ROOF SNOW: 40 PSF

WIND: V3S =115 MPH, EXP C, Kzt = 1.0

SEISMIC: Ss=0.332, S1=0.083, Sds= 0.340, Sd1= 0.133, le=1.0

SEISMIC SOIL SITE CLASS D SEISMIC DESIGN CATEGORY C

### PARTITION: 5 PSF (OUT OF PLANE)

THE INTERNATIONAL BUILDING CODE AND STANDARDS SHALL GOVERN ALL MATERIALS AND WORKMANSHIP.

ALL TEMPORARY SHORING OR BRACING IS THE RESPONSIBILITY OF THE CONTRACTOR. THE DRAWINGS REFLECT THE FINAL FINISHED CONDITION OF THE

THESE DRAWINGS ARE NOT INTENDED TO SHOW EACH AND EVERY CONDITION, BUT INDICATE THE GENERAL CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY DETAILED, SIMILAR CONDITIONS SHALL BE USED AT THE DISCRETION AND APPROVAL OF THE ARCHITECT AND ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR ALL JOB SITE SAFETY AS WELL AS ALL MEANS, METHODS, AND SEQUENCES OF CONSTRUCTION TO SAFELY PERFORM THE WORK. AUE ENGINEERS HAS NO EXPERTISE IN NOR HAS BEEN RETAINED TO PROVIDE REVIEW OF THE CONTRACTORS SAFETY PRECAUTIONS AS THEY RELATE TO THE CONSTRUCTION OF THIS PROJECT

IF ANY ERROR OR OMISSION APPEARS IN THESE DRAWINGS, SPECIFICATIONS, OR OTHER DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF SUCH OMISSION OR ERROR BEFORE PROCEEDING WITH THE WORK, OR ACCEPT FULL RESPONSIBILITY FOR THE COST TO RECTIFY SAME. VERIFY AND COORDINATE OPENINGS IN FLOORS, WALLS AND ROOF WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

THE ARCHITECTURAL DRAWINGS SHALL BE REFERENCED FOR WALLS, FINISHES AND DIMENSIONS. DIMENSIONS PROVIDED ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY AND SHALL BE VERIFIED BY THE ARCHITECTURAL DRAWINGS.

DRAWINGS ARE NOT TO BE SCALED.

SHOP DRAWINGS ARE SPECIFICALLY REQUIRED FOR THE FOLLOWING ITEMS.

- REINFORCING STEEL STRUCTURAL STEEL
- SUBMIT MIX DESIGN FOR REVIEW

THESE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ARCHITECT FOR REVIEW. THE REVIEW WILL BE FOR THE DESIGN INTENT ONLY. THE SHOP DRAWINGS SHALL BE SUBMITTED BEFORE PROCEEDING WITH FABRICATION AND SHALL ALLOW TWO WEEKS MINIMUM FOR REVIEW. WE WILL REVIEW ONLY ONE REPRODUCIBLE SET AND ONE COPY TO BE RETAINED BY AUE.

DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH HAVE NOT BEEN PERMITTED UNDER THE BASE BUILDING APPLICATION AND WHICH ARE REQUIRED TO BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL. SUBMITTALS SHALL NOT BE INSTALLED PRIOR TO APPROVAL BY THE BUILDING OFFICIAL ALL SUBMITTALS SHALL BEAR THE STAMP OF A REGISTERED STRUCTURAL WASHINGTON STATE PROFESSIONAL ENGINEER. SUBMITTALS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD PRIOR TO THE SUBMISSION TO BUILDING OFFICIAL. SUBMITTAL WILL BE REVIEWED FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT ONLY. ALL NECESSARY ANCHORAGE, BRACING, TIES AND CONNECTION MATERIAL SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THESE ELEMENTS INCLUDE BUT ARE NOT LIMITED TO:

- EXTERIOR ROOF AND WALL CLADDING SYSTEMS INCLUDING CURTAINWALL, PRECAST CONCRETE PANELS, PRE-ENGINEERED BRICK PANELS. VENEER
- ANCHORAGE SYSTEM EXTERIOR NON-BEARING COLD FORMED STEEL FRAMING
- INTERIOR NON-BEARING COLD FORMED STEEL FRAMING INCLUDING SUSPENDED CEILINGS AND SOFFITS STEEL STAIRS AND RAILINGS
- HANDRAILS AND GUARD RAILS TEMPORARY SHORING SYSTEMS
- FLAGPOLES, ANTENNAS, AND SATELLITE DISH MECHANICAL, ELECTRICAL, PLUMBING, AND SPRINKLER SUPPORT
- EQUIPMENT ANCHORAGE

## **FOOTING AND FOUNDATION LOADING:**

SOILS REPORT: NA

ALLOWABLE SOIL BEARING PRESSURE: -------------------1500 PSF (PER EXISTING DRAWINGS) SPECIFIED SOIL SITE CLASS: -----D

ALL SOIL CRITERIA MUST BE VERIFIED IN THE FIELD. ALL DATA LISTED WAS ASSUMED PER INFORMATION PROVIDED.

ALL FOOTING DIMENSIONS ARE MINIMUMS.

ALL FOOTINGS SHALL REST ON COMPACTED STRUCTURAL FILL OR UNDISTURBED EARTH

SUBGRADE WALLS ARE DESIGNED ASSUMING A "DRAINED" CONDITION, SEE CIVIL AND MECHANICAL DRAWINGS FOR SUBGRADE DRAINAGE SYSTEM. SUBGRADE WALLS SHALL ATTAIN THEIR DESIGN STRENGTH PRIOR TO PLACING BACKFILL. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACES FOR WALLS IF BACKFILL IS PLACED BEFORE WALLS AND SLABS ACHIEVE THEIR DESIGN STRENGTH OR IF WALL RELIES ON UPPER SLAB FOR SUPPORT.

# **REINFORCED CONCRETE:**

MINIMUM CONCRETE PROPERTIES: ALL CONCRETE EXPOSURE CATEGORIES PER ACI 318 TABLE 19.3.1.

CONCRETE WALLS & FOOTINGS: FXPOSURE: F1/F2

NORMAL WEIGHT CONCRETE

28 DAY STRENGTH, f'c = 4,500 psi

- INTERIOR SLABS ON GRADE: EXPOSURE: F0
- 28 DAY STRENGTH, f'c = 3,000 psi NORMAL WEIGHT CONCRETE
- SLABS ON METAL DECK: EXPOSURE: F0 28 DAY STRENGTH, f'c = 3,000 ps
- NORMAL WEIGHT CONCRETE

**GENERAL REQUIREMENTS:** 

ALL CONCRETE WITH EXPOSURES EXCEEDING F0 SHALL HAVE AIR ENTRAINMENT PER ACI 318 TABLE 19.3.3.1 OR AS NOTED: - CONCRETE EXPOSED (F1) TO MOISTURE AND FREEZING/THAWING SHALL HAVE 5% AIR ENTRAINMENT +/-1.5% - CONCRETE EXPOSED (F2/F3) TO CONTINUOUS MOISTURE OR SOIL AND FREEZING/THAWING SHALL HAVE 6% AIR ENTRAINMENT +/-1.5%

CONCRETE SLUMP SHALL BE 3" MAX (A TARGET SLUMP OF 5" FOR POST TENSIONED SLABS WITH A MAXIMUM OF 6") PRIOR TO ADDITION OF ADMIXTURES AND 8"

# CALCIUM CHLORIDE MAY NOT BE USED.

MAX SLUMP AFTER ADDITION.

NOMINAL AGGREGATE SIZE SHALL BE LIMITED TO 3/4" MAXIMUM, U.N.O. OR AS APPROVED BY THE ENGINEER

ALL CONCRETE SHALL HAVE 5 1/2 SACKS MINIMUM OF CEMENT PER CUBIC YARD AND A MAXIMUM WATER/CEMENT RATIO =0.45.

FLYASH MAY BE USED TO REPLACE UP TO A MAXIMUM OF 25% OF CEMENT BY WEIGHT.

CONCRETE SUPPLIER SHALL COORDINATE EXPECTED WATER VAPOR TRANSMISSION RATES DURING CURING OF THE CONCRETE WITH CONTRACTOR AND ARCHITECT TO ALLOW FOR FLOORING/ROOFING TO BE INSTALLED.

FOR ALL AUGER CAST PILING, PROVIDE NOT LESS THAN 9 SACKS OF CEMENT PER CUBIC YARD OF GROUT.

ELECTRICAL CONDUIT PLACED IN CONCRETE SHALL BE RIGID STEEL OR FLEXIBLE PLASTIC CONDUIT, NO ALUMINUM IS ALLOWED. FOR CONDUIT PLACED IN SLABS THE MAXIMUM OUTSIDE DIAMETER SHALL NOT EXCEED 1/6 TIMES SLAB THICKNESS AND IT SHALL BE LOCATED IN THE MIDDLE THIRD. NO MORE THAN ONE LAYER OF CONDUIT MAY BE USED, ANCHOR CONDUIT TO A MINIMUM OF #4 @ 12" O.C. PERPENDICULAR TO CONDUIT AND EXTENDING 12" MINIMUM BEYOND. FOR CONDUIT PLACED IN CONCRETE OVER METAL DECKING, CONDUIT MAY RUN IN THE VALLEY OF THE DECK FLUTES ONLY WITH A MINIMUM OF 1" COVER ABOVE AND NO MORE THAN ONE CONDUIT PER DECK FLUTE. CONDUIT SHALL NOT BE LOCATED IN FOOTINGS, BEAMS OR GIRDERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

NON-SHRINK GROUT FOR BASE PLATES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI. GROUT SHALL BE AN APPROVED CEMENTITIOUS MATERIAL WITH NATURAL AGGREGATES AND INSTALLED PER THE MANUFACTURES DIRECTIONS. IF FLOWABLE GROUT MIX IS NOT ADEQUATE FOR COVERAGE AN EPOXY

CONCRETE PLACED DURING FREEZING OR NEAR-FREEZING WEATHER SHALL COMPLY WITH REQUIREMENTS OF ACI 318-26.5.4. CONCRETE PLACED DURING HOT WEATHER SHALL COMPLY WITH ACI 318-26.5.5.

CONCRETE CLEAR COVER FOR REINFORCING STEEL IS AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE: 3" FORMED SURFACES IN DIRECT CONTACT WITH EARTH OR WEATHER: 2" FOR #6-#18, 1-1/2" FOR UP TO #5 BAR SLABS, WALLS AND JOISTS NOT EXPOSED TO EARTH OR WEATHER: 1-1/2" FOR #14-#18, 3/4" FOR UP TO #5 BAR

REINFORCING STEEL:

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STANDARDS FOR ALL REINFORCING STEEL: ASTM A615 GRADE 60 EPOXY COATED REINFORCING STEEL: ASTM A775 GRADE 60.

BEAMS AND COLUMNS NOT EXPOSED TO EARTH OR WEATHER: 1-1/2"

 ${\tt DETAILING~(BENDS,~HOOKS,~SPLAYS,~ETC)~SHALL~BE~IN~ACCORDANCE~WITH~ACI~315~AND~318~(LATEST~EDITION)}.$ 

MINIMUM LAP AT ALL CONTINUOUS REINFORCEMENT: 30 BAR DIAMETERS OR 1'-6" U.N.O., SEE TABLE FOR REQUIRED LENGTHS

CORNER BARS SHALL BE PROVIDED AT ALL CORNERS AND WALL OR FOOTING INTERSECTIONS. CORNER BAR LAPS SHALL BE A MINIMUM OF 30 BAR DIAMETERS OR

ALL OPENINGS IN CONCRETE SLABS, WALLS, ETC. MUST HAVE (2) #5 MIN. U.N.O. TRIM BARS ALL AROUND THE OPENING. TRIM BARS MUST EXTEND 2'-6" PAST EVERY

FIELD BENDING OF BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE IS NOT ALLOWED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

STANDARD FOR ALL WELDED WIRE MESH: ASTM A-185. LAP ALL EDGES 1 1/2 MESH MINIMUM.

ALL REINFORCING STEEL SHALL BE FREE OF GREASE, OIL, OR MUD, ETC. AT THE TIME OF CONCRETE PLACEMENT. INTENDED COATINGS SHALL BE PER PLANS OR

ALL BOLTS SHALL BE TIED IN PLACE SO THAT THEY ARE HELD IN THE CORRECT FINAL POSITION THROUGHOUT THE CONCRETE PLACEMENT, DO NOT "WET STICK"

#### WELDING REQUIREMENTS: STANDARDS FOR WELDING OF REINFORCING BARS: ANSI/AWS D1.4-98.

REINFORCEMENT SHALL NOT BE WELDED UNTIL A CHEMICAL ANALYSIS SUFFICIENT TO DETERMINE THE CARBON EQUIVALENT IS PERFORMED. THE CARBON EQUIVALENT OF REINFORCING STEEL BARS SHALL BE CALCULATED FROM THE CHEMICAL COMPOSITION AS SHOWN IN THE MILL TEST REPORT. IF MILL TEST REPORTS ARE NOT AVAILABLE. A CHEMICAL ANALYSIS SHALL BE MADE OF BARS REPRESENTATIVE OF THE BARS TO BE WELDED. THE CARBON EQUIVALENT (C.E.) SHALL NOT EXCEED .55. REINFORCEMENTS MEETING ASTM A706 DEEMED TO MEET THE WELDABILITY REQUIREMENTS MAY BE USED IN LIEU OF TESTING. SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING.

#### **STRUCTURAL STEEL:**

- W & WT SHAPES: ASTM A992 (Fy=50 ksi). • SQUARE OR RECTANGULAR STRUCTURAL TUBE (HSS): ASTM A500 GRADE C (Fy = 50 ksi)
- ROUND STRUCTURAL TUBE (HSS): ASTM A500 GRADE C (Fy = 46 ksi)
- PIPE MEMBERS: ASTM A53 GRADE B (Fy = 35 ksi) PLATES, CHANNELS, ANGLES, & RODS: ASTM A36 (Fy = 36 ksi)
- PLATES (NOTED AS GRADE 50 ON DRAWINGS): ASTM A572 (Fy = 50 ksi)
- ALL STAINLESS STEEL: TYPE 316L (Fy = 30 ksi). CONNECTION BOLTS: ASTM F3125 (GRADE A325-N-SC)
- INSTALL ALL CONNECTION BOLTS PER CRITERIA FOR SLIP CRITICAL CONNECTIONS W/ CLASS A FAYING SURFACES, U.N.O. • ANCHOR BOLTS OR ANCHORS RODS: ASTM F1554 (GRADE 36) (Fy = 36 ksi) FURNISH ANCHOR RODS WITH MATCHING DOUBLE HEAVY HEX NUTS AT THE END EMBEDDED IN CONCRETE

CAST-IN HEADED BOLTS SHALL BE PLACED ACCURATELY INTO FINAL POSITION PRIOR TO POURING CONCRETE. ADDING BOLTS AFTER A POUR OR 'WET STICKING' IS

PROVIDE WASHERS FOR ALL BOLTS AS REQUIRED BY AISC. AS A MINIMUM PROVIDE STANDARD CUT WASHERS UNDER ALL NUTS.

ONE COAT OF APPROVED SHOP PAINT MINIMUM TO ALL STEEL NOT EMBEDDED IN CONCRETE. FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC (ASD) SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS. STEEL NOTED AS GALVANIZED SHALL BE HOT-DIP GALVANIZED UNO.

CONTRACTOR SHALL DESIGN AND SUPPLY ALL ADDITIONAL MISCELLANEOUS METALS THAT ARE INDICATED IN THE ARCHITECTURAL DRAWINGS OR THOSE METALS WHICH ARE FOUND TO BE NECESSARY TO SUPPORT THE ARCHITECTURAL FINISHES OR OTHER BUILDING SYSTEMS. ALL FRAMING AND CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL NOT RESULT IN ECCENTRIC LOADS BEING APPLIED TO THE PRIMARY STRUCTURE OR LATERAL LOADS BEING APPLIED TO THE BOTTOM FLANGE OF STEEL BEAMS. SUBMIT CALCULATIONS STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT ALONG WITH SHOP DRAWINGS NOTING THE LOADING IMPOSED ON THE PRIMARY STRUCTURE.

#### WELDING REQUIREMENTS ALL WELDING SHALL MEET AWS CODES FOR ARC WELDING IN BUILDING CONSTRUCTION.

EXCEPT AS SPECIFIED IN THE SPECIAL PROCEDURE OF THIS SECTION, ELECTRODES MAY BE E70 (70 KSI MINIMUM). ELECTRODES MUST BE KEPT DRY AT ALL TIMES.

ALL WELDING OF STAINLESS STEEL SHALL USE E309 ELECTRODES WITH A GMAC PROCESS

MINIMUM WELDS SHALL BE 3/16" OR AS NOTED IN SECTION J.2b OF AISC (WHICHEVER IS LARGER)

FIELD AND SHOP WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

MASONRY INSTALLATION: U.N.O., INSTALLATION SHALL BE IN GROUTED CELLS ONLY. IF EMBEDMENT MUST BE PROVIDED IN AN UN-GROUTED CELL, NEW GROUT SHALL BE ADDED AT THAT CELL EXTENDING TO THE HORIZONTAL BOND BEAM BELOW. ONE EMBEDDED ITEM ONLY PER GROUTED CELL IS ALLOWED AND NO EMBEDDED ITEMS ARE ALLOWED WITHIN 8" OF A FREE EDGE. (INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARD INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM.)

MANUFACTURER'S RECOMMENDATIONS AND ICC/IAPMO EVALUATION REPORT SHALL BE FOLLOWED DURING THE PREPARATION AND INSTALLATION OF ALL GROUTED BOLTS, RODS AND REINFORCING BARS.

NO REINFORCING SHALL BE CUT TO INSTALL ANCHORS. DEFECTIVE OR ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT THAT AS A MINIMUM MATCHES THE ADJACENT CONCRETE/MASONRY GROUT STRENGTH.

## ADHESIVE MASONRY ANCHORS:

 GROUTED MASONRY: DEWALT AC100+ GOLD (ICC ESR-3200, ESR-3200 LABC) OR APPROVED EQUAL UN-GROUTED MASONRY: DEWALT AC100+ GOLD W/ SCREEN TUBE (ICC ESR-3200, ESR-3200 LABC) OR APPROVED EQUAL UNREINFORCED MASONRY: DEWALT AC100+ GOLD W/ SCREEN TUBE (ICC ESR-4105, ESR-4105 LABC) OR APPROVED EQUAL

- GROUTED MASONRY: DEWALT POWER-STUD+ SD1 (ICC ESR-2966, ESR-2966 LABC) OR APPROVED EQUAL - GROUTED MASONRY: DEWALT SCREW-BOLT+ (ICC ESR-4042, ESR-4042 LABC) OR APPROVED EQUAL

## - DEWALT PURE110+ (ICC ESR-3298, ESR-3298 LABC) OR APPROVED EQUAL

- DEWALT POWER-STUD+ SD2 (ICC ESR-2502, ESR-2502 LABC) OR APPROVED EQUAL

DEWALT SCREW-BOLT+ (ICC ESR-3889, ESR-3889 LABC)) OR APPROVED EQUAL

INSPECTED FOR CONFORMANCE WITH THE APPLICABLE ICC/IAPMO EVALUATION REPORT

AT CONCRETE METAL DECK SUBSTRATES, X-P PAF'S SHALL BE INSTALLED AS SPECIFIED PER PLAN.

# WHERE SPECIAL INSPECTIONS ARE REQUIRED PER THE ANCHOR ICC/IAPMO EVALUATION REPORT, INSPECTIONS SHOULD BE AS FOLLOWS:

ENGINEER OF RECORD FOR REVIEW AND SHALL BE BROUGHT INTO COMPLIANCE EITHER THRU TESTING OR REINSTALLATION

1) FOR ALL ANCHORS PRIOR TO CONCEALMENT, VERIFY: ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR SPACING AND EDGE DISTANCE

2) FOR EACH ANCHOR TYPE AND SIZE, THE INSPECTOR SHALL BE ONSITE TO CONTINUOUSLY INSPECT A MINIMUM OF (10) ANCHORS INSTALLED BY EACH INSTALLER FOR CONFORMANCE WITH THE APPLICABLE ICC/IAPMO EVALUATION REPORT.

IF THE TOTAL NUMBER OF ANCHORS INSTALLED BY EACH INSTALLER IS LESS THAN (10) THEN ALL ANCHORS INSTALLED BY EACH INSTALLER SHALL BE

PROVIDED ALL ANCHORS ARE INSTALLED CORRECTLY PER MANUFACTURER'S INSTRUCTIONS, PROVIDE PERIODIC INSPECTION ON A MINIMUM OF 10 PERCENT OF THE NEXT 1000 ANCHORS BY EACH INSTALLER AND A MINIMUM OF 5 PERCENT OF THE REMAINING ANCHORS BY EACH INSTALLER. INSPECTIONS SHOULD OCCUR ONCE A WEEK AT A RANDOM TIME WHILE ANCHOR INSTALLATION IS ONGOING. ANY NON-COMPLIANCE ISSUES SHALL RESET THE INSPECTION REQUIREMENTS TO THE BEGINNING OF THIS SECTION. ALL NON-COMPLIANT ANCHORS SHALL BE BROUGHT TO THE ATTENTION OF THE

3) FREQUENCY OF TESTING BEYOND THOSE LISTED IN ITEM 2 SHALL BE PER THE (ICC/IAPMO EVALUATION REPORT REQUIREMENTS) (SECTION 1901.3.4 OR 1910A.5 OF THE CBC).

4) THE SPECIAL INSPECTOR SHALL PROVIDE DOCUMENTATION AT THE END OF ANCHOR INSTALLATIONS STATING THE MINIMUM NUMBER OF ANCHORS WERE INSPECTED.

# **POWDER ACTUATED FASTENERS:**

HILTI X-U (POWDER ACTUATED FASTENER):

MANUFACTURERS RECOMMENDATIONS AND ICC REPORTS SHALL BE FOLLOWED DURING THE PREPARATIONS AND INSTALLATION OF ALL PAF'S. ALL REINFORCEMENT IN CONCRETE MUST BE LOCATED PRIOR TO INSTALLATION TO PREVENT DAMAGE DURING INSTALLATION, WASHERS ARE REQUIRED WHEN PAF'S ARE USED WITH WOOD MEMBERS.

WHERE X-U PAF'S ARE SPECIFIED PER PLAN 0.157" DIAM. HILTI X-U ## PAF'S (ESR-2269, LARR 25675) SHALL BE USED OR APPROVED EQUAL.

AT CONCRETE SUBSTRATES, X-U PAF'S SHALL BE INSTALLED IN THE FOLLOWING MANNER UNO. 1-1/4" MINIMUM PAF EMBEDMENT. 4" MINIMUM SPACING BETWEEN PAF'S. 3" MINIMUM CONCRETE EDGE DISTANCE. MINIMUM CONCRETE SUBSTRATE THICKNESS EQUAL TO 3X THE EMBEDMENT DEPTH OF THE FASTENER.

AT CONCRETE METAL DECK SUBSTRATES, X-U PAF'S SHALL BE INSTALLED AS SPECIFIED PER PLAN. AT STRUCTURAL STEEL SUBSTRATES, X-U PAF'S SHALL BE INSTALLED IN THE FOLLOWING MANNER UNO. AT STEEL SUBSTRATES WITH A THICKNESS LESS THAN 1/2" PROVIDE FULL EMBED OF PAF TO STEEL (POINT OF FASTENER TO PENETRATE THROUGH STEEL BASE MATERIAL). AT STEEL SUBSTRATES WITH A THICKNESS GREATER THAN OR EQUAL TO 1/2" PROVIDE MIN 1/2" POINT PENETRATION OF PAF TO STEEL. 1" MINIMUM SPACING BETWEEN PAF'S. 1/2" MINIMUM STEEL EDGE

HILTI X-P (POWER ACTUATED FASTENER) WHERE X-P PAF'S ARE SPECIFIED PER PLAN 0.118" DIAM. HILTI X-P ## G3 (GAS DRIVEN) OR 0.118" DIAM. HILTI X-P ## B3 (ELECTRI-MECHANICALLY DRIVEN) PAF'S

(ESR-1752, LARR 25662) SHALL BE USED OR APPROVED EQUAL. AT CONCRETE SUBSTRATES, X-P PAF'S SHALL BE INSTALLED IN THE FOLLOWING MANNER UNO. 5/8" PAF EMBEDMENT. 4" MINIMUM SPACING BETWEEN PAF'S. 3" MINIMUM CONCRETE EDGE DISTANCE. MINIMUM CONCRETE SUBSTRATE THICKNESS EQUAL TO 3X THE EMBEDMENT DEPTH OF THE FASTENER.

AT STRUCTURAL STEEL SUBSTRATES, X-P PAF'S SHALL BE INSTALLED IN THE FOLLOWING MANNER UNO. AT STEEL SUBSTRATES WITH A THICKNESS LESS THAN OR EQUAL TO 3/8" PROVIDE FULL EMBED. OF PAF TO STEEL (POINT OF FASTENER TO PENETRATE THROUGH STEEL BASE MATERIAL). AT STEEL SUBSTRATES WITH A THICKNESS GREATER THAN 3/8" X-P PAF'S ARE NOT PERMITTED FOR INSTALLATION. 1" MINIMUM SPACING BETWEEN PAF'S. 1/2" MINIMUM STEEL EDGE DISTANCE.

# REINFORCED CMU MASONRY:

MASONRY COMPRESSIVE STRENGTH f'm --------- 2,500 PSI (AT 28 DAYS). CMU SHALL BE MEDIUM WEIGHT AND SHALL CONFORM TO ASTM C90, TYPE 1.

TYPE 'S' MORTAR (ASTM C-270) HAVING MIN. COMPRESSIVE STRENGTH OF 1,800 PSI AT 28 DAYS IS REQUIRED.

# RUNNING BOND IS REQUIRED U.N.O.

VERIFICATION OF COMPRESSIVE STRENGTH OF MASONRY IS REQUIRED BY PRISM TESTING PRIOR TO AND DURING CONSTRUCTION AT LEVEL " B / C" QUALITY

# ASSURANCE PER TMS 402/602-13.

ALL CELLS ARE TO BE GROUTED SOLID, U.N.O.

IF SPECIFIED, 'PARTIAL GROUTING' SPECIFIES THAT ONLY CELLS WITH REINFORCEMENT ARE TO BE GROUTED.

PROVIDE HORIZONTAL BOND BEAMS WITH TWO #5 AT SPACING INDICATED ON PLANS BUT NOT EXCEEDING 32" O.C.

FILL CELLS WITH GROUT (ASTM C-476) HAVING MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI, IN LIFTS NOT EXCEEDING 5'-4" IN HEIGHT

REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM A615, GRADE 60 (fy=60,000 psi). ALL REINFORCEMENT SHALL BE IN PLACE PRIOR TO GROUTING WITH VERTICAL BARS HELD AT TOP, BOTTOM AND 192 DIAMETERS MAX. ON CENTERS.

CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR MASONRY WALLS, AS REQUIRED, UNTIL CONNECTIONS TO FLOOR AND/OR ROOF DIAPHRAGMS ARE COMPLETED AND WALL HAS REACHED DESIGN STRENGTH.

MINIMUM VERTICAL STEEL SHALL BE #5 @ 32" O.C. PROVIDE TWO #5 FULL HEIGHT EACH SIDE OF ALL OPENINGS AND AT DISCONTINUOUS ENDS.

PROVIDE BOND BEAMS AT ALL FLOOR & ROOF LINES AND AT THE TOP OF THE WALL. ALSO PROVIDE A 16" DEEP BOND BEAM WITH TWO #5 HORIZONTALLY (BOTTOM) OVER ALL WALL OPENINGS (EXTEND BOND BEAMS 2'-0" PAST THE OPENING ON EACH SIDE AT PARTIAL GROUTED WALLS.

ALL HORIZONTAL BARS SHALL BE PLACED IN BOND BEAM OR LINTEL BEAM UNITS. PROVIDE CORNER BARS TO MATCH THE WALL HORIZONTAL REINFORCEMENT AT

ALL EMBEDDED ITEMS SHALL BE GROUTED SOLID IN CELLS. SEE THE SCHEDULE FOR REQUIRED DEVELOPMENT AND LAP LENGTHS FOR ALL REINFORCING STEEL.

COLD WEATHER CONSTRUCTION PROVISIONS SHALL BE IMPLEMENTED WHEN AMBIENT TEMPERATURE FALLS BELOW 40 DEGREES FAHRENHEIT PER TMS 402/602-13. HOT WEATHER CONSTRUCTION PER TMS 402/602-13SHALL BE IMPLEMENTED WHEN AMBIENT AIR TEMPERATURE EXCEEDS 100 DEGREES FAHRENHEIT

CONDUITS. PIPES AND SLEEVES SHALL NOT BE PLACED IN MASONRY CONSTRUCTION UNLESS SPECIFICALLY APPROVED BY ENGINEER. IF EMBEDMENT IS APPROVED THE CONDUIT, PIPE OR SLEEVE SHALL BE COMPATIBLE WITH THE MASONRY (ALUMINUM NOT ALLOWED), SHALL BE NO CLOSER THAN THREE DIAMETERS (OF THE LARGEST DIAMETER MEMBER) ON CENTER, SHALL BE A MINIMUM OF 1-1/2" CLEAR OF ANY REINFORCING AND SHALL NOT DISPLACE MORE THAN 2% OF THE NET CELL CROSS SECTION. PIPES SHALL NOT CONTAIN LIQUIDS, GAS OR VAPORS AT TEMPERATURE OVER 150 DEGREES, BE SUBJECT TO FREEZING OR AT

### ROOF DECK AND WELDING

ROOF DECK ------1 1/2" DEEP 20 GAUGE X 36" WIDE.

ALL DECKS TO BE CONTINUED OVER AT LEAST THREE SPANS UNLESS OTHERWISE SO INDICATED ON THE DRAWINGS

PROVIDE (4) 5/8" DIA. PUDDLE WELDS PER 36" WIDTH OF DECK OVER EACH SUPPORT. PROVIDE 1 1/2" LONG TOP SEAM WELDS @ 24" O.C. PROVIDE 5/8" DIA. MARGINAL PUDDLE WELDS @ 12" O.C.

USE E60 SERIES ELECTRODES FOR DECK WELDING.

BOND BEAMS SHALL BE CONTINUOUS IN SOLID GROUTED WALLS.

### **STEEL STUDS AND JOISTS:**

STEEL STUD MANUFACTURERS ASSOCIATION, LATEST EDITION SHALL GOVERN FOR ALL STEEL STUDS & JOISTS SPECIFIED.

SCREW MANUFACTURER SHALL PROVIDE VERIFICATION OF THE FASTENERS RESISTANCE TO HYDROGEN EMBRITTLEMENT.

DEPTH, GAUGE, AND SECTION PROPERTIES OF STEEL STUDS AND JOISTS SHALL MEET OR EXCEED THOSE OF THE SECTIONS SPECIFIED. SEE ICC ESR-3064P FOR ADDITIONAL MATERIAL INFORMATION.

G-60 GALVANIZED COATING PER ASTM A653 IS REQUIRED FOR ALL STEEL STUDS AND JOISTS

ALL SCREWS SHALL BE SELF-TAPPING / SELF-DRILLING FASTENERS THAT ARE ZINC COATED AS MANUFACTURED BY HILTI KWIK-FLEX (ICC ESR-2196, LARR 25095) OF APPROVED EQUAL. THE MINIMUM SCREW SIZE TO BE #8-18 (#2 POINT) OR #10-16 (#2 POINT) FOR 54 MIL (16 GA) OR LESS AND #10-16 (#3 POINT) OR #12-14 (#2 OR #3 POINT) FOR MATERIAL HEAVIER THAN 54 MIL (16 GA) U.N.O. ON THE DRAWINGS. SCREWS FOR SHEATHING CONNECTIONS SHALL BE OF THE PROPER SIZE AND TYPE FOR A POSITIVE SHEATHING TO METAL CONNECTION. ALL SCREW CONNECTIONS SHALL BE MADE FROM THE LIGHTER MATERIAL INTO THE HEAVIER MATERIAL U.N.O. SCREWS SHALL HAVE A MINIMUM PROJECTION OF 3 THREADS THROUGH THE LAST MATERIAL JOINED AND SHALL HAVE MINIMUM EDGE DISTANCES AND CENTER TO CENTER SPACINGS OF 1/2 INCH. ALL SCREWS SHALL CONFORM TO SAE J78 AND SHALL BE COATED WITH A CORROSIVE RESISTANT COATING. THE

ALL FRAMING COMPONENTS SHALL BE SQUARE CUT FOR ATTACHMENT TO PERPENDICULAR MEMBERS.

STUDS SHALL BE INSTALLED IN A MANNER WHICH WILL ASSURE THAT ENDS OF THE STUDS ARE POSITIONED AGAINST THE INSIDE TRACK WEB PRIOR TO STUD AND TRACK ATTACHMENT

PROVIDE WALL BRIDGING PER "TYP. WALL BLOCKING/BRACING" DETAIL, "ALT. WALL BLOCKING/BRACING" DETAIL, OR MANUFACTURER'S SPECIFICATIONS WHERE WALL IS NOT SHEATHED CONTINUOUSLY ON BOTH SIDES AND AS SHOWN IN DRAWINGS. PROVIDE WALL BRIDGING PER MANUFACTURER'S SPECIFICATIONS FOR WALLS DURING THE CONSTRUCTION PROCESS WHERE THEY ARE NOT SHEATHED PRIOR TO RESISTING LOADS.

SEE "TYP. STUD/JOIST PUNCHOUTS" DETAIL FOR PUNCHOUT REQUIREMENTS.

JOISTS SHALL BE LOCATED DIRECTLY OVER STUDS, TYPICAL.

NO SPLICES ARE PERMITTED IN STUDS. ALL SECTIONS SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE FOLLOWING REQUIREMENTS:

97, 68 & 54 MIL. THICKNESS (GAGES 12, 14 & 16) ---- ASTM A-653 GRADE D, YIELD 50 KSI, Fu= 65KSI

43. 33 & 27 MIL. THICKNESS (GAGES 18. 20 & 22) ---- ASTM A-635 GRADE A. YIELD 33 KSI. Fu= 45KSI

ALL TRACKS, BRIDGING, STRAPS ETC. ARE TO BE FORMED FROM STEEL OF THE SAME THICKNESS AS THE STUDS OR JOISTS TO WHICH THEY ARE ATTACHED, U.N.O.

METAL STUD DESIGNATION IS THUS: '600' - MEMBER DEPTH IN 1/100 INCH (6")

'S' - STYLE OF MEMBER (S = STUD/JOIST, T = TRACK, U = CHANNEL, F = FURRING CHANNEL) '162' - MEMBER FLANGE WIDTH IN 1/100 INCH (1.625" = 1-5/8")

### '54' - MINIMUM STEEL THICKNESS IN MILS (54 MILS. = 0.054", OLD DESIGNATION OF 16 GA.) **MASONRY VENEER TIES:**

**GENERAL REQUIREMENTS:** 

TIES SHALL HAVE A MINIMUM WIRE SIZE OF W1.7 OR 22 GAUGE CORRUGATED SHEET METAL AND BE SPACED AT 16" O.C. MAX. VERTICALLY AND HORIZONTALLY UNLESS OTHERWISE ALLOWED BY CODE.

LINTEL ANGLE (OPENING 6'-0" WIDE OR LESS) ------ L3 1/2" X 3 1/2" X 1/4" MINIMUM

HORIZONTAL VENEER REINFORCEMENT ------ NO. 9 WIRE, GALVANIZED FINISH.

LINTEL ANGLE (OPENINGS OVER 6'-0" WIDE) ------ L5" X 5" X 5/16" MINIMUM WITH 5/8" DIA. THREADED RODS @24"O/C, DRILL AND EPOXY 6" MIN. INTO CONCRETE

ALL LINTELS SHALL BE HOT DIP GALVANIZED U.N.O

ALL LINTEL ANGLES SHALL BEAR ON A MINIMUM OF 4" OF MASONRY EACH END

PROVIDE VERT. EXPANSION JOINTS IN CONTINUOUS VENEER @ 25' O.C. MAX. TYPICAL.

SUPPORTING STRUCTURE TO BE DESIGNED FOR A MINIMUM OUT OF PLANE AND IN PLANE DEFLECTION OF L/600.

MASONRY VENEER TO CMU SUBSTRATE: ADJUSTABLE WALL ANCHOR/TIES; SHEET METAL SLOTTED ANCHOR SCREWED TO STEEL SUBSTRATE AND WIRE TIE; GALV. FINISH. FURNISH LENGTH OF TIES AS RECOMMENDED BY MANUFACTURER FOR PARTICULAR CONDITIONS OF INSTALLATION IN EACH CASE.

WHERE VENEER HEIGHTS EXCEED 30 FEET FROM FOUNDATION OR IN SEISMIC DESIGN CATEGORY E OR F VENEER SHALL BE SUPPORTED AT EACH BUILDING LEVEL (DOES NOT INCLUDE ROOF) PER DETAILS ON THE DRAWINGS.

MASONRY VENEER TO STEEL OR WOOD SUBSTRATE: ADJUSTABLE WALL ANCHOR/TIES: PINTLE AND EYE TYPE: GALV. FINISH, FURNISH LENGTH OF TIES AS RECOMMENDED BY MANUFACTURER FOR PARTICULAR CONDITIONS OF INSTALLATION IN EACH CASE. TIES SHALL HAVE A LIP OR HOOK FOR POSITIVE ENGAGEMENT WITH HORIZONTAL VENEER REINFORCEMENT. ANCHOR TO WOOD FRAMING WITH CORROSION RESISTANT 8D COMMON NAIL OR SCREW WITH EQUIVALENT WITHDRAWAL VALUE. ANCHOR TO STEEL FRAMING WITH CORROSION RESISTANT SCREWS THAT HAVE A MINIMUM SHANK DIAMETER OF 0.19 INCH. FOR CORRUGATED SHEET METAL ANCHORS LOCATE FASTENER WITHIN 1/2 INCH OF BEND.

ROOF DECK AND WELDING:

ROOF DECK ------1 1/2" DEEP 20 GAUGE X 36" WIDE.

ALL DECKS TO BE CONTINUED OVER AT LEAST THREE SPANS UNLESS OTHERWISE SO INDICATED ON THE DRAWINGS

PROVIDE (4) 5/8" DIA. PUDDLE WELDS PER 36" WIDTH OF DECK OVER EACH SUPPORT. PROVIDE 1 1/2" LONG TOP SEAM WELDS @ 24" O.C. PROVIDE 5/8" DIA.

USE E60 SERIES ELECTRODES FOR DECK WELDING.

STEEL STUDS AND JOISTS:

MARGINAL PUDDLE WELDS @ 12" O.C.

STEEL STUD MANUFACTURERS ASSOCIATION, LATEST EDITION SHALL GOVERN FOR ALL STEEL STUDS & JOISTS SPECIFIED

DEPTH, GAUGE, AND SECTION PROPERTIES OF STEEL STUDS AND JOISTS SHALL MEET OR EXCEED THOSE OF THE SECTIONS SPECIFIED, SEE ICC ESR-3064P FOR ADDITIONAL MATERIAL INFORMATION.

G-60 GALVANIZED COATING PER ASTM A653 IS REQUIRED FOR ALL STEEL STUDS AND JOISTS

ALL SCREWS SHALL BE SELF-TAPPING / SELF-DRILLING FASTENERS THAT ARE ZINC COATED AS MANUFACTURED BY HILTI KWIK-FLEX (ICC ESR-2196, LARR 25095) OR APPROVED EQUAL. THE MINIMUM SCREW SIZE TO BE #8-18 (#2 POINT) OR #10-16 (#2 POINT) FOR 54 MIL (16 GA) OR LESS AND #10-16 (#3 POINT) OR #12-14 (#2 OR #3 POINT) FOR MATERIAL HEAVIER THAN 54 MIL (16 GA) U.N.O. ON THE DRAWINGS. SCREWS FOR SHEATHING CONNECTIONS SHALL BE OF THE PROPER SIZE AND TYPE FOR A POSITIVE SHEATHING TO METAL CONNECTION. ALL SCREW CONNECTIONS SHALL BE MADE FROM THE LIGHTER MATERIAL INTO THE HEAVIER MATERIAL U.N.O. SCREWS SHALL HAVE A MINIMUM PROJECTION OF 3 THREADS THROUGH THE LAST MATERIAL JOINED AND SHALL HAVE MINIMUM EDGE DISTANCES AND CENTER TO CENTER SPACINGS OF 1/2 INCH. ALL SCREWS SHALL CONFORM TO SAE J78 AND SHALL BE COATED WITH A CORROSIVE RESISTANT COATING. THE

ALL FRAMING COMPONENTS SHALL BE SQUARE CUT FOR ATTACHMENT TO PERPENDICULAR MEMBERS.

STUDS SHALL BE INSTALLED IN A MANNER WHICH WILL ASSURE THAT ENDS OF THE STUDS ARE POSITIONED AGAINST THE INSIDE TRACK WEB PRIOR TO STUD AND

PROVIDE WALL BRIDGING PER "TYP. WALL BLOCKING/BRACING" DETAIL, "ALT. WALL BLOCKING/BRACING" DETAIL, OR MANUFACTURER'S SPECIFICATIONS WHERE WALL IS NOT SHEATHED CONTINUOUSLY ON BOTH SIDES AND AS SHOWN IN DRAWINGS. PROVIDE WALL BRIDGING PER MANUFACTURER'S SPECIFICATIONS FOR WALLS DURING THE CONSTRUCTION PROCESS WHERE THEY ARE NOT SHEATHED PRIOR TO RESISTING LOADS.

SEE "TYP. STUD/JOIST PUNCHOUTS" DETAIL FOR PUNCHOUT REQUIREMENTS

JOISTS SHALL BE LOCATED DIRECTLY OVER STUDS, TYPICAL

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#### METAL STUD DESIGNATION IS THUS: '600' - MEMBER DEPTH IN 1/100 INCH (6")

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LINTEL ANGLE (OPENINGS OVER 6'-0" WIDE) -------- L5" X 5" X 5/16" MINIMUM WITH 5/8" DIA. THREADED RODS @24"O/C, DRILL AND EPOXY 6" MIN. INTO CONCRETE

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MASONRY VENEER TO STEEL OR WOOD SUBSTRATE: ADJUSTABLE WALL ANCHOR/TIES; PINTLE AND EYE TYPE; GALV. FINISH. FURNISH LENGTH OF TIES AS RECOMMENDED BY MANUFACTURER FOR PARTICULAR CONDITIONS OF INSTALLATION IN EACH CASE. TIES SHALL HAVE A LIP OR HOOK FOR POSITIVE ENGAGEMENT WITH HORIZONTAL VENEER REINFORCEMENT. ANCHOR TO WOOD FRAMING WITH CORROSION RESISTANT 8D COMMON NAIL OR SCREW WITH EQUIVALENT WITHDRAWAL VALUE. ANCHOR TO STEEL FRAMING

WITH CORROSION RESISTANT SCREWS THAT HAVE A MINIMUM SHANK DIAMETER OF 0.19 INCH. FOR CORRUGATED SHEET METAL ANCHORS LOCATE FASTENER

WITHIN 1/2 INCH OF BEND.

GENERAL REQUIREMENTS: ALL SPECIAL INSPECTIONS SHALL MEET THE REQUIREMENTS OF THE 2015 IBC, CHAPTER 17

ANY WORK WHICH HAS BEEN COVERED BUT NOT PROPERLY INSPECTED BY THE SPECIAL INSPECTOR AND/OR THE CITY INSPECTOR IS SUBJECT TO REMOVAL OR

BUILDING CODE / LOCAL JURISDICTION OR THE MANUFACTURER.

SATISFACTION OF THE BUILDING OFFICIAL.

THE SPECIAL INSPECTOR MUST WORK UNDER THE SUPERVISION OF A WASHINGTON LICENSED CIVIL ENGINEER. THE SPECIAL INSPECTOR MUST PERSONALLY BE FAMILIAR WITH THE DRAWINGS AND MUST PERSONALLY OBSERVE ALL OF THE WORK REPORTED ON.

THE FINAL REPORT SHALL BE SIGNED BY A WASHINGTON LICENSED CIVIL ENGINEER AND SHALL STATE THAT THE WORK WAS IN CONFORMANCE WITH THE

SPECIFIC SPECIAL INSPECTIONS REQUIRED:

ALL CONCRETE WHERE THE COMPRESSIVE STRENGTH (fc) IS GREATER THAN 2,500 PSI EXCEPT AT SLAB ON GRADES

ALL REINFORCED MASONRY CONSTRUCTION REQUIRES LEVEL "B" QUALITY ASSURANCE INSPECTIONS PER TMS 402/602-13.

ALL EPOXY GROUTING OF BOLTS OR REINFORCING BARS.

• THAT SOIL EXCAVATIONS EXTEND TO DEPTH AND BEARING STRATA.

THESE DOCUMENTS AND THE DESIGN ARE SPECIFIC TO THIS PROJECT ONLY AND MAY NOT BE REUSED IN ANY WAY WITHOUT WRITTEN APPROVAL OF AUE. IT IS

# **GENERAL ABBREVIATIONS**

	ANCHOR BOLT	,	CONTRACTUAL JOINT	EJ, E.J.	EXPANSION JOINT	GRD	GRADE	MAT'L	MATERIAL (4007)	REF.	REFERENCE	TJ	TRUSS JOIST MACMILLAN
ABV.	ABOVE	CL	CENTER LINE	EMBED.	EMBEDMENT	GWB	GYPSUM WALL BOARD	MB	MACHINE BOLT (A307)		REINFORCEMENT	TMPRY	TEMPORARY
ADD'L	ADDITIONAL	CLR	CLEAR	,	ELEVATION	HDR	HEADER	MD	MID-DEPTH		REQUIRED		TOE NAIL
ADJ.	ADJACENT	CMU	CONC. MASONRY UNIT	EN, E.N.	EDGE NAIL		HEM-FIR	MRF	MOMENT RESISTING FRAME		. ROUGH OPENING	T.O.	TOP OF
ALT.	ALTERNATE	COL.	COLUMN	ENG	ENGINEER	HGR	HANGER	MFR	MANUFACTURER	SCHD	SCHEDULE	TRANS.	TRANSVERSE
APPRX.	APPROXIMATE	CONC.	CONCRETE	EQ	EQUAL	HORZ.	HORIZONTAL	MTL	METAL	SHT	SHEET	TYP.	TYPICAL
ARCH	ARCHITECTURAL	CONN.	CONNECT(ION)	ES, E.S.	EACH SIDE	HSB	HIGH STRENGTH BOLT	(N)	NEW MEMBER	SHTG	SHEATHING	UNO	UNLESS OTHERWISE NOTED
@	AT	CONST.	CONSTRUCTION	EXIST	EXISTING		(A325 UNO)	NS, N.S.	NEAR SIDE	SIM.	SIMILAR	VERT.	VERTICAL
BOT.	BOTTOM	CONT.	CONTINUOUS	EXT.	EXTERIOR	HT	HEIGHT	NTS	NOT TO SCALE	SKW	SKEW(ED)	VFY	VERIFY
BF, B.F.	BRACED FRAME	CTSK	COUNTERSINK	FFE	FINISH FLOOR ELEV.	IF, I.F.	INSIDE FACE	OC, O.C.	ON CENTER	SOG	SLAB ON GRADE	W/	WITH
BEL.	BELOW	d	PENNY (NAILS)	FAB.	FABRICATION	INT.	INTERIOR	OF, O.F.	OUTSIDE FACE	SPC	SPACING	WHS	WELDED HEADED STUD
BLDG	BUILDING	DET.	DETAIL	FND	FOUNDATION	JST	JOIST	OH	OVER HANG	SQ.	SQUARE	WP	WORK POINT
BLKG	BLOCKING	DBL	DOUBLE	FIN.	FINISH(ED)	JT	JOINT	OPN'G	OPENING	SS	SELECT STRUCTURAL	WS	WESTERN SERIES
BN, B.N.	BOUNDARY NAIL	DF, D.F.	DOUGLAS FIR	FLG	FLANGE	K	KIPS (1,000 POUNDS)	ORNT	ORIENTATE(ION)	STD	STANDARD	WTS	WELDED THREADED STUD
<b>BNDRY</b>	BOUNDARY	Ø, DIA.	DIAMETER	FLR	FLOOR	LAT.	LATERAL	OWJ	OPEN WEB JOIST	STGR	STAGGER	WWF	WELDED WIRE FABRIC
BM	BEAM	DIAG.	DIAGONAL	FN, F.N.	FACE NAIL	LDGR	LEDGER	PAR	PARALLEL	STIFF.	STIFFENER	X-STG	EXTRA STRONG
B.O.	BOTTOM OF	DIAPH.	DIAPHRAGM	FO, F.O.	FACE OF	LF	LINEAL FEET	P/C	PRECAST CONCRETE	STIR.	STIRRUP	XX-STG	DOUBLE EXTRA STRONG
BRDG	BRIDGE (ING)	do	DITTO (DO OVER)	FRM'G	FRAMING	LLH	LONG LEG HORIZ.	PERP.	PERPENDICULAR	STL	STEEL		
BRG	BEARING	D	DEPTH	FS, F.S.	FAR SIDE	LLV	LONG LEG VERTICAL	PL	PLATE	STRUC.	STRUCTURE(AL)		
B/W	BETWEEN	DWG	DRAWING	FTG	FOOTING	LS	LAG SCREW	PLYWD	PLYWOOD	SYM.	SYMETRICAL		
CAM	CAMBER(ED)	DWL	DOWEL	GA	GAGE	LSL	TIMBER STRAND BEAM	PSL	PARALLAM BEAM	Τ	TOP		
CANT.	CANTILEVER(ED)	(E)	EXISTING MEMBER	GALV.	GALVANIZED	LT WT	LIGHT WEIGHT	PT, P.T.	PRESSURE TREATED	T&G	TONGUE AND GROOVE		
CG	CENTER OF GRAVITY	EA.	EACH	GB, G.B.	GRADE BEAM	LVL	MICROLLAM BEAM		POST TENSIONED	THR'D	THREAD(ED)		
CIP	CAST IN PLACE		EACH FACE	GLB	GLU-LAM. BEAM	MAS.	MASONRY	QTY	QUANTITY		` '		
2		∟ı, ∟.ı.	LAGITAGE					-•••					

SCREW MANUFACTURER SHALL PROVIDE VERIFICATION OF THE FASTENERS RESISTANCE TO HYDROGEN EMBRITTLEMENT.

97, 68 & 54 MIL. THICKNESS (GAGES 12, 14 & 16) ---- ASTM A-653 GRADE D, YIELD 50 KSI, Fu= 65KSI

43, 33 & 27 MIL. THICKNESS (GAGES 18, 20 & 22) ---- ASTM A-635 GRADE A, YIELD 33 KSI, Fu= 45KSI

'S' - STYLE OF MEMBER (S = STUD/JOIST, T = TRACK, U = CHANNEL, F = FURRING CHANNEL) '162' - MEMBER FLANGE WIDTH IN 1/100 INCH (1.625" = 1-5/8")

<u>MASONRY VENEER TIES:</u>

HORIZONTAL VENEER REINFORCEMENT ------ NO. 9 WIRE, GALVANIZED FINISH

ALL LINTELS SHALL BE HOT DIP GALVANIZED U.N.O

SUPPORTING STRUCTURE TO BE DESIGNED FOR A MINIMUM OUT OF PLANE AND IN PLANE DEFLECTION OF L/600

MASONRY VENEER TO CMU SUBSTRATE:

(DOES NOT INCLUDE ROOF) PER DETAILS ON THE DRAWINGS.

**SPECIAL INSPECTIONS:** 

ALL INSPECTIONS AS REQUIRED BY SECTION 110 OF THE 2015 INTERNATIONAL BUILDING CODE ARE REQUIRED. INSPECTIONS SPECIFIED IN THESE NOTES ARE IN ADDITION TO THESE INSPECTIONS. CITY INSPECTION IS NOT A SUBSTITUTE FOR SPECIAL INSPECTION.

WHERE SPECIFICALLY REQUIRED, CONTINUOUS INSPECTION IS REQUIRED DURING THE PERFORMANCE OF THE WORK. THIS MAY BE A REQUIREMENT OF THE THE SPECIAL INSPECTOR MUST BE CERTIFIED TO PERFORM THE TYPES OF INSPECTION SPECIFIED AND SHALL DEMONSTRATE COMPETENCE TO THE

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING AND INFORMING THE SPECIAL INSPECTOR OR CITY INSPECTOR AT LEAST ONE WORKING DAY BEFORE THE WORK IS TO BE PERFORMED UNLESS OTHER CONDITIONS ARE AGREED UPON.

THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING DEPARTMENT AND ENGINEER. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN, IF NOT CORRECTED, TO THE BUILDING DEPARTMENT AND ENGINEER.

REQUIREMENTS OF THE SPECIAL INSPECTOR:

APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF IBC.

PLACEMENT OF ALL BOLTS, REINFORCING, EMBEDS, OR POST TENSION CABLES IN CONCRETE

ALL POST-INSTALLED ANCHORS (SEE "POST-INSTALLED ANCHORS" SECTION FOR TEST FREQUENCY

ALL WELDING OF STEEL EXCEPT WELDING PERFORMED IN AN AISC APPROVED SHOP.

OUR INTENT THAT THIS DESIGN MEETS THE NORMAL STANDARD OF CARE WITHIN THIS INDUSTRY. NO OTHER WARRANTY IS PROVIDED OR IMPLIED.

SIGNATURE/SEAL:

11/08/21 BID SET

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ONSULTANT INFORMATION:

BELLEVUE, WA 98004

JOB NO: 21173

PROJECT INFORMATION:

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RAWING ISSUANCE LOC

V DATE DESCRIPTION 11/05/21 PERMIT SET

**GENERAL NOTES & ABBREVIATIONS** 

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SPECIFIC SPECIAL INSPECTIONS REQUIRED:

• ALL CONCRETE WHERE THE COMPRESSIVE STRENGTH (fc) IS GREATER THAN 2,500 PSI EXCEPT AT SLAB ON GRADES.

• PLACEMENT OF ALL BOLTS, REINFORCING, EMBEDS, OR POST TENSION CABLES IN CONCRETE.

• ALL SHEATHED DIAPHRAGMS INCLUDING SHEARS WALLS, FLOORS, AND ROOFS.

• ALL EPOXY GROUTING OF BOLTS OR REINFORCING BARS.

• ALL POST-INSTALLED ANCHORS (SEE "POST-INSTALLED ANCHORS" SECTION FOR TEST FREQUENCY

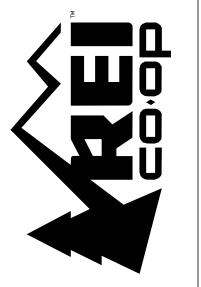
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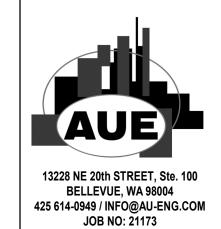
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ARCHITECT INFORMATION:

CONSULTANT INFORMATION:



PROJECT INFORMATION:

**SPRINGS** REI-GLENWOOD



DRAWING ISSUANCE LOG:

REV DATE DESCRIPTION

2 10/21/21 OWNER REVIEW SET

**GENERAL NOTES (CONT.)** 

REI-GL

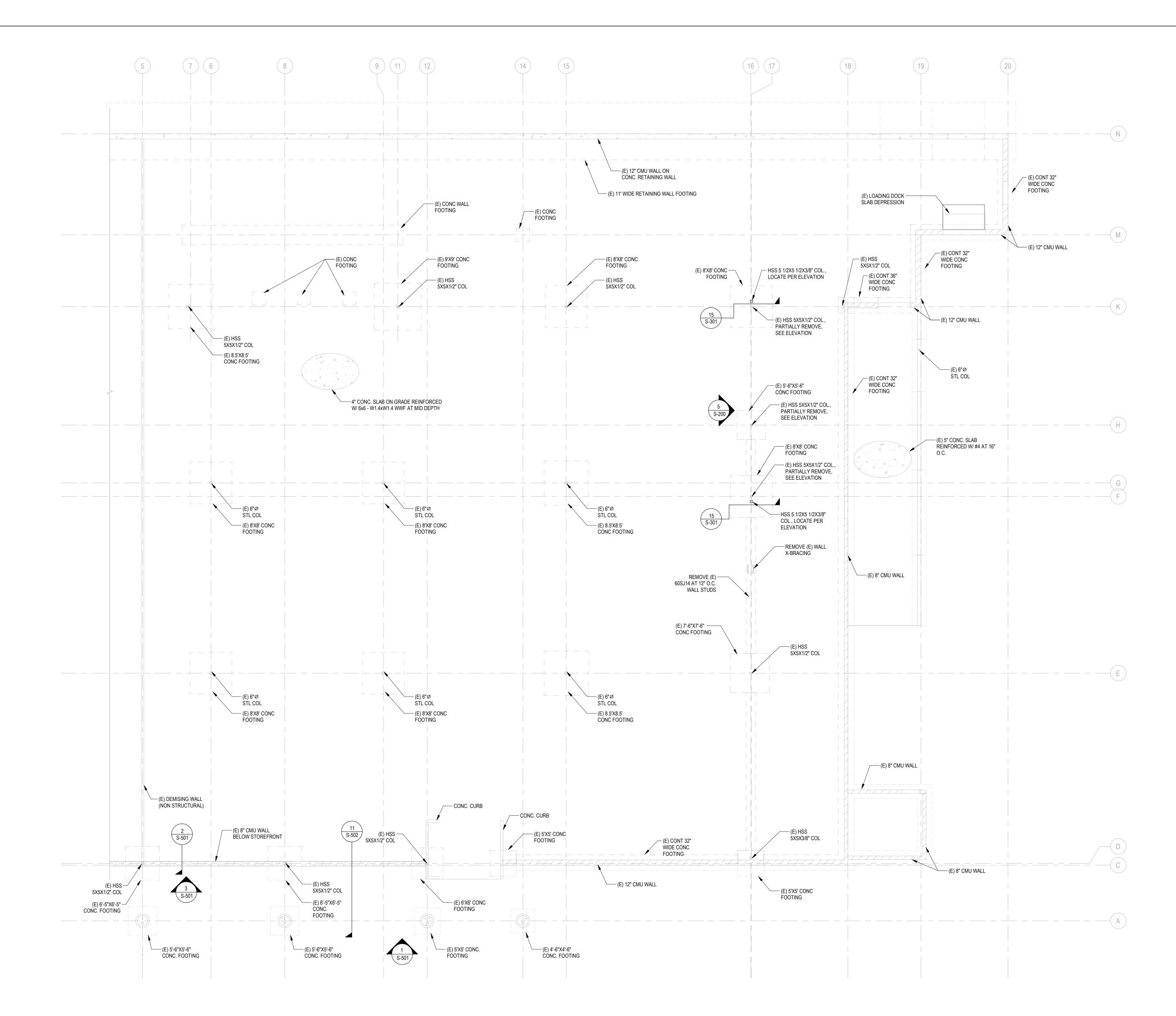
11/08/21 BID SET

1. (E) NON STRUCTURAL INTERIOR PARTITION WALLS NOT SHOWN, UNO. 2. SÉE DET. 1/S-301 FOR REINFORCEMENT BENDING SCHEDULE 3. SEE DET. 3/S-301 FOR TYP. ANCHOR BOLTS 4. SEE DET. 4/S-301 FOR TYP. BEAM STIRRUP/HOOP ASSEMBLY

5. SEE DET. 5/S-301 FOR TYP. SLAB ON GRADE JOINTS 6. SEE DET. 6/S-301 FOR TYP. COLUMN BLOCKOUT 7. SEE DET. 8/S-301 FOR TRENCH AT (E) SLAB ON GRADE 8. SEE DET. 13/S-301 FOR REINF. DEVELOPMENT & SPLICE SCHEDULE 9. SEE DET. 15/S-301 FOR TYP. INTERIOR COLUMN TO SPREAD FOOTING CONN.

> THESE DRAWINGS ARE BASED ON A LIMITED AMOUNT OF INFORMATION FOR AN EXISTING BUILDING. CONTRACTOR MUST FIELD VERIFY CONDITIONS AND NOTIFY ARCHITECT AND ENGINEER IF CONDITIONS ARE OTHER THAN AS SHOWN PRIOR TO MODIFICATION.

LEVEL 1 - STRUCTURAL



PLAN NORTH

SPECIAL INSPECTION APPLIES TO THIS PROJECT PER THE GENERAL NOTES. IF THE SPECIAL INSPECTIONS LISTED ARE NOT PROVIDED, TESTING OR REWORK WILL BE REQUIRED FOR FINAL SIGN OFF.

ALL DIMENSIONS SHOWN ON THESE STRUCTURAL PLANS ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.

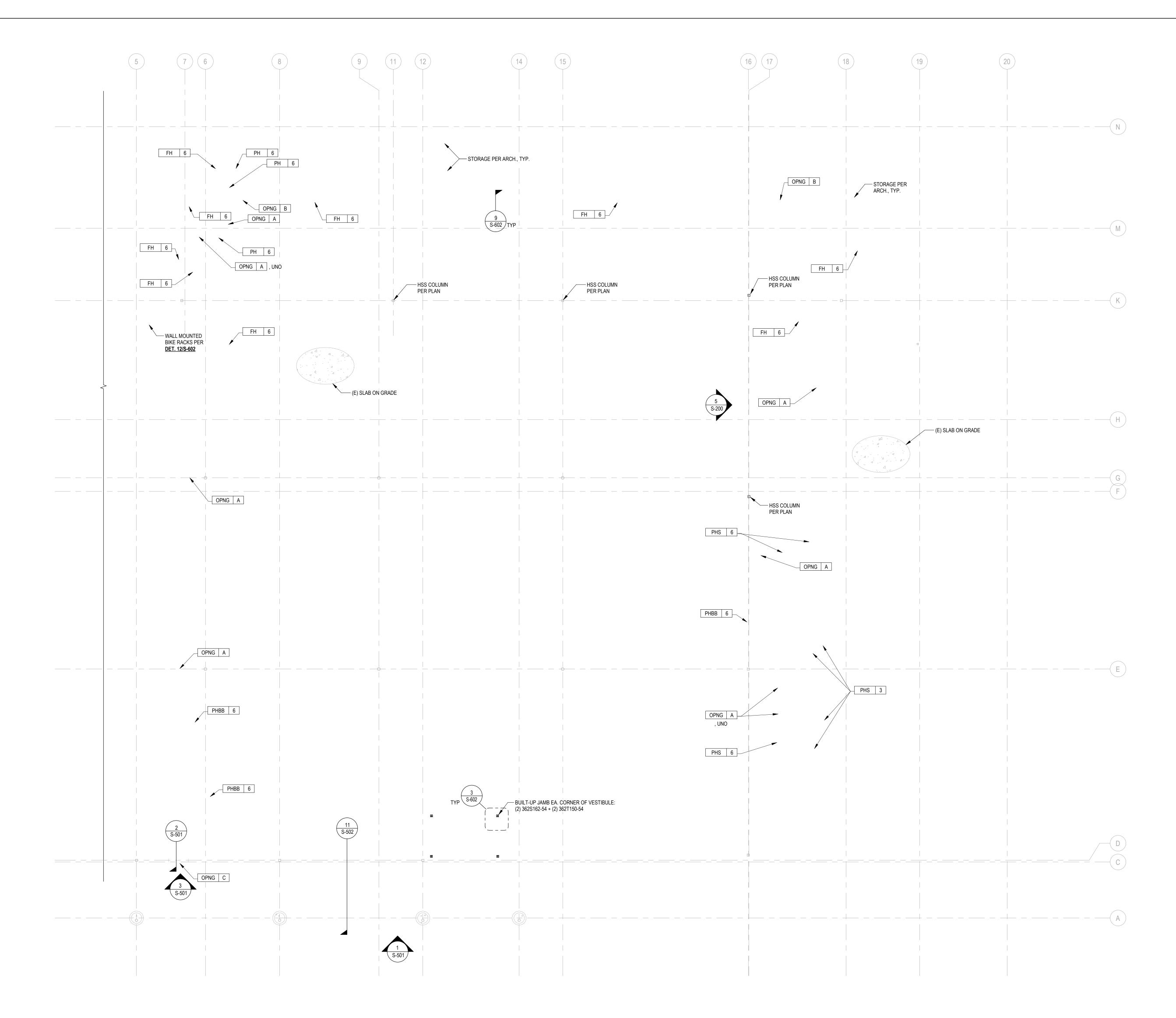
PLAN NOTES:

13228 NE 20th STREET, Ste. 100 BELLEVUE, WA 98004 425 614-0949 / INFO@AU-ENG.COM JOB NO: 21173

11/08/21 BID SET

LEVEL 1 - FLOOR PLAN

**S-112** 



LEVEL 1 - FLOOR PLAN

SPECIAL INSPECTION APPLIES TO THIS PROJECT PER THE GENERAL NOTES. IF THE SPECIAL INSPECTIONS LISTED ARE NOT PROVIDED, TESTING OR REWORK WILL BE REQUIRED FOR FINAL SIGN OFF.

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PLAN NOTES:

SEE SHEETS S-001 FOR STRUCTURAL GENERAL NOTES, ABBREVIATIONS AND REQUIRED SPECIAL INSPECTIONS.

PHBB XX PARTIAL HT. WALL BOX BEAM BRACED, DETAIL 16/S-602

PHS XX PARTIAL HT. STAND-ALONE WALL, DETAIL 19/S-602

2. CONCRETE CURB DETAIL 9/S-301 LOCATION PER ARCH.

PH XX PARTIAL HT. WALL, DETAIL 8/S-601

OPNG XX WALL OPENING, DETAIL 12/S-601

THE ARCHITECT AND ENGINEER IMMEDIATELY.

FH XX FULL HT. PARTITION WALL, DETAIL 6/S-601

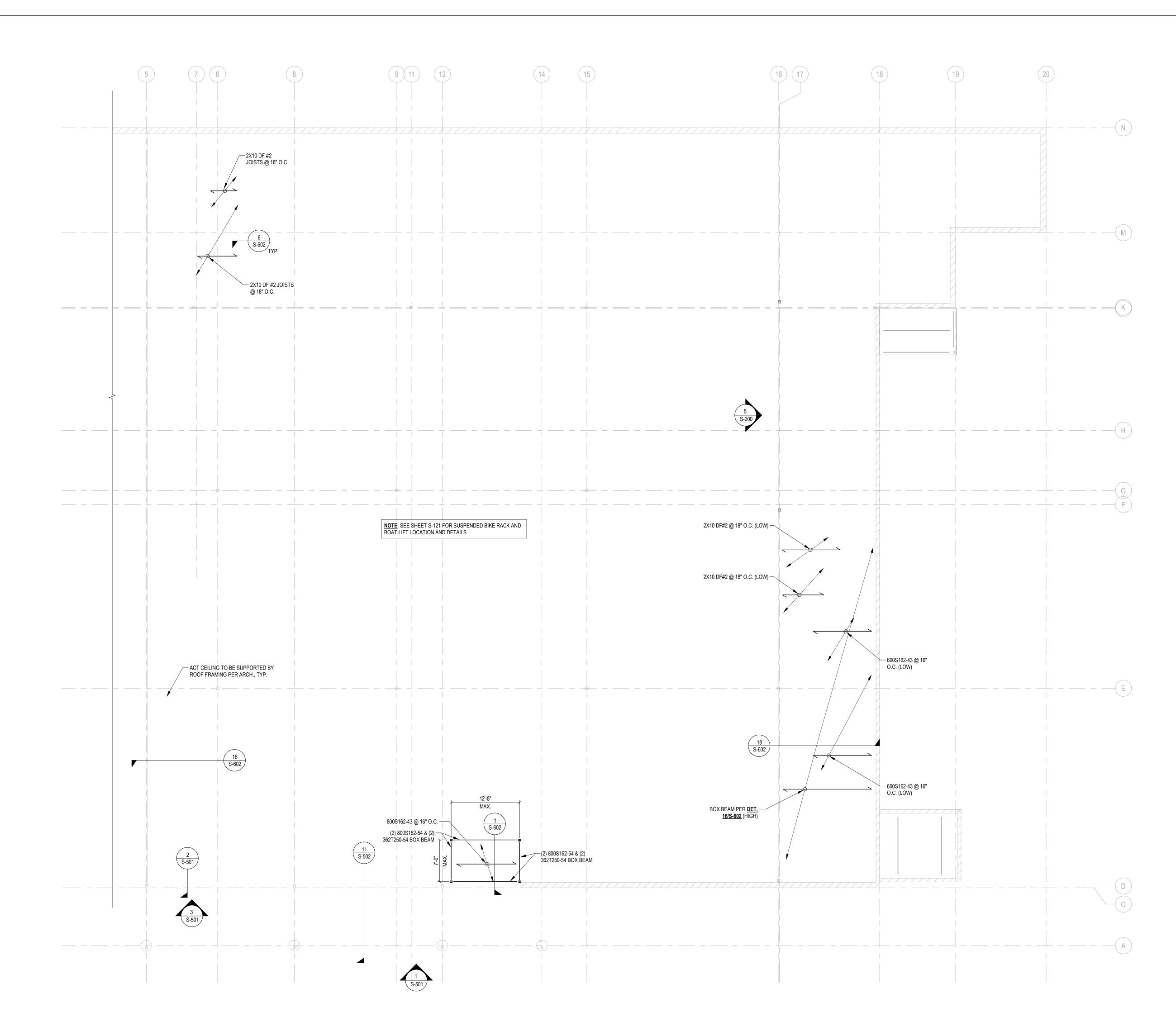
3. INTERIOR WALL PARTITION KEY:

NOTE:
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PLAN NORTH

REFLECTED CEILING PLAN

**S-113** 





PLAN NORTH

SPECIAL INSPECTION APPLIES TO THIS PROJECT PER THE GENERAL NOTES. IF THE SPECIAL INSPECTIONS LISTED ARE NOT PROVIDED, TESTING OR REWORK WILL BE REQUIRED FOR FINAL SIGN OFF.

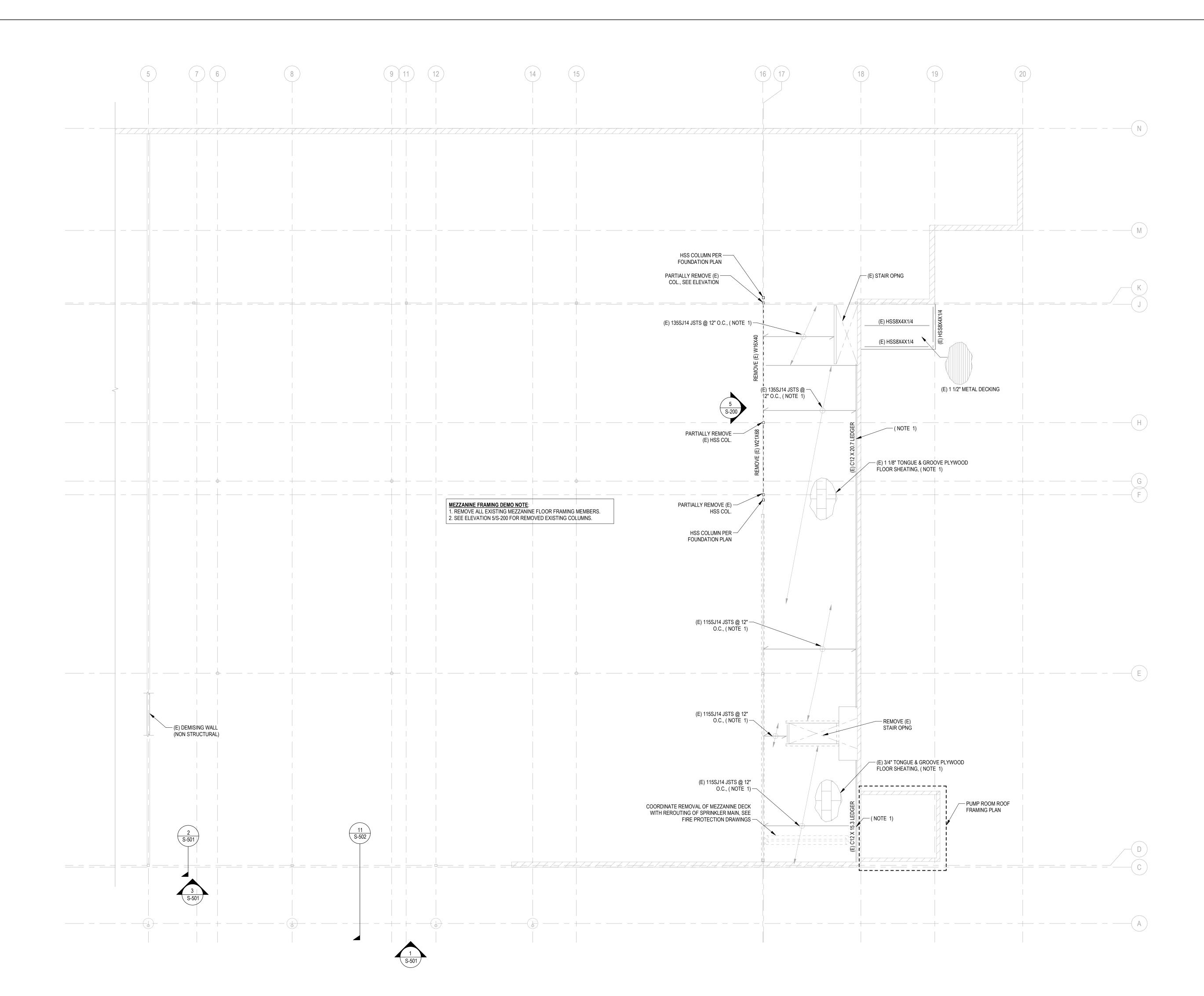
ALL DIMENSIONS SHOWN ON THESE STRUCTURAL PLANS ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.

REI-GL

MEZZANINE & LOW ROOF
PLAN

SHEET NUMBER:

S-115



MEZZANINE FRAMING PLAN

SCALE: 1/8" = 1'

NOTE:
SPECIAL INSPECTION APPLIES TO THIS
PROJECT PER THE GENERAL NOTES. IF THE
SPECIAL INSPECTIONS LISTED ARE NOT
PROVIDED, TESTING OR REWORK WILL BE
REQUIRED FOR FINAL SIGN OFF.

NOTE:
ALL DIMENSIONS SHOWN ON THESE STRUCTURAL PLANS
ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR
IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ANY
DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF
THE ARCHITECT AND ENGINEER IMMEDIATELY.

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

PLAN NOTES:

1. (E) NON STRUCTURAL INTERIOR PARTITION WALLS NOT SHOWN, UNO.

PUMP ROOM ROOF FRAMING PLAN

THESE DRAWINGS ARE BASED ON A LIMITED AMOUNT OF INFORMATION FOR AN EXISTING BUILDING. CONTRACTOR MUST FIELD VERIFY CONDITIONS AND NOTIFY ARCHITECT AND ENGINEER IF CONDITIONS ARE OTHER THAN AS SHOWN PRIOR TO MODIFICATION.

(E) 1 1/2" METAL DECKING

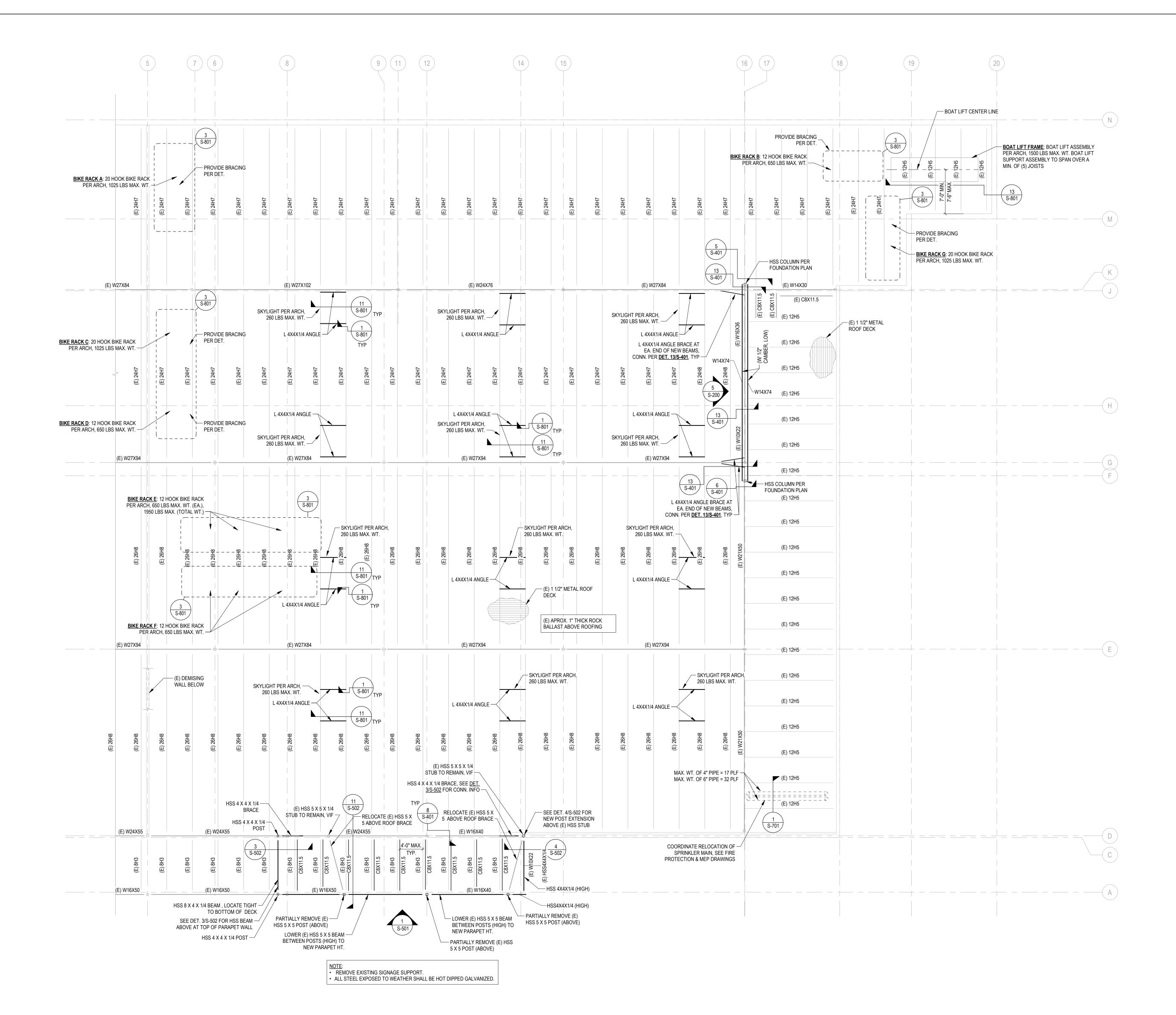
CONSULTANT INFORMATION:

SIGNATURE/SEAL:

11/05/21 PERMIT SET 11/08/21 BID SET

LEVEL 2 - STRUCTURAL PLAN (ROOF)

**S-121** 



LEVEL 2 - STRUCTURAL PLAN (ROOF)

SPECIAL INSPECTION APPLIES TO THIS PROJECT PER THE GENERAL NOTES. IF THE SPECIAL INSPECTIONS LISTED ARE NOT PROVIDED, TESTING OR REWORK WILL BE REQUIRED FOR FINAL SIGN OFF.

ALL DIMENSIONS SHOWN ON THESE STRUCTURAL PLANS ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.

PLAN NORTH

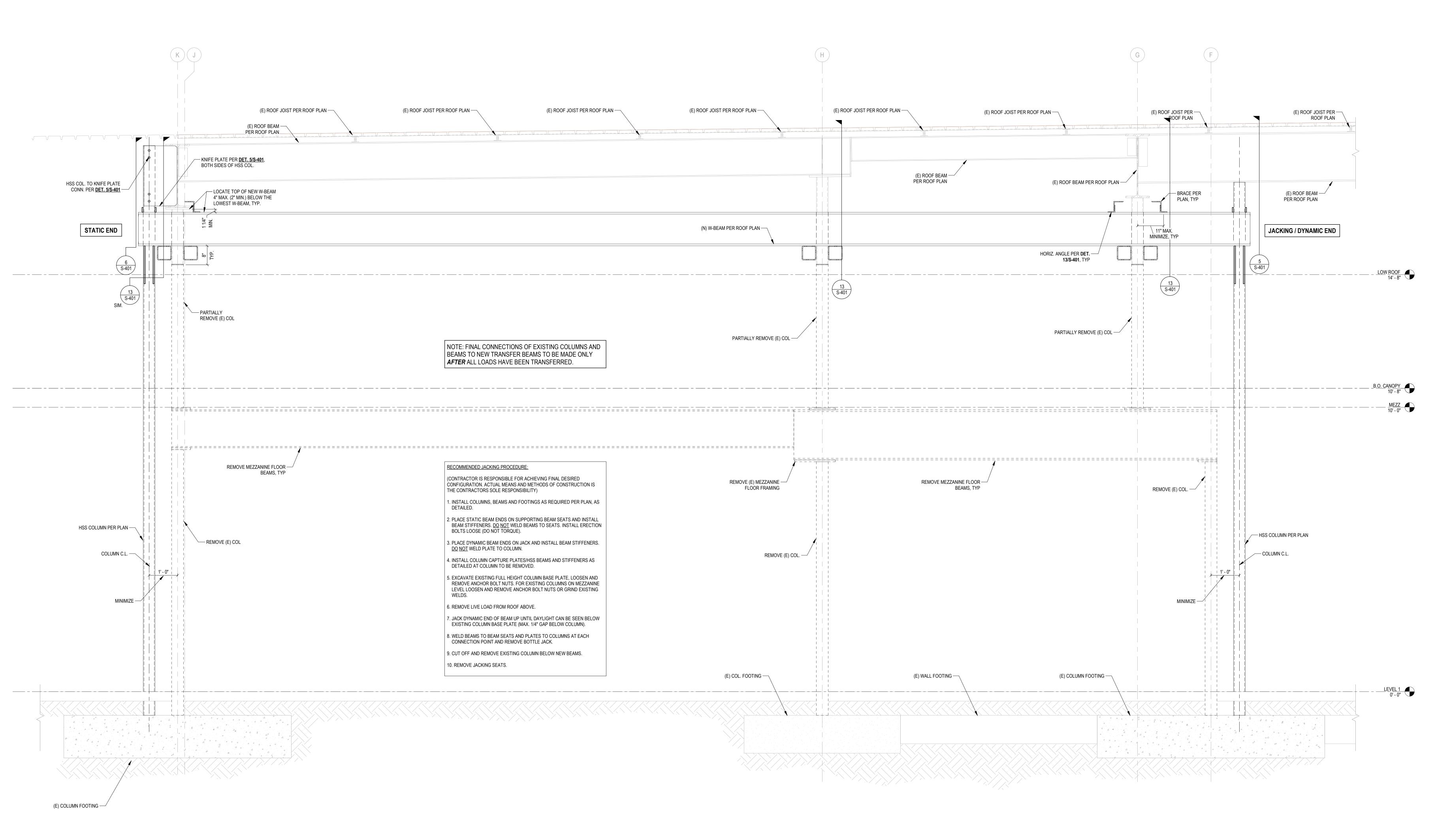
DATE DESCRIPTION

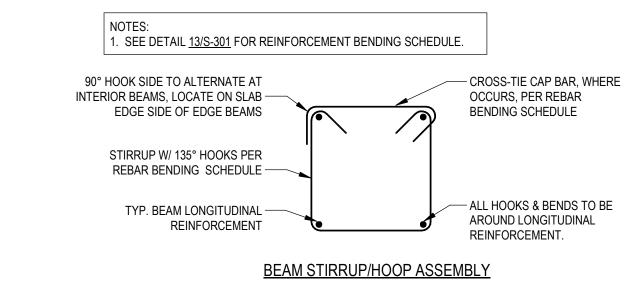
11/05/21 PERMIT SET

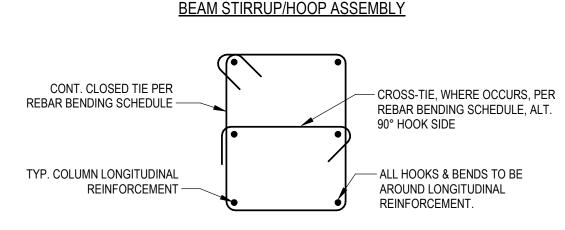
11/08/21 BID SET

ELEVATION

**S-200** 



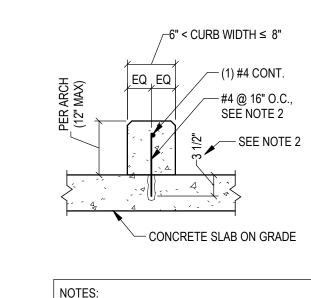




**COLUMN TIE/HOOP ASSEMBLY** 

TYPICAL BEAM STIRRUP/HOOP COLUMN TIE/HOOP ASSEMBLY

S-301 3/4" = 1'-0"

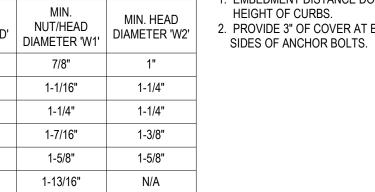


1. ATTACH REBAR TO SLAB WITH ADHESIVE

9 CURBS ON SLAB ON GRADE

**HEADED STUDS** CONCRETE ∕— F1554 GR. 36 HEADED \_\_\_ TYPE B WELDED HEADED — F1554 GR. 36 ✓ ANCHOR ROD ANCHOR BOLT STUD (PER AWS D1.1) HEAVY WASHER HEX NUT WELDED HEADED STUD (TYP. ASSEMBLY) (ALT. ASSEMBLY) ANCHOR BOLT DIMENSIONS 1. EMBEDMENT DISTANCE DOES NOT INCLUDE HEIGHT OF CURBS. MIN. HEAD JT/HEAD 2. PROVIDE 3" OF COVER AT BOTTOM AND DIAMETER 'W2' METER 'W1' SIDES OF ANCHOR BOLTS.

יא סטו	ANCHO
NUT DIAME	BOLT DIAMETER 'D'
-	1/2"
1-	5/8"
1.	3/4"
1-	7/8"
1.	1"
1-1	1-1/8"



CONCRETE SLAB ON GRADE TO MATCH

#4 DOWELS @ 16" O.C., DRILL

& EPOXY 6" INTO (E) SLAB,

TYP. EA. SIDE OF TRENCH

VAPOR BARRIER TO

COMPACT FILL AS REQ'D -

MATCH EXISTING —

8 TRENCH AT (E) SLAB ON GRADE

DEPTH OF (E) SLAB ON GRADE W/ (3)

CONT #3 BARS @ MID-DEPTH OF SLAB —

THIS DETAIL IS ONLY VALID IF THE FLOOR STRUCTURE IS CONCRETE SLAB ON GRADE. DO

NOT USE IF THE FLOOR STRUCTURE IS AN ELEVATED CONCRETE SLAB, STRUCTURAL SLAB

PER DET. 13/S-801 /

3' - 0" MAX.

- LOCATE CONDUIT/PIPING

ABOVE VAPOR BARRIER

— SAW CUT & REMOVE (E) SLAB

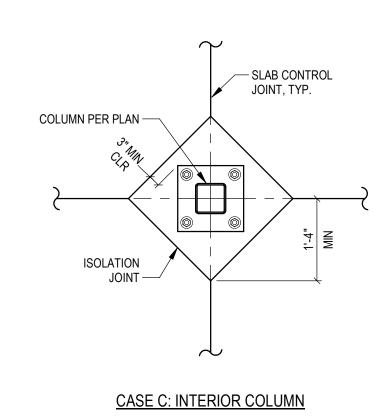
FOR TRENCH AS REQ'D

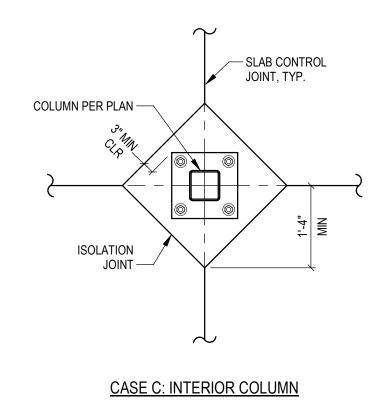
AS OCCURS

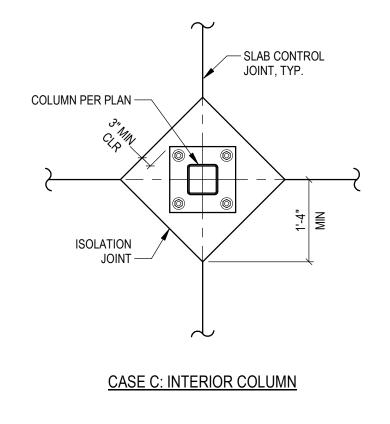
/— (E) SLAB ON GRADE

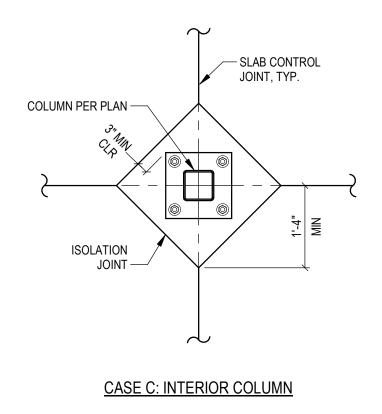
ON GRADE, PT CONCRETE SLAB, OR CONCRETE FILL OVER METAL DECK.

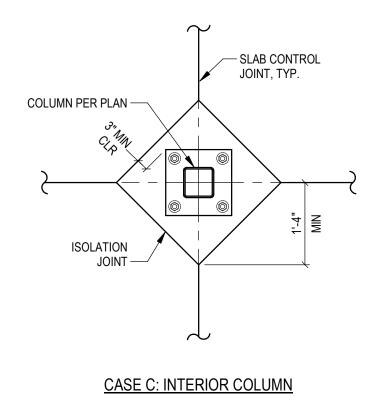


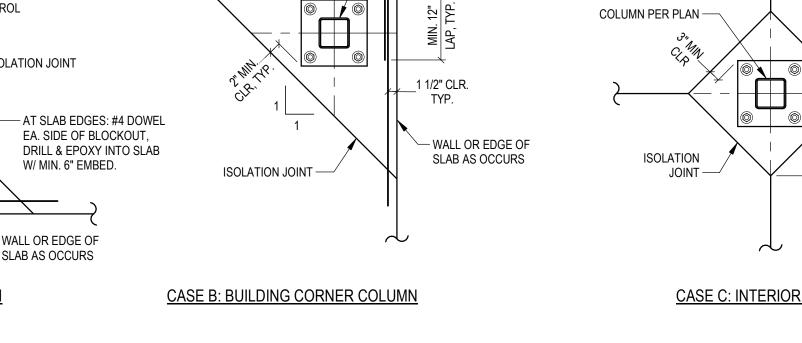




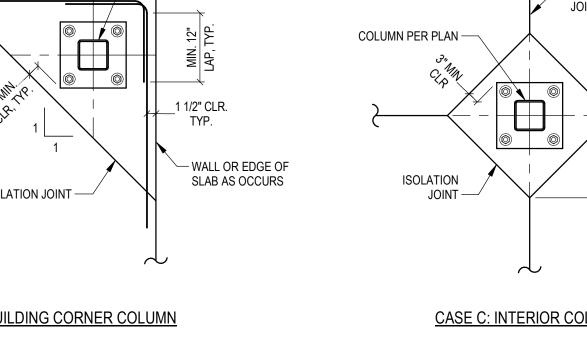








COLUMN PER PLAN





- WALL OR EDGE OF

SLAB AS OCCURS

MAXIMUM BAR OFFSET

BEAM/COLUMN CROSSTIE W/ 90° HOOK MAX BAR SIZE: #3 THRU #5

AT SLAB EDGES: #4 DOWEL EA. SIDE OF

& EPOXY INTO SLAB W/ MIN. 6" EMBED. -

BLOCKOUT W/ STD. HOOK AT CORNER, DRILL

YPICAL COLUMN BLOCKOUT	
TS	

— SLAB CONTROL

- ISOLATION JOINT

W/ MIN. 6" EMBED.

JOINT

		Т	YPICAL STRAIGH	T (Ld) /	AND HO	OKED (	(Ldh) RE	INFOR	CEMEN <sup>*</sup>	T DEVE	LOPME	NT LEN	IGTH S	CHEDU	LE						
BAR SIZE:			7	#3		#4		#5		#6		#7		<b>#</b> 8	#9		#10		#11		
			BAR DIAMETER, db:	d <sub>b</sub> = 0.375 in		d <sub>b</sub> = 0.500 in		d <sub>b</sub> = 0.625 in		d <sub>b</sub> = 0.625 in		d <sub>b</sub> = 0.875 in		d <sub>b</sub> = 1.000 in		d <sub>b</sub> = 1.128 in		d <sub>b</sub> = 1.270 in		$d_b = c$	1.410 in
DEVLOPMENT TYPE	CATEGORY	DESCRIPTION	N.W. CONCRETE f'c (psi)	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
			3,000	13"	12"	18"	14"	22"	17"	26"	20"	43"	33"	54"	42"	66"	51"	81"	63"	97"	75"
	4	MIN. COVER >= 1 1/2" MIN. CLEAR	4,500	12"	12"	14"	12"	18"	14"	21"	17"	35"	27"	44"	34"	54"	42"	66"	51"	79"	61"
	1	SPACING >= 3"	5,000	12"	12"	14"	12"	17"	13"	20"	16"	33"	26"	42"	32"	52"	40"	63"	49"	75"	58"
OTDAIOUT			6,000	12"	12"	13"	12"	16"	12"	19"	14"	30"	23"	38"	30"	47"	36"	" 66" 51" " 63" 49" " 58" 44" " 125" 96" " 102" 79"	69"	53"	
STRAIGHT			3,000	13"	12"	22"	17"	32"	25"	43"	33"	69"	53"	86"	66"	104"	80"	125"	96"	146" 11	113"
		MIN. COVER >= 3/4"	4,500	12"	12"	18"	14"	26"	20"	35"	27"	57"	44"	70"	54"	85"	65"	102"	79"	120"	92"
	2	MIN. CLEAR SPACING >= 2"	5,000	12"	12"	17"	13"	25"	19"	34"	26"	54"	42"	67"	51"	81"		75"	114"	87"	
			6,000	12"	12"	16"	12"	23"	18"	31"	24"	49"	38"	61"	47"	74"	57"	88"	68"	104"	80"
			3,000		9"	1	1"	1	4"	1	7"	2	0"	2	22"	2	25"	2	8" 31"		31"
HOOKED	OTANDADO	ALL OTHERS	4,500		7"	,	9"	1	12"	1	4"	1	6"	1	8"	2	21"	2	3"	2	26"
HOOKED	STANDARD	ALL OTHERS	5,000		7"	,	9"	11"		13"		15"		17"		20"		2	2"	24"	
			6,000		6"		8"	1	10"	12"		14"		16"		18"		20"		22"	

			TYPICAL	REINFO	ORCEM	ENT LA	P SPLIC	E (Lst)	DEVELO	PMEN	T LENG	TH SC	HEDULE	-							
BAR SIZE:				#	<b>#</b> 3	#4		#5		#6		#7		#8		#9		#10		#11	
BAR DIAMETER, d <sub>b</sub> :					.375 in	'5 in $d_b = 0.500$ in $d_b = 0.625$ in $d_b = 0.625$ in		d <sub>b</sub> = 0	.875 in	d <sub>b</sub> = 1.000 in		d <sub>b</sub> = 1.128 in		d <sub>b</sub> = 1.270 in		d <sub>b</sub> = 1.410 in					
LAP CLASS	CATEGORY	DESCRIPTION	N.W. CONCRETE fc (psi)	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
			3,000	17"	16"	24"	19"	29"	23"	34"	26"	56"	43"	71"	55"	86"	67"	106"	82"	82" 127"	98"
		MIN. COVER >= 1 1/2"	4,500	16"	16"	19"	16"	24"	19"	28"	23"	46"	36"	58"	45"	71"	55"	86"	67"	103"	80"
	1	MIN. CLEAR SPACING >= 3"	5,000	16"	16"	19"	16"	23"	17"	26"	21"	43"	34"	55"	42"	68"	52"	82" 64" 98'	98"	76"	
CLACC D			6,000	12"	12"	16"	12"	23"	18"	31"	24"	49"	38"	61"	47"	74"	57"	88"	68"	104"	80"
CLASS B			3,000	17"	16"	29"	23"	42"	33"	56"	43"	90"	69"	112"	86"	136"	104"	163"	125"	190"	147"
		MIN. COVER >= 3/4" MIN.	4,500	16"	16"	24"	19"	34"	26"	46"	36"	75"	58"	91"	71"	111"	85"	133"	103"	$70 \text{ in} \qquad d_b = 1.4$ $0 \text{THER} \qquad TOP$ $82" \qquad 127"$ $67" \qquad 103"$ $64" \qquad 98"$ $68" \qquad 104"$ $125" \qquad 190"$ $103" \qquad 156"$	120"
	2	CLEAR SPACING >= 2"	5,000	16"	16"	23"	17"	33"	25"	45"	34"	71"	55"	88"	67"	106"	81"	127"	98"	149"	114"
			6,000	16"	16"	21"	16"	30"	24"	41"	32"	64"	50"	80"	62"	97"	75"	115"	89"	136"	104"

**GENERAL NOTES:** 1. ALL DEVELOPMENT AND LAP SPLICE LENGTHS SPECIFIED IN SCHEDULES ARE FOR REINFORCING STEEL WITH A Fy = 60,000 psi. 2. "TOP" - HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.

- 3. "OTHER" ALL VERTICAL BARS AND HORIZONTAL BARS THAT DO NOT MEET THE "TOP" BAR DESIGNATION. 4. UNLESS NOTED OTHERWISE, ALL HOOKED BARS SHALL EXTEND TO THE FAR FACE W/ MIN COVER BEYOND PER "NOTE 5.2"
- 5. ALL HOOKED BAR LENGTHS SPECIFIED IN SCHEDULE ARE FOR REINFORCING WITH:
- 5.1 SIDE COVER >= 2 1/2", 5.2 COVER BEYOND >= 2"

REBAR BENDING SCHEDULE

STIRRUP W/ 180° HOOK

1 REINFORCEMENT BENDING SCHEDULE

BAR SIZES

#3, #4, #5

#6, #7, #8

#9, #10, #11

#14, #18

S-301 NTS

5/8"Ø x 2'-6" PLAIN REBAR TO MATCH SPACING —— OF SLAB REINFORCEMENT W/ ONE END

GREASED OR WRAPPED IN BUILDING PAPER

REINFORCEMENT PER PLAN

COMPACTED SUBSOIL PER

GEOTECHNICAL REPORT, TYP. ——

GEOTECHNICAL REPORT, TYP. —

SLAB ON GRADE & -

'D' = INSIDE BEND DIAMETER

'd<sub>b</sub>' = BAR DIAMETER

'D' = FINISHED INSIDE BEND DIAMETER

STANDARD HOOKS STIRRUP / TIE HOOKS

6d<sub>b</sub>

N/A

N/A

CONT. WHERE

REQ'D -

2 1/2" MIN.

STIRRUP/TIE W/ 135° HOOK

ALTERNATE: PNA DIAMOND DOWELS 1/4"x4-1/2"x4-1/2" @

— 1/2" PRE-FORMED EXPANSION JOINT MATERIAL

- GRAVEL OVER VAPOR BARRIER PER

GEOTECHNICAL REPORT, TYP.

SHRINKAGE/CONTROL JOINT

5 TYPICAL SLAB ON GRADE JOINTS

NOTES:

1. JOINTS SHALL BE LOCATED TO PRODUCE SQUARE PANELS WHENEVER POSSIBLE. RATIO OF SIDES SHALL NOT

GEOTECHNICAL REPORT, TYP.

24" O.C. MAX, LOCATE W/IN 1/8" C.L. OF SLAB DEPTH & MOVE REBAR AS NEEDED, HOLD 12" FROM PERP. JOINTS

PLASTIC ZIP STRIP OR SAW CUT

STD. 180° HOOK

#3, #4, #5: 6d<sub>b</sub> OR 3" MIN. #6, #7, #8: 12d<sub>b</sub>

STD. 90° HOOK

1. CONCRETE IN BOX OUT SECTIONS SHALL BE

COLUMN PER PLAN —

POURED AT LEAST 24 HOURS AFTER SLAB AND

AFTER COLUMN DEAD LOADS HAVE BEEN APPLIED.

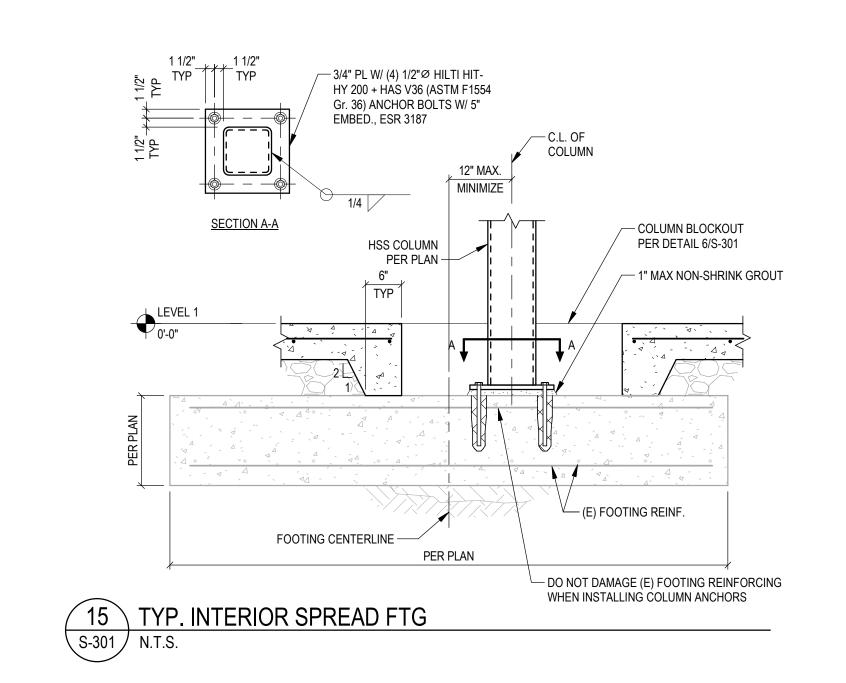
CASE A: BUILDING EDGE COLUMN

STIRRUP/TIE W/ 90° HOOK

LAP SPLICE NOTES: 1. ALL SPLICES SHALL BE WIRED IN CONTACT AND STACKED VERTICALLY. 2. SMALLER BAR LAP LENGTH SHALL BE USED WHEN SPLICING DIFFERENT SIZED BARS.

3. LAP LENGTHS SPECIFICALLY DETAILED IN DRAWINGS SHALL GOVERN IN LIEU OF LAP LENGTHS SCHEDULED.

- ADJUSTMENTS TO SPECIFIED STRAIGHT DEVELOPMENT AND LAP SPLICE LENGTHS: 1. LIGHTWEIGHT CONCRETE: MULTIPLY THE LENGTHS SPECIFIED IN THE SCHEDULE BY 1.33
- 2. EPOXY-COATED REINFORCMENT: 2.1. "TOP" BARS: MULTIPLY THE LENGTHS SPECIFIED IN THE SCHEDULE BY 1.3
- 2.2. "OTHER" BARS: MULTIPLY THE LENGTHS SPECIFIED IN THE SCHEDULE BY 1.5 3. COMBINATIONS OF EFFECTS DUE TO CONCRETE WEIGHT AND EPOXY COATING ARE CUMULATIVE. L<sub>d</sub> / L<sub>st</sub> SHALL BE MULTIPLIED BY EACH FACTOR TO FIN THE CORRECT VALUE
- ADJUSTMENTS TO SPECIFIED HOOK DEVELOPMENT LENGTHS: 1. LIGHTWEIGHT CONCRETE: MULTIPLY THE LENGTHS SPECIFIED IN THE SCHEDULE BY 1.33
- 2. EPOXY-COATED REINFORCMENT: MULTIPLY THE LENGTHS SPECIFIED IN THE SCHEDULE BY 1.2 3. SIDE COVER < 2 1/2": MULTIPLY THE LENGTHS SPECIFIED IN THE SCHEDULE BY 0.7



13 REINFORCEMENT DEVELOPMENT & SPLICE SCHEDULE

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ARCHITECT INFORMATION:

CLIENT INFORMATION:

CONSULTANT INFORMATION: 13228 NE 20th STREET, Ste. 100

BELLEVUE, WA 98004 425 614-0949 / INFO@AU-ENG.COM

JOB NO: 21173

PROJECT INFORMATION:

**SPRINGS ENWOOD** 

SIGNATURE/SEAL:

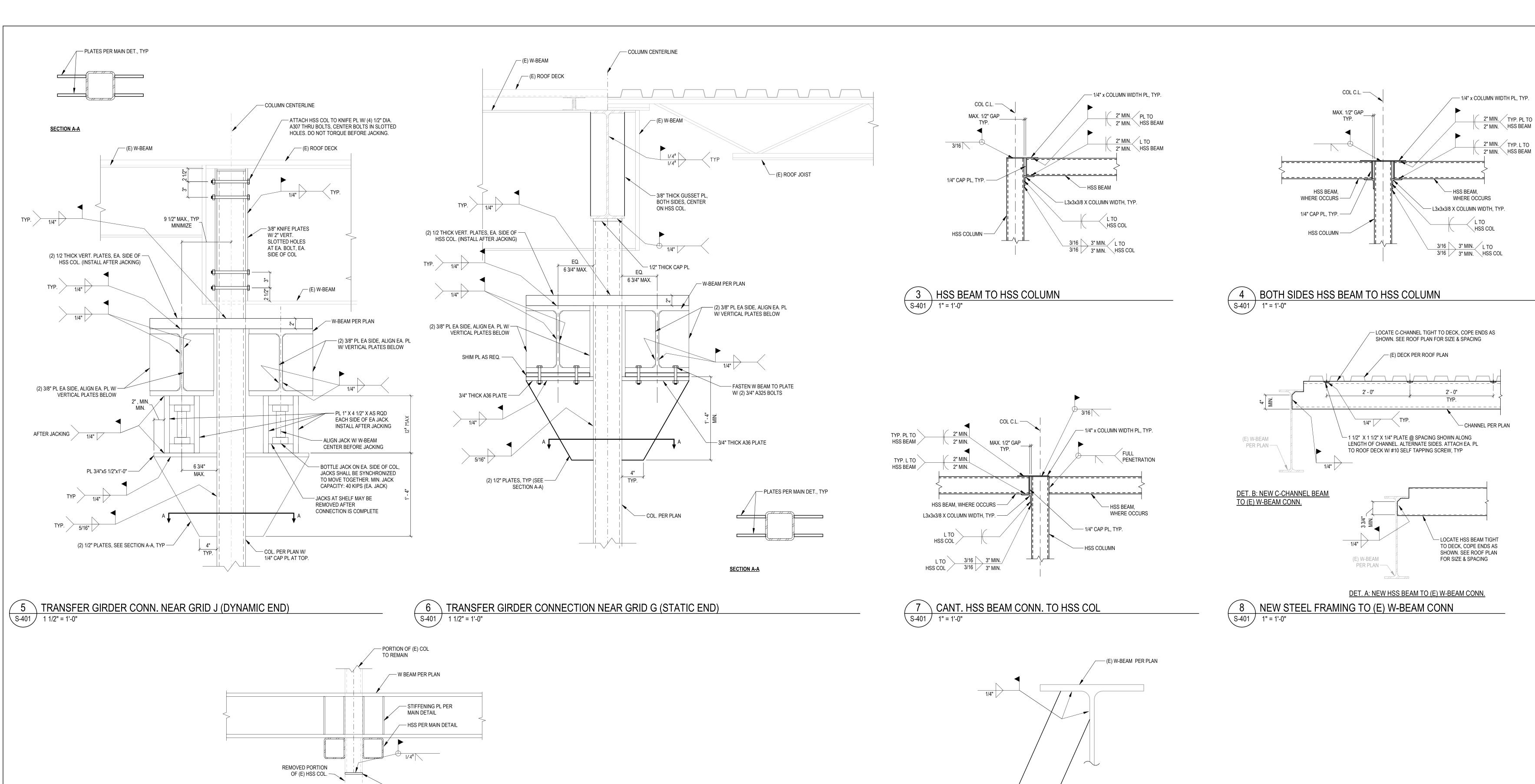
REI-G

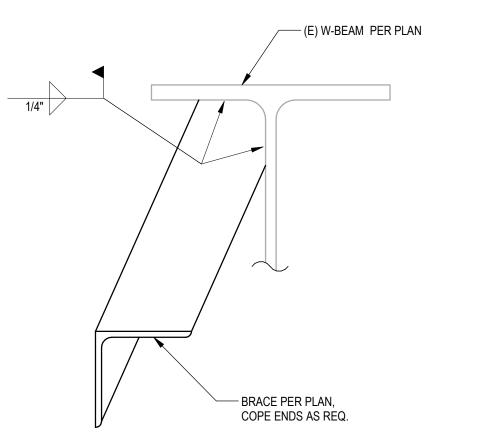
REV DATE DESCRIPTION 11/05/21 PERMIT SET

11/08/21 BID SET

**CONCRETE DETAILS** 

**S-301** 







**SPRINGS** REI-GLENWOOD

ARCHITECT INFORMATION:

ALLISONATKI

CONSULTANT INFORMATION:

13228 NE 20th STREET, Ste. 100 BELLEVUE, WA 98004

425 614-0949 / INFO@AU-ENG.COM JOB NO: 21173

PROJECT INFORMATION:

SIGNATURE/SEAL:

REV DATE DESCRIPTION 11/05/21 PERMIT SET 11/08/21 BID SET

STEEL DETAILS

**S-401** 

3/8" STIFFENING PL, TYP -

HSS 6X6X3/8" EA. SIDE OF —

(E) HSS COL. —

COLUMN, TYP

W-BEAM PER ROOF —

PLAN

/-- (E) W-BEAM

1/4" CAP PL

SECTION A-A

<sub>1</sub>(E) W BEAM PER PLAN

— STIFFENER PL. PER MAIN DETAIL, CENTER ON HSS BEAM BELOW

- (E) COL TO BE CUT AFTER JACKING AND PERMANENT SUPPORT HAS

BEEN COMPLETED

TIGHT TO (E) HSS COL, TYP

- HSS BEAM PER MAIN DET. LOCATE

\_\_\_\_

SECTION B-B

— BRACE PER ROOF PLAN, CONN. TO (E) W-BEAM PER **DET.** 

11/S-401 (INSTALL

(E) W-BEAM PER PLAN

\_\_\_\_ 1/4" CAP PL AT ENDS, TYP

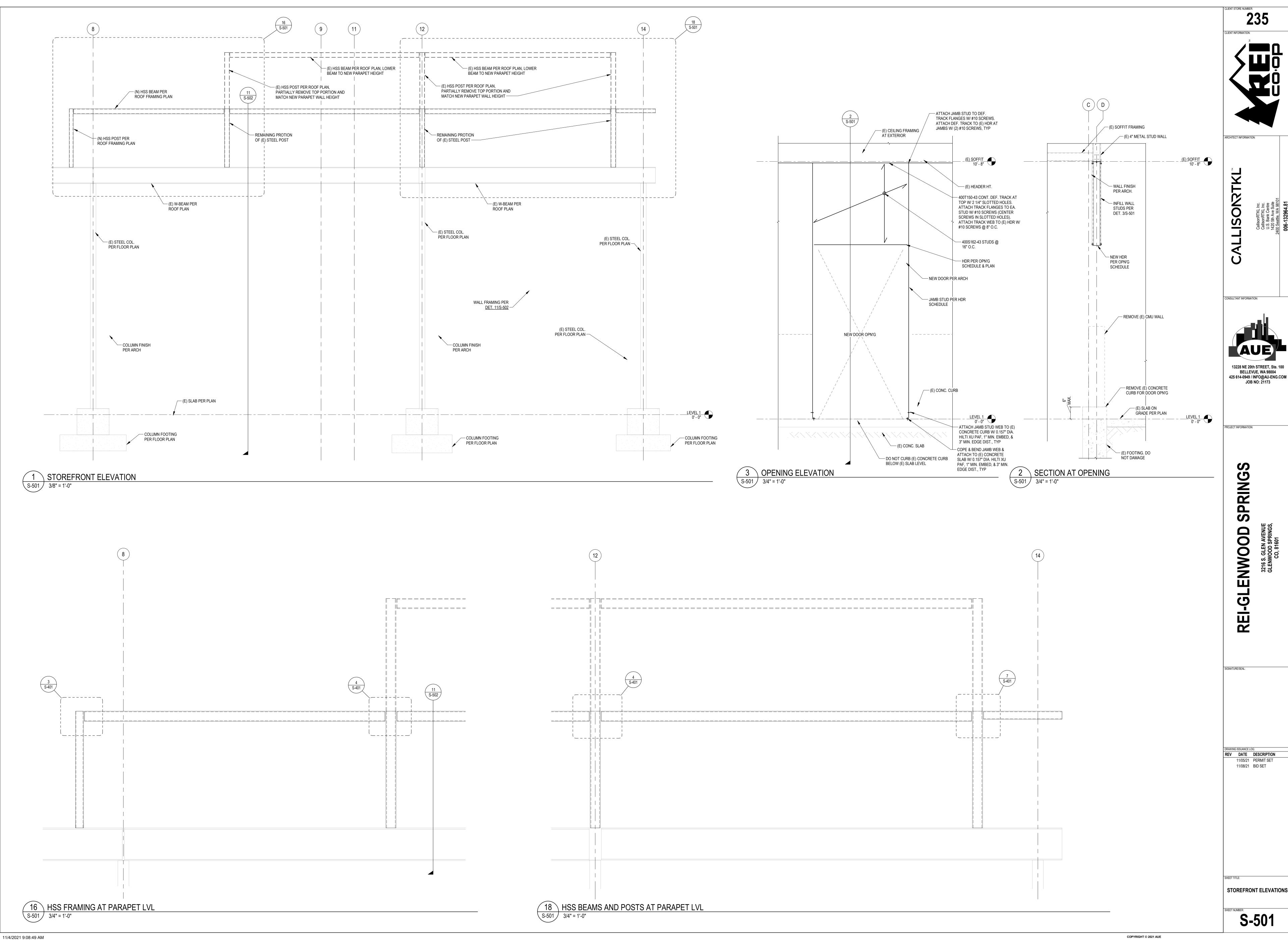
LOWER PORTION OF (E) COL AFTER JACKING AND PERMANENT SUPPORT HAS BEEN COMPLETED

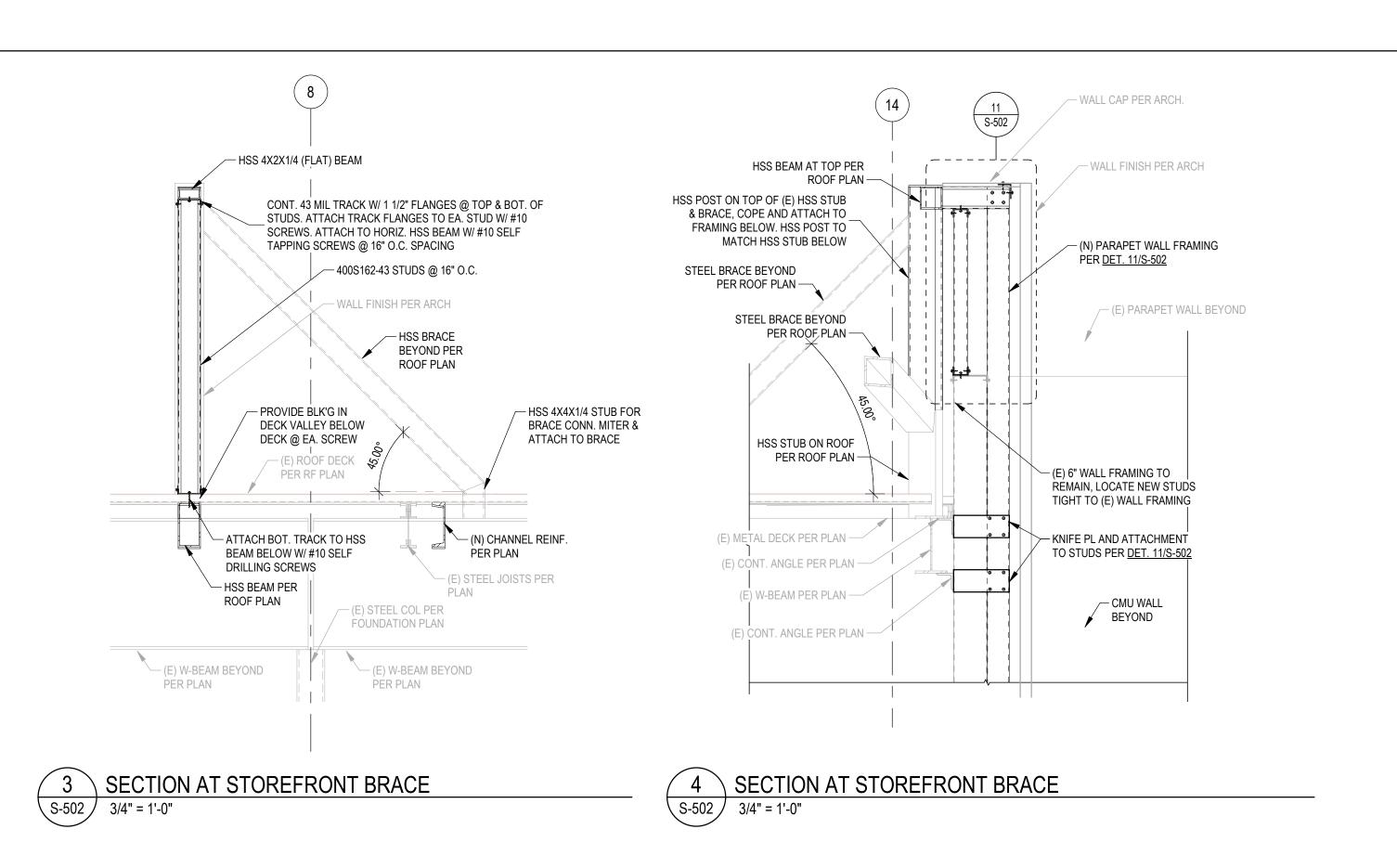
- W BEAM CENTERLINE

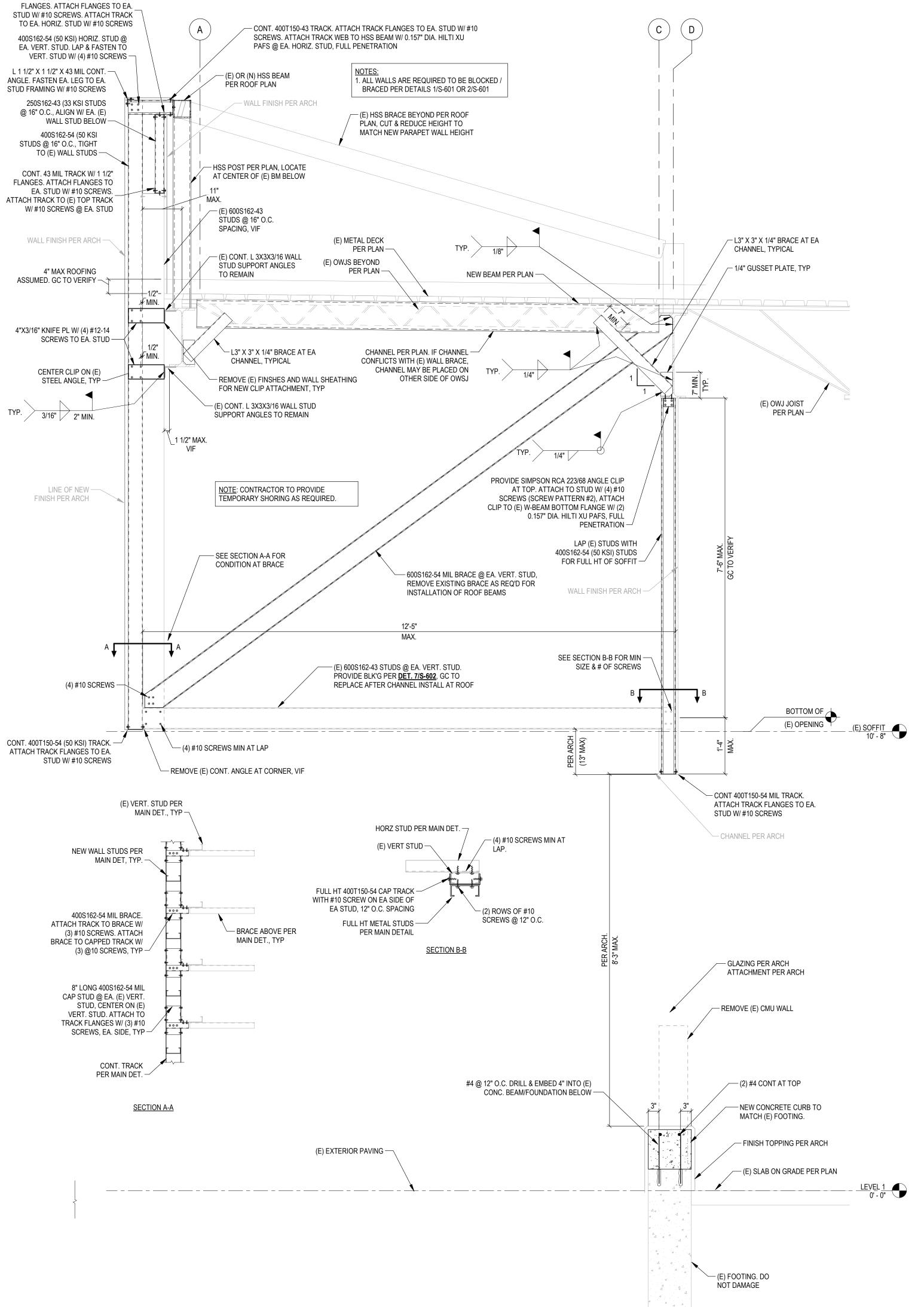
— (E) W-BEAM BEYOND

--- L3X3X1/4 ANGLE (WHERE BRACE OCCURS)

/— (E) ROOF DECK







TINFORMATION:

ARCHITECT INFORMATION:

CallisonRTKL Inc.
CallisonRTKL Inc.
U.S. Bank Centre
1420 5th Ave Suite

CallisonRTKL I CallisonRTKL I U.S. Bank Cen 1420 5th Ave Si 2400 Seattle, WA

13228 NE 20th STREET, Ste. 100 BELLEVUE, WA 98004 425 614-0949 / INFO@AU-ENG.COM JOB NO: 21173

CONSULTANT INFORMATION:

PROJECT INFORMATION:

ENWOOD SPRINGS, GLENWOOD SPRINGS,

REI-G

SIGNATURE/SEAL:

DRAWING ISSUANCE LOG:

REV DATE DESCRIPTION

11/05/21 PERMIT SET

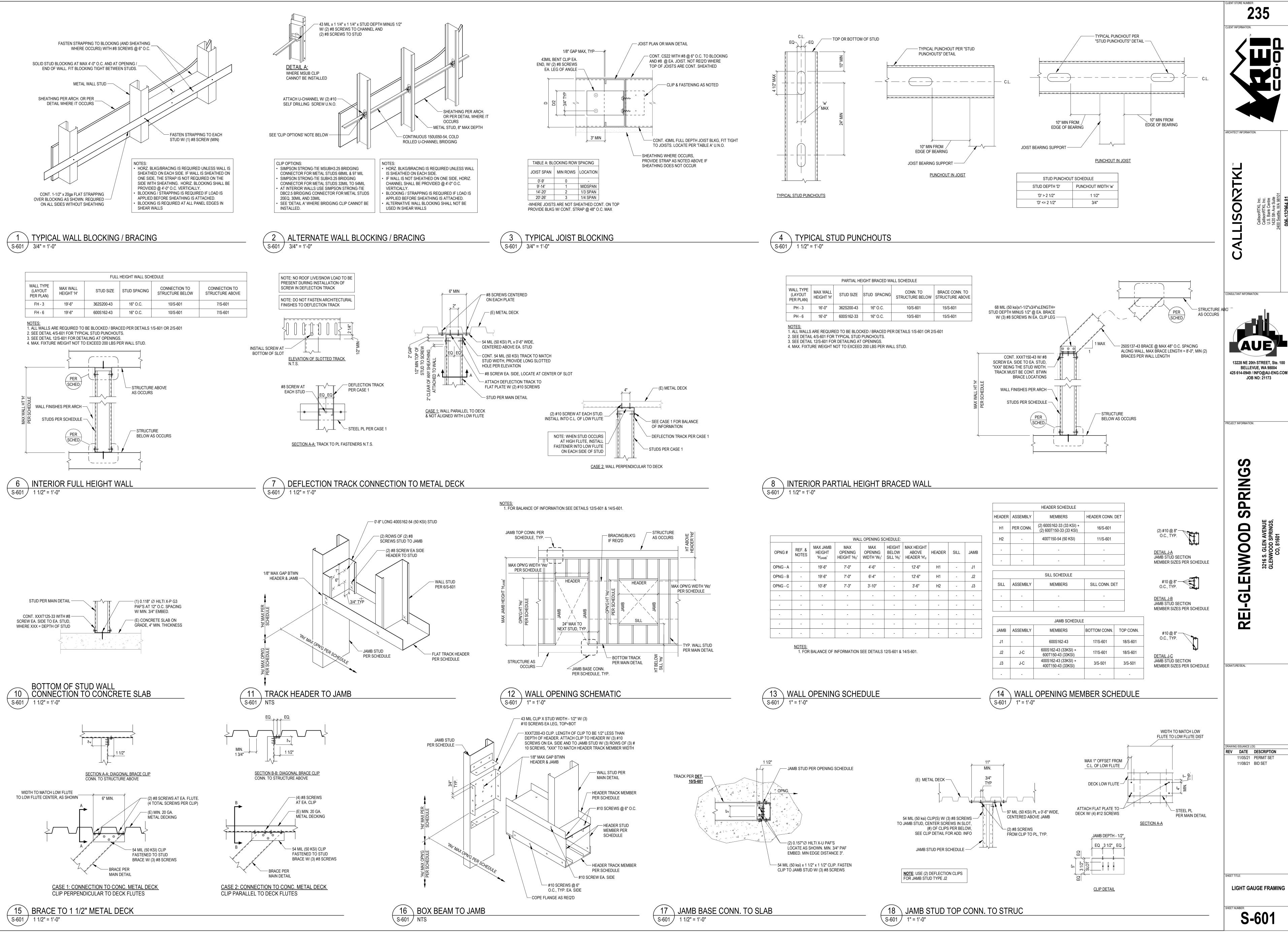
11/08/21 BID SET

STOREFRONT SECTIONS

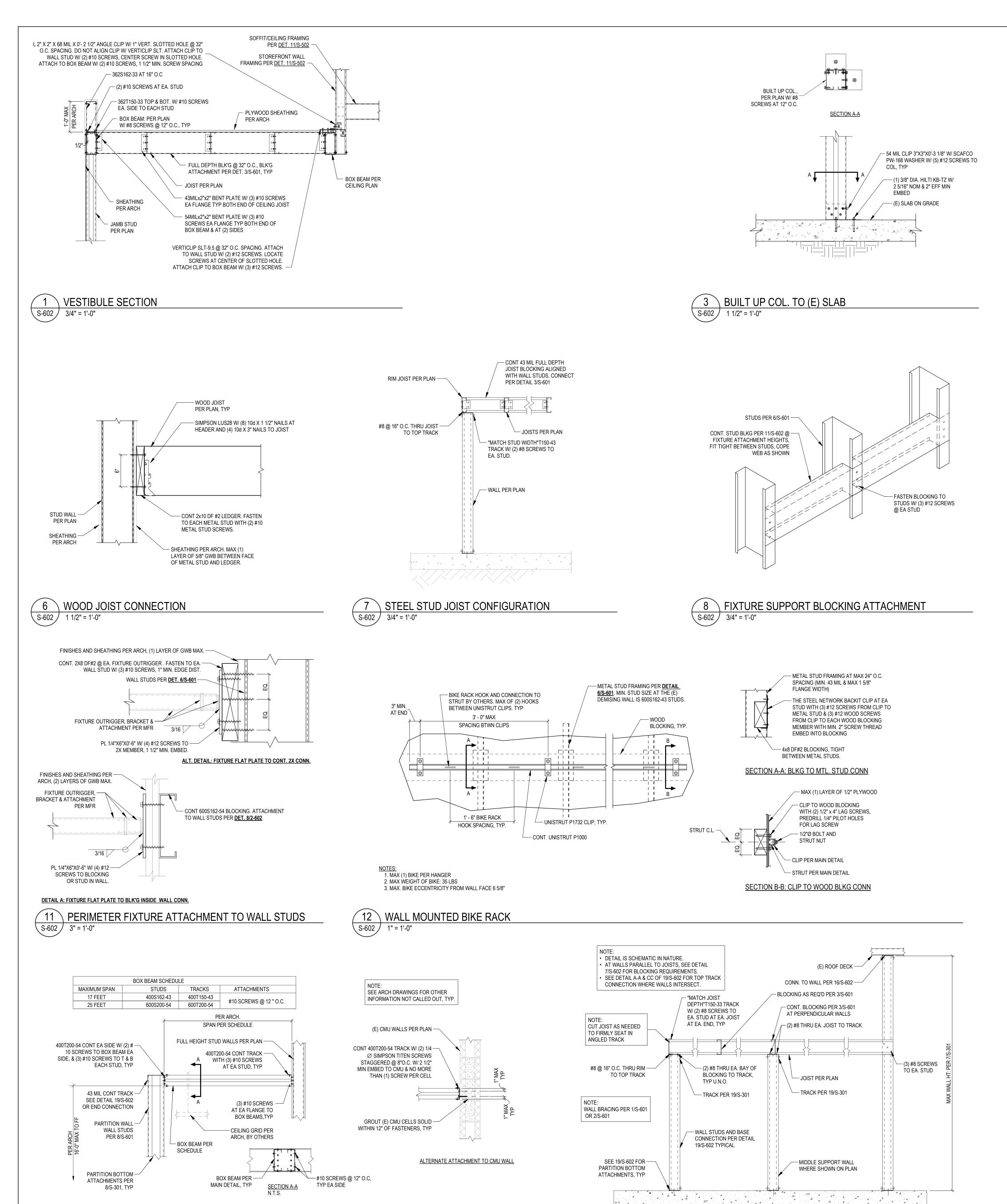
S-502

11 STOREFRONT SECTION

CONT. 43 MIL TRACK W/ 1 1/2"

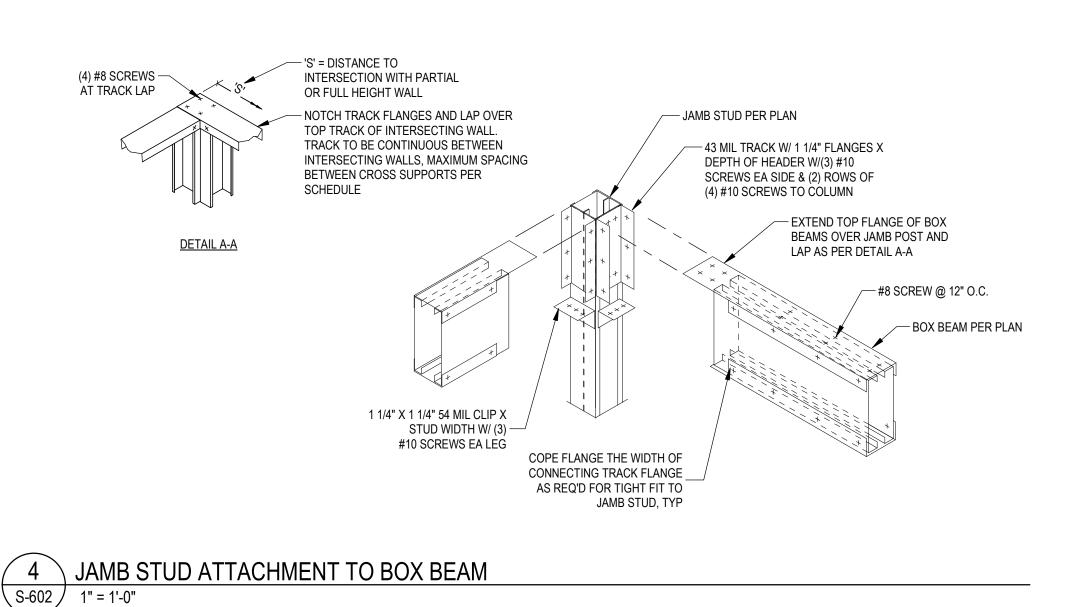


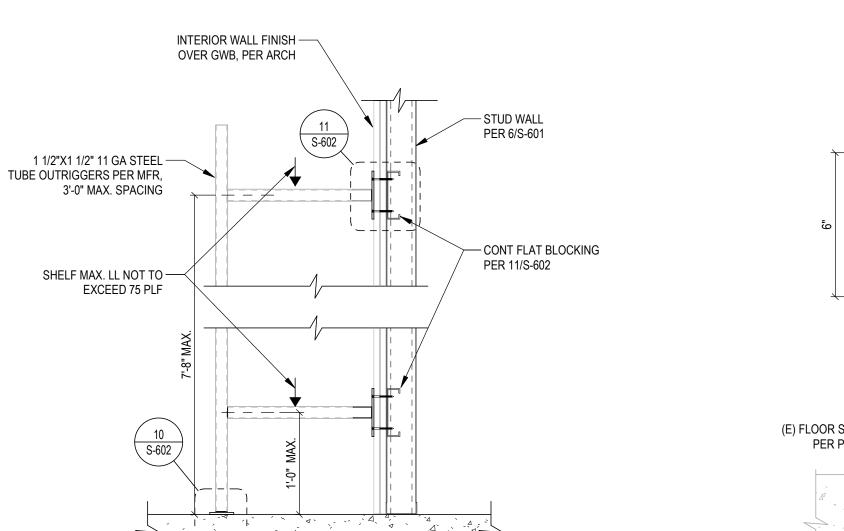
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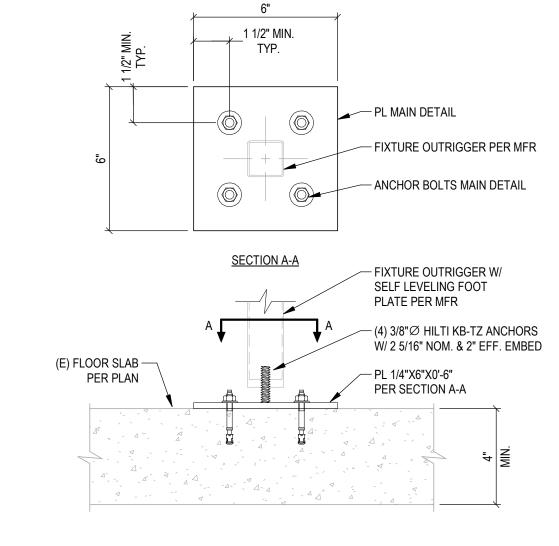


18 STEEL STUD JOIST CONFIGURATION

3/4" = 1'-0"

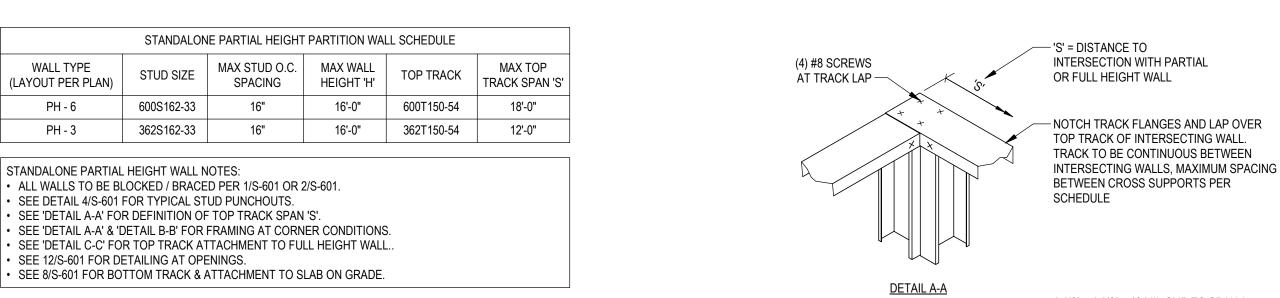


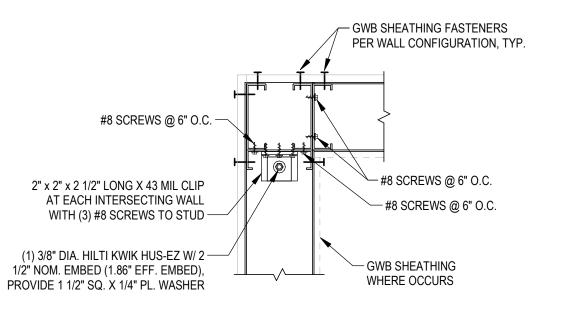


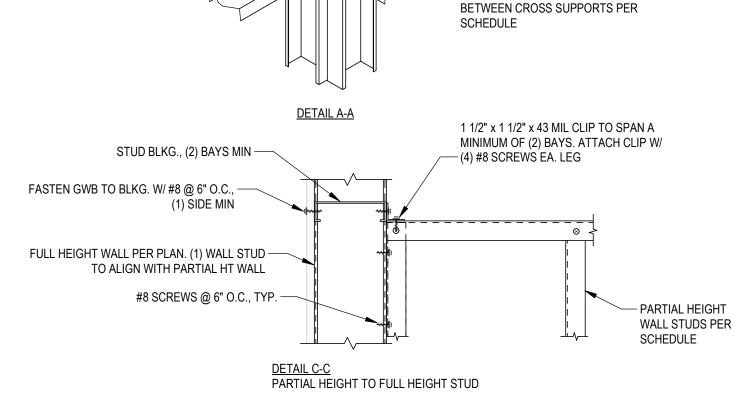


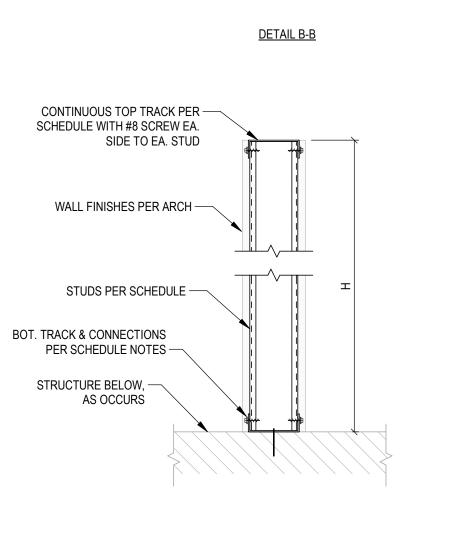
PERIMETER FIXTURE ATTACHMENT TO SLAB

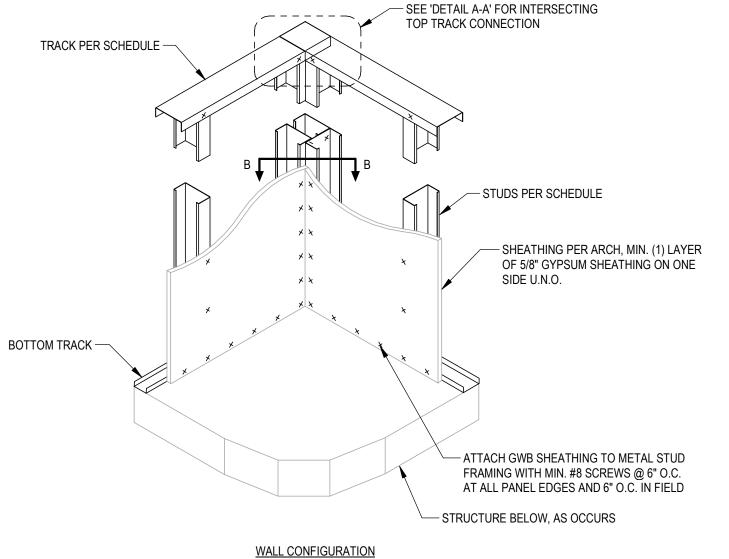












19\ STAND-ALONE PARTIAL HEIGHT WALL

**S-602** 

ARCHITECT INFORMATION:

CONSULTANT INFORMATION: 13228 NE 20th STREET, Ste. 100 BELLEVUE, WA 98004 425 614-0949 / INFO@AU-ENG.COM JOB NO: 21173

PROJECT INFORMATION:

PRIN S **NWOOD** 

9

SIGNATURE/SEAL:

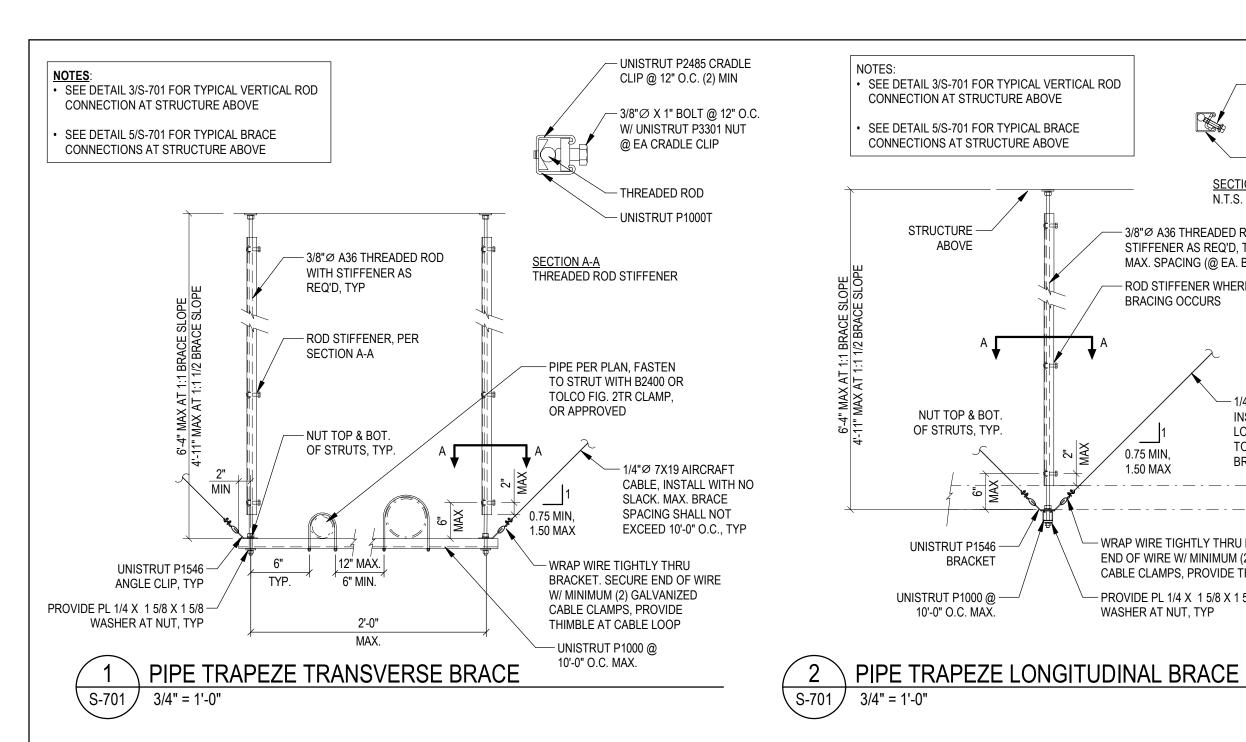
RAWING ISSUANCE LOG: REV DATE DESCRIPTION 11/05/21 PERMIT SET 11/08/21 BID SET

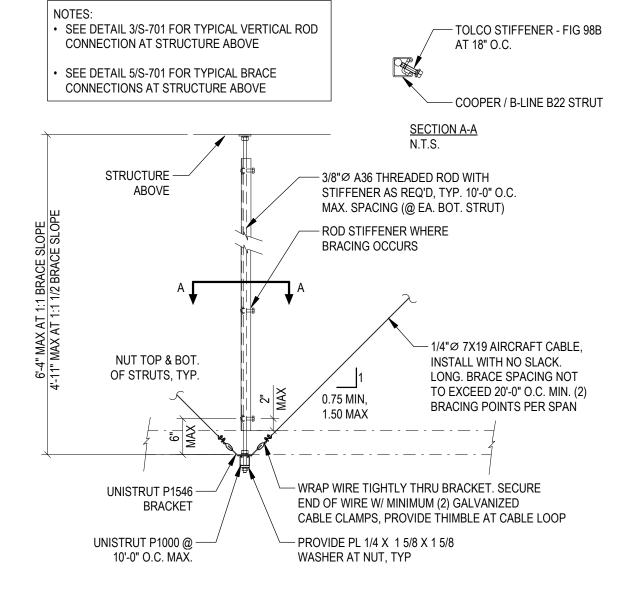
**LIGHT GAUGE FRAMING** 

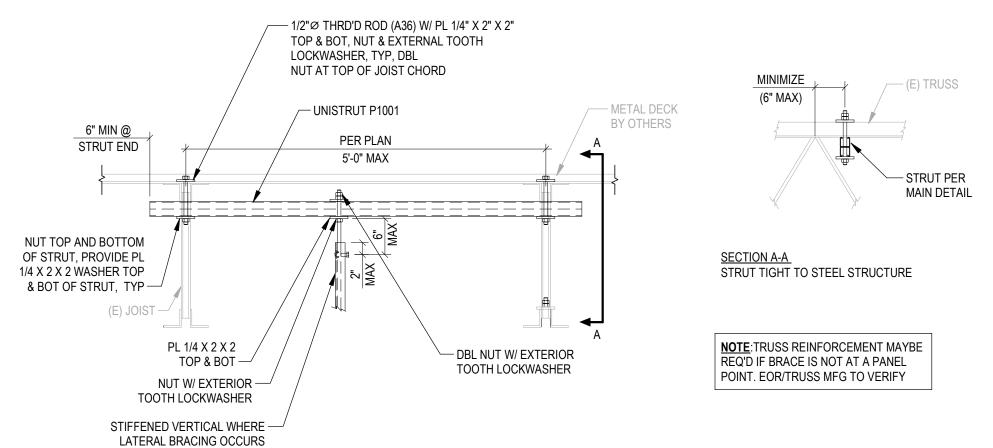
11/4/2021 9:08:53 AM

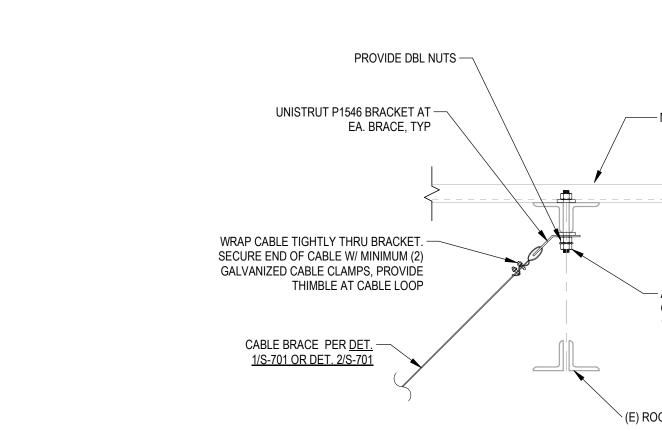
S-602 / 3/4" = 1'-0"

16 \ WALL BRACE TO EXISTING WALL

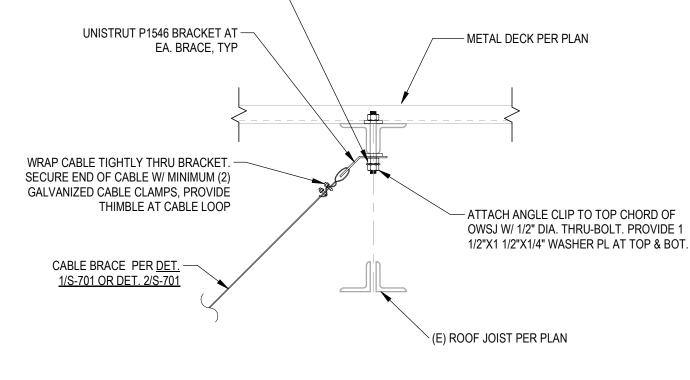








NOTE: PROVIDE JOIST REINFORCEMENT PER DET. 2/S-801 IF BRACE IS NOT AT A PANEL POINT.





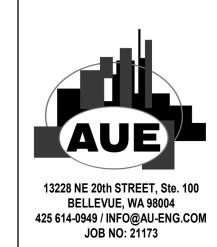
5 BRACE CONNECTION TO STRUCTURE S-701 1 1/2" = 1'-0"

ARCHITECT INFORMATION:

CLIENT INFORMATION:

ALLISONATKL

CONSULTANT INFORMATION:



PROJECT INFORMATION:

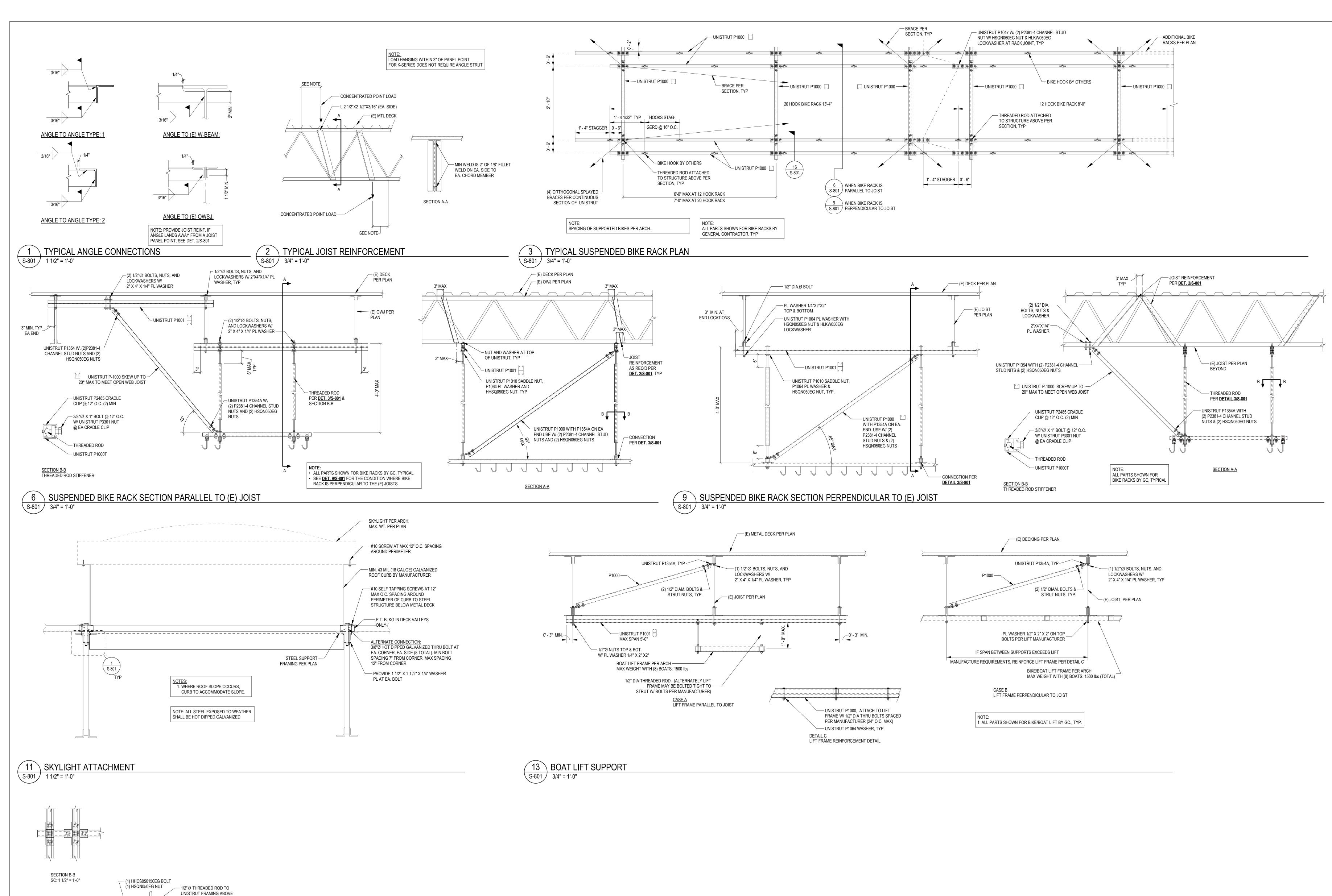
**SPRINGS** REI-GLENWOOD

DRAWING ISSUANCE LOG:
REV DATE DESCRIPTION 11/05/21 PERMIT SET 11/08/21 BID SET

PIPE SUPPORT DETAILS

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STIFFENED VERTICAL WHERE — LATERAL BRACING OCCURS



CLIENT INFORMATION:

ARCHITECT INFORMATION:

CONSULTANT INFORMATION:

13228 NE 20th STREET, Ste. 100 BELLEVUE, WA 98004 425 614-0949 / INFO@AU-ENG.COM JOB NO: 21173

PROJECT INFORMATION:

PRIN S **ENWOOD** 

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SIGNATURE/SEAL:

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11/05/21 PERMIT SET 11/08/21 BID SET

**ROOF SUPPORTED** UNITS/FIXTURES

**S-801** 

UNISTRUT P1047 ~

→ BIKE RACK ENLARGED DETAILS

UNISTRUT (1) P2381-4 CHANNEL STUD -

NUT W/ (1) HSQN050EG NUT AND (1) 0' - 2 1/32" HLKW050EG LOCKWASHER PER SIDE - UNISTRUT (1) P1064 PL WASHER WITH HSQN050EG NUT AND (1) HLKW050EG LOCKWASHER TOP AND BOTTOM

STUD NUT WITH (1) HSQN050EG NUT AND (1) HLKW050EG LOCKWASHER (4 TOTAL)