2. REFER TO DISCIPLINE SPECIFIC SHEETS FOR ADDITIONAL DISCIPLINE NOTES THAT MAY COORDINATE WITH

ABBREVIATION LEGEND

= ANCHOR BOLT = MAXIMUM = ABOVE = ARCHITECT = MASONRY COLUMN = MECHANICAL = MEZZANINE = BOUNDARY SCREWS = MINIMUM = MASONRY JAMB NS, FS = NEAR SIDE, FAR SIDE = CONCRETE MASONRY UNIT = OR APPROVED EQUAL = COLUMN = OPPOSITE CONC = CONCRETE = POWDER ACTUATED FASTENER = CONCRETE PIER = PLATE REINF = REINFORCING = DEMAND CRITICAL DIA/Ø = DIAMETER= DEFORMED BAR ANCHOR = SIMILAR = STEEL STUD HEADER = DECK BEARING ELEVATION = STEEL STUD JAMB

= EDGE OF DECK = STEEL STUD WALL = FOUNDATION = TOP OF BEAM ELEVATION = TOP OF CONCRETE SLAB = TOP OF FOOTING = FINISHED FLOOR ELEVATION = CONCRETE GRADE BEAM = TOP OF GIRDER ELEVATION = HEADED STUD ANCHOR = TOP OF MASONRY = TOP OF STEEL ELEVATION = JOIST BEARING ELEVATION = KICKERBRACE = TYPICAL UNO = UNLESS NOTED OTHERWISE

CIVIL ENGINEER STRUCTURAL ENGINEER TREDO ENGINEERS ARW ENGINEERS 755 SENECA STREET, SUITE 202

= STEEL STUD SILL

200 LEDGEWOOD PLACE, SUITE 200 ROCKLAND, MASSACHUSETTS 02370 BUFFALO, NY 14210 781.261.9700 716.876.7147

ANDREW MARINO, P.E. amarino@tredoengineers.com

DESIGN TEAM

1594 W. PARK CIRCLE OGDEN, UTAH 84404 JEREMY L. ACHTER, PE 801.782.6008 jeremya@arwengineers.com

MECHANICAL ENGINEER PLUMBING ENGINEER ELECTRICAL ENGINEER

FOOD TECH, INC. 18000 W. SARAH LANE, SUITE 100 BROOKFIELD, WI 53045 ROBERT ELIOPULOS, PE 781.261.9700 beliopulos@foodtech.com

= EDGE SCREWS

ARCHITECT

FOOD TECH, INC.

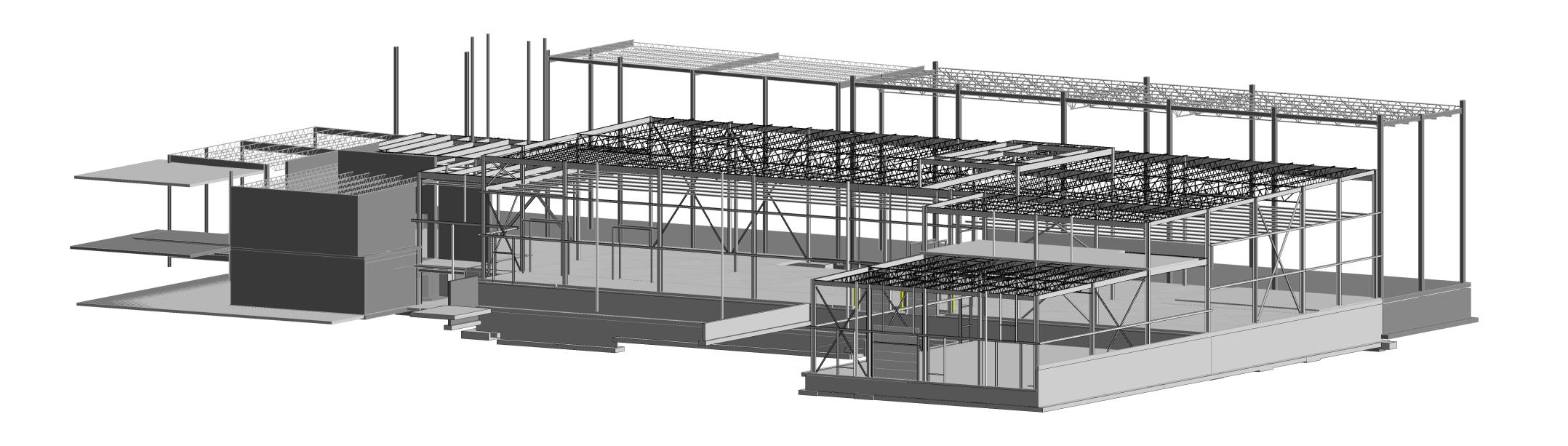
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FOOD TECH, INC. 18000 W. SARAH LANE, SUITE 100 BROOKFIELD. WI 53045 RICHARD WARD, PE 781.261.9700 rward@foodtech.com



PERRY'S ICE CREAM

1 ICE CREAM PLAZA AKRON, NY 14001



STRUCTURAL	STRUCTURAL
S0.000 STRUCTURAL COVER SHEET	
S0.001 STRUCTURAL NOTES	
S0.100 SCHEDULES	
S0.101 SCHEDULES	
S0.102 SCHEDULES	
S1.100 OVERALL FOOTING AND FOUNDATION PLAN	
S1.101 PARTIAL FOOTING AND FOUNDATION PLAN - AREA A	
S1.102 PARTIAL FOOTING AND FOUNDATION PLAN - AREA B	
S1.103 PARTIAL FOOTING AND FOUNDATION PLAN - AREA C	
S1.104 PARTIAL FOOTING AND FOUNDATION PLAN - AREA D	
S1.200 MEZZANINE FRAMING PLAN	
S1.300 OVERALL ROOF FRAMING PLAN	
S1.301 PARTIAL ROOF FRAMING PLAN - AREA A	
S1.302 PARTIAL ROOF FRAMING PLAN - AREA B	
S1.303 PARTIAL ROOF FRAMING PLAN - AREA C	
S2.100 TYPICAL DETAILS	
S2.200 CONTINUOUS DOCK PIT DETAILS	
S2.300 DETAILS	
S2.301 DETAILS	
S2.400 MEZZANINE DETAILS	
S2.500 DETAILS	
S2.501 DETAILS	
S3.100 ELEVATIONS	
S3.101 ELEVATIONS	
S3.102 ELEVATIONS	
S4.100 DETAILS	
S4.101 DETAILS	

DRAWING NO. **DRAWING IN COLOR**

ARW Project #: 22198 102204

HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED TO. DIMENSIONS, SIZES, ETC). 3. THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS

ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

4. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.

5. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS. 6. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS.

SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE 7. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR

SUBSTITUTIONS. 8. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION. 9. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE

WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS. 10. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED "TYPICAL" OR "SIMILAR" IN THE PLANS AND DOCUMENTS.

11. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALED FORM: HOWEVER CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION. 12. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL

STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL

SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER. 13. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE

14. NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS, ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE, FOR ONE USE ONLY. REPRODUCTION AND DISTRIBUTION OF THESE DRAWINGS IS ONLY ALLOWED AS REQUIRED FOR REGULATORY AGENCIES AND FOR CONVEYANCE OF INFORMATION TO PARTIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT. THESE DOCUMENTS SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN

PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS. 15. WHERE THE WORD "SHALL" OCCURS IN THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS. IT IS CONSIDERED A MANDATORY OBLIGATION AND SYNONYMOUS WITH THE PHRASE "HAS DUTY TO".

B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS

1. THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET S0.100, S0.101, & S0.102. 2. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL

COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS. 3. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.

4. STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED

CONSTRUCTION 5. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER.

C. BASIS OF DESIGN

WIND DESIGN

1. GOVERNING BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC) 2018

2. SUSPENDED FLOOR LOADS a. LIVE LOAD = 100 PSF UNREDUCED b. DEAD LOAD = 80 PSF

3. ROOF LOADS a. FLAT-ROOF SNOW LOAD, Pf: 35 PSF . GROUND SNOW LOAD, Pa: 50 PSF 2. SNOW EXPOSURE FACTOR, Ce: 1.0

SNOW LOAD IMPORTANCE FACTOR, Is: 1.0 4. THERMAL FACTOR, Ct: 1.0 5. SLOPE FACTOR, C_S: 1.0

6. SNOW DRIFT: SHOWN ON PLANS WHERE APPLICABLE. b. LIVE LOAD = 20 PSF c. DEAD LOAD = 12 PSF (17 PSF @ WALKABLE CEILINGS) (25 PSF @ ENGINE ROOM) 1. SPECIAL LOADS, IE. PHOTOVOLTAIC PANEL SYSTEMS, ETC. = 0 PSF d. RAIN INTENSITY, i: 2.5 IN/HR

a. BASIC WIND SPEED (3 SECOND GUST): 109 MPH b. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD}: 85 MPH

WIND EXPOSURE : d. INTERNAL PRESSURE COEFFICIENT, GCPI: ±0.18

e. COMPONENT AND CLADDING DESIGN WIND PRESSURE SHALL BE AS REQUIRED PER ASCE 7-16. 5. SEISMIC DESIGN:

a. SEISMIC IMPORTANCE FACTOR, I_E: 1.0 b. SITE CLASS: D

. MAPPED SPECTRAL RESPONSE ACCELERATIONS: $S_8 = 0.180$, $S_1 = 0.047$ d. SPECTRAL RESPONSE COEFFICIENTS: $S_{DS} = 0.156$, $S_{D1} = 0.047$ e. SEISMIC DESIGN CATEGORY: B

BASIC SEISMIC-FORCE-RESISTING SYSTEM: NOT SPECIFICALLY DETAILED FOR SEISMIC SEISMIC RESPONSE COEFFICIENT, Cs: 0.052

RESPONSE MODIFICATION FACTOR, R: 3 i. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

D. FOUNDATION

GENERAL

a. DESIGN SOIL PRESSURE: 3000 PSF b. SOILS REPORT BY: BARRON & ASSOCIATES, P.C. REPORT #: 22-576

DATED: SEPTEMBER 9, 2022 c. SOIL PREPARATION UNDER FOUNDATIONS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH

THE SOILS REPORT. d. TOP OF FOOTING ELEVATIONS SHOWN ON THE FOOTING AND FOUNDATION PLAN ARE BASED ON PRELIMINARY GRADING INFORMATION AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION. STEPS WHERE SHOWN ARE AT APPROXIMATE LOCATIONS. ACTUAL STEP LOCATIONS SHALL BE AT THE CONTRACTOR'S DISCRETION BASED UPON FIELD CONDITIONS. ALL EXTERIOR FOUNDATIONS SHALL

BEAR A MINIMUM OF 48 INCHES BELOW LOWEST ADJACENT FINAL GRADE e. ALL WALLS (EXCEPT CANTILEVERED RETAINING WALLS) SHALL BE ADEQUATELY BRACED AGAINST LATERAL MOVEMENT PRIOR TO BACKFILLING. DESIGN AND ERECTION OF BRACING/SHORING SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.

UNLESS NOTED OTHERWISE. ALL FOOTINGS AT COLUMNS SHALL BE CENTERED BELOW COLUMNS g. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.). WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED SOIL "FORMS" PROVIDED THAT THE DIMENSIONS ARE INCREASED 3" ON ALL SIDE.

2. HELICAL PIER FOUNDATIONS a. HELICAL PIER FOUNDATIONS AND THEIR COMPONENTS SHALL BE CONSIDERED A "PILE FOUNDATION" AND SHALL BE SUBJECT TO CONTINUOUS SPECIAL INSPECTION AS REQUIRED BY THE SPECIAL INSPECTION SCHEDULE FOR PILE FOUNDATIONS AND PER IBC CHAPTER 17. b. HELICAL PIER FOUNDATION SYSTEMS SHALL BE DESIGNED BY A LICENSED ENGINEER TO RESIST

THE LOADS SHOWN ON THE PLANS AND SCHEDULES AND IN ACCORDANCE WITH THE SOILS

REPORT AND SPECIFICATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION CONCERNING REQUIREMENTS FOR DESIGN, TESTING, AND INSTALLATION OF HELICAL PIER FOUNDATIONS. c. THE NUMBER AND LOCATION OF HELICAL PIERS IS SHOWN SCHEMATICALLY ON THE PLANS. HELICAL PIER SUPPLIER IS RESPONSIBLE FOR DETERMINING THE ACTUAL NUMBER AND DEPTH OF PIERS REQUIRED TO RESIST THE LOADS SHOWN ON THE PLANS AND SCHEDULES. LOADS SHOWN

d. HELICAL PIER FOUNDATION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH AN ICC EVALUATION SERVICES INC. RESEARCH REPORT BY CERTIFIED HELICAL PIER INSTALLERS. e. ALL STEEL COMPONENTS OF HELICAL PIER FOUNDATION SYSTEMS SHALL BE HOT-DIPPED

ARE BASED ON ALLOWABLE/DESIGN LEVEL FORCES

GALVANIZED PER ASTM A153. f. ALL HELICAL PIERS SHALL BE PLACED IN UNDISTURBED SOIL TO A MINIMUM DEPTH AS REQUIRED TO REACH THE SPECIFIED LOAD REQUIREMENTS NOTED ON THE PLANS, BUT NO LESS THAN 5

TIMES THE DIAMETER OF THE LARGEST HELIX BELOW THE UNDISTURBED SURFACE. g. HELICAL PIER FOUNDATION SHALL BE DRIVEN INTO SOIL UNTIL THE REQUIRED TORQUE OR ULTIMATE LOAD RATING IS REACHED. TORQUE RESULTS AND HELICAL PIER DEPTHS SHALL BE

RECORDED FOR EACH PIER AND SUBMITTED TO THE ENGINEER FOR REVIEW. h. ALL PIERS SHALL BE PLACED SUCH THAT THE HELICES OF ADJACENT PIERS ARE NO CLOSER THAN 3 HELICE DIAMETERS APART (BASED ON THE LARGEST HELICE USED TO ATTAIN THE REQUIRED LOAD RATING) WHEN THE PIER HAS REACHED ITS FINAL DEPTH.

HELICAL PIER FOUNDATIONS USED TO RESIST CYCLICAL LOADING SHALL HAVE STEEL SHIMS INSTALLED IN THE COUPLING BOXES TO REMOVE SLACK AT COUPLERS.

E. CONCRETE

1. ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS LISTED BELOW: a. FOOTINGS, GRADE BEAMS, FOUNDATION WALLS (EXPOSURE CATEGORY F0):

. 28 DAY COMPRESSIVE STRENGTH: 4500 PSI . MAXIMUM W/C RATIO :

DELIVERED SHALL BE +/- 1.5 PERCENT.

3. MAXIMUM AGGREGATE SIZE : SEE SCHEDULE BELOW 4. AIR CONTENT b. RETAINING WALLS (EXPOSURE CATEGORY F2) :

1. 28 DAY COMPRESSIVE STRENGTH: 4500 PSI 2. MAXIMUM W/C RATIO: 3. MAXIMUM AGGREGATE SIZE: 4. AIR CONTENT SEE SCHEDULE BELOW

c. INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0): 1. 28 DAY COMPRESSIVE STRENGTH: 3000 PSI

d. INTERIOR SUSPENDED SLABS (EXPOSURE CATEGORY F0) 1. 28 DAY COMPRESSIVE STRENGTH: 3000 PSI e. EXTERIOR SLABS (DOCKS, ETC.) (EXPOSURE CATEGORY F2):

1. 28 DAY COMPRESSIVE STRENGTH: 4500 PSI 2. MAXIMUM W/C RATIO: MAXIMUM AGGREGATE SIZE : 4. MINIMUM AIR CONTENT: SEE SCHEDULE BELOW

NOMINAL MAXIMUM TARGET AIR CONTENT, PERCENT AGGREGATE SIZE, IN. F2 AND F3

. WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602. NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE PLACEMENT

4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO

f. TOTAL AIR CONTENT FOR CONCRETE EXPOSED TO CYCLES OF FREEZING AND THAWING SHALL BE

DETERMINED IN ACCORDANCE WITH THIS SCHEDULE. TOLERANCE ON AIR CONTENT AS

CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC. 5. UNLESS NOTED OTHERWISE, MINIMUM REINFORCING IN ALL CONCRETE FOUNDATION WALLS SHALL BE AS FOLLOWS:

THICKNESS BOTTOM BARS VERTICAL HORIZONTAI #4 AT 18"O.C. #4 AT 12"O.C.

APPLIED TO THE JOINT PRIOR TO PLACING NEW CONCRETE

6. UNLESS NOTED OTHERWISE, FOR NON-DETAILED OPENINGS IN CONCRETE WALLS LARGER THAN 12" AND SMALLER THAN 24" IN ANY DIRECTION ADD (2) #5 BARS ON ALL SIDES IN ADDITION TO REGULAR WALL REINFORCING AND EXTEND 24" EACH WAY BEYOND OPENING. IF 24" IS NOT AVAILABLE ON EVERY SIDE, NOTIFY STRUCTURAL ENGINEER FOR FURTHER DIRECTION. OPENINGS SHALL HAVE A MINIMUM OF 12" OF CONCRETE ABOVE THE OPENING, TYP. 7. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE AND LOCATED SO AS TO NOT

IMPAIR THE STRENGTH OF THE STRUCTURE AND AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE 2 X 4 (SHAPED) KEYWAY IN ALL VERTICAL AND HORIZONTAL JOINTS UNLESS NOTED OR DETAILED OTHERWISE. ALL STEEL REINFORCING SHALL BE CONTINUOUS THROUGH COLD JOINTS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR COLD/CONSTRUCTION JOINTS FOR SLABS ON 8. WHERE NEW CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE JOINT SHALL BE CLEAN AND FREE OF LAITANCE. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION

JOINTS SHALL BE PREWETTED AND STANDING WATER REMOVED. WHERE NOTED IN SPECIFIC DETAILS,

HARDENED CONCRETE SHALL BE ROUGHENED TO 1/4" AMPLITUDE AND A BONDING AGENT SHALL BE

F. ANCHOR BOLTS/EMBEDDED BOLTS

1. ALL ANCHOR BOLTS SHALL HAVE ASTM A-563 HEAVY HEX NUT AND ASTM F-436 WASHERS AT STANDARD OR OVERSIZED HOLES PER AISC SPECIFICATION TABLE J3.3. WHERE HOLE SIZES DO NOT COMPLY WITH THE LIMITATIONS FOR OVERSIZED HOLES THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO DETERMINE STEEL PLATE WASHER REQUIREMENTS. ANCHOR BOLTS SHALL COMPLY WITH THE FOLLOWING: a. AT BRACED FRAMES & MOMENT RESISTING FRAMES - ASTM F1554 GRADE 55 HEADED BOLTS.(ASTM A449 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)

b. AT ALL OTHER ANCHOR BOLTS (UNLESS NOTED OTHERWISE) - ASTM F1554 GRADE 36 HEADED BOLTS. (ASTM A36 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.) SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC. 3. FURNISH TEMPLATES AND OTHER DEVICES AS NECESSARY FOR PRESETTING ALL BOLTS PRIOR TO PLACING CONCRETE AND/OR GROUT

5. WHERE REQUIRED FOR ERECTION, HOLES LARGER THAN OVERSIZED MAY BE PERMITTED WITH THE USE OF STEEL PLATE WASHERS AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

4. IF THREADED RODS ARE USED AS PERMITTED ABOVE, THEY SHALL BE CLEAR OF SOIL AND DIRT.

G. ADHESIVE/MECHANICAL ANCHORS

1. WITHOUT WRITTEN APPROVAL OF THE ENGINEER, CONTRACTOR SHALL NOT SUBSTITUTE POST-INSTALLED ANCHORS WHERE CAST-IN-PLACE ANCHORS ARE SPECIFIED IN THE DRAWINGS. WHERE STRUCTURAL DETAILS SPECIFY SPECIFIC BRANDS AND/OR TYPES OF ADHESIVES OR ANCHORS, SUBSTITUTIONS OF OTHER BRANDS AND/OR TYPES IS NOT ALLOWED, WITHOUT WRITTEN

APPROVAL OF THE ENGINEER. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC ESR OR IAPMO REPORT AND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN

4. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED, INCLUDING HOLE DRILLING AND PREPARATION, IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII)

INSTALLERS SHALL BE, AT A MINIMUM, TRAINED FOR THE SPECIFIC APPLICATION INSTALLATION TECHNIQUE FOR THE SPECIFIC PRODUCT BY THE PRODUCT MANUFACTURERS FIELD EMPLOYEE OR SHALL POSSESS A TRAINING CARD OBTAINED BY THE MANUFACTURERS ONLINE TRAINING PROGRAM. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. ADHESIVE ANCHORS SHALL NOT BE FULLY LOADED UNTIL CONCRETE HAS

REACHED DESIGN STRENGTH. ADHESIVE ANCHORS SHALL CONSIST OF REINFORCING BAR OR THREADED RODS AS INDICATED IN

THESE DOCUMENTS 8. UNLESS APPROVED BY THE ENGINEER OF RECORD, CONCRETE AND DRILLED ANCHOR HOLES SHALL BE DRY AND FREE OF WATER FOR 14 DAYS PRIOR TO ADHESIVE INSTALLATION. CONTACT THE ENGINEER OF RECORD FOR GUIDANCE IF THE CONTRACTOR CHOOSES TO INSTALL IN DAMP, WATER-SATURATED, OR WATER-FILLED HOLES.

9. CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE MONITORED BY THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) RELATIVE TO SUBSTRATE TEMPERATURE. 10. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 318-11 D.9.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE

SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR THESE ANCHORS. 11. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE: a. HILTI HIT-RE 500V3 (ESR-3814), OR HILTI HIT-HY 200-A (ESR-3187). b. SIMPSON SET-3G (ESR-4057), OR AT-XP (ER-0263).

c. DEWALT PURE 110+ (ESR-3298), OR AC200+ GOLD (ESR-4027-COLD WEATHER). 12. UNLESS NOTED OTHER WISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE:

a. HILTI KWIK BOLT-TZ2 (ESR-4266). b. SIMPSON STRONG-BOLT 2 (ESR-3037). 13. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE: a. SIMPSON TITEN HD (ESR-2713)

b. DEWALT SCREWBOLT+ (ESR-3889) c. HILTI KWIK HUS-EZ (ESR-3027). 14. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF

RECORD OR THE SPECIAL INSPECTOR. 15. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 2 INCHES, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT OR AN APPROVED ANCHORING ADHESIVE. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCEMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION. 16. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES,

MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.

H. SUSPENDED CONCRETE SLABS / SLABS ON METAL DECK

UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON METAL DECK SHALL BE 6" TOTAL THICKNESS NORMAL WEIGHT CONCRETE WITH A WEIGHT LESS THAN 145 POUNDS PER CUBIC FOOT, REINFORCED WITH #3 @ 16"o.c. REINFORCING STEEL SHALL BE CHAIRED TO 1" TOP COVER AT ALL BEAM LOCATIONS. EXCEPT WHERE SPECIFICALLY DETAILED. FIBER MESH MAY BE USED IN PLACE OF REINFORCEMENT IN SLABS ON DECK WHEN USED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT AND WHERE APPROVED BY THE ENGINEER. WHERE THE SLAB CONSTRUCTION IS USED TO OBTAIN A UL FIRE RATING, THE PROPOSED FIBER MESH SHALL HAVE UL ACCEPTANCE AS AN APPROVED ALTERNATIVE TO WELDED WIRE FABRIC.

2. AROUND OPENINGS IN SUSPENDED CONCRETE SLABS, ADD REINFORCING BARS EQUIVALENT TO BARS CUT BY OPENING WITH HALF ON EACH SIDE OF OPENING. BARS PARALLEL TO PRINCIPAL REINFORCING SHALL RUN FULL LENGTH OF SPAN. BARS PARALLEL TO TEMPERATURE REINFORCING SHALL RUN 24" SLAB PENETRATIONS LESS THAN 6" IN ALL DIRECTIONS WITH A CLEAR SPACING OF AT LEAST 3 TIMES

THE LONGEST DIMENSION, DO NOT REQUIRE SUPPLEMENTAL REINFORCING. OTHERWISE, THE

PENETRATIONS SHALL BE FRAMED ON 4 SIDES WITH STEEL ANGLES OR BENT PLATES (SEE TYPICAL DETAIL) UNLESS NOTED OTHERWISE. 4. EVERY EFFORT SHALL BE MADE TO PROVIDE A LEVEL FINISHED FLOOR WHILE MAINTAINING THE MINIMUM INDICATED SLAB THICKNESS. WHEN PLACING CONCRETE, SCREEDS SHALL BE RE-SET AFTER INITIAL SCREEDING TO ACCOUNT FOR DEFLECTION DUE TO CONCRETE WEIGHT.

5. CONTROL JOINTS IN SUSPENDED CONCRETE SLABS AND CONCRETE SLABS ON DECK SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED AND DETAILED BY THE ENGINEER. 6. SEE TYPICAL DETAILS WHEN SLABS ARE MADE COMPOSITE WITH STEEL BEAMS.

I. REINFORCING STEEL

1. REINFORCING BAR STRENGTH REQUIREMENTS: a. ALL REINFORCING BARS EXCEPT AS INDICATED IN NOTE b, SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.

HEADED SHEAR STUD ASSEMBLIES SHALL CONFORM TO ASTM A1044. STEEL DISCONTINUOUS FIBER REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 50 AND NOT GREATER THAN 100. 4. HEADED DEFORMED BARS SHALL CONFORM TO ASTM A970. OBSTRUCTIONS OR INTERRUPTIONS OF

THE BAR DEFORMATIONS, IF ANY, SHALL NOT EXTEND MORE THAN 2 BAR DIAMETERS FROM THE BEARING FACE OF THE HEAD.

5. ALL REINFORCING STEEL SHALL BE TIED IN PLACE AND ADEQUATELY SUPPORTED PRIOR TO PLACING CONCRETE. WET STABBING OF ANY REINFORCING STEEL IS NOT PERMITTED, UNLESS SPECIFICALLY DETAILED OTHERWISE OR APPROVED BY THE ENGINEER.

ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3" b. EXPOSED TO EARTH OR WEATHER: 1. #6 & LARGER 2"

2. #5 & SMALLER1-1/2" c. NOT EXPOSED TO WEATHER OR EARTH: 1. SLABS, WALLS, JOISTS, #11 & SMALLER 3/4" 2. BEAMS, COLUMNS: MAIN REINFORCING OR TIES 1-1/2"

1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE. 8. EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE. 9. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED

AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS. 10. ALL VERTICAL REINFORCING IN STRUCTURAL ELEMENTS ABOVE SHALL BE SPLICED WITH MATCHING DOWELS EMBEDDED WITHIN THE FOOTINGS OR STRUCTURE BELOW. SPLICE LENGTHS SHALL COMPLY WITH REBAR LAP SCHEDULE. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4" OF THE BOTTOM OF THE FOOTING, BUT NEED NOT EXTEND MORE THAN 20" INTO FOOTING. FOR MASONRY CONSTRUCTION SEE STRUCTURAL NOTE P.6.A. 11. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE

ASTM A-706 REINFORCING 12. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES

13. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER. 14. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT

BE IN CONTACT WITH REINFORCING STEEL.

J. STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING: a. ANSI/AISC 360-16 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY" AND "SUPPLEMENTS" AS REQUIRED BY BUILDING CODE. b. AISC 303-16 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, AND 4.4.2. c. AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".

d. AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS". e. AWS D1.1 AND 1.3, "STRUCTURAL WELDING CODE" (EXCEPT SPECIFIC ITEMS DO NOT APPLY IF THEY CONFLICT WITH AISC).

f. ANSI/AISC 341-16 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS". AWS D1.8, "STRUCTURAL WELDING CODE - SEISMIC STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING:

a. WIDE FLANGE SHAPES AND WT SHAPES - ASTM A992 b. OTHER SHAPES AND PLATES - ASTM A-36 (UNO)

THREADED ROD - ASTM A-449.

c. HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A-500, GRADE C FOR SQUARE, RECTANGULAR AND ROUND SHAPES (FY = 50 KSI FOR SQUARE AND RECTANGULAR SHAPES AND 46 KSI FOR ROUND d. STAINLESS STEEL SHAPES, PLATES, AND FASTENERS - ASTM 304 (Note: TYPE 316, ASTM A240 can

also be specified. It is more resistant to corrosion, but more expensive) e. DEFORMED BAR ANCHORS (DBA) - ASTM A-496, WELDED IN ACCORDANCE WITH AWS D1.1 f. HEADED STUD ANCHORS (HSA) - ASTM A-108, GRADE 1015 STEEL AND WELDED IN ACCORDANCE WITH AWS D1.1 FOR TYPE "B". USE 3/4" DIAMETER STUDS, UNLESS NOTED OTHERWISE.

 NON-SHRINK GROUT - ASTM C110. NON-SHRINK GROUT SHALL BE PRE-PACKAGED, NON-METALLIC, WITH A 28-DAY COMPRESSIVE STRENGTH OF 6,000 PSI. 3. CONNECTIONS SHALL COMPLY WITH THE STRUCTURAL DRAWINGS UNLESS WRITTEN APPROVAL TO CHANGE IS GIVEN BY THE STRUCTURAL ENGINEER. 4. ALL SHOP FABRICATIONS SHALL BE PERFORMED BY AN APPROVED FABRICATOR IN ACCORDANCE

WITH SECTIONS 1702 AND 1704 OF THE IBC OR WITH SHOP INSPECTION BY AN INDEPENDENT AGENCY IN ACCORDANCE WITH SECTION 1704.2.5 OF THE IBC. 5. WELDING a. ALL WELDING AND CUTTING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN ACCORDANCE WITH ANSI/AWS D1.1 (LATEST EDITION) b. USE E-70XX ELECTRODES UNLESS NOTED OTHERWISE. E-60XX MAY BE USED FOR WELDING STEEL

c. ALL INTERSECTING STEEL SHAPES WHICH ARE NOT CONNECTED WITH BOLTS SHALL BE WELDED TOGETHER WITH A FILLET WELD ALL AROUND UNLESS NOTED OTHERWISE. WHERE WELD SIZES ARE NOT SHOWN. USE THE FOLLOWING 1. WHERE THE THICKNESS OF THE CONNECTED PARTS IS EQUAL TO OR THICKER THAN 1/4", WELD SIZE SHALL BE 1/16" LESS THAN THE THICKNESS OF THE THINNEST PART. 2. WHERE ANY OF THE CONNECTED PARTS IS LESS THAN 1/4" THICK, WELD SIZE SHALL BE THE

SAME AS THE THICKNESS OF THE THINNEST PART. d. WELDING OF HSA'S (HEADED STUD ANCHORS) AND DBA'S (DEFORMED BAR ANCHORS) SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS AND AWS D1.1 REINFORCING BARS SHALL NOT BE SUBSTITUTED FOR HSA'S OR DBA'S. e. WHEREVER POSSIBLE. WELDS SHALL BE SHOP WELDS, SPECIAL CONSIDERATIONS, SUCH AS ITEMS WHICH MAY NEED ADJUSTMENT AT THE SITE, REQUIRE THAT SOME WELDS BE FIELD WELDS. WHERE QUESTIONS OR DISCREPANCIES OCCUR THE CONTRACTOR SHALL COORDINATE THE

WORK BETWEEN THE SHOP FABRICATOR AND THE STEEL ERECTOR f. SPECIAL PROVISIONS FOR SFRS (SEISMIC FORCE RESISTING SYSTEM): 1. ALL WELDS DESIGNATED AS DEMAND CRITICAL WELDS SHALL BE MADE WITH FILLER METALS MEETING THE REQUIREMENTS SPECIFIED IN CLAUSES 6.1, 6.2, AND 6.3 OF AWS D1.8. 2. ALL OTHER WELDS THAT ARE PART OF THE SFRS SHALL BE MADE WITH FILLER METALS MEETING THE REQUIREMENTS SPECIFIED IN CLAUSE 6.1 OF AWS D1.8.

BUTT WELDS IN MEMBERS WITH DIFFERENT THICKNESSES, SUCH AS COLUMN SPLICES, SHALL BE TAPERED AND MADE IN SUCH A MANNER THAT THE TRANSITION DOES NOT EXCEED 1 IN 2-1/2 INCHES. THE TRANSITION SHALL BE ACCOMPLISHED BY CHAMFERING THE THICKER PART, TAPERING THE WIDER PART, SLOPING THE WELD METAL OR BY A COMBINATION OF THESE

BOLTING a. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL TO STEEL CONNECTIONS SHALL USE HIGH STRENGTH BOLTS CONFORMING TO ASTM F3125 GR. A325. b. UNLESS NOTED OTHERWISE, ALL BOLTING IS CLASSIFIED AS NON-SLIP CRITICAL BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS TO A SNUG TIGHT CONDITION. WITH ALL PLIES OF THE JOINT IN FIRM CONTACT c. WHERE OVERSIZED OR SLOTTED HOLES OCCUR IN THE OUTER PLY, AN ASTM F436 WASHER OR

5/16" THICK COMMON PLATE WASHER SHALL BE USED AS REQUIRED TO COMPLETELY COVER THE d. BOLTS SHALL BE CENTERED IN SLOTTED HOLES, UNLESS NOTED OTHERWISE e. WHERE A STEEL BEAM TO BEAM CONNECTION IS NOT SHOWN, PROVIDE AN AISC STANDARD FRAMED CONNECTION SIZED FOR 1/2 OF THE TOTAL LOAD CAPACITY OF THE BEAM FOR THE SPAN AND STEEL SPECIFIED.

METAL DECKING a. UNLESS NOTED OTHERWISE, METAL ROOF DECK SHALL BE 22 GAUGE TYPE B GALVANIZED STEEL DECK. SEE ROOF DECK SCHEDULE FOR ATTACHMENTS. b. UNLESS NOTED OTHERWISE, METAL FLOOR DECK SHALL BE 20 GAUGE TYPE B COMPOSITE, GALVANIZED, UNVENTED STEEL DECK. UNLESS NOTED OTHERWISE, ATTACH TO SUPPORTING STRUCTURE WITH 3/4" DIAMETER WELDS AT 12" MAXIMUM SPACING. ATTACH SIDE SEAMS WITH BUTTON PUNCH OR SIDE SEAM SCREWS AT 12" MAXIMUM SPACING. AN HSA FIELD-WELDED THROUGH THE DECK MAY SUBSTITUTE FOR A PUDDLE WELD.

c. ALL DECK SHALL BE CONTINUOUS OVER 3-SPANS. WHERE NOT POSSIBLE, THE DECK SUPPLIER/CONTRACTOR SHALL PROVIDE HEAVIER GAUGE DECK AS NEEDED TO PROVIDE THE EQUIVALENT PERFORMANCE OF THE SPECIFIED DECK WITH 3-SPAN CONTINUITY. d. SEE TYPICAL DETAILS FOR SUPPORT OF DECK AT OPENINGS. e. PROVIDE L2"x2"x3/16" FOR DECK SUPPORT AT LOCATIONS WHERE COLUMNS EXTEND THROUGH f. PAINTED STEEL DECK SHALL CONFORM TO EITHER ASTM A1008 OR A1039, GRADE 50 STEEL AND

GALVANIZED STEEL DECK SHALL CONFORM TO EITHER ASTM A653 OR A1063, GRADE 50 STEEL, WITH A ZINC COATING DESIGNATION OR G90. g. BUILDING ELEMENTS MAY BE SUPPORTED BY HANGING DIRECTLY FROM METAL DECKING, PROVIDED THAT THE TOTAL WEIGHT PER CONNECTION IS LESS THAN 50 LBS AND THAT THE ATTACHMENT TO THE DECKING IS DISTRIBUTED ACROSS AT LEAST TWO RIBS AND SPACED AT LEAST 6 FEET APART IN ANY DIRECTION.

8. PROVIDE FULL DEPTH WEB STIFFENER PLATES AT EACH SIDE OF STEEL BEAMS AT ALL BEARING (EXCEPT SECONDARY FRAMING) POINTS. STIFFENER PLATES SHALL BE THICKNESS SHOWN UNLESS NOTED OTHERWISE AND SHALL BE WELDED BOTH SIDES WITH FILLET WELDS ALL AROUND. FLANGE WIDTH STIFFENER THICKNESS WELD THICKNESS 3/16" 8 1/4" < BF < 12 1/2" 3/8"

12 1/2" < BF < 18" 9. FABRICATORS AND SUPPLIERS SHALL COORDINATE PAINT/FINISHES WITH REQUIREMENTS FOR DIRECT APPLIED INSULATION, FIREPROOFING, ETC. AS NOTED IN THE PROJECT SPECIFICATIONS. 10. WHEN DETERMINING THE FIRE RESISTANCE OF ASSEMBLIES, USE THE FOLLOWING: STEEL ROOF MEMBERS ARE CONSIDERED UN-RESTRAINED AND STEEL FLOOR FRAMING MEMBERS ARE CONSIDERED RESTRAINED.

11. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE ERECTED WITH THE NATURAL CROWN UP. 12. UNLESS OTHERWISE SHOWN OR DETAILED IN THE PLANS, ALL STEEL COLUMNS, BEAMS, BRACES, STRUTS, ETC. SHALL BE CONTINUOUS BETWEEN CONNECTIONS OR SUPPORTS. SPLICES IN MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER OF RECORD.

K. OPEN WEB JOISTS AND GIRDERS

1. ALL OPEN WEB STEEL JOISTS AND GIRDERS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD SPECIFICATIONS AND CODE OF STANDARD PRACTICE" OF THE STEEL JOIST INSTITUTE.

2. (###/###) DENOTES APPLIED TOTAL AND LIVE UNIFORMLY DISTRIBUTED LOADS IN POUNDS PER LINEAR FOOT OF JOIST, RESPECTIVELY. 3. SEE JOIST LOAD PROFILES FOR SPECIALLY LOADED JOISTS.

4. CONCENTRATED POINT LOADS, NOT SPECIFICALLY SHOWN ON THE PLANS, OF LESS THAN 100 POUNDS FOR MECHANICAL UNITS, FIRE SPRINKLER MAINS, AND OTHER EQUIPMENT SHALL BE ALLOWED WITHOUT REQUIRING ADDITIONAL WEB MEMBERS TO BE INSTALLED. WHERE THE LOAD EXCEEDS 100 POUNDS, THE LOAD SHALL BE SUPPORTED WITHIN 6" OF A CHORD PANEL POINT. SUPPORT BEYOND 6" FROM PANEL POINTS CAN BE PROVIDED BY ADDING (2) L2 x 2 x 1/4 DIAGONALS TO THE NEAREST OPPOSITE CHORD PANEL POINT PER THE TYPICAL DETAIL. CONNECTIONS SHALL BE MADE CONCENTRIC TO THE CHORD ANGLES. BEAM CLAMPS, OR SIMILAR ECCENTRIC ATTACHMENTS, ARE NOT ALLOWED, EXCEPT AS INDICATED BELOW. LOADS SHALL BE SPACED AT LEAST 6 FEET APART WITH NO MORE THAN 4 PER JOIST. BEAM CLAMPS, OR SIMILAR ATTACHMENTS THAT ARE NOT CENTERED ON THE CHORD ANGLES MAY ONLY BE USED FOR LOADS LESS THAN 10 POUNDS. SEE JOIST SUBMITTAL FOR ADDITIONAL REQUIREMENTS. ALL LOADS PROVIDED FOR IN THIS NOTE SHALL

BE ACCOUNTED FOR IN THE SPECIFIED DESIGN LOADS. 5. ANY BRACING REQUIRED FOR MISCELLANEOUS ITEMS (I.E. DUCTWORK, PIPING, ETC.) MUST CONNECT TO THE TOP CHORD OF THE JOIST OR GIRDER. BRACING TO THE BOTTOM CHORD IS NOT ALLOWED UNLESS SPECIFICALLY DETAILED THAT WAY ON THE PLANS.

PROVIDE SPECIAL BEARING ENDS AS REQUIRED AT SLOPED BEARING CONDITIONS. CONTRACTOR SHALL COORDINATE WITH OTHER STRUCTURAL ELEMENTS. 7. ALL JOISTS SHALL BE CAMBERED PER SJI SPECIFICATIONS, UNLESS NOTED OTHERWISE. 8. FIELD MODIFICATIONS (INCLUDING HOLES IN THE CHORD OR WEB MEMBERS) SHALL NOT BE MADE TO

ANY JOIST OR GIRDER WITHOUT PRIOR APPROVAL BY THE MANUFACTURER. 9. FABRICATORS AND SUPPLIERS SHALL COORDINATE PAINT/FINISHES WITH REQUIREMENTS FOR DIRECT APPLIED INSULATION, FIREPROOFING, ETC. AS NOTED IN THE PROJECT SPECIFICATIONS. 10. JOIST BRIDGING SHALL BE PROVIDED AS REQUIRED BY THE JOIST MANUFACTURER AND SJI STANDARDS. BRIDGING WHERE SHOWN ON THE STRUCTURAL DRAWINGS IS A SCHEMATIC

11. WHERE ADDED LOADS ARE SHOWN ON THE JOISTS BUT NOT SPECIFICALLY DIMENSIONED, THE JOIST DESIGNER SHALL PLACE THOSE LOADS ON THE JOIST AT A LOCATION THAT RESULTS IN THE HIGHEST

STRESS IN THE MEMBERS. THE DESIGNER MAY ASSUME THAT THE LOAD OCCURS WITHIN 10 FEET OF A SCALED DIMENSION. 12. FABRICATOR MUST SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL PER IBC 2207.5 STATING THAT WORK WAS PERFORMED IN ACCORDANCE WITH APPROVED CONSTRUCTION

REPRESENTATION ONLY. SEE JOIST MANUFACTURER FOR BRIDGING SIZE, CONNECTIONS, TYPE AND

13. UNLESS NOTED OTHERWISE. ROOF JOISTS AND GIRDERS SHALL BE DESIGNED FOR A NET WIND UPLIFT PER WIND UPLIFT SCHEDULE 14. ALL STANDARD AND NON STANDARD SJI JOISTS SHALL BE DESIGNED FOR THE FOLLOWING

a. LIVE LOAD: L/360 15. JOIST MANUFACTURER SHALL APPLY ADDITIONAL POINT OR LINE LOAD AS REQUIRED TO SUPPORT FIRE PROTECTION MAINLINES 4" DIAMETER OR GREATER. JOIST MANUFACTURER SHALL COORDINATE WITH GENERAL CONTRACTOR TO OBTAIN LOCATIONS AND WEIGHTS OF THESE LINES. SEISMIC BRACING LOADS FOR FIRE PROTECTION MAINLINES SHALL ALSO BE ACCOUNTED FOR IN THE JOIST MANUFACTURER'S DESIGN.

L. STRUCTURAL DELEGATED DESIGNS AND DEFERRED SUBMITTALS

M. NON-STRUCTURAL DELEGATED DESIGNS AND DEFERRED SUBMITTALS

DOCUMENTS AND WITH SJI SPECIFICATIONS.

STRUCTURAL DELEGATED DESIGNS AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ELEMENTS, PARTS, OR PORTIONS OF THE OVERALL STRUCTURAL SYSTEM THAT ARE INDICATED OR REFERRED TO ON THESE DRAWINGS AND THAT ARE CRITICAL TO THE PERFORMANCE OF THE OVERALL STRUCTURAL SYSTEM. DESIGN CRITERIA HAS BEEN PROVIDED FOR THESE ITEMS IN THE STRUCTURAL NOTES, PLANS, AND DETAILS.

2. STRUCTURAL DEFERRED SUBMITTALS ARE COMPLETE PACKAGES TO BE SUBMITTED FOR REVIEW THAT INCLUDE DRAWINGS AND CALCULATIONS FOR ALL DELEGATED DESIGN ITEMS AND THEIR CONNECTIONS. DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN

PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN. 3. ARW ENGINEERS WILL REVIEW STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS.

4. STRUCTURAL DELEGATED DESIGN COMPONENTS SHALL NOT BE INSTALLED UNTIL APPROVED BY THE

1. NON-STRUCTURAL DELEGATED DESIGNS AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ITEMS

BUILDING OFFICIAL 5. STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS INCLUDE, BUT ARE NOT a. OPEN WEB JOISTS & GIRDERS, BRIDGING, BRACING, CONNECTIONS, AND RELATED COMPONENTS.

NOT INCLUDED IN THE STRUCTURAL DELEGATED DESIGN SECTION. THESE ARE ITEMS THAT ARE NOT CRITICAL TO THE OVERALL PERFORMANCE OF THE STRUCTURAL SYSTEM BUT THAT IMPART LOADS AND FORCES TO THE STRUCTURAL SYSTEM.

2. NON-STRUCTURAL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN. 3. ARW ENGINEERS WILL REVIEW NON-STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS. 4. IF THE STRUCTURAL DRAWINGS INCLUDE LOADS TO ACCOMMODATE NON-STRUCTURAL ELEMENTS.

THE CONTRACTOR SHALL SUBMIT DOCUMENTATION INDICATING THAT THE NON-STRUCTURAL

ELEMENTS COMPLY WITH THE LOADING CRITERIA PROVIDED HEREIN. SUCH DOCUMENTATION SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN. . WHEN THE NON-STRUCTURAL DEFERRED SUBMITTAL INDICATES THAT THE ELEMENT WILL IMPART FORCES IN EXCESS OF LOADS THAT ARE INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL SUBMIT A DETAILED GRAPHICAL REPRESENTATION OF THOSE DESIGN LOADS. INCLUDING MAGNITUDE, AND LOCATION. THE GRAPHIC SHALL BE ACCOMPANIED BY DOCUMENTATION INDICATING THAT THE NON-STRUCTURAL ELEMENT DESIGN COMPLIES WITH THE LOADING CRITERIA PROVIDED HEREIN. THE LETTER SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN

PROFESSIONAL RESPONSIBLE FOR THE DESIGN. . NON-STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS SHALL INCLUDE, **BUT ARE NOT LIMITED TO:** a. STRUCTURAL STEEL STAIRS.

N. EXISTING BUILDING NOTES

1. ARW ENGINEERS EXPRESSLY DISCLAIMS RESPONSIBILITY FOR ANY PORTION OF THE EXISTING

BUILDING NOT SPECIFICALLY ADDRESSED IN THESE DRAWINGS. 2. DRAWINGS AND DETAILS HAVE BEEN PREPARED TO REFLECT THE EXISTING CONDITIONS AND CONFIGURATIONS OF STRUCTURAL ELEMENTS. HOWEVER, THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND ALERTING THE ENGINEER OF ANY DISCREPANCIES FOUND PRIOR TO FABRICATING OR INSTALLING STRUCTURAL ELEMENTS.

3. THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT THE BUILDING AND ELEMENTS WITHIN THE BUILDING REMAIN STABLE UNTIL CONSTRUCTION IS COMPLETE. AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHORING OR OTHER TEMPORARY SUPPORT OF STRUCTURAL MEMBERS UNTIL THE FINAL CONFIGURATION HAS BEEN COMPLETED.

O. INSULATED WALL PANEL NOTES

WALL PANEL DESIGN CRITERIA

b. INSULATED METAL PANELS.

BUILDING CODE: IBC 2018 OUT OF PLAN DEFLECTION CRITERIA: L/120 SEE ARCHITECTURAL DRAWINGS FOR ALL PANEL TYPES AND THICKNESSES.

. BASED ON THE ABOVE CRITERIA, THE FOLLOWING ARE THE DESIGN WIND PRESSURES FOR THE PANELS. ALL EXTERIOR CORNER BAYS ARE TO BE CONSIDERED END ZONES. INTERIOR ZONE END ZONE 0 - 32'-0"

±26.8 PSF ±30.9 PSF

DRAWING IN COLOR

102204

ARW Project #: 22198

NOTES:
1. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPLICES A MINIMUM OF 24" AS
INDICATED ABOVE.
2. LENGTHS INDICATED IN THIS SCHEDULE SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.

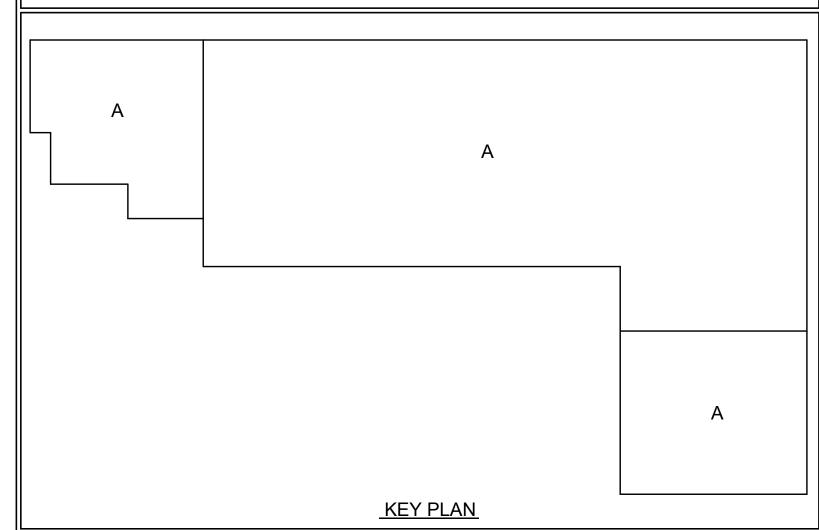
		SPE	CIAL INSPECTI	ON S	SCHEDULE 1, 2
		ESTABLISH	IED PER 2018 IBC SE	ECTION	N 110 AND CHAPTER 17
ITEM	CONTINUOUS ³	PERIODIC ³	REFERENCE		COMMENTS
PRE-FAB CONSTRUCTION (IBC 1704.2)		REFERENC	E NOTES P1 & P2	P1.	SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION, PROVIDED THE FABRICATOR COMPLIES WITH IBC. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. SPECIAL INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE. (SEE NOTE 2).
OPEN-WEB STEEL JOISTS AND JOIST GIRDERS (IBC 1705.2.3)					
INSTALLATION OF OPEN-WEB JOISTS AND JOIST GIRDERS					
END CONNECTIONS - WELDED OR BOLTED		SJI SPECIFIC	ATIONS LISTED IN SECTION 2207.	1	
BRIDGING - HORIZONTAL OR DIAGONAL					
STANDARD BRIDGING		•			
BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1		SJI SPECIFIC	ATIONS LISTED IN SECTION 2207.	1	
CONCRETE CONSTRUCTION (IBC 1705.3)		SEE IBC TAB	LE 1705.3 - REF. NOTE C1	C1.	SPECIAL INSPECTION IS NOT REQUIRED FOR CONC. ISOLATED SPREAD FOOTINGS, CONTINUOUS FOOTINGS, NON-
REINFORCING STEEL PLACEMENT		•			STRUCTURAL SLABS, FOUNDATION WALLS, PATIOS, DRIVEWAYS, AND SIDEWALKS PROVIDED THE REQUIREMENTS OF IBC 1705.3 ARE MET.
WELDING OF REINFORCING STEEL	•	● REFERENC	E NOTE C2	C2.	PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL RESISTING
EMBEDDED BOLTS & PLATES	•				FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR
VERIFYING REQUIRED DESIGN MIX		•			WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINUOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE.
CONCRETE PLACEMENT / SAMPLING	•	REFERENC	E NOTE C3	C3.	PERFORM AIR, SLUMP AND TEMP. TESTS WHEN CONCRETE SAMPLES ARE CAST.
CURING TEMPERATURE / TECHNIQUES		•		C4.	PERIODIC SPECIAL INSPECTION IS REQUIRED FOR VERIFICATION OF IN-SITU CONCRETE STRENGTH FOR POST-TENSIONED CONCRETE PRIOR TO TENSIONING TENDONS OR REMOVING SHORING OR FORMS.
VERIFICATION OF IN-SITU STRENGTH		• REFERENC	E NOTE C4	C 5.	EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT.
EPOXY / EXPANSION ANCHOR PLACEMENT	•	● REFERENC	E NOTE C5		AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
SOILS (IBC 1705.6)		REFERENC	E NOTE F1	F1.	SPECIAL INSPECTION OF SOILS SHALL REFERENCE THE APPROVED SOILS REPORT TO DETERMINE COMPLIANCE.
VERIFY ADEQUATE MATERIALS BELOW FOOTINGS		REFERENC	E NOTE F1	F2.	WHERE SOILS REPORT IS NOT PROVIDED SPECIAL INSPECTIONS ARE REQUIRED TO VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM
EXCAVATIONS EXTEND TO PROPER DEPTH AND REACH PROPER MATERIAL		• REFERENC	E NOTE F2		MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D 1557.
CLASSIFY & TEST CONTROLLED FILL MATERIALS		● REFERENC	E NOTE F2		
PERFORM MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	•	REFERENC	E NOTE F1		
PROPERLY PREPARED SITE AND SUB-GRADE PRIOR TO FILL.		• REFERENC	E NOTE F1		

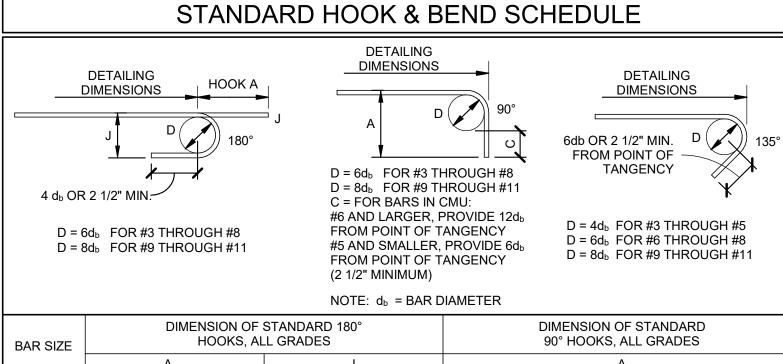
GENERAL SPECIAL INSPECTION NOTES: THE ITEMS MARKED WITH " " IN THE SPECIAL INSPECTION SCHEDULE SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS, AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY ITEMS WHICH FAIL TO COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, ARCHITECT, AND ENGINEER PRIOR TO COMPLETION OF THAT PHASE OF WORK. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.

ANY CONSTRUCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT. CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK. (IBC SECTION 202)

	ROOF DECK SCHEDULE												
	DECK			SUPPO	ORTS		CHMENT SEAMS	OUDDODTO DADALI EL		MIN. SHEAR	MAX.		
AREA	DEPTH	TYPE	GA.	ATTACHMENT	PATTERN	#12 TEK SCREWS	PUNCH LOCK ⁽⁷⁾		SUPPORTS PARALLEL TO FLUTES		FLEXIBILITY FACTOR		
Α	1-1/2"	В	22	HILTI PINS	36/7/A	@ 24"o.c.	@ 8"o.c.	HILTI PINS	SPA.	475	64		
FASTENING PATTERNS													
					WE	LD PATTER	N : 36/7/A						
NOTE	S:												

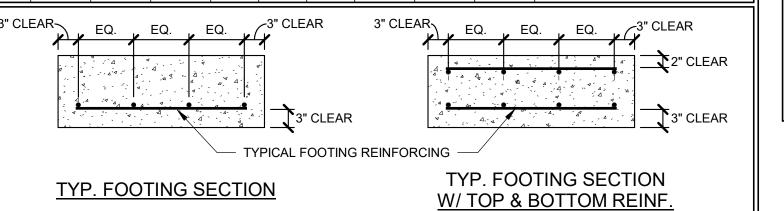
TOP SEAM WELDS SHALL BE 1-1/2" LONG AND SHALL BE ACCORDING TO SDI STANDARDS. ALL DECK WITH A PROFILE DEPTH OF 2" OR LESS SHALL HAVE NESTED OR TELESCOPED END LAPS. ALTERNATE SYSTEMS SHALL MEET OR EXCEED THE MINIMUM SHEAR CAPACITY AND SHALL PROVIDE LESS THAN OR EQUAL TO THE MAXIMUM FLEXIBILITY FACTOR LISTED IN THE SCHEDULE. ALL ALTERNATE SYSTEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. B. A 1" x 3/8" EFFECTIVE ARC SEAM WELD IS REQUIRED AT SUPPORTS ADJACENT TO SIDELAPS.

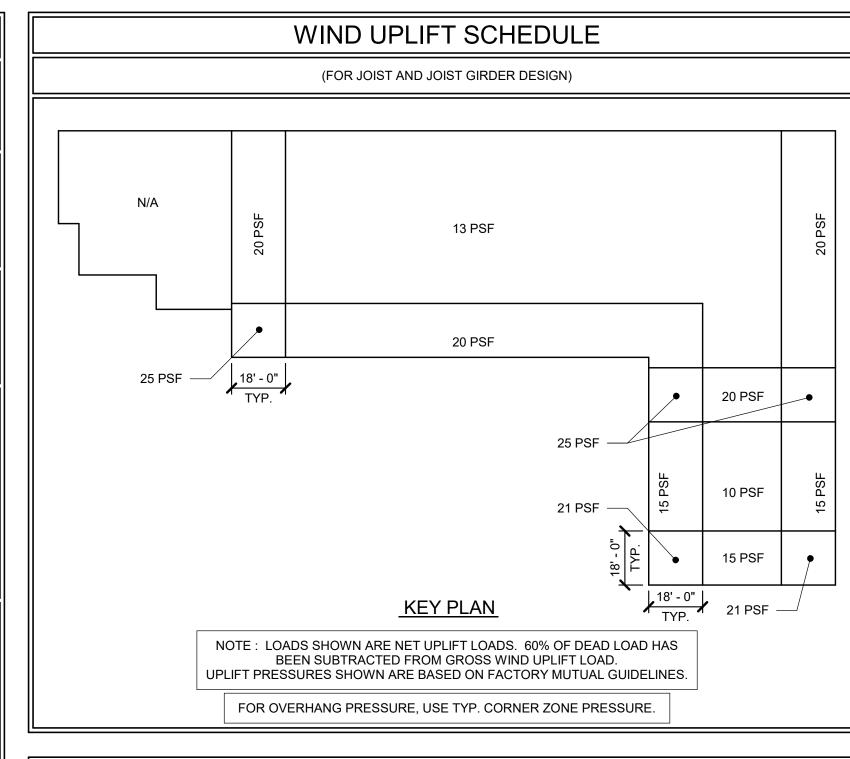




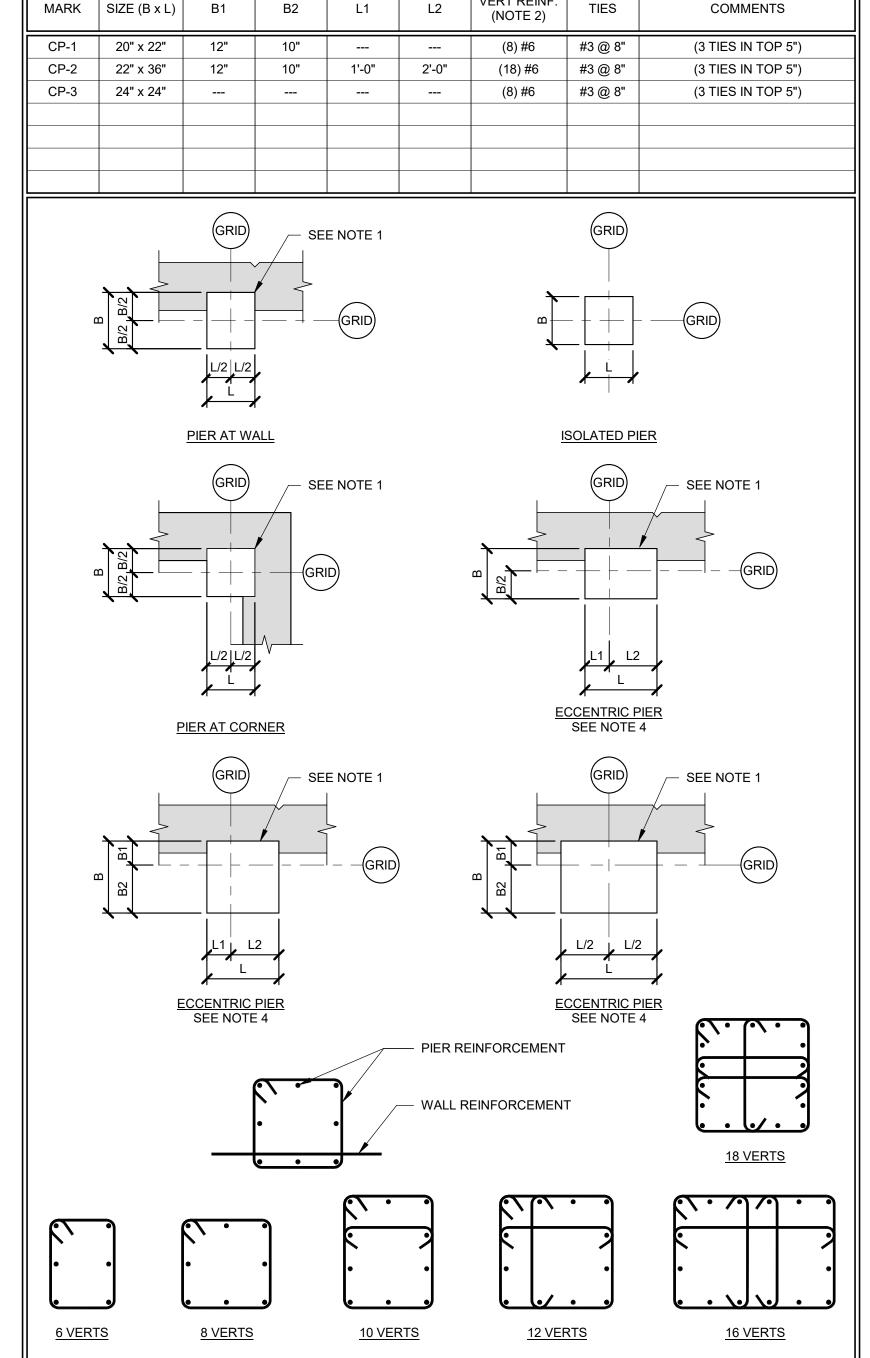
BAR SIZE	DIMENSION OF HOOKS, AL		DIMENSION OF STANDARD 90° HOOKS, ALL GRADES								
	Α	J	A								
#3	5"	3"	6"								
#4	6"	4"	8"								
#5	7"	5"	10"								
#6	8"	6"	1'-0"								
#7	10"	7"	1'-2"								
#8	11"	8"	1'-4"								
#9	1'-3"	11 3/4"	1'-7"								
#10	1'-5"	1'-1 1/4"	1'-10"								
#11	1'-7"	1'-2 3/4"	2'-0"								

MARK	WIDTH	LENGTH	THICK		HWISE SPA.	SIZE		SSWISE R		REMARKS
	<u> </u>			NO.	SPA.	SIZE	NO.	SIZE	SPA.	
FC2	2'-0"	CONT.	12"	(2)		#5				
FS1	SEE PLAN	SEE PLAN	24"		12"	#8	12"	#8	12"	REINFORCE TOP & BOTTOM
FS2	SEE PLAN	SEE PLAN	18"		12"	#8	12"	#8	12"	TELLIT CITCE FOR GEOFFOR
102	OLL 1 L/W	OLL 1 L/W	10		12	"0	12	<i>"</i> "	12	
F2.5	2'-6"	2'-6"	12"	(3)		#5	(3)	#5		
F3	3'-0"	3'-0"	12"	(3)		#5	(3)	#5		
F3.5	3'-6"	3'-6"	12"	(3)		#5	(3)	#5		
F4	4'-0"	4'-0"	12"	(4)		#5	(4)	#5		
F4.5	4'-6"	4'-6"	12"	(4)		#5	(4)	#5		
F5	5'-0"	5'-0"	14"	(5)		#5	(5)	#5		REINFORCE TOP & BOTTOM
F5.5	5'-6"	5'-6"	14"	(5)		#6	(5)	#6		
F6	6'-0"	6'-0"	16"	(6)		#6	(6)	#6		REINFORCE TOP & BOTTOM
F6.5	6'-6"	6'-6"	18"	(6)		#6	(6)	#6		
F7	7'-0"	7'-0"	18"	(7)		#6	(7)	#6		REINFORCE TOP & BOTTOM
F7.5	7'-6"	7'-6"	20"	(7)		#7	(7)	#7		REINFORCE TOP & BOTTOM
F8	8'-0"	8'-0"	22"	(8)		#7	(8)	#7		
F8.5	8'-6"	8'-6"	22"	(8)		#7	(8)	#7		
F9	9'-0"	9'-0"	24"	(9)		#7	(9)	#7		





CONCRETE PIER SCHEDULE



WHERE TOP OF PIER IS LOWER THAN TOP OF FOUNDATION WALL, BLOCK OUT FOUNDATION WALL AS REQUIRED FOR BASE PLATE CLEARANCE. VERTICAL PIER REINFORCING TO BE UNIFORMLY SPACED AROUND PERIMETER, 2" CLEAR FROM OUTSIDE OF PIER.

TOP OF PIER ELEVATION IS 8" BELOW FINISHED FLOOR ELEVATION EXCEPT WHERE [PIER (ELEV.)] OTHERWISE NOTED ON PLANS. SEE LEGEND FOR ADDITIONAL INFORMATION. . WHERE PIER IS NOT SYMMETRICAL ABOUT GRIDLINES, REFER TO PLAN FOR BRACED FRAME LAYOUT AND RESPECTIVE DIRECTION OF OFFSET DIMENSIONS, WHERE PROVIDED. 5. ALL PIERS AT FOUNDATION WALLS ARE TO BE CONSTRUCTED MONOLITHICALLY WITH WALLS UNLESS NOTED

PIER REINFORCEMENT SHALL BE FABRICATED WITH SUFFICIENT SIZE SO THAT WALL REINFORCEMENT PASSES THROUGH PIER REINFORCEMENT. WHERE SPECIFIC 'B' AND 'L' DIMENSIONS ARE NOT PROVIDED, EDGE OF PIER EXTENDS TO EXTERIOR EDGE OF FOUNDATION WALL.

DRAWING IN COLOR

ARW Project #: 22198

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VERT. WALL BARS, FILL ON METAL DECK

HORIZ. WALL BARS, FOOTING TOP BARS BEAM BOTTOM BARS,

COLUMN BARS

FOOTING BOTTOM BARS

BEAM TOP BARS

SLAB ON GRADE

3. WHEN SPLICING BARS OF DIFFERENT SIZES, USE LAP SPLICE LENGTH OF LARGER BARS UNO.

4. SPLICE BARS LARGER THAN #11 USING MECHANICAL COUPLERS.

COLD-FORMED S	TEEL DE	CK SPI	ECIAL IN	SPECT	ION SCHEDULE
EST	ABLISHED P	ER 2018	IBC SECTIO	N 1705.2.	2
INSPECTION TASKS PRIOR TO DECK PLACEMENT (TABLE 1.1)	INSTAL QUALITY C		SPECIAL INS		<u>NOTES</u>
inter de mort i mort i o baetti anterit (mada ini)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	1. PERIODIC - INSPECT THESE ITEMS ON AN INTERMITTENT BASIS. OPERATIONS NEED
VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS	•		•		NOT BE DELAYED PENDING THESE INSPECTIONS. FREQUENCY OF OBSERVATIONS SHALL BE ADEQUATE TO CONFIRM THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPLICABLE DOCUMENTS. ADDITIONAL INSPECTIONS
DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	•		•		SHALL BE PERFORMED TO DETERMINE THE EXTENT OF NON-CONFORMANCE. 2. CONTINUOUS - PERFORM THESE TASKS PRIOR TO FINAL ACCEPTANCE FOR EACH
INSPECTION TASKS AFTER DECK PLACEMENT (TABLE 1.2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	ITEM OR ELEMENT.
VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	•		•		3. WITHIN THE LISTED TASKS, "DOCUMENT" SHALL MEAN THE INSPECTOR SHALL PREPARE REPORTS OR OTHER APPROPRIATE WRITTEN DOCUMENTATION INDICATING THAT THE WORK HAS OR HAS NOT BEEN PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
VERIFY DECK MATERIALS ARE REPRESENTED BY THE MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK	•		•		
ACCESSORIES	•		•		
INSPECTION TASKS PRIOR TO WELDING (TABLE 1.3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE		•		•	
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE		•		•	
MATERIAL IDENTIFICATION (TYPE/GRADE)		•		•	
CHECK WELDING EQUIPMENT		•		•	
INSPECTION TASKS DURING WELDING (TABLE 1.4)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	
USE OF QUALIFIED WELDERS					
CONTROL AND HANDLING OF WELDING CONSUMABLES		•		•	
ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)		•		•	
WPS FOLLOWED		•		•	
INSPECTION TASKS AFTER WELDING (TABLE 1.5)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	
VERIFY SIZE AND LOCATIONS OF WELDS, INCLUDING SUPPORT, SIDELAP, AND PERIMETER WELDS	•		•		
WELDS MEET VISUAL ACCEPTANCE CRITERIA	•		•		
VERIFY REPAIR ACTIVITIES	•		•		
DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	•		•		
INSPECTION TASKS PRIOR TO MECHANICAL FASTENING (TABLE 1.6)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	
MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE FOR MECHANICAL FASTENERS		•		•	
PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION		•		•	
PROPER STORAGE FOR MECHANICAL FASTENERS		•		•	
INSPECTION TASKS DURING MECHANICAL FASTENING (TABLE 1.7)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	
FASTENERS ARE POSITIONED AS REQUIRED		•		•	
FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS		•		•	
INSPECTION TASKS AFTER MECHANICAL FASTENING (TABLE 1.8)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	
CHECK SPACING, TYPE, AND INSTALLATION OF SUPPORT FASTENERS	•		•		
CHECK SPACING, TYPE, AND INSTALLATION OF SIDELAP FASTENERS	•		•		
CHECK SPACING, TYPE, AND INSTALLATION OF PERIMETER FASTENERS	•		•		
VERIFY REPAIR ACTIVITIES	•		•		
DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICAL FASTENERS	•		•		<u> </u>

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	•	•	

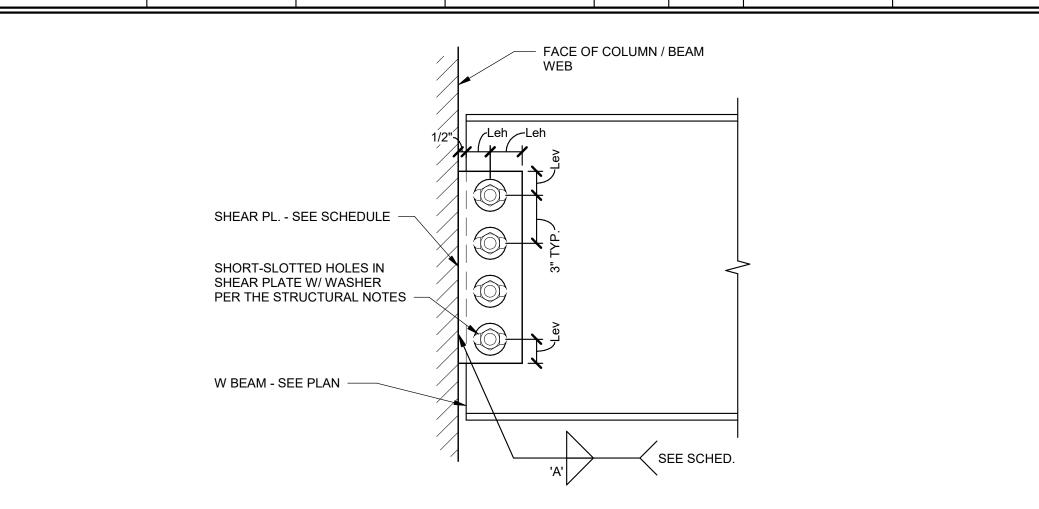
QUALITY CONTROL TASKS SHALL BE PERFORMED BY THE INSTALLER'S QUALITY CONTROL INSPECTOR (QCI).
 FOR QUALITY CONTROL INSPECTION, THE CONSTRUCTION DOCUMENTS, INSTALLATION DRAWINGS, SHOP DRAWINGS, DESIGN DOCUMENTS AND THE APPLICABLE REFERENCED STANDARDS SHALL BE UTILIZED.
 QUALITY ASSURANCE INSPECTION OF THE DECK SHALL BE MADE AT THE PROJECT SITE. THE OWNER'S DESIGNATED REPRESENTATIVE FOR CONSTRUCTION SHALL SCHEDULE THIS WORK WITH THE QUALITY ASSURANCE INSPECTOR (QAI) AND

GENERAL STEEL DECK SPECIAL INSPECTION NOTES:

- THE INSTALLER TO MINIMIZE INTERRUPTIONS TO THE WORK OF THE INSTALLER. 4. THE QAI SHALL REVIEW THE MATERIALS TEST REPORTS AND CERTIFICATIONS LISTED IN SECTION 2.2 OF SDI QA/QC FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. 5. QUALITY ASSURANCE TASKS SHALL BE PERFORMED BY THE QAI.
- 6. WHERE A TASK IS TO BE PERFORMED BY BOTH QA AND QC, IT SHALL BE PERMITTED TO COORDINATE INSPECTION FUNCTIONS BETWEEN THE QCI AND QAI SO THAT THE INSPECTIONS ARE PERFORMED BY ONLY ONE PARTY WHEN APPROVED IN ADVANCE BY THE OWNER, DESIGNER, AND AHJ. WHEN QA TASKS ARE PERFORMED ONLY BY THE QCI, EACH INSPECTION IS TO BE DOCUMENTED IN A REPORT AND THE QAI SHALL PERIODICALLY REVIEW THE WORK OF THE QCI AT AN
- INTERVAL ACCEPTABLE TO THE OWNER, DESIGNER, AND THE AHJ.

 7. IN THE EVENT THAT THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS CONFLICT WITH THE INSTALLATION DRAWINGS OR SHOP DRAWINGS, THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS SHALL GOVERN. 8. IDENTIFICATION AND REJECTION OF MATERIALS AND WORKMANSHIP NOT IN CONFORMANCE WITH THE INSTALLATION DOCUMENTS SHALL BE PERMITTED AT ANY TIME DURING PROGRESS OF OR FOLLOWING THE COMPLETION OF THE WORK.
 HOWEVER, THIS PROVISION SHALL NOT RELIEVE THE OWNER OR THE INSPECTOR OF THE OBLIGATION FOR TIMELY, IN-SEQUENCE INSPECTIONS. NONCOMFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT TO THE IMMEDIATE
 ATTENTION OF THE OWNERS DESIGNATED REPRESENTATIVE FOR CONSTRUCTION AND THE DECK INSTALLER. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT IN CONFORMANCE, OR MADE SUITABLE FOR ITS INTENDED PURPOSE AS DETERMINED BY THE DESIGNER.

	BEAM CONNECTION SCHEDULE										
	SH	EAR PLATE INFORMATION	ON		STANDARD		COMMENTS				
BEAM DEPTH	PL. DIMENSIONS W/ SHORT-	Lev	Leh		RS OVER DTS	WELD 'A'					
	SLOTTED HOLES			No.	SIZE						
W8, W10	PL. 1/4" x REQ'D	1 1/2"	2"	2	3/4" Ø	3/16"					
W12, W14	PL. 5/16" x REQ'D	1 1/2"	2"	3	3/4" Ø	1/4"					
W16	PL. 5/16" x REQ'D	1 1/2"	2"	4	3/4" Ø	1/4"					
W18	PL. 5/16" x REQ'D	1 1/2"	2"	5	3/4" Ø	1/4"					
W21	PL. 5/16" x REQ'D	1 1/2"	2"	6	3/4" Ø	1/4"					
W24	PL. 3/8" x REQ'D	1 1/2"	2"	7	7/8" Ø	1/4"					
W27	PL. 3/8" x REQ'D	1 1/2"	2"	7	7/8" Ø	1/4"					
W30	PL. 1/2" x REQ'D	1 3/4"	2"	8	1" Ø	5/16"					
W33	PL. 1/2" x REQ'D	1 3/4"	2"	9	1" Ø	5/16"					
W36	PL. 1/2" x REQ'D	2"	2 1/4"	10	1-1/8" Ø	5/16"					



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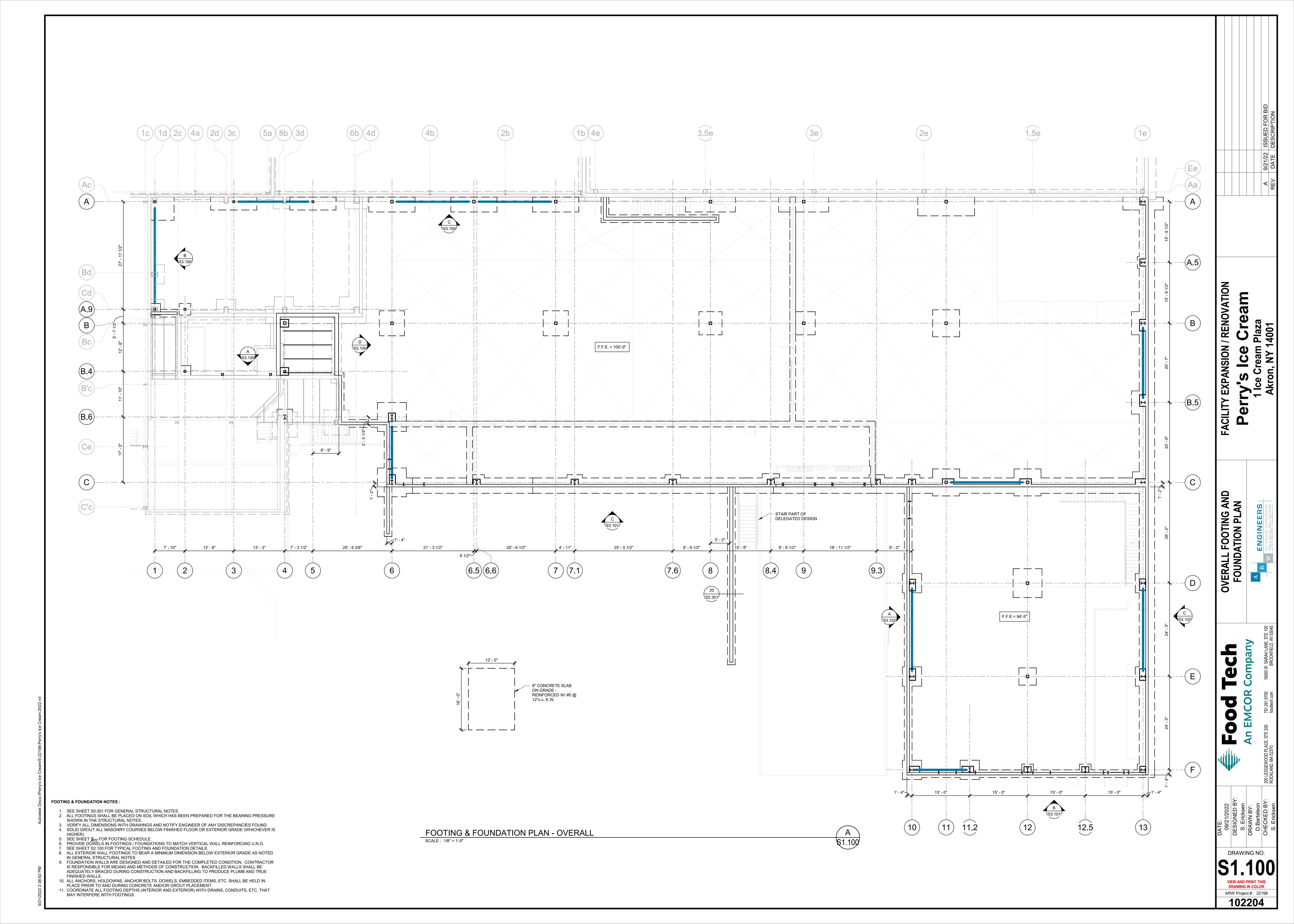
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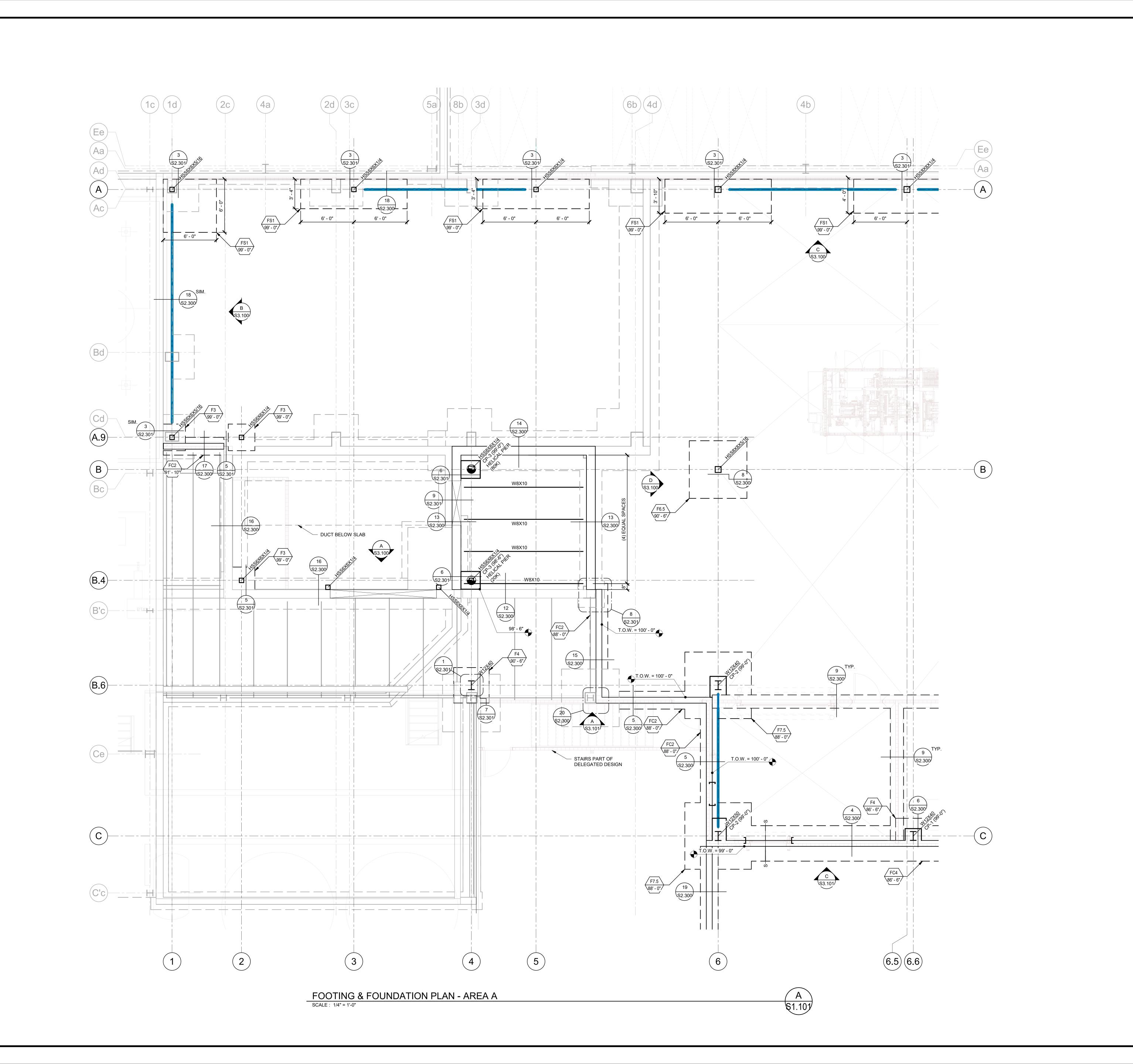
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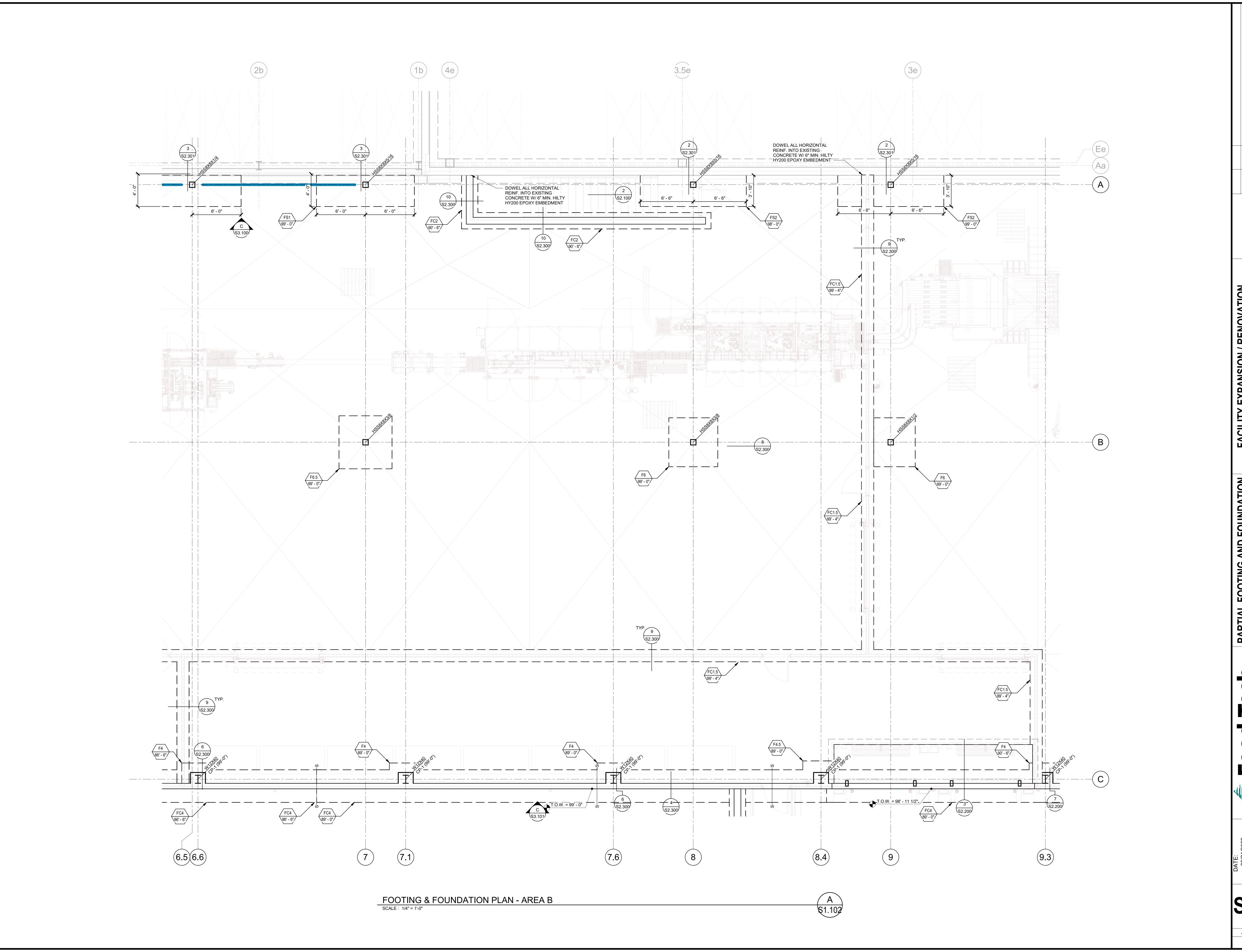
					STRUCTURAL STEE	EL SPECIAL INSPECTION SCHEDULE					
	ESTABLISHED PER 2018 IBC SECTION 1705.2.1										
INSPECTION TASKS PRIOR TO WELDING (TABLE N5.4-1)	FABRICA QUALITY CO	ONTROL	SPECIAL INS QUALITY AS:	SURANCE	NOTES	INSPECTION TASKS PRIOR TO BOLTING (TABLE N5.6-1)	CONTINUOUS PERIODIC	CONTINUOUS PERIODIC	NOTES		
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	•			•	PERIODIC - OBSERVE THESE ITEMS ON A RANDOM PAGE OPERATIONS NEED NOT BE DELAYED.	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	•	•	PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS MEET NOT BE DELAYED BENDING THESE.		
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	•		•		BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	•	•	OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	•		•		 CONTINUOUS - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER. 	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	•	•	CONTINUOUS - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.		
MATERIAL IDENTIFICATION (TYPE / GRADE)		•		•	3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE	· ·			3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR		
WELDER IDENTIFICATION SYSTEM¹ FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)	1	•		•	FABRICATOR AND ERECTOR. 4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY	PROPER BOLTING PROCEDURES SELECTED FOR JOINT DETAIL	•	│	AND ERECTOR. 4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN		
* JOINT PREPARATION	-				OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	•	•	REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR		
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	1				CODE (ABC), PURCHASER, ÓWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT)	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL			ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE		
* CLEANLINESS (CONDITION OF STEEL SURFACES)		•		•	SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT	OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED			FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.		
* TACKING (TACK WELD QUALITY AND LOCATION)					AS PERMITTED IN ACCORDANCE WITH SECTION N6. 5. QC AND QA INSPECTORS SHALL BE QUALIFIED IN	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	•	•	5. FOR SNUG-TIGHT JOINTS, PRE-INSTALLATION VERIFICATION TESTING AS SPECIFIED IN TABLE N5.6-1 AND MONITORING OF THE		
* BACKING TYPE AND FIT (IF APPLICABLE)					ACCORDANCE WITH AISC 360-16 CHAPTER N4. 6. NONDESTRUCTIVE TESTING PERSONNEL SHALL BE				INSTALLATION PROCEDURES AS SPECIFIED IN TABLE N5.6-2 ARE NOT APPLICABLE. THE QCI AND QAI NEED NOT BE PRESENT		
FIT-UP OF CJP GROOVE WELDS OFHSS T-, Y-, AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)					QUALIFIED IN ACCORDANCE WITH AISC 360-16 CHAPTER N4.3.	INSPECTION TASKS DURING BOLTING (TABLE N5.6-2)	CONTINUOUS PERIODIC	CONTINUOUS PERIODIC	DURING THE INSTALLATION OF FASTENERS IN SNUG-TIGHT JOINTS. 6. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE		
* JOINT PREPARATIONS				•	 NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL COMPLY WITH AISC 360-16 CHAPTER N5.5a 	FASTENER ASSEMBLIES, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	•	•	INSTALLER IS USING THE TURN-OF-NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT-TENSION-INDICATOR		
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)					AND b.	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING	_		METHOD, OR THE TWIST-OFF-TYPE TENSION CONTROL BOLT		
* CLEANLINESS (CONDITION OF STEEL SURFACES)	-				8. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND	OPERATION	•		METHOD, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI NEED		
* TACKING (TACK WELD QUALITY AND LOCATION) CONFIGURATION AND FINISH OF ACCESS HOLES					COMPLETED WELDS SHALL BE THE PRIMARY METHOD TO CONFIRM THAT THE MATERIALS.	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	•	•	NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.		
FIT-UP OF FILLET WELDS					PROCEDURES AND WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTRUCTION	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION,			7. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE CALIBRATED WRENCH METHOD OR THE		
* DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	1				DOCUMENTS. FOR STRUCTURAL STEEL, ALL	PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		•	TURN-OF-NUT METHOD WITHOUT MATCHMARKING, MONITORING		
* CLEANLINESS (CONDITION OF STEEL SURFACES)					PROVISIONS OF AWS D1.1 / D1.1M STRUCTURAL WELDING CODE - STEEL FOR STATICALLY LOADED	INSPECTION TASKS AFTER POLITING (TARLE NE 6.2)	CONTINUOUS PERIORIS	CONTINUOUS PERIORIS	OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI SHALL BE ENGAGED IN THEIR		
* TACKING (TACK WELD QUALITY AND LOCATION)					STRUCTURES SHALL APPLY. 9. THERMALLY CUT SURFACES OF ACCESS HOLES	INSPECTION TASKS AFTER BOLTING (TABLE N5.6-3) DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	CONTINUOUS PERIODIC	CONTINUOUS PERIODIC	ASSIGNED INSPECTION DUTIES DURING INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.		
CHECK WELDING EQUIPMENT	<u> </u>	4/5: 5 ==	10 /		SHALL BE TESTED BY QA USING MT OR PT, WHEN THE FLANGE THICKNESS EXCEEDS 2 IN. (50mm) FOR	DOSONIENT ASSETTANCE ON NEGLOTION OF BOLTED CONNECTIONS	_		8. OBSERVATION OF BOLTING OPERATIONS SHALL BE THE PRIMARY METHOD USED TO CONFIRM THAT THE MATERIALS, PROCEDURES		
¹ THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEI JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LO			HO HAS WELDEL	D A	ROLLED SHAPES, OR WHEN THE WEB THÌCKNÉSS EXCEEDS 2 IN. (50mm) FOR BUILT-UP SHAPES. ANY				AND WORKMANSHIP INCORPORATED IN CONSTRUCTION ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE		
INSPECTION TASKS DURING WELDING (TABLE N5.4-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	CRACK SHALL BE DEEMED UNACCEPTABLE REGARDLESS OF SIZE OR LOCATION.				PROVISIONS OF THE RCSC SPECIFICATION.		
CONTROL AND HANDLING OF WELDING CONSUMABLES					10. WHEN REQUIRED BY APPENDIX 3, TABLE A-3.1, WELDED JOINTS REQUIRING WELD SOUNDNESS TO	GENERAL STEE	L SPECIAL INSPEC	TION NOTES:			
* PACKAGING		•		•	BE ESTABLISHED BY RADIOGRAPHICS OR ULTRASONIC INSPECTION SHALL BE TESTED BY QA	1. QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT	THE FABRICATOR'S PLAN	Г. THE QUALITY ASSURANCE	E INSPECTOR (QAI) SHALL SCHEDULE THIS WORK TO MINIMIZE		
* EXPOSURE CONTROL				_	AS PRESCRIBED. REDUCTION IN THE RATE OF UT IS PROHIBITED.	INTERRUPTION TO THE WORK OF THE FABRICATOR. 2. QA INSPECTION OF THE ERECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT	CT SITE THE OALSHALL SO	HEDLILE THIS WORK TO MIN	NIMIZE INTERRUPTION TO THE WORK OF THE ERECTOR		
NO WELDING OVER CRACKED TACK WELDS ENVIRONMENTAL CONDITIONS		•		•	11. REDUCTION OF RATE OF ULTRASONIC TESTING - THE RATE OF UT IS ONLY PERMITTED TO BE REDUCED IF	WHERE A TASK IS NOTED TO BE PERFORMED BY BOTH QC AND QA, IT IS PERMITTE PERFORMED BY ONLY ONE PARTY. WHERE QA RELIES UPON INSPECTION FUNCTION	ED TO COORDINATE THE IN	SPECTION FUNCTION BETW	/EEN THE QCI AND QAI SO THAT THE INSPECTION FUNCTIONS ARE		
* WIND SPEED WITHIN LIMITS	-				APPROVED BY THE EOR AND THE AHJ PER AISC	REQUIRED.	,				
* PRECIPITATION AND TEMPERATURE					360-16 CHAPTER N5.5e. 12. FOR STRUCTURES IN RISK CATEGORY II, WHERE THE	4. THE FABRICATOR'S QCI SHALL INSPECT THE FABRICATED STEEL TO VERIFY COMP CONNECTION. THE ERECTOR'S QCI SHALL INSPECT THE ERECTED STEEL FRAME TO SHALL INSPECT THE SHAL	TO VERIFY COMPLIANCE W				
WPS FOLLOWED					INITIAL RATE FOR UT IS 10%, THE NDT RATE FOR AN INDIVIDUAL WELDER OR WELDING OPERATOR SHALL	MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONI 5. THE QAI SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF THE PLACEMENT		HER EMBEDMENTS SUPPOR	RTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE		
* SETTINGS ON WELDING EQUIPMENT					BE INCREASED TO 100% SHOULD THE REJECT RATE, THE NUMBER OF WELDS CONTAINING	CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND I SHALL BE VERIFIED PRIOR TO PLACEMENT OF THE CONCRETE.	LENGTH OF THE ANCHOR F	ROD OR EMBEDDED ITEM, AN	ND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE,		
* TRAVEL SPEED * SELECTED WELDING MATERIALS					UNACCEPTABLE DEFECTS DIVIDED BY THE NUMBER OF WELDS COMPLETED, EXCEEDS 5% OF THE	6. THE QAI SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS A BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT			TAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS		
* SHIELDING GAS TYPE / FLOW RATE	-	•			WELDS TESTED FOR THE WELDER OR WELDING OPERATOR. A SAMPLING OF AT LEAST 20	7. QUALITY ASSURANCE (QA) INSPECTIONS, EXCEPT NONDESTRUCTIVE TESTING (ND AUTHORITY HAVING JURISDICTION (AHJ) TO PERFORM THE WORK WITHOUT QA. N	OT), MAY BE WAIVED WHEN	THE WORK IS PERFORMED			
* PREHEAT APPLIED	-				COMPLETED WELDS FOR A JOB SHALL BE MADE	APPROVED BY THE AHJ. WHEN THE FABRICATOR PERFORMS THE NDT, THE QA AC	GENCY SHALL REVIEW THE	FABRICATOR'S NDT REPOR	RTS.		
* INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX)					PRIOR TO IMPLEMENTING SUCH AN INCREASE. WHEN THE REJECT RATE FOR THE WELDER OR	8. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CFABRICATOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. AT C	OMPLETION OF ERECTION	, THE APPROVED ERECTOR	SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING		
* PROPER POSITION (F, V, H, OH)					WELDING OPERATOR, AFTER A SAMPLING OF AT LEAST 40 COMPLETED WELDS, HAS FALLEN TO 5%	THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE ERECTOR ARE IN 9. IDENTIFICATION AND REJECTION OF MATERIAL OR WORKMANSHIP THAT IS NOT IN					
WELDING TECHNIQUES					OR LESS, THE RATE OF UT SHALL BE RETURNED TO 10%. FOR EVALUATING THE REJECT RATE OF	THE WORK. HOWEVER, THIS PROVISION SHALL NOT RELIEVE THE OWNER OR THE WORKMANSHIP SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE FABRI			UENCE INSPECTIONS. NONCONFORMING MATERIAL AND		
* INTERPASS AND FINAL CLEANING * EACH PASS WITHIN PROFILE LIMITATIONS	-	•		•	CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS 1 IN. (25mm) OR	10. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT INTO CONFO	ORMANCE, OR MADE SUITA	BLE FOR ITS INTENDED PUR			
* EACH PASS WITHIN PROFILE LIMITATIONS * EACH PASS MEETS QUALITY REQUIREMENTS	-				LESS, EACH 12 IN. (300mm) INCREMENT OR FRÁCTION	(1) NONCONFORMANCE REPORTS	•	LE CODIVITE TO THE FADRICA	TOTAND LILEUTOIN.		
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	•		•		THEREOF SHALL BE CONSIDERED AS ONE WELD. FOR EVALUATING THE REJECT RATE ON	(2) REPORTS OF REPAIR, REPLACEMENT OR ACCEPTANCE OF NONCONFORMING I	I EIVIO.				
INSPECTION TASKS AFTER WELDING (TABLE N5.4-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS GREATER THAN 1						
WELDS CLEANED		•		•	IN. (25mm), EACH 6 IN. (150mm) OF LENGTH OR FRACTION THEREOF SHALL BE CONSIDERED ON						
SIZE, LENGTH AND LOCATION OF WELDS	•		•		WELD. 13. ALL NDT PERFORMED SHALL BE DOCUMENTED. FOR						
WELDS MEET VISUAL ACCEPTANCE CRITERIA					SHOP FABRICATION, THE NDT REPORT SHALL						
* CRACK PROHIBITION	_				IDENTIFY THE TESTED WELD BY PIECE MARK AND LOCATION IN THE PIECE. FOR FIELD WORK, THE NDT						
* WELD / BASE-METAL FUSION * CRATER CROSS SECTION	-				REPORT SHALL IDENTIFY THE TESTED WELD BY LOCATION IN THE STRUCTURE, PIECE MARK, AND						
* CRATER CROSS SECTION * WELD PROFILES	•		•		LOCATION IN THE PIECE. WHEN A WELD IS REJECTED ON THE BASIS OF NDT, THE NDT RECORD						
* WELD SIZE	1				SHALL INDICATE THE LOCATION OF THE DEFECT AND THE BASIS OF REJECTION						
* UNDERCUT	1				14. DEMAND CRITICAL WELDS SHALL MEET THE						
* POROSITY					PROVISION FOUND IN AISC 341-16 AND WELDING METHODS, PROCEDURES AND QUALITY CONTROL						
ARC STRIKES	•		•		SHALL COMPLY WITH AWS D1.1 AND THE FOLLOWING:						
K-AREA ¹	•		•		a. ARC STRIKES, GOUGES AND OTHER IMPERFECTIONS WITHIN OR ADJACENT TO THE						
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ²	•		•		JOINT, SHALL BE REPAIRED OR REMOVED. b. PREHEAT AND INTER-PASS REQUIREMENTS AS						
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	•		•		OUTLINED IN SECTION 3.5.						
REPAIR ACTIVITIES	•		•		c. UNREPAIRED CRACKS, GOUGES, AND NOTCHES WILL NOT BE PERMITTED IN THE JOINT AREA.						
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	•		•		 d. USE ELECTRODES WITH CHARPY V-NOTCH ABSORBED ENERGY EQUAL TO OR GREATER 						
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR		•		•	THAN 20 FT-LBS AT 20 DEGREES FAHRENHEIT UNDER AWS A5 CLASSIFICATION TEST						
	S HAS BEEN SE	DEODMES :			METHODS, AND 40 FT-LBS AT 70 DEGREES FAHRENHEIT USING TEST PROCEDURES						
¹ WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENER VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75mm) OF TI ² AFTER ROLLED HEAVY SHAPES (SEE SECTION A3.1c) AND BUILT-UP HEAVY VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.	HE WELD)		,	D,	PRESCRIBED IN APPENDIX X OF AISC 358. ACCEPTABLE ELECTRODES INCLUDE E70TG-K2, E71 T-1.						

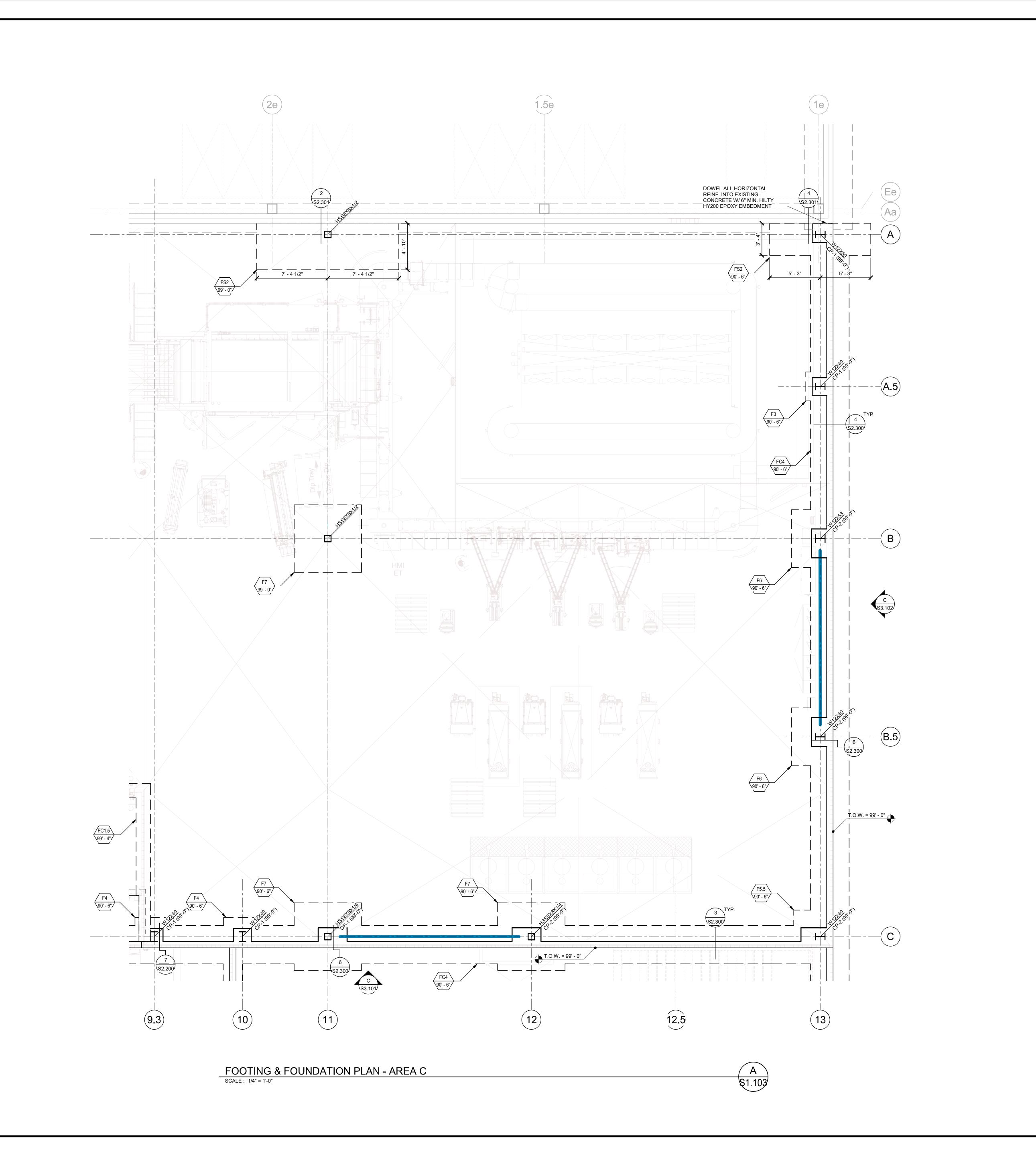
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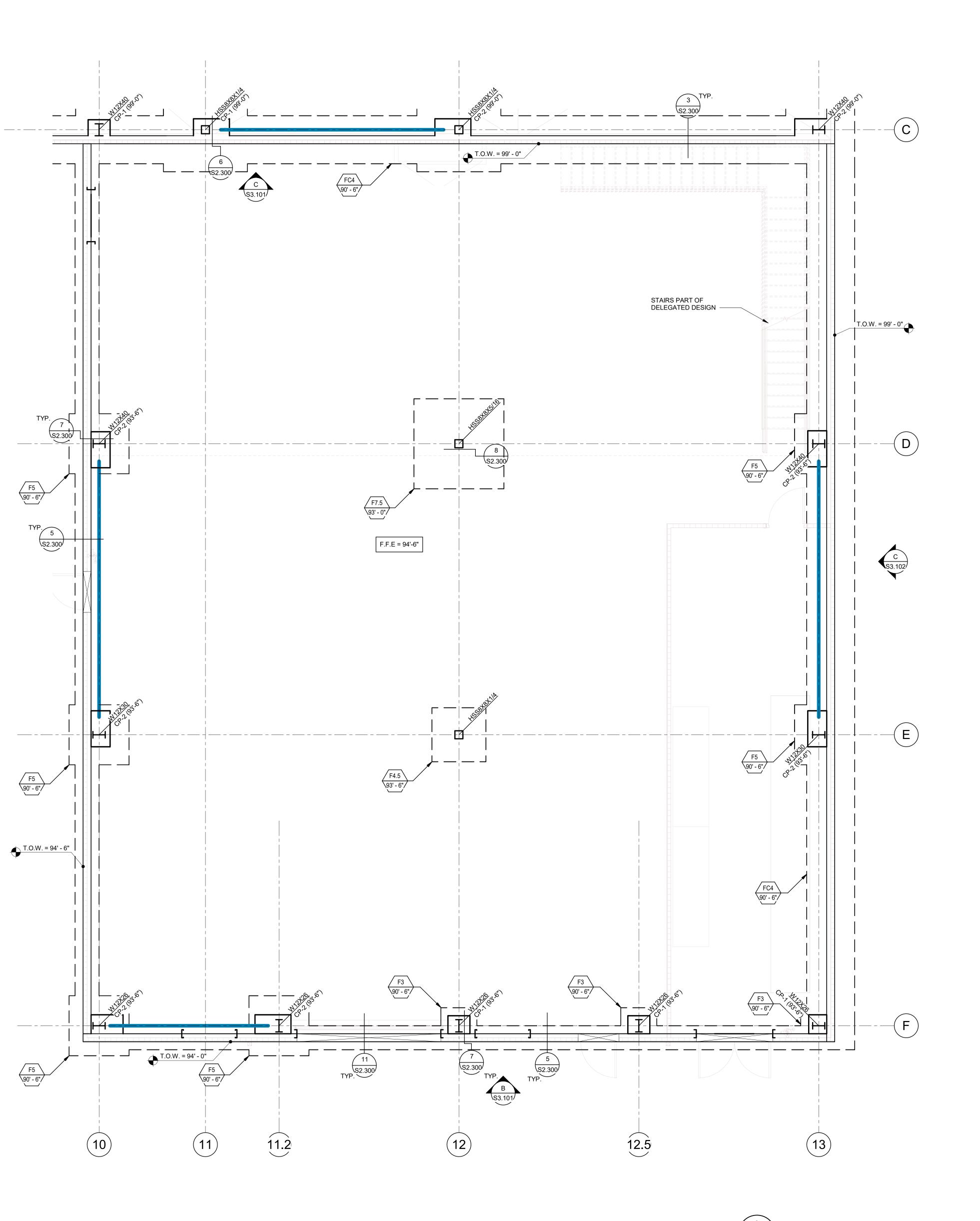
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Perry's Ice Cream Plaza

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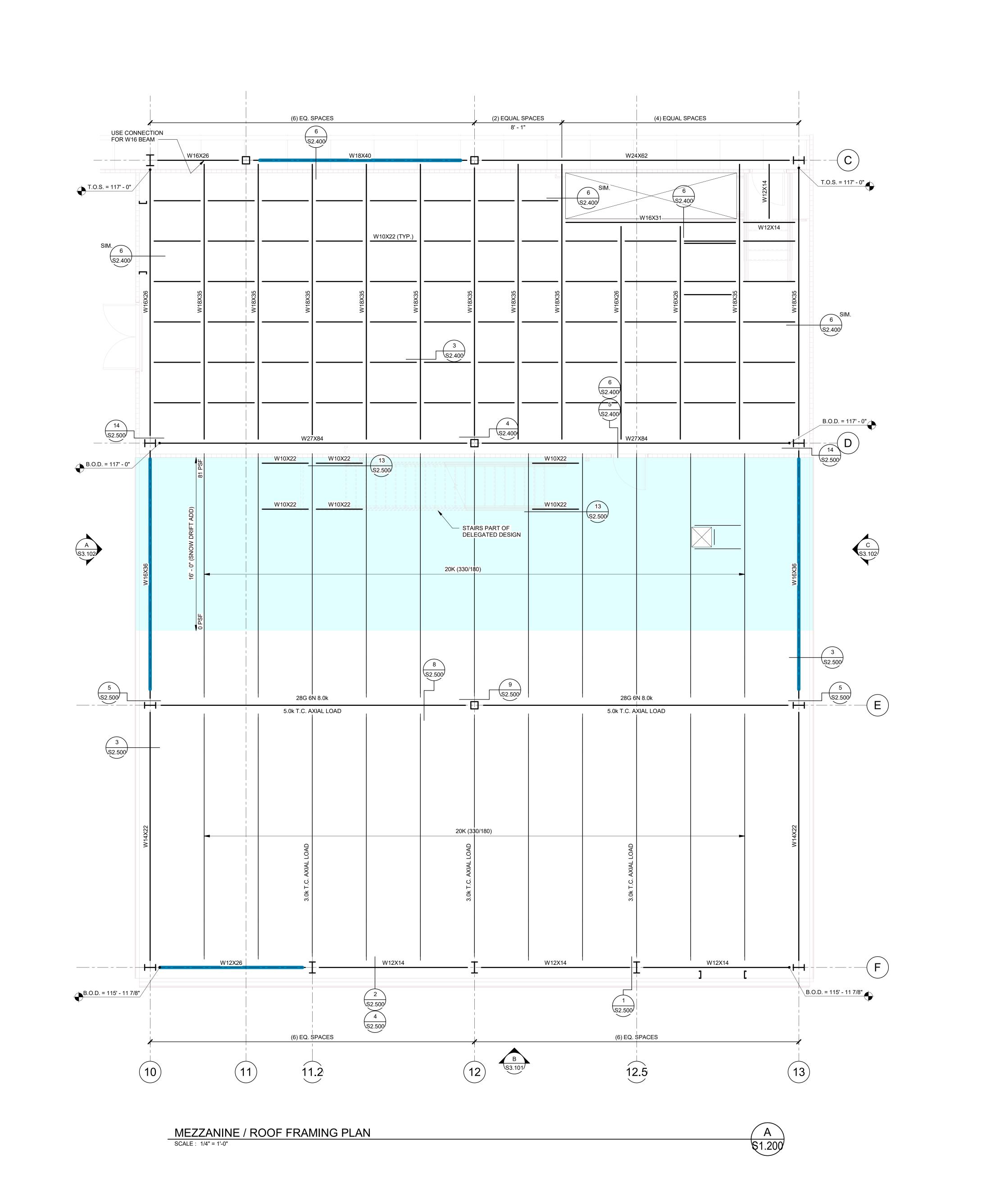
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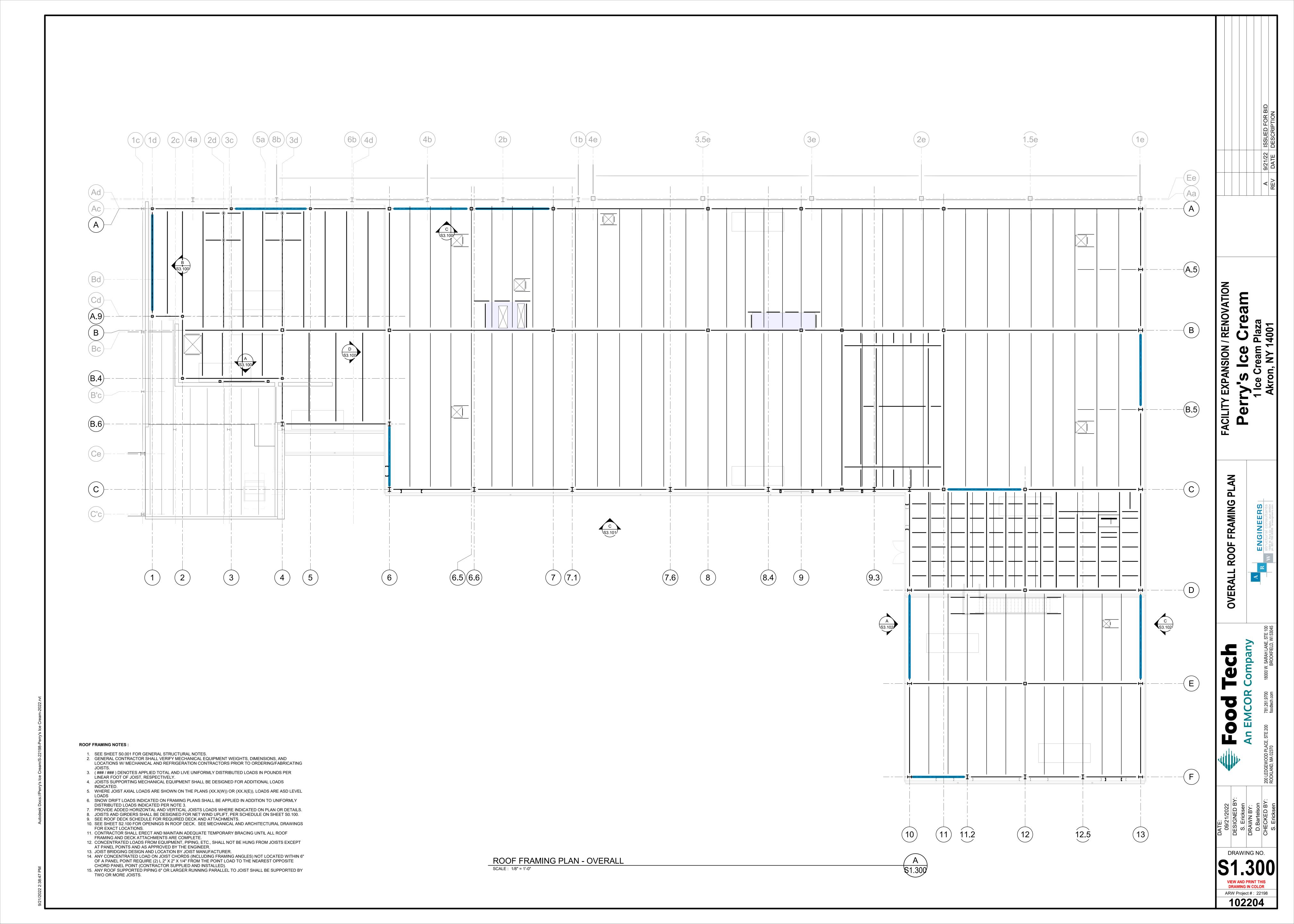
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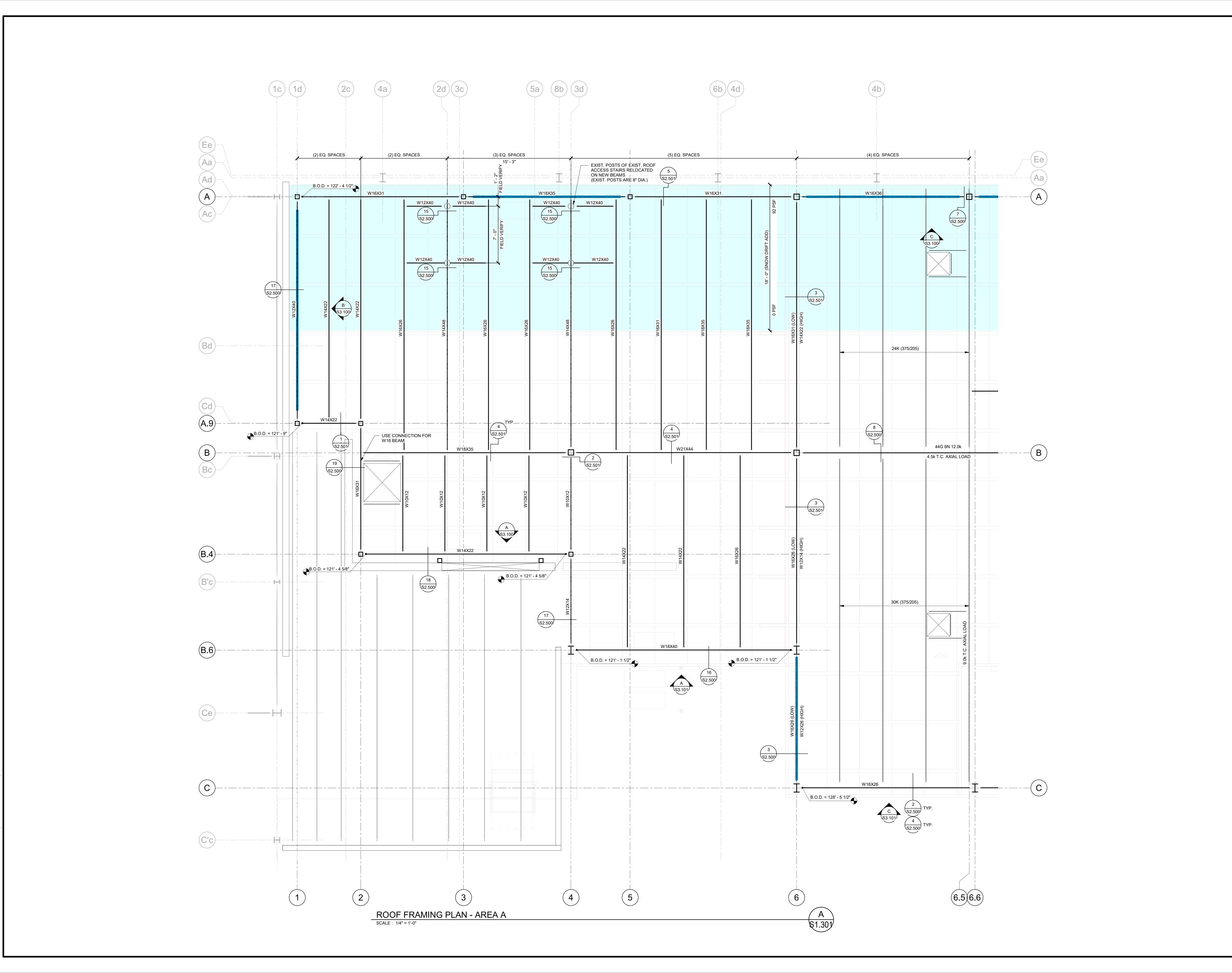
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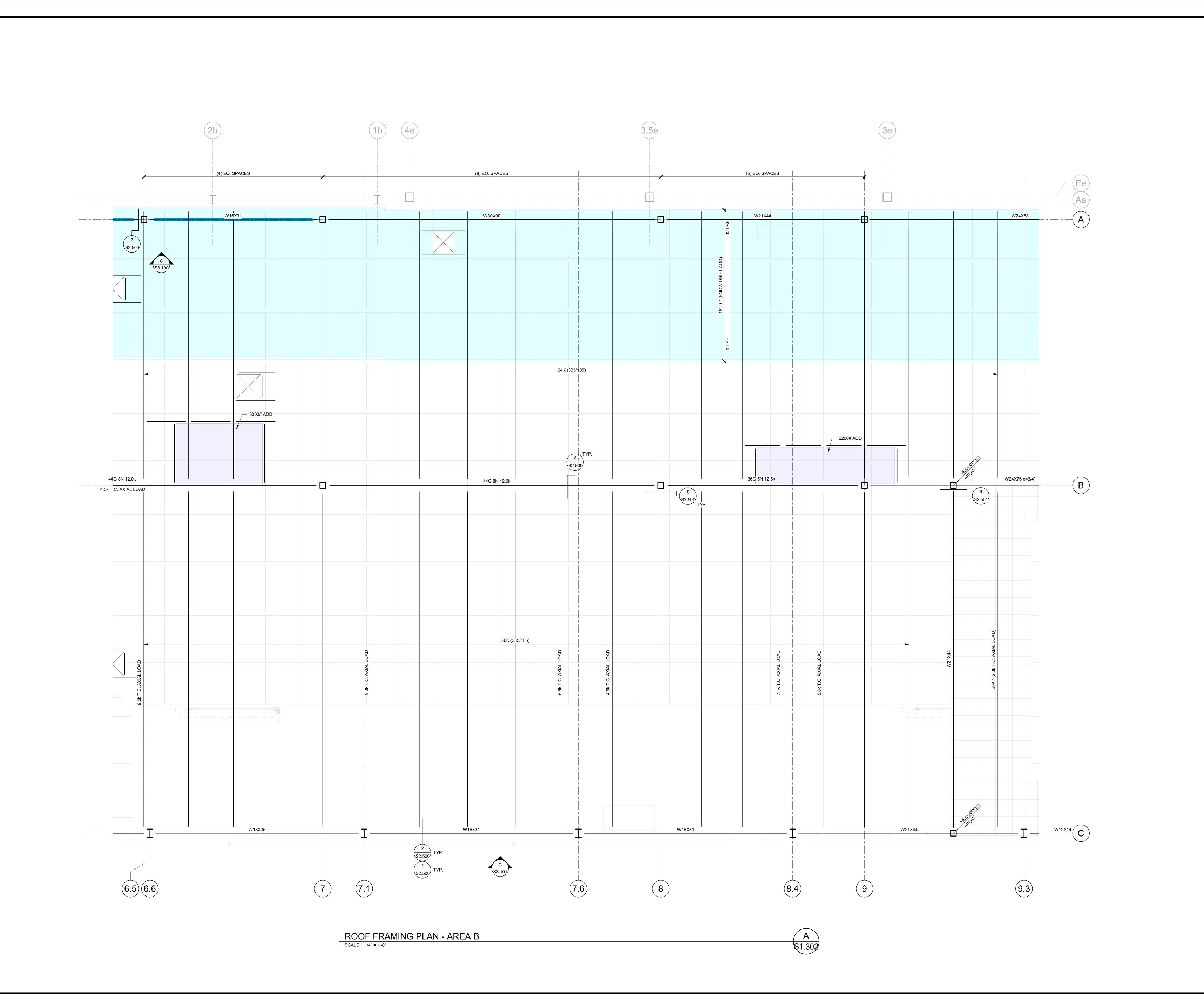
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FACILITY EXPANSION / RENOVATION

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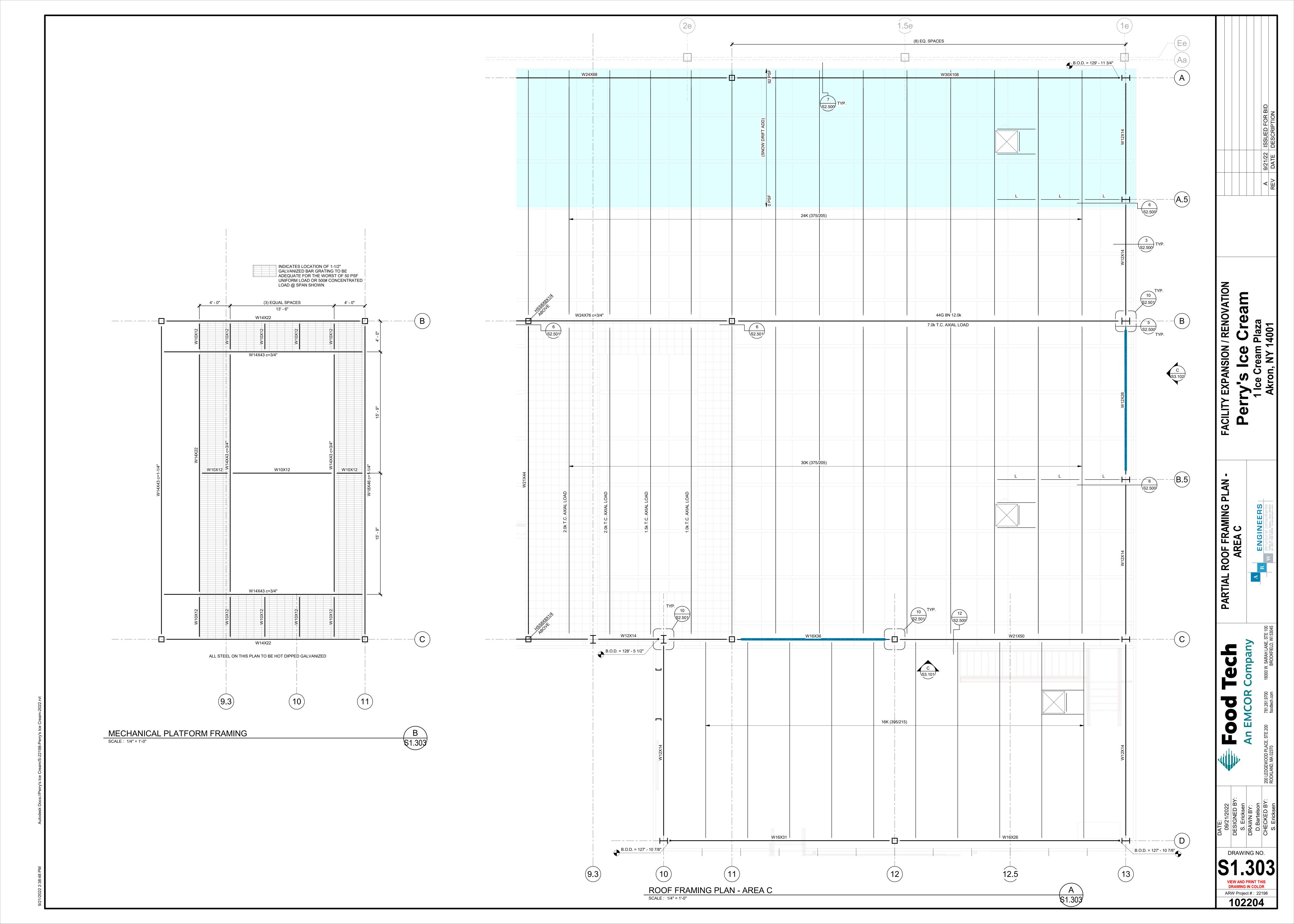
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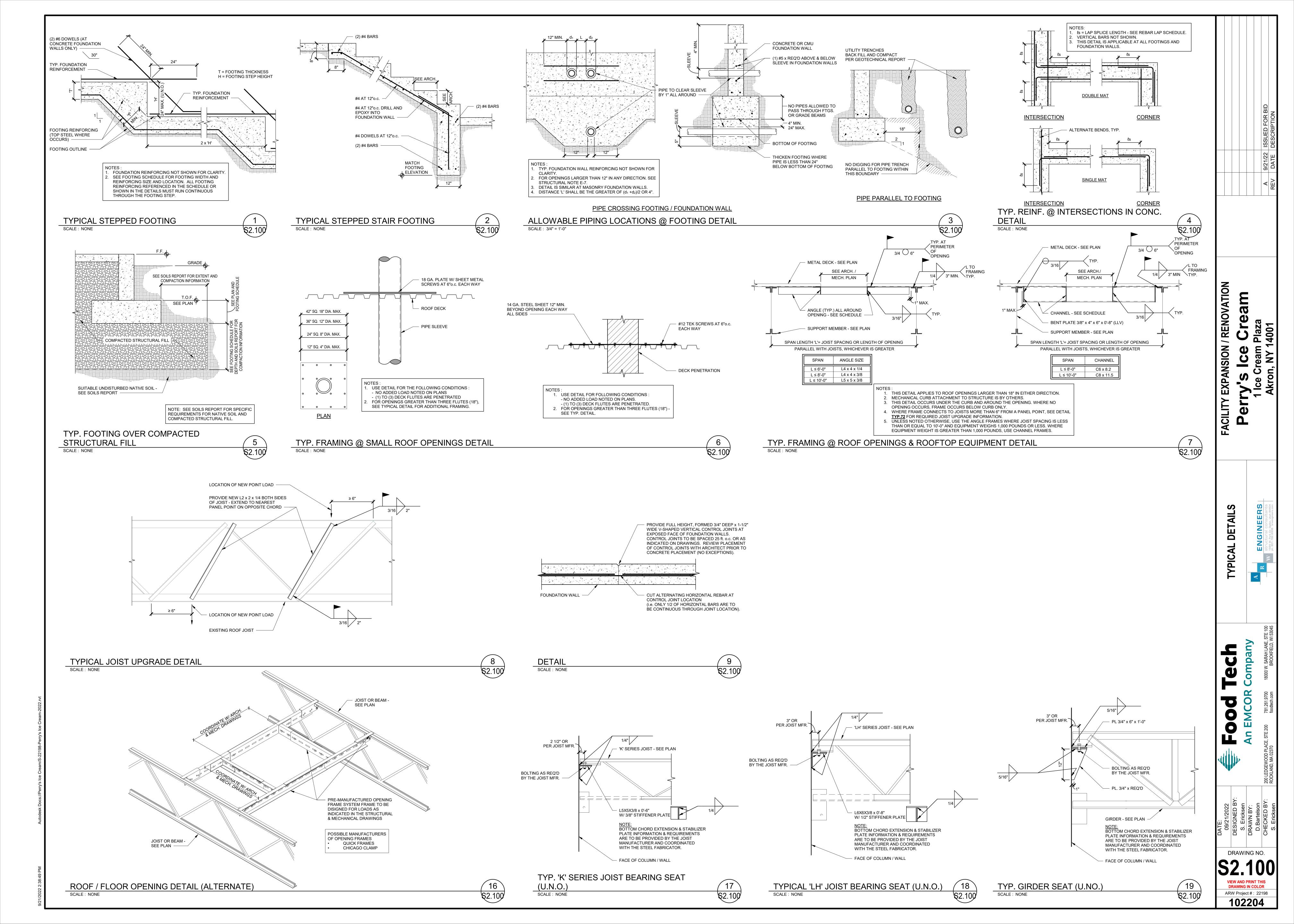
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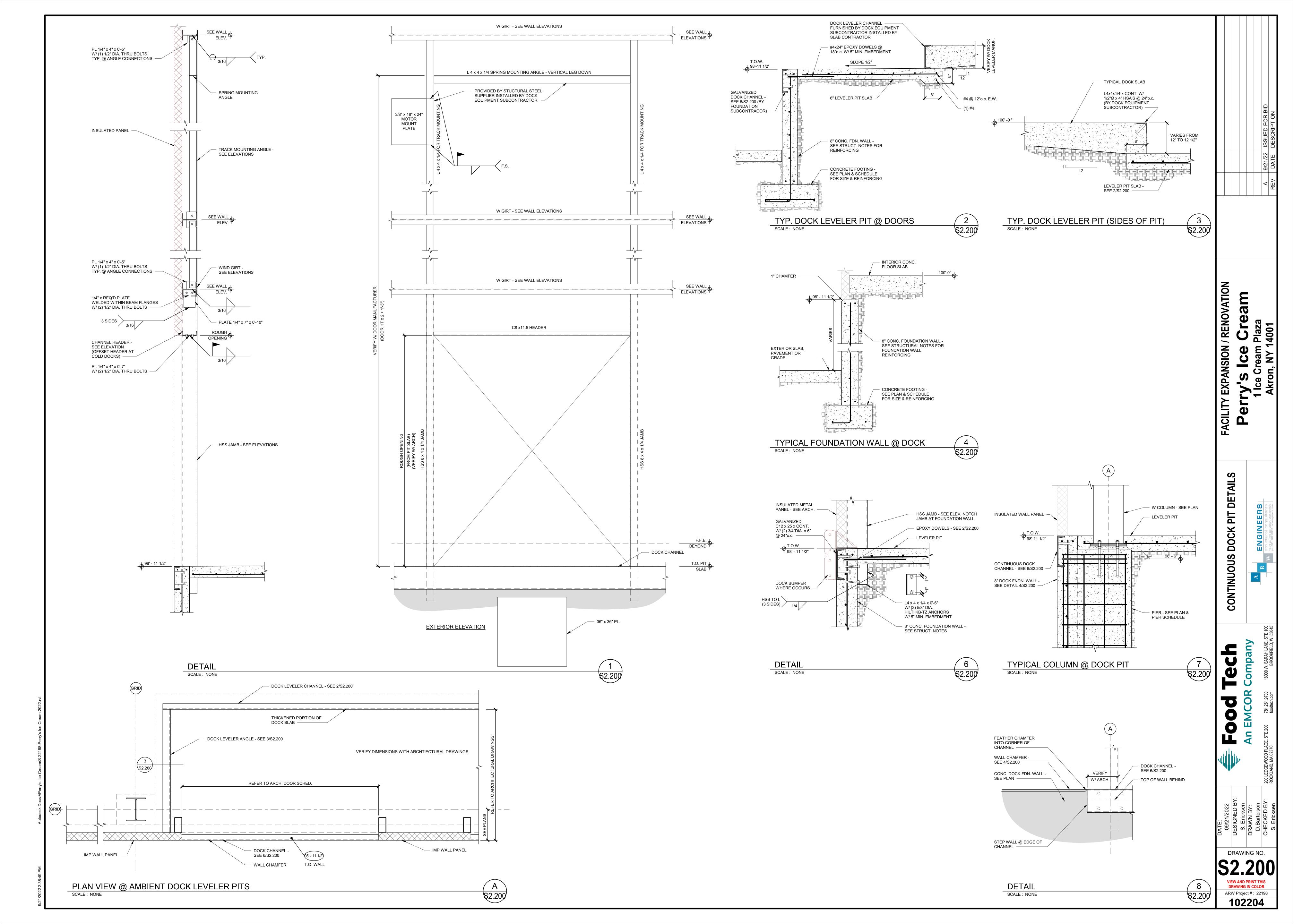
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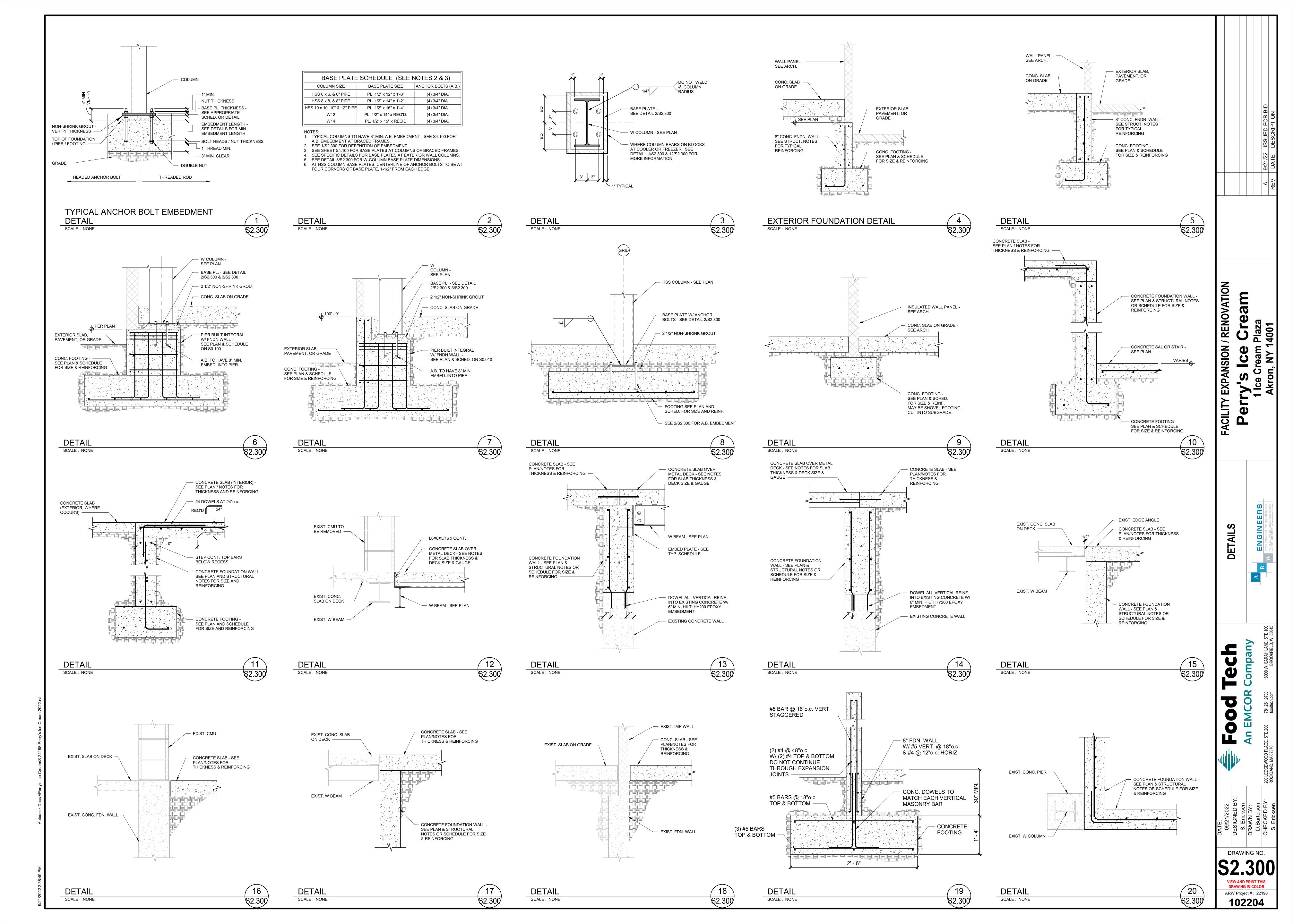
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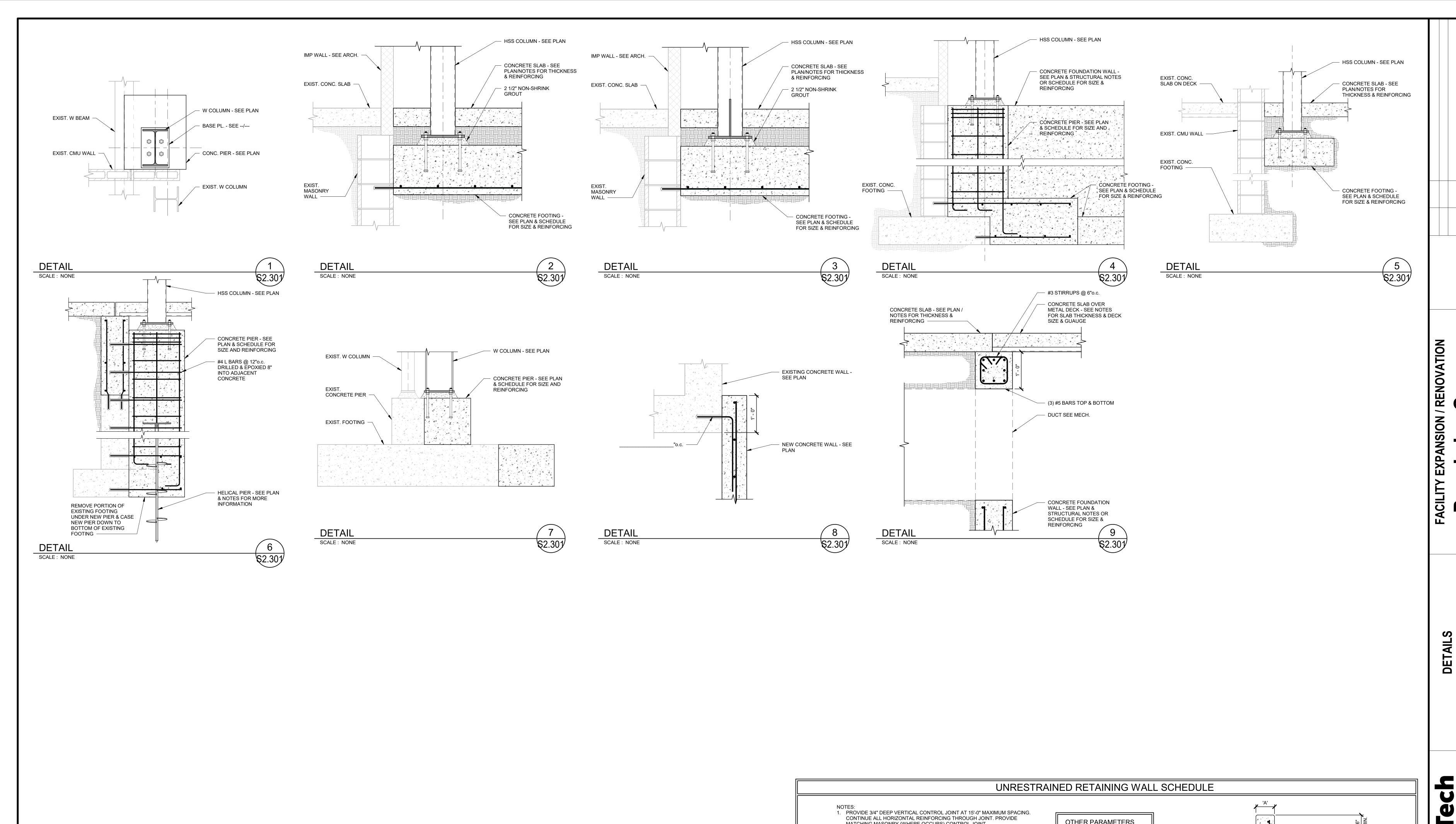
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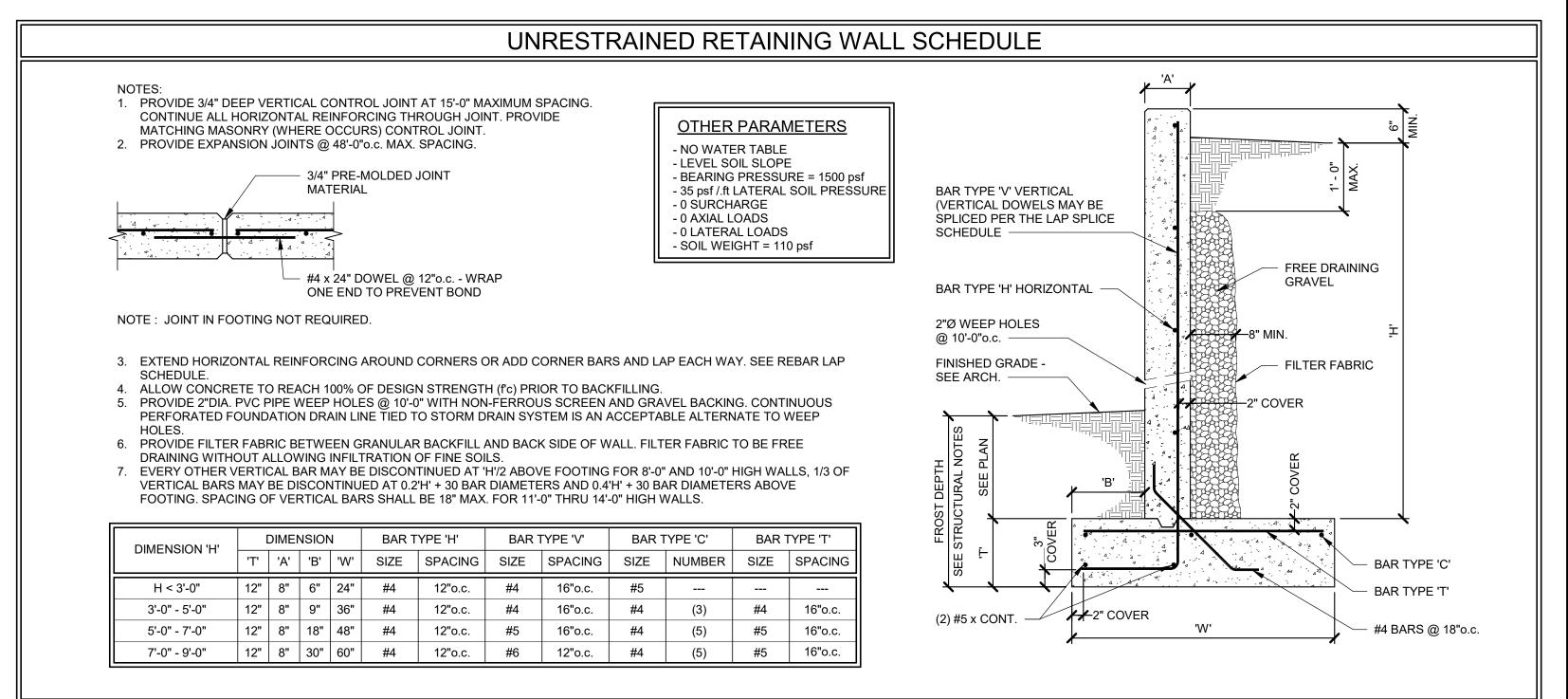


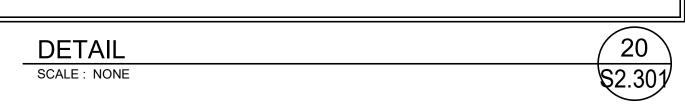












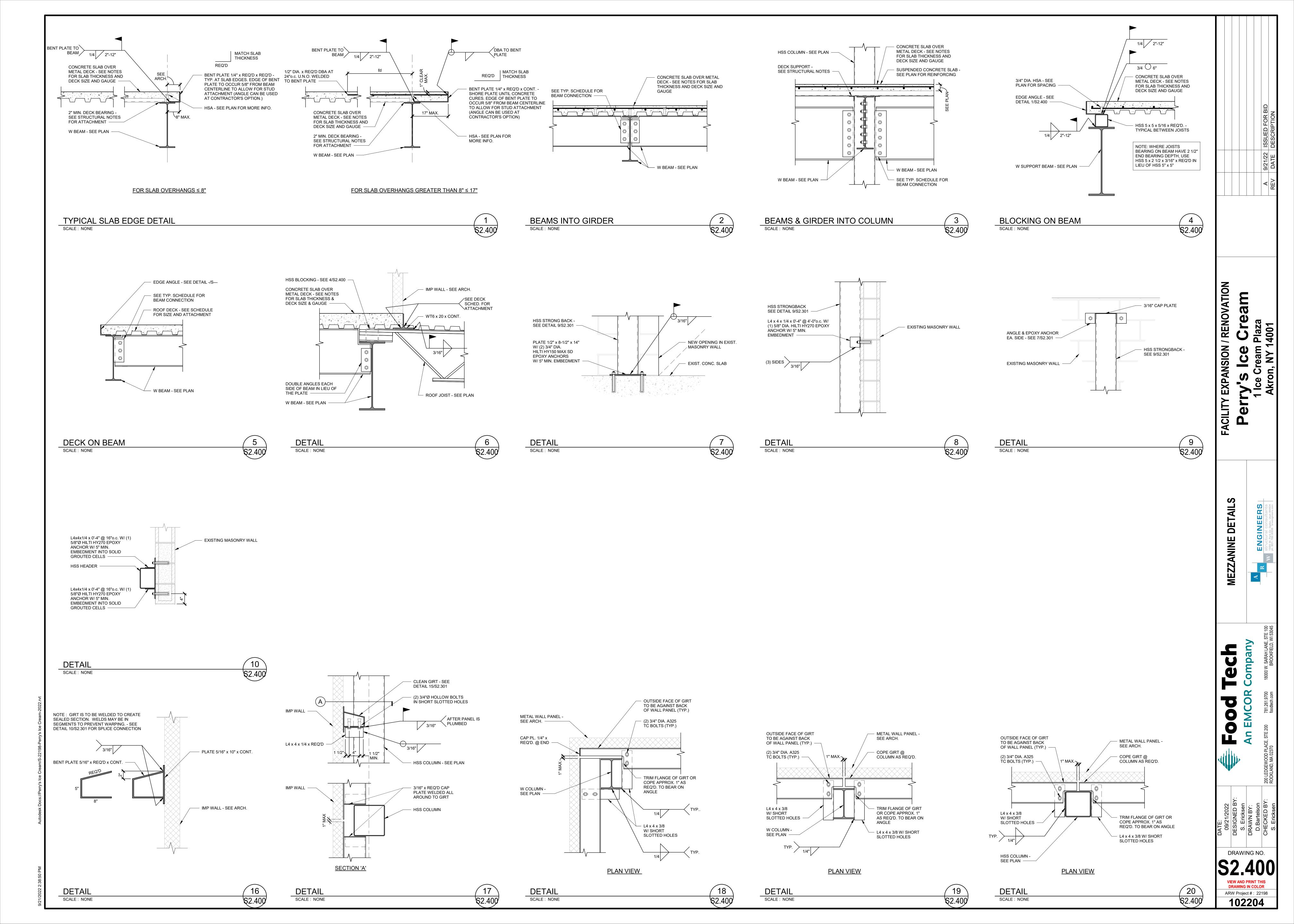
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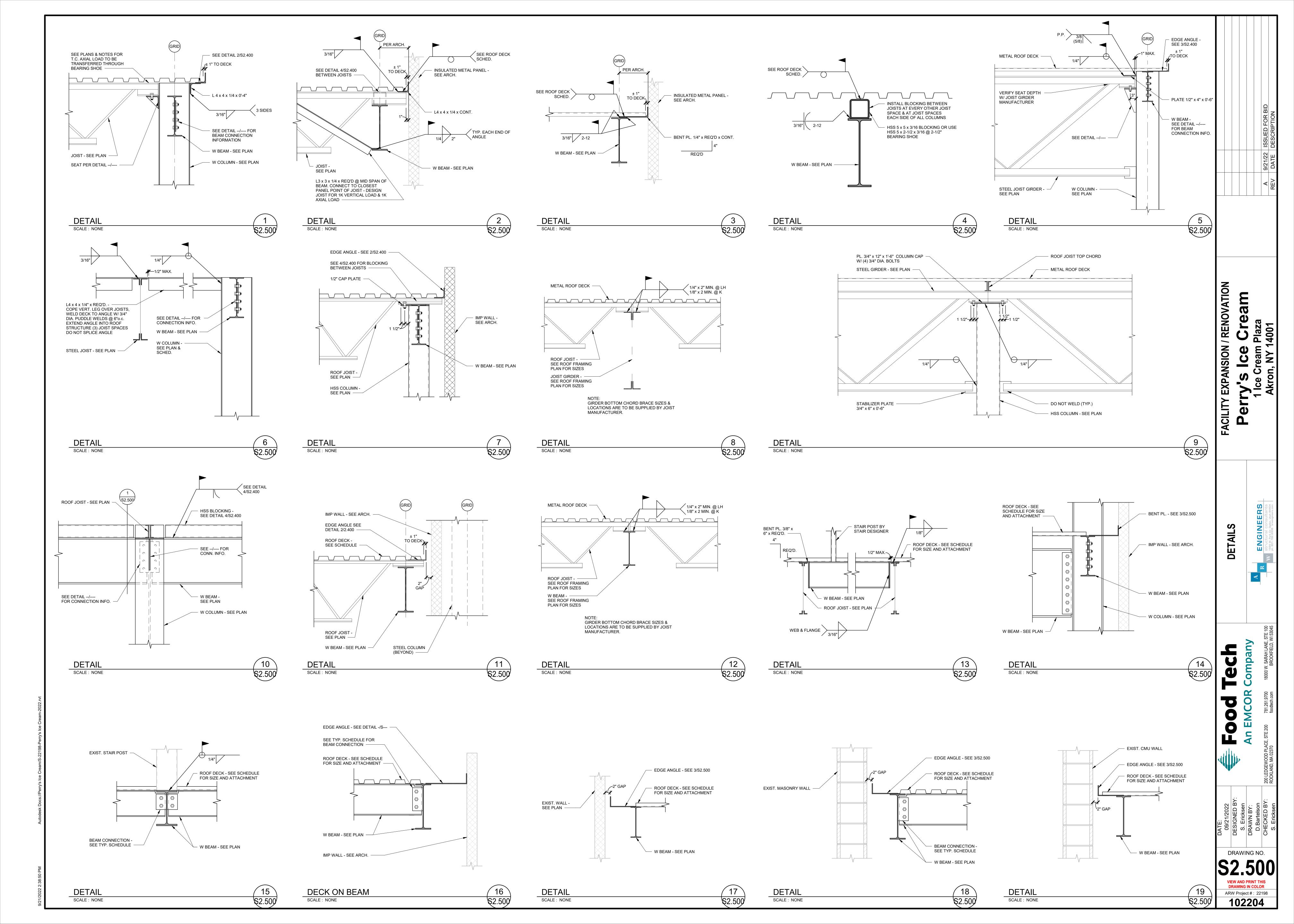
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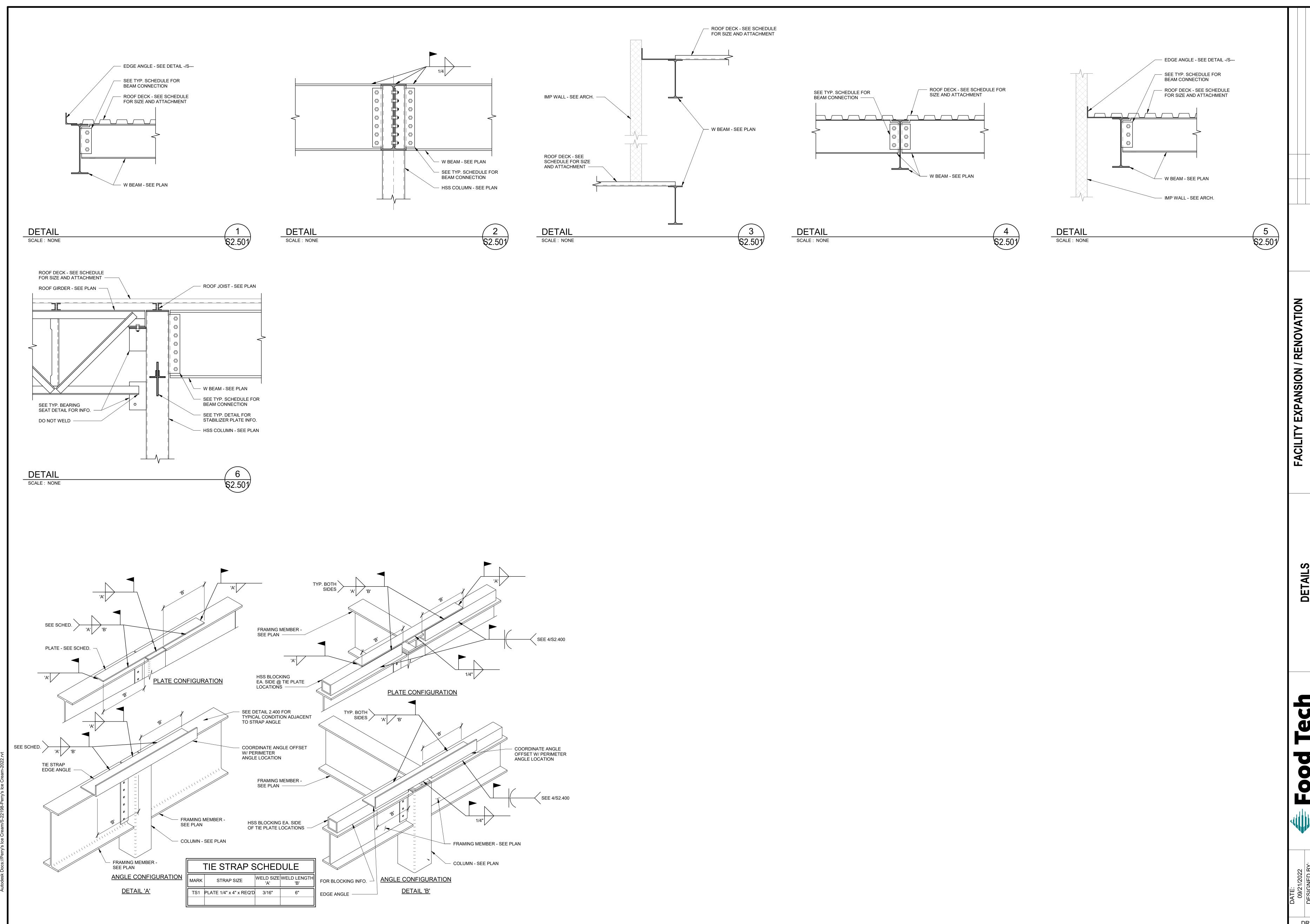
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DETAIL

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