#### **GENERAL**

- 1. THE PROFESSIONAL ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE PROJECT STRUCTURAL ENGINEER—OF—RECORD (SER) WHO BEARS LEGAL RESPONSIBILITY FOR THE PERFORMANCE OF THE STRUCTURAL FRAMING RELATING TO PUBLIC HEALTH, SAFETY AND WELFARE. NO OTHER PARTY, WHETHER OR NOT A PROFESSIONAL ENGINEER, MAY COMPLETE, CORRECT, REVISE, DELETE OR ADD TO THESE CONSTRUCTION DOCUMENTS.
- 2. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH JOB SPECIFICATIONS, GEOTECHNICAL REPORT AND OTHER DRAWINGS.
- 3. SECTIONS AND DETAILS SHOWN SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
- 4. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND TAKE ALL NECESSARY FIELD MEASUREMENTS.
- 5. THE STRUCTURE SHOWN ON THESE DRAWINGS IS STRUCTURALLY SOUND ONLY IN ITS COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING TO STABILIZE THE BUILDING DURING CONSTRUCTION.
- 6. THE GENERAL CONTRACTOR MUST SUBMIT SHOP DRAWINGS TO LOWE'S FOR EACH OF THE STRUCTURAL COMPONENTS.

#### SCOPE OF STRUCTURAL ENGINEERING SERVICES

- 1. THE STRUCTURAL ENGINEER-OF-RECORD (S.E.R.) HAS PERFORMED THE STRUCTURAL DESIGN AND PREPARED THE STRUCTURAL WORKING DRAWINGS FOR THIS PROJECT. "CONSTRUCTION REVIEW" SERVICES WILL BE PERFORMED BY LOWE'S. THE CONSTRUCTION MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE STRUCTURAL DRAWINGS. ANY DEVIATION FROM THE DRAWINGS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. ERRORS AND/OR OMISSIONS FOUND ON THE STRUCTURAL DRAWINGS MUST BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION IMMEDIATELY.
- 2. SHOULD SITE VISITS AND CONSTRUCTION REVIEW BE REQUIRED BY THE STRUCTURAL ENGINEER OF RECORD, THIS WILL BE AN ADDITIONAL SERVICE, IF AND WHEN REQUESTED BY THE ARCHITECT, LOWE'S, GENERAL CONTRACTOR, OR FIELD INSPECTORS.
- 3. PORTIONS OF THE STRUCTURAL DESIGN (AS NOTED ON THE DRAWINGS) ARE THE RESPONSIBILITY OF THE MATERIAL SUPPLIERS.
- 4. THE STRUCTURAL ENGINEER IS RESPONSIBLE FOR THE DESIGN OF THE PRIMARY STRUCTURAL SYSTEM, EXCEPT FOR THE COMPONENTS NOTED IN THE DEFERRED SUBMITTALS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR ANY SECONDARY STRUCTURAL AND NON-STRUCTURAL SYSTEMS NOT SHOWN ON THE STRUCTURAL PLANS.
- 5. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK; NOR WILL THE S.E.R. BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

#### ABBREVIATIONS

ANCHOR BOLT

AFF	ABOVE FINISH FLOOR
ARCH	ARCHITECT
BCX	BOTTOM CHORD EXTENSION
CJ	CONTROL OR CONSTRUCTION JOINT IN SLAB
CL	CENTERLINE
CLR	CLEAR
CONT	CONTINUOUS
DIA	DIAMETER
EJ	EXPANSION JOINT
EL	ELEVATION
EW	EACH WAY
FTG	FOOTING
FOM	FACE OF MASONRY
JB	JOIST BEARING
MAT	MATERIAL
MAX	MAXIMUM
MCJ	MASONRY CONTROL JOINT
MIN	MINIMUM
МО	MASONRY OPENING
NTS	NOT TO SCALE
OC	ON CENTER
PAF	POWDER ACTUATED FASTENER
PL	PLATE
RAP	RAMMED AGGREGATE PIER OR VIBRO PIER
SER	STRUCTURAL ENGINEER OF RECORD
SCHED	SCHEDULE
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOJ	TOP OF JOIST
TYP	TYPICAL

UNLESS NOTED OTHERWISE

WELDED WIRE FABRIC

## FOUNDATIONS

WWF

- 1. ALL FOUNDATIONS ARE DESIGNED BASED ON THE GEOTECHNICAL REPORT PROVIDED BY TERRACON DATED AUGUST 23, 2024, SEALED BY DOUGLAS DUKELBERGER, PE. THE SOIL BEARING PRESSURE IS NOTED AS 2,000 PSF, ON NORMAL SHALLOW CONCRETE FOUNDATIONS. THE GENERAL CONTRACTOR SHALL REFERENCE THE GEOTECHNICAL REPORT FOR ANY AND ALL SUBSURFACE PREPERATION AND REQUIREMENTS, PRIOR TO STARTING ANY WORK. FOR SOIL REPAIR AND/OR REINFORCEMENT, IF UNCOVERED, THE GEOTECHNICAL ENGINEER SHALL BE CONSULTED.
- 2. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-0" BELOW FINISHED GRADE, UNLESS NOTED OTHERWISE.
- 3. SOIL—SUPPORTED FLOOR SLABS ARE ACCEPTABLE AT THIS SITE PROVIDED THAT SITE PREP AND COMPACTION PER THE GEOTECHNICAL REPORT ARE FOLLOWED. A SUBGRADE MODULUS OF 150 PSI HAS BEEN USED FOR THE FLOOR SLAB DESIGN
- 4. IN GENERAL, FILL SHALL BE PLACED IN LOOSE LIFTS AND SHALL BE COMPACTED TO A DRY DENSITY AS NOTED IN THE GEOTECHNCIAL REPORT, IN ACCORDANCE WITH ASTM D-698.
- 5. WALLS ACTING AS RETAINING WALLS SHALL NOT BE BACKFILLED WITHOUT BRACING UNTIL ALL SUPPORTING SOIL AND SLABS ARE IN PLACE.
- 6. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE AND SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
- 7. WHEN TOP OR SUBSOILS ARE EXPANSIVE, COMPRESSIBLE OR SHIFTING, SUCH SOILS SHALL BE REMOVED TO A DEPTH AND WIDTH SUFFICIENT TO ASSURE STABLE MOISTURE CONTENT IN EACH ACTIVE ZONE AND SHALL NOT BE USED AS FILL. REFERENCE GEOTECHNICAL REPORT FOR SUBGRADE REMOVAL AND REPLACEMENT REQUIREMENTS.

<u>CODE</u>	
2023 FLORIDA BUILDING CODE - 8TH EDITION (IBC 2021/ASCE 7-22)	
DESIGN DATA FOR GRAVITY LOADS	

FLOOR LIVE LOAD (SLAB ON GRADE)	FLL	300 PSF
ROOF DEAD LOAD ROOF COLLATERAL LOAD ROOF LIVE LOAD	RDL RCL RLL	15 PSF 15 PSF 20.0 PSF
GROUND SNOW LOAD FLAT ROOF SNOW LOAD (DRIFT IS ADDITIONAL) SNOW EXPOSURE FACTOR SNOW LOAD IMPORTANCE FACTOR THERMAL FACTOR (CONDITIONED SPACE) THERMAL FACTOR (UNHEATED ROOFS)	Pg Pf Ce Is Ct	3.0 PSF 2.8 PSF 1.0 1.0 1.0

# DESIGN DATA FOR WIND LOADS

RAIN ON SNOW SURCHARGE

BASIC WIND SPEED (3—SECOND GUST)	BWS	160 MPH
WIND IMPORTANCE FACTOR	lw	1.0
WIND EXPOSURE	С	
WIND DESIGN IS DIRECTIONAL PROCEDURE PER ASCE 7-10		
WIND BASE SHEAR IN X—X DIRECTION (ULTIMATE)		286 KIPS
WIND BASE SHEAR IN Y-Y DIRECTION (ULTIMATE)		572 KIPS
,		<del></del>

	ROOF PRESSURES FOR COMPONENTS AND CLADDING (ultimate)							
	Effective	Zone 1	Zone 1	Zone 2	Zone 2	Zone 3	Zone 3	
	Wind Area	Positive	Negative	Positive	Negative	Positive	Negative	
	(ft^2)	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure	
ı	(10 2)	(psf)	(psf)	(psf)	(psf)	(psf)	(psf)	
	10	24.5	-95.9	24.5	-126.5	24.5	-172.5	
	20	23.0	-89.6	23.0	-118.4	23.0	-156.2	
	50	20.9	-81.2	20.9	-107.7	20.9	-134.7	
	100 or more	19.4	-74.9	19.4	-99.5	19.4	-118.4	

WALL PRESSURES FOR COMPONENTS AND CLADDING (ultimate)								
Effective	Zone 4	Zone 4	Zone 5	Zone 5				
Wind Area	Positive	Negative	Positive	Negative				
(ft^2)	Pressure	Pressure	Pressure	Pressure				
	(psf)	(psf)	(psf)	(psf)				
10	55.1	-59.7	55.1	-73.5				
50	49.4	-54.0	49.4	-62.1				
200	44.6	-49.2	44.6	-52.4				
500 or more	41.3	-45.9	41.3	-45.9				

#### DESIGN DATA FOR SEISMIC LOADS

SEISMIC IMPORTANCE FACTOR MAPPED SPECTRAL RESPONSE COFFFICIENT	le Ss	1.0 0.056
MAPPED SPECTRAL RESPONSE COEFFICIENT	S1	0.025
SITE CLASS DAMPED SPECTRAL RESPONSE COEFFICIENT	Sds	D 0.050
DAMPED SPECTRAL RESPONSE COEFFICIENT	Sd1	0.035
SEISMIC DESIGN CATEGORY		В

BASIC SEISMIC FORCE RESISTING SYSTEM:
BEARING WALL SYSTEM WITH INTERMEDIATE REINFORCED MASONRY SHEAR WALLS

DESIGN BASE SHEAR (ASD)	V	75 KIPS
SEISMIC RESPONSE COEFFICIENT	Cs	0.014
RESPONSE MODIFICATION FACTOR	R	3.5

ANALYSIS PROCEDURE:

EQUIVALENT LATERAL FORCE PROCEDURE OF ASCE 7-22

## DEFLECTION LIMITS

ROOF L/360 FOR RLL ONLY L/240 FOR RDL + RCL + RLL LINTELS L/600 FOR DL + RLL (3/8" MAX)

# CONCRETE

- 1. CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE." ANY ADMIXTURES MUST BE APPROVED BY THE STRUCTURAL ENGINEER.
- 2. PROVIDE ISOLATION JOINTS IN SLABS AS FOLLOWS:

  A. BETWEEN SLABS ON GRADE AND FOUNDATION WALLS

  B. BETWEEN SLABS AND INSERTS SUCH AS PIPES

AROUND STEEL COLUMNS AT PIER CAPS

- 3. PROVIDE CONTRACTION JOINTS IN CONTINUOUS FLOOR SLABS ON GROUND IN A SQUARE PATTERN IN BOTH DIRECTIONS. PATTERN SIZE MAY RANGE FROM 10'-0" TO 12'-0" AS REQUIRED FOR EQUAL SPACING IN BAYS. SEE SPECIFICATION.
- 4. EXTERIOR CONCRETE FLAT WORK AND FOUNDATION WALLS EXPOSED TO FREEZE/THAW (INCLUDING G.C. SLABS) SHALL BE AIR ENTRAINED. TOTAL AIR CONTENT PER SPECIFICATION.
- 5. DO NOT CAST CONCRETE IN WATER OR ON FROZEN GROUND.
- 6. CHLORIDES IN ANY FORM OR CONCENTRATION SHALL NOT BE ADDED TO ANY CONCRETE.
- 7. COLD WEATHER CONDITIONS: WHEN THE AVERAGE DAILY AIR TEMPERATURE FOR 3 CONSECUTIVE DAYS IS EXPECTED TO BE BELOW 40° F AND THE AIR TEMPERATURE DOES NOT EXCEED 50° F FOR MORE THAN 12 CONSECUTIVE HOURS DURING THIS TIME, ALL CONCRETE PLACEMENT SHALL COMPLY WITH THE PROVISIONS OF ACI 306 AND AS HEREIN SPECIFIED. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS OR LOW TEMPERATURES.
- 8. HOT WEATHER CONDITIONS: WHEN ELEVATED TEMPERATURES, HUMIDITY AND WIND FACTORS EXIST, ALL CONCRETE SHALL COMPLY WITH THE PROVISIONS OF ACI 305 AND AS HERIN SPECIFIED.
- 9. PROVIDE CURING OF CONCRETE BY CURING AND SEALING COMPOUND, BY MOIST CURING, MOISTURE—RETAINING COVER CURING OR BY COMBINATIONS THEREOF.
- 10. POST INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES PRINTED INSTALLATION INSTRUCTIONS (MPII). IF ANCHORS ARE TO BE INSTALLED IN A HORIZONTAL OR UPWARD DIRECTION PERSONNEL SHALL BE TRAINED TO INSTALL ADHESIVE ANCHORS THROUGH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.

CONCRETE DURABILITY REQUIREMENTS PER ACI 318								
APPLICATION	CONCRETE DENSITY	MAXIMUM WATER TO CEMENT MATERIAL RATIO W/CM	MINIMUM COMPRESSIVE STRENGTH fc'(psi)	MAXIMUM NOMINAL AGGREGATE SIZE (in.)	TARGET AIR CONTENT (%)			
FOOTINGS	NORMAL WEIGHT	.58	3,000	1 1/2"	N/A			
INTERIOR SLAB ON GRADE	NORMAL WEIGHT	.50	4,000	1 1/2"	N/A			

- SEE ACI 318-14 TABLE 19.3.1.1 FOR EXPOSURE CATEGORIES AND CLASSES.
   SEE ACI 318-14 TABLE 19.3.2.1 FOR REQUIREMENTS FOR CONCRETE BY EXPOSURE CLASS.
   SEE ACI 318-14 TABLE 19.3.3.1 FOR TOTAL AIR CONTENT REQUIREMENTS. +/- 1.5%
   TOLERANCE IS PERMITTED PER ASTM C94 AND ASTM C685.
   NORMAL WEIGHT CONCRETE SHALL HAVE DENSITY OF 145 PCF.
- FOR NON-VEHICULAR EXTERIOR SLABS ON GRADE, G.C. SHALL REFERRENCE SEE CIVIL DRAWINGS. RECOMMEND F'c=4,500 PSI MIN. WITH MAX W/CM RATIO=0.45, (F2 EXPOSURE)

#### SLAB-ON-GRADE CONSTRUCTION

0.0 PSF

- 1. IN ACCORDANCE WITH THE SITE PREPARATION NOTED IN THE GEOTECHNICAL REPORT, THE FLOOR SLAB SHALL BE PLACED ON A WELL-COMPACTED BASE. THE SUBGRADE AS NOTED IN THE GEOTECH REPORT, OVERLYING AN APPROVED LAYER OF SUBGRADE SOILS, WITH A MINIMUM 10 MIL VAPOR BARRIER AT INTERIOR SLABS.
- 2. SEE SPECIFICATIONS FOR APPROVED ADMIXTURES AND CONCRETE DESIGN MIX REQUIREMENTS. SEE GEOTECH REPORT AND ACI SPECIFICATIONS FOR RECOMMENDATIONS.
- PLACE CONTROL JOINTS TO AVOID RE-ENTRANT CORNERS. MAKE SAWCUTS TO FORM WEAKENED PLANE CONTROL JOINTS AS SOON AS POSSIBLE. SEE GEOTECHNICAL REPORT AND ACI SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 4. LIGHTLY DAMPEN THE SUBGRADE BEFORE PLACING CONCRETE TO PREVENT THE SUBGRADE FROM ABSORBING WATER FROM CONCRETE MIX. APPLY WATER AT NEARLY THE SAME RATE AS IT SOAKS INTO THE SUBGRADE SURFACE.
- 5. DURING HOT WEATHER, USE A FOG SPRAY TO KEEP THE SURFACE DAMP BEFORE APPLYING CURING COMPOUND.
- 6. START CURING AS SOON AS THE FINISHERS ARE DONE. SEE DIVISION 3 OF THE SPECIFICATIONS FOR CURING BLANKET REQUIREMENTS AND CURING SEQUENCE.

#### REINFORCING STEEL

- ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE LATEST "GUIDE TO PRESENTING REINFORCING STEEL DESIGN DETAILS", ACI 315.
- 2. REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. CLEAR CONCRETE COVER OVER BARS SHALL BE 3" AT BOTTOM AND TOP, TYPICAL FOR FOOTNGS.
- 3. PROVIDE CORNER BARS AT ALL FOOTING STEPS AND CORNERS. #5 BARS SHALL BE A MINIMUM OF 5'-8" LONG (2'-6" EA LEG) AND SHALL HAVE THE SAME SIZE AND SPACING AS HORIZONTAL REINFORCING.
- 4. LAP ALL SPLICES AS SPECIFICALLY CALLED FOR, BUT AT LEAST 48 BAR DIAMETERS (12" MINIMUM) FOR TENSION OR 24 BAR DIAMETERS FOR COMPRESSION, UNLESS NOTED OTHERWISE.
- 5. PROVIDE DOWELS IN CONCRETE WALL FOOTINGS EQUIVALENT IN SIZE AND NUMBER TO VERTICAL STEEL EXTENDING 24 BAR DIAMETERS INTO FOOTING AND 24 BAR DIAMETERS INTO CONCRETE WALL, UNLESS NOTED OTHERWISE.

## CONCRETE MASONRY

- 1. CONCRETE MASONRY UNITS SHALL BE ERECTED AS LOAD BEARING CONCRETE MASONRY. COMPLY WITH BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/602).
- 2. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM SPECIFICATIONS FOR HOLLOW LOAD—BEARING CONCRETE MASONRY UNITS (ASTM C90 LATEST EDITION INCLUDING REDUCED WEB AND OPEN END BLOCK, ASA A79.1). MORTAR SHALL CONFORM TO THE REQUIREMENTS OF ASTM STANDARD SPECIFICATIONS FOR MORTAR FOR UNIT MASONRY (ASTM C270), TYPE "S." MASONRY CEMENT SHALL NOT BE USED. THE MINIMUM PRISM COMPRESSIVE STRENGTH BE f'm =2000 PSI. THE MINIMUM COMPRESSIVE STRENGTH OF THE UNITS SHALL BE 1900 PSI.
- 3. PROVIDE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. IN ALL CMU WALLS UNLESS BOND BEAMS ARE DETAILED AT 48" O.C. OR LESS ON DRAWINGS. USE LADDER TYPE REINFORCEMENT, HOT DIP GALVANIZED AFTER FABRICATION. LONGITUDINAL WIRES SHALL BE A MINIMUM OF (2) NO. 9 GAGE. LOCATE JOINT REINFORCEMENT IN FIRST AND SECOND BED JOINTS, 8" APART IMMEDIATELY ABOVE LINTELS AND BELOW SILLS AT OPENINGS. REINFORCEMENT SHALL NOT EXTEND THROUGH VERTICAL MASONRY JOINTS.
- 4. ALL STEEL BEARING SHALL BE ON A BOND BEAM, GROUT FILLED CMU, OR SOLID BLOCK.
- 5. WHERE INTERIOR CONCRETE MASONRY PARTITIONS MEET OTHER INTERIOR PARTITIONS OR EXTERIOR WALLS, PROVIDE A CONTROL JOINT WITH METAL STRAP ANCHORS BETWEEN WALLS.
- 6. PROVIDE BOND BEAMS AT THE TOP OF MASONRY, ROOF ATTACHMENT, AND OTHER LOCATIONS AS SHOWN ON THE DRAWINGS. BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTROL JOINTS.
- 7. BACKFILLING AGAINST MASONRY WALLS SHALL NOT BE PERMITTED UNTIL SUFFICIENT LATERAL SUPPORT IS PROVIDED.
- 8. PROVIDE VERTICAL MASONRY CONTROL JOINTS AT APPROXIMATELY 24'-0" O.C. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS, OR IF NOT SHOWN, COORDINATE LOCATIONS WITH THE ARCHITECT. VERTICAL MASONRY CONTROL JOINTS SHALL BE AT LEAST 32" AWAY FROM ALL BUILDING OPENINGS (DOORS, OVERHEAD DOORS, WINDOWS, ETC)
- 9. THE MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR THE LATERAL BRACING OF MASONRY WALLS UNTIL PERMANENT LATERAL SUPPORT IS IN PLACE.
- 10. MASONRY MAY BE PLACED USING NORMAL PROCEDURES WHEN TEMPERATURES ARE BETWEEN 40-90 DEGREES F. WHEN TEMPERATURES ARE ABOVE OR BELOW THIS RANGE, HOT AND COLD WEATHER MASONRY PROCEDURES OUTLINED IN THE SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1 OR TMS 402-602) SHALL BE FOLLOWED.
- 11. BUILDING WITH FROZEN MATERIALS IS NOT ALLOWED. USING CALCIUM CHLORIDE IS NOT ALLOWED. ALL WALLS SHALL BE COVERED AT THE END OF EACH DAY.

## ROOF DRAINAGE

1. FLAT ROOFS MUST HAVE CONTROLLED DRAINAGE PROVISIONS AND SHALL BE EQUIPPED WITH A SECONDARY DRAINAGE SYSTEM AT A HIGHER ELEVATION WHICH PREVENTS PONDING ON THE ROOF ABOVE THAT ELEVATION. THE SECONDARY DRAINAGE MUST BE SET TO START DRAINAGE AT A 2" MAXIMUM DEPTH OF WATER PONDING ON THE ROOF DURING THE DESIGN RAINSTORM. THE DESIGN OF THE ROOF DRAINAGE, SECONDARY DRAINAGE AND/OR OVERFLOW SCUPPERS IS BEYOND THE SCOPE OF THE STRUCTURAL ENGINEER'S SERVICES.

## LIGHT GAGE STRUCTURAL STEEL FRAMING

- 1. LIGHT GAGE STRUCTURAL STEEL INCLUDES ALL AXIALLY OR WIND LOADED LIGHT GAGE STEEL STUDS, TRACK, JOISTS, TRUSSES, BRIDGING AND RELATED ACCESSORIES AS INDICATED ON THE DRAWINGS.
- 2. DESIGN, FABRICATION AND ERECTION OF LIGHT GAGE STRUCTURAL STEEL FRAMING SHALL BE IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE "SPECIFICATION FOR THE DESIGN OF COLD—FORMED STEEL STRUCTURAL MEMBERS".
- 3. THE STEEL USED SHALL HAVE THE FOLLOWING MINIMUM YIELD STRESS:
- STRUCTURAL STEEL STUDS AND HEADERS 18 OR 20 GAGE 33 KSI STRUCTURAL STEEL STUDS AND HEADERS 12, 14 OR 16 GAGE 50 KSI TRACKS FOR STEEL STUDS 33 KSI
- 4. ALL LIGHT GAGE STRUCTURAL STEEL FRAMING SHALL BE PAINTED, OR GALVANIZED, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 5. ALL LIGHT GAGE METAL STUD FRAMING SHALL HAVE BRIDGING AT 6'-0" O.C. MAX. UNLESS NOTED OTHERWISE IN THE DETAILS.
- 6. 362S162-54; 362 WEB DEPTH (3 5/8") S - MEMBER TYPE: S - STUD, T - TRACK

162 - FLANGE WIDTH (1 5/8")
54 - MEMBER THICKNESS (MILLS); 33 - 20 GAGE

5); 33 - 20 GAGE 43 - 18 GAGE 54 - 16 GAGE 68 - 14 GAGE 97 - 12 GAGE

#### STRUCTURAL STEEL

- 1. FABRICATE AND ERECT ALL STRUCTURAL STEEL IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR STRUCTURAL STEEL OF BUILDINGS," WHERE THE MATERIAL USED CONSISTS OF PLATES, SHAPES OR BARS.
- 2. STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RUST-INHIBITIVE
- 3. THE STEEL USED SHALL HAVE THE FOLLOWING MINIMUM YIELD STRESS:
  STRUCTURAL STEEL WIDE FLANGE SHAPES (ASTM A992)
  STRUCTURAL PIPE COLUMNS (ASTM A53B)
  STRUCTURAL TUBE COLUMNS (ASTM A500 C)
  MISCELLANEOUS STRUCTURAL SHAPES (ASTM A36)
  HEADED STUD ANCHORS (ASTM A108)
  ANCHOR RODS (ASTM F1554)

  50 KSI
  ANCHOR RODS (ASTM F1554)
- 4. BEAMS AND LINTELS SHALL BEAR ON 8" MINIMUM OF MASONRY UNLESS OTHERWISE NOTED.
- 5. ALL BEAM CONNECTIONS SHALL BE WELDED OR BOLTED AS DETAILED ON THE DRAWINGS OR PER THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION HANDBOOK, "FRAMED BEAM CONNECTIONS". BOLTS SHALL BE 3/4" DIAMETER A325N TIGHTENED TO THE SNUG TIGHT CONDITION UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- USE E-70 ELECTRODES FOR ALL SHOP AND FIELD WELDING. ALL WELDING SHALL CONFORM TO THE CURRENT AMERICAN WELDING SOCIETY SPECIFICATIONS AND BE PERFORMED BY CERTIFIED WELDERS.
- 7. POST INSTALLED ANCHORS SHALL BE INSTALLED IN GROUT FILLED MASONRY CORES OR SOLID CONCRETE.
- 8. THE STEEL FABRICATOR SHALL DESIGN ALL STEEL TO STEEL CONNECTIONS NOT SHOWN ON THE DRAWINGS.
- 9. FOR MISCELLANEOUS STEEL NOT SHOWN ON THESE DRAWINGS, SEE ARCHITECTURAL AND OTHER ENGINEERING DRAWINGS.
- 10. UPON FINAL APPROVAL, THE GENERAL CONTRACTOR SHALL FORWARD (2)
  COMPLETE COPIES OF STRUCTURAL STEEL AND JOIST FIELD ERECTION DRAWINGS
  TO THE FIRE PROTECTION ENGINEER OF RECORD.
- 11. ALL EXTERIOR UNPAINTED STEEL SHALL BE GALVANIZED.

## OPEN WEB JOISTS & JOIST GIRDERS

- 1. DESIGN, FABRICATION AND ERECTION OF STEEL JOISTS SHALL CONFORM WITH THE LATEST EDITION OF THE STEEL JOIST INSTITUTE SPECIFICATION.
- 2. USE BRIDGING AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE STEEL JOIST INSTITUTE. CONTINUE ALL BRIDGING TO ROLLED STEEL SHAPES AND/OR WALLS WHICH ARE PARALLEL TO THE JOISTS AND ANCHOR IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS.
- 3. ALL BRIDGING SHALL BE SECURED TO TOP AND BOTTOM OF ALL JOISTS AND BEAMS AND SHALL BE IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS.
- 4. WHERE SHOWN ON PLAN, THE ROW OF BRIDGING NEAREST THE MID SPAN SHALL BE DIAGONAL BRIDGING WITH BOLTED CONNECTIONS AT CHORDS AND MIDSPAN.
- 5. ALL BRIDGING AT DRIVE-THRU CANOPY SHALL BE X-BRIDGING.
- 6. JOIST SUPPLIER SHALL COORDINATE LOCATION OF BRIDGING WITH DRAWINGS PREPARED BY FIRE PROTECTION ENGINEER.
- 7. ALL JOISTS WITHIN A PARTICULAR BAY SHALL HAVE PANEL POINTS WHICH ARE ALIGNED.
- 8. USE "SPECIAL" JOISTS AT ROOF TOP UNITS. REFER TO FRAMING PLAN FOR WEIGHTS AND LOCATIONS. ROOF TOP UNIT WEIGHTS MUST BE ADDED TO THE TOTAL LOAD ON THE JOISTS. COORDINATE WITH MECHANICAL DRAWINGS.
- 9. ADD ROOF TOP UNIT WEIGHTS TO THE PANEL POINT LOADS SHOWN FOR THE JOIST GIRDERS.
- 10. JOISTS SHALL BEAR 4" MINIMUM ON MASONRY AND 2-1/2" MINIMUM ON STEEL. PROVIDE ANCHORAGE AT MASONRY BEARING IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS.
- 11. WELD EACH JOIST TO BEAM, JOIST GIRDER OR WELD PLATE WITH A FILLET WELD EACH SIDE OF JOIST. WELD LENGTH SHALL BE A MINIMUM OF 2 1/2" UNLESS NOTED OTHERWISE.
- 12. JOIST MANUFACTURER MUST CHECK JOISTS AND JOIST GIRDERS FOR A NET SERVICE UPLIFT PRESSURE OF 24 PSF AT PERIMETER EDGES OF BUILDING (20'-0" WIDE STRIP) AND 19 PSF AT ALL OTHER AREAS, AND PROVIDE BRIDGING AND BOTTOM CHORD EXTENSIONS AS REQUIRED TO ADEQUATELY BRACE THE BOTTOM CHORDS AGAINST LATERAL MOVEMENT. WIND LOADS ARE SERVICE LEVEL LOADS. INCREASE NET UPLIFT BY 10 PSF AT GARDEN CENTER AND
- 13. WHERE WELDING OF BOTTOM CHORD STRUTS OF JOIST GIRDERS OR BOTTOM CHORD EXTENSIONS OF BAR JOISTS TO COLUMN STABILIZER PLATES IS REQUIRED, DO NOT WELD UNTIL ALL DEAD LOAD HAS BEEN APPLIED.

DRIVE-THRU CANOPY.

14. JOIST GIRDER BOTTOM CHORD BRACES MAY BE REQUIRED TO LIMIT THE BOTTOM CHORD I/r RATIO TO 240. ADDITIONAL BRACES MAY BE REQUIRED TO TRANSMIT COMPRESSIONAL FORCES DUE TO PRESSURES. JOIST SUPPLIER SHALL INDICATE THE NUMBER OF BRACES REQUIRED BY DESIGN ON THE APPROVAL DRAWINGS. BOTTOM CHORD BRACES MAY BE EITHER WELDED OR BOLTED TO THE GIRDER, BUT ARE ALWAYS WELDED TO THE JOIST.

- 15. ALL JOISTS SHALL RECEIVE A SHOP—COAT OF HIGH QUALITY RUST INHIBITIVE PRIMER.
- 16. UNDER NO CIRCUMSTANCES SHALL ANY PERSONNEL ATTEMPT TO WALK ON UNBRIDGED JOISTS. AS SOON AS THE JOISTS ARE ERECTED, ALL BRIDGING SHALL BE COMPLETELY INSTALLED AND ANCHORED, THEN THE JOISTS PERMANENTLY FASTENED INTO PLACE. UNTIL THIS IS DONE, NO CONSTRUCTION LOADS SHALL BE APPLIED TO THE JOISTS.
- 17. THE JOIST SUPPLIER SHALL DESIGN LL K—SERIES JOIST SEATS FOR "A ROLL—OVER" RESISTANCE OF 1500 LBS.

#### METAL DECK

- DESIGN, FABRICATION AND ERECTION OF METAL DECK SHALL CONFORM TO THE STEEL DECK INSTITUTE "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS."
- 2. METAL ROOF DECK SHALL BE AS SHOWN IN DETAIL 6/S-0.2. THE MINIMUM YIELD STRESS SHALL BE 33 KSI.
- 3. ALL DECK SHALL RECEIVE A SHOP—COAT OF HIGH QUALITY RUST INHIBITIVE PRIMER, OR GALVANIZED IF INDICATED ON DRAWINGS, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SEE SPECIFICATIONS FOR DETAILED INFORMATION OF METAL DECK COATINGS
- 4. NO PERMANENT SUSPENDED LOADS ARE TO BE SUPPORTED BY THE METAL DECK.

### SPECIAL INSPECTIONS

- 1. SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE. ALL SPECIAL INSPECTORS SHALL BE QUALIFIED FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION AND MUST BE APPROVED BY THE BUILDING OFFICIAL. SPECIAL INSPECTORS SHALL PERFORM THE DUTIES AND RESPONSIBILITIES OUTLINED IN CHAPTER 17 OF THE IBC. REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL, ARCHITECT, AND ENGINEER OF RECORD IN A TIMELY MANNER.
- TYPES OF WORK REQUIRING SPECIAL INSPECTION:
- A: CONCRETE PER CHAPTER 17:

  1. PERIODIC INSPECTION OF THE PLACEMENT OF
  - REINFORCING STEEL.

    2. CONTINUOUS INSPECTION OF THE PLACEMENT OF ANCHORS IN CONCRETE INCLUDING, SIZE, LENGTH, PROJECTION, AND LOCATION.
  - SLUMP, AIR CONTENT, AND TEMPERATURE. CAST SPECIMENS FOR STRENGTH TESTS.

    4. PERIODIC INSPECTION OF ANCHORS INSTALLED VERTICALLY DOWNWARD AND CONTINUOUS INSPECTION OF ANCHORS INSTALLED HORIZONTAL OR OVERHEAD IN HARDENED

DEPTH, CLEANING PROCEDURE, MATERIALS, AND

3. SAMPLING OF FRESH CONCRETE. PERFORM TESTS FOR

LOCATION. ALL ANCHORS INSTALLED IN HARDENED CONCRETE ARE SUBJECT TO INSPECTION.

A. PERIODIC INSPECTION FOR MAINTENANCE OF CURING AND TEMPERATURE TECHNIQUES.

CONCRETE. INSPECTIONS SHALL INCLUDE HOLE SIZE AND

- B. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS.
- 5. PERIODIC INSPECTION FOR MAINTENANCE OF CURING TECHNIQUES AND TEMPERATURE.6. PERIODIC INSPECTION OF FORM WORK FOR SHAPE,
- LOCATION AND DIMENSIONS.

  B: MASONRY PER CHAPTER 17:

  1. AT THE BEGINNING OF MASONRY CONSTRUCTION, ONE MASONRY UNIT AND ONE GROUT SAMPLE SHALL BE TAKEN FOR TESTING. MASONRY UNITS SHALL BE IN ACCORDANCE WITH ASTM C140. GROUT SHALL BE
- TESTED IN ACCORDANCE WITH ASTM C1019.

  2. IF HIGH LIFT GROUTING PROCEDURES ARE USED,
  CONTINUOUS INSPECTION IS REQUIRED.

  3. DURING CONSTRUCTION, ONE MASONRY UNIT AND ONE
- GROUT SAMPLE SHALL BE TAKEN FOR EVERY 1500
  SQUARE FEET OF WALL.

  4. THE PLACEMENT OF VERTICAL REINFORCEMENT AND THE
  GROUTING OF WALLS SHALL BE OBSERVED DURING THE
  INITIAL AND FINAL GROUT POURS, AND PERIODICALLY
- BETWEEN, AT LEAST ONCE FOR EVERY 5000 SQUARE FEET OF WALL CONSTRUCTED.

  5. CMU MORTAR SAMPLES AND INSPECTION OF JOINTS SHALL OCCUR AT THE BEGINNING OF MASONRY CONSTRUCTION AND AT LEAST ONCE FOR EVERY
- CONSTRUCTION AND AT LEAST ONCE FOR EVERY 5000 SQUARE FEET OF WALL CONSTRUCTED.

  6. ANCHOR BOLT PLACEMENT AND GROUTING BELOW BEAMS OR BEARING PLATES AT ALL BEAM BEARING LOCATIONS SHALL BE INSPECTED PRIOR TO THE INITIAL AND FINAL GROUT POURS AND PERIODICALLY BETWEEN, AT LEAST
- CONSTRUCTED.

  7. PERIODIC INSPECTION OF THE PREPARATION,
  CONSTRUCTION, AND PROTECTION OF MASONRY DURING
  COLD OR HOT WEATHER CONDITIONS.

  C: STRUCTURAL STEEL PER CHAPTER 17:

ONCE FOR EVERY 5000 SQUARE FEET OF WALL

PERIODIC INSPECTION FOR MATERIAL VERIFICATIONS.
 A. HIGH STRENGTH BOLTS, NUTS AND WASHERS.
 B. STRUCTURAL STEEL IDENTIFICATION.
 C. COLD FORMED STEEL DECK IDENTIFICATION.
 PERIODIC INSPECTION OF BEARING—TYPE BOLTED

CONNECTIONS. BOLTS SHALL BE TIGHTENED TO A

- SNUG—TIGHT CONDITION AND OBSERVED ONLY TO ENSURE THAT ALL PLIES OF THE CONNECTED ELEMENT HAVE BEEN BROUGHT INTO SNUG CONTACT.

  3. QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS SHALL BE VERIFIED PRIOR TO START OF WORK. PERIODIC INSPECTIONS SHALL BE MADE OF WORK IN PROGRESS
- AND A VISUAL INSPECTION OF ALL WELDS
  SHALL BE MADE PRIOR TO COMPLETION.
  A. PERIODIC INSPECTION OF SINGLE—PASS WELDS.
  B. PERIODIC INSPECTION OF STEEL DECK
- ATTACHMENTS.

  C. CONTINUOUS INSPECTION OF FILLET WELDS
  EXCEEDING 5/16" AND COMPLETE OR PARTIAL
  JOINT PENETRATION WELDS.

  D. PERIODIC INSPECTION OF WELD FILLER MATERIALS.
- D: OBSERVATION OF SUBGRADE PREPARATION AND FOUNDATION PREPARATION OPERATIONS BY A LICENSED GEOTECHNICAL ENGINEER. SEE THE GEOTECHNICAL INVESTIGATION REPORT FOR ADDITIONAL INFORMATION.

E: INSTALLATION OF EXPANSION, EPOXY, OR OTHER TYPES OF CHEMICAL

# DEFERRED SUBMITTALS

 DEFFERED SUBMITTALS: JOISTS, JOIST GIRDERS, SHADE STRUCTURE, STORAGE RACK DESIGN AND ANCHORAGE.

ADHESIVE ANCHORS PER SECTION 1705.3.

2. THE DEFFERED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW AND APPROVE THEM, AND FORWARD THEM TO THE BULDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFFERED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND APPROVED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFFERED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. PROVIDE AMPLE TIME FOR THE BULDING OFFICIAL TO REVIEW THE DOCUMENTS.

PRE-BID SET ISSUE DATE

DATE DESCRIPTION

**REVISIONS** 



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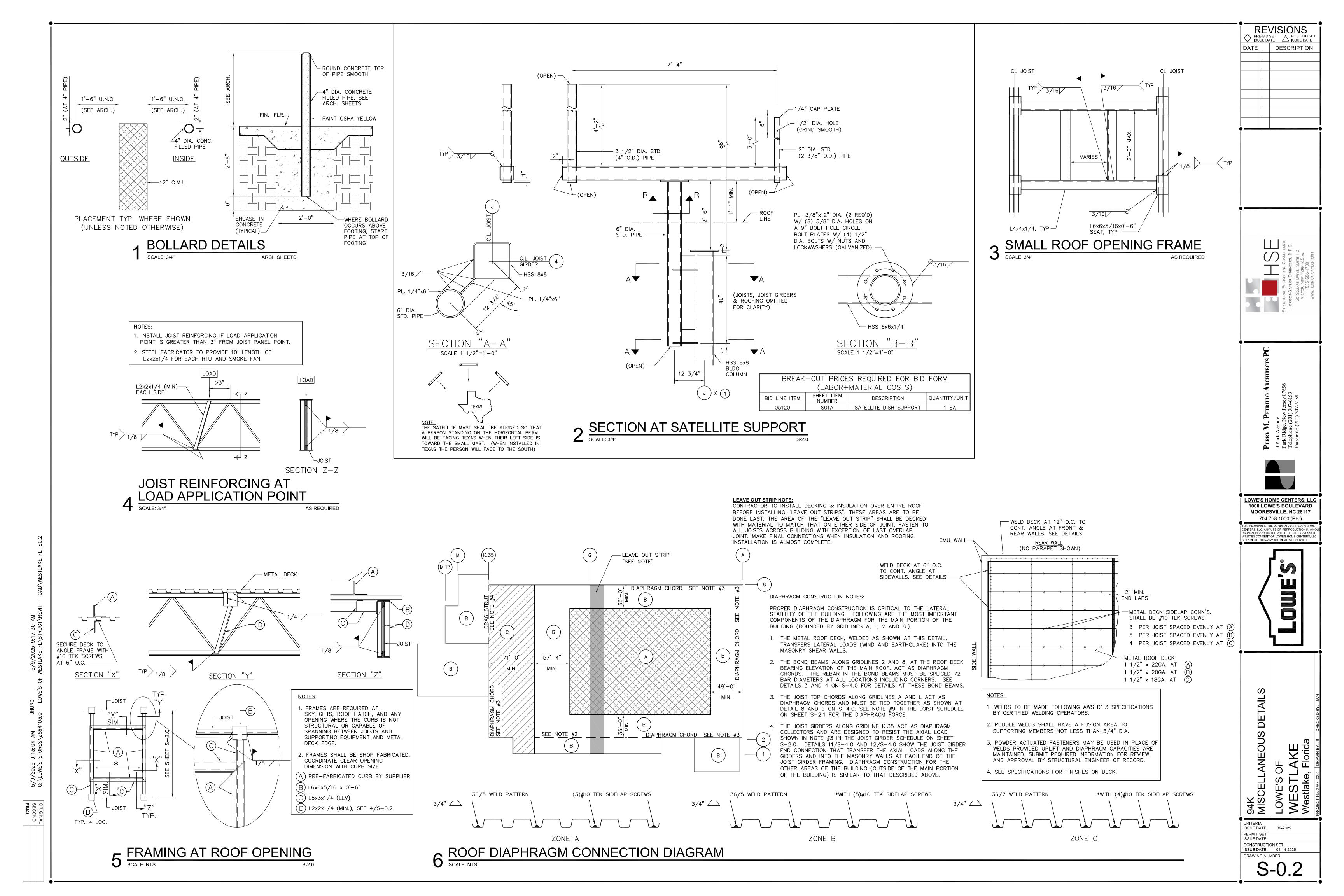
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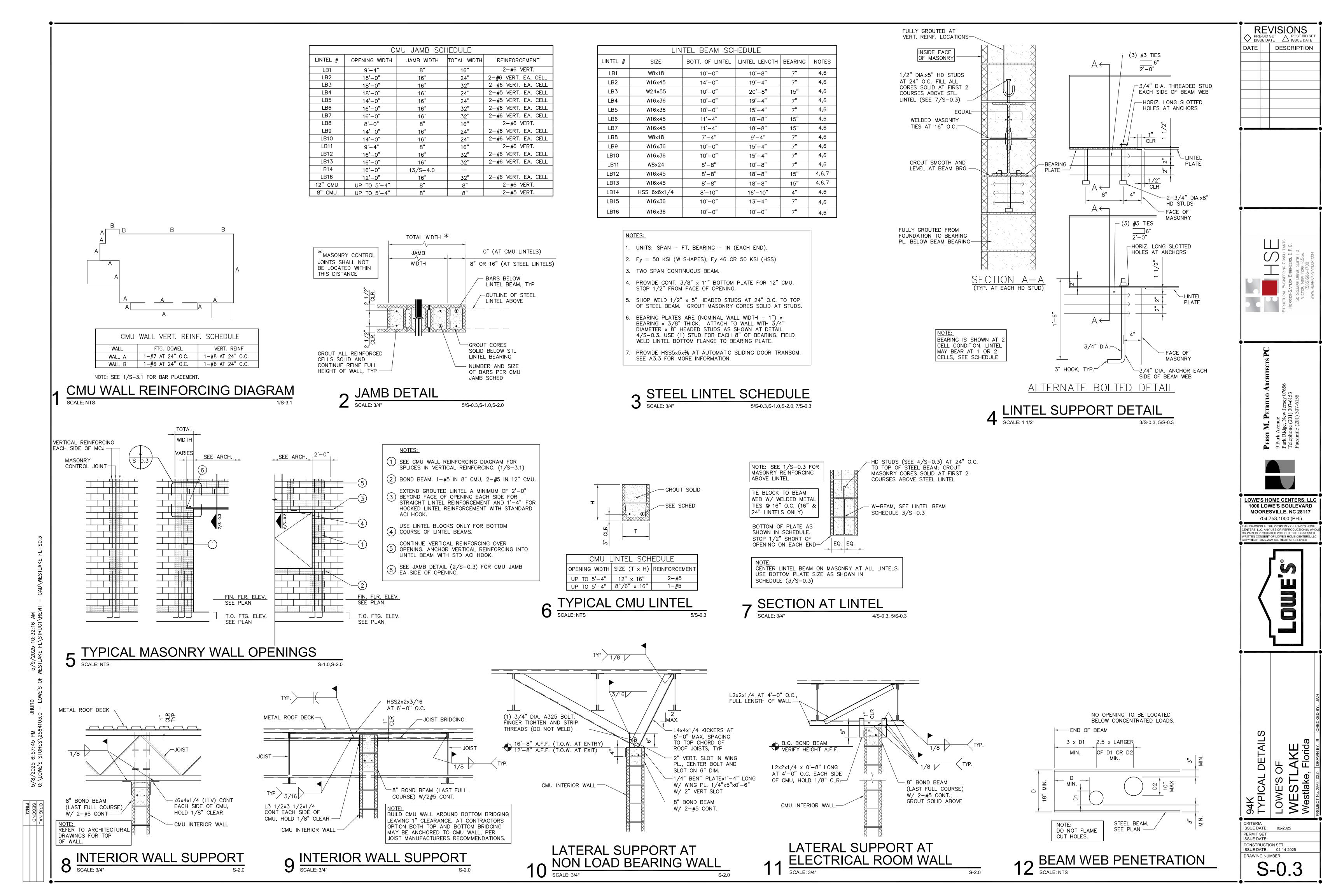
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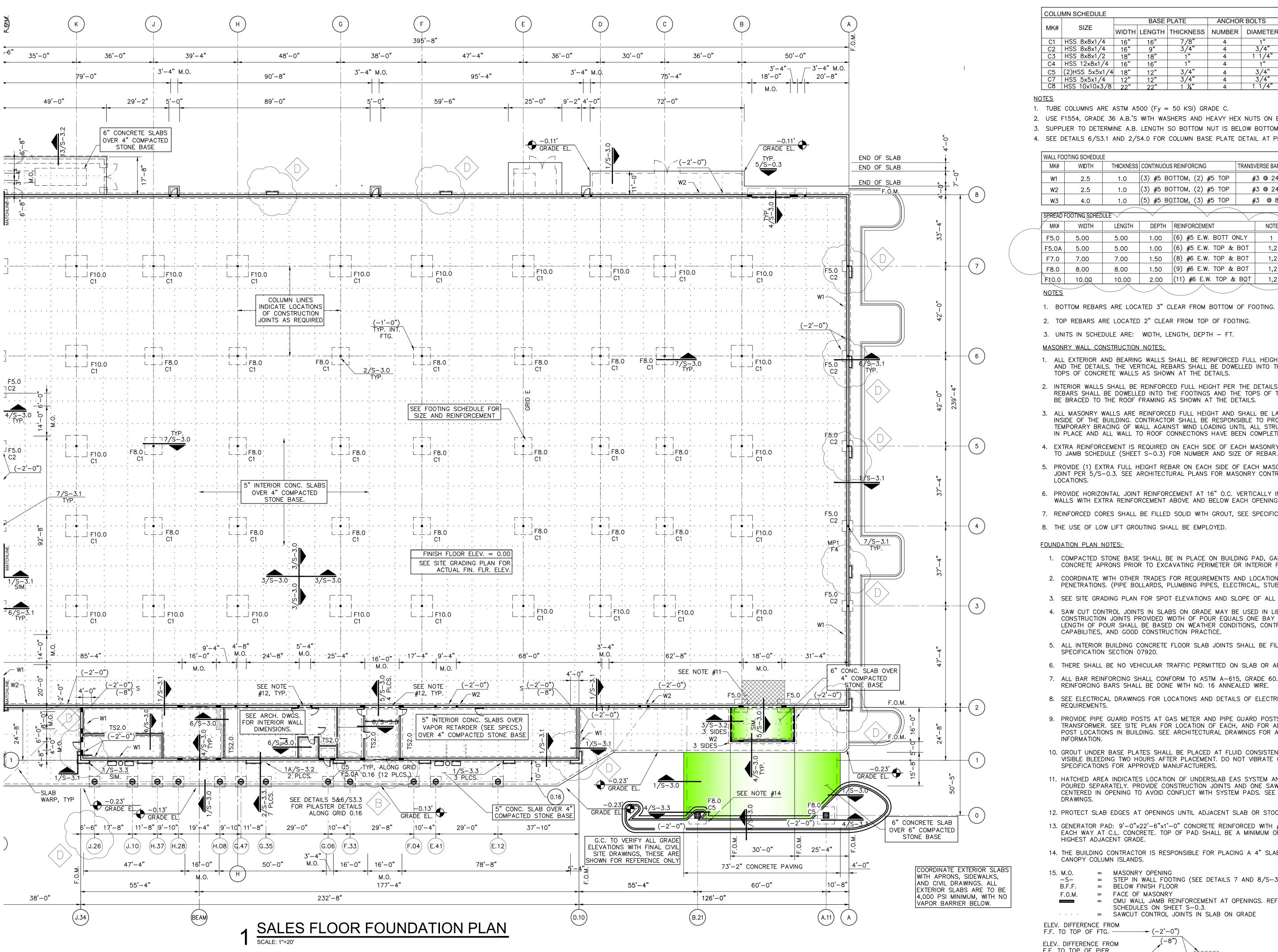
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COLL	IMN SCHEDULE					
			BASE	PLATE	ANCHO	R BOLTS
MK#	SIZE	WIDTH	LENGTH	THICKNESS	NUMBER	DIAMETER
C1	HSS 8x8x1/4	16"	16"	7/8"	4	1"
C2	HSS 8x8x1/4	16"	9"	3/4"	4	3/4"
С3	HSS 8x8x1/2	18"	18"	1"	4	1 1/4"
C4	HSS 12x8x1/4	16"	16"	1"	4	1"
C5	(2)HSS 5x5x1/4	18"	12"	3/4"	4	3/4"
C7	HSS 5x5x1/4	12"	12"	3/4"	4	3/4"

- 1. TUBE COLUMNS ARE ASTM A500 (Fy = 50 KSI) GRADE C.
- 2. USE F1554, GRADE 36 A.B.'S WITH WASHERS AND HEAVY HEX NUTS ON BOTH ENDS. SEE 7/S3.0
- 3. SUPPLIER TO DETERMINE A.B. LENGTH SO BOTTOM NUT IS BELOW BOTTOM REBAR MAT. 4. SEE DETAILS 6/S3.1 AND 2/S4.0 FOR COLUMN BASE PLATE DETAIL AT PERIMETER.

WALL FOO	OTING SCHEDUL	E			
MK#	WIDTH	THICKNESS	CONTINUOUS REINFORCING	TRANSVERSE BARS	NOTES
W1	2.5	1.0	(3) #5 BOTTOM, (2) #5 TOP	#3 @ 24" O/C	1-3
W2	2.5	1.0	(3) #5 BOTTOM, (2) #5 TOP	#3 @ 24" O/C	1-3
W3	4.0	1.0	(5) #5 BOITOM, (3) #5 TOP	#3 @ 8" O/C	1-3

		_				
	SPREAD I	FOOTING SCHED	ULE			
/	MK#	WIDTH	LENGTH	DEPTH	REINFORCEMENT	NOTES
	F5.0	5.00	5.00	1.00	(6) #5 E.W. BOTT ONLY	1
	F5.0A	5.00	5.00	1.00	(6) #5 E.W. TOP & BOT	1,2
	F7.0	7.00	7.00	1.50	(8) #6 E.W. TOP & BOT	1,2
	F8.0	8.00	8.00	1.50	(9) #6 E.W. TOP & BOT	1,2
	F10.0	10.00	10.00	2.00	(11) #6 E.W. TOP & BOT	1,2
				$\wedge$		

- 1. BOTTOM REBARS ARE LOCATED 3" CLEAR FROM BOTTOM OF FOOTING.
- 2. TOP REBARS ARE LOCATED 2" CLEAR FROM TOP OF FOOTING.
- 3. UNITS IN SCHEDULE ARE: WIDTH, LENGTH, DEPTH FT.

#### MASONRY WALL CONSTRUCTION NOTES:

- 1. ALL EXTERIOR AND BEARING WALLS SHALL BE REINFORCED FULL HEIGHT PER 1/S-3.1AND THE DETAILS. THE VERTICAL REBARS SHALL BE DOWELLED INTO THE FOOTINGS OR TOPS OF CONCRETE WALLS AS SHOWN AT THE DETAILS.
- 2. INTERIOR WALLS SHALL BE REINFORCED FULL HEIGHT PER THE DETAILS. THE VERTICAL REBARS SHALL BE DOWELLED INTO THE FOOTINGS AND THE TOPS OF THE WALLS SHALL BE BRACED TO THE ROOF FRAMING AS SHOWN AT THE DETAILS.
- 3. ALL MASONRY WALLS ARE REINFORCED FULL HEIGHT AND SHALL BE LAYED FROM THE INSIDE OF THE BUILDING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL TEMPORARY BRACING OF WALL AGAINST WIND LOADING UNTIL ALL STRUCTURAL STEEL IS IN PLACE AND ALL WALL TO ROOF CONNECTIONS HAVE BEEN COMPLETED.
- 4. EXTRA REINFORCEMENT IS REQUIRED ON EACH SIDE OF EACH MASONRY OPENING. REFER TO JAMB SCHEDULE (SHEET S-0.3) FOR NUMBER AND SIZE OF REBAR.
- 5. PROVIDE (1) EXTRA FULL HEIGHT REBAR ON EACH SIDE OF EACH MASONRY CONTROL JOINT PER 5/S-0.3. SEE ARCHITECTURAL PLANS FOR MASONRY CONTROL JOINT
- 6. PROVIDE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. VERTICALLY IN ALL MASONRY WALLS WITH EXTRA REINFORCEMENT ABOVE AND BELOW EACH OPENING.
- 7. REINFORCED CORES SHALL BE FILLED SOLID WITH GROUT, SEE SPECIFICATIONS.
- 8. THE USE OF LOW LIFT GROUTING SHALL BE EMPLOYED.

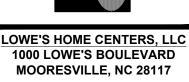
## **FOUNDATION PLAN NOTES:**

- 1. COMPACTED STONE BASE SHALL BE IN PLACE ON BUILDING PAD, GARDEN CENTER AND CONCRETE APRONS PRIOR TO EXCAVATING PERIMETER OR INTERIOR FOOTINGS.
- 2. COORDINATE WITH OTHER TRADES FOR REQUIREMENTS AND LOCATIONS OF SLAB PENETRATIONS. (PIPE BOLLARDS, PLUMBING PIPES, ELECTRICAL, STUB-UPS, ETC.)
- 3. SEE SITE GRADING PLAN FOR SPOT ELEVATIONS AND SLOPE OF ALL EXTERIOR SLABS.
- 4. SAW CUT CONTROL JOINTS IN SLABS ON GRADE MAY BE USED IN LIEU OF CONSTRUCTION JOINTS PROVIDED WIDTH OF POUR EQUALS ONE BAY SPACE. MAXIMUM LENGTH OF POUR SHALL BE BASED ON WEATHER CONDITIONS, CONTRACTOR'S CAPABILITIES, AND GOOD CONSTRUCTION PRACTICE.
- 5. ALL INTERIOR BUILDING CONCRETE FLOOR SLAB JOINTS SHALL BE FILLED/SEALED PER SPECIFICATION SECTION 07920.
- 6. THERE SHALL BE NO VEHICULAR TRAFFIC PERMITTED ON SLAB OR APRONS.
- 7. ALL BAR REINFORCING SHALL CONFORM TO ASTM A-615, GRADE 60. ALL WIRING OF REINFORCING BARS SHALL BE DONE WITH NO. 16 ANNEALED WIRE.
- 8. SEE ELECTRICAL DRAWINGS FOR LOCATIONS AND DETAILS OF ELECTRICAL GROUNDING REQUIREMENTS.
- 9. PROVIDE PIPE GUARD POSTS AT GAS METER AND PIPE GUARD POSTS AT ELECTRICAL TRANSFORMER. SEE SITE PLAN FOR LOCATION OF EACH, AND FOR ADDITIONAL GUARD POST LOCATIONS IN BUILDING. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 10. GROUT UNDER BASE PLATES SHALL BE PLACED AT FLUID CONSISTENCY AND EXHIBIT NO VISIBLE BLEEDING TWO HOURS AFTER PLACEMENT. DO NOT VIBRATE GROUT. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
- 11. HATCHED AREA INDICATES LOCATION OF UNDERSLAB EAS SYSTEM AND MUST BE POURED SEPARATELY. PROVIDE CONSTRUCTION JOINTS AND ONE SAW CUT AS SHOWN CENTERED IN OPENING TO AVOID CONFLICT WITH SYSTEM PADS. SEE ELECTRICAL
- 12. PROTECT SLAB EDGES AT OPENINGS UNTIL ADJACENT SLAB OR STOOP IS POURED.
- 13. GENERATOR PAD: 9'-0"x22'-6"x1'-0" CONCRETE REINFORCED WITH #5 AT 12" O.C. EACH WAY AT C.L. CONCRETE. TOP OF PAD SHALL BE A MINIMUM OF 3" ABOVE HIGHEST ADJACENT GRADE.
- 14. THE BUILDING CONTRACTOR IS RESPONSIBLE FOR PLACING A 4" SLAB INSIDE OF THE CANOPY COLUMN ISLANDS.
- = MASONRY OPENING
- = STEP IN WALL FOOTING (SEE DETAILS 7 AND 8/S-3.2)
- = BELOW FINISH FLOOR
- = FACE OF MASONRY = CMU WALL JAMB REINFORCEMENT AT OPENINGS. REFER TO SCHEDULES ON SHEET S-0.3.

= SAWCUT CONTROL JOINTS IN SLAB ON GRADE ELEV. DIFFERENCE FROM

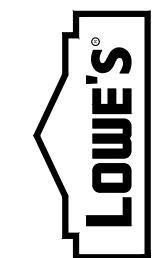
F.F. TO TOP OF FTG.  $\rightarrow$  (-2'-0") ELEV. DIFFERENCE FROM F.F. TO TOP OF PIER (NO PIER IF DIM. IS OMITTED) -

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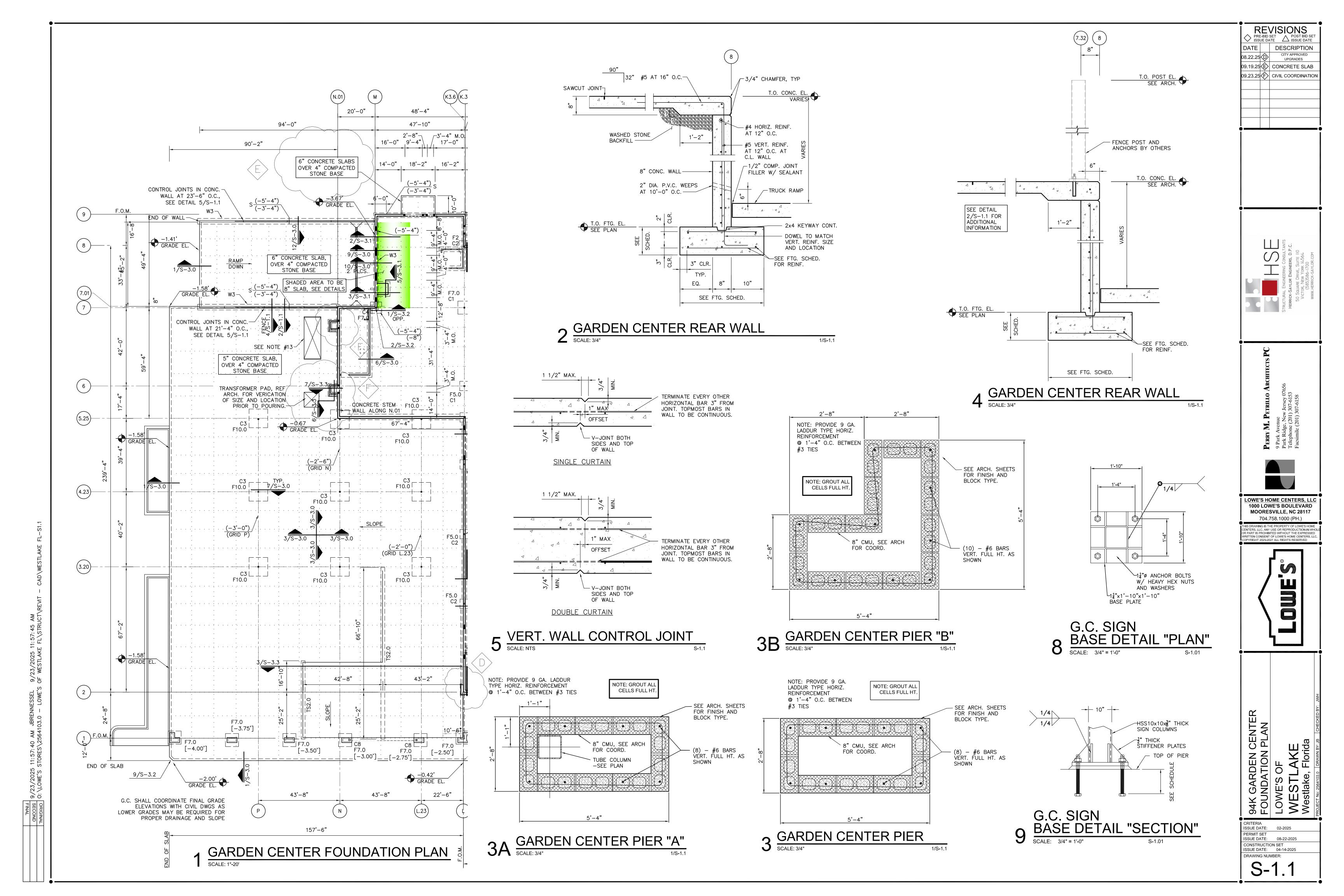
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SALES FLOOR JNDATION PLAN  $\triangleleft \equiv$ 94K SA FOUND LOWE'S WES'

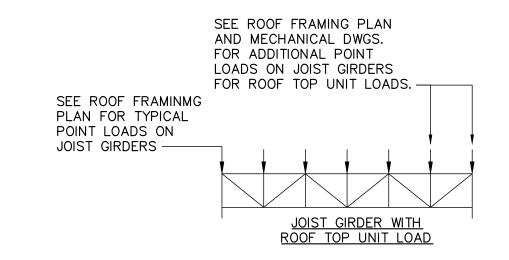
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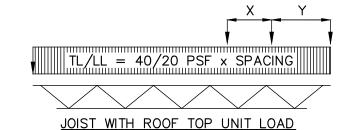


#### **ROOF FRAMING NOTES:**

- 1. ROOF DECK SHALL BE 1 1/2" DEEP WIDE RIB. SEE DETAIL 6/S-0.2 FOR GAGE AND ROOF DIAPHRAGM CONNECTION DIAGRAM.
- 2. SEE MECHANICAL DRAWINGS FOR R.T.U. AND SKYLIGHT CURB MOUNTING DETAILS. CURBS TO BE INSTALLED BY MECHANICAL CONTRACTOR BEFORE DECKING IS
- 3. SEE DETAIL 4/S-0.2 FOR JOIST CHORD REINFORCEMENT REQUIREMENTS AT RTU CURBS, SKYLIGHTS, EXHAUST FANS, AND SMOKE FAN CURBS (IF SHOWN). COORDINATE CURB SIZES WITH MECHANICAL CONTRACTOR. INSTALL CURBS AS SHOWN; DO NOT ROTATE.
- 4. SEE SHEET S-1.0 FOR COLUMN SCHEDULE. SEE SHEET S-0.1 FOR DESIGN LOADS AND GENERAL STRUCTURAL NOTES.
- 5. J.B. = JOIST BEARING ELEVATION ABOVE FINISH FLOOR.
- 6. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL TEMPORARY BRACING OF STEEL AGAINST WIND LOADING UNTIL ALL MASONRY WALLS ARE IN PLACE AND ALL WALL TO ROOF CONNECTIONS HAVE BEEN COMPLETED.
- \* = JOISTS IN COVERED AREA OF GARDEN CENTER SHALL HAVE 3 1/2" SLOPED 7. ENDSEATS.
- \*\* = JOISTS IN CUSTOMER LOADING CANOPY SHALL HAVE 5" SLOPED ENDSEATS.
- 8. X.XK JOIST AND JOIST GIRDER SCHEDULES FOR TOP CHORD AXIAL LOAD. DESIGN JOISTS AND JOIST GIRDERS FOR TOP CHORD SHORT TERM AXIAL FORCE INDICATED IN ADDITION TO GRAVITY LOADS. SPLICE JOISTS PER DETAIL 10/S-4.0. SPLICE JOIST GIRDERS PER DETAIL 11/S-4.0.
- 9. MC = MOMENT CONNECTION
- 10. LB# LINTEL BEAM MARK, REFER TO SCHEDULES ON SHEET S-0.3.



SEE ROOF FRAMING PLAN AND MECHANICAL DWGS. FOR ADDITIONAL ROOF TOP UNIT LOADS. COORDINATE "X" & "Y" DIMS. WITH MECHANICAL CONTRACTOR.



## JOIST NOTES

- 1. USE L 1 1/2 X 1 1/2 X 7/64 BRIDGING ANGLES. ALL JOISTS WITHIN A PARTICULAR BAY SHALL HAVE PANEL POINTS WHICH ARE ALIGNED.
- 2. USE "SPECIAL" JOISTS AT ROOF TOP UNITS. REFER TO FRAMING PLAN FOR WEIGHTS AND LOCATIONS. ROOF TOP UNIT WEIGHTS MUST BE ADDED TO THE TOTAL LOAD ON THE JOISTS. COORDINATE WITH MECHANICAL DRAWINGS.
- 3. DESIGN JOISTS FOR WIND LOAD UPLIFT SHOWN IN THE STRUCTURAL NOTES. USE ONE EXTRA LINE OF BOTTOM CHORD BRIDGING AT THE BOTH ENDS OF JOIST AT FIRST PANEL POINT FROM SUPPORT.
- 4. THE ROW OF BRIDGING NEAREST THE MID SPAN SHALL BE DIAGONAL BRIDGING WITH BOLTED CONNECTIONS AT CHORDS AND MIDSPAN.
- 5. ALL BRIDGING AT DRIVE—THRU CANOPY SHALL BE X—BRIDGING.
- 6. ALL BRIDGING AT THE SKYLIGHT PORTION OF THE COVERED AREA SHALL BE X-BRIDGING BETWEEN THE SKYLIGHTS (WEST COAST ONLY.)
- DESIGN JOISTS AT THE DRIVE—THRU CANOPY AND GARDEN CENTER COVERED AREA FOR AN EXTRA 5 PSF OF NET WIND UPLIFT.
- 8. JOIST SUPPLIER TO COORDINATE LOCATION OF BRIDGING WITH SHEET S-2.0.
- 9. JOISTS ALONG GRIDLINES "A" AND "L" MUST BE DESIGNED FOR AN ADDITIONAL TOP CHORD AXIAL LOAD OF 30 KIPS BECAUSE THEY ARE CHORDS FOR THE ROOF DIAPHRAGM. SEE DETAIL 10/S4.0.
- 10. THE JOISTS HAVE BEEN DESIGNED WITH AN ALLOWANCE OF 4 PSF UNIFORM LOAD FOR THE SPRINKLER SYSTEM. IF CONCENTRATED LOADS FROM SPRINKLER MAINS OR OTHER PIPING EXCEED THIS ALLOWANCE, THEN THE JOIST SUPPLIER MUST DESIGN THOSE JOISTS FOR THE INCREASED LOAD.

## JOIST GIRDER NOTES

- 1. ADD ROOT TOP UNIT WEIGHTS TO "K" VALUES AS SHOWN. SEE ROOF FRAMING PLAN FOR RTU LOCATIONS AND WEIGHTS.
- 2. DESIGN JOIST GIRDER FOR WIND UPLIFT SHOWN IN STRUCTURAL NOTES. (JOIST GIRDERS IN COVERED AREA MUST BE DESIGNED FOR AN EXTRA 5 PSF OF NET WIND UPLIFT.) JOIST SUPPLIER SHALL DETERMINE APPROPRIATE BOTTOM CHORD BRACING IN ACCORDANCE WITH SJI.
- JOIST GIRDERS ALONG OVER GARDEN CENTER ARE MOMENT FRAMES THAT RESIST LATERAL LOADS. DESIGN MOMENT CONNECTION BASED ON 110 K-FT OF WIND LOAD.

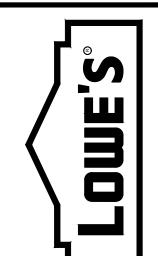
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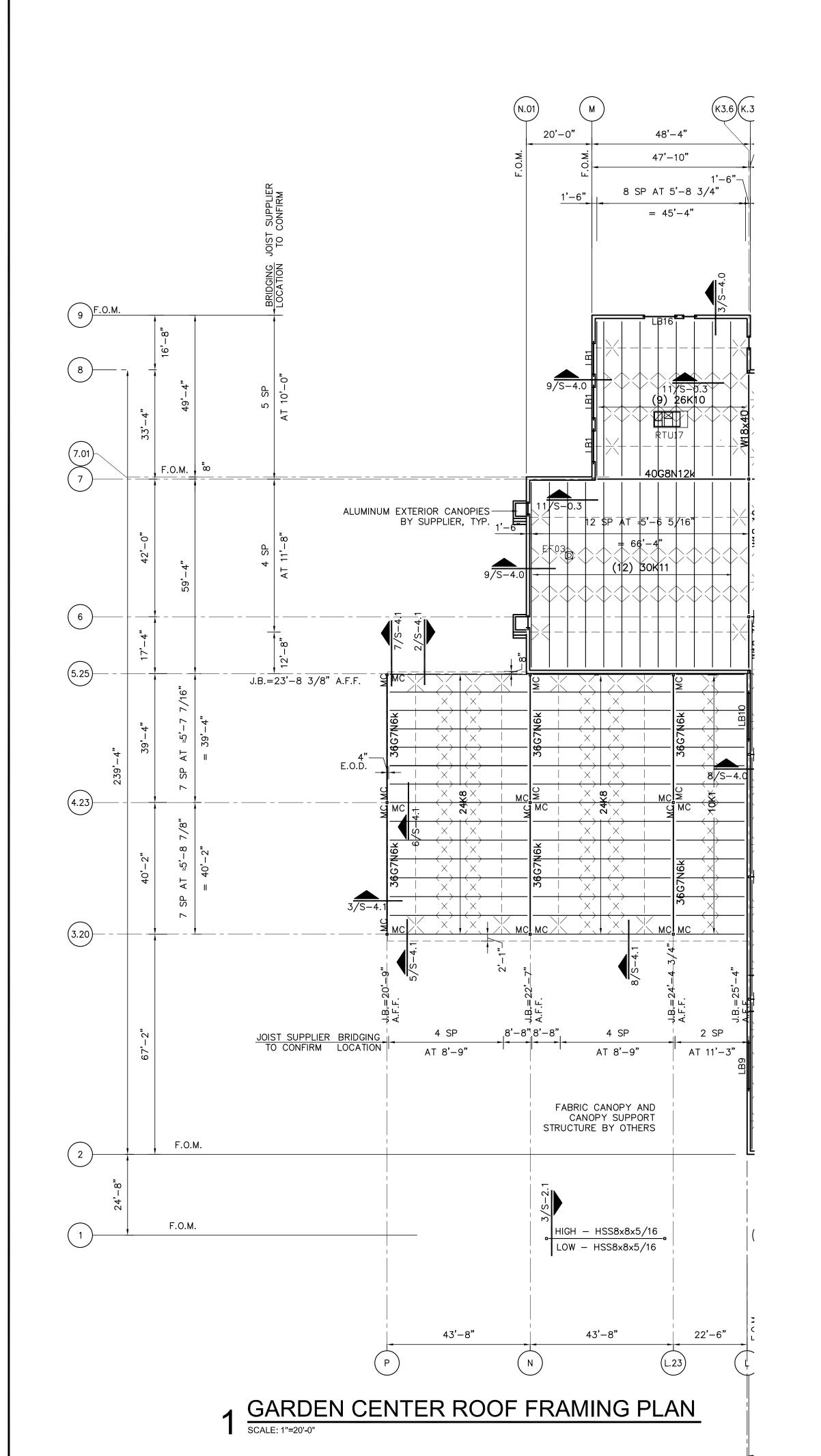
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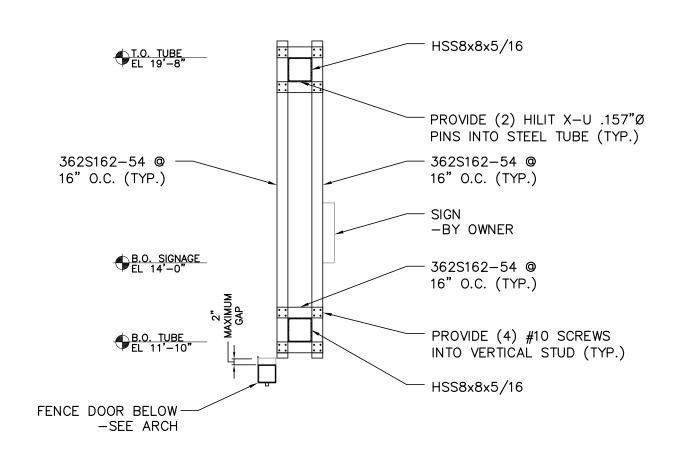


94K SALES FLOOR FRAMING PLAN LOWE'S OF WESTLAKE Westlake, Florida

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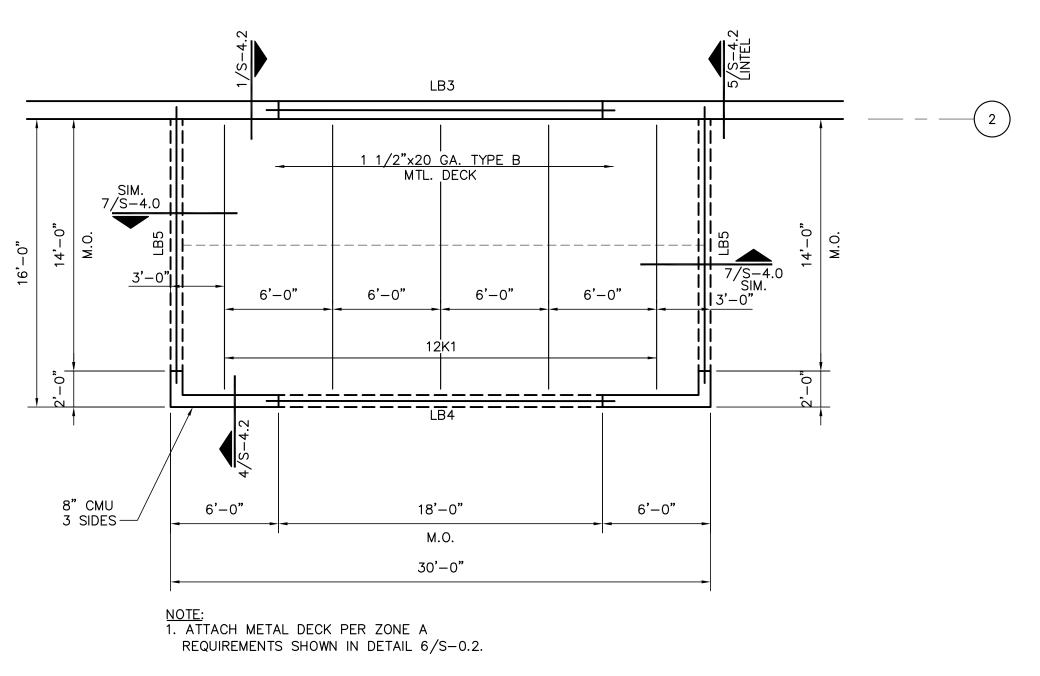
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3 TUBES AT GARDEN CENTER SIGN
SCALE: 3/8"

S-2.0



2 CLC VESTIBULE FRAMING
SCALE: 3/16"

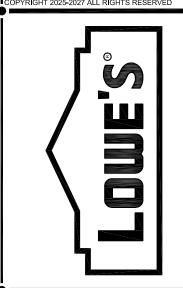
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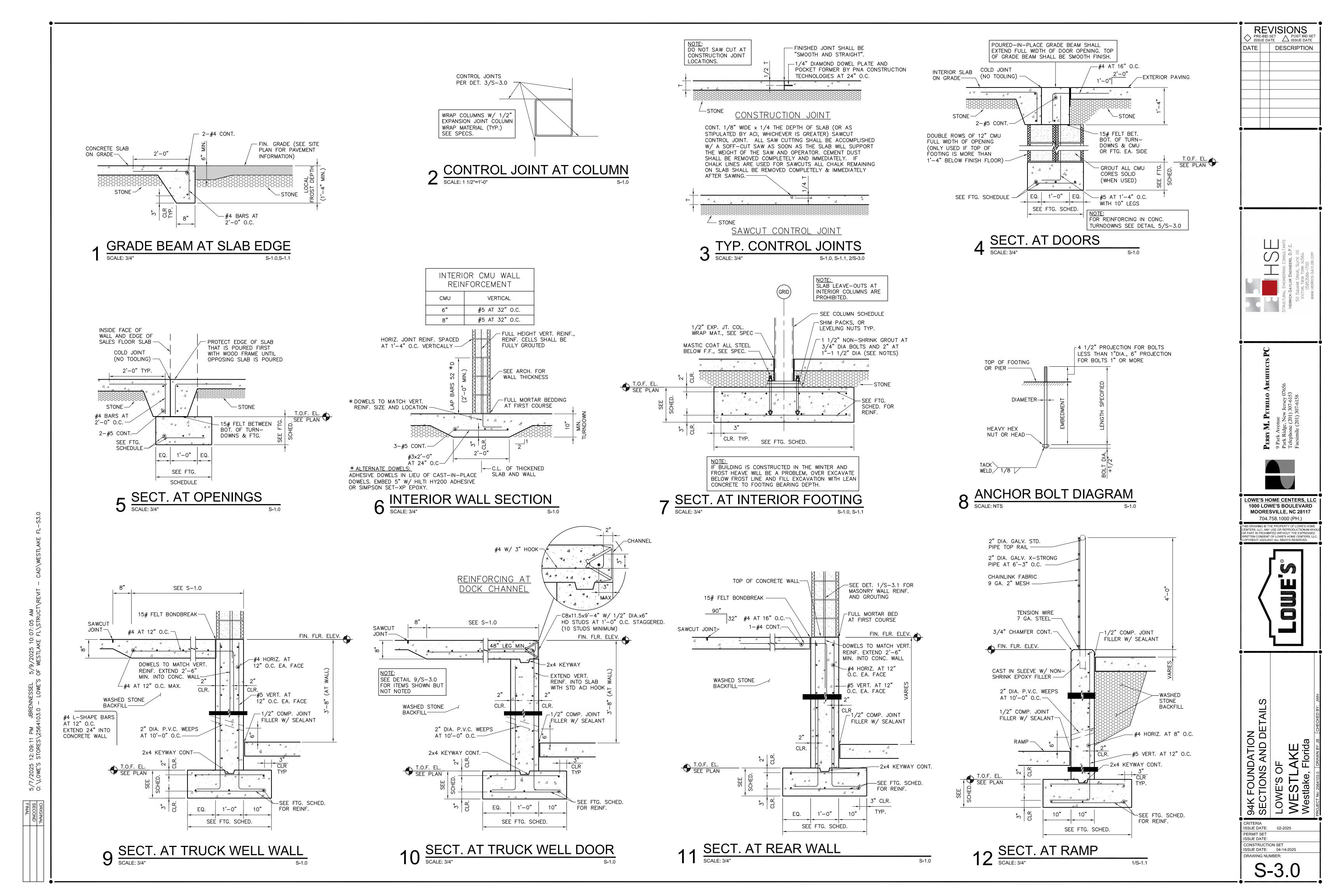
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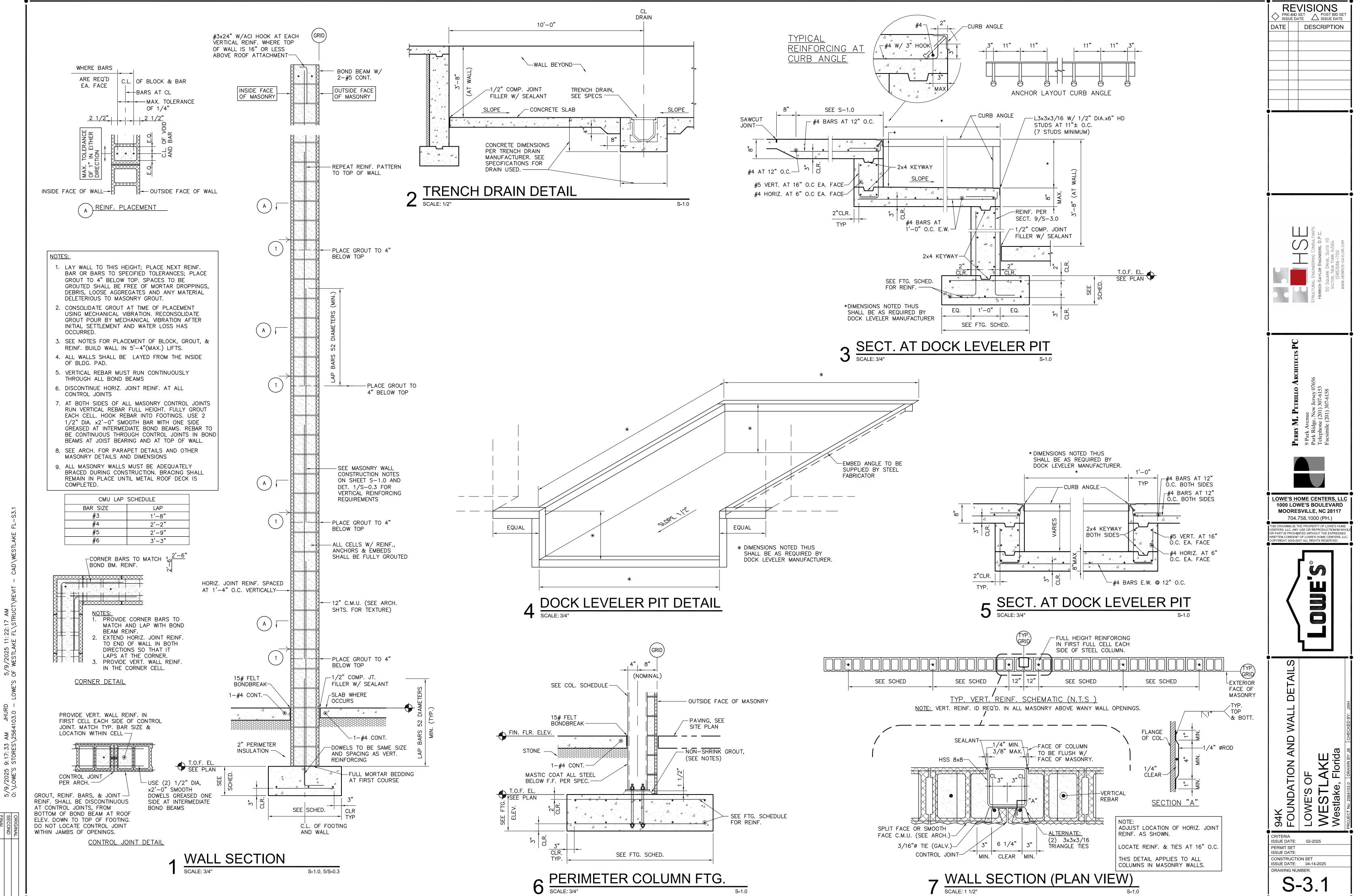


94K GARDEN CENTER FRAMING PLAN LOWE'S OF WESTLAKE Westlake, Florida

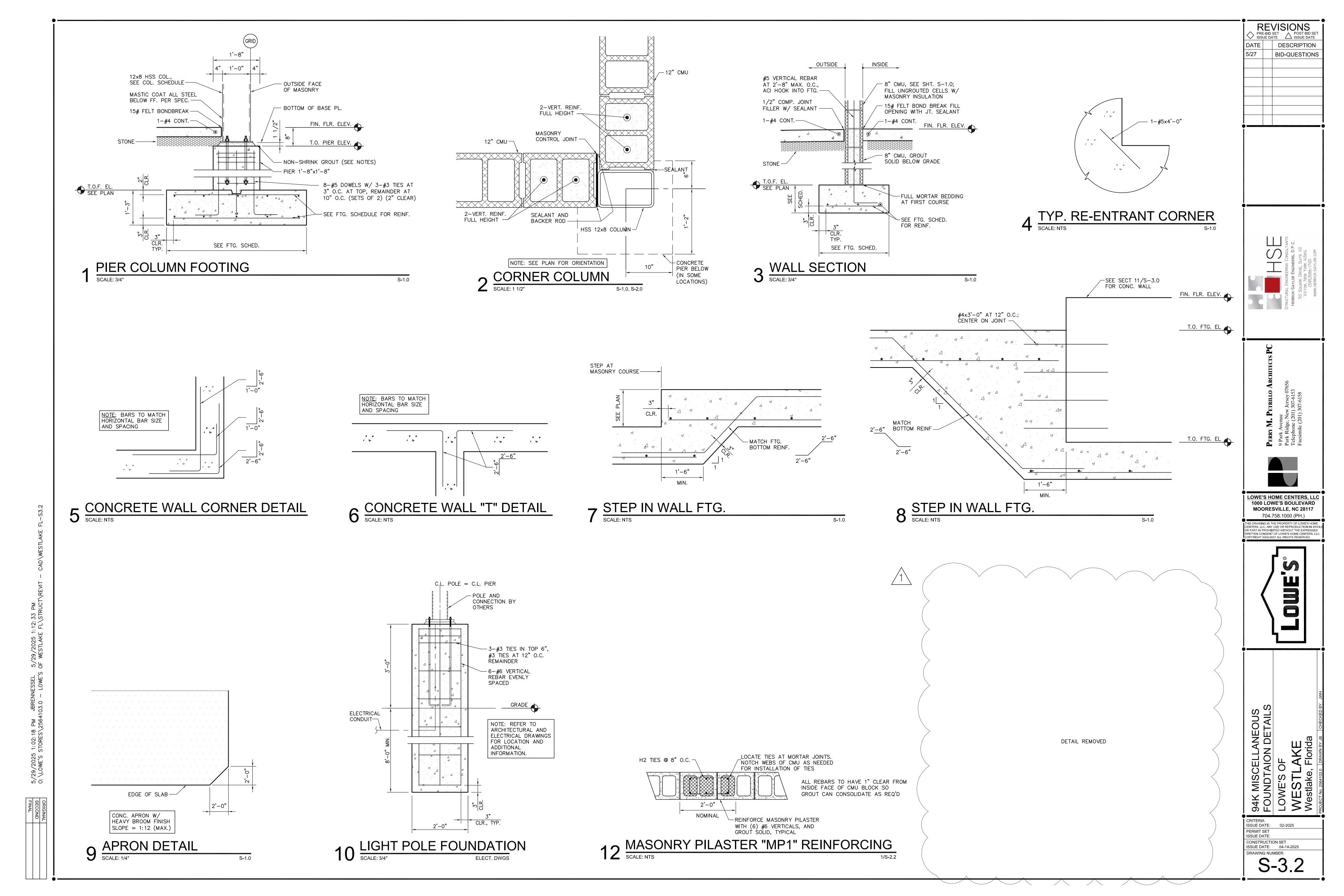
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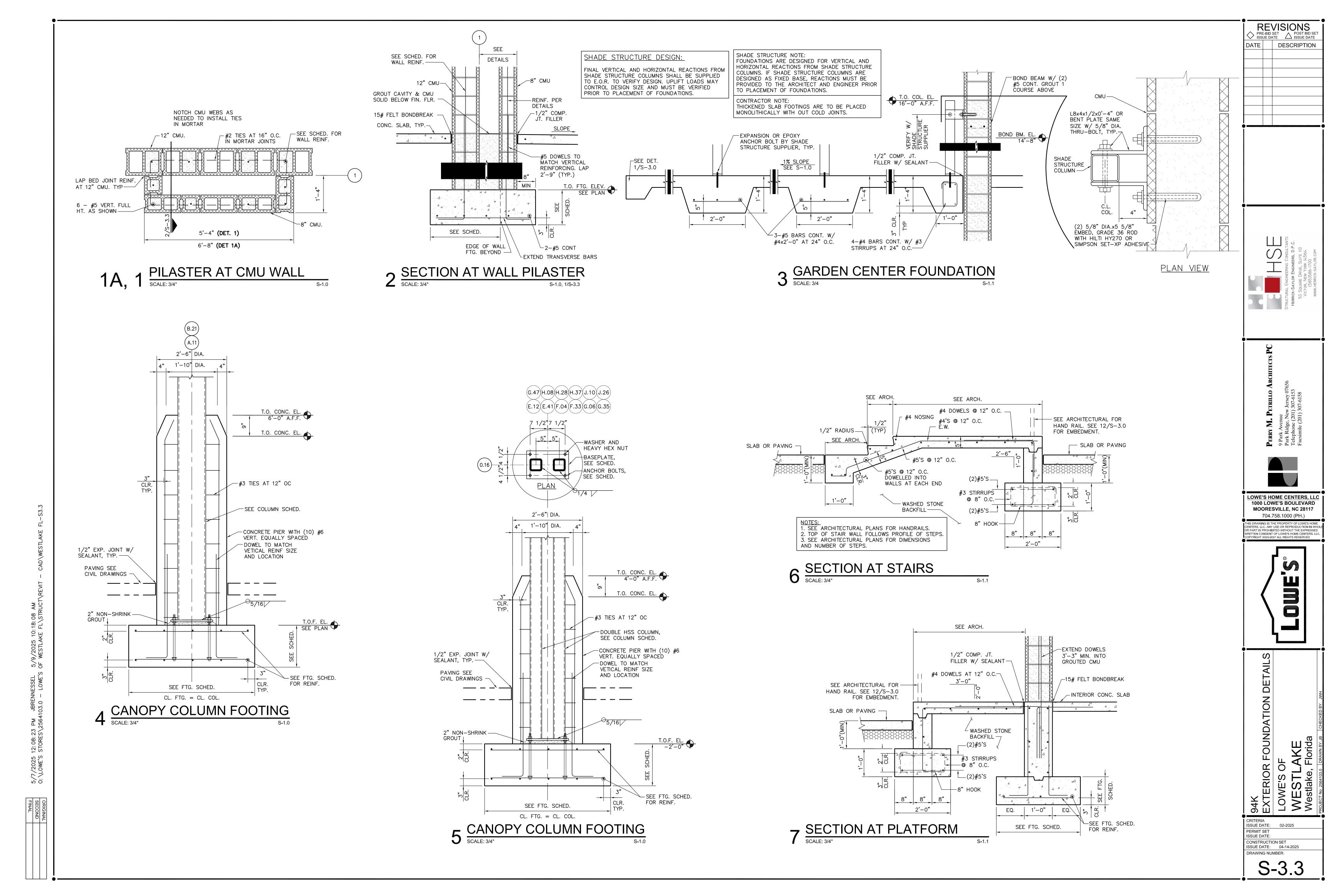
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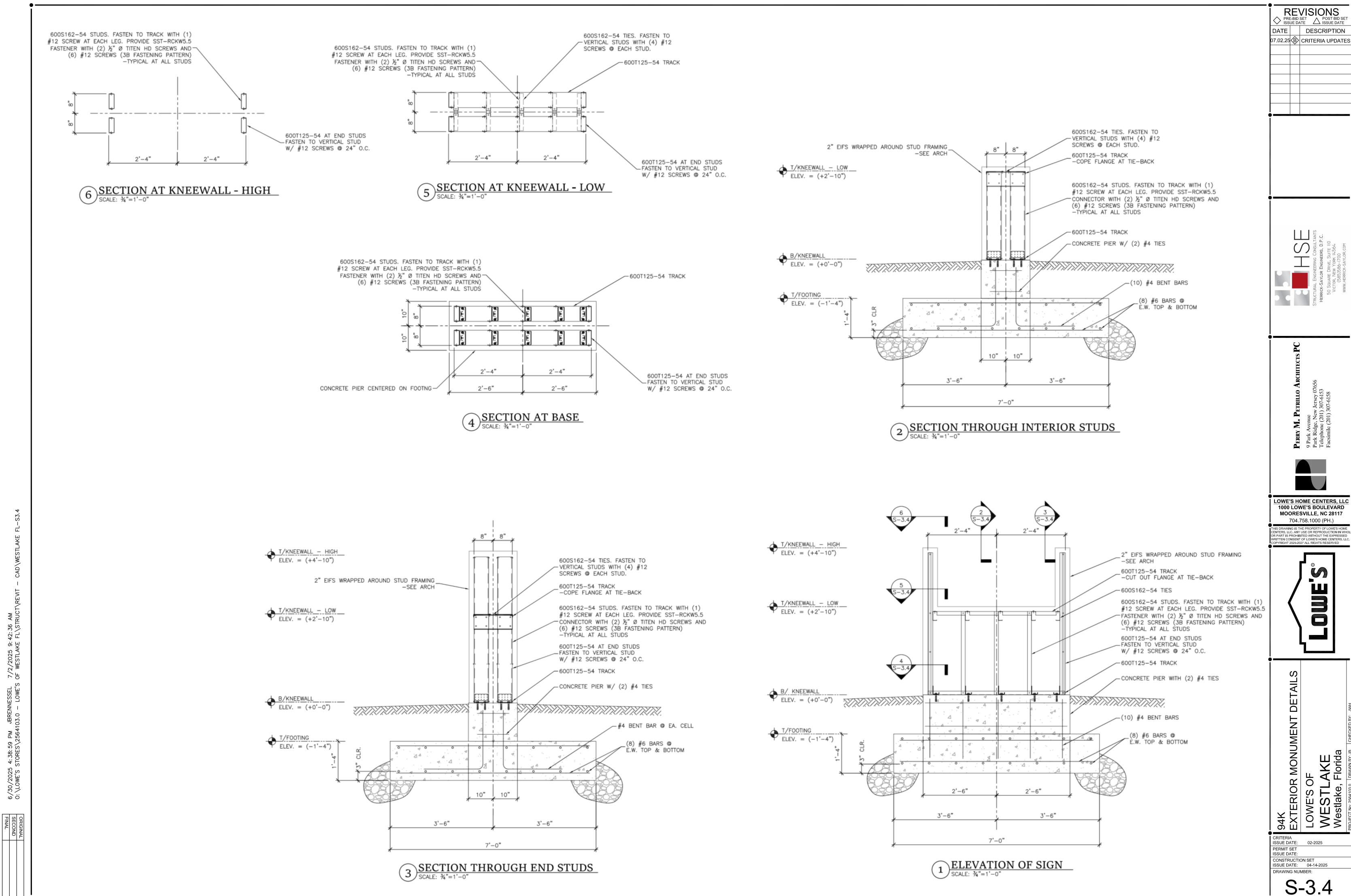


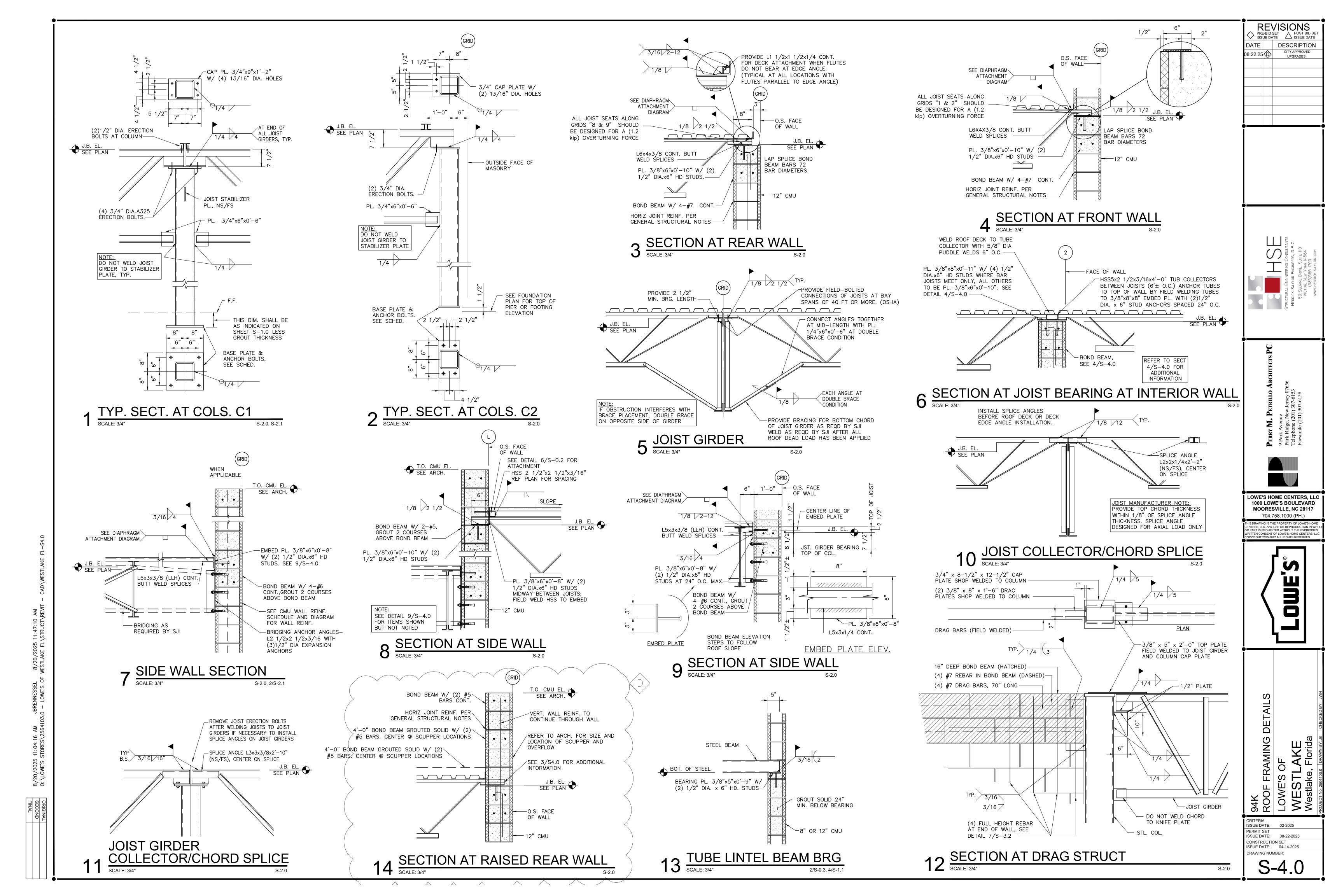


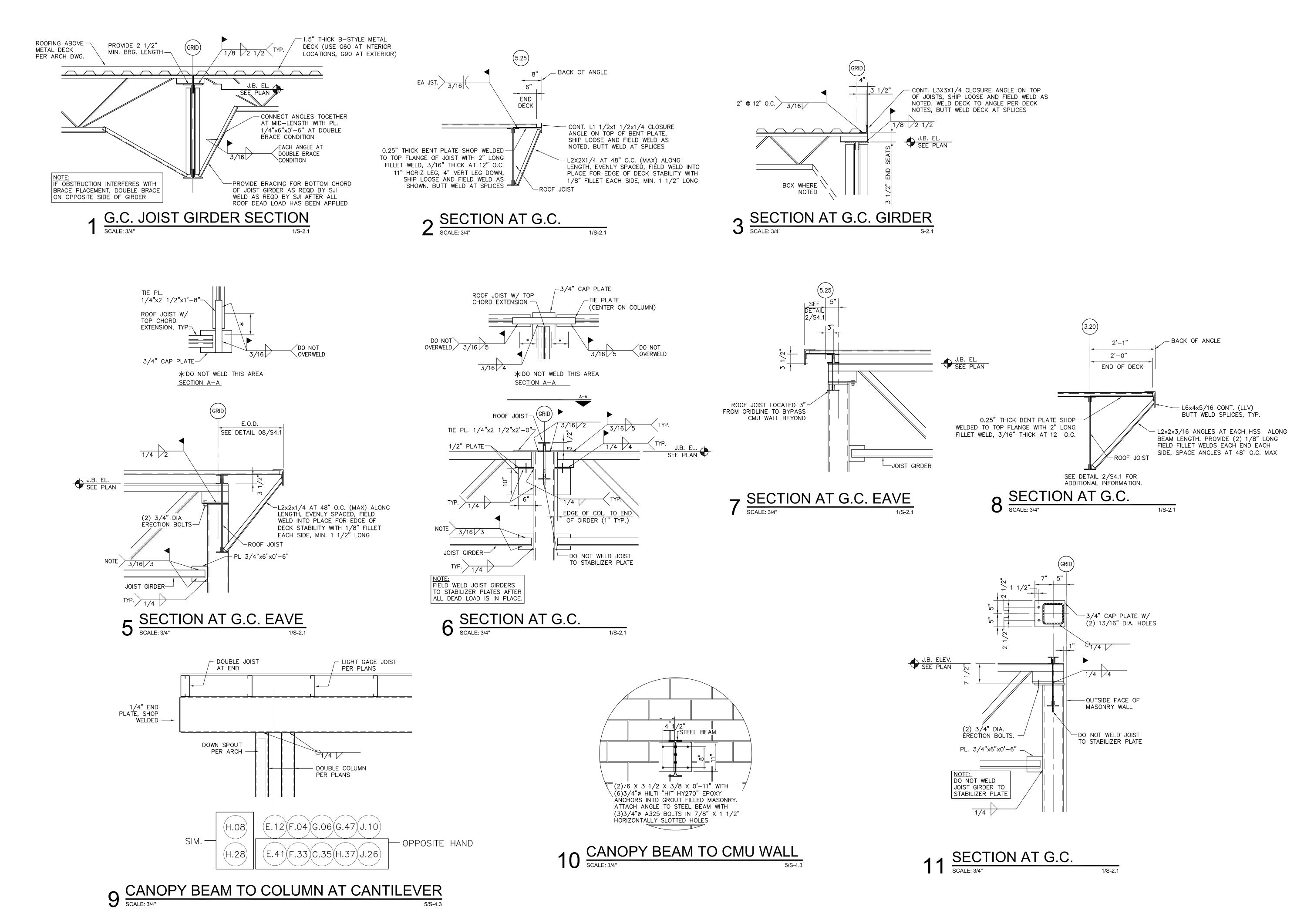
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LOWE'S HOME CENTERS, LLC

1000 LOWE'S BOULEVARD

MOORESVILLE, NC 28117

704.758.1000 (PH.)

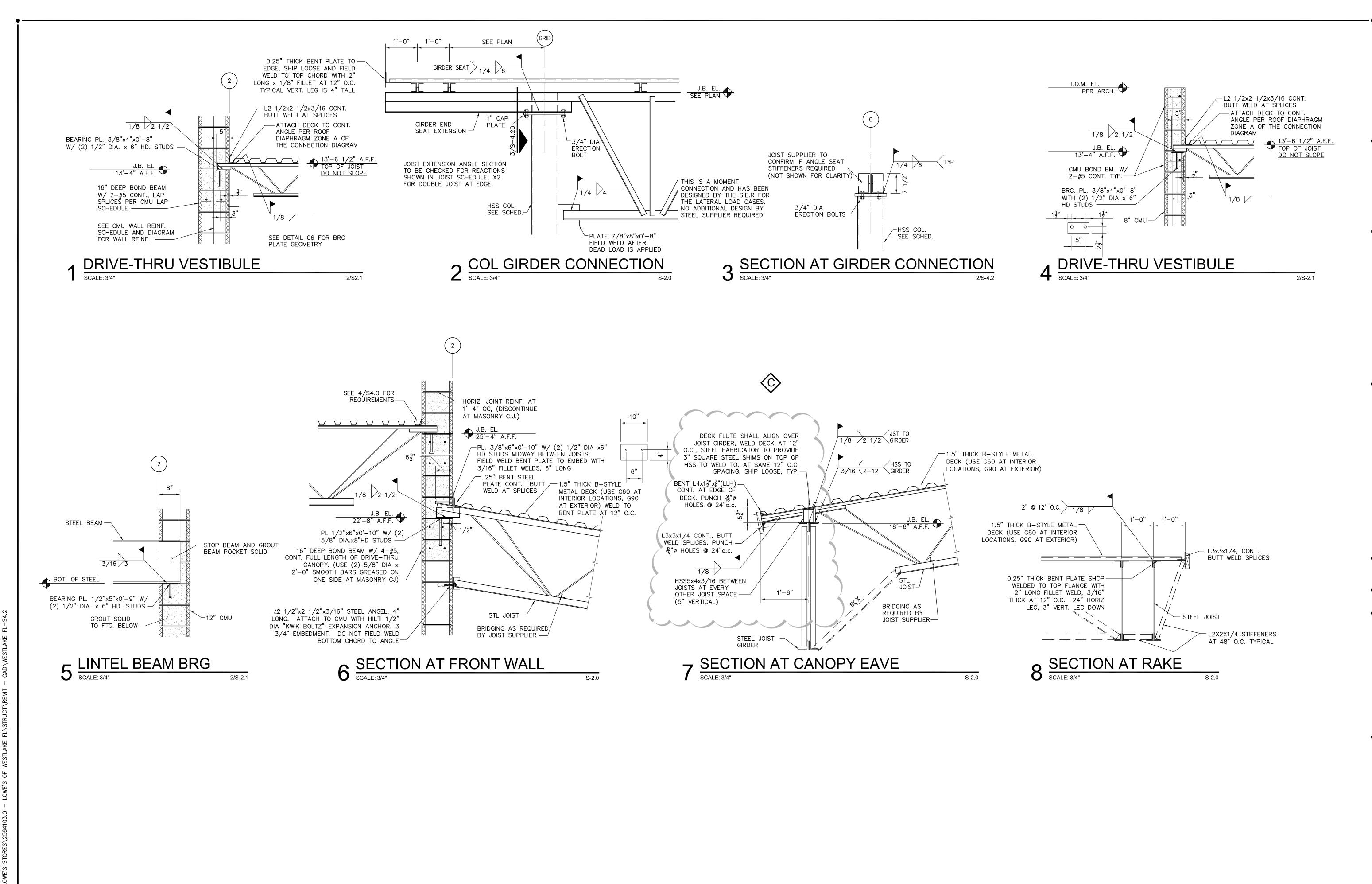
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ROOF FRAMING DETAILS
LOWE'S OF
WESTLAKE
Westlake, Florida

CRITERIA
ISSUE DATE: 02-2025
PERMIT SET
ISSUE DATE:
CONSTRUCTION SET
ISSUE DATE: 04-14-2025
DRAWING NUMBER:

S-4.



REVISIONS

PRE-BID SET POST BID SET ISSUE DATE

DATE DESCRIPTION

07.02.25 CRITERIA UPDATE

07.31.25 CRITERIA UPDATE

STRUCTURAL ENGINEERING CONSULTANTS
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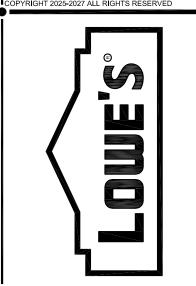
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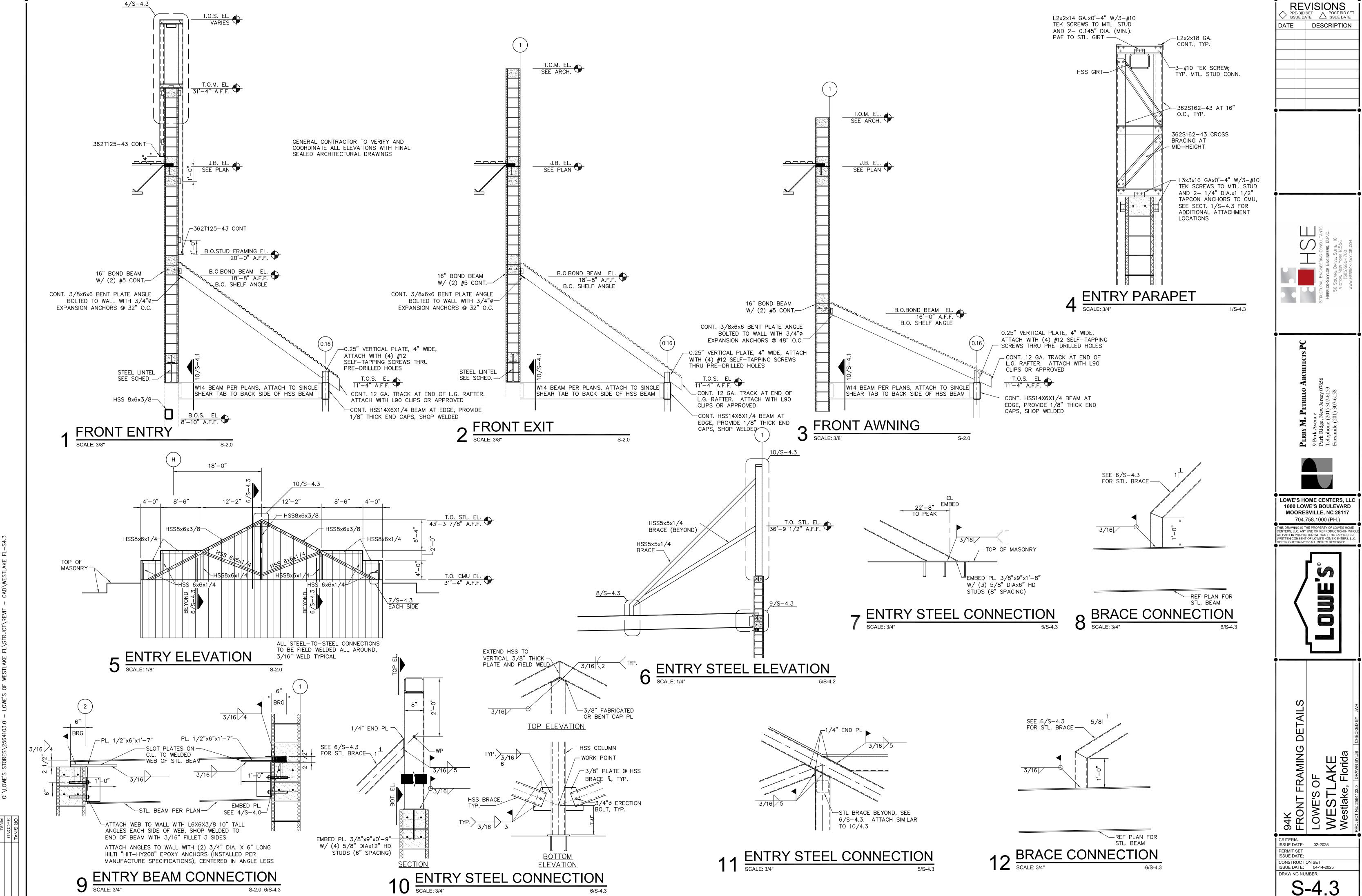
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CRITERIA
ISSUE DATE: 02-2025

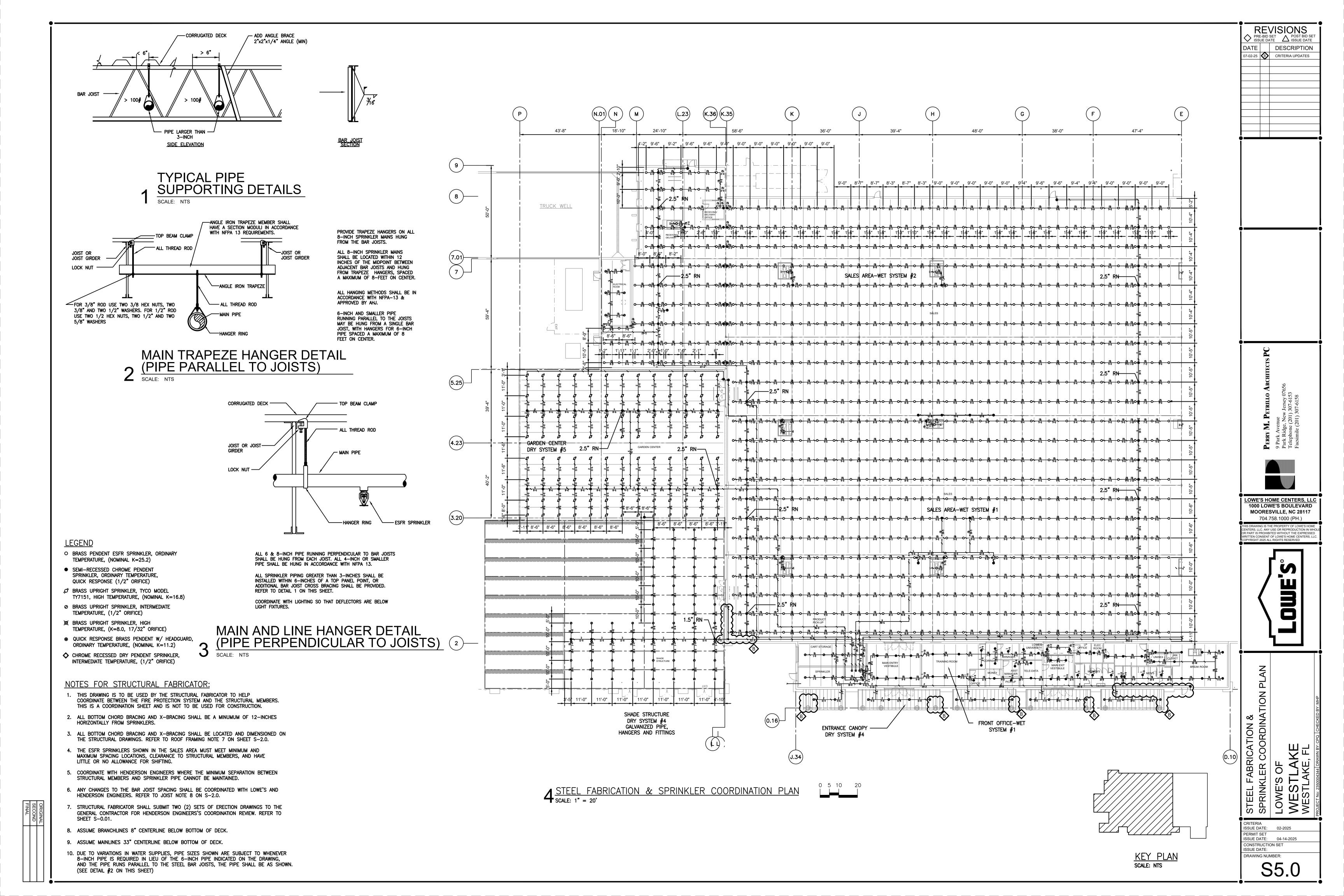
PERMIT SET
ISSUE DATE:
CONSTRUCTION SET
ISSUE DATE: 04-14-2025

DRAWING NUMBER:

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S-4.3

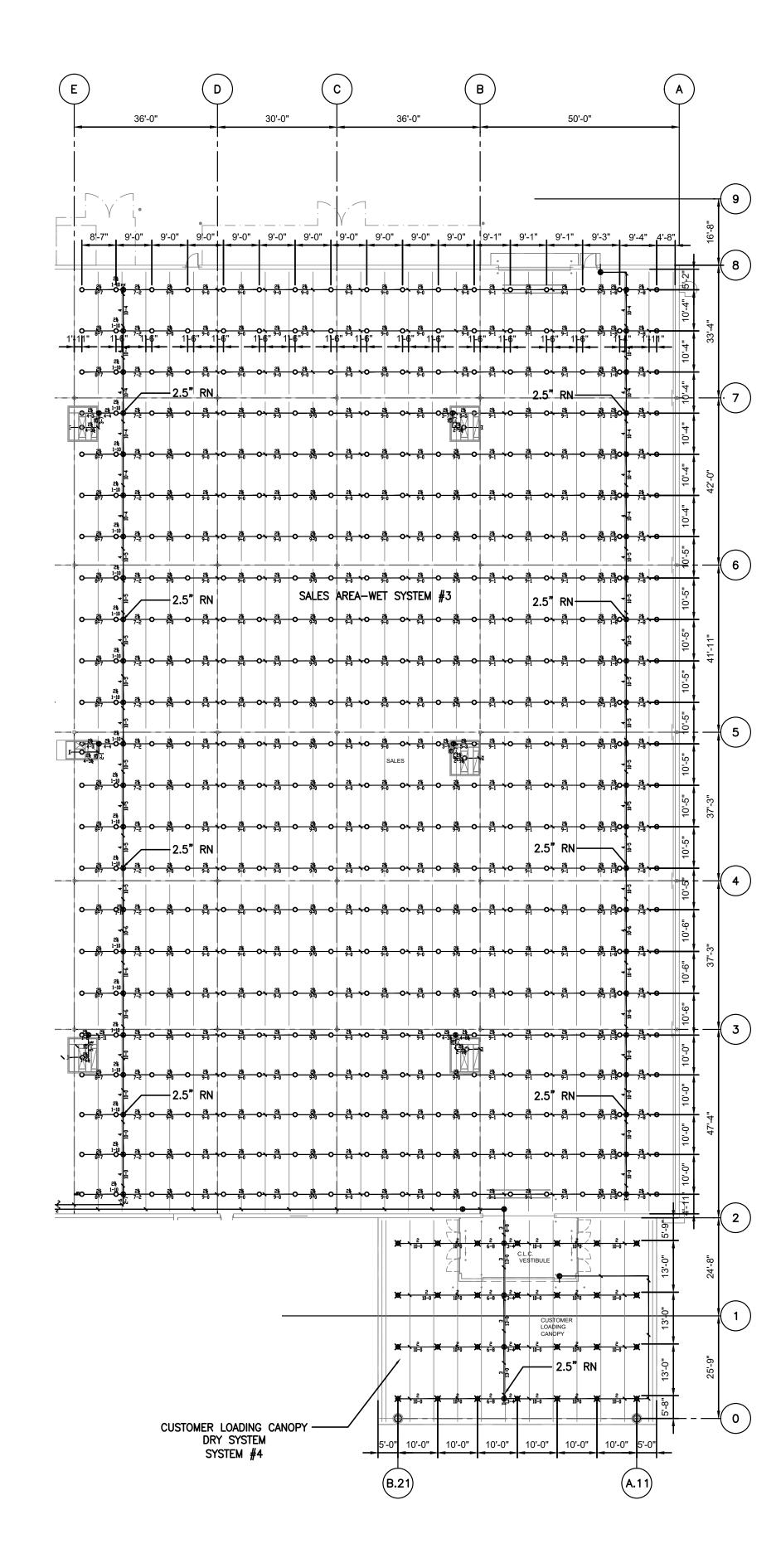


## NOTES FOR STRUCTURAL FABRICATOR:

- 1. THIS DRAWING IS TO BE USED BY THE STRUCTURAL FABRICATOR TO HELP COORDINATE BETWEEN THE FIRE PROTECTION SYSTEM AND THE STRUCTURAL MEMBERS. THIS IS A COORDINATION SHEET AND IS NOT TO BE USED FOR CONSTRUCTION.
- 2. ALL BOTTOM CHORD BRACING AND X-BRACING SHALL BE A MINUMUM OF 12-INCHES HORIZONTALLY FROM SPRINKLERS.
- 3. ALL BOTTOM CHORD BRACING AND X-BRACING SHALL BE LOCATED AND DIMENSIONED ON THE STRUCTURAL DRAWINGS. REFER TO ROOF FRAMING NOTE 7 ON SHEET S-2.0.
- 4. THE ESFR SPRINKLERS SHOWN IN THE SALES AREA MUST MEET MINIMUM AND MAXIMUM SPACING LOCATIONS, CLEARANCE TO STRUCTURAL MEMBERS, AND HAVE LITTLE OR NO ALLOWANCE FOR SHIFTING.
- 5. COORDINATE WITH HENDERSON ENGINEERS WHERE THE MINIMUM SEPARATION BETWEEN STRUCTURAL MEMBERS AND SPRINKLER PIPE CANNOT BE MAINTAINED.
- 6. ANY CHANGES TO THE BAR JOIST SPACING SHALL BE COORDINATED WITH LOWE'S AND HENDERSON ENGINEERS. REFER TO JOIST NOTE 8 ON S-2.0.
- 7. STRUCTURAL FABRICATOR SHALL SUBMIT TWO (2) SETS OF ERECTION DRAWINGS TO THE GENERAL CONTRACTOR FOR HENDERSON ENGINEERS'S COORDINATION REVIEW. REFER TO SHEET S-0.01.
- 8. ASSUME BRANCHLINES 8" CENTERLINE BELOW BOTTOM OF DECK.
- 9. ASSUME MAINLINES 33" CENTERLINE BELOW BOTTOM OF DECK.
- 10. DUE TO VARIATIONS IN WATER SUPPLIES, PIPE SIZES SHOWN ARE SUBJECT TO WHENEVER 8-INCH PIPE IS REQUIRED IN LIEU OF THE 6-INCH PIPE INDICATED ON THE DRAWING, AND THE PIPE RUNS PARALLEL TO THE STEEL BAR JOISTS, THE PIPE SHALL BE AS SHOWN. (SEE DETAIL #2 ON THIS SHEET)

# <u>LEGEND</u>

- O BRASS PENDENT ESFR SPRINKLER 165°F, (NOMINAL K=25.2)
- SEMI-RECESSED CHROME PENDENT SPRINKLER, ORDINARY TEMPERATURE, QUICK RESPONSE (1/2" ORIFICE)
- BRASS UPRIGHT SPRINKLER, TYCO MODEL TY7151, 286°F, (NOMINAL K=16.8)
- Ø BRASS UPRIGHT SPRINKLER, INTERMEDIATE TEMPERATURE, (1/2" ORIFICE)
- Ø BRASS UPRIGHT SPRINKLER, HIGH TEMPERATURE, (K=8.0, 17/32" ORIFICE)
- QUICK RESPONSE BRASS PENDENT W/ HEADGUARD, 155°F, (NOMINAL K=11.2)
- ♦ CHROME RECESSED DRY PENDENT SPRINKLER, INTERMEDIATE TEMPERATURE, (1/2" ORIFICE)



CRITERIA ISSUE DATE: 02-2025 PERMIT SET ISSUE DATE: 04-14-2025 CONSTRUCTION SET ISSUE DATE: KEY PLAN SCALE: NTS DRAWING NUMBER:

REVISIONS PRE-BID SET A POST BID SET ISSUE DATE

DATE DESCRIPTION

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1 STEEL FABRICATION & SPRINKLER COORDINATION PLAN SCALE: 1" = 20'