

GENERAL CONSTRUCTION SPECIFICATIONS

- THESE DRAWINGS ARE THE PROPERTY OF FLUHRER REED, PA FOR USE SOLELY FOR THIS PROJECT AND SH NOT BE REPRODUCED, COPIED OR USED FOR OTHER PURPOSES WITHOUT WRITTEN PERMISSION OF FLUHRER REED, PA.
- THE DESIGN PROFESSIONAL WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE STRUCTURAL ENGINEER OF RECORD FOR THE ADDITIONS AND/OR ALTERATIONS TO THE EXISTING STRUCTURE AS NOTED ON THESE DRAWINGS ONLY. THE STRUCTURAL ENGINEER OF RECORD BEARS THE RESPONSIBILITY OF THE NEW PRIMARY STRUCTURAL ELEMENTS NOTED AND THE PERFORMANCE OF THESE ELEMENTS. UNLESS SPECIFICALLY NOTED OR VERIFIED BY THE ADDITION, THE STRUCTURAL ENGINEER OF RECORD HAS NOT ANALYZED, EFFECTED OR ASSUMES THE RESPONSIBILITY FOR THE EXISTING STRUCTURE. NO OTHER PARTY MAY REVISE, ALTER, OR DELETE THESE CONSTRUCTION DOCUMENTS WITHOUT WRITTEN PERMISSION OF FLUHRER REED, PA OR THE STRUCTURAL ENGINEER OF RECORD. FOR THE PURPOSES OF THESE CONSTRUCTION DOCUMENTS THE STRUCTURAL ENGINEER OF RECORD AND FLUHRER REED, PA SHALL BE CONSIDERED THE SAME ENTITY.
- DIMENSIONS AND STRUCTURAL COMPONENTS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS ARE TAKEN FROM INFORMATION PROVIDED BY OTHERS. EXISTING CONSTRUCTION DOCUMENTS, FIELD MEASUREMENTS, NEW CONSTRUCTION SHALL NOT BEGIN UNTIL THE CONTRACTOR HAS REVIEWED EXISTING CONSTRUCTION AND VERIFIED THESE AND ALL OTHER ITEMS WHICH MAY AFFECT NEW CONSTRUCTION. ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN ON THESE DRAWINGS ARE TO BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE WORK PROCEEDS.
- THIS STRUCTURE IS ONLY STABLE IN ITS COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY BRACINGS DURING CONSTRUCTION TO STABILIZE THE STRUCTURE. FOR RENOVATIONS, ESPECIALLY MODIFICATIONS OF LOAD BEARING ELEMENTS, THIS SHORING, BRACING, ETC. SHOULD BE DONE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. TEMPORARY SHORING AND BRACING METHODS ARE NOT THE RESPONSIBILITY OF FLUHRER REED, PA AND ARE BEYOND THE SCOPE OF THESE DRAWINGS.
- THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR CONSTRUCTION SEQUENCES, METHODS, OR TECHNIQUES IN CONNECTION WITH THE CONSTRUCTION OF THIS STRUCTURE. THE SER WILL NOT BE HELD RESPONSIBLE FOR THE CONTRACTORS FAILURE TO CONFORM TO THE CONSTRUCTION DOCUMENTS, SHOULD ANY NON-COMFORMITIES OCCUR.
- ANY STRUCTURAL ELEMENTS OR DETAILS NOT FULLY DEVELOPED ON THE CONSTRUCTION DRAWINGS SHALL BE COMPLETED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. THESE SHOP DRAWINGS SHALL BE SUBMITTED TO FLUHRER REED, PA FOR REVIEW BEFORE ANY CONSTRUCTION BEGINS. SEE THE 'SUBMITTALS' SECTION OF THESE SPECIFICATIONS.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND CIVIL DRAWINGS. THIS COORDINATION IS NOT THE RESPONSIBILITY OF THE SER. SHOULD ANY DISCREPANCIES BECOME APPARENT THE CONTRACTOR SHALL NOTIFY FLUHRER REED, PA BEFORE ANY CONSTRUCTION BEGINS.
- VERIFICATION OF ASSUMED FIELD CONDITIONS IS NOT THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL VERIFY THE FIELD CONDITIONS FOR ACCURACY AND REPORT ANY DISCREPANCIES TO FLUHRER REED, PA BEFORE CONSTRUCTION BEGINS.
- THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR ANY SECONDARY STRUCTURAL ELEMENTS OR NON-STRUCTURAL ELEMENTS, EXCEPT FOR THE ELEMENTS SPECIFICALLY NOTED ON THE STRUCTURAL DRAWINGS.
- THIS STRUCTURE AND ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE SECTIONS OF THE NORTH CAROLINA STATE BUILDING CODE AND ANY LOCAL LAWS WHERE THE STRUCTURE IS TO BE CONSTRUCTED.
- DIMENSIONS AND STRUCTURAL COMPONENTS WERE TAKEN FROM THE DESIGN DOCUMENTS BY **CENTER FOR INNOVATIVE STRUCTURES, INC.** SEALED BY **VAN GLADFELTER, LICENSE NUMBER 23887**, ISSUED ON JANUARY 17, 2011. NEW CONSTRUCTION SHALL NOT BEGIN UNTIL THE CONTRACTOR HAS REVIEWED EXISTING CONSTRUCTION AND VERIFIED THESE AND ALL OTHER ITEMS WHICH MAY AFFECT NEW CONSTRUCTION. ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN ON THESE DRAWINGS ARE TO BE BROUGHT TO THE ATTENTION OF THE SER BEFORE WORK PROCEEDS.

DESIGN LOADS

- BUILDING CODES
 - A. NORTH CAROLINA STATE BUILDING CODE 2018 EDITION
 - B. 2015 INTERNATIONAL BUILDING CODE
 - C. MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, ASCE 7-10
- RISK CATEGORY II
- ROOF DEAD LOAD, SUPERIMPOSED
 - A. ROOFING 3 PSF
 - B. METAL DECK 2 PSF
 - C. JOISTS 2 PSF
 - D. ELECTRICAL 2 PSF
 - E. MECHANICAL 2 PSF
 - F. SPRINKLERS 4 PSF
 - G. MISC. 2 PSF
 - H. TOTAL LOAD 20 PSF
- ROOF LIVE LOAD
 - A. TRIB AREA < 200 SF 20 PSF
 - B. 200 SF < TRIB AREA < 600 SF PER CODE
 - C. TRIB AREA > 600 SF 12 PSF
- SNOW LOAD
 - A. GROUND SNOW LOAD, P_g 10 PSF
 - B. FLAT-ROOF SNOW LOAD, P_f 15 PSF
 - C. SNOW EXPOSURE FACTOR, C_e 1.00
 - D. SNOW IMPORTANCE FACTOR, I_s 1.00
 - E. THERMAL FACTOR, C_t 1.00
 - F. DRIFT SURCHARGE LOADS AND WIDTH OF SNOW DRIFT, SEE DIAGRAM(S)
- BATHROOM ROOF DEAD LOAD, SUPERIMPOSED
 - A. MECH. ELEC. PLUMBING, CEILING, MISC. 20 PSF
- BATHROOM ROOF LIVE LOAD 20 PSF
- FLOOR LIVE LOADS
 - A. STAIRS AND EXITS 100 PSF LLR
 - B. LOBBIES, FIRST FLOOR CORRIDORS 100 PSF LLR
 - C. LLR INDICATES LIVE LOADS HAVE BEEN REDUCED IN ACCORDANCE WITH THE APPLICABLE BUILDING CODES
- WIND LOADS / DATA
 - A. ULTIMATE WIND SPEED (3 SECOND GUST), V_{ult} 120 MPH
 - B. NOMINAL WIND SPEED, V_{100} 93 MPH
 - C. EXPOSURE CLASS 4
 - D. INTERNAL PRESSURE COEFFICIENT, C_{pi} +0.18
 - E. TOPOGRAPHY FACTOR, K_z 1.00
 - F. APPLIED DIRECTIONALITY FACTOR, K_d 0.85
 - G. WIND BASE SHEARS
 - a. W_e 282 kips
 - b. W_v 242 kips
- SEISMIC LOADS / DATA
 - A. ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE
 - B. SITE CLASS D
 - C. SEISMIC IMPORTANCE FACTOR, I_e 1.00
 - D. MAPPED SPECTRAL RESPONSE ACCELERATION (0.2 sec.), S_s 0.181
 - E. MAPPED SPECTRAL RESPONSE ACCELERATION (1.0 sec.), S_1 0.085
 - F. SPECTRAL RESPONSE COEFFICIENT, S_{DS} 0.193
 - G. SPECTRAL RESPONSE COEFFICIENT, S_{D1} 0.136
 - H. SEISMIC DESIGN CATEGORY C
 - I. BASIC STRUCTURAL SYSTEM BEARING WALL SYSTEM
 - J. RESPONSE MODIFICATION FACTOR, R 4.0
 - K. SYSTEM OVERSTRENGTH FACTOR, C_s 2.5
 - L. DEFLECTION AMPLIFICATION FACTOR, C_d 0.40
 - M. SEISMIC RESPONSE COEFFICIENT, C_e 0.48
 - N. SEISMIC RESISTING SYSTEM INTERMEDIATE PRECAST SHEAR WALLS
 - O. SEISMIC BASE SHEARS
 - a. S_e 596 kips
 - b. S_v 596 kips
- LOADS ON HANDRAILS, GUARDRAILS AND GUARDS
 - A. UNIFORM LOAD, 50 PLF APPLIED IN ANY DIRECTION
 - B. CONCENTRATED LOAD, 200 LBS APPLIED IN ANY DIRECTION
 - C. INTERMEDIATE RAILS / BALUSTERS / PANEL FILLERS, EXCLUDING HANDRAIL, 50 LBS HORIZONTALLY APPLIED NORMAL LOAD ON AN AREA EQUAL TO 1 SQUARE FOOT INCLUDING OPENINGS AND SPACE BETWEEN RAILS
 - D. LOADS NOTED ABOVE ARE NOT REQUIRED TO ACT CONCURRENTLY
- LOADS ON GRAB BARS, ACCESSIBLE SEATS / BENCHES AND GUARDS
 - A. CONCENTRATED LOAD, 250 LBS IN ANY DIRECTION AT ANY POINT
- LOADS ON STAIR TREADS
 - A. CONCENTRATED LOAD, 300 LBS APPLIED OVER AN AREA OF 5 SQUARE INCHES
- AWNINGS AND CANOPIES
 - A. DESIGNED FOR LIVE LOADS, SNOW LOADS AND WIND LOADS SPECIFIED
- A PROGRAM OF SPECIAL INSPECTIONS HAS NOT BEEN PROVIDED FOR THIS PROJECT. THIS PROJECT AND/OR ITS COMPONENTS, TO THE KNOWLEDGE OF FLUHRER REED, PA, ARE EXEMPT FROM SPECIAL INSPECTIONS PER THE NORTH CAROLINA STATE BUILDING CODE SECTION 1704.1.2. HOWEVER SHOULD ANY COMPONENT REQUIRE SPECIAL INSPECTIONS BY THE BUILDING OFFICIAL, THE OWNER MUST CONTACT FLUHRER REED, PA BEFORE CONSTRUCTION BEGINS. FLUHRER REED, PA WILL THEN PROVIDE THIS PROGRAM. PLEASE BE ADVISED THAT THIS PROGRAM IS OUTSIDE THE SCOPE OF SERVICES WHICH FLUHRER REED, PA IS CONTRACTUALLY OBLIGATED.

SUBMITTALS

- SHOP DRAWINGS AND SUBMITTALS SHALL BE SUBMITTED TO FLUHRER REED, PA FOR REVIEW BEFORE ANY CONSTRUCTION BEGINS. THESE SUBMITTALS WILL BE REVIEWED FOR OVERALL COMPLIANCE AS IT RELATES TO THE STRUCTURAL DESIGN OF THIS PROJECT. VERIFICATION OF THE SHOP DRAWINGS FOR DIMENSIONS, OR FOR ACTUAL FIELD CONDITIONS IS NOT THE RESPONSIBILITY OF THE FLUHRER REED, PA.
- ALLOW ENOUGH TIME FOR SUBMITTAL REVIEW, INCLUDING TIME FOR RESUBMITTALS. TIME FOR REVIEW SHALL COMMENCE ON FLUHRER REED'S RECEIPT OF SUBMITTAL. ALLOW 15 DAYS FOR INITIAL REVIEW OF EACH SUBMITTAL AND 15 DAYS FOR REVIEW OF EACH RESUBMITTAL.
- HIGHLIGHT, ENCLOSE OR OTHERWISE SPECIFICALLY IDENTIFY DEVIATIONS FROM THE CONTRACT DOCUMENTS ON SUBMITTALS.
- REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK OF THE CONTRACT AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. NOTE CORRECTIONS AND FIELD DIMENSIONS. MARK WITH APPROVAL STAMP BEFORE SUBMITTING TO FLUHRER REED, PA. STAMP SHALL INCLUDE NAME OF REVIEWER, DATE OF CONTRACTOR'S APPROVAL, AND STATEMENT CERTIFYING THAT SUBMITTAL HAS BEEN REVIEWED, CHECKED, AND APPROVED FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- SHOULD CHANGES MADE BY FLUHRER REED IN THE SHOP DRAWING REVIEW PROCESS OR RESPONSES TO REQUESTS FOR INFORMATION (RFIs) RESULT IN A CHANGE IN THE CONTRACT PRICE, DO NOT PROCEED UNTIL A CHANGE ORDER IS SUBMITTED AND APPROVED.
- WHERE PROFESSIONAL DESIGN SERVICES OR CERTIFICATIONS BY A DESIGN PROFESSIONAL ARE SPECIFICALLY REQUIRED OF CONTRACTOR BY THE CONTRACT DOCUMENTS, PROVIDE PRODUCTS AND SYSTEMS COMPLYING WITH SPECIFIC PERFORMANCE AND DESIGN CRITERIA INDICATED. IN ADDITION, SUBMIT COPIES OF A STATEMENT, SIGNED AND SEALED BY THE RESPONSIBLE DESIGN PROFESSIONAL, FOR EACH PRODUCT AND SYSTEM SPECIFICALLY ASSIGNED TO CONTRACTOR TO BE DESIGNED OR CERTIFIED BY A DESIGN PROFESSIONAL. INDICATE THE LOCATIONS, MAGNITUDE, DIRECTIONS AND CONNECTION TYPES OF LOADS IMPOSED ON THE SUPPORTING STRUCTURE AND INDICATE THE LOADS AND LOAD COMBINATIONS USED IN THE DESIGN.
- SHOP DRAWINGS, STATEMENTS, AND CALCULATIONS REQUIRING A PROFESSIONAL DESIGN SERVICES OR CERTIFICATIONS BY A DESIGN PROFESSIONAL, THAT ARE SUBMITTED UNSEALED WILL BE RETURNED NOT REVIEWED BY THE SER FOR RESUBMITTAL BY THE CONTRACTOR.
- LIMITED CONSTRUCTION ADMINISTRATION SERVICES ARE INCLUDED IN THE SCOPE OF SERVICES PROVIDED BY FLUHRER REED, PA. HOWEVER, IT IS POSSIBLE THAT SOME SUBMITTALS MAY BE RECOMMENDED BUT ARE NOT INCLUDED IN THE SCOPE OF SERVICES PROVIDED BY FLUHRER REED, PA. THE ARCHITECT, OWNER, OR CONTRACTOR MAY ARRANGE FOR THESE SERVICES TO BE PROVIDED BY FLUHRER REED, PA. OR A 3rd PARTY MAY PROVIDE THESE SERVICES WITH PRIOR APPROVAL FROM FLUHRER REED, PA. THE FOLLOWING SUBMITTALS ARE RECOMMENDED FOR THIS PROJECT:
 - A. IN-PLACE CONCRETE
 - B. IN ADDITION TO THE FOLLOWING, COMPLY WITH SUBMITTAL REQUIREMENTS IN ACI 301
 - C. PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED
 - D. DESIGN MIXTURES FOR EACH CONCRETE MIXTURE
 - E. REBAR SHOP DRAWINGS
 - F. SHOP DRAWINGS FOR THE DESIGN, ERECTION AND REMOVAL OF FORMWORK, SHORES AND RESHORES PREPARED BY OR UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. SHOP DRAWINGS, INCLUDE STRUCTURAL ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION, COMPLY WITH REQUIREMENTS IN "ACI MANUAL OF CONCRETE PRACTICE"
- POST-INSTALLED ANCHORS
 - A. PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED.
 - B. ONSITE INSTALLATION TRAINING CERTIFICATION. REFER TO POST-INSTALLED ANCHORS' SECTION FOR ADDITIONAL REQUIREMENTS.
- STRUCTURAL STEEL
 - A. REFER TO SPECIFICATIONS
- STEEL JOISTS
 - A. REFER TO SPECIFICATIONS
- STEEL DECK
 - A. REFER TO SPECIFICATIONS
- UNIT MASONRY ASSEMBLIES
 - A. REFER TO SPECIFICATIONS
- COLD-FORMED METAL FRAMING
 - A. REFER TO SPECIFICATIONS
- SELECTIVE DEMOLITION: SEE "SELECTIVE DEMOLITION" SECTION OF GENERAL NOTES
- ALUMINUM CANOPIES
 - A. REFER TO SPECIFICATIONS
- TILT-UP WALL PANELS
 - A. REFER TO SPECIFICATIONS

COMPONENTS AND CLADDING WIND LOADS

COMPONENTS & CLADDING WIND PRESSURES (PSF) ASCE 7-10

LOCATION	ZONE	EFFECTIVE WIND AREA, A_e
ROOF	1. OTHER	-28
	2. EDGE	-47
	3. CORNER	-70
	4. EDGE	--
PARAPET	5. OTHER	--
	6. OTHER	--
WALLS	4. OTHER	+26, -28
	5. EDGE	+26, -34

- NOTES:
- $q = 22$ FT. WIND PRESSURE COEFFICIENT ZONE PER ASCE 7-10
 - EDGE AND CORNER ZONES EXTEND A MINIMUM DISTANCE "q" FROM BUILDING CORNERS AND EDGES. REFER TO ASCE 7 FOR ROOF ZONE GEOMETRY
 - USE EFFECTIVE WIND AREA, A_e , AS DEFINED BY ASCE 7-10
 - NEGATIVE (-) VALUES REFER TO WIND PRESSURES ACTING AWAY FROM SURFACE. POSITIVE (+) VALUES INDICATE WIND PRESSURES ACTING TOWARDS SURFACE
 - REFER TO FRAMING PLAN NOTES FOR BAR JOIST ROOF NET UP/LIFT PRESSURES
 - WIND PRESSURES ARE BASED ON ULTIMATE WIND SPEED, V_{ult} , PER ASCE 7-10

FUTURE EXPANSION

- NO PROVISIONS FOR HORIZONTAL OR VERTICAL EXPANSIONS HAVE BEEN MADE.

FOUNDATIONS

- THE SCOPE OF SERVICES FOR THIS PROJECT PROVIDED BY FLUHRER REED, PA BEGINS FROM THE BEFORE ANY CONSTRUCTION BEGINS. THESE SUBMITTALS WILL BE REVIEWED FOR OVERALL COMPLIANCE AS IT RELATES TO THE STRUCTURAL DESIGN OF THIS PROJECT. VERIFICATION OF THE SHOP DRAWINGS FOR DIMENSIONS, OR FOR ACTUAL FIELD CONDITIONS IS NOT THE RESPONSIBILITY OF THE FLUHRER REED, PA.
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 - A. REFER TO SPECIFICATIONS
- STEEL JOISTS
 - A. REFER TO SPECIFICATIONS
- STEEL DECK
 - A. REFER TO SPECIFICATIONS
- UNIT MASONRY ASSEMBLIES
 - A. REFER TO SPECIFICATIONS
- COLD-FORMED METAL FRAMING
 - A. REFER TO SPECIFICATIONS
- SELECTIVE DEMOLITION: SEE "SELECTIVE DEMOLITION" SECTION OF GENERAL NOTES
- ALUMINUM CANOPIES
 - A. REFER TO SPECIFICATIONS
- TILT-UP WALL PANELS
 - A. REFER TO SPECIFICATIONS

DELEGATED DESIGN

- THE CONTRACTOR SHALL ENGAGE A QUALIFIED, LICENSED ENGINEER(S) IN THE STATE IN WHICH THE PROJECT IS CONSTRUCTED TO DESIGN DETAIL AND SUBMIT FOR REVIEW SEPALED CALCULATIONS AND SHOP DRAWINGS FOR THE DELEGATED DESIGN SHOWN IN THE CONTRACT DOCUMENTS. ADDITIONAL, DELEGATED DESIGN SYSTEMS MAY BE FOUND IN THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, PROCESS, LANDSCAPE AND CIVIL DRAWINGS NOT CONTAINED HEREIN.
- REFER TO THE SUBMITTALS SECTION FOR ADDITIONAL REQUIREMENTS.
- DELEGATED DESIGN ITEMS SHALL INCLUDE BUT ARE NOT LIMITED TO:
 - A. STRUCTURAL STEEL CONNECTIONS
 - B. HANDRAILS, GUARDRAILS, GUARDS AND CONNECTIONS
 - C. FALL SAFETY ANCHORAGES AND WINDOW WASHING EQUIPMENT INCLUDING DAVITS
 - D. CONCRETE TILT-UP WALL PANELS REINFORCEMENT AND CONNECTIONS FOR TEMPORARY BRACING AND ERECTION
 - E. TEMPORARY SHORING
 - F. COLD FORMED FRAMING AND CONNECTIONS TO SUPPORT EXTERIOR CLADDING OR ACT AS LOAD BEARING MEMBERS INCLUDING JOISTS, CEILING JOISTS AND WALLS NOT SPECIFICALLY DETAILED ON THE DRAWINGS.
 - G. ALUMINUM CANOPIES, COVERS AND STRUCTURES
 - H. SEISMIC ANCHORAGE OF MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION SYSTEMS
 - I. ANCHORAGE OF ROOFTOP EQUIPMENT

SELECTIVE DEMOLITION (SEE SPECIFICATION SECTION 024100)

- DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.
- PROVIDE AND MAINTAIN SHORING, BRACING, AND STRUCTURAL SUPPORTS AS REQUIRED TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF CONSTRUCTION AND FINISHES TO REMAIN, AND TO PREVENT UNEXPECTED OR UNCONTROLLED MOVEMENT OR COLLAPSE OF CONSTRUCTION BEING DEMOLISHED. STRENGTHEN OR ADD NEW SUPPORTS WHEN REQUIRED DURING PROGRESS OF SELECTIVE DEMOLITION. DESIGN OF SHORING IS NOT THE RESPONSIBILITY OF FLUHRER REED, PA.
- LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF INDICATED UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS SERVING AREAS TO BE SELECTIVELY DEMOLISHED.
- PROCEED WITH SELECTIVE DEMOLITION SYSTEMATICALLY, FROM HIGHER TO LOWER LEVEL. COMPLETE SELECTIVE DEMOLITION OPERATIONS ABOVE EACH FLOOR OR TIER BEFORE DISTURBING SUPPORTING MEMBERS ON THE NEXT LOWER LEVEL.
- NEATLY CUT OPENINGS AND HOLES PLUMB, SQUARE, AND TRUE TO DIMENSIONS REQUIRED. USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION. USE HAND TOOLS OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING. NOT HAMMERS AND CHIPPING. TO MINIMIZE DISTURBANCE OF ADJACENT SURFACES. TEMPORARILY COVER OPENINGS TO REMAIN.
- MAINTAIN ADEQUATE VENTILATION WHEN USING CUTTING TORCHES. DO NOT USE CUTTING TORCHES UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. AT CONCEALED SPACES, SUCH AS DUCT AND PIPE INTERIORS, VERIFY CONTENT AND CONTENTS OF HIDDEN SPACE BEFORE STARTING FLAME-CUTTING OPERATIONS. MAINTAIN FIRE WATCH AND PORTABLE FIRE-SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS.
- LOCATE SELECTIVE DEMOLITION EQUIPMENT AND REMOVE DEBRIS AND MATERIALS SO AS NOT TO IMPOSE EXCESSIVE LOADS ON SUPPORTING WALLS, FLOORS, OR FRAMING.
- DISPOSE OF DEMOLISHED ITEMS AND MATERIALS PROMPTLY.
- IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION OPERATIONS, COMPLY WITH APPLICABLE REGULATIONS, LAWS, AND ORDINANCES CONCERNING REMOVAL, HANDLING, DISPOSAL, AND PROTECTION AGAINST EXPOSURE OR ENVIRONMENTAL POLLUTION.
- DEMOLISH CONCRETE IN SECTIONS. CUT CONCRETE FULL DEPTH AT JUNCTURES WITH CONSTRUCTION TO REMAIN AND AT REGULAR INTERVALS. USING POWER-DRIVEN SAW, THEN REMOVE CONCRETE BETWEEN SAW CUTS.

CONCRETE (SEE SPECIFICATION SECTION 033000)

- CONCRETE SHALL BE PROPORTIONED, MIXED, PLACED, AND TESTED IN ACCORDANCE WITH THE ACI 308-14 BUILDING CODE. INCLUDING BUT NOT LIMITED TO ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301-10 "SPECIFICATION FOR STRUCTURAL CONCRETE". COMPLY WITH ACI 117-10 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION" AND MATERIALS: ACI 308.1-08 "SPECIFICATION FOR HOT WEATHER CONCRETING" AND ACI 308.1-10 "STANDARD SPECIFICATIONS FOR COLD WEATHER CONCRETING".
- STEEL REINFORCEMENT SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:
 - A. REINFORCING BARS: ASTM A615, GRADE 60, DEFORMED
 - B. REINFORCING BARS, WELDABLE: ASTM A615, GRADE 60, DEFORMED
 - C. PLAIN WIRE: ASTM A1064, AS DRAWN
 - D. PLAIN-STEEL WELDED: ASTM A1064, FABRICATED WIRE REINFORCEMENT FROM AS-DRAWN
 - E. STEEL WIRE INTO FLAT SHEETS
 - F. JOINT DOWEL BARS: ASTM A615, GRADE 60, PLAIN, FREE OF BURRS
- NORMAL WEIGHT CONCRETE (NWC) SHALL HAVE A UNIT WEIGHT OF 145 PCF (+/- 3 PCF), UNLESS NOTED OTHERWISE. CONCRETE MATERIALS SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:
 - A. PORTLAND CEMENT: ASTM C150, TYPE I OR TYPE II
 - B. FLY ASH: ASTM C91, CLASS F
 - C. BLENDED HYDRAULIC CEMENT: ASTM C33, GRADED
 - D. NORMAL-WEIGHT AGGREGATE: ASTM C330, GRADED
 - E. LIGHTWEIGHT AGGREGATE: ASTM C330, GRADED
 - F. WATER: ASTM C494, POTABLE
 - G. AIR-ENTRAINING ADMIXTURE: ASTM C260
- NO ADMIXTURES SHALL BE ADDED TO ANY STRUCTURAL CONCRETE WITHOUT WRITTEN PERMISSION OF FLUHRER REED, PA. ALL PROPOSED ADMIXTURES SHALL BE SUBMITTED TO FLUHRER REED, PA WITH THE PROPOSED MIX DESIGNS AND SHALL INCLUDE CERTIFICATION FROM THE MANUFACTURER THAT THE ADMIXTURE IS COMPATIBLE WITH OTHER ADMIXTURES AND NOT CONTRADICTORY TO THE EXISTING CONCRETE REINFORCEMENT. THOSE PERMITTED IN HARDENED CONCRETE, DO NOT USE CALCIUM CHLORIDE OR ANY ADMIXTURE CONTAINING CALCIUM CHLORIDE. FOR SLAB ON GRADE MIXES, REFER TO SPECIFICATIONS FOR ADDITIONAL ADMIXTURE REQUIREMENTS.
- SLUMP LIMIT: UNLESS NOTED OTHERWISE 8 INCHES PLUS OR MINUS 1 INCH AT THE POINT OF DELIVERY FOR CONCRETE WITH VERIFIED SLUMP OF 2 TO 4 INCHES BEFORE HIGH-RANGE WATER-REDUCING ADMIXTURE OR PLASTICIZING EQUIPMENT. OTHERWISE, PROVIDE SLUMP LIMIT OF 4 INCHES PLUS OR MINUS 1 INCH AT THE POINT OF DELIVERY. FOR SLAB ON GRADE MIXES, REFER TO SPECIFICATIONS FOR SLUMP REQUIREMENTS.
- INTERIOR SLABS TO BE GIVEN A SMOOTH, DENSE, HARD-TROWELED FINISH NOT CONTAIN AIR ENTRAINMENT SINCE BLISTERING OR DELAMINATION MAY OCCUR. IF SLAB WILL BE EXPOSED TO DEICING OR OTHER AGGRESSIVE CHEMICALS CONTACT FLUHRER REED, PA FOR PROPER AIR ENTRAINMENT REQUIREMENTS. FOR SLAB ON GRADE MIXES, REFER TO SPECIFICATIONS FOR ADDITIONAL AIR ENTRAINMENT REQUIREMENTS.
- COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING AND SUPPORTING REINFORCEMENT.
- COMPLY WITH THE MINIMUM CONCRETE COVER FOR REINFORCEMENT LISTED IN THE TABLES BELOW.
- SPlice REINFORCEMENT AS DETAILED OR AUTHORIZED BY FLUHRER REED, PA. MAKE BARS CONTINUOUS AROUND CORNER. SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICES, UNLESS OTHERWISE NOTED.
- PLACING SLEEVES THROUGH CONCRETE ELEMENTS IS NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS, ON APPROVED SLEEVING SHOP DRAWINGS, OR AS AUTHORIZED BY FLUHRER REED, PA IN WRITING.
- WELDING OF REINFORCING IS NOT PERMITTED UNLESS SPECIFICALLY CALLED FOR OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- FIELD BENDING OF REINFORCING PARTIALLY EMBEDDED IN THE CONCRETE IS NOT PERMITTED UNLESS OTHERWISE SHOWN OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- LOCATING JOINTS IN HORIZONTAL PLANE OF FOUNDATIONS, PILE CAPS, DRILLED PIERS, SLABS, BEAMS, GIRDERS AND JOISTS IS NOT PERMITTED UNLESS OTHERWISE NOTED OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- CHAMFER EXPOSED CONCRETE CORNERS 3/4" x 3/4" MINIMUM, UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS.
- COMPLY WITH ACI 301 FOR MEASURING, BATCHING, MIXING, TRANSPORTING, AND PLACING CONCRETE. BEFORE TEST SAMPLING AND PLACING CONCRETE, WATER MAY BE ADDED AT THE PROJECT SITE, SUBJECT TO LIMITATIONS OF ACI 301.
- SEE ARCHITECTURAL DRAWINGS FOR FINISHING REQUIREMENTS OF FORMED CONCRETE SURFACES. FOR UNIFORM SURFACES COMPLY WITH ACI 302.1R FOR SMOOTHING, STRAIGHTENING, AND FINISHING OPERATIONS UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS.
- CURE FORMED AND UNFORMED CONCRETE FOR AT LEAST SEVEN DAYS BY MOISTURE-RETAINING-CURE CURING - WET CURE WITH BLANKETS AND COVER. APPLY 1ST COAT SPRAY HARDENER IMMEDIATELY AFTER REMOVAL.
- ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO SAMPLE MATERIALS, PERFORM FIELD TESTS AND SUBMIT REPORTS RECOMMENDING CONCRETE PLACEMENT ACCORDING TO ACI 301 AND CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE.
- CURE FORMED AND UNFORMED CONCRETE FOR AT LEAST SEVEN DAYS BY MOISTURE-RETAINING-CURE CURING - WET CURE WITH BLANKETS AND COVER. APPLY 1ST COAT SPRAY HARDENER IMMEDIATELY AFTER REMOVAL.

CONCRETE COVER REQUIREMENTS

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	MINIMUM COVER
CONCRETE EXPOSED TO EARTH OR WEATHER: - No. 6 BAR THROUGH No. 18 BARS - No. 5 BAR AND SMALLER	3" 2" 1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: - SLABS, WALL AND JOISTS: No. 14 AND No. 18 BARS - SLABS, WALL AND JOISTS: No. 11 BARS AND SMALLER - BEAMS, COLUMNS, PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1 1/2" 3/4" 1 1/2"

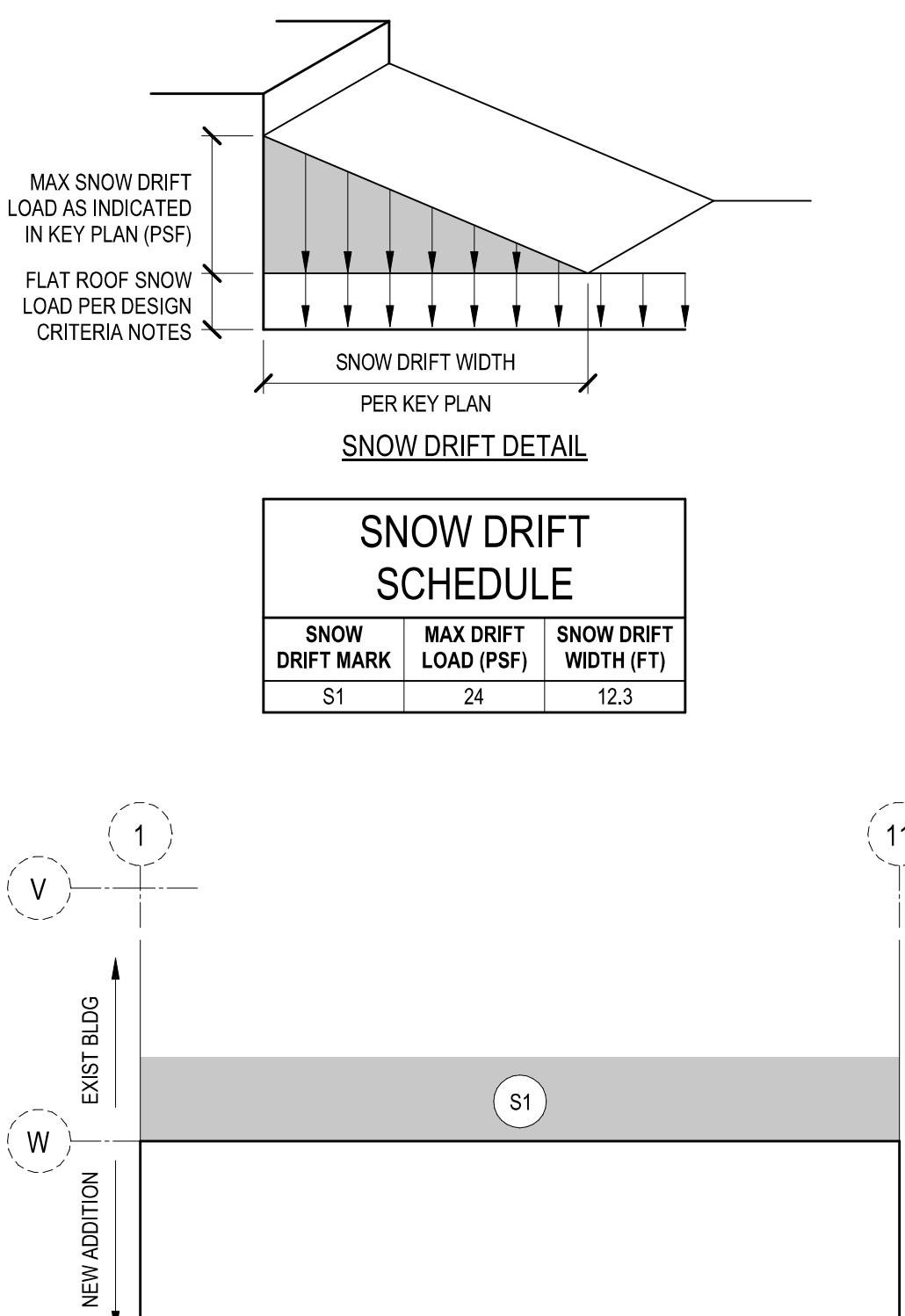
CONCRETE MIX DESIGN REQUIREMENTS

PROJECT CLASS	ELEMENT	28 DAY f_c (MIN)	CONCRETE TYPE	ACI EXPOSURE CLASS	MAX AGGREGATE SIZE
A	FOOTINGS, GRADE BEAMS	3000 PSI	NWC	F0, C1	1 1/2"
B	SLAB ON GRADE	4000 PSI	NWC	F0, C1	1"
C	EXTERIOR STAIR SLABS	5000 PSI	NWC	F1, C2	1"
D	TILT-UP WALL PANELS	4000 PSI	NWC	F0, C1	1"

- NOTES:
- ALL MIXES ARE EXPOSURE CLASS S0 AND P0 ACCORDING TO ACI 318 UNLESS NOTED OTHERWISE
 - WATER CEMENT RATIO: PROPORTION MIXES TO COMPLY WITH THE MAXIMUM WATER CEMENT RATIO REQUIREMENTS SHOWN IN ACI 318-14 TABLE 19.3.2.1. FOR SLAB ON GRADE MIXES, REFER TO SPECIFICATIONS FOR ADDITIONAL WATER CEMENT RATIO REQUIREMENTS.
 - AIR ENTRAINMENT: PROPORTION MIXES TO COMPLY WITH THE MAXIMUM AIR CONTENT REQUIREMENTS SHOWN IN ACI 318-14 TABLE 19.3.3.1.
 - MAXIMUM PERCENT OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT: COMPLY WITH THE REQUIREMENTS OF ACI 318-14 TABLE 26.4.2.2(a), FOR EXPOSURE CLASS F3
 - CHLORIDE ION CONTENT: PROPORTION MIXES TO COMPLY WITH THE MAXIMUM WATER SOLUBLE CHLORIDE ION CONTENT REQUIREMENTS SHOWN IN ACI 318-14 TABLE 19.3.2.1.

SNOW DRIFT

- REFER TO THE SNOW DRIFT KEY PLAN(S) FOR SNOW DRIFT SURCHARGE LOADS AND WIDTH OF SNOW DRIFTS
- SEE FIGURE BELOW FOR INFORMATION RELATED TO SNOW DRIFT SURCHARGE LOADS SHOWN IN SNOW DRIFT KEY PLAN(S)
- REFER TO SHEET THIS SHEET FOR SNOW DRIFT KEY PLANS



SNOW DRIFT LOAD KEY PLAN

NOTE: THE EXISTING JOIST AND JOIST GIRDER FRAMING WAS DESIGNED FOR 20 PSF LIVE LOAD. BASED OFF THE EXISTING BUILDING CODE THE ADDITIONAL DRIFT LOADING DOES NOT EXCEED THE EXISTING JOIST AND JOIST GIRDER CAPACITIES.

POST INSTALLED ANCHORS

- POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
- SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE.
- SUBSTITUTION REQUESTS, FOR 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 REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE.
- SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING A VALID RESEARCH REPORT SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
- ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY Hilti, SIMPSON STRONG-TIE OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- BASIS OF DESIGN INCLUDES THE FOLLOWING DESIGN PARAMETERS:
 - A. CRACKED CONCRETE
 - B. WATER-SATURATED CONCRETE
 - C. BASE MATERIAL TEMPERATURE OF 23-104 DEGREES FAHRENHEIT
 - D. ALLOWABLE WITH HAMMER-DRILL, HOLLOW DRILL BIT SYSTEM, AND CORE DRILLING METHODS
- CONTACT SIMPSON STRONG-TIE AT (800) 999-5099 OR HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY.
- INSTALL ANCHORS PER THE MANUFACTURER PRINTED INSTALLATION INSTRUCTIONS (MPI), AS INCLUDED IN THE ANCHOR PACKAGING.
- ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION IN ACCORDANCE WITH ACI 318.
- DRILLING SHALL BE PERFORMED WITH A ROTARY HAMMER DRILL AND CARBIDE TIPPED DRILL BIT IN ACCORDANCE WITH INSTRUCTIONS ACCOMPANYING ADHESIVE CARTRIDGES AND APPLICABLE RESEARCH REPORT. REFER TO MANUFACTURER'S DIRECTIONS FOR HAMMER DRILL MODE USE IN MASONRY WALLS.
- BORE HOLE CLEANING PROCEDURES MUST COMPLY WITH INSTRUCTIONS ACCOMPANYING THE ADHESIVE CARTRIDGE AND APPLICABLE RESEARCH REPORT IN ORDER TO PRODUCE A DRY, DUST-FREE HOLE.
- INJECTION OF ADHESIVES SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS ACCOMPANYING PRODUCT AND APPLICABLE RESEARCH REPORT TO PRODUCE AN AIR-VOID FREE INJECTION.
- ALTERNATE DRILLING METHODS, SUCH AS DIAMOND CORING, MUST BE APPROVED BY THE ENGINEER OF RECORD AND COMPLY WITH THE APPLICABLE RESEARCH REPORT.
- FASTENING ELEMENTS, INCLUDING THREADED RODS, REBAR AND INTERNALLY THREADED INSERTS, MUST BE CLEAN, DRY AND FREE OF ANY OIL OR CONTAMINANTS.
- OVERHEAD ADHESIVE ANCHORS SHALL BE INSTALLED FOLLOWING THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. OVERHEAD ANCHORS MANUFACTURED BY HILTI MUST BE INSTALLED USING THE HILTI PROPRIETARY SYSTEM.
- ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
- EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS. BY HILTI FERROSCAN, GPR, X-RAY, CHIPPING OR OTHER MEANS.

DRAWING INDEX

S-001	GENERAL NOTES, INDEX
S-002	GENERAL NOTES
S-003	ABBREVIATIONS, SYMBOLS & LAP LENGTH SCHEDULE
S-004	ISOMETRIC VIEWS
S-101A	FOUNDATION PLAN - AREA A
S-101B	FOUNDATION PLAN - AREA B
S-201A	ROOF FRAMING PLAN - AREA A
S-201B	ROOF FRAMING PLAN - AREA B
S-202	BATHROOM FOUNDATION AND FRAMING PLAN
S-301	TYPICAL FOUNDATION DETAILS
S-302	TYPICAL FOUNDATION DETAILS
S-303	TYPICAL MASONRY DETAILS
S-401	TYPICAL ROOF FRAMING DETAILS
S-402	TYPICAL ROOF FRAMING DETAILS
S-501	PANEL NUMBERING PLAN
S-502	TILT-UP WALL ELEVATIONS
S-503	TILT-UP WALL ELEVATIONS
S-504	TILT-UP WALL ELEVATIONS
S-505	TILT-UP WALL ELEVATIONS
S-506	TILT-UP PANEL REINFORCING ELEVATIONS
S-601	TILT-UP WALL DETAILS
TOTAL : 21	

UNIT MASONRY ASSEMBLIES (SEE SPECIFICATION SECTION 042200)

- CONCRETE MASONRY UNITS (CMU) SHALL BE ERECTED AS LOAD BEARING CONCRETE MASONRY. COMPLY WITH ACI 530.1 "SPECIFICATION FOR MASONRY STRUCTURES" FOR MATERIALS, METHODS, AND WORKMANSHIP AND ERECTION TOLERANCES.
- PROVIDE CONCRETE MASONRY UNIT COMPRESSIONS (CMUS) AS INDICATED ON THE DRAWINGS THAT DEVELOPS A MINIMUM NET-AREA COMPRESSIVE STRENGTH (F_m) OF **2080 PSI** AT 28 DAYS AND AS FOLLOWS:
 - CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 WITH A MINIMUM AVERAGE NET-AREA COMPRESSIVE STRENGTH OF **3200 PSI**.
 - MAXIMUM WEIGHT CLASSIFICATION: NORMAL WEIGHT, UNLESS OTHERWISE NOTED
 - SIZE: MANUFACTURED TO DIMENSIONS 3/8" LESS THAN NOMINAL DIMENSIONS
- PROVIDE MORTAR AND GROUT MATERIALS AS INDICATED IN THE SPECIFICATIONS AND CONFORMING TO THE REQUIREMENTS LISTED BELOW. ALL CELLS CONTAINING REINFORCEMENT, CELLS BELOW GRADE, AND ANY LOCATIONS NOTED ON THE DRAWINGS SHALL BE GROUTED SOLID. DO NOT USE ADMIXTURES, INCLUDING AIR-ENTRAINING AGENTS, ACCELERATORS, RETARDERS, WATER-REPELLENT AGENT, ANTIFREEZE COMPOUNDS, OR OTHER ADMIXTURES UNLESS OTHERWISE NOTED. DO NOT USE CALCIUM CHLORIDE IN MORTAR OR GROUT.
- LAY SOLID MASONRY UNITS WITH COMPLETELY FILLED BED AND HEAD JOINTS. BUTTER ENDS WITH SUFFICIENT MORTAR TO FILL HEAD JOINTS AND SHOVE INTO PLACE. DO NOT DEEPLY FURROW BED JOINTS OR SLUSH HEAD JOINTS.
- PROVIDE VERTICAL REINFORCING AS NOTED PER THE CMU WALL REINFORCING SCHEDULE AND PER THE REQUIREMENTS BELOW. PROVIDE MATCHING DOWELS INTO THE FOOTING OR FOUNDATION CONSTRUCTION. PROVIDE TWO ADDITIONAL BARS AND DOWELS UNDER POINT LOADS, LINTELS AND BEAMS WHICH HAVE A REACTION EXCEEDING 10 KIPS, WHETHER OR NOT NOTED ON THE FRAMING PLANS.
 - REINFORCING STEEL SHALL BE PLACED IN COMPLIANCE WITH ACI 530.1.
 - PROVIDE AN OPEN BOTTOM BOND BEAM REINFORCED WITH 2 NO. 5 CONTINUOUS BARS AT THE FOLLOWING LOCATIONS AND AS NOTED ON THE DRAWINGS:
 - AT THE TOP OF ALL WALL ELEVATIONS.
 - AT ALL JOIST AND FRAMING BEARING ELEVATIONS.
 - EQUALLY SPACED BETWEEN LATERAL SUPPORTS OR AT 10'-0" O.C. MAXIMUM VERTICALLY, IF THE DISTANCE BETWEEN LATERAL SUPPORTS EXCEEDS 10'-0"
 - GROUT VOIDS BETWEEN BRICK VENEER AND CMU WALLS OR CONCRETE WALLS SOLID BELOW GRADE. GROUT ALL CMU CELLS SOLID BELOW GRADE.
- VERIFY REINFORCING FOR CMU MASONRY PER THE REINFORCING SCHEDULES SHOWN ON THESE DRAWINGS. IF REINFORCEMENT IS NOT SPECIFICALLY INDICATED, VERIFY WITH THE SER.
- PROVIDE MISCELLANEOUS ANCHORS AS INDICATED AND COMPLY WITH THE FOLLOWING:
 - ANCHOR BOLTS: HEADED OR L-SHAPED STEEL BOLTS COMPLYING WITH ASTM A307, GRADE A, WITH ASTM A563 HEX NUTS AND, WHERE INDICATED, FLAT WASHERS; HOT-DIP GALVANIZED TO COMPLY WITH ASTM A153, CLASS C.
 - POST INSTALLED ANCHORS: PROVIDE CHEMICAL ANCHORS, WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO SIX TIMES THE LOAD IMPOSED WHEN INSTALLED IN SOLID OR GROUTED UNIT MASONRY AND EQUAL TO FOUR TIMES THE LOAD IMPOSED WHEN INSTALLED IN CONCRETE.
- PROVIDE STEEL, MASONRY, AND CONCRETE LINTELS AS NOTED ON THE LINTEL SCHEDULE.
- PROVIDE CONTROL AND EXPANSION JOINTS AS NOTED ON THE ARCHITECTURAL DRAWINGS, BUT SPACING SHALL NOT EXCEED THE LESSER OF A LENGTH-TO-HEIGHT RATIO OF 1:5 AND 25'-0" O.C. INSTALL CONTROL AND EXPANSION JOINT MATERIALS IN UNIT MASONRY AS MASONRY PROGRESSES. DO NOT ALLOW MATERIALS TO SPAN CONTROL AND EXPANSION JOINTS WITHOUT PROVISION TO ALLOW FOR IN-PLANE WALL OR PARTITION MOVEMENT.
- DURING CONSTRUCTION, COVER TOPS OF WALLS, PROJECTIONS, AND SILLS WITH WATERPROOF SHEETING AT END OF EACH DAY'S WORK. COVER PARTIALLY COMPLETED MASONRY WHEN CONSTRUCTION IS NOT IN PROGRESS.
- DO NOT APPLY UNIFORM FLOOR OR ROOF LOADS FOR AT LEAST 12 HOURS AND CONCENTRATED LOADS FOR AT LEAST 3 DAYS AFTER BUILDING MASONRY WALLS OR COLUMNS.
- DO NOT BUILD ON FROZEN SUBSTRATES. REMOVE AND REPLACE UNIT MASONRY DAMAGED BY FROST OR BY FREEZING CONDITIONS. COMPLY WITH COLD-WEATHER CONSTRUCTION REQUIREMENTS CONTAINED IN ACI 530.1.
- COMPLY WITH HOT-WEATHER CONSTRUCTION REQUIREMENTS CONTAINED IN ACI 530.1.

STRUCTURAL SHEATHING

- PLYWOOD AND ORIENTED STRAND BOARD SHALL COMPLY TO EITHER DOC PS 1 OR DOC PS 2, UNLESS OTHERWISE INDICATED. EACH PANEL SHALL BE FACTORY MARKED TO INDICATE COMPLIANCE WITH APPLICABLE STANDARD.
 - COMPLY WITH APPLICABLE RECOMMENDATIONS IN AIA FORM NO. E308, "AIA DESIGN/CONSTRUCTION GUIDE: RESIDENTIAL & COMMERCIAL," INCLUDING "CODE PLUS INSTALLATION PROVISIONS" FOR TYPES OF STRUCTURAL-USE PANELS AND APPLICATIONS INDICATED.
- PLYWOOD OR ORIENTED STRAND BOARD WALL SHEATHING SHALL BE EXPOSURE 1, APA RATED STRUCTURAL SHEATHING CONFORMING TO THE REQUIREMENTS SHOWN ON THESE DRAWINGS.
- INTERIOR WALLS UNLESS NOTED OTHERWISE SHALL BE SHEATHED WITH PAPER-SURFACED GYPSUM WALL SHEATHING, CONFORMING TO ASTM C 79 OR ASTM C 1396. GYPSUM SHEATHING, WITH WATER-RESISTANT TREATED CORE AND WITH WATER-REPELLENT PAPER BONDED TO CORE'S FACE, BACK, AND LONG EDGES. FASTEN GYPSUM SHEATHING TO WOOD FRAMING WITH NAILS PER ICC'S "INTERNATIONAL BUILDING CODE."
- PLYWOOD OR ORIENTED STRAND BOARD ROOF SHEATHING SHALL BE EXTERIOR, APA RATED STRUCTURAL SHEATHING CONFORMING TO THE REQUIREMENTS SHOWN ON THESE DRAWINGS.
- PLYWOOD OR ORIENTED STRAND BOARD SUBFLOORING SHALL BE EXPOSURE 1, APA RATED STRUCTURAL SINGLE-FLOOR PANELS OR SHEATHING CONFORMING TO THE REQUIREMENTS SHOWN ON THESE DRAWINGS.
- SHEATHINGS SHALL BE ATTACHED PER THE REQUIREMENTS SHOWN ON THESE DRAWINGS OR AS REQUIRED PER ICC'S INTERNATIONAL BUILDING CODE, WHICHEVER IS MORE STRINGENT.
- WHEN REQUIRED, ADHESIVES FOR FIELD GLUING PANELS TO FRAMING SHALL COMPLY WITH ASTM D 3498 THAT IS APPROVED FOR USE WITH TYPE OF CONSTRUCTION PANEL INDICATED BY MANUFACTURERS OF BOTH ADHESIVES AND PANELS.

STRUCTURAL STEEL (SEE SPECIFICATION SECTION 051200)

- STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND THE LATEST EDITIONS OF SAID STANDARDS:
 - AISC'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
 - AISC'S "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS" AND "SUPPLEMENT NO. 2," IF THE RESPONSE MODIFICATION FACTOR IS GREATER THAN 1.0
 - AISC'S "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
 - AISC'S "SPECIFICATION FOR THE DESIGN OF STEEL HOLLOW STRUCTURAL SECTIONS"
 - RCS'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS"
 - AWSS'S "STRUCTURAL WELDING CODE AWS D1.1"
- STEEL FABRICATORS FOR THIS PROJECT SHALL PARTICIPATE IN THE AISC QUALITY CERTIFICATION PROGRAM AND HAVE A MINIMUM DESIGNATION OF STD. STEEL INSTALLERS FOR THIS PROJECT SHALL PARTICIPATE IN THE AISC QUALITY CERTIFICATION PROGRAM AND HAVE A MINIMUM DESIGNATION OF CSE. ALL PERSONNEL PERFORMING WELDING ON THIS PROJECT SHALL CONFORM TO THE QUALITY PROCEDURES ACCORDING TO AWS D1.1 "STRUCTURAL WELDING CODE-STEEL".
- ALL STRUCTURAL STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:
 - W-SHAPES: ASTM A992
 - CHANNELS, MC CHANNELS: ASTM A36 (A992 ACCEPTABLE)
 - ANGLES: ASTM A362 GR 50
 - PLATE AND BAR: ASTM A36
 - COLD-FORMED HOLLOW STRUCTURAL SECTIONS (HSS): ASTM A500, GRADE C
 - STEEL PIPE: ASTM A53, TYPE E OR S, GRADE B
 - WELDING ELECTRODES: CLASS E70XX
- UNLESS OTHERWISE NOTED ON THE DESIGN DOCUMENTS, APPLY SHOP PRIMER PER SPECIFICATIONS TO ALL STEEL SURFACES NOT EXPOSED TO WEATHER EXCEPT THE FOLLOWING:
 - SURFACES EMBEDDED IN CONCRETE OR MORTAR. EXTEND PRIMING OF PARTIALLY EMBEDDED MEMBERS TO A DEPTH OF 2".
 - SURFACES TO BE FIELD WELDED.
 - SURFACES TO BE HIGH-STRENGTH BOLTED WITH SLIP-CRITICAL CONNECTIONS
 - SURFACES TO RECEIVE SPRAYED FIRE-RESISTIVE MATERIALS
 - GALVANIZED SURFACES
- APPLY ZINC COATING BY THE HOT-DIP PROCESS ACCORDING TO ASTM A123 TO LOOSE LINTELS, RELINING ANGLES AND CHANNELS AT DOCK LEVELERS, AND ALL STEEL. EXPOSED TO WEATHER, FILL VENT HOLES AND GRIND SMOOTH AFTER GALVANIZING AS REQUIRED. REPAIR DAMAGED GALVANIZED COATINGS WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A790 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
- BOLTS, CONNECTORS, AND ANCHORS SHALL CONFORM TO THE FOLLOWING:
 - ASTM F1554 BOLTED CONNECTIONS:
 - GR A325, TYPE 1, HEAVY HEX STEEL STRUCTURAL BOLTS; ASTM A563 HEAVY HEX CARBON-STEEL NUTS, AND ASTM F436 HARDENED CARBON-STEEL WASHERS. THE FINISH FOR THESE BOLTED CONNECTIONS SHALL BE PLAIN UNLESS CONNECTING HOT-DIPPED GALVANIZED MATERIALS AND THEN SHALL HAVE A HOT-DIPPED ZINC COATING CONFORMING TO ASTM A153.
 - OR A490, TYPE 1, HEAVY HEX STEEL STRUCTURAL BOLTS; ASTM A563 HEAVY HEX CARBON-STEEL NUTS, AND ASTM F436 HARDENED CARBON-STEEL WASHERS. PLAIN. THE FINISH FOR THESE BOLTED CONNECTIONS SHALL BE PLAIN.
 - ANCHOR RODS: ASTM F1554, GRADE 36 UNLESS NOTED OTHERWISE
 - NUTS: ASTM A563
 - PLATE WASHERS: ASTM A36 CARBON STEEL, REFER TO DRAWINGS AND DETAILS FOR DIMENSIONAL REQUIREMENTS
 - WHERE F1554 GR.55 ANCHOR RODS ARE NOTED ON THE DRAWINGS, THE ANCHORS SHALL INCLUDE THE S1 WELDING SUPPLEMENT.
 - FINISH: PLAIN
- DEFORMED BAR ANCHORS (DBAR): ASTM A1064 AND MEETING REQUIREMENTS FOR TYPE 'C' STUDS PER AWS D1.1, F1770X1. REINFORCING BARS SHALL NOT BE SUBSTITUTED FOR DEFORMED BAR ANCHORS. WELD IN ACCORDANCE WITH AWS D1.1 CH.7.
- SELECT AND COMPLETE STEEL TO STEEL CONNECTIONS USING SCHEMATIC DETAILS INDICATED WITH THE FACTORED REACTIONS SHOWN ON THESE DRAWINGS AND AISC'S "MANUAL OF STEEL CONSTRUCTION, LOAD AND RESISTANCE FACTOR DESIGN, IF NO REACTION IS LISTED DESIGN THE CONNECTION FOR A MINIMUM OF 30 KIPS. THE FABRICATOR'S RESPONSIBILITIES INCLUDE USING A QUALIFIED PROFESSIONAL ENGINEER, LICENSED IN NORTH CAROLINA, TO PREPARE STRUCTURAL ANALYSIS DATA FOR STRUCTURAL STEEL CONNECTIONS. HOWEVER, ALL CONNECTIONS SHALL USE A MINIMUM OF 3/4"Ø A325 BOLTS AND WITH THE MINIMUM NUMBER OF BOLTS AS LISTED ON THESE DRAWINGS.
- IN BOLTED CONNECTIONS, PROVIDE HIGH STRENGTH BOLTS, NUTS AND WASHERS IN BOLTED STEEL CONNECTIONS AND INSTALL SAID CONNECTORS ACCORDING TO RCS'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". CUT, DRILL, OR PUNCH BOLT HOLES PERPENDICULAR TO METAL SURFACES. ALL CONNECTIONS EXCEPT LISTED BELOW, OR AS INDICATED ON THE DRAWINGS, SHALL BE SNUG TIGHTENED:
 - JOINTS THAT UTILIZE OVER-SIZED HOLES
 - JOINTS THAT CONNECT BRACING MEMBERS FOR THE LATERAL RESISTING SYSTEM
 - JOINTS THAT UTILIZE SLOTTED HOLES EXCEPT THOSE WITH APPLIED LOAD APPROXIMATELY NORMAL WITHIN 80° TO 100° TO THE DIRECTION OF THE LONG DIMENSION OF THE SLOT.
 - COLUMN SPLICES IN MULTI-STORY STRUCTURES OVER 125 FT IN HEIGHT.
- IN WELDED CONNECTIONS, COMPLY WITH AWS D1.1 FOR WELDING PROCEDURE SPECIFICATIONS, TOLERANCES, APPEARANCE, AND QUALITY OF WELDS AND FOR METHODS USED IN CORRECTING WELDING WORK. COMPLY WITH AISC MINIMUM WELDING REQUIREMENTS.
- BASE AND OR BEARING PLATES WHICH ARE SUPPORTED OVER CONCRETE OR MASONRY SHALL BE PLACED OVER 2" OF GROUT WITH A TOLERANCE OF ± 1/2" UNLESS OTHERWISE NOTED. CLEAN CONCRETE AND MASONRY SURFACES OF BOND REDUCING MATERIAL AND ROUGHEN SURFACES. SET PLATES FOR STRUCTURAL MEMBERS ON WEDGES, SHIMS, OR SETTING NUTS AS REQUIRED. TIGHTEN ANCHOR RODS AFTER MEMBER IS POSITIONED AND PLUMBED. DO NOT REMOVE WEDGES, BUT IF PROTRUDING, CUT OFF FLUSH WITH BASE PLATE. PROMPTLY PACK GROUT SOLIDLY BETWEEN BEARING SURFACES SO NO VOIDS REMAIN. GROUT SHALL CONFORM TO ASTM C1107. FACTORY-PACKAGED, NONMETALLIC AGGREGATE GROUT, NONCORROSIVE, NONSTAINING, MIXED WITH WATER TO CONSISTENCY SUITABLE FOR APPLICATIONS. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI.
- FURNISH ANCHORAGE ITEMS EMBEDDED OR ATTACHED TO OTHER CONSTRUCTION BY USE OF SETTING DIAGRAMS AND TEMPLATES. DO NOT FLOAT-IN THESE ITEMS.
- ACCURATELY FINISH ENDS OF COLUMNS AND OTHER MEMBERS TRANSMITTING BEARING LOADS.
- PROVIDE TEMPORARY SHORES, GUYS, BRACES, AND OTHER SUPPORTS DURING ERECTION TO KEEP STRUCTURAL STEEL SECURE, PLUMB AND IN ALIGNMENT AGAINST TEMPORARY CONSTRUCTION LOADS AND LOADS EQUAL IN INTENSITY TO DESIGN LOADS. ALSO, PROVIDE TEMPORARY SUPPORTS IN STEEL TO STEEL CONNECTIONS AND ALL OTHER LOCATIONS PER OSHA REQUIREMENTS.
- MAINTAIN ERECTION TOLERANCES OF STRUCTURAL STEEL WITHIN AISC'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
- ONLY SPLICE MEMBERS WHERE INDICATED ON THE DESIGN DOCUMENTS.
- ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTION AGENCY TO INSPECT FIELD WELDS AND HIGH-STRENGTH BOLTED CONNECTIONS. SHOP-SOLD CONNECTIONS WILL BE INSPECTED ACCORDING TO RCS'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". FIELD WELDS WILL BE VISUALLY INSPECTED ACCORDING TO AWS D1.1, EXCEPT FULL PENETRATION WELDS SHALL ALSO BE INSPECTED PER ULTRASONIC INSPECTION PER ASTM E164.

STEEL DECK (SEE SPECIFICATION SECTION 053100)

- METAL DECKING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STEEL DECK INSTITUTE SPECIFICATIONS.
- WELDING OF METAL DECKING SHALL CONFORM TO AWS D1.3, "STRUCTURAL WELDING CODE-SHEET STEEL"
- METAL ROOF DECK SHALL BE TYPE B (WIDE RIB) WITH A 1.5" PROFILE DEPTH MANUFACTURED BY Nucor Corporation VULCRAFT DIVISION UNLESS NOTED OTHERWISE. ALTERNATE 1/800 OR 1/1000 OF THE SPAN FOR LIVE LOAD PLUS DEAD LOAD.
 - FLOOR MEMBERS
 - ROOF MEMBERS
- METAL ROOF DECK SHALL HAVE A 3-SPAN CONDITION UNLESS NOTED OTHERWISE AND HAVE NESTED SIDELAPS.
- FASTEN ROOF DECK PANELS TO STEEL SUPPORTING MEMBERS TO INTERIOR RIBS OF DECK UNITS AS INDICATED AS INDICATED ON THE DRAWINGS. FASTEN SIDELAPS OF PANELS BETWEEN SUPPORTS AS INDICATED ON THE DRAWINGS. INSTALL DECK ENDS OVER SUPPORTING FRAMING WITH A 1 1/2" MINIMUM END BEARING AND LAP JOINTS 2'. FASTEN ROOF DECK PANELS TO DIAPHRAGM PERIMETER, AS STEEL MEMBERS, EDGE ANGLES, EMBED PLATES AS INDICATED ON THE DRAWINGS. AS AN ALTERNATIVE TO 80° PLUGGLE WELDS WHERE SPECIFIED, CONTRACTOR MAY USE SIMPSON STRONG-TIE No. 12 STRONG-DRIVE XL SELF-DRILLING SCREWS WHERE THE SUPPORTING STEEL THICKNESS DOES NOT EXCEED 3/8". FASTEN SIDELAPS OF PANELS BETWEEN SUPPORTS AT THE SPACING INDICATED IN THE DRAWINGS.
- PROVIDE ROOF SLUMP PANS AND SLUMP PLATES OVER OPENINGS PROVIDED IN ROOF DECK AND EITHER WELD OR MECHANICALLY FASTEN FLANGES TO TOP OF DECK. SPACE CONNECTORS NOT MORE THAN 12" APART AND AT LEAST ONE AT EACH CORNER.
- PROVIDE MISCELLANEOUS ROOF DECK ACCESSORIES NOT SPECIFICALLY NOTED ON THESE DRAWINGS AS REQUIRED TO SUBSTRATE A COMPLETE DECK INSTALLATION. THESE ACCESSORIES MAY INCLUDE RIDGE AND VALLEY PLATES, FINISH STRIPS, END CLOSURES, REINFORCING CHANNELS, AND WELD COVER PLATES AT CHANGES IN DIRECTION OF ROOF-DECK PANELS ACCORDING TO DECK MANUFACTURER'S WRITTEN INSTRUCTIONS.
- DO NOT SUPPORT SUSPENDED LOADS FROM THE METAL ROOF DECK, OTHER THAN LAY-IN ACoustICAL CEILING TILE SYSTEMS, WITHOUT PRIOR WRITTEN APPROVAL BY THE DECK MANUFACTURER AND REVIEW BY THE SER. PROVIDE A SECONDARY FRAMING SYSTEM, UNISTRUT OR SIMILAR, SPANNING BETWEEN STRUCTURAL STEEL BEAMS/SUITS TO SUPPORT PERMANENT SUSPENDED LOADS BELOW METAL ROOF DECK.
- INSTALL DECK PANELS AND ACCESSORIES ACCORDING TO APPLICABLE SPECIFICATIONS AND COMMENTARY IN SDI PUBLICATION NO. 30, MANUFACTURER'S WRITTEN INSTRUCTIONS AND REQUIREMENTS IN THESE DOCUMENTS.
- INSTALL TEMPORARY SHORING BEFORE PLACING DECK PANELS, IF REQUIRED TO MEET DEFLECTION LIMITATIONS.
- PLACE DECK PANELS ON SUPPORTING FRAME AND ADJUST TO FINAL POSITION WITH ENDS ACCURATELY ALIGNED AND BEARING ON SUPPORTING FRAME BEFORE BEING PERMANENTLY FASTENED. DO NOT STRETCH OR CONTRACT SIDELAP INTERLOCKS.
- DO NOT EMBED ELECTRICAL CONDUIT OR OTHER UTILITIES IN SLAB ON METAL DECK UNLESS NOTED OTHERWISE OR UNLESS REVIEWED AND APPROVED BY ENGINEER OF RECORD.

TILT-UP WALL PANELS (SEE SPECIFICATION SECTION 034713)

- REFER TO THE CONCRETE AND STRUCTURAL STEEL SECTIONS FOR ADDITIONAL REQUIREMENTS INCLUDING BUT NOT LIMITED TO MATERIALS REQUIREMENTS, GOVERNING SPECIFICATIONS AND COLD AND HOT WEATHER CORRECTING REQUIREMENTS.
- REFER TO ARCHITECTURAL DRAWINGS FOR CHAMBERS, REVEALS AND ANY ADDITIONAL EMBEDDED ITEMS. REFER TO ARCHITECTURAL FOR FINISHING REQUIREMENTS.
- PROVIDE 3/4" CHAMBERS ON ALL EXPOSED WALL CORNERS UNLESS INDICATED OTHERWISE ON ARCHITECTURAL DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR ADDITIONAL REINFORCING NECESSARY FOR LIFTING AND ERECTION. LIFTING FRAMEWORKS AND ALL TEMPORARY BRACING, THE PANEL DESIGNS INCLUDING THESE DRAWINGS AND DO NOT ACCOUNT FOR ADDITIONAL STRESSES DUE TO LIFTING AND ERECTION. MIN COMPRESSIVE STRENGTH AT TIME OF LIFTING SHALL BE IN ACCORDANCE WITH LIFTING DESIGN REQUIREMENTS.
- CASTING SLAB SHALL BE CURED. SAW CUTS, CRACKS, JOINTS OR DEFECTS IN THE CASTING BED SHALL BE FILLED SO AS TO MINIMIZE TRANSFER OF THE JOINT LINE TO THE PANEL FACE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPATIBILITY OF CURING AGENTS, SEALANTS, AND RELEASING AGENTS UTILIZED IN THE WORK. IF PANELS ARE TO BE STACKED, THE TROWELED SURFACE SHALL BE CONSIDERED THE CASTING BED AND SHALL BE TREATED AS THE SAME.
- COLD JOINTS SHALL NOT BE PERMITTED IN AN INDIVIDUAL SITE CAST TILT-UP PANEL.
- USE ERECTION EQUIPMENT THAT WILL PREVENT DAMAGE TO EXISTING CONSTRUCTION, PERMANENT FLOOR SLABS AND PANELS. DAMAGE TO WORK SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND IN A MANNER ACCEPTABLE TO THE ARCHITECT PRIOR TO PAINTING OR COATING.
- PANELS NOT ATTACHED TO THE BUILDING FRAME AT THE TIME OF ERECTION SHALL BE BRACED IN POSITION USING A BRACING SYSTEM DESIGNED TO RESIST WIND, SOIL AND OTHER LOADS THAT MAY REASONABLY BE DETERMINED UNTIL STRUCTURAL CONNECTIONS HAVE BEEN MADE INCLUDING CONCRETE POUR BACK STRIP PLACEMENT ACHIEVING A MINIMUM STRENGTH OF 3,000PSI. THERE SHALL BE A MINIMUM OF TWO BRACES PER PANEL. ENGINEERING OF BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. PANEL BRACING CONNECTION SHALL BE MAINTAINED DAILY TO ASSURE TIGHTNESS.
- TEMPORARY PANEL BRACING SHALL NOT BE REMOVED UNTIL ROOF DIAPHRAGM IS COMPLETELY WELDED AND INSTALLED AND SHALL NOT RELY ON ANY MOMENT RESISTANCE PROVIDED BY THE FOUNDATION SYSTEM. CONTRACTOR TO PROVIDE FOOTINGS AS REQUIRED FOR ANCHORAGE OF TILT WALL ERECTION BRACING.
- PROVIDE CONTINUOUS BEARING UNDER ALL PANELS USING 5,000 PSI (MIN) NON-SHRINK FLOWABLE GROUT OR DRYPACK. ALL PANELS SHOULD BE GROUTED IMMEDIATELY AFTER PANELS ARE SET.
- PANELS SHALL BE SHIMMED AT A MAXIMUM OF 5'-0" ON CENTER TO UNIFORMLY LOAD THE FOUNDATION FOOTING. FAILURE TO SHIM TO THIS STANDARD MAY DAMAGE THE FOUNDATION SYSTEM.
- DRY-PACK GROUT INSTALLATION AND PREPARATION FOR WELD POCKETS AND OTHER PANEL BLOCK OUTS NOT CAST IN DURING POURING SHALL BE PERFORMED AS FOLLOWS:
 - REMOVE LAITANCE DOWN TO SOUND CONCRETE
 - SURFACE TO RECEIVE GROUT SHALL BE ROUGH AND REASONABLY LEVEL
 - SURFACE SHALL HAVE BEEN PROPERLY WET CURED
 - DO NOT USE CURING COMPOUNDS
 - CLEAN SURFACE OF OIL, GREASE, DIRT AND LOOSE PARTICLES
 - REMOVE FREE WATER FROM CONCRETE AND BOLT HOLES IMMEDIATELY BEFORE GROUTING.
- PATCH HOLES IN PANEL SURFACES CAUSED BY LIFTING AND BRACING DEVICES AS PER SPECIFICATIONS.
- REFER TO ARCHITECTURAL FOR PANEL JOINT CAULK REQUIREMENTS.
- WAIT A MINIMUM OF 28 DAYS FROM PANEL CASTING BEFORE MAKING PANEL-TO-PANEL WELDS.

STEEL JOISTS (SEE SPECIFICATION SECTION 052100)

- STEEL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STEEL JOIST INSTITUTE SPECIFICATIONS.
- PROVIDE JOISTS CAPABLE OF WITHSTANDING THE UNIFORM DESIGN LOADS INDICATED. FOR JOISTS WITH NONUNIFORM LOADS PROVIDE KCS JOISTS AS NOTED ON THE FRAMING PLANS OR SPECIAL JOISTS (SP) WITH THE LOADING DIAGRAMS. IF APPLICABLE, JOISTS SHALL HAVE VERTICAL DEFLECTION LIMITS AS FOLLOWS UNLESS NOTED OTHERWISE:
 - FLOOR MEMBERS
 - ROOF MEMBERS
- PROVIDE JOISTS ACCESSORIES AND MISCELLANEOUS MATERIALS CONFORMING TO THE FOLLOWING UNLESS NOTED OTHERWISE:
 - STEEL BEARING PLATES: ASTM A36
 - CARBON STEEL BOLTS AND THREADED FASTENERS: ASTM A307, GRADE A, CARBON-STEEL HEX-HEAD BOLTS AND THREADED FASTENERS; CARBON-STEEL NUTS, AND FLAT, UNHARDENED WASHERS, PLAIN FINISH
 - WELDING ELECTRODES: COMPLY WITH AWS STANDARDS
- ALL JOISTS SHALL BE SHOP PRIMED WITH SSPC-15 PAINT OR THE MANUFACTURER'S STANDARD SHOP PRIMER COMPLYING WITH THE PERFORMANCE REQUIREMENTS IN SSPC-Paint 15. CONFIRM COLORS WITH THE ARCHITECTURAL DRAWINGS. DO NOT PAINT OR PRIME WHEN JOISTS ARE TO RECEIVE SPRAYED-ON FIRE-PROOFING.
- EXTEND TOP CHORDS OF JOISTS AS NOTED ON THE FRAMING PLANS. PROVIDE TYPE S EXTENSIONS, COMPLYING WITH S1/S "SPECIFICATIONS" UNLESS NOTED OTHERWISE.
- CAMBER JOISTS ACCORDING S1/S "SPECIFICATIONS" UNLESS NOTED OTHERWISE.
- EQUIP BEARING ENDS OF JOISTS WITH MANUFACTURER'S STANDARD BEVELED ENDS OR SLOPED SHOES IF SLOPE EXCEEDS 1/4 INCH PER 12 INCHES.
- DO NOT INSTALL JOISTS UNTIL SUPPORTING CONSTRUCTION IS IN PLACE AND SECURED. INSTALL JOISTS AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE. SECURELY FASTEN TO SUPPORTING CONSTRUCTION ACCORDING TO S1/S "SPECIFICATIONS". JOIST MANUFACTURERS' WRITTEN RECOMMENDATIONS AND THE REQUIREMENTS BELOW.
 - BEFORE INSTALLATION, SPLICE JOISTS DELIVERED TO PROJECT SITE IN MORE THAN ONE PIECE.
 - SPACE, ADJUST, AND ALIGN JOISTS ACCURATELY IN LOCATION BEFORE PERMANENTLY FASTENING.
 - INSTALL TEMPORARY BRACING AND ERECTION BRIDGING, CONNECTIONS, AND ANCHORS TO ENSURE JOISTS ARE STABILIZED DURING CONSTRUCTION.
 - DELAY RIGIDLY CONNECTING BOTTOM CHORD EXTENSIONS TO COLUMNS OR SUPPORTS UNTIL DEAD LOADS HAVE BEEN APPLIED.
- FIELD WELDS JOISTS TO SUPPORTING STEEL BEARING PLATES AND FRAMEWORK. COORDINATE WELDING SEQUENCE AND PROCEDURE WITH PLACEMENT OF JOISTS. COMPLY WITH AWS REQUIREMENTS AND PRECAUTIONS FOR WELDING. APPEARANCE AND QUALITY OF WELDS, AND METHODS USED IN CORRECTING WELDING WORK. JOISTS SHALL BE WELDED TO THEIR SUPPORTS WITH 1/2" FILLET WELD FOR EACH SIDE OF JOIST UNLESS OTHERWISE NOTED.
- INSTALL AND CONNECT BRIDGING ACCORDING TO S1/S "SPECIFICATIONS". BRIDGING SHALL BE INSTALLED CONCURRENTLY WITH JOIST ERECTION. BEFORE CONSTRUCTION LOADS ARE APPLIED, ANCHOR ENDS OF BRIDGING LINE AT TOP AND BOTH ENDS AT BOTTOM. IF TERMINATING AT WALLS OR BEAMS, FURNISH ADDITIONAL ERECTION BRIDGING IF REQUIRED FOR STABILITY.
- JOIST MANUFACTURER MUST CHECK THE JOIST SYSTEM FOR AN UP/LIFT PRESSURE AS NOTED ON THE UP/LIFT DIAGRAM AND PROVIDE BRIDGING AS REQUIRED TO ADEQUATELY BRACE THE BOTTOM CHORD AGAINST LATERAL MOVEMENT.
- FOLLOW THE TESTING AND INSPECTION REQUIREMENTS IN THE "STRUCTURAL STEEL" SECTION OF THESE SPECIFICATIONS.
- COORDINATE JOIST WEB AND BRIDGING LAYOUT WITH THE ESFR FIRE SUPPRESSION SYSTEM PRIOR TO FABRICATION.
- PROVIDE SEALED CALCULATIONS FOR SPECIAL CONDITIONS NOTED IN THE DELEGATED DESIGN SECTION OF THESE NOTES, AS REQUIRED.

CONCRETE FLOOR AND SLABS (SEE SPECIFICATION SECTION 033500 & 033511)

- REQUIREMENTS NOTED IN THIS SECTION APPLY TO CONCRETE SLABS ON GRADE. REFER TO THE CONCRETE SECTION AND THE CONCRETE FINISHING SECTION OF THE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
- CONCRETE SLABS ON GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 302.1R "GUIDE FOR CONCRETE SLAB AND SLAB CONSTRUCTION".
- SLABS ON GRADE DEPEND ON THE INTEGRITY OF BOTH THE SLAB AND FULL SOIL SUPPORT. PROVIDE SATISFACTORY SOIL MATERIALS UNDER SLABS ON GRADE ACCORDING TO GEOTECHNICAL ENGINEER'S WRITTEN RECOMMENDATIONS. PROOF-ROLL SUBGRADE BELOW THE BUILDING SLABS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING.
- COMPACT SOIL MATERIALS AND SUBGRADE TO NOT LESS THAN 98% OF MAXIMUM DRY UNIT WEIGHT, UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- PROVIDE PLASTIC VAPOR RETARDER AS SHOWN ON THE "TYPICAL SLAB ON GRADE DETAIL" ON THESE DRAWINGS. VAPOR RETARDER SHALL BE 15 MIL STEGO WRAP OR APPROVED EQUAL AND SHALL CONFORM TO ASTM E 1745, CLASS A, NOT LESS THAN 10 MILS THICK.
- PROVIDE A MINIMUM OF 4" OF GRANULAR FILL DIRECTLY UNDER SLAB ON GRADES. FILL SHALL CONSIST OF A CLEAN MIXTURE OF CRUSHED STONE OR CRUSHED OR UNCRUSHED GRAVEL PER ASTM D448, SIZE 57, WITH 100 PERCENT PASSING A 1-1/2" SIEVE, 15 TO 55 PERCENT PASSING A NO. 4 SIEVE AND LESS THAN 12 PERCENT PASSING A NO. 200 SIEVE. MATERIAL PASSING THE NO. 200 SIEVE SHOULD BE CLEAN GRANULAR FILL WITH LESS THAN 1 PERCENT CLAY OR FRAGILE PARTICLES.
- PROVIDE STEEL FIBER REINFORCEMENT IN CONCRETE SLABS ON GRADE TO CONTROL CRACKING DUE TO DRYING SHRINKAGE AND THERMAL EXPANSION/CONTRACTION. LOWERED WATER MIGRATION, INCREASED IMPACT CAPACITY, ABRASION RESISTANCE AND RESIDUAL STRENGTH. REFER TO SPECIFICATIONS FOR ADDITIONAL FIBER REINFORCEMENT REQUIREMENTS.
- THE CONCRETE SLAB ON GRADE HAS BEEN DESIGNED USING A SUBGRADE MODULUS PER THE FOUNDATION SPECIFICATION AND A DESIGN LOADING AS NOTED IN THE "DESIGN LOADS" SECTION OF THESE SPECIFICATIONS. THE SER IS NOT RESPONSIBLE FOR DIFFERENTIAL SETTLEMENT, SLAB CRACKING OR OTHER FAILURE DEFECTS RESULTING FROM UNREPORTED CONDITIONS MITIGATING THE ABOVE ASSUMPTIONS.

COLD FORMED STEEL FRAMING (SEE SPECIFICATION SECTION 054000)

- LIGHT GAGE STRUCTURAL STEEL FRAMING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISI'S "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS"
- LIGHT GAGE STRUCTURAL STEEL FRAMING AS SHOWN ON THESE PLANS CONFORMS TO THE INDUSTRY-STDARD NOMENCLATURE. EXPLANATION OF THIS NOMENCLATURE IS SHOWN BELOW FOR REFERENCE.

INDUSTRY STANDARD NOMENCLATURE

DEPTH OF MEMBER (6 inches)

TYPE OF MEMBER

600 x 162 x 43 (16')

SPACING OF MEMBERS, inches

MINIMUM METAL THICKNESS, mils

FLANGE WIDTH (1.58 inch)

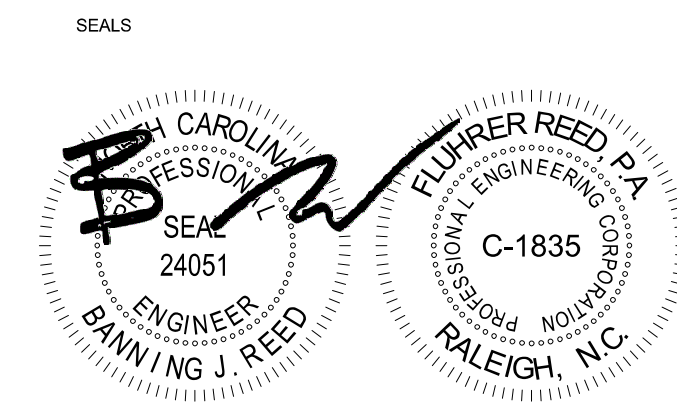
 - THE FIRST SET OF NUMBERS REPRESENTS THE DEPTH OF THE MEMBER TO TWO (2) DECIMAL PLACES WITHOUT THE USE OF A DECIMAL POINT, I.E. 162 = 1' 6", 1000 = 10', 362 = 3' 6", ETC.
 - THE LETTER REPRESENTS THE TYPE OF MEMBER. THERE ARE ONLY FIVE LETTERS USED, S = "C" MEMBERS, T = TRACK, JS = JAMSTUD MEMBERS BY THE STEEL NETWORK, F = FURRING CHANNEL, AND U = "U" CHANNEL
 - THE SECOND SET OF NUMBERS REPRESENTS THE FLANGE WIDTH OF THE MEMBER TO TWO (2) DECIMAL PLACES WITHOUT THE USE OF A DECIMAL POINT, I.E. 162 = 1' 6", 200 = 2', 125 = 1' 1/4", ETC.
 - THE THIRD NUMBER REPRESENTS THE MINIMUM UNCOATED METAL THICKNESS EXPRESSED IN MILS. (0.001 in.). THESE CORRESPOND TO REFERENCE GAGES AS FOLLOWS: -18 (24ga.), -27 (22ga.), -33 (20ga.), -43 (18ga.), -54 (16ga.), -60 (14ga.), -68 (13ga.), AND -97 (12ga.). THE MILS DEFINING THE MINIMUM ALLOWABLE UNCOATED METAL THICKNESS ARE 5% LESS THAN THE DESIGN THICKNESS. THE 5% VARIANCE IN METAL THICKNESS IS PERMITTED PER SECTION A.3.4 OF THE AISI SPECIFICATION.
 - THE LAST NUMBER INDENTED IN (B) IS NOT PART OF THE INDUSTRY-STANDARD NOMENCLATURE. HOWEVER FLUHRER REED, PA USES THIS NUMBER TO REPRESENT THE MAXIMUM SPACING OF THE MEMBERS IN THE SYSTEM.
 - PREPARATION OF SHOP DRAWINGS, DESIGN CALCULATIONS, AND OTHER STRUCTURAL DATA BY A QUALIFIED PROFESSIONAL ENGINEER AS PER SPECIFICATIONS.
 - PROVIDE COLD FORMED METAL FRAMING AS FOLLOWS:
 - STEEL SHEET PER SPECIFICATIONS
 - STRUCTURAL MEMBERS SHALL HAVE THE MINIMUM YIELD STRESS AS FOLLOWS:
 - 33 ml. 43 ml = 33 KSI
 - 54 ml. 68 ml. 97 ml = 50 KSI
 - INSTALL COLD-FORMED METAL FRAMING AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE, AND WITH CONNECTIONS SECURELY FASTENED.
 - LOCATE MECHANICAL FASTENERS AND INSTALL ACCORDING TO SHOP DRAWINGS, AND COMPLYING WITH REQUIREMENTS FOR SPACING, EDGE DISTANCES, AND SCREW PENETRATION AS NOTED ON THESE DRAWINGS.
 - COMPLY WITH THE FOLLOWING FOR EXTERIOR NON-LOAD-BEARING WALL INSTALLATION.
 - INSTALL CONTINUOUS TRACKS SIZED TO MATCH STUDS. ALIGN TRACKS ACCURATELY AND SECURELY ANCHOR AT CORNERS AND ENDS, AND AT SPACINGS AS INDICATED.
 - FASTEN BOTH FLANGES OF STUDS TO BOTTOM TRACK, UNLESS OTHERWISE INDICATED. SPACE TRACKS TO MATCH STUDS.
 - ISOLATE NON-LOAD-BEARING STEEL FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT. CLIPS SHALL ALLOW FOR AN UPWARD AND DOWNWARD MOVEMENT OF 1" UNLESS OTHERWISE NOTED.
 - WALLS UNLESS NOTED OTHERWISE SHALL BE SHEATHED WITH PAPER-SURFACED GYPSUM WALL SHEATHING, CONFORMING TO ASTM C 79 OR ASTM C 1396. GYPSUM SHEATHING, WITH WATER-RESISTANT-TREATED CORE AND WITH WATER-REPELLENT PAPER BONDED TO CORE'S FACE, BACK, AND LONG EDGES. FASTEN GYPSUM SHEATHING TO STUDS PER ICC'S "INTERNATIONAL BUILDING CODE."
 - INSTALL HORIZONTAL BRIDGING IN STUD SYSTEM. SPACING AS INDICATED ON SHOP DRAWINGS BUT NOT GREATER THAN 48" O.C. FASTEN AT EACH STUD INTERSECTION.
 - COMPLY WITH THE FOLLOWING FOR JOIST INSTALLATION.
 - INSTALL PERIMETER JOIST TRACK SIZED TO MATCH JOISTS, ALIGN AND SECURELY ANCHOR OR FASTEN TRACK TO SUPPORTING STRUCTURE AT CORNERS, ENDS, AND SPACINGS INDICATED.
 - INSTALL JOISTS BEARING ON SUPPORTING FRAME OR WALL, LEVEL, STRAIGHT, AND PLUMB. ADJUST TO FINAL POSITION, BRACE, AND REINFORCE. FASTEN JOISTS TO BOTH FLANGES OF JOIST TRACK. REINFORCE ENDS AND BEARING POINTS OF JOISTS WITH WEB STIFFENERS, END CLIPS, JOIST HANGERS, STEEL CLIP ANGLES, OR STEEL-STUD SECTIONS AS INDICATED ON SHOP DRAWINGS.
 - PLACE JOISTS NOT MORE THAN 2 INCHES FROM ABUTTING WALLS, AND AS NOTED IN THE WALL FRAMING SCHEDULE.
 - FRAME OPENINGS WITH BUILT-UP JOIST HEADERS CONSISTING OF JOIST AND JOIST TRACK. NESTING JOISTS OR ANY OTHER COMBINATION OF CONNECTED JOISTS IF INDICATED.
 - INSTALL JOIST REINFORCEMENT AT INTERIOR SUPPORTS WITH A SINGLE, SHORT LENGTH OF JOIST SECTION LOCATED DIRECTLY OVER INTERIOR SUPPORT, WITH LAPPED JOISTS OF EQUAL LENGTH TO JOIST REINFORCEMENT, OR AS INDICATED ON THE DRAWINGS. ALSO PROVIDE WEB STIFFENERS TO TRANSFER AXIAL LOADS OF WALLS ABOVE.
 - INSTALL BRIDGING AT INTERVALS INDICATED ON SHOP DRAWINGS. FASTEN BRIDGING AT EACH JOIST INTERSECTION.
 - SECURE JOISTS TO LOAD-BEARING INTERIOR WALLS OR BEAMS TO PREVENT LATERAL MOVEMENT OF BOTTOM FLANGE.

ANCHORAGE OF ROOFTOP EQUIPMENT

- THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS RELATED TO THE DESIGN, PURCHASE, AND INSTALLATION OF NECESSARY SUPPORTS, BRACING, AND ANCHORAGE OF ROOFTOP EQUIPMENT AND COMPONENTS.
- ANCHORAGE OF CERTAIN ITEMS MAY BE SPECIFICALLY NOTED/SHOWN ON THESE STRUCTURAL DESIGN DOCUMENTS. HOWEVER, ALL ROOFTOP EQUIPMENT MUST BE ANCHORED. THE ANCHORAGE OF ALL ROOFTOP EQUIPMENT AND COMPONENTS TO THE BUILDING SUPERSTRUCTURE OR DUNNAGE NOT SHOWN ON THE STRUCTURAL DESIGN DOCUMENTS, INCLUDING BUT NOT LIMITED TO FANS, HOODS, STACKS, CURBS, CURB MOUNTED ROOF SCREENS, EQUIPMENT-MOUNTED ROOF SCREENS, SOLAR PANELS, DUCT WORK, DISCHARGES, TIE DOWNS, AND VIBRATION ISOLATORS, ARE TO BE DESIGNED BY THE CONTRACTOR'S LICENSED AND QUALIFIED SPECIALTY ENGINEER.
- THE SPECIALTY ENGINEER SHALL CONSIDER WIND AND SEISMIC LOADING AS DICTATED BY THE GOVERNING BUILDING CODES LISTED IN THE SPECIFICATIONS IN THEIR DESIGNS.
- SIGNED AND SEALED DRAWINGS AND CALCULATIONS ARE TO BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL, BEFORE CONSTRUCTION BEGINS (SEE NOTE 5). THE EQUIPMENT MANUFACTURER SHALL PROVIDE THE ATTACHMENT OF THE UNIT TO THE STRUCTURE AND SUBMIT TO THE ENGINEER LOADS, LOCATIONS, AND METHODS OF ATTACHMENT.
- THE ENGINEER OF RECORD HAS MADE PROVISIONS IN THE DESIGN OF THE PRIMARY STRUCTURAL FRAME TO ACCOMMODATE THE LOADS AND ATTACHMENTS OF THE ROOFTOP EQUIPMENT. HOWEVER, FOLLOWING THE ENGINEER OF RECORD'S REVIEW OF THE SPECIALTY ENGINEERS' ANCHORAGE DESIGN, MODIFICATIONS AND/OR REINFORCEMENTS TO THE STRUCTURE MAY STILL BE REQUIRED.
- ANCHORAGES SHALL CONSIDER THE EFFECTS OF, BUT NOT LIMITED TO, THE BASE MATERIAL THICKNESS, EDGE DISTANCES, SPACINGS AND ANCHOR EMBEDMENT DEPTH.
- REFER TO THE "SUBMITTALS" AND "DELEGATED DESIGN" SECTIONS FOR ADDITIONAL REQUIREMENTS.



300 S. DAWSON STREET
RALEIGH, NC 27601 |
919.821.5547
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DECEMBER 18, 2023

PROJECT 2023576

ROOMS TO GO - PHASE II EXPANSION DUNN, NC



1101 Haynes Street Suite 207
Raleigh, NC 27604
tel 919 821 7146 www.flrehired.com



ENGINEERING FIRM NUMBER: C-0110
6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, N.C. 27607
P.919.851.4422 BNKNC.COM

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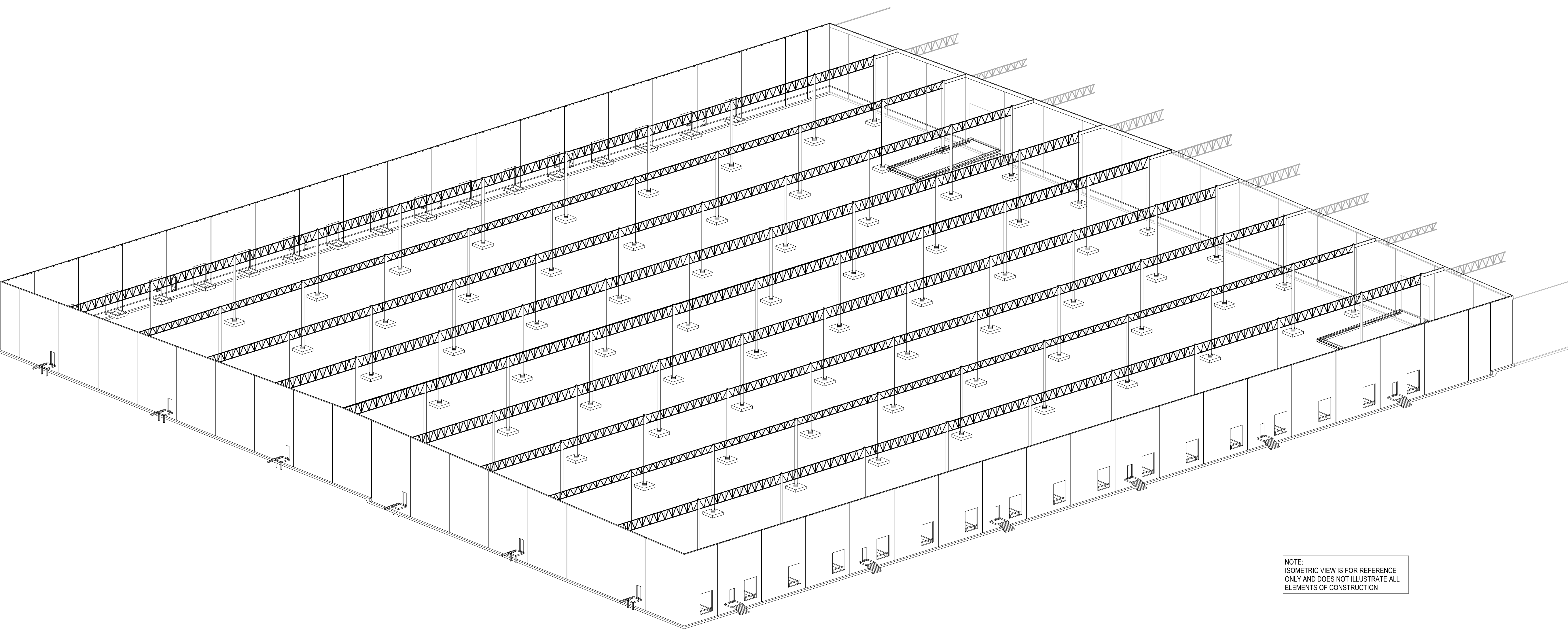
DUNN, NC 28334
901 ROOMS TO GO WAY
(910) 292-3505

GENERAL NOTES

REVISIONS		
NUMBER	DESCRIPTION	DATE

DRAWN BY **NCS**
CHECKED BY **HMB**
DATE ISSUED **12/18/23** OF

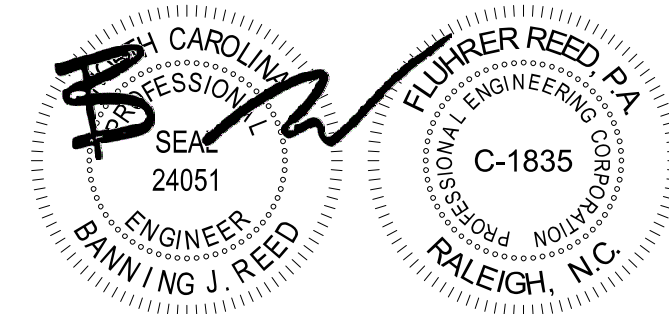
S-002



NOTE:
ISOMETRIC VIEW IS FOR REFERENCE
ONLY AND DOES NOT ILLUSTRATE ALL
ELEMENTS OF CONSTRUCTION

1	BUILDING ISOMETRIC VIEW
SCALE:	

SEALS



DECEMBER 18, 2023

PROJECT 2023576
**ROOMS TO GO -
PHASE II
EXPANSION**
DUNN, NC

CONSULTANTS



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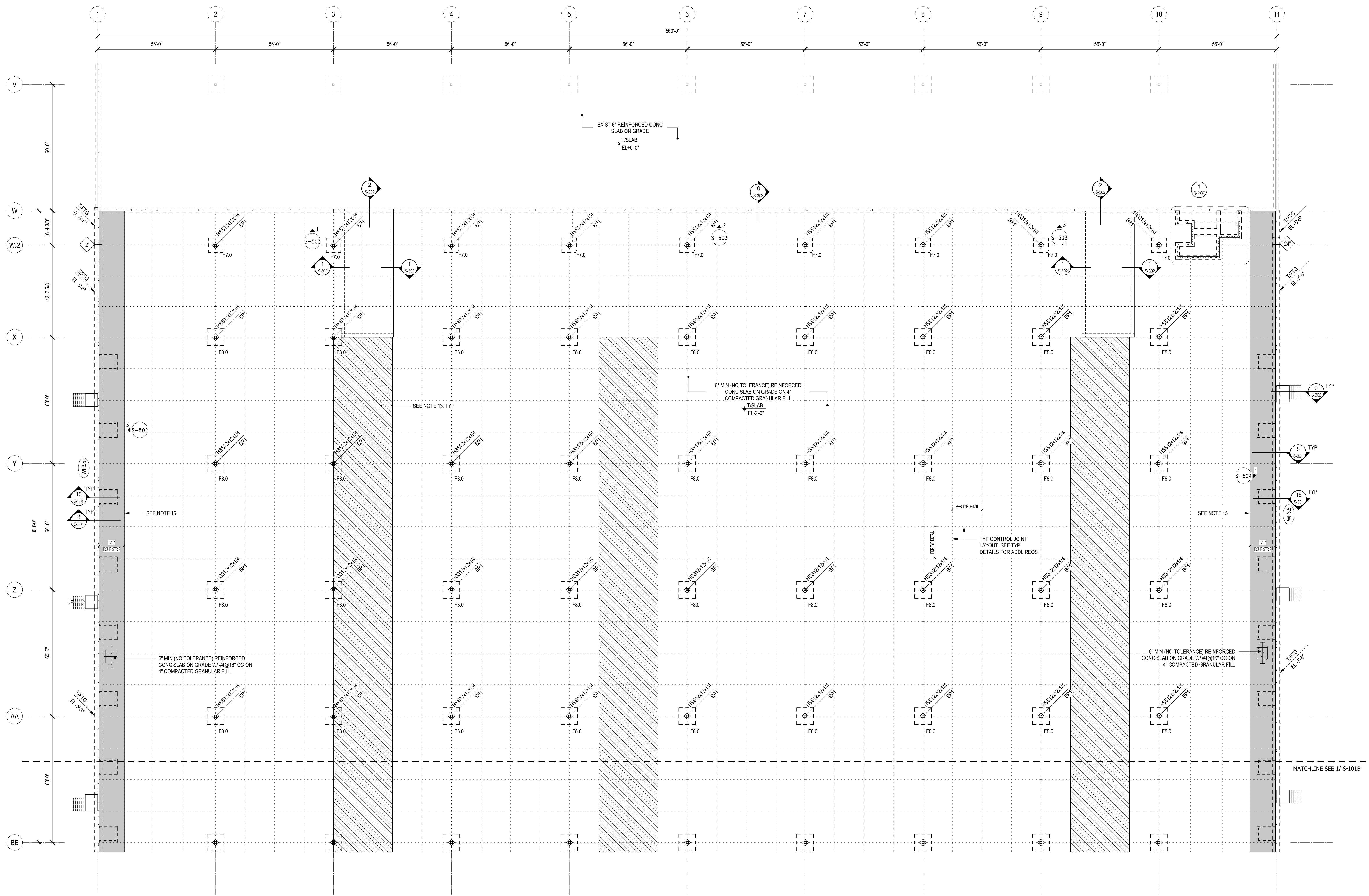


DRAWING TITLE
ISOMETRIC VIEWS

REVISIONS		
NUMBER	DESCRIPTION	DATE

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S-004



1 FOUNDATION PLAN - AREA A
SCALE: 1" = 20'-0"

SPREAD FOOTING SCHEDULE

MARK	PLAN SIZE		THICKNESS, T	REINFORCING		NOTES
	L	W		BOTTOM	TOP	
F7.0	7'-0"	7'-0"	1'-6"	7-#6 EA WAY	7-#6 EA WAY	
F8.0	8'-0"	8'-0"	1'-6"	8-#6 EA WAY	8-#6 EA WAY	

- SEE FOUNDATION PLAN FOR TOP OF FOOTING ELEVATION (TOF), TYPICAL, UNO.
- BOTTOM STEEL SHALL BE PLACED 3" CLEAR FROM THE BOTTOM OF THE FOOTING.
- TOP STEEL SHALL BE PLACED 2" CLEAR FROM THE TOP OF THE FOOTING.

2 SCHEDULE
SPREAD FOOTING SCHEDULE

WALL FOOTING SCHEDULE

MARK	WIDTH	THICKNESS, T	REINFORCING	NOTES
WF3.5	3'-6"	1'-0"	3-#5 CONT. BOT. #5@36" HORIZ TIES	

- SEE FOUNDATION PLAN FOR TOP OF FOOTING ELEVATION (TOF), TYPICAL, UNO.
- BOTTOM STEEL SHALL BE PLACED 3" CLEAR FROM THE BOTTOM OF THE FOOTING.
- TOP STEEL SHALL BE PLACED 2" CLEAR FROM THE TOP OF THE FOOTING.

3 SCHEDULE
WALL FOOTING SCHEDULE

FOUNDATION PLAN NOTES

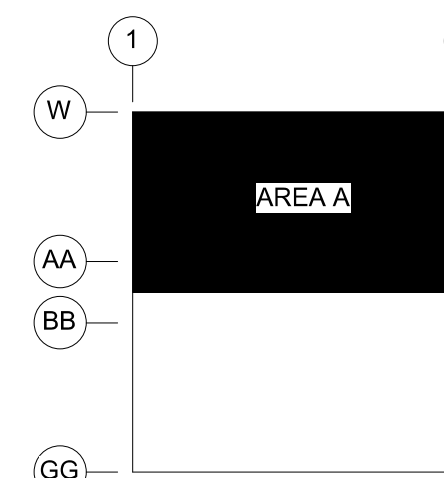
- REFER TO GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL STRUCTURAL INFORMATION.
- REFER TO TYPICAL DETAIL SHEETS S-300, S-301, S-302 FOR ADDITIONAL REQUIREMENTS NOT SHOWN.
- ALL TOP OF FOOTING ELEVATIONS ARE MEASURED FROM THE TOP OF THE EXISTING FLOOR SLAB. ELEVATION 0'-0". ALL TOP OF FOOTING ELEVATIONS ARE 1'-0" UNLESS NOTED OTHERWISE.
- COLUMNS, AS NOTED ON THIS DRAWING, SHALL RUN CONTINUOUSLY FROM THE FOUNDATION TO THE HIGHEST LEVEL OF THE SUPPORTED STEEL BEAMS FOR THAT COLUMN.
- ALL COLUMNS AND FOOTINGS SHALL BE CENTERED ON GRID LINES UNLESS NOTED OTHERWISE.
- SEE THE FOUNDATION PLAN FOR COLUMN SIZES, AND BASEPLATE TYPES.
- SEE SCHEDULES ON S-100 FOR TYPICAL SPREAD FOOTINGS AND WALL FOOTINGS.
- COLUMNS SHALL BE SET ON TOP OF 2" OF GROUT MIN UNO ON TOP OF THE FOOTINGS AT THE ELEVATIONS SHOWN ON THIS PLAN. CONCRETE SHALL BE POURED INTO BLOCKOUT TO THE TOP OF THE SLAB ELEVATION. SHOULD THE COLUMN BASE PLATE EXTEND BEYOND THE FACE OF THE FOUNDATION ENCASE ENTIRE BASE PLATE IN CONCRETE. CONCRETE FOR THIS ENCASEMENT SHALL EXTEND AT LEAST (5) INCHES ABOVE THE ANCHOR BOLTS.
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN ON THIS DRAWING.
- REFER TO CIVIL DRAWINGS FOR EXTERIOR SLABS AND GRADING. FR RECOMMENDS MINIMUM 1/8" PER FOOT SLOPE AWAY FROM BUILDING.
- SEE PLUMBING DRAWINGS FOR FLOOR DRAINS, FLOOR SLOPES TO DRAINS, AND PIPING PENETRATIONS THROUGH THE FLOOR SLAB. REPORT ANY CONFLICTS WITH STRUCTURAL ELEMENTS OF SAID ITEMS TO FLUHRER REED, PA BEFORE CONSTRUCTION.
- SEE ARCHITECTURAL PLANS FOR LOCATION OF FLOOR FINISHES, AND AREAS REQUIRING SLOPED OR DEPRESSED SLABS.
- HATCHED AREAS INDICATE BASIS OF DESIGN DRIVE AISLE LOCATIONS. COORDINATE FINAL DRIVE AISLE LOCATIONS WITH OWNER REQUIREMENTS PRIOR TO CONSTRUCTION. REFER TO DET 11 S-301 FOR JOINT REINFORCEMENT REQUIREMENTS AT DRIVE AISLES.
- FLUHRER REED, PA HAS PERFORMED A LIMITED SITE VISIT TO VERIFY STRUCTURAL CONDITIONS. ALL ASSUMED INFORMATION SHOWN ON THESE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO FLUHRER REED, PA BEFORE PROCEEDING.
- REFER TO DETAIL, 81 S-301 FOR JOINT REQUIREMENTS. POUR TIGHT WITH SLAB ON GRADE, NO SAW CUT JOINT REQUIRED.
- SLAB ON GRADE TO BE REINFORCED WITH HELICAL STEEL FIBERS - FIBER DOSAGE BY HELIX STEEL.

FLOOR SLAB THICKNESS AND STRENGTH ARE BASED ON THE FOLLOWING PARAMETERS AND LOADING USING A MINIMUM OF 5 LB/SD FIBER DOSAGE BASED ON THE MANUFACTURER'S PUBLISHED DATA, CONFIRM DOSING WITH MANUFACTURER PRIOR TO CONSTRUCTION:

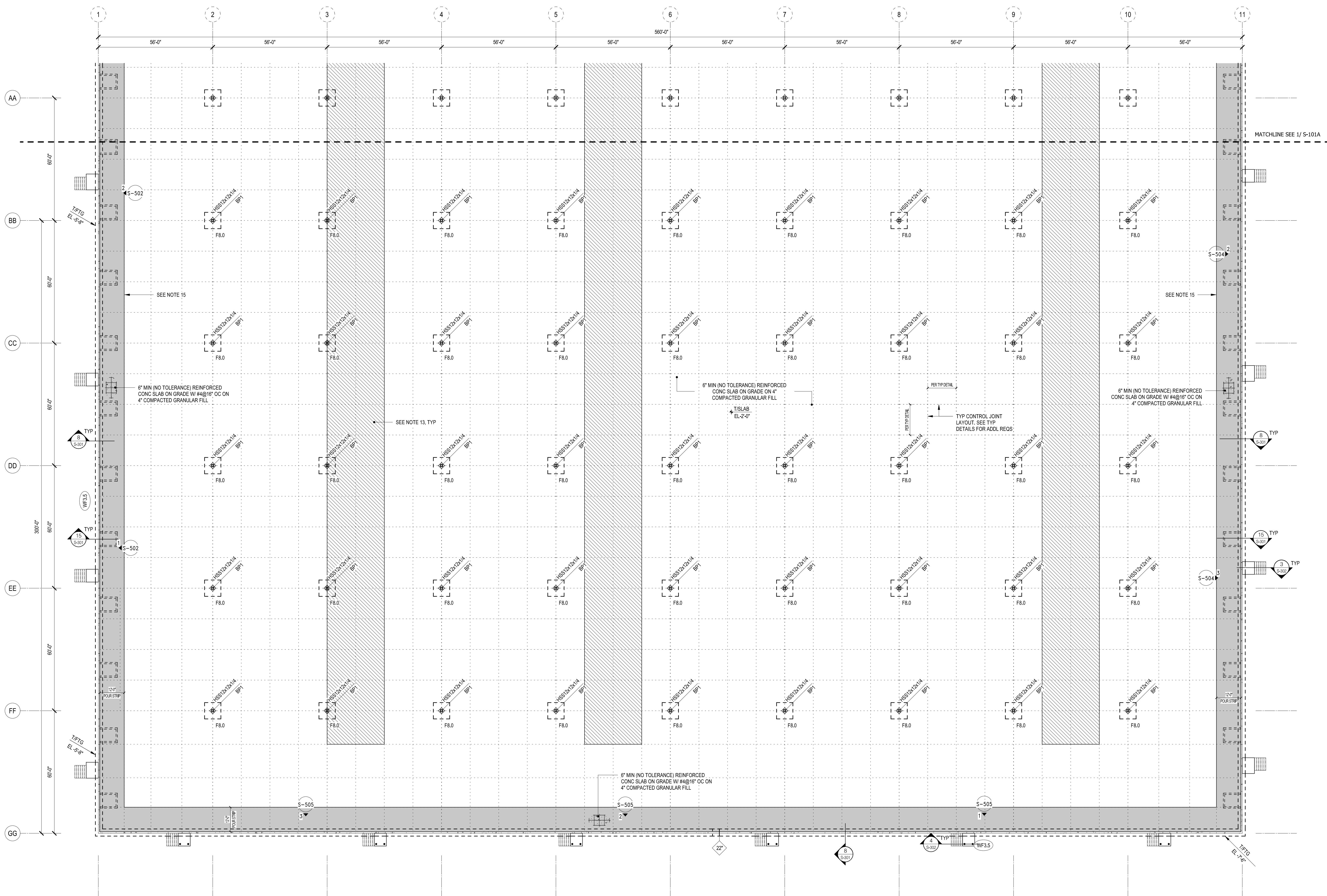
- a. SUBGRADE MODULUS (K)
- b. MAX FORKLIFT AXLE LOAD (SOFT TIRE ONLY-250PSI, 22in² AREA)
- c. MAX STORAGE RACK POST LOAD (6"x6" BP, 96"x48" RACK)
- d. MAX UNIFORM LOADING

100 PSI
11000 LBS
9000 LBS
500 PSF

KEYPLAN

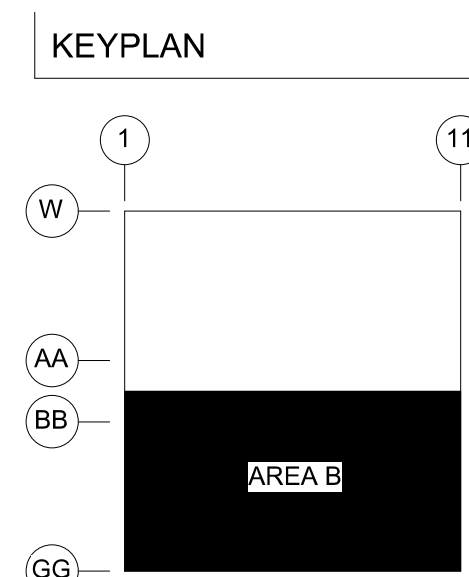


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1 FOUNDATION PLAN - AREA B
SCALE: 1" = 20'-0"

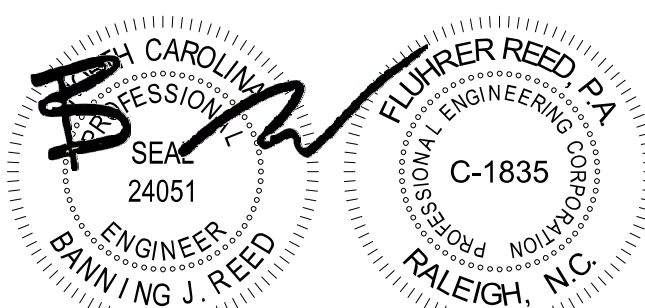
FOUNDATION PLAN NOTES
1. REFER TO S-101B FOR FOUNDATION PLAN NOTES AND FOOTING SCHEDULES.



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CONSULTANTS



1101 Haynes Street Suite 207
Raleigh, NC 27604
tel 919.821.7146 www.fluhrerreed.com



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CONSULTING ENGINEERS
ENGINEERING FIRM NUMBER: C-0110
6310 CHAPEL HILL ROAD, SUITE 250
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P.919.851.4422 BNKINC.COM

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901 ROOMS TO GO WAY
(910) 292-3505

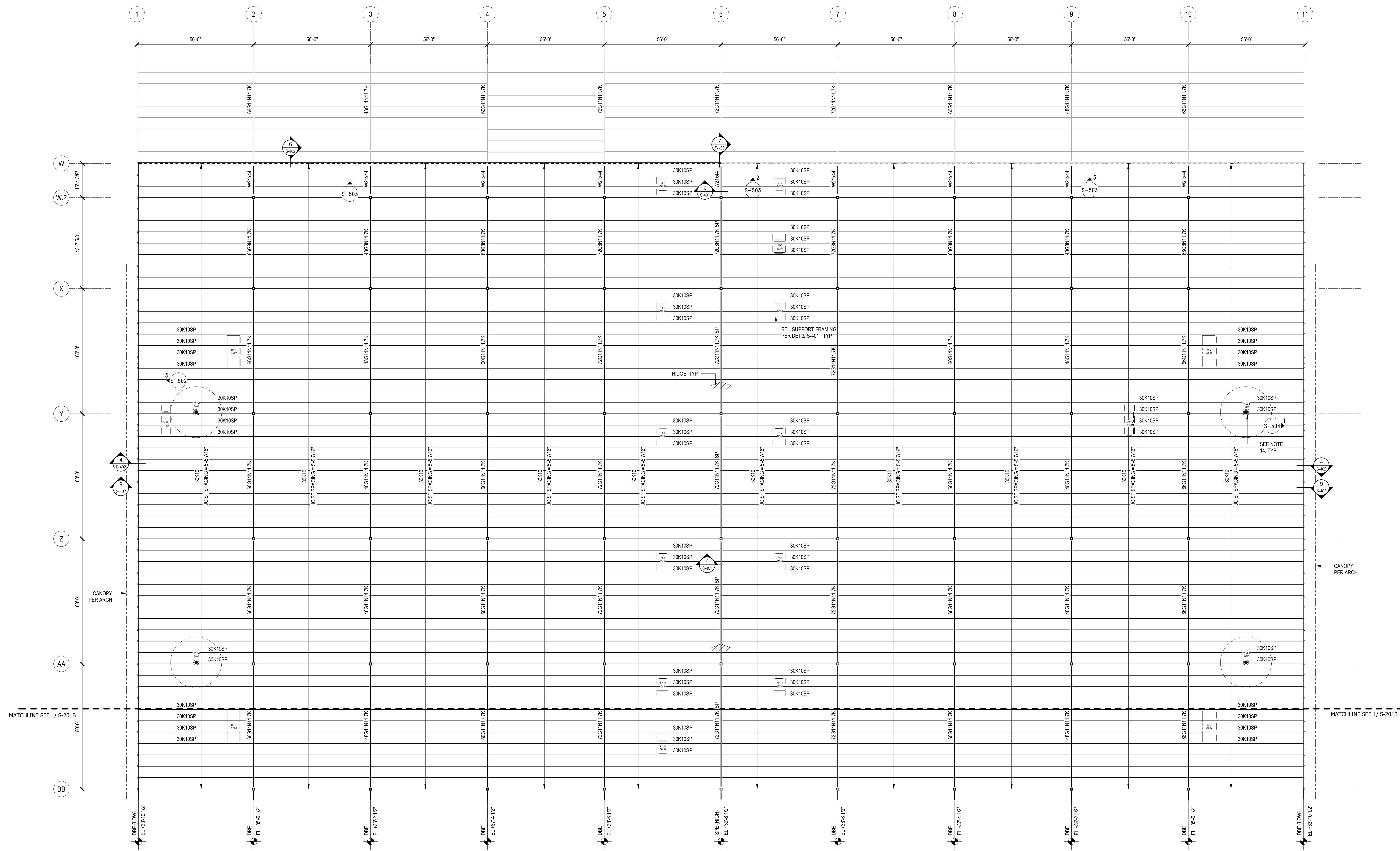
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FOUNDATION PLAN - AREA B

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NUMBER	DESCRIPTION	DATE

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S-101B

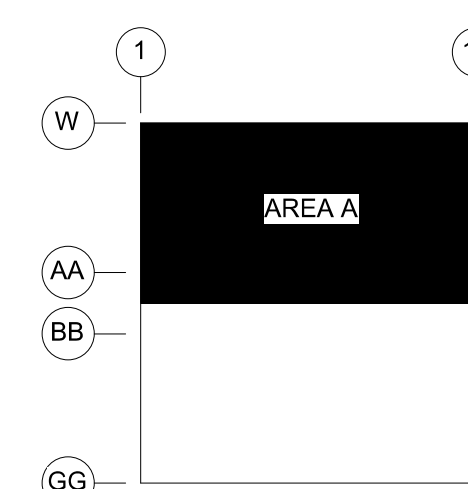


1 ROOF FRAMING PLAN - AREA A
SCALE: 1" = 20'-0"

ROOF FRAMING PLAN NOTES

- REFER TO GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL STRUCTURAL INFORMATION.
- REFER TO TYPICAL DETAIL SHEETS S-402, S-403 FOR ADDITIONAL REQUIREMENTS NOT SHOWN.
- SEE TYPICAL ROOF DECKING CONSTRUCTION DETAIL ON S-402 FOR ROOF DECKING TYPE, GAGE, AND DECK ATTACHMENT REQUIREMENTS.
- DECK BEARING ELEVATIONS (DBE) AND TOP OF STEEL (TOS) ELEVATIONS ARE LABELED ON THE FRAMING SHEET. JOISTS SHALL SLOPE 1/4" PER FOOT FROM THE FRONT OF THE STRUCTURE TO THE REAR. BEAMS THAT ARE LABELED WITH A MARK OF 2 1/2" BESIDE OR BELOW THE BEAM LABEL INDICATE A TOP OF STEEL SET BELOW THE DECK BEARING ELEVATION TO ALLOW FOR PROPER JOIST SUPPORT.
- SEE THE FOUNDATION PLAN FOR COLUMN SIZES.
- FACTORED BEAM REACTIONS ARE SHOWN ON THE FRAMING PLAN. BEAMS WITHOUT REACTION SHOWN SHALL BE DESIGNED FOR A 25 KIP MINIMUM REACTION.
- OPEN WEB BAY JOIST MANUFACTURER SHALL DESIGN ALL JOIST FOR A NET UPLIFT ROOF PRESSURE OF 10 PSF (0.60+0.8W, ASCE 7-10 SERVICE LEVEL).
- PROVIDE TOP AND BOTTOM CHORD JOIST BRIDGING PER S.J. SPECIFICATIONS. BRIDGING SHALL TERMINATE INTO FLOOR BEAMS WITH DIAGONAL MEMBERS AS SHOWN THE TYPICAL BRIDGING TO FLOOR BEAM DETAIL.
- SEE TYPICAL JOIST REINFORCEMENT AT POINT LOADS DETAIL FOR TYPICAL JOIST REINFORCEMENT AT CONCENTRATED LOADS.
- SEE ARCHITECTURAL AND PM&E DRAWINGS FOR LOCATIONS OF PENETRATIONS THROUGH THE ROOF DECKING. PROVIDE SUPPORT FRAMING AS SHOWN IN THE TYPICAL DECKING SUPPORT AT ROOF PENETRATIONS DETAIL FOR OPENINGS EXCEEDING 4 INCHES SQUARE.
- ROOFS ARE DESIGNED FOR THE UNIFORMLY DISTRIBUTED LOADS SHOWN ON THE CONSTRUCTION SPECIFICATIONS. SPECIAL LOADING CONDITIONS MUST BE REPORTED TO FLUHRER REED, P.A. ALL NONSTANDARD LOADS ARE NOTED ON THE DESIGN DOCUMENTS. FLUHRER REED, P.A. NOT RESPONSIBLE FOR DEFECTS RESULTING FROM UNREPORTED CONDITIONS MITIGATING THE ABOVE ASSUMPTIONS.
- ROOF STRUCTURE HAS BEEN DESIGNED FOR THE HVAC EQUIPMENT SHOWN. VERIFY LOCATIONS AND WEIGHTS OF THESE ELEMENTS AND REPORT DISCREPANCIES TO FLUHRER REED, P.A. BEFORE STEEL FABRICATION. LOADS SHOWN INDICATE UNIT AND CURB MAXIMUM WEIGHT.
- STRUCTURAL FRAMING & COMPONENTS HAVE NOT BEEN DESIGNED FOR VIBRATING EQUIPMENT, UNO, MOUNT VIBRATING EQUIPMENT ON VIBRATION ISOLATORS. REFER TO MECHANICAL / ELECTRICAL / PLUMBING FOR ADDITIONAL REQUIREMENTS.
- VERIFY FAN LOCATION PER ARCH AND NOTIFY FLUHRER REED, P.A. OF DISCREPANCIES. FAN TO ROOF CONN SHALL DISTRIBUTE LOAD EQUALLY TO (2) ROOF JOIST. COORD CONN WITH FAN MANUFACTURER. SEE TYPICAL JOIST REINFORCEMENT AT POINT LOADS DETAIL FOR JOIST REINFORCEMENT AT FAN ATTACHMENT LOCATIONS.
- ALL JOIST SEATS AT THE POTENTIAL DIAPHRAGM BOUNDARIES SHALL HAVE THE CAPACITY TO RESIST A LATERAL LOAD APPLIED AT THE TOP OF THE TOP CHORD, PERPENDICULAR TO THE SPAN, (ROLLOVER) AS FOLLOWS. THE SEAT SHALL BE CAPABLE OF RESISTING A 60W WIND ULTIMATE LOAD OR 1176W SEISMIC ULTIMATE LOAD. NOTE THAT FOR K-SERIES JOISTS A MINIMUM ANCHORAGE WELD LENGTH OF 1 1/2" SHALL BE USED.

KEYPLAN



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BANNING J. REED
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CONSULTANTS
FLUHRER REED
RALEIGH, NC
1101 Hayes Street Suite 207
Raleigh, NC 27604
tel 919.821.7146 www.fluhrerreed.com

BNK
BASS | NIXON | KENNEDY
CONSULTING ENGINEERS
ENGINEERING FIRM NUMBER: C-0110
6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, N.C. 27607
P.919.851.4422 BNKINC.COM

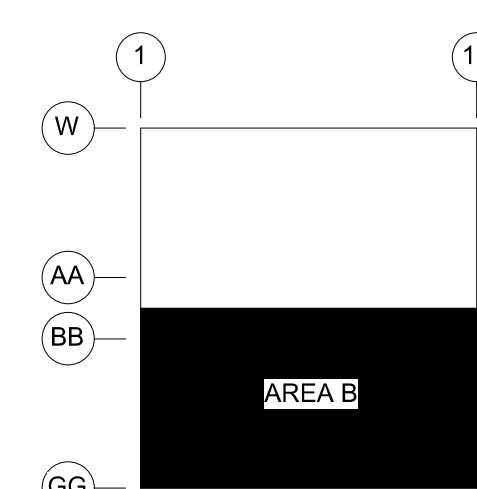
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ROOF FRAMING PLAN - AREA A

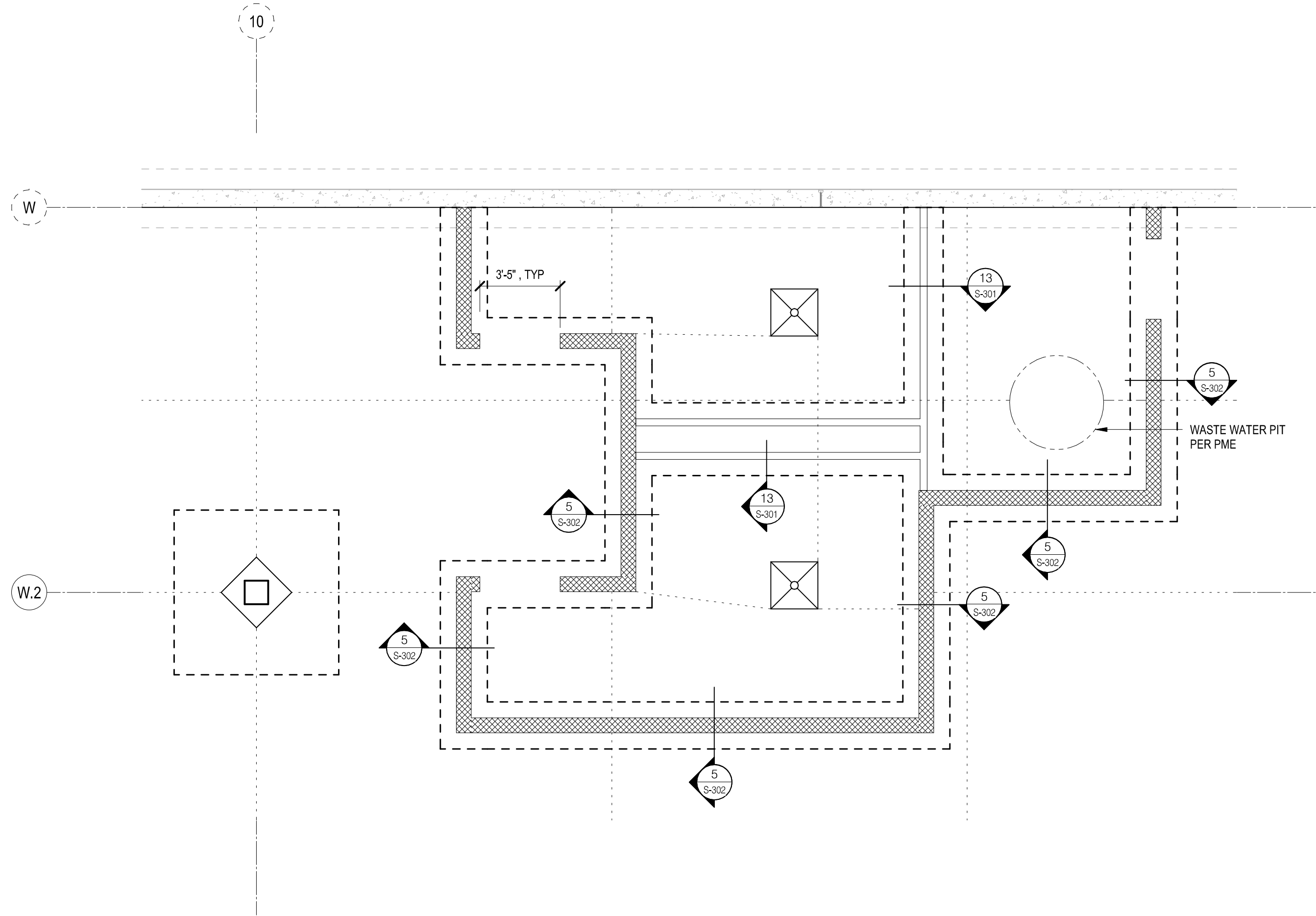
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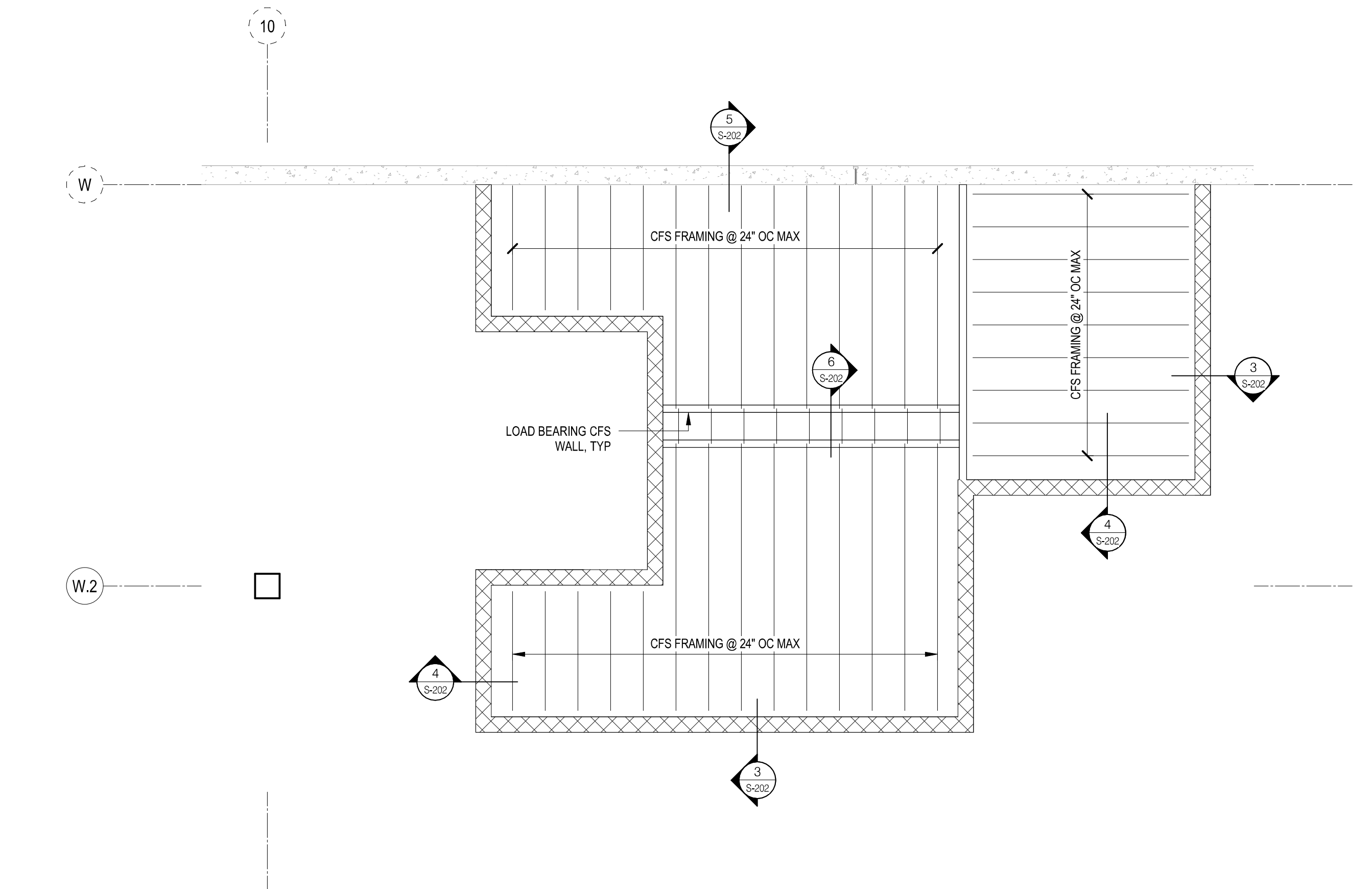
S-201A



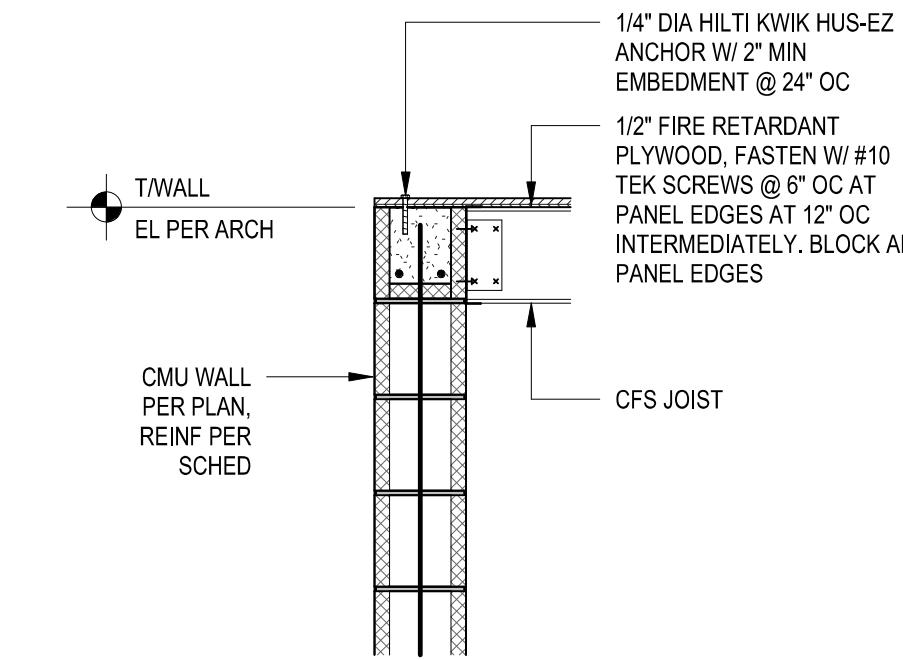
1. REFER TO S-201A FOR ROOF FRAMING PLAN NOTES



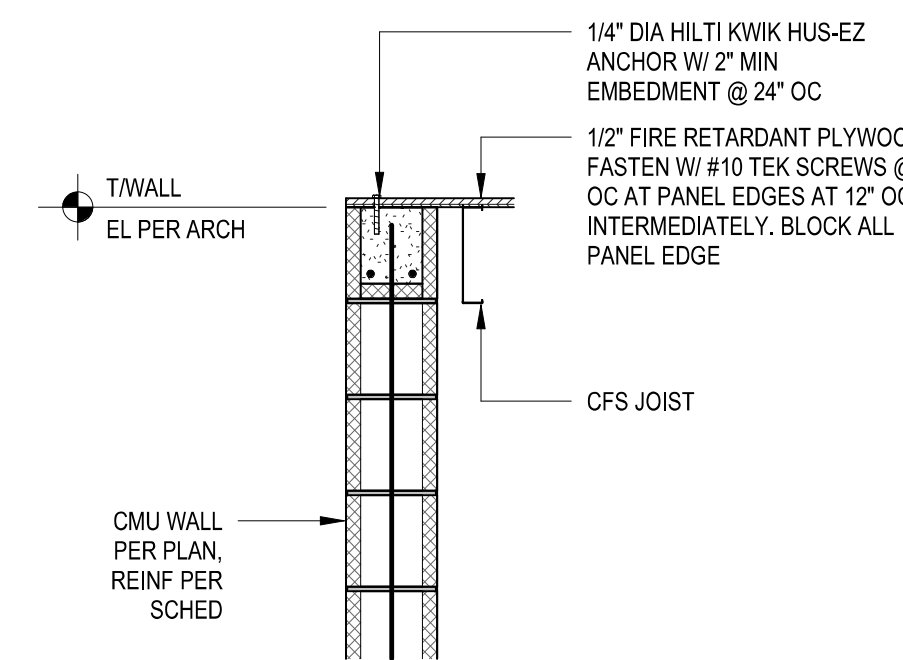
1 BATHROOM FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



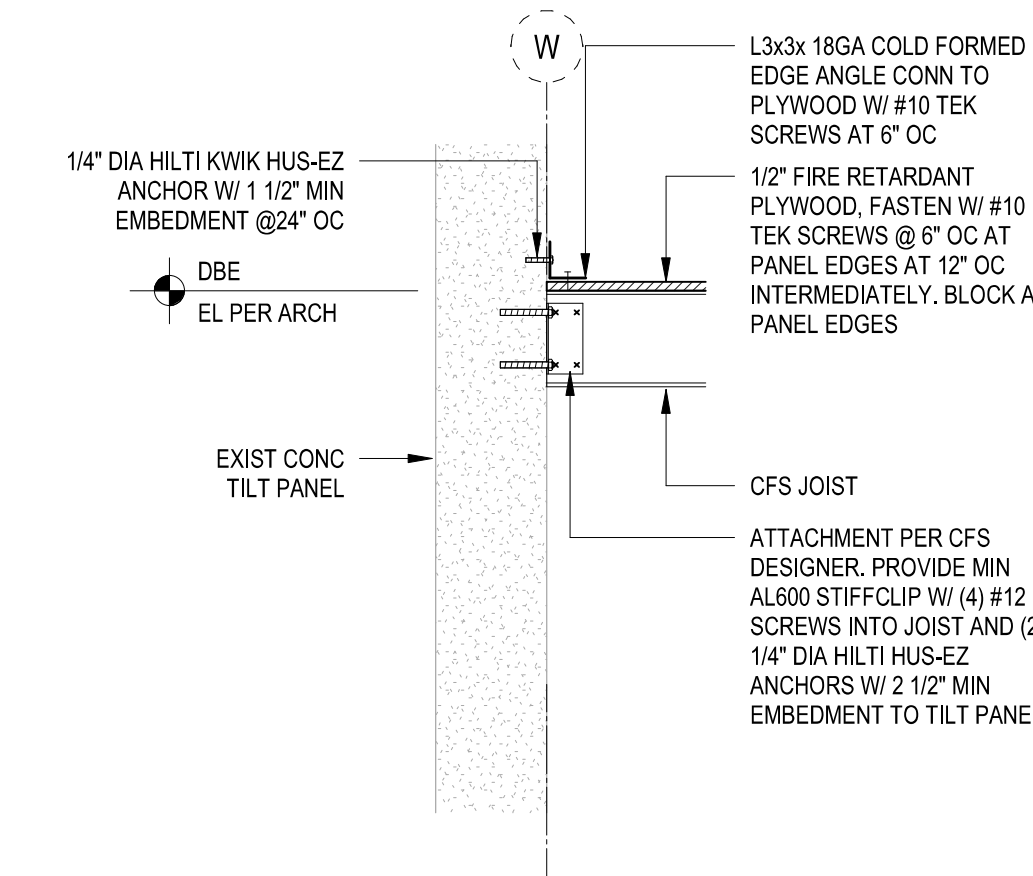
2 BATHROOM FRAMING PLAN
SCALE: 1/4" = 1'-0"



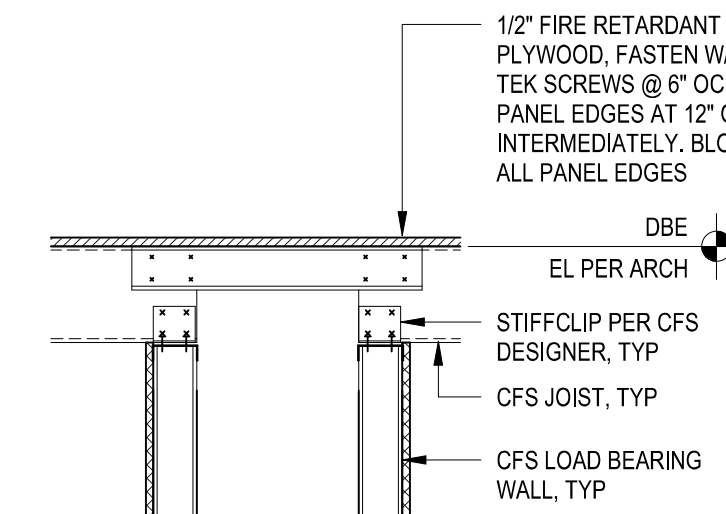
3 SECTION
S-202 BATHROOM ROOF FRAMING -
JOIST PARALLEL
SCALE: 3/4" = 1'-0"



4 SECTION
S-202 BATHROOM ROOF FRAMING -
JOIST PERPENDICULAR
SCALE: 3/4" = 1'-0"

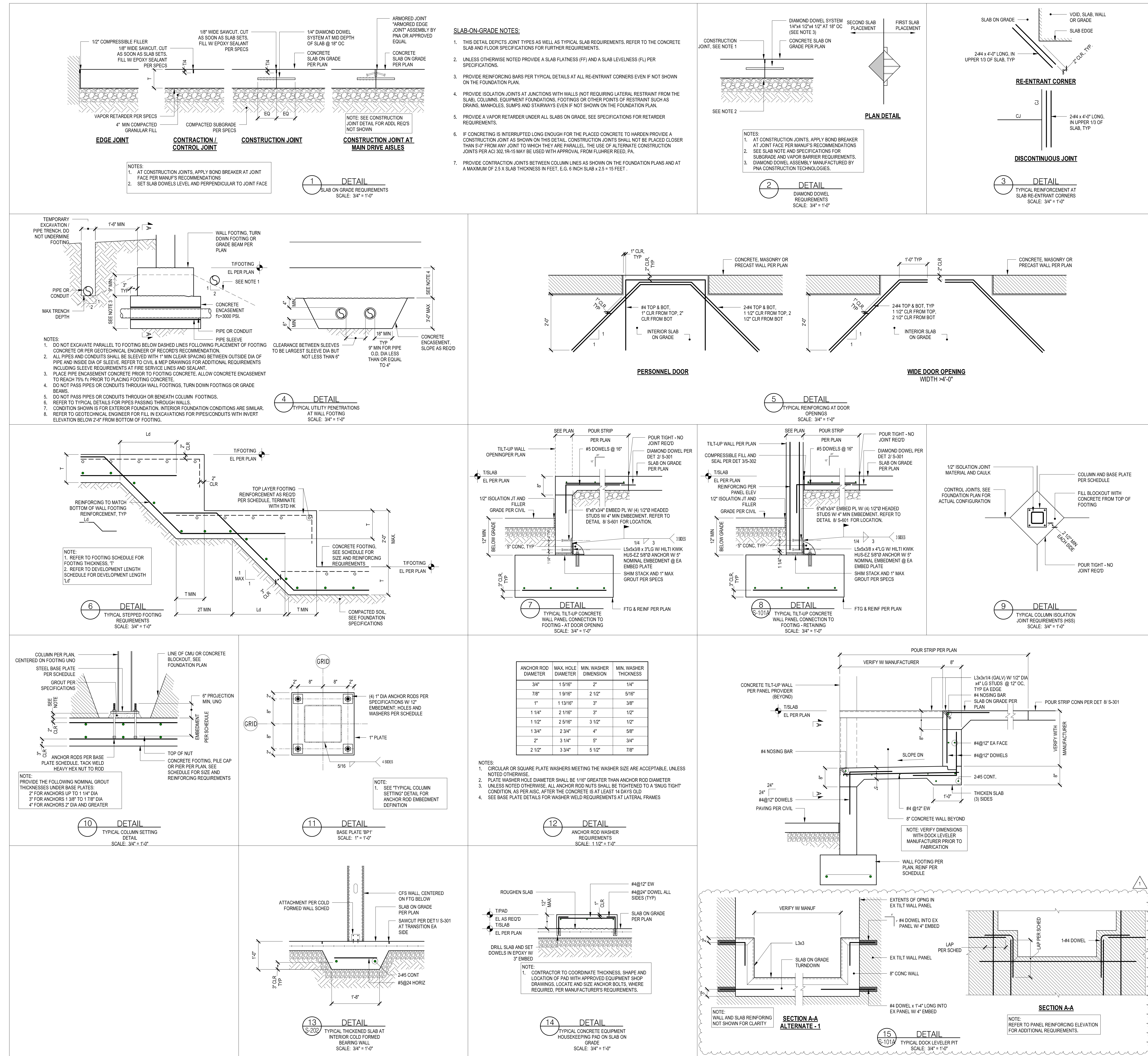


5 SECTION
S-202 BATHROOM ROOF FRAMING AT
EXISTING TILT PANEL
SCALE: 3/4" = 1'-0"



6 SECTION
S-202 BATHROOM WET WALL FRAMING
SCALE: 3/4" = 1'-0"

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CONSULTANTS

FLUHRER REED & ASSOCIATES, P.A.
1101 Hayes Street Suite 207
Raleigh, NC 27604
tel 919.821.7146 www.fluhrerreed.com

BNK
BASS | NIXON | KENNEDY
CONSULTING ENGINEERS
ENGINEERING FIRM NUMBER: C-0110
6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, N.C. 27607
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TYPICAL FOUNDATION DETAILS

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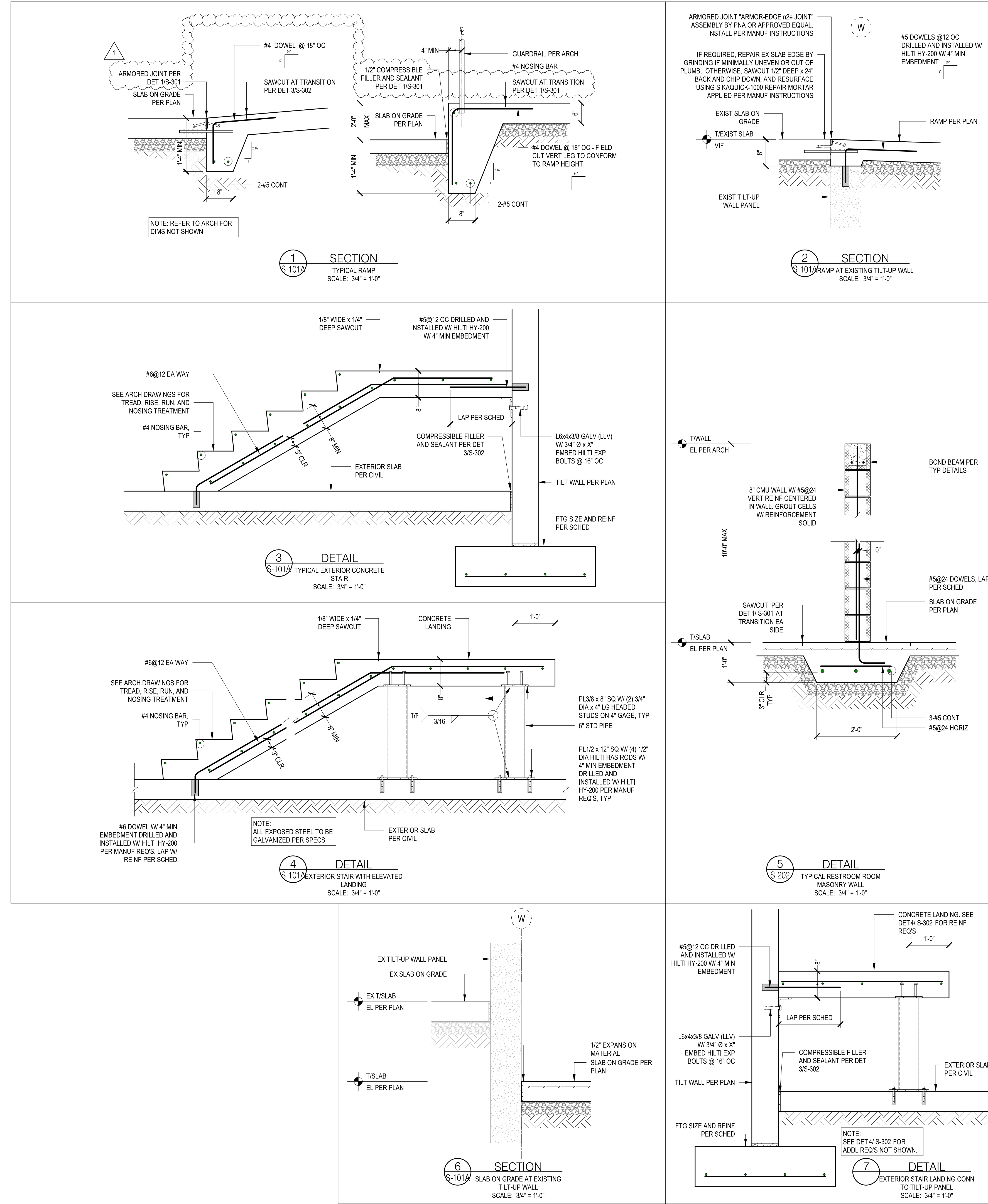
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C-1835
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EXPANSION**
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CONSULTANTS
FLUHRER REED
1101 Haynes Street Suite 207
Raleigh, NC 27604
tel 919.821.7146 www.fluhrerreed.com

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CONSULTING ENGINEERS
ENGINEERING FIRM NUMBER: C-0110
6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, N.C. 27607
P.919.851.4422 BNKINC.COM

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TYPICAL FOUNDATION DETAILS

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1	BID DOCUMENTS	02/02/24

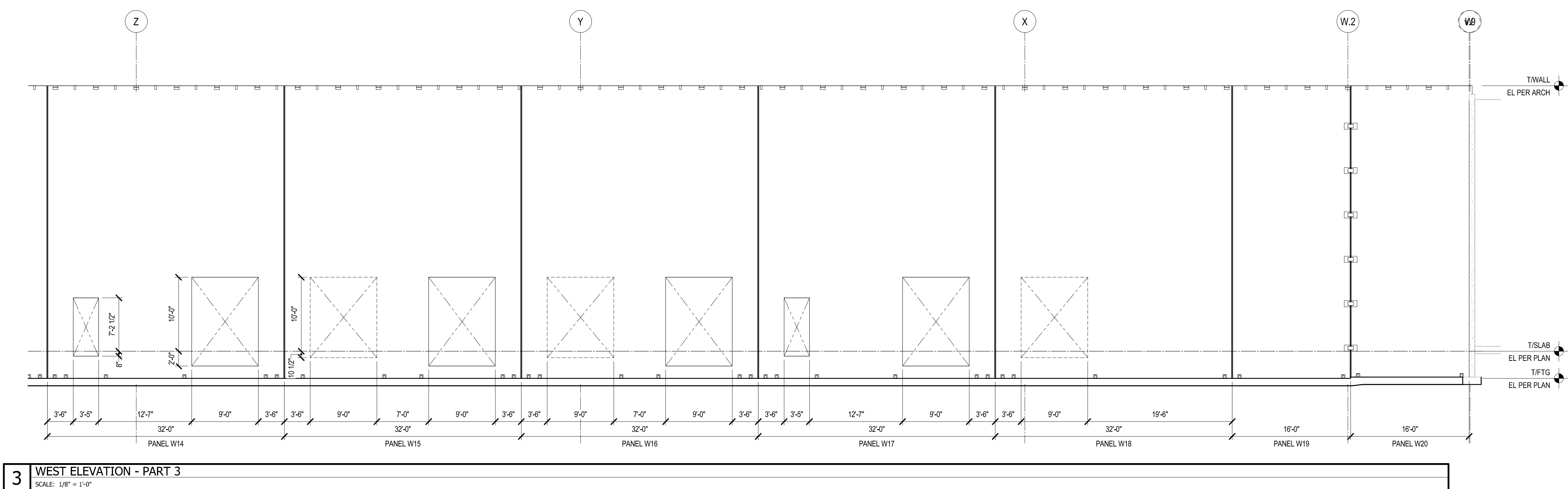
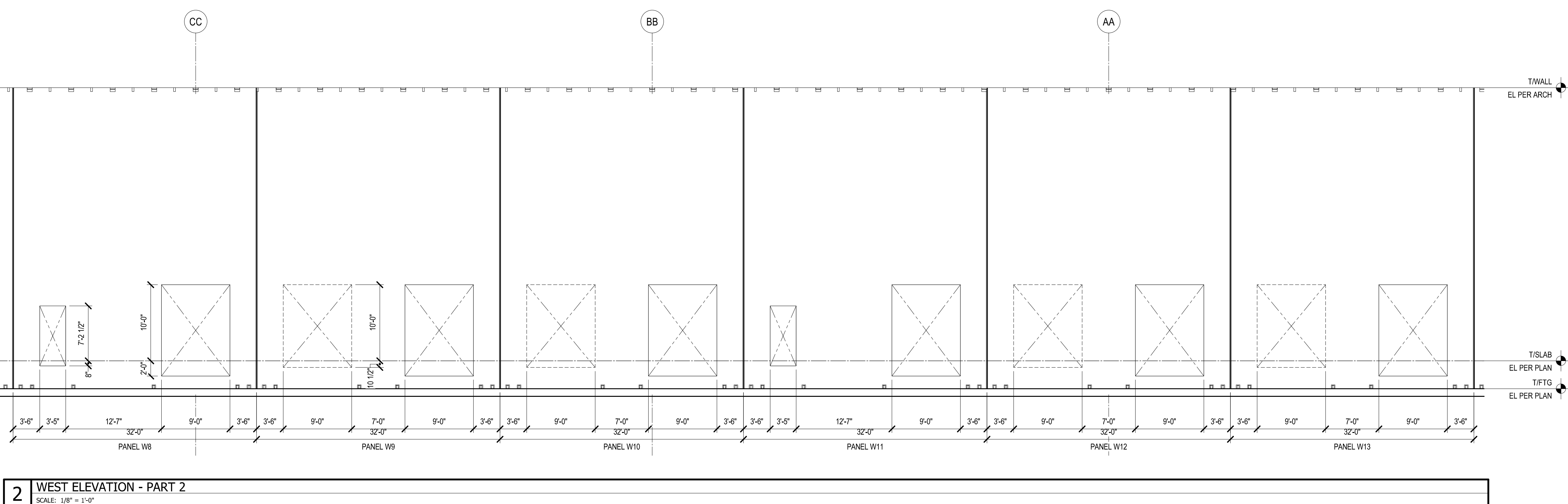
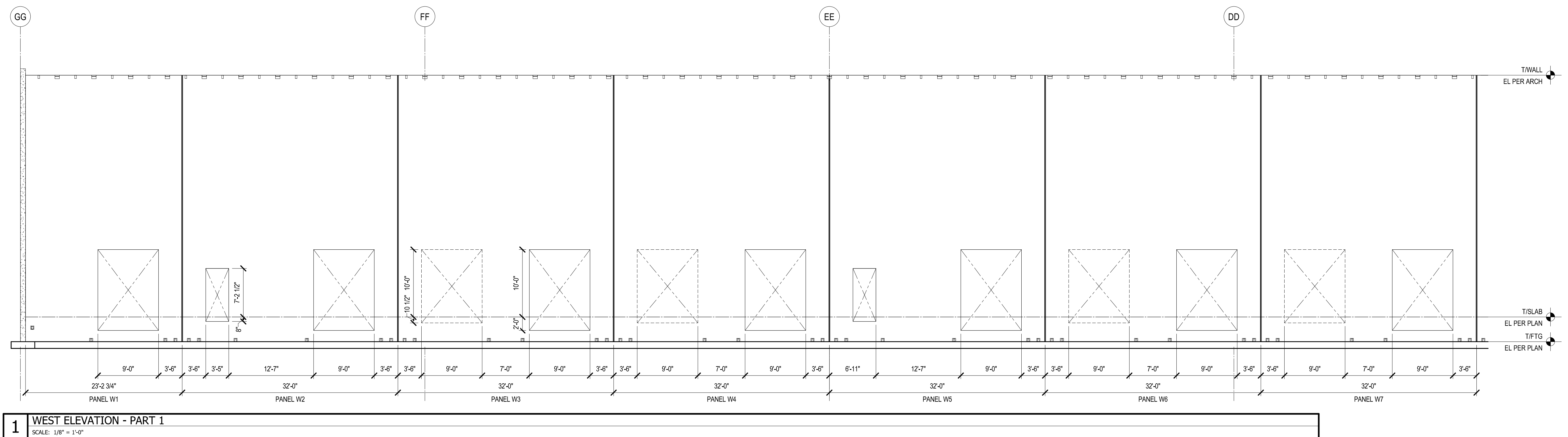
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S-302

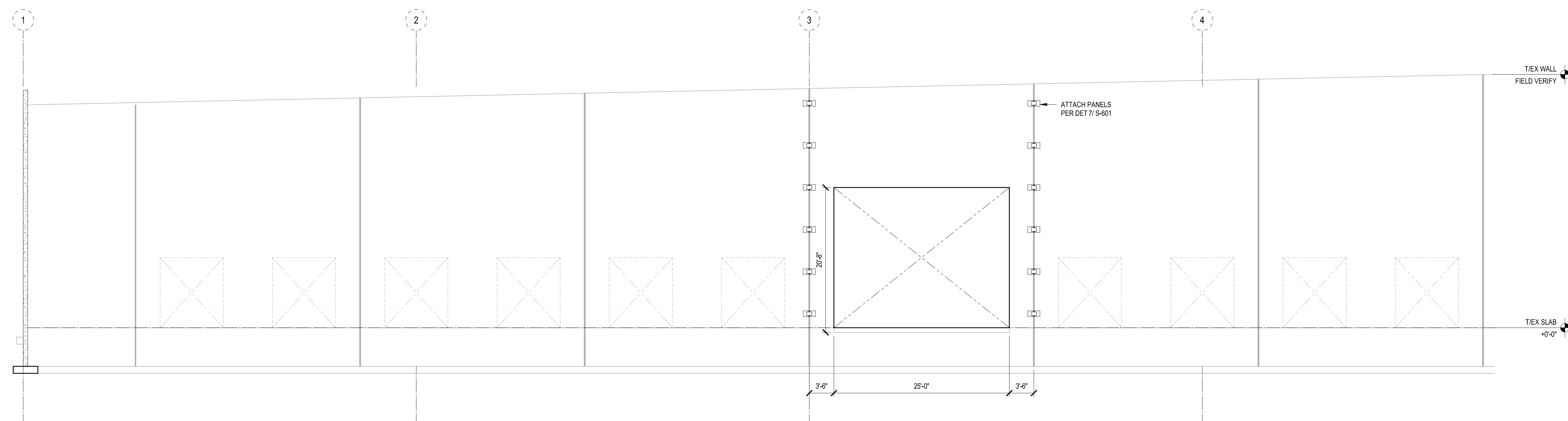
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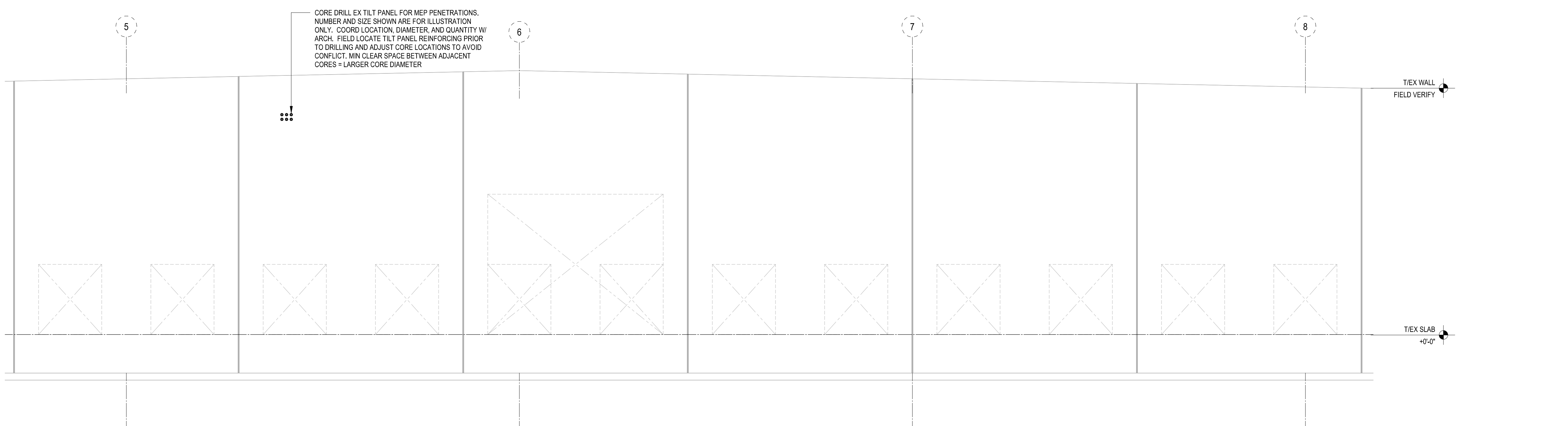




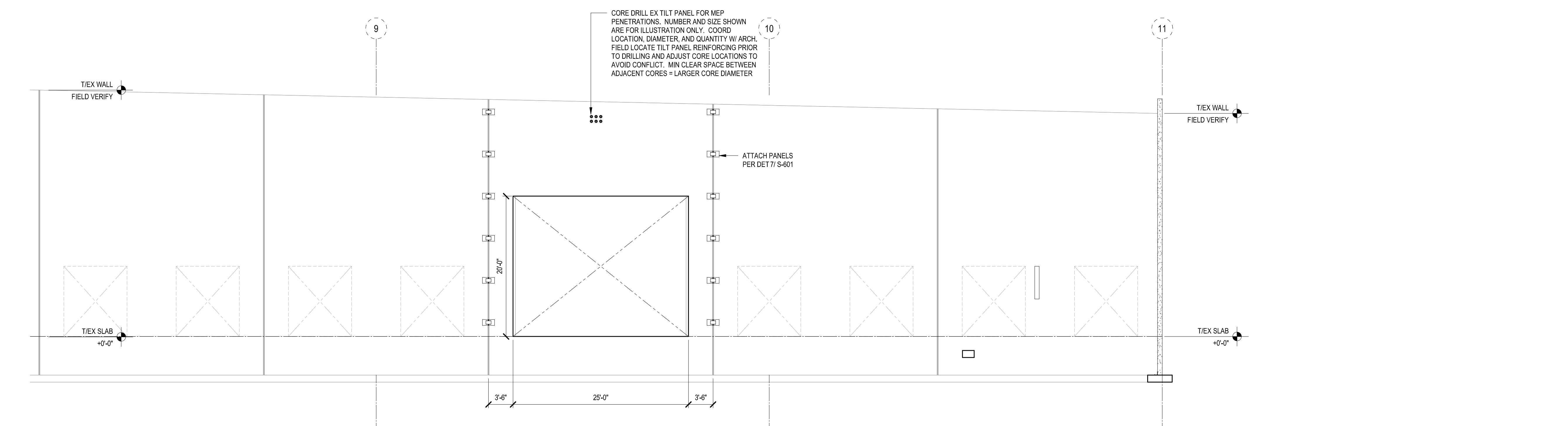
REVISIONS		
NUMBER	DESCRIPTION	DATE



1 NORTH ELEVATION - PART 1
SCALE: 1/8" = 1'-0"

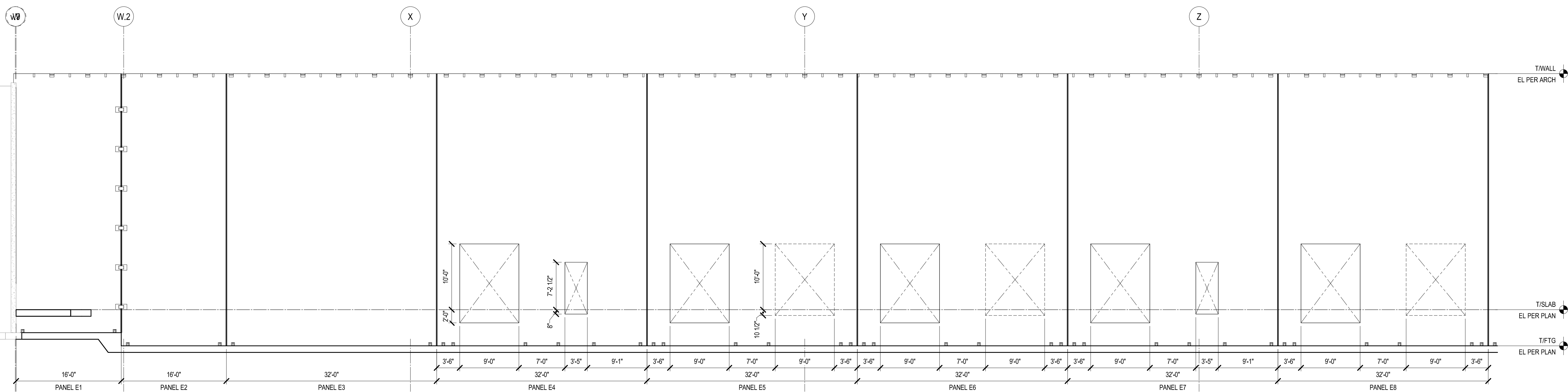


2 NORTH ELEVATION - PART 2
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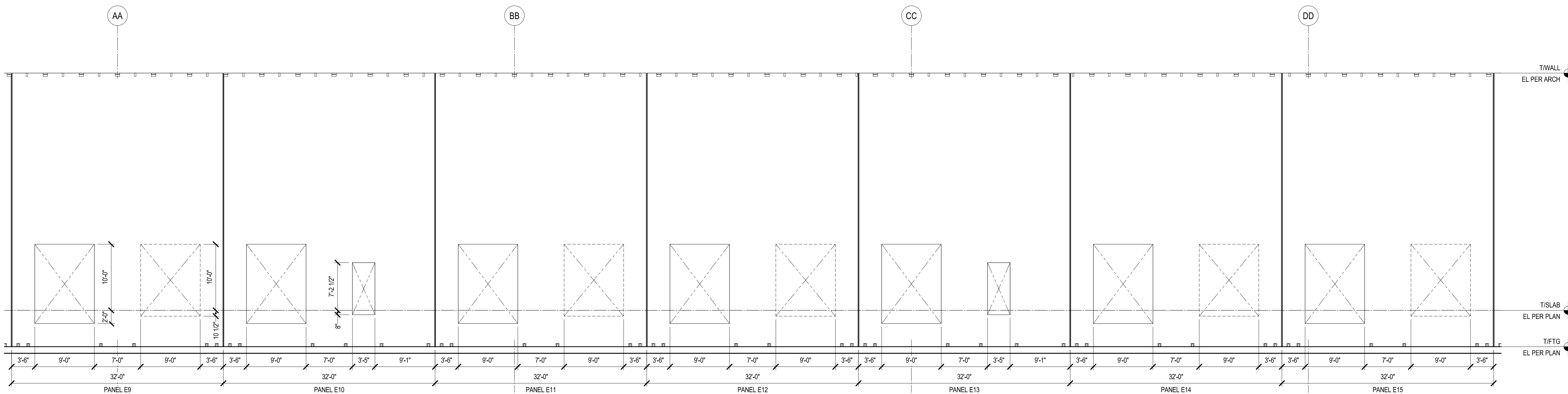


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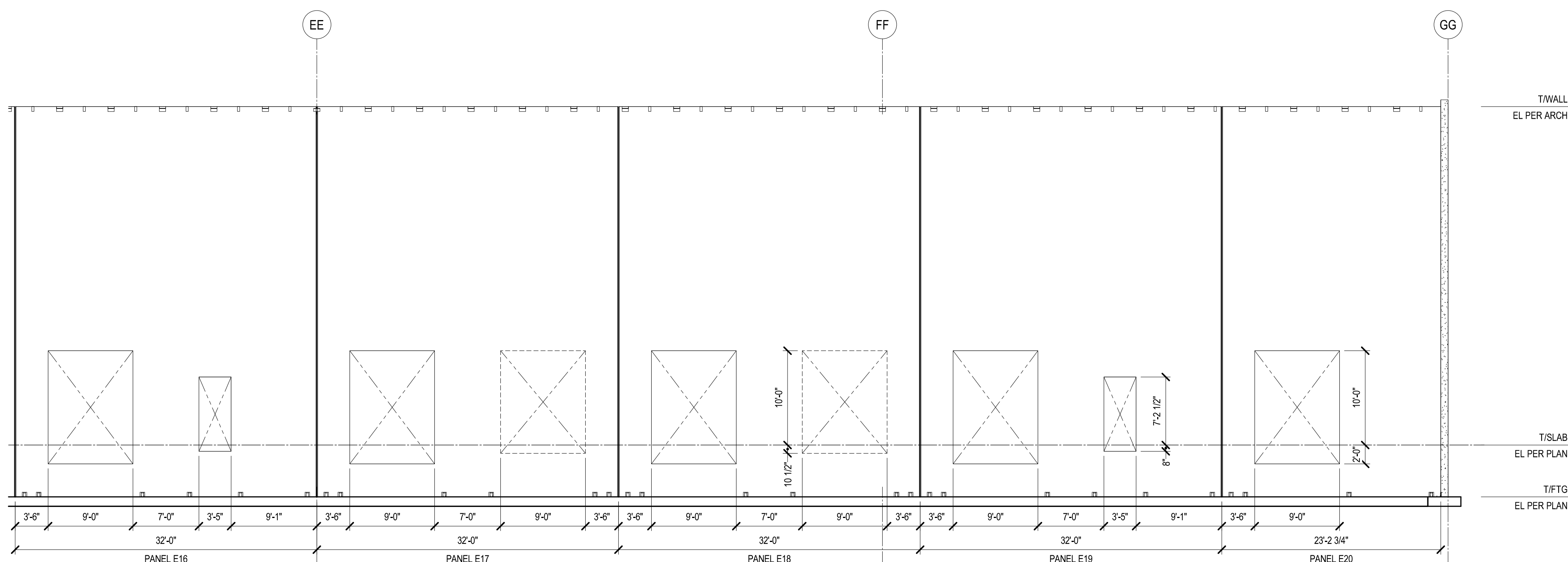
REVISIONS		
NUMBER	DESCRIPTION	DATE



1 EAST ELEVATION - PART 1
SCALE: 1/8" = 1'-0"

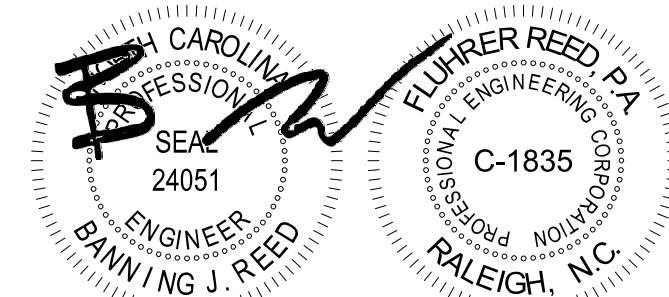


2 EAST ELEVATION - PART 2
SCALE: 1/8" = 1'-0"



3 EAST ELEVATION - PART 3
SCALE: 1/8" = 1'-0"

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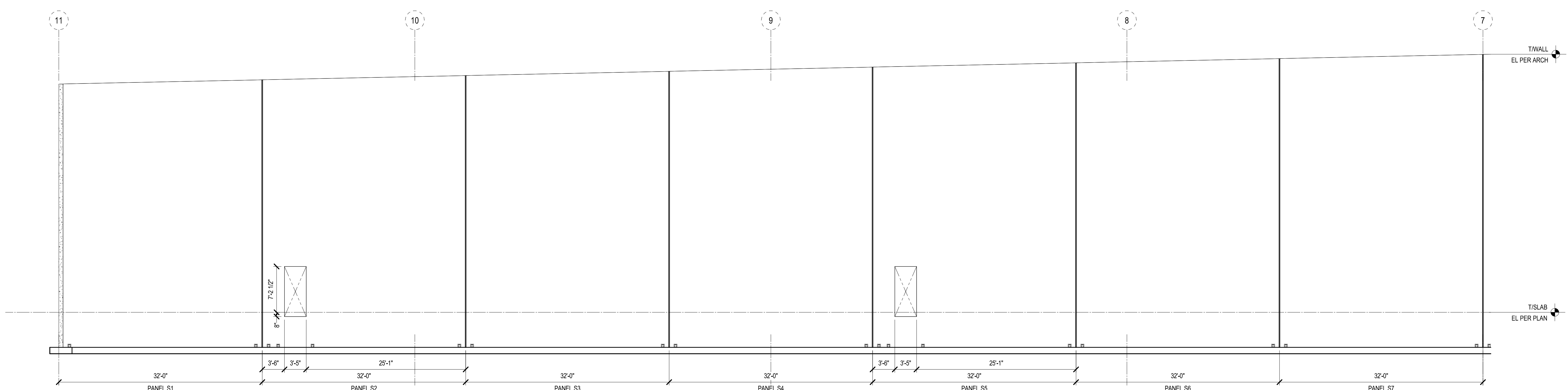
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TILT-UP WALL ELEVATIONS

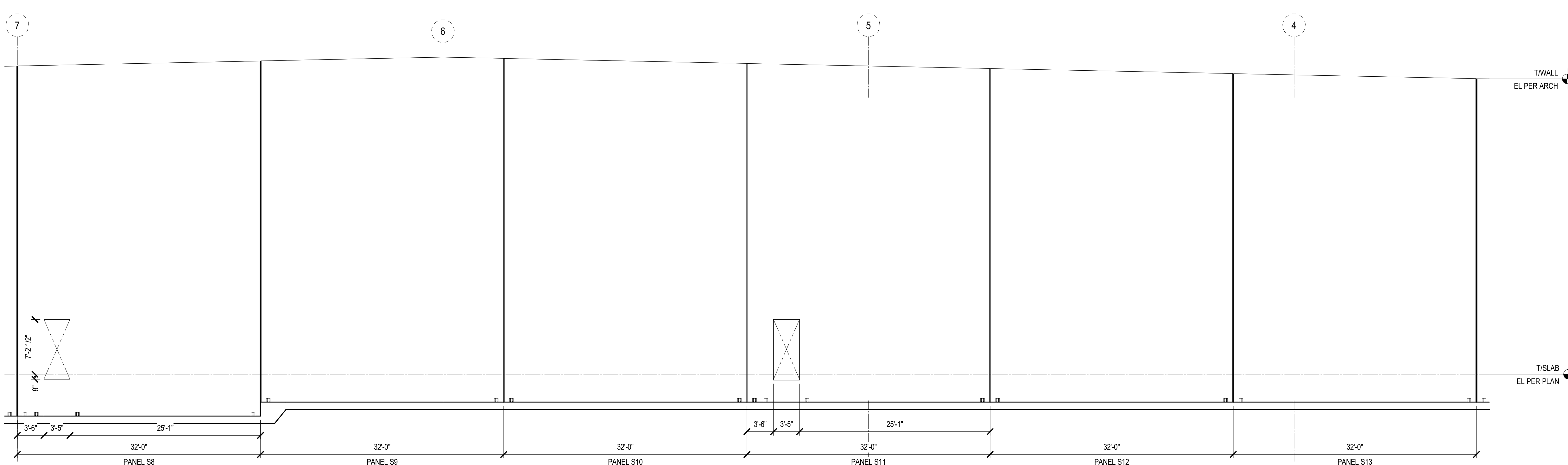
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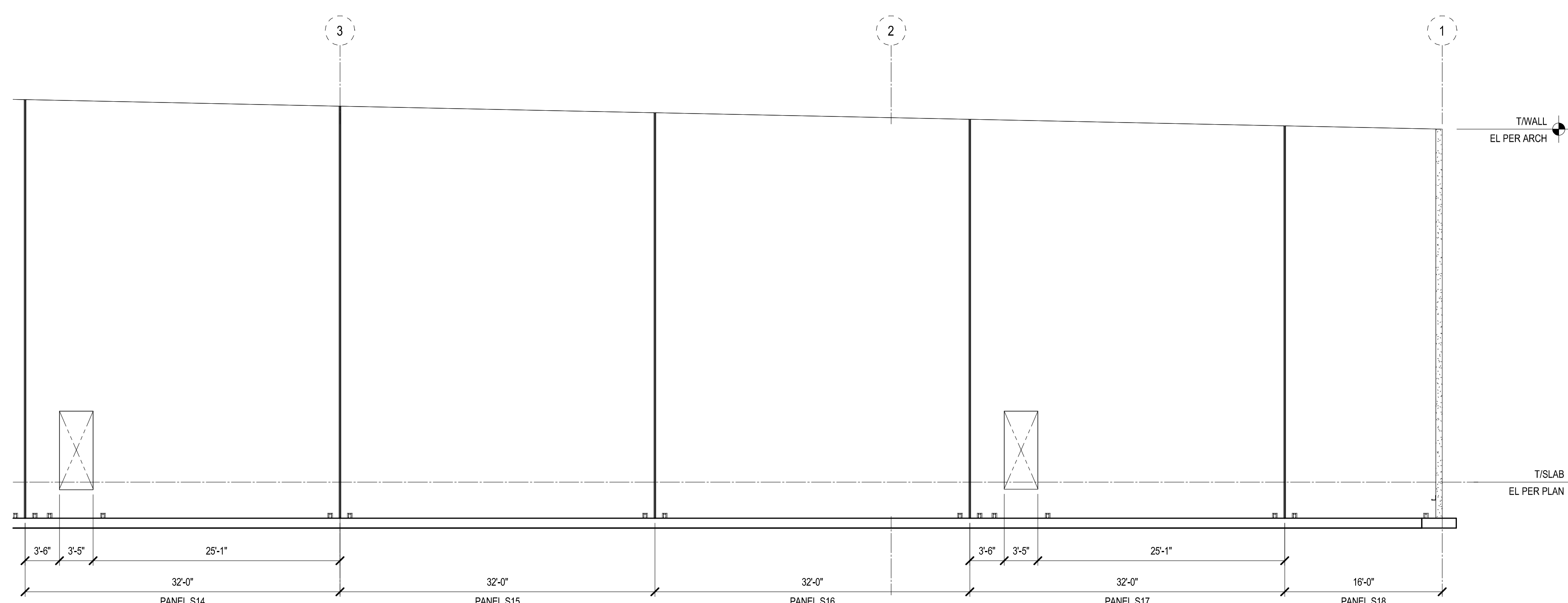
S-504



1 SOUTH ELEVATION - PART 1
SCALE: 1/8" = 1'-0"

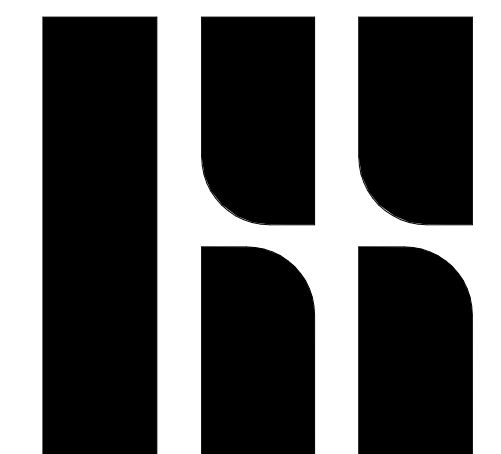


2 SOUTH ELEVATION - PART 2
SCALE: 1/8" = 1'-0"



3 SOUTH ELEVATION - PART 3
SCALE: 1/8" = 1'-0"

REVISIONS		
NUMBER	DESCRIPTION	DATE

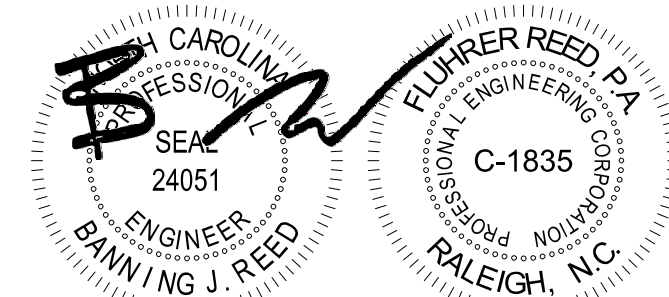


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Raleigh, NC 27604
tel 919 821 7140 www.fluhrerreed.com



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CONSULTING ENGINEERS
ENGINEERING FIRM NUMBER: C-0110
6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, N.C. 27607
P.919.851.4422 BNKINC.COM

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DUNN, NC 28334
901 ROOMS TO GO WAY
(910) 292-3505

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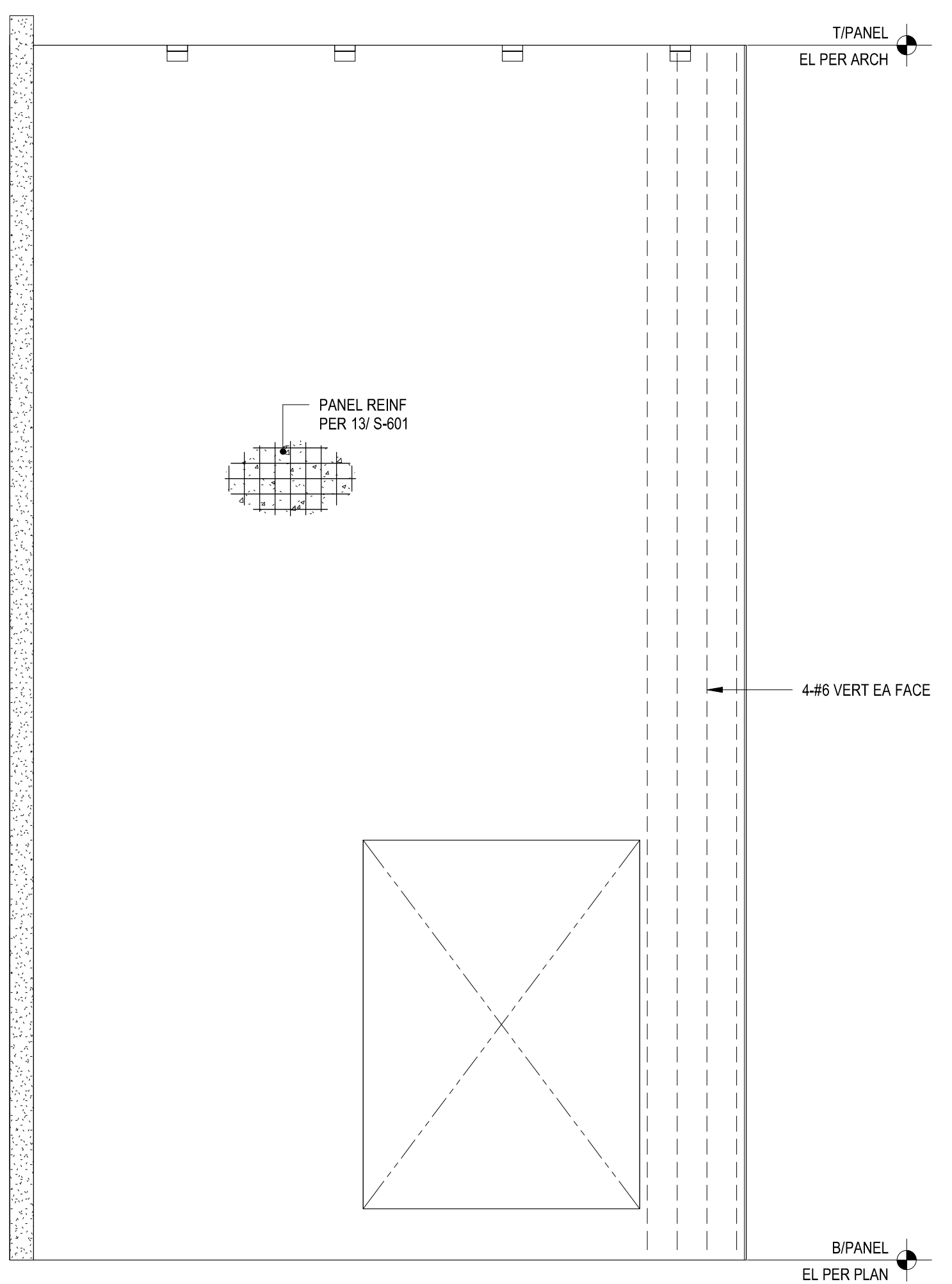
TILT-UP PANEL REINFORCING
ELEVATIONS

REVISIONS

NUMBER	DESCRIPTION	DATE

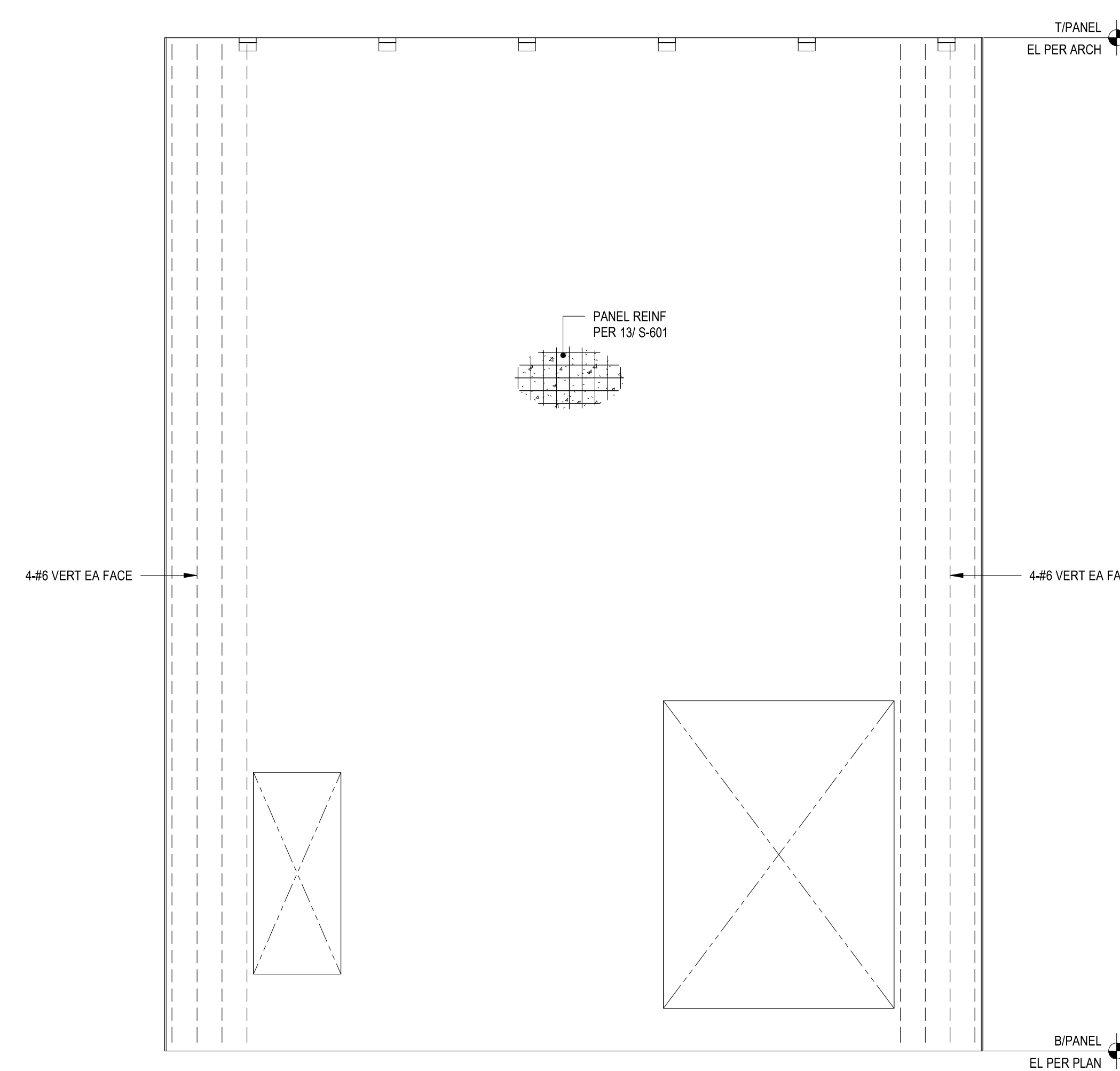
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S-506



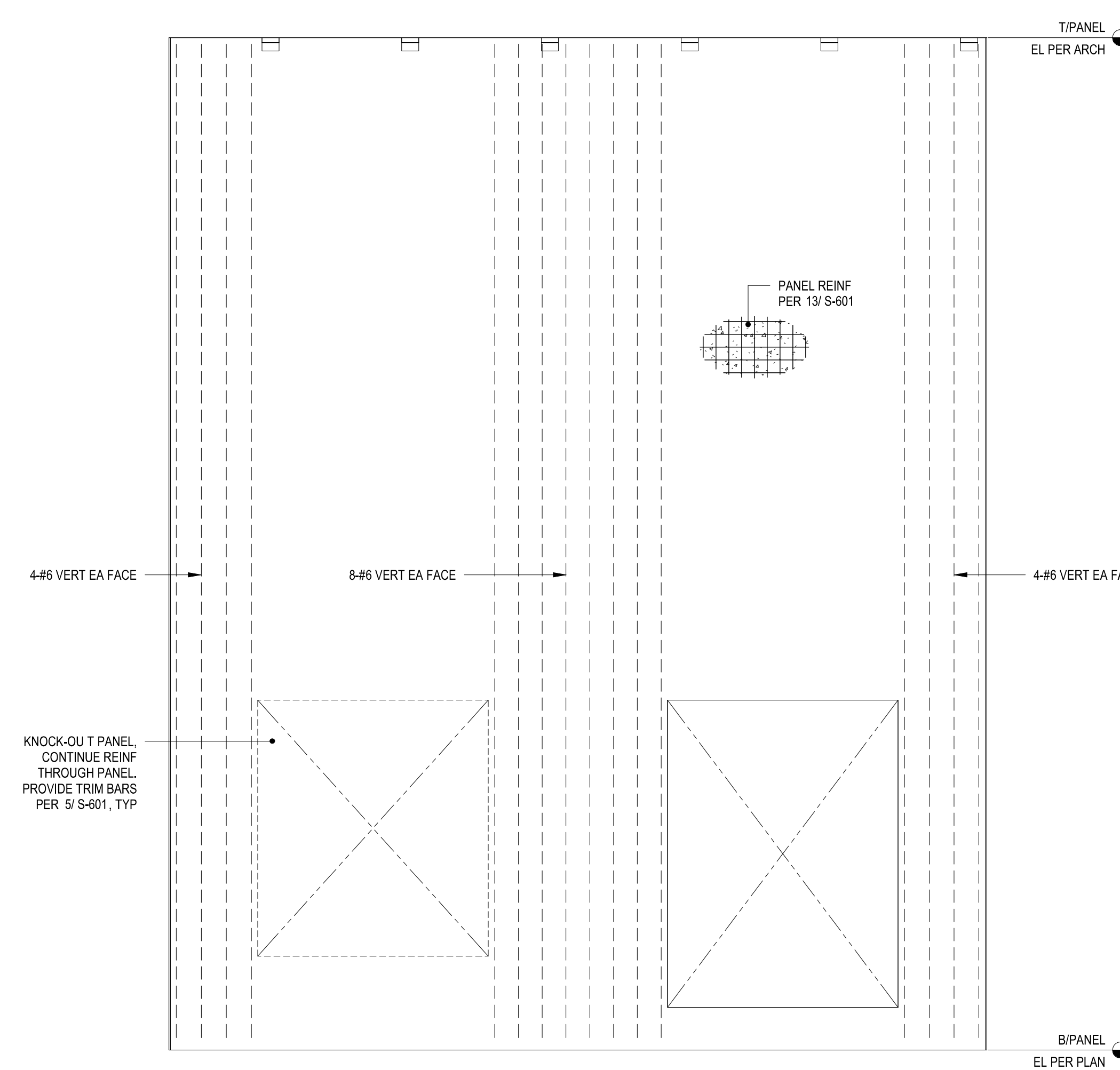
PANEL W1
PANEL E20 (OPP HAND)

1 CONCRETE TILT-UP PANEL REINFORCING ELEVATION
SCALE: 1/4" = 1'-0"



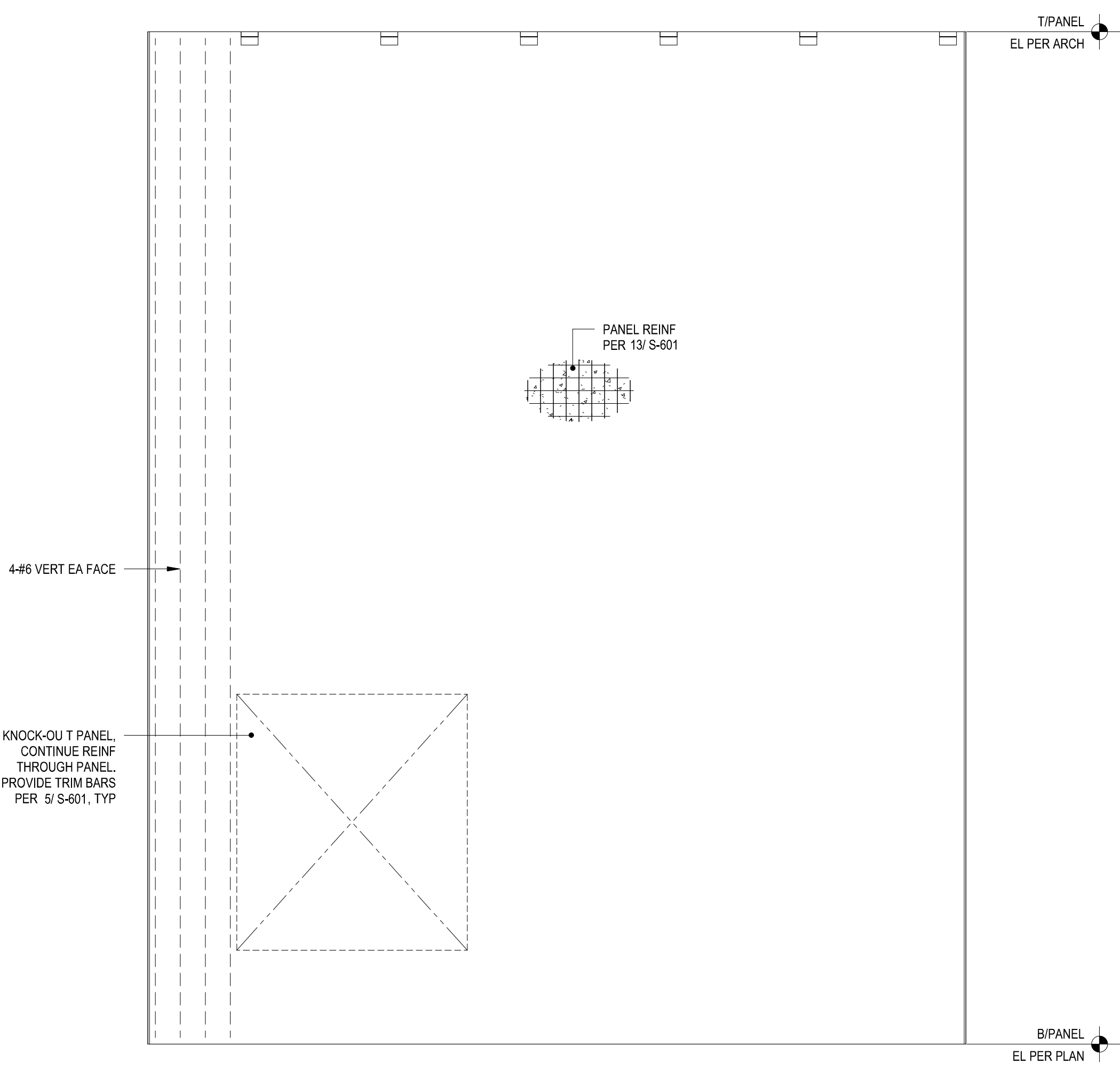
PANELS W2, W5, W8, W11, W14, W17

2 CONCRETE TILT-UP PANEL REINFORCING ELEVATION
SCALE: 1/4" = 1'-0"



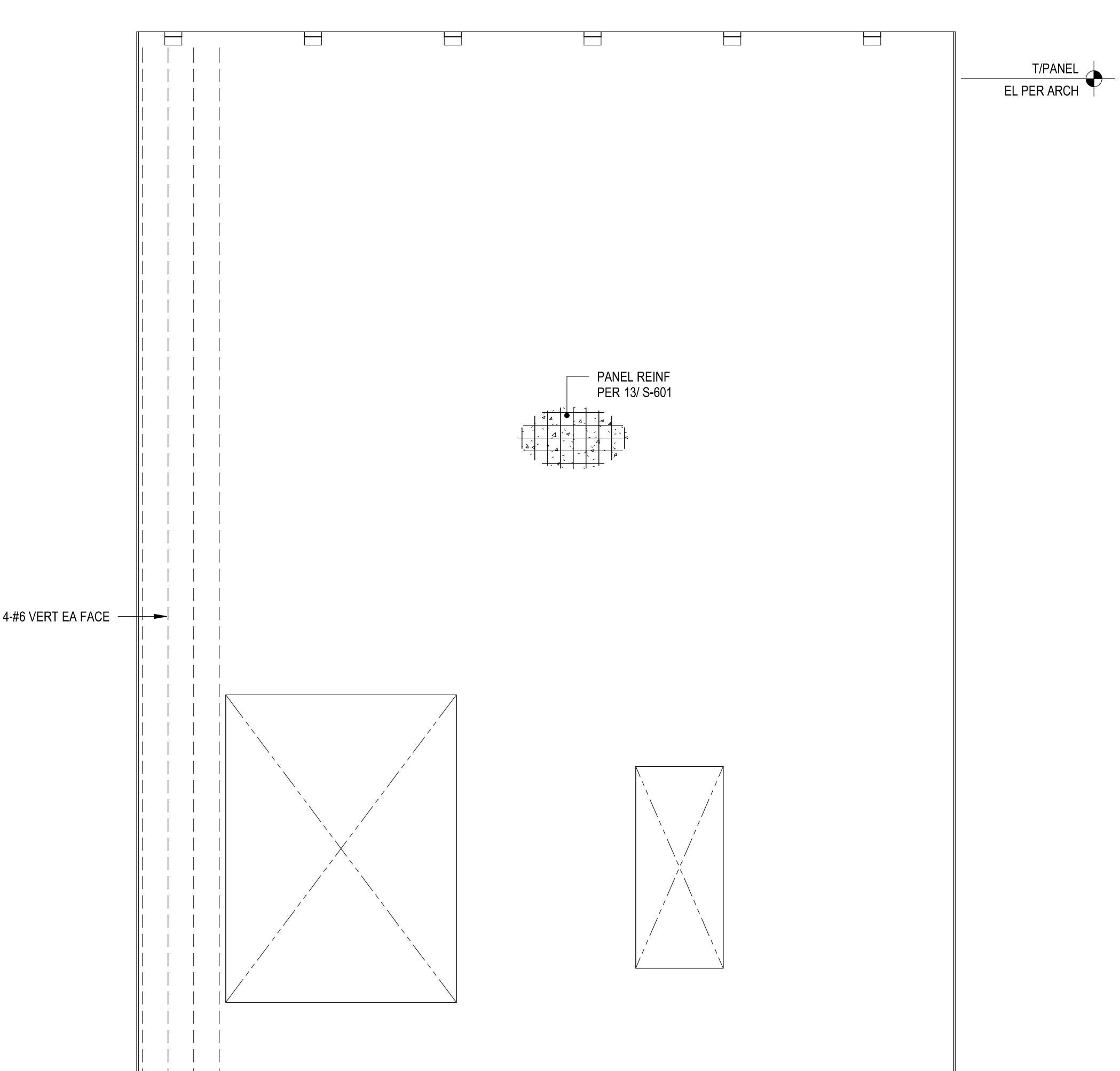
PANELS W3, W4, W6, W7, W9, W10, W12, W13, W15, W16
PANELS E5, E6, E8, E9, E11, E12, E14, E15, E17, E18 (OPP HAND)

3 CONCRETE TILT-UP PANEL REINFORCING ELEVATION
SCALE: 1/4" = 1'-0"



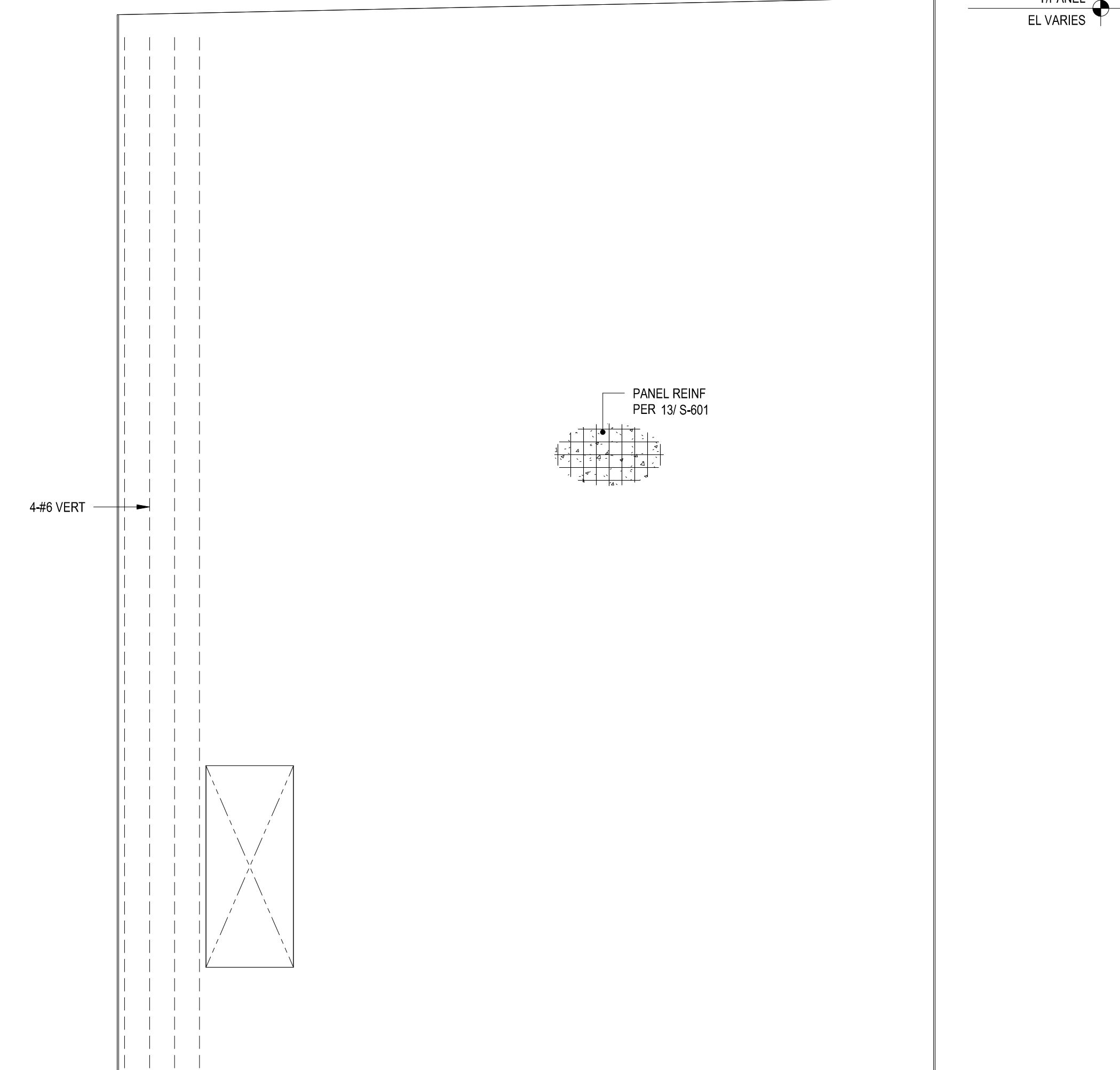
PANEL W18

4 CONCRETE TILT-UP PANEL REINFORCING ELEVATION
SCALE: 1/4" = 1'-0"



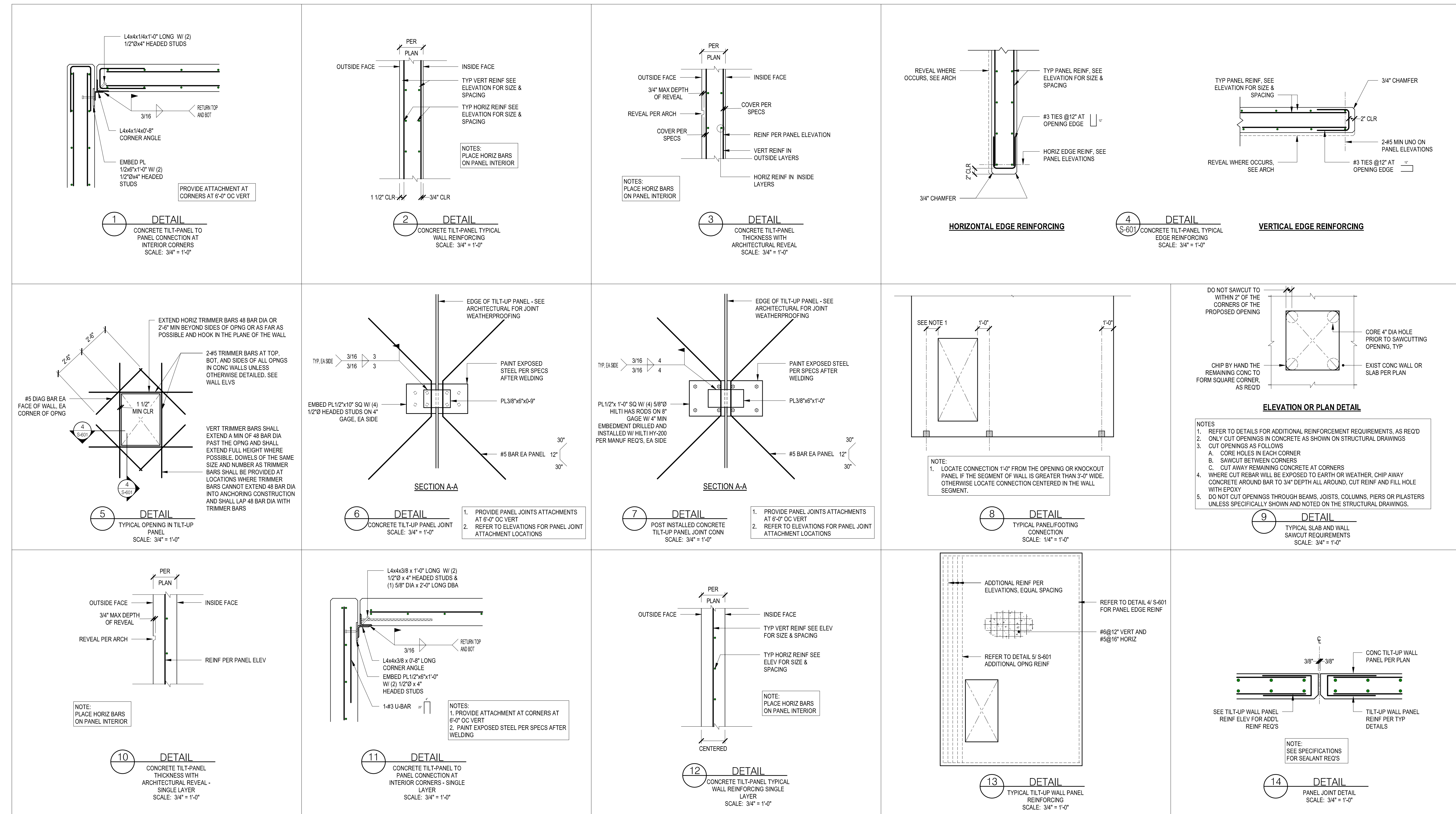
PANELS E4, E7, E10, E13, E16, E19

5 CONCRETE TILT-UP PANEL REINFORCING ELEVATION
SCALE: 1/4" = 1'-0"



PANELS S2, S5, S8, S11, S14, S17

6 CONCRETE TILT-UP PANEL REINFORCING ELEVATION
SCALE: 1/4" = 1'-0"



REVISIONS		
NUMBER	DESCRIPTION	DATE