

STRUCTURAL ABBREVIATIONS		STRUCTURAL ABBREVIATIONS	
ABBREV.	DEFINITION	ABBREV.	DEFINITION
A.B.	anchor bolts	HOF	horizontal outer face
ABV	above	HOK	hook
ADONL	additional	HORZ	horizontal
AFV	above finished floor	IF	inner face
ALT	alternate	INT	interior
ARCH	architectural	J	joint
B. BOT	bottom	K	kips (1000 lbs)
B. BOX	bottom of xxx	L. LEN	length
BAL	balance	LAT	lateral
BB	bond beam	LBS	pounds
BCX	bottom chord extension	LE	left end
BL	brick ledge	LLH	long leg horizontal
BLDG	building	LLO	long leg outstanding
BLW	below	LVL	long leg vertical
BM	beam	LONG	longitudinal
BRG	bearing	MAS	masonry
BRK	brick	MAX	maximum
BTWN	between	MCH	mechanical
CJ	cont. control joint	MFR	manufacturer
CLR	clear	MIN	minimum
CMU	concrete masonry unit	MTL	metal
COL	column	NOM	nominal
CONC	concrete	OC, O/C	on center
CONN	connection	OFF	outer face, opp. face
CONST	construction	OH	opposite hand
CONT	continuous center	OPP	opposite
CTR	center	OPNG	opening
DBA	deformed bar anchor	PC	precast
DET DTL	detail	PL	plate
DIM	dimension	RE	right end
DWSS	drawings	REF	Reference
DWL	dowel	REINF	reinforcement
EA	each	REOQD	required
EE	each end	RET	retaining
EF	each face	SOG	slab on grade
EFF	effective	SC	slip critical
EJ	expansion joint	SCHED	schedule
ELLELEV	elevation	SEC	section
EOC	edge of concrete	SL	slab
EOD	edge of deck	SPA	spacing
EOM	edge of masonry	STNFR	stiffener
EOS	edge of slab	STL	steel
ES	each side	SUPPL	supplier
EW	each way	T	top
EXIST	existing	THX	top of xxx
EXP	expansion	TCX	top chord extension
EXT	exterior, extension	THK	thick, thickness
FK	Foot/Kilobits	TRAN	transverse
FL FLR	floor	TYP	typical
FOB	face of brick	UNO	unless noted otherwise
EDM	edge of masonry	VERT	vertical
FOS	face of stud	VIF	verify in field
FP	full penetration	W	wide, width
FT	foot, feet	WWF	welded wire fabric
FTG	footing		
GB	grade beam		
GEN	general		
HEF	horizontal each face		
HIF	horizontal inner face		

1.0 GENERAL NOTES

1. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND THE SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES AND ALL REFERENCES, CHANGES, INSERTS, ANCHORS, HOLES AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO THE PROTECTION OF PERSONNEL OR PROPERTY.
3. THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONNECTIONS HAVE BEEN COMPLETED, THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND SEQUENCE OF ERECTION, BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES AND SEQUENCES OF PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION, WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO APPROVAL BY THE ENGINEER.
6. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED AND JOINED BY THE SUBMITTER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH THE SUPPLIER'S INSTRUCTIONS AND REQUIREMENTS.
7. LOADING APPLIED TO THE STRUCTURE DURING THE PROCESS OF CONSTRUCTION IS THE CONTRACTOR'S SOLE RESPONSIBILITY AND SHALL NOT EXCEED THE SAFE LOAD - CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADINGS USED IN THE DESIGN OF THIS STRUCTURE ARE BASED ON THE DESIGNATED TRAFFIC LOADS. THE CONTRACTOR SHALL APPLY ALL TRAFFIC LOADS UNTIL THE STRUCTURAL FRAMING IS PROPERLY CONNECTED TOGETHER AND UNTIL ALL TEMPORARY BRACING IS IN PLACE.
8. ALL ASTM AND OTHER REFERENCES ARE PER THE LATEST EDITIONS OF THESE STANDARDS, UNLESS OTHERWISE NOTED.
9. SHOP DRAWINGS AND OTHER ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR BEFORE SUBMITTAL, AND SHALL BEAR THE CONTRACTOR'S APPROVAL STAMP ACCEPTING RESPONSIBILITY FOR DIMENSIONS, QUANTITIES AND COORDINATION WITH OTHER TRADES. IF SHOP DRAWINGS AND OTHER ITEMS ARE NOTED TO NOT MEET THE CONTRACTOR'S APPROVAL STAMP, THEY WILL NOT BE REVIEWED AND WILL BE RETURNED - NO EXCEPTIONS. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND NATIONAL AND INTERNATIONAL STANDARDS. THE ENGINEER'S REVIEW IS NOT THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK, AND CORRECT THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS RESPONSIBLE FOR THE SUBMITTAL OF ALL SHOP DRAWINGS ASSOCIATED WITH THE FABRICATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC. ALL SUBMITTALS INCLUDING CONCRETE MIX DESIGNS, CMC SPECs, ETC. MUST BE DATED AND NO MORE THAN ONE (1) DAY OLD.
10. SUBMIT SHOP DRAWINGS IN THE FORM OF THREE PRINTS IN NO CASE SHALL REPRODUCTION OF THE CONTRACT DRAWINGS BE USED AS SHOP DRAWINGS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD. CONTRACTOR SHALL PROVIDE IN HIS SCHEDULE FOR SHOP DRAWING REVIEW NO MORE THAN A WEEK. A MINIMUM OF TWO SETS OF SHOP DRAWINGS FOR STRUCTURAL ENGINEER'S OFFICE AS A MINIMUM. SUBMIT THE FOLLOWING ITEMS FOR REVIEW:
 - A. CONCRETE MIX DESIGN(S).
 - B. REINFORCING STEEL SHOP DRAWINGS INCLUDING ELEVATED SLABS.
 - C. PRE-MANUFACTURED WOOD SYSTEMS/TRUSS SHOP DRAWINGS WITH CALCULATIONS.
 - D. OTHER SUBMITTALS MAY BE REQUIRED PER THE "SCHEDULE OF SPECIAL INSPECTIONS".REMARKS/NOTES CONTAINED HEREIN SHALL BE THE PROPERTY OF THE ENGINEER.
11. UNLESS OTHERWISE INDICATED, ALL ITEMS IDENTIFIED TO BE DEMOLISHED SHALL BECOME THE CONTRACTOR'S PROPERTY AND BE REMOVED FROM THE SITE.
12. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.
13. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.
14. FIREPROOFING OF STRUCTURAL ELEMENTS IS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR FIRE RATING REQUIREMENTS, MATERIALS AND METHODS.
15. THE CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER, CLEARLY AND EXPLICITLY IN WRITING, OF ANY DEVIATION OR SUBSTITUTION OF REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR IS NOT RELIEVED OF ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS BY VIRTUE OF THE STRUCTURAL ENGINEER'S REVIEW OF THE CONTRACT DOCUMENTS. CONTRACTOR PRESUMES THE CONTRACTOR HAS CLEARLY AND EXPLICITLY INFORMED THE STRUCTURAL ENGINEER IN WRITING OF ANY DEVIATIONS OR SUBSTITUTIONS AT TIME OF SUBMISSION, AND THE STRUCTURAL ENGINEER HAS REVIEWED AND APPROVED ANY SUCH DEVIATIONS OR SUBSTITUTIONS.
16. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES IN THE DRAWINGS OR SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER. CORRECTIONS OR WRITTEN INTERPRETATIONS SHALL BE USED AND NOT AFFECTED WORK.
17. IF THE CONTRACTOR CANNOT CONSTRUCT ANY PORTION OF THE WORK IDENTIFIED IN THE DRAWINGS IN ACCORDANCE WITH THESE DRAWINGS AND SPECIFICATIONS THEN THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH THE WORK. IF THE CONTRACTOR DOES NOT CONTACT THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING, OR ENGINEERING EVALUATION AT THE CONTRACTOR'S EXPENSE.
18. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY EXISTING CONDITIONS. STRUCTURAL ENGINEER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW STRUCTURE.
19. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS. INCONSISTENCIES ON THE STRUCTURAL DRAWINGS OR BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER CONTRACT, SHOP, FABRICATION, OR OTHER DRAWINGS OR INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH AFFECTED WORK.

2.0 DESIGN CRITERIA NOTES:

- THE PRIMARY DESIGN STANDARDS AND/OR CRITERIA INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
- | | |
|-------------------------|--|
| GENERAL: | BLDG CODE (N.C.B.C.2.018, AS AMENDED, ASCE 7-10) |
| CONCRETE: | ACI 318 |
| MASONRY: | ACI 530 |
| STRUCTURAL STEEL: | AISC 341 |
| STEEL JOISTS / GIRDERS: | SJI |
| METAL DECK: | SJI |
| COLD - FORMED METAL: | NAS |
2. DESIGN GRAVITY SUPER IMPOSED DEAD LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS (SELF WEIGHT OF STRUCTURE IS NOT INCLUDED):
- | | | |
|---------------------|-------------|-------------|
| ROOF: | 20 PSF MAX. | 10 PSF MIN. |
| FLOORS - TYPICAL | 15 PSF | |
| PARTITION ALLOWANCE | 0 PSF | |
3. DESIGN GRAVITY LIVE LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:
- | | |
|-------------------------|-------------|
| SLAB ON GRADE..... | 200 PSF |
| ROOF - TYPICAL..... | 20 PSF MIN. |
| STAIRS..... | 100 PSF |
| APARTMENT/CORRIDOR..... | 40 PSF |
| BALCONY..... | 60 PSF |
- FLOOR LIVE LOAD REDUCTION PER N.C.B.C. HAS BEEN UTILIZED. ROOF LIVE LOAD REDUCTION PER N.C.B.C. HAS BEEN UTILIZED.
4. DESIGN LATERAL LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:
- | | |
|------------------------------------|----------|
| BASIC WIND SPEED (3 SECOND GUST) | 115 MPH |
| RISK CATEGORY | II |
| WIND EXPOSURE | B |
| HEIGHT "H" | 50.3ft. |
| INTERNAL PRESSURE COEFFICIENT "Cp" | +/- 0.18 |
- COMPONENTS & CLADDING PRESSURES (PSF):

		TRIBUTARY AREA (FT ²)			
		ZONE	A ≤ 10	A = 50	A =100
WALLS	ZONE 4 (-)	-29.9	-27.0	-25.8	
	ZONE 5 (-)	-36.9	-31.2	-28.7	
	ZONE 4&5 (+)	+27.6	+24.7	+23.4	
ROOF	ZONE 1 (-)	-34.6	-31.3	-29.9	
	ZONE 2 (-)	-41.6	-35.1	-32.2	
	ZONE 3 (-)	-72.0	-57.3	-50.9	
	ALL ZONES (+)	+16.0	+16.0	+16.0	

NOTES:
* CORNER & EDGE ZONES SHALL EXTEND 10'-8" FROM BUILDING EDGES
* "+" INDICATES POSITIVE AND "-" NEGATIVE PRESSURE (SUCTION).

NET ROOF SUCTION

WING MAIN WIND FORCE RESISTING SYSTEM	NORTH/SOUTH LIGHT FRAME SHEAR WALLS	EAST/WEST LIGHT FRAME SHEAR WALLS
WIND BASE SHEAR "Vo"	148 KIPS	55 KIPS

SEISMIC LOADS PER N.C.B.C. 2018:	
SITE CLASS	D (ASSUMED)
SHORT PERIOD DESIGN SPECTRAL RESPONSE "Sds"	0.308g
1-SECOND PERIOD DESIGN SPECTRAL RESPONSE "Sd1"	0.169g
SEISMIC USE GROUP	II

WING SEISMIC FORCE RESISTING SYSTEM	NORTH/SOUTH LIGHT FRAME SHEAR WALLS	EAST/WEST LIGHT FRAME SHEAR WALLS
SEISMIC BASE SHEAR "V _o "	88 KIPS	88 KIPS

- | | | |
|----|---|--|
| 5. | DESIGN SNOW LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:
DEFINING SNOW LOAD PER ASCE 7-10 : NONE WHERE "P" IS LESS THAN 10 PSF

50 YEAR GROUND SNOW LOAD "Pg"
EXPOSURE FACTOR "Ce"
THERMAL FACTOR "T"
IMPORTANCE CATEGORY CLASSIFICATION
IMPORTANCE FACTOR "Is"

FLAT ROOF SNOW LOAD "Ps"
"Pf" | 15 PSF
1.0
1.0
II
1.0
1.0
10.5 PSF (ASCE 7-05, EC 7-1)
10.5 PSF |
| 6. | THIS STRUCTURE HAS BEEN DESIGNED WITH "SAFETY FACTORS" IN ACCORDANCE WITH GENERALLY ACCEPTED PRINCIPLES OF STRUCTURAL ENGINEERING. THE FUNDAMENTAL NATURE OF THE "SAFETY FACTOR" IS TO COMPENSATE FOR UNCERTAINTIES IN THE DESIGN OF MATERIALS AND DESIGN OF STRUCTURAL BUILDING COMPONENTS. IT IS INTENDED THAT "SAFETY FACTORS" BE USED SO THAT THE LOAD CARRYING CAPACITY OF THE STRUCTURE DOES NOT FALL BELOW THE DESIGN LOAD, BUT THAT THE BUILDING HAS PERFORMANCE UNDER DESIGN LOAD WITHOUT DISTRESS. WHILE THE USE OF "SAFETY FACTORS" IMPLIES SOME EXCESS CAPACITY BEYOND DESIGN LOAD, SUCH EXCESS CAPACITY CANNOT BE ADEQUATELY PREDICTED AND SHALL NOT BE RELIED UPON. | |
| 7. | BUILDING SHALL NOT BE USED AS AN EMERGENCY SHELTER. | |

3.0 DEFERRED SUBMITTAL NOTES:

1. SHOP DRAWINGS AND OTHER ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
2. IN NO CASE SHALL REPRODUCTION OF THE CONTRACT DRAWINGS BE USED AS SHOP DRAWINGS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD. CONTRACTOR SHALL SUBMIT THE SCHEDULE OF SHOP DRAWING REVIEW AND RETURN TIME. A MINIMUM OF FIFTEEN (15) WORKING DAYS IN THE STRUCTURAL ENGINEER'S OFFICE.
3. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR BEFORE SUBMITTAL, AND SHALL BEAR THE CONTRACTOR'S APPROVAL STAMP ACCEPTING RESPONSIBILITY FOR DIMENSIONS, QUANTITIES AND COORDINATION WITH OTHER TRADES. IF SHOP DRAWINGS AND OTHER SUBMITTALS DO NOT BEAR THE CONTRACTOR'S APPROVAL STAMP, THEY WILL NOT BE REVIEWED AND WILL BE RETURNED. NO EXCEPTIONS.
4. ALL SHOP DRAWINGS AND CALCULATIONS FOR DELEGATED DESIGN REQUIRING AN ENGINEER'S SEAL SHALL BE SEALED PRIOR TO SUBMISSION FOR REVIEW. IF SHOP DRAWINGS AND OTHER SUBMITTALS DO NOT BEAR THE DELEGATED ENGINEER'S SEAL, THEY WILL NOT BE REVIEWED AND WILL BE RETURNED. NO EXCEPTIONS.
5. WHERE NOTED SEALED DRAWINGS OR CALCULATIONS ARE REQUIRED TO BE SEALED AND SIGNED BY A LICENSED STRUCTURAL ENGINEER IN THE PROJECT STATE, NOTE THAT PLACEMENT OR LAYOUT PLANS FOR TRUSSES AND JOISTS DO NOT REQUIRE ENGINEER'S SEAL.
6. THE ENGINEER OR RECORD'S (EOR) REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS THE EOR REVIEWER WILL NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS WHICH PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC. ALL SUBMITTALS INCLUDING CONCRETE MIX DESIGNS, CMU SPECS, ETC. MUST BE DATED AND NO MORE THAN ONE (1) YEAR OLD.
7. AS A MINIMUM, SUBMIT THE FOLLOWING ITEMS FOR REVIEW:
 - A. CONCRETE MIX DESIGNS
 - B. REINFORCING STEEL SHOP DRAWINGS
 - C. PRE-FABRICATED WOOD SYSTEM/STRUSS SHOP DRAWINGS WITH CALCULATIONS.
 - D. SHOP DRAWINGS MAY BE RETURNED TO THE ENGINEER WITH THE "SCHEDULE OF SPECIAL INSPECTIONS" OR THE SEPARATE NOTES CONTAINED HEREIN.
8. ANY SHOP DRAWINGS WITH LANGUAGE LIMITING REVIEW RESPONSES SUCH AS BUT NOT LIMITED TO THE FOLLOWING WILL NOT BE REVIEWED AND WILL BE RETURNED. NO EXCEPTIONS.
 - A. "RESPONSES SUCH AS 'YES TO VERIFY' OR 'ARCH TO VERIFY' ARE NOT ACCEPTABLE ANSWERS"
 - B. "CLOUDS MARKED IN MANNER WILL BE CONSIDERED NOT ADDRESSED"
9. SHOP DRAWINGS SHALL NOT BE USED AS RFIs AND ARE TO BE CONSIDERED COMPLETELY SEPARATE SUBMITTALS.

4.0 SITE PREPARATION NOTES:

1. WITHIN AN AREA A MINIMUM OF 5 FEET BEFORE THE BUILDING LIMITS EXCAVATE A MINIMUM OF 3' OF EXISTING SOIL. REMOVE ALL ORGANICS, PAVEMENT, ROOTS, DEBRIS AND OTHERWISE UNSUITABLE MATERIAL.
2. THE SURFACE OF THE EXPOSED SUBGRADE SHALL BE INSPECTED BY PROBING OR TESTING TO CHECK FOR POCKETS OF SOFT OR UNSUITABLE MATERIAL. EXCAVATE UNSUITABLE SOILS AS DIRECTED BY THE GEOTECHNICAL ENGINEER / TESTING AGENCY.
3. PROOF-ROLL THE SURFACE OF THE EXPOSED SUBGRADE WITH A LOADED TANDDEM AXLE DUMP TRUCK. REMOVE ALL SOILS WHICH PUMP OR DO NOT COMPACT PROPERLY AS DIRECTED BY THE GEOTECHNICAL ENGINEERING/TESTING AGENCY.
4. FILL ALL EXCAVATED AREAS WITH APPROVED CONTROLLED FILL. PLACE IN 8 INCH LOTS LIFTS AND COMPACT TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D - 698.
5. ALL CONTROLLED FILL MATERIAL SHALL BE A SELECT GRANULAR MATERIAL FREE FROM ALL ORGANICS OR OTHERWISE DELETERIOUS MATERIAL WITH NOT MORE THAN 20% BY WEIGHT PASSING NO. 200 SIEVE (AS CLASSIFIED AS S.C., S.M., SP. OR BETTER IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM) AND WITH A PLASTICITY INDEX NOT EXCEEDING 6%.
6. PROVIDE FIELD DENSITY TESTS FOR EACH 3,000 S.F. OF BUILDING AREA FOR EACH LIFT OF CONTROLLED FILL.

5.0 FOUNDATION NOTES: (TYP)

1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT BY BLE CORP, DATED 03/31/2025
2. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATION FOR STRUCTURAL-CONCRETE BUILDINGS" - NOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 308.60 WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 308.
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED.
4. SEE "CAST-IN-PLACE CONCRETE NOTES" FOR MINIMUM CONCRETE COVER REQUIREMENTS, AND CONCRETE ELEMENT PROPERTIES.
5. ALL REINFORCING MARKED CONTINUOUS (CONT.) ON THE PLANS AND DETAILS SHALL BE LAPPED LAPS AT SPICES UNLESS OTHERWISE NOTED SEE EMBEDMENT & LAP SPICE SCHEDULE
6. NO UNBALANCED BACKFILLING SHALL BE DONE AGAINST FOUNDATION WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING EITHER BY TEMPORARY BRACING OR BY PERMANENT CONSTRUCTION.
7. PRIOR TO COMMENCING ANY FOUNDATION WORK, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATING WORK WITH ANY EXISTING UTILITIES. FOUNDATIONS SHALL BE LOWERED AS REQUIRED TO AVOID UTILITIES. STRUCTURAL ENGINEER MUST BE NOTIFIED IF FOOTINGS ARE LOWERED MORE THAN 2 FEET RELATIVE TO THAT WHICH IS SHOWN.
8. UNLESS OTHERWISE NOTED, THE CENTERLINES OF COLUMN FOUNDATIONS SHALL BE LOCATED ON COLUMN CENTERLINES.
9. ALL RETAINING WALLS SHALL HAVE AT LEAST 12" OF FREE - DRAINING GRANULAR BACKFILL FULL HEIGHT OF WALL. PROVIDE VERTICAL CONTROL JOINTS NOT TO EXCEED 25 FEET O.C. NOR 3 TIMES THE WALL HEIGHT. MAXIMUM LENGTH OF WALL POURS SHALL NOT EXCEED 50 FEET IN ANY SINGLE POUR.
10. BOTTOM OF EXTERIOR FOUNDATIONS SHALL BEAR AT A MINIMUM DEPTH OF 1'-0" BELOW FINAL GRADE FOR FROST PROTECTION.
11. ALL FOOTINGS HAVE BEEN DESIGNED BASED UPON AN ASSUMED SOIL BEARING CAPACITY OF 1.5 KSF. ALL FOOTINGS SHALL BEAR ON UNDISTURBED, FIRM NATURAL SOIL OR COMPACTED FILL. ALL FOUNDATION EXCAVATIONS SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY PRIOR TO POURING FOUNDATION CONCRETE, SCHEDULE 1.
12. TOP OF FOOTING ELEVATION SHALL BE AS SHOWN ON THE FOUNDATION PLAN. THESE ELEVATIONS ARE A MAXIMUM AND SHALL BE LOWERED AS REQUIRED TO OBTAIN THE REQUIRED DESIGNING PRESSURE. STRUCTURAL ENGINEER MUST BE NOTIFIED IF FOOTINGS ARE LOWERED MORE THAN 2 FEET RELATIVE TO THAT WHICH IS SHOWN.
13. WHERE FOOTING EXCAVATIONS MUST REMAIN OPEN OVERNIGHT OR IF RAINFALL BECOMES IMMINENT WHILE BEARING SOILS ARE EXPOSED, A 2" TO 4" THICK MID DIRT OF UNCOMPACTED LEAN (FC = 2000psi) CONCRETE SHALL BE PLACED ON THE BEARING SOILS BEFORE PLACEMENT OF THE FOOTING REINFORCING.

6.0 SLAB ON GRADE NOTES:

1. PROVIDE CONCRETE SLABS OVER A VAPOR BARRIER PER ARCHITECT DRAWINGS AND 4" OF POROUS FILL. CONCRETE SLABS SHALL HAVE A MAXIMUM SLOPE OF 5 INCHES, USING TYPE 1 CEMENT.
2. ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A-185. LAP ADJOINING PIECES AND ONE FULL LAP SHALL BE IN ACCORDANCE WITH ASTM A-185.
3. ALL POROUS FILL MATERIAL SHALL BE A CLEAN GRANULAR MATERIAL WITH 100% PASSING A 1-1/2" SIEVE AND NO MORE THAN 5% PASSING A NO. 4 SIEVE. POROUS FILL SHALL BE COMPACTED TO 95% MAX. DRY DENSITY PER ASTM D-686.
4. SLAB JOINTS SHALL BE FILLED WITH APPROVED MATERIAL. THIS SHOULD TAKE PLACE AS LATE AS POSSIBLE, PREFERABLY AT 2 TO 6 WEEKS AFTER THE SLAB HAS BEEN CAST. PRIOR TO FILLING ALL DEBRIS AND WASTE SHALL BE REMOVED. PROVIDE LOCATIONS FOR THE MANUFACTURER'S RECOMMENDATIONS AS FOLLOWS: a) SLABS - FILL WITH EPOXY RESIN OTHER SLABS - FILL WITH FILL MOLDED OR ELASTOMERIC SEALANT
5. UNLESS OTHERWISE PROVIDED, ALL SLAB REINFORCEMENT SHALL BE SECURED INTO POSITION WITH PLASTIC TIEPINS OR STAINLESS STEEL BAR SUPPORTS. BRICK OR OTHER MASONRY ARE NOT PERMITTED FOR USE AS SUPPORTS.
6. WALKWAYS AND OTHER EXTERIOR SLABS ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS. PROVIDE PLAN AND SECTION ARCHITECTURAL DRAWINGS FOR LOCATION, DIMENSIONS, ELEVATIONS, JOINTING DETAILS AND FINISH DETAILS. PROVIDE 4" WALKS REINFORCED WITH 6X6 - W1.4XW1.4 W/WF UNLESS OTHERWISE NOTED.
7. SLABS TO BE PERMANENTLY EXPOSED TO WEATHER SHALL BE AIR ENTRAINED TO 5% (+/- 1%) WITH AN ADMIXTURE THAT CONFORMS TO ASTM C-260.
8. SLABS NOT PERMANENTLY EXPOSED TO WEATHER SHALL NOT BE AIR ENTRAINED AND ENTRAPPED AIR SHALL BE LIMITED TO 3%.
9. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS"; HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 305 COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306.
10. IN ORDER TO AVOID CONCRETE SHRINKAGE CRACKING, PLACE CONCRETE SLABS IN AN ALTERNATING LANE (OR CHECKERBOARD) PATTERN, THE MAXIMUM LENGTH OF SLAB CAST IN ANY ONE CONTINUOUS POUR IS RECOMMENDED TO BE LESS THAN 100 FEET. THE MAXIMUM LENGTH OF CONTROL JOINTS SHALL BE LIMITED TO THE SLAB THICKNESS IF FEASIBLE. (EXAMPLE 4' SLAB X 3 = 12'-0" CJ SPACING TYPICAL)
11. THE USE OF POLYPROPYLENE FIBERS (IN LIEU OF WELDED WIRE FABRIC) IS PROHIBITED WITHOUT THE WRITTEN AUTHORIZATION OF THE ENGINEER.
12. SEE THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF DEPRESSION SLAB AREAS AND DRAINS. SLOPE SLABS TO DRAINS WHERE SHOWN.
13. THE FINISH TOLERANCE OF ALL SLABS SHALL BE IN ACCORDANCE WITH ACI 301, TYPE A.

7.0 POST-INSTALLED ANCHORS:

1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD FOR ANY CHANGES TO THE INSTALLATION OF ANY TYPE OF MISSED OR MISAPPLIED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID COLLISIONS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE REBAR MANUFACTURER'S PRINTING INSTRUCTIONS (MPSI). ANY SUBSTITUTION REQUESTS, PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES (MINIMUM OF THE SPECIFIED PRODUCT) USING THE APPROPRIATE DESIGN PROCEDURE. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION AS REQUIRED BY THE ANCHORS EVALUATION REPORT (ICC-ES ESR OR APMQ/US CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TESTS AND INSTALLATION OF ANY TYPE OF POST-INSTALLED ANCHOR PRODUCT RELATED QUESTIONS AND AVAILABILITY. CALL SIMPSON STRONG-TIE (800) 999-5699.
2. FOR ANCHORING INTO CRACKED AND UNCRACKED CONCRETE:
 - A. MECHANICAL ANCHORS - SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 308.2 AND ACI 308.4S AC108 FOR CRACKED & UNCRACKED CONCRETE. PRE-APPROVED PRODUCTS INCLUDE:
 1. SIMPSON STRONG-TIE "STRONG-BOLTZ" (ATM-JES ESR-2713)
 2. SIMPSON STRONG-TIE "TITEN H-T" (ATM-JES ESR-2713) & "TITEN H-DC" (ICC-ES ESR-2713)
 3. SIMPSON STRONG-TIE "STAINLESS STEEL TITEN H-T" (APMQ/US ESR-493)
 4. SIMPSON STRONG-TIE "TITEN TURBO" (ATM-JES ESR-712)
 - B. ADHESIVE ANCHORS - SHALL HAVE BEEN TESTED IN ACCORDANCE WITH AC308.5 & 5.4.2 AND ACCEPTED FOR CRACKED AND UNCRACKED CONCRETE. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS. HOLES SHALL BE DRY AT THE TIME OF INSTALLATION. AC308.5A TEMPERATURE CATEGORY 'B' ASSUMED IN DESIGN. IN ORDER TO INSTALL ADHESIVE ANCHORS IN HORIZONTAL OR UNFAVORABLY INCLUDED ORIENTATIONS REQUIRING SUSTAINED TENSION LOADS, INSTALLERS ARE REQUIRED TO BE CERTIFIED IN ACCORDANCE WITH THE ACH/US1 ADHESIVE ANCHOR INSTALLATION CERTIFICATION PROGRAM AND MUST BE CONTINUOUSLY INSPECTED. PRE-APPROVED PRODUCTS INCLUDE:
 1. THREADED ROD & REBAR AS ANCHOR ELEMENTS - SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4047)
 2. THREADED ROD & REBAR AS ANCHOR ELEMENTS - SIMPSON STRONG-TIE "SET-XP" (ICC-ES ESR-4508)
 3. THREADED ROD & REBAR AS ANCHOR ELEMENTS - SIMPSON STRONG-TIE "AT-XP" (APMQ/US ESR-263)
 4. POST INSTALLED REINFORCING BARS USING THE AC308.6 DEVELOPMENT LENGTH PROVISION - SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4047)
 5. POST INSTALLED REINFORCING BARS USING THE AC308.6 DEVELOPMENT LENGTH PROVISION - SIMPSON STRONG-TIE "SET-XP" (ICC-ES ESR-4508)
3. SIMPSON STRONG-TIE CLEAN DYS DUST EXTRACTION SYSTEM IN APPROVED FOR USE WITH THE PRODUCTS LISTED ABOVE TO DRY AND CLEAN HOLES.
3. FOR ANCHORING INTO GROUT-FILLED CONCRETE MASONRY UNITS.
 - A. MECHANICAL ANCHORS - SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC108 (EXPANSION ANCHORS) OR ICC-ES AC108 (S-REIN ANCHORS) PRE-APPROVED PRODUCTS INCLUDE:
 1. SIMPSON STRONG-TIE "STRONG-BOLTZ" (ATM-JES ESR-2713)
 2. SIMPSON STRONG-TIE "WEDGE-ALL" (ICC-ES ESR-1396)
 3. SIMPSON STRONG-TIE "TITEN H-T" & "STAINLESS STEEL TITEN H-T" (APMQ/US ESR-493)
 4. SIMPSON STRONG-TIE "TITEN TURBO" (APMQ/US ESR-716)
 - B. ADHESIVE ANCHORS - SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC08.1 PRE-APPROVED PRODUCTS INCLUDE:
 1. SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4047)
 2. SIMPSON STRONG-TIE "AT-XP" (APMQ/US ESR-261)
 3. SIMPSON STRONG-TIE "ET-HP" (APMQ/US ESR-241)
4. FOR ANCHORING INTO HOLLOW CONCRETE MASONRY UNITS.
 - A. MECHANICAL ANCHORS - SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC108 FOR PERFORMANCE IN HOLLOW CONCRETE MASONRY. PRE-APPROVED PRODUCTS INCLUDE:
 1. SIMPSON STRONG-TIE "STAINLESS STEEL TITEN HD" (ICC-ES ESR-1056)
 2. SIMPSON STRONG-TIE "TITEN H-T" (ATM-JES ESR-2713)
 - B. ADHESIVE ANCHORS - SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC508 FOR PERFORMANCE IN HOLLOW CONCRETE MASONRY USING MANUFACTURERS' RECOMMENDED SCREEN TUBES. PRE-APPROVED PRODUCTS INCLUDE:
 1. SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4047)
 2. SIMPSON STRONG-TIE "AT-XP" (APMQ/US ESR-261)
5. FOR ANCHORING INTO UNREINFORCED MASONRY.
 - A. ADHESIVE ANCHORS - SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC06.0 FOR PERFORMANCE IN UN-REINFORCED MASONRY CONFIGURATIONS A, B, & C. PRE-APPROVED PRODUCTS INCLUDE:
 1. SIMPSON STRONG-TIE "ET-HP" (APMQ/US ESR-338)
6. FOR ANCHORING LOW VELOCITY AND THREADED STUDS INTO CONCRETE, MASONRY AND STEEL

8.0 CAST-IN-PLACE CONCRETE NOTES:

- CONCRETE MIXES SHALL BE DESIGNED PER ACI 301 CHAPTER 3, USING PORTLAND CEMENT CONFORMING TO ASTM C-150 OR C-595, AGGREGATE CONFORMING TO ASTM C-33, AND ADMIXTURES CONFORMING TO ASTM C-494, C-417, C-618, C-989 AND C-260. CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH ASTM C-104.
- CONCRETE SHALL CONFORM TO THE FOLLOWING COMPRESSIVE STRENGTH, SLUMP AND UNIT WEIGHT RATIO REQUIREMENTS:
- | ELEMENT | MIN. FC (28 DAYS) | SLUMP* | UNIT WEIGHT |
|--------------------|-------------------|----------|-------------|
| CONCRETE NOT NOTED | 3000 PSI | 2" TO 4" | 145 PCF |
| FOOTINGS | 3000 PSI | 2" TO 4" | 145 PCF |
| SLABS-ON-GRADE | 3000 PSI | 2" TO 4" | 145 PCF |
- *AT CONTRACTOR'S OPTION, AN APPROVED ADMIXTURE MAY BE USED TO PRODUCE FLOWABLE CONCRETE. MAXIMUM SLUMP SHALL NOT EXCEED 10 INCHES. THE CONTRACTOR SHALL SUBMIT TEST RESULTS OF THE PROPOSED CONCRETE MIXTURE TO THE ARCHITECT AND THE MANUFACTURER'S TECHNICAL DATA FOR APPROVAL PRIOR TO POURING CONCRETE.
- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS," HOT WEATHER CONCRETE SHALL BE IN ACCORDANCE WITH ACI 305. COLD WEATHER CONCRETE SHALL BE IN ACCORDANCE WITH ACI 306.
- WATER REDUCING ADMIXTURE SHALL BE USED IN ALL CONCRETE.
- AIR ENTRAINING ADMIXTURE IN ACCORDANCE WITH ACI 301 TABLE 3.4.1.1 SHALL BE USED IN ALL CONCRETE EXPOSED TO FREEZING AND THAWING DURING CONSTRUCTION AND/OR SERVICE CONDITIONS.
- WATER/CEMENT RATIO SHALL NOT EXCEED 0.50 FOR ANY CONCRETE SUBJECTED TO FREEZING/ THAWING.
- ALL PUMPED CONCRETE SHALL HAVE A WATER/CEMENT RATIO LESS THAN 0.50 AND SHALL CONTAIN A HIGH RANGE WATER REDUCING ADMIXTURE (SUPERPLASTICIZER).
- IN NO CASE SHALL A WATER/CEMENT RATIO EXCEED THE FOLLOWING:
- | fc 3000 PSI | 0.60 MAX. w/c RATIO |
|-------------|---------------------|
|-------------|---------------------|
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60 U N O - , EXCEPT THAT REINFORCING WHICH IS REQUIRED TO BE WELDED SHALL CONFORM TO ASTM A706. ALL WELDING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH AWS D1.4. EPOXY COATED REINFORCING SHALL CONFORM TO ASTM A-775.
- ALL WELDED WIRE FABRIC (WVF) SHALL CONFORM TO ASTM A-185.
- ALL REINFORCING STEEL SHALL BE SET AND TIED IN PLACE PRIOR TO POURING OF CONCRETE. DO NOT FIELD BEND BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE UNLESS SPECIFICALLY INDICATED OR APPROVED BY THE ENGINEER.
- REINFORCING STEEL, INCLUDING HOOKS AND BENDS, SHALL BE DETAILLED IN ACCORDANCE WITH ACI 315. ALL REINFORCING STEEL INDICATED AS BEING CONTINUOUS (CONT) SHALL BE LAPPED 17" PER EMBEDMENT AND LAP SPLICED SCHEDULE UNLESS OTHERWISE NOTED.
- UNLESS OTHERWISE NOTED, THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:
- | | |
|---|----------|
| A. CONCRETE EXPOSED TO EARTH OR WEATHER: | |
| #6 THROUGH #18 BARS | - 1" MIN |
| #5 BAR, W/31 OR D31 WIRE & SMALLER | - 1 1/2" |
| B. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: | |
| SLABS, WALLS & JOISTS | - 1 1/2" |
| #14 AND #18 BARS | - 3/4" |
| #11 BAR AND SMALLER | - 3/4" |
| BEAMS AND COLLARS | - 1 1/2" |
| PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS | - 1 1/2" |
| SHELLS, FOLDED PLATE MEMBERS | - 3/4" |
| #6 BAR AND LARGER | - 1 1/2" |
| #5 BAR, W/31 OR D31 WIRE AND SMALLER | - 1 1/2" |
| C. CONCRETE CAST AGAINST EARTH | - 3" |
- BAR SUPPORTS AND HOLDING BARS SHALL BE PROVIDED FOR ALL REINFORCING STEEL TO INSURE MINIMUM CONCRETE COVER AND PLACEMENT. BAR SUPPORTS SHALL BE PLASTIC TYPED OR STAINLESS STEEL.
- ALL EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH DOCUMENTATION THAT ALL MATERIALS CONFORM TO THE QUALITY STANDARDS SPECIFIED IN THE GENERAL BUILDING CODE.
- IN ORDER TO AVOID CONCRETE SHRINKAGE CRACKING, PLACE CONCRETE SLABS IN AN ALTERNATING LANE PATTERN THE MAXIMUM LENGTH OF SLAB CAST IN ANY ONE CONTINUOUS POUR SHALL BE LIMITED TO 80 FEET.
- FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF ITS 28 DAY COMPRESSIVE STRENGTH THE CONTRACTOR SHALL PROVIDE ALL SHORING AND RE-SHORING.
- CONSTRUCTION JOINTS, REQUIRED TO FACILITATE CONSTRUCTION ARE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND SHALL REQUIRE ACI 308.1-1 REINFORCING. SUCH JOINTS SHALL BE CLEARLY DETAILD ON THE SHOP DRAWINGS AND ALL REINFORCING SHALL PASS CONTINUOUSLY THROUGH THE JOINT.
- REFER TO ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIPS, REGLETS, WASHES, MASONRY ANCHORS, BRICK LEDGE ELEVATIONS, SLAB DEPRESSIONS AND MISCELLANEOUS EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, ETC.
- REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES WHERE FINISH IS NOT SPECIFIED, CONFORM TO REQUIREMENTS OF ACI 301.
- REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR UNDERFLOOR, PERIMETER AND OTHER DRAINS AND FOR SLEEVES, OUTLET BOXES, CONDUIT, ANCHORS, ETC. THE VARIOUS TRADES ARE RESPONSIBLE FOR THEIR ITEMS.
- SLAB REIN. NOT SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE REINFORCED WITH A MINIMUM OF 6X6-W/1.4XW/1.4 WWM UNLESS NOTED OTHERWISE ON OTHER DRAWINGS OR IN THE SPECIFICATIONS.
- REINFORCING BARS SHALL BE WELDED ONLY WHERE SHOWN ON THE STRUCTURAL DRAWINGS AND SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE - REINFORCING STEEL (AWS D1.4). NO OTHER REINFORCING MAY BE WELDED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. TACK WELDING OF ANY REINFORCING IS STRICTLY PROHIBITED.
- ALL REINFORCING TERMINATING AT TOPS OF THE COLUMNS AND PILASTERS SHALL BE HOOKED U.N.O.
- CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ALL CONCRETE POURS IN ORDER TO PERMIT REINFORCING STEEL REVIEW IF REQUIRED BY THE STRUCTURAL ENGINEER.

 JDH STRUCTURAL ENGINEERS, PLLC 18645 GREENTREE WAY, SUITE B CORNELIUS, NORTH CAROLINA 28031 phone : 704.987.7072 fax : 980.312.6520 http://jdhengineers.com  06.13.2025 NC CERTIFICATE OF LICENSURE # P-1583		
SIGNATURE:		
CLIENT:		
The orchards at Naples Road, LLC 341 N main Street Hendersonville, NC 28792 Luis Graef: President		
 Orchards PROPERTIES		
PROJECT:		
The Orchards at Naples Road Apartment Complex Hendersonville, North Carolina		
#	REVISIONS	DATE
DWG INFO : ISSUE DATE: 09/27/24 PROJECT #: 22105 DRAWN BY: CHECKED BY:		
DWG DESCRIPTION :		
GENERAL NOTES		
SHEET #: S-0.00		

9.0 PLYWOOD/GYPBOARD SHEATHING TO WOOD NOTES:

- ALL PLYWOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH AMERICAN PLYWOOD ASSOCIATION (APA) SPECIFICATIONS.
- ALL ROOF PANEL SHEATHING SHALL BE 7/16" (NOM.) TYPE CDX, EXP. 1 APA RATED 24/16 SHEATHING. SUITABLE EDGE SUPPORT SHALL BE PROVIDED BY USE OF PANEL CLIPS OR BLOCKING BETWEEN FRAMING, UNLESS OTHERWISE NOTED CONNECT ROOF SHEATHING WITH 6d COMMON NAILS AT 6" O/C AT SUPPORTED PANEL EDGES AND 12" O/C AT INTERMEDIATE SUPPORTS.
- ALL FLOOR SHEATHING SHALL BE 19/32" (NOM.) APA RATED STURD-1-FLOOR, @ 16" O.C. EXP. 1, WITH TONGUE AND GROOVE EDGE. UNLESS OTHERWISE NOTED CONNECT FLOOR SHEATHING WITH 10d COMMON NAILS SPACED 6" O/C AT SUPPORTED EDGES AND 12" O/C AT INTERMEDIATE SUPPORTS. FIELD-GUUE USING ADHESIVES MEETING APA SPECIFICATIONS AFG-01, APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- ALL WALL PANEL SHEATHING, INCLUDING DESIGNATED SHEAR WALLS, SHALL BE 7/16" (NOM.) TYPE CDX, EXP. 1 APA RATED 24/16 SHEATHING. UNLESS OTHERWISE INDICATED, CONNECT WALL SHEATHING WITH 10d COMMON NAILS SPACED 6" O/C AT SUPPORTED PANEL EDGES AND 12" O/C AT INTERMEDIATE SUPPORTS. SEE SHEAR WALL SCHEDULE FOR FASTENING REQUIREMENTS.
- INSTALL ALL PLYWOOD SHEATHING WITH THE LONG DIMENSION OF THE PANEL ACROSS SUPPORTS AND WITH PANEL CONTINUOUS OVER TWO OR MORE SPANS. STAGGER PANEL END JOINTS. ALLOW 18" SPACING AT PANEL ENDS AND EDGES UNLESS OTHERWISE RECOMMENDED BY THE SHEATHING MANUFACTURER.
- ALL NAILING SHALL BE CAREFULLY DRIVEN AND NOT OVERDRIVEN. THE USE OF PNEUMATIC NAIL GUNS MAY BE USED PROVIDED (1) NAIL IS INSTALLED FOR EVERY OVERDRIVEN NAIL (THOSE SUNK > 1/8" INTO SHEATHING), THE USE OF STAPLES IS PROHIBITED.
- ALL EXTERIOR WALLS SHALL BE SHEATHED ON BOTH FACES WITH GYP-BOARD SHEATHING (SEE ARCH. DWGS. FOR THICKNESS) AND CONNECTED WITH 6d COOLER NAILS SPACED 7" O/C AT SUPPORTED PANEL EDGES AND INTERMEDIATE SUPPORTS.
- PROVIDE 2x BLOCKING AT UNSUPPORTED PANEL EDGES AS FOLLOWS: ROOFS AND FLOORS - ONLY WHERE INDICATED ON PLAN WALLS - PER THE SHEAR WALL SCHEDULE ON SHEET S1.2.

10.0 WOOD FRAMING NOTES:

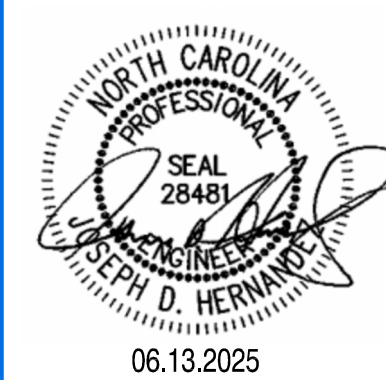
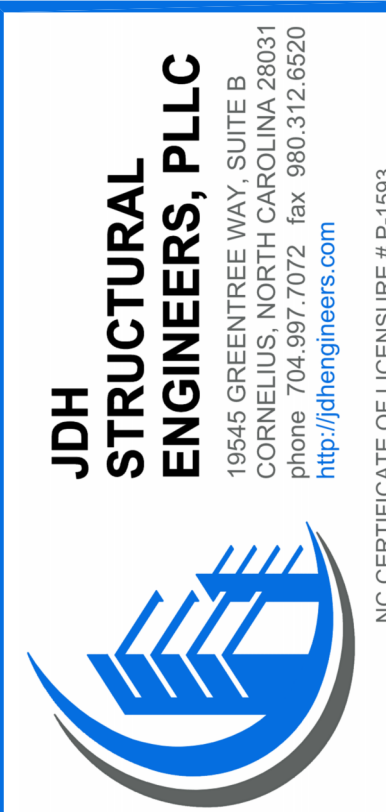
- ALL WOOD FRAMING MATERIAL SHALL BE SURFACED DRY AND USED AT 19% MAXIMUM MOISTURE CONTENT. ALLOWABLE STRESS REQUIREMENTS OF ALL MATERIAL SHALL BE IN ACCORDANCE WITH THE U RATING AS NOTED BELOW.
- ALL STUD AND WALL FRAMING SHALL BE EITHER OF THE FOLLOWING:
A. NO. 2 GRADE SOUTHERN YELLOW PINE (SYP)
B. NO. 2 GRADE SPRUCE-PINE-FIR (SPF)
- ALL JOIST, RAFTER & MISC. FRAMING SHALL BE NO. 2 GRADE, SOUTHERN PINE. PROVIDE FULL-DEPTH (OR METAL) BRIDGING AT MIDSPAN AND AT A MAXIMUM SPACING OF 8'-0" O/C IN BETWEEN.
- ALL FRAMING EXPOSED TO THE WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE-TREATED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION SPECIFICATIONS. WHERE POSSIBLE, ALL CUTS AND HOLES SHOULD BE COMPLETED BEFORE TREATMENT. CUTS AND HOLES DUE TO ON-SITE FABRICATION SHALL BE BRUSHED WITH 2 COATS OF COPPER NAPHTHENATE SOLUTION CONTAINING A MINIMUM OF 2% METALLIC COPPER IN SOLUTION (PER ANPA STD. M4).
- THE CONTRACTOR SHALL CAREFULLY SELECT LUMBER TO BE USED IN LOADBEARING APPLICATIONS. THE LENGTH OF SPLIT ON THE WIDE FACE OF 2" NOMINAL LOADBEARING FRAMING SHALL BE LIMITED TO LESS THAN 1/2 OF THE WIDE FACE DIMENSION. THE LENGTH OF SPLIT ON THE WIDE FACE OF 3" (NOMINAL) AND THICKER LUMBER SHALL BE LIMITED TO 1/2 OF THE NARROW FACE DIMENSION.
- ALL NAILING NOT OTHERWISE INDICATED SHALL BE IN ACCORDANCE WITH THE "NAILING SCHEDULE" ON SHEET S1.1. NAILING SHALL NOT BE OVERDRIVEN.
- PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS, WHICH RUN PARALLEL WITH JOISTS AND UNDER ALL CONCENTRATED LOADS FROM FRAMING ABOVE.
- PROVIDE HEADER BEAMS OF THE SAME SIZE AS JOISTS OR RAFTERS TO FRAME AROUND OPENINGS IN THE PLYWOOD DECK UNLESS OTHERWISE INDICATED.
- STRUCTURAL STEEL PLATE CONNECTORS SHALL CONFORM TO ASTM A-36 SPECIFICATIONS AND BE 1/4" THICK UNLESS OTHERWISE INDICATED. BOLTS CONNECTING WOOD MEMBERS SHALL BE PER ASTM A-307 AND BE 3/4" DIAMETER UNLESS OTHERWISE INDICATED. PROVIDE WASHERS FOR ALL BOLT HEADS AND NUTS IN CONTACT WITH WOOD SURFACES.
- BOLT HOLES SHALL BE CAREFULLY CENTERED AND DRILLED NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER. BOLTED CONNECTIONS SHALL BE SNUGGED TIGHT BUT NOT TO THE EXTENT OF CRUSHING WOOD UNDER WASHERS.
- PREFABRICATED "MICRO-LAM" LUMBER HEADERS AND BEAMS SHALL BE AS MANUFACTURED BY "TRUSS JOIST McMillan Corp.", BOISE, IDAHO OR APPROVED EQUAL. MICRO-LAM MATERIAL SHALL BE 2.0; SOUTHERN PINE. DO NOT CUT OR NOTCH MICRO-LAM MATERIAL WITHOUT THE MANUFACTURER'S APPROVAL.
- PREFABRICATED METAL JOIST HANGERS, HURRICANE CLIPS, HOLD-DOWN ANCHORS AND OTHER ACCESSORIES SHALL BE AS MANUFACTURED BY "SIMPSON STRONG-TIE COMPANY", (TEL 800-999-5099), OR APPROVED EQUAL. INSTALL ALL ACCESSORIES PER THE MANUFACTURER'S REQUIREMENTS. ALL STEEL SHALL HAVE A MINIMUM THICKNESS OF 0.04 INCHES (PER ASTM A446, GRADE A) AND BE GALVANIZED (COATING G60).
- HOLES AND NOTCHES DRILLED OR CUT INTO WOOD FRAMING SHALL NOT EXCEED THE REQUIREMENTS OF N.C.B.C. 2018.
- ALL PLATES, ANCHORS, NAILS, BOLTS, NUTS, WASHERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE HOT DIP GALVANIZED.

11.0 PRE-ENGINEERED WOOD TRUSS NOTES:

- WOOD TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE FOLLOWING LOADS:
A. MINIMUM GRAVITY LOADING:
ROOF TRUSSES
TOP CHORD LIVE LOAD: 20 PSF
DEAD LOAD: 8 PSF
FLOOR TRUSSES
40 PSF
15 PSF
BOTTOM LIVE LOAD: 10 PSF
DEAD LOAD: 5 PSF
- WOOD TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL DESIGN SPECIFICATION OF THE NATIONAL FOREST PRODUCTS ASSOCIATION. THE DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES OF THE TRUSS PLATE INSTITUTE AND N.C.B.C 2003.4.
- WOOD MATERIALS SHALL BE SOUTHER PINE, DOUGLAS FIR OR LARCH AND SHALL BE KILN DRIED AND USED AT 19% MAXIMUM MOISTURE CONTENT. PROVIDE GRADE NO. 2 OR AS REQUIRED TO SATISFY STRESS REQUIREMENTS.
- CONNECTOR PLATES SHALL BE NOT LESS THAN 0.036 INCHES (20 GAUGE) IN COATED THICKNESS, SHALL MEET OR EXCEED ASTM GRADE A OR HIGHER AND SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A-655 (COATING G60). MINIMUM STEEL YIELD STRESS SHALL BE 33,000 PSI.
- TRUSSES SHALL BE FABRICATED IN A PROPERLY EQUIPPED MANUFACTURING FACILITY OF A PERMANENT NATURE. TRUSSES SHALL BE MANUFACTURED BY EXPERIENCED WORKMEN, USING PRECISION CUTTING, JOGGING AND PRESSING EQUIPMENT UNDER THE REQUIREMENTS IN QUALITY CONTROL STANDARD QST-66 OF THE TRUSS PLATE INSTITUTE.
- SECONDARY BENDING STRESSES IN TRUSS TOP AND BOTTOM CHORDS DUE TO DEAD, LIVE AND WIND LOADS SHALL BE CONSIDERED IN THE DESIGN. LOAD DURATION FACTORS SHALL BE PER THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION".
- WOOD TRUSSES SHALL BE ERECTED IN ACCORDANCE WITH THE TRUSS MANUFACTURER'S REQUIREMENTS. THIS WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED CONTRACTOR. TRUSS ERECTION BY AN INEXPERIENCED OR NON-QUALIFIED CONTRACTOR CAN RESULT IN CONSTRUCTION COLLAPSE AND/OR SERIOUS INJURY AND DAMAGE.
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY AND PERMANENT BRACING AS REQUIRED FOR SAFE ERECTION AND PERFORMANCE OF THE TRUSSES. THE GUIDELINES SET FORTH BY THE TRUSS PLATE INSTITUTE PUBLICATION "HB-91, COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES" SHALL BE A MINIMUM REQUIREMENT.
- TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED NOR OTHERWISE ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
- SUBMIT COMPLETE SHOP DRAWINGS FOR ALL WOOD TRUSSES SHOWING MEMBER SIZES, SPECIES, GRADE, MOISTURE CONTENT, SPAN, CAMBER, DIMENSIONS, CHORD PITCH, BRACING REQUIREMENTS AND LOADINGS. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN NORTH CAROLINA.

12.0 LAMINATED VENEER LUMBER (LVL) NOTES:

- SUBMIT MANUFACTURER'S DESCRIPTIVE LITERATURE INDICATING MATERIAL COMPOSITION, THICKNESS, DIMENSIONS, LOADING AND FABRICATION DETAILS.
- SUBMIT MANUFACTURER'S LITERATURE INDICATING INSTALLATION DETAILS, INCLUDE LOCATIONS AND DETAILS OF BEARING, BLOCKING, BRIDGING AND CUTTING FOR WORK BY OTHERS.
- LVL BASIS OF DESIGN IS PER 2.0E GP LAM HAVING THE FOLLOWING PROPERTIES:
A. QUALIFIED TO ASTM D 5456 BY APA- THE ENGINEERED WOOD ASSOCIATION.
B. MODULUS OF ELASTICITY E = 2.0 x 10 PSI
C. SHEAR MODULUS OF ELASTICITY G = 0.125 x 10 PSI
D. FLEXURAL STRESS Fb = 2,900 PSI
E. HORIZONTAL SHEAR Fv = 265 PSI
F. COMPRESSION PERP. TO GRAIN Fc = 845 PSI
- DELIVER MATERIALS TO THE JOB SITE IN MANUFACTURER'S ORIGINAL PACKAGING, CONTAINERS AND BUNDLES WITH MANUFACTURER'S IDENTIFICATION INTACT AND LEGIBLE.
- STORE AND HANDLE MATERIALS TO PROTECT AGAINST CONTACT WITH DAMP AND WET SURFACES, EXPOSURE TO WEATHER, BREAKAGE AND DAMAGE. PROVIDE AIR CIRCULATION UNDER COVERING AND AROUND STACKS OF MATERIALS.
- EXCEPT FOR CUTTING TO LENGTH, GP LAM LVL BEAMS AND HEADERS SHALL NOT BE CUT, DRILLED OR NOTCHED, EXCEPT AS NOTED IN MANUFACTURER'S LITERATURE.
- PROVIDE GP LAM LVL BEAMS AND HEADERS WHERE INDICATED ON DRAWINGS USING HANGERS AND ACCESSORIES SPECIFIED.
- INSTALL GP LAM LVL BEAMS AND HEADERS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



SIGNATURE:

CLIENT:

The orchards at Naples Road, LLC
341 N main Street
Hendersonville, NC 28792
Luis Graef: President



PROJECT:

The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

#	REVISIONS	DATE

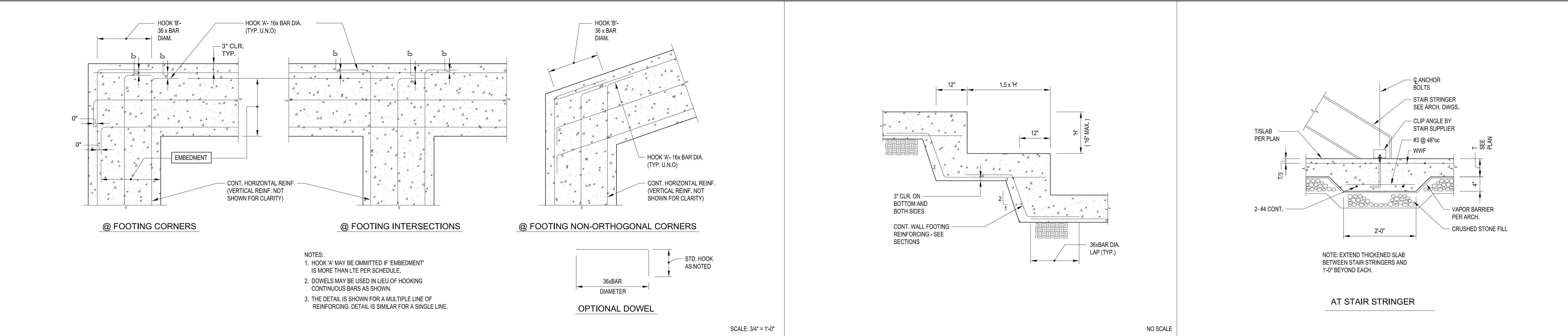
DWG INFO :
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION :

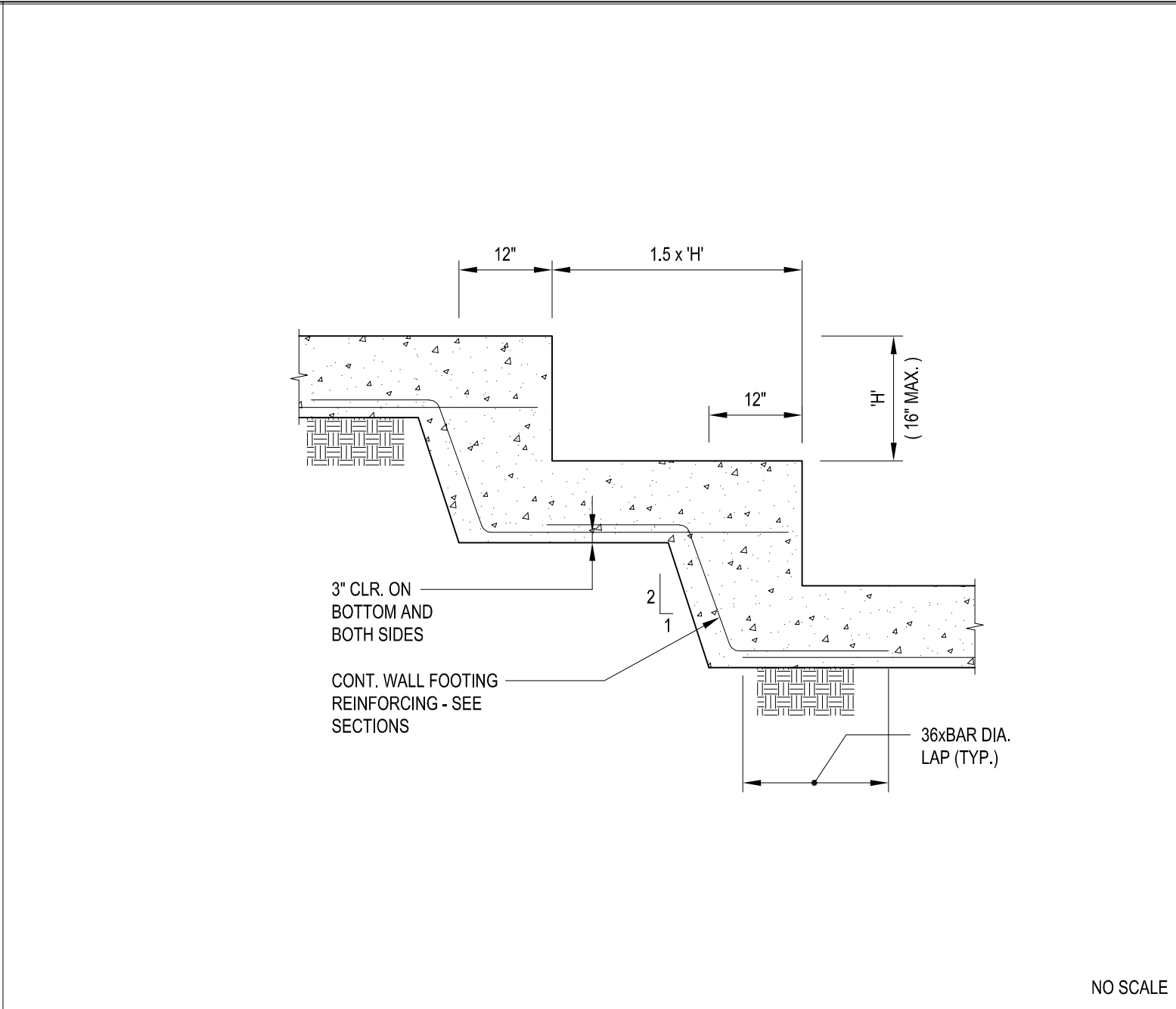
GENERAL NOTES

SHEET #:

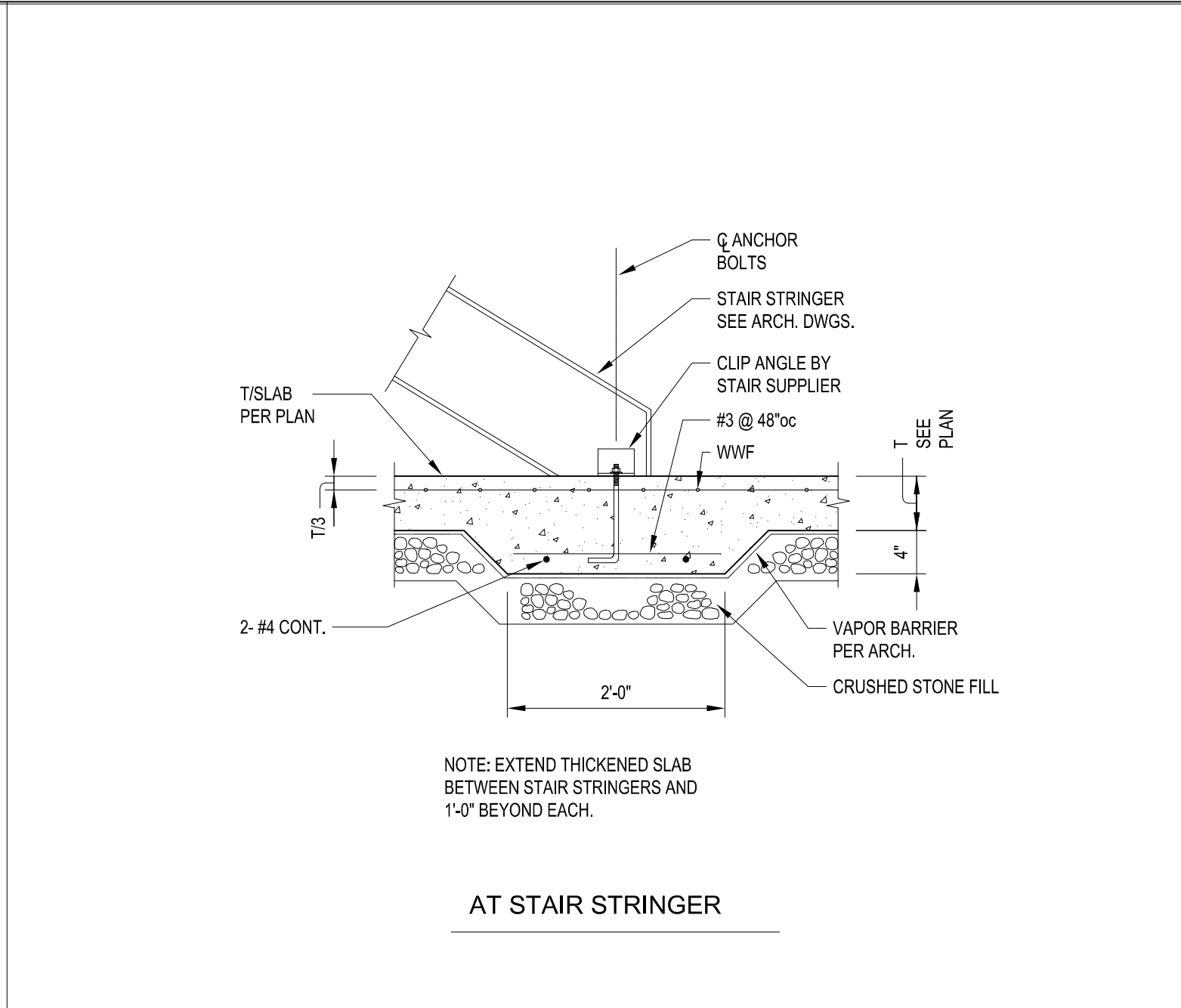
S-0.01



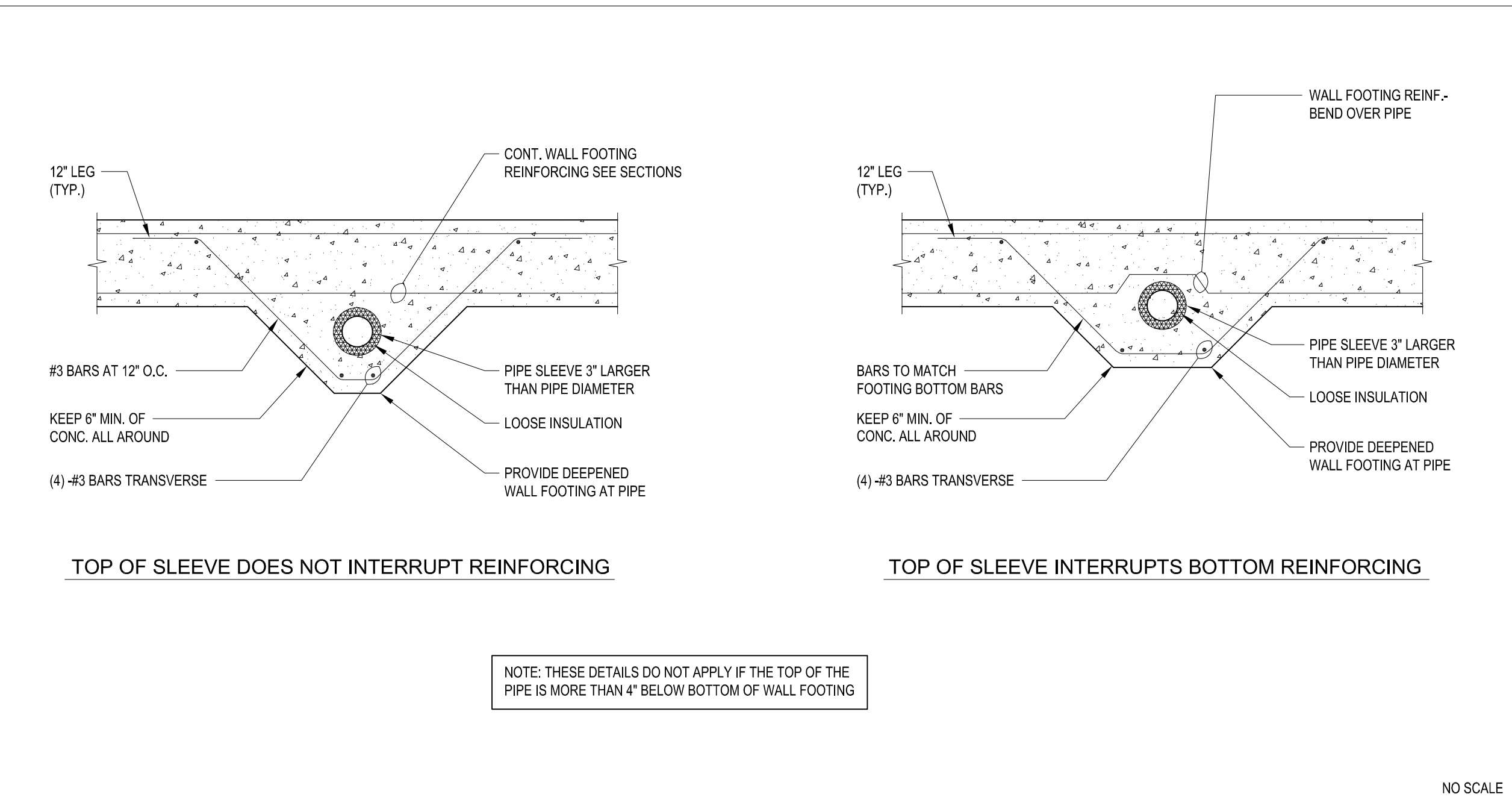
1 TYP. STRIP FOOTING CORNER INTERSECTION & NON-ORTHOGONAL



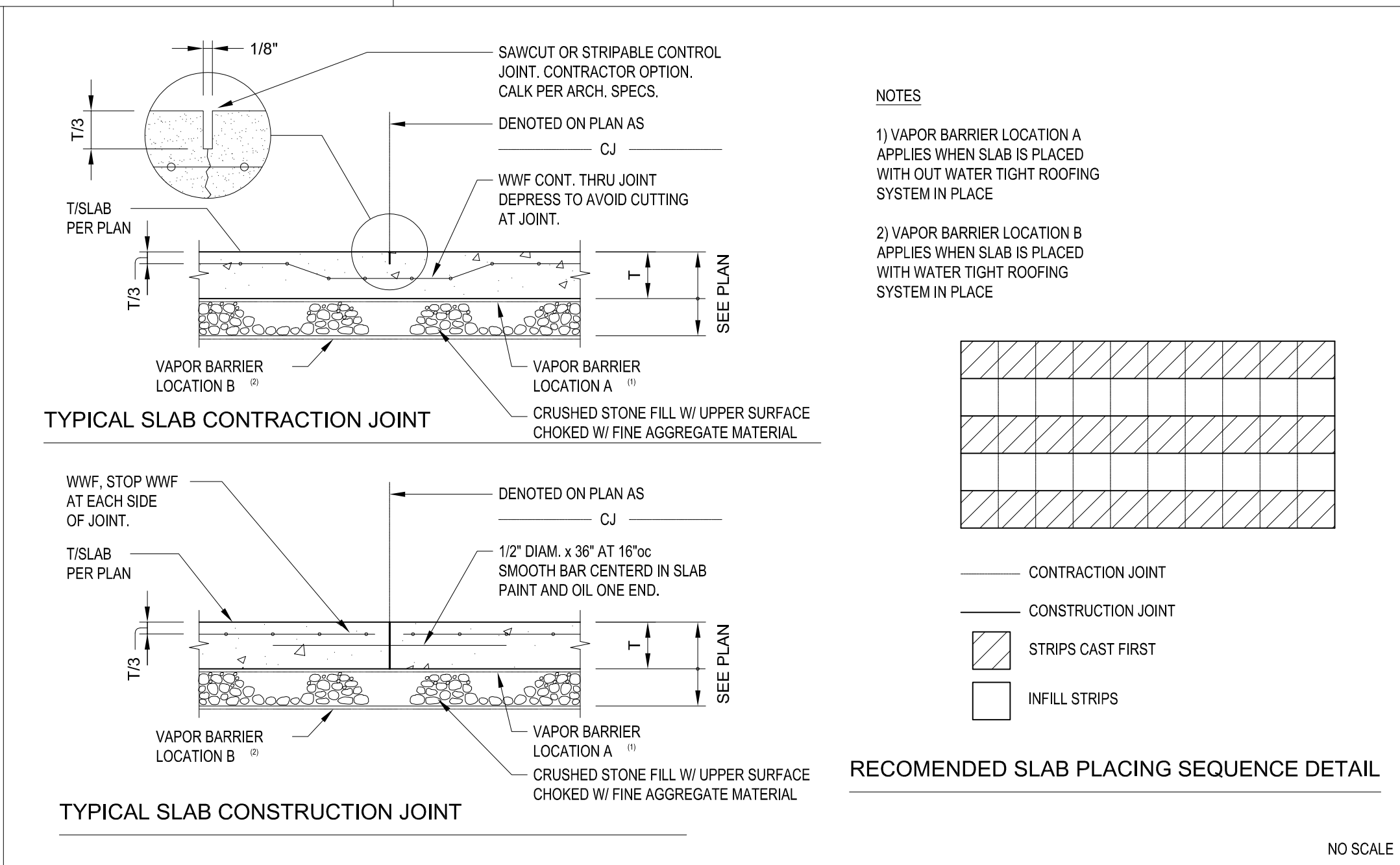
2 STEPPED FOOTING



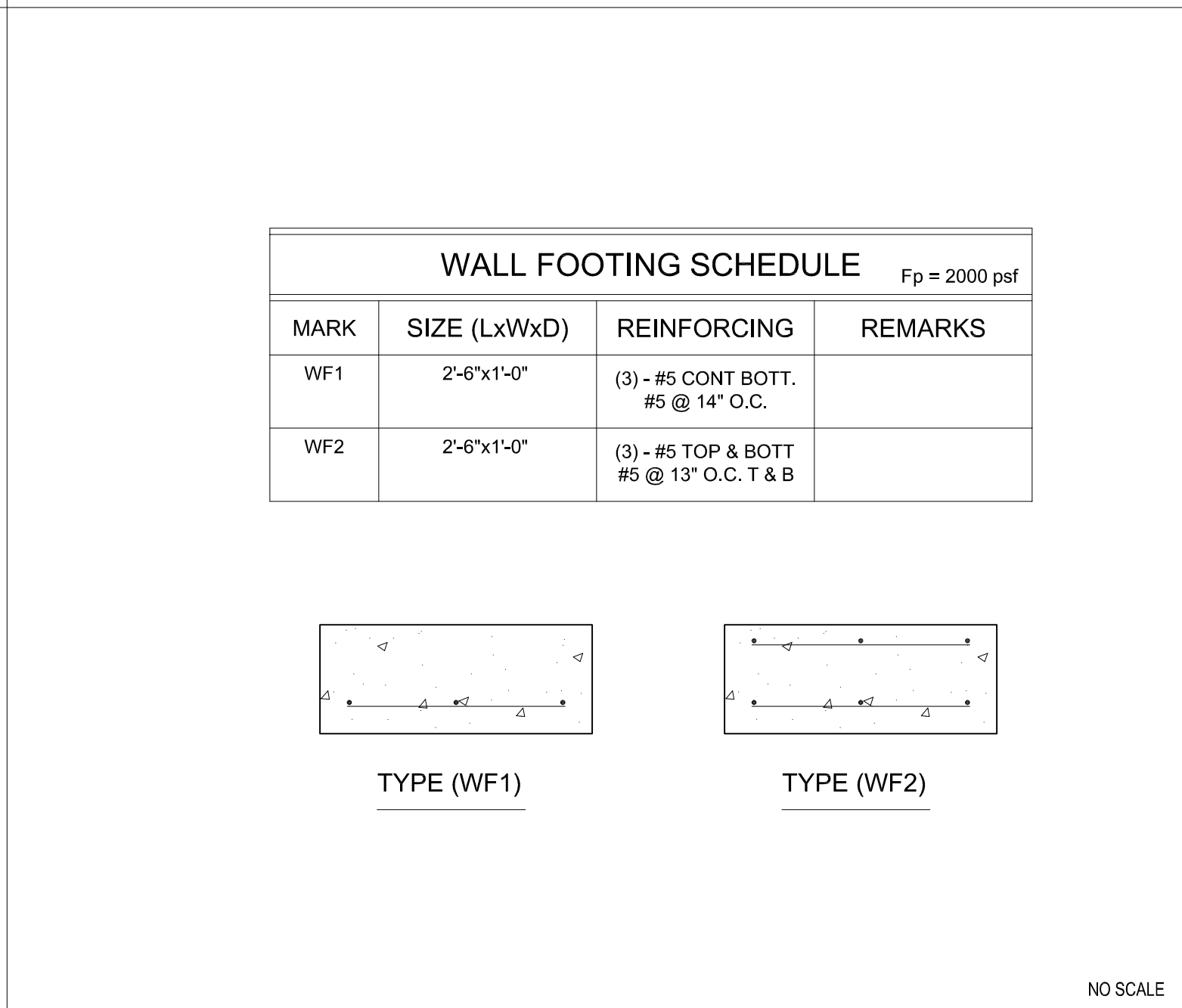
3 TYP. THICKENED SLAB DETAIL



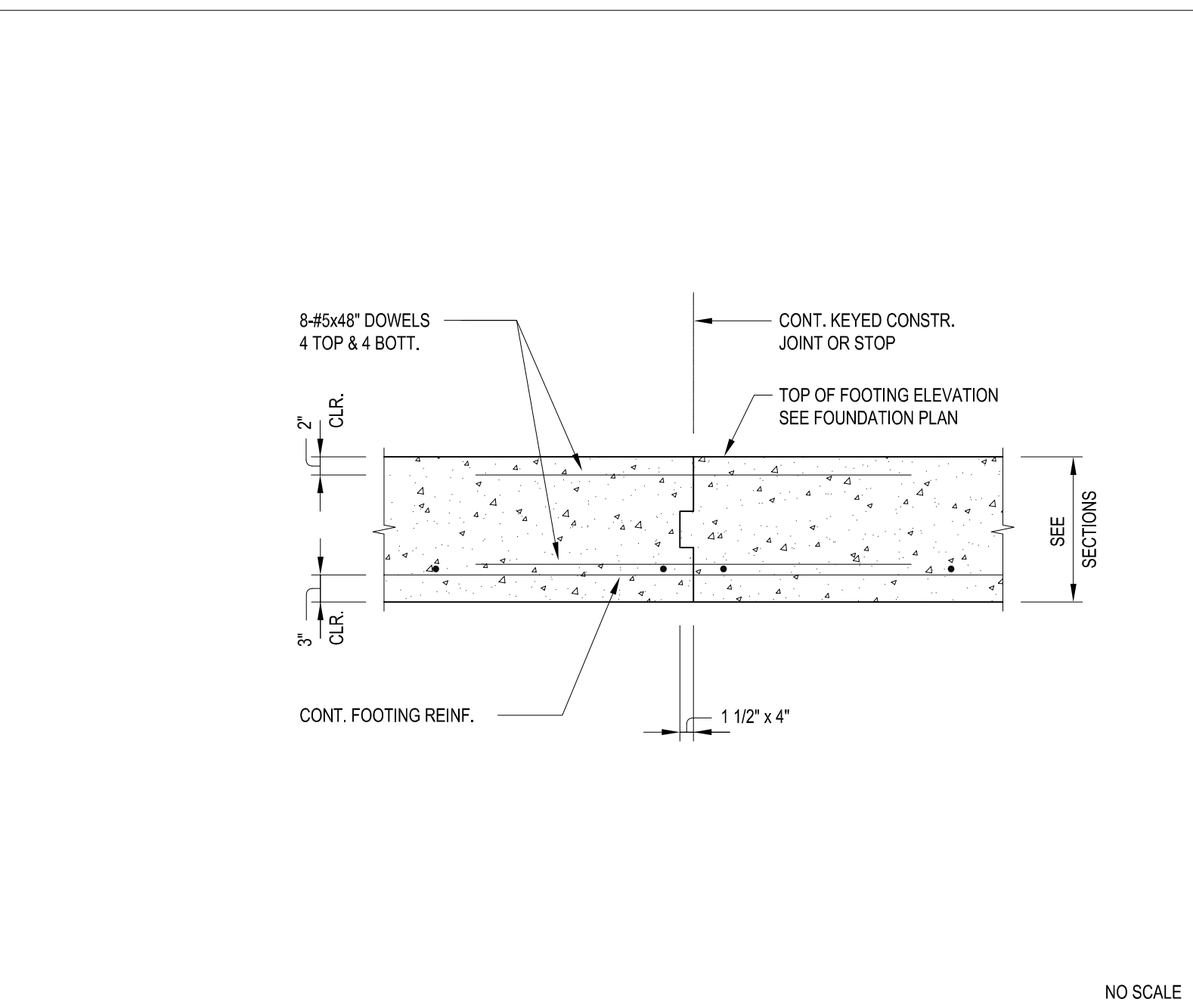
4 TYP. STRIP FOOTING CORNER INTERSECTION & NON-ORTHOGONAL



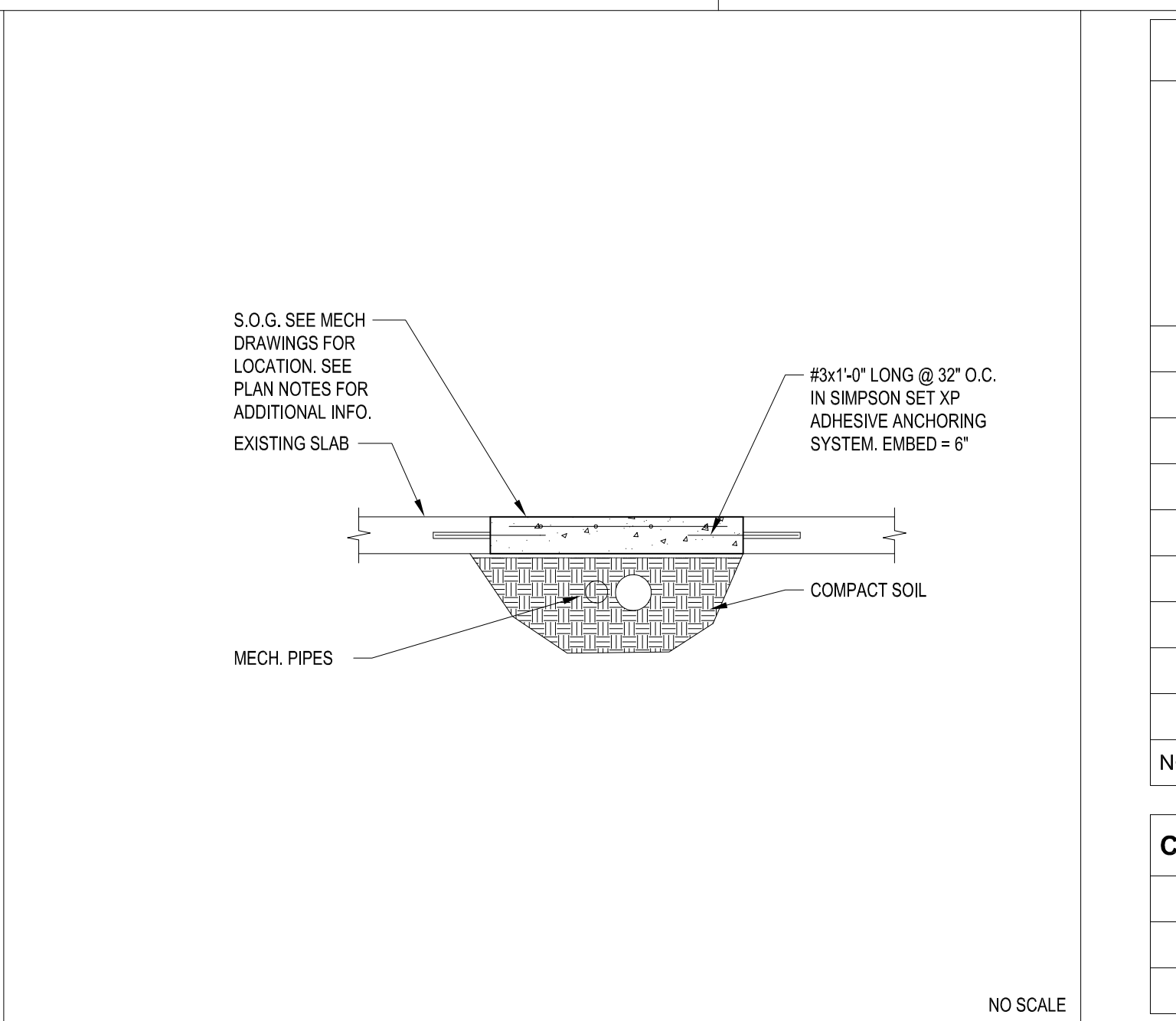
5 TYP. SLAB CONSTRUCTION/ CONTROL JOINT



6 WALL FOOTING SCHEDULE



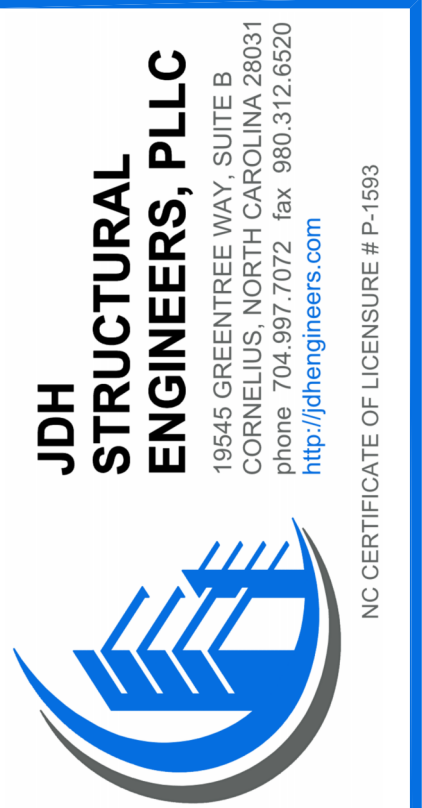
7 TYP. FOOTING CONST. JOINT



8 TYP. TRENCH DETAIL

F _y = 60,000 PSI			F _c = 3,000 PSI			CYLINDER STRENGTH							
BAR SIZE	COMPRESSION			TENSION EMBEDMENT LENGTH (IN)				TENSION LAP SPLICE LENGTH - CLASS B, (IN)					
	EMBEDMENT LENGTH (IN.)	LAP SPLICE LENGTH (IN.)	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS				
			CATEGORY		CATEGORY		CATEGORY		CATEGORY				
			I	II	I	II	I	II	I	II			
#3	9	12	22	33	17	25	29	43	23	33	NOTES: FOR EMBEDMENT & SPLICE SCHEDULES 1. THE CATEGORY OF THE REINFORCEMENT FOR DETERMINING THE EMBEDMENT & SPLICE LENGTHS SHALL BE OBTAINED FROM THE BOTTOM TABLE. (db = BAR DIAMETER) 2. THE SCHEDULE TO THE LEFT APPLIES FOR NORMAL WEIGHT CONCRETE. 3. TENSION LAP SPLICE LENGTH CATEGORIES II ARE BASED ON ACI CLASS 'B' CONDITIONS. LESSER LENGTHS MAY BE ACCEPTABLE, BUT ONLY IF: (a) THE AREA OF REINFORCEMENT PROVIDED IS AT LEAST TWICE THAT REQUIRED BY ANALYSIS OVER THE ENTIRE LENGTH OF THE SPLICE AND (b) ONE-HALF OR LESS OF THE TOTAL REINFORCEMENT IS SPLICED WITHIN THE REQUIRED LAP LENGTH. THE CONTRACTOR CAN REQUEST SUCH REDUCTION BY INDICATING THE FOLLOWING: A. WHERE THIS SIZE AND NUMBER OF TIES OR SPIRALS PERMITS THE REDUCTION OF LAP LENGTH, THOSE BARS SHALL BE INDICATED ON THE DETAILS. B. WHERE COMPUTED STRESS VALUES PERMIT THE REDUCTION OF LAP LENGTH, COMPUTATIONS SHALL BE SUBMITTED FOR REVIEW. C. THE APPLICATION SECTION OF THE ACI CODE, PERMITTING THE LESSER SPLICE LENGTH, SHALL BE INDICATED ON THE SUBMITTED MATERIAL. 4. USE TENSION LAP SPLICE LENGTH (L.T.S.) AT ALL SPLICE LOCATIONS NOT SPECIFICALLY DETAILED UNLESS INDICATED OTHERWISE ON PLANS OR DETAILS. 5. TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR. 6. WHERE BARS OF DIFFERENT SIZE ARE TO BE SPLICED, THE SPLICE LENGTH FOR ALL BARS SHALL BE THAT REQUIRED FOR THE LARGEST BAR. 7. FOR BUNDLED BARS INCREASE EMBEDMENT & SPLICE LENGTHS BY 20% FOR 3-BAR BUNDLE AND BY 33% FOR 4-BAR BUNDLE. IN DETERMINING THE CATEGORY OF BUNDLE REINF., TREAT THE BUNDLE AS A SINGLE BAR WITH A DIAMETER DERIVED FROM THE EQUIVALENT TOTAL AREA. 8. FOR TENSION SPLICING OF #14 BARS USE MECHANICAL COUPLERS. MECHANICAL COUPLERS MUST DEVELOP A MINIMUM OF 125% OF SPECIFIED YIELD STRENGTH (fy) OF BAR. 9. WHEN REINFORCING BARS ARE EPOXY-COATED, THE VALUE FOR TENSION EMBEDMENT AND LAP SPLICE LENGTHS FOR TOP BARS SHALL INCREASE BY 30% AND THE VALUES FOR THE OTHER BARS SHALL BE INCREASED BY 50%. 10. SPLICE LENGTHS SHALL BE DIMENSIONED AT ALL LOCATIONS ON ALL SHOP DRAWINGS.		
#4	11	15	29	43	22	33	38	56	29	43			
#5	14	19	36	54	28	42	47	71	37	55			
#6	17	23	43	65	33	50	56	85	43	65			
#7	20	27	63	94	48	72	82	123	63	94			
#8	22	30	72	107	55	83	94	140	72	108			
#9	25	34	81	121	62	93	106	158	81	121			
#10	28	39	91	136	70	105	119	177	91	137			
#11	31	43	101	151	78	116	132	197	102	151			
NOTATION	LCE	LCS	LTE				LTS						
CATEGORY	COVER	CLEAR SPACING	REMARKS										
I	≥ db	≥ db	BEAM STIRRUPS OR COLUMN TIES THROUGHOUT DEVELOPMENT LENGTH CODE MINIMUM										
I	≥ db	≥ 2db											
II	OTHER CASES												

EMBEDMENT AND LAP SPLICE SCHEDULE



SIGNATURE:

CLIENT:
The orchards at Naples Road, LLC
341 N main Street
Hendersonville, NC 28792
Luis Graef: President



PROJECT:
The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

#	REVISIONS	DATE

DWG INFO:
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION:

TYPICAL DETAILS

SHEET #:
S-1.00

WALL STUD SCHEDULE

MARK	LEVEL	STUDS	SPACING
W1	B - ROOF NOTES: (H) (S)	2 x 6 SPF NO. 2	24" O.C.
W2	B - 1	(3)2 x 4 SPF NO. 2	24" O.C.
	1 - 3	(2)2 x 4 SPF NO. 2	24" O.C.
	3 - ROOF	2 x 4 SPF NO. 2	24" O.C.
W3	1 - ROOF	2 x 4 SPF NO. 2	24" O.C.

NOTES:
1. 2x6 STUDS WITH SAME SPECIES AND GRADE CAN BE SUBSTITUTED FOR 2x4 STUDS WHERE INDICATED ON ARCH DWGS. TO ACCOMMODATE M.E.P. CHASES, ETC.
2. SPF DENOTES SPRUCE-PINE-FIR.
3. BRACE AT 1/3 POINTS.
4. BRACE AT MID-POINT.
5. NO ADDITIONAL BRACING REQUIRED WHERE WALL TYPE IS WITHIN A SHEAR WALL.

FASTENING REQUIREMENTS FOR MULTIPLE MEMBERS

PIECES IN MEMBER	MAX. SPAN	NAILED 16d COMMON	MAX. SPAN	NAILED 16d COMMON
2	20'	2 ROWS AT 12" oc	20'	2 ROWS AT 24" oc STAGGER AT 12"
	30'	3 ROWS AT 12" oc	40'-6"	2 ROWS AT 12" oc
3	15'	2 ROWS AT 12" oc	15'	2 ROWS AT 24" oc STAGGER AT 12"
	22'-6"	3 ROWS AT 12" oc	30'	2 ROWS AT 12" oc
4	-	N / A	13'-6"	2 ROWS AT 24" oc STAGGER AT 12"
	-	N / A	27'	2 ROWS AT 12" oc

NOTES:
1. TOP AND BOTTOM ROWS OF CONNECTORS SHALL BE 2" FROM EDGE
2. BOLT HOLES ARE TO BE THE SAME DIAMETER AS THE BOLT. EVERY BOLT MUST BOLT HOLES ARE EXTEND THROUGH THE FULL THICKNESS OF THE MEMBER. USE WASHERS UNDER HEAD AND NUT. CARRIAGE BOLTS MAY BE USED, BUT THE OUTERMOST OF THE HEAD MAY NOT BE DRAWN IN BEYOND FLUSH WITH THE OUTSIDE FACE OF THE LVL MEMBER.
3. FOR THREE-PIECE MEMBER, SPECIFIED NAILING IS FROM EACH SIDE.
4. FOUR-PLY MEMBERS, REGARDLESS OF DEPTH, MUST BE BOLTED.

MULTIPLE MEMBERS

1

WALL STUD SCHEDULE

2

FASTENING REQUIREMENTS

3

WOOD HEADER SCHEDULE

WOOD BEAM SCHEDULE

MARK	SIZE	POST
B1	(2)2x12 SPF NO.2	SEE PLAN
B2	(2)1-3/4x11-7/8 LVL (2.0E)	SEE PLAN
B3	(3)1-3/4x14 LVL (2.0E)	SEE PLAN
B4	(2)2x10 SPF NO.2	SEE PLAN
B5	(3)1-3/4x11-7/8 LVL (2.0E)	SEE PLAN

NOTES:
1. SEE WALL OPENING SCHEDULE. TYPICAL FOR OPENING FRAMING NOT SPECIFICALLY NOTED ON THE PLANS.
2. SEE TYPICAL POST SCHEDULE & ELEVATION ON \$1.00 SERIES SHEETS
3. IF NO POST IS SHOWN ON PLAN, USE (2) WALL STUDS UNDER BEAM

4

JOIST SCHEDULE

JOIST SCHEDULE

MARK	MEMBER	SPACING
J1	2 x 10 SPF NO.2	16" OC

NOTES:
1. WHERE DOUBLE JOISTS ARE REQUIRED, PROVIDE "TYPICAL POST" AT EACH END. SEE POST SCHEDULE ON \$1.00 SERIES SHEETS.
2. 2x8 BLOCKING OR 2x12 BLOCKING @ 6'-0" O.C. MAX AS BRIDGING.

5

NOT USED

6

WOOD BEAM SCHEDULE

WOOD POST SCHEDULE

MARK	SIZE	CONNECTION	
		BASE	CAP
P1	6x6 SPF NO. 2	PBS66	CC64/ECC64
P2	5.25x5.25 PSL 2.0E	PBS66	CC64/ECC64
P3	(3)2x6 SPF NO. 2		
P4	HSS3-1/2x3-1/2x3/16		
P5	4x4 SPF NO. 2	PBS44	CC44/ECC44
P6	3.5x3.5 PSL 2.0E	PBS44	CC44/ECC44
P7	3.5x5.25 PSL 2.0E	PBS46	CC46
P8	(3)2x4 SPF NO. 2		

ALL POSTS SHALL BE SPRUCE PINE FIR-NO. 2 OR BETTER
USED TO BUILD UP STUDS SHALL BE 10d COMMON WIRE NAILS
W/ MINIMUM DIAMETER= 0.148 IN. AND MINIMUM LENTGH= 3 IN.
SEE NAILING SCHEDULE BELOW

7

WOOD HEADER SCHEDULE

DECKING LAYOUT @ BLOCKED DIAPHRAGMS

DECKING LAYOUT @ UNBLOCKED DIAPHRAGMS

8

NAIL FASTENER SCHEDULE

9

POST SCHEDULE

10

TYPICAL DECKING LAYOUT DETAILS

JDH
STRUCTURAL
ENGINEERS, PLLC

18545 GREENTREE WAY, SUITE B
CORNELIUS, NORTH CAROLINA 28031
phone 704.997.7072 fax 980.312.6520
http://jdhengrners.com

NC CERTIFICATE OF LICENSURE # P-1693

06.13.2025

SEAL
28481
JOHN D. HERING
06.13.2025

SIGNATURE:

CLIENT:
The orchards at Naples Road, LLC
341 N main Street
Hendersonville, NC 28792
Luis Graef: President

PROJECT:

The Orchards at Naples Road
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Hendersonville, North Carolina

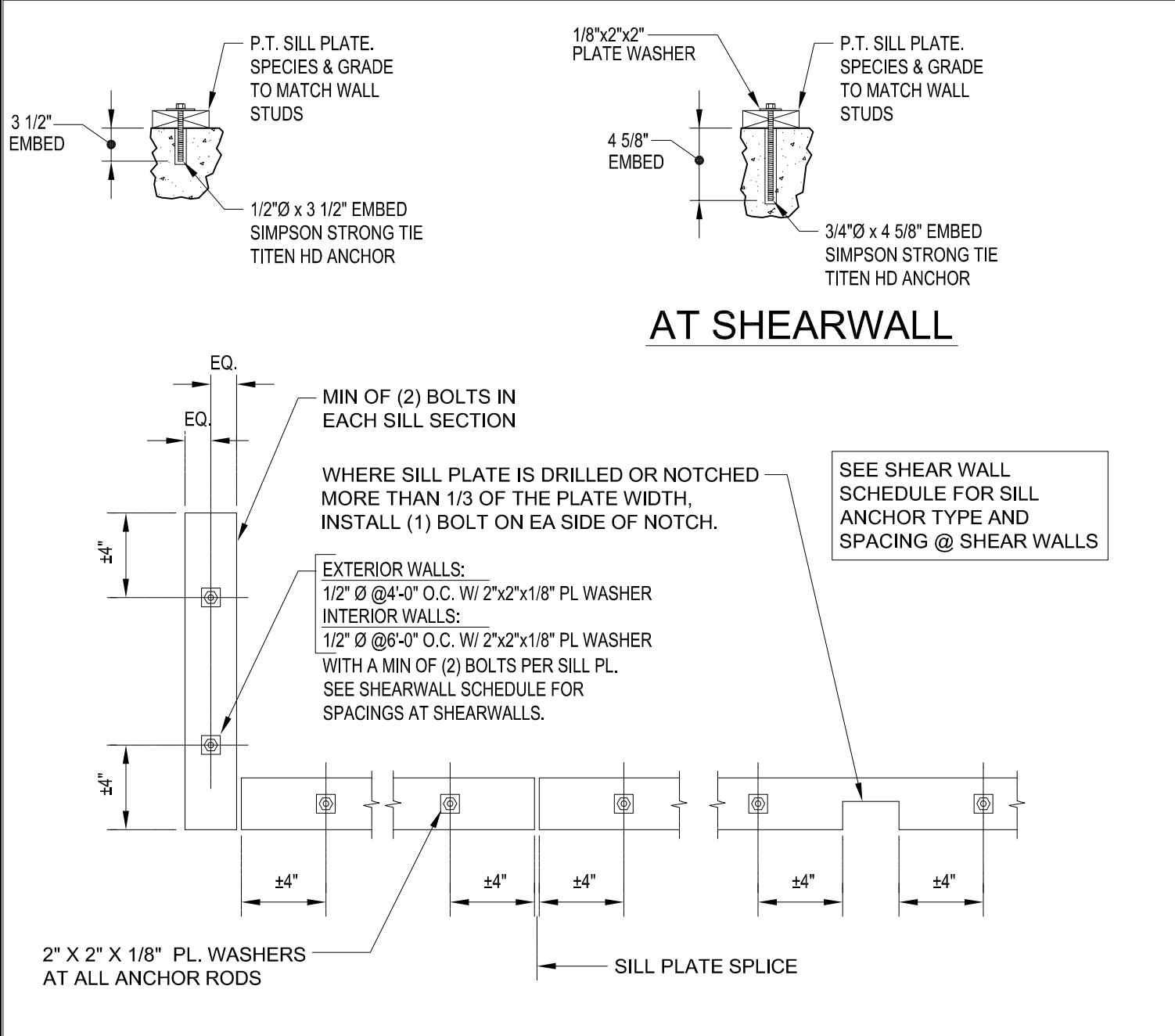
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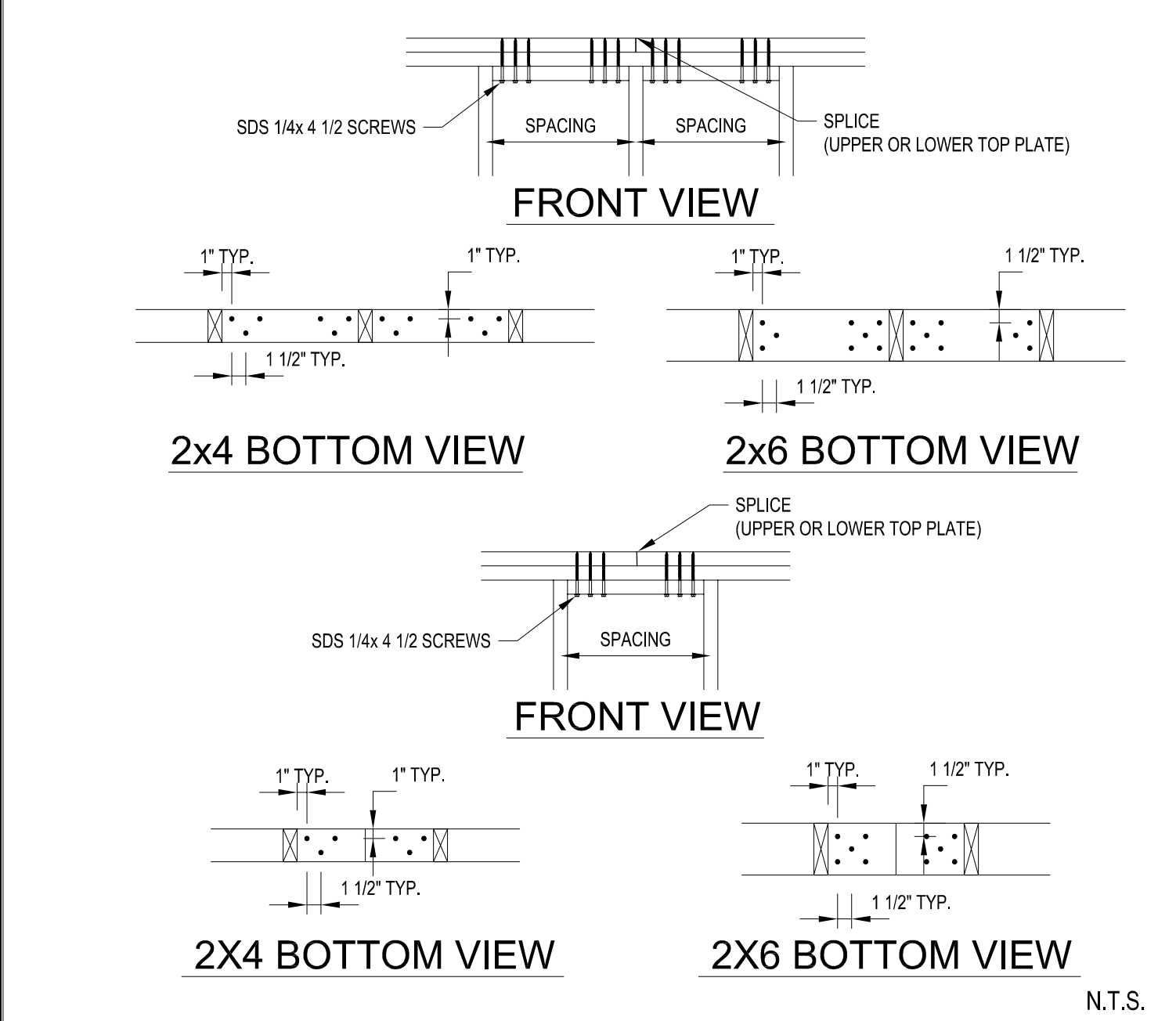
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TYPICAL DETAILS

SHEET #:
S-1.01



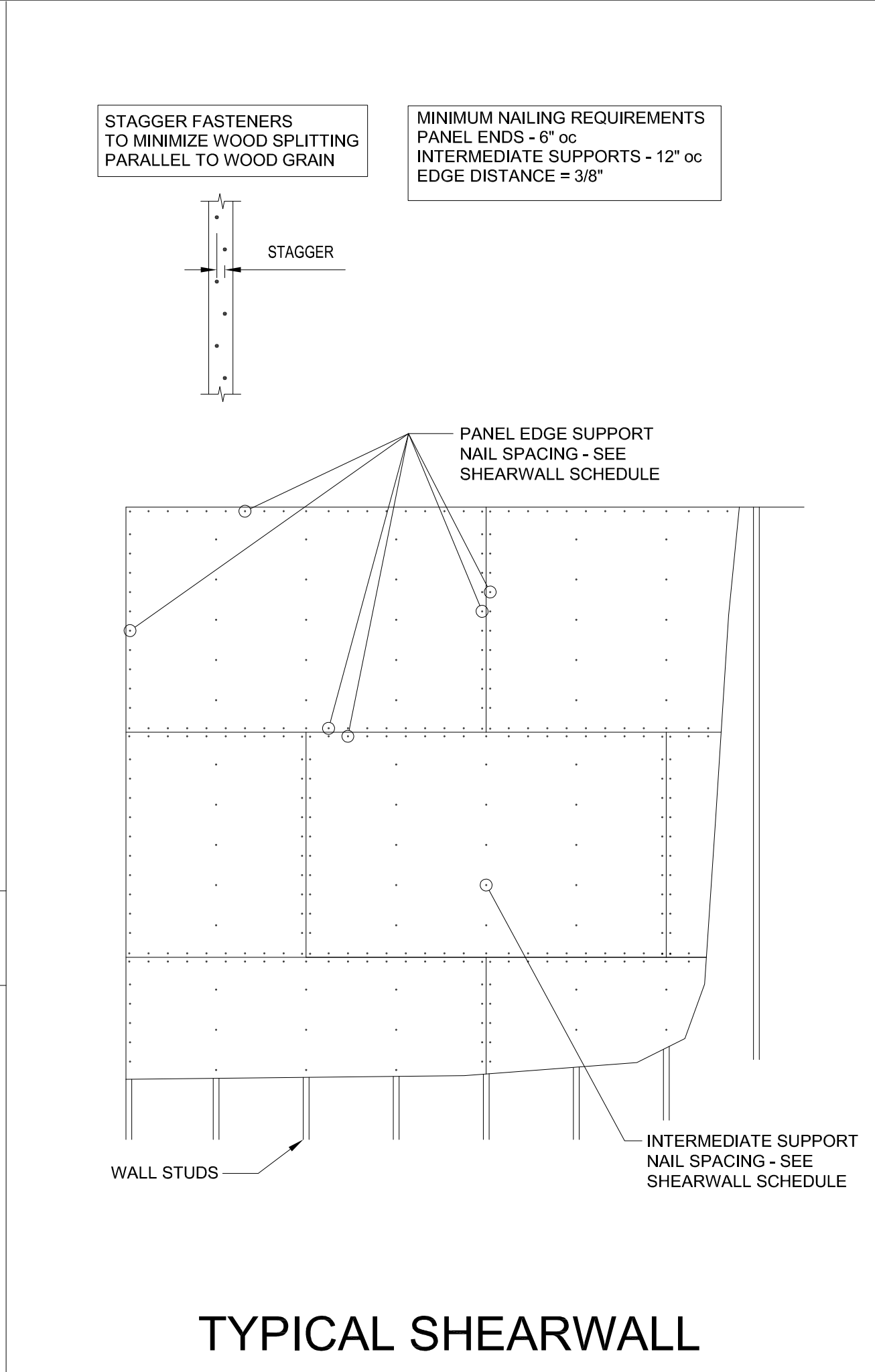
1 TYP. SILL PLATE BOLTING @ S.O.G.



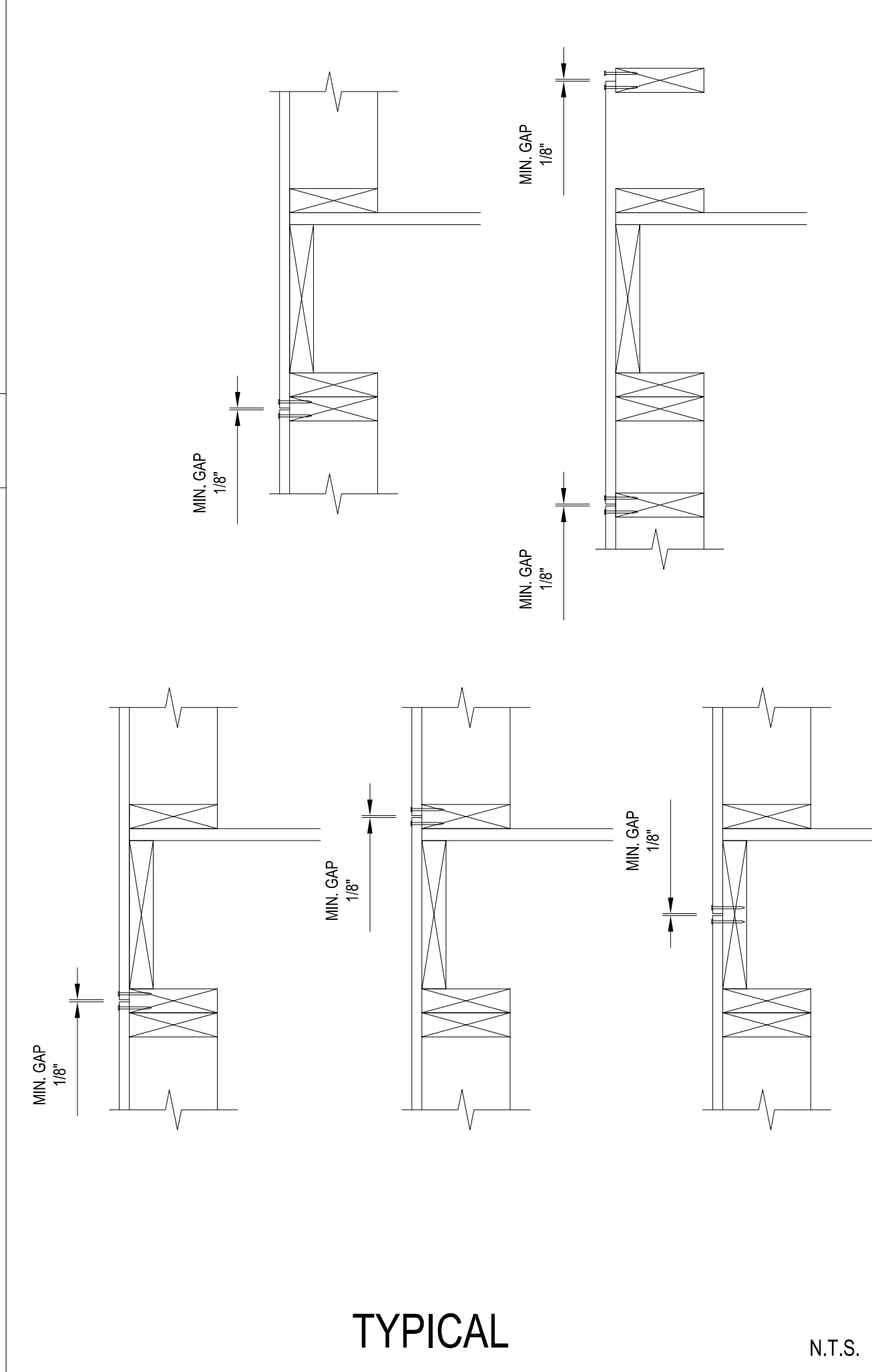
5 TOP PLATE SPLICE DETAILS



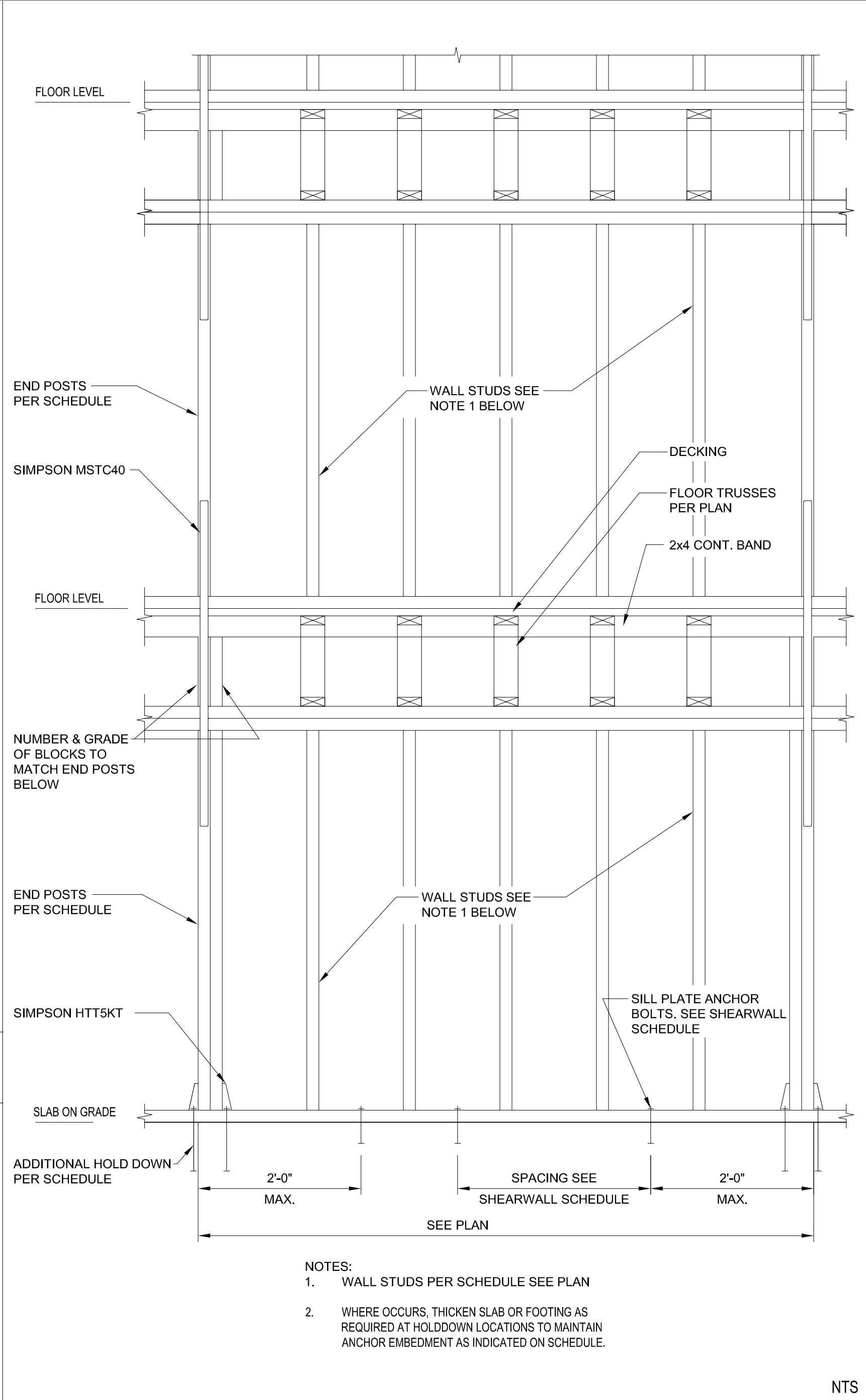
6 NOT USED



2 PANEL NAILING / SCREWING



7 STORY TO STORY SHEATHING



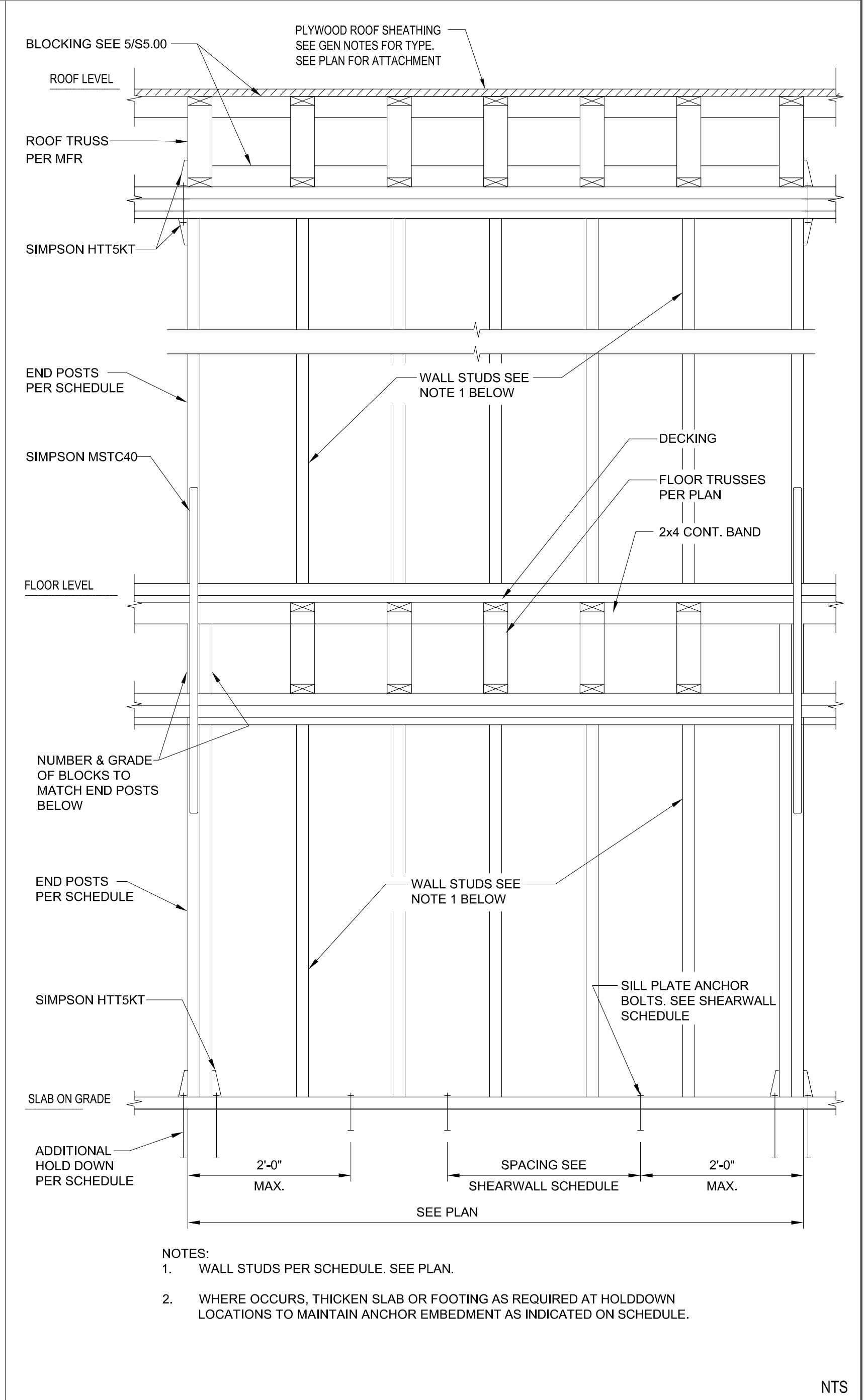
3 SW1 & SW2 ELEVATION

SHEAR WALL SCHEDULE					
MARK	FLOOR	PANEL TYPE SEE ARCH ASSEMBLY	# OF PANELS (NOTE #3)	PANEL NAILING	
				NAIL SIZE	EDGE SUPPORT NAIL SPACING
SW-1	B - 3	7/16" PLYWOOD	SINGLE	8d	4" O.C.
	3 - Roof	7/16" PLYWOOD	SINGLE	8d	6" O.C.
SW-2	B - 3	5/8" GYP.	SINGLE	6d COOLER	6" O.C.
	3 - Roof	5/8" GYP.	SINGLE	6d COOLER	6" O.C.
SW-3	B - 3	5/8" GYP.	SINGLE	6d COOLER	6" O.C.
	3 - Roof	5/8" GYP.	SINGLE	6d COOLER	6" O.C.

NOTES:

- SEE 8/S1.2 FOR PERFORATED SHEAR WALL ELEVATION.
- END POST HOLD DOWN, USE SIMPSON HTT4 W/ 5/8"Ø KWIK BOLT 3 (EMBED = 4")
- "SINGLE" INDICATES PLYWOOD SHEATHING ON ONE SIDE OF WALL STUDS.
- ALL FOUR SIDES OF EACH PANEL MUST BE CONTINUOUSLY BLOCKED (TYPICAL)

8 SHEARWALL SCHEDULE



4 SW3 ELEVATION

JDH
STRUCTURAL
ENGINEERS, PLLC

18545 GREENTREE WAY, SUITE B
CORNELIUS, NORTH CAROLINA 28031
phone 704.997.7072 fax 980.312.6520
http://jdheengineers.com

PROFESSIONAL
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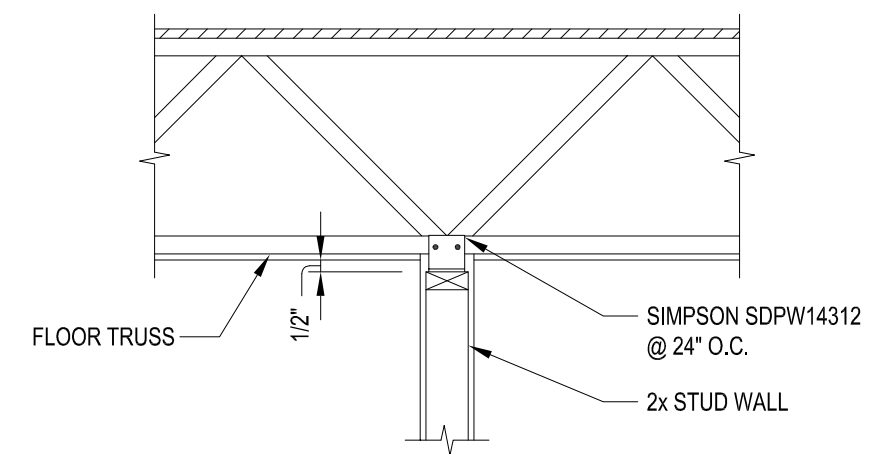
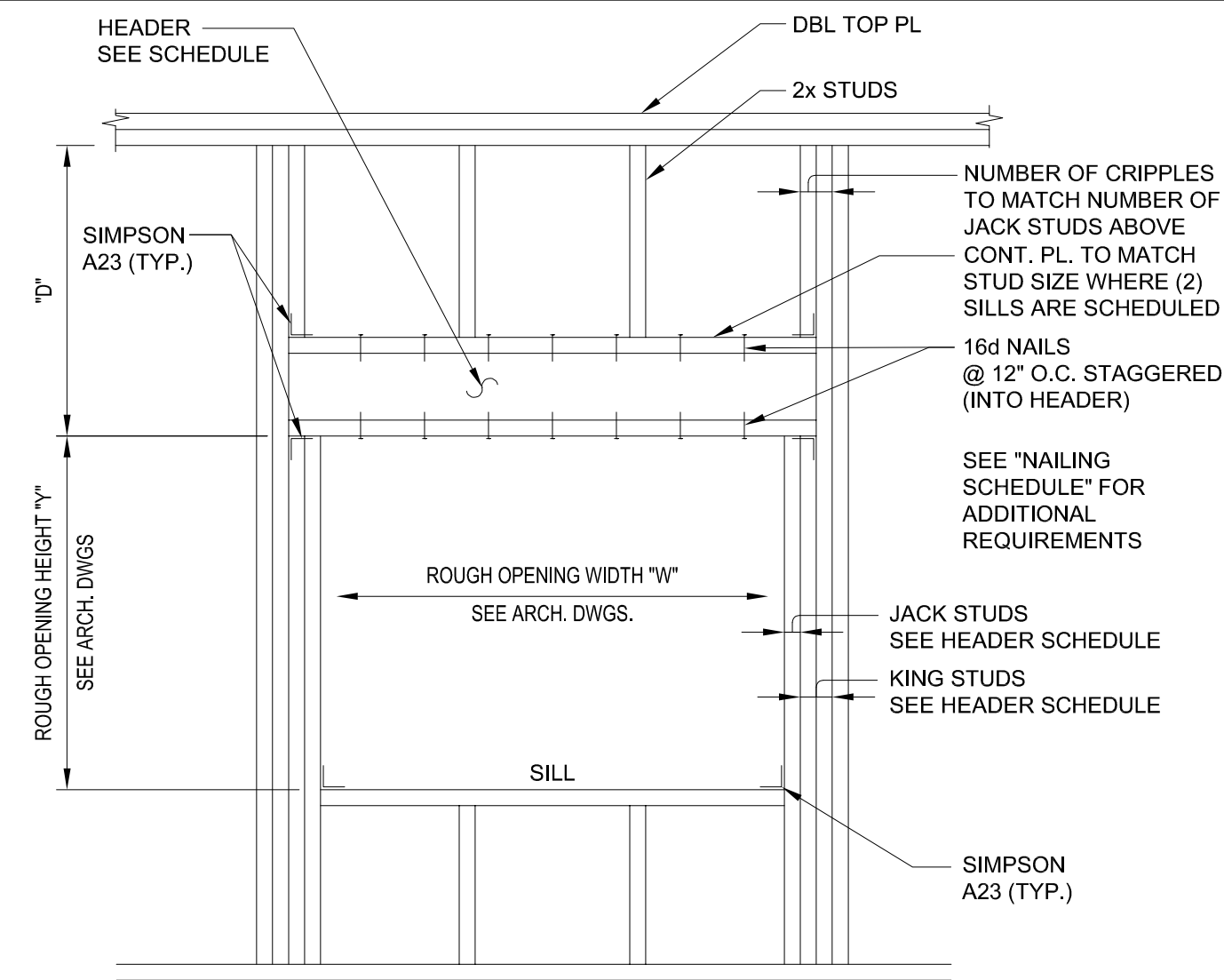
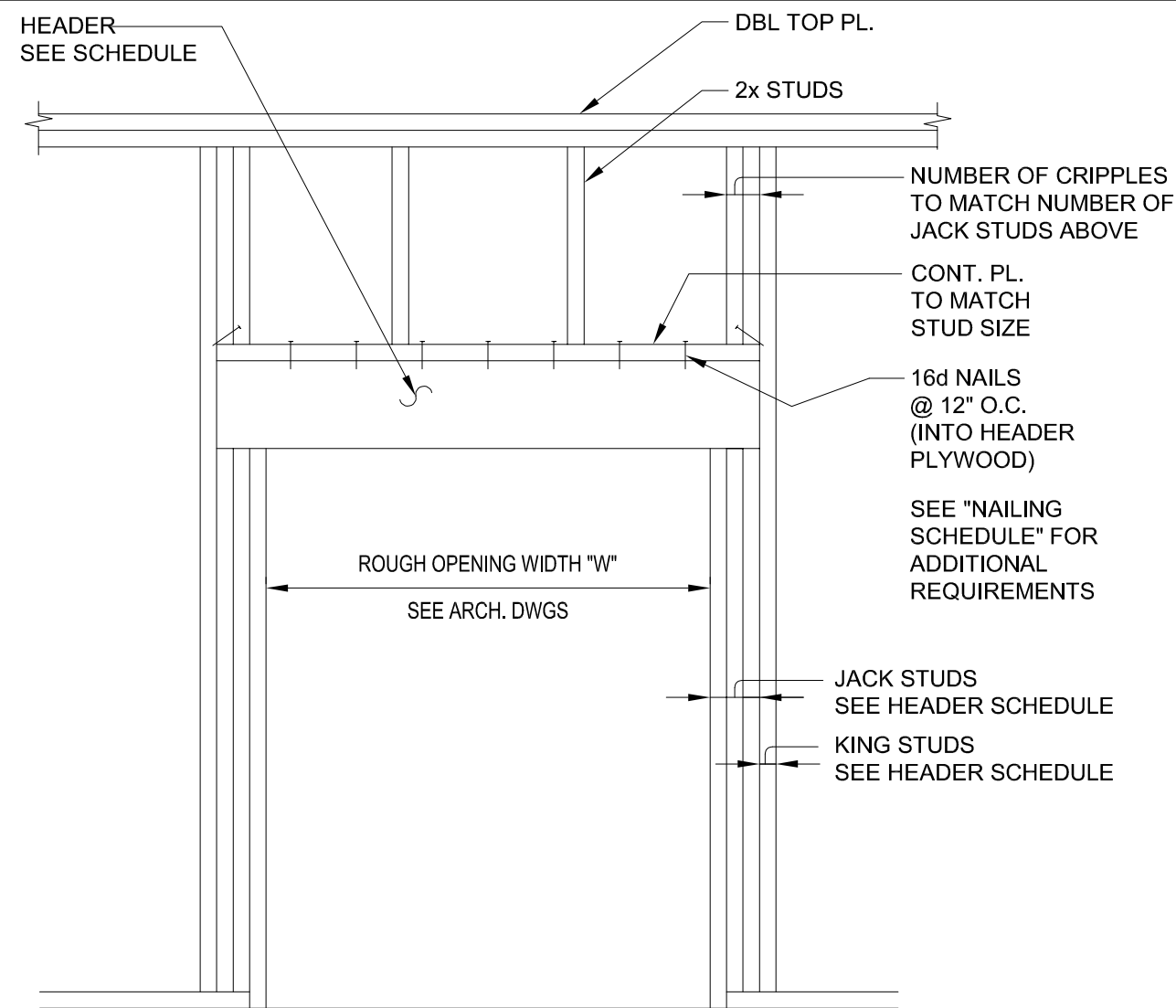
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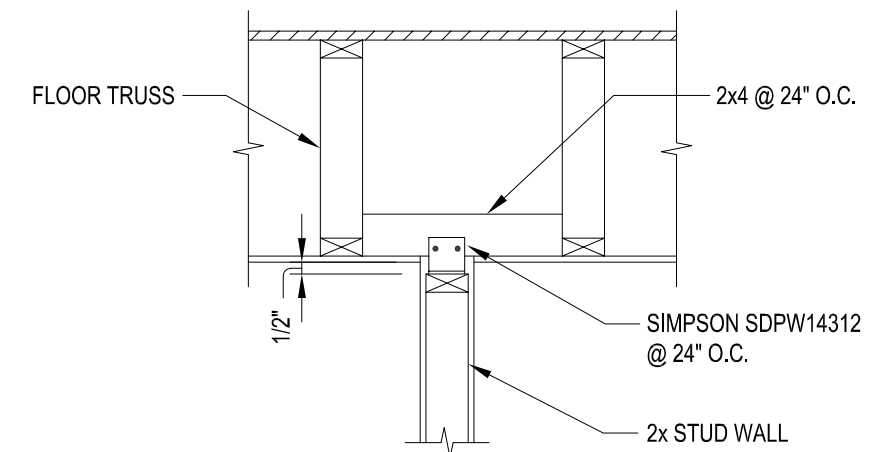
SHEET #:
S-1.02

NC CERTIFICATE OF LICENSURE # P-1693



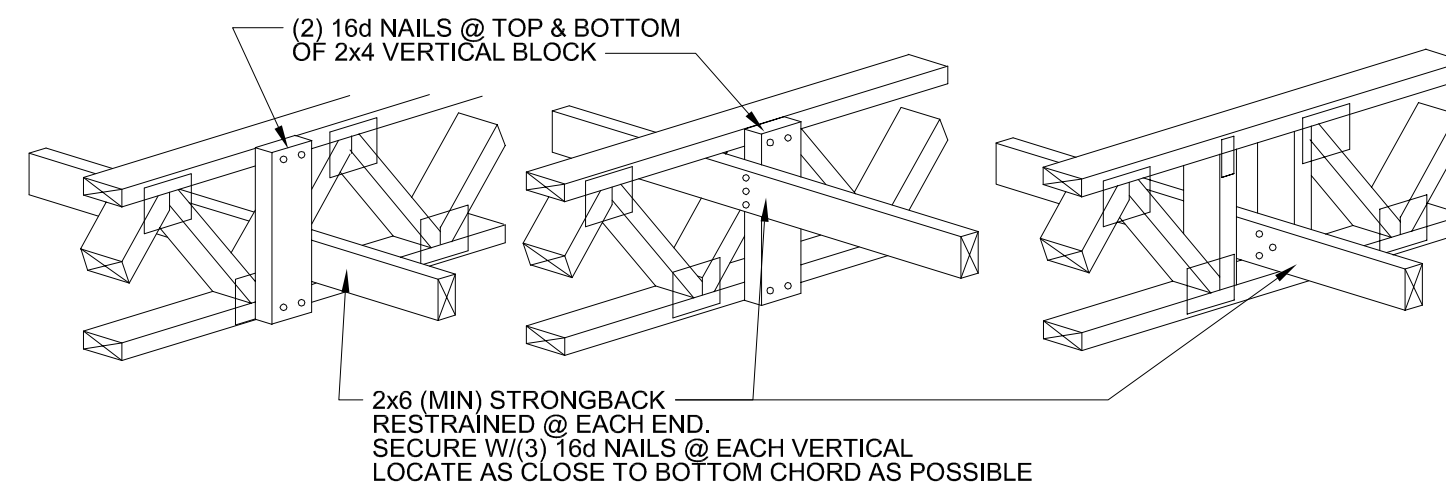
ELEVATION TYPE 2

@ WALL PARALLEL TO FLOOR TRUSS



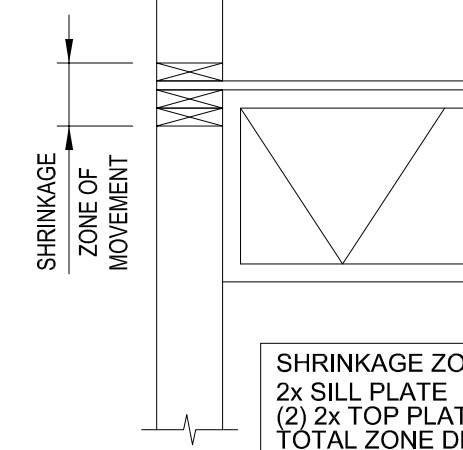
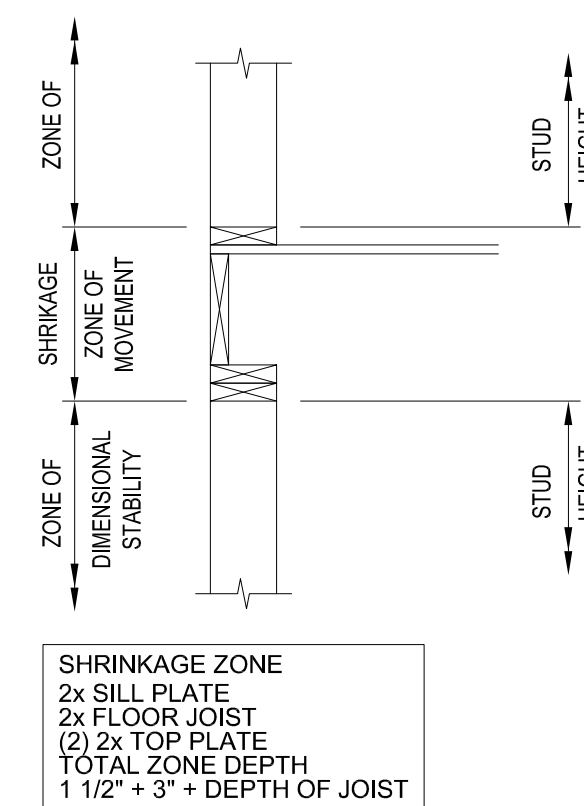
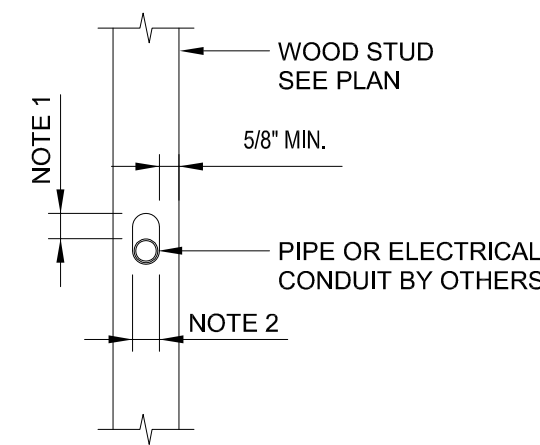
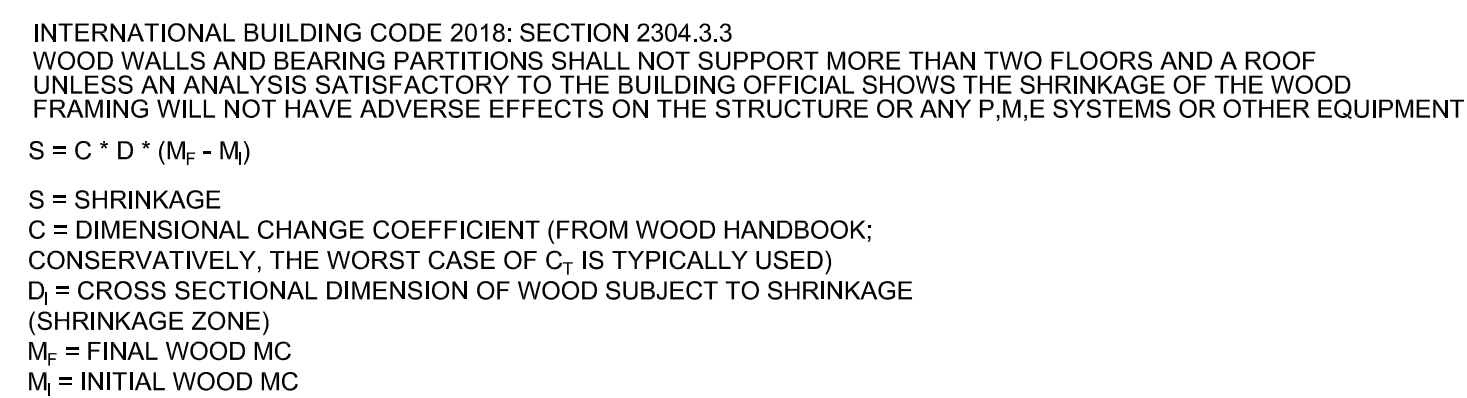
TYPICAL HEAD OF WALL

WOOD SHRINKAGE SCHEDULE	
FLOOR LEVEL	ANTICIPATED SHRINKAGE
ROOF	N/A
3RD FLOOR	0.561 in
2ND FLOOR	0.378 in
1ST FLOOR	0.187 in



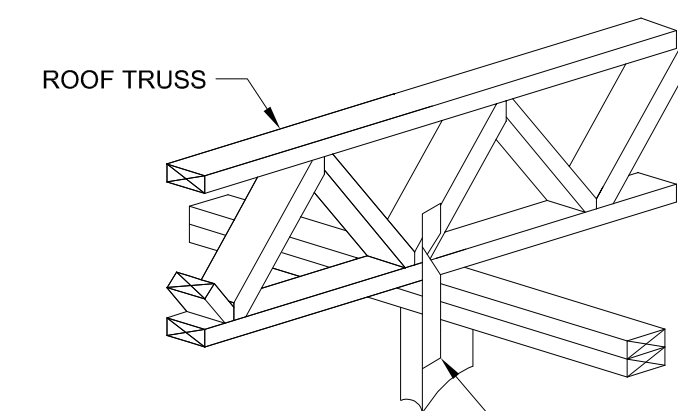
STRONGBACKS SPACED AT 10'-0" (MAX) ARE REQUIRED TO MAINTAIN CERTAIN FIRE ASSEMBLIES.
STRONGBACKS ARE RECOMMENDED TO MINIMIZE VIBRATION

FLOOR TRUSS

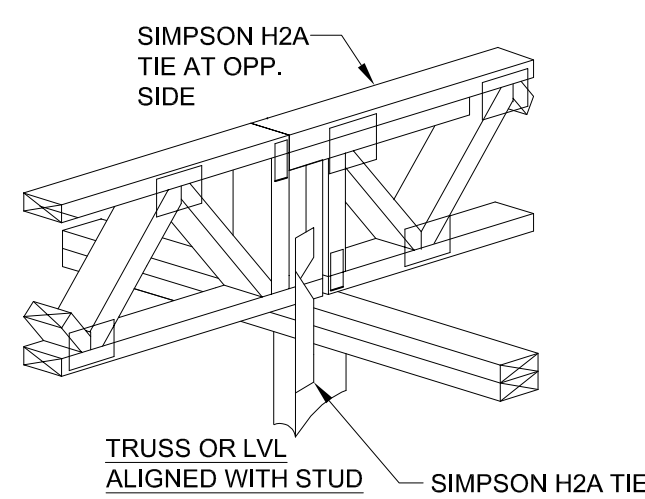


SHRINKAGE ZONE
2x SILL PLATE
(2) 2x TOP PLATE
TOTAL ZONE DEPTH
1 1/2" + 3"

WOOD SHRINKAGE DETAIL



EXTERIOR WALL

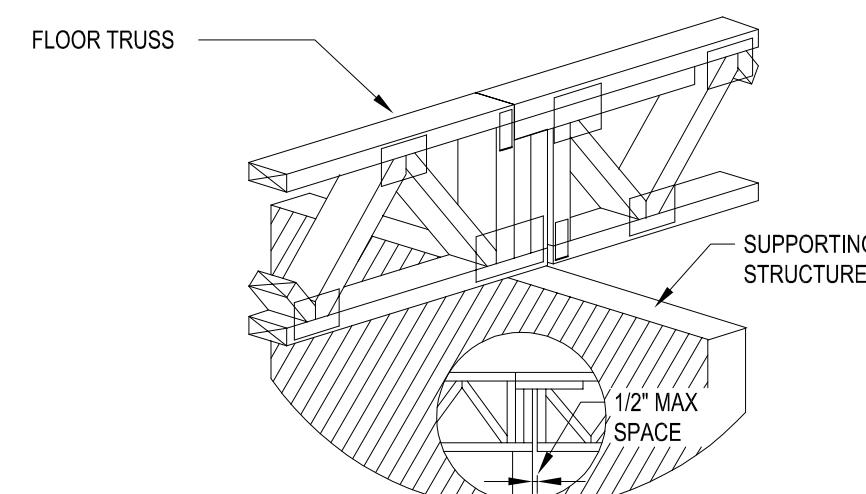


BALCONY WALL

TYPICAL

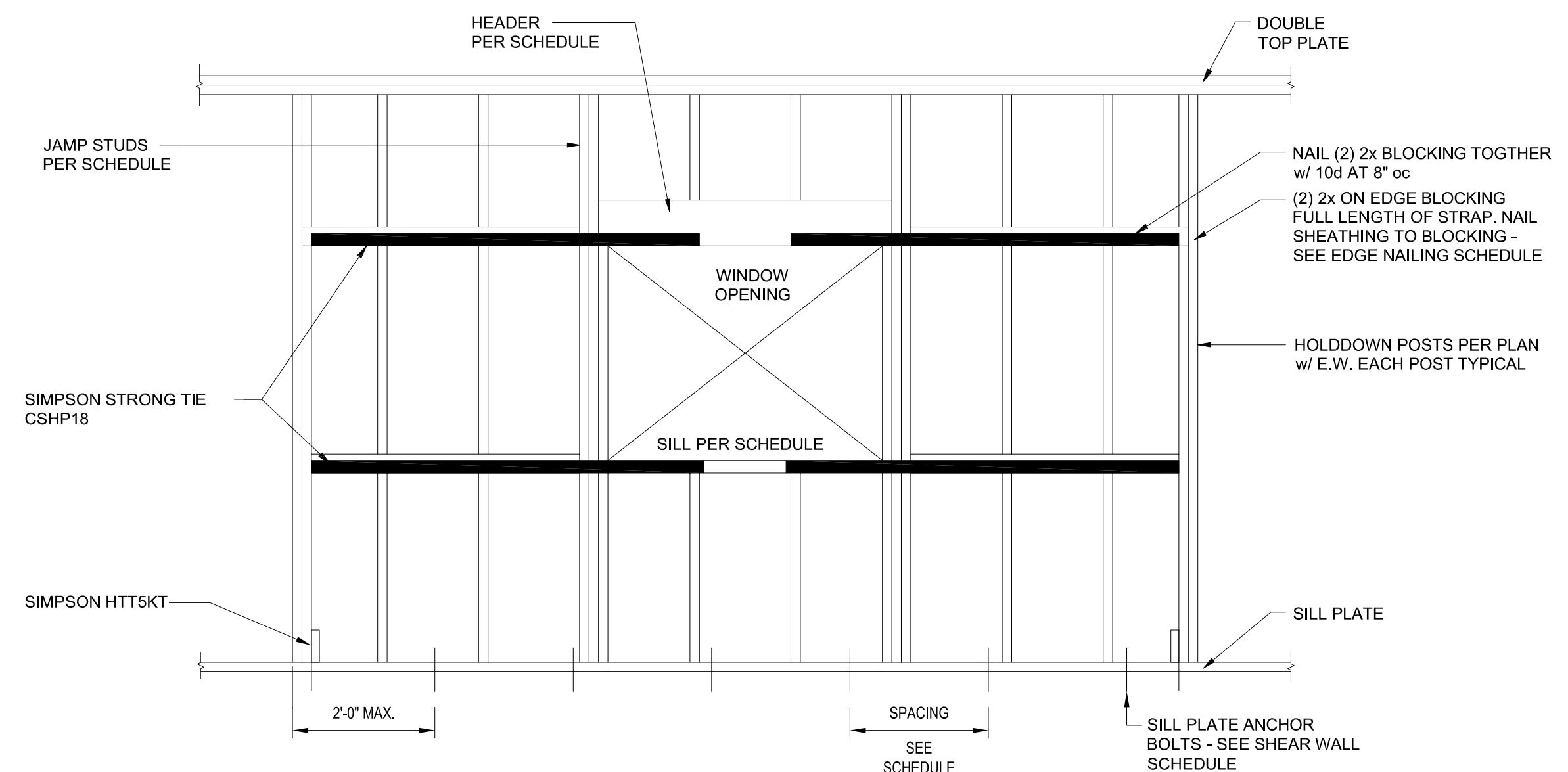
AT INTERIOR SUPPORT (BOTTOM BEARING)

TYPICAL



(OPTIONAL PIGGY-BACK DETAIL)

FLOOR TRUSS BEARING DETAIL



DETAIL AT PERFORATED SHEARWALL OPENINGS



ATURE:

ENT:

the orchards at Naples Road, LLC
1 N main Street
Andersonville, NC 28792
his Graef: President



SUBJECT:

The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

[illegible]

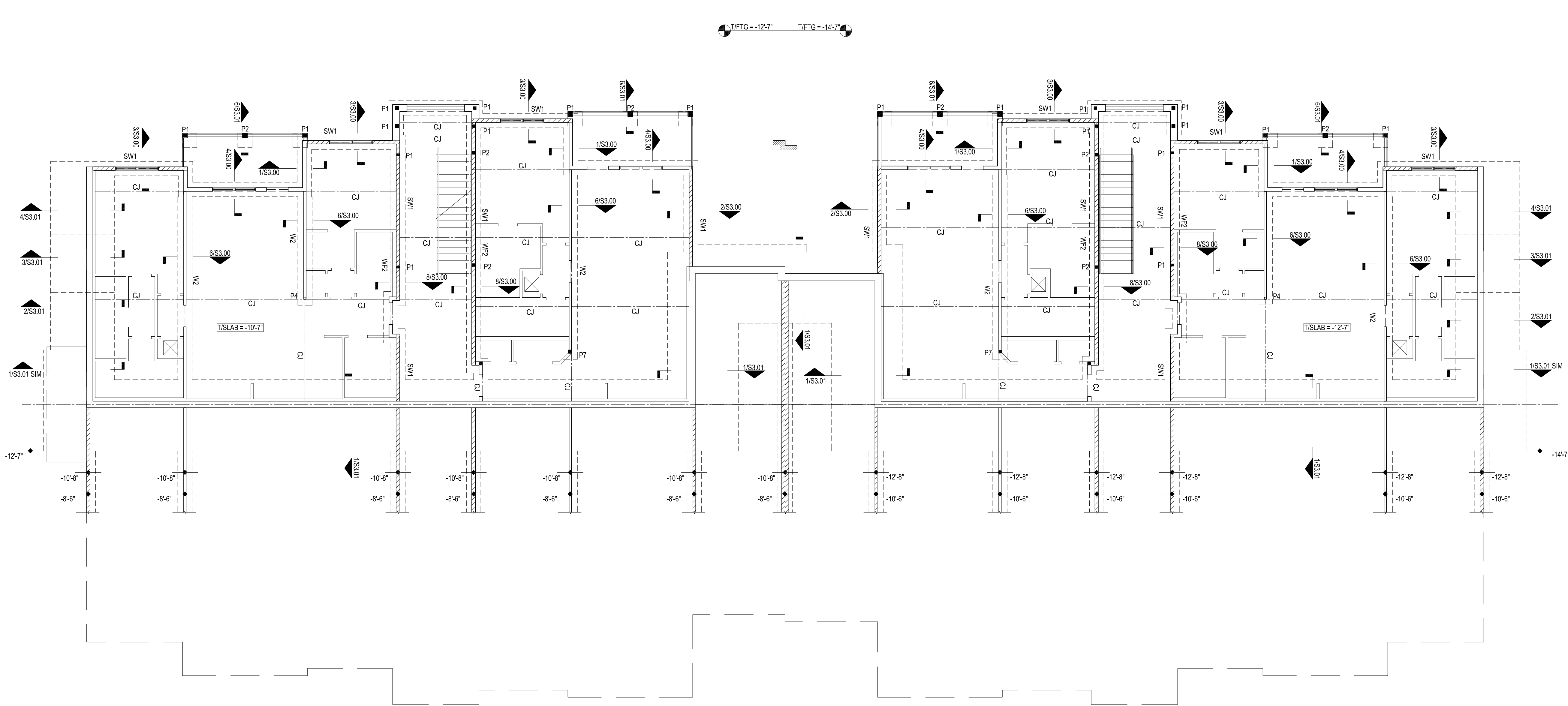
DWG INFO :
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
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ING DESCRIPTION :

TYPICAL DETAILS

SET #:

S-1.03



BASEMENT FOUNDATION PLAN

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

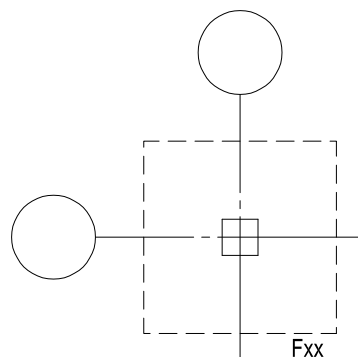
LEGEND:

- INDICATES STEP IN FOOTING
- INDICATES STEP IN FLOOR SLAB OR ROOF STRUCTURE
- INDICATES SHEAR WALL LOCATION AND LABEL
- INDICATES LOAD BEARING WALL AND LABEL
- INDICATES NON-STRUCTURAL WALL
- INDICATES LOAD BEARING WALL BELOW
- INDICATES WALL OPENING
- INDICATES WALL OPENING BELOW
- INDICATES DIRECTION OF FLOOR OR ROOF FRAMING
- "Jx" INDICATES FLOOR JOIST LABEL. SEE JOIST SCHEDULE ON S1.00 SERIES SHEETS
- "Bx" INDICATES WOOD BEAM LABEL. SEE WOOD BEAM SCHEDULE ON S1.00 SERIES SHEETS
- "RJx" INDICATES ROOF JOIST LABEL. SEE JOIST SCHEDULE ON S1.00 SERIES SHEETS
- INDICATES WOOD POST LABEL. SEE S1.05 FOR SCHEDULE AND DETAIL.

FOUNDATION PLAN NOTES:

- ELEVATIONS FOR FOOTINGS, SLABS, STEEL, WALLS, FLOORS, ELEVATOR, PITS, ETC. ARE REFERENCED + OR - FROM DATUM ELEVATION SEE SHEET S2.02 (I.E. T/SL +2'-6", T/W -5'-3", T/STL -6 1/4", ETC.).
- T/FTG ELEVATIONS SHOWN ON PLAN ARE FOR STRIP AND SPREAD FOOTINGS. T/FTG ELEVATION AROUND PERIMETER SHALL BE -2'-0" U.N.O. WITH FOOTING STEPS SHOWN IN RELATIVE LOCATIONS. SEE S1.00 SERIES SHEETS "TYPICAL DETAILS" FOR FOOTING STEP AND SPACING REQUIREMENTS.
- TYPICAL SLAB ON GRADE (S.O.G.) IS 4" NORMAL WEIGHT CONCRETE REINFORCED WITH 6x6-W1.4xW1.4 WWF (FLAT SHEETS) ON 6" CRUSHED STONE BASE. SEE ARCHITECTURAL DRAWINGS FOR VAPOR BARRIER REQUIREMENTS. SEE S2.00 FOR SLAB CONTROL JOINT LAYOUT.
- SUPPORT WWF AT 1" FROM TOP OF S.O.G. WITH SAND PLATES (CHAIRS WITH PLATE BASES) OR OTHER ACCEPTABLE DEVICES. BRICKS ARE NOT PERMITTED.
- NO UNDERCUTTING AND BACKFILLING IS PERMITTED UNDER ANY FOOTING DUE TO HIGH ALLOWABLE BEARING PRESSURES USED IN FOOTING DESIGN. LEAN CONCRETE ($f_c = 2000\text{psi}$) OR FOOTING CONCRETE SHALL BE USED TO "BACKFILL" ANY OVEREXCAVATION.
- CONTRACTOR SHALL SHORE ALL WALLS RECEIVING BACKFILL ON ONLY ONE SIDE OR RECEIVING UNEQUAL LEVELS OF BACKFILL ON OPPOSITE SIDES, UNLESS NOTED OTHERWISE IN THE DETAILS. ANY WALLS FOR WHICH SHORING IS INDICATED AS REQUIRED IN THE PLANS OR DETAILS SHALL BE SHORED REGARDLESS OF BACKFILL CONDITIONS.
- MASONRY SHOWN ON STRUCTURAL DRAWINGS DEFINES ONLY THE EXTENT AND REQUIREMENTS OF MASONRY UTILIZED FOR STRUCTURAL PURPOSES (I.E. BEARING WALLS, SHEAR WALLS, RETAINING WALLS, FOUNDATION WALLS, COLUMNS, ETC.).
- W1 TYP U.N.O., W1 TYP U.N.O., SEE 8/S-1.02 FOR SHEARWALLS W/ OPENINGS.
- ALL STUDS TO ALIGN W/ TRUSSES

- DIMENSIONS SHOWN ON PLAN ARE TO CENTERLINE OF COLUMN OR CENTERLINE OF WALL U.N.O.
- REFER TO ARCHITECTURAL MECHANICAL, ELECTRICAL, PLUMBING AND DRAWINGS OF OTHER DISCIPLINES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, DEPRESSIONS, AND NON-STRUCTURAL MASONRY.
- SEE S1.00 SERIES SHEETS FOR "GENERAL NOTES" AND FOR "TYPICAL DETAILS". TYPICAL DETAILS ARE GENERALLY NOT CUT ON PLANS BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS. WHERE TYPICAL DETAILS ARE CUT IN PLAN, THE INTENT IS TO ILLUSTRATE THE TYPE OF CONDITION AT WHICH THAT DETAIL IS INTENDED TO APPLY RATHER THAN EVERY OCCURRENCE OF THAT DETAIL.
- SEE S1.00 SERIES SHEETS FOR FOOTING SCHEDULE.
- SEE S1.00 SERIES SHEETS FOR COLUMN SCHEDULE AND BASE PLATE DETAILS.
- ALL STRUCTURAL WALLS SHOWN ARE TYPE "W1" U.N.O.
- FOOTINGS ARE NOTED ON PLAN WITH THE FOLLOWING DESIGNATIONS:
 F_{xx} = FOOTING MARK PER SCHEDULE ON S1.00



SIGNATURE:

CLIENT:

The orchards at Naples Road, LLC
341 N main Street
Hendersonville, NC 28792
Luis Graef: President



PROJECT:

The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

#	REVISIONS	DATE

DWG INFO:

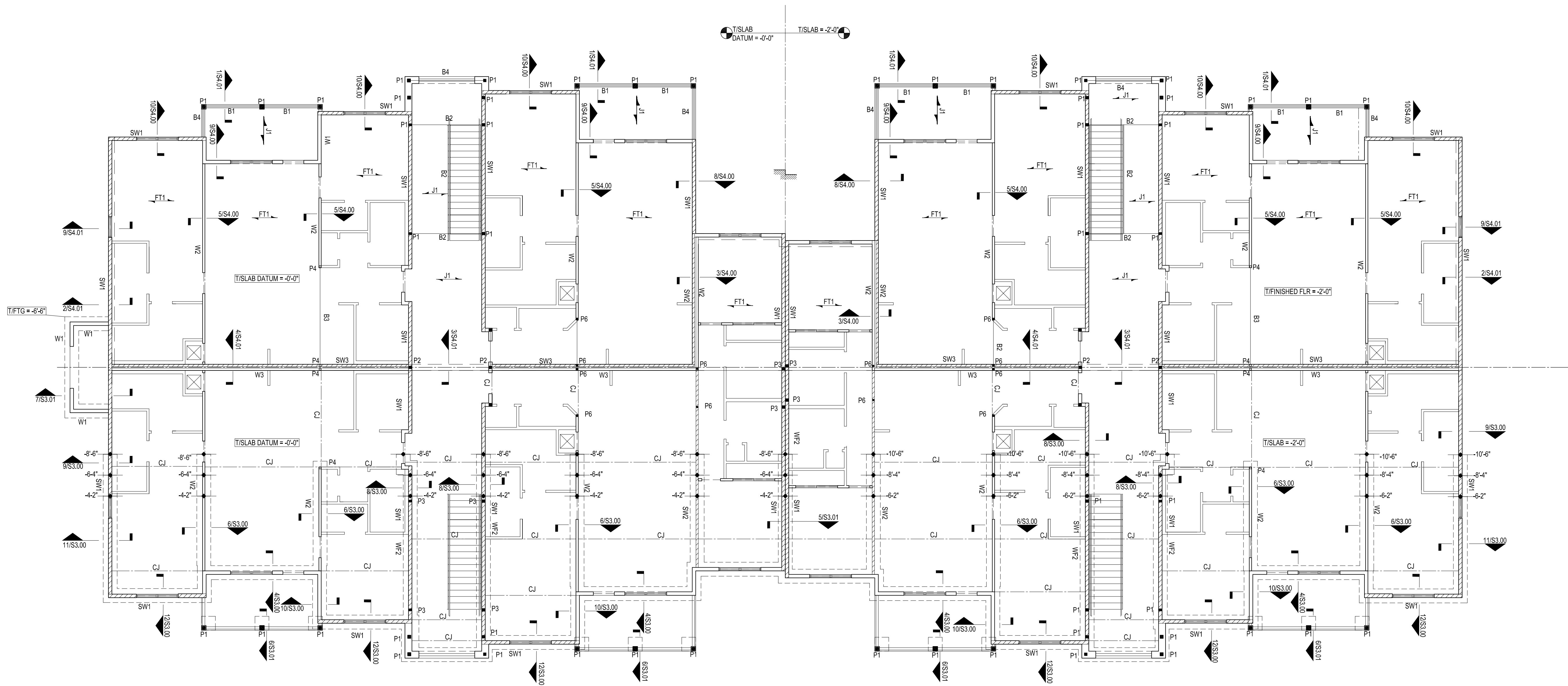
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION:

BUILDING 3 BASEMENT
FOUNDATION PLAN

SHEET #:

S-2.01B



FIRST FLOOR FOUNDATION & FRAMING PLAN

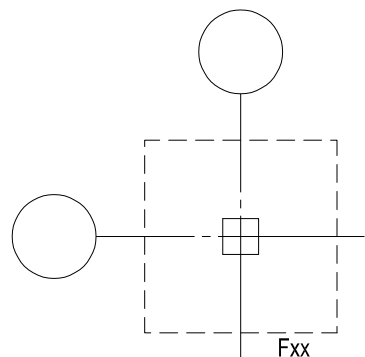
SCALE: 1/8" = 1'-0"

LEGEND:

- INDICATES STEP IN FOOTING
- INDICATES STEP IN FLOOR SLAB OR ROOF STRUCTURE
- INDICATES SHEAR WALL LOCATION AND LABEL
- INDICATES LOAD BEARING WALL AND LABEL
- INDICATES NON-STRUCTURAL WALL
- INDICATES LOAD BEARING WALL BELOW
- INDICATES WALL OPENING
- INDICATES WALL OPENING BELOW
- INDICATES DIRECTION OF FLOOR OR ROOF FRAMING
- "Jx" INDICATES FLOOR JOIST LABEL. SEE JOIST SCHEDULE ON S1.00 SERIES SHEETS
- "Bx" INDICATES WOOD BEAM LABEL. SEE WOOD BEAM SCHEDULE ON S1.00 SERIES SHEETS
- "Rjx" INDICATES ROOF JOIST LABEL. SEE JOIST SCHEDULE ON S1.00 SERIES SHEETS
- INDICATES WOOD POST LABEL, SEE S1.05 FOR SCHEDULE AND DETAIL.

FOUNDATION PLAN NOTES:

- T/SL DATUM ELEVATION IS 0'-0". ELEVATIONS FOR FOOTINGS, SLABS, STEEL, WALLS, FLOORS, ELEVATOR, PITS, ETC. ARE REFERENCED + OR - FROM DATUM ELEVATION (I.E. T/SL +2'-6", T/W -5'-3", T/STL -6' 1/4", ETC.).
- T/FTG ELEVATIONS SHOWN ON PLAN ARE FOR STRIP AND SPREAD FOOTINGS. T/FTG ELEVATION AROUND PERIMETER SHALL BE -2'-0" U.N.O. WITH FOOTING STEPS SHOWN IN RELATIVE LOCATIONS. SEE S1.00 SERIES SHEETS "TYPICAL DETAILS" FOR FOOTING STEP AND SPACING REQUIREMENTS.
- TYPICAL SLAB ON GRADE (S.O.G.) IS 4" NORMAL WEIGHT CONCRETE REINFORCED WITH 6x6-W1.4xW1.4 WWF (FLAT SHEETS) ON 6" CRUSHED STONE BASE. SEE ARCHITECTURAL DRAWINGS FOR VAPOR BARRIER REQUIREMENTS. SEE S2.00 FOR SLAB CONTROL JOINT LAYOUT.
- SUPPORT WWF AT 1" FROM TOP OF S.O.G. WITH SAND PLATES (CHAIRS WITH PLATE BASES) OR OTHER ACCEPTABLE DEVICES. BRICKS ARE NOT PERMITTED.
- NO UNDERCUTTING AND BACKFILLING IS PERMITTED UNDER ANY FOOTING DUE TO HIGH ALLOWABLE BEARING PRESSURES USED IN FOOTING DESIGN. LEAN CONCRETE ($f_c = 2000\text{psi}$) OR FOOTING CONCRETE SHALL BE USED TO "BACKFILL" ANY OVEREXCAVATION.
- CONTRACTOR SHALL SHORE ALL WALLS RECEIVING BACKFILL ON ONLY ONE SIDE OR RECEIVING UNEQUAL LEVELS OF BACKFILL ON OPPOSITE SIDES. UNLESS NOTED OTHERWISE IN THE DETAILS. ANY WALLS FOR WHICH SHORING IS INDICATED AS REQUIRED IN THE PLANS OR DETAILS SHALL BE SHORED REGARDLESS OF BACKFILL CONDITIONS.
- W1 TYP U.N.O., WF1 TYP U.N.O., SEE 8/S-1.02 FOR SHEARWALLS W/ OPENINGS.
- ALL STUDS TO ALIGN W/ TRUSSES
- FT1 INDICATES 18" DEEP FLOOR TRUSS @ 24" O.C. BY OTHERS
- DIMENSIONS SHOWN ON PLAN ARE TO CENTERLINE OF COLUMN OR CENTERLINE OF WALL U.N.O.
- REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND DRAWINGS OF OTHER DISCIPLINES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, DEPRESSIONS, AND NON-STRUCTURAL MASONRY.
- SEE S1.00 SERIES SHEETS FOR "GENERAL NOTES" AND FOR "TYPICAL DETAILS". TYPICAL DETAILS ARE GENERALLY NOT CUT ON PLANS BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS. WHERE TYPICAL DETAILS ARE CUT IN PLAN, THE INTENT IS TO ILLUSTRATE THE TYPE OF CONDITION AT WHICH THAT DETAIL IS INTENDED TO APPLY RATHER THAN EVERY OCCURRENCE OF THAT DETAIL.
- SEE S1.00 SERIES SHEETS FOR FOOTING SCHEDULE.
- SEE S1.00 SERIES SHEETS FOR COLUMN SCHEDULE AND BASE PLATE DETAILS.
- ALL STRUCTURAL WALLS SHOWN ARE TYPE "W1" U.N.O.
- FOOTINGS ARE NOTED ON PLAN WITH THE FOLLOWING DESIGNATIONS:
Fxx = FOOTING MARK PER SCHEDULE OB S1.00



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Hendersonville, North Carolina

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DWG INFO:

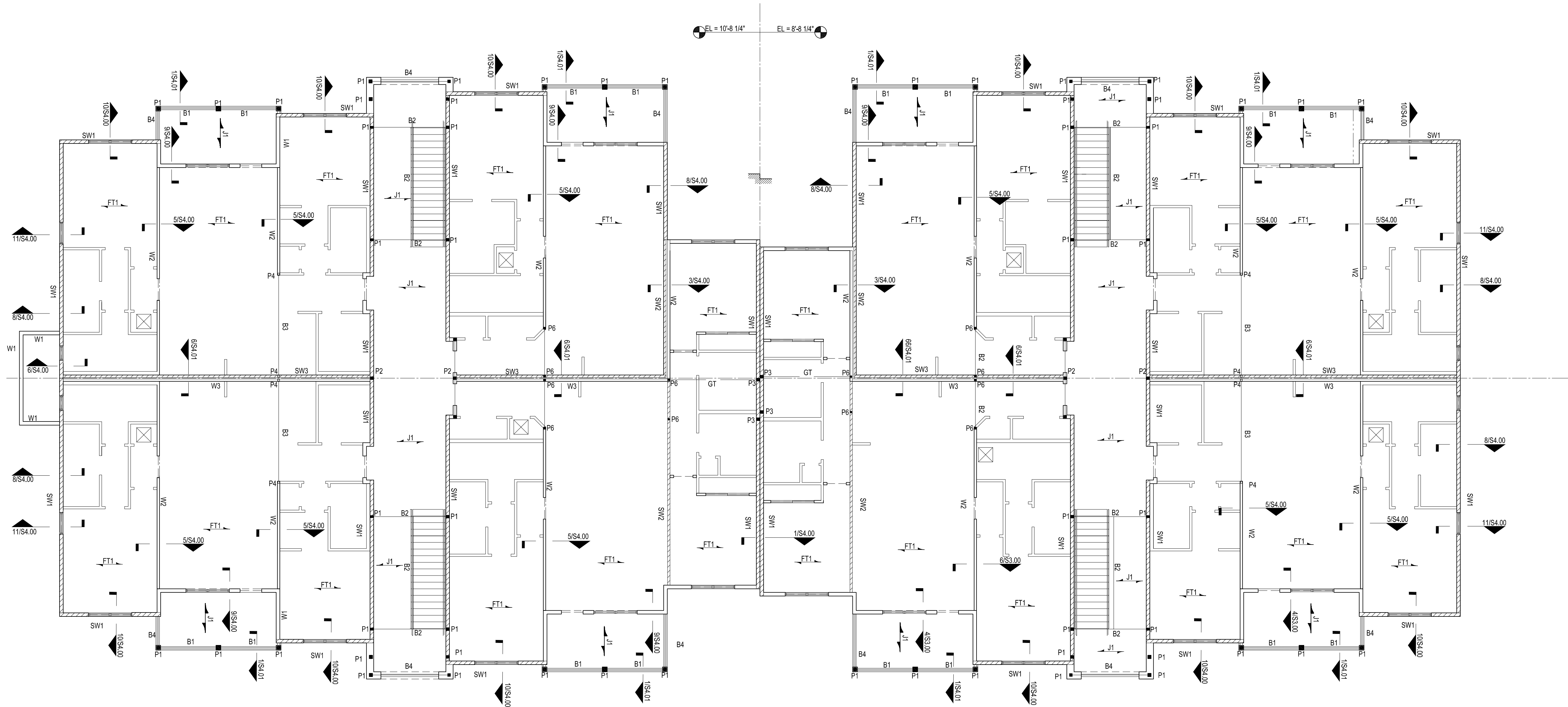
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION:

BUILDING 3 FIRST FLOOR
FOUNDATION & FRAMING PLAN

SHEET #:

S-2.02



SECOND FLOOR FRAMING PLAN
SCALE: 1/8" = 1'-0"

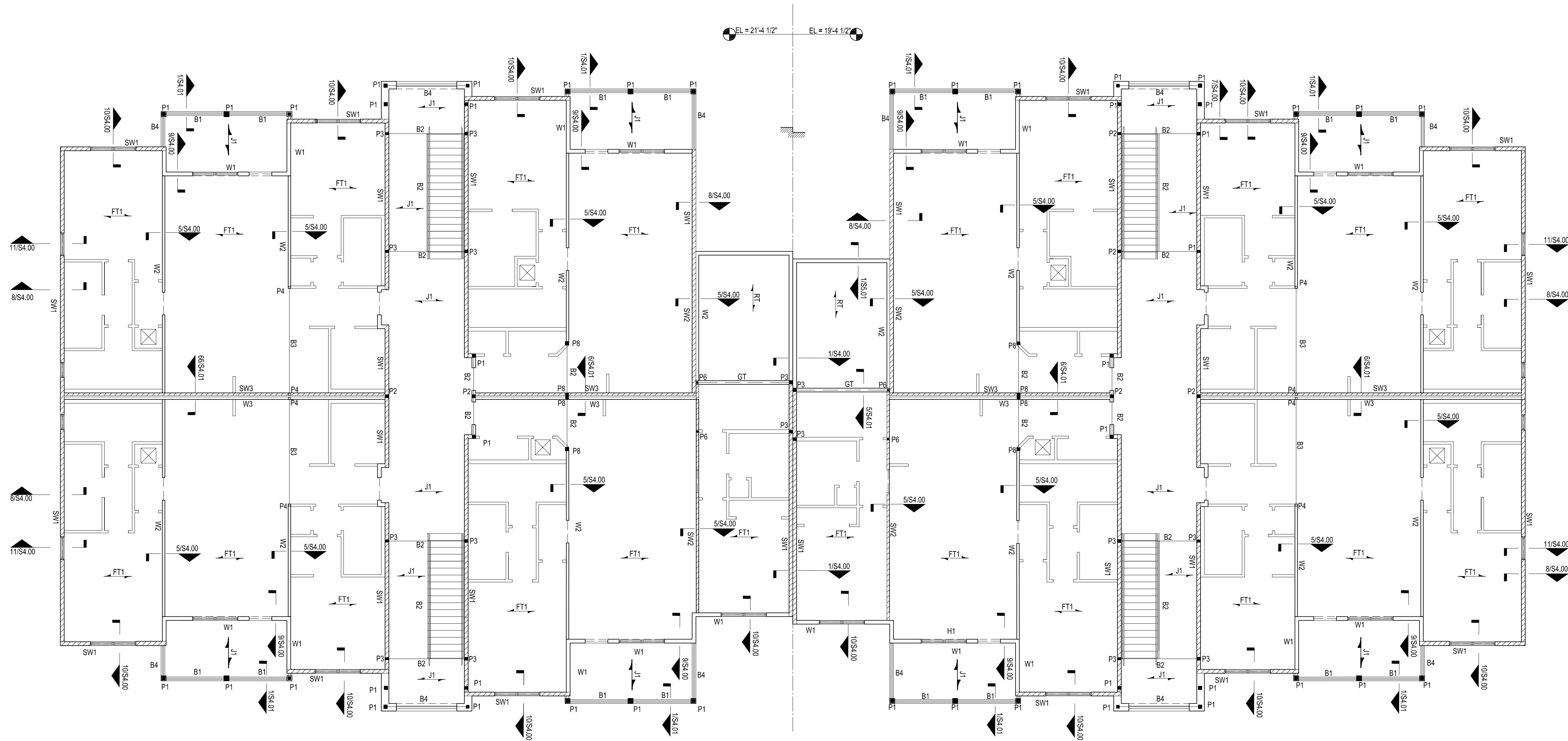
LEGEND:

- INDICATES STEP IN FOOTING
- INDICATES STEP IN FLOOR SLAB OR ROOF STRUCTURE
- INDICATES SHEAR WALL LOCATION AND LABEL
- INDICATES LOAD BEARING WALL AND LABEL
- INDICATES NON-STRUCTURAL WALL
- INDICATES LOAD BEARING WALL BELOW
- INDICATES WALL OPENING
- INDICATES WALL OPENING BELOW
- INDICATES DIRECTION OF FLOOR OR ROOF FRAMING
- INDICATES FLOOR JOIST LABEL. SEE JOIST SCHEDULE ON S1.00 SERIES SHEETS
- INDICATES WOOD BEAM LABEL. SEE WOOD BEAM SCHEDULE ON S1.00 SERIES SHEETS
- INDICATES ROOF JOIST LABEL. SEE JOIST SCHEDULE ON S1.00 SERIES SHEETS
- INDICATES WOOD POST LABEL. SEE S1.05 FOR SCHEDULE AND DETAIL.

FLOOR FRAMING PLAN NOTES:

- SEE PLAN FOR FINISHED FLOOR ELEVATIONS FROM DATUM ELEVATION, U.N.O. ON PLAN AS (+X-X") OR (-X-X") AS REFERENCED FROM NOMINAL DATUM.
- WOOD TRUSS FABRICATOR SHALL REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONAL INFORMATION.
- WHERE AVAILABLE, DIMENSIONS AND LOCATIONS FOR OPENINGS ARE SHOWN ON THE LOWEST LEVEL ON WHICH THE OPENING FIRST OCCURS AND ON SUBSEQUENT LEVELS WHERE DIMENSIONS OR LOCATIONS VARY.
- SHEATH REMAINING LENGTH OF WALL (BEYOND MIN. SHEAR WALL LENGTH AS PER SCHEDULE) WITH EQUIVALENT NON-SHEAR WALL SHEATHING THICKNESS AND GWB PER ARCH. DWGS. ATTACH NON-SHEAR WALL SHEATHING WITH 10d NAILS @ 16" O.C.
- TYPICAL FLOOR DECK OVER WOOD SUPPORT SHALL BE 3/4" TONGUE AND GROOVED EXPOSURE 1, OSB OR PLYWOOD SHEATHING. ATTACH PER GENERAL NOTES ON S1.00 SERIES SHEETS, WOOD FRAMING NOTES U.N.O. ON DRAWINGS.
- REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND DRAWINGS OF OTHER DISCIPLINES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, DEPRESSIONS, AND NON-STRUCTURAL MASONRY.
- SEE S1.00 SERIES SHTS. FOR "GENERAL NOTES" AND FOR "TYPICAL DETAILS". TYPICAL DETAILS ARE GENERALLY NOT CUT ON PLANS BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS. WHERE TYPICAL DETAILS ARE CUT IN PLAN, THE INTENT IS TO ILLUSTRATE THE TYPE OF CONDITION AT WHICH THAT DETAIL IS INTENDED TO APPLY RATHER THAN EVERY OCCURRENCE OF THAT DETAIL.
- SEE S1.00 SERIES SHTS. FOR SHEAR WALL INFORMATION.
- SEE S1.00 SERIES SHEETS FOR WOOD JOIST AND ALL BEAM SCHEDULES.
- SEE S1.00 SERIES SHEETS FOR BEARING WALL SCHEDULES.
- DIMENSIONS SHOWN ON PLAN ARE TO CENTERLINE OF COLUMN OR CENTERLINE OF WALL U.N.O.
- ALL STRUCTURAL WALLS SHOWN ARE TYPE "W1" U.N.O.
- SEE 3/S1.03 FOR TYPICAL DECKING LAYOUT DETAILS. USE UNBLOCKED DIAPHRAGM U.N.O. USE BLOCKED DIAPHRAGM FOR SHADED AREA. USE 10d NAILS WITH 2" BOUNDARY SPACING IN BOTH DIRECTIONS.
- INDICATES WOOD POST LABEL. SEE S1.05 FOR SCHEDULE AND DETAIL.
- INDICATES SHEARWALL LOCATION AND LABEL
- ALL STUDS TO ALIGN W/ TRUSSES
- FT1 INDICATES 18" DEEP FLOOR TRUSS @ 24" O.C. BY OTHERS
- W1 TYP U.N.O., WF1 TYP U.N.O., SEE 8/S-1.02 FOR SHEARWALLS W/ OPENINGS.

#	REVISIONS	DATE



THIRD FLOOR FRAMING PLAN

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

LEGEND:

- INDICATES STEP IN FOOTING
- INDICATES STEP IN FLOOR SLAB OR ROOF STRUCTURE
- INDICATES SHEAR WALL LOCATION AND LABEL
- INDICATES LOAD BEARING WALL AND LABEL
- INDICATES NON-STRUCTURAL WALL
- INDICATES LOAD BEARING WALL BELOW
- INDICATES WALL OPENING
- INDICATES WALL OPENING BELOW
- INDICATES DIRECTION OF FLOOR OR ROOF FRAMING
- "Jx" INDICATES FLOOR JOIST LABEL. SEE JOIST SCHEDULE ON S1.00 SERIES SHEETS
- "Bx" INDICATES WOOD BEAM LABEL. SEE WOOD BEAM SCHEDULE ON S1.00 SERIES SHEETS
- "Rjx" INDICATES ROOF JOIST LABEL. SEE JOIST SCHEDULE ON S1.00 SERIES SHEETS
- INDICATES WOOD POST LABEL, SEE S1.05 FOR SCHEDULE AND DETAIL.

FLOOR FRAMING PLAN NOTES:

- SEE PLAN FOR FINISHED FLOOR ELEVATIONS. FROM DATUM ELEVATION, U.N.O. ON PLAN AS (+X-X") OR (-X-X") AS REFERENCED FROM NOMINAL DATUM.
- WOOD TRUSS FABRICATOR SHALL REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONAL INFORMATION.
- TYPICAL ROOF DECK OVER WOOD SUPPORT SHALL BE 3/4" TONGUE AND GROOVED EXPOSURE 1, OSB OR PLYWOOD SHEATHING. ATTACH PER GENERAL NOTES ON S1.00 SERIES SHEETS, WOOD FRAMING NOTES U.N.O. ON DRAWINGS.
- WHERE AVAILABLE, DIMENSIONS AND LOCATIONS FOR OPENINGS ARE SHOWN ON THE LOWEST LEVEL ON WHICH THE OPENING FIRST OCCURS AND ON SUBSEQUENT LEVELS WHERE DIMENSIONS OR LOCATIONS VARY.
- SHEATH REMAINING LENGTH OF WALL (BEYOND MIN. SHEAR WALL LENGTH AS PER SCHEDULE) WITH EQUIVALENT NON-SHEAR WALL SHEATHING THICKNESS AND GWB PER ARCH. DWGS. ATTACH NON-SHEAR WALL SHEATHING WITH 10d NAILS @ 16" O.C.
- TYPICAL FLOOR DECK OVER WOOD SUPPORT SHALL BE 3/4" TONGUE AND GROOVED EXPOSURE 1, OSB OR PLYWOOD SHEATHING. ATTACH PER GENERAL NOTES ON S1.00 SERIES SHEETS, WOOD FRAMING NOTES U.N.O. ON DRAWINGS.
- REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND DRAWINGS OF OTHER DISCIPLINES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, DEPRESSIONS, AND NON-STRUCTURAL MASONRY.
- SEE S1.00 SERIES SHTS. FOR "GENERAL NOTES" AND FOR "TYPICAL DETAILS". TYPICAL DETAILS ARE GENERALLY NOT CUT ON PLANS BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS. WHERE TYPICAL DETAILS ARE CUT IN PLAN, THE INTENT IS TO ILLUSTRATE THE TYPE OF CONDITION AT WHICH THAT DETAIL IS INTENDED TO APPLY RATHER THAN EVERY OCCURRENCE OF THAT DETAIL.
- SEE S1.00 SERIES SHTS. FOR SHEAR WALL INFORMATION.
- SEE S1.00 SERIES SHEETS FOR WOOD JOIST AND ALL BEAM SCHEDULES.
- SEE S1.00 SERIES SHEETS FOR BEARING WALL SCHEDULES.
- DIMENSIONS SHOWN ON PLAN ARE TO CENTERLINE OF COLUMN OR CENTERLINE OF WALL U.N.O.
- ALL STRUCTURAL WALLS SHOWN ARE TYPE "W1" U.N.O.
- SEE 3/S1.03 FOR TYPICAL DECKING LAYOUT DETAILS. USE UNBLOCKED DIAPHRAGM U.N.O. USE BLOCKED DIAPHRAGM FOR SHADED AREA.
USE 10d NAILS WITH 2" BOUNDARY SPACING IN BOTH DIRECTIONS.
- INDICATES WOOD POST LABEL, SEE S1.05 FOR SCHEDULE AND DETAIL.
- INDICATES SHEARWALL LOCATION AND LABEL
- ALL STUDS TO ALIGN W/ TRUSSES
- FT1 INDICATES 18" DEEP FLOOR TRUSS @ 24" O.C. BY OTHERS
- W1 TYP U.N.O., WF1 TYP U.N.O., SEE 8/S-1.02 FOR SHEARWALLS W/ OPENINGS.
- GT INDICATES GIRDER TRUSS

SIGNATURE:

CLIENT:

The Orchards at Naples Road, LLC
341 N main Street
Hendersonville, NC 28792
Luis Graef: President



PROJECT:

The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

#	REVISIONS	DATE

DWG INFO:

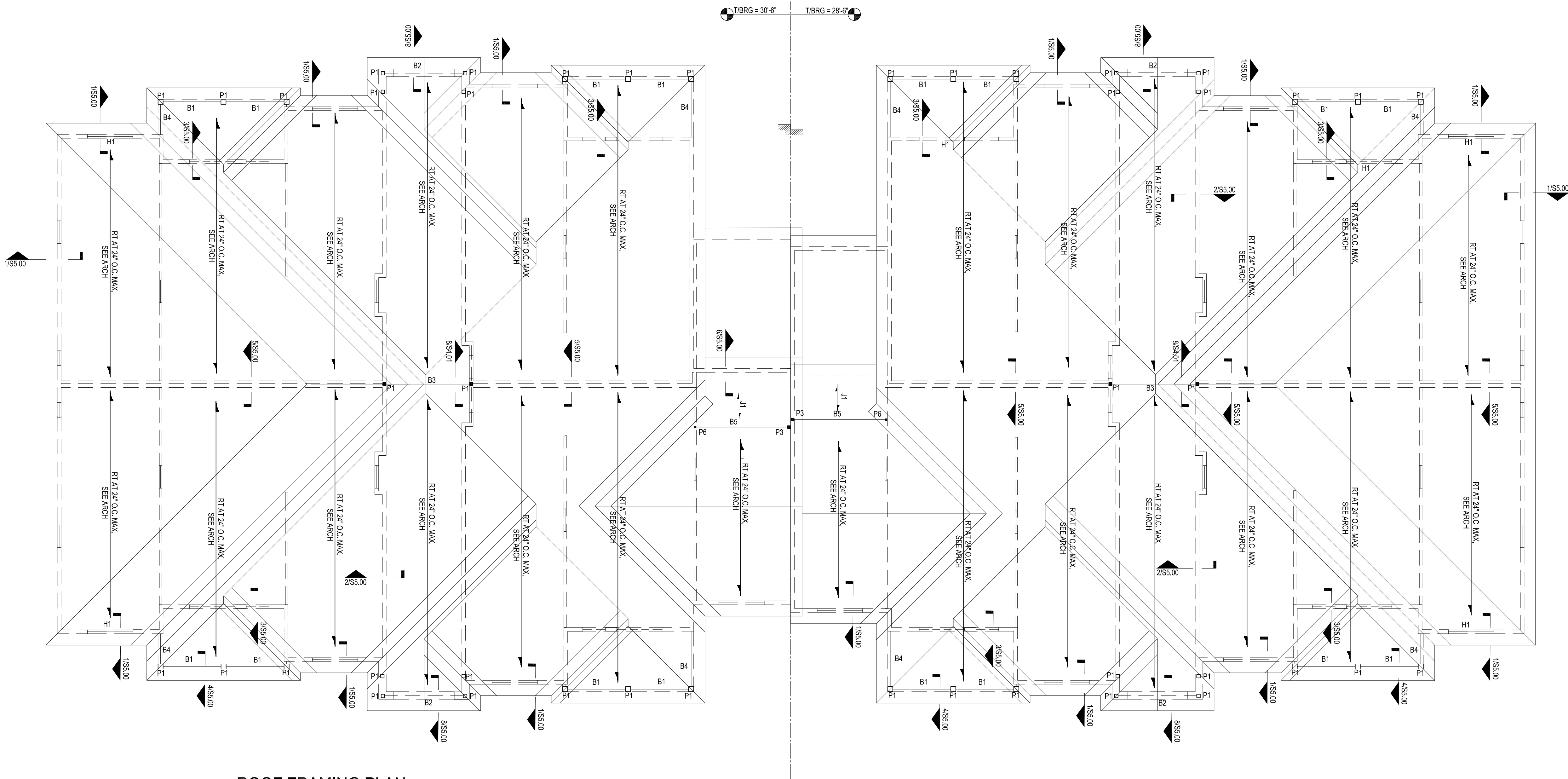
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION:

BUILDING 3 THIRD
FLOOR FRAMING PLAN

SHEET #:

S-2.04



ROOF FRAMING PLAN

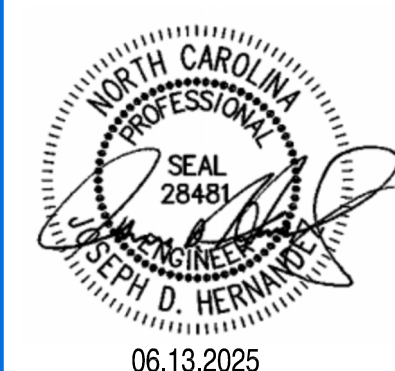
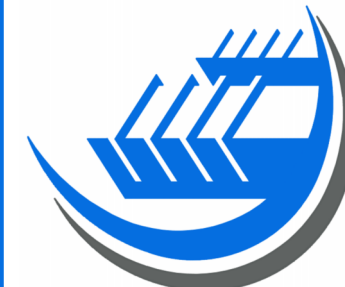
SCALE: 1/8" = 1'-0"

LEGEND:

- 1. INDICATES STEP IN FOOTING
- 2. INDICATES STEP IN FLOOR SLAB OR ROOF STRUCTURE
- 3. INDICATES SHEAR WALL LOCATION AND LABEL
- 4. INDICATES LOAD BEARING WALL AND LABEL
- 5. INDICATES NON-STRUCTURAL WALL
- 6. INDICATES LOAD BEARING WALL BELOW
- 7. INDICATES WALL OPENING
- 8. INDICATES WALL OPENING BELOW
- 9. INDICATES DIRECTION OF FLOOR OR ROOF FRAMING
- 10. "Jx" INDICATES FLOOR JOIST LABEL. SEE JOIST SCHEDULE ON \$1.00 SERIES SHEETS
- 11. "Bx" INDICATES WOOD BEAM LABEL. SEE WOOD BEAM SCHEDULE ON \$1.00 SERIES SHEETS
- 12. "Rjx" INDICATES ROOF JOIST LABEL. SEE JOIST SCHEDULE ON \$1.00 SERIES SHEETS
- 13. INDICATES WOOD POST LABEL, SEE \$1.05 FOR SCHEDULE AND DETAIL.

ROOF FRAMING PLAN NOTES:

- 1. SEE PLAN FOR TRUSS BEARING ELEVATIONS FROM DATUM ELEVATION, U.N.O. ON PLAN AS (+X-X") OR (-X-X") AS REFERENCED FROM NOMINAL DATUM.
- 2. WOOD TRUSS FABRICATOR SHALL REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONAL INFORMATION.
- 3. TYPICAL ROOF DECK OVER WOOD SUPPORT SHALL BE 3/4" TONGUE AND GROOVED EXPOSURE 1, OSB OR PLYWOOD SHEATHING. ATTACH PER GENERAL NOTES ON \$1.00 SERIES SHEETS, WOOD FRAMING NOTES U.N.O. ON DRAWINGS.
- 4. WHERE AVAILABLE, DIMENSIONS AND LOCATIONS FOR OPENINGS ARE SHOWN ON THE LOWEST LEVEL ON WHICH THE OPENING FIRST OCCURS AND ON SUBSEQUENT LEVELS WHERE DIMENSIONS OR LOCATIONS VARY.
- 5. SHEATH REMAINING LENGTH OF WALL, (BEYOND MIN. SHEAR WALL LENGTH AS PER SCHEDULE) WITH EQUIVALENT NON-SHEAR WALL SHEATHING THICKNESS AND GWB PER ARCH. DWGS. ATTACH NON-SHEAR WALL SHEATHING WITH 10d NAILS @ 16" O.C.
- 6. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND DRAWINGS OF OTHER DISCIPLINES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, DEPRESSIONS, AND NON-STRUCTURAL MASONRY.
- 7. SEE \$1.00 SERIES SHTS. FOR "GENERAL NOTES" AND FOR "TYPICAL DETAILS". TYPICAL DETAILS ARE GENERALLY NOT CUT ON PLANS BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS. WHERE TYPICAL DETAILS ARE CUT IN PLAN, THE INTENT IS TO ILLUSTRATE THE TYPE OF CONDITION AT WHICH THAT DETAIL IS INTENDED TO APPLY RATHER THAN EVERY OCCURRENCE OF THAT DETAIL.
- 8. SEE \$1.00 SERIES SHTS. FOR SHEAR WALL INFORMATION.
- 9. SEE \$1.00 SERIES SHEETS FOR WOOD JOIST AND ALL BEAM SCHEDULES.
- 10. SEE \$1.00 SERIES SHEETS FOR BEARING WALL SCHEDULES.
- 11. DIMENSIONS SHOWN ON PLAN ARE TO CENTERLINE OF WALL U.N.O.
- 12. W1 TYP U.N.O., WF1 TYP U.N.O., SEE 8/S-1.02 FOR SHEARWALLS W/ OPENINGS.
- 13. SEE 3/\$1.03 FOR TYPICAL DECKING LAYOUT DETAILS, USE UNBLOCKED DIAPHRAGM U.N.O.
- 14. INDICATES WOOD POST LABEL, SEE \$1.05 FOR SCHEDULE AND DETAIL.
- 15. MAU-1 AND MAU-2 DENOTES ROOF TOP UNITS, SEE MECH. DRAWINGS FOR LOCATION AND EQUIPMENT WEIGHT. JOIST SUPPLIER TO DESIGN TO SUIT. SEE \$1.00 FOR ROOF LOADS.
- 16. SEE 1/\$1.05 FOR WALL OPENINGS
- 17. ALL STUDS TO ALIGN W/ TRUSSES
- 18. FT1 INDICATES 18" DEEP FLOOR TRUSS @ 24" O.C. BY OTHERS



SIGNATURE:

CLIENT:
The orchards at Naples Road, LLC
341 N main Street
Hendersonville, NC 28792
Luis Graef: President



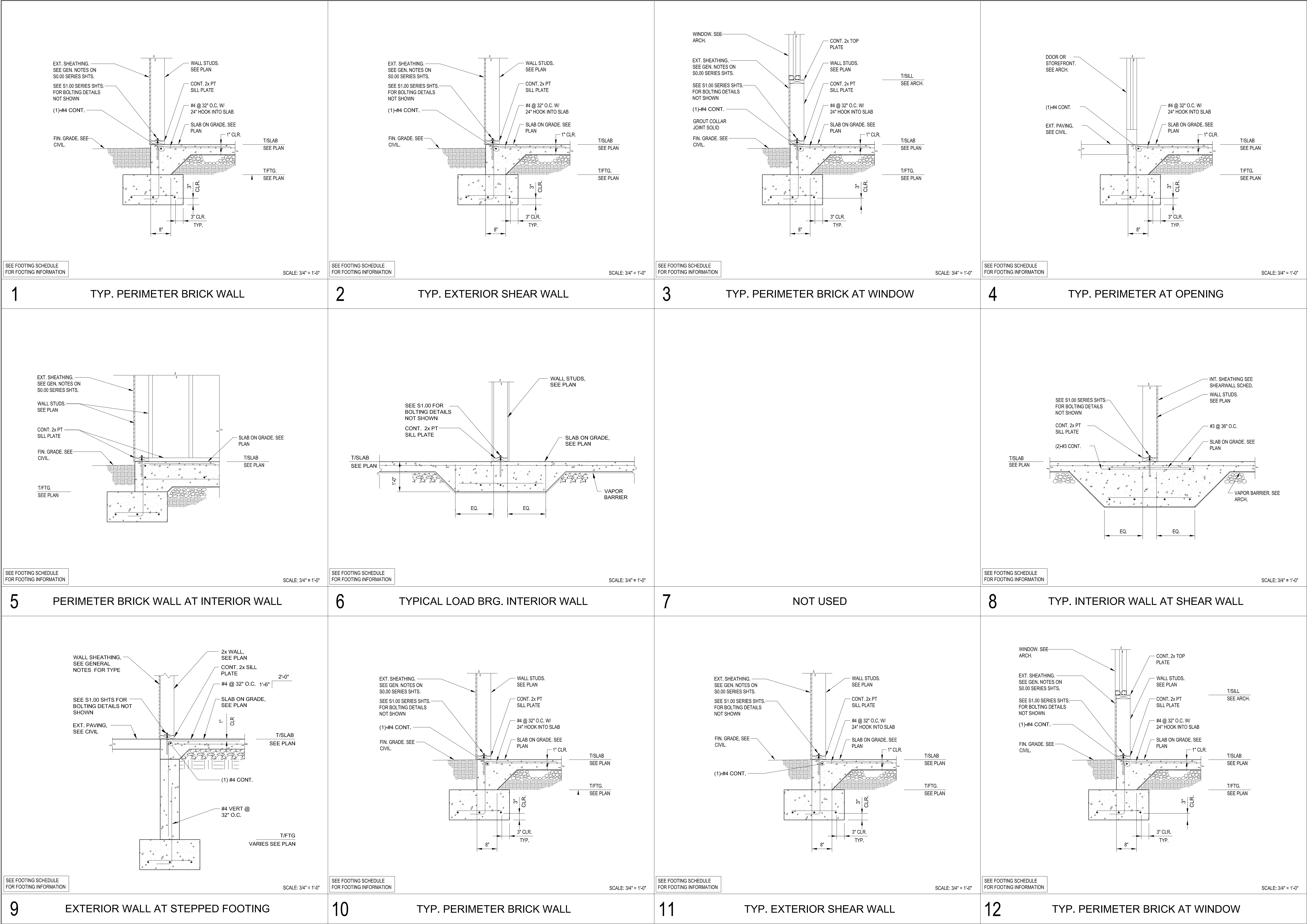
PROJECT:
The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

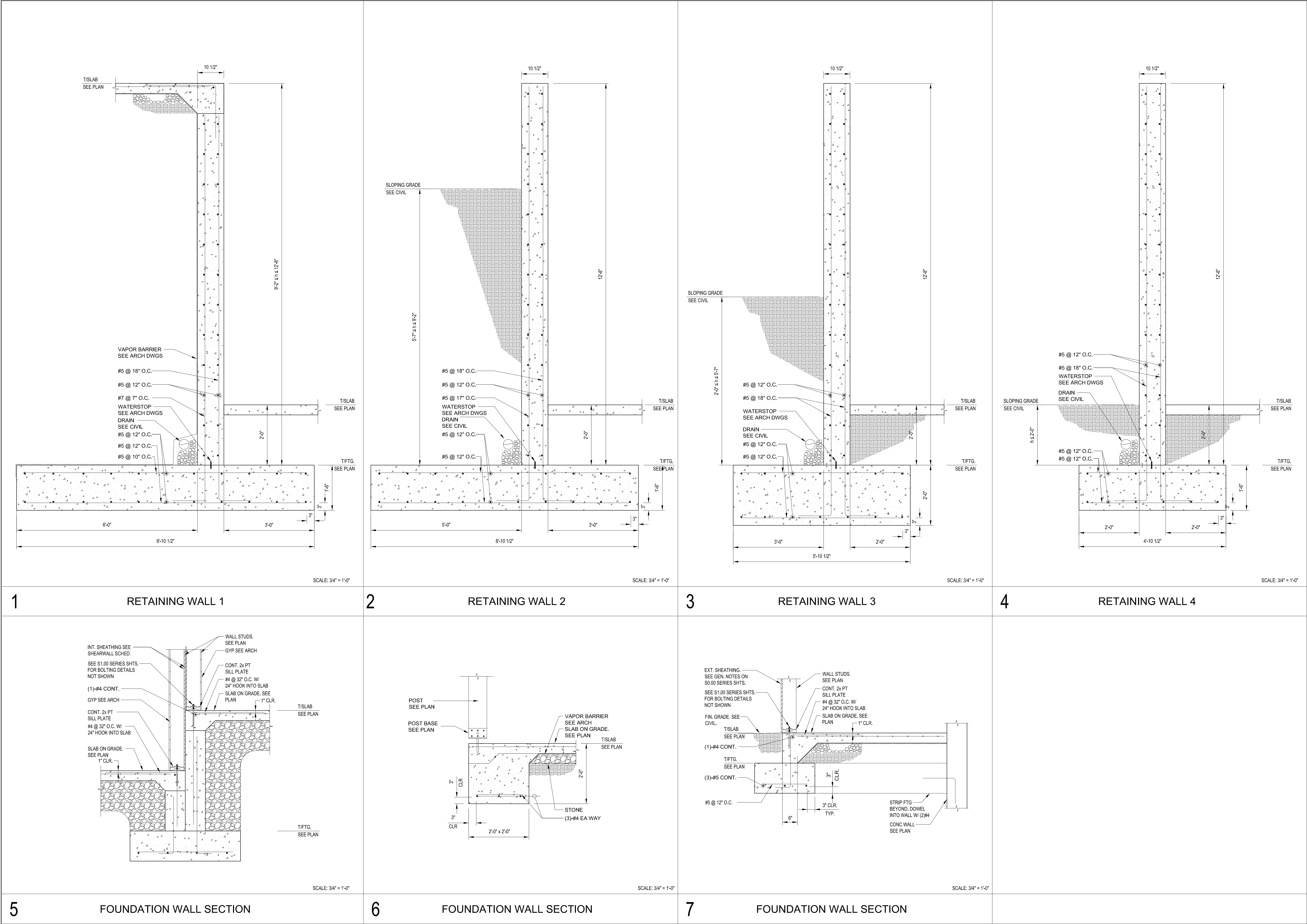
#	REVISIONS	DATE

DWG INFO :
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION :
BUILDING 3 ROOF
FRAMING PLAN

SHEET #:
S-2.05





JDH

STRUCTURAL ENGINEERS, PLLC

19545 GREENTREE WAY, SUITE B
CORNELIUS, NORTH CAROLINA 28031
Phone: 704.997.1722 Fax: 704.997.1202
http://jdhengineers.com

NORTH CAROLINA

PROFESSIONAL SEAL

28481

JOSEPH D. HENDERSON

06.13.2025

SIGNATURE:

CLIENT:
The Orchards at Naples Road, LLC
341 N main Street
Hendersonville, NC 28792
Luis Graef, President

PROJECT:
The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

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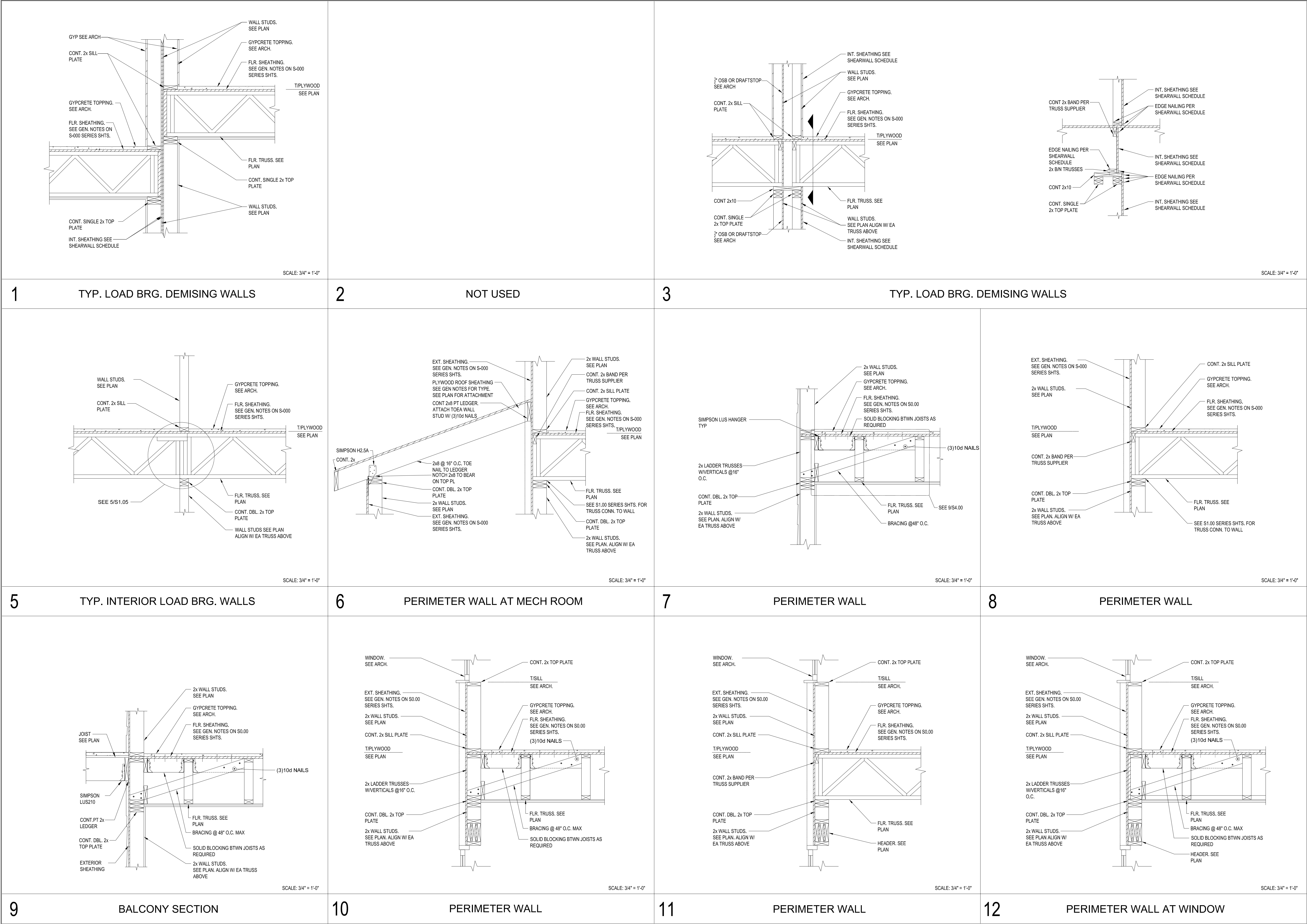
DWG INFO:

ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION:

FOUNDATION SECTIONS

SHEET #:
S-3.01



JDH
STRUCTURAL
ENGINEERS, PLLC

19545 GREENTREE WAY, SUITE B
CORNELIUS, NORTH CAROLINA 28031
Phone: 704.997.7272 Fax: 704.997.12020
http://jdhengineers.com

06.13.2025

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Hendersonville, NC 28792
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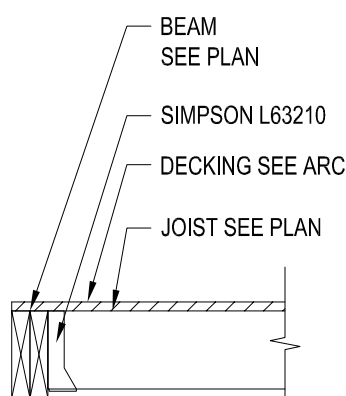
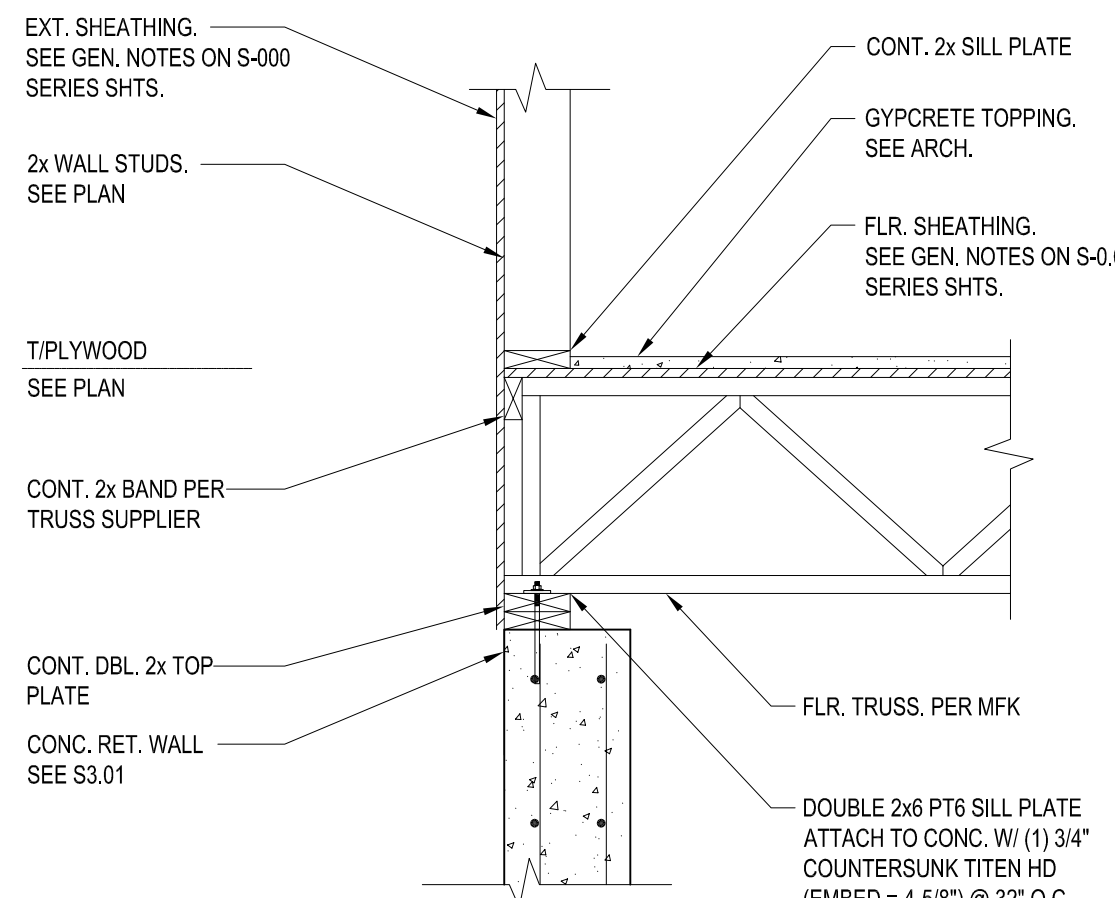
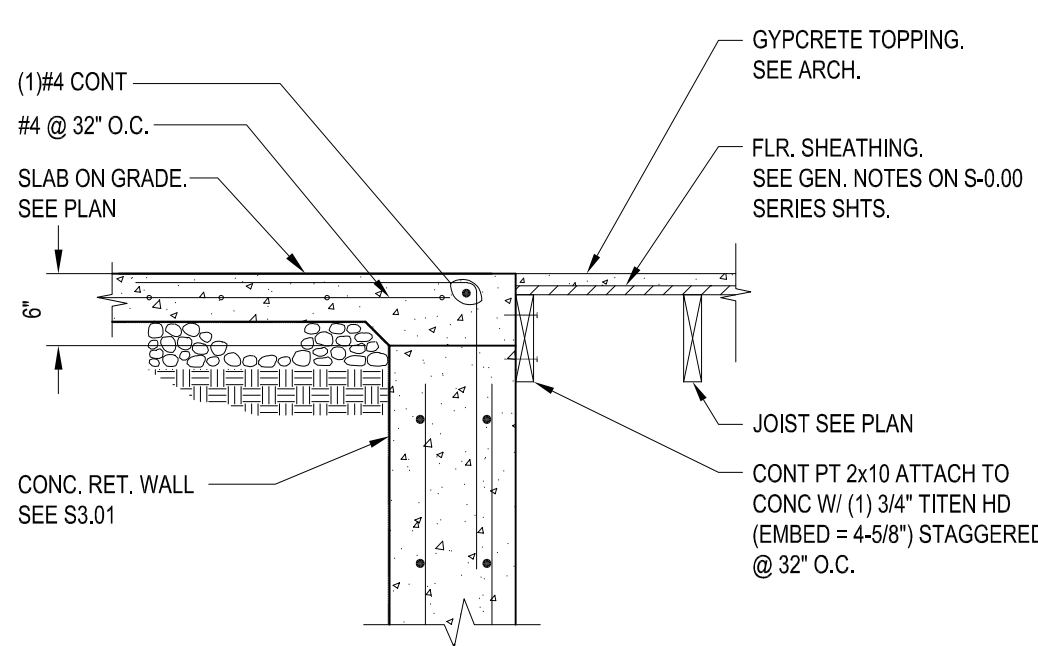
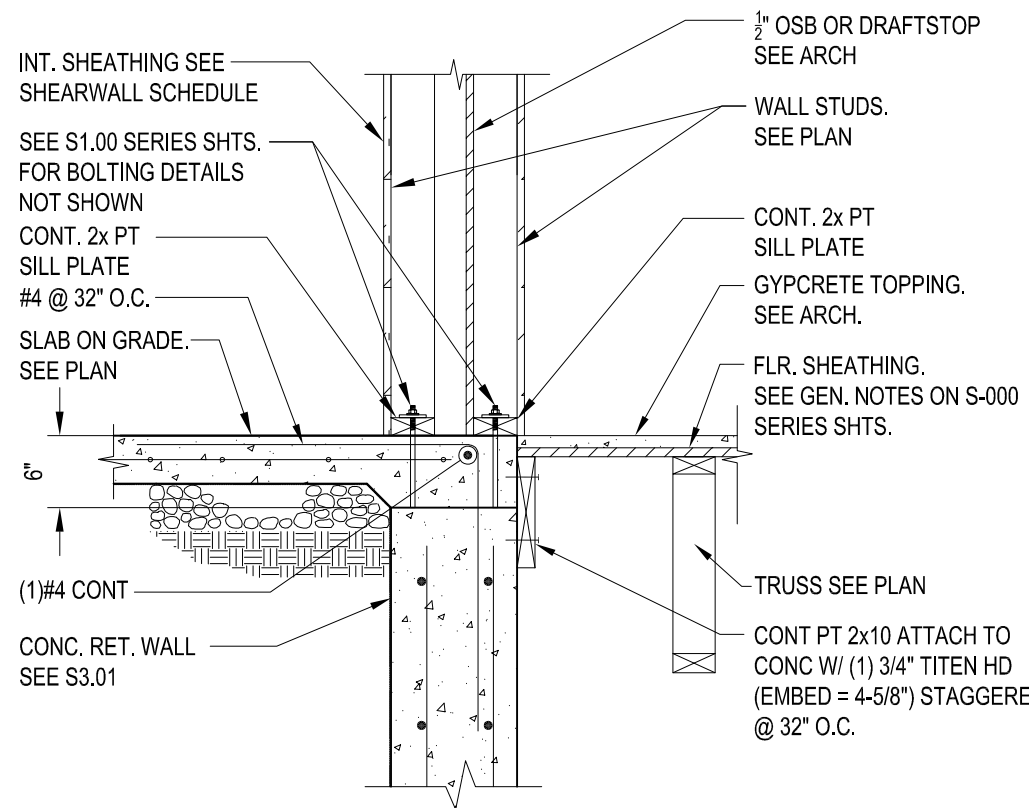
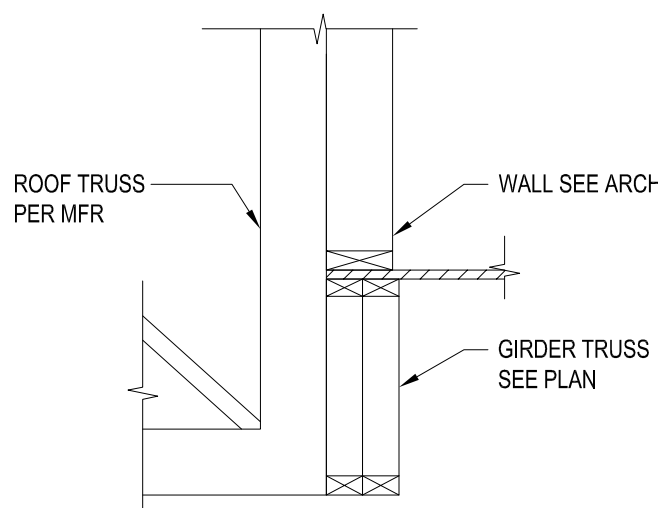
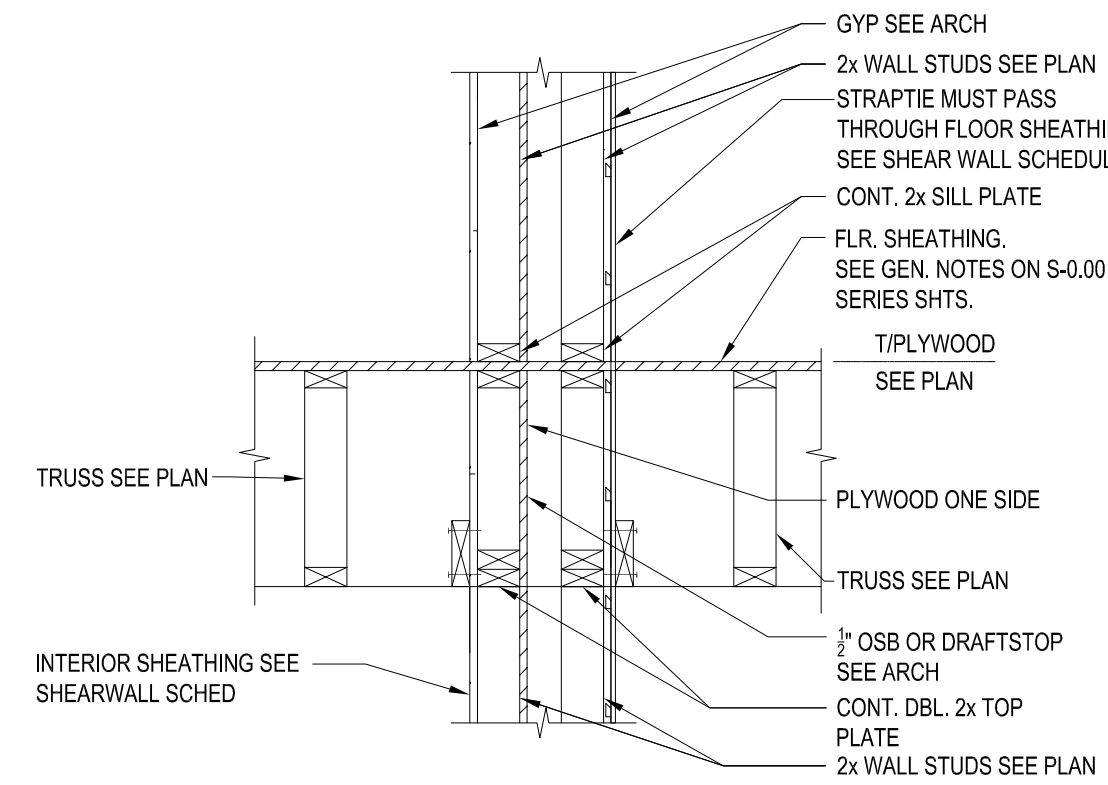
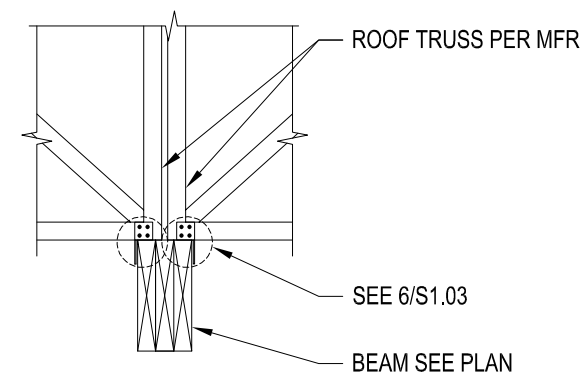
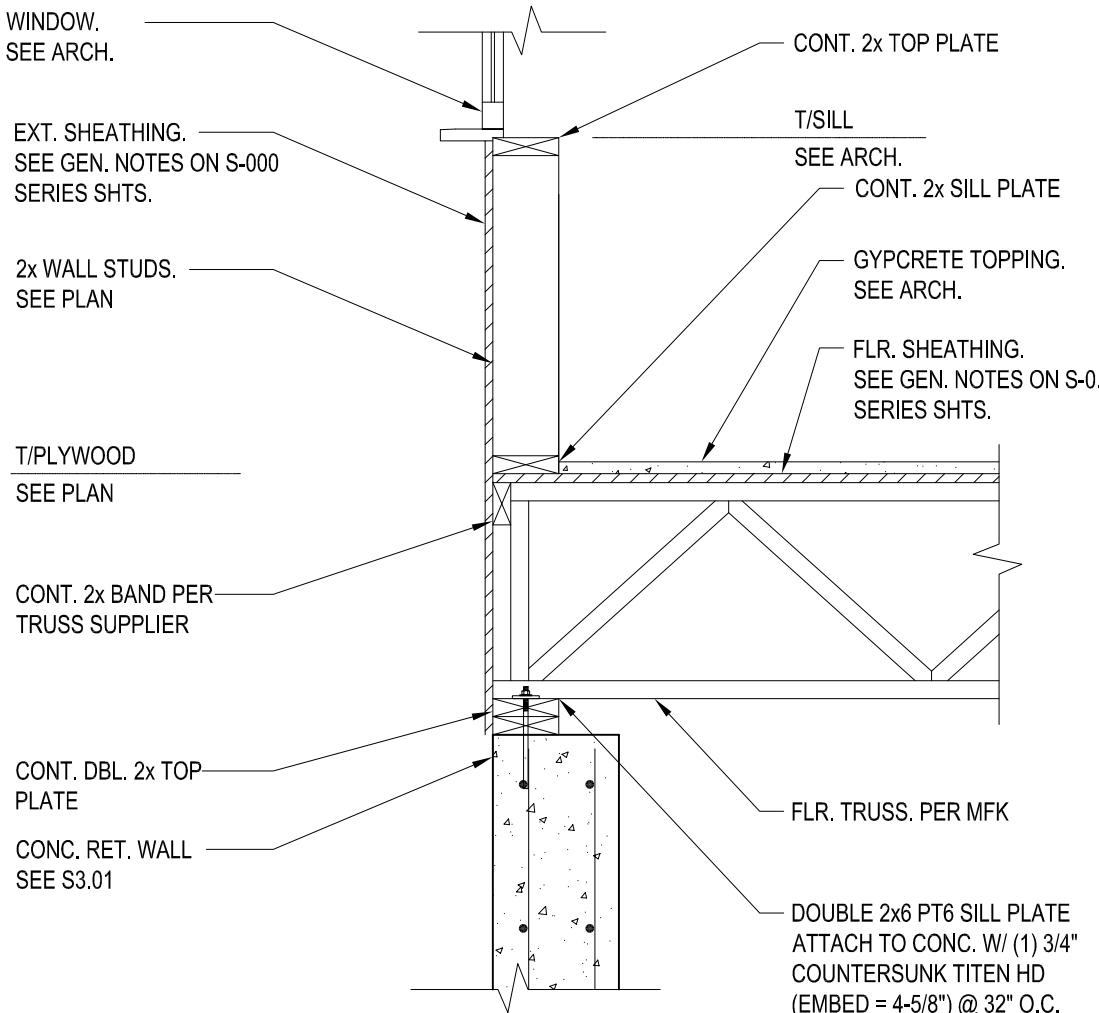
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION :

FLOOR FRAMING
SECTIONS

SHEET #:

S-4.00

 BEAM SEE PLAN SIMPSON L63210 DECKING SEE ARCH JOIST SEE PLAN SCALE: 3/4" = 1'-0"	 EXT. SHEATHING. SEE GEN. NOTES ON S-000 SERIES SHTS. 2x WALL STUDS. SEE PLAN T/PLYWOOD SEE PLAN CONT. 2x BAND PER TRUSS SUPPLIER CONT. DBL. 2x TOP PLATE CONC. RET. WALL SEE S3.01 CONT. 2x SILL PLATE GYPCRETE TOPPING. SEE ARCH. FLR. SHEATHING. SEE GEN. NOTES ON S-0.00 SERIES SHTS. FLR. TRUSS. PER MFK DOUBLE 2x6 PT6 SILL PLATE ATTACH TO CONC. W/ (1) 3/4" COUNTERSUNK TITEN HD (EMBED = 4-5/8") @ 32" O.C. SCALE: 3/4" = 1'-0"	 (1)#4 CONT. #4 @ 32" O.C. SLAB ON GRADE. SEE PLAN CONC. RET. WALL SEE S3.01 GYPCRETE TOPPING. SEE ARCH. FLR. SHEATHING. SEE GEN. NOTES ON S-0.00 SERIES SHTS. JOIST SEE PLAN CONT PT 2x10 ATTACH TO CONC W/ (1) 3/4" TITEN HD (EMBED = 4-5/8") STAGGERED @ 32" O.C. SCALE: 3/4" = 1'-0"	 INT. SHEATHING SEE SHEARWALL SCHEDULE SEE S1.00 SERIES SHTS. FOR BOLTING DETAILS NOT SHOWN CONT. 2x PT SILL PLATE #4 @ 32" O.C. SLAB ON GRADE. SEE PLAN (1)#4 CONT. CONC. RET. WALL SEE S3.01 1/2 OSB OR DRAFTSTOP SEE ARCH WALL STUDS. SEE PLAN CONT. 2x PT SILL PLATE GYPCRETE TOPPING. SEE ARCH. FLR. SHEATHING. SEE GEN. NOTES ON S-000 SERIES SHTS. TRUSS SEE PLAN CONT PT 2x10 ATTACH TO CONC W/ (1) 3/4" TITEN HD (EMBED = 4-5/8") STAGGERED @ 32" O.C. SCALE: 3/4" = 1'-0"				
1	TYPICAL DECK FRAMING	2	SECTION	3	SECTION	4	SECTION
 ROOF TRUSS PER MFR WALL SEE ARCH GIRDER TRUSS SEE PLAN SCALE: 3/4" = 1'-0"	 GYP SEE ARCH 2x WALL STUDS SEE PLAN STRAPTIE MUST PASS THROUGH FLOOR SHEATHING SEE SHEAR WALL SCHEDULE CONT. 2x SILL PLATE FLR. SHEATHING. SEE GEN. NOTES ON S-0.00 SERIES SHTS. T/PLYWOOD SEE PLAN PLYWOOD ONE SIDE TRUSS SEE PLAN TRUSS SEE PLAN 1/2 OSB OR DRAFTSTOP SEE ARCH CONT. DBL. 2x TOP PLATE 2x WALL STUDS SEE PLAN INTERIOR SHEATHING SEE SHEARWALL SCHED SCALE: 3/4" = 1'-0"		 ROOF TRUSS PER MFR SEE 6/S1.03 BEAM SEE PLAN SCALE: 3/4" = 1'-0"				
5	FRAMING SECTION	6	SECTION	7	NOT USED	8	FRAMING SECTION
 WINDOW. SEE ARCH. EXT. SHEATHING. SEE GEN. NOTES ON S-000 SERIES SHTS. 2x WALL STUDS. SEE PLAN T/PLYWOOD SEE PLAN CONT. 2x BAND PER TRUSS SUPPLIER CONT. DBL. 2x TOP PLATE CONC. RET. WALL SEE S3.01 CONT. 2x TOP PLATE T/SILL SEE ARCH. CONT. 2x SILL PLATE GYPCRETE TOPPING. SEE ARCH. FLR. SHEATHING. SEE GEN. NOTES ON S-0.00 SERIES SHTS. FLR. TRUSS. PER MFK DOUBLE 2x6 PT6 SILL PLATE ATTACH TO CONC. W/ (1) 3/4" COUNTERSUNK TITEN HD (EMBED = 4-5/8") @ 32" O.C. SCALE: 3/4" = 1'-0"							
9	SECTION						

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SEAL
28481

JOSEPH D. HERMAN

06.13.2025

NC CERTIFICATE OF LICENSE # P-1593

SIGNATURE:

CLIENT:
The orchards at Naples Road, LLC
341 N main Street
Hendersonville, NC 28792
Luis Graef: President

Orchards
PROPERTIES

PROJECT:
The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

#	REVISIONS	DATE

DWG INFO :

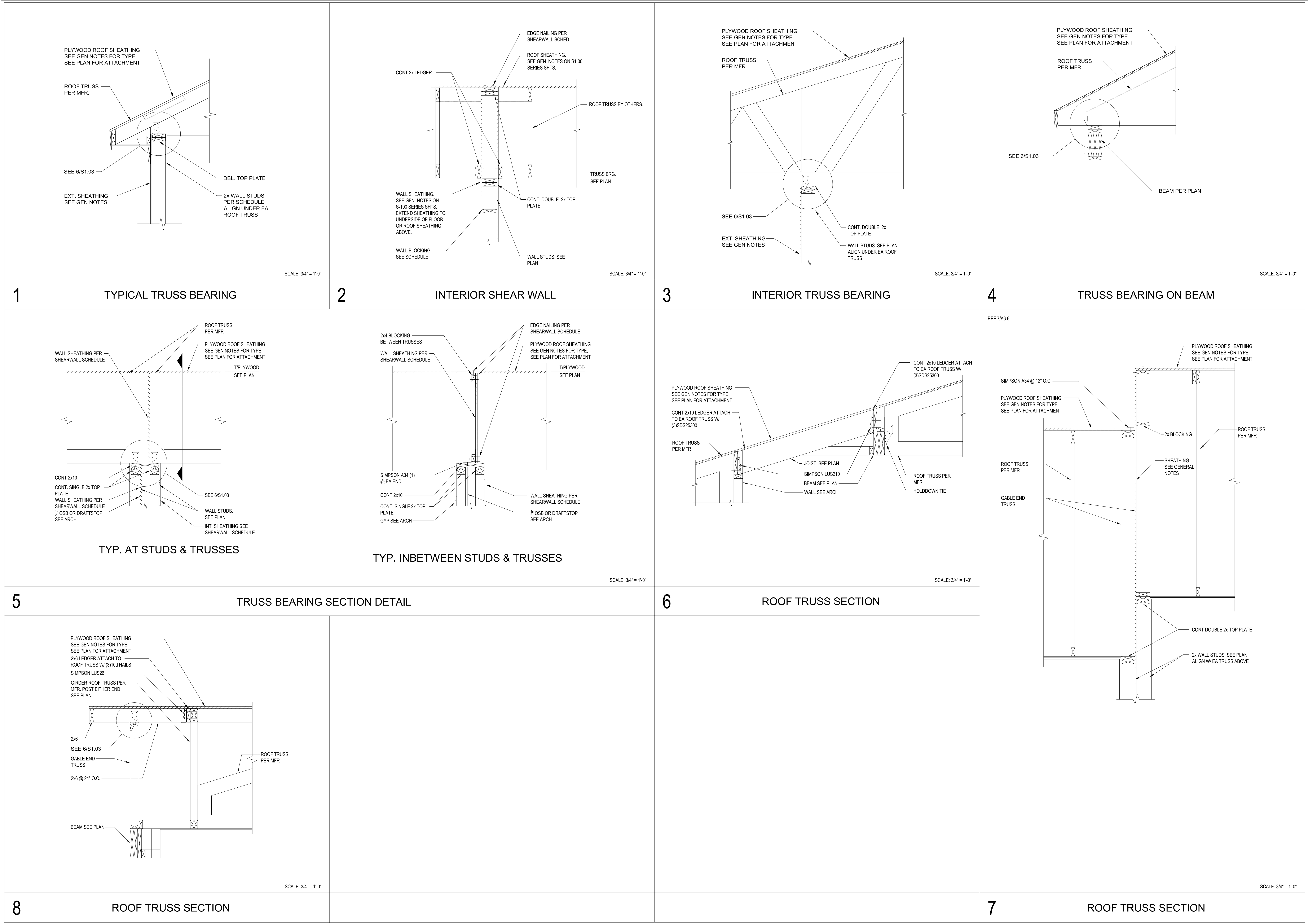
ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION :

FLOOR FRAMING
SECTIONS

SHEET #:

S-4.01



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The orchards at Naples Road, LLC
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Hendersonville, NC 28792
Luis Graef: President

PROJECT:
The Orchards at Naples Road
Apartment Complex
Hendersonville, North Carolina

#	REVISIONS	DATE

DWG INFO :

ISSUE DATE: 09/27/24
PROJECT #: 22105
DRAWN BY:
CHECKED BY:

DWG DESCRIPTION :

ROOF FRAMING
SECTIONS

SHEET #:
S-5.00