THAN 11".
  - LANDINGS SHALL COMPLY WITH CBC 1011 AND SHALL HAVE A MINIMUM WIDTH PERPENDICULAR TO THE DIRECTION OF TRAVEL NO LESS THAN THE WIDTH OF THE FLIGHT SERVED.
  - PER CBC 1015.4 HANDRAILS SHALL BE PROVIDED ON NO LESS THAN ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR A FLIGHT WITH FOUR OR MORE RISERS. HANDRAILS SHALL BE INSTALLED MIN. 34" AN MAX. 38" MEASURED VERTICALLY FROM THE SLOPED PLAN ADJOINING TREAD NOSING.
  - HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT FROM A POINT DIRECTLY ABOVE THE LOWEST RISER.
  - HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT FROM A POINT DIRECTLY ABOVE THE LOWEST RISER.
  - HANDRAILS ADJACENT TO A WALL SHALL HAVE A MIN. CLEAR OFFSET OF 1.5" FROM THE WALL.
  - HANDRAIL GRIP SIZE SHALL COMPLY WITH CBC 1015.4 STAIRWAYS.

#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**EXISTING & PROPOSED SIDE (NORTH) ELEVATION**

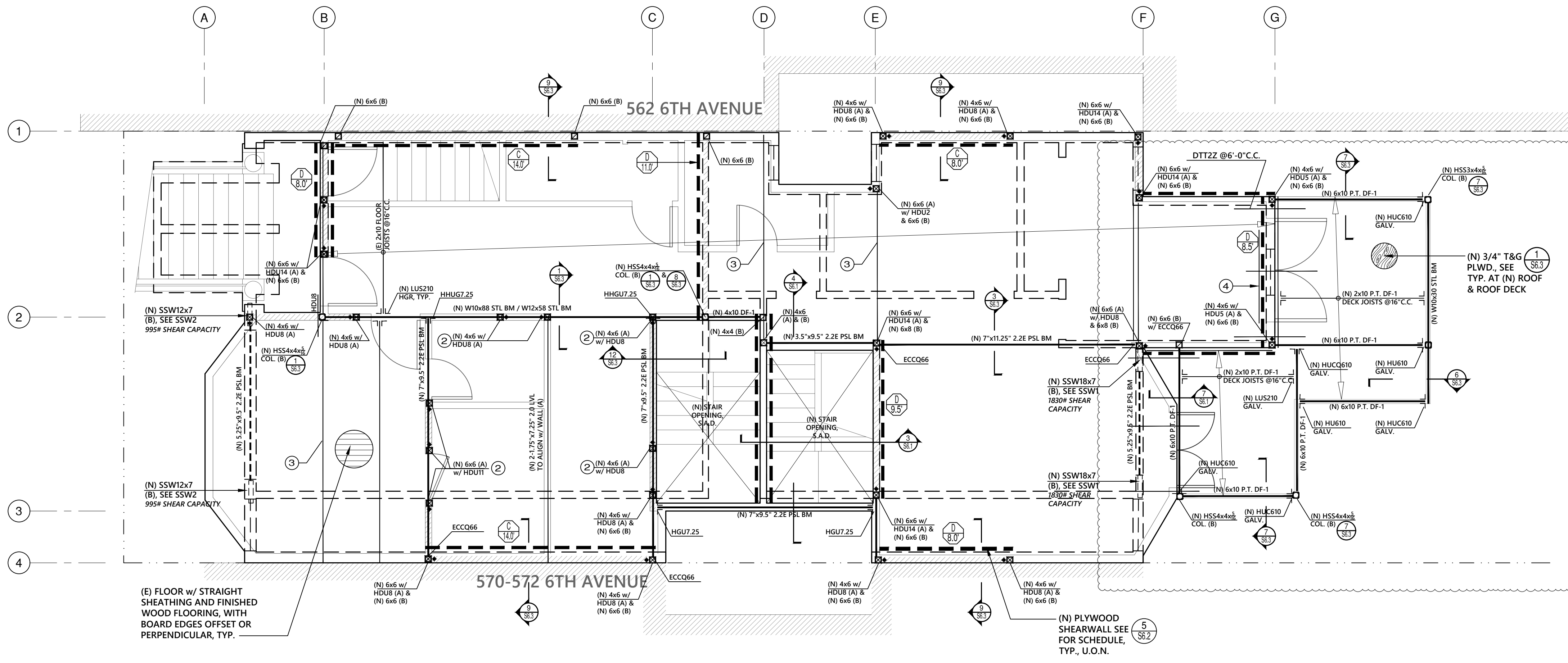
SHEET NUMBER  
**A2.3**

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR REPRODUCED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.





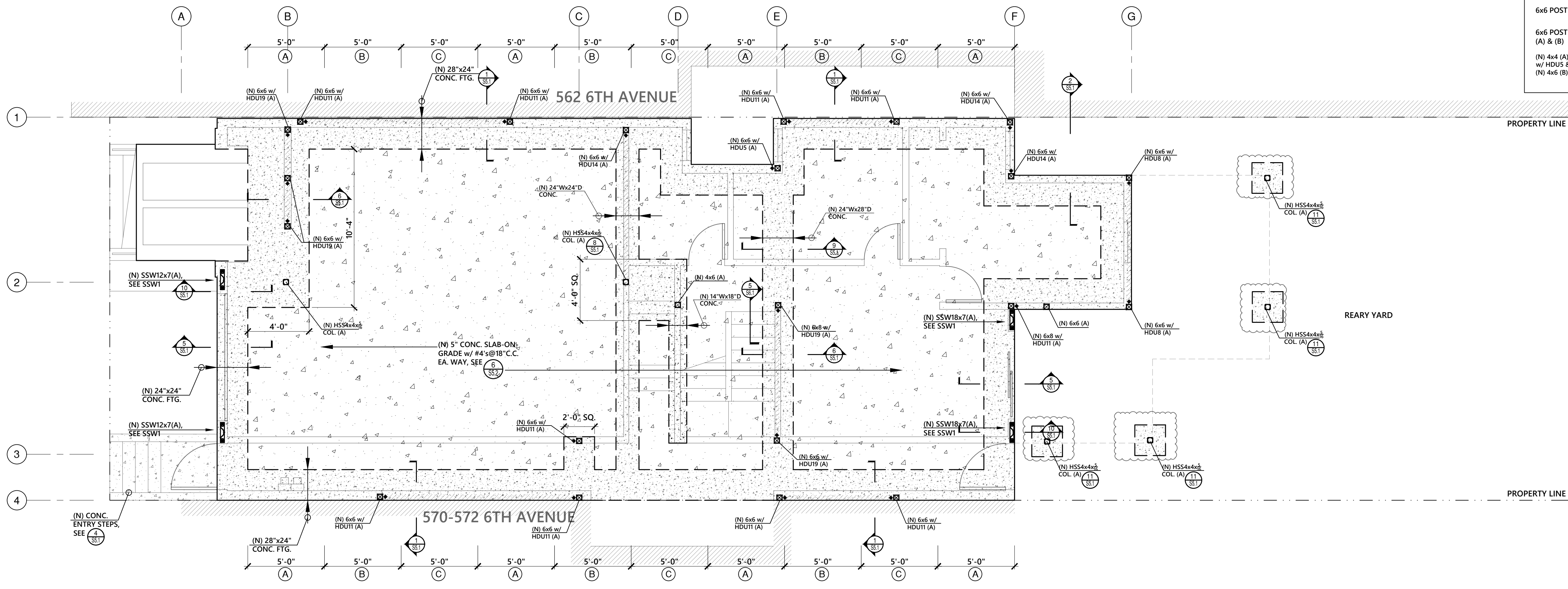
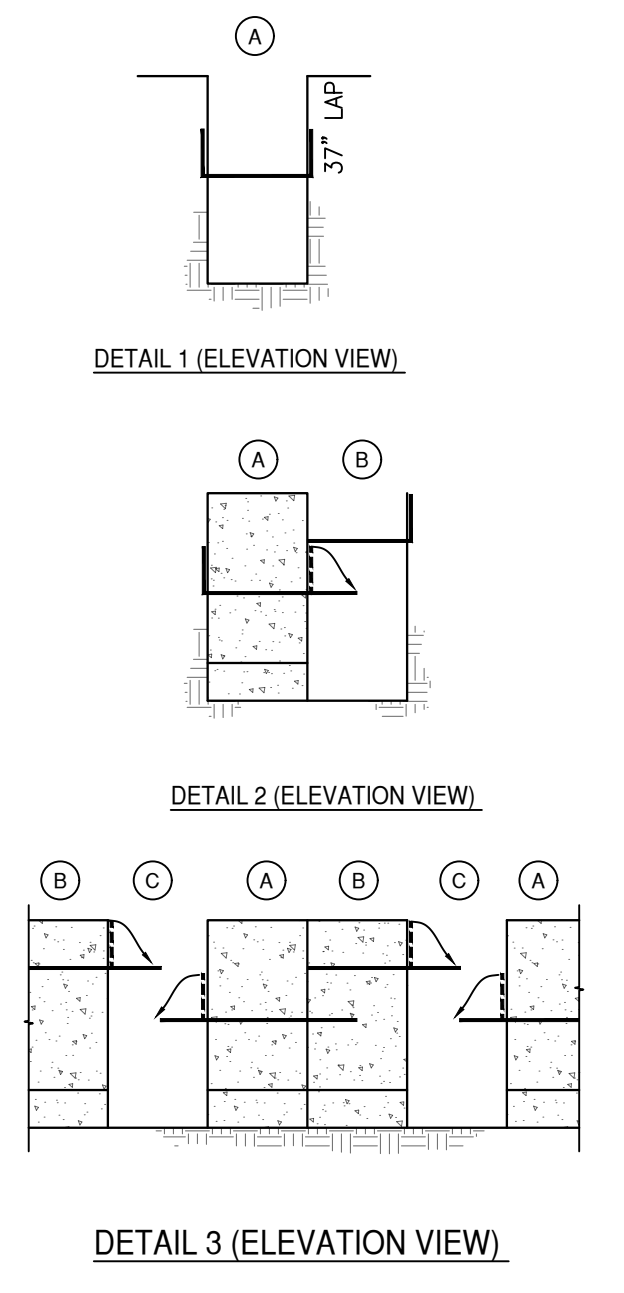




**SECOND FLOOR FRAMING PLAN**  
SCALE: 1/4"=1'-0"

**EXCAVATION SEQUENCE:**

- DEMOLISH ALL "A" SECTIONS. EXCAVATE DOWN @ ALL "A" SECTIONS. DO NOT EXCAVATE "B" AND "C" SECTIONS. SEE PLAN FOR SECTIONS.
- INSTALL FOOTING AND WALL REBAR IN ALL "A" SECTIONS W/ HORIZ. REBAR BENT UP @ ENDS PER DETAIL 1.
- POUR FOOTING AND WALL CONCRETE FOR ALL "A" SECTIONS. LET CONCRETE CURE FOR 3 DAYS.
- DEMOLISH ALL "B" SECTIONS. EXCAVATE DOWN @ ALL "B" SECTIONS. DO NOT EXCAVATE "C" SECTIONS. SEE PLAN FOR SECTIONS.
- BEND HORIZONTAL REBAR ADJACENT TO SECTIONS "B" DOWN AT ALL SECTIONS "A" PER DETAIL 2.
- INSTALL FOOTING AND WALL REBAR IN ALL "B" SECTIONS W/ HORIZONTAL REBAR ADJACENT TO SECTIONS "C" BENT UP @ ENDS PER DETAIL 2.
- POUR FOOTING AND WALL CONCRETE FOR ALL "B" SECTIONS. LET CONCRETE CURE FOR 3 DAYS.
- DEMOLISH ALL "C" SECTIONS. EXCAVATE DOWN @ ALL "C" SECTION. SEE PLAN FOR SECTIONS.
- BEND HORIZONTAL REBAR ADJACENT TO SECTIONS "C" DOWN AT ALL SECTIONS "B" AND "A" PER DETAIL 3.
- INSTALL FOOTING AND WALL REBAR IN ALL "C" SECTIONS.
- POUR FOOTING AND WALL CONCRETE FOR ALL "C" SECTIONS. LET CONCRETE CURE FOR 3 DAYS.



**GROUND FLOOR FOUNDATION PLAN**  
SCALE: 1/4"=1'-0"

**WD POST LEGEND**  
(EXAMPLE: AT THIRD FLOOR FRAMING LEVEL)

6x6 POST (A)	6x6 POST ABOVE (AT 3RD FLOOR LEVEL)
6x6 POST (B)	6x6 POST BELOW (AT 2ND FLOOR LEVEL)
6x6 POST (A) & (B)	6x6 POST ABOVE & BELOW (AT 3RD & 2ND FLOOR LEVEL)
(N) 4x4 (A) w/ HDUS & (N) 4x6 (B)	4x4 POST ABOVE w/ HDUS (AT 3RD FLOOR LEVEL) 6x6 POST BELOW AT 2ND FLOOR LEVEL

**STRUCTURAL LEGEND**

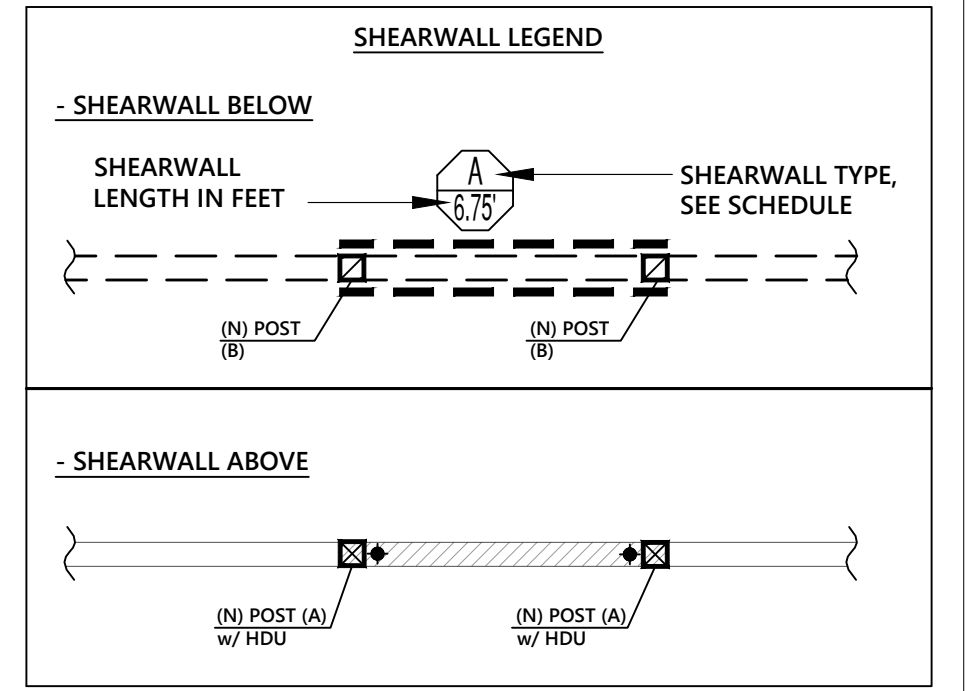
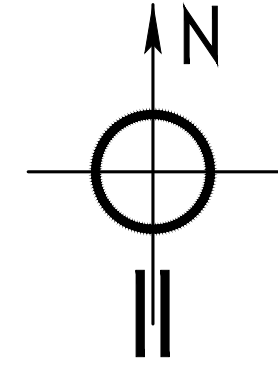
MARK	DESCRIPTION
1	CS16 STRAP w/ 2x BLK'G @ 16" C.C., MIN. 3 BAYS PAST REINFRANT CORNER OR OPENING OF STAIR, SEE 381
2	HDU AT BM, SEE 382
3	(N) OR (E) 2x8/2x10 COLLECTOR (MSTA30 STRAP AT SPLICE), SEE 381
4	(N) CMSTC16 STRAP w/ 4x6 BLK'G AROUND TOP & BOTTOM OF WINDOW OPENING IN SHEAR WALL (CONT. STRAP & BLK FOR 3 BAYS PAST OPENING), SEE 382

**EXISTING CONDITIONS VERIFICATION:**  
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PER PLAN. ANY DISCREPANCY MUST BE REPORTED TO ENGINEERING BEFORE PROCESSING WITH WORK

**SHEAR WALL NOTE:**  
- PROVIDE (N) MSTA21 STRAP TIES TO SIDE OF DOUBLE TOP PLATES WHERE SPLICE OCCURS  
- EXTEND CLIPS AND BLOCKING ALONG SHEAR WALL LINE FOR FULL LENGTH OR WIDTH OF BUILDING AT ALL SHEAR WALLS

**FOUNDATION LEGEND:**

(E) CONC. FTG./SLAB TO REMAIN	[Symbol]
(N) CONC. FTG./WALL	[Symbol]
(N) CONC. SLAB	[Symbol]



#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

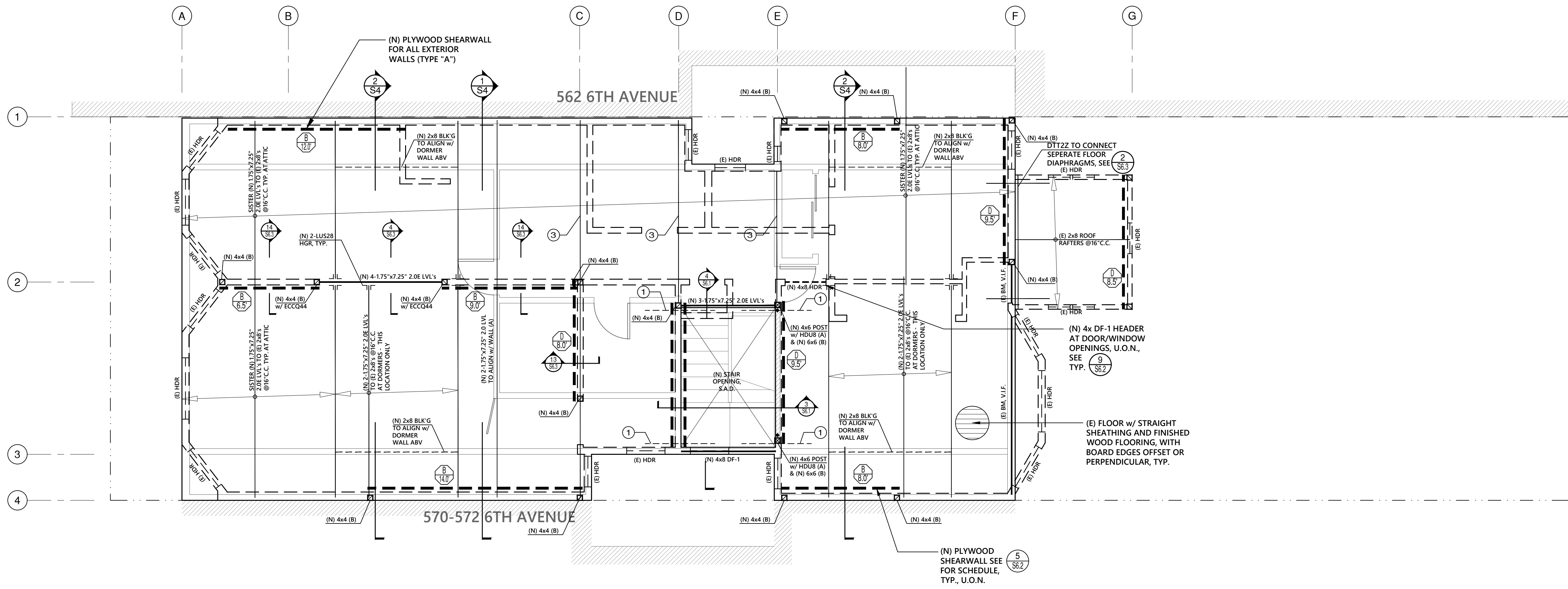
SHEET TITLE:  
**GROUND FLOOR FOUNDATION PLAN**  
**SECOND FLOOR FRAMING PLAN**

SHEET NUMBER  
**S2**

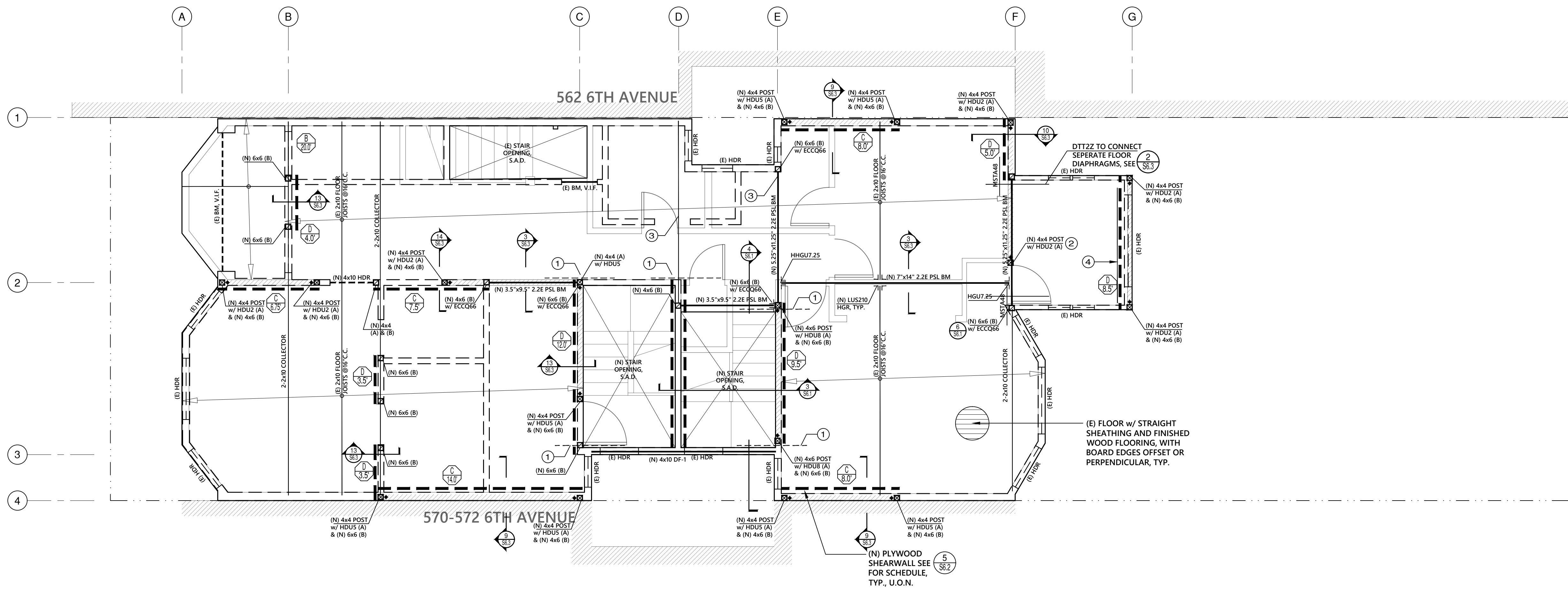
ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.







**ATTIC FLOOR FRAMING PLAN**  
 SCALE: 1/4"=1'-0"



**THIRD FLOOR FRAMING PLAN**  
 SCALE: 1/4"=1'-0"

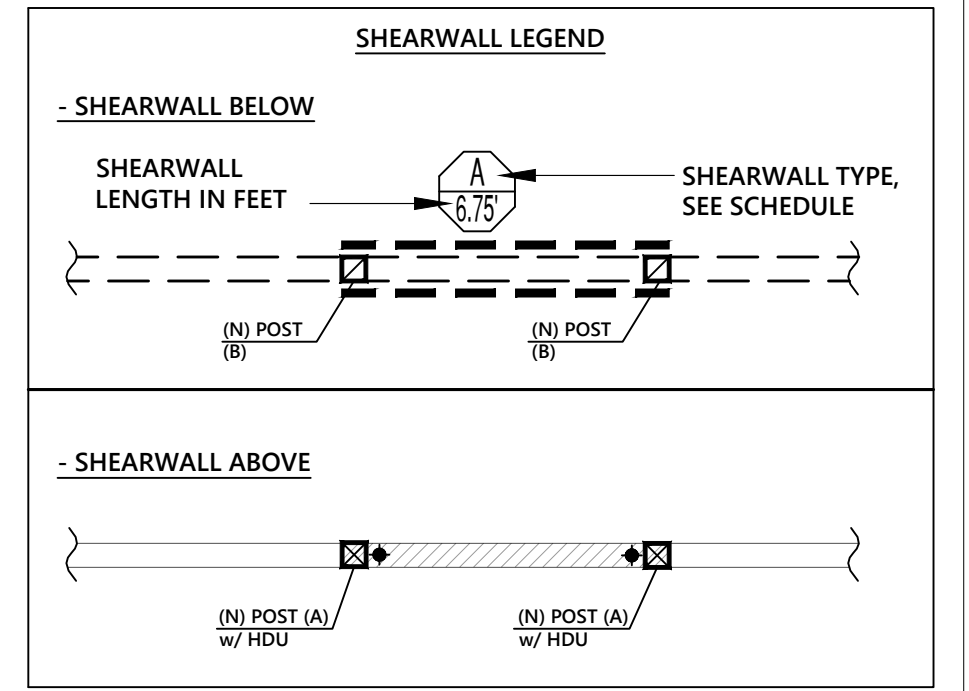
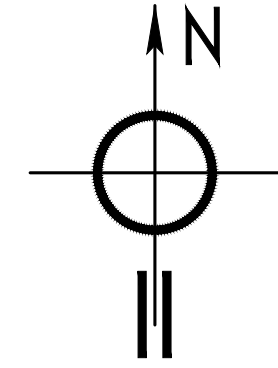
STRUCTURAL LEGEND	
MARK	DESCRIPTION
①	CS16 STRAP w/ 2x BLK'G @16" C.C., MIN. 3 BAYS PAST REINTRACT CORNER OR OPENING OF STAIR, SEE 1 SS1
②	HDU AT BM, SEE 3 SS2
③	(N) OR (E) 2x8/2x10 COLLECTOR (MSTA30 STRAP AT SPLICE), SEE 2 SS1
④	(N) CMSTC16 STRAP w/ 4x6 BLKG AROUND TOP & BOTTOM OF WINDOW OPENING IN SHEAR WALL (CONT. STRAP & BLK FOR 3 BAYS PAST OPENING), SEE 8 SS2

**WD POST LEGEND**  
 (EXAMPLE: AT THIRD FLOOR FRAMING LEVEL)

6x6 POST (A)	6x6 POST ABOVE (AT 3RD FLOOR LEVEL)
6x6 POST (B)	6x6 POST BELOW (AT 2ND FLOOR LEVEL)
6x6 POST (A) & (B)	6x6 POST ABOVE & BELOW (AT 3RD & 2ND FLOOR LEVEL)
(N) 4x4 (A)	4x4 POST ABOVE w/ HDUS (AT 3RD FLOOR LEVEL)
(N) 4x6 (B)	6x6 POST BELOW (AT 2ND FLOOR LEVEL)

**EXISTING CONDITIONS VERIFICATION:**  
 - CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PER PLAN. ANY DISCREPANCY MUST BE REPORTED TO ENGINEERING BEFORE PROCESSING WITH WORK

**SHEAR WALL NOTE:**  
 - PROVIDE (N) MSTA21 STRAP TIES TO SIDE OF DOUBLE TOP PLATES WHERE SPLICE OCCURS  
 - EXTEND CLIPS AND BLOCKING ALONG SHEAR WALL LINE FOR FULL LENGTH OR WIDTH OF BUILDING AT ALL SHEARWALLS



#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

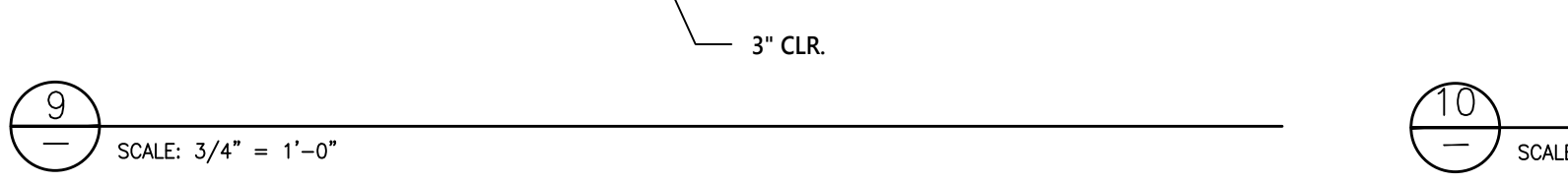
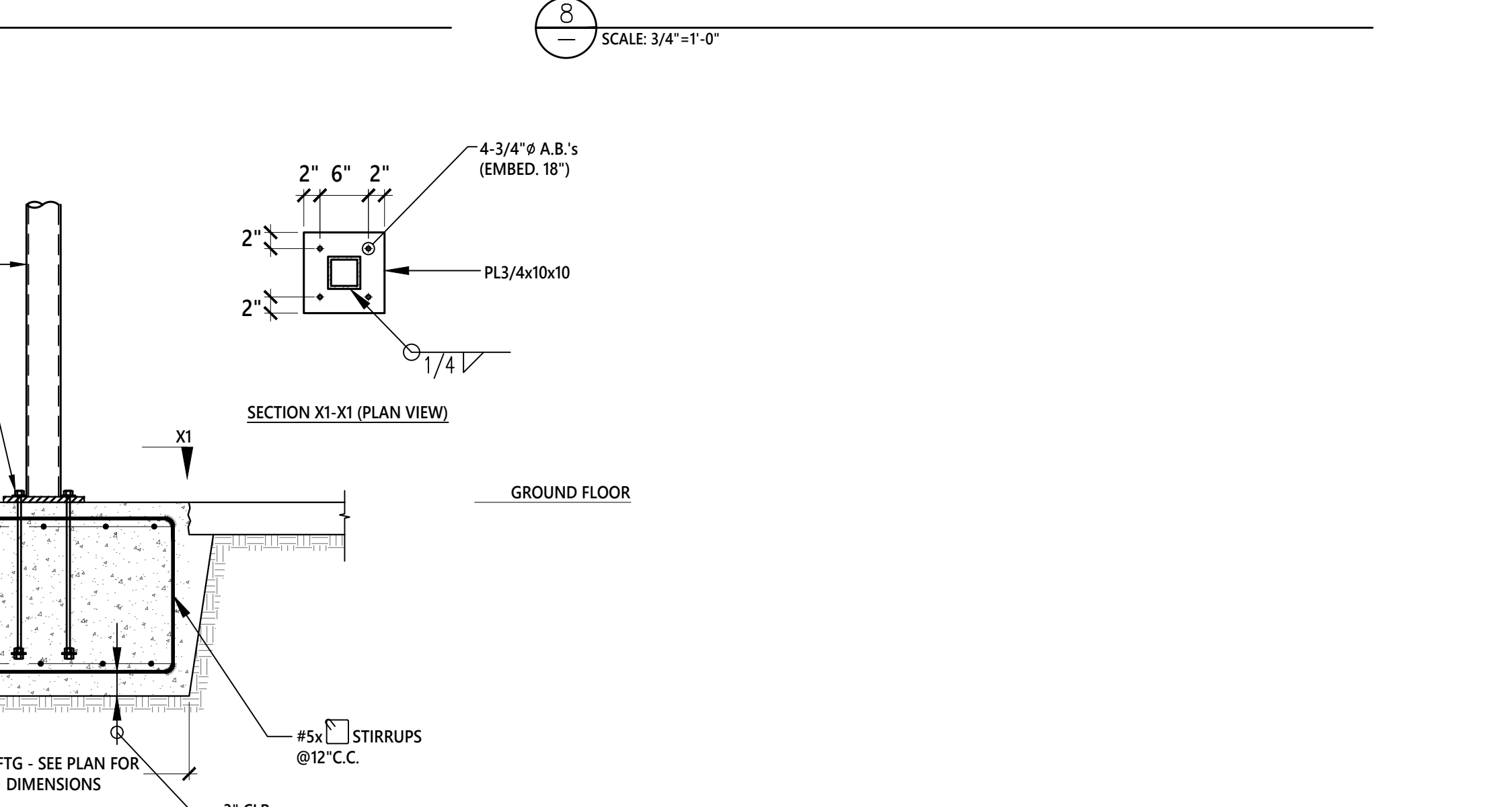
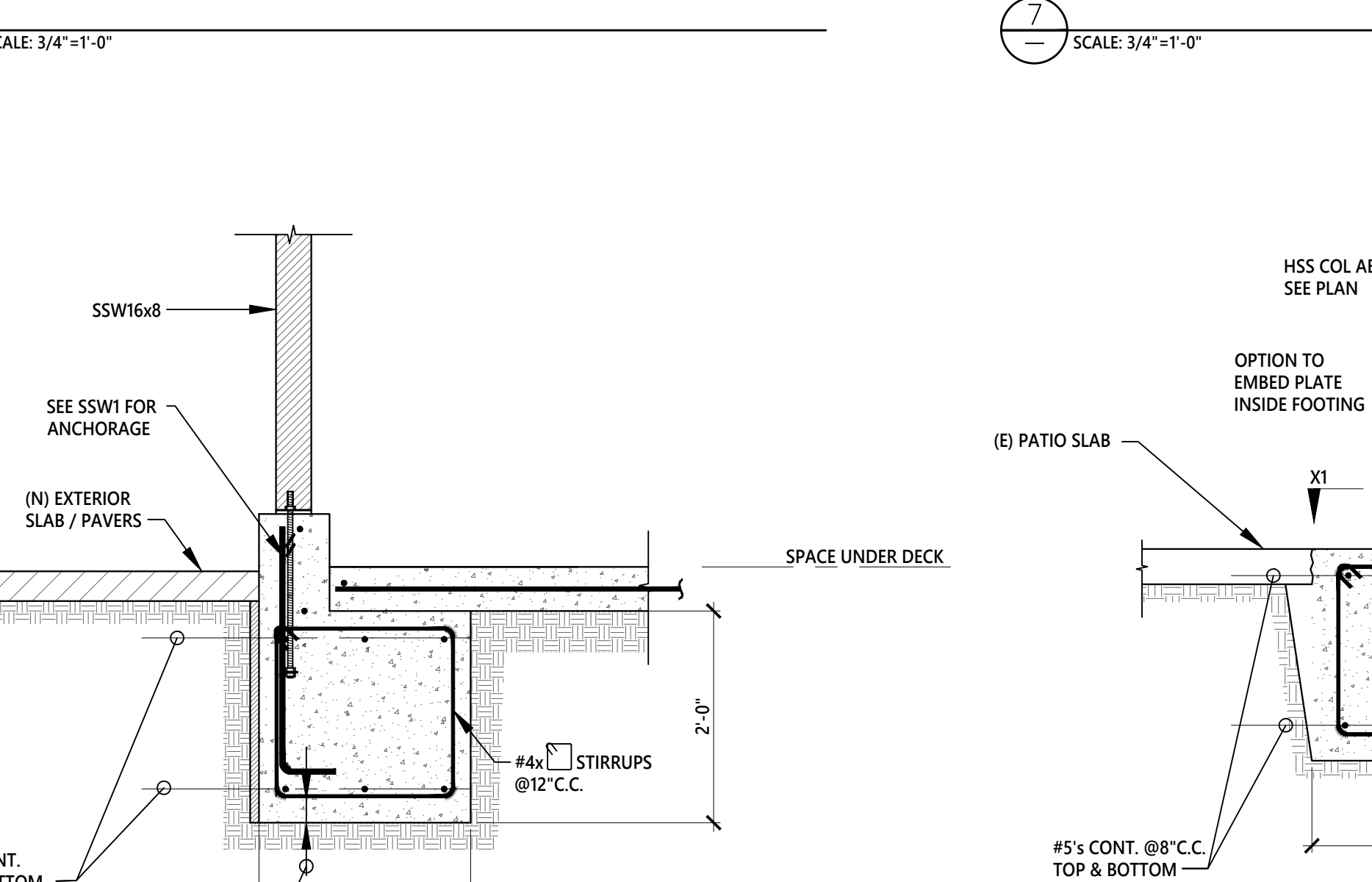
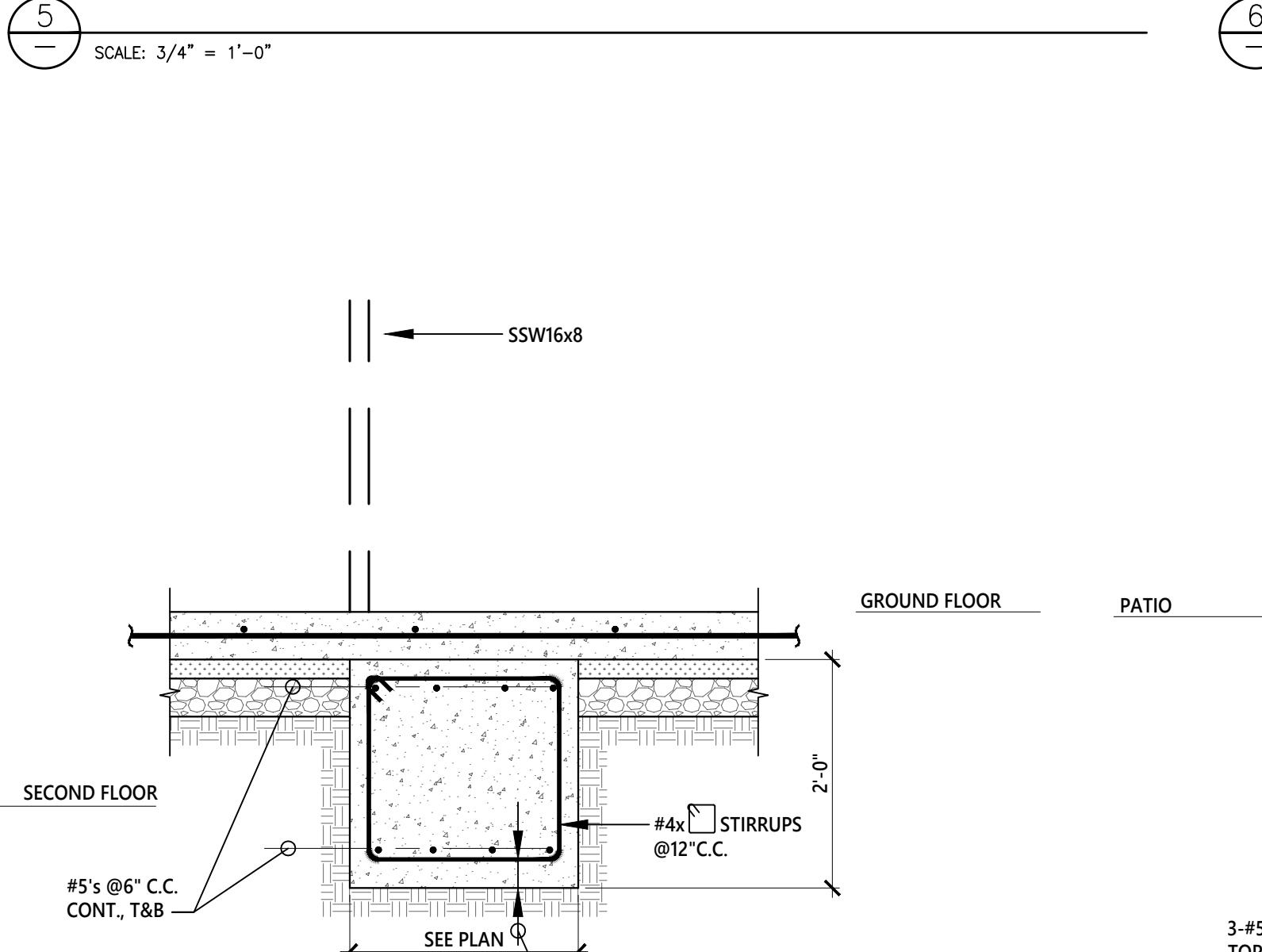
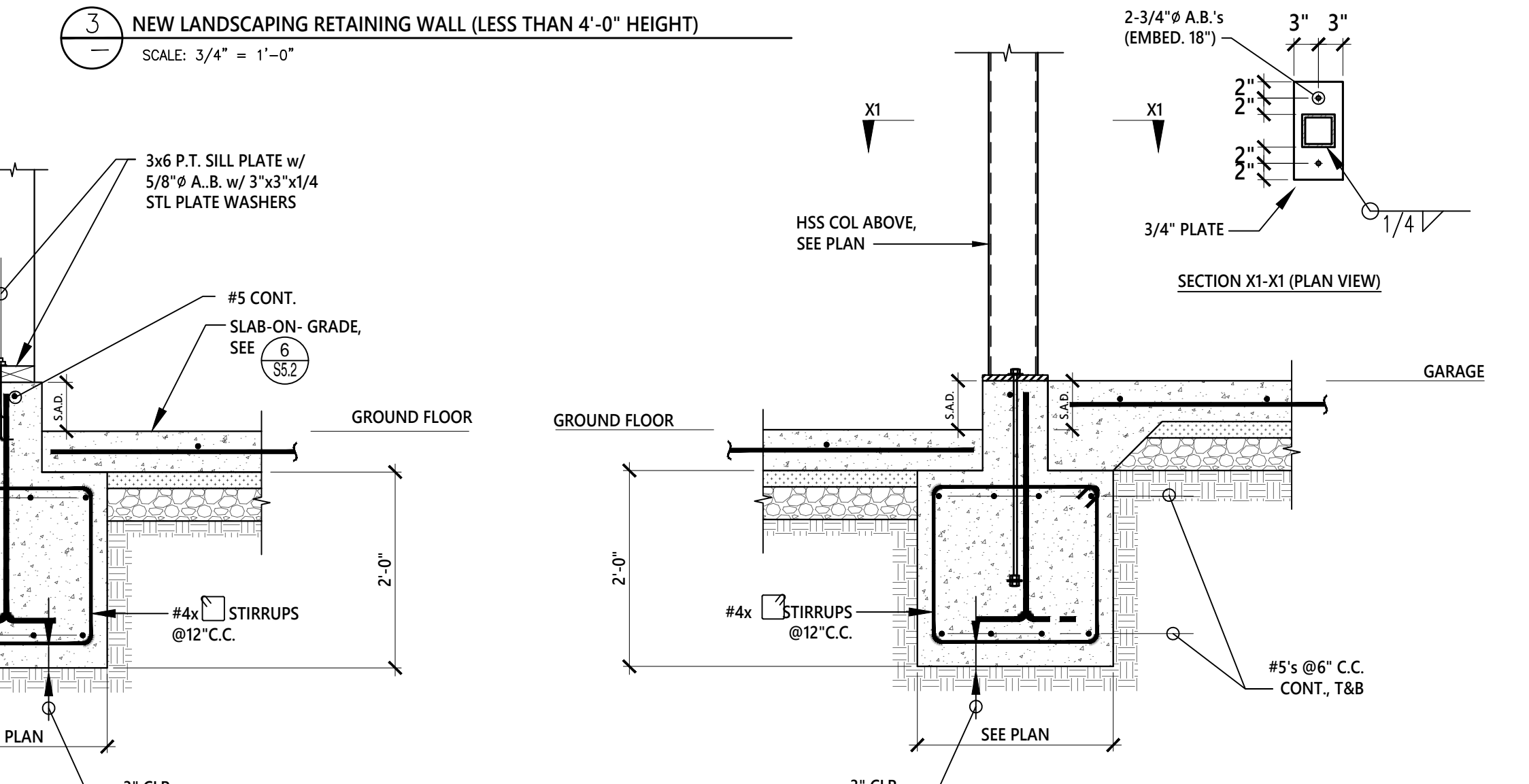
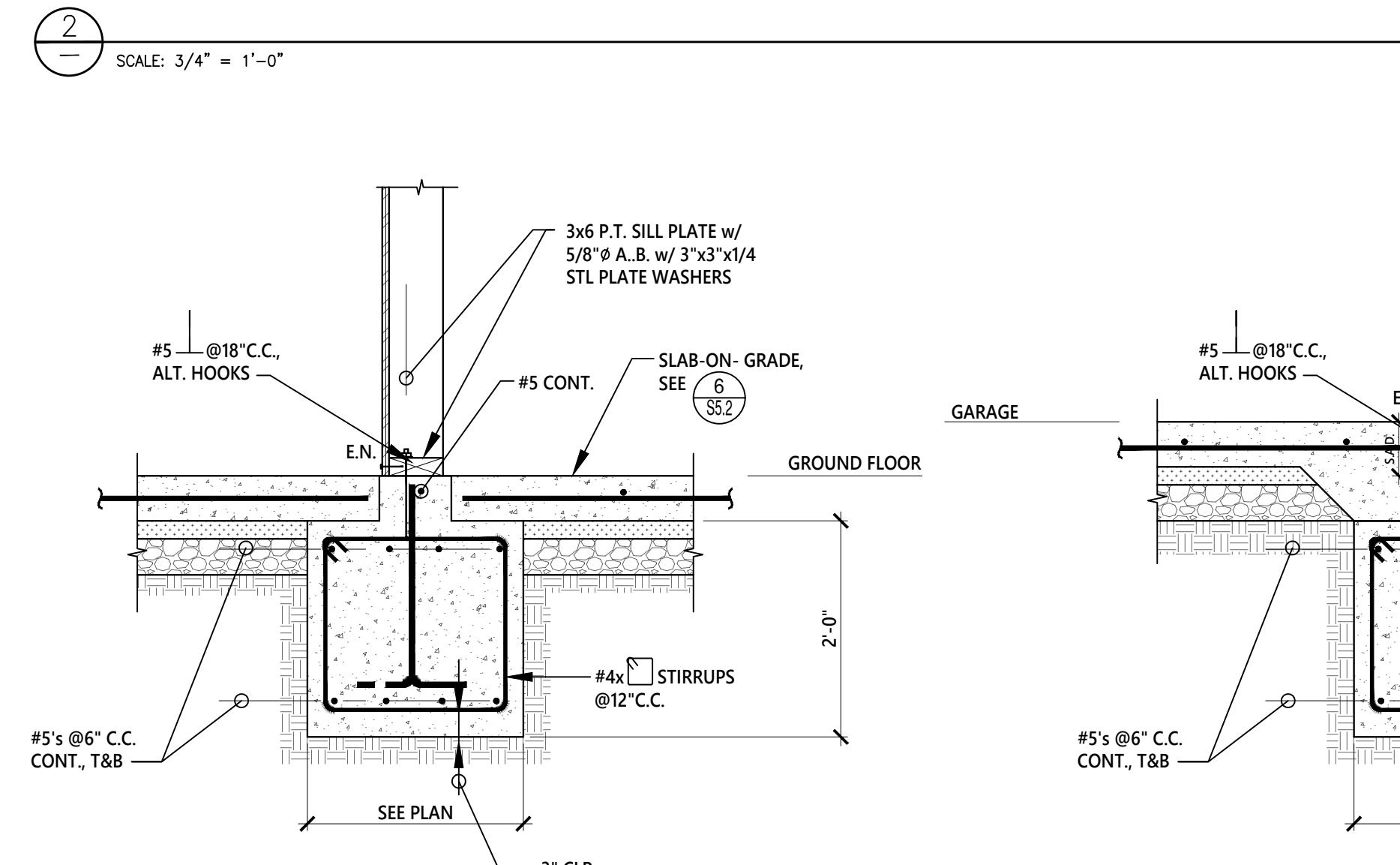
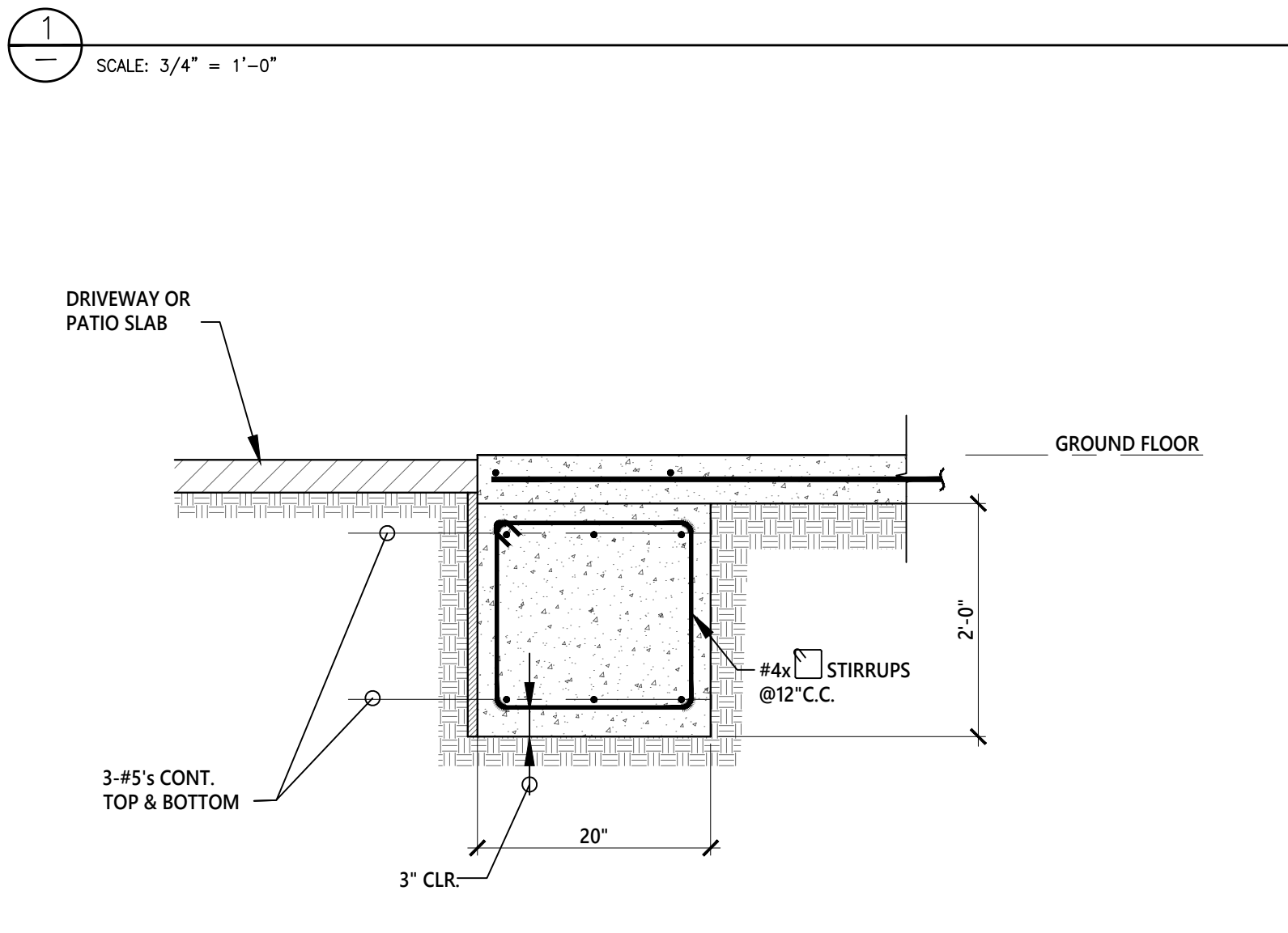
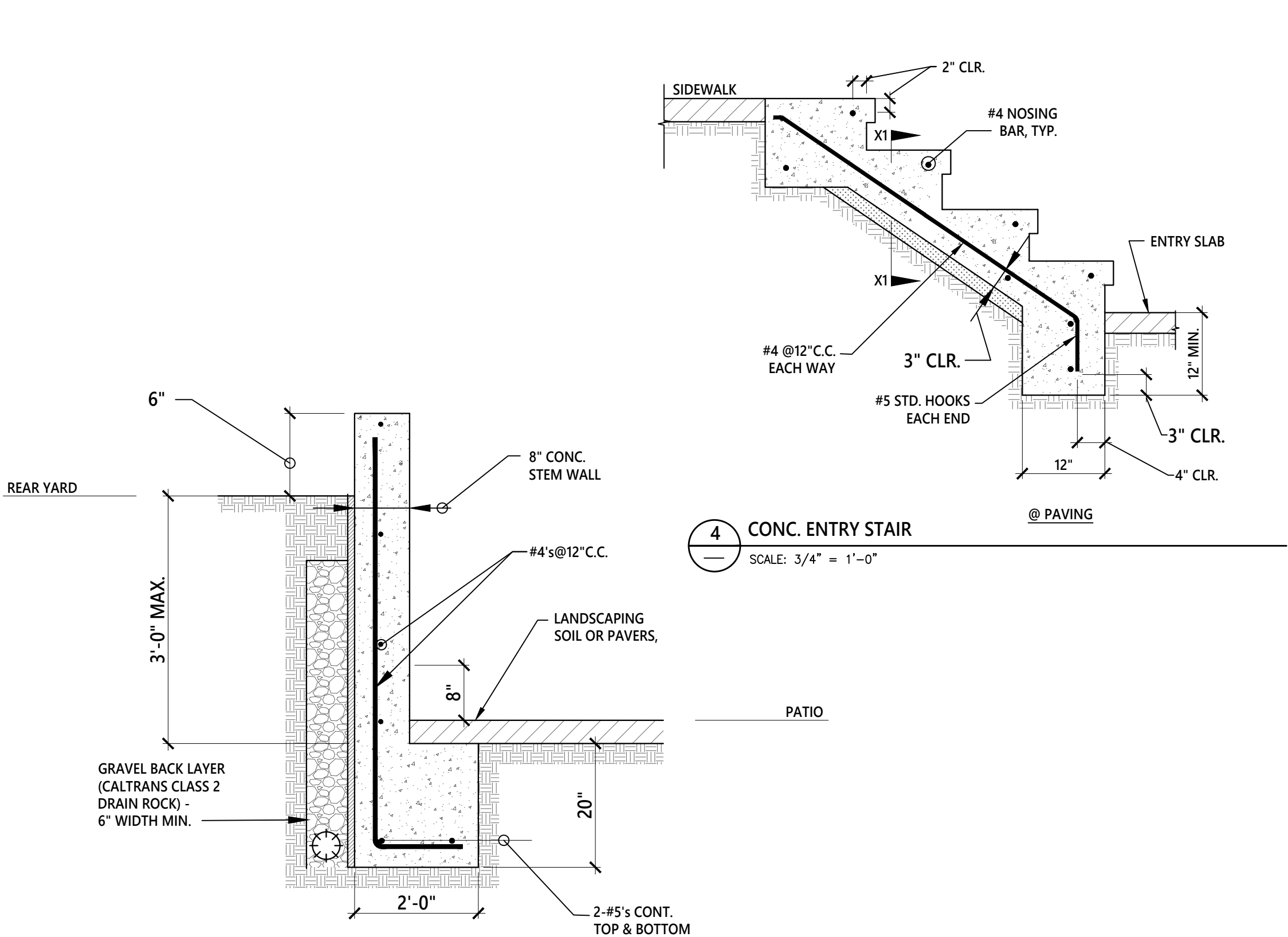
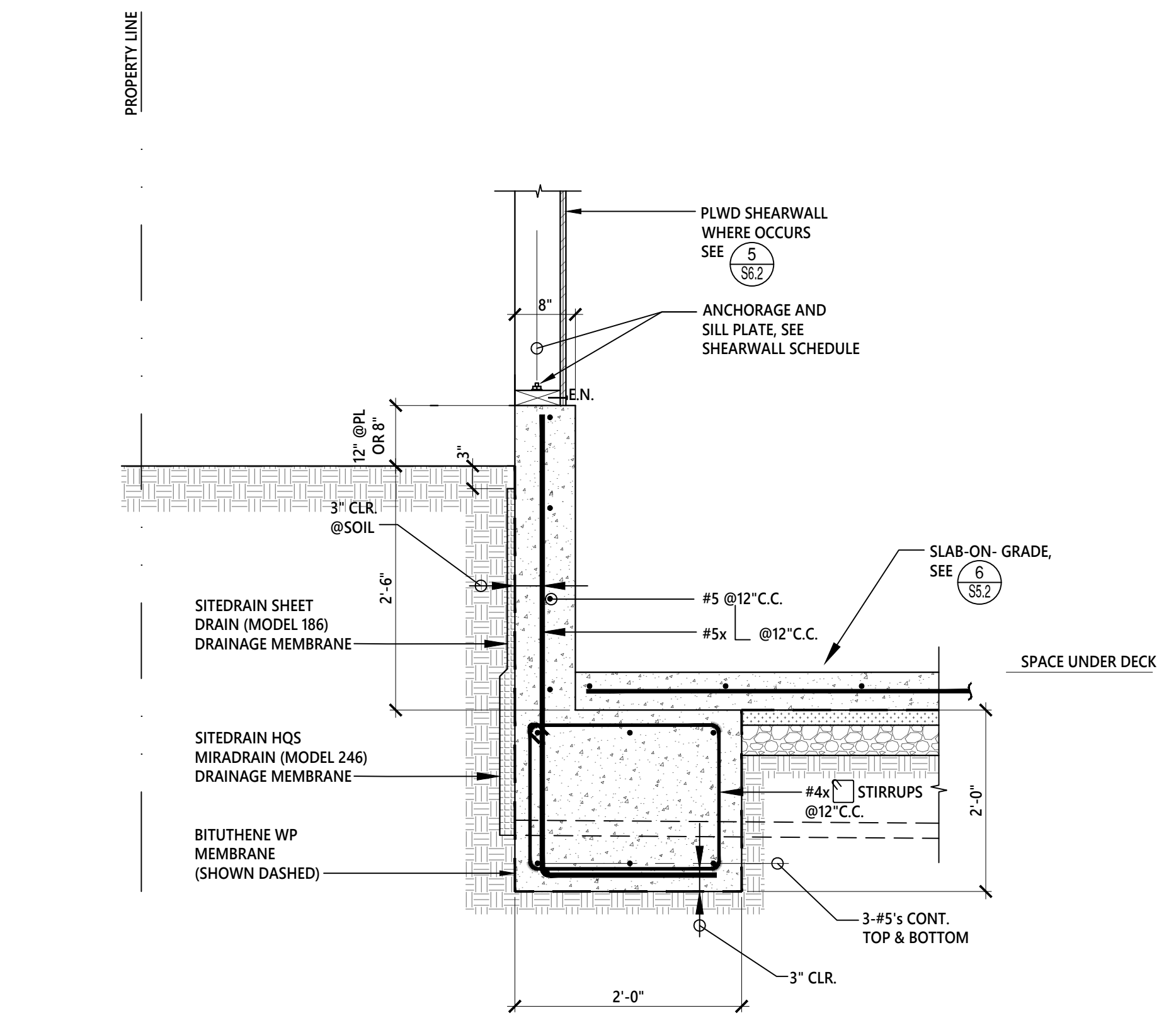
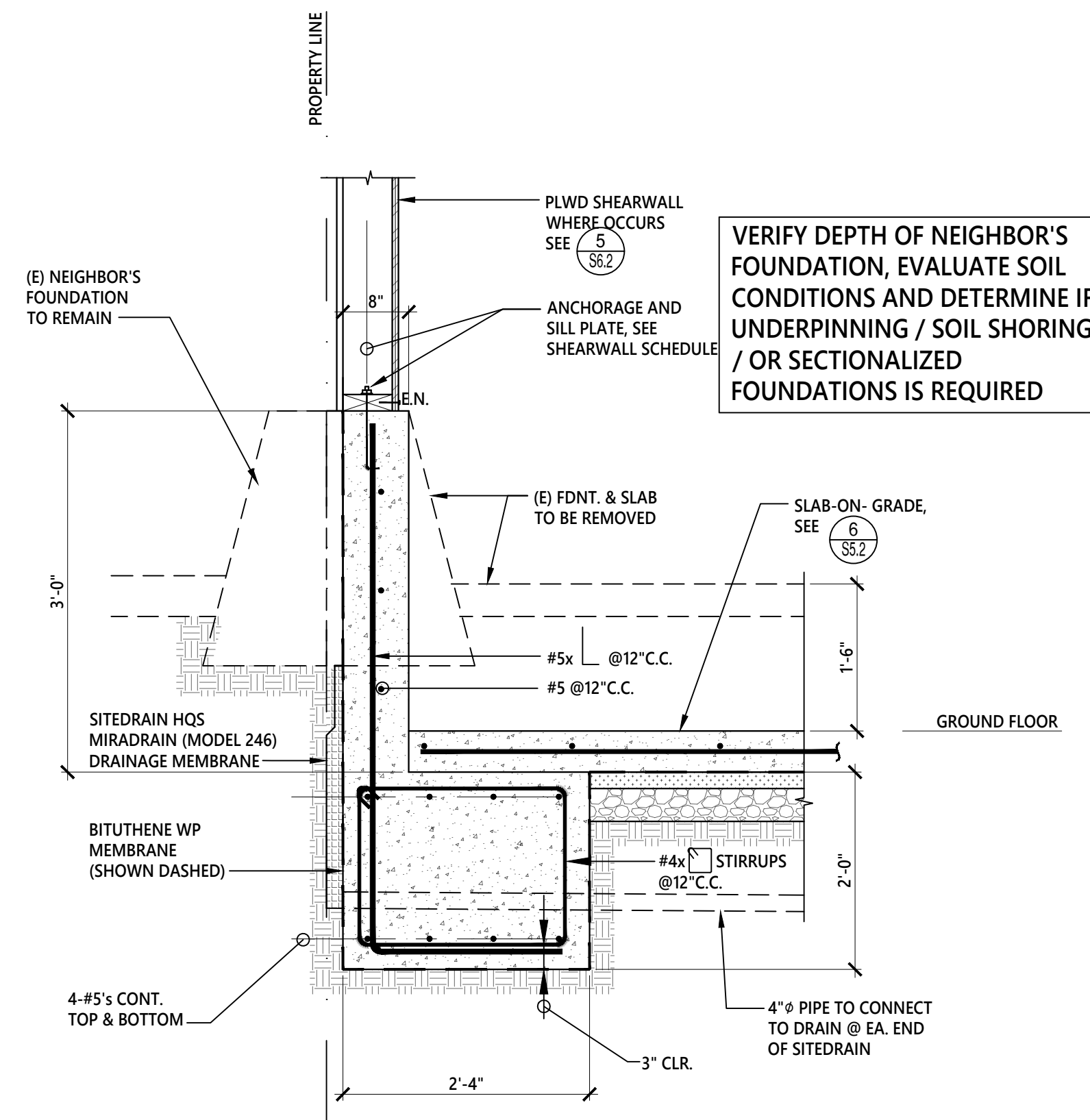
SHEET TITLE:  
**THIRD FLOOR FRAMING PLAN**  
**ATTIC FRAMING PLAN**

SHEET NUMBER:  
**S3**

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.





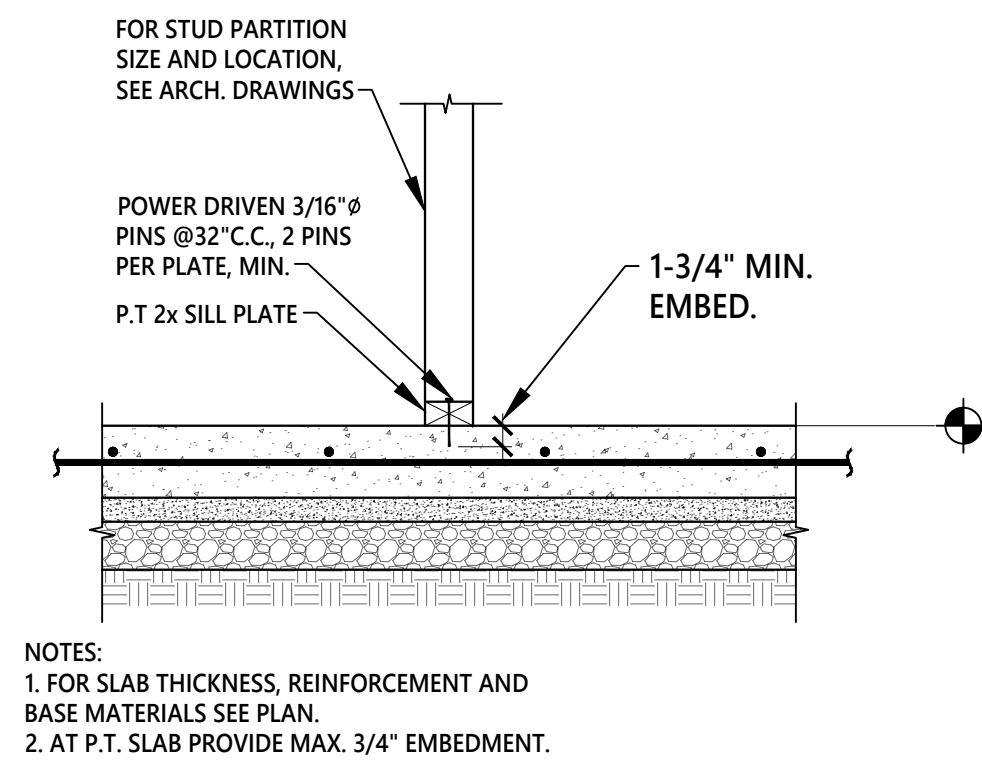


#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

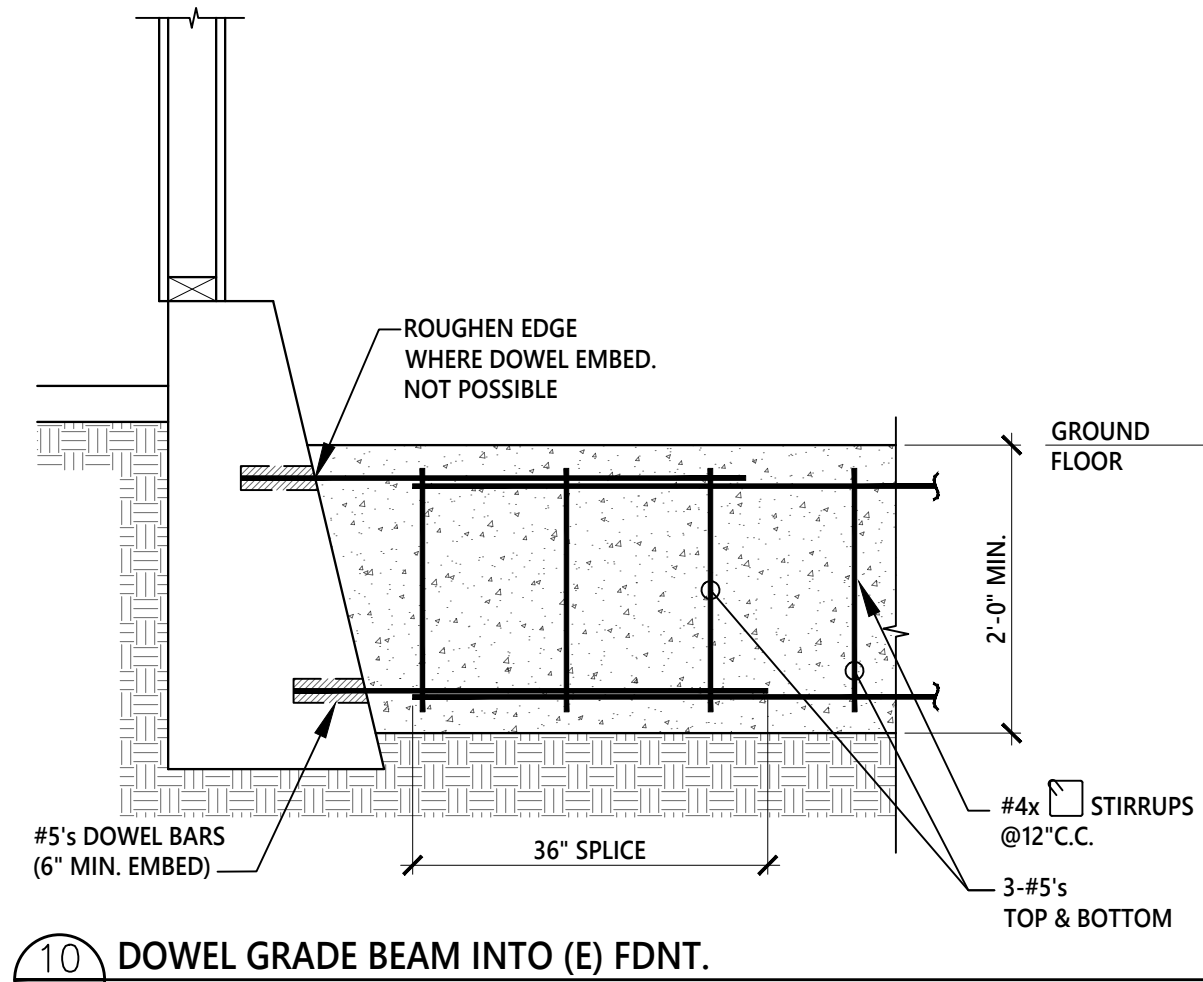
SHEET TITLE:  
**CONCRETE STRUCTURAL DETAILS**

SHEET NUMBER  
**S5.1**

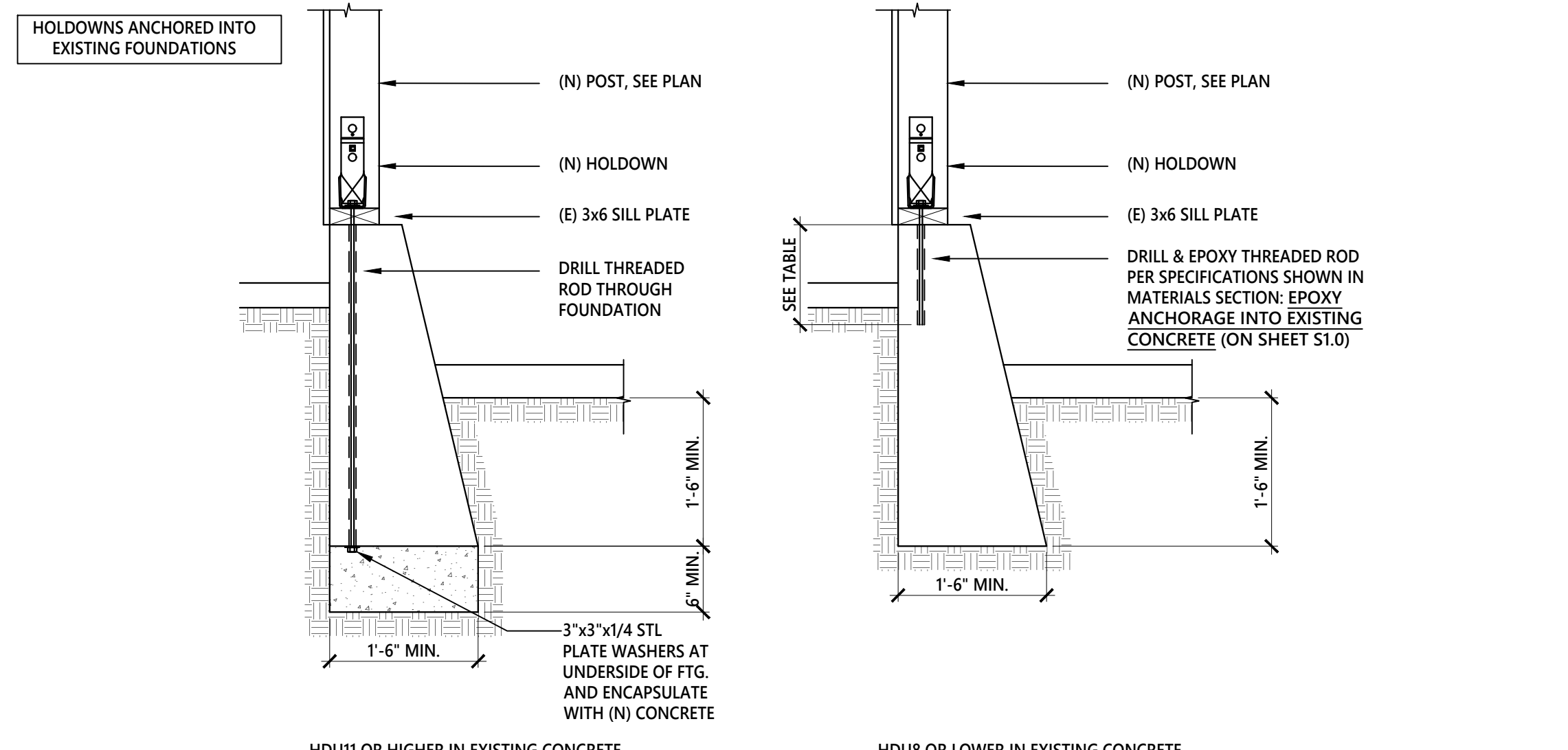
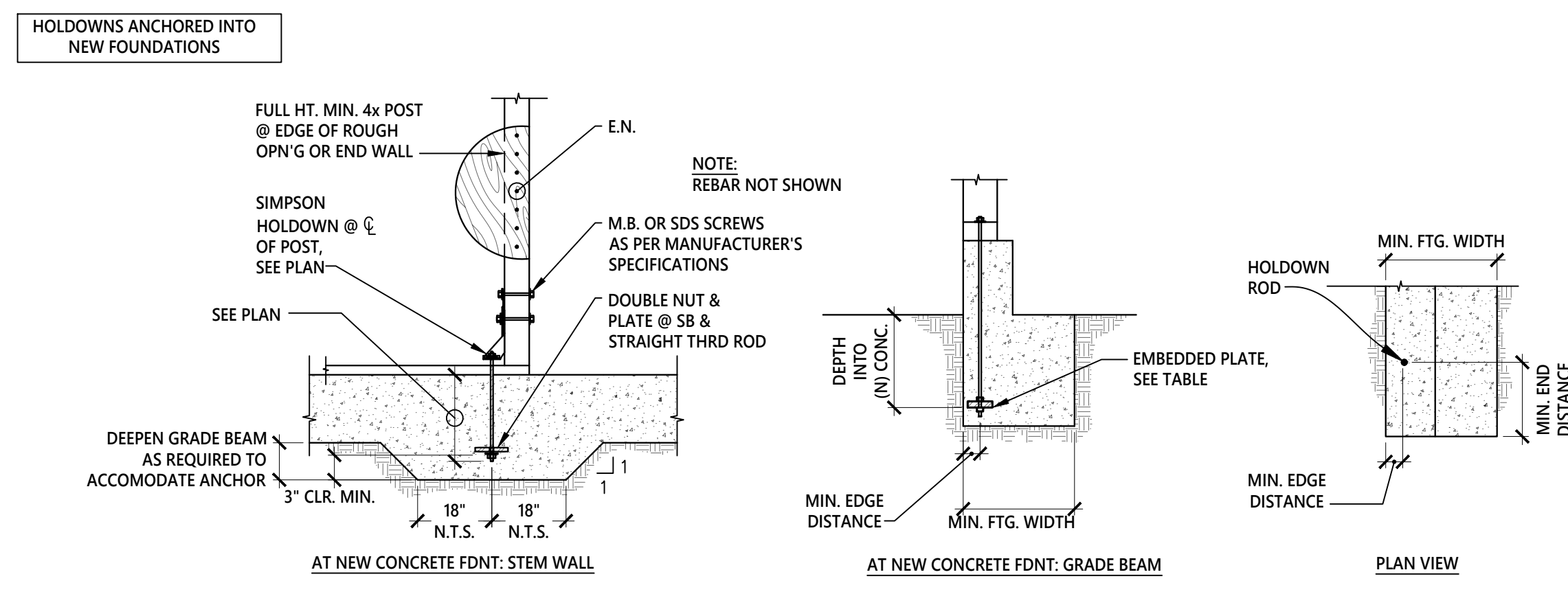
ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.



**1** TYPICAL NON-BEARING / NON-SHEARWALL CONNECTION AT CONCRETE SLAB

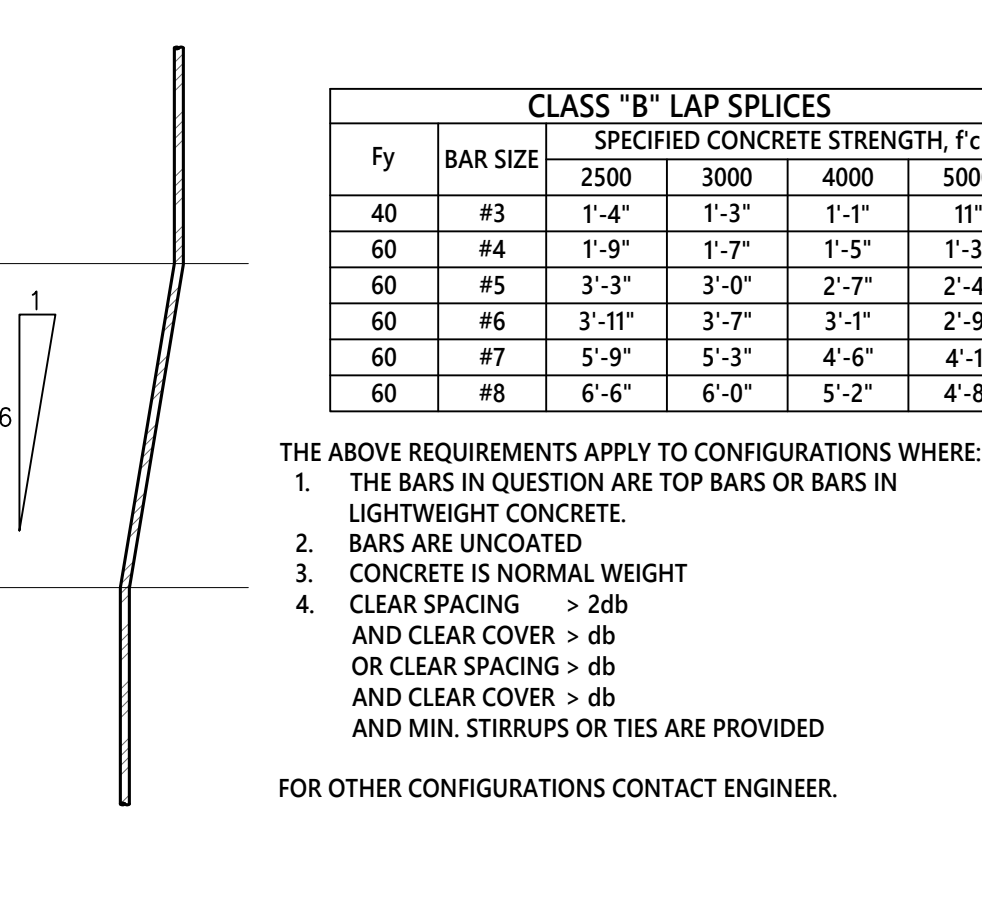


**10** DOWEL GRADE BEAM INTO (E) FDNT.  
SCALE: 3/4" = 1'-0"

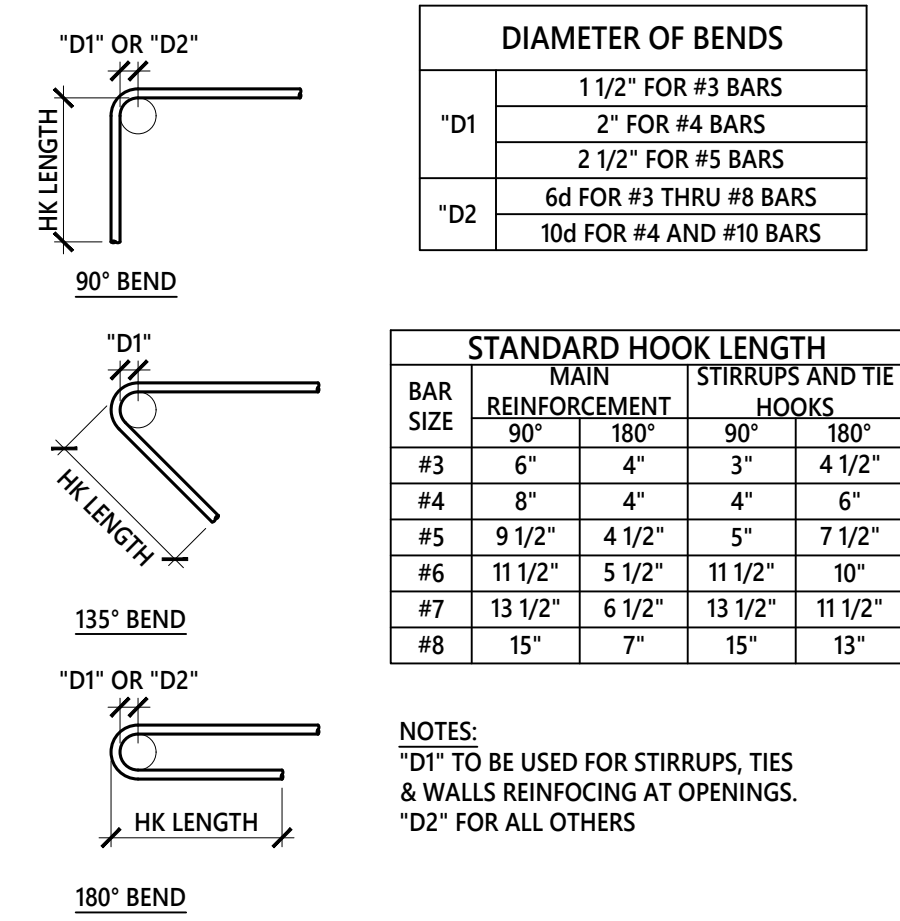


HOLDOWN	ANCHOR DIAMETER	ANCHOR INTO (N) CONC.	DEPTH OF ANCHOR INTO (N) CONC.	MIN. EDGE DISTANCE*	HDU11 OR HIGHER IN EXISTING CONCRETE		HDU8 OR LOWER IN EXISTING CONCRETE		EPOXY PULL TEST LOAD FOR ADHESIVE ANCHORS **	
					MIN. END DISTANCE	MIN. FTG. WIDTH	PLATE IN (N) CONC. FOOTING	MIN. EMBED. INTO (E) CONC.		MIN. EDGE INTO (E) CONC.*
HDU2	5/8"	SSTB16	12"	2"	7"	18"	1.25"x1.25"x1/4"	10"	3"	6,050#
HDU4	5/8"	SSTB30	12"	2"	7"	18"	1.25"x1.25"x1/4"	10"	3"	9,130#
HDU5	5/8"	SSTB34	12"	2"	7"	18"	1.25"x1.25"x1/4"	10"	3"	11,290#
HDU8	7/8"	SB 7/8x24	18"	3.5"	18"	18"	1.5"x1.5"x1/4"	10"	5.25"	13,940#
HDU11	1"	SB 1x30	24"	4"	18"	18"	1.75"x1.75"x1/4"	10"	6"	22,350#
HDU14	1"	SB 1x30	24"	4"	18"	18"	1.75"x1.75"x1/4"	12"	6"	28,890#
HD19	1 1/4"	-	30"	5"	18"	18"	2"x2"x3/8"	12"	7.5"	-

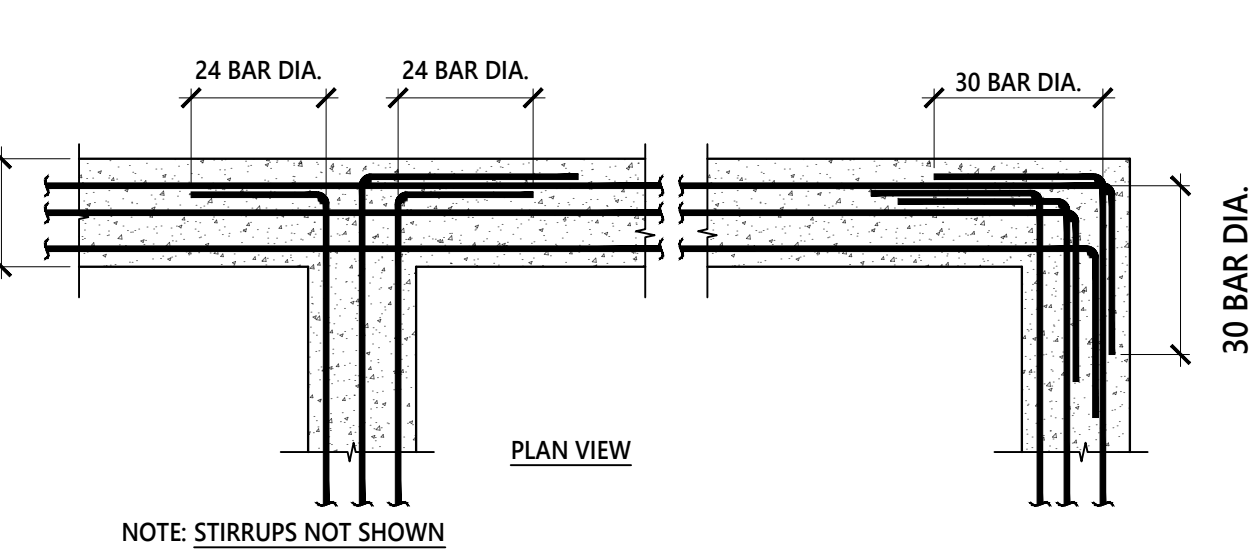
**9** TYPICAL HOLDOWN DETAIL @ CONCRETE FOUNDATION  
SCALE: 3/4" = 1'-0"



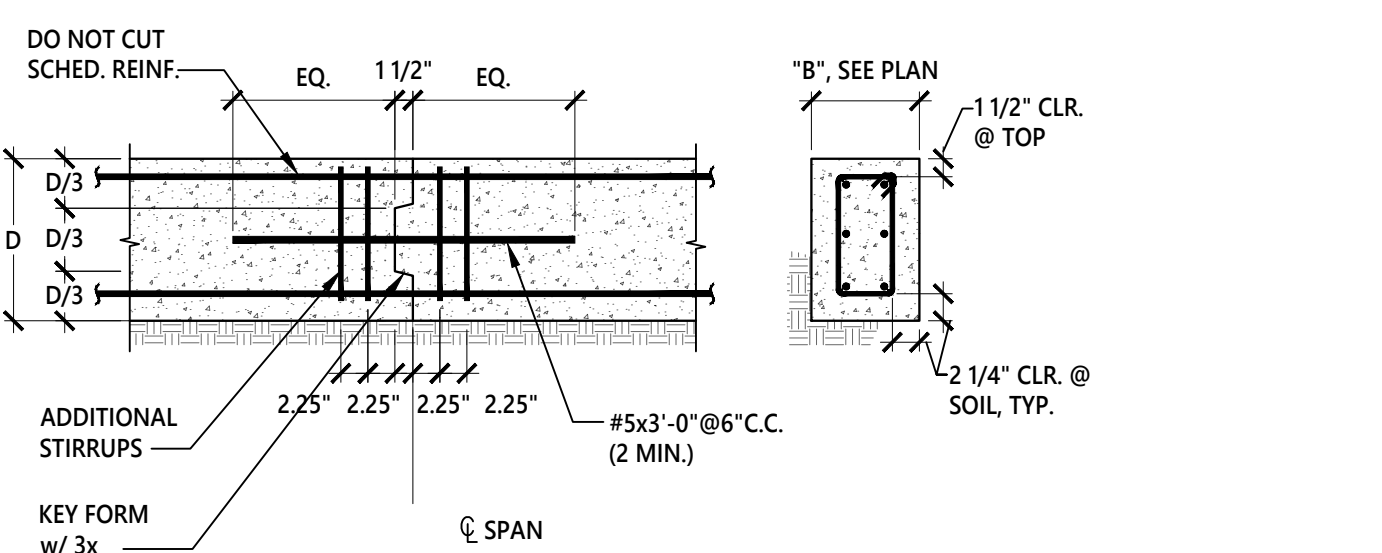
**2** TYPICAL OFFSET AND TYPICAL LAP SPLICE  
SCALE: 1-1/2" = 1'-0"



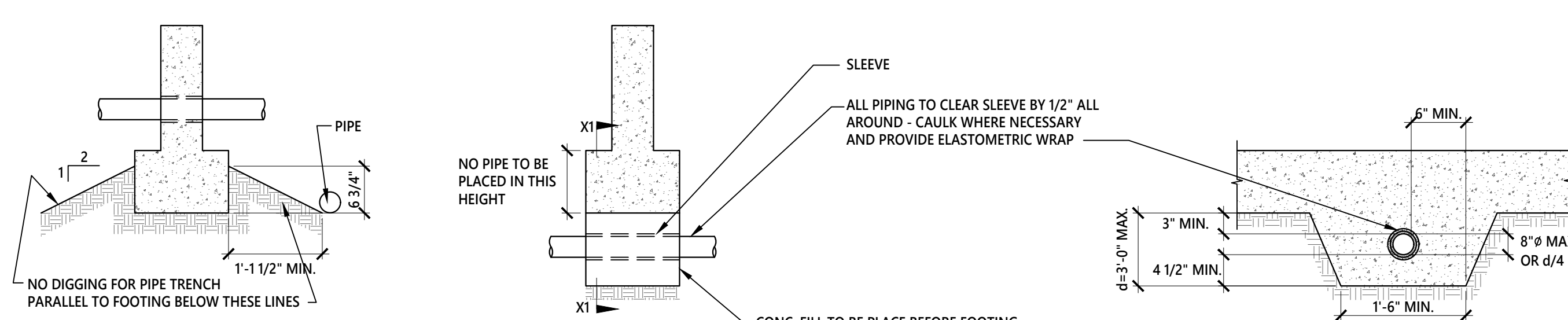
**3** STANDARD HOOKS  
SCALE: 1-1/2" = 1'-0"



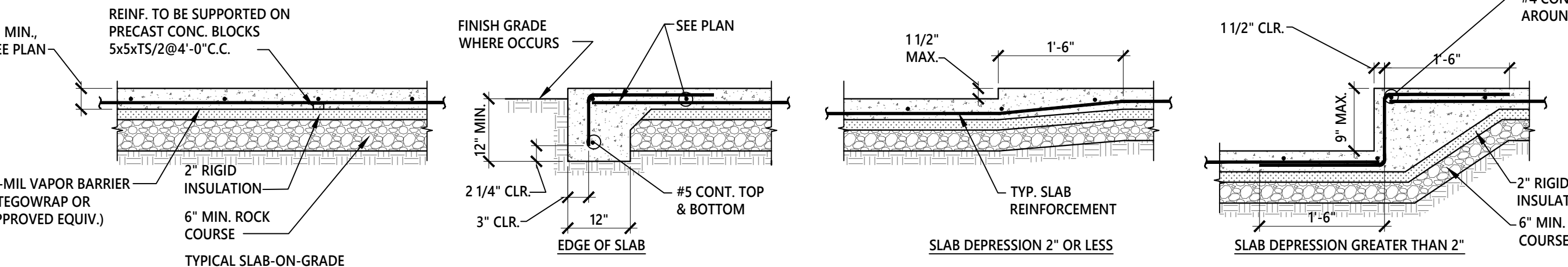
**4** TYPICAL GRADE BEAM INTERSECTIONS  
SCALE: 3/4" = 1'-0"



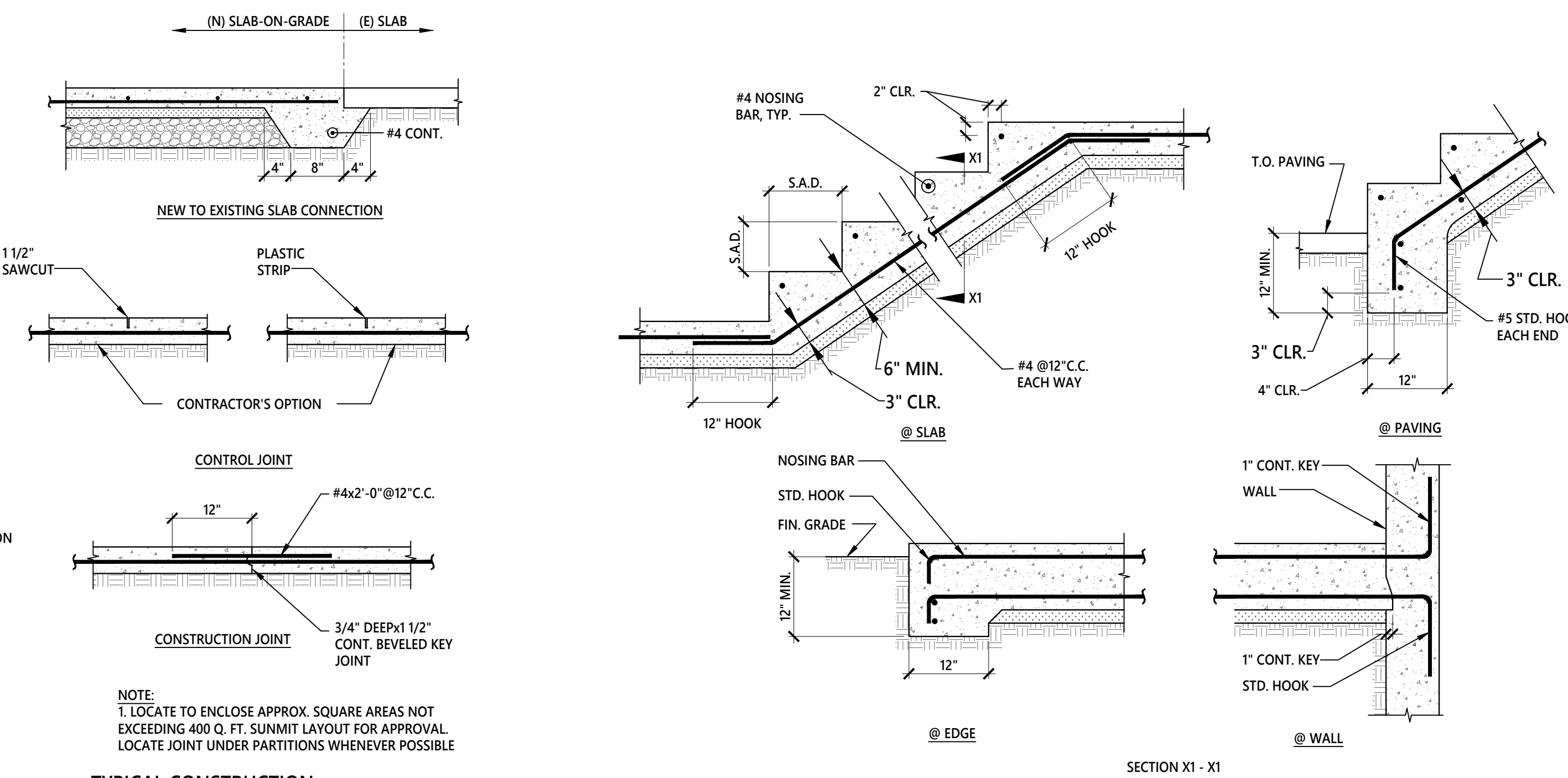
**5** TYPICAL GRADE BEAM CONSTRUCTION JOINT  
SCALE: 3/4" = 1'-0"



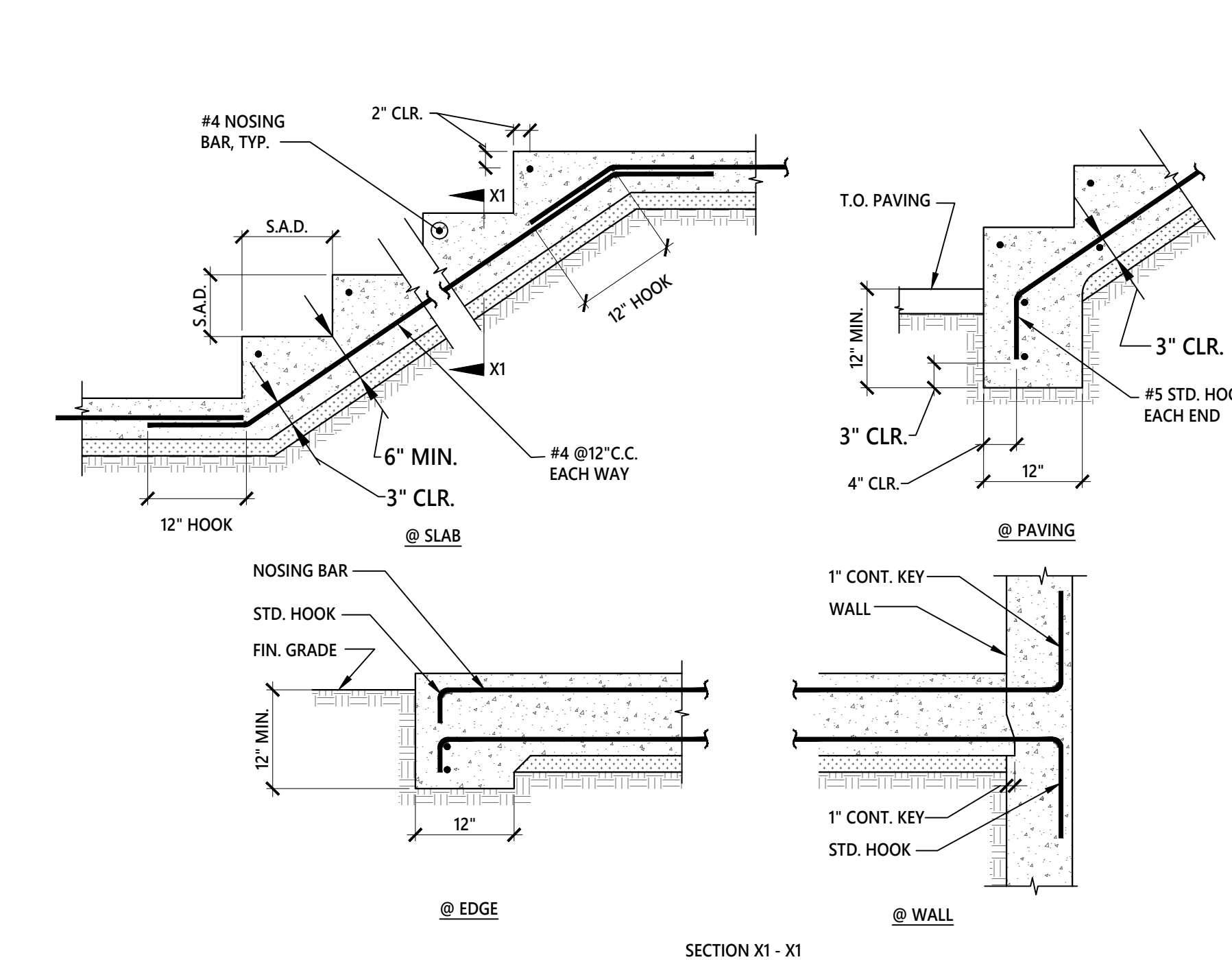
**10** PIPE CLEARANCE AND DETAILS @ FOOTING  
SCALE: 3/4" = 1'-0"



**6** TYPICAL SLAB-ON-GRADE DETAILS  
SCALE: 3/4" = 1'-0"



**7** TYPICAL CONSTRUCTION JOINT DETAILS @ SLAB-ON-GRADE  
SCALE: 3/4" = 1'-0"



**8** TYPICAL CONCRETE STAIRS ON GRADE  
SCALE: 3/4" = 1'-0"

#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
CONCRETE STRUCTURAL DETAILS

SHEET NUMBER  
**S5.2**

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR REPRODUCED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.





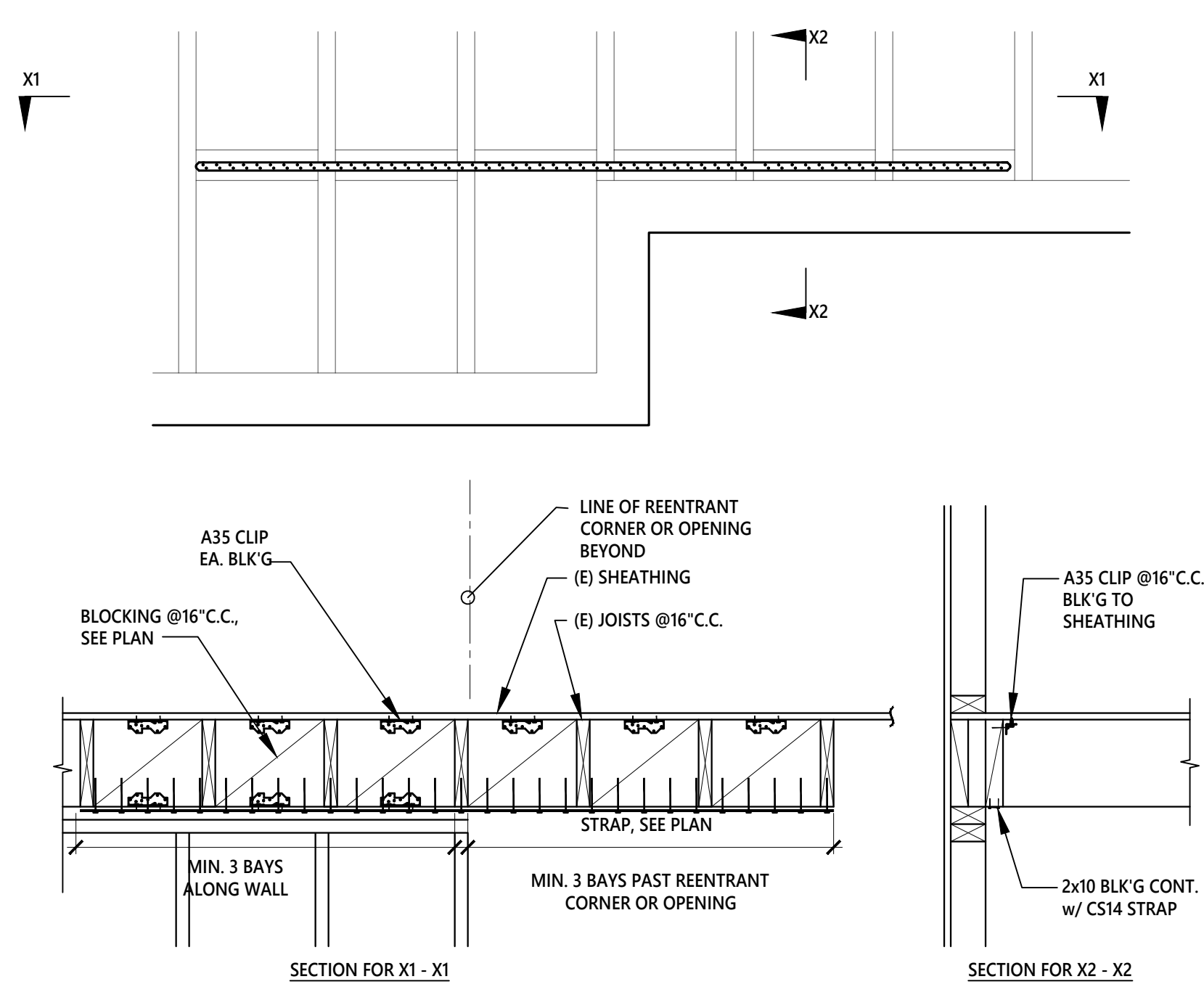
#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**WOOD STRUCTURAL DETAILS**

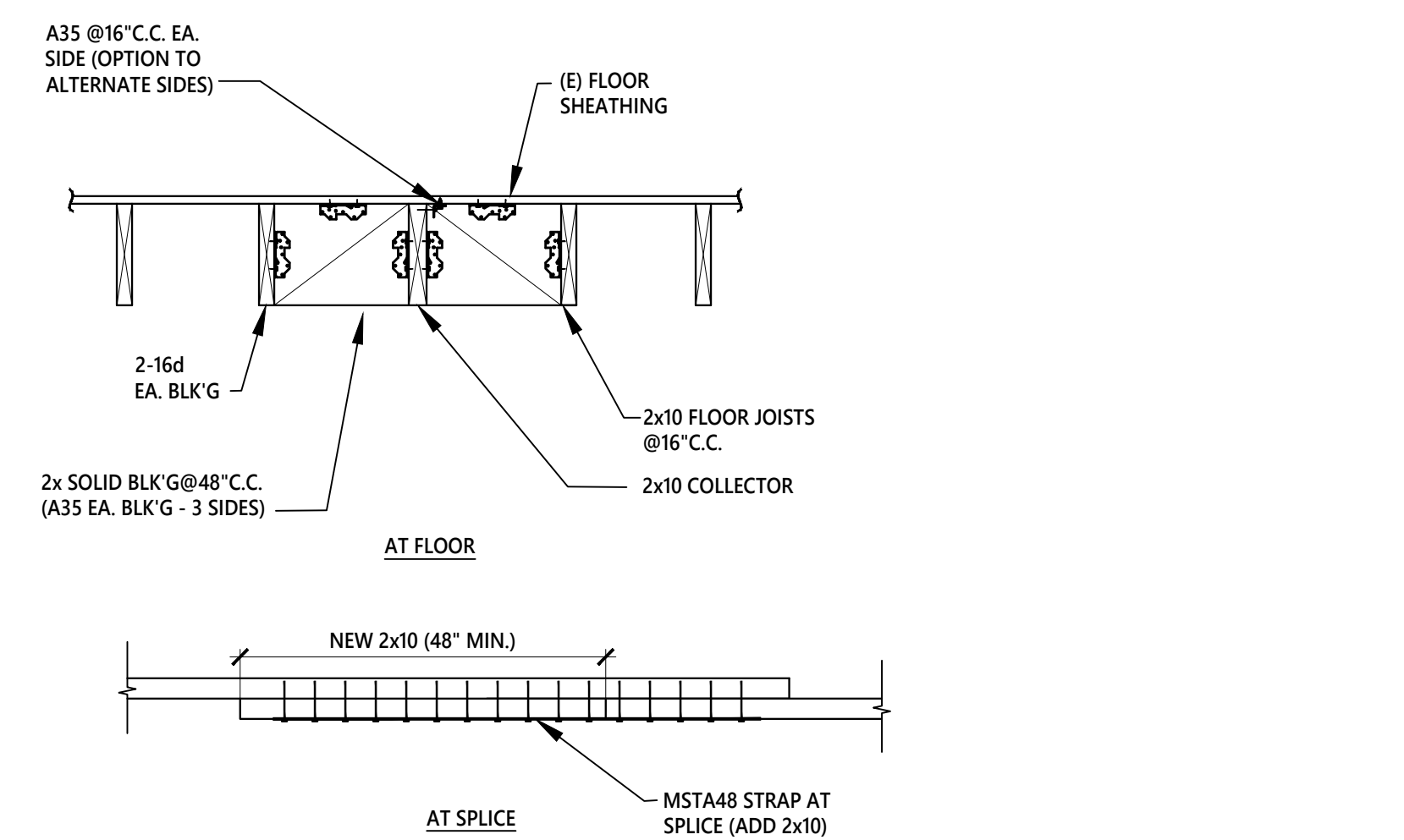
SHEET NUMBER

**S6.1**

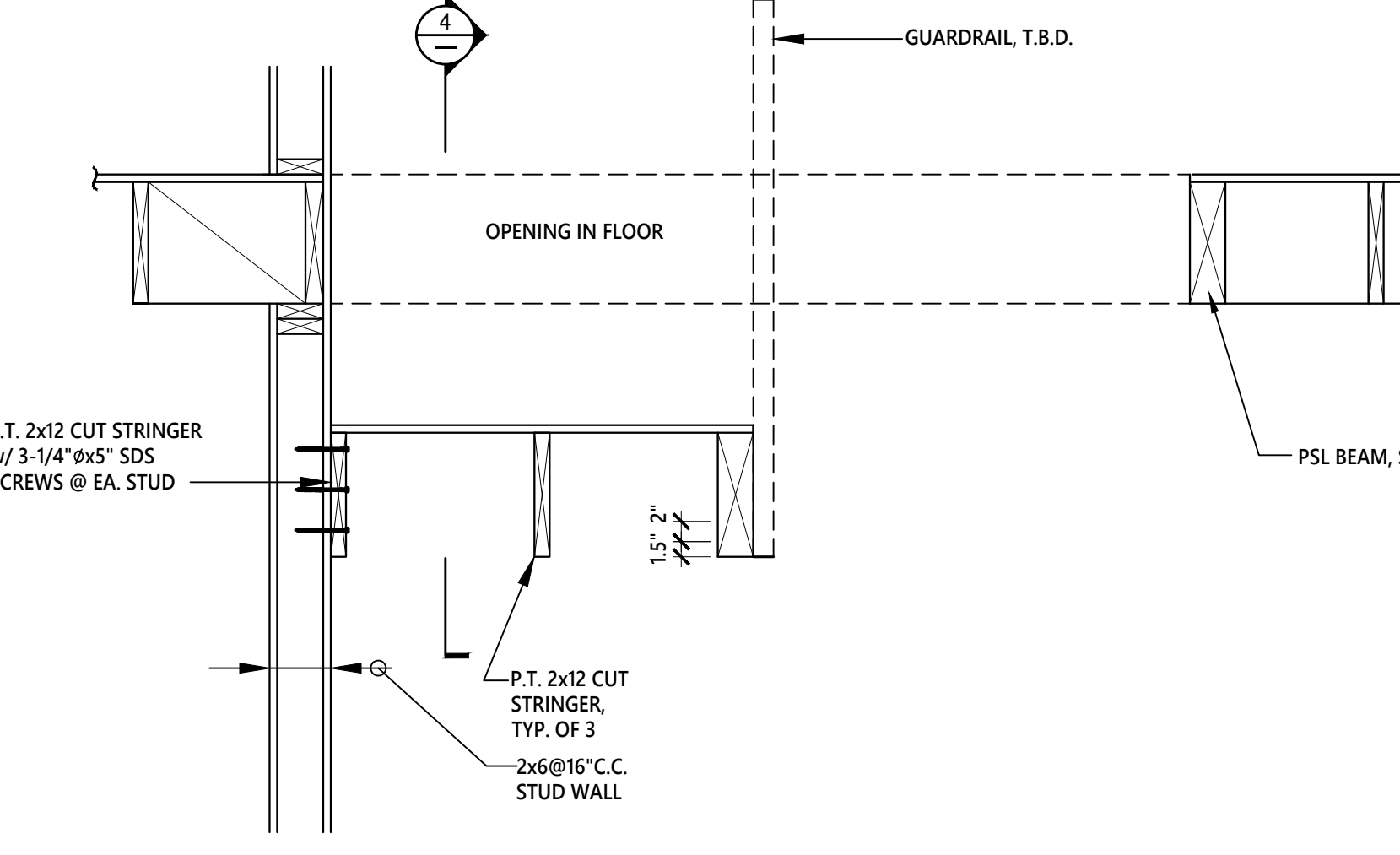
ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.



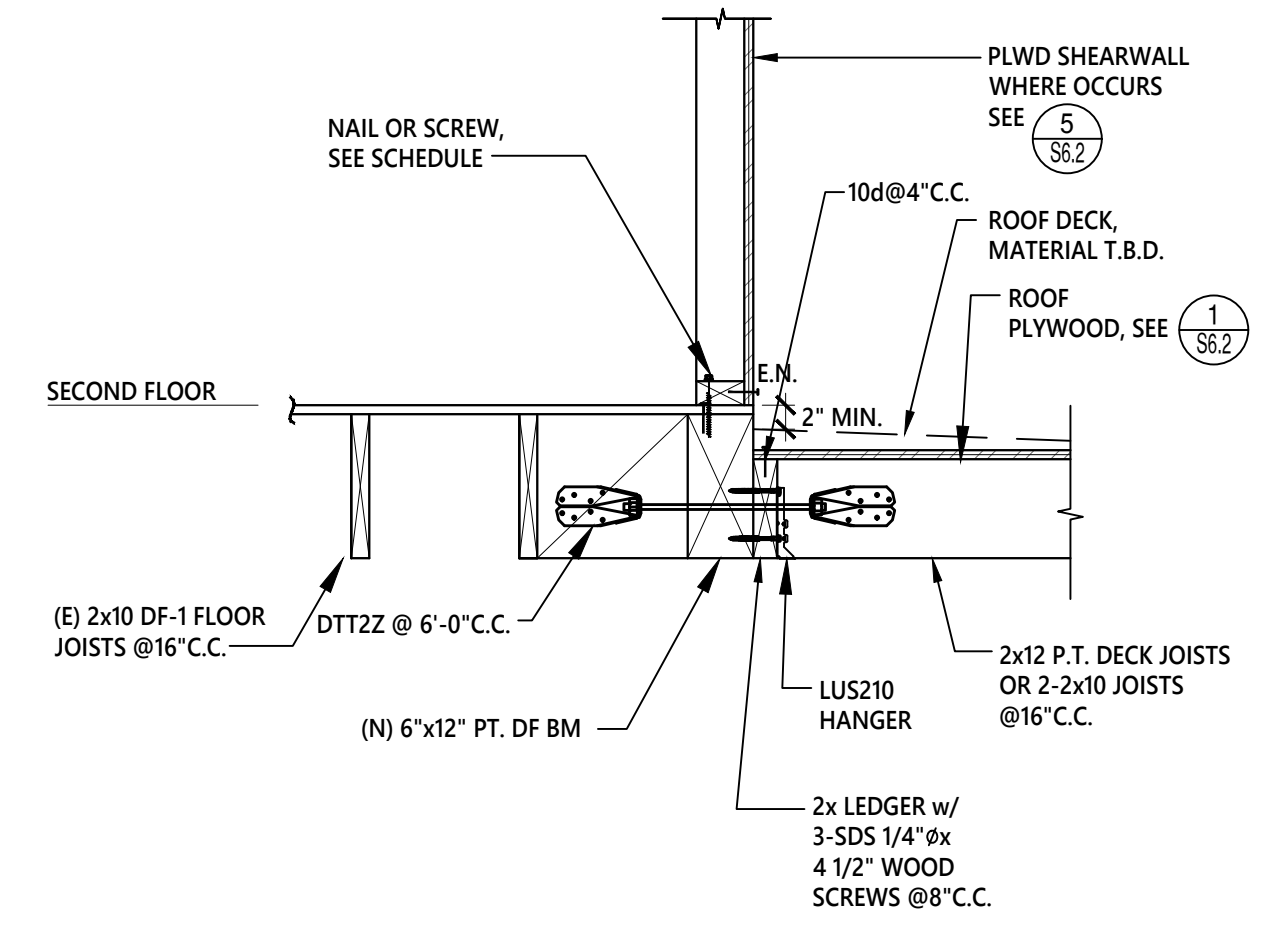
**1** TYPICAL STRAPPING AT REENTRY CORNER / STAIR  
SCALE: 3/4" = 1'-0"



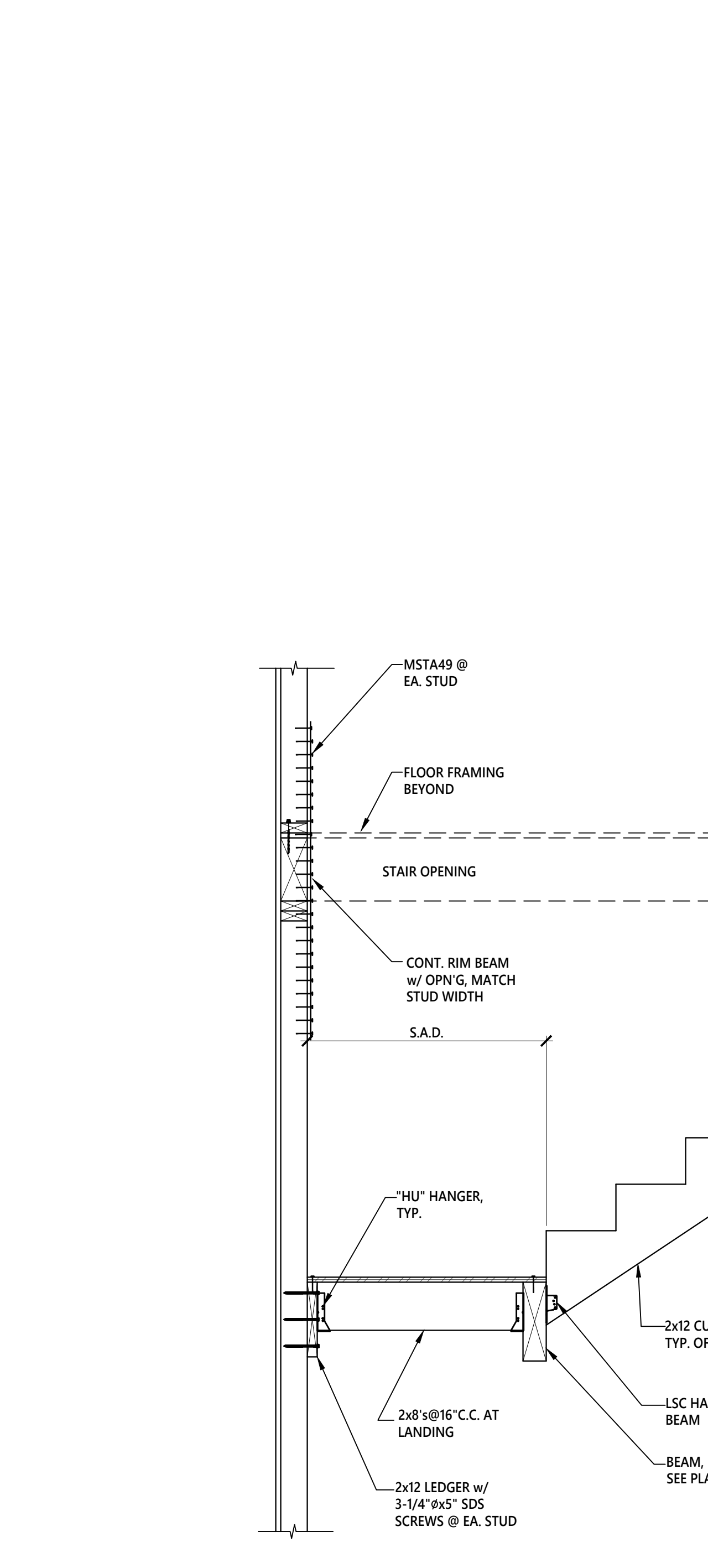
**2** COLLECTOR DETAILS FOR PLYWOOD SHEARWALLS  
SCALE: 3/4"=1'-0"



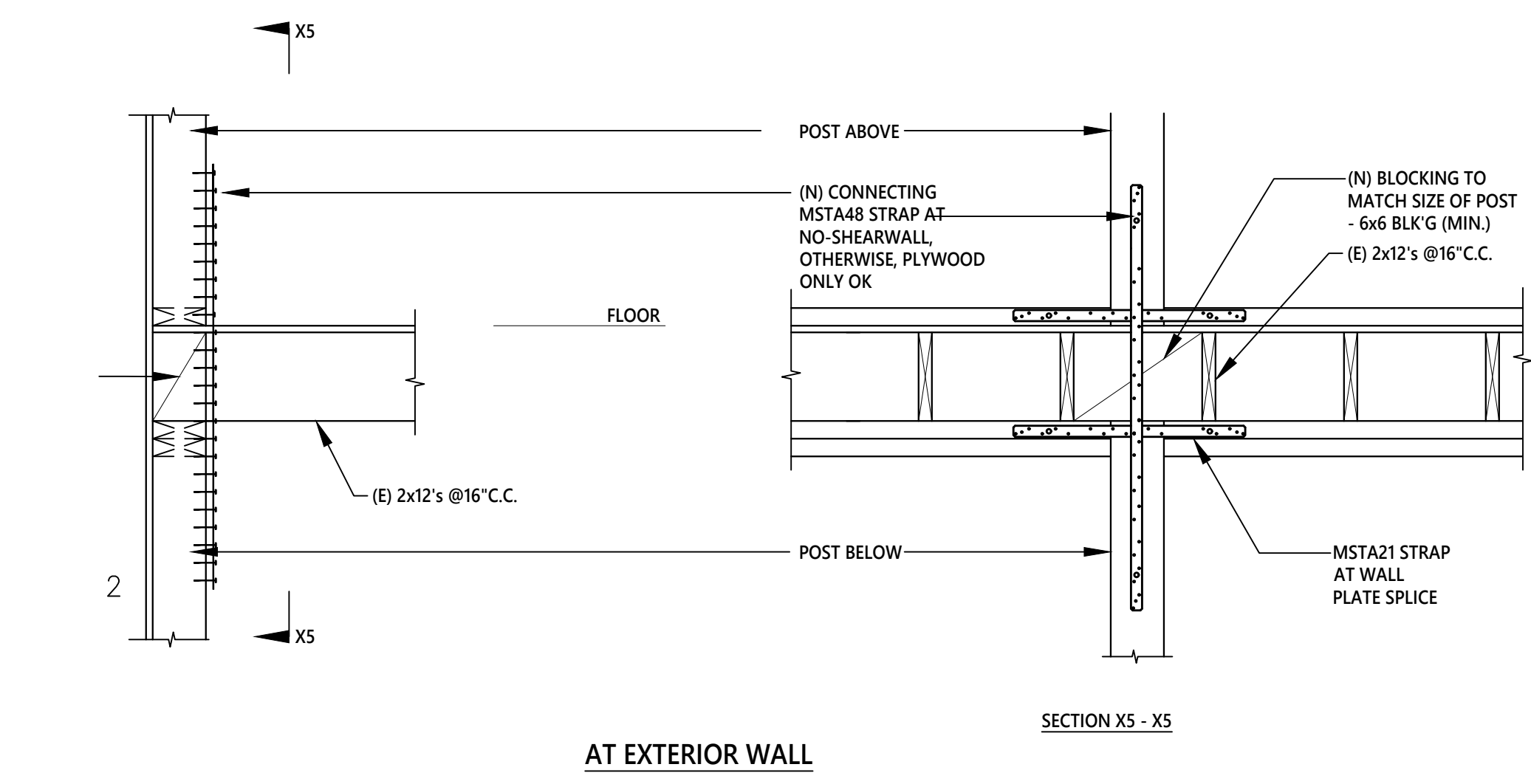
**3** INTERMEDIATE LANDING - UP DIRECTION  
SCALE: 3/4"=1'-0"



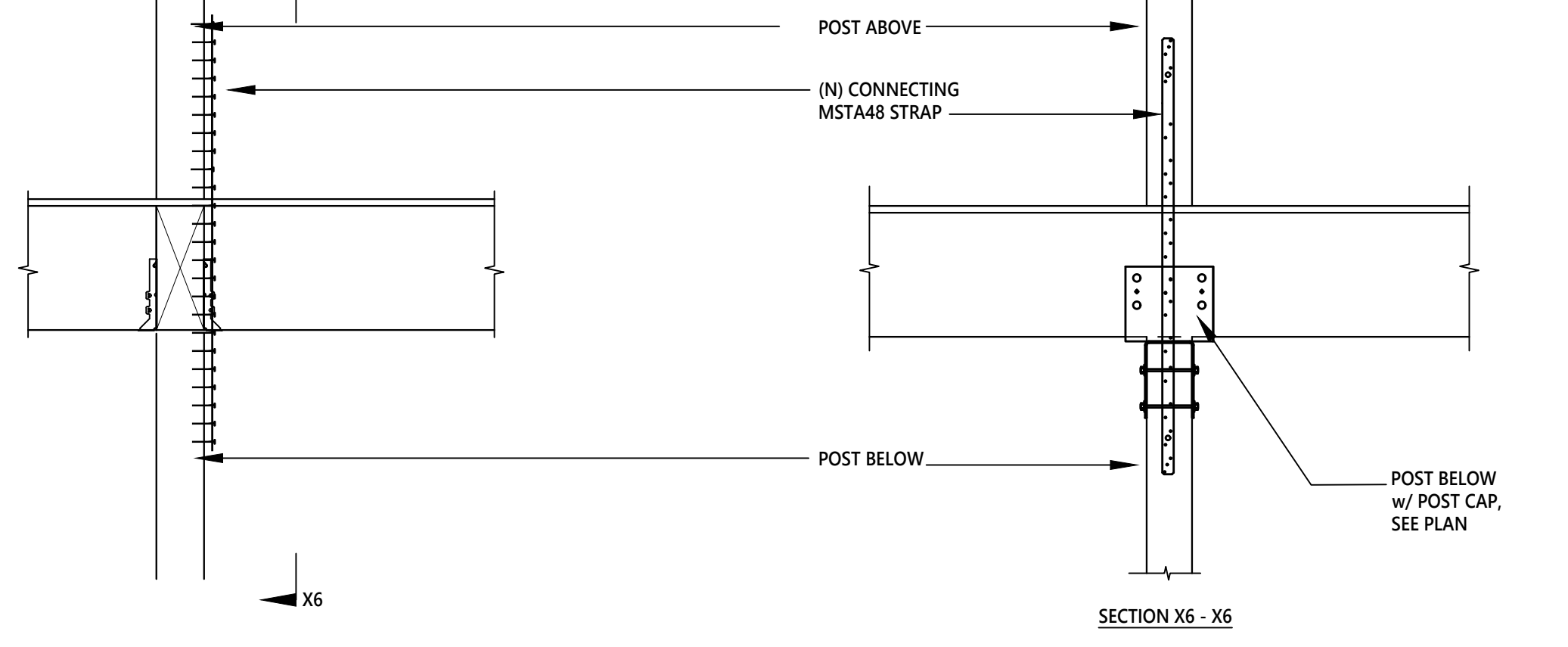
**4** INTERMEDIATE LANDING - UP DIRECTION  
SCALE: 3/4"=1'-0"



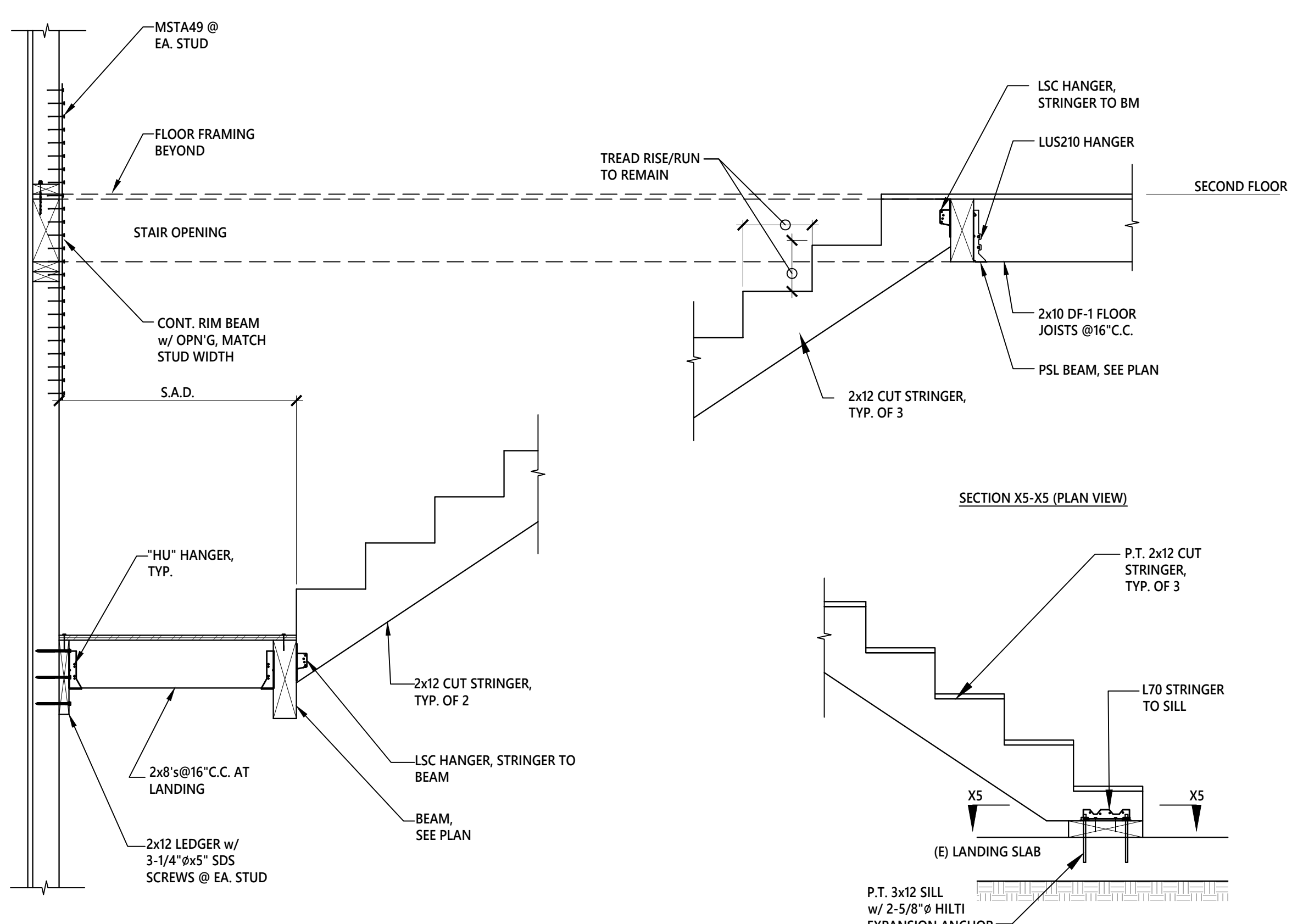
**5** INTERMEDIATE LANDING - UP DIRECTION  
SCALE: 3/4"=1'-0"



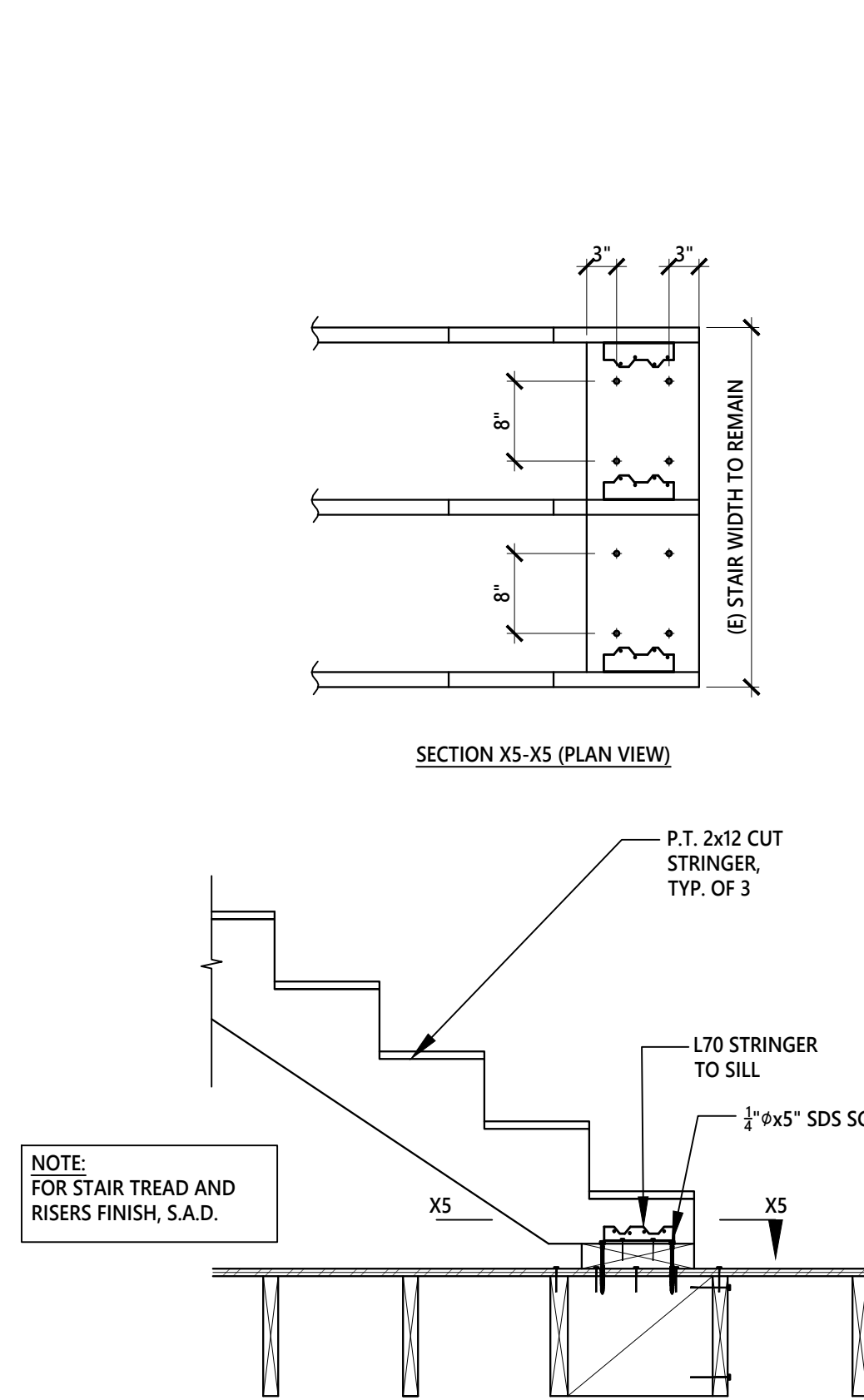
**6** POST CONNECTION BETWEEN FLOORS  
SCALE: 3/4"=1'-0"



**7** NEW DECK TO (E) STRUCTURE  
SCALE: 3/4" = 1'-0"

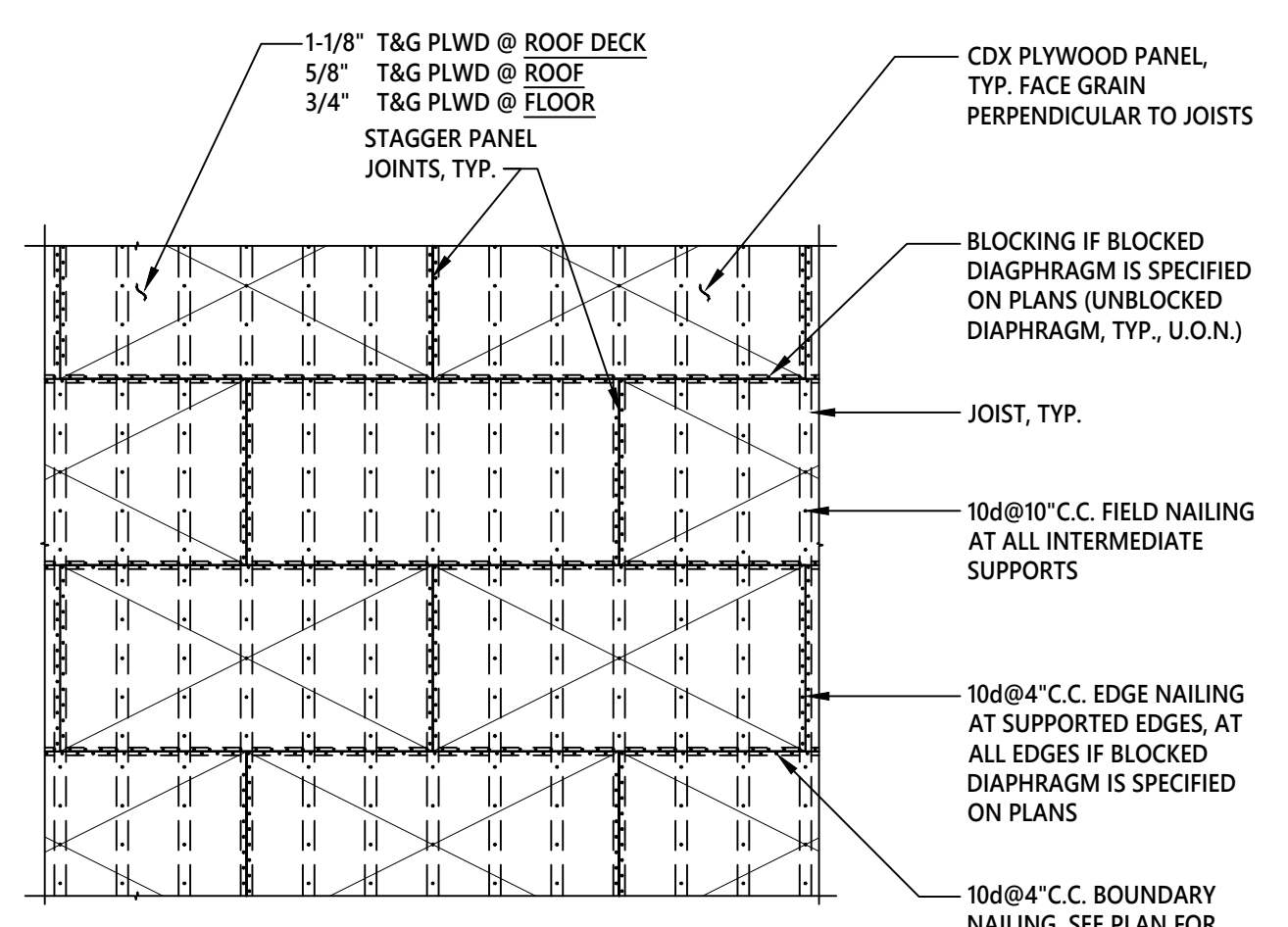


**8** SECTION X5-X5 (PLAN VIEW)

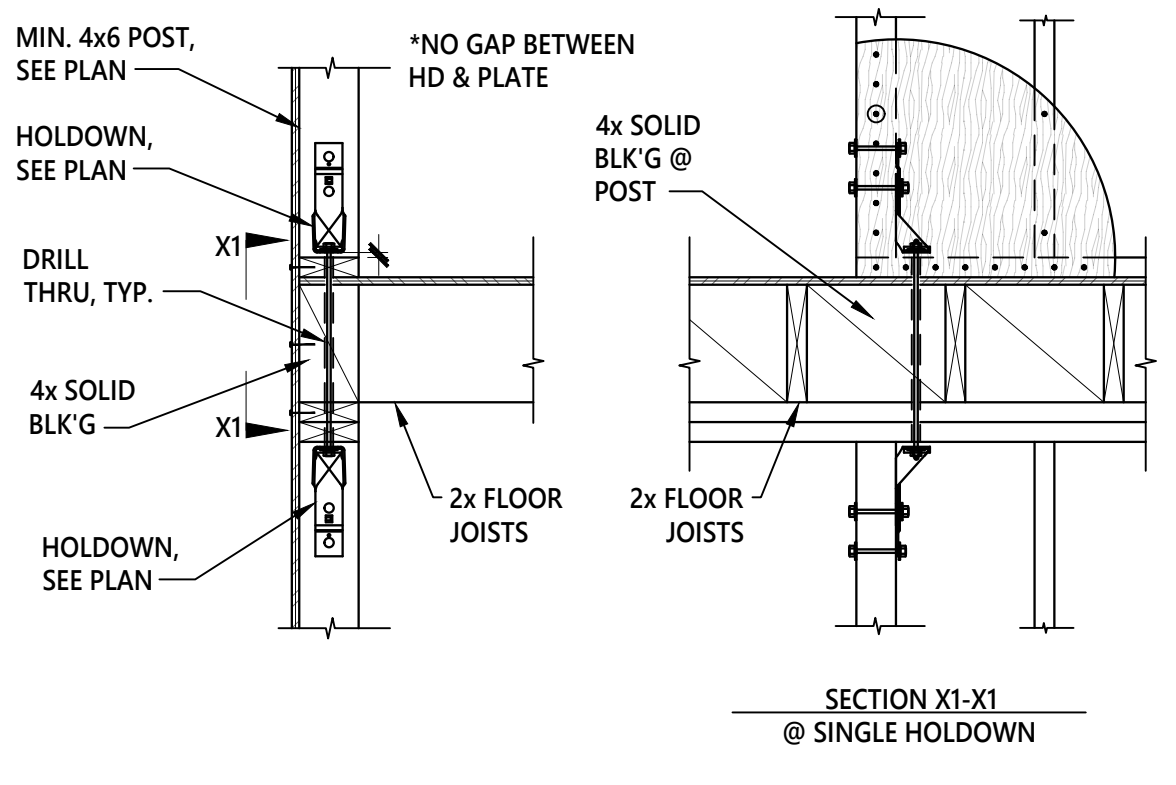


**9** SECTION X5-X5 (PLAN VIEW)

NOTE: FOR STAIR TREAD AND RISERS FINISH, S.A.D.



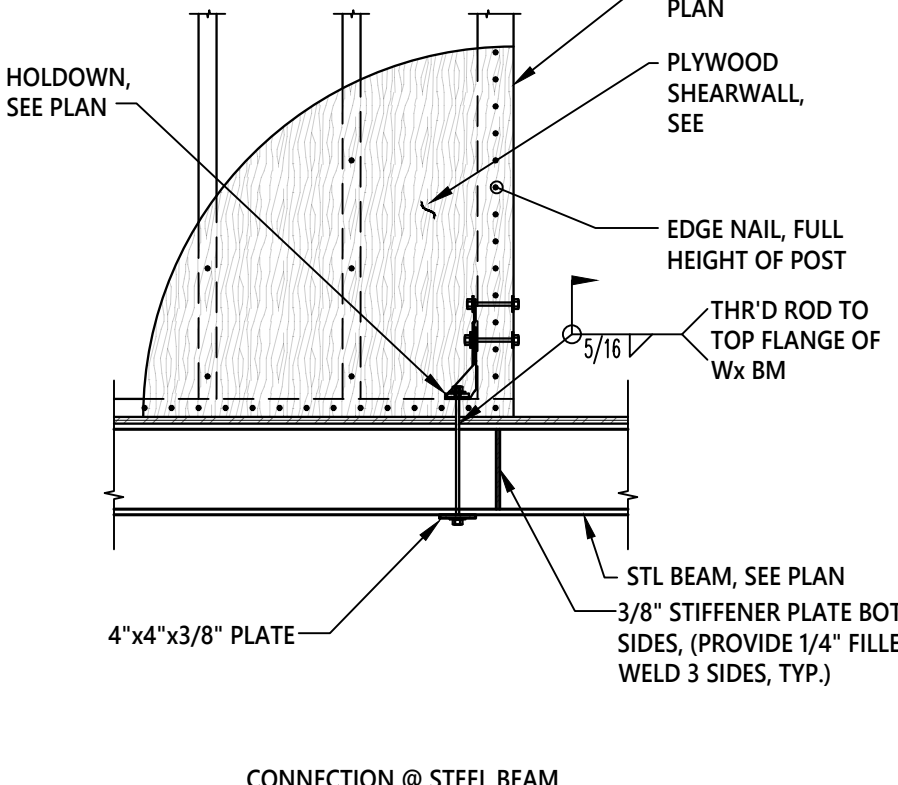
**1 TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)**  
SCALE: 3/4"=1'-0"



**2 TYPICAL HOLDOWN BETWEEN FLOORS**  
SCALE: 3/4"=1'-0"

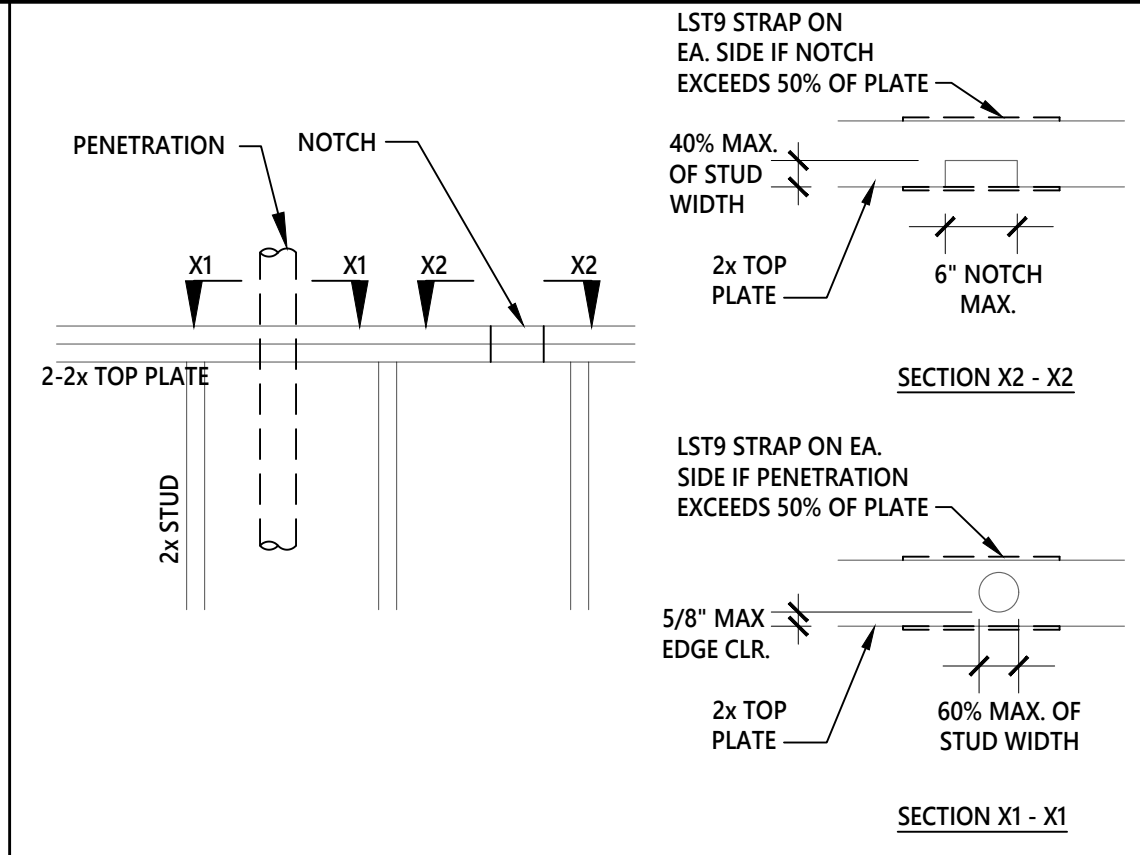
HOLDOWN	STRAP OPTION	
	EQUIV. MST	EQUIV. CS / L MIN.
HDU2	MST48	CMSTC16 / 20"
HDU4	MST60	CMSTC16 / 20"
HDU5	2-MST48's	CMSTC16 / 20"
HDU8	2-MST60's	CMSTC12 / 33"

NOTE: @ INTERIOR WALL, NOTCH FLOOR PLYWOOD SHEATHING AS REQUIRED

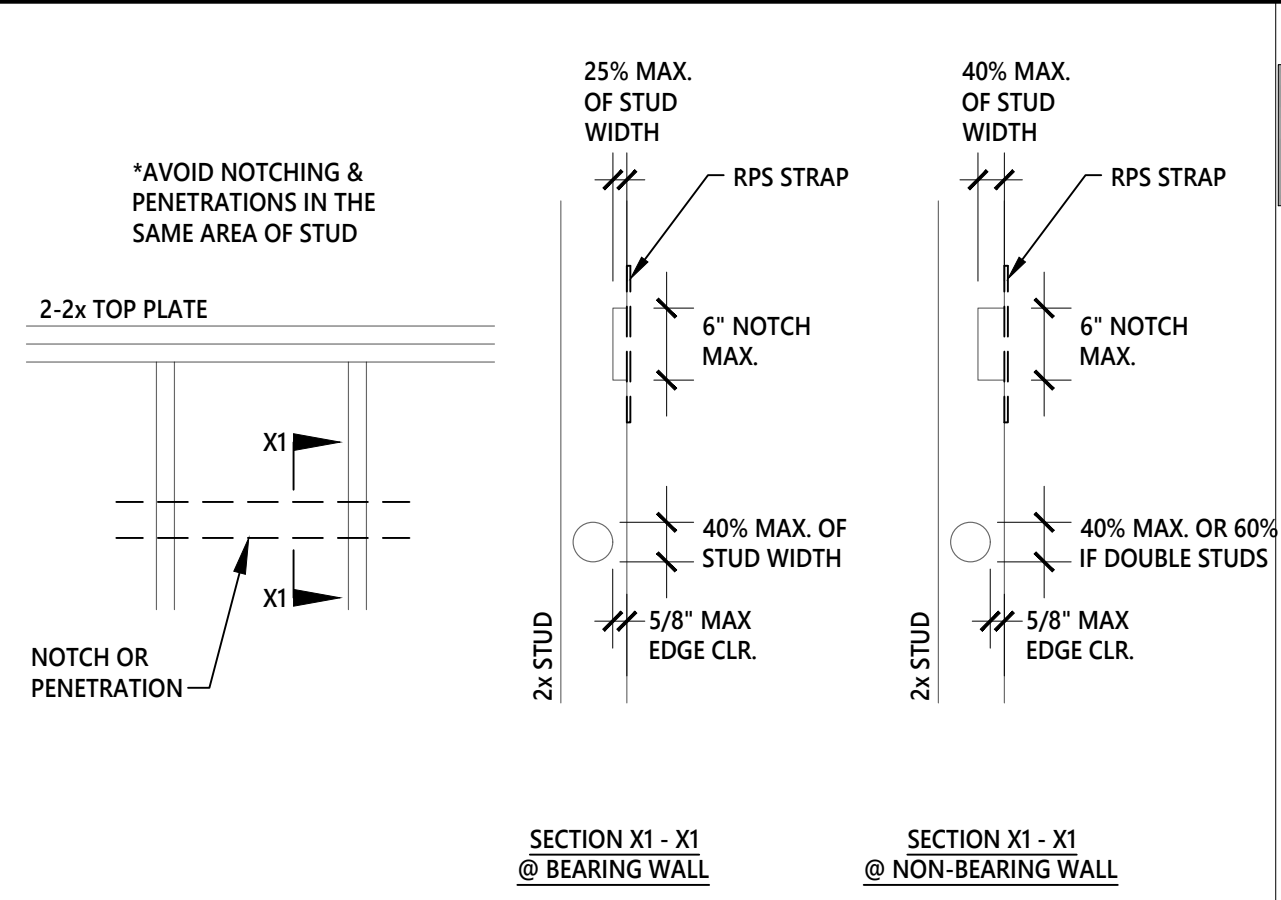


**3 TYPICAL HOLDOWN AT BEAM**  
SCALE: 3/4"=1'-0"

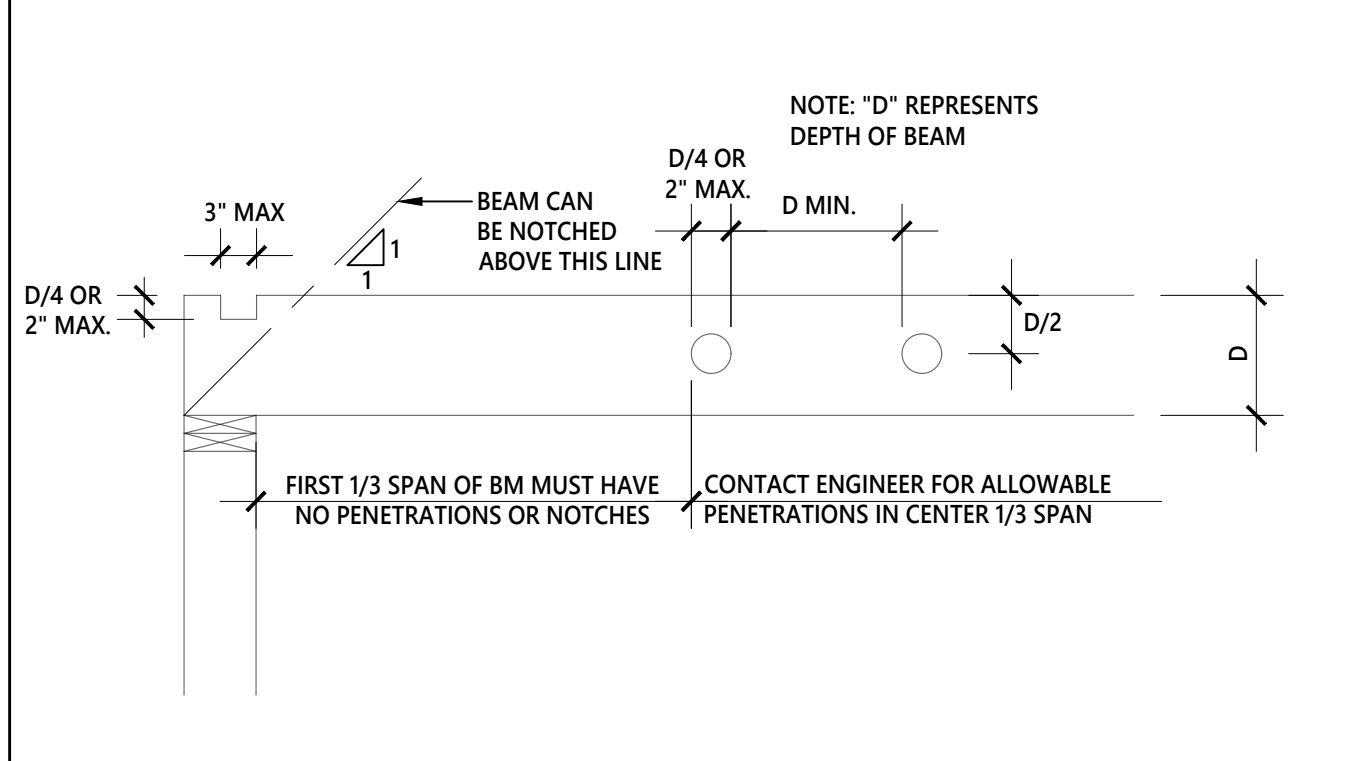
NOTE: CONTACT ENGINEER FOR ANY PROPOSED NOTCHING OF BEAMS



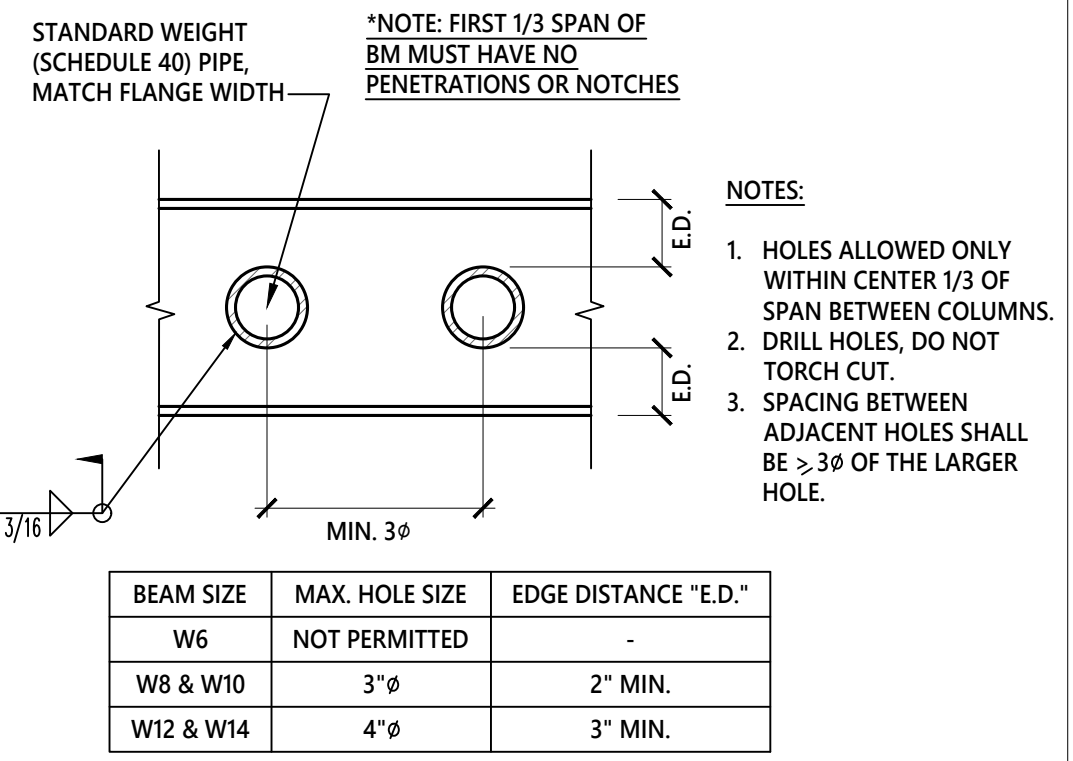
**A ALLOWABLE PENETRATIONS/NOTCHING THROUGH WD TOP PLATES**  
SCALE: 3/4"=1'-0"



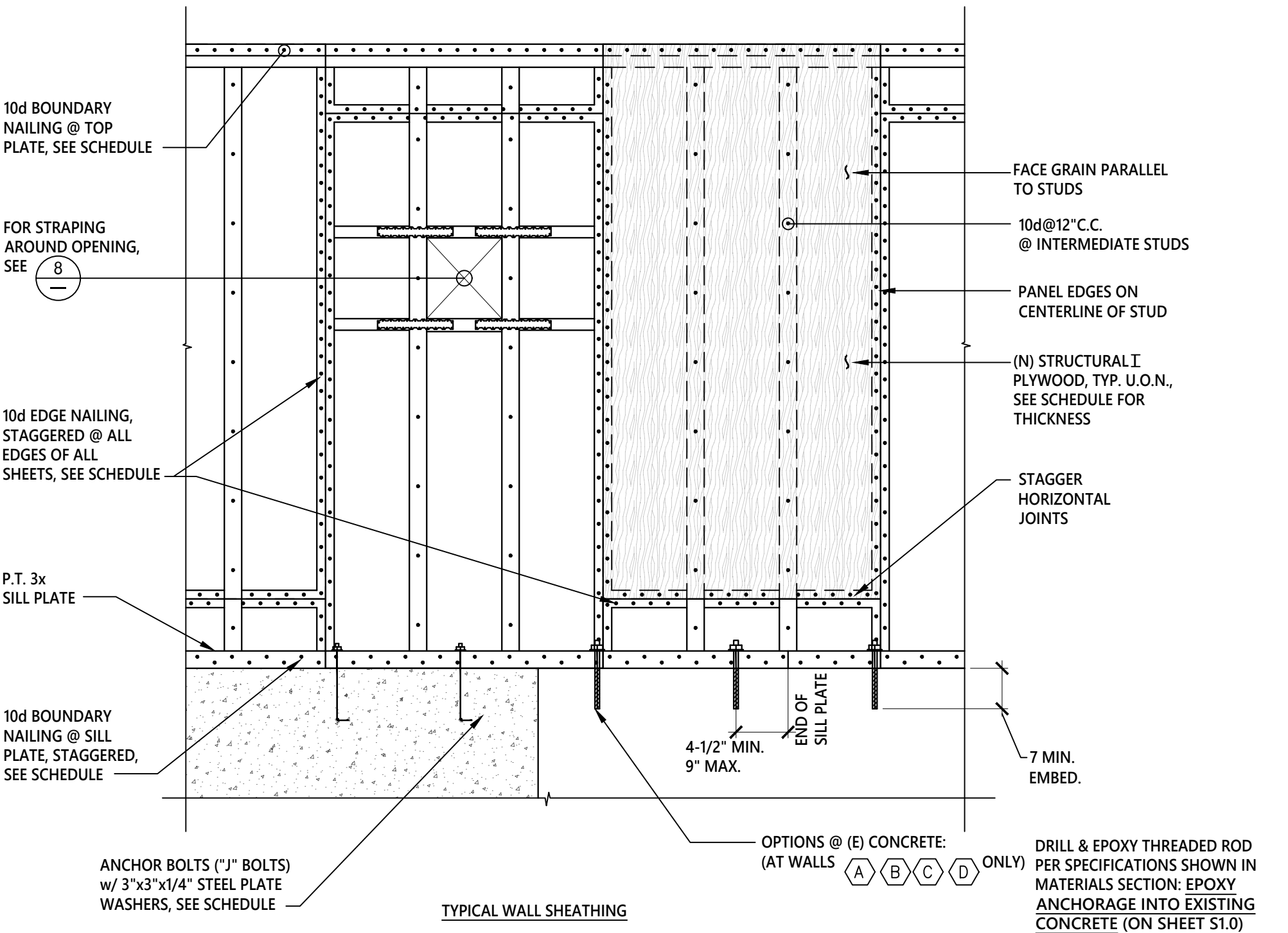
**B ALLOWABLE PENETRATIONS/NOTCHING THROUGH WD STUDS**  
SCALE: 3/4"=1'-0"



**C ALLOWABLE PENETRATIONS/NOTCHING THROUGH WD BEAMS**  
SCALE: 3/4"=1'-0"



**D ALLOWABLE PENETRATIONS/NOTCHING THROUGH STL BEAMS**  
SCALE: 3/4"=1'-0"

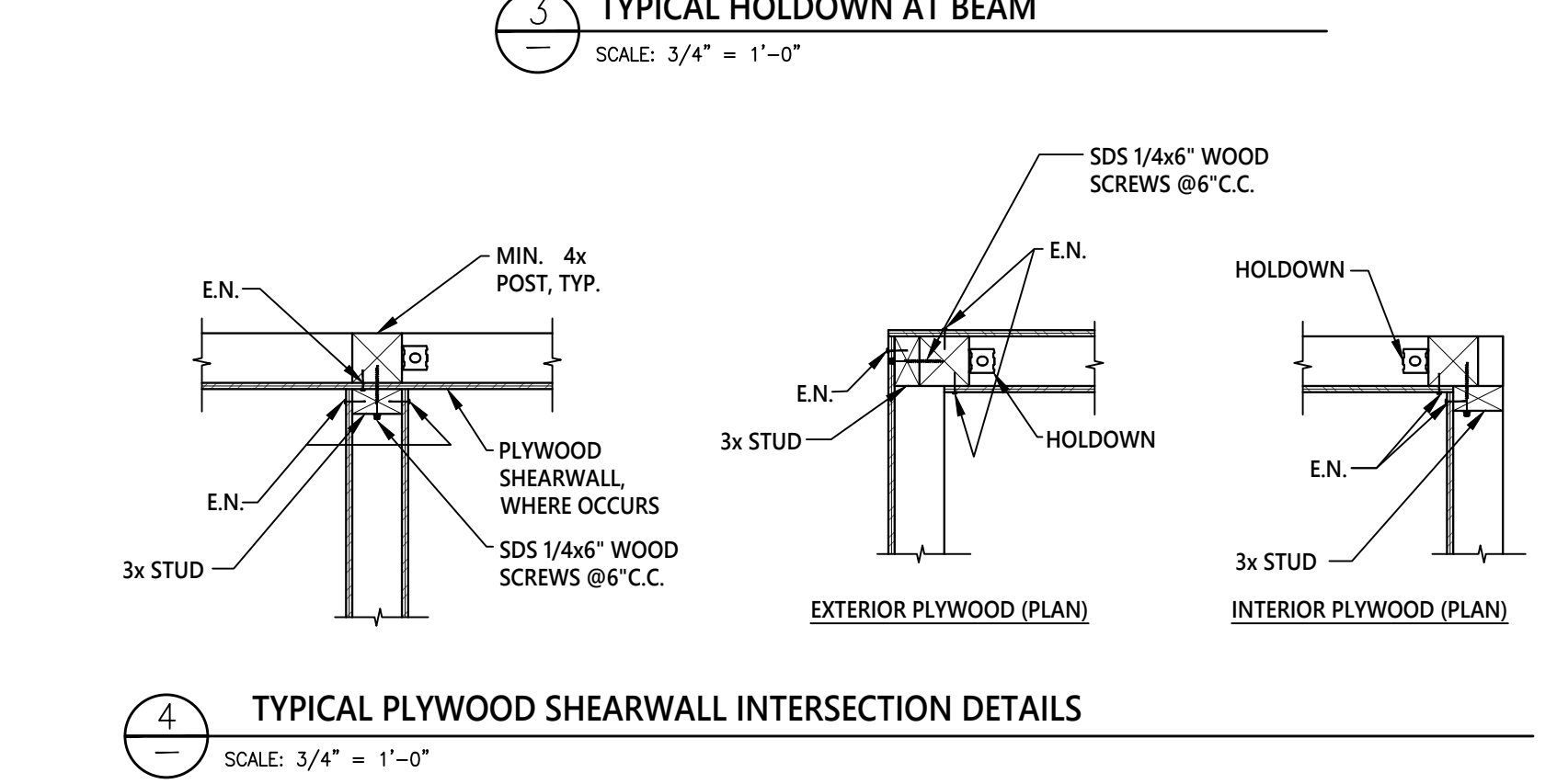


**4 TYPICAL PLYWOOD SHEARWALL INTERSECTION DETAILS**  
SCALE: 3/4"=1'-0"

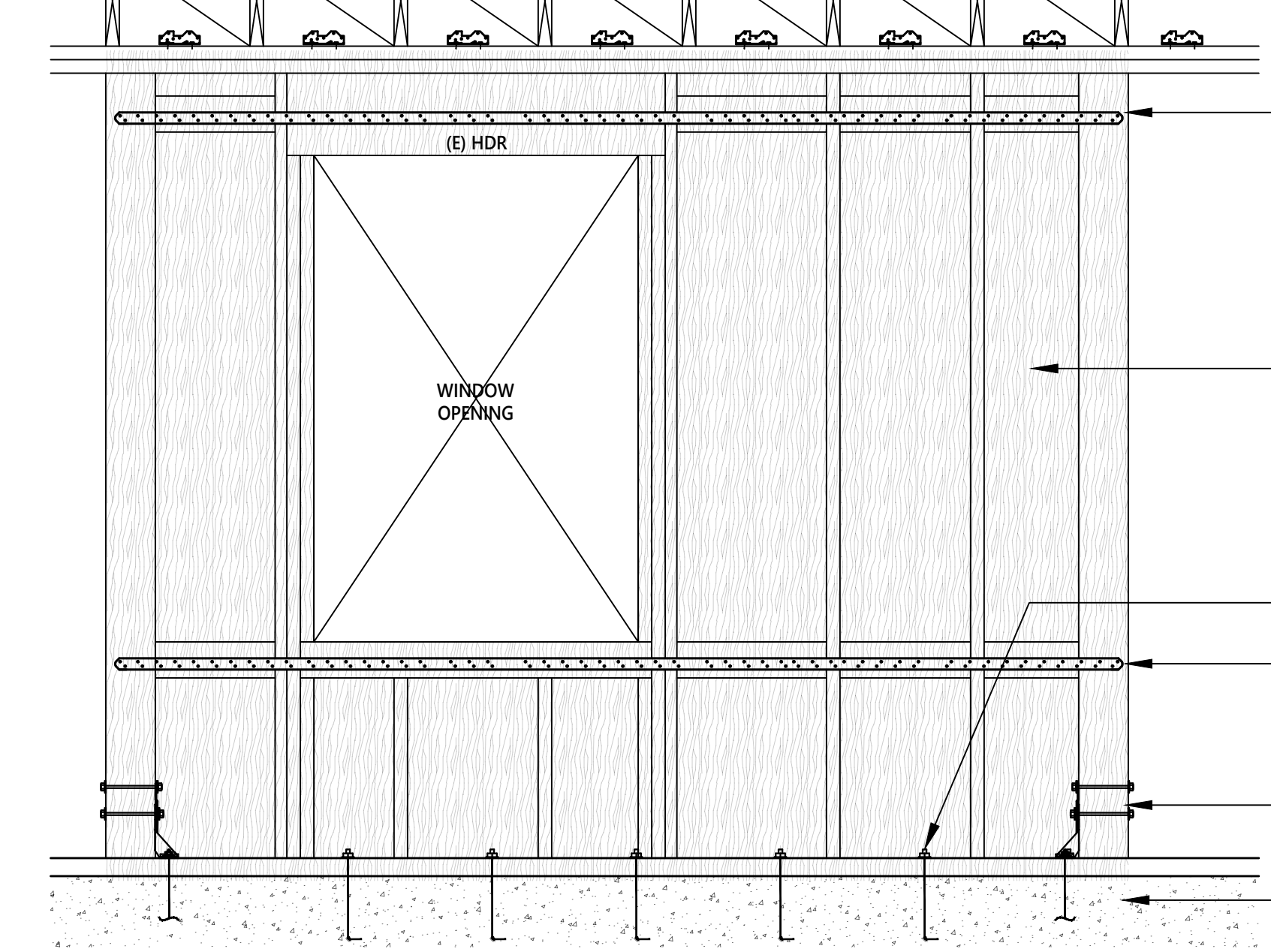
SHEARWALL SCHEDULE									
SYMBOL	PLYWD GRADE	PLYWD THICKNESS	PLYWD ONE SIDE	PLYWD TWO SIDES	MIN. STUD THICKNESS	PLYWD EDGE & BOUNDARY NAILING	CONT. JOIST OR SOLID BLK'G	CLIP SPACING	SDS 1/4x4 1/2\"/>
A	STRUCT I	1/2"	X	2x	2x	10d @ 6\"/>			
B	STRUCT I	1/2"	X	2x	2x	10d @ 4\"/>			
C	STRUCT I	1/2"	X	3x	2x	10d @ 3\"/>			
D	STRUCT I	1/2"	X	3x	2x	10d @ 2\"/>			
E	STRUCT I	1/2"	X	3x	4x	10d @ 3\"/>			
F	STRUCT I	1/2"	X	3x	4x	10d @ 2\"/>			

NOTES:  
1. PLYWOOD SHALL BE NAILED DIRECTLY TO FRAMING.  
2. WHEN PLYWOOD APPLIED TO BOTH FACES, STAGGER SHEETS SO THAT EDGES OCCUR AT DIFFERENT STUDS.  
3. DO NOT OVER SHOOT NAILS THROUGH OUTER LAYER OF SHEARWALL PLYWOOD.  
4. PLYWOOD = WOOD STRUCTURAL PANEL.  
5. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD AT CONTRACTOR'S OPTION.  
7. USE 3\"/>

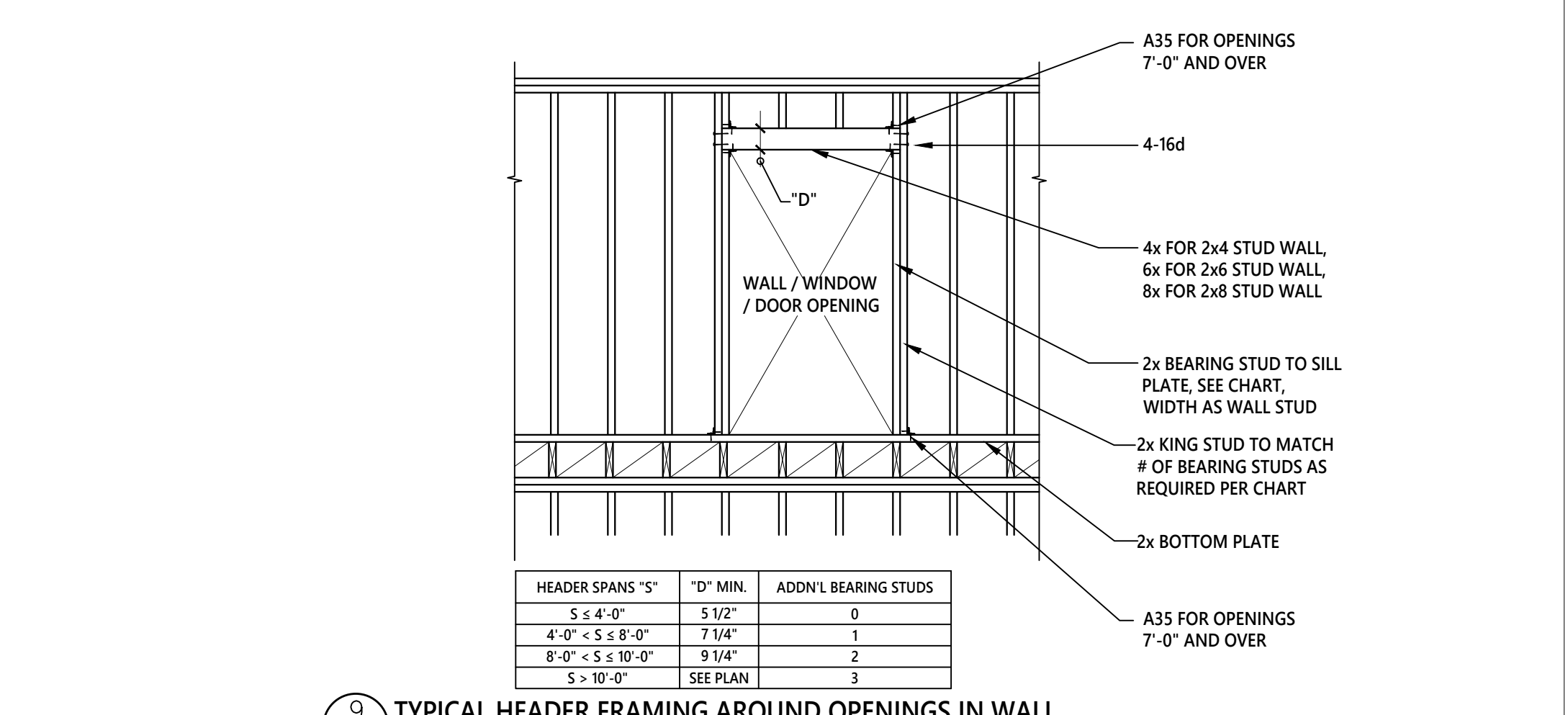
**5 TYPICAL PLYWOOD SHEARWALL**  
SCALE: 3/4"=1'-0"



**6 TYPICAL STRAPPING IN OPENING IN WALL**  
SCALE: N.T.S.

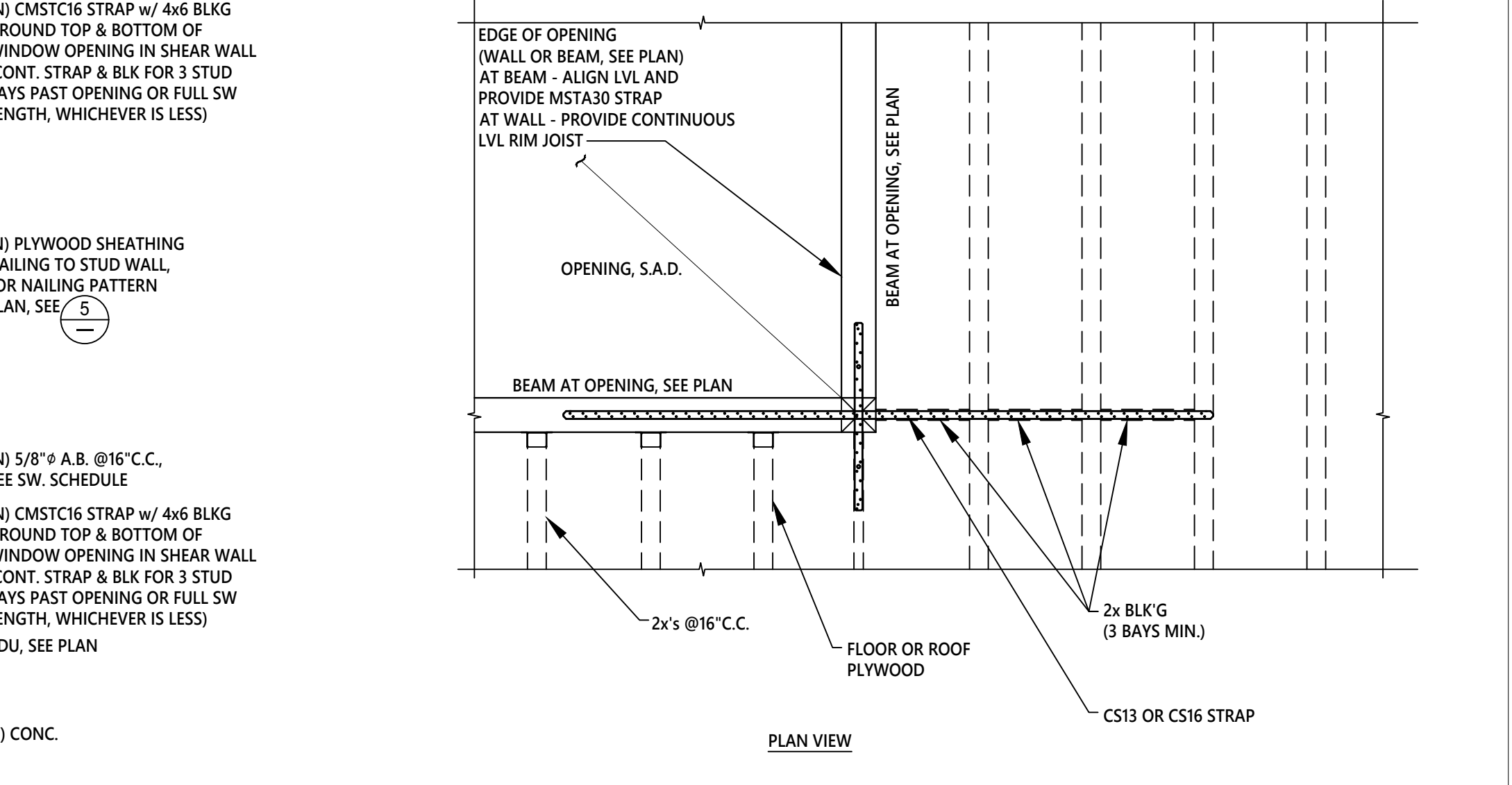


**7 TYPICAL STRAPPING IN OPENING IN FLOOR**  
SCALE: 3/4"=1'-0"



**8 TYPICAL HEADER FRAMING AROUND OPENINGS IN WALL**  
SCALE: 3/8"=1'-0"

HEADER SPANS \"S\"	\"D\" MIN.	ADD'L BEARING STUDS
S ≤ 4'-0"	5 1/2"	0
4'-0" < S ≤ 8'-0"	7 1/4"	1
8'-0" < S ≤ 10'-0"	9 1/4"	2
S > 10'-0"	SEE PLAN	3



**9 TYPICAL STRAPPING IN OPENING IN FLOOR**  
SCALE: 3/4"=1'-0"



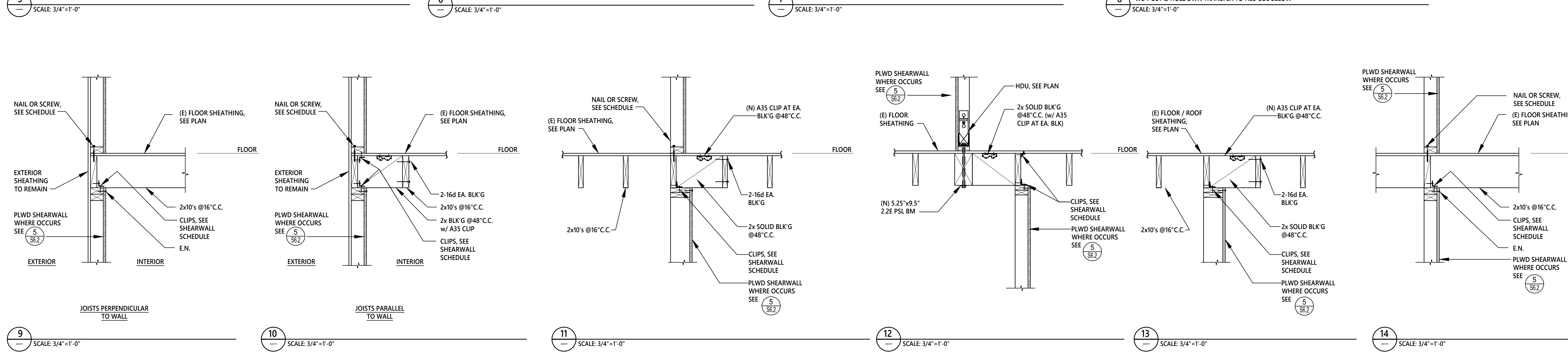
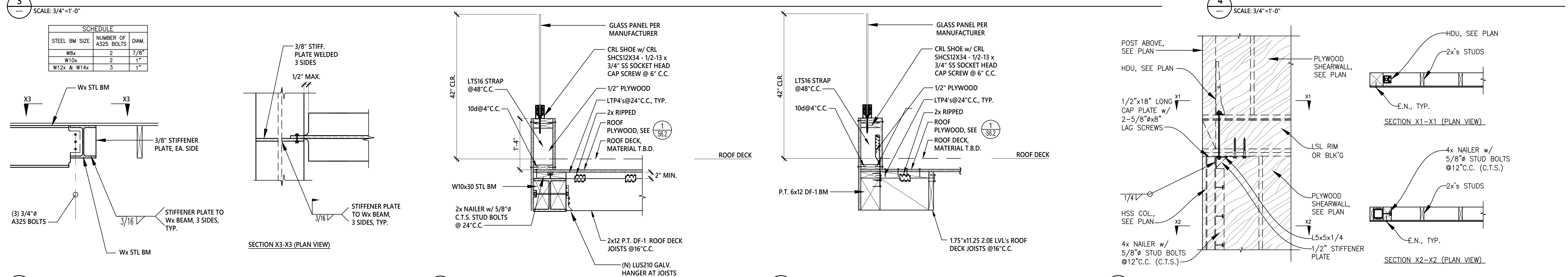
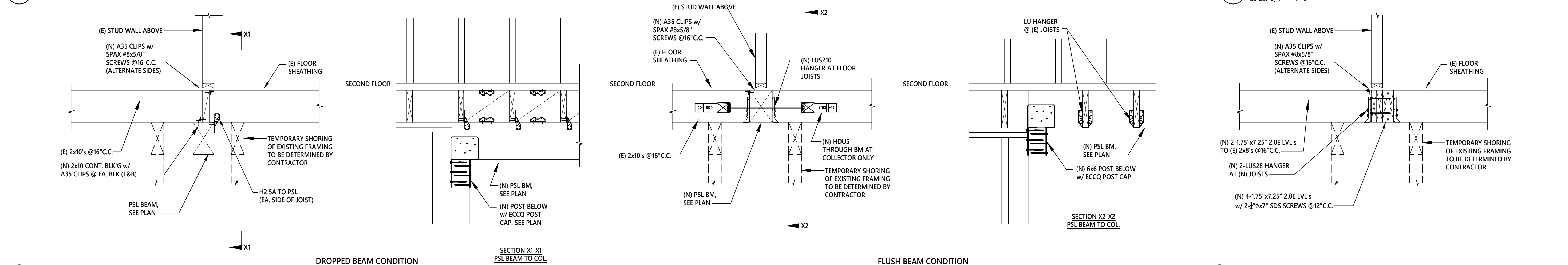
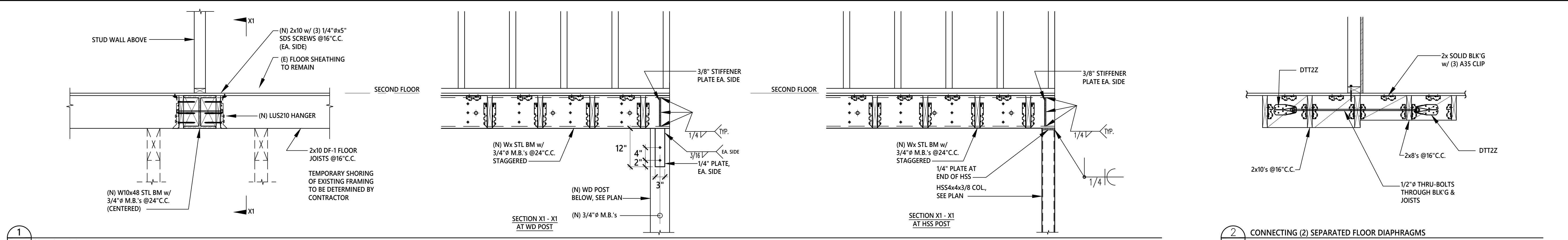
#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**WOOD STRUCTURAL DETAILS**

SHEET NUMBER  
**S6.2**

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.





STEEL BM SIZE	NUMBER OF A325 BOLTS	DIAM.
WBx	2	7/8"
W10x	2	1"
W12x & W14x	3	1"

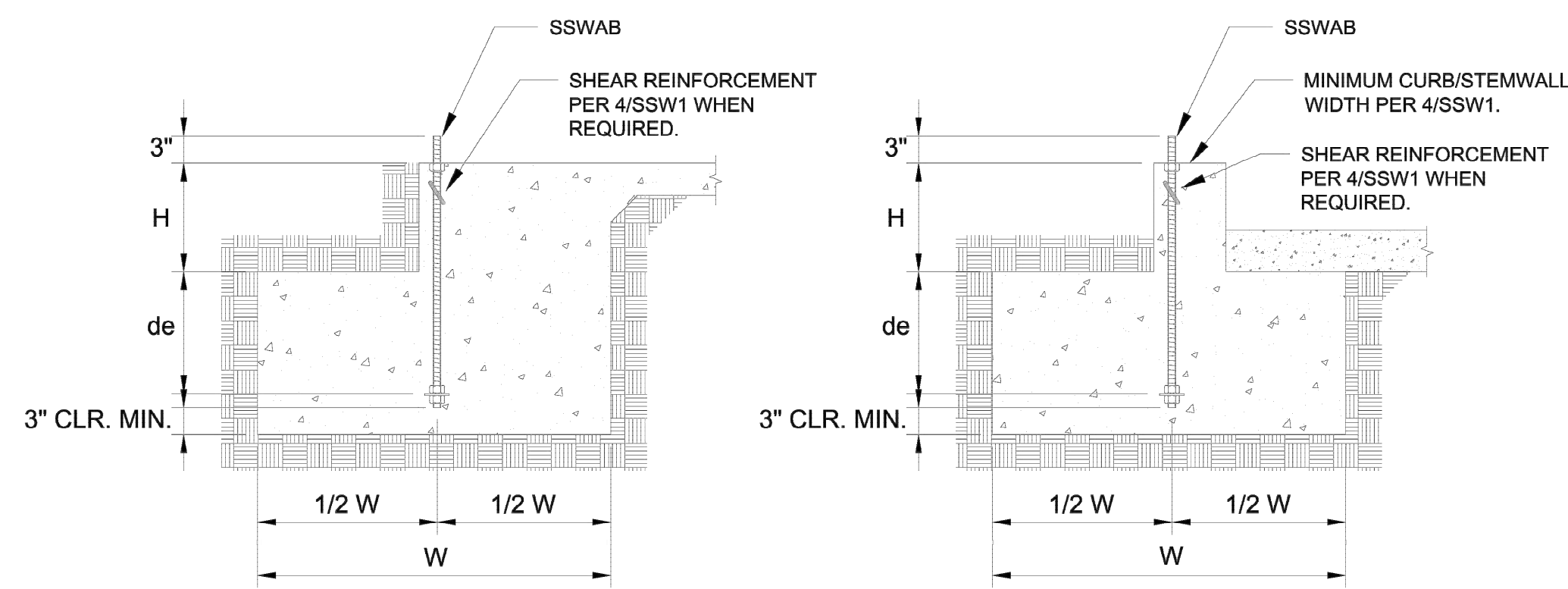
#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS
2	09/27/21	RESPONSE TO PC #1	AS

SHEET TITLE:  
**WOOD STRUCTURAL DETAILS**

SHEET NUMBER  
**S6.3**

ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.

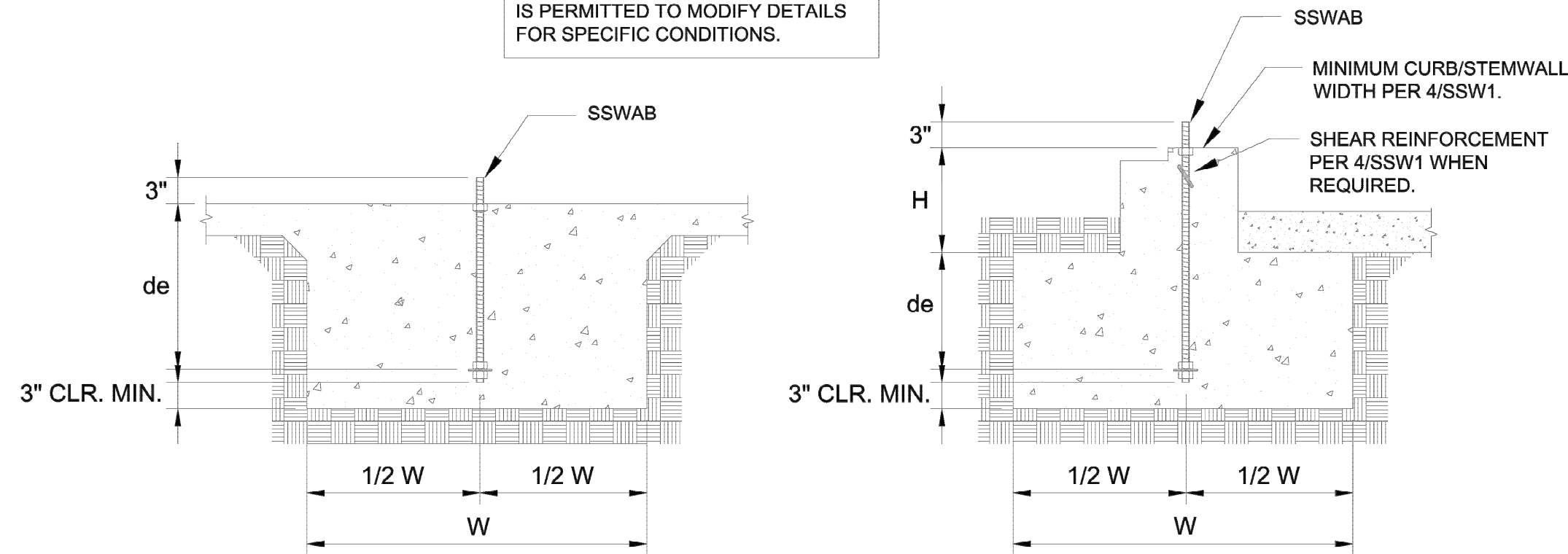




SLAB ON GRADE FOUNDATION

CURB OR STEMWALL FOUNDATION

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

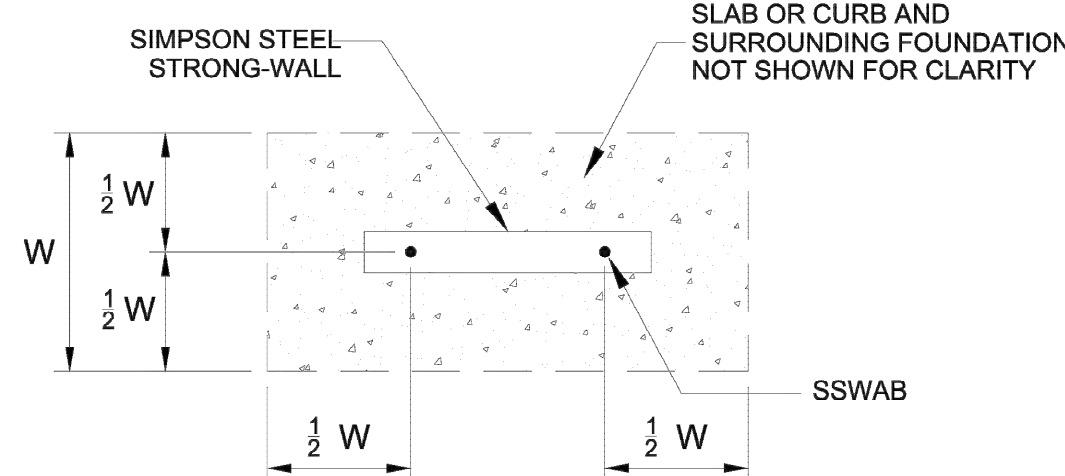


INTERIOR FOUNDATION

BRICK LEDGE FOUNDATION

- NOTES:
1. SEE 2/SSW1 AND 3/SSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
  2. SEE 4/SSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
  3. MAXIMUM H =  $l_e - d_e$ . SEE 5/SSW1 AND 6/SSW1 FOR  $l_e$ .

STEEL STRONG-WALL ANCHORAGE - TYPICAL SECTIONS 1



SEE TABLES BELOW FOR DIMENSIONS  
FOUNDATION PLAN VIEW

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	SSWAB 3/4" ANCHOR BOLT			SSWAB 1" ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	8,800	22	8	16,100	33	11
		HIGH STRENGTH	9,600	24	8	17,100	35	12
			18,500	36	12	33,000	51	17
	UNCRAKED	STANDARD	8,800	19	7	15,700	28	10
		HIGH STRENGTH	9,600	21	7	17,100	30	10
			18,300	31	11	32,300	44	15
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
		HIGH STRENGTH	7,400	18	6	11,400	24	8
			9,600	22	8	17,100	32	11
			11,400	24	8	21,100	36	12
			13,600	27	9	27,300	42	14
			15,900	30	10	31,800	46	16
	19,900	35	12	35,300	50	17		
	UNCRAKED	STANDARD	5,000	12	6	6,400	14	6
		HIGH STRENGTH	7,800	16	6	12,500	22	8
			9,600	19	7	17,100	28	10
			12,500	22	8	21,900	32	11
			14,300	24	8	26,400	36	12
17,000			27	9	31,500	40	14	
19,900	30	10	35,300	43	15			

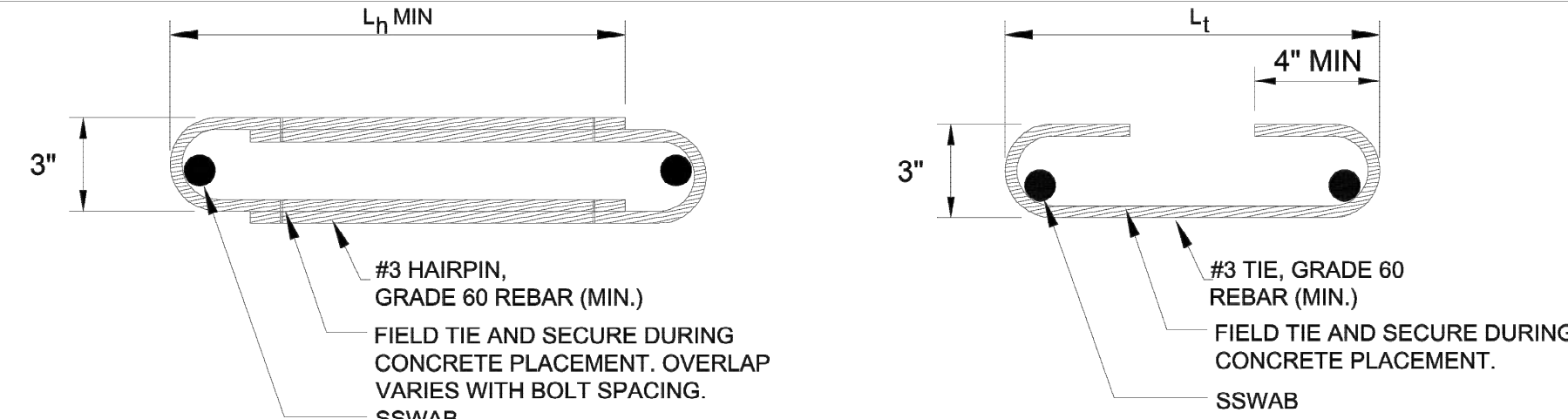
- NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-14 AND ACI 318-11 APPENDIX D WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
  2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF SSWAB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
  3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-11 SECTION D.3.3.4.
  4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
  5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
  6. REFER TO 1/SSW1 FOR  $l_e$ .

SSWAB TENSION ANCHORAGE SCHEDULE 2500 PSI 2

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	SSWAB 3/4" ANCHOR BOLT			SSWAB 1" ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	9,000	20	7	15,700	29	10
		HIGH STRENGTH	9,600	21	7	17,100	31	11
			18,200	32	11	33,000	46	16
	UNCRAKED	STANDARD	8,800	17	6	15,700	25	9
		HIGH STRENGTH	9,600	19	7	17,100	27	9
			18,600	28	10	32,600	40	14
WIND	CRACKED	STANDARD	6,000	14	6	7,300	16	6
		HIGH STRENGTH	7,300	16	6	13,500	24	8
			9,600	20	7	17,100	29	10
			11,800	22	8	22,700	34	12
			13,500	24	8	27,400	38	13
			17,000	28	10	32,300	42	14
	19,900	32	11	35,300	45	15		
	UNCRAKED	STANDARD	6,000	12	6	7,500	14	6
		HIGH STRENGTH	7,500	14	6	12,800	20	7
			9,600	17	6	17,100	25	9
			12,800	20	7	21,300	28	10
			14,800	22	8	26,000	32	11
16,900			24	8	31,300	36	12	
19,900	27	9	35,300	39	13			

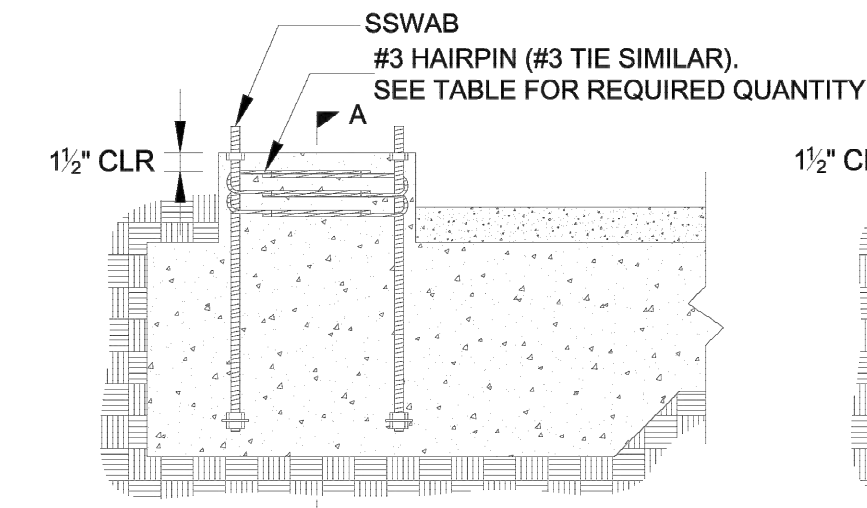
- NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-14 AND ACI 318-11 APPENDIX D WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
  2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF SSWAB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
  3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-11 SECTION D.3.3.4.
  4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
  5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
  6. SEE 1/SSW1 AND 2/SSW1 FOR W AND  $d_e$ .

SSWAB TENSION ANCHORAGE SCHEDULE 3500/4500 PSI 3

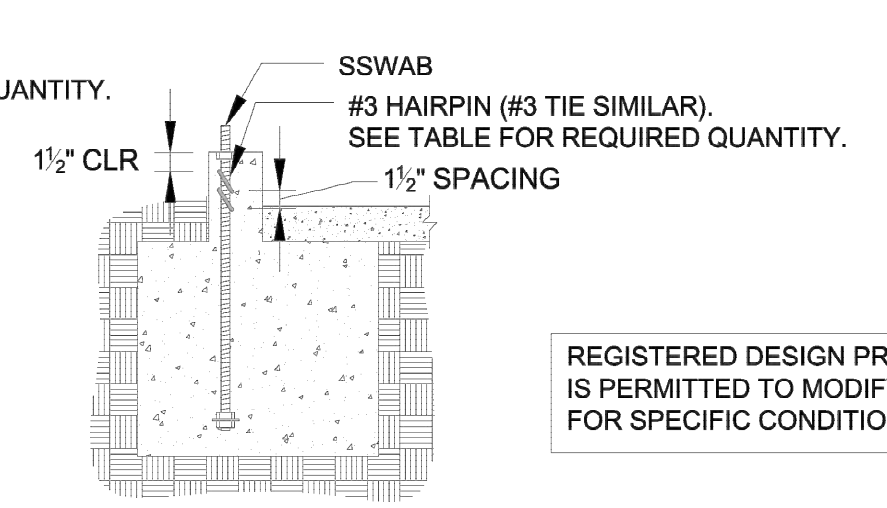


HAIRPIN SHEAR REINFORCEMENT

TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION  
(GARAGE CURB SHOWN, OTHER FOOTING TYPES SIMILAR.)



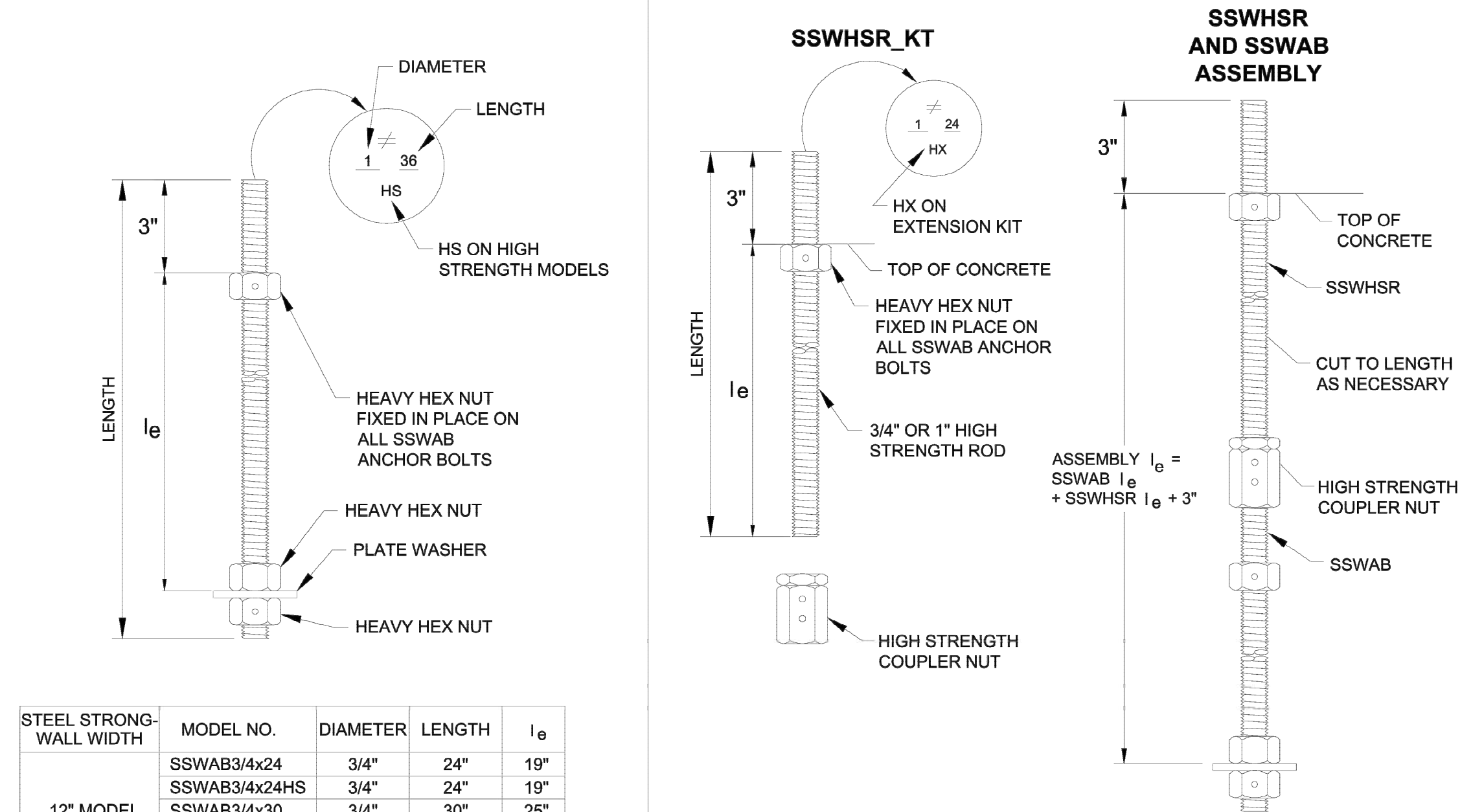
SECTION A-A

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

MODEL	L OR $l_e$ (in)	SHEAR REINFORCEMENT	MIN. CURB / STEMWALL WIDTH (in)	SHEAR REINFORCEMENT	MIN. CURB / STEMWALL WIDTH (in)	ASD ALLOWABLE SHEAR LOAD V (lbs.) <sup>a</sup>			
						6" MIN CURB / STEMWALL		8" MIN CURB / STEMWALL	
						UNCRAKED	CRACKED	UNCRAKED	CRACKED
SSW12	9	(1) #3 TIE	6	NONE REQUIRED	-	1230	880	1440	1030
SSW15	12	(2) #3 TIES	6	NONE REQUIRED	-	1590	1135	1810	1295
SSW18	14	(1) #3 HAIRPIN	8 <sup>b</sup>	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE STEEL STRONG-WALL PANEL			
SSW21	15	(2) #3 HAIRPIN	8 <sup>b</sup>	(1) #3 HAIRPIN	6				
SSW24	17	(2) #3 HAIRPIN	8 <sup>b</sup>	(1) #3 HAIRPIN	6				

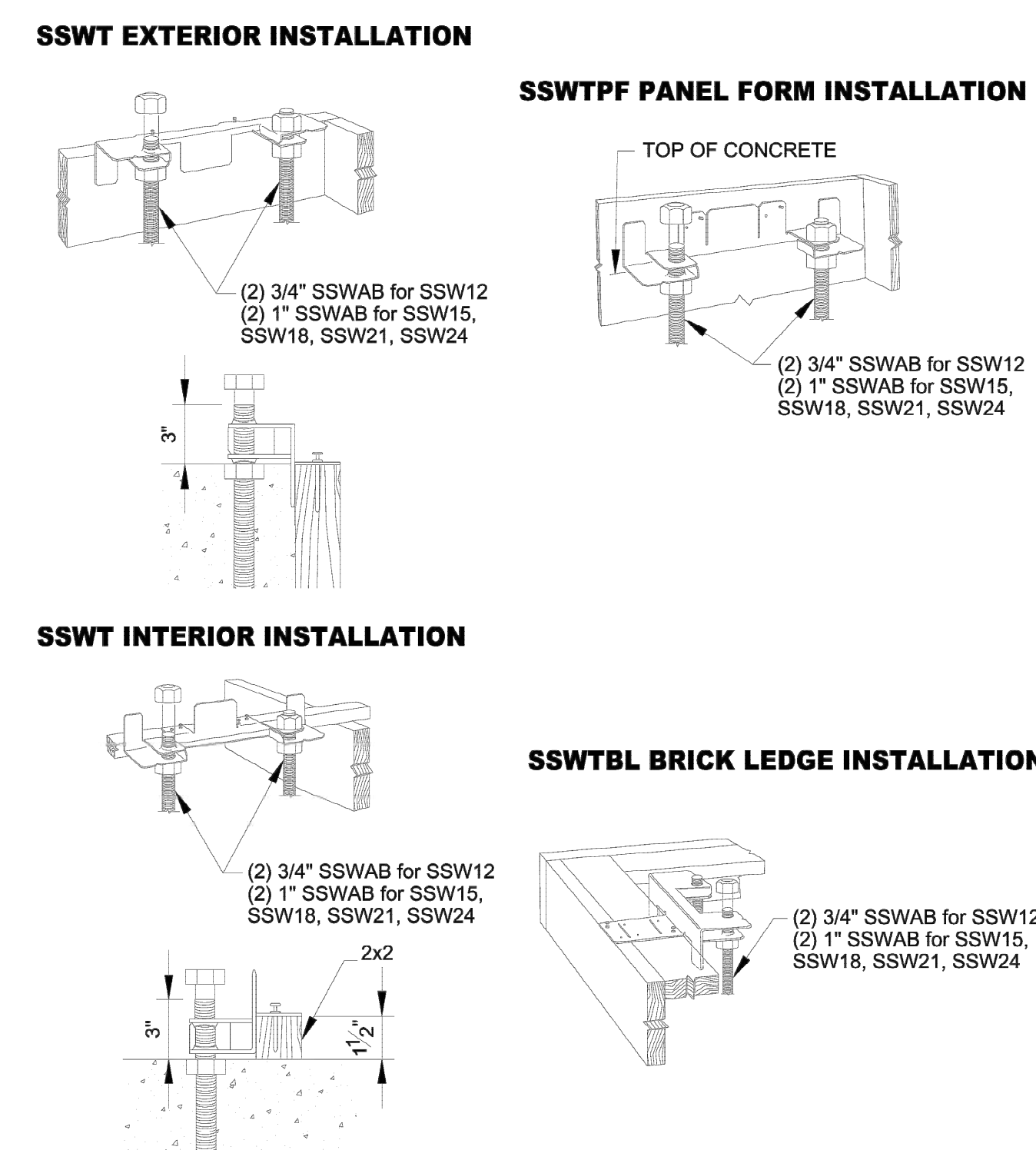
- NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-14 AND ACI 318-11 AND ASSUME MINIMUM  $f_c=2,500$  PSI CONCRETE. SEE DETAILS 1/SSW1 TO 3/SSW1 FOR TENSION ANCHORAGE.
  2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR PANELS INSTALLED ON A WOOD FLOOR, INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
  3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
  4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B.
  5. MINIMUM CURB/STEMWALL WIDTH IS 6" WHEN STANDARD STRENGTH SSWAB IS USED.
  6. USE (1) #3 TIE FOR SSW12 AND SSW15 WHEN THE STEEL STRONG-WALL PANEL DESIGN SHEAR FORCE EXCEEDS THE TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
  7. CONCRETE EDGE DISTANCE FOR ANCHORS MUST COMPLY WITH ACI 318-14 SECTION 17.7.2 AND ACI 318-11 D.8.2.

STEEL STRONG-WALL ANCHOR BOLT SHEAR ANCHORAGE 4



MODEL NO.	DIAMETER	LENGTH	$l_e$
SSWAB3/4x24	3/4"	24"	19"
SSWAB3/4x24HS	3/4"	24"	19"
SSWAB3/4x30	3/4"	30"	25"
SSWAB3/4x30HS	3/4"	30"	25"
SSWAB3/4x36HS	3/4"	36"	31"
SSWAB1x24	1"	24"	19"
SSWAB1x24HS	1"	24"	19"
SSWAB1x30	1"	30"	25"
SSWAB1x30HS	1"	30"	25"
SSWAB1x36HS	1"	36"	31"

SSW WIDTH	MODEL NO.	DIAMETER	TOTAL LENGTH	$l_e$
12" MODEL	SSWHSR3/4-2KT	3/4"	24"	21"
	SSWHSR3/4-3KT	3/4"	36"	33"
15", 18", 21 AND 24" MODELS	SSWHSR1-2KT	1"	24"	21"
	SSWHSR1-3KT	1"	36"	33"



SSWAB TENSION ANCHORAGE SCHEDULE 2500 PSI 2

SSW ANCHOR BOLTS 5

SSW ANCHOR BOLT EXTENSION 6

SSW ANCHOR BOLT TEMPLATES 7

NO.	DATE	2006 IBC REVISIONS	2012 IBC REVISIONS	2015 IBC REVISIONS
1	9/21/2009			
2	4/16/2014			
3	8/08/2016			

**SIMPSON STRONG-TIE COMPANY, INC.**  
 HOME OFFICE: 5956 W. LAS POSITAS BLVD. PLEASANTON, CA 94588  
 TEL: (800) 999-5099

**SIMPSON Strong-Tie**  
 THERE IS NO EQUAL

**STEEL STRONG-WALL ANCHORAGE DETAILS ENGINEERED DESIGNS**

**SIMPSON Strong-Tie**  
 THERE IS NO EQUAL

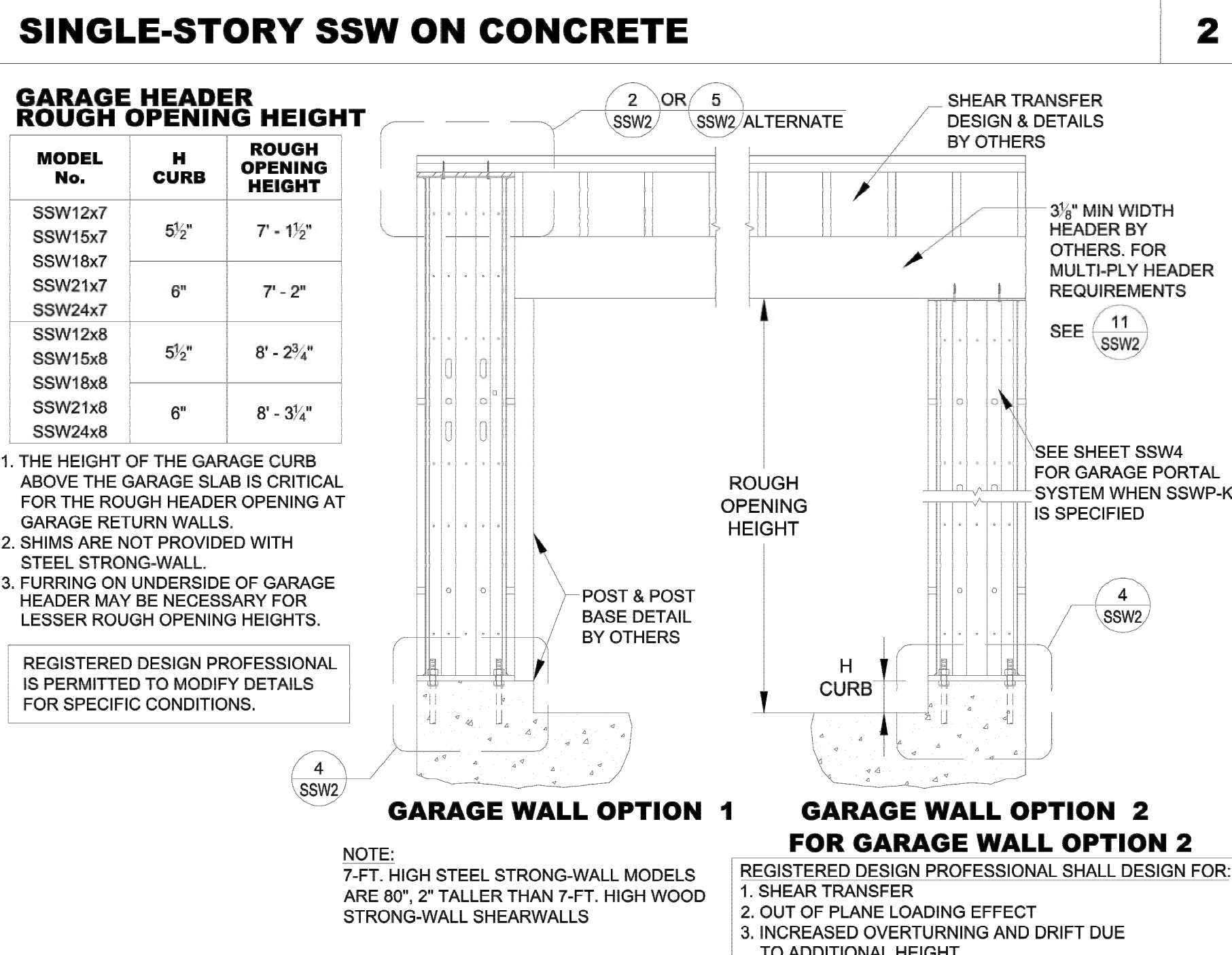
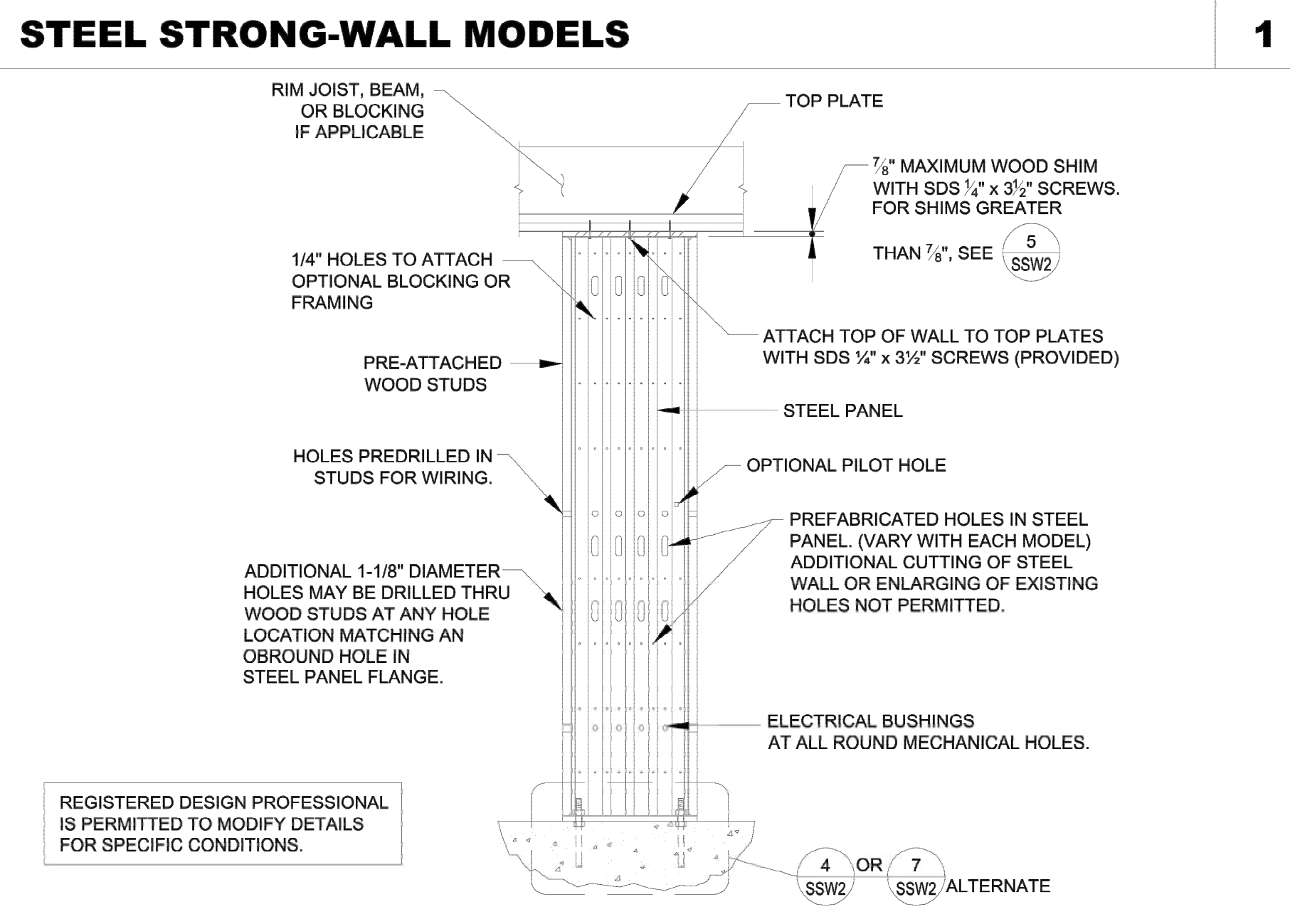
NAME	
DATE	8-8-2016
SCALE	N.T.S.
CHECKED	
SHEET	
<b>SSW1</b>	
OF SHEETS	
JOB NO.	



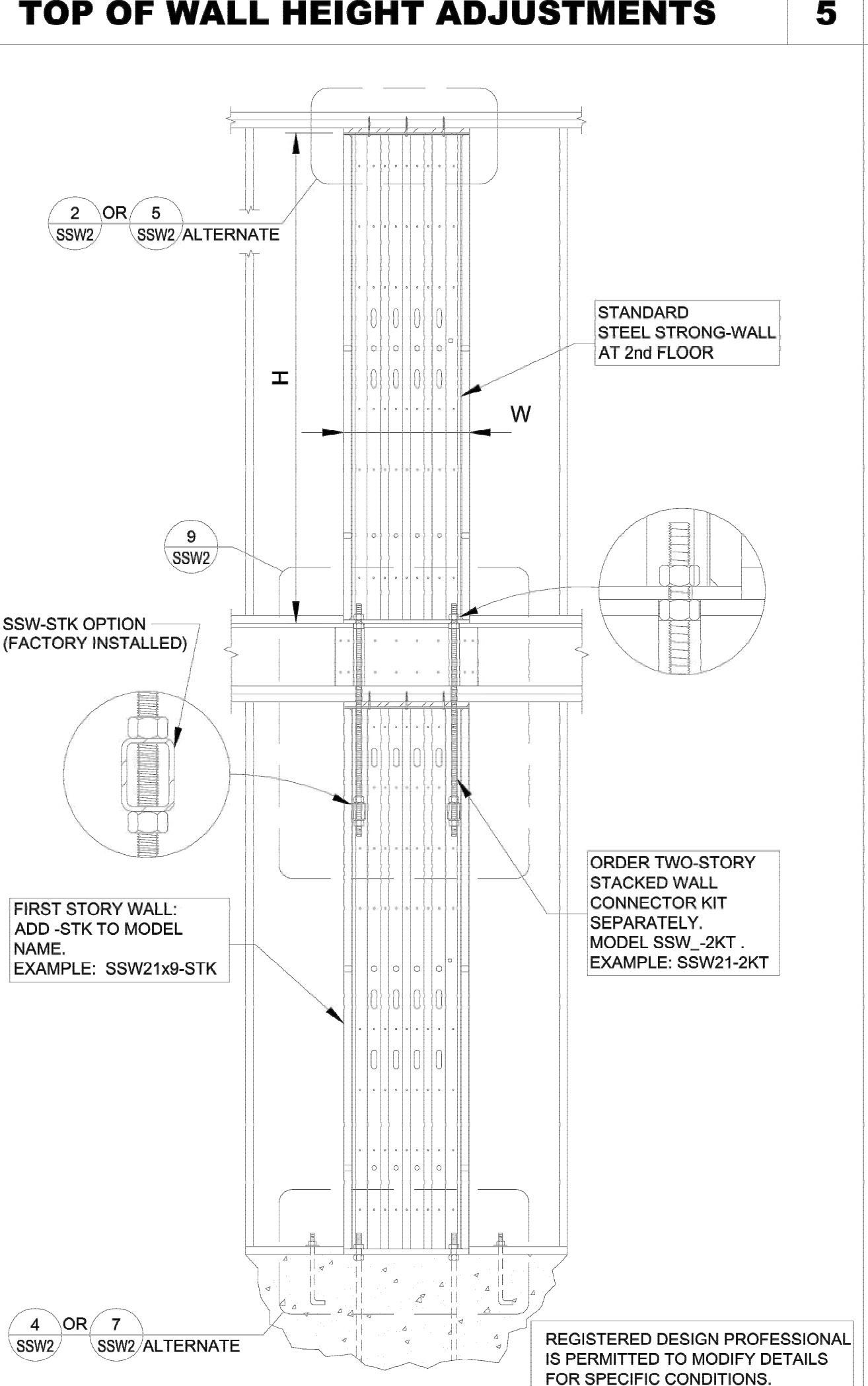
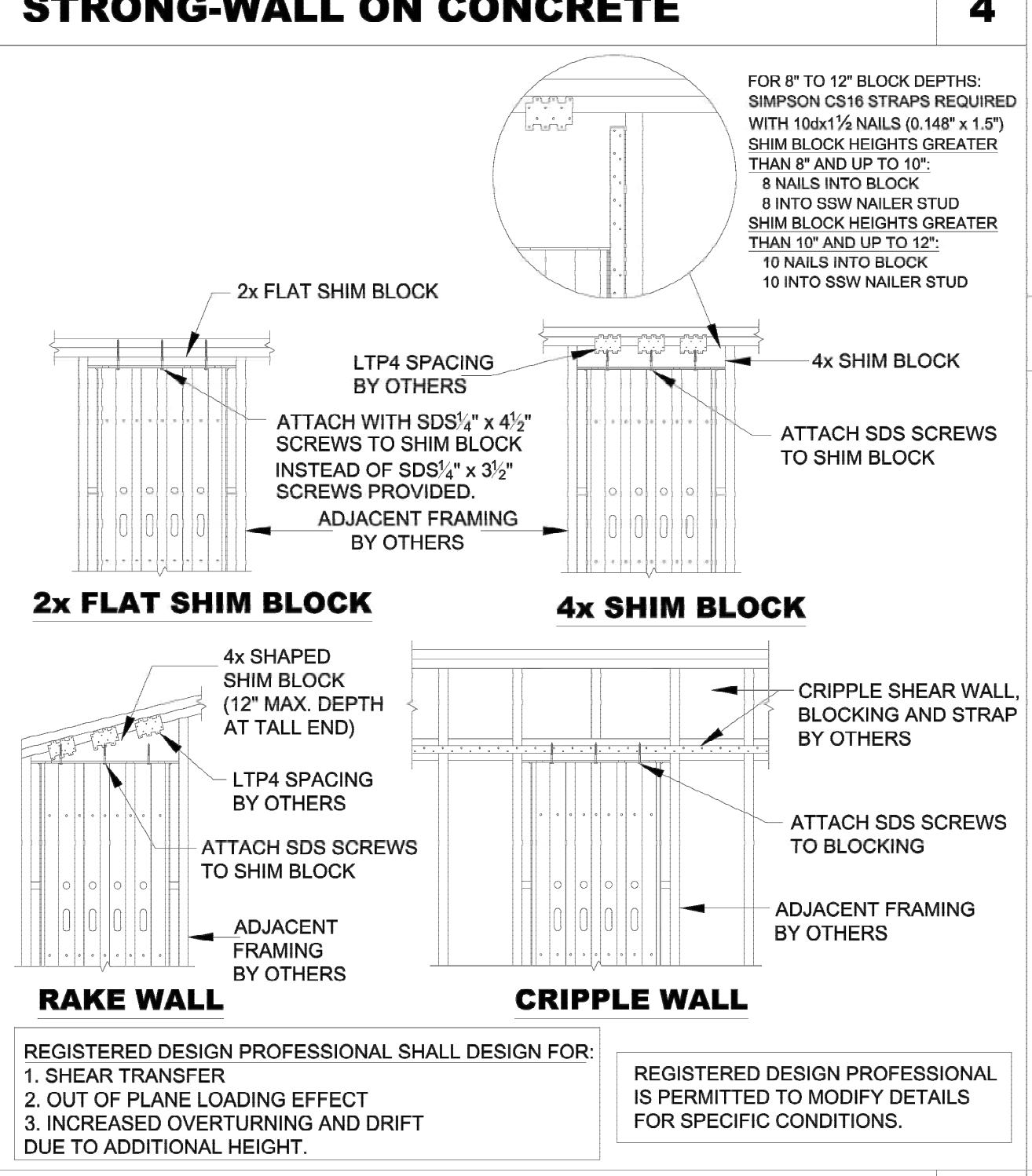
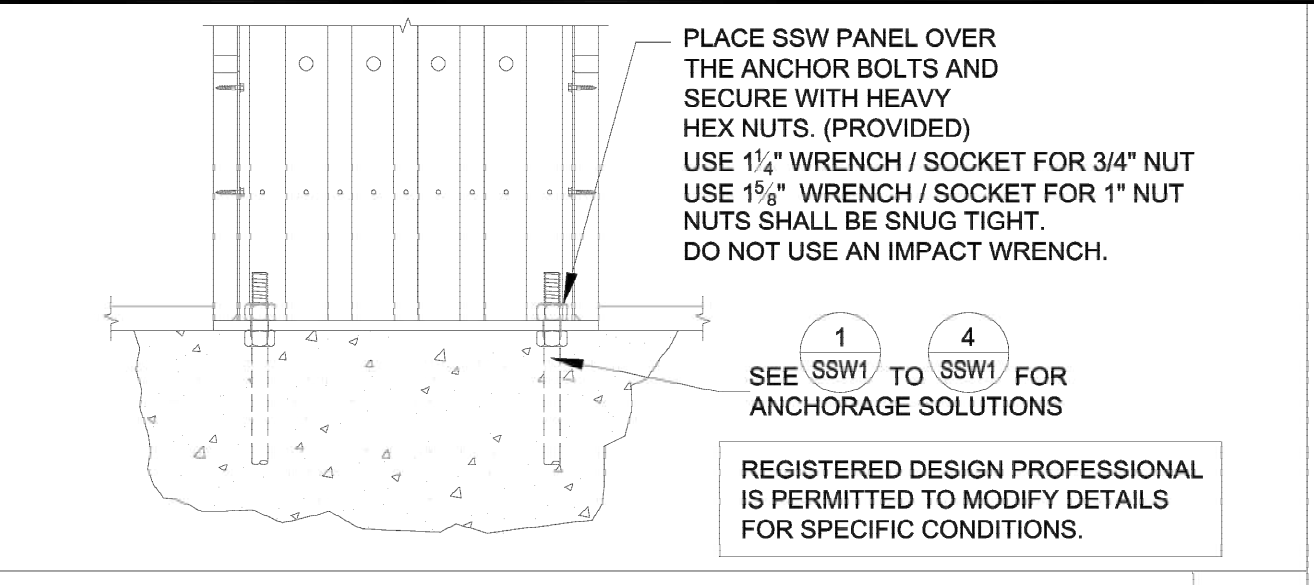
### STEEL STRONG-WALL MODELS

STD. WALL MODEL NO.	-STK WALL MODEL NO.	H (in)	T (in)	HOLLOW ANCHOR BOLTS <sup>2</sup>	QTY. OF TOP OF WALL SCREWS <sup>2</sup>
SSW12x7	--	80	3 1/2	(2) 3/4"	4
SSW15x7	--	80	3 1/2	(2) 1"	6
SSW18x7	--	80	3 1/2	(2) 1"	9
SSW21x7	--	80	3 1/2	(2) 1"	12
SSW24x7	--	80	3 1/2	(2) 1"	14
SSW12x7.4	--	85 1/2	3 1/2	(2) 3/4"	4
SSW15x7.4	--	85 1/2	3 1/2	(2) 1"	6
SSW18x7.4	--	85 1/2	3 1/2	(2) 1"	9
SSW21x7.4	--	85 1/2	3 1/2	(2) 1"	12
SSW24x7.4	--	85 1/2	3 1/2	(2) 1"	14
SSW12x8	--	93 1/4	3 1/2	(2) 3/4"	4
SSW15x8	SSW15x8-STK	93 1/4	3 1/2	(2) 1"	6
SSW18x8	SSW18x8-STK	93 1/4	3 1/2	(2) 1"	9
SSW21x8	SSW21x8-STK	93 1/4	3 1/2	(2) 1"	12
SSW24x8	SSW24x8-STK	93 1/4	3 1/2	(2) 1"	14
SSW12x9	--	105 1/4	3 1/2	(2) 3/4"	4
SSW15x9	SSW15x9-STK	105 1/4	3 1/2	(2) 1"	6
SSW18x9	SSW18x9-STK	105 1/4	3 1/2	(2) 1"	9
SSW21x9	SSW21x9-STK	105 1/4	3 1/2	(2) 1"	12
SSW24x9	SSW24x9-STK	105 1/4	3 1/2	(2) 1"	14
SSW12x10	--	117 1/4	3 1/2	(2) 3/4"	4
SSW15x10	SSW15x10-STK	117 1/4	3 1/2	(2) 1"	6
SSW18x10	SSW18x10-STK	117 1/4	3 1/2	(2) 1"	9
SSW21x10	SSW21x10-STK	117 1/4	3 1/2	(2) 1"	12
SSW24x10	SSW24x10-STK	117 1/4	3 1/2	(2) 1"	14
SSW15x11	SSW15x11-STK	129 1/4	5 1/2	(2) 1"	6
SSW18x11	SSW18x11-STK	129 1/4	5 1/2	(2) 1"	9
SSW21x11	SSW21x11-STK	129 1/4	5 1/2	(2) 1"	12
SSW24x11	SSW24x11-STK	129 1/4	5 1/2	(2) 1"	14
SSW15x12	SSW15x12-STK	141 1/4	5 1/2	(2) 1"	6
SSW18x12	SSW18x12-STK	141 1/4	5 1/2	(2) 1"	9
SSW21x12	SSW21x12-STK	141 1/4	5 1/2	(2) 1"	12
SSW24x12	SSW24x12-STK	141 1/4	5 1/2	(2) 1"	14
SSW18x13	SSW18x13-STK	153 1/4	5 1/2	(2) 1"	9
SSW21x13	SSW21x13-STK	153 1/4	5 1/2	(2) 1"	12
SSW24x13	SSW24x13-STK	153 1/4	5 1/2	(2) 1"	14

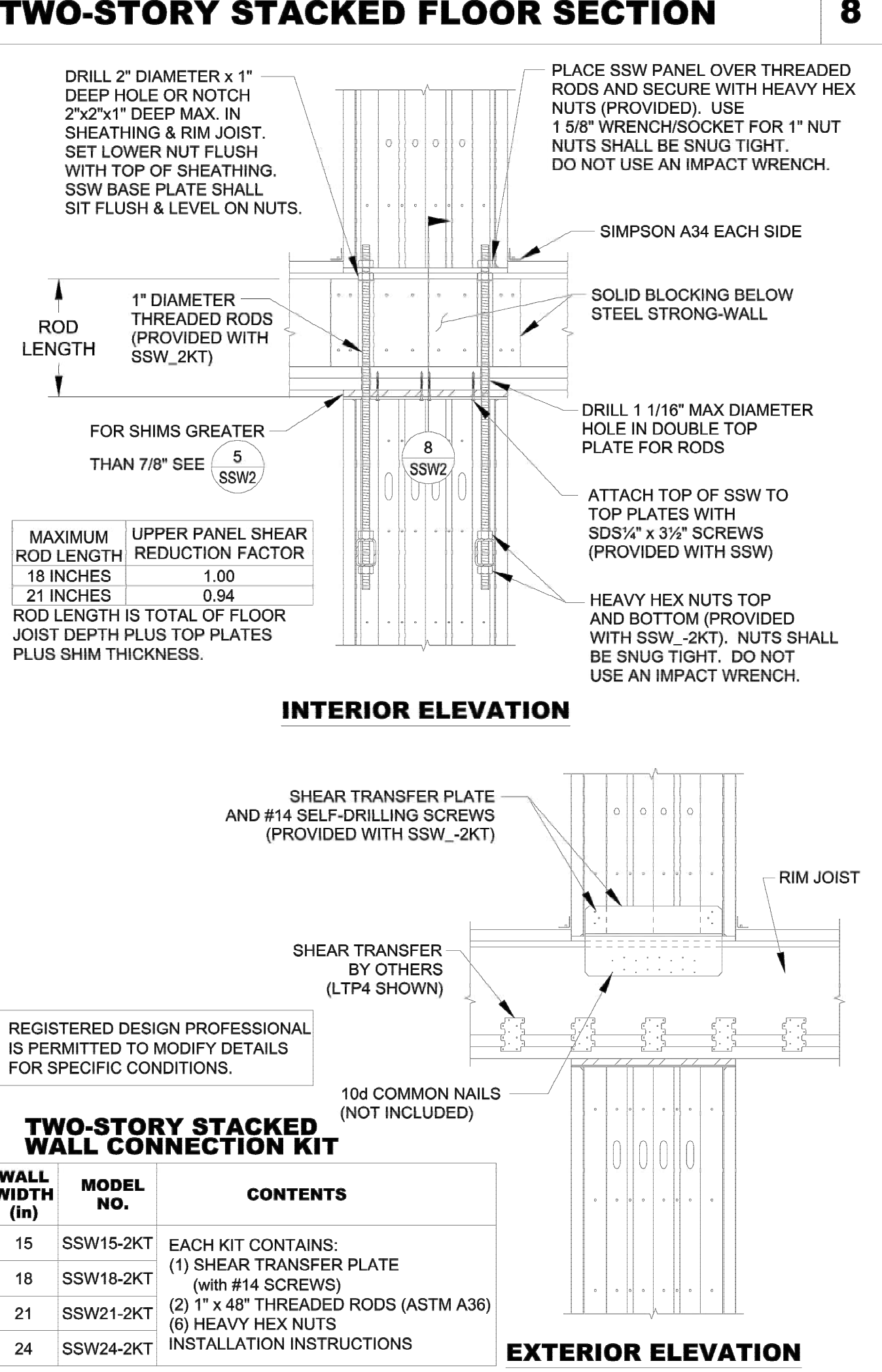
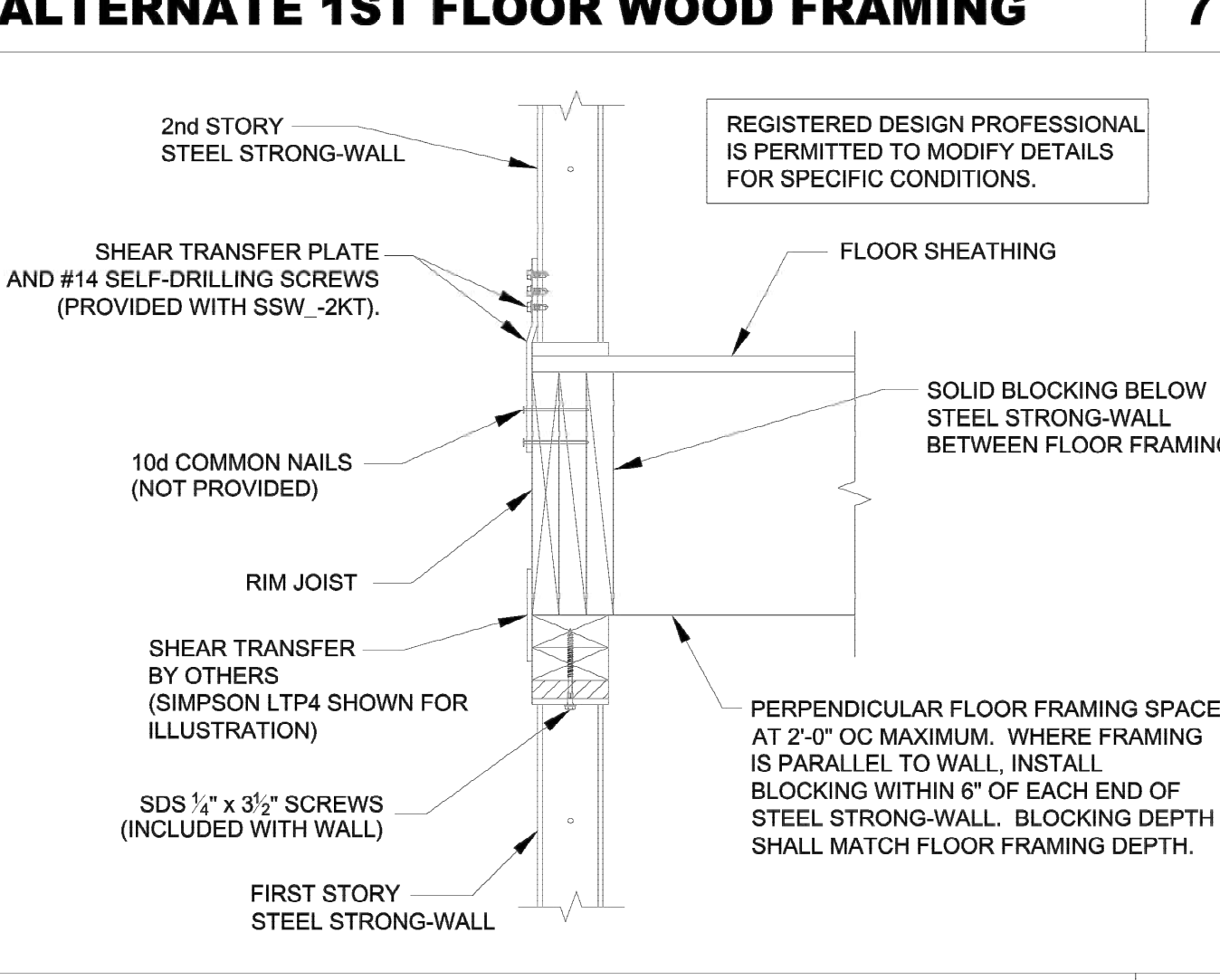
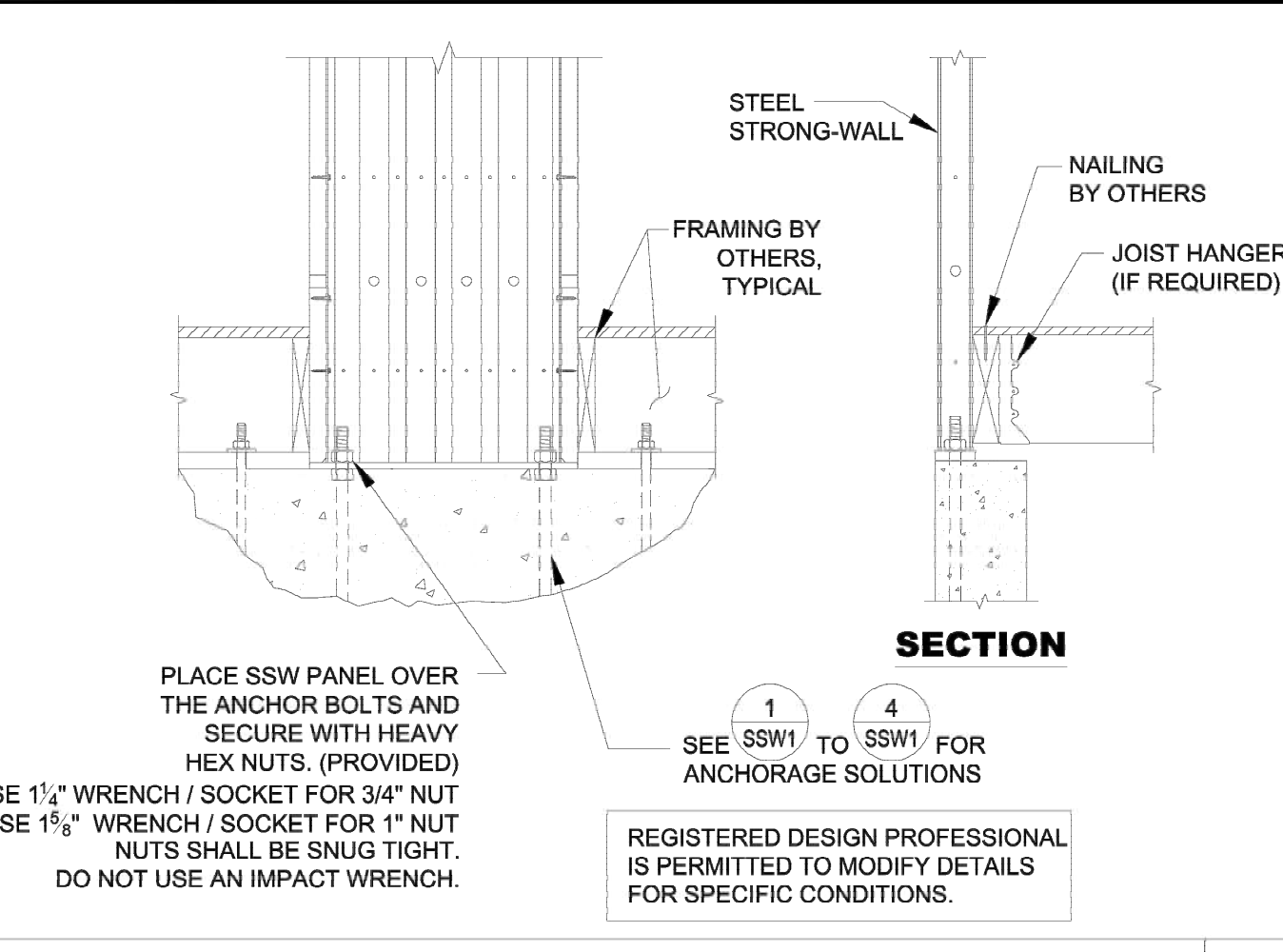
TABLE NOTES:  
1. SDS<sup>1/2</sup> x 3/4" SCREWS PROVIDED WITH WALL.  
2. SEE SHEET SSW1 FOR ANCHORAGE SOLUTIONS.



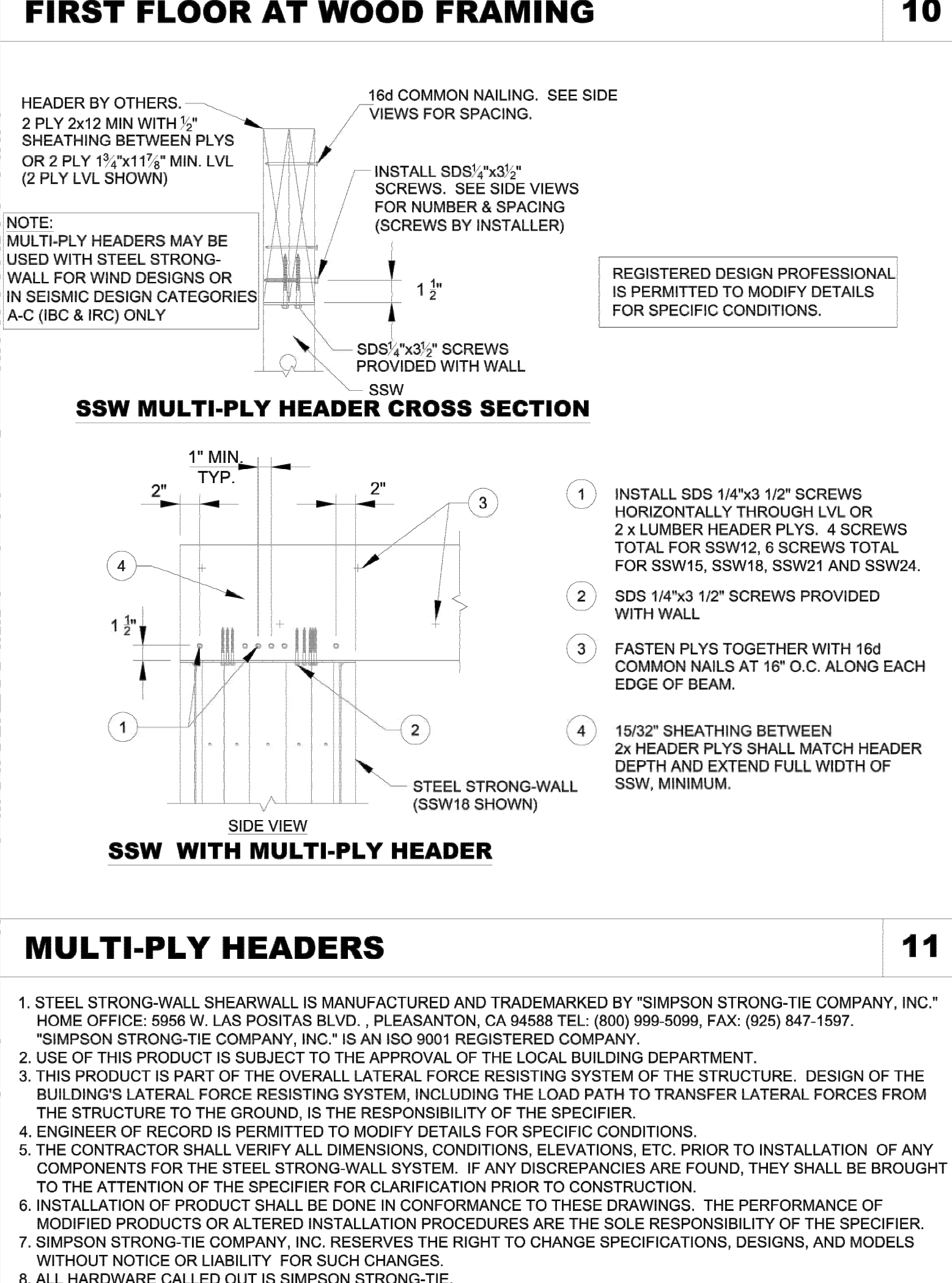
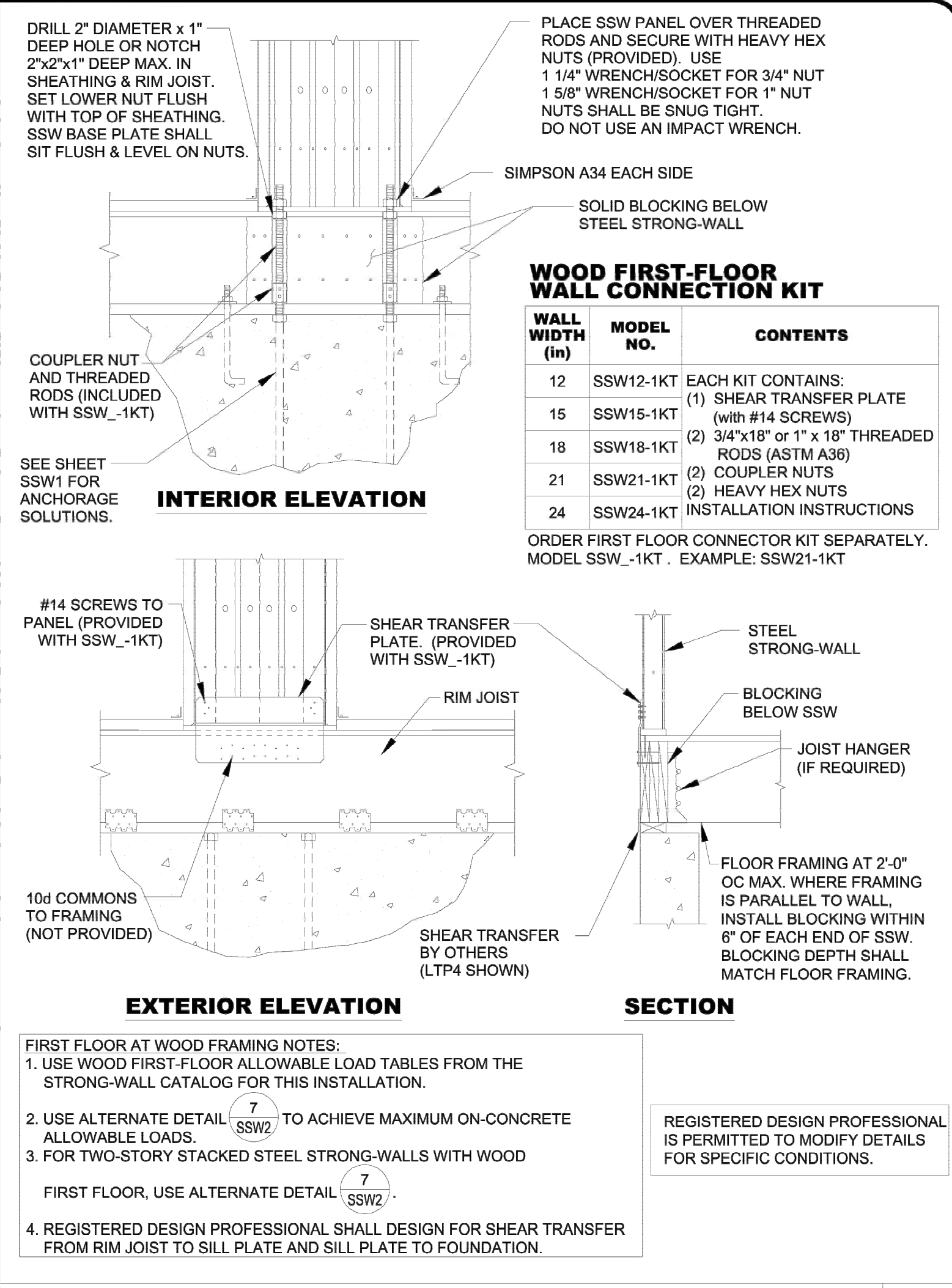
### ALTERNATE GARAGE WALL OPTIONS



### TWO-STORY STACKED



### TWO-STORY STACKED FLOOR FRAMING



### NOTES

REVISIONS

NO.	DATE	DESCRIPTION
1	9/21/2009	2006 IBC REVISIONS
2	4/16/2014	2012 IBC REVISIONS
3	8/08/2016	2015 IBC REVISIONS

SIMPSON STRONG-TIE COMPANY, INC.  
HOME OFFICE: 6958 W. LAS POSITAS BLVD., PLEASANTON, CA 94588  
TEL: (800) 999-5099

THIS IS NO EQUAL

# STEEL STRONG-WALL FRAMING DETAILS ENGINEERED DESIGNS

NAME: \_\_\_\_\_  
DATE: 8-8-2016  
SCALE: N.T.S.  
CHECKED: \_\_\_\_\_  
SHEET: **SSW2**  
OF SHEETS  
JOB NO. \_\_\_\_\_



GENERAL INFORMATION									
01	Project Name	Residential Building							
02	Run Title	Title 24 Analysis							
03	Project Location	566 6th Avenue							
04	City	San Francisco							
05	Zip code	94118							
06	Climate Zone	3							
07	Software Version	EnergyPro 8.2							
08	Building Type	Single family							
09	Front Orientation (deg/ Cardinal)	270							
10	Number of Dwelling Units	1							
11	Number of Bedrooms	4							
12	Number of Stories	2							
13	Addition Cond. Floor Area (ft²)	598							
14	Existing Cond. Floor Area (ft²)	1365							
15	Fenestration Average U-factor	0.34							
16	Total Cond. Floor Area (ft²)	1963							
17	Glazing Percentage (%)	17.82%							
18	ADU Bedroom Count	n/a							
19	ADU Conditioned Floor Area	n/a							
20	Is Natural Gas Available?	Yes							

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	Building does not require field testing or HERS verification
03	This building incorporates one or more Special Features shown below

ENERGY USE SUMMARY				
Energy Use (kTDV/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	39.08	38.65	0.43	1.1
Space Cooling	6.89	6.21	0.68	9.9
IAQ Ventilation	0	0	0	
Water Heating	19.48	19.48	0	0
Sell Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	65.45	64.34	1.11	1.7

Registration Number: CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: Report Version: 2019.1.300  
 Schema Version: rev 20200901  
 HERS Provider: Report Generated: 2021-09-17 07:36:08

OPAQUE SURFACES - CATHEDRAL CEILINGS													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Zone	Construction	Area (ft²)	Orientation	Area (ft²)	Roof Rise (x in 12)	Roof Reflectance	Roof Emissance	Cool Roof	Status	Verified Existing Condition	Existing Construction	
Roof	Fourth Floor	R-30 Roof No Attic	270	Front	598	0	9	0.1	0.85	No	New	n/a	

ATTIC									
01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emissance	Radiant Barrier	Cool Roof	Status	Verified Existing Condition
Attic Third Floor	Attic Roof/Third Floor	Ventilated	9	0.1	0.85	No	No	Existing	No

FENESTRATION / GLAZING															
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Area (ft²)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition	
Window	Window	South Wall	Right	180	1	40.3	0.99	Table 110.6-A	0.74	Table 110.6-B	Bug Screen	Existing	No		
Window 2	Window	Southwest Wall	225	1	17	0.99	Table 110.6-A	0.74	Table 110.6-B	Bug Screen	Existing	No			
Window 3	Window	West Wall	Front	270	1	56	0.99	Table 110.6-A	0.74	Table 110.6-B	Bug Screen	Existing	No		
Window 4	Window	Northeast Wall	315	1	17	0.99	Table 110.6-A	0.74	Table 110.6-B	Bug Screen	Existing	No			
Window 5	Window	North Wall	Left	0	1	20	0.99	Table 110.6-A	0.74	Table 110.6-B	Bug Screen	Existing	No		
Window 6	Window	Northeast Wall	45	1	17	0.99	Table 110.6-A	0.74	Table 110.6-B	Bug Screen	Existing	No			
Window 7	Window	East Wall	Back	90	1	54.5	0.99	Table 110.6-A	0.74	Table 110.6-B	Bug Screen	Existing	No		

Registration Number: CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: Report Version: 2019.1.300  
 Schema Version: rev 20200901  
 HERS Provider: Report Generated: 2021-09-17 07:36:08

WATER HEATING SYSTEMS									
01	02	03	04	05	06	07	08	09	10
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a	Existing	No	

WATER HEATERS													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot (kBtu/hr)	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition	Status	Verified Existing Condition
DHW Heater 1	Gas	Small Storage	1	50	0.57-EF	<= 75 kBtu/hr	0	80	n/a	n/a	n/a	Existing	No

WATER HEATING - HERS VERIFICATION							
01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery	
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	

Registration Number: CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: Report Version: 2019.1.300  
 Schema Version: rev 20200901  
 HERS Provider: Report Generated: 2021-09-17 07:36:08

REQUIRED SPECIAL FEATURES	
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.	
<ul style="list-style-type: none"> <li>New ductwork added is less than 40 ft. in length</li> <li>Non-standard duct location (any location other than attic)</li> </ul>	

HERS FEATURE SUMMARY	
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry	
Building-level Verifications:	
<ul style="list-style-type: none"> <li>None --</li> <li>Cooling System Verifications:</li> <li>None --</li> <li>Heating System Verifications:</li> <li>None --</li> <li>HVAC Distribution System Verifications:</li> <li>None --</li> <li>Domestic Hot Water System Verifications:</li> <li>None --</li> </ul>	

BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Residential Building	1963	1	4	2	0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
Third Floor	Conditioned	HVAC System 1	1365	9.5	DHW Sys 1	N/A
Fourth Floor	Conditioned	HVAC System 1	598	9	DHW Sys 1	N/A

Registration Number: CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: Report Version: 2019.1.300  
 Schema Version: rev 20200901  
 HERS Provider: Report Generated: 2021-09-17 07:36:08

FENESTRATION / GLAZING															
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Area (ft²)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition	
Window (New)	Window	East Wall	Back	90	1	15.1	0.34	NFRC	0.34	NFRC	Bug Screen	New	n/a		
Window 8	Window	Southwest Wall	135	1	17	0.99	Table 110.6-A	0.74	Table 110.6-B	Bug Screen	Existing	No			
Window 9	Window	South Wall 2	Right	180	1	40	0.34	NFRC	0.34	NFRC	Bug Screen	New	n/a		
Window 10	Window	West Wall 2	Front	270	1	8	0.34	NFRC	0.34	NFRC	Bug Screen	New	n/a		
Window 11	Window	North Wall 2	Left	0	1	40	0.34	NFRC	0.34	NFRC	Bug Screen	New	n/a		
Window 12	Window	East Wall 2	Back	90	1	8	0.34	NFRC	0.34	NFRC	Bug Screen	New	n/a		

OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Default Wall Prior to 197	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.302	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: Wood Siding/sheathing/decking
R-19 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19	None / None	0.07	Inside Finish: Gypsum Board Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6 Exterior Finish: Wood Siding/sheathing/decking
R-30 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 24 in. O. C.	R-30	None / None	0.035	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10 Inside Finish: Gypsum Board

Registration Number: CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: Report Version: 2019.1.300  
 Schema Version: rev 20200901  
 HERS Provider: Report Generated: 2021-09-17 07:36:08

SPACE CONDITIONING SYSTEMS										
01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count
HVAC System 1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	n/a	Existing	No	1	1

HVAC - HEATING UNIT TYPES			
01	02	03	04
Name	System Type	Number of Units	Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-78

HVAC - COOLING UNIT TYPES							
01	02	03	04	05	06	07	08
Name	System Type	Number of Units	Efficiency EER/CEER	Efficiency SEER	Zonally Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	No Cooling	1	n/a	n/a	Not Zonal	Single Speed	n/a

HVAC - DISTRIBUTION SYSTEMS															
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution system	New Ducts 40 ft
Air Distribution System 1	Conditioned space-entirely	Non-Verified	R-6	R-6	Conditioned Zone	Conditioned Zone	n/a	n/a	No Bypass Duct	Existing (not specified)	Air Distribution System 1-HERS-dist	Existing + New	No	n/a	n/a

Registration Number: CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: Report Version: 2019.1.300  
 Schema Version: rev 20200901  
 HERS Provider: Report Generated: 2021-09-17 07:36:08

OPAQUE SURFACES										
01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Area (ft²)	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
South Wall	Third Floor	Default Wall Prior to 197	180	Right	566.2	40.3	90	none	Existing	No
Southwest Wall	Third Floor	Default Wall Prior to 197	225	n/a	72.2	17	90	none	Existing	No
West Wall	Third Floor	Default Wall Prior to 197	270	Front	164.3	56	90	none	Existing	No
Northeast Wall	Third Floor	Default Wall Prior to 197	315	n/a	72.2	17	90	none	Existing	No
North Wall	Third Floor	Default Wall Prior to 197	0	Left	566.2	20	90	none	Existing	No
Northeast Wall	Third Floor	Default Wall Prior to 197	45	n/a	36.4	17	90	none	Existing	No
East Wall	Third Floor	Default Wall Prior to 197	90	Back	227.1	69.6	90	none	Existing	No
Southeast Wall	Third Floor	Default Wall Prior to 197	135	n/a	36.4	17	90	none	Existing	No
South Wall 2	Fourth Floor	R-19 Wall	180	Right	113.7	40	90	none	New	n/a
West Wall 2	Fourth Floor	R-19 Wall	270	Front	101.5	8	90	none	New	n/a
North Wall 2	Fourth Floor	R-19 Wall	0	Left	113.7	40	90	none	New	n/a
East Wall 2	Fourth Floor	R-19 Wall	90	Back	101.5	8	90	none	New	n/a
Roof 2	Third Floor	Default Roof Prior to 197	n/a	n/a	767	n/a	n/a	n/a	Existing	No
Raised Floor	Third Floor	Default Floor No Crawlspace	n/a	n/a	100	n/a	n/a	n/a	Existing	No
Interior Surface Floor	Third Floor	Default Floor No Crawlspace	n/a	n/a	1265	n/a	n/a	n/a	Existing	No
Interior Surface Floor 2	Fourth Floor	R-0 Floor No Crawlspace	n/a	n/a	598	n/a	n/a	n/a	New	n/a

Registration Number: CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: Report Version: 2019.1.300  
 Schema Version: rev 2020









RESIDENTIAL MEASURES SUMMARY							RMS-1
Project Name	Building Type	Single Family	Additional Allowance	Date			
Wong, Nancy Addition	CA Climate Zone 03	1,963	598	01/7/2021			
Project Address	California Energy Climate Zone	Total Cond. Floor Area	Additional	# of Units			
566 6th Avenue San Francisco	CA Climate Zone 03	1,963	598	1			

INSULATION	Construction Type	Cavity Area (ft²)	Special Features	Status
Floor	Wood Framed w/ Craw Space	-no insulation	100	Existing
Wall	Wood Framed	-no insulation	526	Existing
Wall	Wood Framed	-no insulation	55	Existing
Wall	Wood Framed	-no insulation	108	Existing
Wall	Wood Framed	-no insulation	55	Existing
Wall	Wood Framed	-no insulation	546	Existing
Wall	Wood Framed	-no insulation	19	Existing
Wall	Wood Framed	-no insulation	158	Existing

FENESTRATION							RMS-1
Orientation Area (ft²)	U-Fac	SHGC	Overhang	Sidelines	Exterior Shades	Status	
Right (S)	40.3	0.990	0.74	none	none	N/A	Existing
Right (SW)	17.0	0.990	0.74	none	none	N/A	Existing
Front (W)	56.0	0.990	0.74	none	none	N/A	Existing
Front (NW)	17.0	0.990	0.74	none	none	N/A	Existing
Left (N)	20.0	0.990	0.74	none	none	N/A	Existing
Front (E)	54.5	0.990	0.74	none	none	N/A	Existing
Right (E)	23.1	0.340	0.34	none	none	N/A	New
Right (SE)	17.0	0.990	0.74	none	none	N/A	Existing
Right (S)	40.0	0.340	0.34	none	none	N/A	New
Front (W)	8.0	0.340	0.34	none	none	N/A	New
Left (N)	40.0	0.340	0.34	none	none	N/A	New

HVAC SYSTEMS						
Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	78% AFUE	No Cooling	14.0 SEER	Setback	Existing

HVAC DISTRIBUTION						
Location	Heating	Cooling	Duct Location	Duct R-Value	Status	
HVAC System	Ducted	Ducted	Conditioned	6.0	Allowed	

WATER HEATING						
Qty.	Type	Gallons	Min. Eff	Distribution	Status	

EnergyPro 8.2 by EnergySoft User Number: 5581 ID: 0916202102 Page 13 of 18

RESIDENTIAL MEASURES SUMMARY							RMS-1
Project Name	Building Type	Single Family	Additional Allowance	Date			
Wong, Nancy Addition	CA Climate Zone 03	1,850	585	01/7/2021			
Project Address	California Energy Climate Zone	Total Cond. Floor Area	Additional	# of Units			
568 6th Avenue San Francisco	CA Climate Zone 03	1,850	585	1			

INSULATION	Construction Type	Cavity Area (ft²)	Special Features	Status
Wall	Wood Framed	-no insulation	19	Existing
Wall	Wood Framed	-no insulation	171	Existing
Door	Opaque Door	-no insulation	518	Existing
Wall	Wood Framed	-no insulation	19	Existing
Wall	Wood Framed	-no insulation	546	Existing
Wall	Wood Framed	-no insulation	19	Existing
Wall	Wood Framed	-no insulation	131	Existing
Wall	Wood Framed	-no insulation	39	Existing

FENESTRATION							RMS-1
Orientation Area (ft²)	U-Fac	SHGC	Overhang	Sidelines	Exterior Shades	Status	
Front (W)	11.3	0.340	0.40	none	none	N/A	New
Front (E)	157.7	0.340	0.40	none	none	N/A	New
Right (S)	40.3	0.990	0.74	none	none	N/A	Existing
Right (SW)	17.0	0.990	0.74	none	none	N/A	Existing
Front (W)	47.0	0.990	0.74	none	none	N/A	Existing
Front (NW)	17.0	0.990	0.74	none	none	N/A	Existing
Left (NE)	20.0	0.990	0.74	none	none	N/A	Existing
Right (E)	31.8	0.990	0.74	none	none	N/A	Existing
Right (SE)	17.0	0.990	0.74	none	none	N/A	Existing

HVAC SYSTEMS						
Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	78% AFUE	No Cooling	14.0 SEER	Setback	Existing

HVAC DISTRIBUTION						
Location	Heating	Cooling	Duct Location	Duct R-Value	Status	
HVAC System	Ducted	Ducted	Conditioned	6.0	Allowed	

WATER HEATING						
Qty.	Type	Gallons	Min. Eff	Distribution	Status	

EnergyPro 8.2 by EnergySoft User Number: 5581 ID: 0916202102 Page 13 of 18

RESIDENTIAL MEASURES SUMMARY							RMS-1
Project Name	Building Type	Single Family	Additional Allowance	Date			
Wong, Nancy Addition	CA Climate Zone 03	1,963	598	01/7/2021			
Project Address	California Energy Climate Zone	Total Cond. Floor Area	Additional	# of Units			
566 6th Avenue San Francisco	CA Climate Zone 03	1,963	598	1			

INSULATION	Construction Type	Cavity Area (ft²)	Special Features	Status
Floor	Wood Framed	-no insulation	19	Existing
Roof	Wood Framed Attic	R 11	767	Existing
Demising	Wood Framed w/ Craw Space	-no insulation	1,265	Existing
Wall	Wood Framed	R 19	334	New
Roof	Wood Framed Rafters	R 30	598	New
Demising	Wood Framed w/ Craw Space	-no insulation	598	New

FENESTRATION							RMS-1
Orientation Area (ft²)	U-Fac	SHGC	Overhang	Sidelines	Exterior Shades	Status	
Right (S)	40.3	0.990	0.74	none	none	N/A	Existing
Right (SW)	17.0	0.990	0.74	none	none	N/A	Existing
Front (W)	56.0	0.990	0.74	none	none	N/A	Existing
Front (NW)	17.0	0.990	0.74	none	none	N/A	Existing
Left (N)	20.0	0.990	0.74	none	none	N/A	Existing
Front (E)	54.5	0.990	0.74	none	none	N/A	Existing
Right (E)	23.1	0.340	0.34	none	none	N/A	New
Right (SE)	17.0	0.990	0.74	none	none	N/A	Existing
Right (S)	40.0	0.340	0.34	none	none	N/A	New
Front (W)	8.0	0.340	0.34	none	none	N/A	New
Left (N)	40.0	0.340	0.34	none	none	N/A	New

HVAC SYSTEMS						
Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	78% AFUE	No Cooling	14.0 SEER	Setback	Existing

HVAC DISTRIBUTION						
Location	Heating	Cooling	Duct Location	Duct R-Value	Status	
HVAC System	Ducted	Ducted	Conditioned	6.0	Allowed	

WATER HEATING						
Qty.	Type	Gallons	Min. Eff	Distribution	Status	

EnergyPro 8.2 by EnergySoft User Number: 5581 ID: 0916202102 Page 14 of 18

RESIDENTIAL MEASURES SUMMARY							RMS-1
Project Name	Building Type	Single Family	Additional Allowance	Date			
Wong, Nancy Addition	CA Climate Zone 03	1,850	585	01/7/2021			
Project Address	California Energy Climate Zone	Total Cond. Floor Area	Additional	# of Units			
568 6th Avenue San Francisco	CA Climate Zone 03	1,850	585	1			

INSULATION	Construction Type	Cavity Area (ft²)	Special Features	Status
Demising	Wood Framed Attic	R 11	1,265	Existing
Wall	Wood Framed	-no insulation	171	Existing
Door	Opaque Door	-no insulation	518	Existing
Wall	Wood Framed	-no insulation	19	Existing
Wall	Wood Framed	-no insulation	546	Existing
Wall	Wood Framed	-no insulation	19	Existing
Wall	Wood Framed	-no insulation	131	Existing
Wall	Wood Framed	-no insulation	39	Existing

FENESTRATION							RMS-1
Orientation Area (ft²)	U-Fac	SHGC	Overhang	Sidelines	Exterior Shades	Status	
Front (W)	11.3	0.340	0.40	none	none	N/A	New
Front (E)	157.7	0.340	0.40	none	none	N/A	New
Right (S)	40.3	0.990	0.74	none	none	N/A	Existing
Right (SW)	17.0	0.990	0.74	none	none	N/A	Existing
Front (W)	47.0	0.990	0.74	none	none	N/A	Existing
Front (NW)	17.0	0.990	0.74	none	none	N/A	Existing
Left (NE)	20.0	0.990	0.74	none	none	N/A	Existing
Right (E)	31.8	0.990	0.74	none	none	N/A	Existing
Right (SE)	17.0	0.990	0.74	none	none	N/A	Existing

HVAC SYSTEMS						
Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	78% AFUE	No Cooling	14.0 SEER	Setback	Existing

HVAC DISTRIBUTION						
Location	Heating	Cooling	Duct Location	Duct R-Value	Status	
HVAC System	Ducted	Ducted	Conditioned	6.0	Allowed	

WATER HEATING						
Qty.	Type	Gallons	Min. Eff	Distribution	Status	

EnergyPro 8.2 by EnergySoft User Number: 5581 ID: 0916202102 Page 14 of 19

RESIDENTIAL MEASURES SUMMARY							RMS-1
Project Name	Building Type	Single Family	Additional Allowance	Date			
Wong, Nancy Addition	CA Climate Zone 03	1,963	598	01/7/2021			
Project Address	California Energy Climate Zone	Total Cond. Floor Area	Additional	# of Units			
566 6th Avenue San Francisco	CA Climate Zone 03	1,963	598	1			

INSULATION	Construction Type	Cavity Area (ft²)	Special Features	Status
Demising	Wood Framed w/ Craw Space	-no insulation	598	Existing
Wall	Wood Framed	-no insulation	19	Existing
Roof	Wood Framed Attic	R 11	767	Existing
Demising	Wood Framed w/ Craw Space	-no insulation	1,265	Existing
Wall	Wood Framed	R 19	334	New
Roof	Wood Framed Rafters	R 30	598	New
Demising	Wood Framed w/ Craw Space	-no insulation	598	New

FENESTRATION							RMS-1
Orientation Area (ft²)	U-Fac	SHGC	Overhang	Sidelines	Exterior Shades	Status	
Right (S)	40.3	0.990	0.74	none	none	N/A	Existing
Right (SW)	17.0	0.990	0.74	none	none	N/A	Existing
Front (W)	56.0	0.990	0.74	none	none	N/A	Existing
Front (NW)	17.0	0.990	0.74	none	none	N/A	Existing
Left (N)	20.0	0.990	0.74	none	none	N/A	Existing
Front (E)	54.5	0.990	0.74	none	none	N/A	Existing
Right (E)	23.1	0.340	0.34	none	none	N/A	New
Right (SE)	17.0	0.990	0.74	none	none	N/A	Existing
Right (S)	40.0	0.340	0.34	none	none	N/A	New
Front (W)	8.0	0.340	0.34	none	none	N/A	New
Left (N)	40.0	0.340	0.34	none	none	N/A	New

HVAC SYSTEMS						
Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	78% AFUE	No Cooling	14.0 SEER	Setback	Existing

HVAC DISTRIBUTION						
Location	Heating	Cooling	Duct Location	Duct R-Value	Status	
HVAC System	Ducted	Ducted	Conditioned	6.0	Allowed	

WATER HEATING						
Qty.	Type	Gallons	Min. Eff	Distribution	Status	

EnergyPro 8.2 by EnergySoft User Number: 5581 ID: 0916202102 Page 15 of 18

RESIDENTIAL MEASURES SUMMARY							RMS-1
Project Name	Building Type	Single Family	Additional Allowance	Date			
Wong, Nancy Addition	CA Climate Zone 03	1,850	585				





Attachment RB

### NOTICE

#### TITLE-24 LOW-RISE RESIDENTIAL ENERGY/GREEN INSPECTION REQUIREMENTS (BUILDING)

Please note that Certificates of Installation and/or Acceptance and/or Verification are required for this project, as indicated on this form issued with this permit. Ensuring the accurate completion of this documentation is the direct responsibility of the engineer/architect of record. This documentation is required *in addition* to the called inspections performed by the Department of Building Inspection.

For questions regarding the details or extent of required documentation or testing, and if there are any field problems regarding documentation or testing, please call your District Building Inspector or 415-558-6570.

Before final building inspection is scheduled, documentation of energy compliance "Certificate of Installation, Acceptance, and Verification" and green building "Attachment E" must be completed and signed by the responsible person in charge. **The permit will not be finalized without compliance with the energy inspection requirements.**

#### Energy Inspection Services Contact Information

1. Telephone: (415) 558-6132
2. Fax: (415) 558-6474
3. Email: [dbi.energyinspections@sfgov.org](mailto:dbi.energyinspections@sfgov.org)
4. In person: 3<sup>rd</sup> floor at 1660 Mission St.

Note: We are moving towards a 'paperless' mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Installation, Acceptance, and Verification certificates can be found on the California Energy Commission website at <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>

Information Sheet M-06 provides submittal instructions for the Title-24 installation, verification, and acceptance energy certificates and Green Building Attachment E. M-06 may be found on the SFDBI website at <http://sfdbi.org/information-sheets>

Energy Inspection Services  
1660 Mission Street - San Francisco CA 94103  
Office (415) 558-6132 - FAX (415) 558-6474 - [www.sfgov.org/dbi](http://www.sfgov.org/dbi) (website) Revised 1/23/2020

#### TITLE-24 LOW-RISE RESIDENTIAL ENERGY/GREEN INSPECTION (BUILDING) A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED DRAWING SET

JOB ADDRESS 566-568 6th AVENUE APPLICATION NO. 2021/0806/5930 ADDENDUM NO. \_\_\_\_\_  
ENGINEER/ARCHITECT NAME ALEX SANTOS PHONE NO. 415 497-2668

Ensuring the completion of installation documentation as well as the required acceptance/verification testing is the direct responsibility of the undersigned. Installation documentation must be completed by the contractor performing the installation. Verification testing must be completed by a certified HERS rater. Green Building Attachment E shall be completed as per Administrative Bulletin 093 (AB-093).

In accordance with the requirements of the 2019 California Energy Code, 2019 SFGBC and AB-093, the following documentation is required for the building elements in this project:

#### 1. Installation

##### Addition and Alteration

- CF2R-ADD-02-E Non HERS - Prescriptive Additions Simple (IB53)
- CF2R-ALT-05-E Non HERS - Prescriptive Alterations Simple (IB54)

##### Envelope

- CF2R-ENV-01-E Non HERS - Fenestration Installation (IB1)
- CF2R-ENV-03-E Non HERS - Insulation Installation (IB3)
- CF2R-ENV-04-E Non HERS - Roofing-Radiant Barrier (IB4)
- CF2R-ENV-20-H HERS - Building Envelope Air Leakage Test (IB56)
- CF2R-ENV-21-H HERS - Quality Insulation Installation (QII) - Framing Stage (IB64)
- CF2R-ENV-22-H HERS - Quality Insulation Installation (QII) - Insulation Stage (IB65)

##### Solar Ready

- CF2R-SRA-01-E - Solar Ready Buildings - New Constructions (IB68)
- CF2R-SRA-02-E - Minimum Solar Zone Area Worksheet - New Constructions (IB69)

#### 2. Verification

##### Existing Conditions

- CF3R-EXC-20-H HERS - HERS Verification of Existing Conditions for Residential Alterations (VB47)

##### Envelope

- CF3R-ENV-20-H HERS - Building Envelope Air Leakage Test (VB48)
- CF3R-ENV-21-H HERS - Quality Insulation Installation (QII) - Framing Stage (VB56)
- CF3R-ENV-22-H HERS - Quality Insulation Installation (QII) - Insulation Stage (VB57)

#### 3. Green Building (For New Construction and Major Alterations)

- Green Building Attachment E (GBCT1)

#### Required information:

Prepared by: ALEX SANTOS Date: 04/12/2021  
Engineer/Architect of Record Signature

Fax: \_\_\_\_\_ Email: [alex@altosengineer.com](mailto:alex@altosengineer.com)

Review by: \_\_\_\_\_ Phone: (415) 558-\_\_\_\_\_  
DBI Engineer or Plan Checker

#### APPROVAL (Based on submitted reports)

DATE \_\_\_\_\_ DBI Building Inspector or Energy Inspection Services Staff

QUESTIONS ABOUT TITLE-24 ENERGY INSPECTION SHOULD BE DIRECTED TO:  
Energy Inspection Services (415) 558-6132; or [dbi.energyinspections@sfgov.org](mailto:dbi.energyinspections@sfgov.org); or FAX (415) 558-6474

Revised 1/23/2020



Attachment RE

### NOTICE

#### TITLE-24 LOW-RISE RESIDENTIAL ENERGY INSPECTION REQUIREMENTS (ELECTRICAL)

Please note that Certificates of Installation and/or Acceptance and/or Verification are required for this project, as indicated on this form issued with this permit. Ensuring the accurate completion of this documentation is the direct responsibility of the engineer/architect of record. This documentation is required *in addition* to the called inspections performed by the Department of Building Inspection.

For questions regarding the details or extent of required documentation or testing, and if there are any field problems regarding documentation or testing, please call your District Building Inspector or 415-558-6570.

Before final building inspection is scheduled, documentation of energy compliance "Certificate of Installation, Acceptance, and Verification" must be completed and signed by the responsible person in charge. **The permit will not be finalized without compliance with the energy inspection requirements.**

#### Energy Inspection Services Contact Information

1. Telephone: (415) 558-6132
2. Fax: (415) 558-6474
3. Email: [dbi.energyinspections@sfgov.org](mailto:dbi.energyinspections@sfgov.org)
4. In person: 3<sup>rd</sup> floor at 1660 Mission St.

Note: We are moving towards a 'paperless' mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Installation, Acceptance, and Verification certificates can be found on the California Energy Commission website at <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>

Information Sheet M-06 provides submittal instructions for the Title-24 installation, verification, and acceptance energy certificates. M-06 may be found on the SFDBI website at <http://sfdbi.org/information-sheets>

Energy Inspection Services  
1660 Mission Street - San Francisco CA 94103  
Office (415) 558-6132 - FAX (415) 558-6474 - [www.sfgov.org/dbi](http://www.sfgov.org/dbi) (website) Revised 1/23/2020

#### TITLE-24 LOW-RISE RESIDENTIAL ENERGY INSPECTION (ELECTRICAL) A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED DRAWING SET

JOB ADDRESS 566-568 6th AVENUE APPLICATION NO. 2021/0806/5930 ADDENDUM NO. \_\_\_\_\_  
ENGINEER/ARCHITECT NAME ALEX SANTOS PHONE NO. 415 497-2668

Ensuring the completion of installation documentation as well as the required acceptance/verification testing is the direct responsibility of the undersigned. Installation documentation must be completed by the contractor performing the installation. Verification testing must be completed by a certified HERS rater.

In accordance with the requirements of the 2019 California Energy Code, the following documentation is required for the electrical elements in this project:

#### 1. Installation

##### Electrical

- CF2R-LTG-01-E Lighting - Single Family Dwellings (IE1)
- CF2R-LTG-02-E Lighting - Multi-Family Dwellings (IE2)

##### Solar

- CF2R-PVB-01-E Photovoltaic Systems (IE18)
- CF2R-PVB-02-E Battery Storage Systems (IE19)

#### Required information:

Prepared by: ALEX SANTOS Date: 04/12/2021  
Engineer/Architect of Record Signature

Fax: \_\_\_\_\_ Email: [alex@altosengineer.com](mailto:alex@altosengineer.com)

Review by: \_\_\_\_\_ Phone: (415) 558-\_\_\_\_\_  
DBI Engineer or Plan Checker

#### APPROVAL (Based on submitted reports)

DATE \_\_\_\_\_ DBI Electrical Inspector or Energy Inspection Services Staff

QUESTIONS ABOUT TITLE-24 ENERGY INSPECTION SHOULD BE DIRECTED TO:  
Energy Inspection Services (415) 558-6132; or [dbi.energyinspections@sfgov.org](mailto:dbi.energyinspections@sfgov.org); or FAX (415) 558-6474

Revised 1/23/2020



Attachment RP

### NOTICE

#### TITLE-24 LOW-RISE RESIDENTIAL ENERGY INSPECTION REQUIREMENTS (PLUMBING)

Please note that Certificates of Installation and/or Acceptance and/or Verification are required for this project, as indicated on this form issued with this permit. Ensuring the accurate completion of this documentation is the direct responsibility of the engineer/architect of record. This documentation is required *in addition* to the called inspections performed by the Department of Building Inspection.

For questions regarding the details or extent of required documentation or testing, and if there are any field problems regarding documentation or testing, please call your District Building Inspector or 415-558-6570.

Before final building inspection is scheduled, documentation of energy compliance "Certificate of Installation, Acceptance, and Verification" must be completed and signed by the responsible person in charge. **The permit will not be finalized without compliance with the energy inspection requirements.**

#### Energy Inspection Services Contact Information

1. Telephone: (415) 558-6132
2. Fax: (415) 558-6474
3. Email: [dbi.energyinspections@sfgov.org](mailto:dbi.energyinspections@sfgov.org)
4. In person: 3<sup>rd</sup> floor at 1660 Mission St.

Note: We are moving towards a 'paperless' mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Installation, Acceptance, and Verification certificates can be found on the California Energy Commission website at <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>

Information Sheet M-06 provides submittal instructions for the Title-24 installation, verification, and acceptance energy certificates. M-06 may be found on the SFDBI website at <http://sfdbi.org/information-sheets>

Energy Inspection Services  
1660 Mission Street - San Francisco CA 94103  
Office (415) 558-6132 - FAX (415) 558-6474 - [www.sfgov.org/dbi](http://www.sfgov.org/dbi) (website) Revised 1/23/2020

#### TITLE-24 LOW-RISE RESIDENTIAL ENERGY INSPECTION (PLUMBING) A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED DRAWING SET

JOB ADDRESS 566-568 6th AVENUE APPLICATION NO. 2021/0806/5930 ADDENDUM NO. \_\_\_\_\_  
ENGINEER/ARCHITECT NAME ALEX SANTOS PHONE NO. 415 497-2668

Ensuring the completion of installation documentation as well as the required acceptance/verification testing is the direct responsibility of the undersigned. Installation documentation must be completed by the contractor performing the installation. Verification testing must be completed by a certified HERS rater.

In accordance with the requirements of the 2019 California Energy Code, the following documentation is required for the plumbing work in this project:

#### 1. Installation

##### Plumbing

- CF2R-PLB-01-E DHW Non-HERS - Multifamily Central Hot Water System Distribution (IP6)
- CF2R-PLB-02-E DHW Non-HERS - Single Dwelling Unit Hot Water System Distribution (IP5)
- CF2R-PLB-03-E DHW Non-HERS - Pool and Spa Heating System (IP7)
- CF2R-PLB-21-H DHW HERS - HERS Multifamily Central Hot Water System Distribution (IP9)
- CF2R-PLB-22-H DHW HERS - HERS Single Dwelling Unit Hot Water System Distribution (IP8)

##### Solar

- CF2R-STH-01-E Solar Water Heating System (IP1)

##### Mechanical

- CF2R-MCH-04-E Non HERS - Evaporative coolers (IP2)

#### 2. Verification

- CF3R-PLB-21-H DHW HERS - HERS Multifamily Central Hot Water System Distribution (VP2)
- CF3R-PLB-22-H DHW HERS - HERS Single Dwelling Unit Hot Water System Distribution (VP3)

#### Required information:

Prepared by: ALEX SANTOS Date: 04/12/2021  
Engineer/Architect of Record Signature

Fax: \_\_\_\_\_ Email: [alex@altosengineer.com](mailto:alex@altosengineer.com)

Review by: \_\_\_\_\_ Phone: (415) 558-\_\_\_\_\_  
DBI Engineer or Plan Checker

#### APPROVAL (Based on submitted reports)

DATE \_\_\_\_\_ DBI Plumbing Inspector or Energy Inspection Services Staff

QUESTIONS ABOUT TITLE-24 ENERGY INSPECTION SHOULD BE DIRECTED TO:  
Energy Inspection Services (415) 558-6132; or [dbi.energyinspections@sfgov.org](mailto:dbi.energyinspections@sfgov.org); or FAX (415) 558-6474

Revised 1/23/2020

RESIDENTIAL RENOVATION

SAN FRANCISCO, CALIFORNIA 94118  
566 - 568 6TH AVENUE (BLOCK / LOT: 1548 / 034)



#	DATE	ISSUES & REVISIONS	BY
0	08/23/21	PERMIT SUBMISSION	AS
1	09/02/21	REVISION #1	AS

DRAWN BY: A.S.

SHEET TITLE:

TITLE-24 ENERGY INSPECTIONS

SHEET NUMBER

T4



# GS5: San Francisco Green Building Submittal Form for Residential Alteration + Addition Projects

Form version: March 11, 2020 (For permit applications January 2020 - December 2022)

**INSTRUCTIONS:**

1. Fill out the project information in the Verification box at the right.
2. Submittal must be a minimum of 11" x 17".
3. This form is for permit applications submitted January 2020 through December 2022.

	TITLE	SOURCE OF REQUIREMENT	DESCRIPTION OF REQUIREMENT	OTHER RESIDENTIAL ALTERATIONS + ADDITIONS
<b>RESIDENTIAL</b>	GRADING & PAVING	CALGreen 4.106.3	Show how surface drainage (grading, swales, drains, retention areas) will keep surface water from entering the building.	if applicable
	RODENT PROOFING	CALGreen 4.406.1	Seal around pipe, cable, conduit, and other openings in exterior walls with cement mortar or DBI-approved similar method.	•
	FIREPLACES & WOODSTOVES	CALGreen 4.503.1	Install only direct-vent or sealed-combustion, EPA Phase II-compliant appliances.	•
	CAPILLARY BREAK, SLAB ON GRADE	CALGreen 4.505.2	Slab on grade foundation requiring vapor retarder also requires a capillary break such as: 4 inches of base 1/2-inch aggregate under retarder; slab design specified by licensed professional.	•
	MOISTURE CONTENT	CALGreen 4.505.3	Wall + floor <19% moisture content before enclosure.	•
	BATHROOM EXHAUST	CALGreen 4.506.1	Must be ENERGY STAR compliant, ducted to building exterior, and its humidistat shall be capable of adjusting between <50% to >80% (humidistat may be separate component).	•
<b>MATERIAL EMISSIONS</b>	LOW-EMITTING MATERIALS	CALGreen 4.504.2.1-5, SFGBC 4.103.3.2	Use products that comply with the emission limit requirements of 4.504.2.1-5, 5.504.4.1-6 for adhesives, sealants, paints, coatings, carpet systems including cushions and adhesives, resilient flooring (80% of area), and composite wood products.	•
<b>WATER</b>	INDOOR WATER USE REDUCTION	CALGreen 4.303.1, SF Housing Code sec.12A10	Meet flush/flow requirements for: toilets (1.28 gpf); urinals (0.125 gpf wall, 0.5 gpf floor); showerheads (1.8 gpm); lavatories (1.2 gpm private, 0.5 gpm public/common); kitchen faucets (1.8 gpm); wash fountains (1.8 gpm); metering faucets (0.2 gpc); food waste disposers (1 gpm/8 gpm). Residential major improvement projects must upgrade all non-compliant fixtures per SF Housing Code sec.12A10.	•
	WATER-EFFICIENT IRRIGATION	Administrative Code ch.63	If modified landscape area is ≥1,000 sq.ft., use low water use plants or climate appropriate plants, restrict turf areas and comply with Model Water Efficient Landscape Ordinance restrictions by calculated ETAF of ≤.55 or by prescriptive compliance for projects with ≤2,500 sq.ft. of landscape area.	•
<b>ENERGY</b>	ENERGY EFFICIENCY	CA Energy Code	Comply with all provisions of the CA Energy Code.	•
<b>PARKING</b>	BICYCLE PARKING	Planning Code sec.155.1-2	Provide short- and long-term bike parking to meet requirements of SF Planning Code sec.155.1-2.	if applicable
<b>RESOURCE RECOVERY</b>	RECYCLING BY OCCUPANTS	SF Building Code 106A.3.3, CalGreen 5.410.1, AB-088	Provide adequate space and equal access for storage, collection, and loading of compostable, recyclable and landfill materials.	•
	CONSTRUCTION & DEMOLITION (C&D) DISCARDS MANAGEMENT	Environment Code ch. 14 SFGBC 4.103.2.3 CalGreen 4.408.2, 4.408.5	Construction Discards Management - 100% of mixed debris must be taken by a Registered Transporter to a Registered facility and processed for recycling. Demonstrate ≥65% recovery. See www.dbi.org for details.	•
<b>HVAC</b>	HVAC INSTALLER QUALS	CALGreen 4.702.1	Installers must be trained in best practices.	•
	HVAC DESIGN	CALGreen 4.507.2	HVAC shall be designed to ACCA Manual J, D, and S.	•
<b>GOOD NEIGHBOR</b>	BIRD-SAFE BUILDINGS	Planning Code sec.139	Glass facades and bird hazards facing and/or near Urban Bird Refuges may need to treat their glass for opacity.	•
	TOBACCO SMOKE CONTROL	Health Code art.19F	Prohibit smoking within 10 feet of building entries, air intakes, and operable windows and enclosed common areas.	•
<b>POLLUTION PREVENTION</b>	STORMWATER CONTROL PLAN	Public Works Code art.4.2 sec.147	Projects disturbing ≥5,000 sq.ft. in combined or separate sewer areas, or replacing ≥2,500 impervious sq.ft. in separate sewer area, must implement a Stormwater Control Plan meeting SFPUC Stormwater Management Requirements.	if project extends outside envelope
	CONSTRUCTION SITE RUNOFF	Public Works Code art.4.2 sec.146	Provide a construction site Stormwater Pollution Prevention Plan and implement SFPUC Best Management Practices.	if project extends outside envelope
<b>INDOOR AIR QUALITY</b>	AIR FILTRATION (CONSTRUCTION)	CALGreen 4.504.1	Seal permanent HVAC ducts/equipment stored onsite before installation.	•

adds any amount of conditioned area, volume, or size

**VERIFICATION**

Indicate below who is responsible for ensuring green building requirements are met. Projects that increase total conditioned floor area by ≥1,000 sq. ft. are required to have a Green Building Compliance Professional of Record as described in Administrative Bulletin 93. For projects that increase total conditioned floor area by <1,000 sq. ft., the applicant or design professional may sign below, and no license or special qualifications are required. FINAL COMPLIANCE VERIFICATION form will be required prior to Certificate of Completion

**Residential Addition & Alterations**

PROJECT NAME  
**1548/034**

BLOCK/LOT  
**566-568 6th Avenue**

ADDRESS  
**Residential Duplex (R-2)**

PRIMARY OCCUPANCY  
**2630 SQ.FT.**

GROSS BUILDING AREA  
**1185 SQ.FT.**

INCREASE IN CONDITIONED FLOOR AREA

*I have been retained by the project sponsor to verify that approved construction documents and construction fulfill the requirements of San Francisco Green Building Code. It is my professional opinion that the requirements of the San Francisco Green Building Code will be met. I will notify the Department of Building Inspection if the project will, for any reason, not substantially comply with these requirements, if I am no longer the Green Building Compliance Professional of Record for the project, or if I am otherwise no longer responsible for assuring the compliance of the project with the San Francisco Green Building Code.*

LICENSED PROFESSIONAL (sign & date)  
May be signed by applicant when <1,000 sq. ft. is added.  
**AFFIX STAMP BELOW:**

**Projects that increase total conditioned floor area by ≥1,000 sq.ft.: Green Building Compliance Professional of Record will verify compliance.**

**John Tao (510)967-1299**  
GREEN BUILDING COMPLIANCE PROFESSIONAL  
(name & contact phone #)  
**Basaltic, Inc.**

FIRM

I am a LEED Accredited Professional

I am a GreenPoint Rater

I am an ICC Certified CALGreen Inspector

**9/22/2021**

GREEN BUILDING COMPLIANCE PROFESSIONAL  
(sign & date)

Signature by a professional holding at least one of the above certifications is required. If the Licensed Professional does not hold a certification for green design and/or inspection, this section may be completed by another party who will verify applicable green building requirements are met.

**FOR YOUR INFORMATION: INDOOR WATER EFFICIENCY**

Indoor Water Efficiency

Each fixture must not exceed CALGreen 4.303 maximum flow rates:

FIXTURE TYPE	MAXIMUM FIXTURE FLOW RATE
Showerheads <sup>2</sup>	1.8 gpm @ 80 psi
Lavatory Faucets: residential	1.2 gpm @ 60 psi
Kitchen Faucets	1.8 gpm @ 60 psi default
Wash Fountains	1.8 gpm / 20 [rim space (inches) @ 60 psi]
Metering Faucets	.20 gallons per cycle
Tank-type water closets	1.28 gallons / flush <sup>1</sup> and EPA WaterSense Certified
Flushometer valve water closets	1.28 gallons / flush <sup>1</sup>
Urinals	Wall mount: 0.125 gallons / flush Floor mount: 0.5 gallons / flush

**NOTES:**

1. For dual flush toilets, effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. The referenced standard is ASME A112.19.14 and USEPA WaterSense Tank-Type High Efficiency Toilet Specification – 1.28 gal (4.8L)
2. The combined flow rate of all showerheads in one shower stall shall not exceed the maximum flow rate for one showerhead, or the shower shall be designed to allow only one showerhead to be in operation at a time (CALGreen 5.303.2.1)

Water Efficiency of Existing Non-Compliant Fixtures

All fixtures that are not compliant with the San Francisco Commercial Water Conservation Ordinance that serve or are located within the project area must be replaced with fixtures or fittings meeting the maximum flow rates and standards referenced above. For more information, see the Commercial Water Conservation Program Brochure, available at SFDBI.org.

**NON-COMPLIANT PLUMBING FIXTURES INCLUDE:**

1. Any toilet manufactured to use more than 1.6 gallons/flush
2. Any urinal manufactured to use more than 1 gallon/flush
3. Any showerhead manufactured to have a flow capacity of more than 2.5 gpm
4. Any interior faucet that emits more than 2.2 gpm

Exceptions to this requirement are limited to situations where replacement of fixture(s) would detract from the historic integrity of the building, as determined by the Department of Building Inspection pursuant to San Francisco Building Code Chapter 13A.