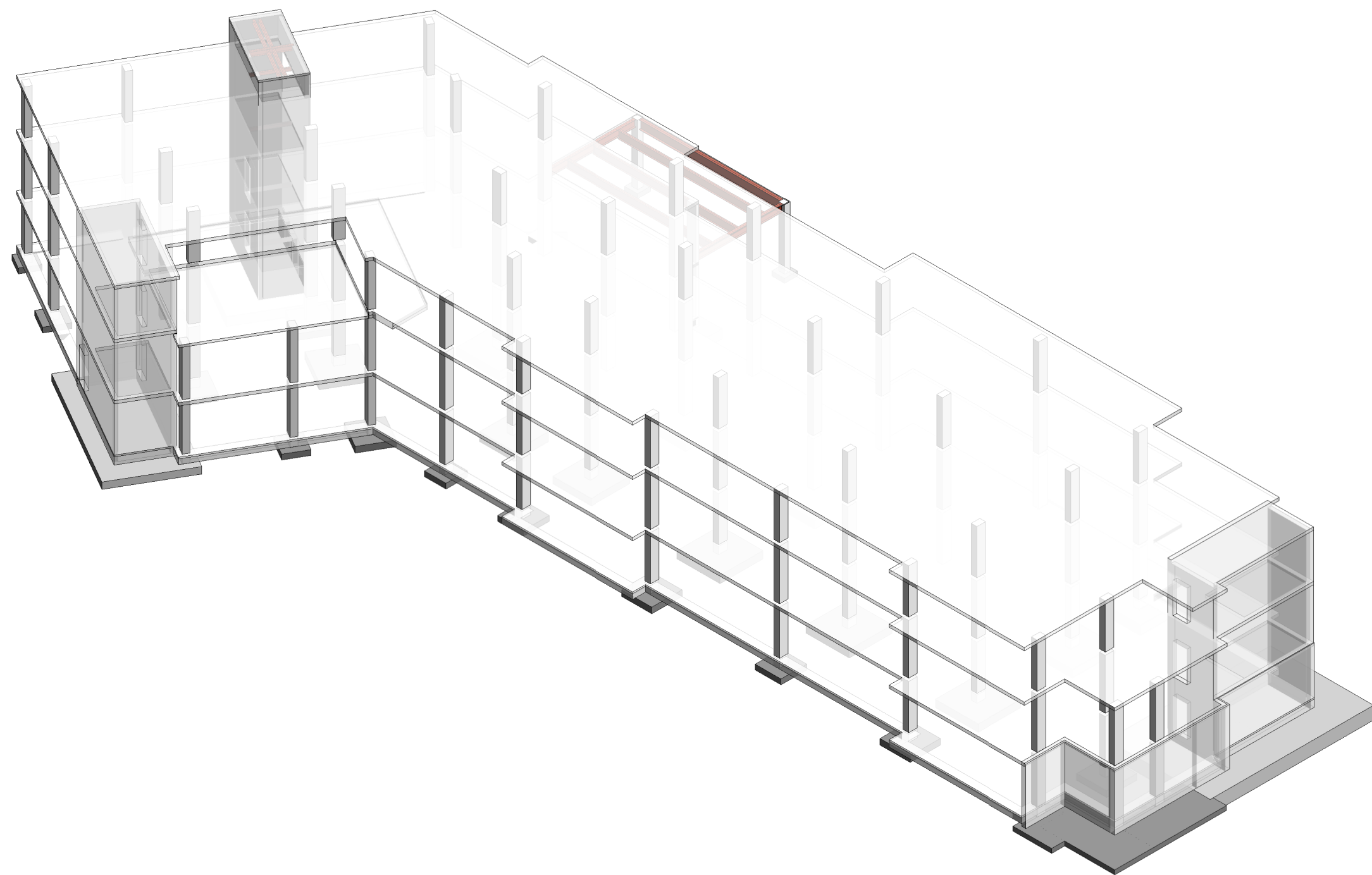


3D
S-001
ISOMETRIC VIEW - FOR REFERENCE ONLY



EARTHWORK & FOUNDATIONS

- A. GEOTECHNICAL INVESTIGATION REPORT
1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL INVESTIGATION REPORT AS FOLLOWS:
 - a. REPORT TITLE: REPORT OF GEOTECHNICAL SERVICES - THREE RESIDENTIAL BUILDINGS THE WATERFORD, 601 UNIVERSE BOULEVARD, JUNO BEACH, FLORIDA 33408 REPORT No. 25-239
 - b. PREPARED BY: ALLTERRA ENGINEERING & TESTING, WEST PALM BEACH, FL
 - c. DATED: SEPTEMBER 5, 2025
 2. THE GEOTECHNICAL INVESTIGATION REPORT IS AVAILABLE TO THE CONTRACTOR UPON REQUEST TO THE OWNER. THE INFORMATION HEREIN MAY BE USED BY THE CONTRACTOR FOR HIS GENERAL REFERENCE ONLY. THE GEOTECHNICAL INVESTIGATION REPORT RECOMMENDATIONS SHALL SUPERSEDE THE MINIMUM CRITERIA STATED IN THE STRUCTURAL GENERAL NOTES.
 3. SHALLOWS FOUNDATIONS
 1. FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
 2. FOUNDATION SIZES AND REINFORCEMENT ARE BASED ON AN ALLOWABLE BEARING PRESSURE OF 4,200 PSF PER THE GEOTECHNICAL INVESTIGATION REPORT.
 3. FOUNDATIONS SHALL BEAR A MINIMUM OF 2'-0" BELOW ADJACENT EXTERIOR GRADE.
 4. FOUNDATIONS SHALL BEAR ON SOIL THAT HAS BEEN IMPROVED THROUGH VIBRO-FLOTATION PER THE GEOTECHNICAL REPORT.
 5. FOUNDATIONS WITH GROUND IMPROVEMENT SHALL BEAR ON RAMMED AGGREGATE PIERS PER THE GEOTECHNICAL INVESTIGATION REPORT. JG WILL COORDINATE FOUNDATION REACTIONS WITH THE GEOTECHNICAL ENGINEER OF RECORD FOR FINAL RAMMED AGGREGATE PIER DESIGN AND ZONING CONSIDERATIONS. FOUNDATIONS IN AREAS WITHOUT GROUND IMPROVEMENT SHALL BE PREPARED PER GEOTECHNICAL REQUIREMENTS.
 6. PRIOR TO PLACEMENT OF CONCRETE, A QUALIFIED GEOTECHNICAL ENGINEER SHALL VERIFY SOILS CONFORMANCE TO THE RECOMMENDATIONS AND ASSUMPTIONS IN THE GEOTECHNICAL INVESTIGATION REPORT. ALL ADVERSE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ STRUCTURAL ENGINEER OF RECORD.
 7. SOILS BELOW FOUNDATIONS NOT MEETING DESIGN BEARING PRESSURE SHALL BE REMEDIATED PER THE GEOTECHNICAL INVESTIGATION REPORT AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE FOUNDATIONS.
 8. CENTER ALL FOUNDATIONS UNDER THEIR RESPECTIVE COLUMNS OR WALLS, UNLESS NOTED OTHERWISE.
 9. TOP OF FOUNDATION ELEVATIONS PROVIDED ON THE CONTRACT DRAWINGS ARE FOR PURPOSE OF THE CONTRACT AND SHALL BE ADJUSTED, AS REQUIRED, AT THE TIME OF EXCAVATION TO BEAR ON PROPERLY PREPARED SUPPORT SUBGRADE (PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS).
 4. EARTHWORK AND EXCAVATION
 1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING, BUT NOT LIMITED TO: LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS.
 2. EXCAVATION SHALL NOT OCCUR WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING FOUNDATION UNLESS THE FOUNDATION IS PROTECTED AGAINST SETTLEMENT.
 3. THE EXTENT OF SUBGRADE PREPARATION SHALL EXTEND A MINIMUM OF 5'-0" BEYOND THE BUILDING PERIMETER.
 4. THE CONTRACTOR SHALL PROVIDE A SUBGRADE BENEATH THE SLAB-ON-GROUND PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
 5. UNLESS NOTED IN THE GEOTECHNICAL INVESTIGATION REPORT, COMPACT FILL TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR ASTM D-1557. EACH LAYER SHALL NOT EXCEED 8" LOOSE THICKNESS. COMPACT PRIOR TO THE PLACEMENT OF THE NEXT LAYER. COMPACT SHALL MEET ALL RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT.
 6. PLACEMENT OF FILL AND COMPACTION SHALL BE MONITORED AND ACCEPTED BY A RETAINED TESTING AGENCY. PERFORM A MINIMUM OF ONE FIELD DENSITY TEST (ASTM D-1556 OR D-4938) FOR EVERY 2,500 SQUARE FEET OF EACH LAYER. THE TESTING AGENCY SHALL RANDOMLY SELECT TEST LOCATIONS.
 7. THE CONTRACTOR SHALL DETERMINE THE EXTENT OF THE CONSTRUCTION DEWATERING SYSTEMS REQUIRED FOR THE EXCAVATION. AT A MINIMUM, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING SITE.
 8. THE CONTRACTOR SHALL SUBMIT CONSTRUCTION DEWATERING PLAN TO THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO BEGINNING EXCAVATION.
 9. THE CONTRACTOR SHALL INSTALL ALL NECESSARY DEWATERING SYSTEMS.
 5. RETAINING WALL
 - a. RETAINING WALLS SHALL BE DESIGNED FOR THE FOLLOWING:
 - i. LATERAL EARTH PRESSURE AT REST: PSF PER FOOT OF DEPTH
 - ii. ACTIVE EARTH PRESSURE: PSF PER FOOT OF DEPTH
 - iii. PASSIVE EARTH PRESSURE RESISTANCE: PSF PER FOOT OF DEPTH
 - iv. SOIL FRICTION FACTOR
 2. RETAINING WALL DESIGN IS BASED ON DRAINED BACKFILL WITH NO BUILDUP OF WATER. THE CONTRACTOR SHALL PROVIDE A DRAINAGE SYSTEM IN ALL BACKFILL CONDITIONS (SEE CIVIL/ ARCHITECTURAL DRAWINGS FOR DRAINAGE SPECIFICATIONS).
 3. DO NOT BACKFILL AGAINST CANTILEVERED RETAINING WALLS UNTIL CONCRETE COMPRESSIVE STRENGTH, f_c , REACHES ITS 28 DAY DESIGN STRENGTH. DO NOT BACKFILL PRIOR TO WATERPROOFING AND INSPECTION.

GENERAL REQUIREMENTS

- A. THE GENERAL STRUCTURAL NOTES EMPLOY THE FOLLOWING DEFINITIONS AND ABBREVIATIONS.
1. CONTRACT DOCUMENTS - THE LATEST SET OF DRAWINGS, SPECIFICATIONS, AND RECORDED ADDENDA AND AMENDMENTS ISSUED FOR BID OR CONSTRUCTION.
 2. LICENSED PROFESSIONAL (STRUCTURAL) ENGINEER - AN ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED AND QUALIFIED TO PERFORM THE WORK REQUIRED.
 3. STRUCTURAL ENGINEER OF RECORD - LICENSED PROFESSIONAL ENGINEER WHO IS IN RESPONSIBLE CHARGE FOR THE PREPARATION, SIGNING, DATING, SEALING, AND ISSUING OF STRUCTURAL ENGINEERING DOCUMENTS FOR ENGINEERING SERVICE OR CREATIVE WORK.
 4. DELEGATED ENGINEER - A LICENSED PROFESSIONAL ENGINEER WHO PROVIDES SERVICES OR CREATIVE WORK REGARDING A PORTION OF THE ENGINEERING PROJECT. THE DELEGATED ENGINEER IS THE ENGINEER OF RECORD FOR THAT PORTION OF THE ENGINEERING PROJECT. TYPICALLY, DELEGATED ENGINEERS FALL INTO ONE OF THE FOLLOWING CATEGORIES:
 - a. AN INDEPENDENT CONSULTANT
 - b. AN EMPLOYEE OR OFFICER OF AN ENTITY SUPPLYING COMPONENTS TO A FABRICATOR OR CONTRACTOR
 - c. AN EMPLOYEE OR OFFICER OF A FABRICATOR OR CONTRACTOR
 5. DELEGATED ENGINEERING DOCUMENTS - ENGINEERING DOCUMENTS THAT ARE PREPARED BY A DELEGATED ENGINEER.
 6. DESIGN TEAM - DESIGN PROFESSIONALS INCLUDING THE ARCHITECT, STRUCTURAL ENGINEER, CIVIL ENGINEER, MEP ENGINEER, AND ANY OTHER CONSULTANT THAT ISSUES CONTRACT DOCUMENTS.
 7. CONTRACTOR - GENERAL CONTRACTOR, CONSTRUCTION MANAGER, DESIGN BUILDER, OR ANY OTHER ENTITY CONTRACTED BY THE OWNER TO PERFORM THE WORK.
 8. SHOP DRAWINGS - DRAWINGS DEPICTING INSTALLATION MEANS AND METHODS AND CATALOG INFORMATION ON STANDARD PRODUCTS. SHOP DRAWINGS SHALL BE PREPARED BASED ON ENGINEERING DIRECTION CONTAINED IN CONTRACT DOCUMENTS BY A CONTRACTOR, FABRICATOR, MANUFACTURER, OR LICENSED PROFESSIONAL ENGINEER, FOR INCORPORATION INTO THE PROJECT.
 9. ESTABLISHED CHANNELS - AT THE ONSET OF THE PROJECT, ARCHITECT, OWNER, AND CONTRACTOR SHALL ESTABLISH DESIRED LINES OF COMMUNICATION BETWEEN ALL PROJECT PARTIES. THESE AGREED UPON LINES OF COMMUNICATION ARE THE ESTABLISHED CHANNELS.
 10. GENERAL STRUCTURAL NOTES ARE APPLICABLE TO THE DESIGN AND CONSTRUCTION OF THE ENTIRE PROJECT UNLESS OTHERWISE INDICATED BY THE ARCHITECT OR STRUCTURAL ENGINEER OF RECORD.
 11. WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION, OR PLAN NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL SIMILAR OR LIKE CONDITIONS, UNLESS NOTED OTHERWISE.
 12. ISOMETRIC DRAWINGS FOR INSULATION PURPOSES ONLY AND DO NOT CONVEY ALL OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
 13. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE DRAWINGS AND ANY OTHER CONTRACT DOCUMENT OR APPLICABLE CODE OR STANDARD OF PRACTICE DURING BIDDING, THE PROVISION RESULTING IN THE GREATER COST APPLIES. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT DURING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR CLARIFICATION TO THE DESIGN TEAM, WHO WILL PROVIDE A WRITTEN RESPONSE IN RETURN.
 14. SPECIFICATIONS HAVE BEEN ISSUED ON THIS PROJECT BY THE STRUCTURAL ENGINEER OF RECORD AND ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS.
 15. SEE SPECIFICATIONS FOR MATERIALS TESTING REQUIREMENTS.
 16. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE QUALITY AND CORRECTNESS OF THE WORK.
 17. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH OTHER TRADES INCLUDING, BUT NOT LIMITED TO: ARCHITECTURAL, CIVIL, AND MEP FOR FLOOR SLAB STEPS, SLOPES AND CURBS, FLOOR SLAB FINISH, OPENINGS IN STRUCTURAL FLOORS, ROOFS AND WALLS, ETC.
 18. THE BUILDING HAS BEEN DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD TO RESIST THE CODE REQUIRED VERTICAL AND LATERAL FORCES IN ITS FULLY COMPLETED CONDITION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED BRACING, SHORING, AND OTHER CONSTRUCTION SUPPORTS NECESSARY TO ENSURE THE BUILDING'S STABILITY AND SAFETY THROUGHOUT THE DURATION OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PROVIDE THE ANALYSIS AND DESIGN NECESSARY TO DETERMINE POTENTIALLY OVERLOADED, UNDESIGNED, OR HAZARDOUS CONDITIONS THAT MAY OCCUR AT ANY STAGE DURING CONSTRUCTION.
 19. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS.
 20. THE CONTRACTOR SHALL NOT EMPLOY CONSTRUCTION MEANS OR METHODS THAT MAY DAMAGE UTILITIES, ADJACENT BUILDINGS, OR PROPERTY. DOCUMENTATION OF ADJACENT CONDITIONS PRIOR TO CONSTRUCTION IS RECOMMENDED. FURTHER, THE CONTRACTOR SHALL EITHER ADEQUATELY CONFINE THE SITE OR PROTECT ADJACENT PROPERTY FROM DAMAGE.
 21. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROJECT SAFETY AND OSHA REQUIREMENTS. SHOULD THE STRUCTURAL ENGINEER OF RECORD NOTIFY THE CONTRACTOR OF A POTENTIALLY UNSAFE CONDITION, IT IS SOLELY AS A COURTESY FROM A PROFESSIONAL TO ANOTHER. IT SHOULD NOT BE INTERPRETED AS THE STRUCTURAL ENGINEER OF RECORD ASSUMING ANY RESPONSIBILITY FOR PROJECT SAFETY.
 22. ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXTEND LIFE SPAN AND ENSURE STRUCTURAL INTEGRITY TO THE ENVIRONMENT. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE BUILDING OWNER. THIS PROGRAM SHALL INCLUDE, BUT NOT BE LIMITED TO: PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATINGS FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, AND TRENCHES IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO A SALINE OR OTHER HARSH CHEMICAL ENVIRONMENT.
 23. THE USE OF DE-ICING CHEMICALS ON ANY EXPOSED STRUCTURAL ELEMENT IS DISCOURAGED AND WILL ACCELERATE DETERIORATION OF STRUCTURAL ELEMENTS.
 24. THE BUILDING OWNER SHALL NOT ALTER OR MODIFY ANY STRUCTURAL ELEMENT WITHOUT CONSULTING A LICENSED PROFESSIONAL ENGINEER. FURTHER, BUILDING OWNER SHALL NOT RENOVATE, REPURPOSE, ADD-ON TO, OR OTHERWISE MODIFY THE EXISTING STRUCTURAL SYSTEMS WITHOUT CONSULTING A LICENSED PROFESSIONAL ENGINEER.
 25. CONTRACT DRAWINGS SHOW MAJOR OPENINGS IN FLOORS AND WALLS AND DO NOT NECESSARILY SHOW ALL OPENINGS REQUIRED. THE CONTRACTOR SHALL COORDINATE ALL OPENING SIZES AND LOCATIONS BETWEEN ALL DISCIPLINES AND TRADES. ADDITIONAL OPENINGS, BLOCKOUTS, AND SLEEVES MAY BE REQUIRED AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR REQUIREMENTS WITHIN THE CONTRACT DOCUMENTS. OPENINGS REQUIRED, BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
 26. THE CONTRACTOR SHALL COORDINATE PIPING AND CONDUIT EMBEDDED IN OR ATTACHED TO SLABS, SLAB-ON-DECK BEAMS, AND COLUMNS. ANY REQUIRED MODIFICATIONS TO STRUCTURAL MEMBERS OR THEIR REINFORCEMENT AS A RESULT OF EMBEDMENT OR ATTACHMENT SHALL BE SUBMITTED TO THE DESIGN TEAM FOR THEIR REVIEW. SEE GENERAL STRUCTURAL NOTES SECTION "DESIGN CRITERIA" FOR LIMITATIONS OF MEP LOADING ON STRUCTURAL SYSTEMS.
 27. THE STRUCTURAL ENGINEER OF RECORD'S ROLE DURING CONSTRUCTION
 1. THE STRUCTURAL ENGINEER OF RECORD SHALL NOT ASSUME CONTROL OF, OR RESPONSIBILITY FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, PROJECT SAFETY, THE ACTS AND OMISSIONS OF THE CONTRACTOR, OR THEIR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 2. STRUCTURAL ENGINEER OF RECORD SHALL NOT HAVE AUTHORITY TO STOP THE WORK OR AUTHORIZE CHANGES TO ANY CONTRACT SUM.
 3. PERIODIC SITE VISITS BY REPRESENTATIVES OF THE STRUCTURAL ENGINEER OF RECORD ARE SOLELY FOR THE PURPOSE OF BECOMING GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK AND DETERMINING, IN GENERAL, IF THE WORK OBSERVED IS BEING PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS LIMITED OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS AND THAT OBSERVATIONS ARE QUALITATIVE, NOT QUANTITATIVE. THIS LIMITED INFORMATION WILL BE USED TO ADVISE THE OWNER/CONTRACTOR/ARCHITECT OF POTENTIAL DEFICIENCIES.
 28. CLARIFICATION OF POSITION OF STRUCTURALLY FRAMING ELEMENTS
 1. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS, DO NOT SCALE ANY DIMENSIONS.
 2. IF NOT INDICATED ON DRAWINGS, ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS.
 3. CENTER LINES OF COLUMNS AND FOUNDATIONS SHALL COINCIDE WITH GRID LINE INTERSECTION, UNLESS NOTED OTHERWISE.
 4. CENTER LINES OF FOOTINGS, GRADE BEAMS, AND WALLS SHALL COINCIDE WITH CENTER LINES OF FOUNDATIONS, UNLESS NOTED OTHERWISE.
 5. CENTER LINES OF FRAMING MEMBERS SHALL COINCIDE WITH COLUMN CENTER LINES, UNLESS NOTED OTHERWISE.
 6. ELEVATIONS SHOWN ARE TO TOP OF FOUNDATIONS, SLABS, OR BEAMS, UNLESS NOTED OTHERWISE.
 29. SEE ARCHITECTURAL, CIVIL, MEP, AND VERTICAL TRANSPORTATION CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS INCLUDING, BUT NOT LIMITED TO:
 - a. CIVIL:
 - i. SITING OF BUILDING GRID LINES WITH RESPECT TO CITY BENCHMARKS
 - ii. SITE PREPARATION
 - iii. BACKFILLING MATERIALS AND REQUIREMENTS INCLUDING DRAINAGE ADJACENT TO RETAINING WALLS
 - iv. SITE ELEMENTS OUTSIDE OF BUILDING ENVELOPE
 - v. NEW AND EXISTING SITE UTILITIES
 2. ARCHITECTURAL:
 - i. PLAN DIMENSIONS AND PROJECT DATUM
 - ii. SLAB EDGE DIMENSIONS AND FINISH ELEVATIONS
 - iii. WATERPROOFING AND DAMP PROOFING DETAILS
 - iv. SLAB SLOPES, STEPS AND DEPRESSIONS, RAMPS, TRENCHES
 - v. EMBEDMENTS, INSERTS, BLOCKOUTS, ETC.
 - vi. CONCRETE FINISHES AND TOPPING SLABS
 - vii. CONCRETE CURBS AND HOUSEKEEPING PADS
 - viii. INTERIOR NON-STRUCTURAL MASONRY PARTITIONS
 - ix. LIFE SAFETY, FIRE RATING
 - x. CAST-IN-PLACE STAIRS AND SUPPORTS
 - xi. OPERABLE PARTITIONS
 3. MEP:
 - i. PIPE AND DUCT SIZES FOR OPENING AND SLEEVE COORDINATION
 - ii. FLOOR DRAINS
 - iii. UNDERFLOOR AND PERIMETER DRAINAGE SYSTEMS
 - iv. EQUIPMENT CURBS
 - v. CONDUITS AND EMBEDMENTS IN WALLS AND SLABS
 4. VERTICAL TRANSPORTATION:
 - i. INSERTS, HANGERS, TRENCHES, PITS, CONDUITS IN WALLS AND SLAB
 30. THIS BUILDING QUALIFIES AS A THRESHOLD BUILDING PER CHAPTER 553.71 OF THE FLORIDA STATUTES. AS SUCH, SPECIAL INSPECTIONS SHALL BE REQUIRED PER CHAPTER 553.73 OF THE FLORIDA STATUTES BY PERSONS DULY AUTHORIZED TO PERFORM THEM BY CHAPTER 61G15-35.003 OF THE FLORIDA ADMINISTRATIVE CODE. SEE SPECIAL INSPECTION PLAN FOR SPECIFIC INSPECTION REQUIREMENTS.

ELECTRONIC DATA/REPRODUCTION

- A. ALL INFORMATION CONTAINED IN THE ELECTRONIC FILES OF THE CONTRACT DOCUMENTS ARE INSTRUMENTS OF SERVICE OF THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD AND SHALL NOT BE USED FOR OTHER PROJECTS, ADDITIONS TO THE PROJECT, OR THE COMPLETION OF THE PROJECT BY OTHERS. ELECTRONIC FILES OF THE STRUCTURAL DOCUMENTS REMAIN THE PROPERTY OF JEZERINAC GROUP AND IN NO CASE SHALL THEIR TRANSFER BE CONSIDERED A SALE.
- B. THE USE OF ELECTRONIC FILES OR REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNifies THEIR ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT AND OBLIGATES THEMSELVES TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS OR OMISSIONS THAT MAY OCCUR HEREIN. THE USE OF ELECTRONIC FILES DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROPER CHECKING AND COORDINATION OF DIMENSIONS, DETAILS, SIZE, AND QUANTITIES.
- C. WHEN USED FOR THE PREPARATION OF SHOP DRAWINGS, ALL INFORMATION NOT APPLICABLE TO THE SUBCONTRACT SHALL BE REMOVED FROM THE DRAWINGS, INCLUDING, BUT NOT LIMITED TO: SHEET NUMBERS, SECTION MARKS, TITLE BLOCKS, AND REFERENCES TO THE CONTRACT DOCUMENTS.
- D. THE SUBMITTALS ARE REQUIRED TO BE SUBMITTED FOR STRUCTURAL ENGINEER OF RECORD REVIEW AS OUTLINED IN THE SPECIFICATIONS.
1. THE SUBMITTAL IS REQUESTED.
2. THE SUBMITTAL IS BASED ON THE LATEST DESIGN.
3. THE SUBMITTAL IS CLEARLY CLOUDED FOR ALL THE DIFFERENCES FROM THE CONTRACT DOCUMENTS ON THE FIRST SUBMITTAL.
4. THE SUBMITTAL IS CLEARLY CLOUDED FOR ALL CHANGES AND ADDITION FROM PREVIOUS SUBMITTAL.
5. THE ARCHITECTS AND STRUCTURAL ENGINEER OF RECORD'S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
6. THE WORK IS COORDINATED AMONGST ALL CONSTRUCTION TRADES.
7. THE SUBMITTAL IS COMPLETE.
8. THE SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, AND SPECIFICATION SECTION NUMBER.
9. THE STRUCTURAL ENGINEER OF RECORD'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT.
- F. THE STRUCTURAL ENGINEER OF RECORD SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS.
- G. FOR THE COMPONENTS DESIGNED BY A DELEGATED ENGINEER, PROVIDE SHOP DRAWINGS, DESIGN CALCULATIONS, AND A COVER LETTER SIGNED AND SEALED BY THE DELEGATED ENGINEER. LETTER SHALL INDICATE THAT THE SHOP DRAWINGS ARE IN CONFORMANCE WITH THE DELEGATED ENGINEER'S CALCULATIONS. REFER TO APPLICABLE SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
- H. DEFERRED SUBMITTALS ARE MANUFACTURER OR CONTRACTOR DESIGNED COMPONENTS PER THE CONTRACT DOCUMENTS. THESE ELEMENTS OF THE DESIGN ARE DEFERRED SUBMITTAL COMPONENTS AND HAVE NOT BEEN PERMITTED UNDER THE BASE BUILDING APPLICATION. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD, WHO SHALL REVIEW THEM FOR GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE CONTRACTOR SHALL SUBMIT THESE REVIEWED DEFERRED SUBMITTAL DOCUMENTS TO THE BUILDING OFFICE FOR APPROVAL. THESE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN TEAM HAS REVIEWED AND THE BUILDING OFFICE HAS APPROVED. SEE BELOW FOR THE LIST OF DEFERRED SUBMITTALS.
- I. THE FOLLOWING SUBMITTALS ARE REQUIRED TO BE SUBMITTED FOR STRUCTURAL ENGINEER OF RECORD REVIEW AS OUTLINED IN THE SPECIFICATIONS.
- | | | |
|--------|---|---------------------|
| 031000 | CONCRETE FORMWORK | (SS, CALC) |
| 032000 | CONCRETE REINFORCEMENT LAYOUT | (S) |
| 033000 | CONCRETE PRODUCT DATA | (S) |
| 033000 | DIMENSION PLANS AND SLEEVE LAYOUT DRAWINGS | (CALC, TA) |
| 033000 | CONCRETE MIX DESIGNS | (S) |
| 033000 | CONCRETE CONSTRUCTION JOINT LAYOUT | (S) |
| 033000 | SLAB-ON-GROUND SAWCUT CONTROL JOINT LAYOUT DRAWINGS | (S) |
| 033816 | POST-TENSIONING PRODUCT DATA | (S) |
| 033816 | POST-TENSIONING TENDON LAYOUT & INSTALLATION DRAWINGS | (DF, SS, CALC) |
| 033816 | POST-TENSIONING TENDON FRICTION LOSS CALC. | (DF, CALC) |
| 033816 | STRESSING RECORDS | (S) |
| 042000 | MASONRY PRODUCT DATA | (S) |
| 042000 | MASONRY REINFORCEMENT LAYOUT | (S) |
| 051200 | STRUCTURAL STEEL | (S) |
| 051200 | STRUCTURAL STEEL CONNECTIONS | (DF, S, CALC) |
| 053100 | STEEL DECK | (S) |
| | SHORING AND RESHORING | (DF, SS, CALC) |
| | HANDRAIL, GUARDRAIL, RAILING | (SS, CALC, REC) |
| 064400 | PRE-ENGINEERED CFS TRUSS SHOP DRAWINGS | (DF, S) |
| 064400 | PRE-ENGINEERED CFS TRUSS DELEGATED DESIGN SUBMITTAL | (DF, SS) |
| 142000 | ELEVATOR | (DF, SS, CALC, REC) |
| 321919 | DEWATERING | (GE, REC) |
- S = SHOP DRAWING REQUIRED
- DF = DEFERRED SUBMITTAL
- SS = SIGNED AND SEALED SHOP DRAWINGS PREPARED BY A LICENSED DELEGATED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- CALC = SUPPORTING CALCULATIONS REQUIRED, SIGNED AND SEALED BY A LICENSED DELEGATED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- REC = ITEMS SUBMITTED FOR RECORD ONLY AND WILL NOT HAVE STRUCTURAL ENGINEER OF RECORD SHOP DRAWING STAMP AFFIXED.
- GEO = ITEMS SUBMITTED TO CONSTRUCTION GEOTECHNICAL ENGINEER FOR THEIR REVIEW.
- TA = ITEMS SUBMITTED TO OWNER'S TESTING AGENCY FOR THEIR REVIEW.

GOVERNING CODES & STANDARDS

BUILDING CODE:	FBC 2023	FLORIDA BUILDING CODE, BUILDING
STANDARDS:	ASCE 7	AMERICAN SOCIETY OF CIVIL ENGINEERS: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
	ACI 301	AMERICAN CONCRETE INSTITUTE: SPECIFICATIONS FOR CONCRETE CONSTRUCTION
	ACI 318	AMERICAN CONCRETE INSTITUTE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
	TMS 402	THE MASONRY SOCIETY: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
	ACI 360	AMERICAN INSTITUTE OF STEEL CONSTRUCTION: SPECIFIC FOR STRUCTURAL STEEL BUILDINGS
	ACI 341	AMERICAN INSTITUTE OF STEEL CONSTRUCTION: SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS
	AWS D1.1	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - STEEL
	AWS D1.3	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - SHEET STEEL
	AWS D1.4	AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE - REINFORCING STEEL
	AI SI 100	AMERICAN IRON AND STEEL INSTITUTE: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
	ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS

ABBREVIATIONS

ABBREVIATIONS	ABBREVIATIONS
ADOL	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT OR ARCHITECTURAL
ASD	ALLOWABLE STRESS DESIGN
B/	BOTTOM OF
BB	BACK-TO-BACK
BLDG	BUILDING
BKLG	BLOCKING
BP	BASE PLATE
BRG	BEARING
BOT	BOTTOM
BTWN	BETWEEN
C	COMPRESSION
CS	COLD-FORMED STEEL
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CIP	COMPLETE JOINT PENETRATION
CL	CENTER LINE
CLR	CLEAR OR CLEARANCE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN(S)	CONNECTION(S)
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
d&E	DRILL & EPOXY
db	REINFORCING BAR DIAMETER
EJ	EXPANSION JOINT
DBA	DEFORMED BAR ANCHOR
DCA	DEMAND CRITICAL WELD
DEGREE(S)	DEGREE(S)
D	DIAMETER
DIAG	DIAGONAL
DM(S)	DIMENSIONS
DWG(S)	DRAWING(S)
EA	EACH
EF	EACH FACE
EXP	EXPANSION
EL	ELEVATION
ELEV	ELEVATOR
ELOS	EDGE-OF-SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FF	FACE-TO-FACE
FD	FLOOR DRAIN
FF	FINISH FLOOR
FND	FOUNDATION
FS	FAR SIDE
FT	FEET
FTG	FOOTING
GA	GAGE, GAUGE
GAUV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GRD	GRIDER
GEN	GENERAL
GYP	GYPSONUM
HCA	HEADED CONCRETE ANCHORS
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
I	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH
INFO	INFORMATION
INT	INTERIOR
ICC-ES	INTERNATIONAL CODE COUNCIL - EVALUATION SERVICE
JST(S)	JOIST(S)
K	KIPS (1,000 POUNDS)
KLF	KIP PER LINEAR FOOT
KSF	KIP PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	LENGTH
LB(S)	POUNDS
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LRFD	LOAD RESISTANCE FACTORED DESIGN
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LTS	LAP TENSION SPLICE
LW	LIGHT WEIGHT
LWC	LIGHT WEIGHT CONCRETE
M	MOMENT
MC	MAXIMUM
MC	MOMENT CONNECTION(S)
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MFR	FIRE PROTECTION
MD	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
NC	NOT IN CONTRACT
NS	NEAR SIDE
NSFC	NOT SHOWN FOR CLARITY
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPN(S)	OPENING(S)
OPP	OPPOSITE
OSL	OUTSTANDING LEG
PAP	POWDER ACTUATED FASTENER
PERF	PERPENDICULAR
PJP	PREFORMED JOINT FILLER
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS PER LINEAL FOOT
POST	POST
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
REF	REFERENCE
REFN	REINFORCED(D) (ING) OR (MENT)
REQD	REQUIRED
REV	REVISION
RTU	ROOF TOP UNIT
SCHED	SCHEDULED
SDL	SUPERIMPOSED DEAD LOAD
SER	STRUCTURAL ENGINEER OF RECORD
SF	SQUARE FOOT (FEET)
SIM	SIMILAR
SLRS	SEISMIC LOAD RESISTING SYSTEM
SOG	SLAB-ON-GROUND
SS	SPECIFICATIONS
SS	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STR	STRUCTURE OR STRUCTURAL
SYM	SYMMETRICAL
T	TENSION
T&B	TOP AND BOTTOM
T&G	TONGUE & GROOVE
T/	TOP OF
TEMP	TEMPERATURE OR TEMPORARY
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	SHEAR
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WITH
W/O	WITHOUT
WP	WORK POINT
WWR	WELDED WIRE REINFORCEMENT

STRUCTURAL THRESHOLD INSPECTIONS

- A. PER CHAPTER 553.71 OF THE FLORIDA STATUTES, THIS BUILDING QUALIFIES AS A THRESHOLD BUILDING.
- B. SPECIAL INSPECTORS OF THRESHOLD BUILDINGS (THRESHOLD INSPECTORS) SHALL MEET THE REQUIREMENTS OF RULE 61G15-35.003 OF THE FLORIDA ADMINISTRATIVE CODE.
- C. PER CHAPTER 553.73 OF THE FLORIDA STATUTES, THE ENFORCING AGENCY SHALL REQUIRE A THRESHOLD INSPECTOR TO PERFORM STRUCTURAL INSPECTIONS ON A THRESHOLD BUILDING PER SUIT TO A STRUCTURAL INSPECTION PLAN PREPARED BY THE STRUCTURAL ENGINEER OF RECORD.
- D. THRESHOLD INSPECTOR SHALL BE A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA WHO IS CERTIFIED UNDER CHAPTER 471.015 OF THE FLORIDA STATUTES, TO CONDUCT INSPECTIONS OF A THRESHOLD BUILDING. FURTHER, THE THRESHOLD INSPECTOR MUST BE ON THE FLORIDA BOARD OF PROFESSIONAL ENGINEERS LIST OF PERSONS QUALIFIED TO BE THRESHOLD INSPECTORS.
- E. THE STRUCTURAL INSPECTION PLAN MUST BE SUBMITTED TO AND APPROVED BY THE ENFORCING AGENCY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THE CONSTRUCTION OF A THRESHOLD BUILDING.
- F. THE FEE OWNER OF A THRESHOLD BUILDING SHALL SELECT AND PAY ALL COSTS OF EMPLOYING A THRESHOLD INSPECTOR, BUT THE THRESHOLD INSPECTOR SHALL BE RESPONSIBLE TO THE ENFORCEMENT AGENCY.
- G. THRESHOLD INSPECTIONS RELATED TO TEMPORARY CONDITIONS SUCH AS SHORING, RESHORING, AND TEMPORARY BRACING ARE REQUIRED TO BE PERFORMED BY THE CONTRACTOR'S DELEGATED ENGINEER (DELEGATED ENGINEER (NOT SPECIAL INSPECTOR)) IS RESPONSIBLE FOR THE SUPERVISION, INSPECTION AND CERTIFICATION OF SUCH TEMPORARY SYSTEMS.
- H. SEE STRUCTURAL INSPECTION PLAN FOR FURTHER INFORMATION.

STRUCTURAL DRAWING LIST	
SHEET NUMBER	SHEET NAME
S-001	GENERAL NOTES
S-002	LOADING CRITERIA
S-003	CONCRETE GENERAL NOTES
S-004	STEEL GENERAL NOTES
S-010	SPECIAL INSPECTIONS PLAN
S-011	FOUNDATION PLAN
S-122	SECOND FLOOR FRAMING PLAN
S-122-PT	SECOND FLOOR PT PLAN
S-122-R	SECOND FLOOR REINFORCING PLAN
S-122	THIRD FLOOR FRAMING PLAN
S-123-PT	THIRD FLOOR PT PLAN
S-123-R	THIRD FLOOR REINFORCING PLAN
S-124	ROOF FRAMING PLAN
S-124-PT	ROOF PT PLAN
S-124-R	ROOF REINFORCING PLAN
S-300	TYPICAL FOUNDATION DETAILS
S-310	TYPICAL SLAB-ON-GROUND DETAILS
S-320	TYPICAL CONCRETE SHEAR WALLS DETAILS
S-321	CONCRETE SHEAR WALL ELEVATIONS
S-322	CONCRETE SHEAR WALL ELEVATIONS
S-323	TYPICAL PT TENDON DETAILS
S-331	TYPICAL PT REINFORCEMENT DETAILS
S-332	TYPICAL PT SHEAR STUD RAILS DETAILS
S-340	TYPICAL CONCRETE COLUMN DETAILS
S-350	CONCRETE STAIR DETAILS
S-360	TYPICAL CONCRETE FRAMING DETAILS
S-370	TYPICAL RETAINING WALL DETAILS
S-400	TYPICAL MASONRY DETAILS
S-500	STEEL FRAMING DETAILS
S-600	ROOF FRAMING DETAILS

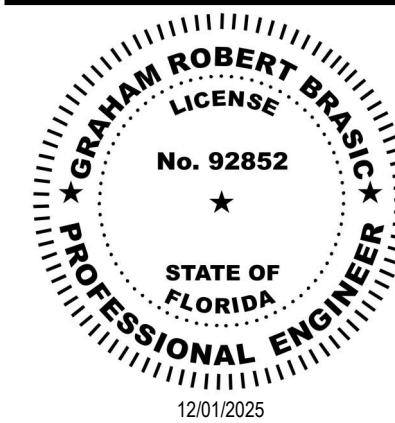
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JG Project #: 21.18.004

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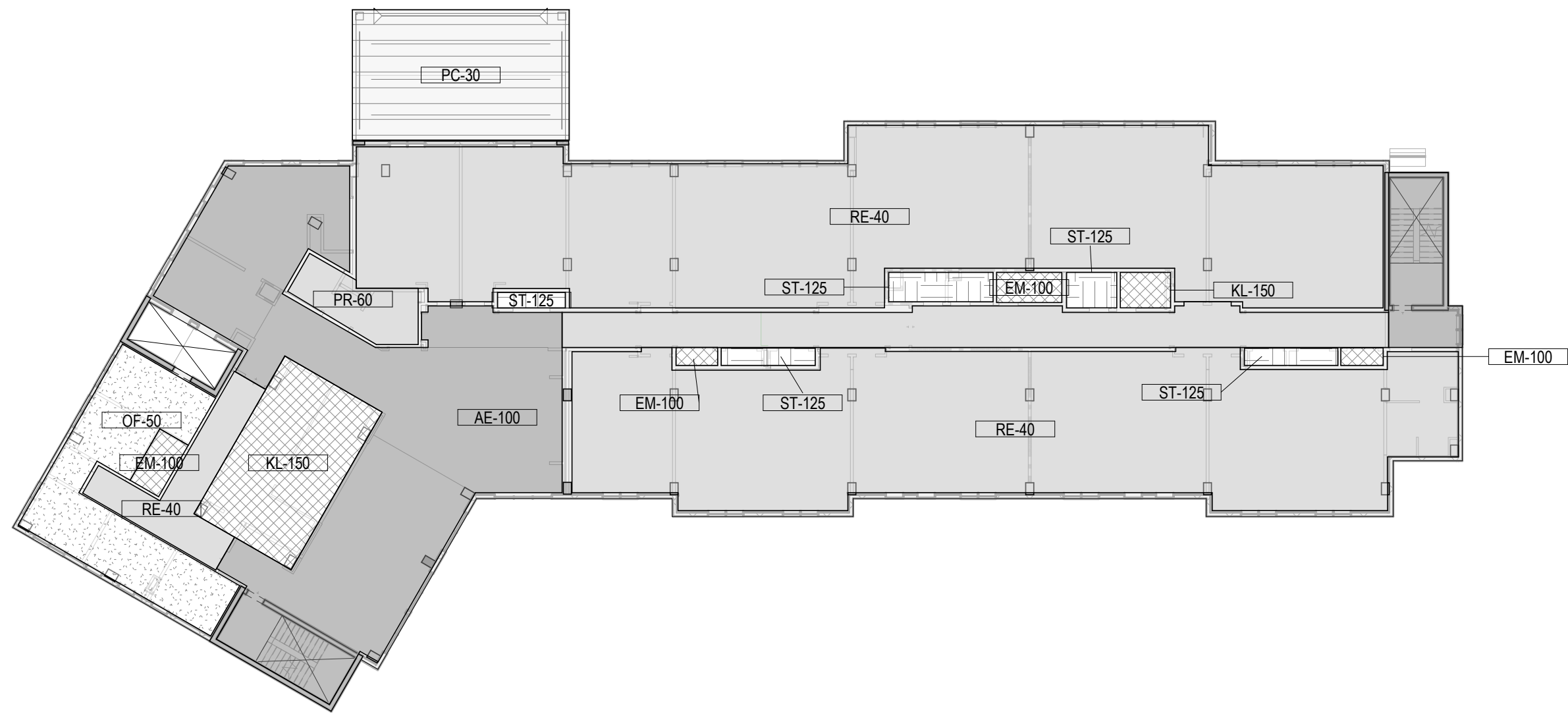
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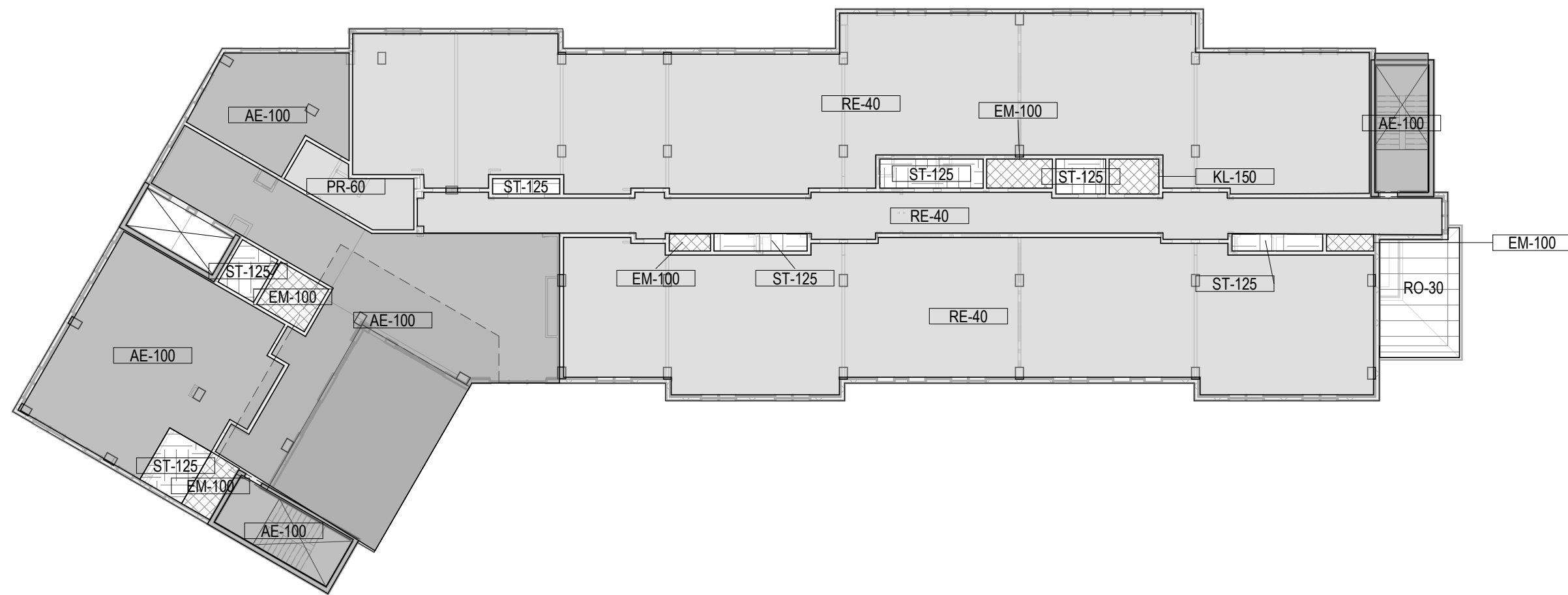
GROUND FLOOR LOAD PLAN

3/64" = 1'-0"



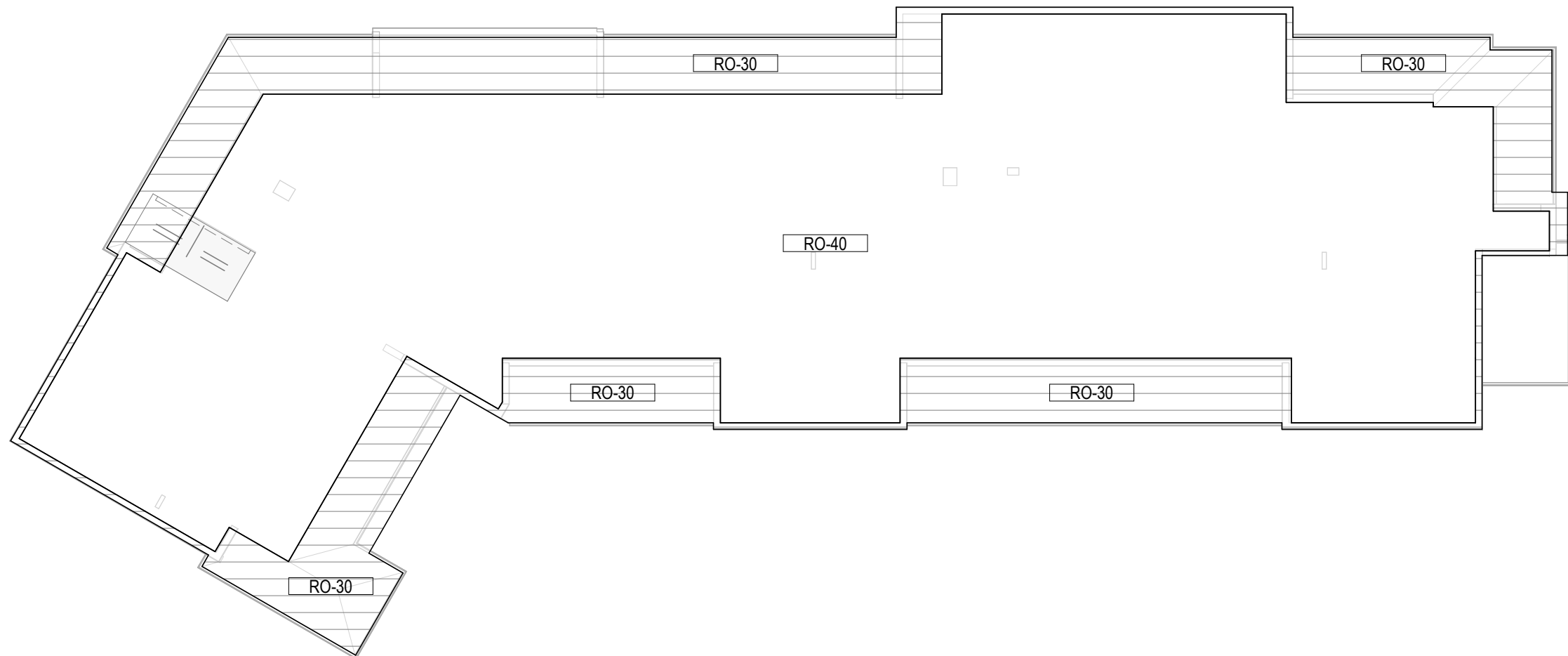
SECOND FLOOR LOAD PLAN

3/64" = 1'-0"



THIRD FLOOR LOAD PLAN

3/64" = 1'-0"



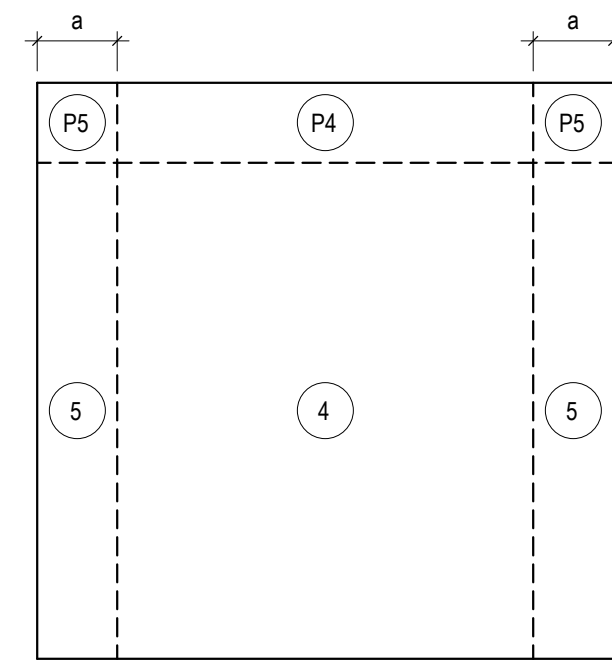
ROOF LEVEL LOAD PLAN

3/64" = 1'-0"

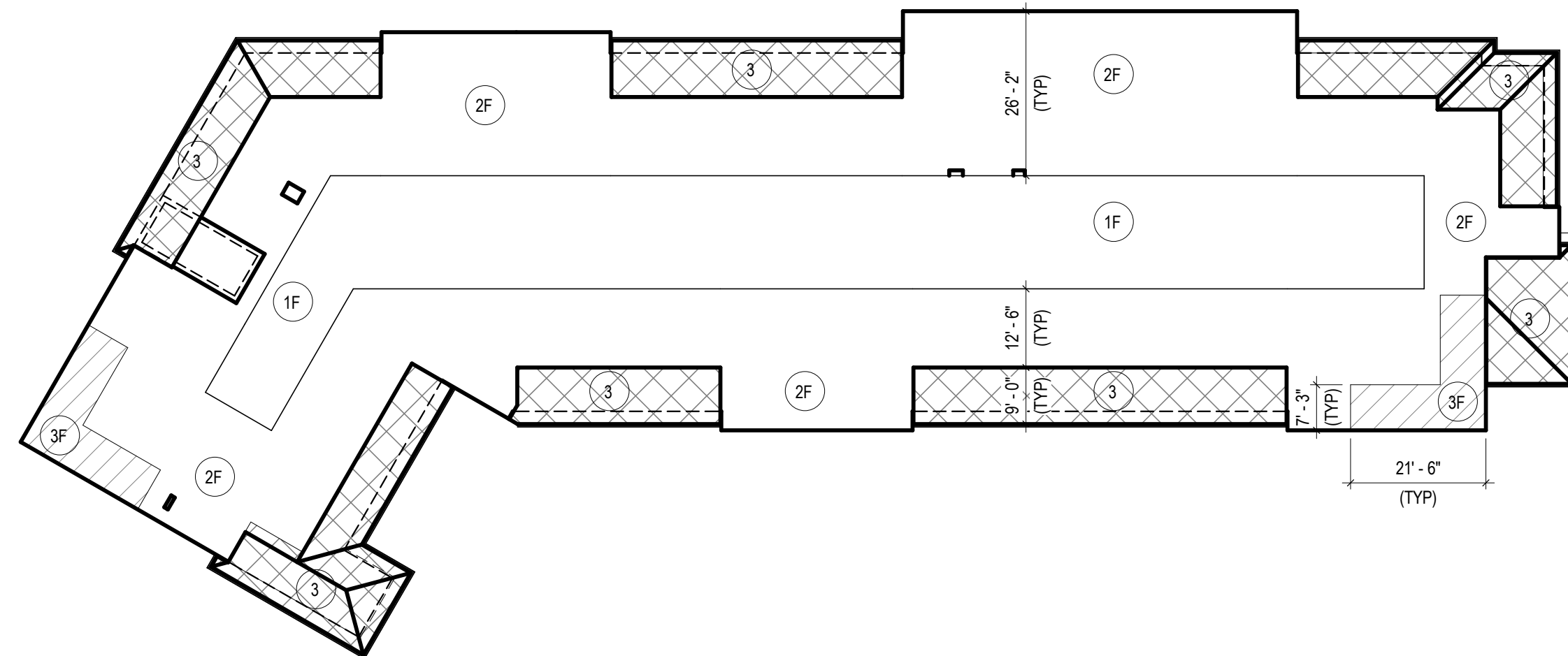
DESIGN CRITERIA

- A. STRUCTURE LOCATION:
LONGITUDE: -80.059
LATITUDE: 26.85
- B. LOADING:
1. DEAD & LIVE LOADS: SEE LOAD PLANS
2. RAIN LOAD:
DESIGN RAINFALL: 5"/HOUR (100-YEAR, 1-HOUR RAINFALL)
RAINWATER AT LOWEST POINT OF ROOF SHALL NOT EXCEED 6" DURING DESIGN RAINFALL
DESIGN RAIN LOAD, R: 30 PSF
3. WIND LOAD:
ULTIMATE DESIGN WIND SPEED, V_{ult} : 170 MPH
NOMINAL DESIGN WIND SPEED, V_{ref} : 122 MPH
RISK CATEGORY: II
ENCLOSURE CLASSIFICATION: C
INTERNAL PRESSURE COEFFICIENT: $C_{pi} = -0.18$
COMPONENTS & CLADDING DESIGN PRESSURES: SEE WIND PRESSURE DIAGRAMS
4. SEISMIC LOAD:
RISK CATEGORY: II
SEISMIC IMPORTANCE FACTOR, I_p : 1.0
SITE CLASS: D (ASSUMED)
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{ds} : 0.055 g
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{d1} : 0.025 g
SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{d2} : 0.049 g
SPECTRAL RESPONSE ACCELERATION PARAMETER, S_{d3} : 0.035 g
SEISMIC DESIGN CATEGORY: A
SEISMIC FORCE RESISTING SYSTEM: ORDINARY REINFORCED CONCRETE SHEAR WALLS
REDUNDANCY FACTOR, R : 1.0
OVERSTRENGTH FACTOR, Q_s : 2.5
RESPONSE MODIFICATION FACTOR, R : 4
SEISMIC RESPONSE COEFFICIENT, C_s : 0.015
EFFECTIVE SEISMIC WEIGHT, W : 6750 KIPS
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE (ELF)
DESIGN BASE SHEAR: 255 KIPS
- C. HANDRAIL AND GUARDRAIL LOADS:
CONCENTRATED AND DISTRIBUTED LOADS ARE TO BE APPLIED AT THE HANDRAIL OR TOP RAIL IN ANY DIRECTION. CONCENTRATED AND DISTRIBUTED LOADS ARE NOT TO BE APPLIED CONCURRENTLY.
CONCENTRATED LOAD: 200 LB
DISTRIBUTED LOAD: 50 PLF
- D. FUTURE EXPANSION:
NO PROVISIONS HAVE BEEN MADE FOR FUTURE VERTICAL OR HORIZONTAL EXPANSION OF THE STRUCTURE.
- E. SERVICEABILITY:
1. DEFLECTION LIMITS: TOTAL LOAD DEFLECTION ONLY APPLIES TO THE DEFLECTION DUE TO THE CREEP COMPONENT OF LONG-TERM DEAD LOAD DEFLECTION PLUS THE SHORT-TERM DEFLECTION. LONG-TERM DEFLECTION OF WOOD STRUCTURAL MEMBERS SHALL BE CALCULATED IN ACCORDANCE WITH THE AWC NDS. IT IS PERMITTED TO ESTIMATE THE CREEP COMPONENT OF THE LONG-TERM DEFLECTION AS THE IMMEDIATE DEAD LOAD DEFLECTION.
a. ROOF MEMBERS
• TOTAL LOAD DEFLECTION: L/240
• TRANSITORY LOAD DEFLECTION: L/360
b. FLOOR MEMBERS
• TOTAL LOAD DEFLECTION: L/240
• LIVE LOAD DEFLECTION: L/360
c. EXTERIOR WALLS & CLADDING
• WIND LOAD DEFLECTION: L/360
• INTERIOR PARTITIONS
• LIVE LOAD DEFLECTION: L/240
2. DRIFT LIMITS
a. INTERSTORY DRIFT: H/400
b. TOTAL STRUCTURE DRIFT: H/500

EWA (ft²)	C&C External Pressure Loads - Main Roof (psf)									
	Zone					P4	P5	ROH 1	ROH 2	ROH 3
10	59.7	59.7	59.7	59.7	80.1	228.0	228.0	154.7	154.7	154.7
	-107.2	-147.9	-147.9	-147.9	-107.2	--	--	-175.1	-215.8	-215.8
20	51.6	51.6	51.6	51.6	76.5	204.0	204.0	139.3	139.3	139.3
	-95.0	-127.5	-127.5	-127.5	-83.3	--	--	-159.2	-191.8	-191.8
50	40.7	40.7	40.7	40.7	71.7	172.2	172.2	119.0	119.0	119.0
	-78.8	-100.5	-100.5	-100.5	-50.5	--	--	-138.3	-160.0	-160.0
100	32.6	32.6	32.6	32.6	68.1	148.2	148.2	103.6	103.6	103.6
	-66.5	-80.1	-80.1	-80.1	-43.3	--	--	-122.4	-136.0	-136.0
200	32.6	32.6	32.6	32.6	64.5	144.6	144.6	96.4	96.4	96.4
	-66.5	-80.1	-80.1	-80.1	-76.0	--	--	-118.8	-132.4	-132.4
500	32.6	32.6	32.6	32.6	59.7	139.8	139.8	86.9	86.9	86.9
	-66.5	-80.1	-80.1	-66.5	-66.5	--	--	-114.0	-127.6	-127.6



WALL ELEVATION



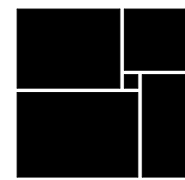
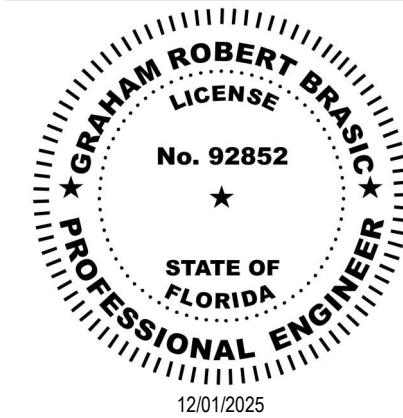
COMPONENTS & CLADDING ROOF PRESSURE DIAGRAM

3/64" = 1'-0"

NOTES:

- FOR COMPONENTS HAVING EFFECTIVE AREAS IN BETWEEN TABULATED VALUES, DESIGN LOADS MAY BE INTERPOLATED. OTHERWISE DESIGN LOAD SHALL BE TAKEN FROM THE NEXT LOWEST TABULATED EFFECTIVE AREA.
- DESIGN VALUES SHOWN IN THIS TABLE ARE ULTIMATE VALUES FOR USE WITH LRFD DESIGN. VALUES MAY BE MULTIPLIED BY 0.6 FOR USE WITH SERVICE LEVEL OR ASD DESIGN. REFER TO THE BUILDING CODE FOR APPLICABLE LOAD COMBINATIONS.
- ± 6'-0". SEE ROOF PLAN MAP BELOW FOR LOCATION OF ± ZONES. WALL ± ZONE LOCATIONS TO MATCH ROOF ± ZONES.
- POSITIVE PRESSURE VALUES REFER TO FORCES ACTING TOWARDS BUILDING OR COMPONENT FACE. NEGATIVE PRESSURE VALUES REFER TO FORCES ACTING AWAY FROM BUILDING OR COMPONENT FACE.
- EACH COMPONENT AND ITS CONNECTION SHALL BE DESIGNED FOR MAXIMUM POSITIVE AND NEGATIVE FORCES.
- PARAPET COMPONENTS AND CLADDING ARE THOSE ELEMENTS WHICH EXIST ABOVE THE HORIZONTAL PLANE OF THE ROOF AND SHALL BE DESIGNED FOR:
 - POSITIVE AND NEGATIVE PRESSURES 4 OR 5 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON OUTSIDE FACE.
 - POSITIVE PRESSURES 4 OR 5 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON ROOF SIDE FACE.
 - NEGATIVE PRESSURES 2 OR 3 APPLIED TO THE SHEATHING OR PANELING AND ITS CONNECTION ON ROOF SIDE FACE.
 - P4S SHALL BE APPLIED TO THE DESIGN OF THE STRUCTURAL ELEMENT OF THE PARAPET AND ITS CONNECTION, INCLUDING BUT NOT LIMITED TO THE STUD FRAMING OF THE PARAPET.
- A DESIGN WIND PRESSURE HORIZONTAL VALUE OF 120 PSF AND VERTICAL VALUE OF 96 PSF SHALL BE APPLIED TO COMPONENTS WHICH ARE EITHER ROOF-TO-ROOF STRUCTURES OR ROOFTOP APPURTENANCES AND THEIR CONNECTION. EXAMPLES OF THIS ARE RTUs, AHUs, AND SCREEN WALLS.
- ROH± DENOTES DESIGN WIND PRESSURE VALUES WHICH SHALL BE APPLIED AT ROOF OVERHANGS TO TOP SURFACE CLADDING OR SHEATHING AND ITS CONNECTION. SOFFIT CLADDING OR SHEATHING SHALL BE DESIGNED FOR SIMILAR PRESSURE TO THE ADJACENT WALL PRESSURE. A COMBINATION OF THESE FORCES SHALL BE APPLIED TO THE STRUCTURAL ELEMENT OF THE OVERHANG AND ITS CONNECTION, INCLUDING BUT NOT LIMITED TO THE STUD FRAMING OF THE OVERHANG.
- ALL DOORS TO BE RATED TO RESIST DESIGN WIND PRESSURES SPECIFIED.

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CONSTRUCTION

Project No.: 2021009
Date: 12/01/2025

LOADING
CRITERIA

S-002



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CONCRETE

- A. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
- B. FOR CONCRETE MIXTURE REQUIREMENTS SEE SCHEDULE ON THIS SHEET.
- C. THE USE OF RECYCLED CONCRETE IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
- D. NORMAL WEIGHT CONCRETE SHALL BE USED FOR ALL CONCRETE MEMBERS UNLESS NOTED OTHERWISE. NORMAL WEIGHT CONCRETE SHALL HAVE A CURED DENSITY OF 145 PCF ±5 PCF. WHERE LIGHT WEIGHT CONCRETE IS SPECIFIED THE CURED DENSITY SHALL BE 112 PCF ±3 PCF.
- E. EACH MIX SHALL BE UNIVELY IDENTIFIED BY MIX NUMBER AND THE INTENDED LOCATION OF PLACEMENT ON THE SPECIFIC PROJECT SHALL BE CLEARLY STATED.
- F. ALL PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS, WALLS, AND SLABS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS OR BY WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD. FOR MILD REINFORCED MEMBERS, CONSTRUCTION JOINTS SHALL OCCUR WITHIN THE MIDDLE THIRD OF A MEMBER'S SPAN. ALL APPROVED CONSTRUCTION JOINTS SHALL BE INDICATED, DIMENSIONED, AND DETAILED ON THE CONCRETE REINFORCEMENT SHOP DRAWINGS.
- G. GIRDERS, BEAMS, HAUNCHES, DROP PANELS, DROP CAPS, AND CAPITALS SHALL BE POURED MONOLITHICALLY AS PART OF THE SLAB SYSTEM UNLESS NOTED OTHERWISE.
- H. PROVIDE A ¼ INCH CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC UNLESS NOTED OTHERWISE.
- I. CONCRETE CORING AND INSTALLATION OF DRILLED ANCHORS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
- J. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL CONCRETE DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL COORDINATE BETWEEN THE ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS TO FURNISH DIMENSIONED DRAWINGS THAT LOCATE AND SIZE ALL SLAB EDGES, OPENINGS, AND PENETRATIONS. THESE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
- K. EMBEDDED CONDUITS, PIPES, AND SLEEVES
1. THE OUTSIDE DIAMETER OF CONDUITS, PIPES, AND SLEEVES SHALL NOT EXCEED ONE-THIRD THE THICKNESS OF THE SLAB, WALL OR BEAM IN WHICH THEY ARE EMBEDDED. EMBEDMENTS SHALL NOT SIGNIFICANTLY REDUCE THE CAPACITY OF THE MEMBERS THEY PENETRATE.
2. THE MINIMUM CLEAR COVER FOR CONDUITS, PIPES, AND SLEEVES SHALL BE 1 ½" FOR CONCRETE EXPOSED TO EARTH OR WEATHER AND ¾" FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER.
3. ALUMINUM EMBEDMENTS AND EMBEDMENTS MADE OF ANY OTHER MATERIAL HARMFUL TO THE CONCRETE OR REINFORCEMENT ARE PROHIBITED.
4. EMBEDMENTS NOT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE DESIGNED TO RESIST THE EFFECTS OF LOCAL AIR PRESSURE, AND TEMPERATURE THAT THEY WILL BE SUBJECTED TO. THE WORK SHALL BE COORDINATED AMONGST ALL CONSTRUCTION TRADES.
5. THE CONTENTS OF EMBEDDED PIPES SHALL NOT FLOW UNTIL THE CONCRETE HAS REACHED ITS SPECIFIED LIMIT LENGTH.
6. CONDUITS, PIPES, AND SLEEVES SHALL BE PLACED BETWEEN TOP AND BOTTOM LAYERS OF REINFORCEMENT IN SLABS AND BETWEEN INNER AND OUTER LAYERS OF REINFORCEMENT IN WALLS.
7. EMBEDDED ITEMS SHALL BE FABRICATED AND INSTALLED SUCH THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS SPECIFIED LOCATION IS NOT REQUIRED.

CONCRETE REINFORCEMENT

- A. ALL CONCRETE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
- B. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.
- C. WHERE WELDS ARE INDICATED FOR REINFORCING STEEL ON THE DRAWINGS, REINFORCING STEEL SHALL BE A706, GRADE 60 UNLESS OTHERWISE NOTED.
- D. WELDED WIRE REINFORCEMENT SHALL CONFORM TO THE MATERIAL REQUIREMENTS OF ASTM A1064.
- E. ALL 90°, 135°, AND 180° HOOKED REINFORCEMENT SPECIFIED AND GRAPHICALLY DEPICTED IN THE CONTRACT DOCUMENTS SHALL BE DETAILED IN ACCORDANCE WITH SECTION 316 STANDARD HOOK GEOMETRY FOR DEFORMED BARS IN TENSION AND FOR STIRRUPS, TIES, AND HOOPS.
- F. FOR EVERY VERTICAL OR HORIZONTAL BAR DISCONTINUED BY AN OPENING, ONE BAR (MINIMUM OF 2 BARS) SHALL BE ADDED AT EACH SIDE OF OPENING (½" TO EACH SIDE, TYPICAL).
- G. FOR CONCRETE CLEAR COVER TO REINFORCEMENT SEE SCHEDULE ON THIS SHEET UNLESS NOTED OTHERWISE. CLEAR COVER IN PARENTHESES () DENOTES CLEAR COVER WHEN THE AS-BUILT APPLICATION IS EXPOSED TO WEATHER.
- H. ALL LAP SPLICES SHALL BE CLASS B TENSION LAP SPLICES IN ACCORDANCE WITH AC308 UNLESS NOTED OTHERWISE. SEE LAP SPLICE SCHEDULE ON THIS SHEET FOR LAP SPLICE LENGTHS. UNLESS NOTED AS CONTINUOUS, REINFORCEMENT SHALL ONLY BE SPLICED AT LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS. SPLICES AT NON-SPECIFIED LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
- I. A MINIMUM LAP SPLICE OF 8" SHALL BE PROVIDED AT ALL END AND SIDE LAP CONDITIONS FOR WELDED WIRE REINFORCEMENT UNLESS NOTED OTHERWISE.
- J. MECHANICAL SPLICES ARE REQUIRED WHERE SPECIFIED ON THE CONTRACT DOCUMENTS. MECHANICAL SPLICES ARE ALSO REQUIRED TO SPLICE #4 AND #18 BARS. MECHANICAL SPLICES MAY ALSO BE USED AT THE CONTRACTOR'S OPTION, PROVIDED THE MECHANICAL SPLICES HAVE A CURRENT ICC-ES REPORT DEMONSTRATING THEY CAN DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR IN TENSION OR COMPRESSION. MECHANICAL SPLICES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
- K. THE USE OF WELDED SPLICES IS PROHIBITED UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL SUBMIT THE LOCATIONS OF WELDED SPLICES TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. IF APPROVED, WELDED SPLICES SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.
- L. DOWELS SHALL MATCH SIZE AND SPACING OF PRIMARY REINFORCEMENT UNLESS NOTED OTHERWISE.
- M. SEE TYPICAL DETAILS FOR REINFORCEMENT REQUIRED AT OPENINGS AND PENETRATIONS.
- N. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE REINFORCEMENT BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE.

CONCRETE MIXTURE REQUIREMENTS								
	APPLICATION	EXPOSURE CLASS	f _c (PSI)	TEST AGE	MODULUS OF ELASTICITY (KSI)	MAXIMUM W/C/M	AIR CONTENT	NOMINAL MAXIMUM AGGREGATE
ON-GROUND	FOUNDATIONS	F0, S0, W1, C1	4000	28 DAYS	3605	SEE NOTE 2	SEE NOTE 3	1" 150 PCF
	EXTERIOR SLAB-ON-GROUND (EXTERIOR/PARKING)	F0, S0, W1, C2	5000	28 DAYS	4031	0.40	SEE NOTE 3	1" 150 PCF
	SLAB-ON-GROUND (INTERIOR)	F0, S0, W0, C0	3000	28 DAYS	3122	SEE NOTE 2	SEE NOTE 3	1" 150 PCF
	SHEAR WALLS AND COLUMNS (FIRST FLOOR)	F0, S0, W2, C2	5000	28 DAYS	4031	0.40	SEE NOTE 3	¾" 150 PCF
VERTICAL	SHEAR WALLS AND COLUMNS (SECOND FLOOR TO ROOF)	F0, S0, W0, C0	5000	28 DAYS	4031	SEE NOTE 2	SEE NOTE 3	¾" 150 PCF
	CMU FILLED CELLS	GROUT MIX SHALL BE USED FOR CMU FILLED CELLS - SEE CONCRETE MASONRY UNIT GENERAL NOTES, DETAILS, AND SPECIFICATIONS						
ELEVATED	POST TENSIONED ELEVATED FRAMING (EXTERIOR)	F0, S0, W2, C2	6000 3000	28 DAYS 48 HOURS	4415 @ 28-DAYS	0.40	SEE NOTE 3	¾" 150 PCF
	POST TENSIONED ELEVATED FRAMING (INTERIOR)	F0, S0, W0, C0	6000 3000	28 DAYS 48 HOURS	4415 @ 28-DAYS	SEE NOTE 2	SEE NOTE 3	¾" 150 PCF
	ELEVATED SLABS AND BEAMS (NON-PRESTRESSED)	F0, S0, W1, C1	5000	28 DAYS	4031	SEE NOTE 2	SEE NOTE 3	¾" 150 PCF

- NOTES:
- EXPOSURE CATEGORIES AND CLASSES FOR SULFATES, PERMEABILITY, AND CORROSION PROTECTION OF REINFORCEMENT IS CLASS ZERO UNLESS NOTED OTHERWISE.
 - WATER/CEMENT RATIO SHALL BE AS REQUIRED FOR THE SPECIFIED CONCRETE MIX DESIGN. THERE IS NO MAXIMUM WATER/CEMENT RATIO REQUIREMENT FOR THE EXPOSURE CLASSIFICATION ASSOCIATED WITH THIS APPLICATION. MAXIMUM WATER/CEMENT RATIO IS NOT APPLICABLE FOR DURABILITY REQUIREMENTS IN LIGHTWEIGHT CONCRETE.
 - THERE IS NO MANDATORY TARGET AIR CONTENT FOR THIS APPLICATION. THE CONTRACTOR MAY CHOOSE TO ADD AIR ENTRAINMENT TO IMPROVE THE WORKABILITY AND FINISHING PROPERTIES OF THE MIX. AIR CONTENT SHALL BE AS REQUIRED FOR THE SPECIFIED CONCRETE MIX.
 - COARSE AGGREGATE SHALL BE ASTM C 33, GRADED SELECT GRADING CLASS #57 OR EQUIVALENT OR LOCATION USED, AND IN RELATION TO SPECIFIC WATER REGION AGGREGATE SHALL BE FROM A SINGLE SOURCE. #57 GRADING SHALL BE USED FOR CONCRETE WITH 4 INCH MAXIMUM. #57 GRADING SHALL BE USED FOR CONCRETE WITH 1 INCH MAXIMUM.

CAST-IN-PLACE CONCRETE (NON-PRESTRESSED) CLEAR COVER SCHEDULE

APPLICATION	BOTTOM	TOP	SIDES
FOUNDATIONS	3"	2"	3"
SLAB-ON-GROUND	SEE DETAILS	SEE DETAILS	3"
RETAINING WALLS	N/A	N/A	2"
SHEAR WALLS	N/A	N/A	1 ½"
COLUMNS	N/A	N/A	2" TO VERTICAL BARS
INTERIOR ELEVATED SLABS	¾"	¾"	1 ½"
EXTERIOR ELEVATED SLABS - POST TENSIONED	1"	1"	1 ½"
EXTERIOR ELEVATED SLABS - CONVENTIONAL	1"	1 ½"	1 ½"
STRUCTURED SLAB-ON-GROUND	¾"	1 ½"	2"
BEAMS	1 ½"	1 ½"	1 ½"

DEVELOPMENT LENGTH SCHEDULE (INCHES)

BAR SIZE	MIN BAR SPACING (INCHES) (MAX OF 48" OR 1" OR 2d)	TENSION					
		Ld	Ldh	Ld	Ldh	Ld	Ldh
#3	1,375	17	15	13	12	9	8
#4	1,500	22	19	17	16	11	10
#5	1,625	28	24	22	20	14	12
#6	1,750	33	29	26	24	17	15
#7	1,875	48	42	38	34	20	17
#8	2,000	55	48	43	39	22	18
#9	2,375	62	54	48	44	25	20
#10	2,625	70	61	54	50	28	22
#11	2,875	78	67	60	55	31	24

LAP SPLICE LENGTH SCHEDULE (INCHES)

BAR SIZE	MIN BAR SPACING (INCHES)	TENSION (LTS)				TENSION (LTS)			
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#4	1,500	33	25	29	23	27	21	31	25
#5	1,625	41	31	36	28	33	26	39	31
#6	1,750	49	37	44	34	40	31	47	39
#7	2,000	57	44	53	40	48	36	57	45
#8	3,000	61	62	72	56	66	51	78	61
#9	3,500	91	70	81	63	74	57	91	71
#10	3,875	102	79	92	71	84	64	102	79
#11	4,250	114	87	102	78	93	71	114	87

CMU - REINFORCING SPLICES

BAR WITH SPLICE	VERTICAL BARS			HORIZONTAL BARS		
	1 VERT.	2 VERT.	1 VERT. 1 HORIZ.	2 VERT. 1 HORIZ.	1 VERT. 2 HORIZ.	2 VERT. 2 HORIZ.
#4	21"	26"	21"	21"	26"	45"
#5	26"	40"	29"	26"	40"	70"
#6	43"	74"	57"	43"	74"	131"
#7	60"	107"	81"	60"	107"	

NOTES:

1. SEE TYPICAL REBAR LAYOUT DETAIL FOR BAR PLACEMENT. WHERE BARS OF DIFFERENT SIZES ARE TO BE SPLICED, THE SPLICE LENGTH SHALL BE THAT REQUIRED FOR THE LARGER BAR.
2. SPLICES OF VERTICAL REINFORCEMENT SHALL BE PLACED NEXT TO THE MAIN BAR AS INDICATED IN THE ILLUSTRATION.
3. SPLICES OF HORIZONTAL REINFORCEMENT SHALL BE PLACED VERTICALLY OVER THE MAIN BAR.
4. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS CONTAINING TOW BARS PER COURSE SHALL BE STAGGERED.

POST-INSTALLED ANCHORS

- A. SEE THE POST-INSTALLED ANCHORS SPECIFIED PRODUCTS BY APPLICATION SCHEDULE ON THIS SHEET FOR PRE-APPROVED PRODUCTS.
1. WHEN A SPECIFIC MANUFACTURER AND PRODUCT IS NOT CALLED FOR, IT IS ACCEPTABLE TO USE ANY OF THE LISTED PRODUCTS FOR THAT APPLICATION AS APPROPRIATE FOR THE SUBSTRATE AND LIMITATIONS OF THE PRODUCT PER MANUFACTURER'S LITERATURE.
2. WHEN A SPECIFIC PRODUCT IS LISTED WITHIN THE CONSTRUCTION DOCUMENTS, SUBSTITUTIONS SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD, INCLUDING SUBSTITUTION OF ANCHORS IDENTIFIED BY MIX NUMBER AND THE INTENDED LOCATION OF PLACEMENT ON THE SPECIFIC PROJECT SHALL BE CLEARLY STATED.
- C. ANCHOR MATERIALS/SCOTINGS SHALL BE STAINLESS STEEL (TYPE 316) AT ALL EXTERIOR LOCATIONS OR UNCONDITIONED SPACES, UNLESS OTHERWISE INDICATED ON THE DRAWINGS. PROVIDE SEPARATING RUBBER GROMMETS/WASHERS AT DISJUNCT MATERIALS WHEN ANCHOR MATERIAL DIFFERS FROM FIXTURE MATERIAL.
- D. SPECIAL INSPECTIONS SHALL BE PROVIDED FOR POST-INSTALLED ANCHORS IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, APPLICATION EVALUATION REPORTS, AND AS INDICATED WITHIN THE SPECIAL INSPECTIONS PLAN WITHIN THE CONSTRUCTION DOCUMENTS.
- E. CONTINUOUS INSPECTION SHALL BE PROVIDED FOR ADHESIVE ANCHORS INSTALLED HORIZONTALLY, UPWARDLY.
- F. ADHESIVE ANCHORS SHALL BE PROOF TESTED AS FOLLOWS:
- EACH TYPE AND SIZE OF ANCHOR SHALL BE PROOF TESTED IN TENSION BY AN INDEPENDENT TESTING LABORATORY.
 - PROOF LOADING SHALL BE PERFORMED TO ADHESIVE ANCHORS AS FOLLOWS:
 - 10% OF ADHESIVE ANCHORS FOR EACH TYPE AND SIZE OF ADHESIVE ANCHOR.
 - 10% OF ADHESIVE ANCHORS FOR EACH TYPE AND SIZE OF ADHESIVE ANCHOR.
 - PROOF LOADING SHALL BE PERFORMED ON PRODUCTION ANCHORS. SACRIFICIAL ANCHORS SHALL BE NOT CONSIDERED ACCEPTABLE.
 - IN AN INDEPENDENT TESTING LABORATORY SHALL SUBMIT AN ANCHORAGE TESTING PLAN TO THE STRUCTURAL ENGINEER OF RECORD.
 - TENSION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM E488 AND AC 308.4, PERFORMED AFTER THE 28-DAY CURE CURING PERIOD AND AFTER THE MINIMUM EPOXY CURING PERIOD SPECIFIED BY THE MANUFACTURER. PROOF LOAD SHALL BE 1.5 X THE ASD LOAD CAPACITY OF THE ANCHOR, AND LOAD SHALL BE MAINTAINED ON THE ANCHOR FOR A MINIMUM OF 10 SECONDS.
 - ANCHORS SHALL HAVE NO VISIBLE INDICATION OF DISPLACEMENT OR DAMAGE DURING OR AFTER PROOF LOAD APPLICATION. CONCRETE CRACKING IN THE VICINITY OF THE ANCHOR AND LOAD SHALL BE CONSIDERED A FAILURE.
 - IF MORE THAN 10% OF THE TESTED ANCHORS FAIL TO ACHIEVE THE SPECIFIED PROOF LOAD WITHIN THE LIMITS DEFINED IN THESE NOTES, AN ADDITIONAL 25% OF THE ANCHORS OF THE SAME DIAMETER AND TYPE AS THE FAILED ANCHOR SHALL BE PROOF TESTED.
 - IN THE EVENT OF FAILURE TO ACHIEVE PROOF LOAD, OR EXCESSIVE DISPLACEMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO THE CONCRETE.

POST-TENSIONED CONCRETE

- A. ALL POST-TENSIONED CONCRETE SHALL MEET THE REQUIREMENTS IN THE CONCRETE MIX SCHEDULE ON THIS SHEET. PRIOR TO STRESSING OF THE POST-TENSIONED SLAB, THE CONCRETE SHALL ATTAIN A MINIMUM OF TWO-THIRDS OF THE SPECIFIED 28-DAY COMPRESSIVE DESIGN STRENGTH.
- B. NO CONCRETE SHALL BE PLACED UNTIL THE POST-TENSIONING TENDONS AND REINFORCEMENT LOCATIONS HAVE BEEN INSPECTED AND APPROVED FOR TESTING AGENCY.
- C. THE CONTRACTOR SHALL SUBMIT ANCHORAGE TESTING PLAN BEFORE POST-TENSIONING AND STRESSING SHALL BEGIN WITHIN 24 HOURS FROM THE TIME THAT THE CONCRETE ATTAINS THE INDICATED STRENGTH. POST-TENSIONED CONCRETE SLABS SHALL REMAIN SHORED UNTIL THE SLAB IS STRESSED.
- D. POST-TENSIONED FORCES SPECIFIED ON THE CONSTRUCTION DRAWINGS ARE EFFECTIVE FORCES AFTER ALL LOSSES ARE ACCOUNTED FOR.
1. POST-TENSIONING SUPPLIER SHALL DETERMINE TENDON LOSSES IN ACCORDANCE WITH AC308 AND SHALL PROVIDE SUFFICIENT TABLE TO DEVELOP FINAL EFFECTIVE FORCES AS INDICATED ON THE STRUCTURAL DRAWINGS.
- E. TENDONS SHALL BE STRESSED TO A MAXIMUM OF 80% OF F_{pu} WHILE ANCHORAGE STRESSES SHALL BE A MAXIMUM OF 70% OF F_{pu} OR F_{pu} WHATEVER, STRESSES SHALL NOT EXCEED THE MAXIMUM VALUE RECOMMENDED BY THE MANUFACTURER OF THE POST-TENSIONING STEEL OR ANCHORAGE DEVICES.
- F. ALL POST-TENSIONED FORCES SHOWN ARE IN KIPS OR KIPS/FT.
- G. POST-TENSIONED FORCES SHALL BE SHOWN IN KIPS OR KIPS/FT. UNIFORMITY IN A BAND WIDTH ON EACH SIDE OF A COLUMN, PLACE EITHER TWO OR THREE TENDONS THROUGH A COLUMN SO THAT HALF OF THE REMAINING TENDONS ARE EQUAL ON EACH SIDE OF THE COLUMN.
- H. SLAB TENDONS FOR FORCES SHOWN IN KIPS/FT ARE TO BE PLACED UNIFORMLY BETWEEN INDICATED WIDTHS. AT LEAST TWO TENDONS SHALL PASS THROUGH EACH COLUMN.
- I. ALL POST-TENSIONED SLAB THICKNESSES ARE AS MARKED ON THE CONSTRUCTION DRAWINGS.
- J. AT DEAD ENDS AND STRESSING ENDS, TENDON CENTER OF GRAVITY SHALL BE AT CENTROID OF THE MEMBER, UNLESS NOTED OTHERWISE.
- K. POST-TENSIONED SLABS ARE DESIGNED BASED ON TENDONS BEING CONTINUOUS BETWEEN EDGES OF SLABS AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY ADDITIONAL INTERMEDIATE STRESSING JOINTS OR CLOSURE STRIPS REQUIRED BY THE CONTRACTOR MAY REQUIRE ADDITIONAL REINFORCEMENT AND SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL BEFORE STARTING CONSTRUCTION.
- L. COORDINATION OF THE TENDONING AND ANCHORAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- PLACE TOP REINFORCEMENT BARS UNIFORMLY IN A WIDTH EQUAL TO THE COLUMN WIDTH PLUS ONE AND A HALF TIMES THE SLAB THICKNESS OF THE COLUMN. PLACE A MINIMUM OF THREE OR FOUR BARS THROUGH THE COLUMN SO THAT THE REMAINING BARS ARE EQUAL ON EACH SIDE OF THE COLUMN, WHERE NOT SHOWN OR CALLED OUT, PROVIDE THE SAME REINFORCEMENT AS SHOWN OR AS CALLED OUT FOR AT AREAS WITH SIMILAR CONSIDERATIONS.
 - PLACE TENDONS IN SMOOTH PARABOLIC DRAPES BETWEEN HIGH AND LOW POINTS SHOWN, UNLESS NOTED OTHERWISE.
 - TENDON LOOPS SHALL BE CENTERED IN SPAN, UNLESS NOTED OTHERWISE.
 - PLACE TENDONS IN SMOOTH PARABOLIC DRAPES BETWEEN HIGH AND LOW POINTS SHOWN, UNLESS NOTED OTHERWISE.
 - OTHER TENDON CONTROL POINTS SHOWN ON THE STRUCTURAL DRAWINGS ARE DIMENSIONS TO THE CENTER OF GRAVITY FROM THE BOTTOM OF THE MEMBER, UNLESS NOTED OTHERWISE.
 - PROVIDE CHAIRS AND SUPPORT BARS AS REQUIRED TO HOLD TENDONS IN THE CORRECT POSITION DURING PLACEMENT OF CONCRETE.
 - TENDONS SHALL NOT DEVIATE FROM THEIR CORRECT POSITION BY MORE THAN ONE-EIGHTH OF AN INCH. SLIGHT DEVIATIONS IN TENDON SPACING WILL BE PERMITTED WHERE REQUIRED TO AVOID CONFLICTS WITH OPENINGS, INSERTS, ETC.
 - SHOULD CONFLICT ARISE BETWEEN TENDONS, MILD REINFORCING STEEL, OR OTHER CONDUITS, TENDON LOCATIONS SHALL TAKE PRECEDENCE.
- M. CONTRACTOR SHALL CONDUCT CONTINUOUS INSPECTION AND RECORDING OF JACKING FORCES AND ELONGATIONS WHICH ARE TO BE IMMEDIATELY SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND ACCEPTANCE PRIOR TO THE REMOVAL OF EXCESS TENDON END MATERIAL.
- N. EXCESS TENDON END MATERIAL SHALL BE REMOVED ONLY BY A PLASMA CUTTER OR AN ACCEPTED SUBSTITUTION BY THE STRUCTURAL ENGINEER OF RECORD. NO TORCH CUTTING IS PERMITTED. TENDON ENDS SHALL NOT BE CUT UNTIL THE ENTIRE SLAB HAS BEEN SATISFACTORILY STRESSED AND THE STRUCTURAL ENGINEER OF RECORD HAS REVIEWED THE ELONGATIONS.
- O. FOLLOWING REMOVAL OF EXCESS TENDON END MATERIAL, GREASE CAPS SHALL BE PLACED IN ACCORDANCE WITH THE POST-TENSIONING SUPPLIER. THE POST-TENSIONING SUPPLIER SHALL INSPECT AND PROVIDE A SIGNED AND SEALED LETTER FROM A STRUCTURAL ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED, STATING THAT THE CORROSION PROTECTION SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED DOCUMENTS.
- P. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED:
- DETAILED DESIGN OF TENDON END ANCHORAGES.
 - THE CALCULATION OF STRESS LOSSES DUE TO CREEP, SHRINKAGE, TENDON RELAXATION, ANCHORAGE SLIP, AND FRICTION.
 - POST-TENSIONED SHOP DRAWINGS.

SLAB-ON-GROUND

- A. THE SLAB-ON-GROUND HAS BEEN DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
- B. SLAB THICKNESSES AND REINFORCEMENT ARE BASED ON A MODULUS OF SUBGRADE REACTION OF 47 PCF PER THE GEOTECHNICAL INVESTIGATION REPORT.
- C. SUBGRADE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
- D. FOR INTERIOR SLABS, PLACE A 10-MIL (MINIMUM) VAPOR RETARDER BETWEEN THE SOIL AND BOTTOM OF SLAB.
- E. SEE CAST-IN-PLACE CONCRETE SPECIFICATIONS FOR APPROVED VAPOR RETARDER PRODUCT/MANUFACTURERS. DO NOT USE VAPOR RETARDERS AT EXTERIOR SLABS. SEE ARCHITECTURAL CONTRACT DOCUMENTS FOR PRODUCT SPECIFIC REQUIREMENTS.
- F. IF THE SLAB-ON-GROUND HAS BEEN DESIGNATED AS A STRUCTURAL SLAB-ON-GROUND IN THE CONTRACT DOCUMENTS, NO SAW CUTTING OF THE SLAB IS PERMITTED.
- G. CONTROL JOINTS SHALL BE CUT INTO THE SURFACE OF THE SLAB, IN EACH DIRECTION. SEE THE TYPICAL SAW CUT JOINT DETAIL FOR TIME, DEPTH, AND SPACING OF JOINT REQUIREMENTS UNLESS NOTED OTHERWISE. CONTROL JOINTS SHALL BE CONSTRUCTED SUCH THAT THE AREA CONTAINED BY THE CONTROL JOINTS HAS A MAXIMUM RATIO OF LONG SIDE TO SHORT SIDE OF 1.5 TO 1 UNLESS NOTED OTHERWISE. DO NOT CONSTRUCT CONTROL JOINTS SUCH THAT 1" SHARPED SLAB PANELS ARE CREATED.
- H. COLUMN ISOLATION JOINTS SHALL BE CONSTRUCTED PER THE TYPICAL COLUMN ISOLATION JOINT DETAIL IN ORDER TO PROVIDE ADEQUATE SPACE FOR COLUMN INSTALLATION.
- I. REINSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. SLAB CONSTRUCTION JOINTS SHALL BE DOWELED.
- J. WHERE SPECIFIED ON PLAN, WELDED WIRE REINFORCEMENT SHALL BE INSTALLED. WELDED WIRE REINFORCEMENT SHALL BE PROPERLY CHAIRED SUCH THAT IT IS LOCATED AT A DEPTH OF 1 ½" FROM THE TOP OF SLAB.
- K. REFERENCE ARCHITECTURAL AND MEP DOCUMENTS FOR SLAB FINISHES AND SLOPES NOT REFERENCED ON THE CONSTRUCTION DOCUMENTS. THE MINIMUM SLAB THICKNESS SPECIFIED IN THE CONTRACT DOCUMENTS MUST BE MAINTAINED.
- L. REFERENCE ARCHITECTURAL DOCUMENTS FOR VAPOR RETARDER AND SLAB AND CONTROL JOINT SEALANT.
- M. CONDUITS SHALL NOT BE PLACED WITHIN THE SLAB. CONDUITS SHALL BE PLACED BENEATH THE SLAB.
- N. THE FOLLOWING CRITERIA REGARDING PIPES AND CONDUITS EMBEDDED IN MASONRY SHALL BE ADHERED TO. SEE MEP DRAWINGS FOR LOCATIONS OF SLEEVES, PIPES, CONDUIT, ACCESSORIES, ETC. THESE CRITERIA WILL BE STRICTLY ENFORCED.
- CONDUITS, PIPES, AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO MASONRY AND MEETING THE CRITERIA BELOW SHALL BE PERMITTED TO BE EMBEDDED IN MASONRY. ALL OTHER CONDUITS, PIPES, AND SLEEVES SHALL NOT BE EMBEDDED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
 - CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL MASONRY.
 - CONDUITS, PIPES, AND SLEEVES PASSING THROUGH A WALL SHALL NOT SIGNIFICANTLY IMPAIR THE STRENGTH OF THE CONSTRUCTION. CONDUITS, PIPES, AND SLEEVES SHALL NOT PASS THROUGH JAMBS, LINTELS, BOND BEAMS, OR SHEAR WALLS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
 - CONDUITS AND PIPES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER.
 - CONDUITS AND PIPES SHALL BE FABRICATED AND INSTALLED SO THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED.
 - CONDUITS AND PIPES, WITH FITTINGS, EMBEDDED IN MASONRY OR WALL SHALL NOT DISPLACE MORE THAN 2 PERCENT OF THE NET SECTION OR AS REQUIRED BY FIRE PROTECTION.
 - ALL MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES IN THE FINAL CONSTRUCTED CONFIGURATION ONLY ASSUMING FLAT BRACING TOP, BOTTOM, AND/OR SIDE OF WALL AS SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROPERLY AND ADEQUATELY BRACE ALL MASONRY WALLS AT ALL STAGES DURING CONSTRUCTION TO RESIST ERECTION LOADS AND LATERAL LOADS THAT COULD OCCUR PRIOR TO THE COMPLETION OF CONSTRUCTION.
 - CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE MASONRY CONSTRUCTION. REFER TO TYPICAL CONTROL JOINT DETAIL FOR GUIDELINES AND SPACING.

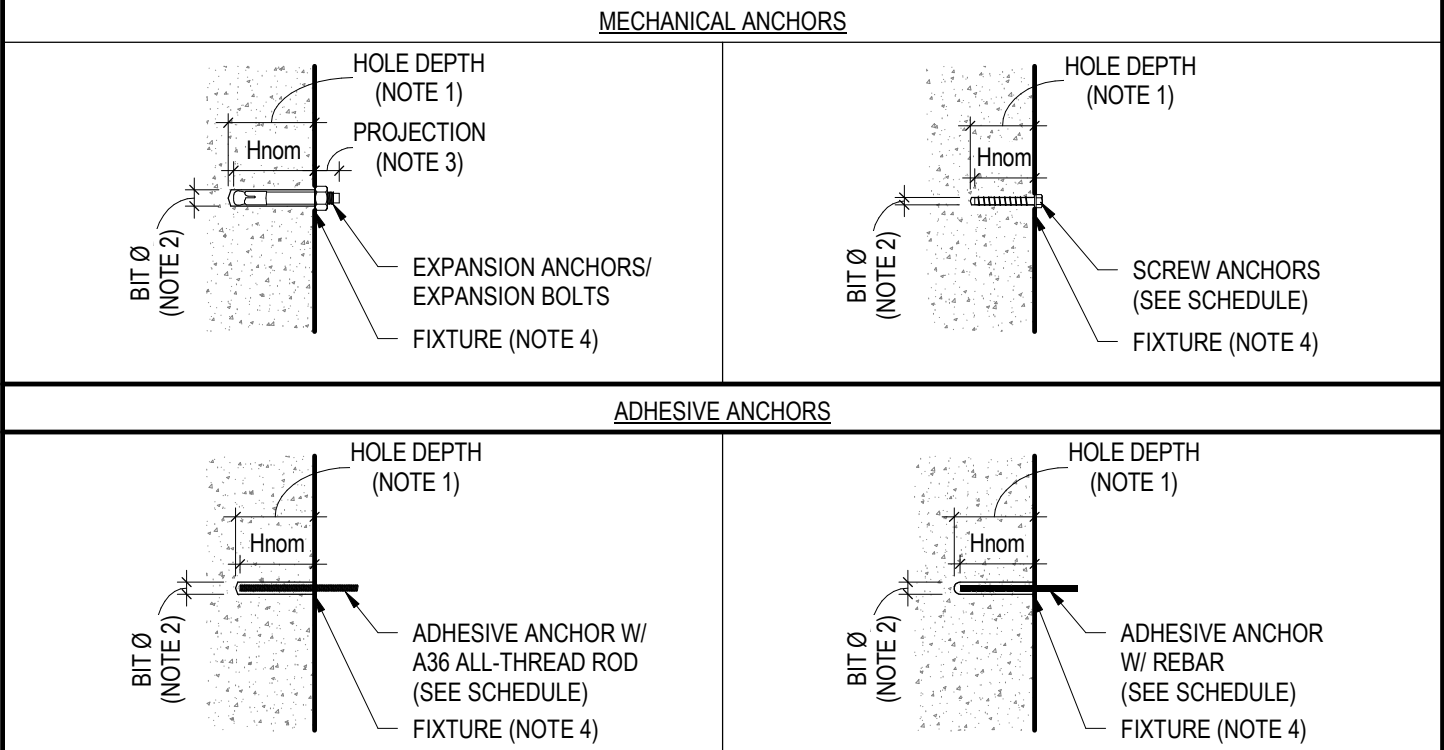
POST-INSTALLED ANCHORS SPECIFIED PRODUCTS BY APPLICATION

ANCHOR TYPE	CONCRETE	
	CONCRETE MASONRY	CONCRETE MASONRY
EXPANSION ANCHORS/EXPANSION BOLTS	HILTI KWIK BOLT TZ SIMPSON STRONG-BOLT 2 DEWALT POWER-STOP - SD2	HILTI KWIK BOLT 3 SIMPSON STRONG-BOLT 2 DEWALT POWER-STOP - SD1
MECHANICAL	HILTI HUS-EZ SIMPSON TITEN HD DEWALT SCREW-BOLT +	HILTI HUS-EZ SIMPSON TITEN HD DEWALT SCREW-BOLT +
ADHESIVE	HILTI HIT-HY200 SIMPSON SET-36 DEWALT PURE10+ OR PURE220+	HILTI HIT-HY270 SIMPSON SET-30 DEWALT ACT-100+ - GOLD
ADHESIVE ANCHORS (EPOXY ANCHORS) WITH AS3 ALL-THREAD ROD	HILTI HIT-HY200 SIMPSON SET-36 DEWALT PURE10+ OR PURE220+	HILTI HIT-HY270 SIMPSON SET-30 DEWALT ACT-100+ - GOLD

NOTES:

1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REINFORCEMENT. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
2. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED, SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED DESIGN PROFESSIONAL LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE REFERENCED BUILDING CODE.
3. ALTERNATE PRODUCTS SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL SHALL HAVE A VALID RESEARCH REPORT, ALONG WITH AN EVALUATION REPORT, INDICATING COMPLIANCE WITH APPROPRIATE ACCEPTANCE CRITERIA REQUIRED BY THE REFERENCED BUILDING CODE FOR THE INTENDED LOAD TYPE AND USE (E.G. WIND, SEISMIC, SUSTAINED TENSION, ETC.). RESEARCH REPORTS SHALL BE ISSUED BY A SOURCE APPROVED BY THE AUTHORITY HAVING JURISDICTION.
4. SPECIAL INSPECTIONS SHALL BE PROVIDED FOR POST-INSTALLED ANCHORS IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND/OR EVALUATION REPORT, UNLESS MORE SPECIFIC REQUIREMENTS ARE SPECIFIED IN THE CONSTRUCTION DOCUMENTS.

POST-INSTALLED ANCHORS INSTALLATION REQUIREMENTS



NOTES:

1. POST-INSTALLED ANCHORS ARE SPECIFIED BY THE NOMINAL EMBEDMENT (H_{em}) INDICATED IN MANUFACTURER'S LITERATURE. INCREASE THE HOLE DEPTH AS REQUIRED BY THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS FOR THE SPECIFIED ANCHOR SIZE AND EMBEDMENT.
2. COORDINATE BIT DIAMETER WITH MANUFACTURER REQUIREMENTS.
3. TOTAL ANCHOR LENGTH SHALL BE COORDINATED TO PROVIDE ADEQUATE PROJECTION LENGTH FOR FIXTURE THICKNESS, WASHER(S) AS REQUIRED (SEE NOTE 5), AND FULL ENGAGEMENT OF NUT.
4. FIXTURE THICKNESS SHALL BE COORDINATED WITH MANUFACTURER REQUIREMENTS.
- A. CONSIDERATION FOR "THROUGH-SET" VS "PRESET" INSTALLATION IN DETERMINING FIXTURE HOLE DIAMETER AND WASHER REQUIREMENTS (SEE NOTE 5).
- B. PROVIDE DOUBLE WASHERS WHEN "THROUGH-SET" INSTALLATION IS USED FOR ADHESIVE ANCHORS AS REQUIRED BY MANUFACTURER REQUIREMENTS.
- C. LOCATE, BY NONDESTRUCTIVE MEANS, ALL EXISTING REINFORCEMENT AND EMBEDMENTS (REBAR, POST-TENSIONED TENDONS, CONDUIT, ETC.) AND TAKE NECESSARY MEASURES TO AVOID CONFLICT AND DAMAGE OF EXISTING ELEMENTS DURING DRILLING OPERATIONS AND THE EMBEDMENT AND ANCHOR EMBEDMENTS PROHIBIT THE INSTALLATION OF ANCHORS AS INDICATED ON THE STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD IMMEDIATELY AND DISCONTINUE DRILLING OPERATIONS.
- D. DEFECTIVE OR ABANDONED HOLES WITHIN A DISTANCE OF THE GREATER OF 4" (ANCHOR DIAMETER) OR 3", WHICHEVER IS GREATER, SHALL BE FILLED WITH AN INJECTABLE ADHESIVE PRODUCT.
- E. COORDINATE OTHER REQUIREMENTS WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS INCLUDING (BUT NOT LIMITED TO) TEMPERATURE, HOLE DRILLING/CLEANING/PREPARATION, AND INSTALLATION TORQUE. INSTALLATION TO CORE DRILLED HOLES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY ALLOWED BY MANUFACTURER PRINTED INSTALLATION INSTRUCTIONS WITH CERTIFICATION THAT EQUAL CAPACITY IS ACHIEVED TO INSTALLATION IN HOLES DRILLED USING CARBIDE-TIPPED BITS. HOLES SHALL NOT BE OVERSIZED.
9. ADDITIONAL NOTES FOR ANCHORS IN MASONRY WALLS:
- A. ANCHORS SHALL NOT BE INSTALLED WITHIN 1-3/8" OF HEAD JOINTS. THE GENERAL CONTRACTOR SHALL REVIEW FIXTURE HOLE LOCATIONS RELATIVE TO HEAD JOINT LAYOUT ACCORDINGLY AND NOTIFY THE STRUCTURAL ENGINEER OF RECORD IF GEOMETRY RESULTS IN A CONDITION WHERE ANCHORS WILL BE LOCATED WITHIN THIS DISTANCE FROM HEAD JOINTS FOR A MODIFIED ANCHOR LAYOUT.
- B. ANCHORS SHALL NOT BE INSTALLED IN HOLLOW CORE / UNGROUTED MASONRY. THE GENERAL CONTRACTOR SHALL COORDINATE FILLED CELL LOCATIONS AND PROVIDE FOUR STOPS TO PROVIDE SOLID GROUTED MASONRY AT ALL AREAS TO RECEIVE POST-INSTALLED ANCHORS WITH A MINIMUM EDGE DISTANCE OF 4" ON ALL SIDES. IF INSTALLATION INTO HOLLOW CORE / UNGROUTED MASONRY IS REQUIRED, SCREEN TUBES INTO HOLLOW CORE / UNGROUTED MASONRY SHALL ONLY BE PERMISSIBLE WHEN SPECIFICALLY INDICATED AS SUCH WITH THE DOCUMENTS, OR WITH WRITTEN APPROVAL TO DO SO BY THE STRUCTURAL ENGINEER OF RECORD.
- C. INSTALLATION OF ANCHORS INTO EXISTING MASONRY WALLS SHALL CONFORM WITH THESE REQUIREMENTS, INCLUDING KNOCKING OUT OF FACE SHELLS AS REQUIRED TO GROUT SOLID AND/OR KNOCKING OUT LOCAL HEAD JOINTS TO CREATE SOLID PORTIONS OF WALL WITH NO JOINT WITHIN THE REQUIRED EDGE DISTANCE FROM ANCHOR INSTALLATION.
10. ADDITIONAL NOTES FOR ADHESIVE ANCHORS:
- A. ADHESIVE ANCHOR DESIGN TEMPERATURE RANGE IS 10°F (LONG TERM) AND 130°F (SHORT TERM).
- B. IN ADDITION TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, THE FOLLOWING GUIDEL

STRUCTURAL STEEL

- A. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE ON THE CONTRACT DOCUMENTS:
- ROLLED SHAPES AND CHANNELS: ASTM A572 OR A992, MIN. YIELD STRENGTH 50 KSI
 - ANGLES FOR TRUSSES AND BRACES: ASTM A36 MIN YIELD STRENGTH 36 KSI
 - MISCELLANEOUS ANGLES: ASTM A36
 - HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE C, MIN YIELD STRENGTH 46 KSI FOR ROUND AND 50 KSI FOR RECTANGULAR HSS
- B. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS OR AS NEEDED FOR CONNECTION DESIGN:
- ANGLES: ASTM A36
 - WTS: ASTM A992
 - PLATES: ASTM A36
 - BOLTS: ASTM A325
 - NUTS: ASTM A563
 - WASHERS: ASTM A438
 - ANCHOR RODS: ASTM F1554 GRADE 36
 - WELD ELECTRODES: MATCH FILLER METAL TO BASE METAL PER AWS D1.1
- C. WHERE NO CAMBER IS INDICATED, FABRICATE BEAMS SO THAT ANY CAMBER IS UPWARD AFTER ERECTION.
- D. CANTILEVERED BEAMS WITH NATURAL MILL CAMBER SHALL BE ERECTED SUCH THAT THE CAMBER IS ORIENTED DOWNWARD (OR CONCAVE UP).
- E. BRICES SHALL BE ALLOWED ONLY AT LOCATIONS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS UNLESS APPROVED OTHERWISE BY THE SER IN WRITING.
- F. FOR STEEL MEMBERS AND EMBEDMENTS EXPOSED TO WEATHER, PROVIDE HOT-DIPPED GALVANIZED FINISH.
- G. PROVIDE HOLES IN ALL STEEL AS REQUIRED TO PREVENT ANY ACCUMULATION OF WATER. ALL PENETRATIONS THROUGH MAIN MEMBERS SHALL NOT EXCEED 1/10 DIA. AND SHALL BE GROUND SMOOTH. THESE DRANGS MUST BE KEPT CLEAN AND OPEN.
- H. SHOW ALL COPIES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES ON THE SHOP DRAWINGS FOR APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- I. FIELD MODIFICATIONS OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ARCHITECT AND STRUCTURAL ENGINEER.
- J. WHERE BEAM SHEAR IS NOT NOTED, DESIGN FOR 30K.
- K. ALL CONNECTIONS SHALL BE DESIGNED FOR THE SPECIFIED SHEAR, MOMENT, AND AXIAL LOADS ON THE DRAWINGS. THE CONNECTIONS SHALL BE DESIGNED FOR LOAD REVERSAL. ALL CONNECTIONS SHALL BE DESIGNED TO RESIST THE ULTIMATE LEVEL FORCES UNLESS NOTED OTHERWISE.
- L. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, DETAILING, AND FABRICATION OF ALL STEEL FRAMING CONNECTIONS UNLESS SPECIFICALLY NOTED AS COMPLETELY DESIGNED AND DETAILING PROVIDED ON THE DRAWINGS. THE CONTRACTOR SHALL RETAIN A STRUCTURAL ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED, WHO SHALL DESIGN THE CONNECTIONS, SUBMIT SIGN AND SEALED CALCULATIONS TO THE ARCHITECT FOR REVIEW AND APPROVAL, PRIOR TO STARTING FABRICATION.

CONNECTION DESIGN SHALL MEET THE REQUIREMENTS OF THE AISI SPECIFICATIONS AND THE BUILDING CODE. CONNECTIONS SHALL BE CAPABLE OF RESISTING VERTICAL AND HORIZONTAL LOADS LISTED ON THE DRAWINGS. CONNECTION DESIGN SHALL PROVIDE AN ADEQUATE LOAD PATH TO TRANSFER THE LOADS FROM EACH MEMBER, THROUGH THE CONNECTION, INTO THE SUPPORTING MEMBER, AND SHALL CONSIDER THE EFFECTS OF THE FORCES ON EACH MEMBER. PROVIDE STIFFENER PLATES, WEB DOUBLER PLATE PLATES, ETC. AS REQUIRED. MEMBERS SHOWN ON THE DRAWINGS HAVE NOT BEEN SIZED FOR LOCAL EFFECTS AT CONNECTIONS.

STEEL CONNECTION DETAILS SHOW GENERAL CRITERIA FOR DESIGN AND DETAILING, AND ARE NOT INTENDED TO SHOW COMPLETE CONNECTION CONFIGURATIONS OR OTHER SPECIFIC INFORMATION THAT ARE THE RESPONSIBILITY OF THE CONNECTION DESIGN ENGINEER. ALTERNATIVE CONNECTION CONFIGURATION MAY BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. CONNECTIONS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS ARE TO BE FABRICATED AS SHOWN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION ADS THAT INCLUDE, BUT ARE NOT LIMITED TO ERECTION ANGLES, LIFT HOLES, AND OTHER AIDS.

STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSION POINTS AT THE MAXIMUM DECK SPAN LOCATION UNLESS NOTED OTHERWISE. MINIMUM CONNECTIONS SHALL BE A TWO-BOLT CONNECTION USING 3/4 INCH DIAMETER A325 BOLTS IN SINGLE SHEAR UNLESS NOTED OTHERWISE. ALL HIGH-STRENGTH BOLTS SHALL BE INSTALLED, TIGHTENED, AND INSPECTED IN ACCORDANCE WITH THE RCSC. BOLTS IN CONNECTIONS SHALL BE INSTALLED WITH FULL PRETENSION EXCEPT WHERE "SNUG-TIGHT" INSTALLATION IS SPECIFICALLY PERMITTED ON THE DRAWINGS. WHERE CONNECTIONS ARE NOTED AS SNUG-TIGHT, THE CONTRACTOR MAY INSTALL PER THE CRITERIA FOR SNUG-TIGHT BOLTS. BOLTS IN SLIP-CRITICAL CONNECTIONS SHALL BE INSTALLED USING TURN-OF-NUT PRETENSIONING, TWIST-OFF TYPE TENSION CONTROL, BOLT PRETENSIONING, OR DIRECT TENSION INDICATOR (DTI) PRETENSIONING. ALL BOLT HOLES SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE.

WELDING

- A. ALL WELDING SHALL BE PERFORMED IN STRICT ADHERENCE TO A WRITTEN WELDING PROCEDURE SPECIFICATION PER AMERICAN WELDING SOCIETY D1.1. ALL WELDING PARAMETERS SHALL FOLLOW THE RECOMMENDATIONS OF THE MANUFACTURER'S RECOMMENDATIONS. WELDING PROCEDURES SHALL BE SUBMITTED TO THE OWNER'S TESTING AGENCY FOR REVIEW BEFORE STARTING FABRICATION OR ERECTION. COPIES OF THE WELDING PROCEDURE SPECIFICATION SHALL BE ON SITE AND AVAILABLE TO ALL WORKERS AND THE SPECIAL INSPECTOR.
- B. ALL WELDS SHALL BE MADE USING LOW HYDROGEN ELECTRODES WITH MINIMUM TENSILE STRENGTH PER AWS D1.1 (MINIMUM 70 KSI).
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOINT PREPARATIONS AND WELDING PROCEDURES THAT INCLUDE, BUT ARE NOT LIMITED TO: REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPIES, SURFACE ROUGHNESS VALUES, TAPERS, AND TRANSITIONS OF UNEQUAL PARTS.
- D. WELDING SHALL BE DONE BY WELDERS WITH CURRENT AMERICAN WELDING SOCIETY CERTIFICATION.
- E. FIELD WELDING SYMBOLS HAVE NOT NECESSARILY BEEN INDICATED ON THE DRAWINGS. WHERE SHOWN, PROPER FIELD WELDING PER AMERICAN WELDING SOCIETY D1.1 SHALL BE USED. WHERE NO FIELD WELDING SYMBOLS ARE SHOWN, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE USE OF SHOP AND FIELD WELDS.
- F. ALL WELD SIZES SHALL BE THE LARGER OF: THE SIZE REQUIRED BY THE CONNECTION FORCES, MINIMUM SIZE PER ANSIAWS D1.1 OR 3/16 INCH MINIMUM FILLET WELD, UNLESS NOTED OTHERWISE.
- G. PROVIDE FILLET WELDS AT CONTACT POINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE FORCE OF THE SMALLER MEMBER AT THE JOINT, UNLESS NOTED OTHERWISE.
- H. ALL FILLET WELDS SHALL BE VISUALLY INSPECTED BY THE TESTING FIRM.
- I. GROOVE WELDS SHALL BE FULL PENETRATION UNLESS NOTED OTHERWISE.
- J. ALL COMPLETE JOINT PENETRATION WELDS SHALL BE ULTRASONICALLY TESTED UPON COMPLETION OF THE CONNECTION, EXCEPT PLATES LESS THAN OR EQUAL TO 1/4-INCH-THICK SHALL BE MAGNETIC PARTICLE TESTED. REDUCTION IN TESTING MAY BE MADE IN ACCORDANCE WITH THE BUILDING CODE WITH APPROVAL OF THE ENGINEER.
- K. A RUN-OFF TAB SHALL BE USED AT ALL BEVEL AND FULL PENETRATION WELDS. RUN-OFF TABS SHALL BE REMOVED BY HEAT CUTS AFTER WELD IS COMPLETED. GRIND SMOOTH WHERE REQUIRED BY DETAIL.
- L. WHERE REQUIRED BY DETAIL, REMOVE WELD BACKING BARS AND GRIND SMOOTH AFTER WELD IS COMPLETED.
- M. WHERE NECESSARY, REMOVE GALVANIZING OR PRIMER PRIOR TO WELDING.
- N. STEEL USING COMPLETE JOINT PENETRATION GROOVE WELDS THAT FUSE THROUGH THE THICKNESS OF THE FLANGE OR WEB SHALL HAVE A MINIMUM CHARTER V-NOTCH IMPACT TESTING VALUE AS FOLLOWS:
- ASTM A568M HOT-ROLLED SHAPES WITH A FLANGE THICKNESS EXCEEDING 2 INCHES AND BUILT-UP HEAVY SHAPES WITH PLATES EXCEEDING 2 INCHES IN THICKNESS: 20 FT-LB AT 70° FAHRENHEIT.
 - REGARDLESS OF THICKNESS, ALL TRUSSES, LATERAL SYSTEM MEMBERS (INCLUDING COLUMNS, WIND GIRDERS, BRACES, ETC.) 20 FT-LB AT 70° FAHRENHEIT.
 - STEEL EXPOSED TO TEMPERATURES IN SERVICE BELOW 50° FAHRENHEIT: 20 FT-LB AT SERVICE TEMPERATURE + 20° FAHRENHEIT; 40° FAHRENHEIT MAXIMUM.
 - WELD METAL: 20 FT-LB AT -20° FAHRENHEIT AND 40 FT-LB AT 70° FAHRENHEIT.
 - TESTING IS TO BE IN ACCORDANCE WITH ASTM A568M, SUPPLEMENTARY REQUIREMENT S30, CHARTER V; NOTCH IMPACT TEST FOR STRUCTURAL SHAPES - ALTERNATE CORE LOCATION, AT ROLLED SHAPES AND ASTM A563 FOR PLATES, AT ANY PERMITTED LOCATIONS. WELD METAL SHALL BE TESTED IN ACCORDANCE WITH ASTM E23, STANDARD METHODS FOR NOTCHED BAR IMPACT TESTING OF METALLIC MATERIALS FOR WELD METAL.

STEEL JOISTS

- A. MANUFACTURE AND ERECT ALL STRUCTURAL STEEL JOISTS, JOIST GIRDERS, AND BRIDGING IN ACCORDANCE WITH SPECIFICATION SECTION 052100, SPECIFICATIONS OF THE STEEL JOIST INSTITUTE AND ALL OSHA REQUIREMENTS.
- B. JOIST MANUFACTURER SHALL DESIGN JOISTS PER LISTED DESIGN CRITERIA AND ANY ADDITIONAL LOADING SHOWN ON PLAN OR IN DETAILS. AT A MINIMUM, JOIST SHALL BE DESIGNED PER STEEL JOIST INSTITUTE (SJI) LOAD TABLES.
- C. JOISTS SHALL BE EQUALLY SPACED BETWEEN COLUMN LINES OR OTHER SPECIFICALLY LOCATED FRAMING MEMBERS UNLESS NOTED OTHERWISE.
- D. STEEL JOISTS, JOIST GIRDERS, BRIDGING, AND THEIR CONNECTIONS SHALL BE DESIGNED FOR NET UPLIFT (NEGATIVE PRESSURE) AS INDICATED IN THE STRUCTURAL DRAWINGS. REFER TO THE APPLICABLE BUILDING CODE LISTED IN DESIGN CRITERIA FOR LOAD COMBINATIONS.
- DEAD LOAD (MIN) = 8 PSF (FOR UPLIFT)
- E. STEEL JOISTS, JOIST GIRDERS, BRIDGING, AND THEIR CONNECTIONS SHALL BE DESIGNED FOR ADDITIONAL DOWN FORCE RESULTING FROM WIND (POSITIVE PRESSURE) AS INDICATED IN THE STRUCTURAL DRAWINGS.
- DEAD LOAD (MAXIMUM) = 20 PSF (SIMULTANEOUS WITH DOWNWARD WIND)
- F. JOIST MANUFACTURER SHALL DESIGN AND DETAIL ALL BRIDGING PER SJI REQUIREMENTS AND CLEARLY INDICATE LOCATION ON STEEL JOIST ERECTION DRAWINGS.
- BRIDGING SHALL BE DESIGNED TO FULLY BRACE TOP CHORD OF JOISTS UNDER SERVICE LOADS FOR JOISTS NOT BRACED BY STEEL ROOF DECK.
 - BOTTOM CHORD OF ROOF JOISTS SHALL BE DESIGNED FOR NET UPLIFT (COMPONENTS & CLADDING) SHOWN ON DIAGRAM ON S-002C, UNLESS NOTED OTHERWISE.
- G. AN ALLOWABLE STRESS INCREASE FOR LOAD COMBINATIONS INCLUDING WIND IS NOT PERMITTED.
- H. JOIST MANUFACTURER SHALL CAMBER JOISTS PER SJI CRITERIA.
- I. PROVIDE MINIMUM BEARING PER SJI REQUIREMENTS AND CONNECT TO STEEL SUPPORT AS FOLLOWS:
- K-SERIES: 3/16" x 1" FILLET WELD EACH SIDE.
 - LH AND DLH SERIES: 1/2" x 2" FILLET WELD EACH SIDE.
- J. PROVIDE STANDARD DEPTH OF BEARING FOR ALL JOISTS AS SHOWN BELOW UNLESS NOTED IN DRAWINGS:
- K-SERIES - 2 1/4"
 - LH - 5"
 - WHERE STEEL JOIST OR JOIST GIRDER SLOPE EXCEEDS 1/4 INCH PER FOOT, PROVIDE SLOPED BEARING AS NOTED IN SLOPED SEAT REQUIREMENTS OF SJI.
- K. JOIST MANUFACTURER SHALL DESIGN AND DETAIL FIELD BOLTING FOR ERECTION PER SJI REQUIREMENTS.

STEEL DECK GENERAL REQUIREMENTS

- A. ALL STEEL DECK SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE DIVISION 05 SPECIFICATIONS.
- B. STEEL DECK SHALL BE SUPPORTED BY A MINIMUM OF FOUR SUPPORT LOCATIONS (THREE SPAN CONDITION), UNLESS NOTED OTHERWISE.
- C. THE CONTRACTOR SHALL COORDINATE SLAB/DECK OPENING SIZES AND LOCATIONS PER ARCHITECTURAL AND MEP CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE OPENING SUPPORT FRAMING AND/OR REINFORCEMENT AS REQUIRED PER TYPICAL DETAILS AND SUBMIT PROPOSED SLAB/DECK OPENINGS FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD.
- D. SHOP DRAWINGS SHALL BE SUBMITTED INDICATING:
- MATERIAL STRENGTH
 - SECTION PROPERTIES
 - DECK GAGE, LAYOUT
 - FASTENER TYPE
 - CONNECTION PATTERN
 - CLOSURE ANGLES
- E. THE CAPACITY OF THE DECK SHALL BE BASED ON CURRENT ICC-ES EVALUATION REPORTS.

STEEL ROOF DECK

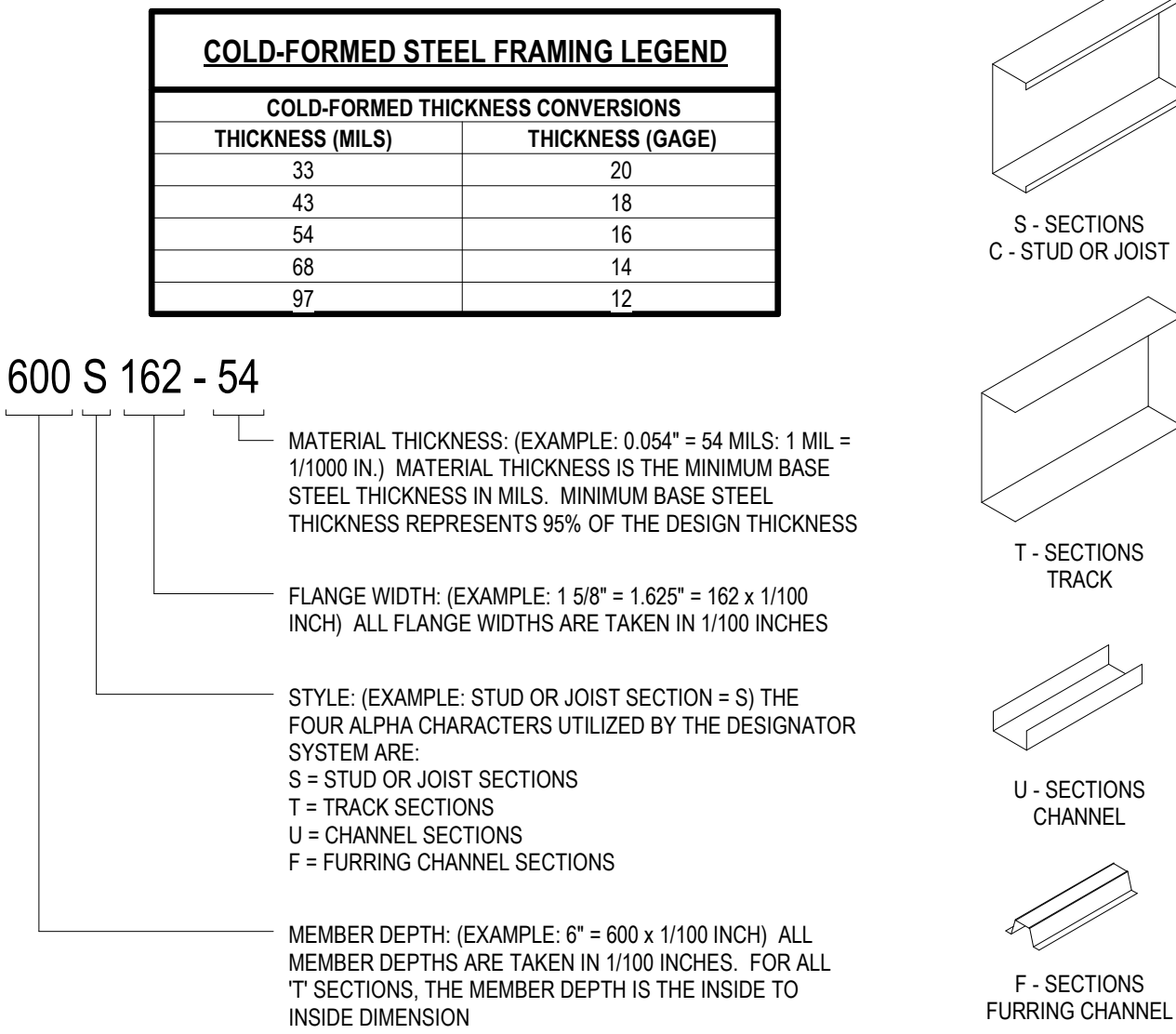
- A. STEEL ROOF DECK SHALL BE A MINIMUM YIELD STRENGTH OF 33 KSI, UNLESS NOTED OTHERWISE. ALL INTERIOR STEEL ROOF DECK SHALL CONFORM TO ASTM A1008, FACTORY PRIMED FOR PAINT. ALL EXPOSED STEEL ROOF DECK SHALL CONFORM TO ASTM A653 WITH G90 HOT-DIPPED GALVANIZATION, UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR EXTENTS.
- B. STEEL ROOF DECK SHALL BE ATTACHED TO STEEL SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS AND TO COLD-FORMED METAL FRAMING WITH #12 SELF-DRILLING SCREWS UNLESS NOTED OTHERWISE. WHEN DECK THICKNESS IS LESS THAN 0.028 INCHES, WELDS MUST BE MADE THROUGH MINIMUM 16 GAGE WELDING WASHERS. SPACING OF WELDS SHALL BE AS SPECIFIED IN THE DECK ATTACHMENT SCHEDULE.
- C. WHERE STEEL MEMBERS ARE PARALLEL TO THE DECK FLUTES AND AT THE SAME ELEVATION OF THE BOTTOM OF THE DECK, ADJUST DECK LAYOUT AND WELD DECK TO STEEL WITH SAME WELDING AS REQUIRED FOR SIDE BOUNDARIES.
- D. ERECT STEEL DECK CLOSURES AND OTHER LIGHT GAGE MATERIAL REQUIRED TO PRODUCE A COMPLETED INSTALLATION.
- E. FLAT, RIDGE, AND VALLEY PLATES.
- F. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL PROVIDE FLAT PLATES (20 GAGE MINIMUM) AT ALL LOCATIONS WHERE ROOF DECK CHANGES DIRECTION AND RIDGE OR VALLEY PLATES (20 GAGE MINIMUM) AT ALL LOCATIONS WHERE ROOF SLOPE EXCEEDS 1/4 INCH PER FOOT.
- G. DO NOT HANG CEILING, DUCTS, LIGHT FIXTURES, EQUIPMENT, OR OTHER ITEMS FROM THE ROOF DECK WITHOUT PRIOR APPROVAL FROM THE DECK SUPPLIER AND REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.
- H. SEE ARCHITECTURAL DRAWINGS FOR FINAL ROOF SLOPES. WHERE STRUCTURAL FRAMING DOES NOT CREATE THE SPECIFIED ROOF SLOPE, IT SHALL BE CREATED WITH RIGID INSULATION ABOVE THE DECK.

NON-COMPOSITE STEEL FORM DECK

- A. NON-COMPOSITE STEEL FORM DECK SHALL BE A MINIMUM YIELD STRENGTH OF 60 KSI AND SHALL CONFORM TO ASTM A653 WITH G90 HOT-DIPPED GALVANIZATION, UNLESS NOTED OTHERWISE.
- B. NON-COMPOSITE STEEL FORM DECK SHALL BE ATTACHED TO SUPPORTS WITH 5/8 INCH DIAMETER PUDDLE WELDS. WHEN DECK THICKNESS IS LESS THAN 0.028 INCHES, WELDS MUST BE MADE THROUGH MINIMUM 16 GAGE WELDING WASHERS. SPACING OF WELDS SHALL BE AS FOLLOWS:
- AT BUTTED ENDS AT 10 INCHES ON CENTER
 - AT PERIMETER EDGES OF BUILDING: AT 10 INCHES ON CENTER
 - INTERMEDIATE SUPPORTS: AT 10 INCHES ON CENTER
 - SIDE LAPS: FOR FORM DECK WITH SPANS 3-FEET OR GREATER, PROVIDE TWO CONNECTIONS PER SPAN. HEX HEAD SCREWS, SIZE #10, OR CRIMPING (BUTTON PUNCHING) MAY BE USED AT SIDE LAP CONNECTIONS.

COLD-FORMED STEEL

- A. DESIGN, FABRICATION, AND ERECTION OF COLD-FORMED STEEL SHALL CONFORM TO AISI S100.
- B. ALL STUDS, JOISTS, TRACK, BRIDGING, END CLOSURES, AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF AISI S100.
- C. THE CONTRACTOR'S DELEGATED ENGINEER SHALL DESIGN ALL COLD-FORMED STEEL AND ITS CONNECTIONS TO THE BUILDING STRUCTURE. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR REQUIRED COLD-FORMED STEEL.
- D. ALL EXTERIOR COLD-FORMED STEEL AND ITS CONNECTIONS TO THE BUILDING STRUCTURE SHALL BE DESIGNED PER DESIGN CRITERIA AND COMPONENTS AND CLADDING WIND PRESSURES LISTED IN THE STRUCTURAL DOCUMENTS.
- E. ALL INTERIOR COLD-FORMED STEEL AND ITS CONNECTIONS TO THE BUILDING STRUCTURE SHALL BE DESIGNED PER DESIGN CRITERIA LISTED IN THE GENERAL STRUCTURAL NOTES AND A MINIMUM OF 3 PSF INTERNAL PRESSURE NORMAL TO THE STRONG AXIS OF FRAMING MEMBERS IN ADDITION TO DEAD LOAD.
- F. ALL EXTERIOR COLD-FORMED STEEL SHALL HAVE A MINIMUM G90 GALVANIZED COATING. ALL INTERIOR COLD-FORMED STEEL SHALL HAVE A MINIMUM G60 GALVANIZED COATING.
- G. ALL STUDS SHALL BE DESIGNED TO A MINIMUM GAUGE OF 43 MILS. STUD SPACING SHALL NOT EXCEED 24" ON CENTER.
- H. ALL COLD-FORMED STEEL, 54 MIL AND THICKER SHALL HAVE A MINIMUM YIELD STRENGTH (F_y) OF 50 KSI.
- I. ALL WELDING SHALL MEET REQUIREMENTS OF AWS D1.3 AND THE AISI STANDARD.
- J. ALL SCREWS OR PINS SHALL BE NON-CORROSIVE NO. 8-18 (Ø = 0.125") OR LARGER, UNLESS NOTED OTHERWISE. DO NOT USE STAINLESS STEEL OR COPPER-COATED FASTENERS.
- K. TRACKS SHALL BE THE SAME DEPTH AS STUDS OR JOISTS AND OF EQUAL OR THICKER GAUGE THAN STUDS OR JOISTS, UNLESS NOTED OTHERWISE. TRACKS SHALL BE CONNECTED IN ORDER TO SUPPORT STUDS OR JOISTS AT 24" ON CENTER, MAXIMUM. STUDS AND JOISTS SHALL BE CONNECTED TO TRACKS AT EACH SIDE.
- L. INSTALLATION OF CURTAIN WALL FRAMING SHALL ACCOMMODATE VERTICAL DISPLACEMENT OF THE PRIMARY STRUCTURE.
- M. DESIGN OF SLIP TRACKS SHALL CONFORM TO GUIDELINES ESTABLISHED IN STEEL STUD MANUFACTURER'S ASSOCIATION TECHNICAL NOTE NO. 1, PUBLISHED JANUARY 2020.
- N. PROVIDE THE STANDARD TRACK, CLIP ANGLES, BRACING, REINFORCEMENTS, FASTENERS, AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER FOR THE APPLICATION INDICATED AND AS NEEDED TO PROVIDE A COMPLETE FRAMING SYSTEM. INSTALL THE FRAMING SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS, UNLESS NOTED OTHERWISE.
- O. MATCH FILLER METAL TO BASE METAL PER AWS D1.3 FOR WELDING STEEL STUDS. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS PROCEDURES. CONSULT MANUFACTURER FOR EQUIPMENT RECOMMENDATIONS AND PROPER ELECTRODE SELECTION. TOUCH UP WELDED AREAS WITH A ZINC RICH PAINT.
- P. STUD-TO-STUD CONNECTIONS SHALL BE A MINIMUM OF (4) #8 TEK SCREWS AT EACH CONNECTION, UNLESS NOTED OTHERWISE.
- Q. RESISTANCE TO MINOR AXIS BENDING AND ROTATION SHALL BE PROVIDED BY GYPSUM BOARD, GYPSUM SHEATHING, PLYWOOD, HORIZONTAL BRACING, OR CHANNEL SHAPED COLD-FORMED STEEL FRAMING BLOCKING.
- R. SHOP DRAWINGS, INCLUDING CALCULATIONS, SHALL BE SIGNED AND SEALED BY A DELEGATED ENGINEER AND SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD AND ARCHITECT FOR REVIEW.
- S. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL FRAMING SIZES, CONNECTIONS, AND BRACING. IF BRACING DEPTH IS NOT INDICATED IN THE CONTRACT DOCUMENTS, THE MOST ECONOMICAL MEMBER AND CONNECTION MEETING THE DESIGN CRITERIA SHALL BE PROVIDED.
- T. CALCULATIONS SHALL CLEARLY INDICATE DESIGN LOADING, FRAMING SIZE, SPACING, ASSUMPTIONS, AND FORCES IMPOSED ONTO BUILDING STRUCTURE FROM CONNECTIONS.
- U. STEEL STUD MANUFACTURERS ASSOCIATION FOUR PART NOMENCLATURE IDENTIFIES MEMBER DEPTH, TYPE, FLANGE WIDTH AND GAUGE.



STEEL EMBED PLATE SCHEDULE										
MARK	PLATE GEOMETRY (IN)			EDGE DISTANCE	ANCHORS (AWS D1.1, TYPE B)			COMMENTS	REFERENCE DETAIL	
	WIDTH	LENGTH	THICKNESS		#	DIAMETER	LENGTH			
EP0814	14"	18"	1/2"	1 1/2"	4	1/2"	4"		1/ S-500	
EP1010	10"	10"	1/2"	1 1/2"	4	1/2"	4"		5/ S-600	
EP1212	12"	12"	1/2"	1 1/2"	4	1/2"	6"	GALVANIZED	2/ S-600	

LAYOUT WITH 4 ANCHORS

LAYOUT WITH 6 ANCHORS

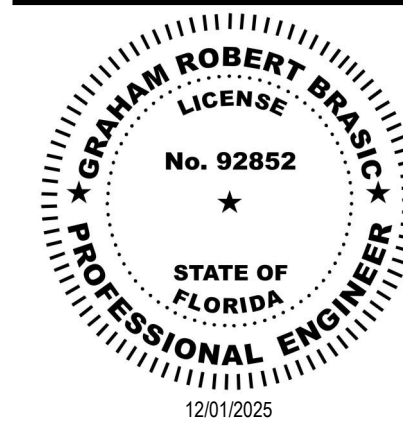
T/PLATE = T/SLAB
(SEE PLAN)

LENGTH
(NOTE 1)

NOTES:

- ANCHOR LENGTH INDICATED IS FINAL LENGTH AFTER BURNOFF.
- SEE PLAN FOR LOCATION OF KEYED SECTIONS & DETAILS REFERENCING EMBED PLATES AND ATTACHMENT OF CONNECTING ELEMENTS.
- FOR LAYOUTS WITH MORE THAN 4 ANCHORS SEE KEYED SECTIONS/DETAILS FOR ANCHOR LAYOUTS.

WATERFORD CAMPUS - ASSISTED
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PERMITTING, OR

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CONSTRUCTION

Project No.: 2021009
Date: 12/01/2025

STEEL
GENERAL
NOTES

S-004

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CERTIFICATE OF AUTHORIZATION FL #30795
JG Project #: 21.18.004

TO THE BEST OF THE ENGINEER'S
KNOWLEDGE, THE PLANS AND
SPECIFICATIONS COMPLY WITH THE
APPLICABLE BUILDING CODES AND
MATERIAL SPECIFICATIONS.

Autodesk Docs://The Waterford (Stage 2)/2021-009_WCR_MC-AL-BLDG_STRUCT_R24.rvt

GENERAL

- A. THIS STRUCTURAL INSPECTION PLAN IS PREPARED IN ACCORDANCE WITH SECTION 553.79(5) OF THE FLORIDA STATUTES WHICH DESCRIBES THE REQUIREMENT THAT A STRUCTURAL INSPECTION PLAN BE PREPARED BY THE ENGINEER OF RECORD FOR A THRESHOLD BUILDING.
- B. THE PURPOSE OF THIS STRUCTURAL INSPECTION PLAN IS TO PROVIDE SPECIFIC INSPECTION PROCEDURES AND SCHEDULES SO THAT THE BUILDING CAN BE ADEQUATELY INSPECTED FOR GENERAL COMPLIANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT, SUCH THAT THE FOUNDATION FOR THE PROJECT WILL FUNCTION AS INTENDED.
- C. STRUCTURAL INSPECTIONS SHALL BE PERFORMED BY THE SPECIAL INSPECTOR REGISTERED UNDER SECTION 471 OF THE FLORIDA STATUTES AS AN ENGINEER.
- D. THE OWNER SHALL EMPLOY THE SERVICES OF A SPECIAL INSPECTOR IN COMPLIANCE WITH THE PROVISIONS OF CHAPTER 553.79 OF THE FLORIDA STATUTES.
- E. THE SPECIAL INSPECTOR SHALL INSPECT THE FRAMING SHOWN ON THE STRUCTURAL DRAWINGS IN ACCORDANCE WITH THIS PLAN TO VERIFY THAT THE WORK IS CONSTRUCTED IN GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS, EXCEPT FOR ACCEPTED VARIATIONS.
1. THE CONTRACT DOCUMENTS ARE DEFINED AS THE PERMITTED DRAWINGS, PROJECT SPECIFICATIONS, AND RECORDED ADDENDA AND AMENDMENTS.
2. UNLESS NOTED OTHERWISE, WORK OF THIS PLAN EXCLUDES THE INSPECTION OF ELEMENTS THAT DO NOT CONTRIBUTE TO THE CAPACITY OF THE PRIMARY STRUCTURAL FRAME. THIS INCLUDES, BUT IS NOT LIMITED TO, RAILINGS, FIRE PROTECTION, ROOFING, GLAZED WINDOW SYSTEMS, MECHANICAL/ELECTRICAL SYSTEMS, ARCHITECTURAL COMPONENTS, SITE WORK, AND OSHA SAFETY PROVISIONS OR OTHER SAFETY STANDARDS THAT APPLY DURING THE CONSTRUCTION PERIOD. PRECAST CLADDING, EXTERIOR MASONRY WALLS, AND SUB-ON-GROUND ARE SPECIFICALLY INCLUDED.
- F. AT A MINIMUM, THE SPECIAL INSPECTOR SHALL PERFORM THE MANDATORY STRUCTURAL INSPECTIONS AS REQUIRED UNDER THE PROVISIONS OF THE FLORIDA BUILDING CODE, IN ACCORDANCE WITH THE SCOPE AND SCHEDULE OUTLINED HEREIN.
- G. THE SPECIAL INSPECTOR SHALL LOG EACH SITE VISIT DOCUMENTING THE PROGRESS OF THE WORK, THE RELEVANT TESTING CONDUCTED, THE AREAS INSPECTED, AND ANY OTHER ELEMENTS PERTINENT TO THE WORK PROGRESS AT THE TIME OF THE INSPECTION. THE LOG RECORD SHALL REMAIN ON SITE AND ACCESSIBLE AT ANY TIME.
- H. DAILY SIGNED AND SEALED FIELD REPORTS SHALL BE SUBMITTED ON A WEEKLY BASIS TO THE ENFORCING AGENCY, ARCHITECT OR STRUCTURAL ENGINEER OF RECORD, AND OWNER.
- I. THE SPECIAL INSPECTOR SHALL NOT MAKE DESIGN DECISIONS. DIRECT THE CONTRACTOR'S WORK, NOR BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS.
- J. THE SPECIAL INSPECTOR MAY SEND A FULL-TIME COLLEAGUE AS HIS AUTHORIZED REPRESENTATIVE TO THE PROJECT, BUT THAT PERSON SHALL BE KNOWLEDGEABLE AND HAVE A COLLEGE DEGREE IN CIVIL OR STRUCTURAL ENGINEERING.

CONTRACTOR RESPONSIBILITIES

- A. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR WITH AN OFFICE AT THE CONSTRUCTION SITE THAT INCLUDES, AT MINIMUM, A DESK, CHAIR, PLAN TABLE, PLAN RACK, INTERNET ACCESS, AND JANITORIAL SERVICES IN AIR-CONDITIONED SPACE.
- B. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR WITH AN UPDATED COPY OF ALL PERMIT DOCUMENTS, REVISED AND APPROVED SHOP DRAWING SUBMITTALS, TEST REPORTS, AND OTHER ITEMS WITH THE LATEST INFORMATION IN A TIMELY MANNER.
- C. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS NOTICE TO THE SPECIAL INSPECTOR PRIOR TO THE NEED FOR ANY INSPECTION ON SITE.
- D. THE CONTRACTOR SHALL COOPERATE AND ASSIST THE SPECIAL INSPECTOR IN PERFORMING HIS INSPECTION DUTIES AND SHALL PROVIDE HIM FREE ACCESS TO THE WORK AT ALL TIMES.
- E. THE PRESENCE OF THE SPECIAL INSPECTOR DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO COMPLY WITH CONTRACT DOCUMENTS. THE CONTRACTOR HAS THE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS AND THE COSTS OF RECTIFYING THOSE DEVIATIONS.
- F. THE CONTRACTOR MAY SEND A FULL-TIME COLLEAGUE AS HIS AUTHORIZED REPRESENTATIVE TO THE PROJECT, BUT THAT PERSON SHALL BE KNOWLEDGEABLE AND HAVE A COLLEGE DEGREE IN CIVIL OR STRUCTURAL ENGINEERING.
- G. CONSTRUCTION PERFORMED WITHOUT INSPECTION MAY REQUIRE TESTING OR MAY NEED TO BE REMOVED AS DETERMINED BY THE STRUCTURAL ENGINEER OR ARCHITECT OF RECORD.
- H. THE CONTRACTOR'S SHORING ENGINEER SHALL SUPERVISE, INSPECT, AND CERTIFY THE INSTALLATION OF ALL SHORING AND RE-SHORING PER APPROVED SHOP DRAWINGS. THE SHORING ENGINEER SHALL PROVIDE A SIGNED AND SEALED INSPECTION CERTIFICATION TO THE SPECIAL INSPECTOR PRIOR TO ALL CONCRETE POURS.

FEE OWNER RESPONSIBILITIES

- A. THE FEE OWNER SHALL RETAIN A GEOTECHNICAL ENGINEER TO PROVIDE INSPECTION SERVICES FOR MONITORING THE PREPARATION OF THE FOUNDATION BEARING SURFACE AND PILE FOUNDATION ELEMENTS.
- B. THE FEE OWNER SHALL RETAIN AN INDEPENDENT TESTING LABORATORY FOR MATERIAL SAMPLING AND TESTING SERVICES REQUIRED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.
- C. THE FEE OWNER SHALL ARRANGE AND ENSURE THAT ALL NECESSARY UPDATED CONSTRUCTION DOCUMENTS WITH THE LATEST INFORMATION, APPROVED SHOP DRAWINGS, LATEST SKETCHES, AND ANY OTHER TYPE OF CORRESPONDENCE WHICH MAY AFFECT THE INSPECTIONS BE FURNISHED TO THE SPECIAL INSPECTOR IN A TIMELY MANNER.
- D. THE FEE OWNER SHALL ENSURE THAT THE CONTRACTOR PROVIDES SHOP DRAWINGS FOR ALL PRECAST STRUCTURAL COMPONENTS THESE SHOP DRAWINGS MUST BE DESIGNED, SIGNED AND SEALED BY A REGISTERED FLORIDA PROFESSIONAL ENGINEER AND HAVE BEEN REVIEWED AND STAMPED BY THE ENGINEER OF RECORD.

SPECIAL INSPECTOR RESPONSIBILITIES

- A. PRIOR TO STARTING WITH THEIR WORK, THE SPECIAL INSPECTOR, AND THEIR AUTHORIZED REPRESENTATIVE, IF APPLICABLE, SHALL ATTEND A PRE-CONSTRUCTION MEETING FOR THE PURPOSE OF BECOMING FAMILIAR WITH THE SPECIFIC STRUCTURAL COMPONENTS AND SYSTEM WHICH THEY WILL BE RESPONSIBLE FOR INSPECTING.
- B. THE SPECIAL INSPECTOR SHALL INSPECT ALL STRUCTURAL SYSTEMS NOTED BELOW AND IN COMPLIANCE WITH THOSE LISTED UNDER THE "GENERAL" HEADINGS.
- C. THE SPECIAL INSPECTOR SHALL VISIT THE SITE AT SUCH FREQUENCY TO SATISFY THEMSELVES THAT THEIR REPRESENTATIVE'S INSPECTIONS COMPLY WITH THIS PLAN.
- D. THE SPECIAL INSPECTOR SHALL DEDICATE THEIR ENTIRE TIME ON-SITE TO THE REQUIREMENTS OF THIS PLAN AND SHALL NOT PERFORM OTHER WORK, SUCH AS MATERIAL TESTING.

REPORTING

- A. THE SPECIAL INSPECTOR SHALL RECORD PROGRESS, WORKING CONDITIONS, OBSERVATIONS, TESTING, DEVIATIONS FROM THE CONTRACT DOCUMENTS, AND ANY REQUIRED CORRECTIVE ACTION. THEY SHALL RETAIN THE RECORDS FOR A MINIMUM OF 7 YEARS AFTER COMPLETION OF THE PROJECT.
- B. THE SPECIAL INSPECTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTOR IN PERSON, AND THE ARCHITECT AND STRUCTURAL ENGINEER BY TELEPHONE, OF MATERIALS, TESTS, EQUIPMENT, WORKMANSHIP, OR CONSTRUCTION THAT:
1. DOES NOT CONFORM TO THE CONTRACT DOCUMENTS, OR
2. IS NOT INSPECTED OR TESTED AND CANNOT BE INSPECTED OR TESTED IN PLACE.
- C. THE SPECIAL INSPECTOR SHALL THEN IMMEDIATELY ISSUE THOSE EXCEPTIONS IN WRITING TO THOSE LISTED ABOVE AND ATTACH A COPY TO THE DAILY INSPECTION REPORT.
- D. THE SPECIAL INSPECTOR SHALL KEEP AN EXCEPTIONS FILE AND REVIEW IT ON A DAILY BASIS, UPDATING AS EXCEPTIONS ARE RECTIFIED. IF ANY EXCEPTIONS ARE NOT RESOLVED IN A TIMELY MANNER, THE SPECIAL INSPECTOR SHALL ISSUE A NONCOMPLIANCE NOTICE TO THE CONTRACTOR AND SHALL COPY THE ENFORCING AGENCY, OWNER'S REPRESENTATIVE, ARCHITECT, AND STRUCTURAL ENGINEER.
- E. AFTER EACH INSPECTION, THE INSPECTOR SHALL WRITE AND SIGN AN INSPECTION REPORT. THE REPORT SHALL INCLUDE THE FOLLOWING:
1. THE NAME AND LOCATION OF PROJECT, NAME OF INSPECTOR, PERMIT NUMBER, DATE, WORKING CONDITIONS, INCLUDING WEATHER AND TEMPERATURE, AND TYPE AND LOCATION OF WORK BEING PERFORMED.
2. DETAILS OF EACH INSPECTION, INCLUDING THE PRESENCE AND ACTIVITIES OF THE TESTING AGENCY.
3. NOTE DEFICIENCIES IN THE WORK AND ANY UNUSUAL CIRCUMSTANCES AFFECTING THE PERFORMANCE OF WORK, INCLUDING CHANGES IN MATERIALS OR WORK SEQUENCE, PLACING EMPHASIS ON RECURRING DEFICIENCIES.
4. IDENTIFY CORRECTIONS TO DEFICIENCIES LISTED IN PREVIOUS REPORTS.
- F. SINCE THE SPECIAL INSPECTOR DOES NOT CERTIFY THAT THE CONTRACT DOCUMENTS ARE IN COMPLIANCE WITH THE GOVERNING CODES, ALL STATEMENTS ISSUED SHALL REFER TO WHETHER OR NOT COMPLETED WORK IS IN SUBSTANTIAL ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- G. THE REPORT SHALL ALSO COMMENT ON THE FOLLOWING, WHEN APPLICABLE:
1. TEST REPORTS THAT DO NOT COMPLY WITH THE CONTRACT DOCUMENTS.
2. THE GEOTECHNICAL ENGINEER'S INSPECTION REPORTS.
3. SHORING AND RESHORING ENGINEER'S INSPECTION REPORTS.
4. CHANGES MADE IN THE FIELD.
- H. THE REPORT SHALL ALSO INCLUDE PHOTOGRAPHS, WHEN APPROPRIATE.
- I. THE SPECIAL INSPECTOR SHALL SUBMIT THE REPORTS TO THE ENFORCING AGENCY, OWNER'S REPRESENTATIVE, ARCHITECT, AND STRUCTURAL ENGINEER UNDER A SIGNED AND SEALED COVER LETTER ON A WEEKLY BASIS OR AS DIRECTED BY THE ENFORCING AGENCY.
- J. THE SPECIAL INSPECTOR SHALL POST AT THE JOBSITE A LOG SUMMARIZING ALL INSPECTIONS. THE HEADER SHALL CONTAIN, AT A MINIMUM, THE PROJECT NAME AND LOCATION, PERMIT NUMBER, AND THE NAME OF THE SPECIAL INSPECTOR, OWNER, AND CONTRACTOR. THE INSPECTOR SHALL WRITE AN ENTRY AFTER EACH INSPECTION THAT INCLUDES THE DATE, CONSTRUCTION PHASE, WORK DESCRIPTION, COMMENTS, HIS SIGNATURE, AND WHETHER THE WORK INSPECTED IS APPROVED OR REJECTED.
- K. UPON COMPLETION OF THE BUILDING AND PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, THE SPECIAL INSPECTOR SHALL ISSUE A SIGNED AND SEALED STATEMENT ATTESTING THAT THE PART OF THE PROJECT UNDER THEIR INSPECTION RESPONSIBILITIES HAS BEEN CONSTRUCTED IN SUBSTANTIAL ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 553.79(7) OF THE FLORIDA STATUTES AND SHALL BE SUBMITTED TO THE ENFORCING AGENCY, OWNER, ARCHITECT, AND STRUCTURAL ENGINEER.

SOIL OR FOUNDATION PREPARATION

- A. THE GEOTECHNICAL ENGINEER OF RECORD FOR THE PROJECT SHALL BE RETAINED BY THE FEE OWNER TO MONITOR THE SITE PREPARATION ACTIVITIES, FOUNDATION BEARING SURFACES, AND PILE FOUNDATION ELEMENTS.
- B. THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE SPECIAL INSPECTOR WITH DAILY REPORTS AND A SUMMARY REPORT INDICATING THAT THE FOUNDATION BEARING SURFACE IS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT, SUCH THAT THE FOUNDATION FOR THE PROJECT WILL FUNCTION AS INTENDED.
- C. THE INDEPENDENT TESTING AGENCY RETAINED BY THE FEE OWNER SHALL MONITOR THE BACKFILL AND THE COMPACTOR OPERATIONS AND PROVIDE THE SPECIAL INSPECTOR WITH REPORTS DOCUMENTING THAT THE OPERATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND THE CONTRACT DOCUMENTS.
- D. ALL INSPECTION AND TESTING REPORTS PROVIDED TO THE SPECIAL INSPECTOR SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN FLORIDA.

STRUCTURAL CAST-IN-PLACE CONCRETE

- A. THE CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR A MINIMUM OF 24 HOURS PRIOR TO THE PLACEMENT OF ANY STRUCTURAL CONCRETE.
- B. THE SPECIAL INSPECTOR SHALL:
1. INSPECT SHORING, RESHORING, AND FORMWORK AS FOLLOWS:
- a. VERIFY THAT THE DELEGATED SHORING AND RESHORING ENGINEER HAS CONFIRMED THAT THE SHORING AND RESHORING ARE IN COMPLIANCE WITH THEIR SHOP DRAWINGS (REFER TO SECTION 1.5F IN THE SPECIAL INSPECTION PLAN). ADDITIONALLY, THE SPECIAL INSPECTOR SHALL SPOT CHECK THE SHORING AND RESHORING FOR CONFORMANCE WITH THE SHORING AND RESHORING PLANS SUBMITTED TO THE ENFORCING AGENCY.
- b. SPOT CHECK SHORING AND RESHORING LAYOUT, ALIGNMENT, AND MATERIALS.
- c. CONFIRM THAT THE TIMING OF SHORING, RESHORING, AND FORMWORK PROCEDURES AND REMOVAL COMPLY WITH THE CONTRACT DOCUMENTS AND THE SHORING AND RESHORING DRAWINGS. WHERE APPROPRIATE, VERIFY THAT CONCRETE TEST CYLINDER STRENGTH IS ADEQUATE PRIOR TO FORM REMOVAL.
- C. VERIFY THAT SLAB THICKNESS IS MAINTAINED AT SLAB DEPRESSIONS AND STEPS.
- D. INSPECT STEEL REINFORCEMENT PER THE STRUCTURAL DRAWINGS, SUPPLEMENTED BY THE APPROVED SHOP DRAWINGS, TO VERIFY:
1. STEEL REINFORCEMENT GRADE, SIZE, QUANTITY, CONFIGURATION, AND SPACING.
2. MINIMUM CLEARANCE REQUIREMENTS FROM CONCRETE SURFACES.
3. STEEL REINFORCEMENT IS ADEQUATELY SUPPORTED AND TIED TO RESIST SHIFTING DURING CONCRETE POUR AND THAT CONCRETE COVER IS PROPER.
4. HOOKED REINFORCEMENT IS PLACED PROPERLY.
5. EMBEDMENT LENGTHS, SPlice LOCATIONS, AND LAP SPlice LENGTHS ARE ACCEPTABLE.
6. MECHANICAL COUPLERS ARE APPROVED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
7. PROPER TIE SPACING, PARTICULARLY AT BEAM/COLUMN INTERSECTIONS.
8. STEEL REINFORCEMENT LAYERS IN SLABS AND WALLS ARE PROPER.
9. ALL OPENINGS LARGER THAN 12" AND NOT SHOWN ON THE CONTRACT DOCUMENTS HAVE BEEN REPORTED TO THE STRUCTURAL ENGINEER OF RECORD. CHECK PLACEMENT OF ADDITIONAL REINFORCEMENT AROUND OPENINGS. OPENINGS THROUGH BEAMS ARE PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
10. IN ONE-WAY SLABS, THAT TEMPERATURE STEEL IS CORRECT, INCLUDING PROPER LAYERING.
11. IN TWO-WAY SLABS, THAT:
- a. THE COLUMN STRIP TOP BARS HAVE A UNIFORM SPACING AND ARE NOT BUNDLED TOGETHER.
- b. THE ADDED TOP BARS ARE PLACED IN THE VICINITY OF THE COLUMN.
- c. THE TOP AND BOTTOM HOOKED BARS HAVE BEEN PLACED AS REQUIRED, ESPECIALLY AT SLAB EDGES.
12. THE POSITION OF BARS AT SLAB OFFSETS AND DEPRESSIONS.
13. ALL STEEL REINFORCEMENT SURFACES ARE FREE OF EXCESS RUST OR OTHER COATING THAT MAY AFFECT THE BONDING CAPACITY.
- E. VERIFY THAT EXPANSION JOINT MATERIAL, DOWEL SLOTS, ANCHORS, EMBEDDED CONDUITS, AND LOAD CARRYING EMBEDDED ITEMS ARE PROPERLY POSITIONED AND SECURED TO RESIST DISPLACEMENT DURING CONCRETE PLACEMENT. RELOCATION OF, OR MODIFICATION TO, STRUCTURAL ITEMS DUE TO CONFLICTS WITH REINFORCEMENT IS PROHIBITED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
- F. INSPECT CONSTRUCTION JOINTS AS FOLLOWS:
1. VERIFY THAT DOWELS, KEYWAYS, AND BULHEADS COMPLY WITH THE CONTRACT DOCUMENTS.
2. CONFIRM THAT BEHIND SLAB CONSTRUCTION JOINT LOCATIONS COMPLY WITH THE CONTRACTOR'S CONSTRUCTION JOINT PLAN SUBMITTED TO THE ARCHITECT.
- G. VERIFY THAT SAWCUT JOINTS ARE:
1. PROVIDED ONLY WHERE INDICATED.
2. THE PROPER DEPTH, SPACING, AND LOCATION.
3. PROVIDED IN THE TIME FRAME INDICATED IN THE CONTRACT DOCUMENTS.
- H. CHECK THAT ALL FOREIGN MATERIAL IS REMOVED FROM FORMS OR EXCAVATIONS PRIOR TO CONCRETE PLACEMENT.
- I. BE ON SITE AT THE START OF EACH CONCRETE POUR REQUIRING INSPECTION BY THIS PLAN. AND SHALL REMAIN ON SITE FOR A SUFFICIENT TIME TO CONFIRM THAT CONCRETING PRACTICES ARE PROPER AND COMPLY WITH ACI 308, ASTM C94, AND OTHER RECOGNIZED INDUSTRY STANDARDS INCLUDING THE FOLLOWING:
1. ALL STEEL REINFORCEMENT CORRECTIONS ARE COMPLETED PRIOR TO CONCRETE PLACEMENT.
2. THE FIRST CONCRETE TRUCK OF EACH TYPE OF CONCRETE POUR HAS THE PROPER CONCRETE MIX NUMBER AND STRENGTH AND THAT THE BATCH TIME LEAVES SUFFICIENT TIME TO POUR ALL CONCRETE FROM THE TRUCK. SPOT CHECK FUTURE TRUCKS.
3. THE TESTING AGENCY IS ON SITE FOR EACH TYPE OF CONCRETE POUR TO TEST CONCRETE AS REQUIRED BY THE CONTRACT DOCUMENTS. THIS SHALL INCLUDE MIXING TIME, TEMPERATURE, SLUMP, AND AIR CONTENT, REPORTING ANY CONCRETE DELIVERED THAT IS NOT AS SPECIFIED. ENSURE THAT ADDITION OF WATER TO THE CONCRETE MIX IN THE FIELD COMPLIES WITH THE GUIDELINES IN THE CONTRACT DOCUMENTS.
4. CONCRETE IS BEING CONVEYED FROM MIXER TO PLACE OF FINAL DEPOSIT BY RECOGNIZED INDUSTRY STANDARDS. CONCRETE IS BEING PLACED CONTINUOUSLY, OR IN A MANNER TO AVOID PLACING CONCRETE AGAINST HARDENED CONCRETE WHICH WOULD RESULT IN THE FORMATION OF SEAMS OR PLANES OF WEAKNESS.
5. CONCRETE IS BEING CONSOLIDATED AND THOROUGHLY WORKED AROUND REINFORCEMENT, EMBEDDED ITEMS, AND INTO CORNERS OF FORMS ELIMINATING AIR OR STONE POCKETS THAT MAY CAUSE HONEYCOMBING, FITTING, OR PLANES OF WEAKNESS.
6. SPOT CHECK THAT CURING PROCEDURES COMPLY WITH THE CONTRACT DOCUMENTS, ACI 308, STANDARD PRACTICE FOR CURING CONCRETE, AND OTHER RECOGNIZED INDUSTRY STANDARDS.
7. FOLLOWING FORMWORK REMOVAL, SPOT CHECK CONCRETE SURFACES FOR HONEYCOMBING AND VOIDS.
- J. INSPECT EXPANSION ANCHORS AND CHEMICAL ADHESIVE FOR ANCHORING STEEL REINFORCEMENT AND THREADED RODS USED TO SUPPORT WORK DESCRIBED IN THIS PLAN AS FOLLOWS:
1. VERIFY HOLE DIAMETER, DEPTH, LOCATION, SPACING, EDGE DISTANCE, AND CONFIRM THAT THE HOLE HAS BEEN THOROUGHLY CLEANED AS REQUIRED BY MANUFACTURER.
2. VERIFY THAT EXPANSION ANCHORS ARE PROPERLY TIGHTENED.
3. VERIFY THAT THE EPOXY MIXING IS PROPER FOR THE APPLICATION, SUCH AS PASTE FOR HORIZONTAL HOLES. VERIFY THAT EPOXY MIXING AND INSTALLATION COMPLES WITH MANUFACTURER'S REQUIREMENTS.

SHALLOW FOUNDATIONS

- A. THE SPECIAL INSPECTOR SHALL REVIEW THE SIZE AND CONFIGURATION OF FOUNDATIONS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- B. THE SPECIAL INSPECTOR SHALL REVIEW THE SIZE, PLACEMENT, AND CLEARANCES OF REINFORCEMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- C. THE SPECIAL INSPECTOR SHALL REVIEW DOWEL REINFORCEMENT AND DOWEL LENGTHS SUCH THAT LAP SPICES WILL BE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- D. THE SPECIAL INSPECTOR SHALL VERIFY THAT REINFORCEMENT IS SUPPORTED AND TIED SUCH THAT IT WILL NOT BE DISPLACED DURING THE CONCRETE POUR.

MASONRY

- A. THE SPECIAL INSPECTOR SHALL INSPECT ALL REINFORCED MASONRY PER ACI 530, ACI 530.1 AND AS FOLLOWS:
1. SPOT CHECK THAT MATERIALS ARE PROPERLY STORED.
2. WORKMANSHIP.
3. UNIT SIZE, STRENGTH, AND WEIGHT.
4. MORTAR AND GROUT TYPE, MIXING AND PLACEMENT.
5. PLACEMENT OF STEEL REINFORCEMENT, JOINT REINFORCEMENT, INSERTS, ANCHORS, AND OTHER STRUCTURAL ASPECTS.
6. CHECK CLEANOUT AREAS TO CONFIRM THAT CELLS TO BE REINFORCED ARE CLEAN AND FREE OF ALL FOREIGN MATERIAL AND THAT VERTICAL BARS ARE EACH TIED TO A DOWEL.
7. CONTRACTION JOINT CONSTRUCTION.
8. DURING GROUTING, VERIFY THAT ALL CELLS ARE FILLED SOLID AND THAT GROUT IS CONSOLIDATED AS REQUIRED BY THE CONTRACT DOCUMENTS. IF IN DOUBT AFTER COMPLETION, CHECK USING A HAMMER.
9. CHECK TIE BEAM AND TIE COLUMN SIZE, SPACING, AND REINFORCEMENT.
10. CHECK CONNECTION OF SIDE OR TOP OF WALL TO SUPPORTING ELEMENTS.

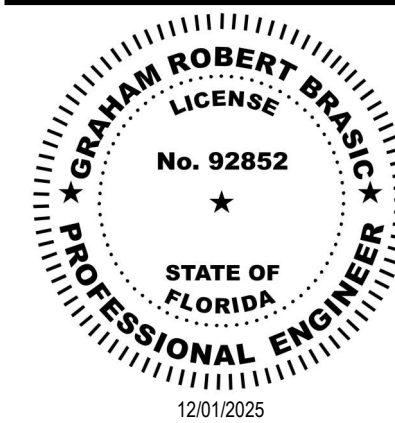
POST-INSTALLED ANCHORS

- A. THE STRUCTURAL INSPECTOR SHALL:
1. PERFORM SPECIAL INSPECTIONS FOR ALL POST-INSTALLED ANCHORS PER THE PRODUCT MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, APPLICABLE EVALUATION REPORTS, AND ANY ADDITIONAL REQUIREMENTS INVOKE WITHIN THE CONSTRUCTION DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
- a. ANCHORS MATCH INTENDED MANUFACTURER AND PRODUCT FOR EACH APPLICATION, OR APPROVED ALTERNATE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- b. ANCHOR PARAMETERS:
- TYPE AND SPECIFIC PRODUCT
 - DIMENSIONS (DIAMETER & LENGTH)
 - MATERIAL COATING
 - ADHESIVE ANCHOR EXPIRATION DATE
 - ANCHOR OR THREAD DAMAGE
 - PRESENCE OF SUBSTANCES THAT MAY INTERFERE WITH BOND (DUST, MUD, OIL, LOOSE RUST)
- c. PLACEMENT:
- RELATIVE TO FIXTURE GEOMETRY
 - RELATIVE TO OTHER ANCHORS (SPACING)
 - RELATIVE TO SUBSTRATE, CONFIRMING MINIMUM EDGE DISTANCES COMMUNICATED WITHIN THE CONTRACT DOCUMENTS.
 - RELATIVE TO REBAR AND EMBEDMENTS WITHIN THE SUBSTRATE, CONFIRMING THAT NONDESTRUCTIVE TESTING (NDT) HAS BEEN PERFORMED ACCORDINGLY TO CONFIRM THAT DRILLING AND ANCHOR INSTALLATION DOES NOT DAMAGE EXISTING ELEMENTS.
 - AGE OF SUBSTRATE MATERIAL (21 DAYS MINIMUM FROM CONCRETE PLACEMENT FOR ADHESIVE ANCHOR INSTALLATION)
 - MINIMUM CONCRETE THICKNESS OF SUBSTRATE TO RECEIVE POST-INSTALLED ANCHORS.
- d. HOLES/DRILLING:
- DRILLING METHOD (BIT TYPE AND DIAMETER)
 - HOLE DEPTH RELATIVE TO MANUFACTURER REQUIREMENTS FOR SPECIFIED NOMINAL EMBEDMENT
 - CLEANING PROCEDURES
 - PRESENCE OF ADJACENT EXISTING/ABANDONED HOLES
 - HOLE PROTECTION FOR CONTAMINANTS, DEBRIS, OR WATER/MOISTURE
 - TIMING OF CLEANING IMMEDIATELY BEFORE ANCHOR INSTALLATION, RECLEANING AS NECESSARY.
- e. INSTALLATION AND SETTING:
- TEMPERATURE LIMITS
 - SPECIFIED TORQUE AND NUMBER OF FULL TURNS REQUIRED TO ACHIEVE TORQUE. NOTIFY STRUCTURAL ENGINEER OF RECORD WHEN ANCHORS FAIL TO SET WITHIN MAXIMUM PERMITTED NUMBER OF TURNS PER MANUFACTURER.
 - PROJECTION LENGTH AND REQUIRED EMBEDMENT.
 - ADHESIVE QUANTITY DISPENSED FOR HOLE DEPTH TO CONFIRM AIR BUBBLES/VOIDS ARE NOT PRESENT
 - APPROPRIATE ADHESIVE MIXING AND METERING PROCEDURES AND EQUIPMENT, INCLUDING MANUFACTURER REQUIREMENTS SPECIAL EQUIPMENT IF APPLICABLE FOR LONG HOLES AND HORIZONTAL/OVERHEAD APPLICATIONS
 - REVIEW FOR SYMPTOMS OF AIR BUBBLES WITHIN ADHESIVE (SPRING BACK OR POPPING SOUNDS DURING ANCHOR INSTALLATION)
 - WASHER CONDITIONS AND FLUSH CONDITION WITH FIXTURE
- f. CONFIRM THAT ADHESIVE ANCHOR INSTALLERS HAVE THE NECESSARY CERTIFICATIONS (ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT).
- g. PERFORM CONTINUOUS SPECIAL INSPECTIONS WHEN THERE IS A CHANGE IN PERSONNEL PERFORMING ANCHOR INSTALLATION.
- h. PERFORM CONTINUOUS INSPECTIONS FOR ADHESIVE ANCHORS INSTALLED HORIZONTALLY, UPWARDLY INCLINED, OR OVERHEAD.
- i. BE FAMILIAR WITH PROOF TESTING REQUIREMENTS AND THE SUBMITTED ROOF TESTING PLAN (BY THE INDEPENDENT TESTING LABORATORY); SEE GENERAL NOTES UNDER "POST INSTALLED ANCHORS"
- a. VERIFY THAT FEE OWNER'S TESTING AGENCY HAS TESTED ALL REQUIRED ANCHORS PER THE APPROVED POST-INSTALLED ANCHOR TEST PLAN.
- b. VERIFY THAT ANY FAILED ANCHORS HAVE BEEN REPLACED.
- c. VERIFY THAT THE TESTING AGENCY HAS SUBMITTED SIGNED AND SEALED TEST REPORTS TO THE STRUCTURAL ENGINEER OF RECORD.

STRUCTURAL STEEL FRAMING

- A. THE SPECIAL INSPECTOR SHALL:
1. INSPECT ALL STRUCTURAL STEEL FRAMING AS REQUIRED BY THE CONTRACT DOCUMENTS. USE BOTH THE CONTRACT DOCUMENTS AND THE SHOP DRAWINGS FOR ALL INSPECTIONS. VERIFY THAT ALL FIELD WELDERS ARE AWS CERTIFIED FOR THE TYPE OF WELDS BEING MADE.
2. PROVIDE ALL INSPECTIONS REQUIRED BY THE CONTRACT DOCUMENTS. COMPLETE ALL INSPECTIONS AND VERIFY COMPLIANCE PRIOR TO CONCRETE PLACEMENT OR CONCEALMENT.
- a. CHECK STRUCTURAL STEEL FRAMING FOR POSSIBLE DAMAGE DURING SHIPPING.
- b. CHECK STRUCTURAL STEEL FRAMING SIZES AND GRADES.
- c. SPOT CHECK MEMBER STRAIGHTNESS, FINISH, AND CAMBER. CONFIRMING THAT PAINT IS ONLY APPLIED ON APPROPRIATE SURFACES.
- d. INSPECT SETTING OF ANCHOR BOLTS, EMBEDS, AND OTHER MISCELLANEOUS STRUCTURAL ITEMS FOR SIZE, QUANTITY AND FINISH. CHECK THE INSTALLATION OF COLUMN BASE PLATES FOR PROPER LEVELING, GROUT TYPE, AND GROUT APPLICATION.
- e. INSPECT ALL FIELD CONNECTIONS AND SPOT CHECK SHOP CONNECTIONS. VERIFY CONNECTION MATERIAL, SIZES, CONFIGURATIONS, AND FIT-UP.
- VISUALLY EXAMINE ALL FIELD WELDS AND SPOT CHECK ALL SHOP WELDS FOR TYPE, SIZE, LENGTH, AND QUALITY. VERIFY THAT SPECIFIED TESTING IS PERFORMED BY THE TESTING AGENCY. VERIFY THAT WELDS ARE CLEAN AND FREE FROM SLAG AND THAT RUST PROTECTION HAS BEEN APPLIED PER THE SPECIFICATIONS.
 - VERIFY THE TYPE, SIZE, AND QUANTITY OF BOLTS IN ALL BOLTED CONNECTIONS. CHECK THAT BOLTS ARE CLEAN AND LUBRICATED, HAVE PROPER WASHERS, AND CONFORM TO THE SPECIFICATIONS. ENSURE BOLT HOLES ARE THE SPECIFIED TYPE AND SIZE. SPOT CHECK THE BOLT TIGHTENING SEQUENCE. VISUALLY VERIFY PROPER DEGREE OF BOLT TIGHTENING, PARTICULARLY OF ALL SLIP-CRITICAL BOLTS. CHECK 10% OF LOAD INDICATOR WASHERS WITH A FEELER GAUGE.
- f. CHECK HEADED STUD ANCHORS FOR TYPE, LENGTH, SPACING, AND WELDING AS REQUIRED BY THE CONTRACT DOCUMENTS. VERIFY THAT SHEAR CONNECTORS ARE TESTED BY TESTING LABORATORY.
3. CHECK ALL STEEL DECKS PER SDI SPECIFICATIONS AND AS FOLLOWS:
- a. DECK TYPE, SIZE, GAGE, FINISH, ACCESSORIES, AND REINFORCEMENT AROUND OPENINGS.
- b. SPACING AND TYPE OF ALL CONNECTIONS.
- c. WELDING PROCEDURES.
- d. WELD SIZE, SHARP, QUALITY, RUST PROTECTION, AND WELD WASHERS WHERE APPLICABLE.
- e. SCREW SIZE, TYPE, AND FINISH AND OTHER CONNECTION TO SUPPORTS.

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LIVING MEMORY CARE BUILDING
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Project No.: 2021009
Date: 12/01/2025

SPECIAL
INSPECTIONS
PLAN

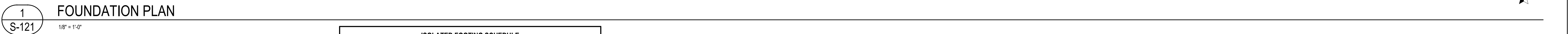
S-010

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JG Project #: 21.18.004

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- | ISOLATED FOOTING SCHEDULE | | | | | | |
|---------------------------|----------|--------|--------|-----------|---------------|-------------|
| MARK | GEOMETRY | | | THICKNESS | REINFORCEMENT | |
| | LENGTH | WIDTH | HEIGHT | | TOP BARS | BOTTOM BARS |
| F3.0 | 3'-0" | 3'-0" | 12" | - | (3) #5 | |
| F4 | 4'-0" | 4'-0" | 14" | - | (4) #5 | |
| F5 | 5'-0" | 5'-0" | 14" | - | (4) #5 | |
| F6 | 6'-0" | 6'-0" | 14" | - | (7) #5 | |
| F7 | 7'-0" | 7'-0" | 16" | - | (9) #5 | |
| F8 | 8'-0" | 8'-0" | 24" | - | (9) #6 | |
| F9 | 9'-0" | 9'-0" | 24" | - | (9) #7 | |
| F10 | 10'-0" | 10'-0" | 30" | (1) #7 | (1) #7 | |
| F11-12.5 | 11'-0" | 11'-8" | 24" | (5) #7 | (7) #7 | |

RETAINING WALL SCHEDULE				
WALL MARK	T	WALL REINFORCEMENT		
		VERTICAL	HORIZONTAL	
RW12	1' - 0"	#6 @ 12" OC EACH FACE	#5 @ 12" OC EACH FACE	

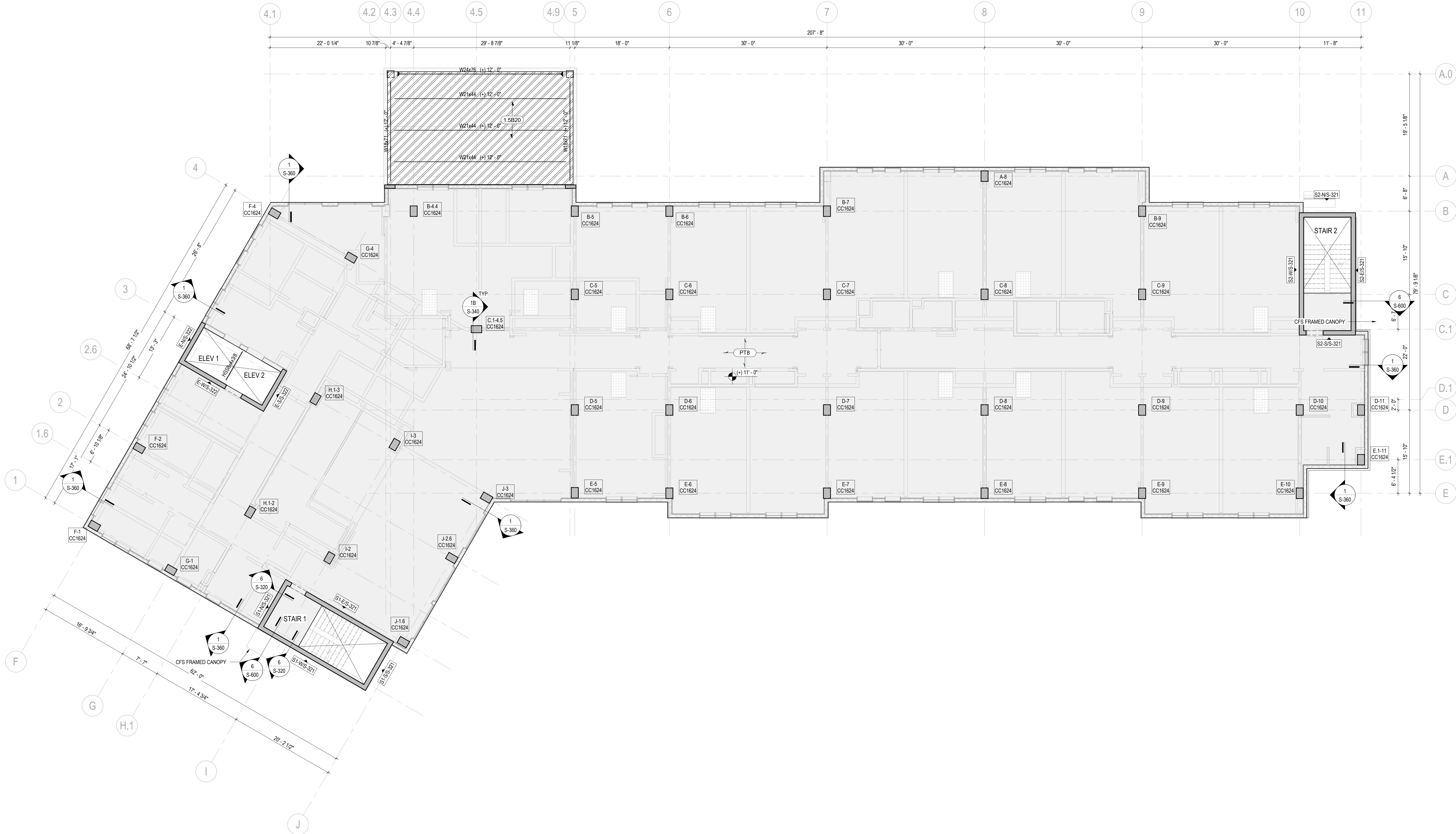
RETAINING WALL FOOTING SCHEDULE					
MARK	THICKNESS	GEOMETRY		FOOTING REINFORCEMENT	
		WIDTH	TOE LENGTH	TRANSVERSE	LONGITUDINAL
RF9-12	12"	9' - 0"	1' - 0"	#5 @ 12" OC	#5 @ 12" OC

SLAB-ON-GROUND PLAN NOTES:

1. REFERENCE BUILDING TOP-OF-SLAB ELEVATION = $(+WP - 0' - 0" (XX.XX NAVD))$
2.  DENOTES SLAB-ON-GROUND MARK (SEE SCHEDULE ON THIS SHEET).
3. SJ DENOTES SLAB-ON-GROUND CONTROL JOINT. FOR CONTROL JOINT REQUIREMENTS, SEE [S-310](#)
4. FOR RE-ENTRANT CORNER BARS, SEE [S-310](#)
5. INSTALL THICKENED SLAB UNDER STAIR STRINGER. SEE 6/S-360.
6. FOR THICKENED SLAB UNDER NON-LOAD BEARING CONCRETE MASONRY WALLS, SEE 10/40-0.
7. GENERAL CONTRACTOR SHALL COORDINATE HOUSEKEEPING PAD LOCATIONS.
8.  DENOTES STEP IN TOP OF SLAB. SEE [S-310](#)
9. SEE CIVIL DRAWINGS FOR BASE AND SUBGRADE PREPARATION INFORMATION.
10. SEE ARCHITECTURAL DRAWINGS FOR:
 - VAPOR BARRIER REQUIREMENTS AND LOCATIONS.
 - ALL SLOPED SLAB AREAS.
 - (MAINTAIN SLAB THICKNESS NOTED ON PLAN AS A MINIMUM IN ALL AREAS).
 - ALL DEPRESSED SLAB AND/OR RAISED SLAB AREAS.
 - (MAINTAIN SLAB THICKNESS NOTED ON PLAN AS A MINIMUM IN ALL AREAS).
 - ALL DIMENSIONS NOT SHOWN, VERIFY ALL DIMENSIONS SHOWN IN STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS AND REPORT ANY DISCREPANCIES OR DIMENSIONS NOT SHOWN ON ARCHITECTURAL DRAWINGS FOR CLARIFICATION.
 - SLAB SLOPES, DRAIN PITS, PENETRATIONS, FINISHES, AND ANY OTHER ADDITIONAL INFORMATION.



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1 S-122 SECOND FLOOR FRAMING PLAN

1/8" = 1'-0"
CONCRETE FRAMING PLAN NOTES:

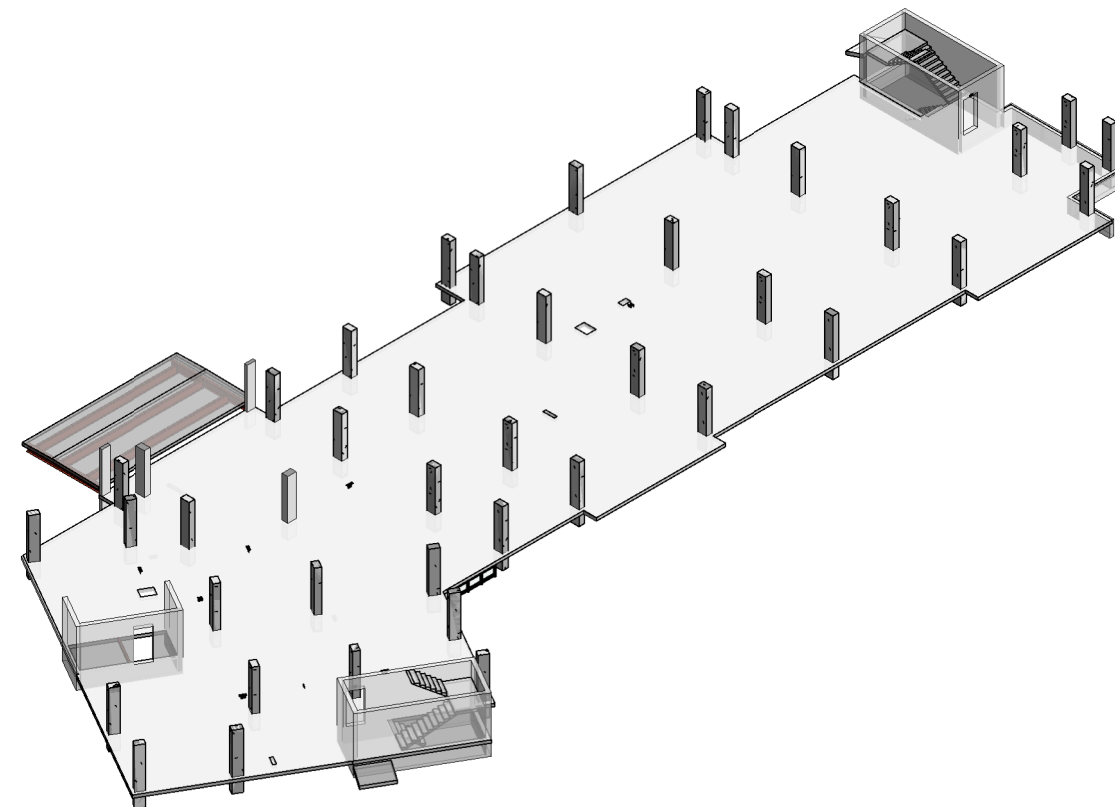
- CONCRETE SLAB TAG:
ARROWS DENOTE SLAB SPAN DIRECTION
CS##: DENOTES SLAB MARK (SEE SCHEDULE ON THIS SHEET FOR SLAB THICKNESS AND REINFORCEMENT)
PT##: DENOTES SLAB MARK (SEE SCHEDULE ON THIS SHEET FOR SLAB THICKNESS AND REINFORCEMENT)
- SEE PLAN FOR TOP OF SLAB ELEVATIONS.
- DENOTES CONCRETE COLUMN/PIER/WALL. FOR COLUMN SCHEDULE AND DETAILS SEE S-340 SERIES. FOR WALL DETAILS SEE S-320 SERIES.
- DENOTES NON-LOAD BEARING CONCRETE MASONRY UNIT (CMU) WALL WITH #5 AT 24" OC VERTICAL REINFORCEMENT, CENTERED IN FULLY-GROUTED CELL.
- SEE ARCHITECTURAL DRAWINGS FOR:
 - ALL SLOPED SLAB AREAS.
 - ALL DIMENSIONS NOT SHOWN. VERIFY ALL DIMENSIONS SHOWN IN THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS AND REPORT ANY DISCREPANCIES OR DIMENSIONS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS FOR CLARIFICATION.
- SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL FLOOR PENETRATIONS, SLEEVES, AND INSERTS REQUIRED TO BE CAST IN THE SLABS.
 - SLEEVES AND PENETRATIONS WITHIN 48 INCHES OF THE FACE OF ANY CONCRETE COLUMN (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
 - SLEEVES AND PENETRATIONS INTERRUPTING BANDED LINES OF TENDONS (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
 - SLEEVES AND PENETRATIONS GREATER THAN 12 INCHES IN LENGTH OR WIDTH (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
- FOR REINFORCEMENT PLAN AND ADDITIONAL NOTES, SEE SHEET **S-122-R**.
- FOR POST-TENSIONED LAYOUT PLAN AND ADDITIONAL NOTES, SEE SHEET **S-122-PT**.
- DENOTES SHOWER DEPRESSIONS.

STEEL ROOF FRAMING PLAN NOTES:

- ROOF DECK TAG:
ARROWS DENOTE DECK SPAN DIRECTION
#X##: DENOTES DECK MARK (SEE SCHEDULE ON THIS SHEET FOR DECK PROPERTIES AND ATTACHMENT PATTERNS)
- SEE PLAN FOR TOP OF STEEL ELEVATIONS.
- SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS NOT SHOWN AND ALL SLAB ELEVATIONS.
- JOIST SPACING SHALL NOT EXCEED 6'-0" (TYPICAL) UNLESS NOTED OTHERWISE.
- ROOF EDGE ANGLES SHALL BE CONTINUOUS. FOR SPLICE CONNECTION SEE 2/S-500.
- NOTIFY STRUCTURAL ENGINEER OF RECORD IF MECHANICAL UNITS SUPPLIED EXCEED WEIGHTS NOTED ON PLAN. COORDINATE EXACT DIMENSIONS AND LOCATIONS WITH MECHANICAL DRAWINGS AND UNITS SUPPLIED.
- PROVIDE EQUIPMENT SUPPORT FRAMING AT ROOFTOP EQUIPMENT. UNIT SUPPORT CURBS/FRAMES AND THEIR CONNECTION TO THE STRUCTURE SHALL BE DESIGNED AND DETAILED BY OTHERS, UNLESS SPECIFICALLY SHOWN.
- GENERAL CONTRACTOR SHALL COORDINATE OPEN WEB STEEL JOIST BRIDGING AND BRACING REQUIREMENTS PER OPEN WEB STEEL JOIST SUPPLIER.
- HB: DENOTES HOIST BEAM BY ELEVATOR MANUFACTURER INSTALLED BY GENERAL CONTRACTOR. ELEVATION OF BEAM PER ELEVATOR MANUFACTURER.
- STEEL CONNECTION DESIGN HAS BEEN DELEGATED TO BE SELECTED/COMPLETED BY STRUCTURAL STEEL FABRICATOR (SEE STRUCTURAL STEEL GENERAL NOTES & PROJECT SPECIFICATIONS).
REACTIONS SHOWN ARE IN SERVICE LEVEL (ALLOWABLE STRESS DESIGN) FOR CONNECTION DESIGN ARE NOTED AS FOLLOWS:
 - M = #K-FT DENOTES MOMENT CONNECTION.
 - M = #K-FT DENOTES MOMENT CONNECTIONS FOR FORCES INDICATED ON PLAN AND IN ELEVATIONS.
 - V = #K DENOTES SHEAR REACTION.
 - V = #K DESIGN SHEAR CONNECTIONS FOR FORCES INDICATED.
 - V = #K IF REACTION IS NOT SHOWN, DESIGN FOR 25 KIPS.
 - L DENOTES LATERAL BRACING. SEE DETAILS ON PLAN.

POST-TENSIONED CONCRETE SLAB SCHEDULE			
MARK	THICKNESS	TYPICAL REINFORCEMENT	
		TOP	BOTTOM
PT6S	6"	SEE PLAN	#5 @ 18" OC EW
PT8	8"	SEE PLAN	#4 @ 48" OC EW

METAL ROOF DECK SCHEDULE								
MARK	DECK DEPTH (THICKNESS)	DECK TYPE	DECK GAUGE	MINIMUM DECK PROPERTIES				COMMENTS
				Ip (in ⁴ /ft)	I _x (in ⁴ /ft)	Sp (in ³ /ft)	S _x (in ³ /ft)	
1.5B22	1 1/2"	WIDE RIB ROOF DECK	22 GA	0.155	0.178	0.169	0.179	
1.5B20	1 1/2"	WIDE RIB ROOF DECK	20 GA	0.197	0.217	0.224	0.229	

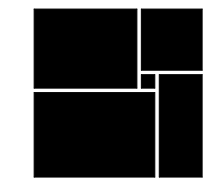
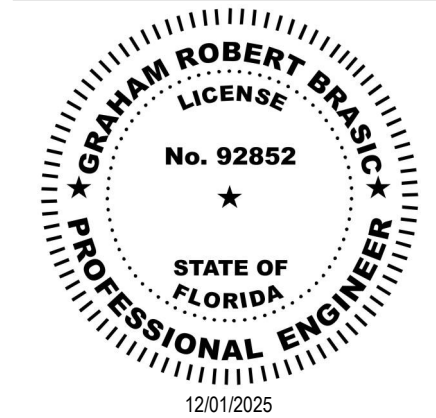


3D AXONOMETRIC - SECOND FLOOR (FOR REFERENCE ONLY)

2
S-122

NO.	DATE	DESCRIPTION
12/01/25	CONSTRUCTION	
08/22/25	DOCUMENTS	
04/07/25	DESIGN	
	DEVELOPMENT	
	SCHEMATIC DESIGN	

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Project No.: 2021009
Date: 12/01/2025

SECOND
FLOOR
FRAMING
PLAN

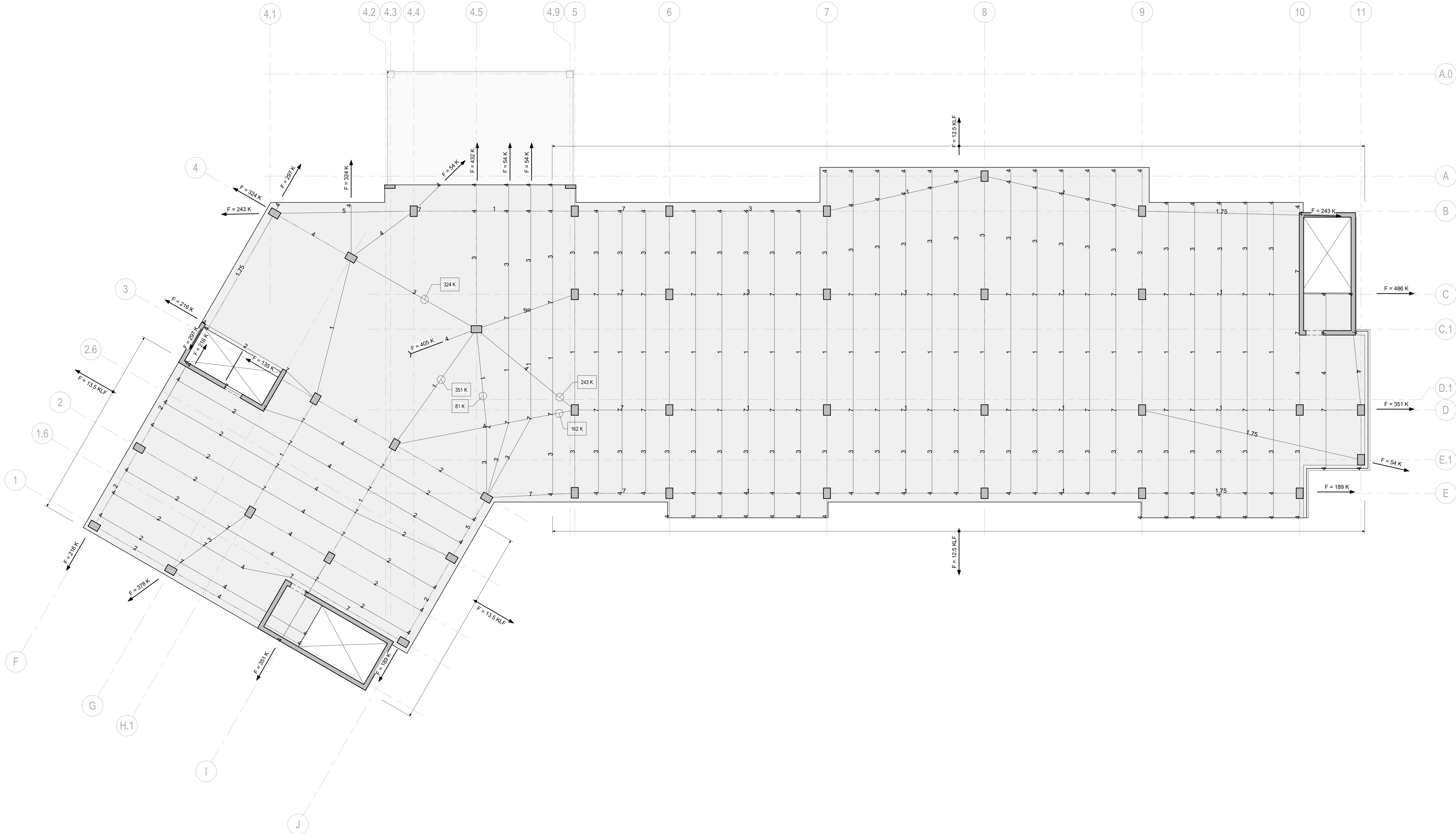
S-122

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1
S-122-PT

SECOND FLOOR PT PLAN

1/8" = 1'-0"

POST-TENSIONED CONCRETE SLAB PLAN NOTES:

- SEE FRAMING PLAN FOR SLAB GEOMETRY, REFERENCE ELEVATION, AND KEYED SECTIONS.
- SEE POST-TENSIONED FRAMING GENERAL NOTES ON SHEET S-003 AND DIVISION 03 SPECIFICATIONS FOR GENERAL REQUIREMENTS.
- FOR TYPICAL POST-TENSIONED CONCRETE SECTIONS AND DETAILS, SEE S-33X SERIES.
- TENDON LAYOUT NOTES:
 - LINEWORK SHOWN FOR TENDON PATHS IS SCHEMATIC TO ILLUSTRATE DESIGN INTENT, BUT NOT MEANT TO INDICATE EXACT TENDON PATHS OR SPACING OF UNIFORMLY DISTRIBUTED TENDON BUNDLES.
 - A MINIMUM OF (2) TENDONS SHALL PASS THROUGH EACH COLUMN IN EACH DIRECTION, WITH TENDONS LOCATED INSIDE OF THE COLUMN VERTICAL REINFORCEMENT CAGE.
 - STRAIGHT LINE HORIZONTAL OFFSETS SHOWN IN THE LAYOUT PLAN SHALL BE ACCOMPLISHED WITH SMOOTH HORIZONTAL CURVE/SWEEP PER DETAIL.
 - MAINTAIN CLEAR COVER BETWEEN EDGE-OF-SLAB (INCLUDING INTERIOR OPENINGS) AS INDICATED IN THE PROJECT SPECIFICATIONS AND TYPICAL DETAILS REFERENCED ABOVE.
- TENDON DRAPE ELEVATION NOTES:
 - # DENOTES PT TENDON DRAPE ELEVATION IN INCHES, MEASURED FROM BOTTOM OF SLAB / FRAMING TO THE CENTER-OF-GRAVITY OF THE TENDONS/STRAND BUNDLE (CGS).
 - AT DEAD ENDS AND STRESSING ENDS, CGS SHALL BE LOCATED AT THE CENTROID OF THE FRAMING (MID-DEPTH FOR SLAB CONDITIONS), UNLESS OTHERWISE NOTED.
 - TENDON HIGH POINTS SHALL BE LOCATED AT SUPPORTS (COLUMNS, WALLS, BEAMS, BANDED TENDON LINES) AS INDICATED ABOVE.
 - TENDON LOW POINTS SHALL BE LOCATED AT MID-SPAN BETWEEN SUPPORTS, UNLESS NOTED OTHERWISE.
- TENDON FORCE NOTES:
 - F = # K .DENOTES EFFECTIVE PRESTRESS FORCE, IN KIPS, WITHIN BANDED TENDON GROUP OR BEAM.
 - BANDED TENDON GROUPS SHALL BE PLACED IN FLAT BUNDLED GROUPS OF NO MORE THAN (5) TENDONS PER BUNDLE, SPACED AT NO MORE THAN 12 INCHES ON CENTER, WITH TENDONS FLAT IN ONE LAYER.
 - TOTAL QUANTITY OF BANDED TENDONS SHALL BE EQUALLY DISTRIBUTED EACH SIDE OF THE COLUMN, MINUS A MINIMUM OF (2) TENDONS PASSING THROUGH THE COLUMN REINFORCEMENT CAGE PER NOTE ABOVE.
 - F = # KLF .DENOTES EFFECTIVE PRESTRESS FORCE, IN KIPS PER LINEAR FOOT, IN UNIFORMLY DISTRIBUTED TENDONS.
 - UNIFORMLY DISTRIBUTED TENDON BUNDLES SHALL BE PLACED IN FLAT BUNDLED GROUPS OF NO MORE THAN (5) TENDONS PER BUNDLE, SPACED AT NO MORE THAN 5'-0" ON CENTER, WITH TENDONS FLAT IN ONE LAYER.

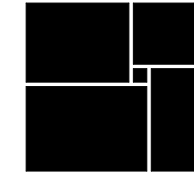
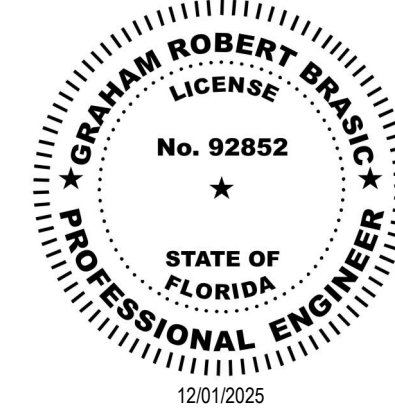


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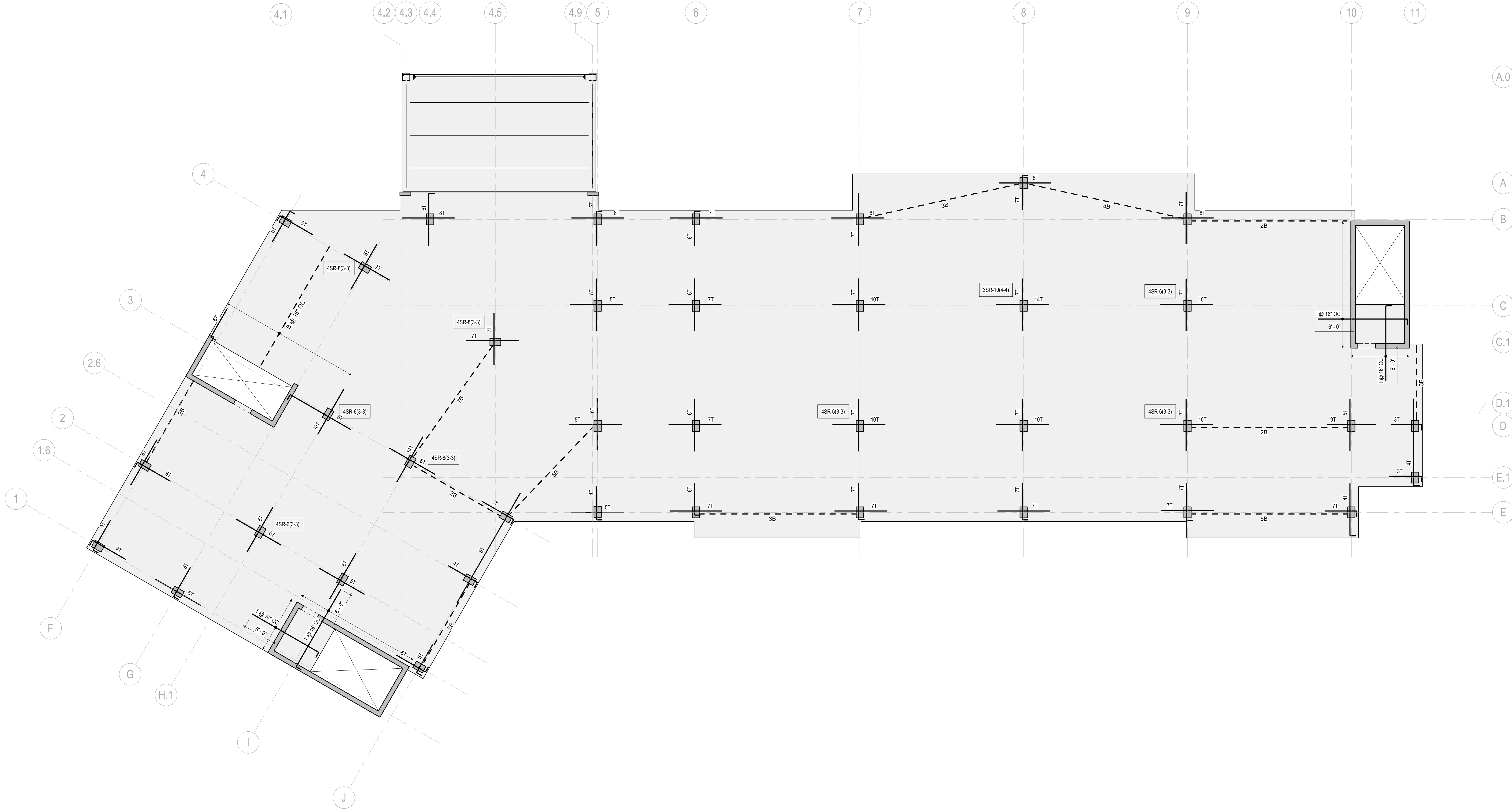
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Date: 12/01/2025

SECOND
FLOOR PT
PLAN

S-122-PT

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1 SECOND FLOOR REINFORCING PLAN

S-122-R

1/8" = 1'-0"

CONCRETE SLAB REINFORCEMENT PLAN NOTES:

- FOR TYPICAL SLAB REINFORCEMENT DETAILS, SEE S-331 AND S-332. REINFORCING ON PLAN SHALL BE IN ADDITION TO REINFORCING IN TYPICAL SLAB REINFORCEMENT DETAILS.
- PROVIDE CONTINUOUS REINFORCEMENT AROUND PERIMETER OF SLAB AND AT ALL INTERIOR SLAB EDGES (SEE S-331). SEE 11(S-331 FOR CONCEPTUAL LAYOUT (NOT INDICATIVE OF PROJECT SPECIFIC GEOMETRY) AND SPLICE/DEVELOPMENT REQUIREMENTS.
- SLAB REINFORCEMENT SHALL BE #5 UNLESS NOTED OTHERWISE.
- ##SR-#(##) : DENOTES SHEAR STUD RAILS (SEE DETAILS AND SCHEDULE ON S-332).
- SLAB REINFORCEMENT SYMBOLS AND NOMENCLATURE:

- A. MAT REINFORCEMENT (SEE SLAB SCHEDULE).

- B. ISOLATED/DISTRIBUTED REINFORCEMENT (SEE S-331).

BAR SPACING OVER WIDTH OR QUANTITY SHOWN
ACI STANDARD 180° HOOK
(ALL TOP BARS HOOKED AT EDGE-OF-
SLAB EVEN WHEN NOT INDICATED)
SOLID LINE DENOTES
TOP BARS (OR TOP & BOTTOM)
DASHED LINE DENOTES
BOTTOM BARS
SINGLE ARROW DENOTES EXTENT OF BAR
PLACEMENT. DOUBLE ARROW DENOTES EXTENT
TO CONTINUE UNTIL EDGE-OF-SLAB OR END-OF-
ELEMENT (AS APPLICABLE)

- C. TYPICAL NOMENCLATURE.

: DENOTES QUANTITY OF BARS
T : DENOTES TOP BARS
B : DENOTES BOTTOM BARS

- D. REINFORCEMENT AT COLUMNS.

CONCRETE COLUMN
(SEE FRAMING PLAN)
BARS EACH WAY
(SEE TYPICAL NOMENCLATURE)

POST-TENSIONED CONCRETE SLAB SCHEDULE

MARK	THICKNESS	TYPICAL REINFORCEMENT	
		TOP	BOTTOM
PT6S	6"	SEE PLAN	#5 @ 18" OC EW
PT8	8"	SEE PLAN	#4 @ 48" OC EW

SHEAR STUD RAIL SCHEDULE

MARK	FIRST STUD SPACING	TYP STUD SPACING	# OF STUDS PER RAIL	NUMBER OF RAILS	
				SHORT SIDE	LONG SIDE
3SR-6(3-4)	2"	3"	6	3	4
3SR-10(4-4)	2 3/4"	3"	10	4	4
4SR-6(3-3)	2 3/4"	4"	6	3	3
4SR-8(3-3)	2 3/4"	4"	8	3	3



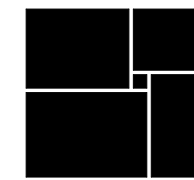
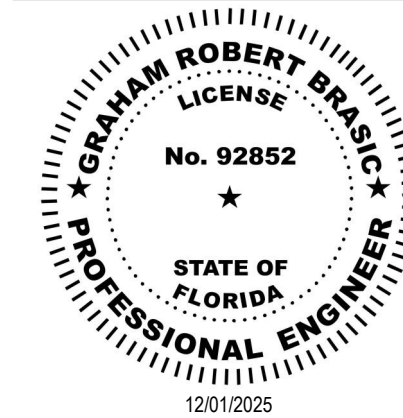
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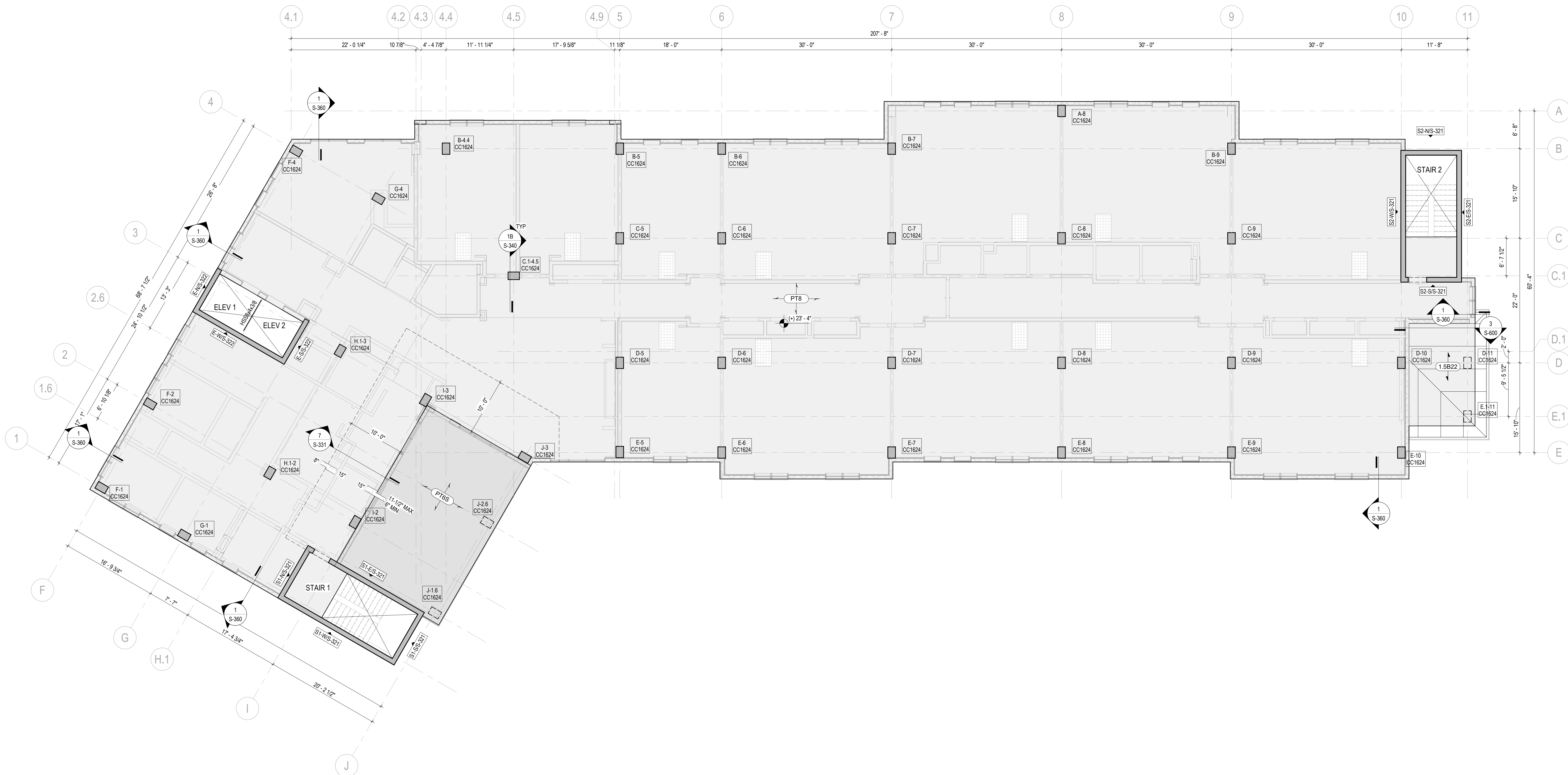
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SECOND
FLOOR
REINFORCING
PLAN

S-122-R

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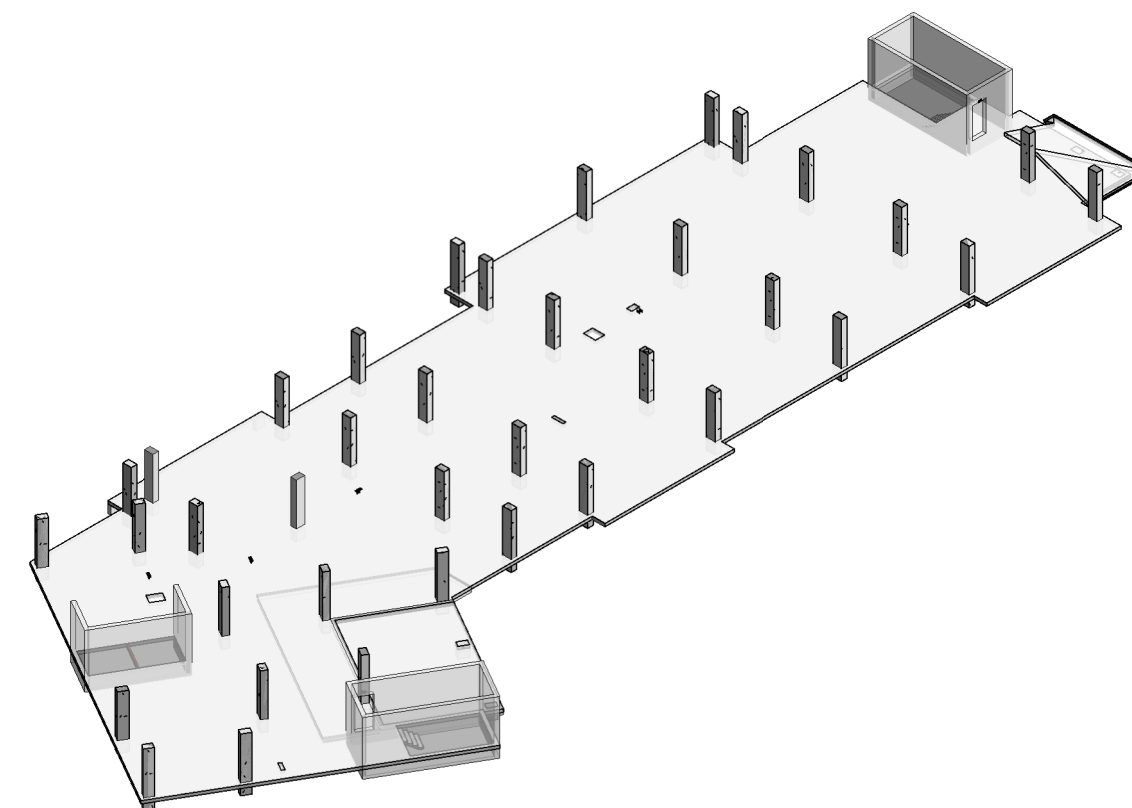
1 S-123 THIRD FLOOR FRAMING PLAN

CONCRETE FRAMING PLAN NOTES:

- CONCRETE SLAB TAG:
ARROWS DENOTE SLAB SPAN DIRECTION
CS##: DENOTES SLAB MARK (SEE SCHEDULE ON THIS SHEET FOR SLAB THICKNESS AND REINFORCEMENT)
PT##: DENOTES SLAB MARK (SEE SCHEDULE ON THIS SHEET FOR SLAB THICKNESS AND REINFORCEMENT)
- SEE PLAN FOR TOP OF SLAB ELEVATIONS.
- DENOTES CONCRETE COLUMN/PIER/WALL.
FOR COLUMN SCHEDULE AND DETAILS SEE S-340 SERIES.
FOR WALL DETAILS SEE S-320 SERIES.
- DENOTES NON-LOAD BEARING CONCRETE MASONRY UNIT (CMU) WALL WITH #5 AT 24" OC VERTICAL REINFORCEMENT, CENTERED IN FULLY-GROUTED CELL.
- SEE ARCHITECTURAL DRAWINGS FOR:
ALL SLOPED SLAB AREAS.
ALL DIMENSIONS NOT SHOWN. VERIFY ALL DIMENSIONS SHOWN IN THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS AND REPORT ANY DISCREPANCIES OR DIMENSIONS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS FOR CLARIFICATION.
- SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL FLOOR PENETRATIONS, SLEEVES, AND INSERTS REQUIRED TO BE CAST IN THE SLAB.
SLEEVES AND PENETRATIONS WITHIN 48 INCHES OF THE FACE OF ANY CONCRETE COLUMN (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
SLEEVES AND PENETRATIONS INTERRUPTING BANDED LINES OF TENDONS (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
SLEEVES AND PENETRATIONS GREATER THAN 12 INCHES IN LENGTH OR WIDTH (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
- FOR REINFORCEMENT PLAN AND ADDITIONAL NOTES, SEE SHEET **S-123-8**.
- FOR POST-TENSIONED LAYOUT PLAN AND ADDITIONAL NOTES, SEE SHEET **S-123-2T**.
- DENOTES SHOWER DEPRESSIONS.

POST-TENSIONED CONCRETE SLAB SCHEDULE					
MARK	THICKNESS	TYPICAL REINFORCEMENT			
		TOP	BOTTOM		
PT6S	6"	SEE PLAN	#5 @ 18" OC EW		
PT8	8"	SEE PLAN	#4 @ 48" OC EW		

METAL ROOF DECK SCHEDULE								
MARK	DECK DEPTH (THICKNESS)	DECK TYPE	DECK GAUGE	MINIMUM DECK PROPERTIES				COMMENTS
				Ip (in ⁴ /ft)	I _x (in ⁴ /ft)	Sp (in ³ /ft)	S _x (in ³ /ft)	
1.5B22	1 1/2"	WIDE RIB ROOF DECK	22 GA	0.155	0.178	0.169	0.179	
1.5B20	1 1/2"	WIDE RIB ROOF DECK	20 GA	0.197	0.217	0.224	0.229	

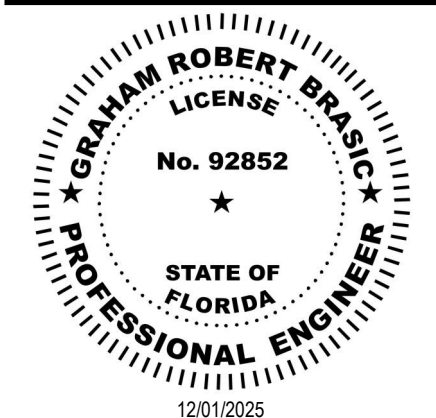


2 S-123 3D AXONOMETRIC - THIRD FLOOR (FOR REFERENCE ONLY)

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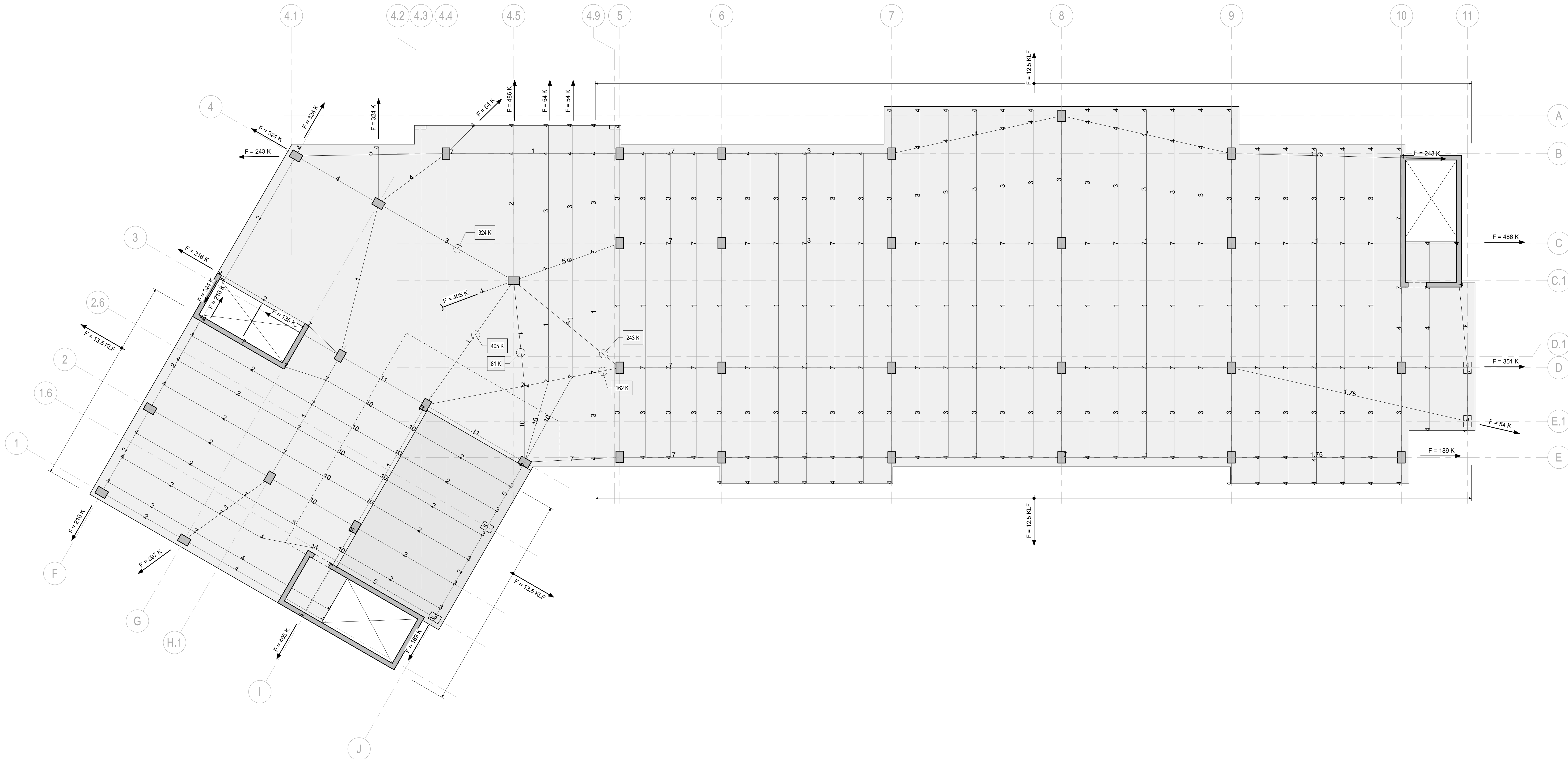
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Project No.: 2021009
Date: 12/01/2025

THIRD FLOOR FRAMING PLAN

S-123

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1
S-123-PT

THIRD FLOOR PT PLAN

1/8" = 1'-0"

POST-TENSIONED CONCRETE SLAB PLAN NOTES:

- SEE FRAMING PLAN FOR SLAB GEOMETRY, REFERENCE ELEVATION, AND KEYED SECTIONS.
- SEE POST-TENSIONED FRAMING GENERAL NOTES ON SHEET S-003 AND DIVISION 03 SPECIFICATIONS FOR GENERAL REQUIREMENTS.
- FOR TYPICAL POST-TENSIONED CONCRETE SECTIONS AND DETAILS, SEE S-33X SERIES.
- TENDON LAYOUT NOTES:
 - LINEWORK SHOWN FOR TENDON PATHS IS SCHEMATIC TO ILLUSTRATE DESIGN INTENT, BUT NOT MEANT TO INDICATE EXACT TENDON PATHS OR SPACING OF UNIFORMLY DISTRIBUTED TENDON BUNDLES.
 - A MINIMUM OF (2) TENDONS SHALL PASS THROUGH EACH COLUMN IN EACH DIRECTION, WITH TENDONS LOCATED INSIDE OF THE COLUMN VERTICAL REINFORCEMENT CAGE.
 - STRAIGHT LINE HORIZONTAL OFFSETS SHOWN IN THE LAYOUT PLAN SHALL BE ACCOMPLISHED WITH SMOOTH HORIZONTAL CURVE/SWEEP PER DETAIL.
 - MAINTAIN CLEAR COVER BETWEEN EDGE-OF-SLAB (INCLUDING INTERIOR OPENINGS) AS INDICATED IN THE PROJECT SPECIFICATIONS AND TYPICAL DETAILS REFERENCED ABOVE.
- TENDON DRAPE ELEVATION NOTES:
 - # .DENOTES PT TENDON DRAPE ELEVATION IN INCHES, MEASURED FROM BOTTOM OF SLAB / FRAMING TO THE CENTER-OF-GRAVITY OF THE TENDONS/STRAND BUNDLE (CGS).
 - AT DEAD ENDS AND STRESSING ENDS, CGS SHALL BE LOCATED AT THE CENTROID OF THE FRAMING (MID-DEPTH FOR SLAB CONDITIONS), UNLESS OTHERWISE NOTED.
 - TENDON HIGH POINTS SHALL BE LOCATED AT SUPPORTS (COLUMNS, WALLS, BEAMS, BANDED TENDON LINES) AS INDICATED ABOVE.
 - TENDON LOW POINTS SHALL BE LOCATED AT MID-SPAN BETWEEN SUPPORTS, UNLESS NOTED OTHERWISE.
- TENDON FORCE NOTES:
 - F = # K .DENOTES EFFECTIVE PRESTRESS FORCE, IN KIPS, WITHIN BANDED TENDON GROUP OR BEAM.
 - BANDED TENDON GROUPS SHALL BE PLACED IN FLAT BANDED GROUPS OF NO MORE THAN (5) TENDONS PER BUNDLE, SPACED AT NO MORE THAN 12 INCHES ON CENTER, WITH TENDONS FLAT IN ONE LAYER.
 - TOTAL QUANTITY OF BANDED TENDONS SHALL BE EQUALLY DISTRIBUTED EACH SIDE OF THE COLUMN, MINUS A MINIMUM OF (2) TENDONS PASSING THROUGH THE COLUMN REINFORCEMENT CAGE PER NOTE ABOVE.
 - F = # KLF .DENOTES EFFECTIVE PRESTRESS FORCE, IN KIPS PER LINEAR FOOT, IN UNIFORMLY DISTRIBUTED TENDONS.
 - UNIFORMLY DISTRIBUTED TENDON BUNDLES SHALL BE PLACED IN FLAT BANDED GROUPS OF NO MORE THAN (5) TENDONS PER BUNDLE, SPACED AT NO MORE THAN 5'-0" ON CENTER, WITH TENDONS FLAT IN ONE LAYER.

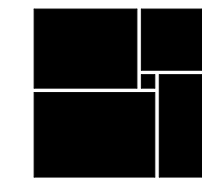
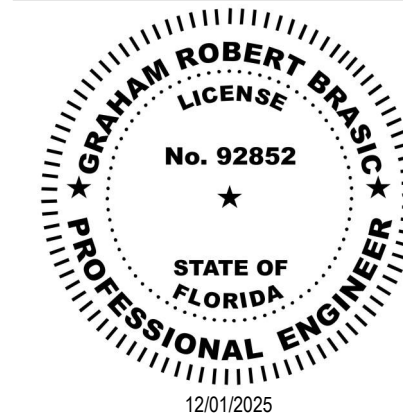
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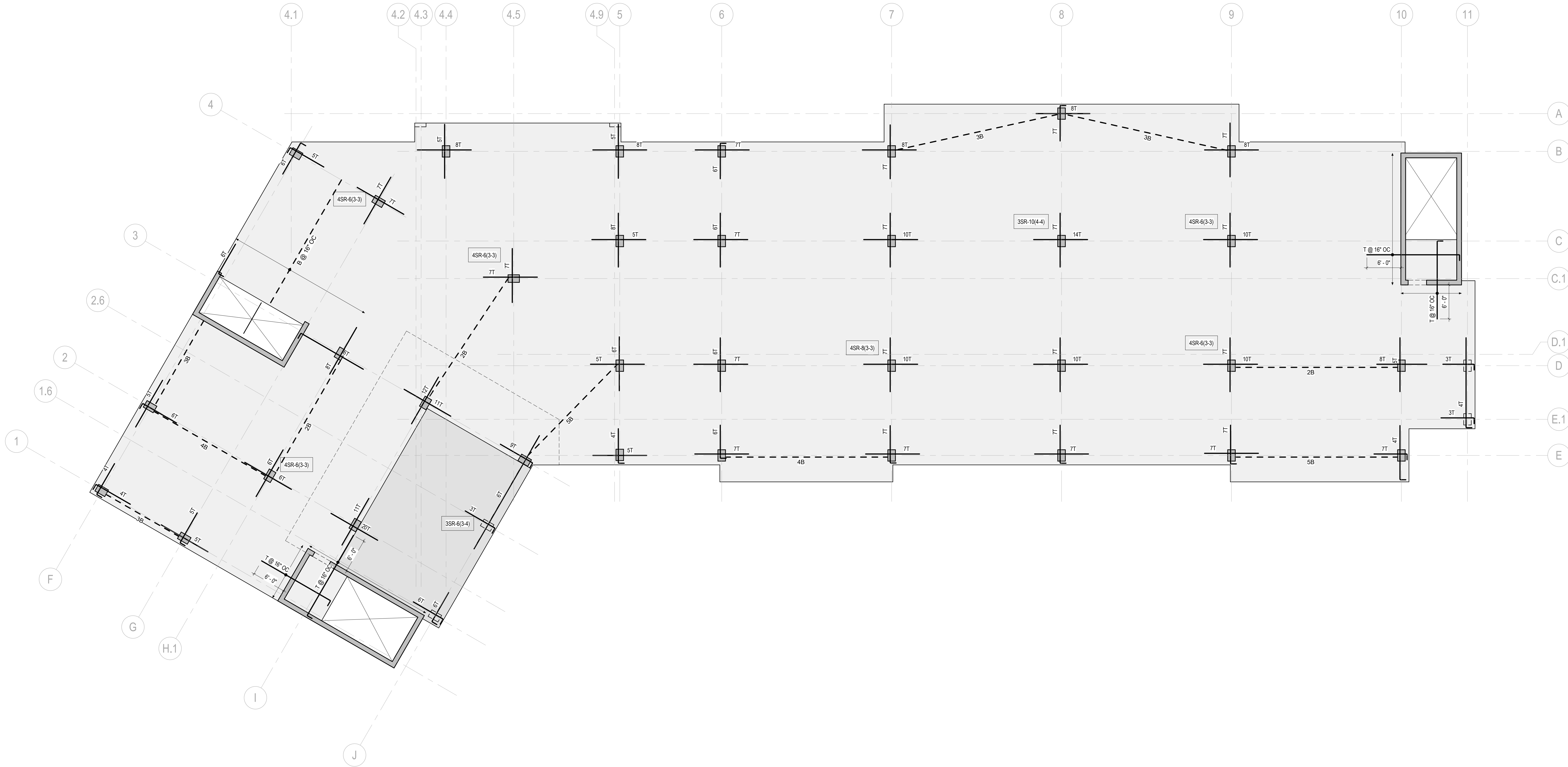
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**THIRD FLOOR
PT PLAN**

S-123-PT

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1 THIRD FLOOR REINFORCING PLAN
S-123-R 1/8" = 1'-0"

CONCRETE SLAB REINFORCEMENT PLAN NOTES.

- FOR TYPICAL SLAB REINFORCEMENT DETAILS, SEE S-331 AND S-332. REINFORCING ON PLAN SHALL BE IN ADDITION TO REINFORCING IN TYPICAL SLAB REINFORCEMENT DETAILS.
- PROVIDE CONTINUOUS REINFORCEMENT AROUND PERIMETER OF SLAB AND AT ALL INTERIOR SLAB EDGES (SEE 8/5-331). SEE 11/S-331 FOR CONCEPTUAL LAYOUT (NOT INDICATIVE OF PROJECT SPECIFIC GEOMETRY) AND SPLICE/DEVELOPMENT REQUIREMENTS.
- SLAB REINFORCEMENT SHALL BE #5 UNLESS NOTED OTHERWISE.
- ##SR-#(#-#) DENOTES SHEAR STUD RAILS (SEE DETAILS AND SCHEDULE ON S-332).
- SLAB REINFORCEMENT SYMBOLS AND NOMENCLATURE:
 - MAT REINFORCEMENT (SEE SLAB SCHEDULE).
 - ISOLATED/DISTRIBUTED REINFORCEMENT (SEE S-331).

BAR SPACING OVER WIDTH OR QUANTITY SHOWN

ADJ STANDARD 180° HOOK (ALL TOP BARS HOOKED AT EDGE-OF-SLAB EVEN WHEN NOT INDICATED)

SOLID LINE DENOTES TOP BARS (OR TOP & BOTTOM)

DASHED LINE DENOTES BOTTOM BARS

SINGLE ARROW DENOTES EXTENT OF BAR PLACEMENT. DOUBLE ARROW DENOTES EXTENT TO CONTINUE UNTIL EDGE-OF-SLAB OR END-OF-ELEMENT (AS APPLICABLE)
 - TYPICAL NOMENCLATURE.

#- DENOTES QUANTITY OF BARS

T- DENOTES TOP BARS

B- DENOTES BOTTOM BARS
 - REINFORCEMENT AT COLUMNS.

CONCRETE COLUMN (SEE FRAMING PLAN)

BARS EACH WAY (SEE TYPICAL NOMENCLATURE)

SHEAR STUD RAIL SCHEDULE					
MARK	FIRST STUD SPACING	TYP STUD SPACING	# OF STUDS PER RAIL	NUMBER OF RAILS	
				SHORT SIDE	LONG SIDE
3SR-6(3-4)	2"	3"	6	3	4
3SR-10(4-4)	2 3/4"	3"	10	4	4
4SR-6(3-3)	2 3/4"	4"	6	3	3
4SR-8(3-3)	2 3/4"	4"	8	3	3

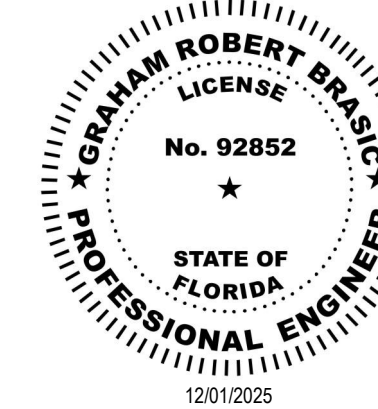
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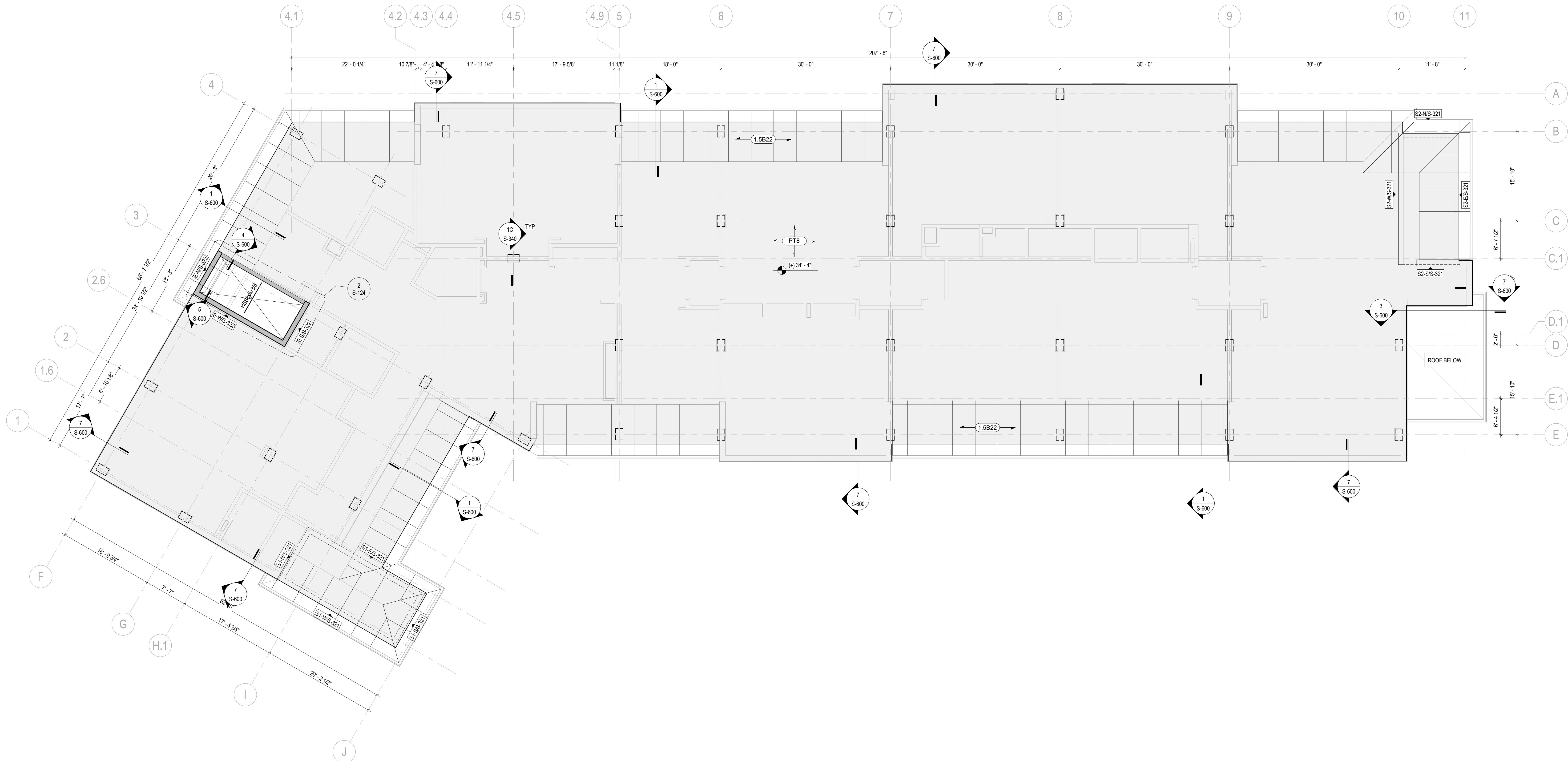
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**THIRD FLOOR
REINFORCING
PLAN**

S-123-R

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1 ROOF FRAMING PLAN

1/8" = 1'-0"

CONCRETE FRAMING PLAN NOTES:

- CONCRETE SLAB TAG:
 - ARROWS DENOTE SLAB SPAN DIRECTION
 - CS## DENOTES SLAB MARK (SEE SCHEDULE ON THIS SHEET FOR SLAB THICKNESS AND REINFORCEMENT)
 - PT## DENOTES SLAB MARK (SEE SCHEDULE ON THIS SHEET FOR SLAB THICKNESS AND REINFORCEMENT)
- SEE PLAN FOR TOP OF SLAB ELEVATIONS.
- DENOTES CONCRETE COLUMN/PIER/WALL. FOR COLUMN SCHEDULE AND DETAILS SEE S-340 SERIES. FOR WALL DETAILS SEE S-320 SERIES.
- DENOTES NON-LOAD BEARING CONCRETE MASONRY UNIT (CMU) WALL WITH #5 AT 24" OC VERTICAL REINFORCEMENT, CENTERED IN FULLY-GROUTED CELL.
- SEE ARCHITECTURAL DRAWINGS FOR:
 - ALL SLOPED SLAB AREAS.
 - ALL DIMENSIONS NOT SHOWN. VERIFY ALL DIMENSIONS SHOWN IN THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS AND REPORT ANY DISCREPANCIES OR DIMENSIONS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS FOR CLARIFICATION.
- SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL FLOOR PENETRATIONS, SLEEVES, AND INSERTS REQUIRED TO BE CAST IN THE SLAB.
 - SLEEVES AND PENETRATIONS WITHIN 48 INCHES OF THE FACE OF ANY CONCRETE COLUMN (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
 - SLEEVES AND PENETRATIONS INTERRUPTING Banded LINES OF TENDONS (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
 - SLEEVES AND PENETRATIONS GREATER THAN 12 INCHES IN LENGTH OR WIDTH (NOT SHOWN EXPLICITLY ON THE STRUCTURAL DRAWINGS) SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD.
- FOR REINFORCEMENT PLAN AND ADDITIONAL NOTES, SEE SHEET **S-12X-R**.
- FOR POST-TENSIONED LAYOUT PLAN AND ADDITIONAL NOTES, SEE SHEET **S-12X-PT**.
- DENOTES SHOWER DEPRESSIONS.

METAL ROOF TRUSS PLAN NOTES:

- ROOF DECK TAG:
 - ARROWS DENOTE DECK SPAN DIRECTION
 - #X## DENOTES DECK MARK (SEE SCHEDULE ON THIS SHEET FOR DECK PROPERTIES AND ATTACHMENT PATTERNS)
- SEE ARCHITECTURAL DRAWINGS FOR TRUSS BEARING ELEVATION.
- SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS NOT SHOWN AND ALL SLAB ELEVATIONS.
- ROOF TRUSSES SHALL BE SUPPORTED FRONT AND BACK BY GALVANIZED DOWNTURNED CHANNEL SPANNING BETWEEN AND WELDED TO GALVANIZED EMBEDS IN TOP OF SLAB. SEE 1/S-600.
- TRUSS SYSTEM IS OVERBUILT AND THUS DOES NOT HAVE LATERAL ELEMENTS FOR DIAPHRAGM BRACING. TRUSS CONNECTIONS SHALL BE DESIGNED FOR CONCURRENT VERTICAL AND HORIZONTAL LOADS TO TRANSFER REACTIONS TO DOWNTURNED CHANNELS BELOW.
- TG: DENOTES PRE-ENGINEERED METAL ROOF TRUSS GIRDER.
- HG: DENOTES PRE-ENGINEERED METAL ROOF HIP GIRDER.

POST-TENSIONED CONCRETE SLAB SCHEDULE					
MARK	THICKNESS	TYPICAL REINFORCEMENT			
		TOP	BOTTOM		
PT6S	8"	#5 @ 18" OC EW			
PT8	8"	#4 @ 18" OC EW			

METAL ROOF DECK SCHEDULE									
MARK	DECK DEPTH (THICKNESS)	DECK TYPE	DECK GAUGE	MINIMUM DECK PROPERTIES					
				tp (in ⁴ /ft)	ln (in ⁴ /ft)	Sp (in ³ /ft)	Sn (in ³ /ft)		
1.5822	1 1/2"	WIDE RIB ROOF DECK	22 GA	0.155	0.173	0.169	0.179		
1.5820	1 1/2"	WIDE RIB ROOF DECK	20 GA	0.197	0.217	0.224	0.229		

CONCRETE OVER COMPOSITE METAL DECK SCHEDULE									
TYPE MARK	DECK DEPTH (THICKNESS)	TOTAL SLAB THICKNESS	DECK GAUGE	MINIMUM DECK PROPERTIES				REINFORCEMENT	
				tp (in ⁴ /ft)	ln (in ⁴ /ft)	Sp (in ³ /ft)	Sn (in ³ /ft)		
2.0C20-4	2"	4"	20	0.409	0.407	0.326	0.337	S66-WT.40W1.4	

2 ELEVATOR HIGH ROOF PLAN

1/8" = 1'-0"

3 S-124

3D AXONOMETRIC - ROOF (FOR REFERENCE ONLY)

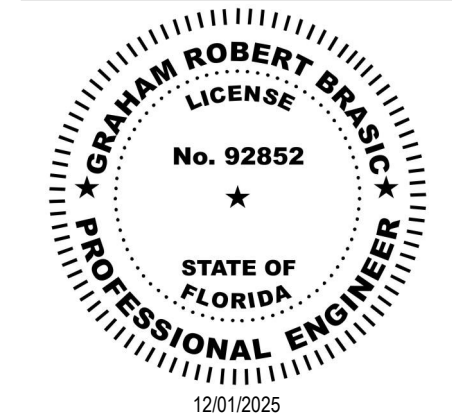
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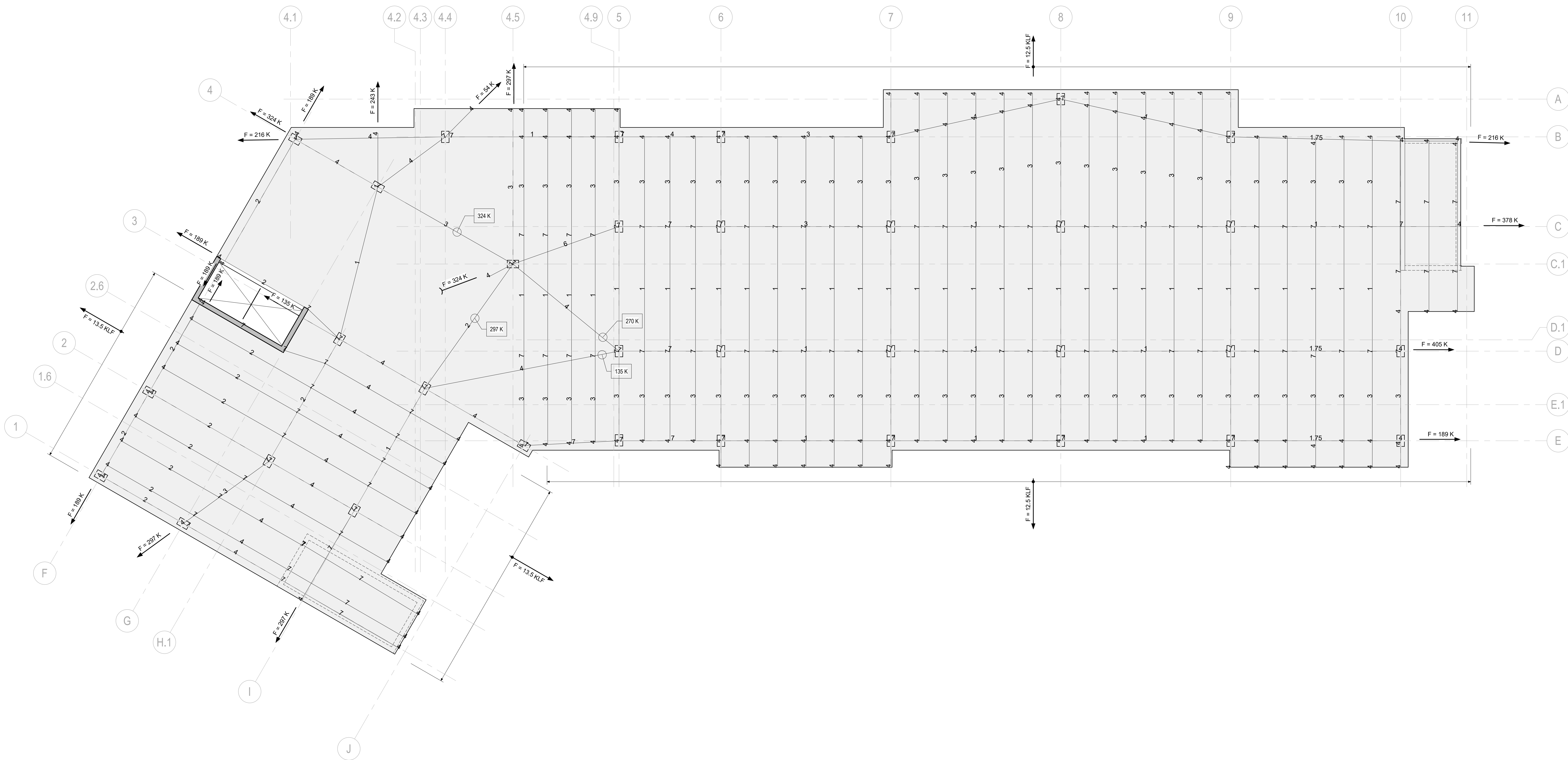
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ROOF FRAMING PLAN

S-124

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S-124-PT

ROOF PT PLAN

1/8" = 1'-0"

POST-TENSIONED CONCRETE SLAB PLAN NOTES:

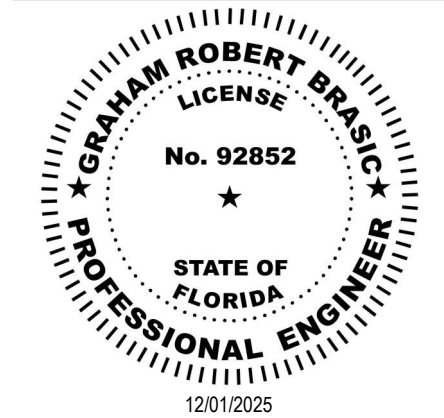
- SEE FRAMING PLAN FOR SLAB GEOMETRY, REFERENCE ELEVATION, AND KEYED SECTIONS.
- SEE POST-TENSIONED FRAMING GENERAL NOTES ON SHEET S-003 AND DIVISION 03 SPECIFICATIONS FOR GENERAL REQUIREMENTS.
- FOR TYPICAL POST-TENSIONED CONCRETE SECTIONS AND DETAILS, SEE S-33X SERIES.
- TENDON LAYOUT NOTES:
 - LINEWORK SHOWN FOR TENDON PATHS IS SCHEMATIC TO ILLUSTRATE DESIGN INTENT, BUT NOT MEANT TO INDICATE EXACT TENDON PATHS OR SPACING OF UNIFORMLY DISTRIBUTED TENDON BUNDLES.
 - A MINIMUM OF (2) TENDONS SHALL PASS THROUGH EACH COLUMN IN EACH DIRECTION, WITH TENDONS LOCATED INSIDE OF THE COLUMN VERTICAL REINFORCEMENT CAGE.
 - STRAIGHT LINE HORIZONTAL OFFSETS SHOWN IN THE LAYOUT PLAN SHALL BE ACCOMPLISHED WITH SMOOTH HORIZONTAL CURVES/SWEEP PER DETAIL.
 - MAINTAIN CLEAR COVER BETWEEN EDGE-OF-SLAB (INCLUDING INTERIOR OPENINGS) AS INDICATED IN THE PROJECT SPECIFICATIONS AND TYPICAL DETAILS REFERENCED ABOVE.
- TENDON DRAPE ELEVATION NOTES:
 - # DENOTES PT TENDON DRAPE ELEVATION IN INCHES, MEASURED FROM BOTTOM OF SLAB / FRAMING TO THE CENTER-OF-GRAVITY OF THE TENDON/STRAND BUNDLE (CGS).
 - AT DEAD ENDS AND STRESSING ENDS, CGS SHALL BE LOCATED AT THE CENTROID OF THE FRAMING (MID-DEPTH FOR SLAB CONDITIONS), UNLESS OTHERWISE NOTED.
 - TENDON HIGH POINTS SHALL BE LOCATED AT SUPPORTS (COLUMNS, WALLS, BEAMS, BANDED TENDON LINES) AS INDICATED ABOVE.
 - TENDON LOW POINTS SHALL BE LOCATED AT MID-SPAN BETWEEN SUPPORTS, UNLESS NOTED OTHERWISE.
- TENDON FORCE NOTES:
 - F = # K DENOTES EFFECTIVE PRESTRESS FORCE, IN KIPS, WITHIN BANDED TENDON GROUP OR BEAM.
 - BANDED TENDON GROUPS SHALL BE PLACED IN FLAT BUNDLED GROUPS OF NO MORE THAN (5) TENDONS PER BUNDLE, SPACED AT NO MORE THAN 12 INCHES ON CENTER, WITH TENDONS FLAT IN ONE LAYER. TOTAL QUANTITY OF BANDED TENDONS SHALL BE EQUALLY DISTRIBUTED EACH SIDE OF THE COLUMN, MINUS A MINIMUM OF (2) TENDONS PASSING THROUGH THE COLUMN REINFORCEMENT CAGE PER NOTE ABOVE.
 - F = # KLF DENOTES EFFECTIVE PRESTRESS FORCE, IN KIPS PER LINEAR FOOT, IN UNIFORMLY DISTRIBUTED TENDONS.
 - UNIFORMLY DISTRIBUTED TENDON BUNDLES SHALL BE PLACED IN FLAT BUNDLED GROUPS OF NO MORE THAN (5) TENDONS PER BUNDLE, SPACED AT NO MORE THAN 5'-0" ON CENTER, WITH TENDONS FLAT IN ONE LAYER.

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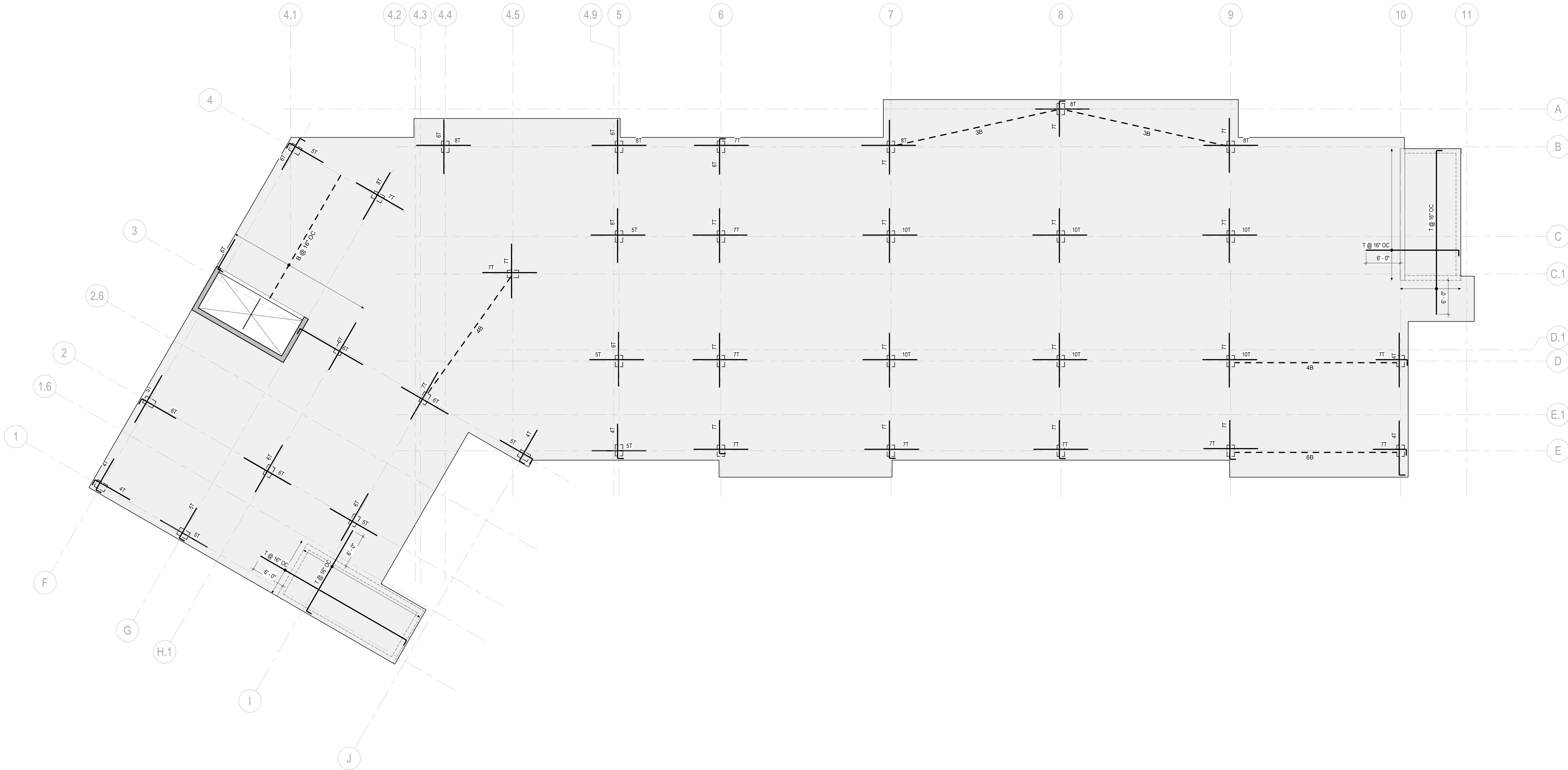
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**ROOF PT
PLAN**

S-124-PT

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1
S-124-R

1/8" = 1'-0"

ROOF REINFORCING PLAN

CONCRETE SLAB REINFORCING PLAN NOTES:

- FOR TYPICAL SLAB REINFORCING DETAILS, SEE S-331 AND S-332. REINFORCING ON PLAN SHALL BE IN ADDITION TO REINFORCING IN TYPICAL SLAB REINFORCING DETAILS.
- PROVIDE CONTINUOUS REINFORCEMENT AROUND PERIMETER OF SLAB AND AT ALL INTERIOR SLAB EDGES (SEE S-331). SEE 1105-331 FOR CONCEPTUAL LAYOUT (NOT INDICATIVE OF PROJECT SPECIFIC GEOMETRY) AND SPLICE DEVELOPMENT REQUIREMENTS.
- SLAB REINFORCEMENT SHALL BE #5 UNLESS NOTED OTHERWISE.
- #SR-#(X) DENOTES SHEAR STUD RAILS (SEE DETAILS AND SCHEDULE ON S-332).
- SLAB REINFORCEMENT SYMBOLS AND NOMENCLATURE:

- A. MAT REINFORCEMENT (SEE SLAB SCHEDULE).

- B. ISOLATED/DISTRIBUTED REINFORCEMENT (SEE S-331).

BAR SPACING OVER WIDTH OR QUANTITY SHOWN

ACI STANDARD 180° HOOK

(ALL TOP BARS HOOKED AT EDGE-OF-SLAB EVEN WHEN NOT INDICATED)

SOLID LINE DENOTES TOP BARS (OR TOP & BOTTOM)

DASHED LINE DENOTES BOTTOM BARS

SINGLE ARROW DENOTES EXTENT OF BAR PLACEMENT. DOUBLE ARROW DENOTES EXTENT TO CONTINUE UNTIL EDGE-OF-SLAB OR END-OF-ELEMENT (AS APPLICABLE)

- C. TYPICAL NOMENCLATURE.

DENOTES QUANTITY OF BARS

T DENOTES TOP BARS

B DENOTES BOTTOM BARS

- D. REINFORCEMENT AT COLUMNS.

CONCRETE COLUMN (SEE FRAMING PLAN)

BARS EACH WAY (SEE TYPICAL NOMENCLATURE)

POST-TENSIONED CONCRETE SLAB SCHEDULE

MARK	THICKNESS	TYPICAL REINFORCEMENT	
		TOP	BOTTOM
PT6S	6"	SEE PLAN	#5 @ 18" OC EW
PT8	8"	SEE PLAN	#4 @ 48" OC EW

SHEAR STUD RAIL SCHEDULE

MARK	FIRST STUD SPACING	TYP STUD SPACING	# OF STUDS PER RAIL	NUMBER OF RAILS	
				SHORT SIDE	LONG SIDE
3SR-6(3-4)	2"	3"	6	3	4
3SR-10(4-4)	2 3/4"	3"	10	4	4
4SR-6(3-3)	2 3/4"	4"	6	3	3
4SR-8(3-3)	2 3/4"	4"	8	3	3

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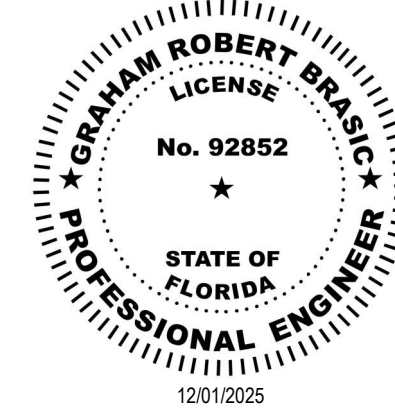
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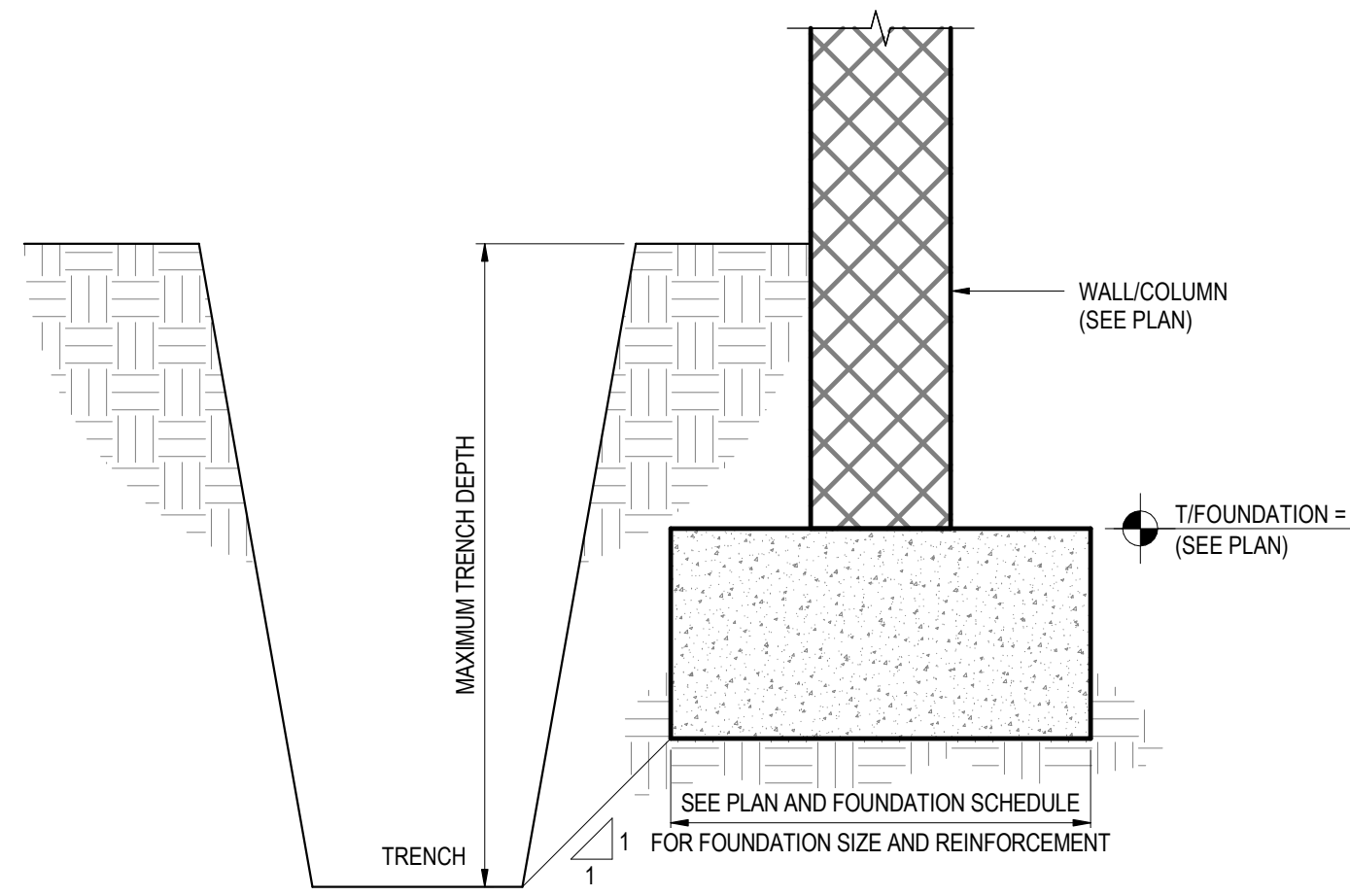
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**ROOF
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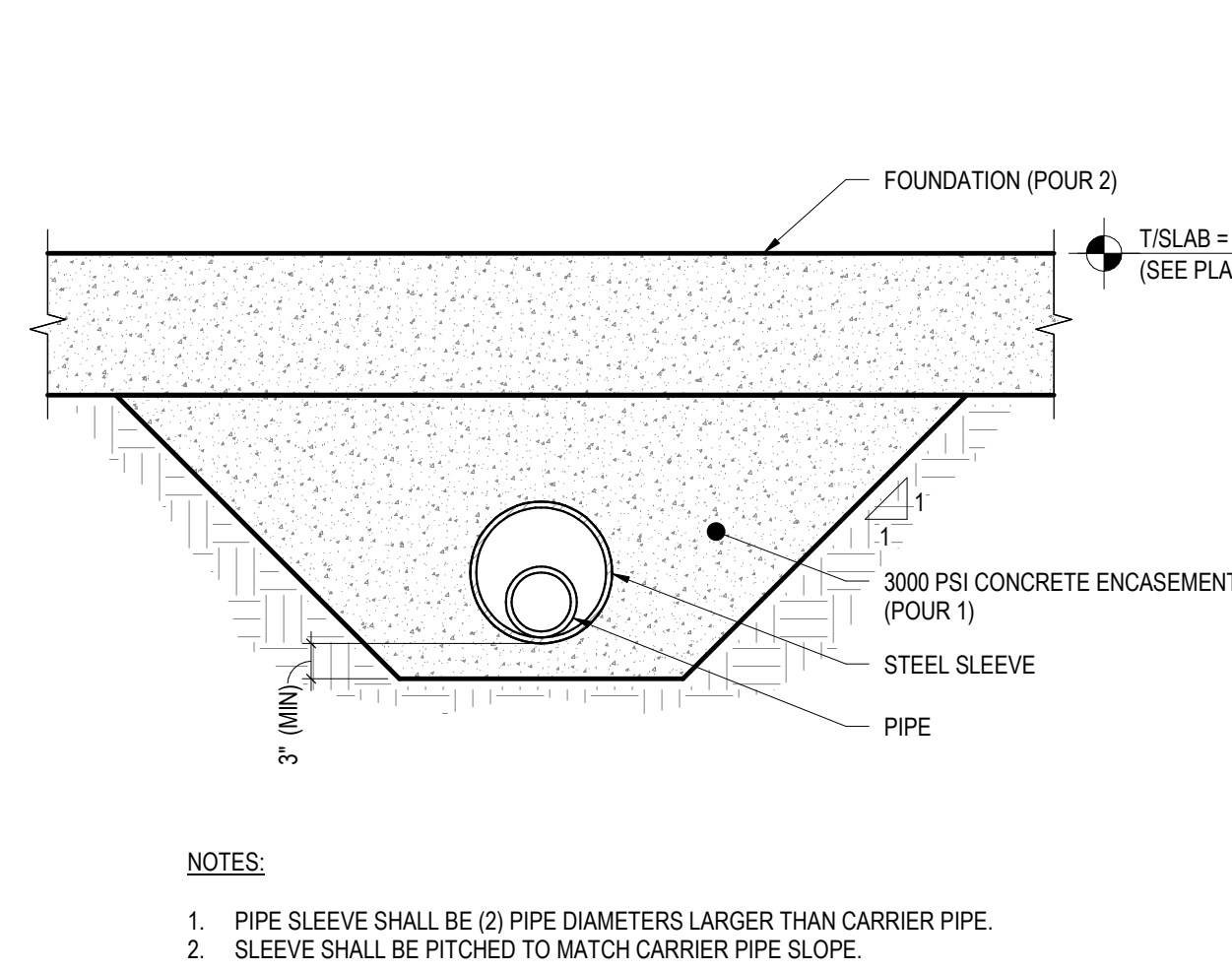
S-124-R

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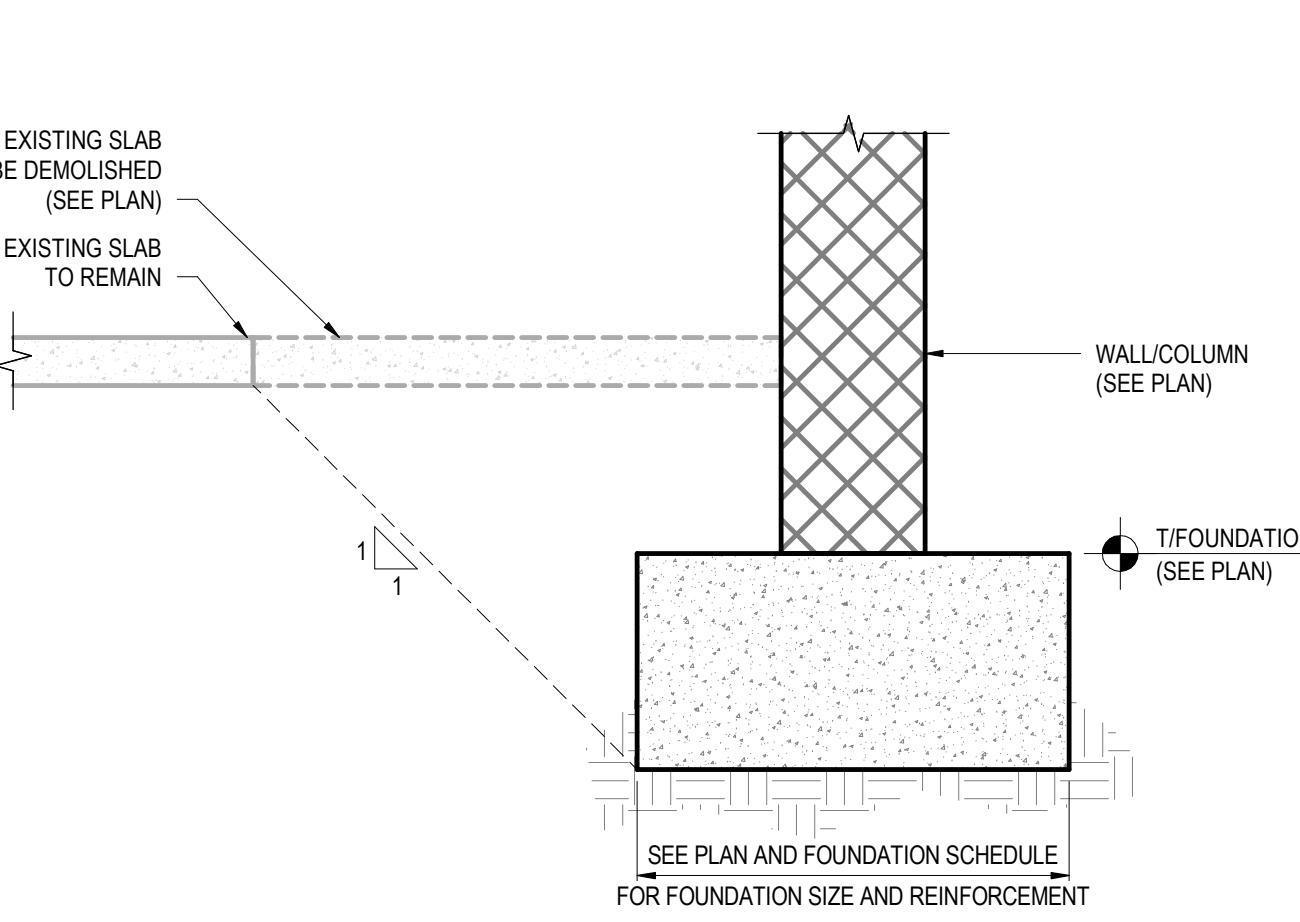
Autodesk Docs://The Waterford (Stage 2)/2021009_WCR_MC-AL-BLDG_STRUCT_R24.rvt



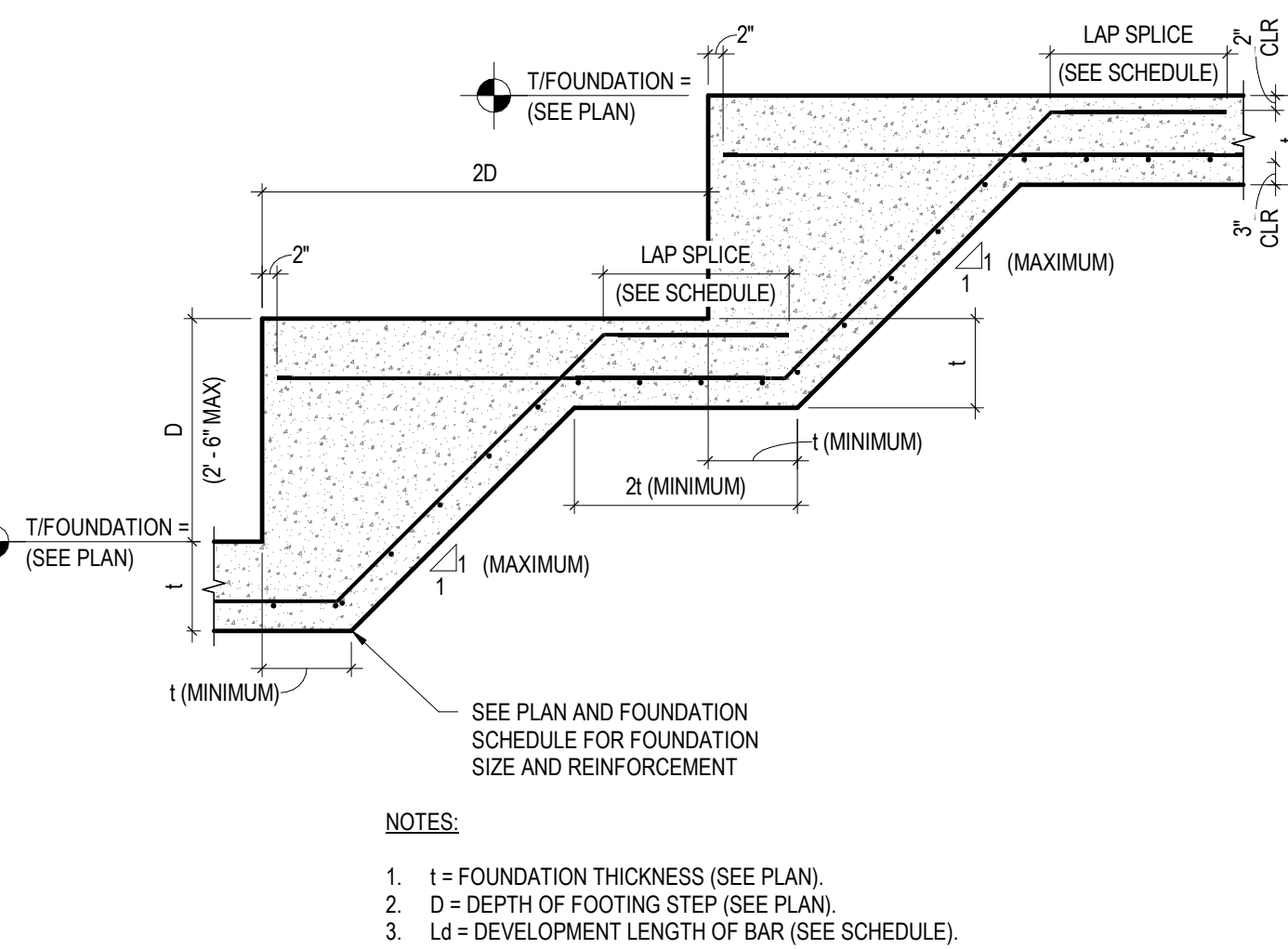
1 FOUNDATION ADJACENT TO TRENCH
3/4" = 1'-0"



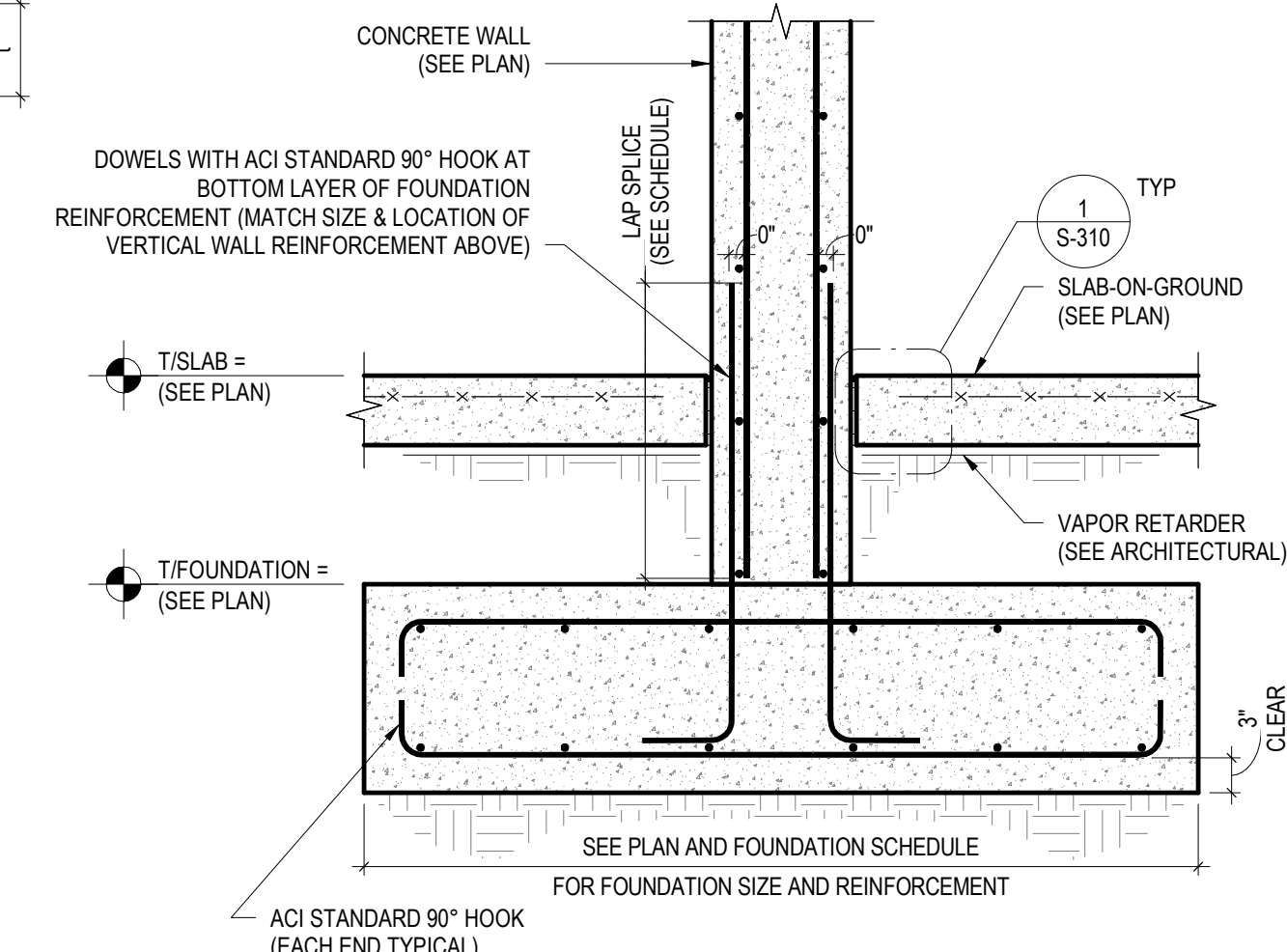
2 PIPE UNDER FOUNDATION
3/4" = 1'-0"



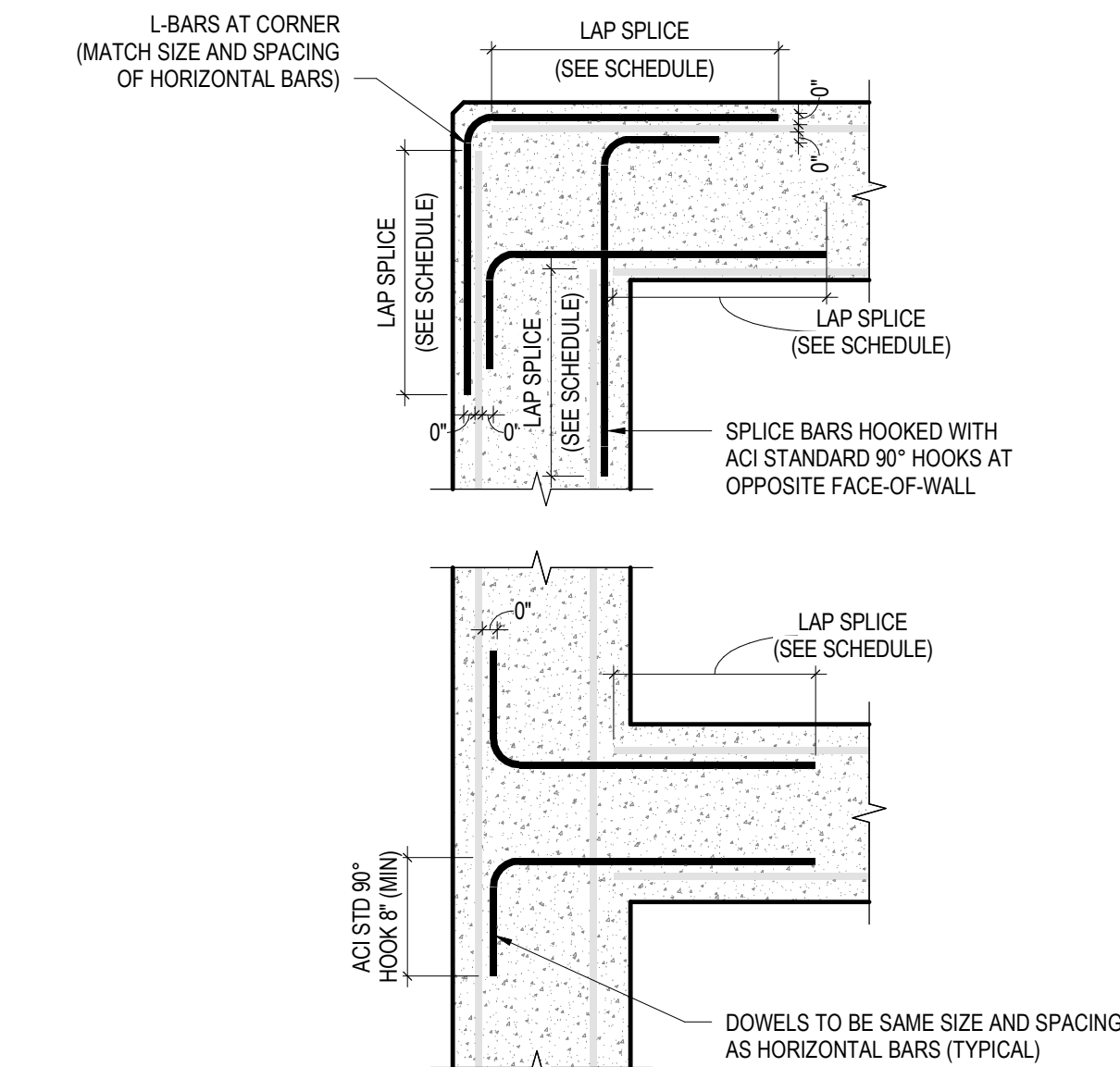
3 FOUNDATION ADJACENT TO EXISTING SLAB
3/4" = 1'-0"



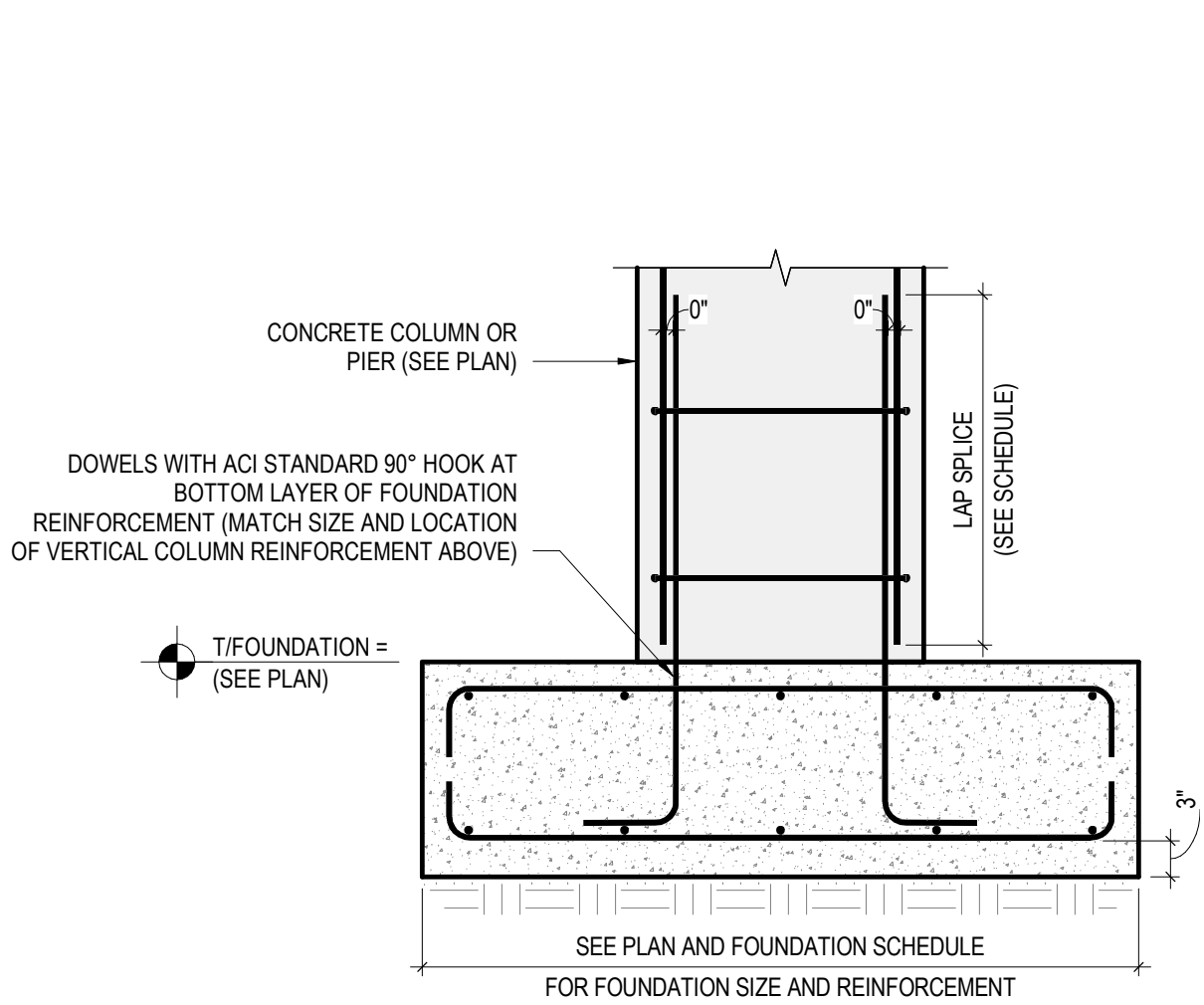
4 STEPPED CONTINUOUS WALL FOUNDATION
1/2" = 1'-0"



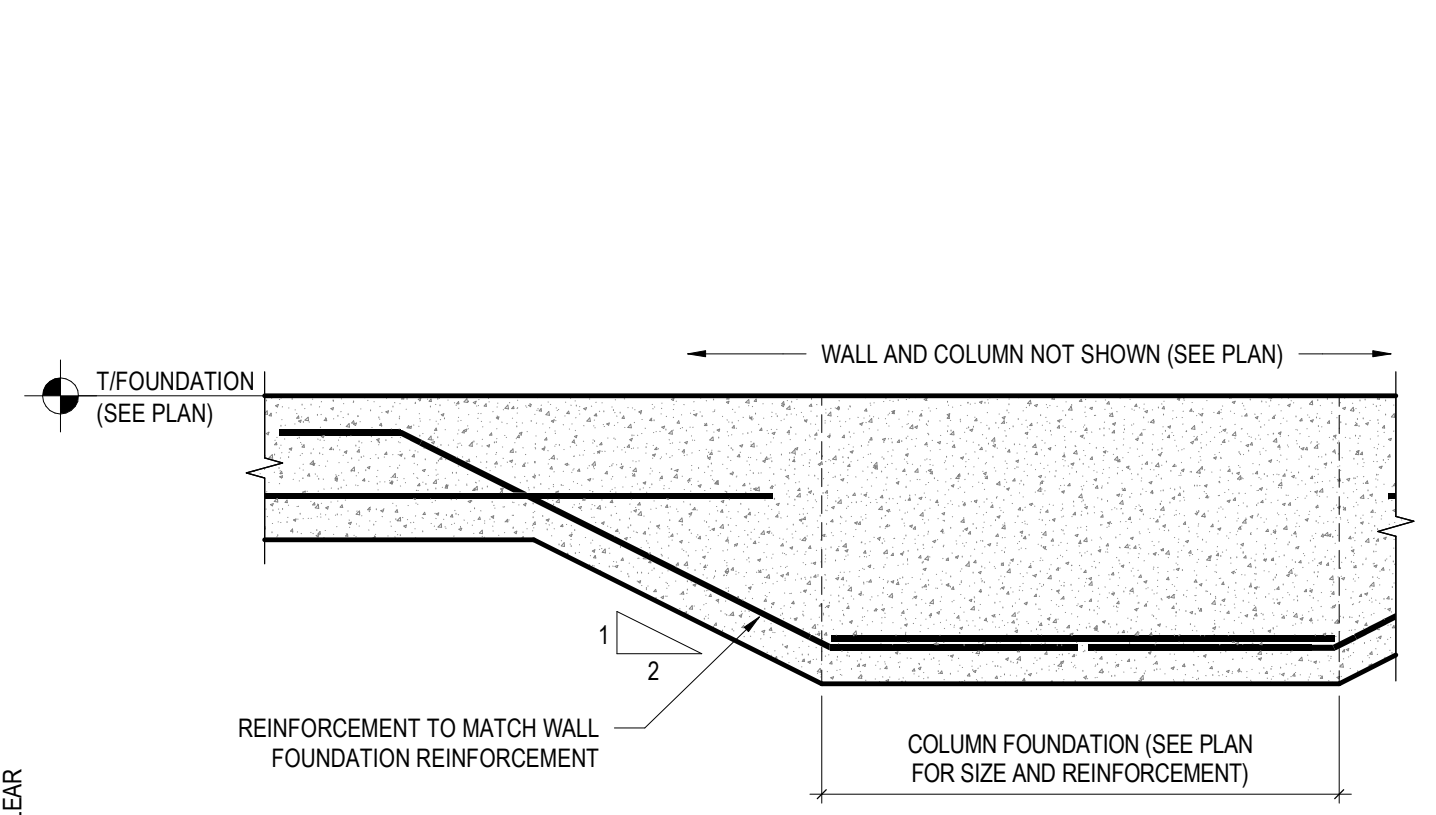
7 FOUNDATION AT CONCRETE WALL
3/4" = 1'-0"



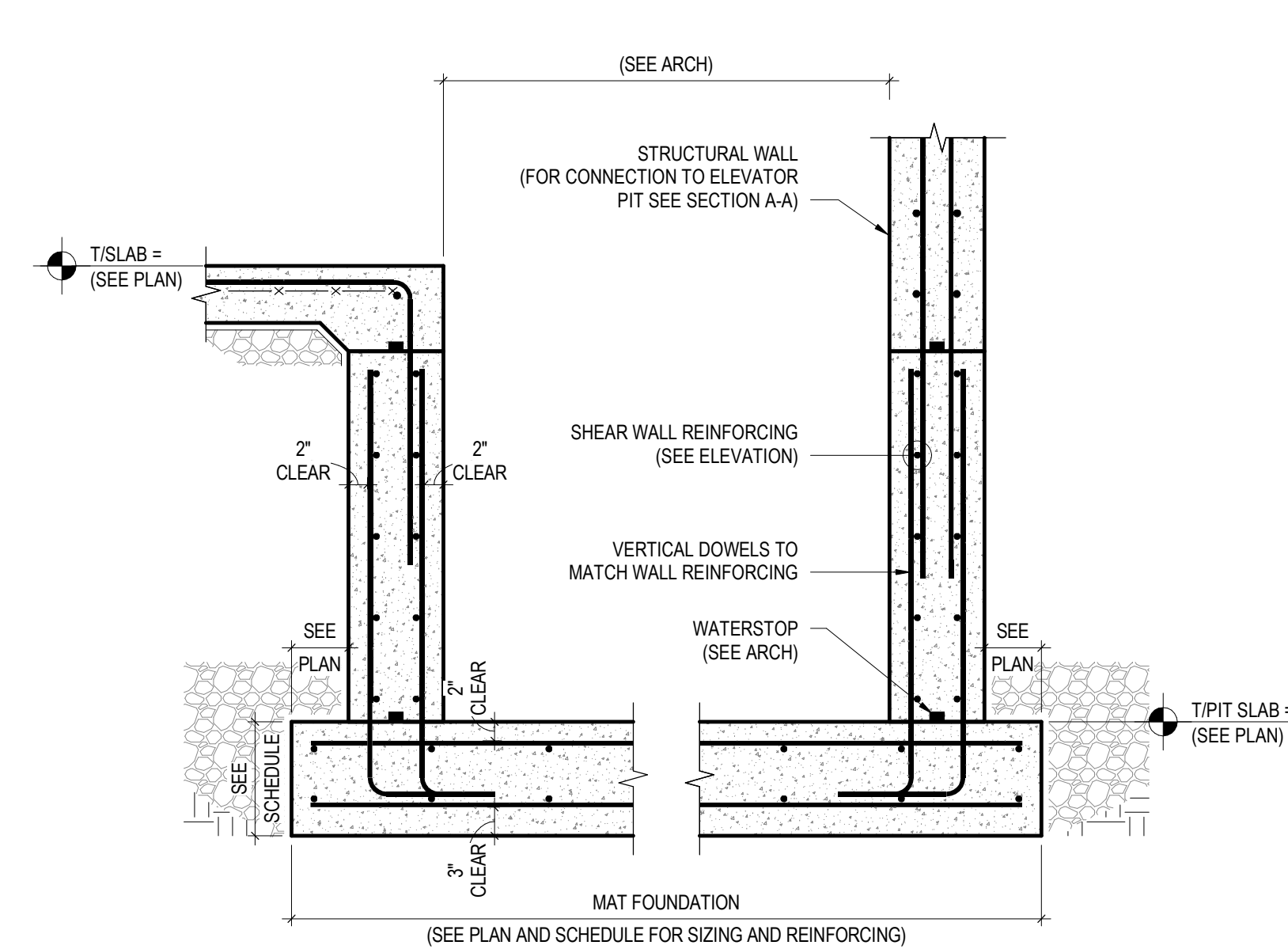
6 CORNER BARS AT WALLS & FOUNDATIONS
1" = 1'-0"



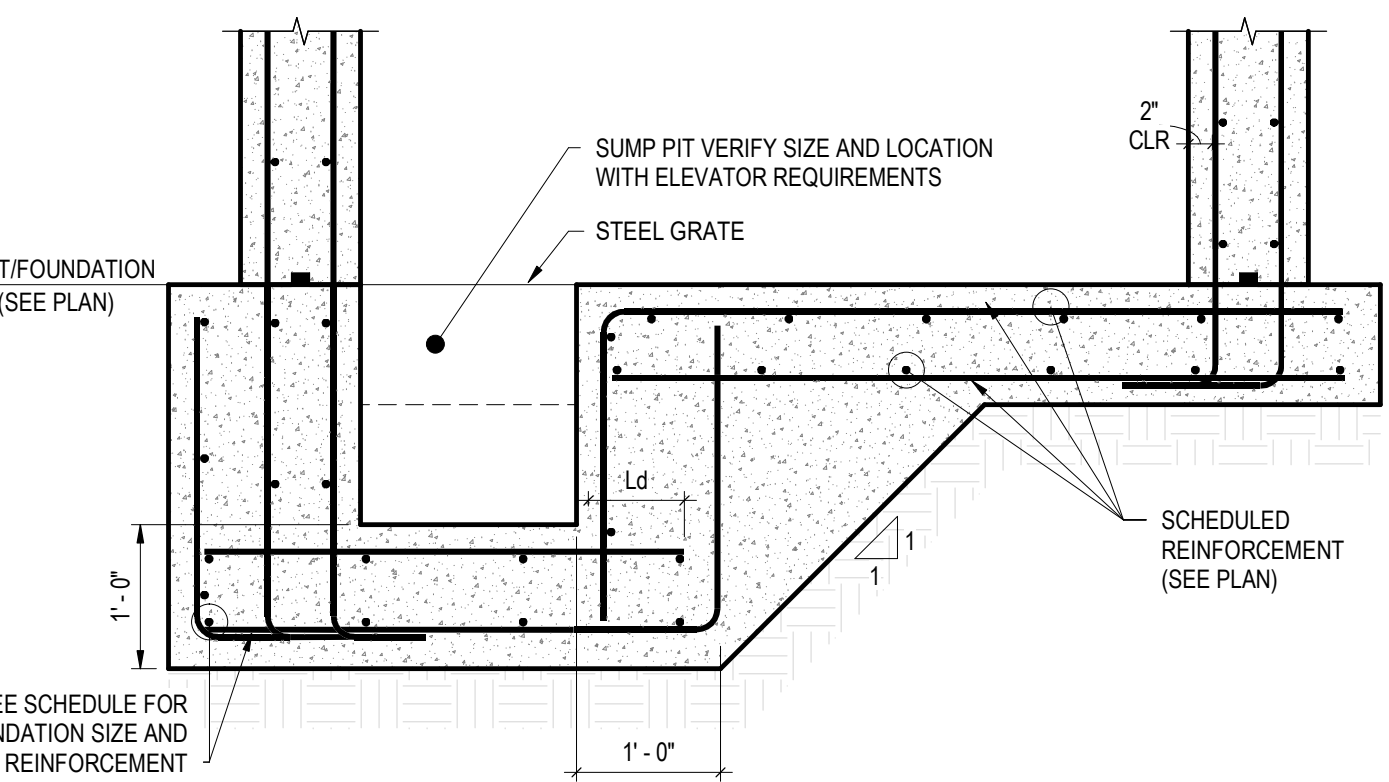
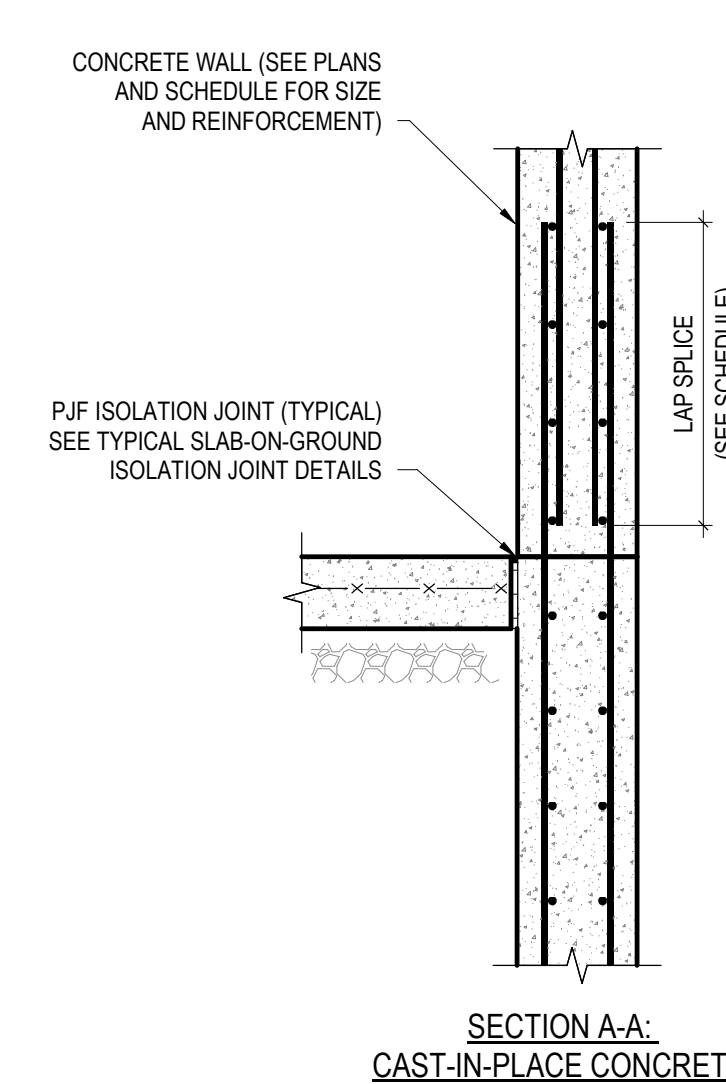
5 CONCRETE COLUMN/PIER FOUNDATION
3/4" = 1'-0"



8 WALL FOUNDATION TO COLUMN FOUNDATION TRANSITION
3/4" = 1'-0"



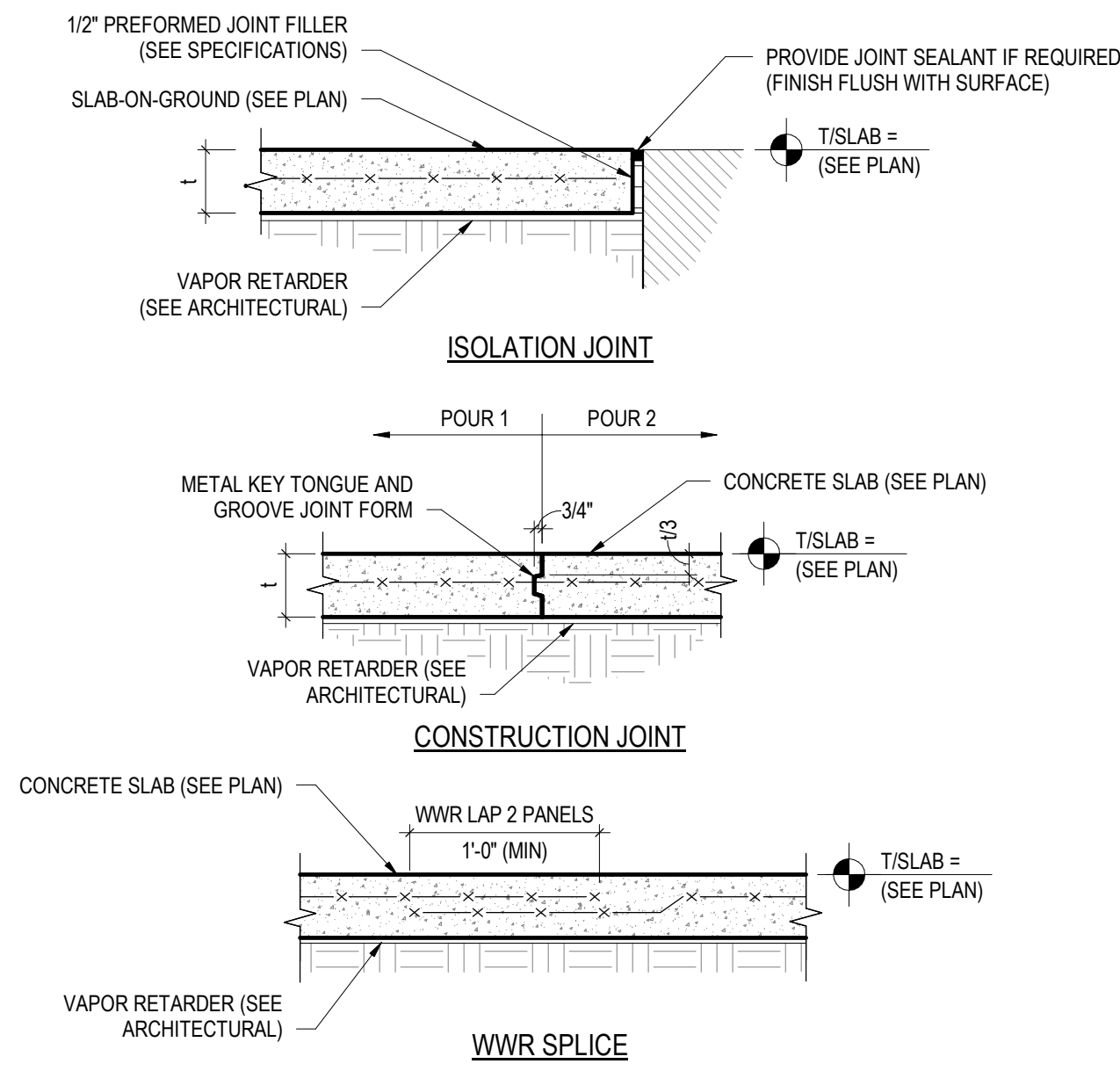
9 ELEVATOR PIT
3/4" = 1'-0"



10 ELEVATOR SUMP PIT
3/4" = 1'-0"

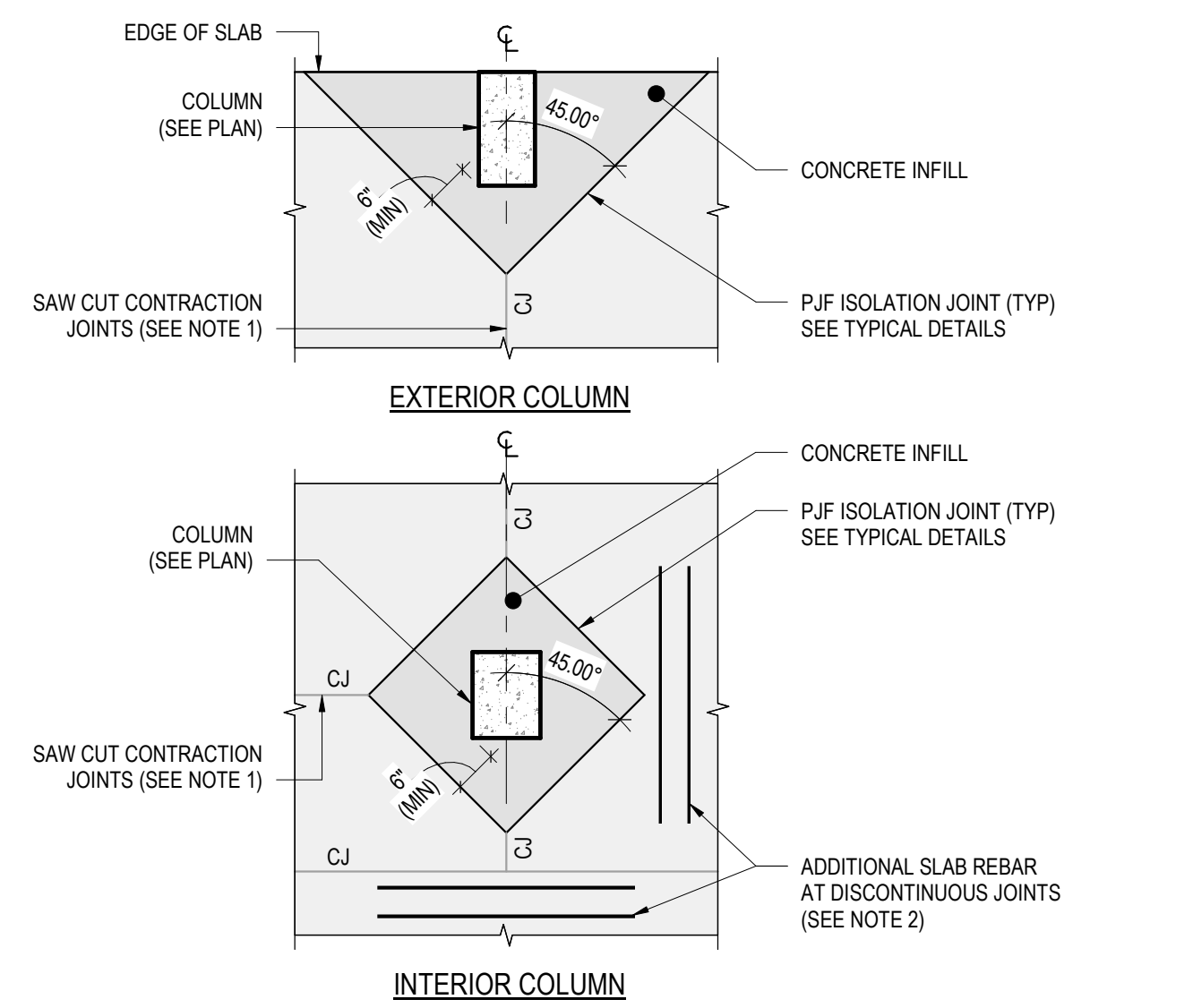
- NOTES:
- GC SHALL CONFIRM ALL DIMENSIONS WITH ELEVATOR MANUFACTURER PRIOR TO CONSTRUCTION.

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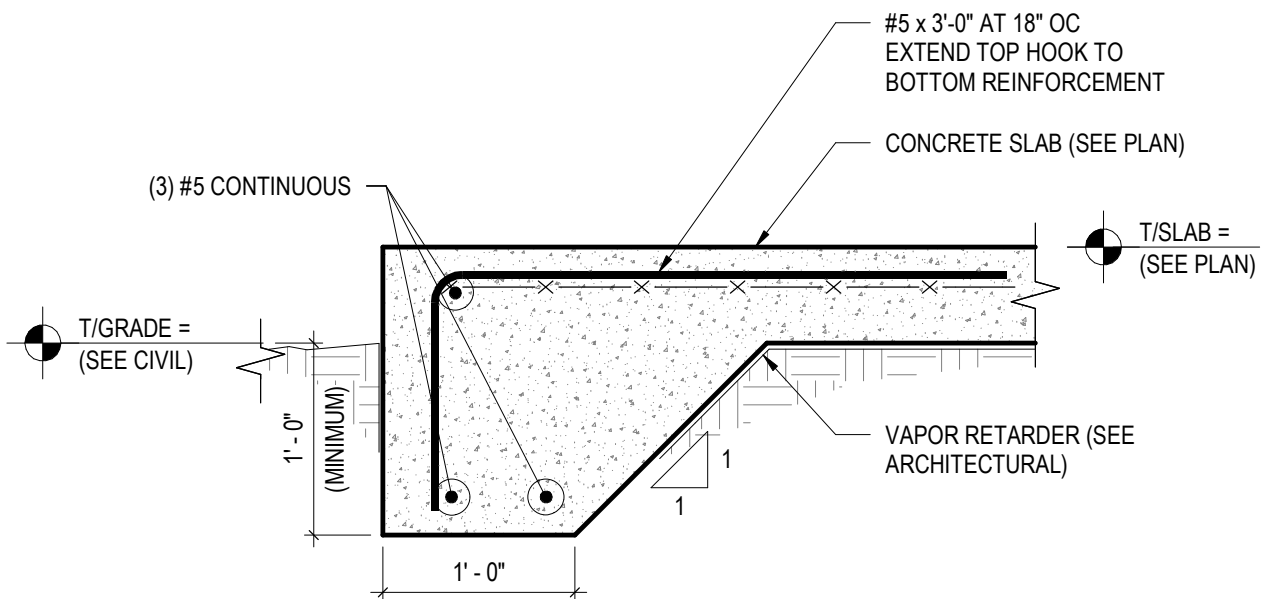
1
S-310
3/4" = 1'-0"

SLAB-ON-GROUND JOINT DETAILS



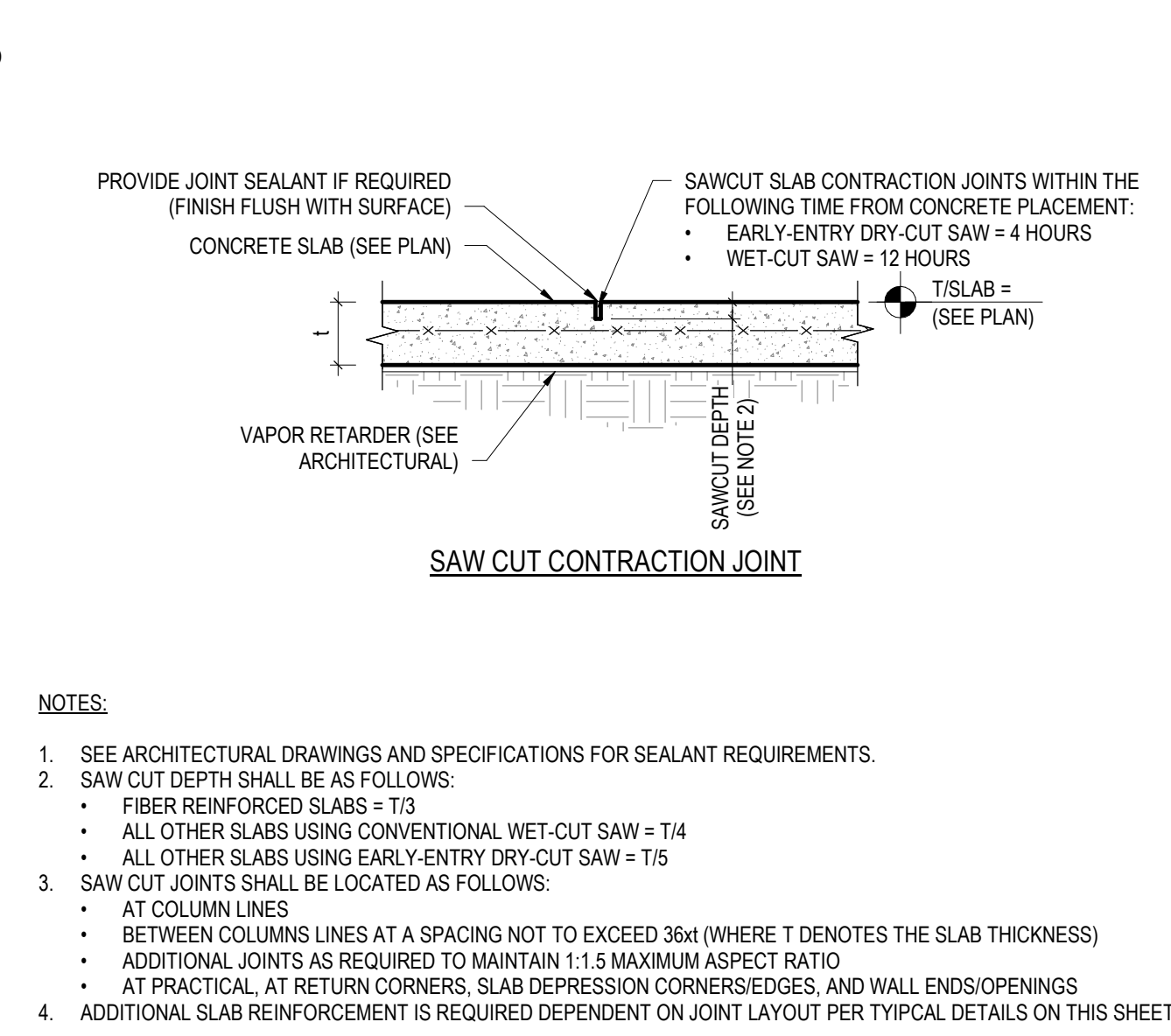
4
S-310
1/2" = 1'-0"

SLAB-ON-GROUND ISOLATION/CONTRACTION JOINT

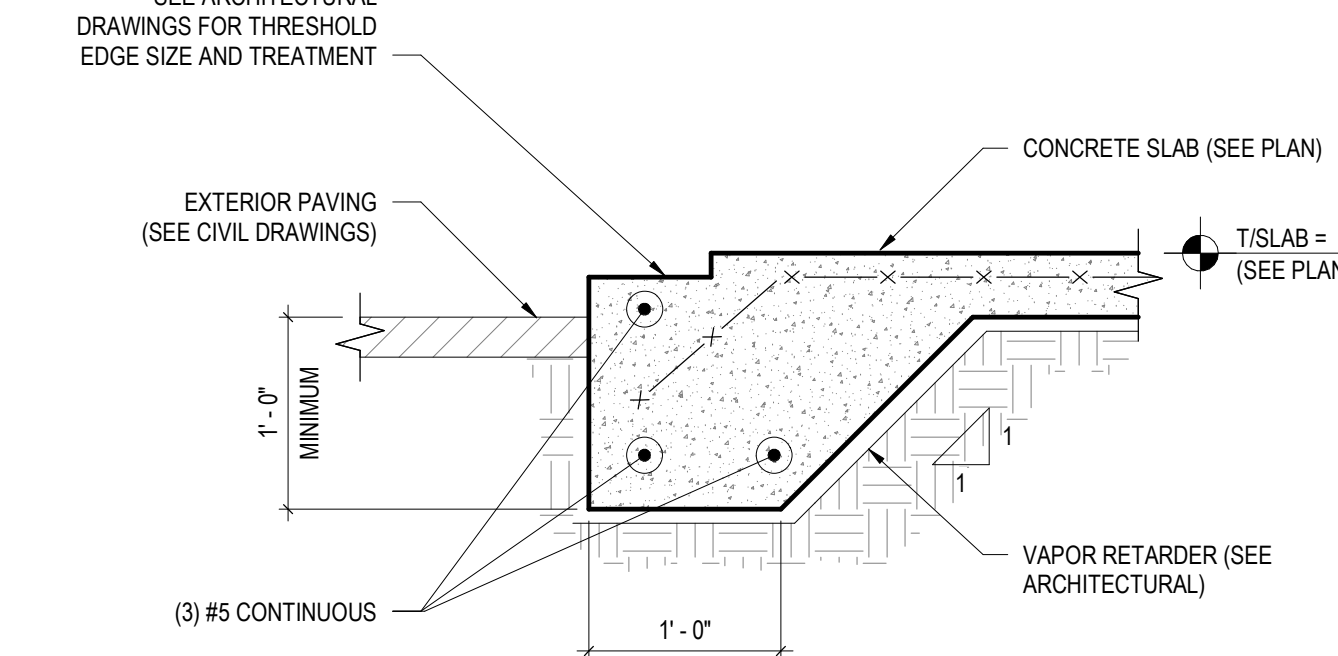


7
S-310
1" = 1'-0"

THICKENED EDGE-OF-SLAB

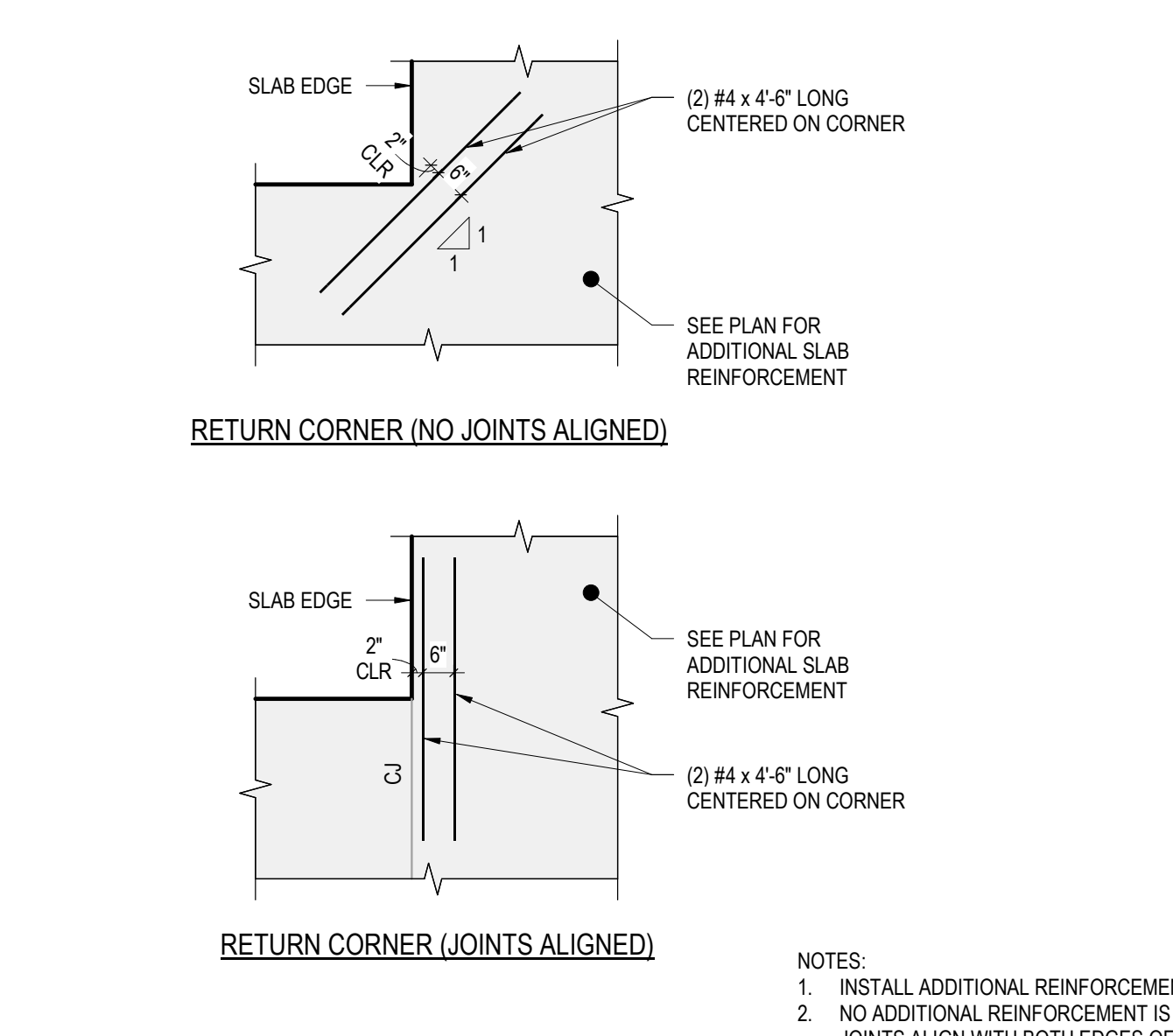


- NOTES:
1. ALIGN SAW CUT CONTRACTION JOINTS WITH CORNERS OF DIAMOND BOXOUTS AT COLUMNS. SEE TYPICAL SLAB-ON-GROUND DETAILS FOR JOINT SPACING REQUIREMENTS BETWEEN COLUMNS.
2. WHEN CONTRACTION JOINTS DO NOT ALIGN WITH CORNERS OF DIAMOND BOXOUT, PROVIDE ADDITIONAL SLAB REINFORCEMENT SIMILAR TO DISCONTINUOUS JOINTS.
3. CONCRETE INFILL BETWEEN COLUMN AND ISOLATION JOINT SHALL BE POURED AFTER ALL THE SLABS SUPPORTED BY THE COLUMN HAVE BEEN POURED.
4. AS A GC OPTION, A PINWHEEL LAYOUT OR P/JF DIRECT APPLIED TO FACE-OF-COLUMN OPTION MAY BE ACCEPTABLE IF THE SLAB-ON-GROUND IS POURED AFTER THE COLUMNS ARE INSTALLED. NOTIFY DESIGN TEAM OF DESIRE TO USE ALTERNATE DETAIL FOR FURTHER CONSIDERATION.
5. DETAIL SCHEMATICALLY SHOWS CONCRETE COLUMNS/PIERS. SIMILAR BOXOUTS ARE REQUIRED AT STEEL COLUMNS, WHERE THE DIMENSION OF THE DIAMOND BOXOUT SHALL BE COORDINATED WITH THE REQUIRED LAYBACK FOR SOIL STABILITY WHILE ALLOWING FOR BASE PLATE INSTALLATION ON ANCHOR RODS WITH ADEQUATE CLEARANCE FOR GROUT PLACEMENT BELOW THE BASE PLATE.



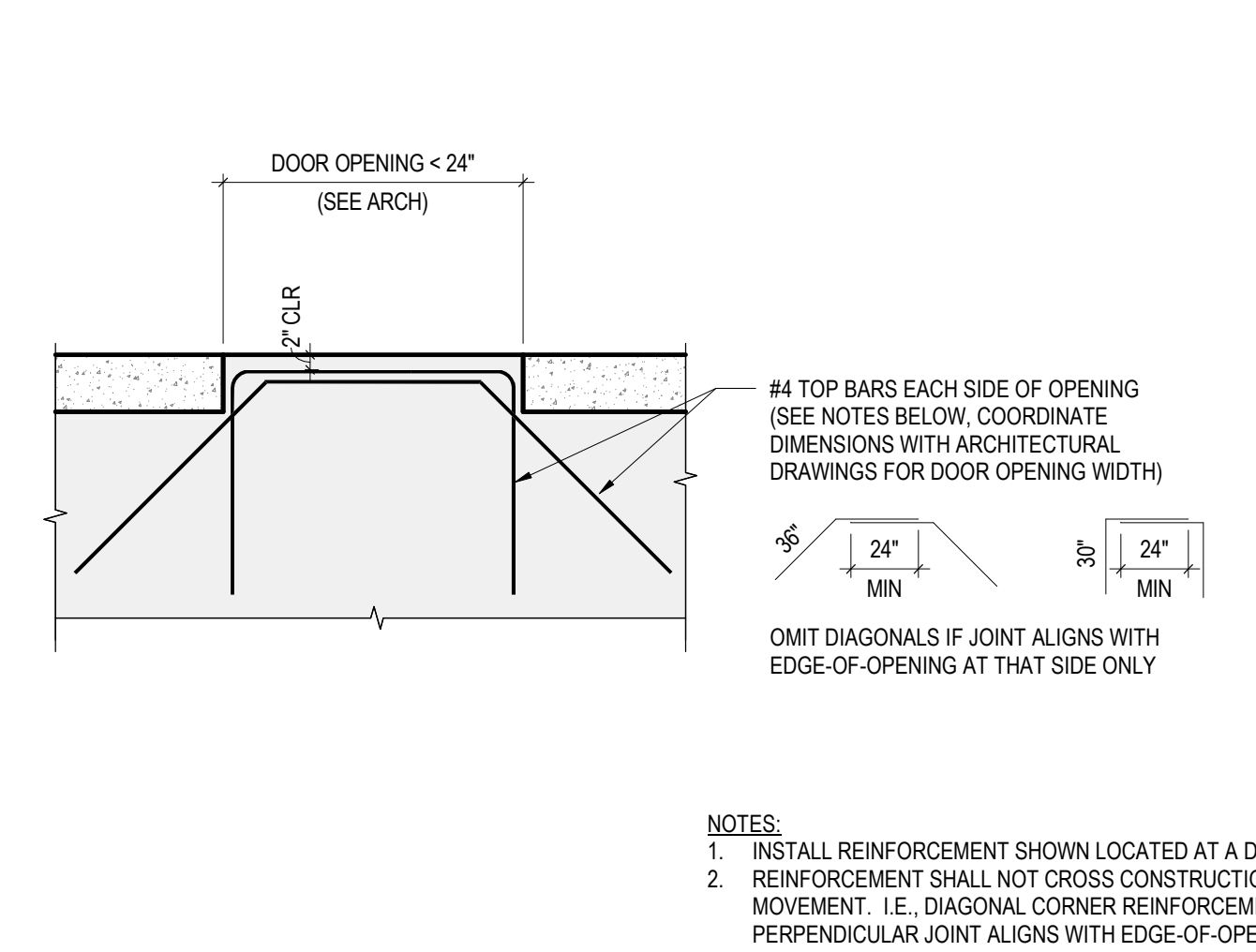
8
S-310
1" = 1'-0"

THICKENED EDGE-OF-SLAB AT OPENING



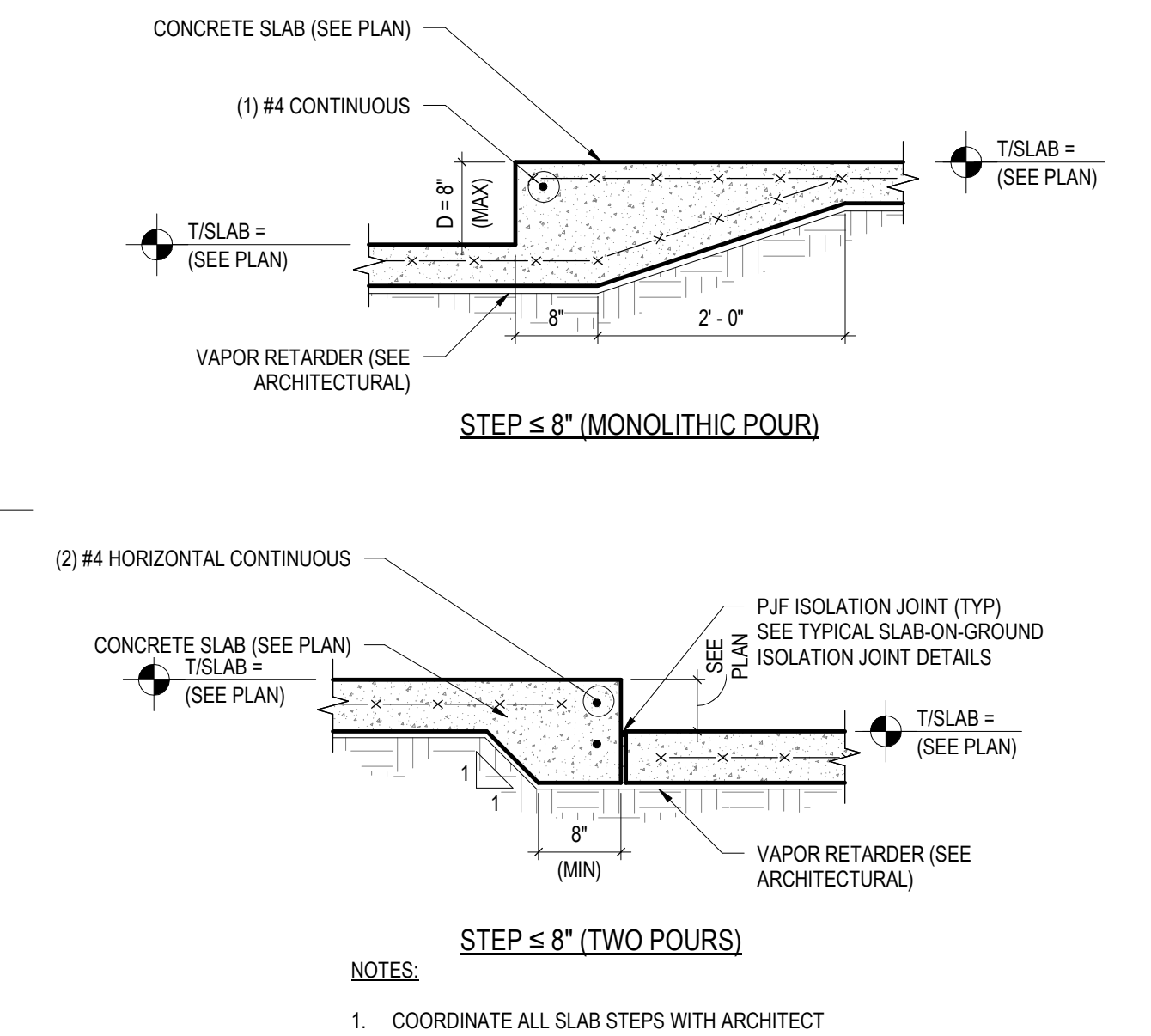
2
S-310
3/4" = 1'-0"

ADDITIONAL SLAB REINFORCEMENT AT CORNERS



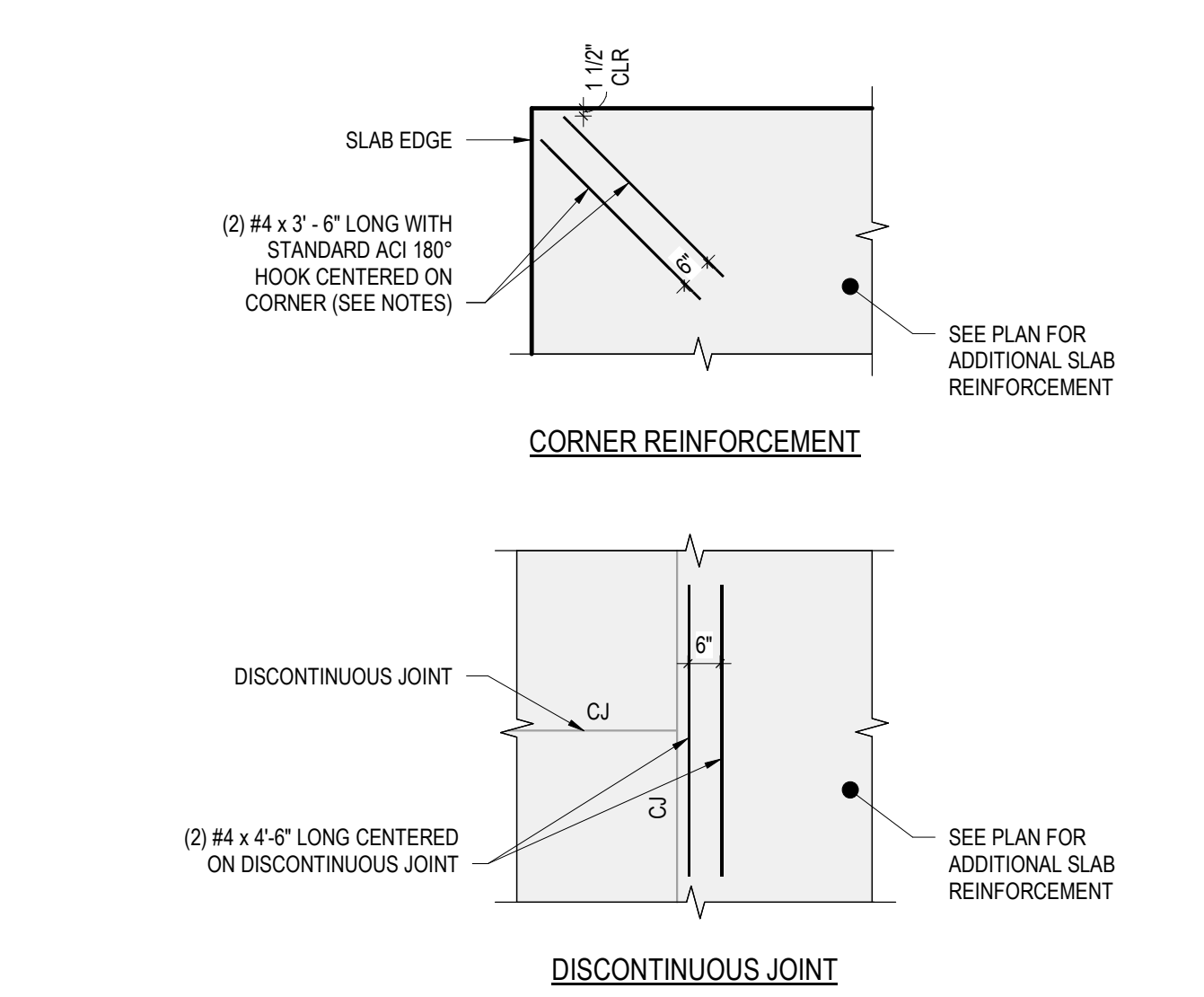
5
S-310
1/2" = 1'-0"

SLAB REINFORCEMENT AT DOOR OPENINGS



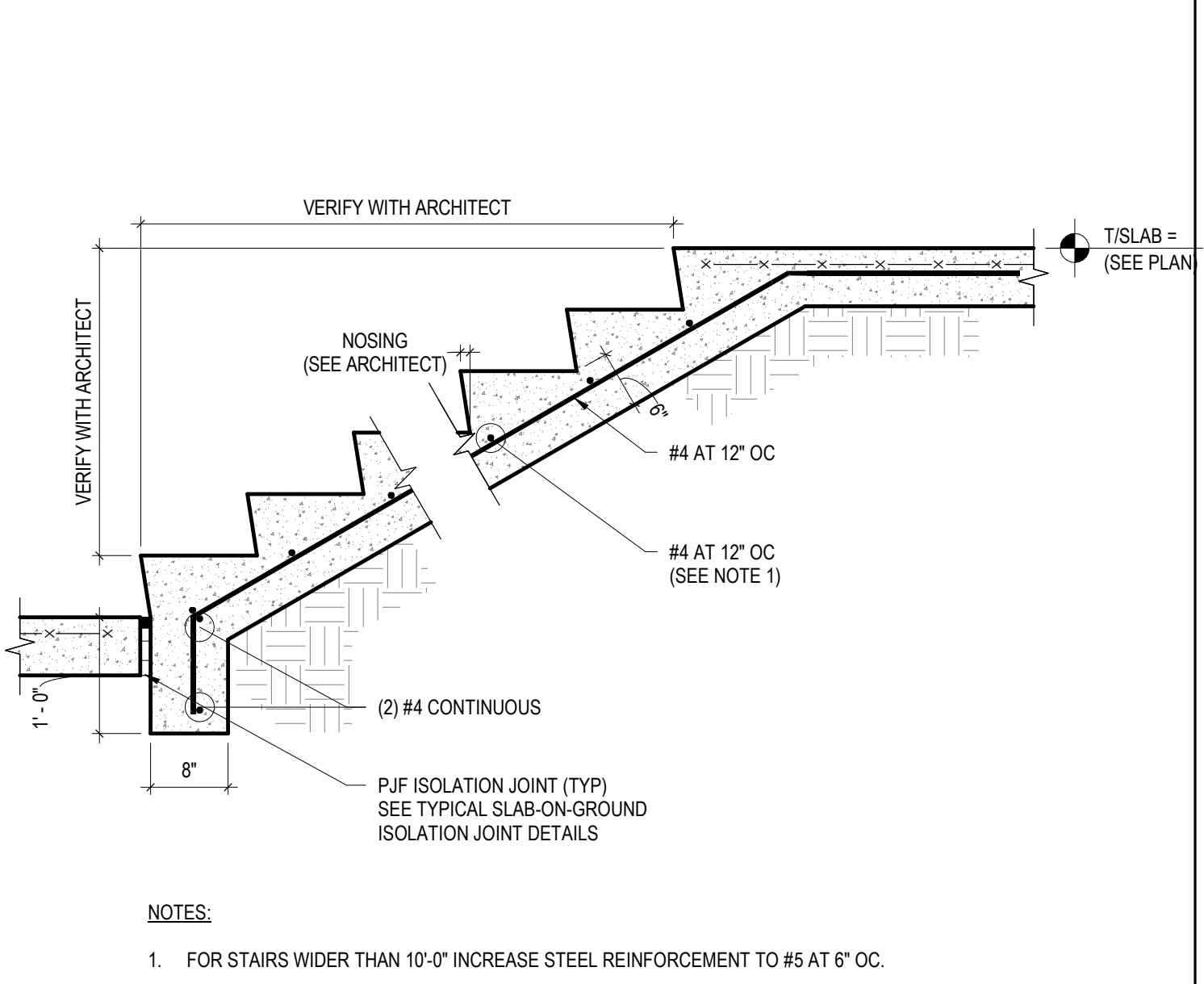
9
S-310
3/4" = 1'-0"

SLAB STEP DETAILS



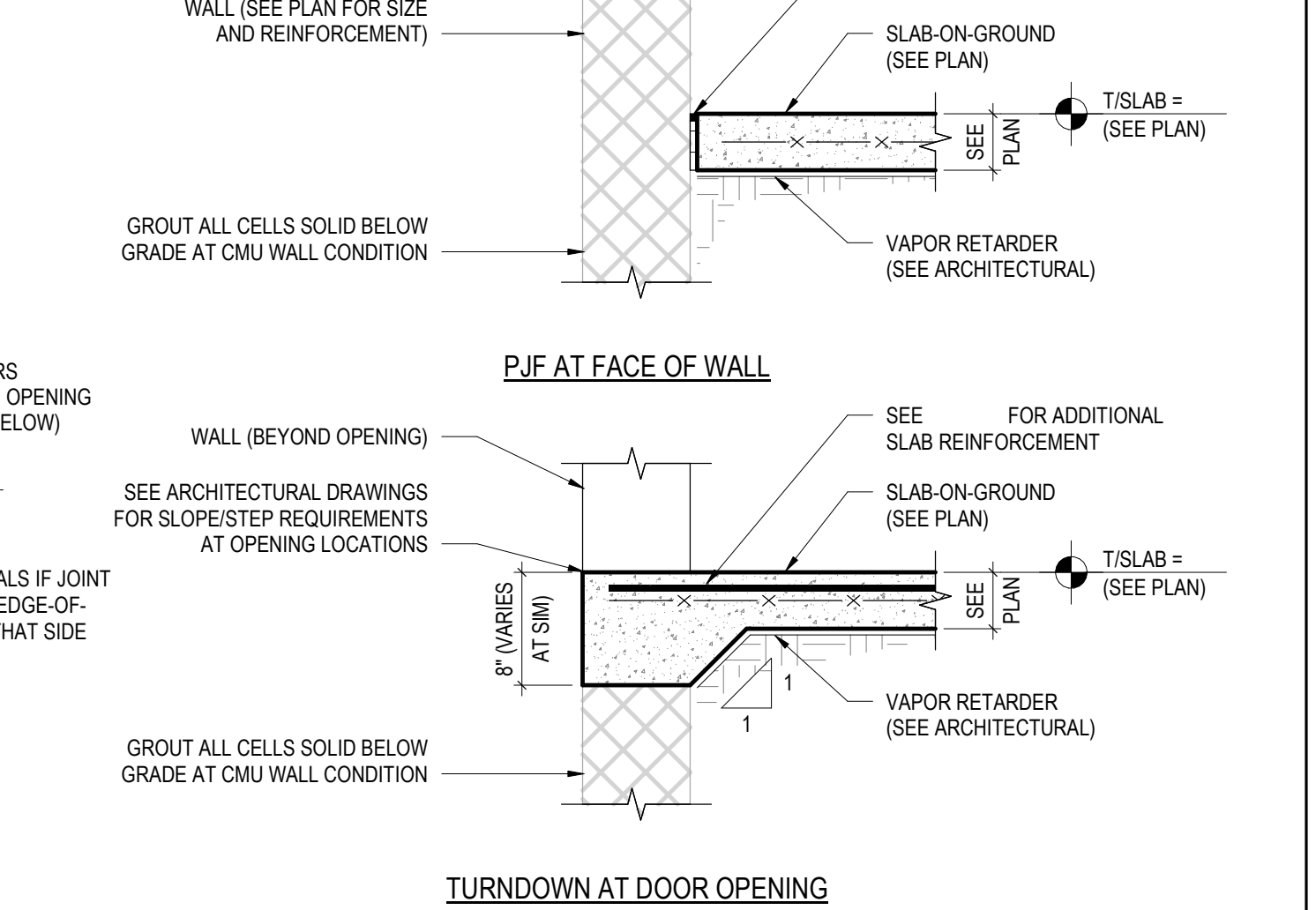
10
S-310
1" = 1'-0"

CMU WALL AT THICKENED SLAB EDGE



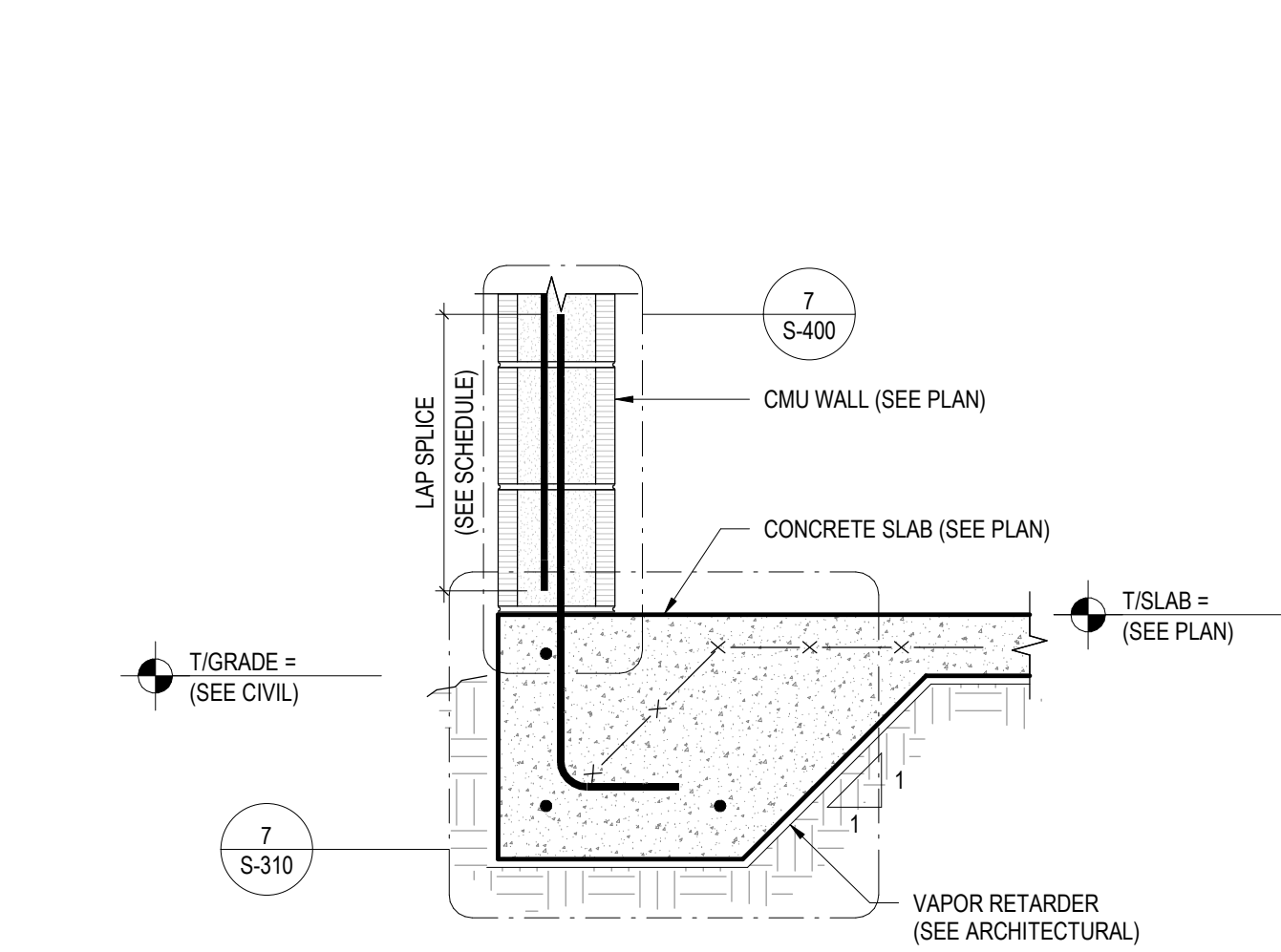
3
S-310
3/4" = 1'-0"

CONCRETE STAIRS-ON-GROUND



6
S-310
1" = 1'-0"

TYPICAL EDGE-OF-SLAB CONDITION AT WALLS



11
S-310
1/2" = 1'-0"

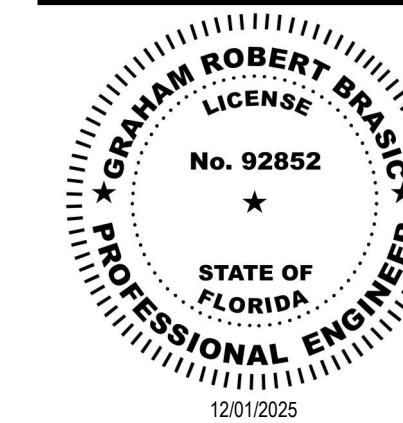
BALCONY-ON-GRADE INTERFACE WITH BUILDING TURNDOWN

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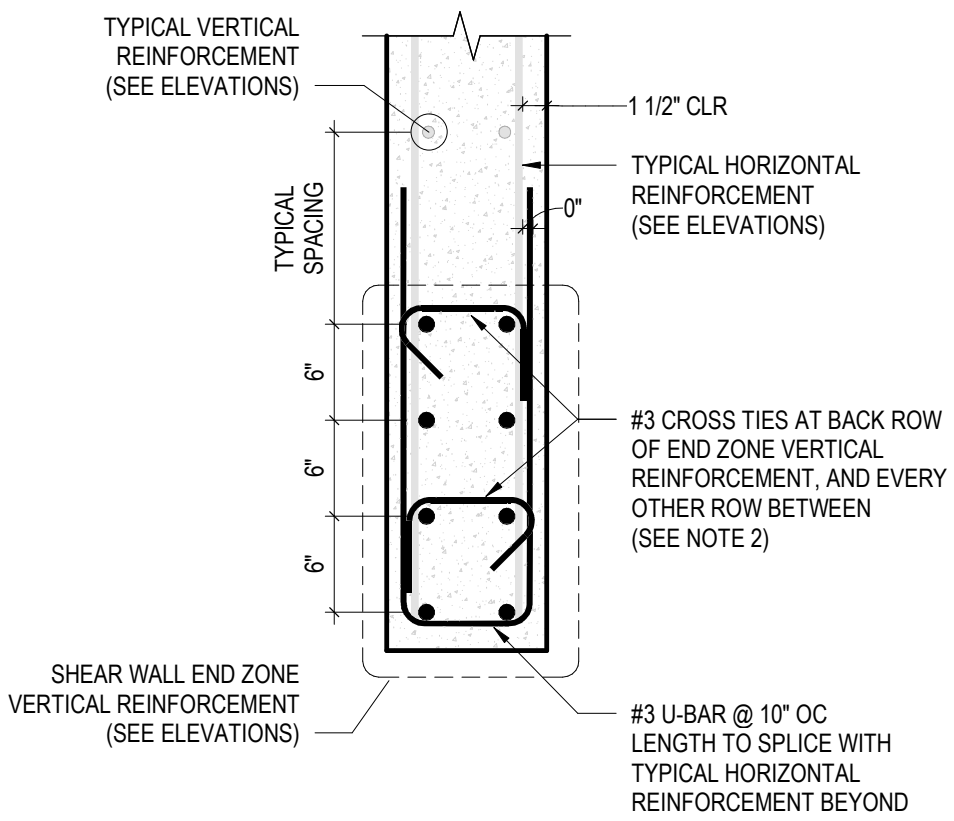
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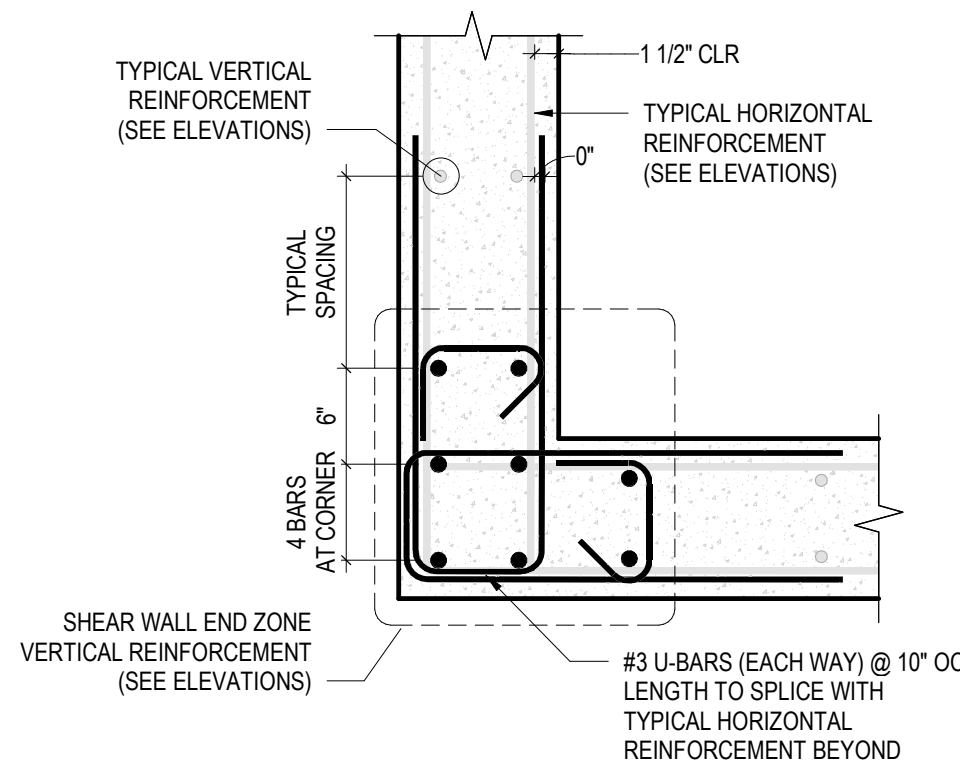
Project No.: 2021009
Date: 12/01/2025

**TYPICAL
SLAB-ON-GROUND
DETAILS**

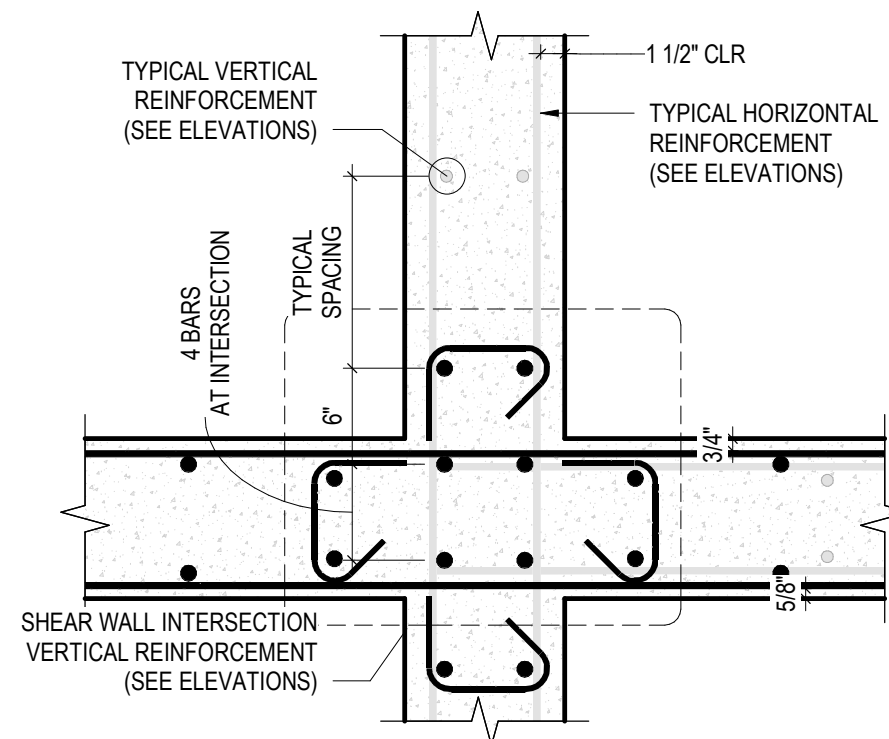
S-310



ENDS OF WALLS & AT OPENINGS
(E-TYPE MARK ON ELEVATIONS)



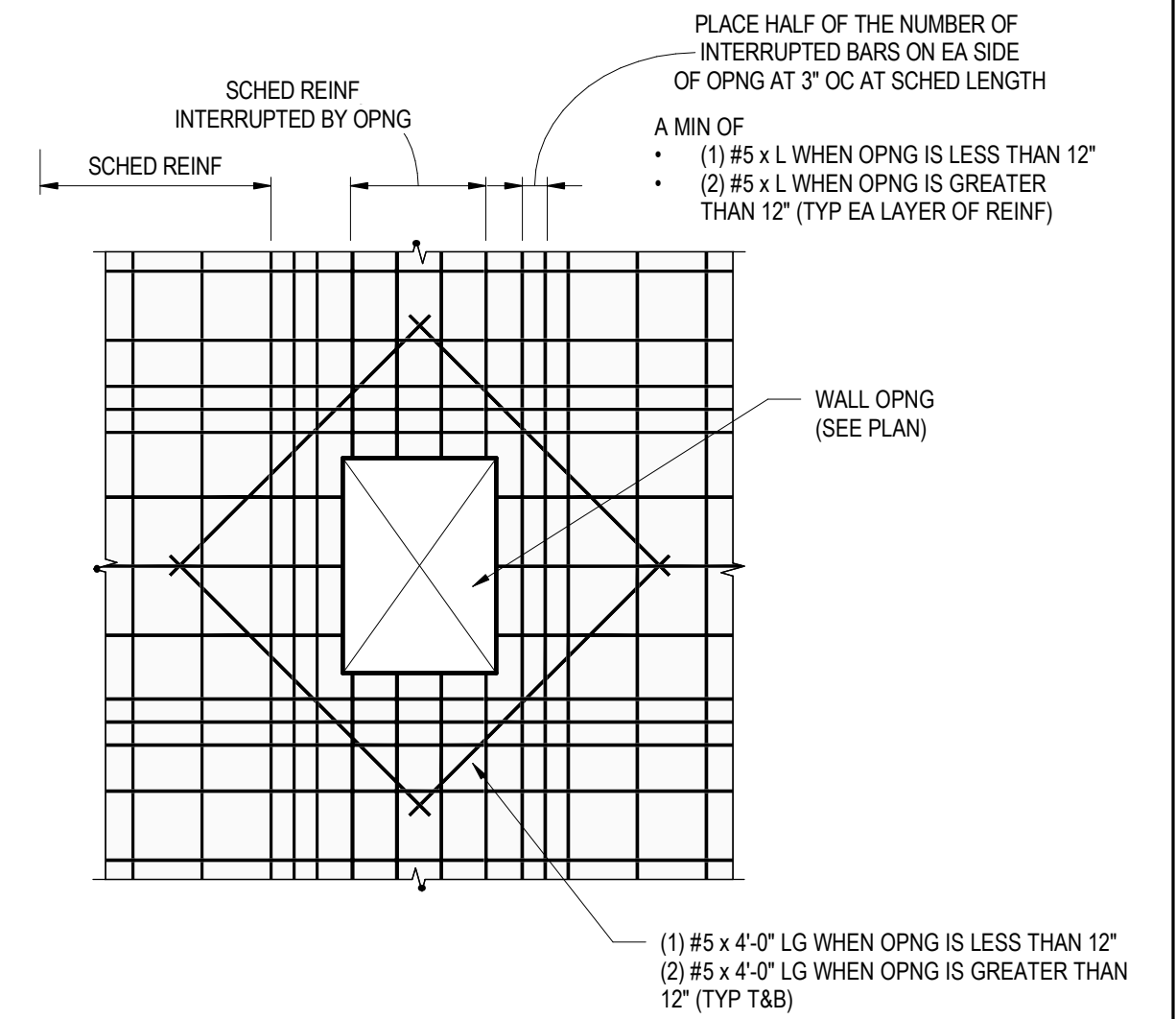
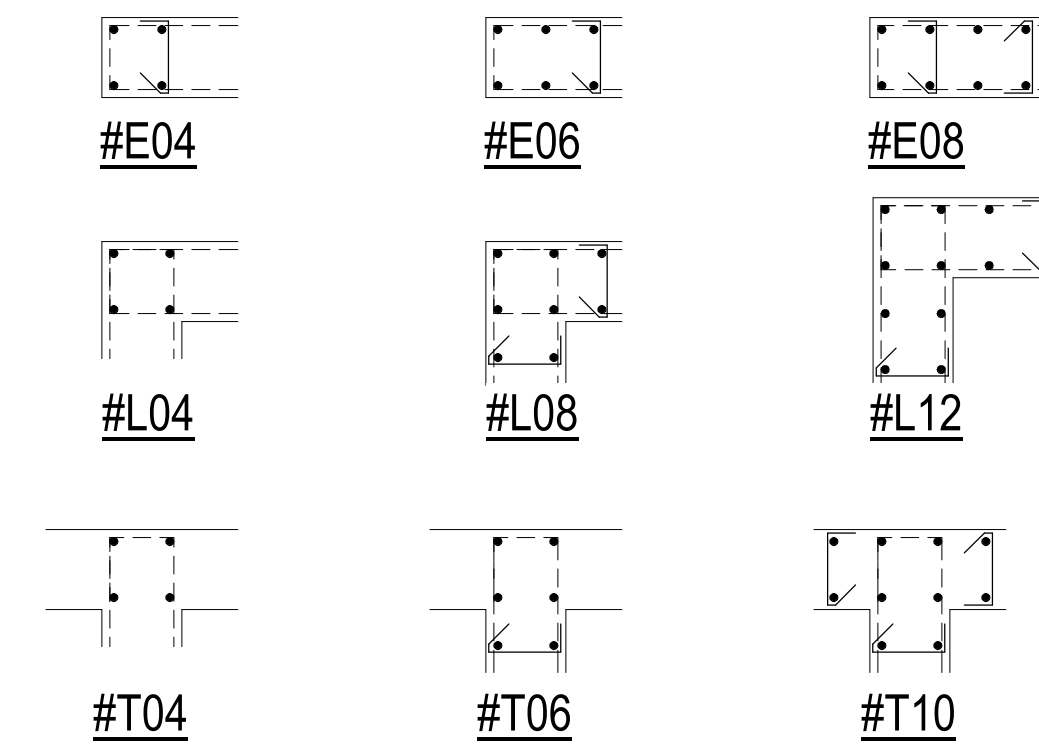
CORNER CONDITION
(L-TYPE MARK ON ELEVATIONS)



INTERSECTION CONDITION
(T-TYPE MARK ON ELEVATIONS)

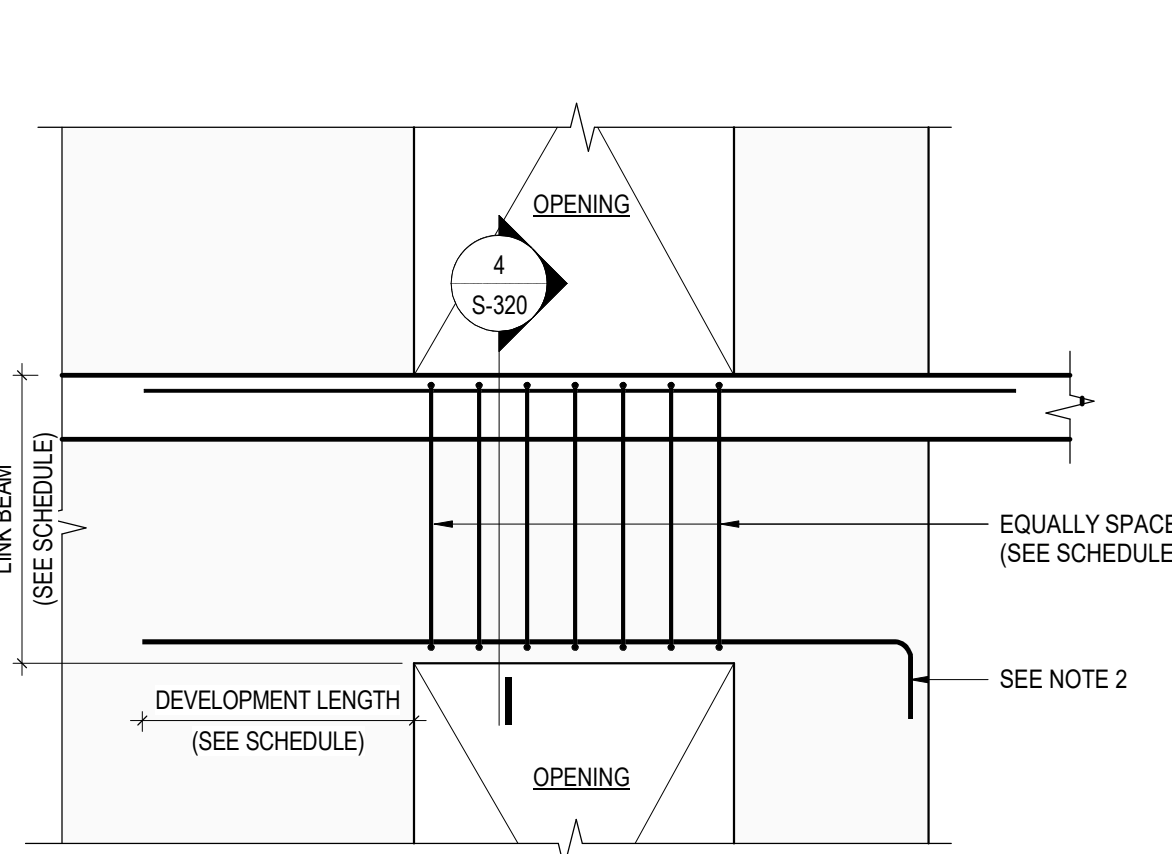
NOTES:

1. BAR LAPS SHOWN OFFSET FOR CLARITY.
- HORIZONTAL REINFORCEMENT SHALL BE LAPPED WITH BARS STACKED VERTICALLY.
- VERTICAL REINFORCEMENT SHALL BE LAPPED WITH BARS ALIGNED PARALLEL TO FACE-OF-WALL (OFFSET BENDS SHALL NOT BE PERMITTED).
- CROSS TIE BAR ORIENTATION SHALL BE ALTERNATED AT EACH TIE IN BOTH THE HORIZONTAL AND VERTICAL DIRECTION.
2. BAR COUNT INDICATED IN SHEAR WALL VERTICAL REINFORCEMENT SCHEDULE IS THE TOTAL QUANTITY OF BARS REQUIRED, DISTRIBUTED HALF EACH FACE AND THROUGHOUT CORNER/INTERSECTION CONDITIONS AS INDICATED IN DIAGRAMS BELOW.

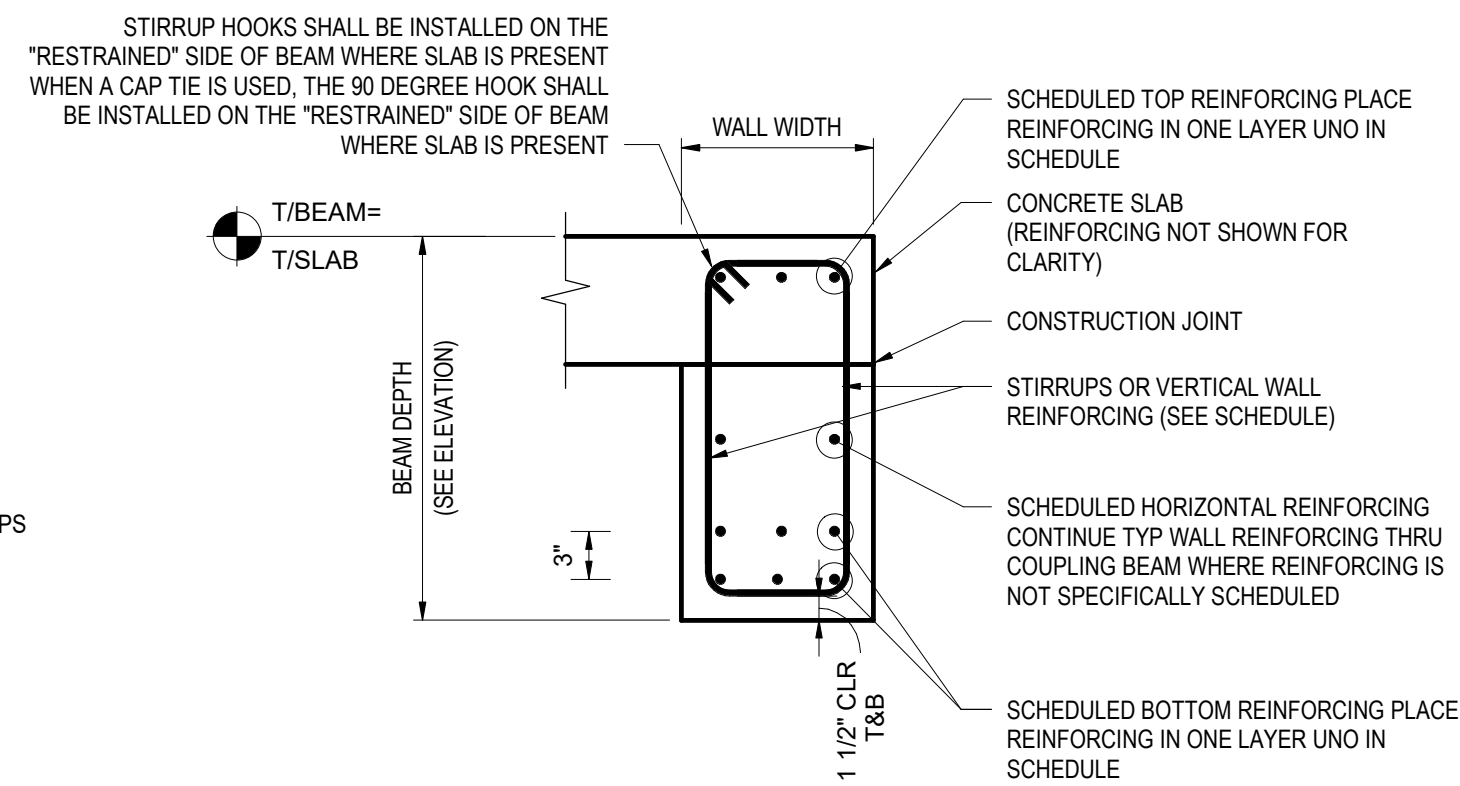


2 TYPICAL WALL OPENING
1/2" = 1'-0"

1 SHEAR WALL END ZONE AND CORNER/INTERSECTION REBAR LAYOUTS
1" = 1'-0"

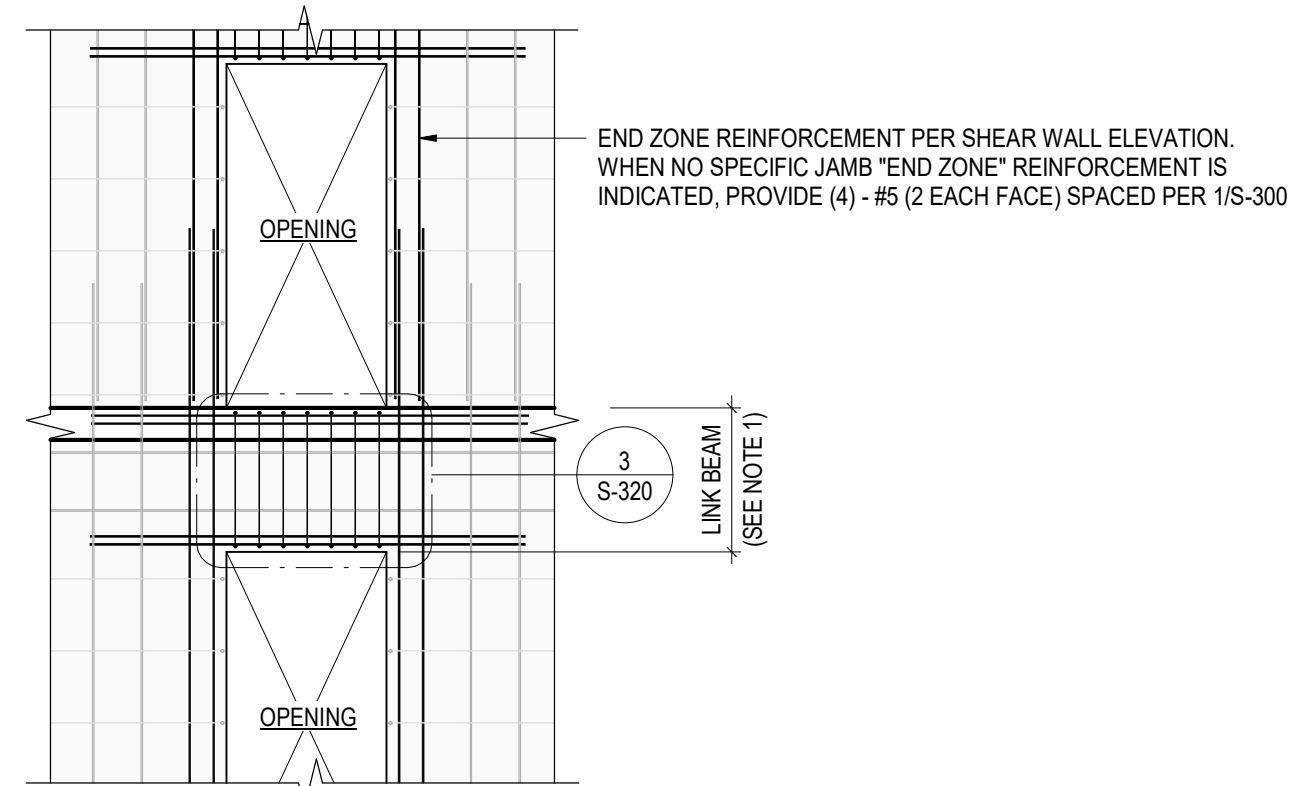


3 SHEAR WALL LINK BEAM ELEVATION
1/2" = 1'-0"

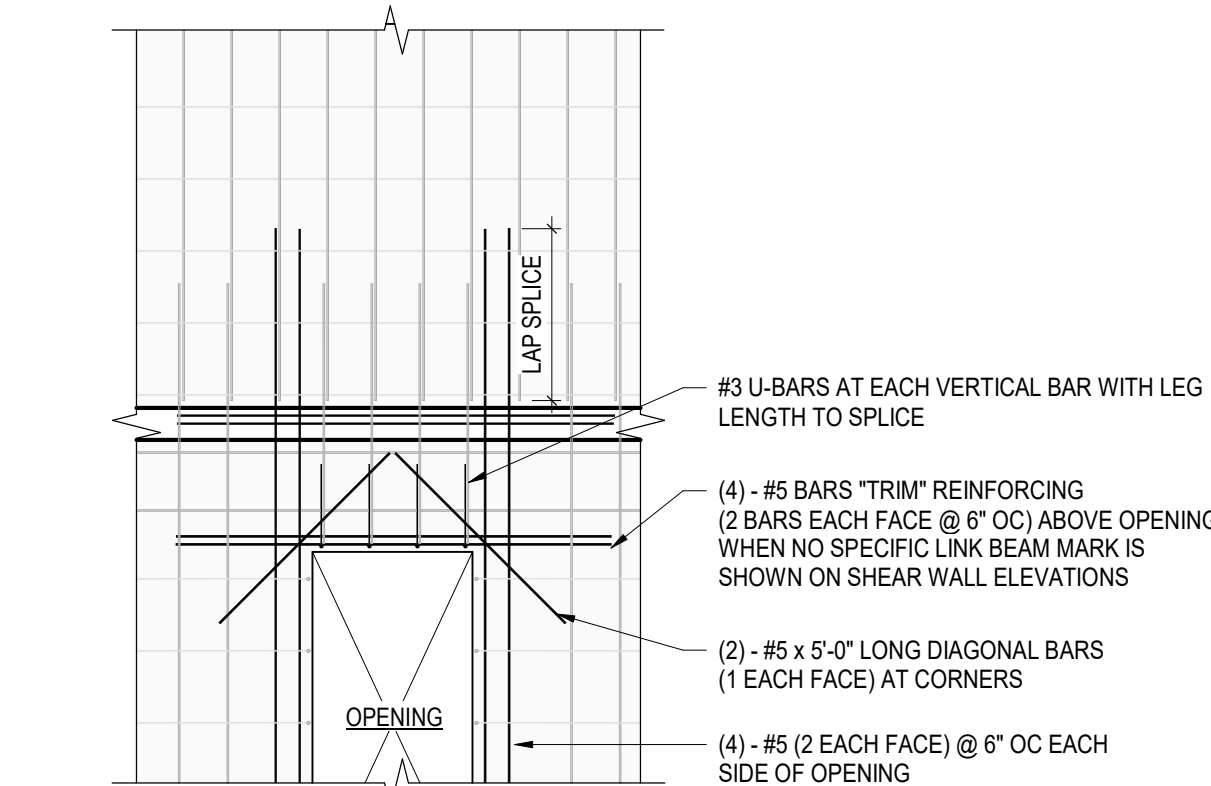


- NOTES:
1. CLOSED STIRRUP MAY BE EITHER ONE CONTINUOUS BAR WITH A 135 HOOK ON EITHER END AROUND THE SAME LONGITUDINAL BAR, OR A U SHAPED STIRRUP WITH 135 DEGREE HOOKS AT EITHER END AND AN OPEN STIRRUP AS A CAP WITH A 135 DEGREE HOOK AT ONE END AND A 90 DEGREE HOOK AT THE OTHER (ACI 318 STANDARD OPTIONS FOR DETAILING OF CLOSED STIRRUP).
 2. CONCRETE STRENGTH OF THE COUPLING BEAM SHALL MATCH THE SPECIFIED STRENGTH OF THE WALL BELOW, INCLUDING THE SLAB DEPTH.

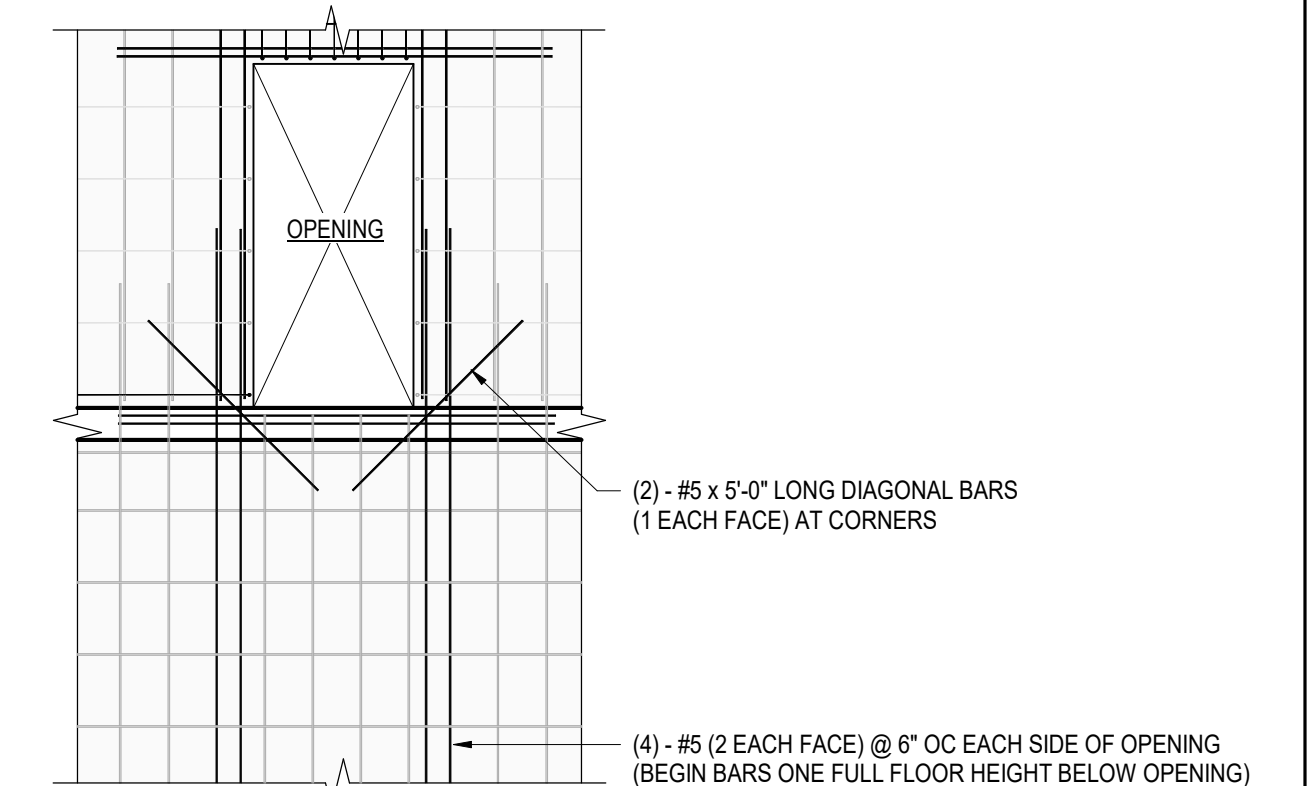
4 LINK BEAM - SECTION
1" = 1'-0"



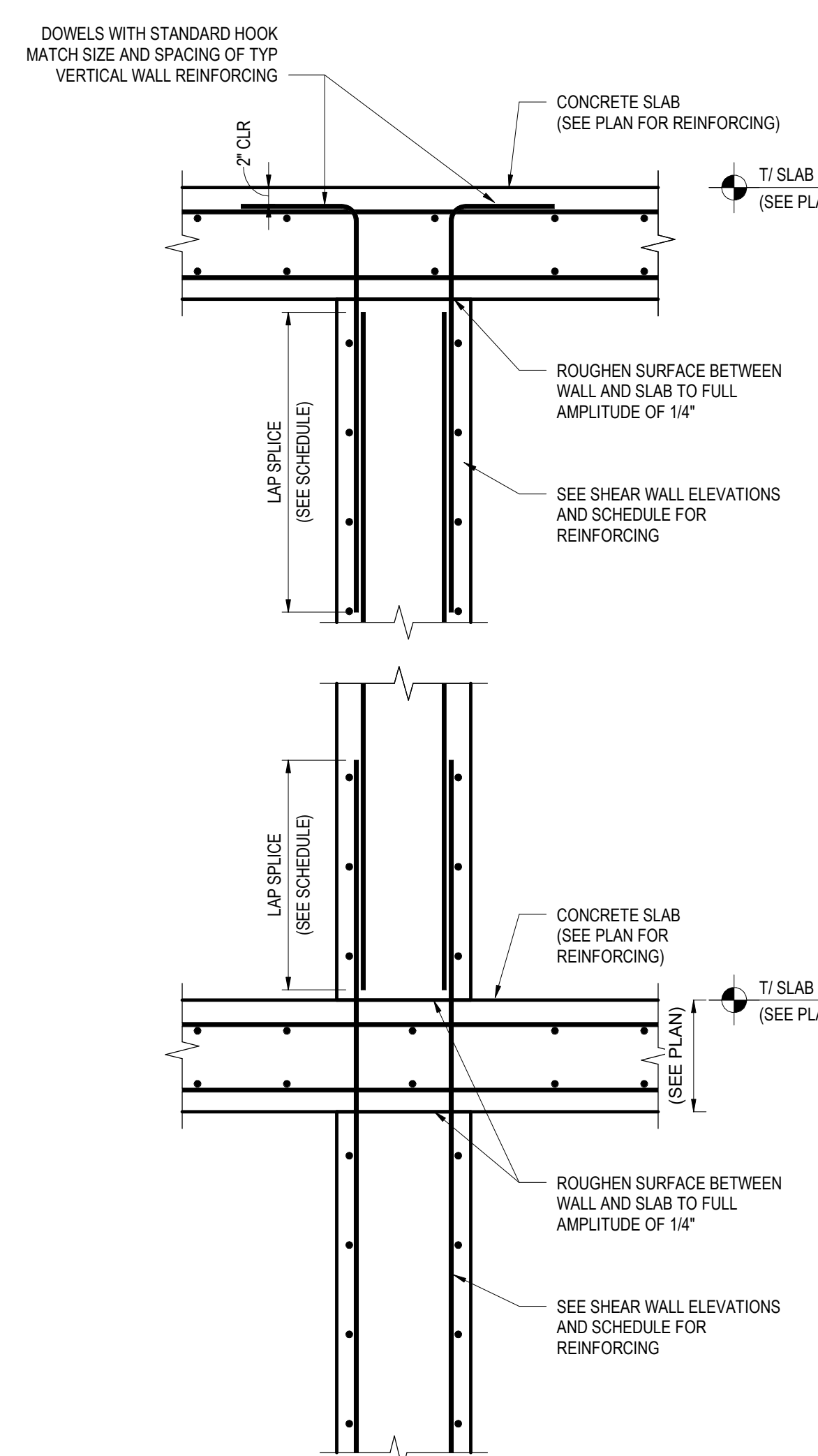
TYPICAL STACKED OPENINGS



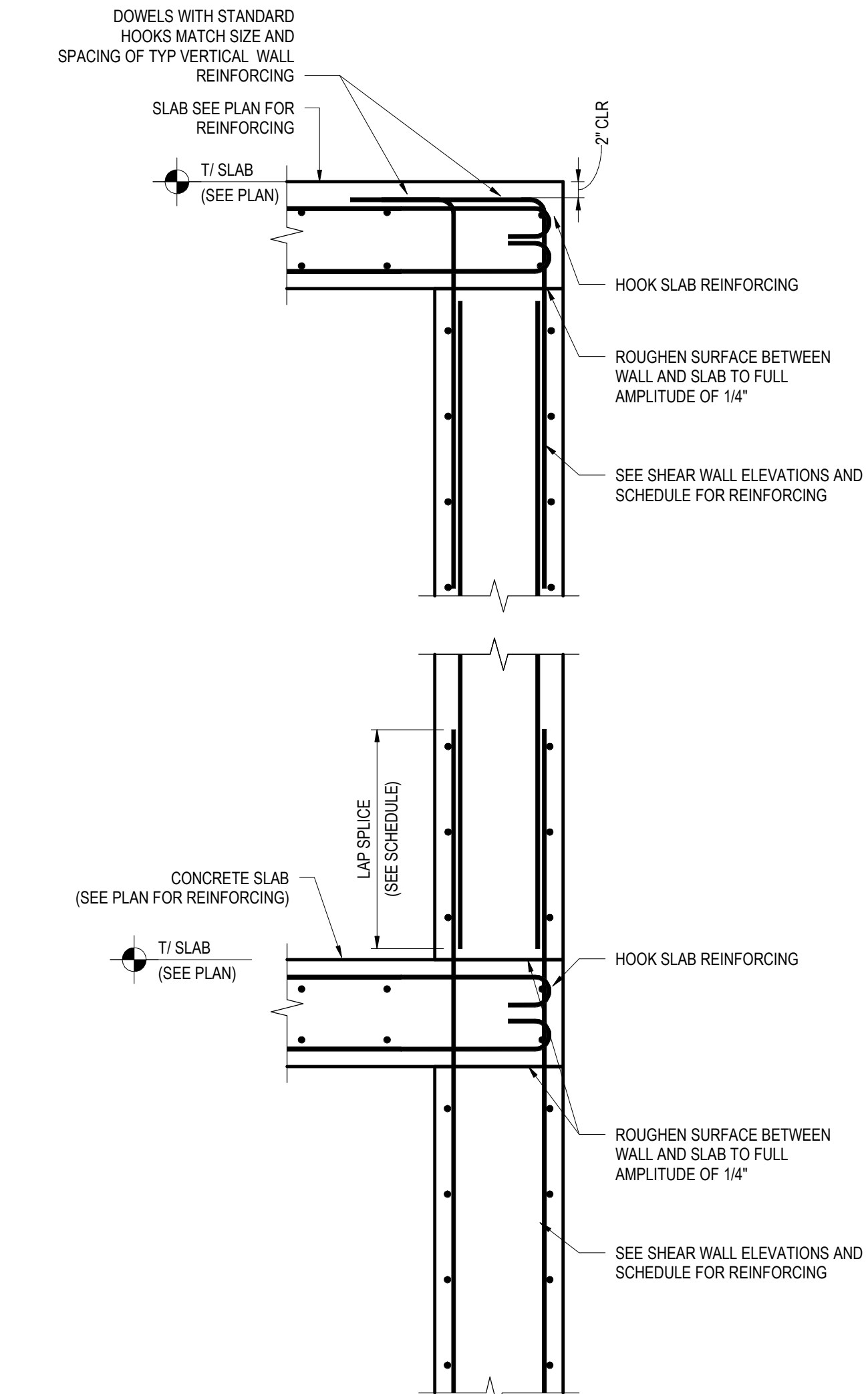
DISCONTINUOUS OPENING ALIGNMENT - NO OPENING ABOVE
(UNLESS NOTED OTHERWISE ON SHEAR WALL ELEVATIONS)



DISCONTINUOUS OPENING ALIGNMENT - NO OPENING BELOW
(UNLESS NOTED OTHERWISE ON SHEAR WALL ELEVATIONS)



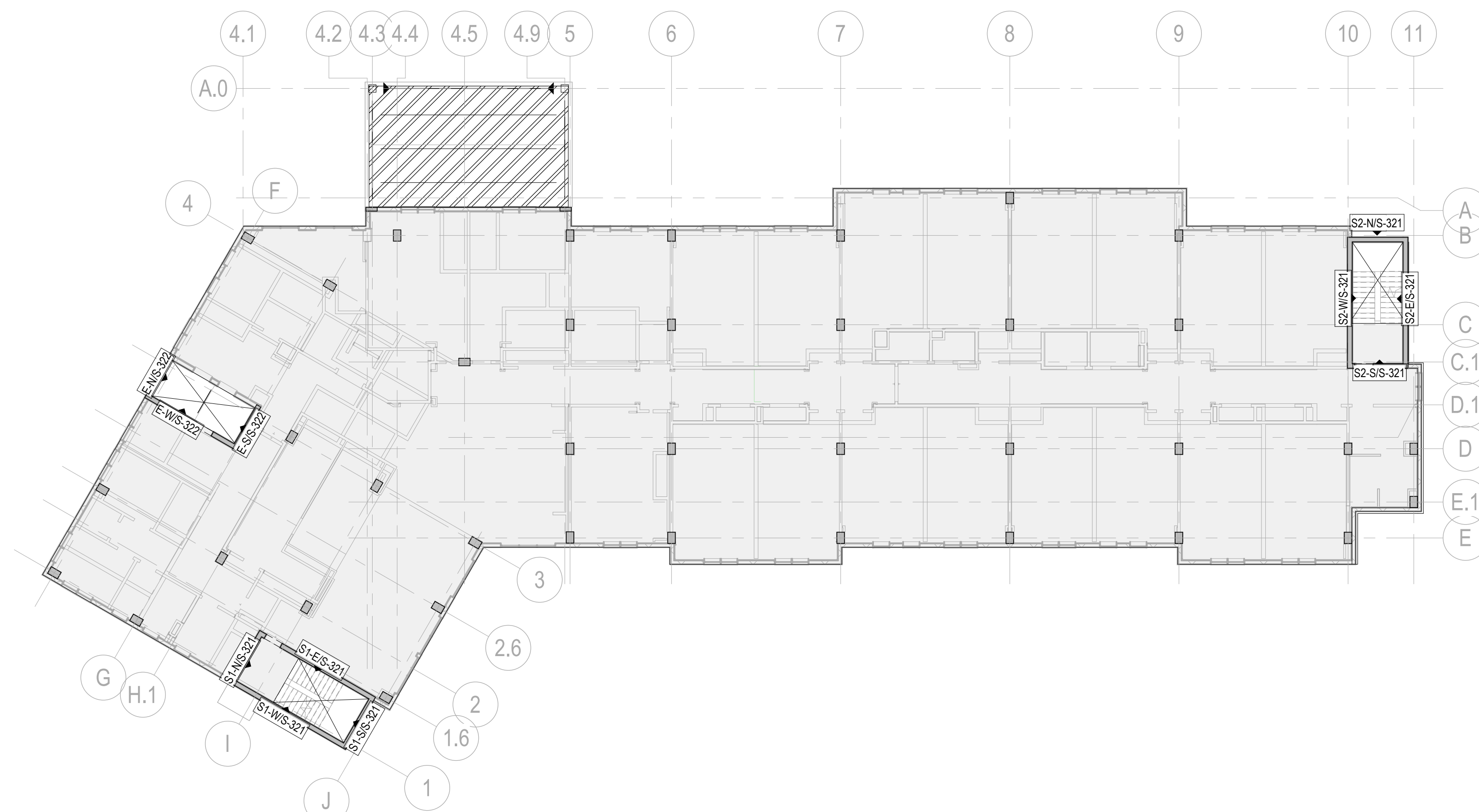
INTERIOR WALL



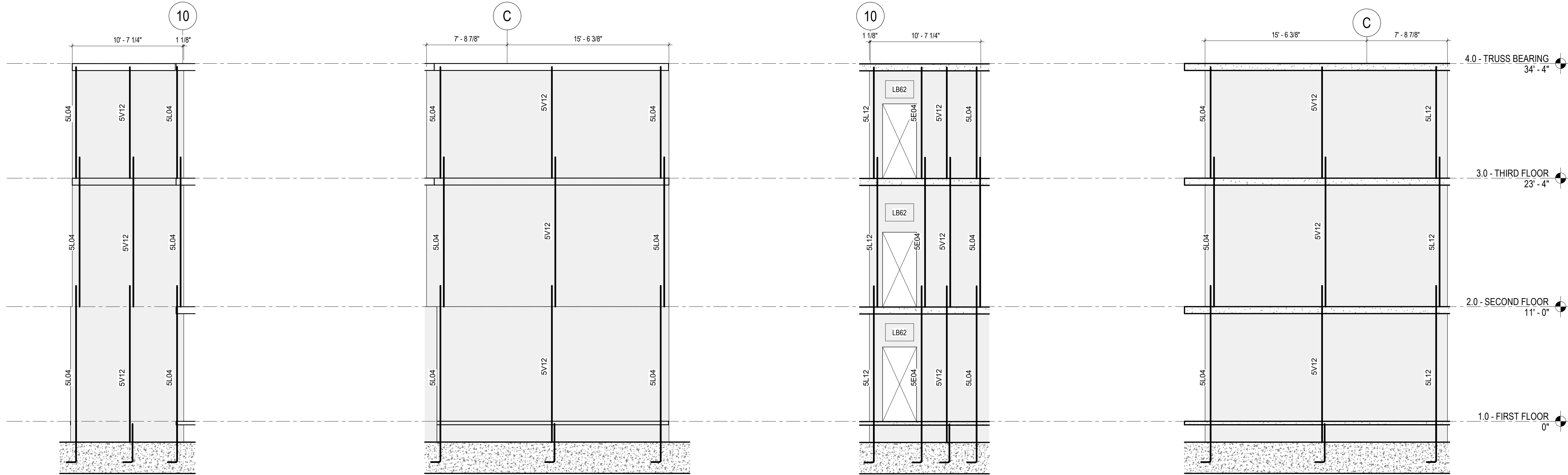
EXTERIOR WALL

6 TYPICAL CONCRETE SLAB-TO-SHEAR WALL CONNECTIONS - SECTION
1" = 1'-0"

5 BAR ARRANGEMENT AT OPENINGS (UNO) - SECTION
1/4" = 1'-0"



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S2-N
S-321

STAIR 2 NORTH WALL ELEVATION

3/16" = 1'-0"

S2-E
S-321

STAIR 2 EAST WALL ELEVATION

3/16" = 1'-0"

S2-S
S-321

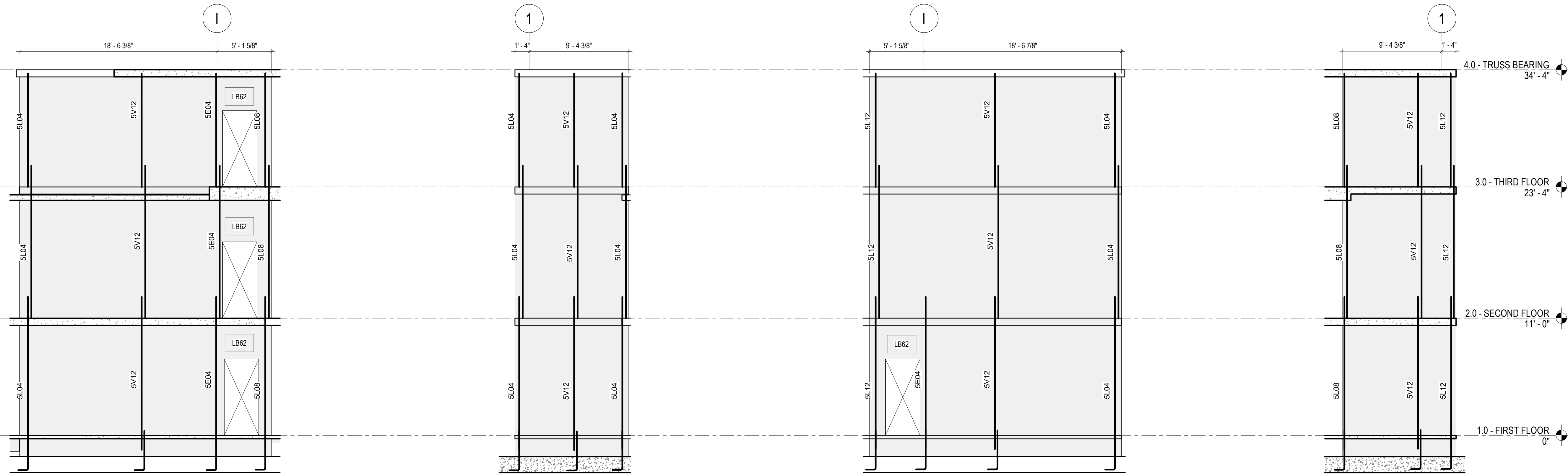
STAIR 2 SOUTH WALL ELEVATION

3/16" = 1'-0"

S2-W
S-321

STAIR 2 WEST WALL ELEVATION

3/16" = 1'-0"



S1-E
S-321

STAIR 1 EAST WALL ELEVATION

3/16" = 1'-0"

S1-S
S-321

STAIR 1 SOUTH WALL ELEVATION

3/16" = 1'-0"

S1-W
S-321

STAIR 1 WEST WALL ELEVATION

3/16" = 1'-0"

S1-N
S-321

STAIR 1 NORTH WALL ELEVATION

3/16" = 1'-0"

- SHEAR WALL ELEVATION NOTES:**
1. DENOTES 10" WALL THICKNESS
DENOTES 12" WALL THICKNESS
 2. SEE ARCHITECTURAL DRAWING FOR ROUGH OPENING DIMENSIONS
 3. SHEAR WALL REINFORCEMENT TAGS:
 - V#/#: DENOTES TYPICAL VERTICAL REINFORCEMENT (SEE SCHEDULE ON THIS SHEET)
 - H#/#: DENOTES TYPICAL HORIZONTAL REINFORCEMENT (SEE SCHEDULE ON THIS SHEET)
 - E#/#: DENOTES VERTICAL END ZONE REINFORCEMENT (SEE SCHEDULE ON THIS SHEET)
 - C#/#: DENOTES COUPLING BEAM, MARK (SEE SCHEDULE ON THIS SHEET)
 4. ALL BARS SHALL BE FULLY LAPPED, INCLUDING DOWELS INTO FOUNDATION ELEMENTS.
 5. SEE DETAILS ON S-320.
 6. GC SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF WALLS AND OPENINGS WITH ARCHITECTURAL DRAWINGS. NOTIFY DESIGN TEAM OF DISCREPANCIES.

TYPICAL HORIZONTAL REINFORCING		
MARK	BAR SIZE	BAR SPACING
SH12	#5	12"

TYPICAL VERTICAL REINFORCING		
MARK	BAR SIZE	BAR SPACING
SV12	#5	12"

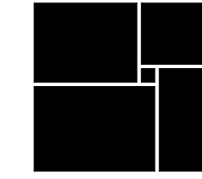
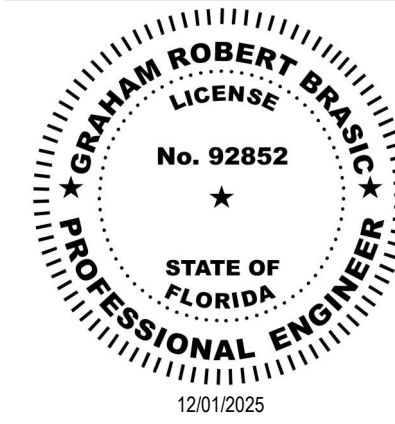
VERTICAL END REINFORCING		
MARK	BAR SIZE	# BARS (1/2 EF)
SE04	#5	4
SL12	#5	12

VERTICAL CORNER REINFORCING		
MARK	BAR SIZE	# BARS (1/2 EF)
SL04	#5	4
SL08	#5	8
SL12	#5	12

LINK BEAM SCHEDULE			
MARK	REINFORCEMENT		
	LONGITUDINAL	STIRRUPS	SKIN
LB62	(2) - #5 (T&B)	#4 @ 12" OC	SEE NOTE 1

NOTES:
1. #5 @ 9" OC (EACH FACE) SKIN REINFORCEMENT SHALL BE PROVIDED FOR ALL LINK BEAMS GREATER THAN 36" DEEP, FULL-HEIGHT OF LINK BEAM.

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Date: 12/01/2025

CONCRETE
SHEAR WALL
ELEVATIONS

S-321

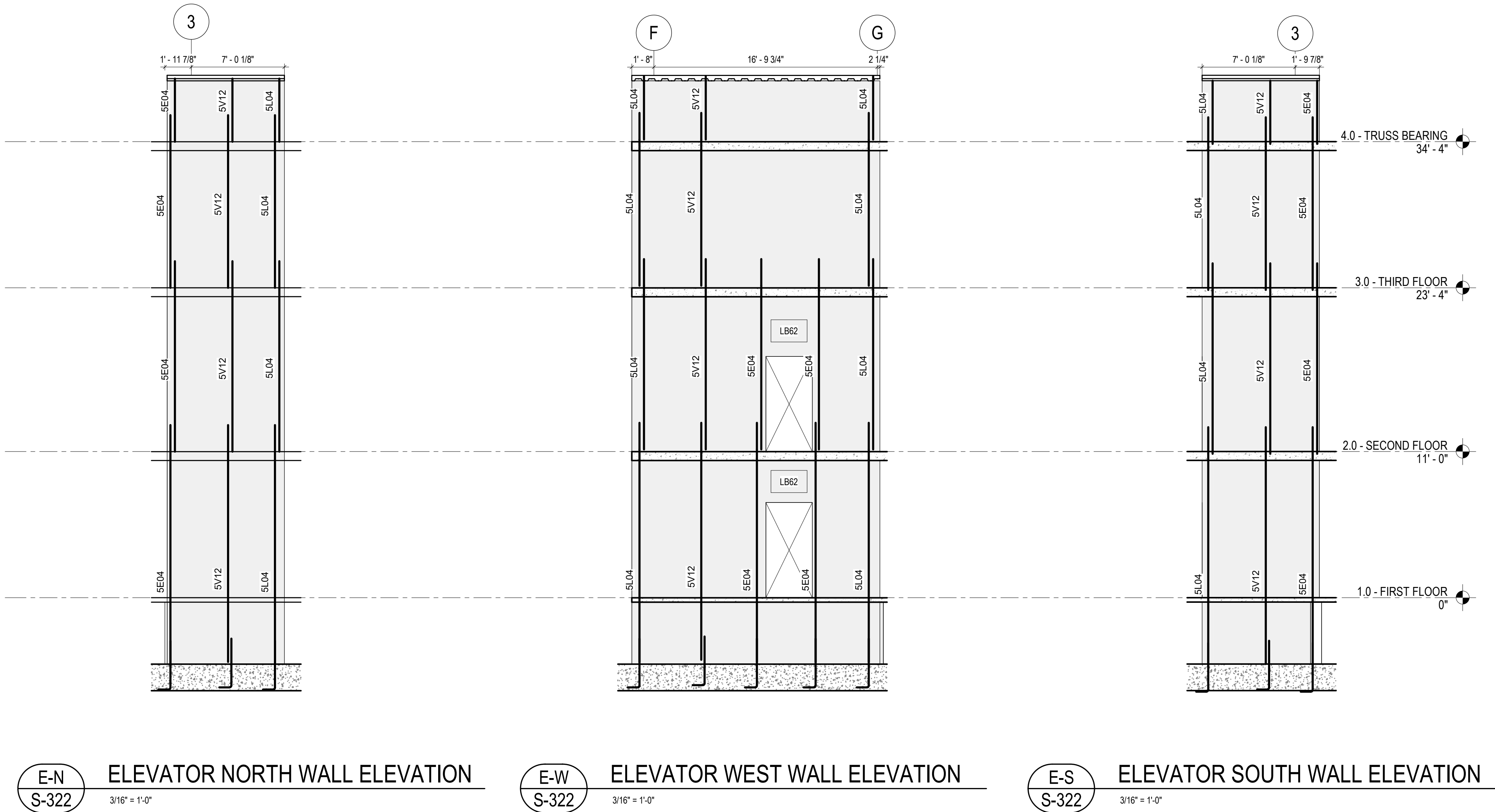


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- SHEAR WALL ELEVATION NOTES:**
1. DENOTES 10" WALL THICKNESS
 DENOTES 12" WALL THICKNESS
 2. SEE ARCHITECTURAL DRAWING FOR ROUGH OPENING DIMENSIONS
 3. SHEAR WALL REINFORCEMENT TAGS:
 - #VV# DENOTES TYPICAL VERTICAL REINFORCEMENT (SEE SCHEDULE ON THIS SHEET)
 - #EH# DENOTES VERTICAL END ZONE REINFORCEMENT (SEE SCHEDULE ON THIS SHEET)
 - #HH# DENOTES TYPICAL HORIZONTAL REINFORCEMENT (SH12 UNLESS NOTED OTHERWISE - (SEE SCHEDULE ON THIS SHEET))
 - CBW# DENOTES COUPLING BEAM, MARK (SEE SCHEDULE ON THIS SHEET)
 4. ALL BARS SHALL BE FULLY LAPPED, INCLUDING DOWELS INTO FOUNDATION ELEMENTS.
 5. SEE DETAILS ON S-320.
 6. GC SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF WALLS AND OPENINGS WITH ARCHITECTURAL DRAWINGS. NOTIFY DESIGN TEAM OF DISCREPANCIES.

TYPICAL HORIZONTAL REINFORCING		
MARK	BAR SIZE	BAR SPACING
SH12	#5	12"

TYPICAL VERTICAL REINFORCING		
MARK	BAR SIZE	BAR SPACING
SV12	#5	12"

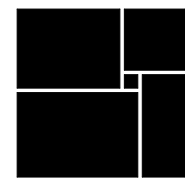
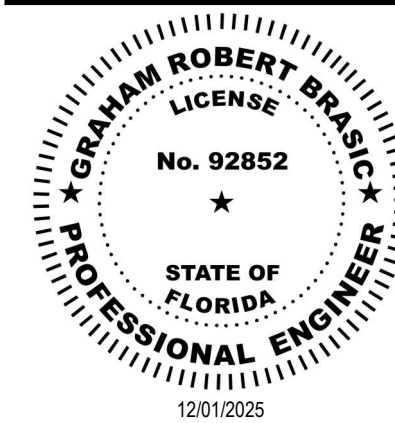
VERTICAL END REINFORCING		
MARK	BAR SIZE	# BARS (1/2 EF)
SE04	#5	4

VERTICAL CORNER REINFORCING		
MARK	BAR SIZE	# BARS (1/2 EF)
SL04	#5	4
SL08	#5	8
SL12	#5	12

LINK BEAM SCHEDULE			
MARK	REINFORCEMENT		
	LONGITUDINAL	STIRRUPS	SKIN
LB62	(2) - #5 (T&B)	#4 @ 12" OC	SEE NOTE 1

NOTES:
1. #5 @ 9" OC (EACH FACE) SKIN REINFORCEMENT SHALL BE PROVIDED FOR ALL LINK BEAMS GREATER THAN 36" DEEP, FULL-HEIGHT OF LINK BEAM.

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Date: 12/01/2025

**CONCRETE
SHEAR WALL
ELEVATIONS**

S-322



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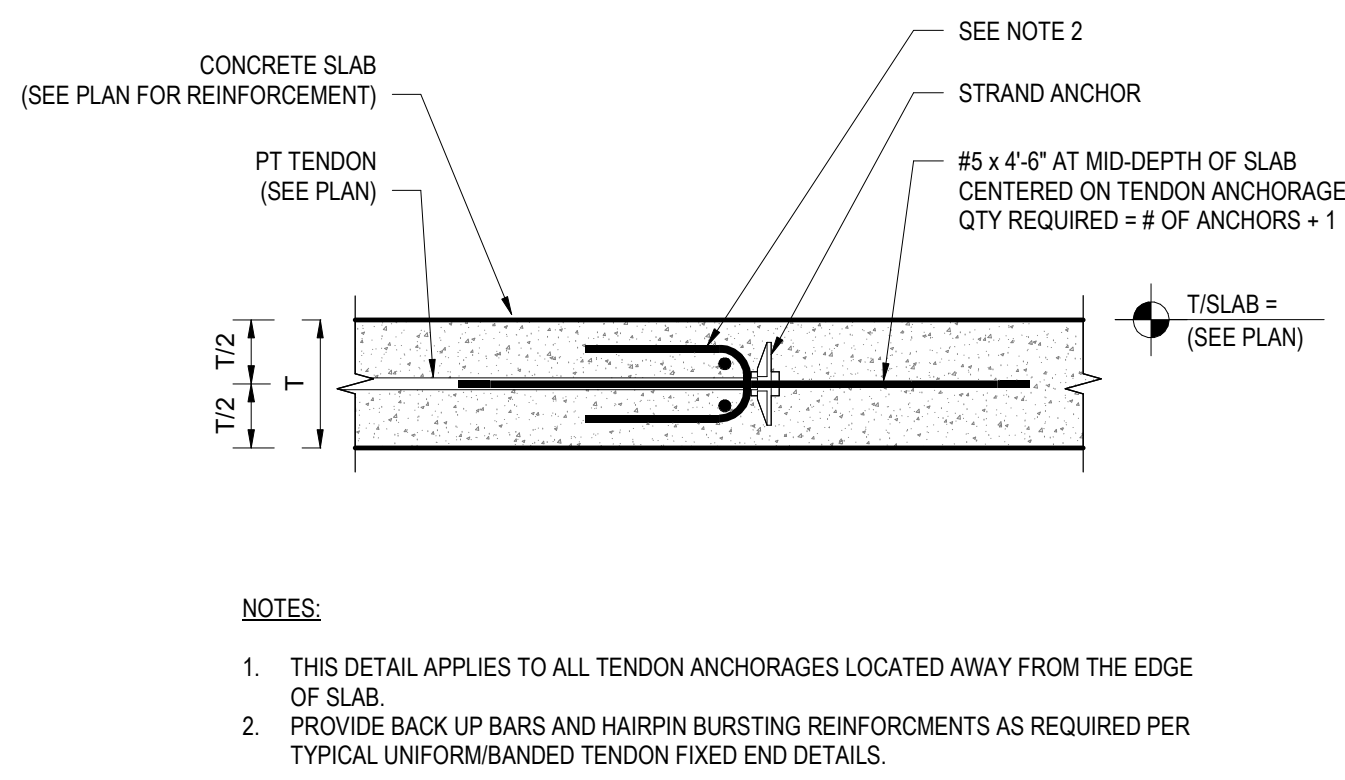
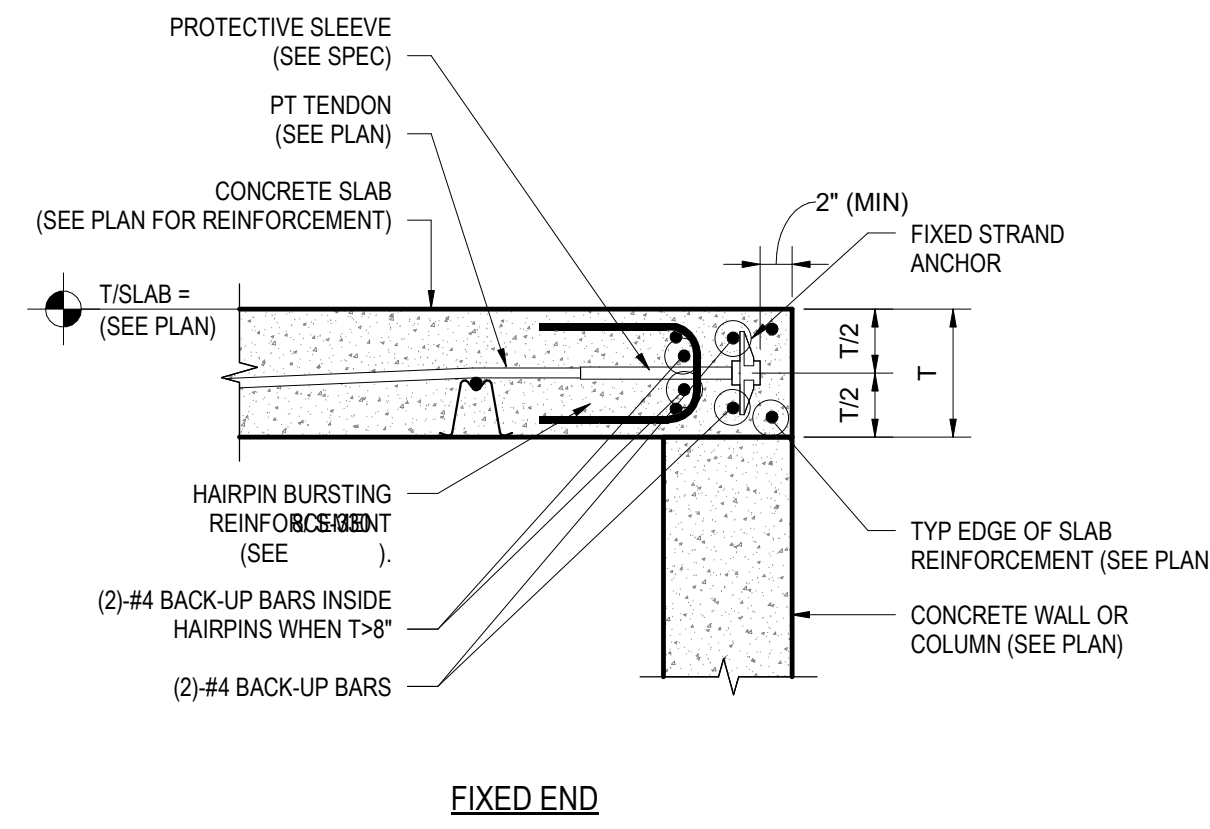
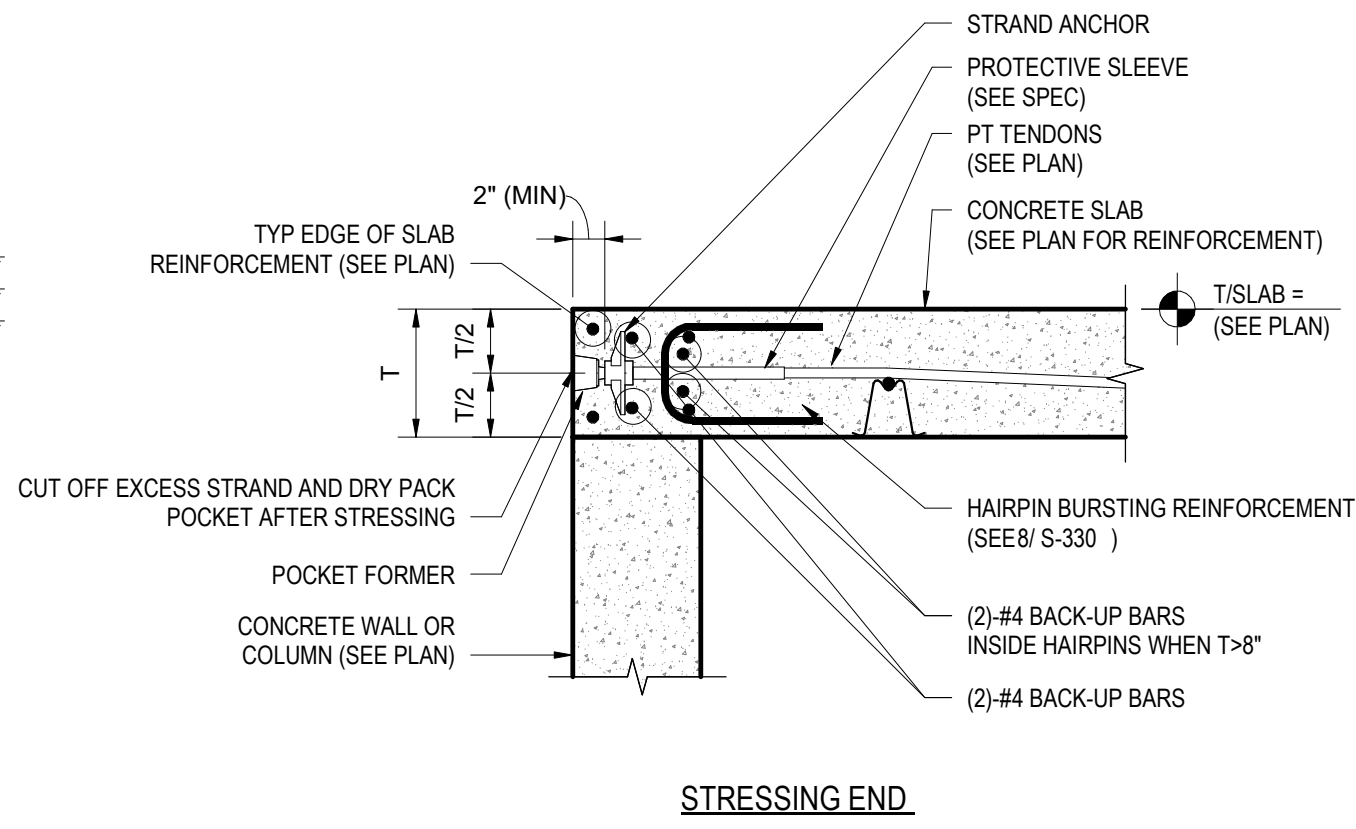
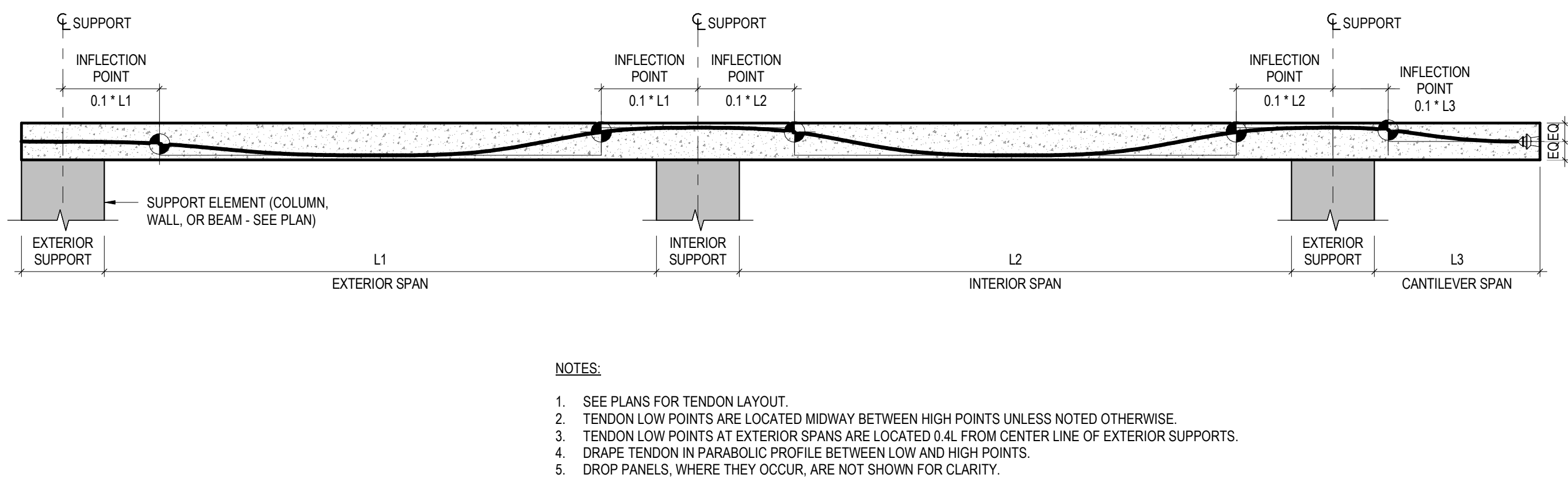
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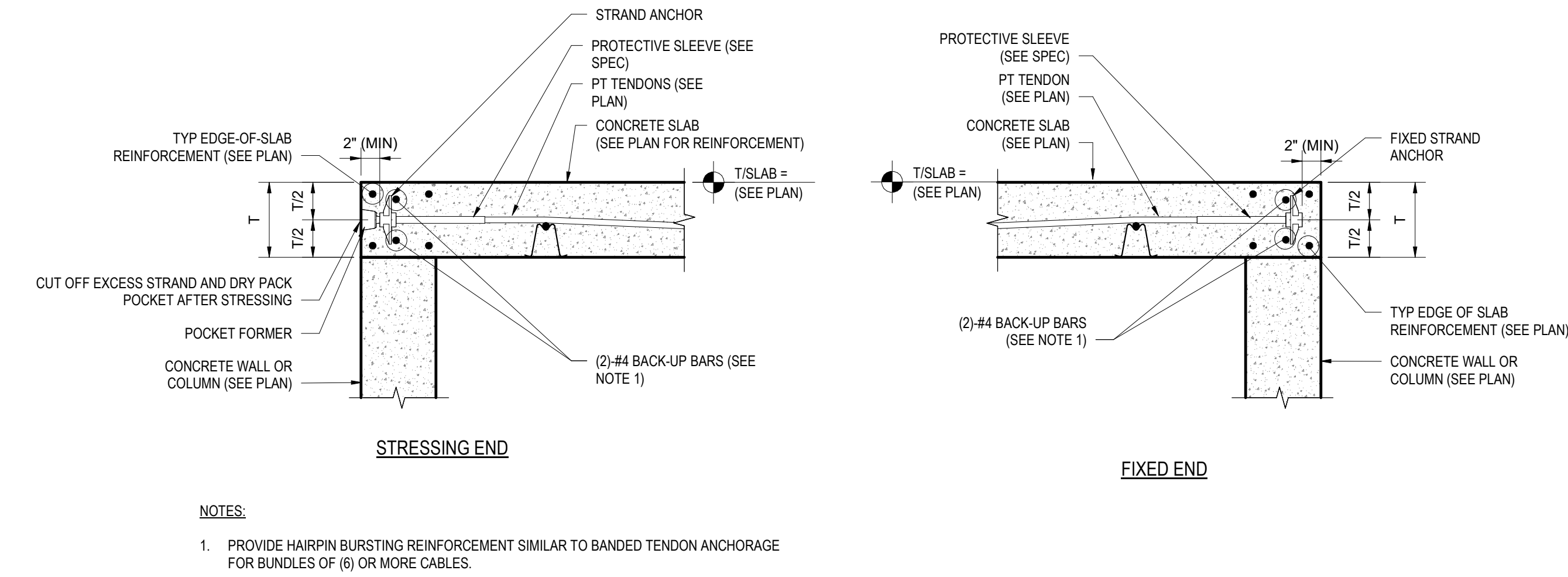
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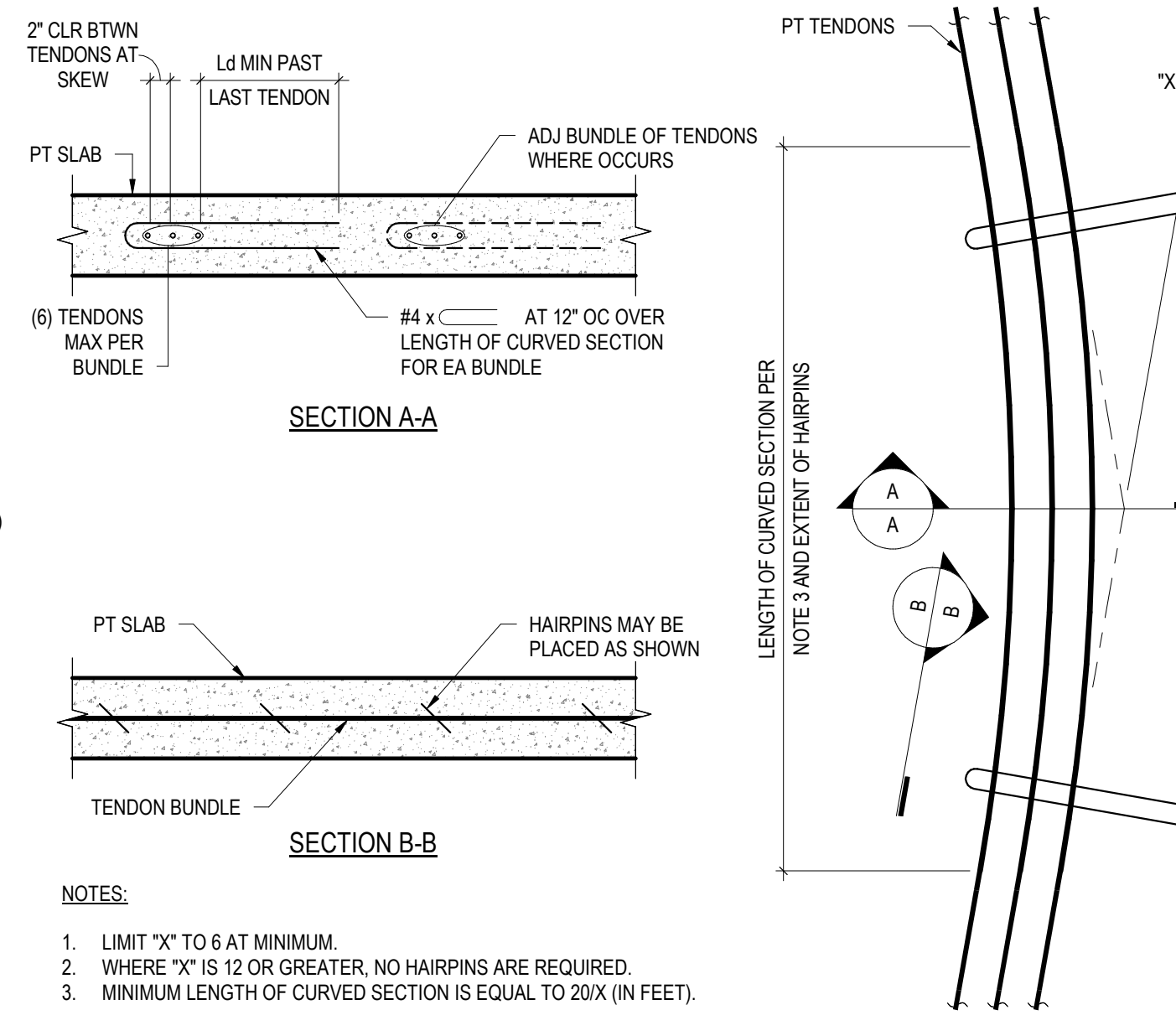
1 TYPICAL TENDON PROFILE

1/2" = 1'-0"



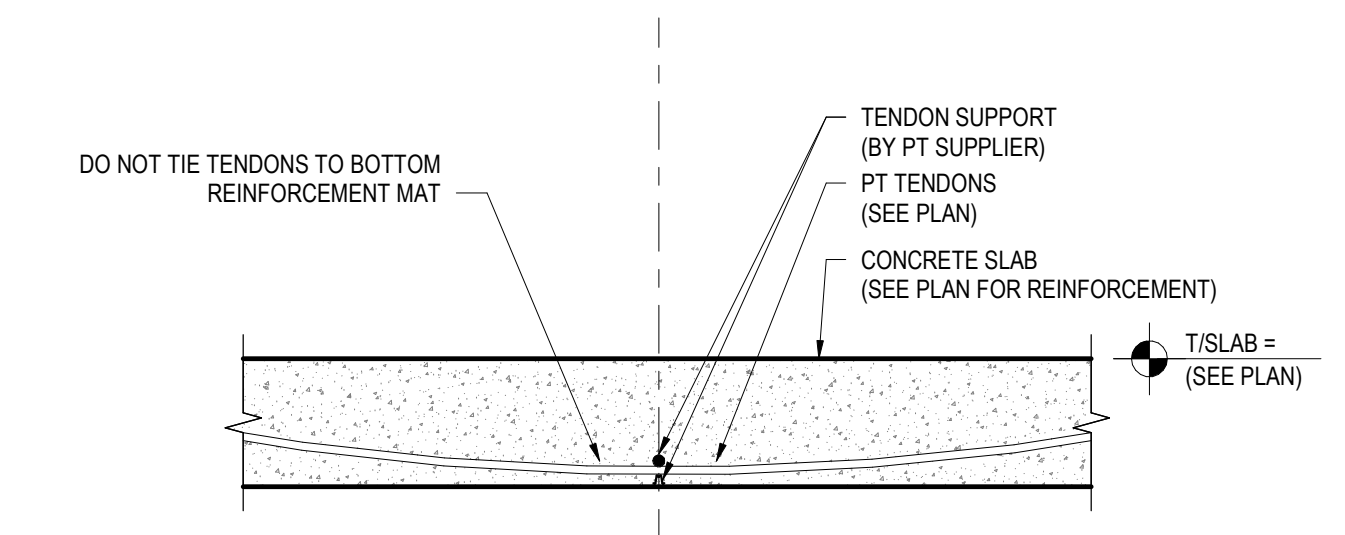
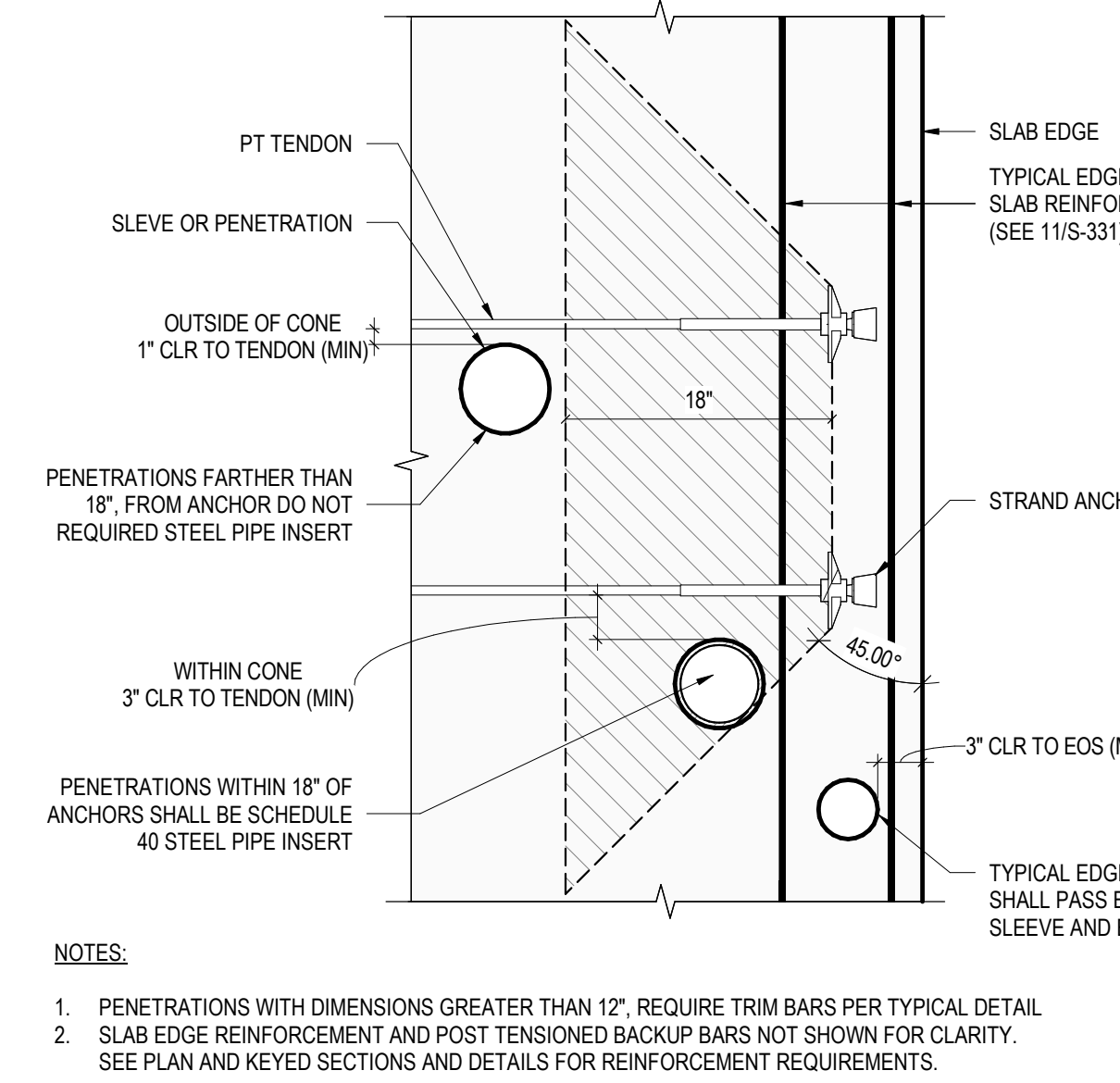
2 BANDED TENDON ANCHORAGE CONDITIONS

NTS



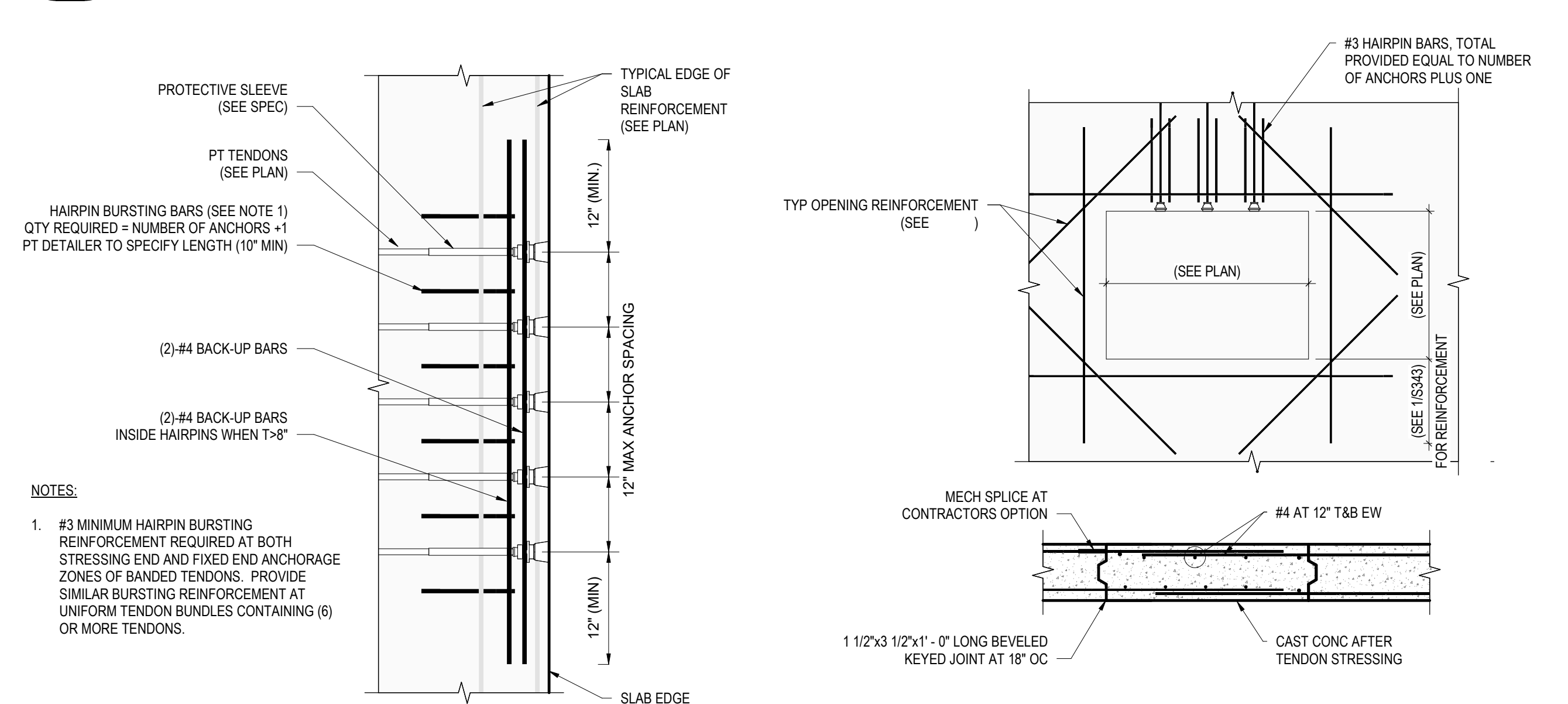
3 ANCHORAGE AT ADDED TENDON

NTS



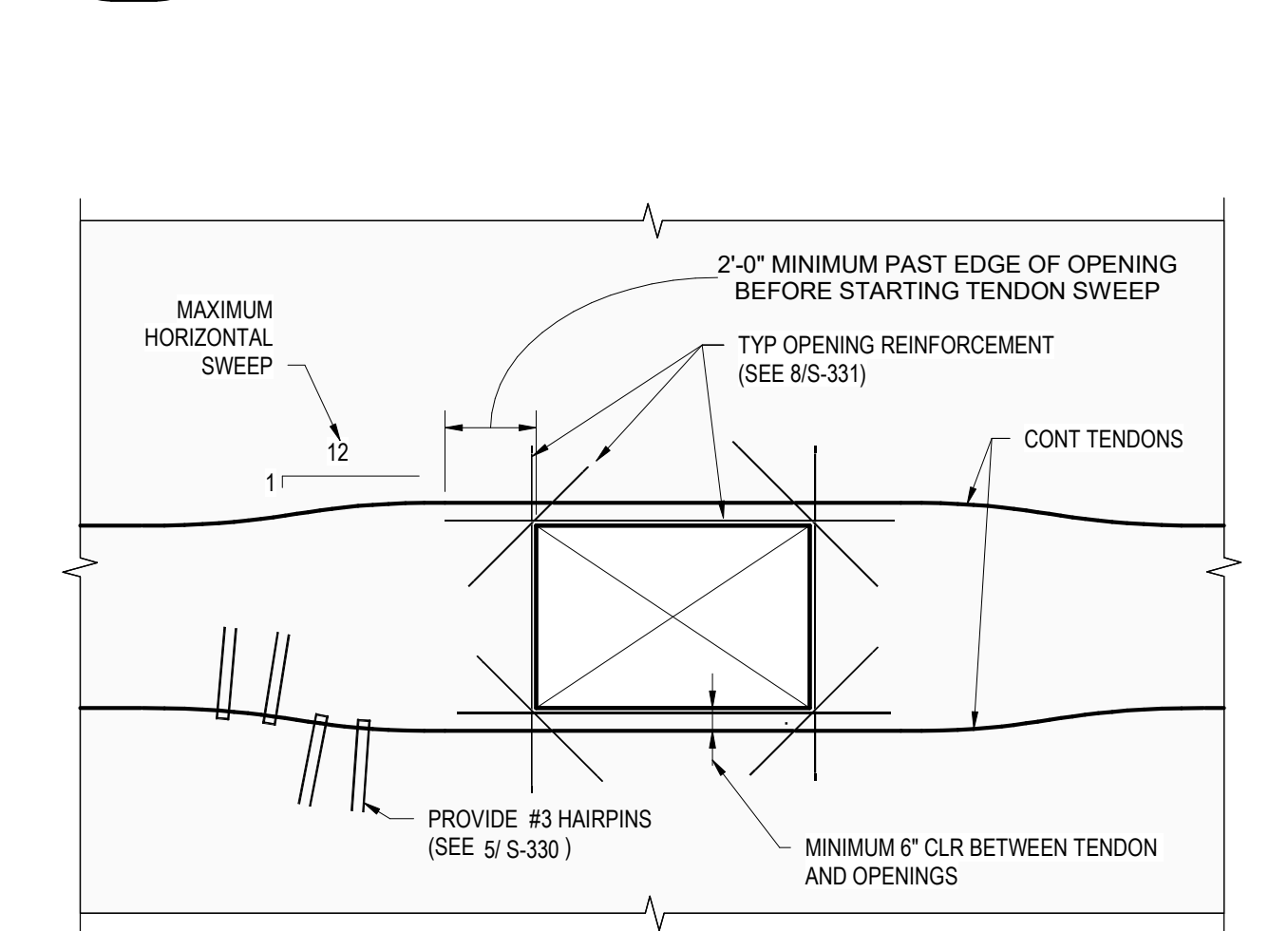
4 UNIFORM TENDON ANCHORAGE CONDITIONS

NTS



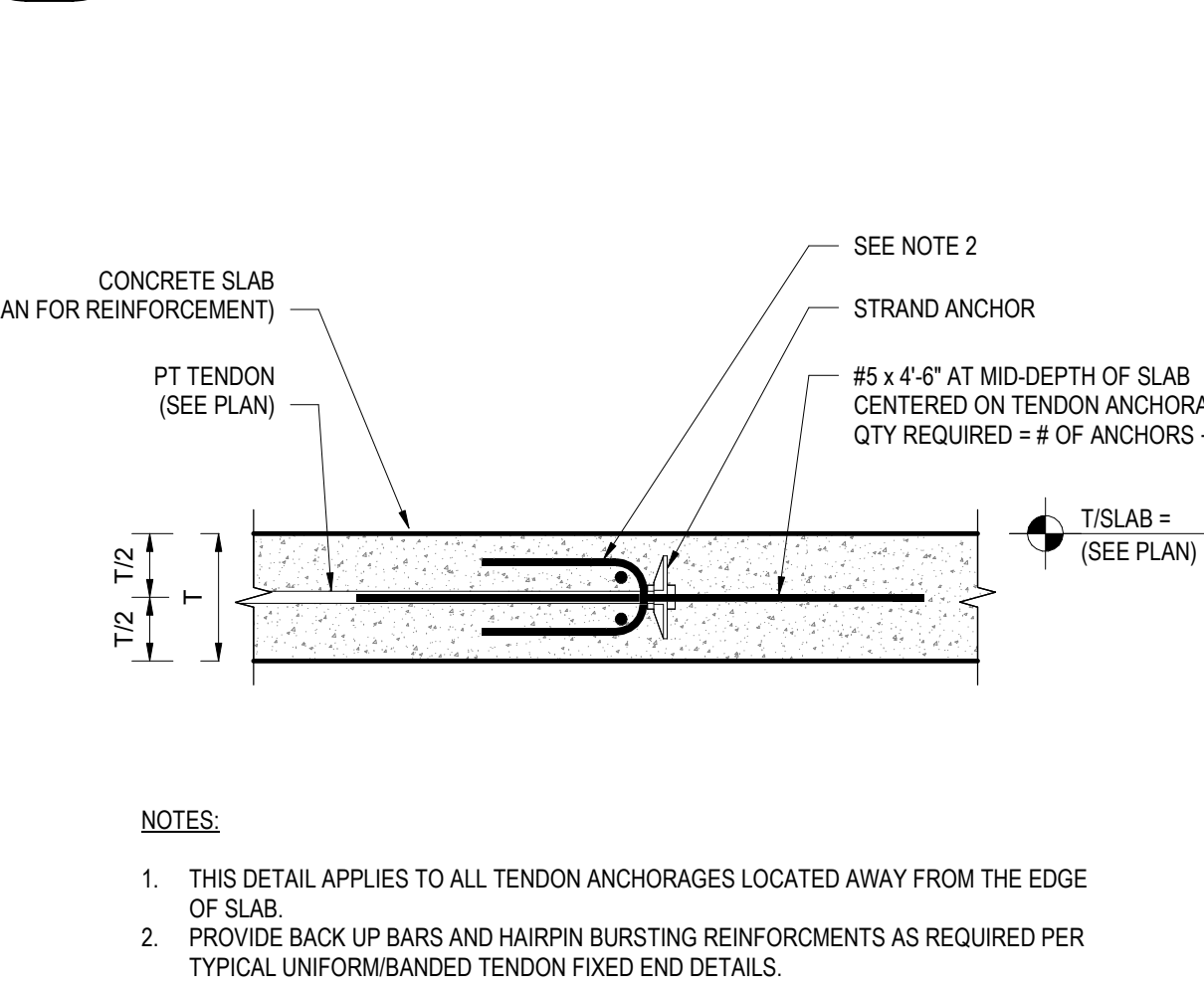
5 TYPICAL TENDON HORIZONTAL CURVE

3/4" = 1'-0"



6 SLEEVES NEAR TENDON ANCHORAGE

1" = 1'-0"



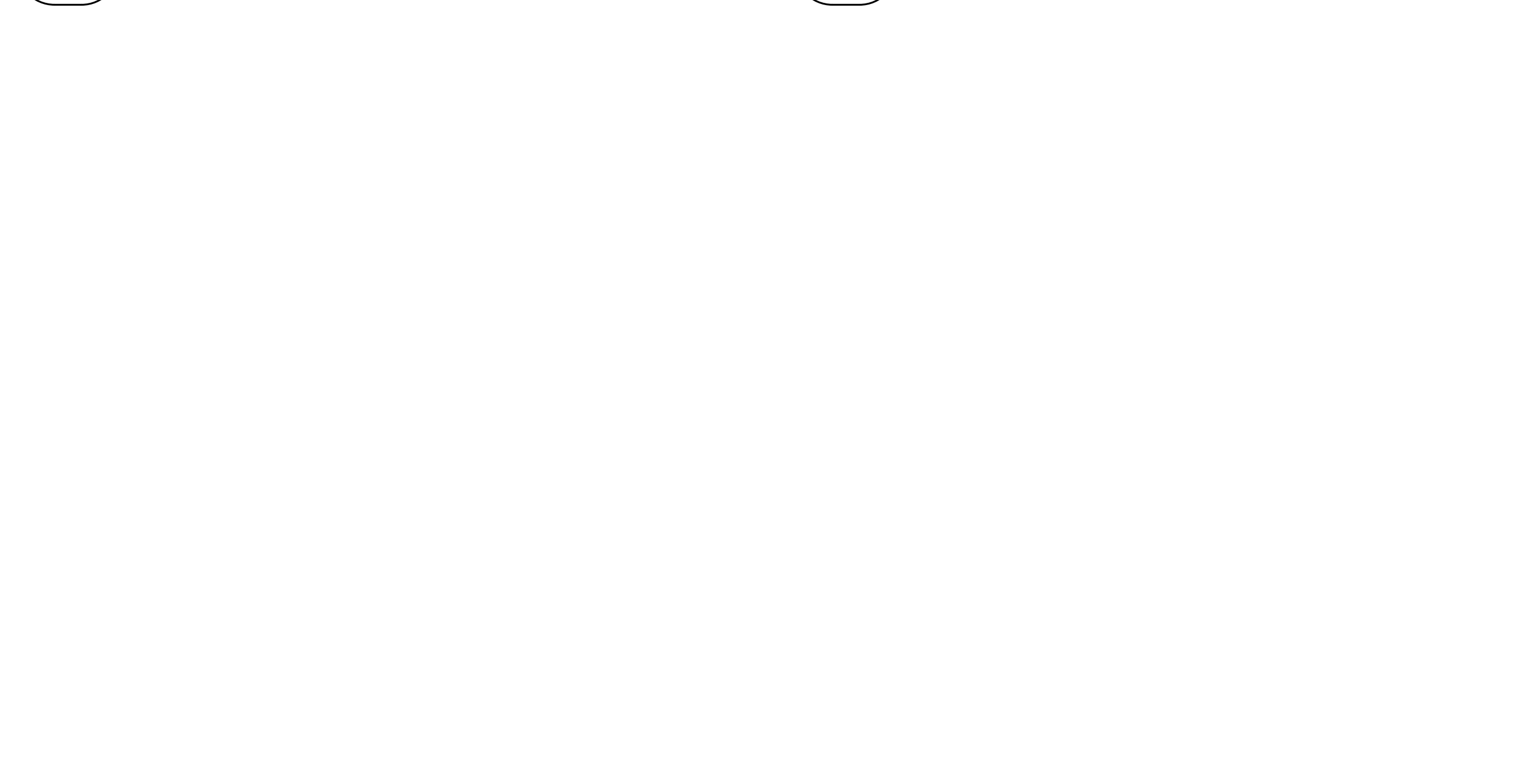
7 PT TENDON LOW POINT - SECTION

1" = 1'-0"



8 TYPICAL BANDED ANCHORAGE ZONE

NTS



9 STRESSING BLOCKOUT

1/2" = 1'-0"



10 TENDONS AT SLAB OPENING

NTS

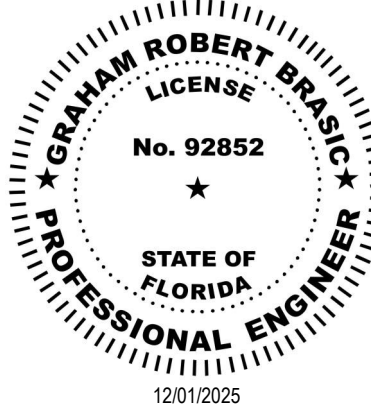


11 ANCHORAGE AT ADDED TENDON

NTS



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**TYPICAL PT
TENDON
DETAILS**

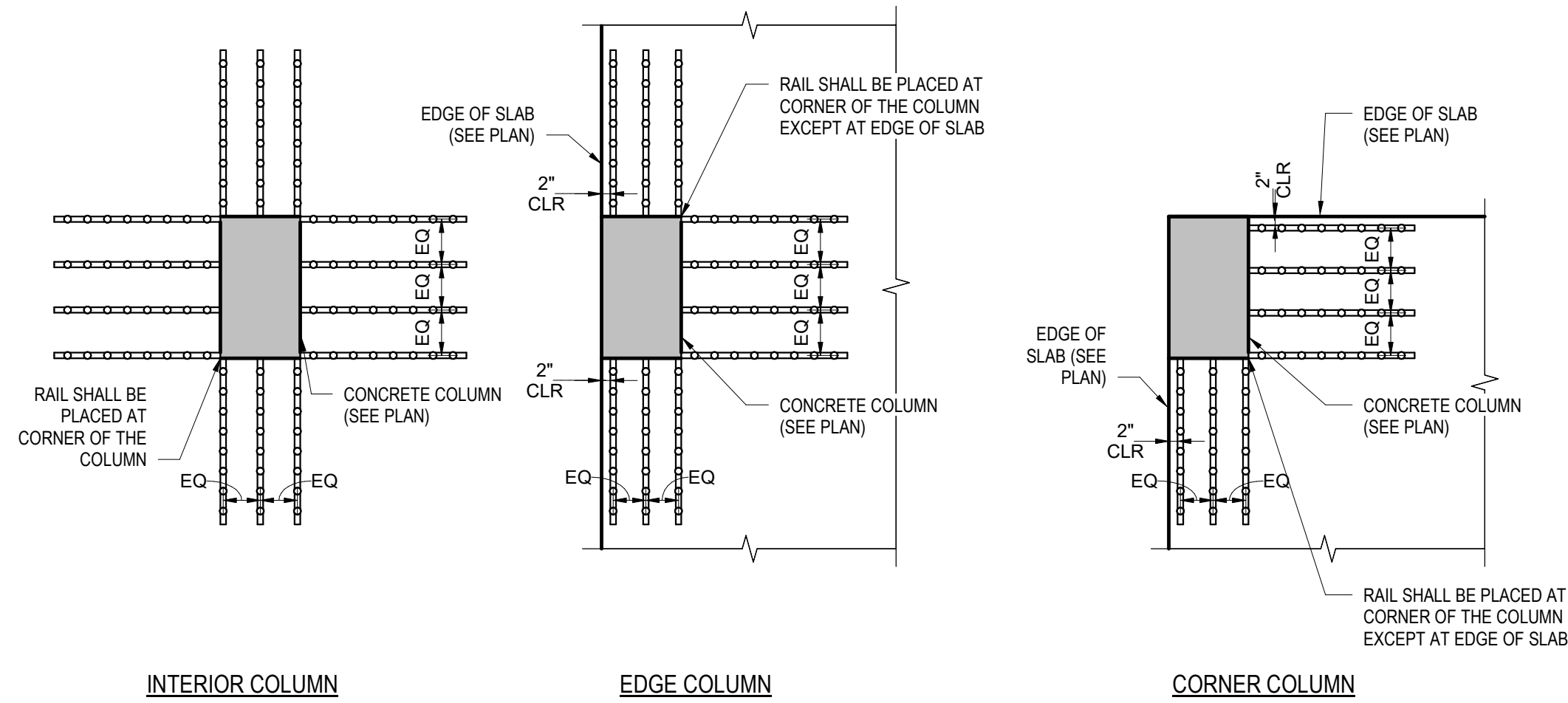
S-330



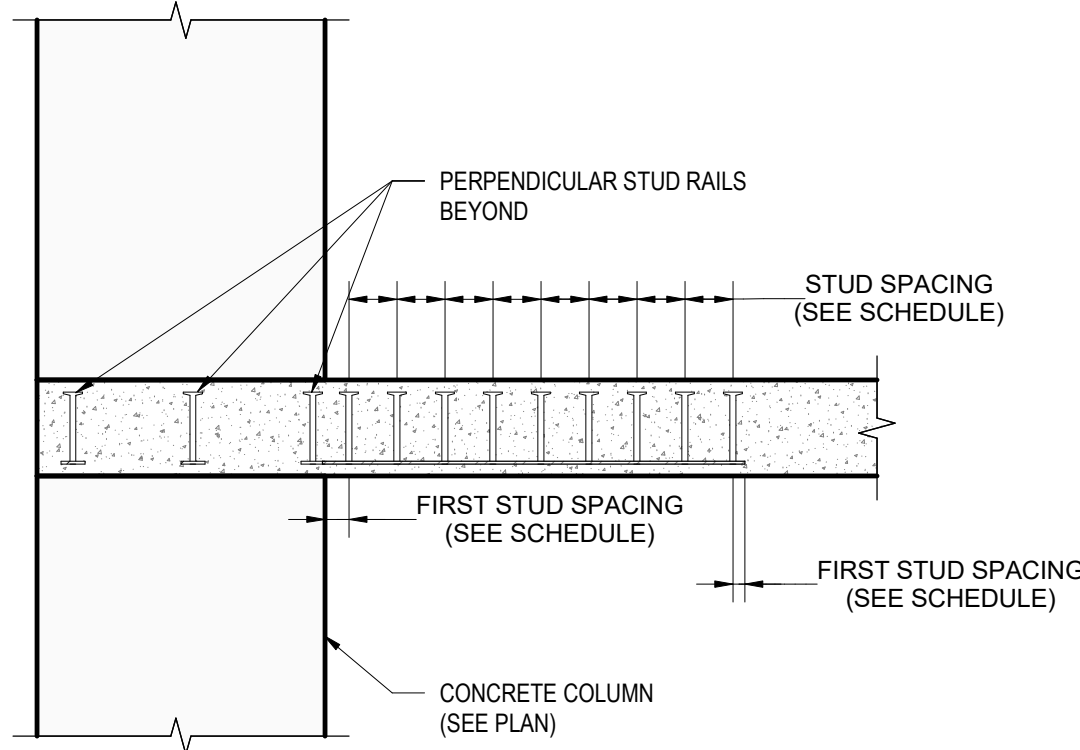
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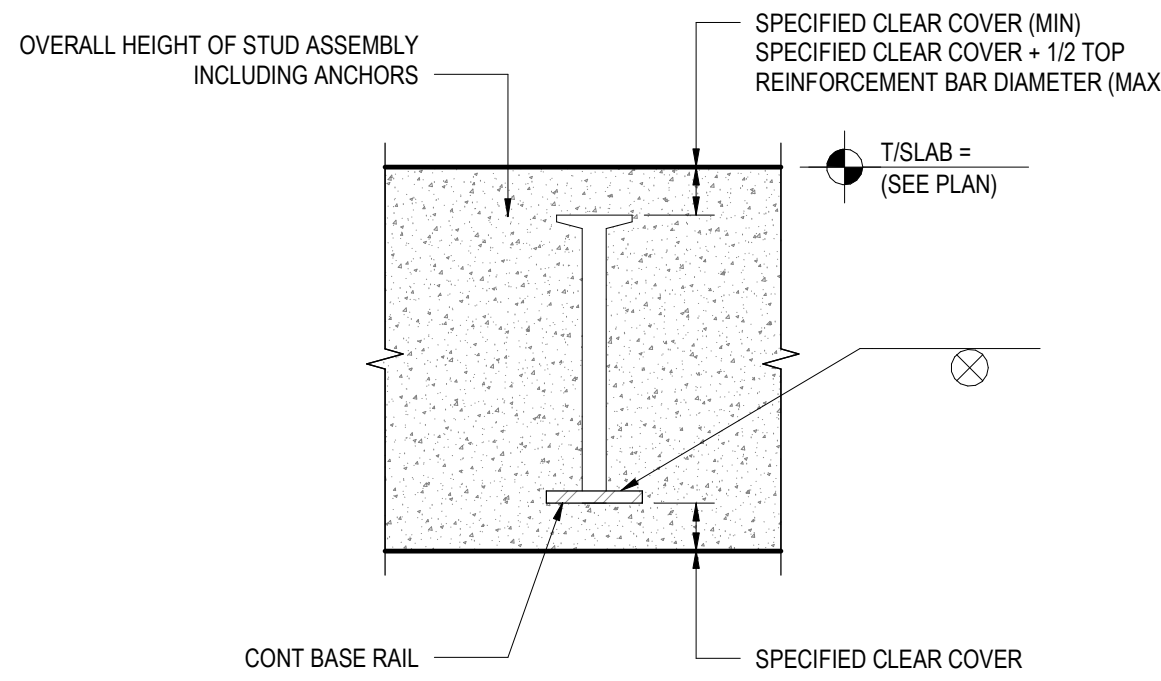
12/1/2025 6:02:22 PM



1 TYPICAL SHEAR STUD RAIL CONFIGURATIONS - PLAN



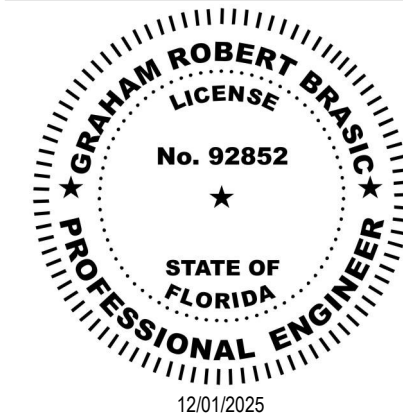
2 TYPICAL SHEAR STUD RAIL LAYOUT - ELEVATION



3 TYPICAL SHEAR STUD LAYOUT - SECTION

SHEAR STUD RAIL SCHEDULE					
MARK	FIRST STUD SPACING	TYP STUD SPACING	# OF STUDS PER RAIL	NUMBER OF RAILS	
SSR-6(3-4)	2"	3"	6	3	4
SSR-10(4-4)	2 3/4"	3"	10	4	4
4SR-6(3-3)	2 3/4"	4"	6	3	3
4SR-8(3-3)	2 3/4"	4"	8	3	3

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TYPICAL PT
SHEAR STUD
RAILS
DETAILS

S-332



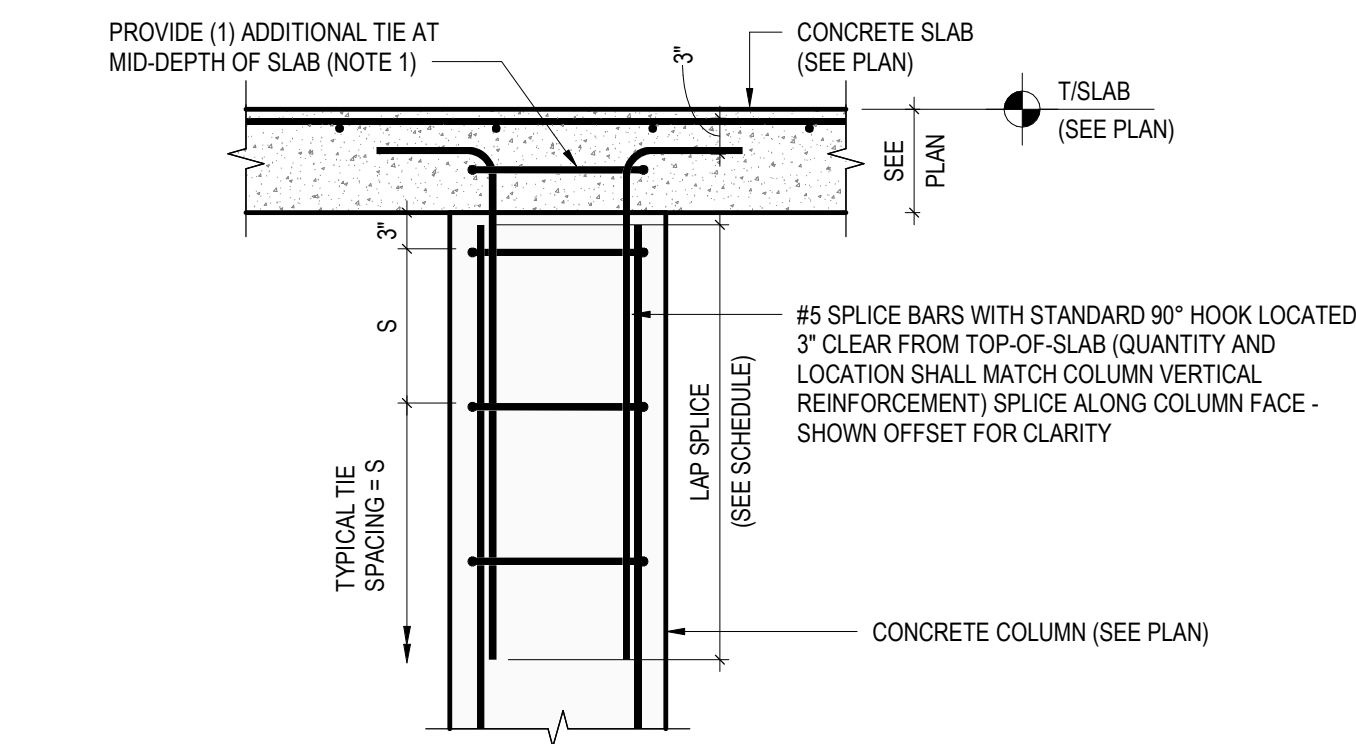
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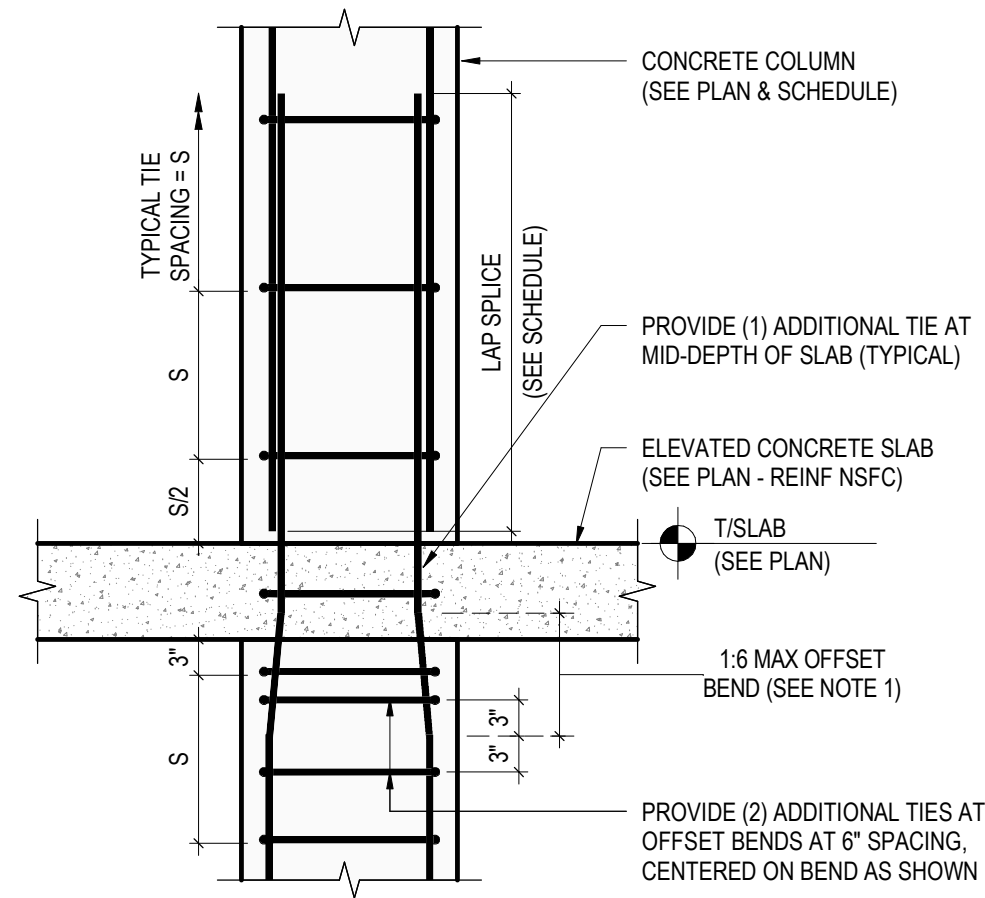
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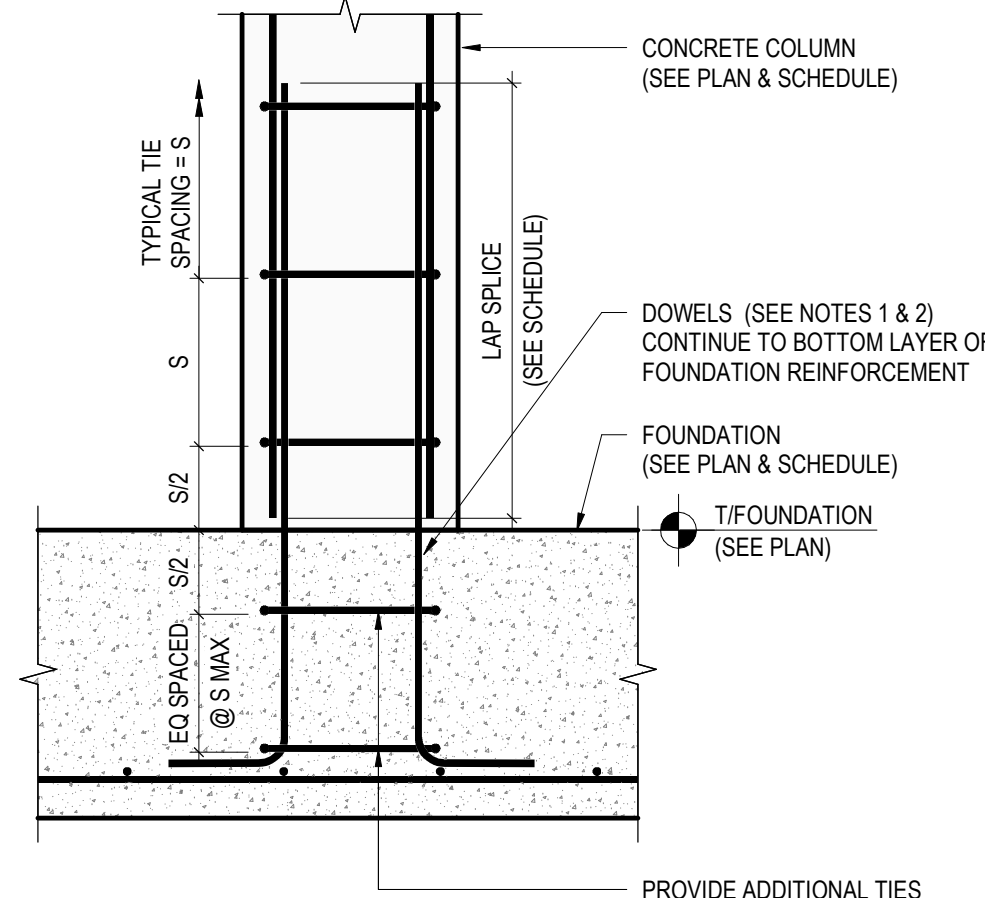
NOTES:
1. ADDITIONAL TIE WITHIN SLAB DEPTH NOT REQUIRED WHEN A BOTTOM MAT OF SLAB REINFORCEMENT IS PRESENT AT COLUMN LOCATION

1C CONCRETE COLUMN AT ROOF
3/4" = 1'-0"



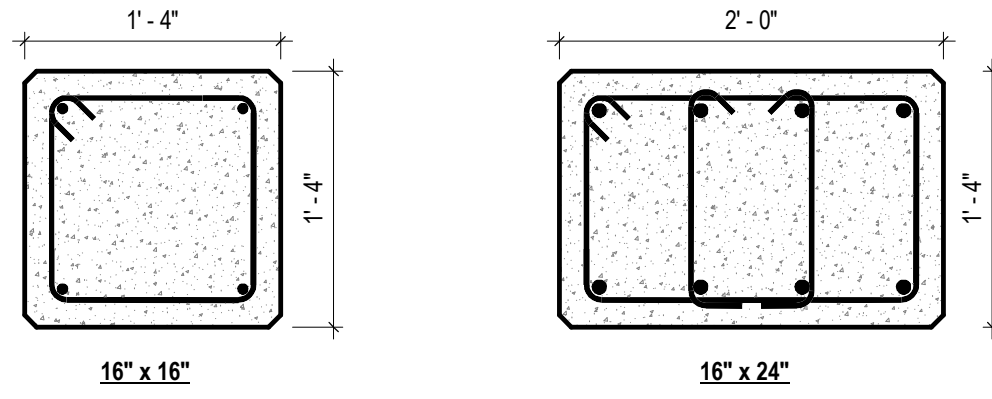
NOTES:
1. OFFSET BARS SHALL BE BENT PRIOR TO PLACEMENT IN COLUMN FORMS

1B CONCRETE COLUMN AT SLAB
3/4" = 1'-0"

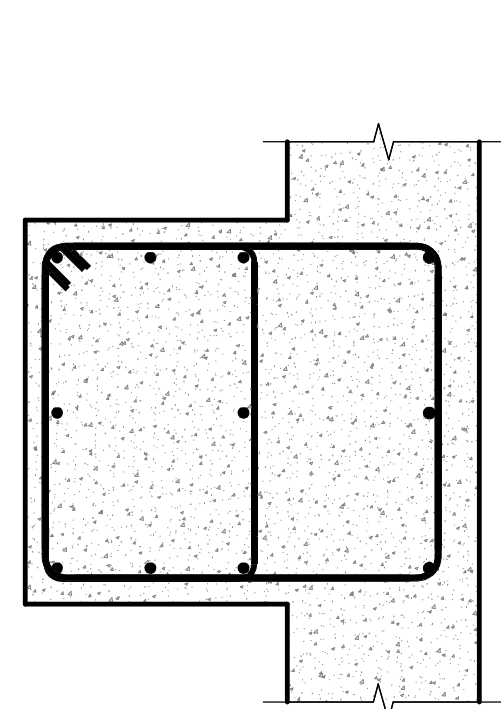


NOTES:
1. DOWELS SHALL MATCH SIZE & QUANTITY OF COLUMN VERTICAL REINFORCEMENT ABOVE.
2. DOWELS SHALL BE PLACED FOR A CONTACT LAP SPICE WITH VERTICAL REINFORCEMENT ABOVE IN-LINE WITH FACE-OF-COLUMN (DO NOT OFFSET FROM FACE-OF-COLUMN). AT RECTANGULAR COLUMNS, OFFSET SHALL BE ALONG THE LONG FACE OF THE COLUMN AS SHOWN BELOW.

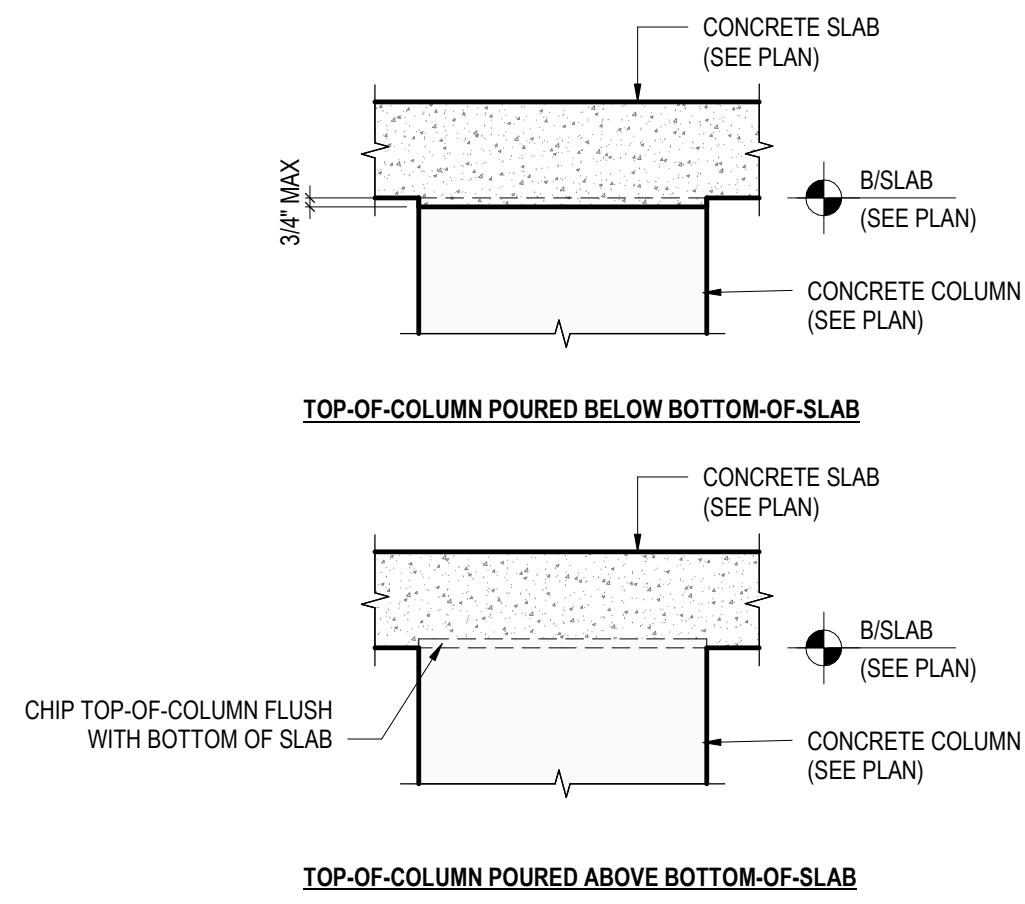
1A CONCRETE COLUMN AT FOUNDATION
3/4" = 1'-0"



2 COLUMN PLAN DETAILS
1" = 1'-0"

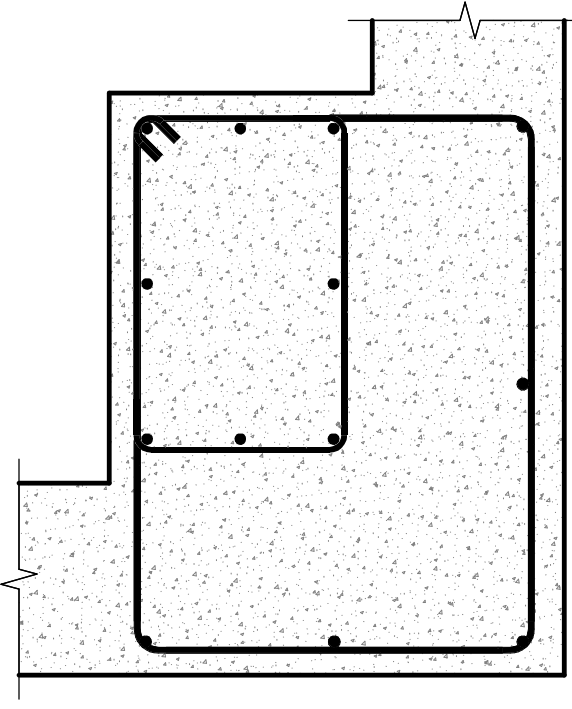


STRUCTURAL COLUMN SCHEDULE					
Type	GEOMETRY		REINFORCING		REMARKS
	WIDTH	DEPTH	VERTICAL	TIES	
CC1816	16"	16"	(4) #8	#3 @ 14" OC	
CC1824	16"	24"	(8) #7	#3 @ 14" OC	



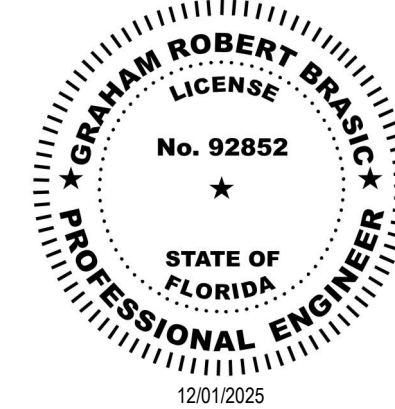
NOTES:
1. DEVIATION FROM MAXIMUM TOLERANCES SHOWN ABOVE SHALL BE CORRECTED PRIOR TO PLACEMENT OF CONCRETE SLAB. WHEN TOP-OF-COLUMN IS INSTALLED BELOW BOTTOM-OF-SLAB BY MORE THAN THE TOLERANCE SHOWN ABOVE, THE DIFFERENCE SHALL BE POURED CONCRETE WITH STRENGTH EQUAL TO THE REQUIRED COLUMN STRENGTH.

3 TOP-OF-COLUMN ELEVATION TOLERANCE
3/4" = 1'-0"



6 E.1-11 COLUMN REINFORCEMENT
1" = 1'-0"

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TYPICAL
CONCRETE
COLUMN
DETAILS

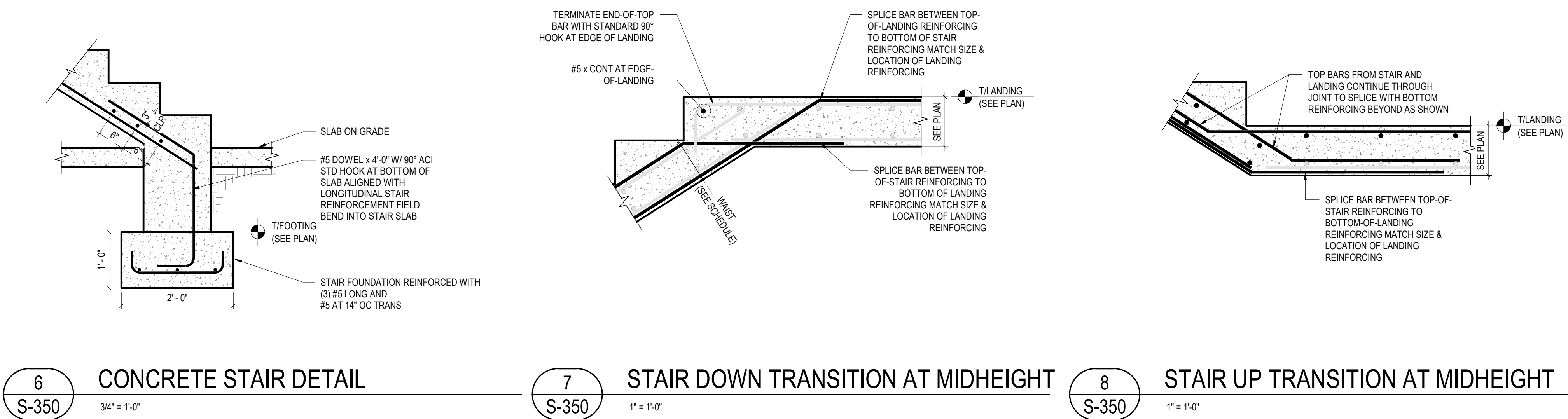
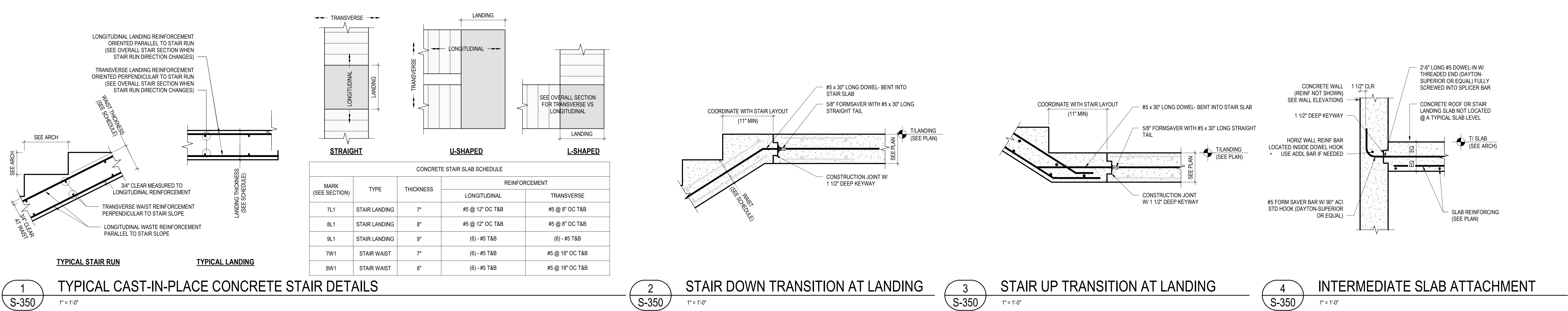
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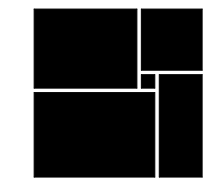
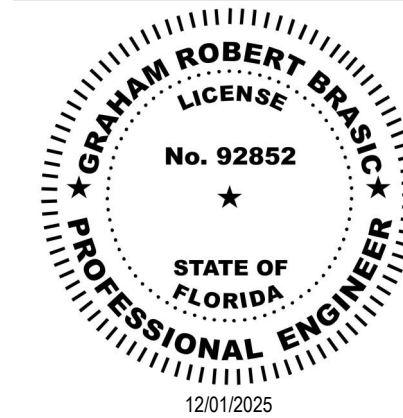
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STAIR
DETAILS

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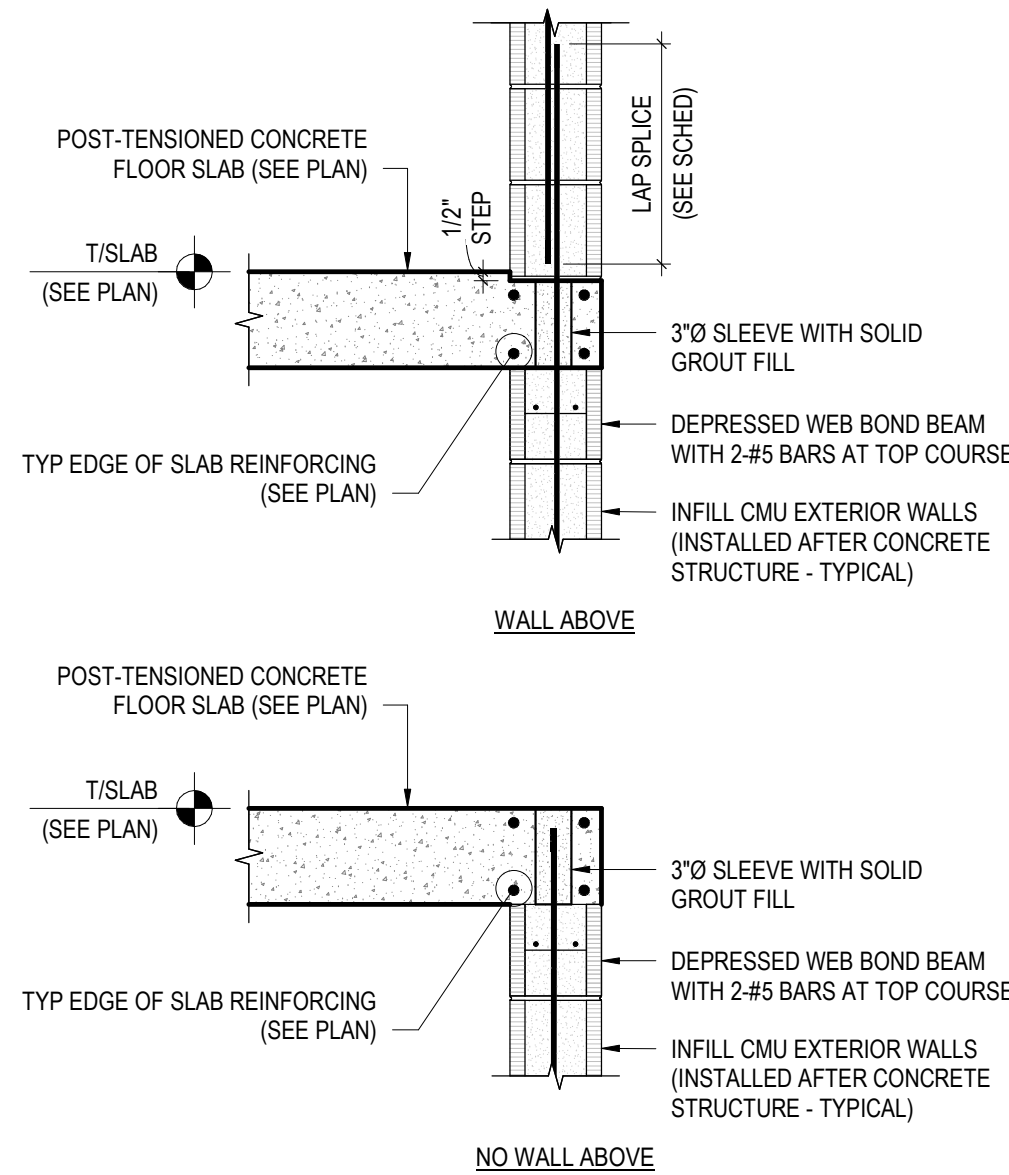
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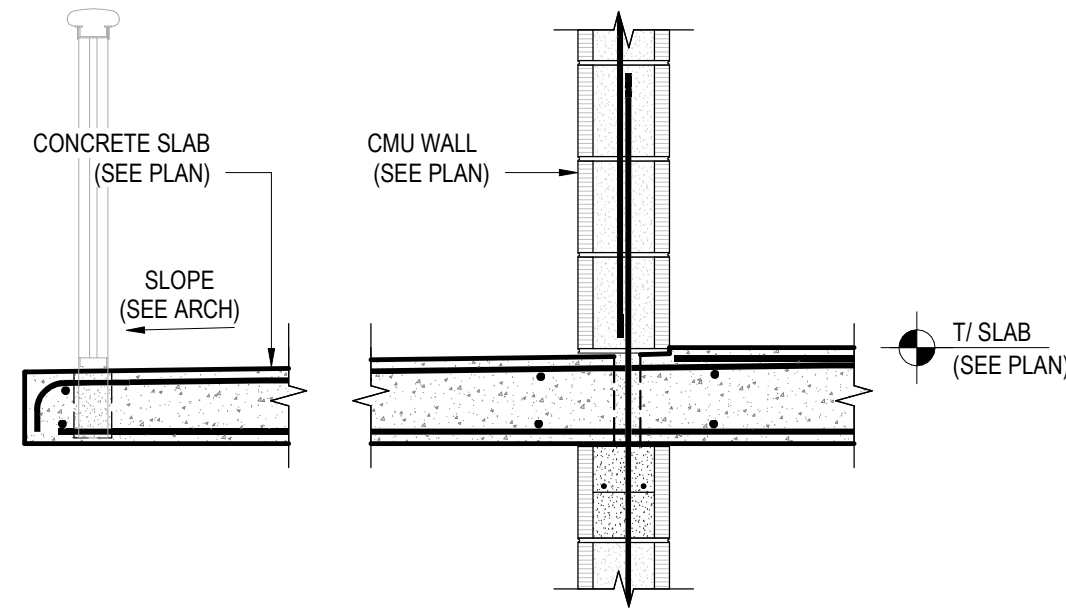
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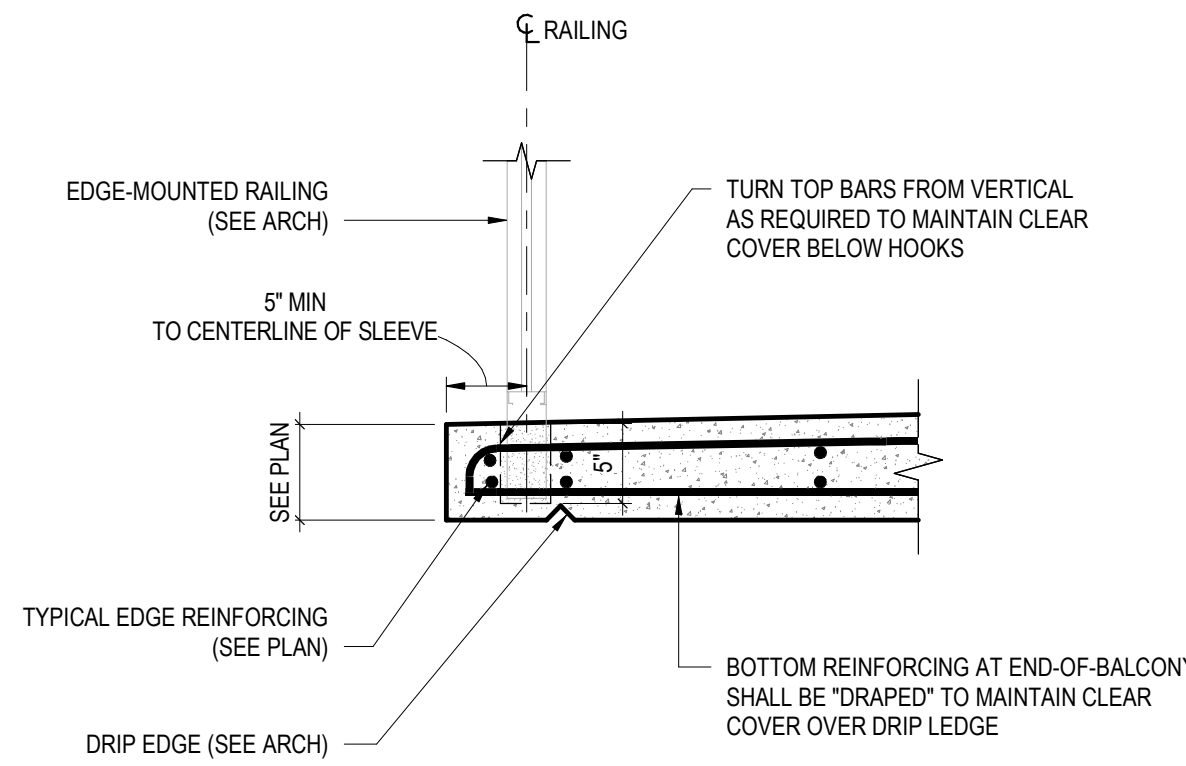
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1 TYPICAL EDGE-OF-SLAB
3/4" = 1'-0"

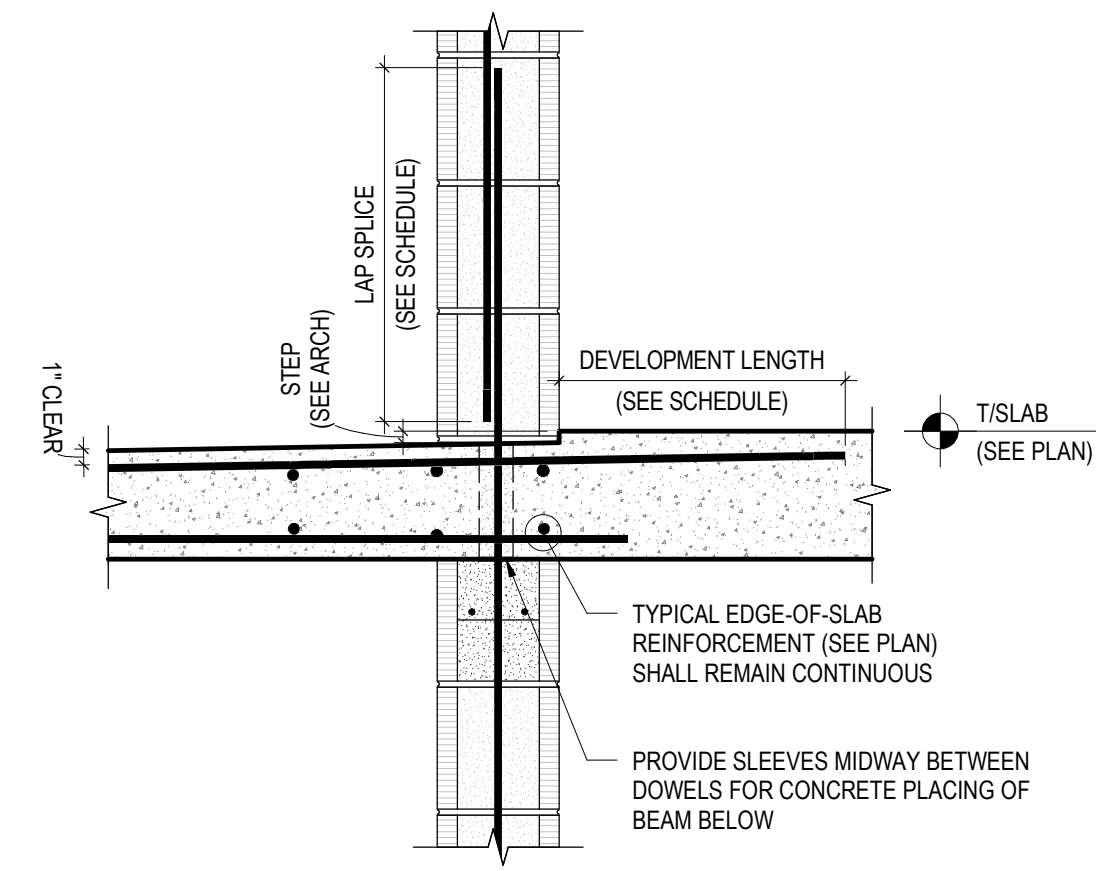


2 TYPICAL BALCONY FRAMING
3/4" = 1'-0"

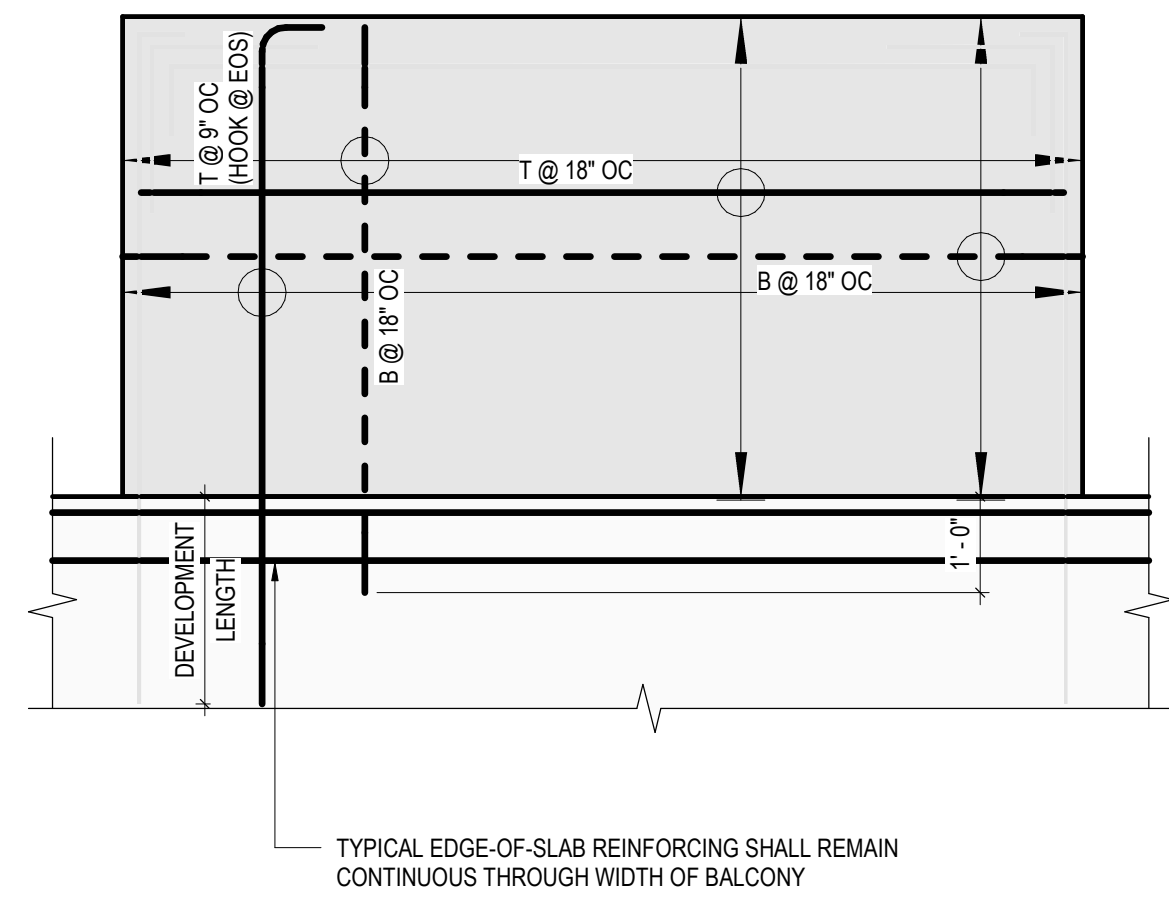


NOTES:
1. BALCONY RAILING SHALL BE INSTALLED IN SLEEVES/BLOCKOUTS WITHIN THE SLAB POUR. CORING OF THE SLAB SHALL NOT BE PERMITTED UNLESS IT CAN BE DEMONSTRATED THAT REINFORCING AND TENDONS CAN BE PLACED AND LOCATED ACCORDINGLY SUCH THAT CORE DRILLING AND INSTALLATION OPERATIONS DO NOT DAMAGE THESE ELEMENTS.

2A EDGE OF BALCONY SECTION
1" = 1'-0"

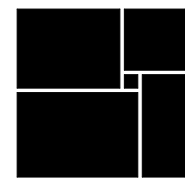
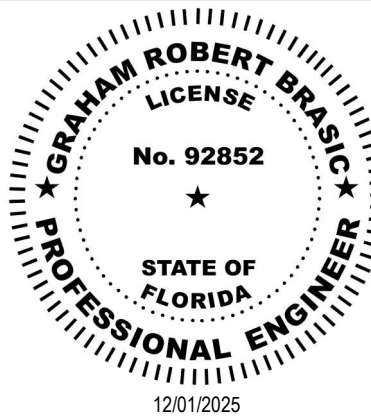


2B TYPICAL TRANSITION AT BALCONY
1" = 1'-0"



3 BALCONY SLAB REINFORCEMENT
1/2" = 1'-0"

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TYPICAL
CONCRETE
FRAMING
DETAILS

S-360



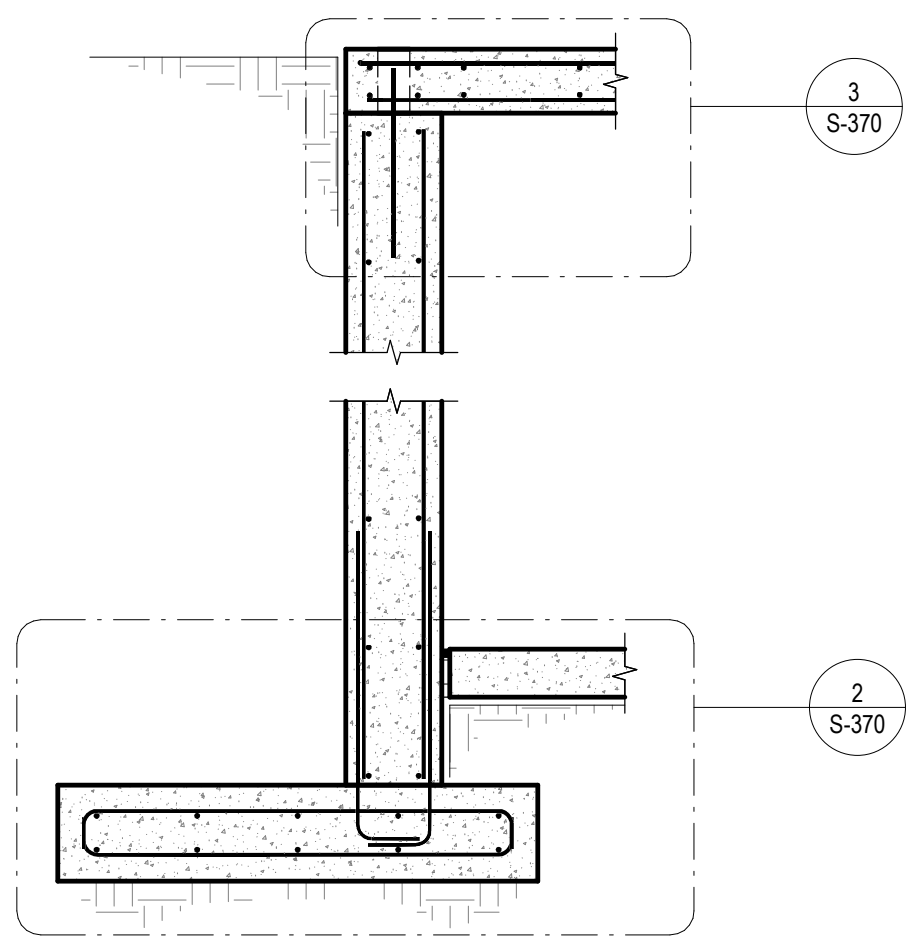
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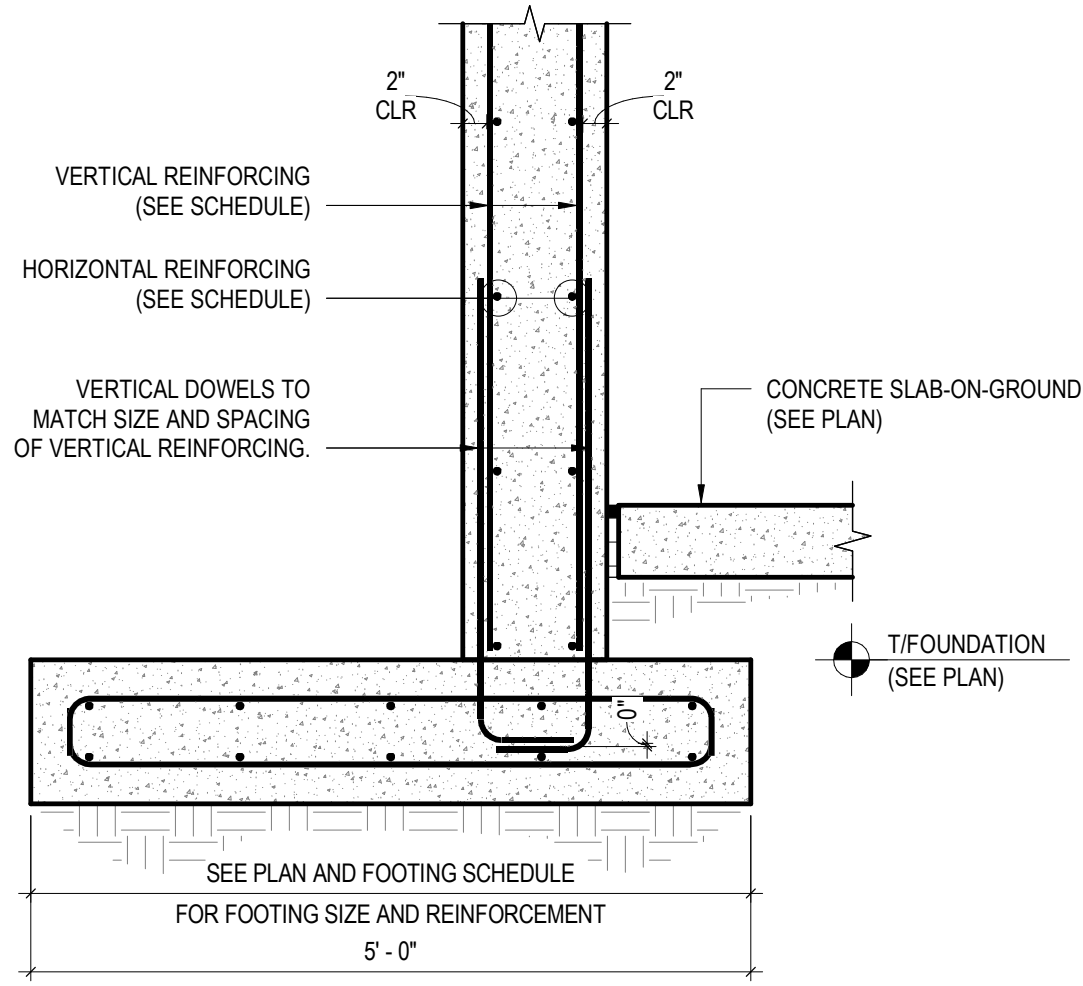


- NOTES:
- WALL IS DESIGNED FOR A DRAINED CONDITION. POSITIVE WALL DRAINAGE IS REQUIRED (SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS).
 - PROVIDE PERVIOUS BACKFILL MATERIAL COMPACTED IN LIFTS PER GEOTECHNICAL REQUIREMENTS. WALL SHALL NOT BE BACKFILLED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.
 - PROVIDE VERTICAL JOINTS IN WALL STEM PER TYPICAL DETAIL.

1
S-370

12" = 1'-0"

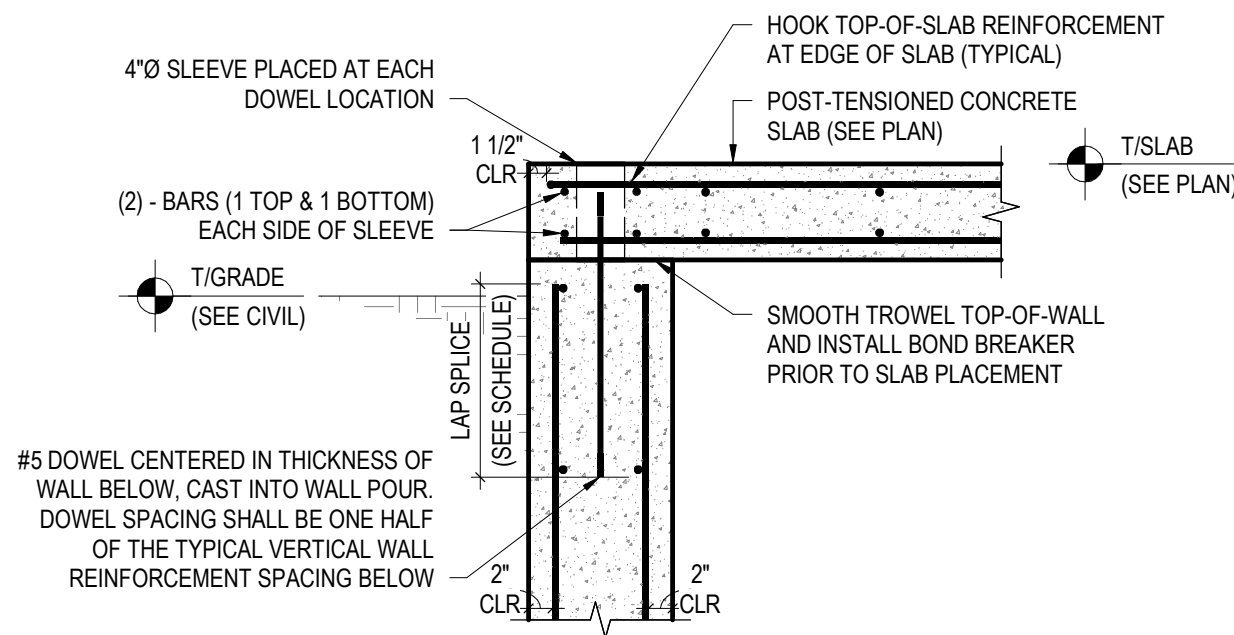
TYPICAL BASEMENT RETAINING WALL



2
S-370

3/4" = 1'-0"

TYPICAL RETAINING WALL FOUNDATION



3
S-370

3/4" = 1'-0"

SLEEVED SLIP CONNECTION

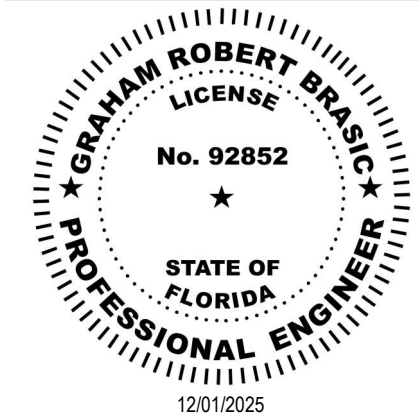
RETAINING WALL SCHEDULE				
WALL MARK	T	WALL REINFORCEMENT		
		VERTICAL	HORIZONTAL	
RW12	1'-0"	#6 @ 12" OC EACH FACE	#6 @ 12" OC EACH FACE	

RETAINING WALL FOOTING SCHEDULE					
MARK	THICKNESS	GEOMETRY		FOOTING REINFORCEMENT	
		WIDTH	TOE LENGTH	TRANSVERSE	LONGITUDINAL
RF9-12	12"	9'-0"	1'-0"	#6 @ 12" OC	#6 @ 12" OC



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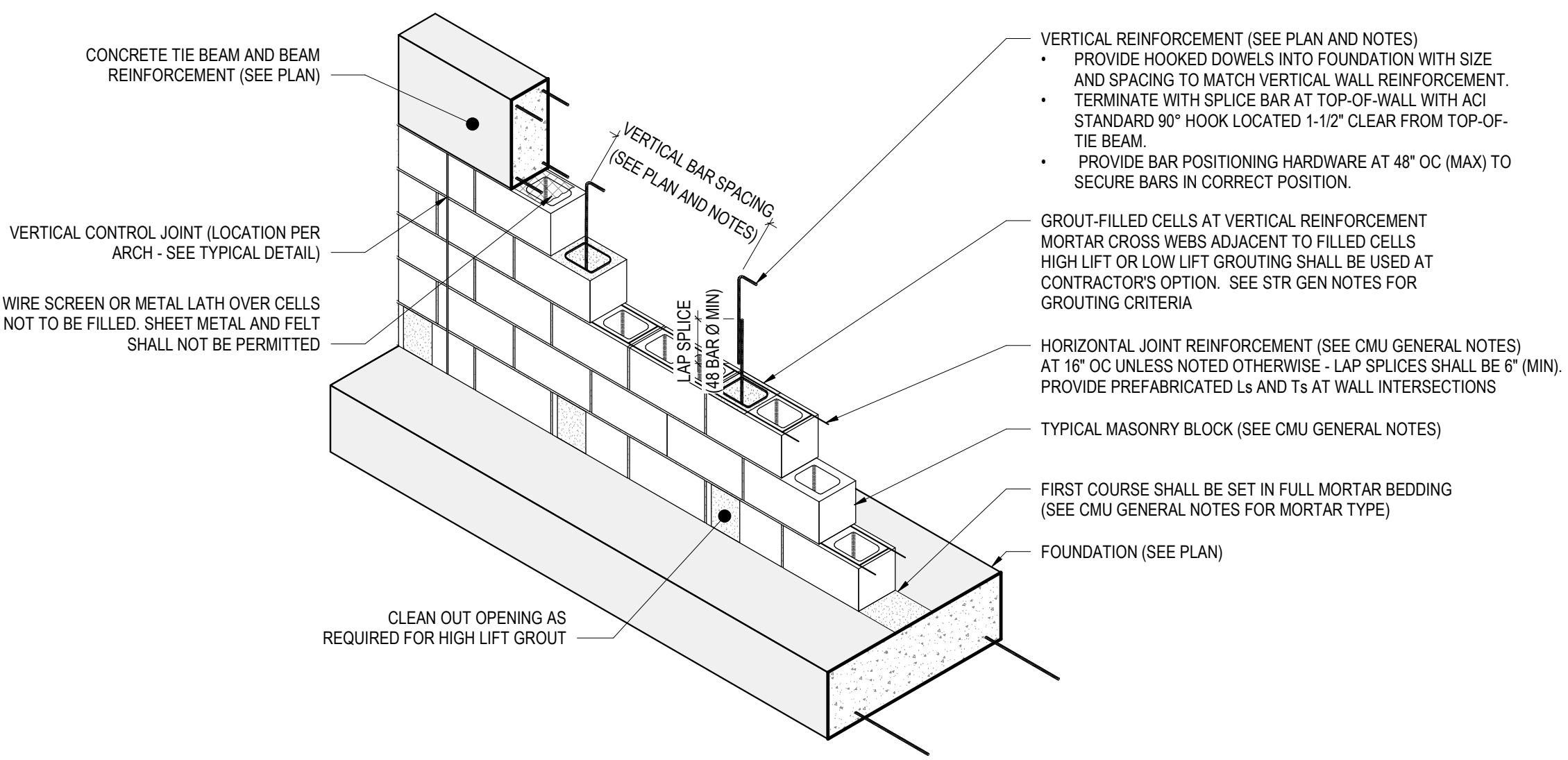
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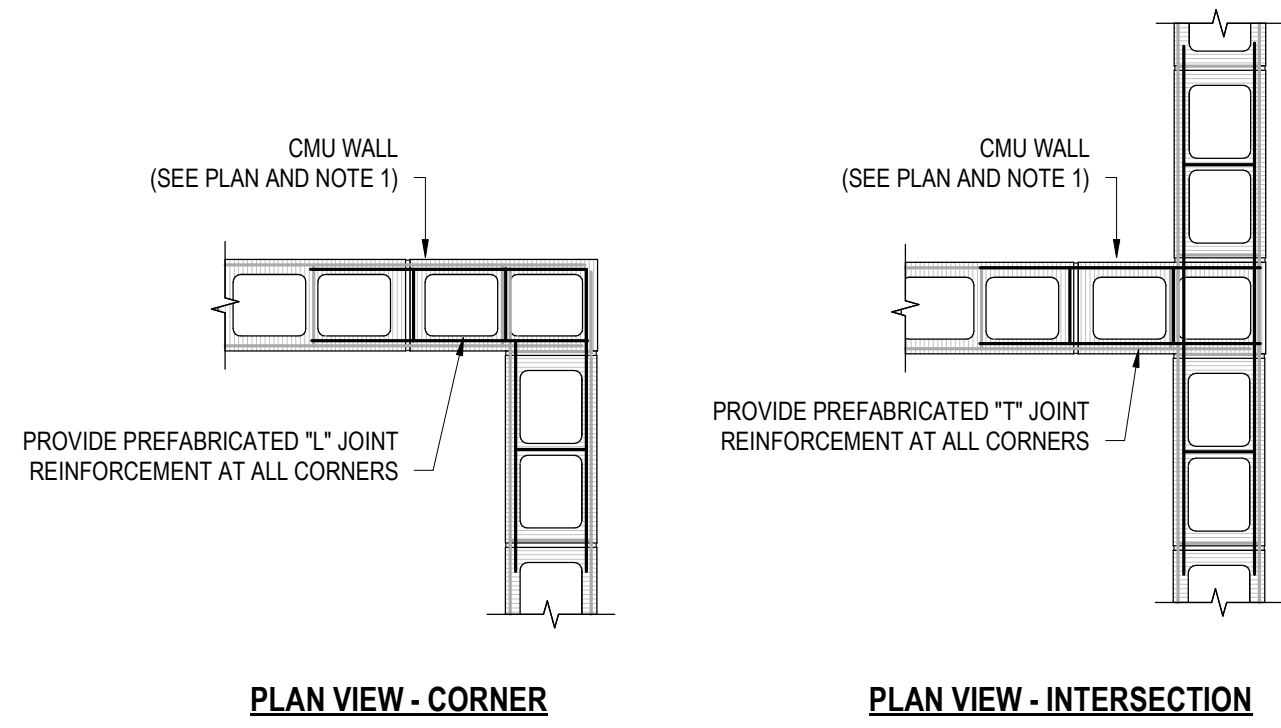
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TYPICAL
RETAINING
WALL
DETAILS

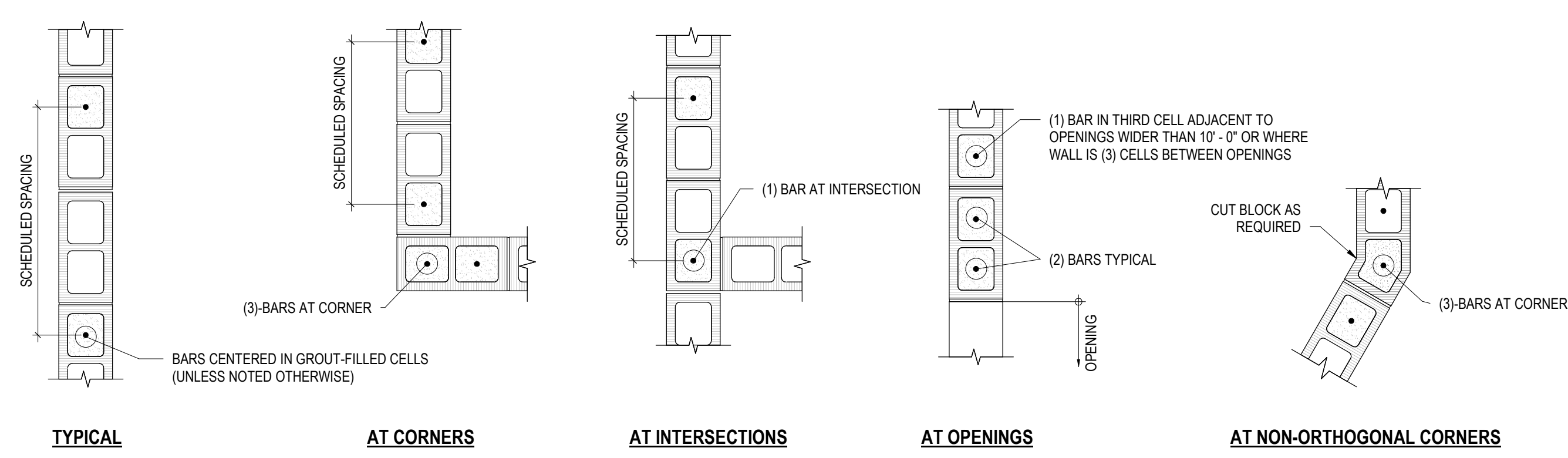
S-370



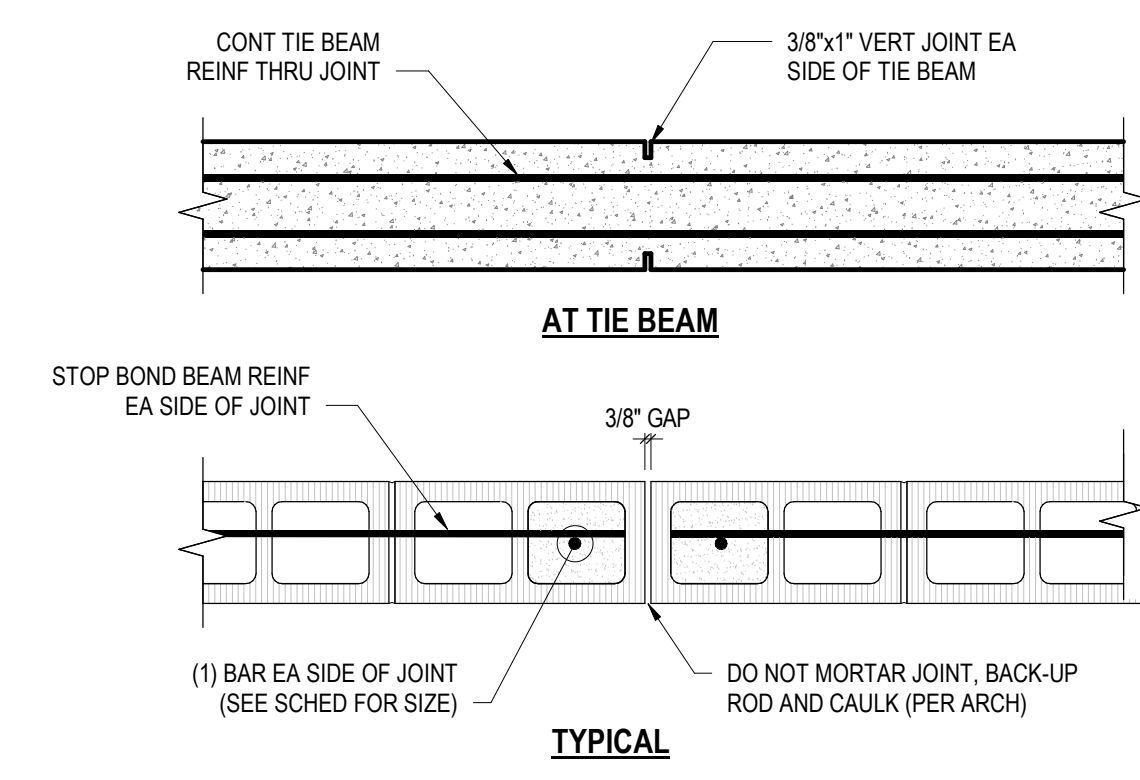
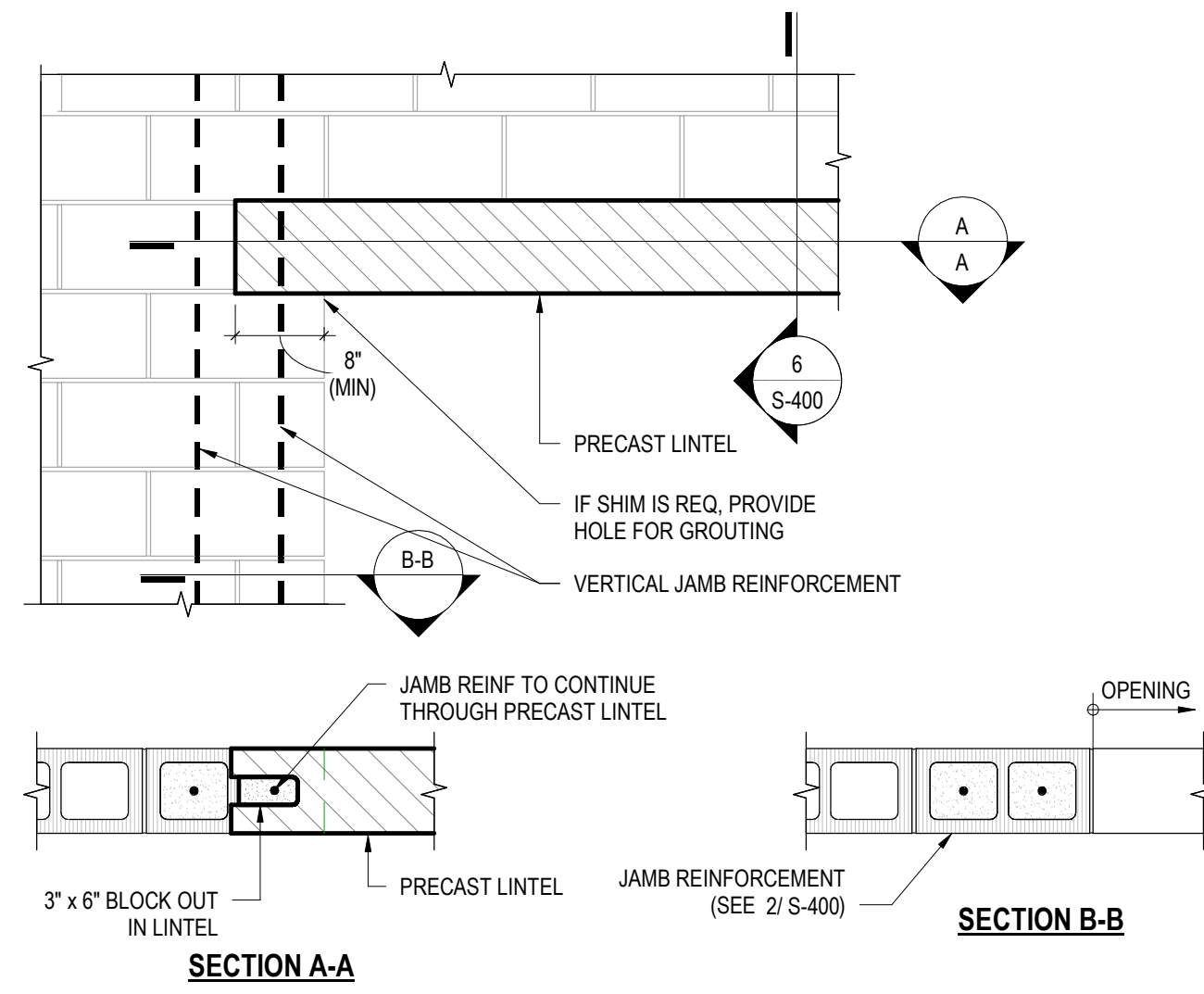
1 TYPICAL CMU WALL CONSTRUCTION - PERSPECTIVE
1/2" = 1'-0"



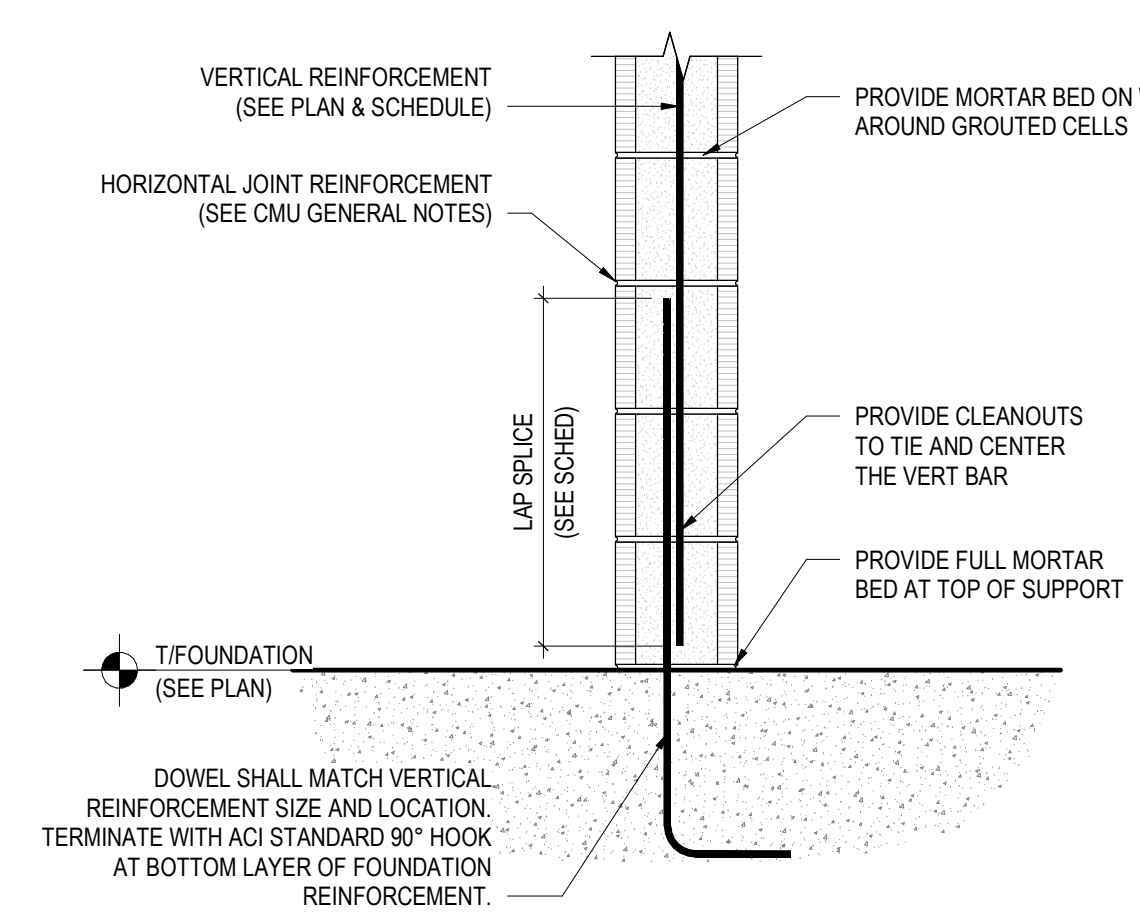
NOTES:
1. VERTICAL REINFORCEMENT AND GROUTED CELLS NOT SHOWN ON THIS DETAIL - SEE TYPICAL DETAIL



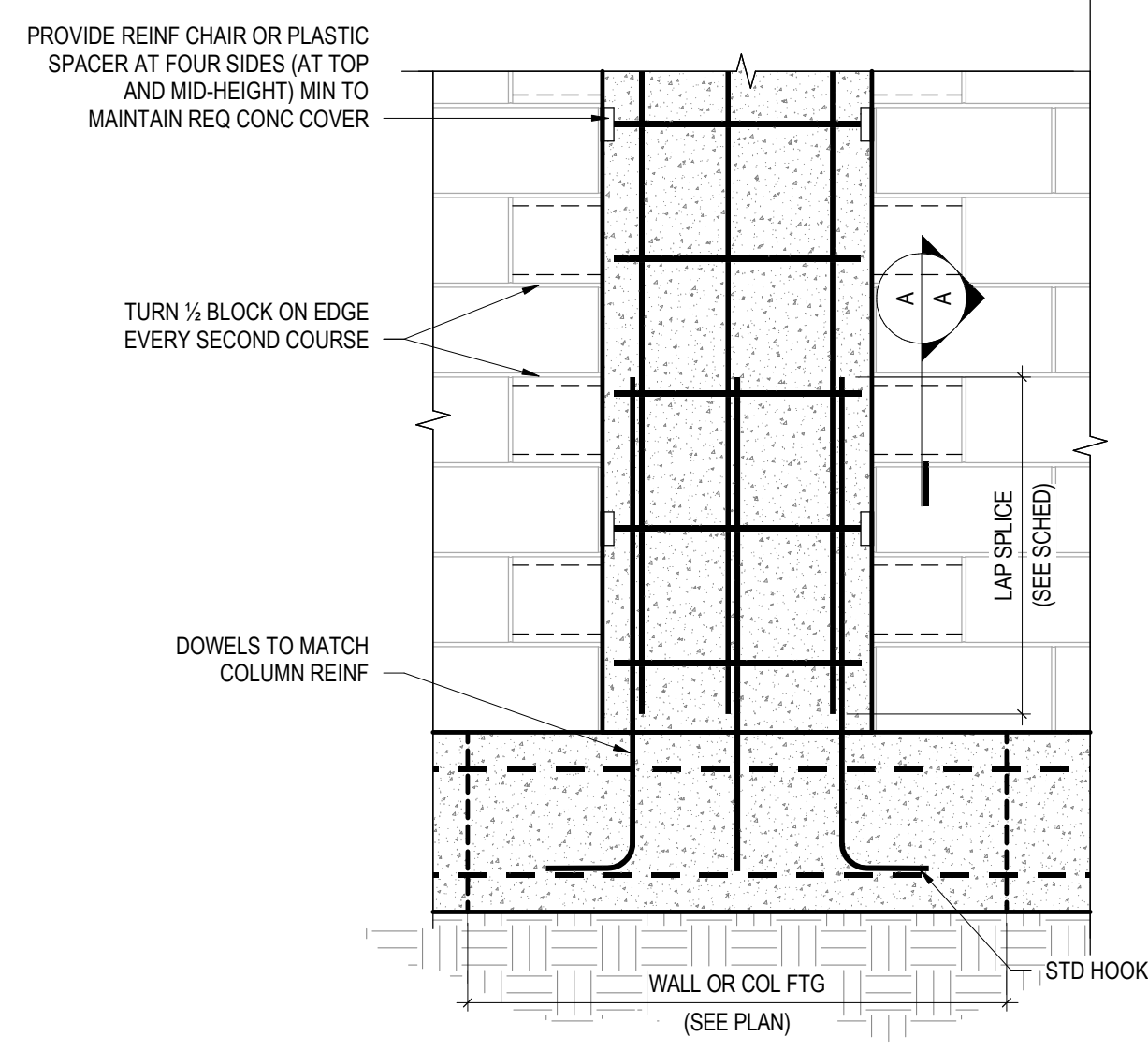
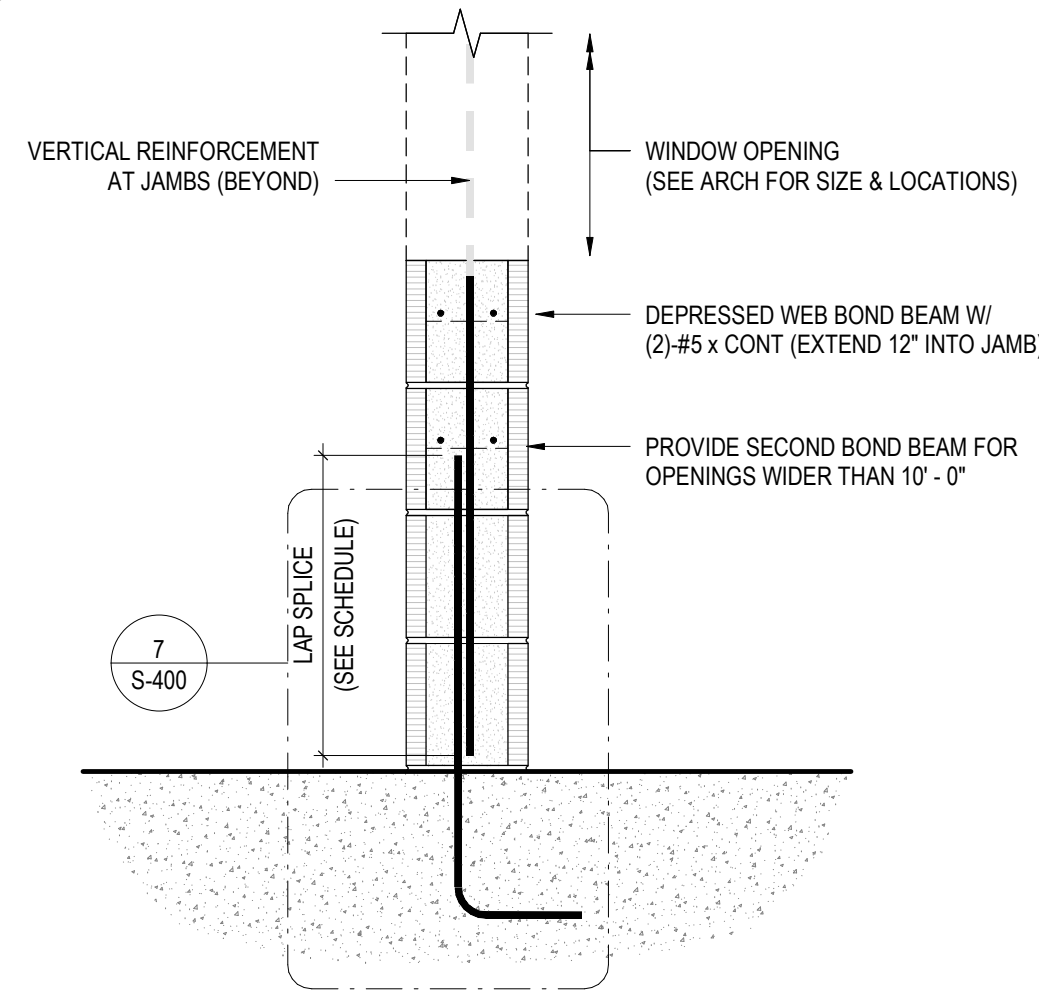
2 TYPICAL CMU WALL REINFORCEMENT
3/4" = 1'-0"



3 CMU CONTROL JOINTS
1" = 1'-0"

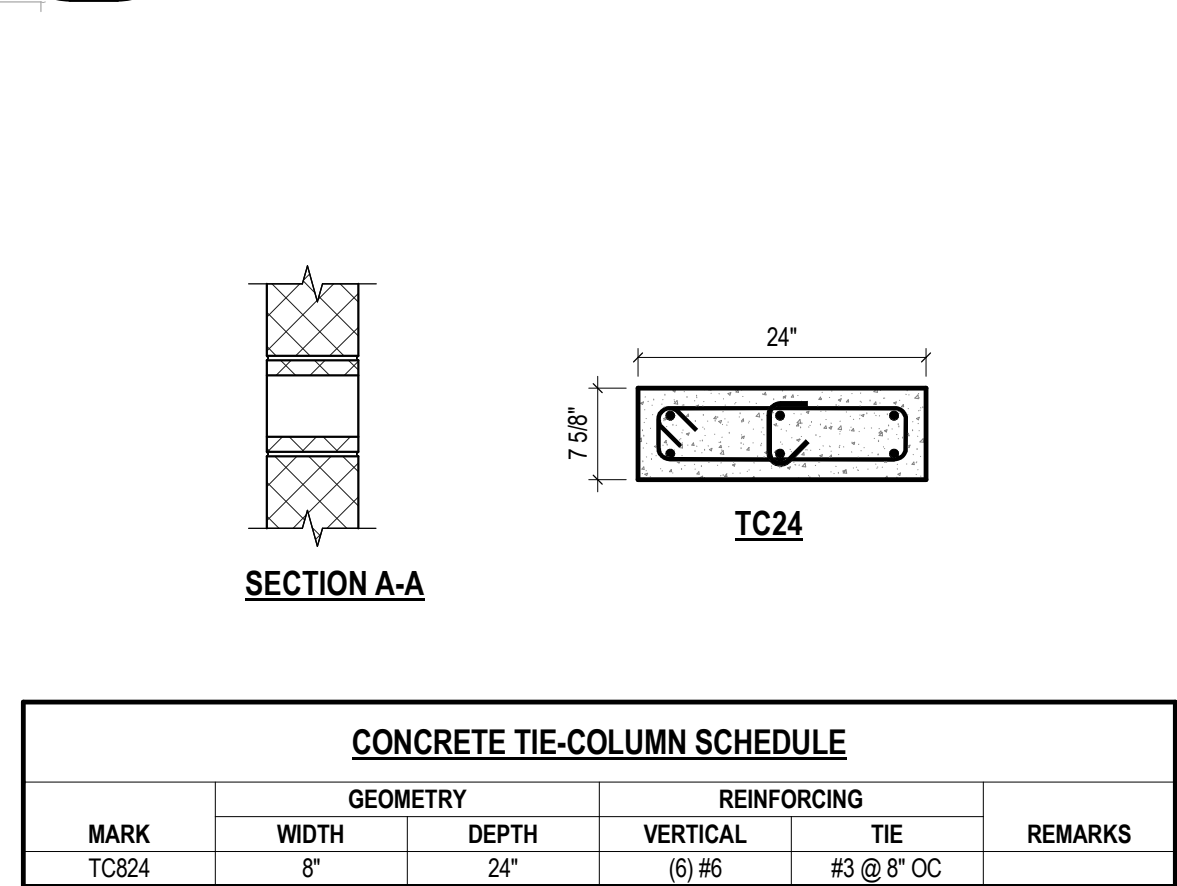


4 TYPICAL CMU JOINT REINFORCEMENT
3/4" = 1'-0"

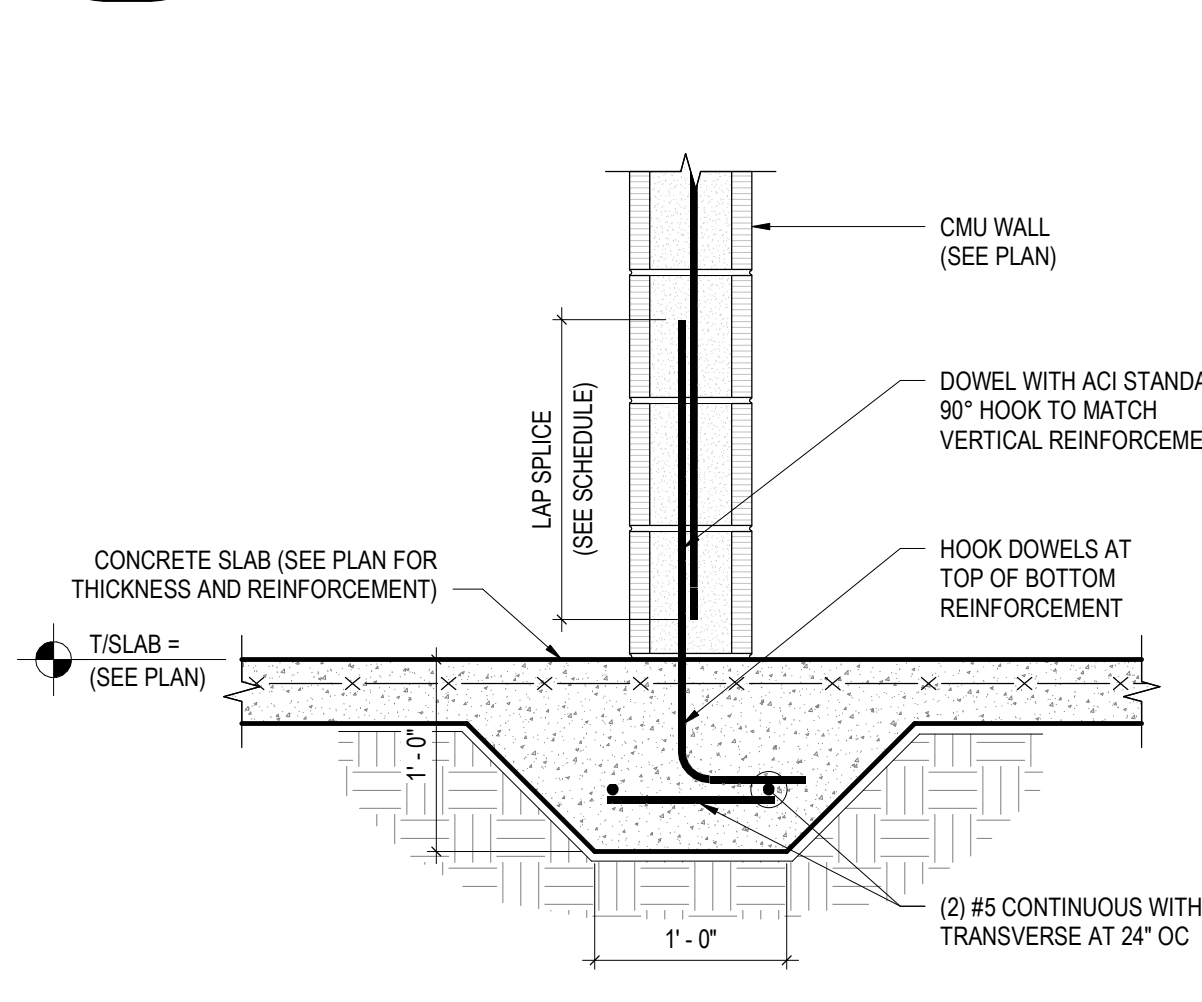


9 TYPICAL CONCRETE TIE COLUMN
3/4" = 1'-0"

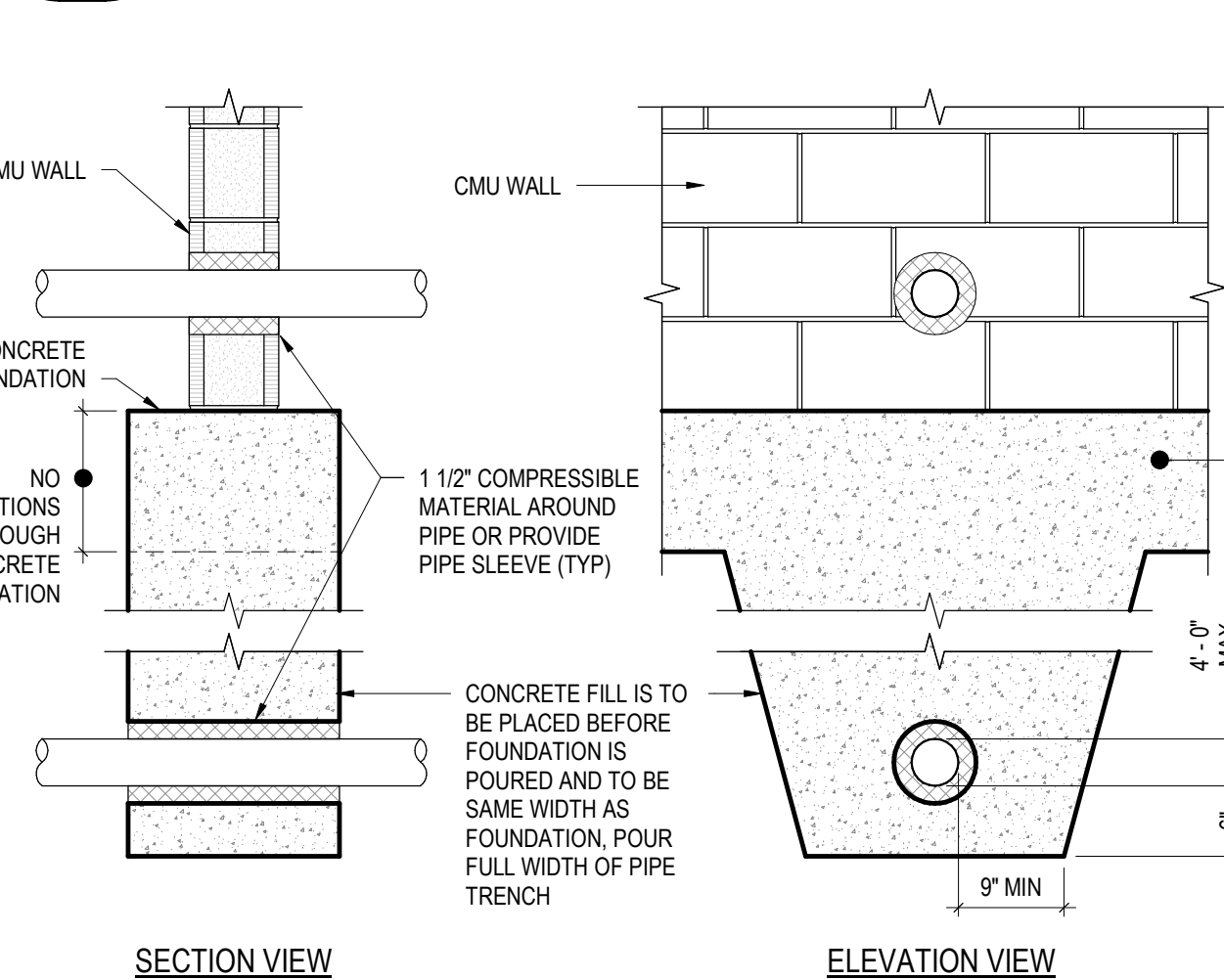
5 CMU PRECAST LINTEL
3/4" = 1'-0"



6 TYPICAL CMU LINTEL AT OPENING
1" = 1'-0"



7 BASE-OF-CMU WALL CONNECTION
1" = 1'-0"

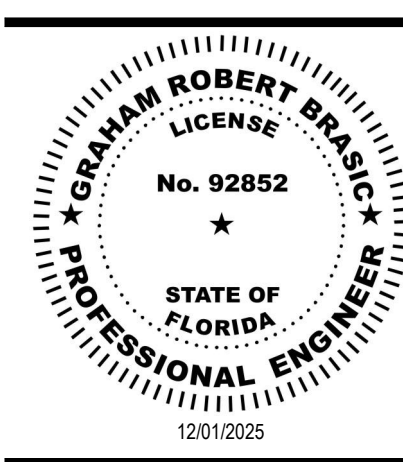


8 CMU SILL - SECTION
1" = 1'-0"

10 THICKENED SLAB AT CMU WALL
1" = 1'-0"

11 PIPE PENETRATION THROUGH WALL OR BELOW FOUNDATION
3/4" = 1'-0"

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Project No.: 2021009
Date: 12/01/2025

TYPICAL
MASONRY
DETAILS

S-400

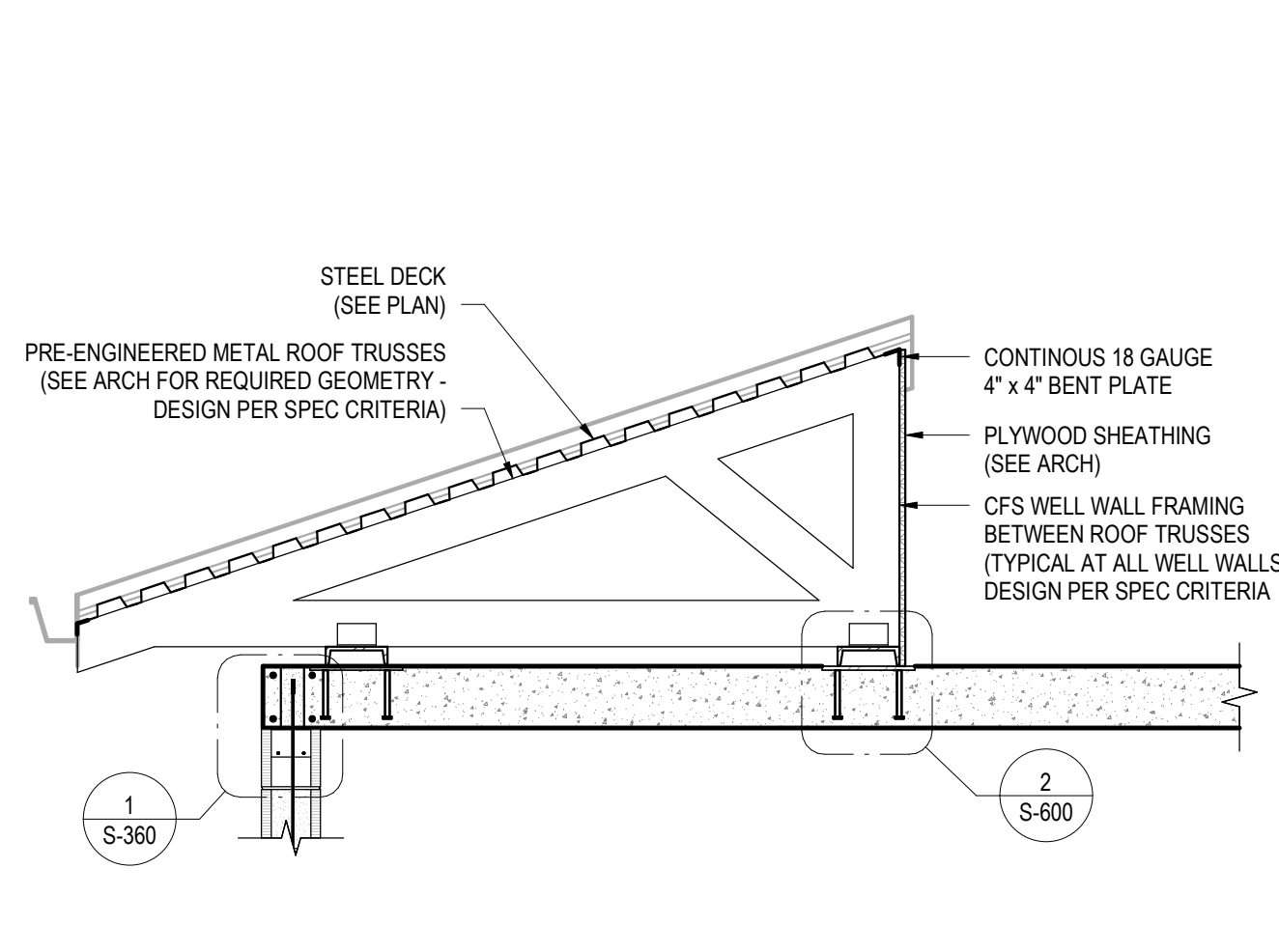
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JG Project #: 21.18.004

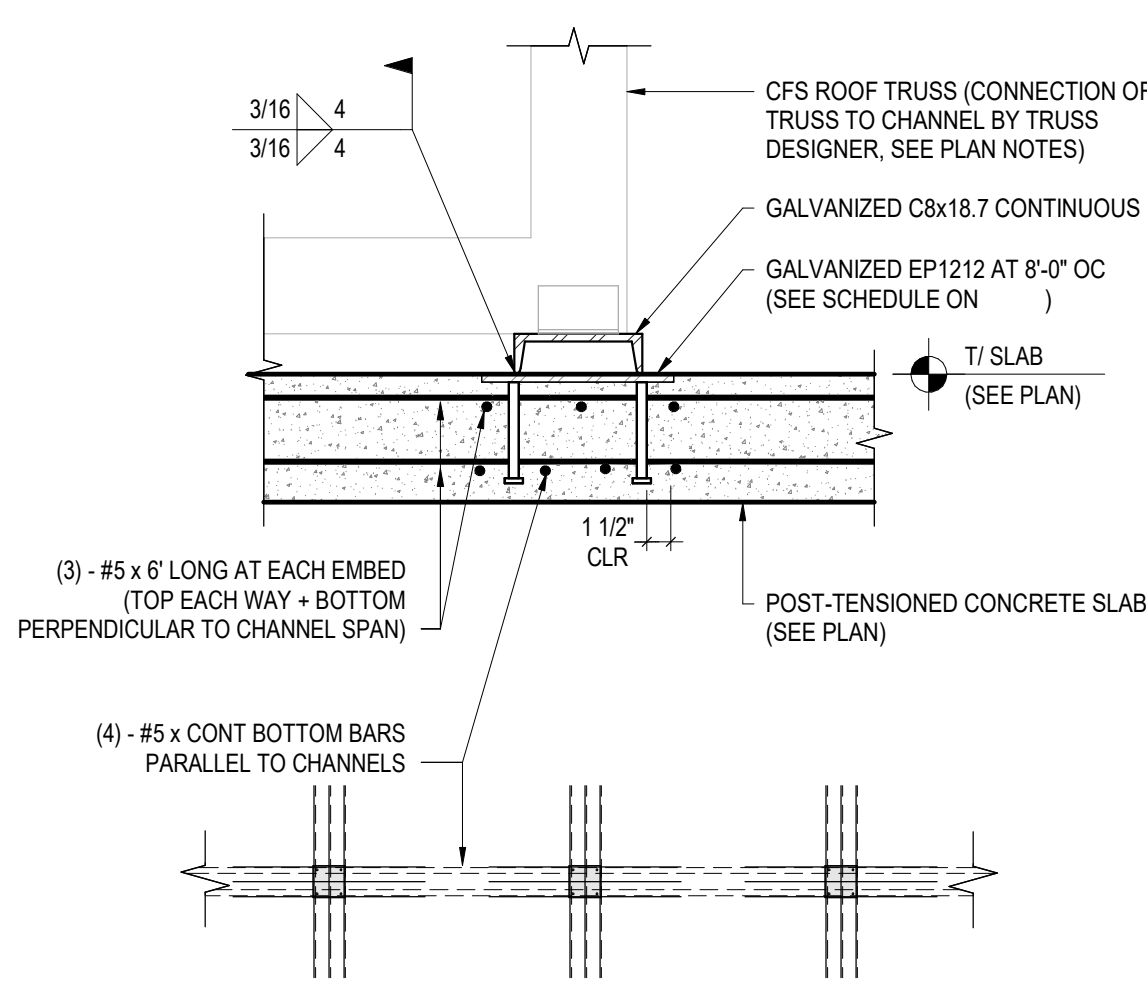
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Autodesk Docs://The Waterford (Stage 2)/2021009_WCR_MC-AL-BLDG_STRUCT_P24.rvt



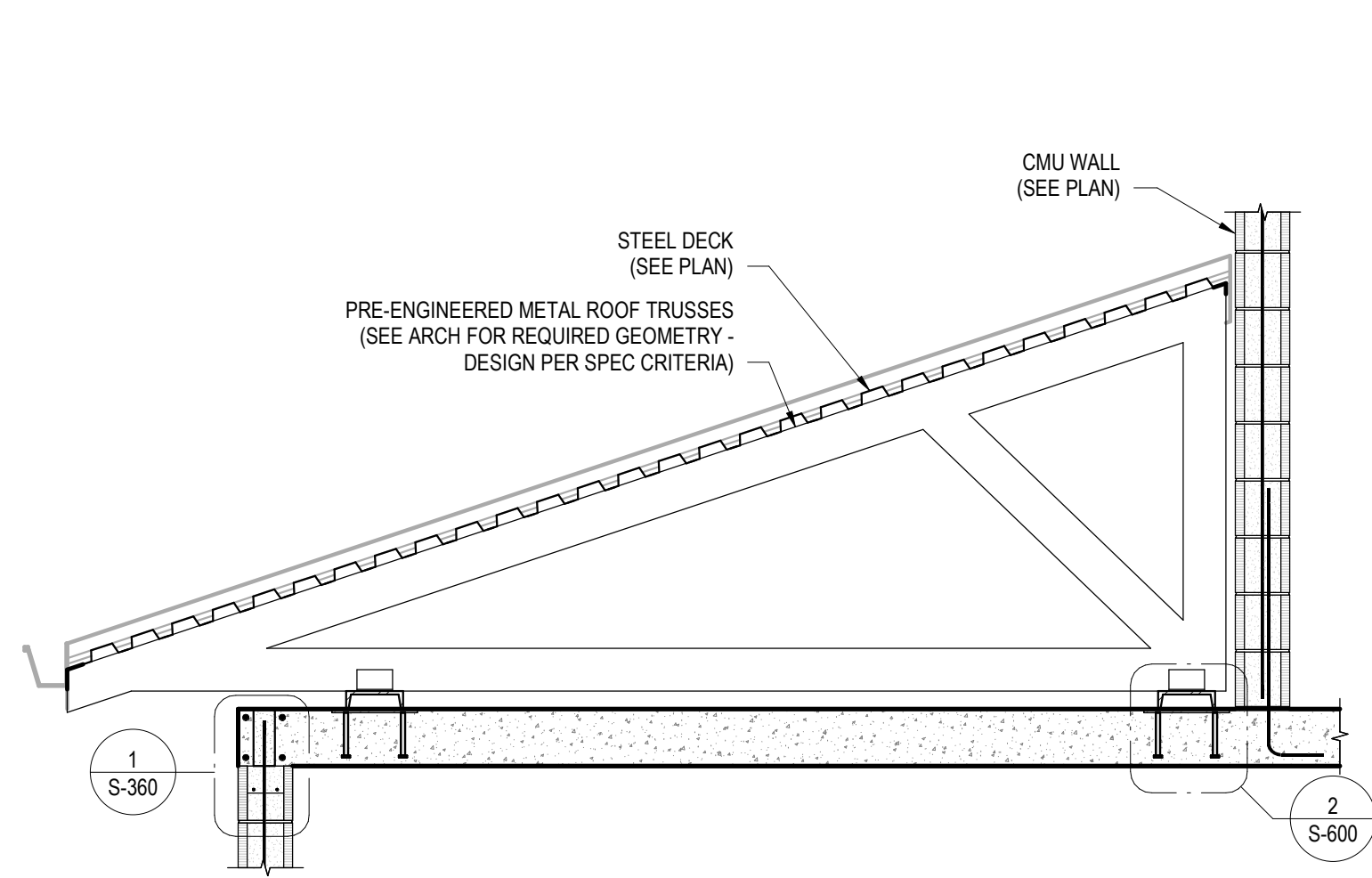
1
S-600
1/2" = 1'-0"

TYPICAL ROOF TRUSS - SECTION



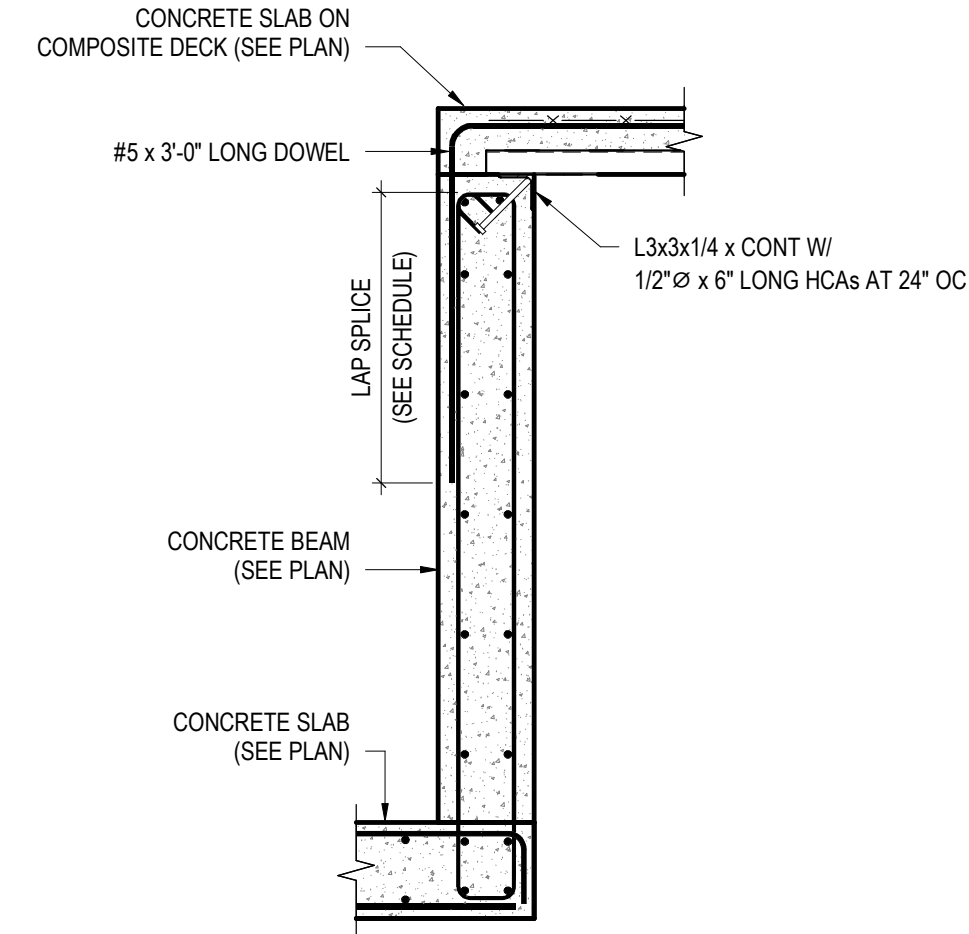
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S-600
1" = 1'-0"

CFS ROOF TRUSS CONNECTION



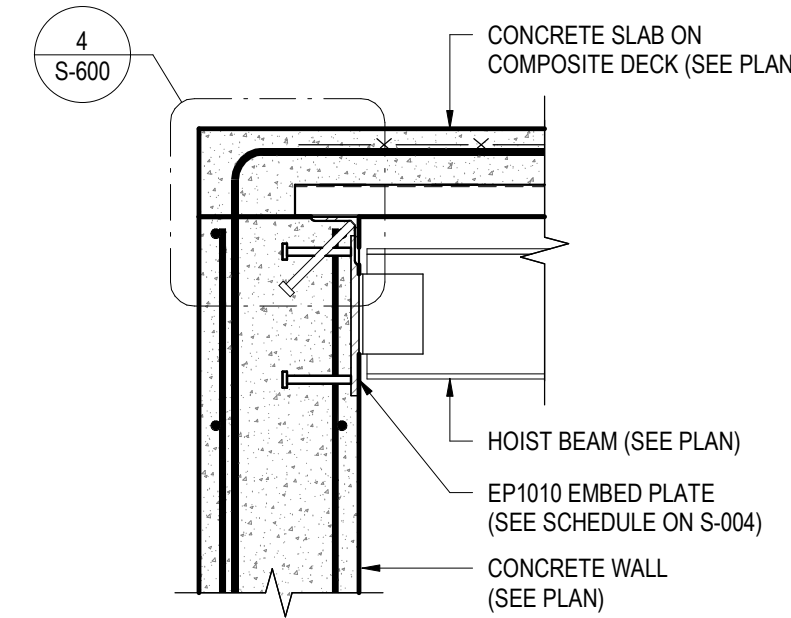
3
S-600
1/2" = 1'-0"

LOW ROOF SECTION



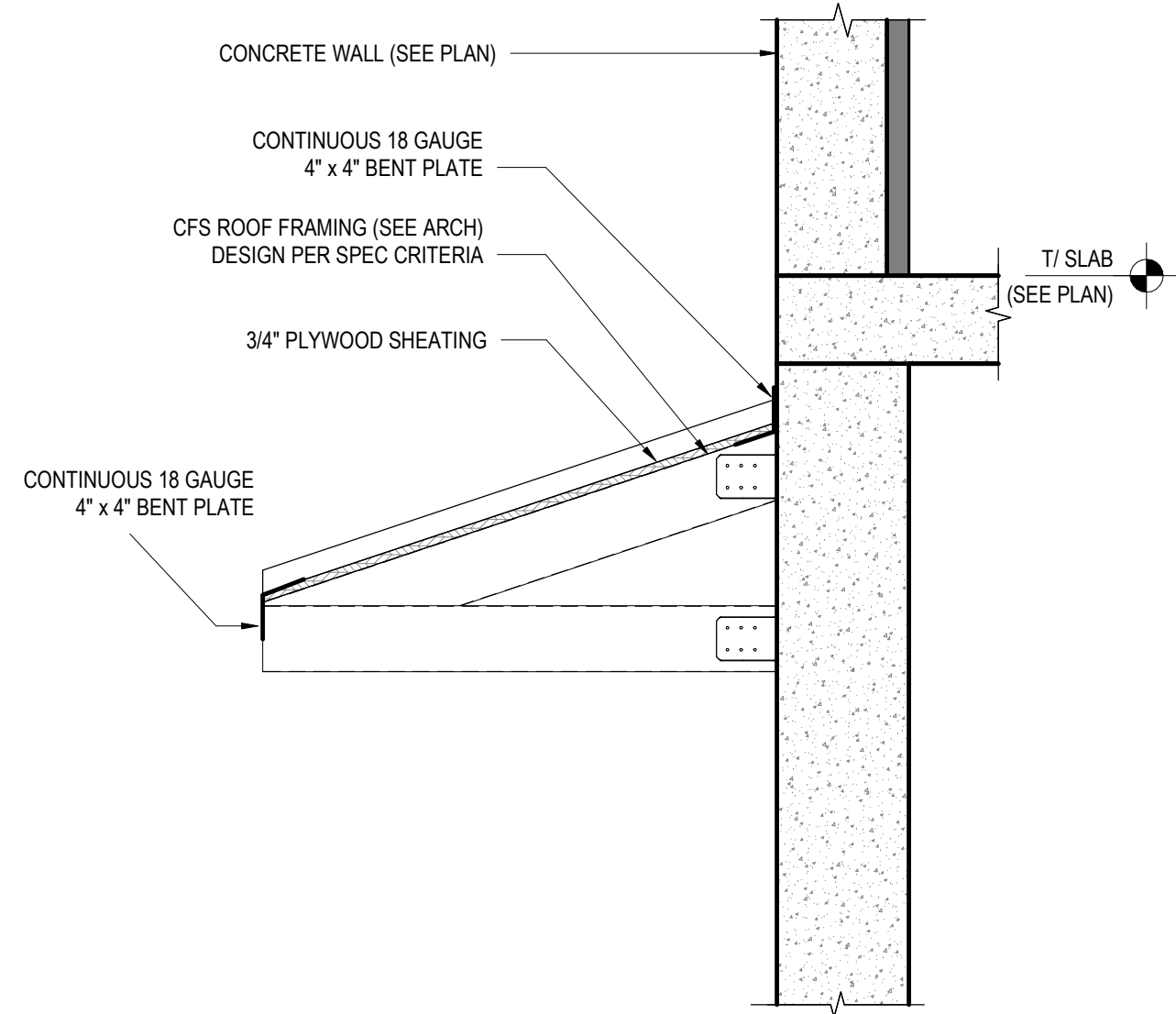
4
S-600
3/4" = 1'-0"

ELEVATOR POP-UP CAP-TO-BEAM CONNECTION



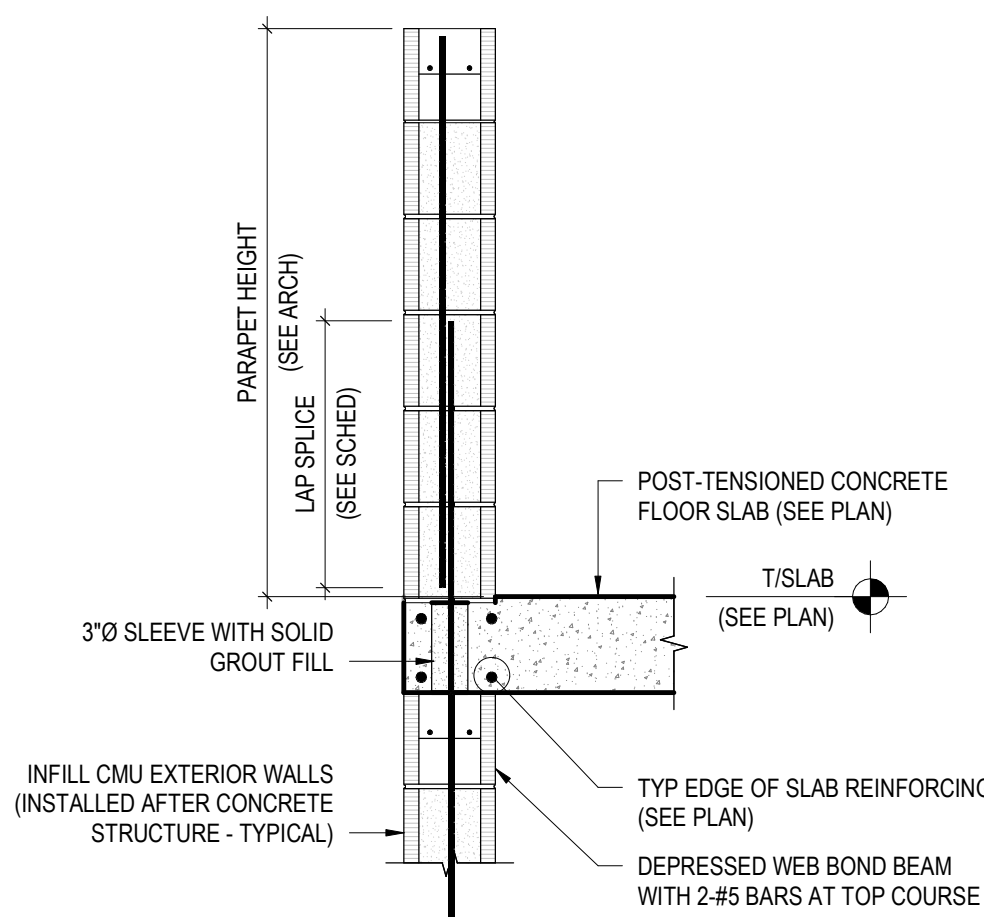
5
S-600
1" = 1'-0"

ELEVATOR POP-UP CAP - SECTION



6
S-600
3/4" = 1'-0"

CANOPY CONNECTION DETAIL



7
S-600
3/4" = 1'-0"

TYPICAL EDGE-OF-SLAB AT PARAPET

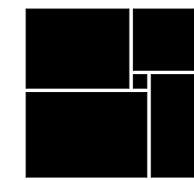
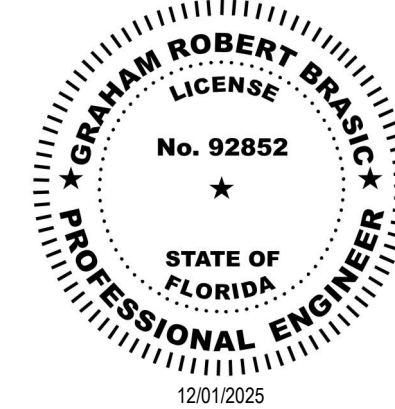


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Project No.: 2021009
Date: 12/01/2025

ROOF
FRAMING
DETAILS

S-600