GENERAL CONDITIONS

1. IF MATERIALS, QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE MOST STRINGENT SHALL BE PROVIDED.
2. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH PROJECT SPECIFICATIONS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
4. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR TO CONFORM TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.
5. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. THE CONTRACTOR'S RESPONSIBILITY IS TO SUPPORT, BRACE AND SECURE EXISTING STRUCTURE AS REQUIRED. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION.
6. VISITS TO THE SITE BY THE ENGINEER WILL BE FOR OBSERVATION AND SHALL NOT INCLUDE INSPECTIONS. THE PURPOSE OF THE ENGINEER'S VISITS WILL BE TO ASSIST IN QUALITY CONTROL AND HELP ACHIEVE CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. THE VISITS SHOULD NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
7. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR HAVING VISITED THE SITE AND HAVING FAMILIARIZED HIMSELF WITH ALL EXISTING CONDITIONS. ANY QUESTIONS OR DISCREPANCIES FOUND WITH REGARD TO THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNERS BEFORE SUBMITTING A PROPOSAL. FIELD MEASURE EXISTING CONDITIONS PRIOR TO FABRICATION OF MATERIALS.

DESIGN LOADS

1. THE FOLLOWING DESIGN LOADS ARE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2023 (8TH EDITION) AND PROVISIONS OF THE ASCE 7-22.
2. UNIFORMLY DISTRIBUTED DEAD LOADS:
   A. OPEN-WEB STEEL ROOF JOISTS
      - ROOF SDL - TOP CHORD 15 PSF
      - ROOF SDL - BOTTOM CHORD 10 PSF
3. LIVE LOADS
   - CORRIDORS AND PUBLIC AREAS 100 PSF
   - STORAGE 125 PSF
   - ROOF AND AWNINGS 20 PSF
4. WIND LOADS
   - ULTIMATE DESIGN WIND SPEED V_{ult}=162 MPH
   - NOMINAL DESIGN WIND SPEED V_{asd}=126 MPH
   - RISK CATEGORY II
   - WIND EXPOSURE D
   - ENCLOSURE CLASSIFICATION ENCLOSED
   - INTERNAL PRESSURE COEFFICIENT GC_{pi}= +/-0.18
   - SEE COMPONENTS AND CLADDING PRESSURES ON SHEET S0.2

SUBMITTAL & SHOP DRAWINGS

1. SUBMITTALS THAT DO NOT MEET THE REQUIREMENTS BELOW WILL BE RETURNED WITHOUT REVIEW.
2. FOUR COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED. FOLLOW THE ARCHITECT'S INSTRUCTIONS FOR DISTRIBUTION.
3. THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE FOLLOWING ITEMS
   A. CONCRETE MIX DESIGNS
   B. REINFORCING STEEL
   C. STRUCTURAL STEEL
   D. OPEN-WEBBED STEEL JOISTS
   E. COLD FORMED STEEL FRAMING (*)
   F. COLD FORMED STEEL ROOF TRUSSES (*)
   G. STAIRS AND RAILINGS (*)
   H. ALUMINUM AWNINGS (*)

   * INDICATES THAT SHOP DRAWINGS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. ALL SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER SHALL BE ACCOMPANIED BY A SET OF SIGNED AND SEALED CALCULATIONS, SEE THE REQUIREMENTS BELOW.
4. DETAILER SHALL BE RESPONSIBLE FOR CHECKING ALL ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR OPENINGS AND EMBEDS, EFFECTING STRUCTURAL MEMBERS.
5. THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER OF RECORD.
6. CHANGES AND ADDITIONS MADE ON RE-SUBMITTALS SHALL BE CLEARLY INDICATED WITH A CLOUD AND NOTE. THE PURPOSE OF THE RE-SUBMITTAL SHALL CLEARLY BE NOTED ON THE TRANSMITTAL. THE REVIEW WILL BE LIMITED TO THOSE ITEMS CAUSING THE RE-SUBMITTAL.
7. SHOP DRAWINGS SHALL BEAR THE INITIALS OF THE DETAILER'S CHECKER AND BE APPROVED BY THE CONTRACTOR BEFORE SUBMITTAL TO ENGINEER. NON-CONFORMING SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
   A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.
   B. REVIEW OF THE SHOP DRAWING DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS.
8. THE USE OF REPRODUCTIONS OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUB-CONTRACTOR, ERECTOR, FABRICATOR, OF MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
9. IF REPRODUCTIONS OF THESE CONTRACT DRAWINGS ARE USED IN LIEU OF PREPARATION OF SHOP DRAWINGS, THE ARCHITECT'S, ENGINEER'S, OR OTHER DESIGN CONSULTANT'S TITLE BLOCK SHALL BE REMOVED AND REPLACED WITH A TITLE BLOCK LISTING THE FOLLOWING ITEMS:
   A. NAME, ADDRESS, AND TELEPHONE NUMBER OF CONTRACTOR, SUB-CONTRACTOR, ETC. SUBMITTING SHOP DRAWINGS.
   B. SHEET NUMBER
   C. DATE DRAWINGS PREPARED, INITIALS OF PERSON WHO PREPARED DRAWINGS, AND PERSON WHO CHECKED DRAWINGS.

   *ANY REPORDUCTION OF THESE CONTRACT DRAWINGS NOT COMPLYING WITH THE ABOVE WILL BE REJECTED WITHOUT REVIEW.
10. CALCULATION REQUIREMENTS:
    A. CALCULATIONS AS REQUIRED BY DRAWINGS SHALL BE SUBMITTED WITH THE REQUIRED SHOP DRAWINGS AT THE SAME TIME AS THE SUBMITTAL.
    B. ALL CALCULATIONS SUBMITTED SHALL BE PRESENTED IN A LEGIBLE MANNER AND FOLLOW AN ORDERLY, LOGICAL SEQUENCE.
    C. ALL REFERENCES AND SOURCES OF INFORMATION SHALL BE LISTED WITHIN THE CALCULATIONS. COPIES OF PERTINENT SECTIONS SHALL BE INCLUDED.
    D. BASIC LOADS AND DERIVATION OF FORCES, MOMENTS, SHEARS, REACTIONS, DEFLECTIONS, CAMBERS, ETC., SHALL BE INCLUDED. INCLUDE ALL UNBALANCED LOADING FORCES AS REQUIRED.
    E. DESIGN ASSUMPTIONS SHALL BE CLEARLY STATED.
    F. ALL COMPUTER GENERATED CALCULATIONS SHALL BE ACCOMPANIED WITH EXPLANATIONS OF OUTPUT/INPUT DATA (i.e. VARIABLE IDENTIFICATION, LOAD DERIVATION, ETC.). A BRIEF EXPLANATION OF GENERAL THEORY, METHOD AND ASSUMPTIONS USED SHALL BE INCLUDED.
    G. ALL CALCULATIONS ARE TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

FOUNDATIONS

1. FOUNDATION DESIGN SHALL BE BASED ON AN ALLOWABLE BEARING PRESSURE OF 3000 PSF IN ACCORDANCE WITH THE GEOTECHNICAL REPORT BY ECS SOUTHWEST, LLP (PROJECT NO. 17.6232) DATED MAY 12, 2023. SEE GEOTECHNICAL REPORT FOR SOIL IMPROVEMENT AND FOUNDATION REQUIREMENTS FOR EXPANSIVE SOILS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT THE SUBGRADE IS COMPACTED SUFFICIENTLY TO ACHIEVE THIS BEARING PRESSURE.
2. EARTHWORK SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED SOIL TESTING COMPANY TO ASSURE COMPLIANCE WITH REQUIREMENTS OF THE SOILS REPORT AND SPECIFICATIONS.
3. ALL FOOTINGS SHALL BE CENTERED UNDER THE COLUMNS OR WALL ABOVE UNLESS NOTED OTHERWISE.
4. IF REQUIRED, PROVIDE GRAVEL LAYER BELOW SLABS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR RADON GAS VENTING. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS AND LOCATION OF VENT PIPES THROUGH SLABS.

REINFORCING STEEL

1. ALL REINFORCING SHALL BE ASTM A615, GRADE 60. BARS SHALL SECURELY TIE IN PLACE WITH #16 DOUBLE-ANNEALED IRON WIRE, BARS SHALL BE SUPPORTED ON ACCEPTABLE CHAIRS. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES." CONTRACTOR SHALL COORDINATE REINFORCING STEEL PLACEMENT DETAILS AND PROVIDE TEMPLATES FOR PLACING STEEL IN CONGESTED AREAS AS NECESSARY. SHOP DRAWINGS (INCLUDING PLACING PLANS AND ELEVATIONS) SHALL BE SUBMITTED TO, AND REVIEWED BY, THE ARCHITECTS/ENGINEER BEFORE STARTING FABRICATION.
2. WELDED WIRE REINFORCING SHALL BE ELECTRICALLY WELDED AND CONFORM TO ASTM A185 (FLAT SHEET), YIELD STRENGTH 65,000 PSI. AN 8" MINIMUM LAP SHALL BE PROVIDE FOR SIDE AND END LAP. WELDED WIRE REINFORCING SHALL SUPPORTED IN APPROVED CHAIRS. REFER TO NOTE #6 UNDER SLAB ON GRADE CONSTRUCTION FOR FIBROUS REINFORCING OPTION.
3. NO REINFORCING BARS SHALL BE SPLICED BY WELDING. AT THE CONTRACTOR'S OPTION, MECHANICAL BUTT SPLICING USING AN EXOTHERMIC WELDING PROCESS AND HIGH STRENGTH SLEEVES OR MECHANICAL CONNECTION SPLICING MAY BE USED, PROVIDED THAT THE MECHANICAL SPLICES SHALL BE ICBO APPROVED TO ACHIEVE A MINIMUM TENSILE STRENGTH OF 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. THE MINIMUM TENSILE STRENGTH REQUIREMENT SHALL BE INCREASED TO 160 PERCENT FOR MECHANICAL SPLICES AT THE INTERFACE OF DIAPHRAGMS AND THE LATERAL SYSTEM, AND FOR MECHANICAL SPLICES WITHIN ELEMENTS OF THE LATERAL SYSTEM. SPLICES DEVICES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. REINFORCING BARS SHALL BE LAP SPLICED FOR TENSION UNLESS NOTED OTHERWISE ON THE DRAWINGS. #14 AND #18 BARS SHALL NOT BE LAP SPLICED.
4. WELDING OR TACK WELDING OF REINFORCING BARS TO OTHER BARS OR TOE PLATES, ANGLES ETC, IS PROHIBITED, EXCEPT WHERE SPECIFICALLY APPROVED BY THE ENGINEER. WHERE WELDING IS APPROVED, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING E9018 OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.4.
5. MINIMUM CAST-IN-PLACE CONCRETE COVER OVER REINFORCING STEEL, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: • 3 INCHES.
   B. CONCRETE EXPOSED TO EARTH OR WEATHER:
      1-1/2 INCHES FOR #5 BARS OR SMALLER
      2 INCHES FOR #6 BARS OR LARGER.
   C. OTHER CONCRETE:
      a. WALLS - INTERIOR FACE:
         1-1/2 INCHES FOR #14 AND #18 BARS
         3/4 INCH FOR #11 BARS AND SMALLER
      b. SLABS:
         #11 BARS AND SMALLER - 3/4 INCH
      c. BEAMS AND COLUMNS - TIES, STIRRUPS AND SPIRALS:
         1-1/2 INCHES
6. PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE. SPLICE ONLY AS SHOWN OR APPROVED. STAGGER SPLICES WHERE POSSIBLE. USE TENSION SPLICE CLASS "B" UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH TENSION SPLICES. UNLESS NOTED OTHERWISE LAP LENGTHS EXPRESSED IN NUMBER OF BAR DIAMETERS SHALL BE AS FOLLOWS:

BAR SIZE	NORMAL WEIGHT CONCRETE F'c (PSI)				
	CLASS	3,000	4,000	5,000	6,000
#6 OR SMALLER	A	44 DIA	38 DIA	34 DIA	31 DIA
	B	57 DIA	49 DIA	44 DIA	40 DIA
#7 OR LARGER	A	55 DIA	47 DIA	42 DIA	39 DIA
	B	71 DIA	62 DIA	55 DIA	50 DIA

LAP SPLICE LENGTH NOTES:

- TABLE IS BASED ON a) CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN ONE BAR DIAMETER (BD), CLEAR COVER NOT LESS THAN ONE DB, AND STIRRUPS OR TIES THROUGHOUT THE LAP SPLICE LENGTH NOT LESS THAN THE CODE MINIMUM, OR b) CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2 DB AND CLEAR COVER NOT LESS THAN ONE DB. FOR ALL OTHER CASES, MULTIPLY TENSION LAP BY 1.5.
- FOR TENSION REINFORCEMENT WITH MORE THAN 12" OF CONCRETE BELOW, OR FOR VERTICAL REINFORCEMENT, MULTIPLY THE LAP SPLICE LENGTH INDICATED IN THE TABLE BY 1.3. HOWEVER, THE LAP SPLICE LENGTH SHALL NOT BE LESS THAN 12".
- FOR TENSION REINFORCEMENT IN LIGHTWEIGHT CONCRETE, MULTIPLY LAP SPLICED LENGTH BY 1.3.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:

PLACEMENT	MINIMUM STRENGTH	MAX WATER/CEMENT RATIO
FOOTINGS / SLAB ON GRADE:	3000 PSI	0.58
REMAINING CONCRETE:	4000 PSI	0.54

2. ALL CONCRETE SHALL HAVE A SLUMP OF 4" PLUS OR MINUS 1", AND HAVE 2 TO 4% AIR ENTRAINMENT.
3. CONCRETE MIX DESIGN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301 CHAPTER 3, METHOD 1 OR METHOD 2. SUBMIT BACKUP DATA AS REQUIRED BY CHAPTER 5 SECTION 5.3. OF THE LATEST EDITION OF ACI 318.
4. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 60.
5. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318 LATEST EDITION, AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS," ACI 301, LATEST EDITION.
6. ALL REINFORCING DETAILS SHALL CONFORM TO "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI 315 LATEST EDITION, UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS.
7. CONTRACTOR SHALL REVIEW ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF EMBEDDED ITEMS, SLEEVES, SLAB DEPRESSIONS, OPENINGS, ANCHOR BOLTS, SLOPES, ETC. REQUIRED BY OTHER TRADES. THESE ITEMS SHALL BE FURNISHED AND INSTALLED PRIOR TO PLACEMENT OF CONCRETE.
8. WHERE BAR LENGTHS ARE GIVEN ON THE DRAWINGS, THE LENGTH OF ANY HOOK, IF REQUIRED, IS NOT INCLUDED. HOOKS SHALL BE PROVIDED AT DISCONTINUOUS ENDS OF ALL TOP BARS OF BEAMS AND AT SLAB EDGES.
9. CONTRACTOR SHALL PROVIDE SPACERS, CHAIRS, BOLSTERS, ETC. NECESSARY TO SUPPORT REINFORCING STEEL. SUPPORT ITEMS WHICH BEAR ON EXPOSED CONCRETE SURFACES SHALL HAVE ENDS WHICH ARE PLASTIC TIPPED OR STAINLESS STEEL.
10. CONTRACTOR SHALL PROVIDE 3/4 INCH CHAMFER ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS, AND WALLS UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL DRAWINGS.
11. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:
    3" AT CONCRETE PERMANENTLY EXPOSED TO EARTH.
    1-1/2" AT ALL OTHER CONCRETE.
12. HORIZONTAL WALL AND FOOTING BARS SHALL BE BENT 1'-0" AROUND CORNERS OR CORNER BARS WITH 2'-0" LAP SHALL BE PROVIDED.
13. HORIZONTAL KEYWAYS IN CONSTRUCTION JOINTS SHALL BE PROVIDED IN BEAMS, SUPPORTED SLABS, AND WALL FOOTINGS WITH A DEPTH OF 1-1/2" AND HEIGHT EQUAL TO ONE-THIRD OF THE MEMBER'S DEPTH. REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS OTHERWISE NOTED ON THE DRAWINGS. CONSTRUCTION JOINTS MAY BE USED ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AT OTHER LOCATIONS APPROVED BY THE ARCHITECT.
14. CONTRACTOR SHALL KEEP A COPY OF "FIELD REFERENCE MANUAL" (ACI PUBLICATION SP-15, LATEST EDITION) AT THE PROJECT FIELD OFFICE.
15. MINIMUM LAP LENGTHS ON ALL REINFORCING BAR SPLICES SHALL BE 48 BAR DIAMETERS. FOR BEAMS AND ELEVATED SLABS, LAP BOTTOM STEEL AT THE SUPPORT AND TOP STEEL OVER THE MIDSPAN, UNLESS OTHERWISE NOTED.
16. TESTING LABORATORY SHALL SUBMIT ONE COPY OF ALL CONCRETE TEST REPORTS DIRECTLY TO THE ENGINEER.

CONCRETE SLAB ON GRADE

1. SPECIFICATION: UNLESS NOTED OTHERWISE, SLAB ON GRADE CONSTRUCTION SHALL FOLLOW THE RECOMMENDATIONS OF "THE GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION ACI 302.1R-04".
2. SUBGRADE PREPARATION::
   A. AREAS CONTAINING SLAB ON GRADE CONSTRUCTION SHALL BE STRIPPED TO SUFFICIENT DEPTH TO REMOVED ALL VEGETATION, TOP SOIL, ORGANIC AND OTHER UNSUITABLE MATERIALS.
3. REINFORCING STEEL:
   A. SEE THE DRAWINGS FOR TYPICAL SLAB REINFORCEMENT REQUIREMENTS.
   B. LAP CONTINUOUS SLAB ON GRADE REINFORCING STEEL 30 BAR DIAMETERS AT SPLICES BUT NOT LESS THAN 12".
   C. ALL REINFORCING STEEL FOR SLABS ON GRADE SHALL BE CHAIRED WITH SLAB BOLSTERS DESIGNED FOR SUPPORT ON SOIL TO PROVIDED SPECIFIED COVER TO REINFORCING STEEL.
4. SEE DETAILS ON THE DRAWINGS FOR REQUIREMENTS OF CONSTRUCTION JOINTS, CONTROL JOINTS AND POUR SIZE AND SEQUENCE OF SLAB ON GRADE CONSTRUCTION.
5. OPENINGS ON SLAB ON GRADE: UNLESS DETAILED OTHERWISE ON THE DRAWINGS, PROVIDE (1) #5 x OPENING WIDTH +3'-0" AROUND ALL PENETRATION THROUGH SLAB ON GRADE ON GRADE 10" WIDE OR GREATER AND (1) #5 x 3'-0" DIAGONAL CORNERS BARS. SUCH REINFORCEMENT SHALL BE PROVIDED WHETHER OPENING IS SHOWN ON DRAWINGS OR NOT.
6. FIBROUS REINFORCING (OPTION): FIBROUS REINFORCING SHALL BE 100 PERCENT VIRGIN POLYPROPYLENE, FIBRILLATED FIBERS CONTAINING NO REPROCESS EDOLEFIN MATERIALS AND SPECIFICALLY MANUFACTURED TO AN OPTIMUM GRADATION FOR USE AS CONCRETE SECONDARY REINFORCEMENT. VOLUME PER CUBIC YARD SHALL EQUAL A MINIMUM OF 0.1% (1.5 LBS).
7. SLAB ON GRADE SHALL BE PLACED OVER A CONTINUOUS 10 MIL VAPOR BARRIER.

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DATE
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MASONRY CONSTRUCTION

1. CONSTRUCTION SHALL MEET THE REQUIREMENTS OF ACI 530/ASCE 5, "BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY" AND ACI 530.1/ASCE6, "SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF LOAD BEARING CONCRETE MASONRY. ALL HOLLOW LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, MEDIUM WEIGHT, TYPE 1. ALL UNITS SHALL BE LAID IN RUNNING BOND USING TYPE S MORTAR WITH HEAD JOINTS. MASONRY MINIMUM STRENGTH F'M = 1500 PSI. MINIMUM BLOCK COMPRESSIVE STRENGTH IS 1900 PSI.

2. USE TYPE S MORTAR IN ACCORDANCE WITH ASTM C270 EXCEPT TYPE M MORTAR BELOW GRADE. HEAD AND BED JOINTS SHALL BE 3/8" FOR THE THICKNESS OF THE FACE SHELL. WEBS ARE TO BE FULLY MORTARED IN ALL COURSES OF PIERS, COLUMNS AND PILASTERS. IN STARTING COURSE, AND WHERE AN ADJACENT CELL IS TO BE GROUTED. REMOVE MORTAR PROTRUSIONS EXTENDING 1/2" OR MORE INTO THE CELL TO BE GROUTED.

3. USE STANDARD (9 GAUGE) HORIZONTAL JOINT REINFORCING CONFORMING TO ASTM A-82 IN EVERY OTHER COURSE. OVERLAP DISCONTINUOUS END 6". USE PREFABRICATED CORNER AND TEES. USE LADDER TYPE JOINT REINFORCING.

4. ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLID WITH CONCRETE GROUT CONFORMING TO ASTM C-476, GROUT MIXED SHALL CONTAIN PORTLAND CEMENT ONLY PLUS AGGREGATE. MAXIMUM SIZE OF AGGREGATE SHALL BE 3/8 INCH. SLUMP SHALL BE 8 TO 11 INCHES. WATER REDUCING ADMIXTURES MAY BE USED. GROUT SHALL BE VIBRATED WHILE PLACING TO ENSURE THAT CELLS ARE COMPLETELY FILLED. MINIMUM GROUT COMPRESSIVE STRENGTH BASED ON 28 DAY TEST SHALL BE 3000 PSI USING 3 1/2"X3 1/2"X7" OR 3"X3"X6" TEST SPECIMENS CAST IN MOIST WITH A FIST NON-ABSORBENT BASE AND MASONRY UNITS HAVING THE SAME MOISTURE CONDITIONS AT THOSE BEING LAID FORMING THE SIDE OF THE SPECIMENS. SPECIMEN SHALL BE TESTED ACCORDING TO ASTM C39.

5. VERTICAL BARS SHALL BE HELD IN POSITION AT THE TOP AND THE BOTTOM AND INTERVAL NOT EXCEEDING 8'-0". WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH CORRESPONDING VERTICAL BAR, IT SHALL NO BE SLOPED MORE THAN ONE HORIZONTAL IN SIX VERTICAL.

6. THE MINIMUM SPLICE LENGTH FOR ALL VERTICAL BARS SHALL BE:
   - 31 INCHES FOR #5 BARS
   - 56 INCHES FOR #6 BARS
   - 75 INCHES FOR #7 BARS

7. PROVIDE DOVETAIL ANCHORS AT 16" C/C, UNLESS NOTED OTHERWISE, WHERE MASONRY WALLS ABUT CONCRETE SURFACES.

STRUCTURAL STEEL

1. ALL STRUCTURAL "W" SHAPES TO CONFORM TO ASTM A992 WITH MINIMUM YIELD STRENGTH OF 50KSI. ANGLES, CHANNEL AND PLATES SHALL CONFORM TO ASTM A36 WITH MINIMUM YIELD STRENGTH OF 36 KSI.

2. ALL SHOP AND FIELD WELDING SHALL BE DONE BY CURRENTLY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE" LATEST EDITION.

3. USE E70XX ELECTRODES FOR ALL WELDING, UNLESS NOTED OTHERWISE. (GRIND SMOOTH ALL EXPOSED WELDS.

4. ALL HSS SHAPES SHALL CONFORM TO ASTM A-500, GRADE B, WITH A MINIMUM YIELD STRESS OF 46 KSI.

5. ALL BOLTS IN STRUCTURAL CONNECTIONS SHALL CONFORM TO ASTM A325 TYPE 1, HIGH STRENGTH BOLTS FOR STRUCTURAL STEEL JOINTS UNLESS NOTED OTHERWISE ON THE DRAWINGS. MINIMUM BOLT DIAMETER SHALL BE ¾ INCHES. UNLESS NOTED OTHERWISE IN THE DRAWINGS OR IN THESE GENERAL NOTES ALL BOLTED CONNECTION SHALL BE BEARING TYPE CONNECTIONS USING STANDARD HOLES WITH THREAD INCLUDED IN THE PLANES. HIGH STRENGTH BEARING BOLTS SHALL BE TIGHTENED USING AN IMPACT WRENCH TO A SNUG TIGHT CONDITION. THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTENED ATTAINED BY FEW IMPACT OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH.

6. HOT DIP GALVANIZING AFTER FABRICATION ALL STRUCTURAL STEEL ITEM AND THEIR CONNECTIONS PERMANENTLY EXPOSED TO THE OUTSIDE, WHETHER SPECIFIED ON THE DRAWING OR NOT.

7. STRUCTURAL STEEL SHOP DRAWING SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH AWS D1.1. WELDS SHOWN IN THE DRAWINGS ARE THE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES, BASED ON PLATE THICKNESS. THE MINIMUM WELD SIZE SHALL BE 3/16 INCH. FIELD WELDING SYMBOLS HAVE NOT NECESSARILY BEEN INDICATED ON THE DRAWINGS. WHERE SHOWN, PROPER FIELD WELDING PER AWS D1.1 SHALL BE USED. WHERE NO FIELD WELDING SYMBOLS ARE SHOWN, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE USE OF SHOP AND FIELD WELDS.

8. NON SHRINK GROUT FOR BASE PLATES AND BEARING PLATES SHALL BE NON METALLIC, SHRINKAGE RESISTANCE, PREMIXED, NON CORROSIVE, NON STAINING PRODUCT CONTAINING PORTLAND CEMENT, SILLICA SANDS, SHRINKAGE COMPENSATING AGENTS, AND FLUIDITY IMPROVING COMPOUND. TWENTY EIGHT DAY COMPRESSIVE STRENGTH AS DETERMINED BY GROUT TUBE TESTS SHALL BE 6,000 PSI. GROUT SHALL BE PLACED IN A FLUID FLOWABLE STATE UNDER BASE PLATES THAT HAVE A FORM BUILT AROUND FOR GROUT CONFINEMENT. GROUT SHOULD BE CURED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MINIMUM THICKNESS OF GROUT UNDER ALL BASE PLATES AND BEARING PLATES SHALL BE 1", UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.

9. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 WITH CLASS 1A TREADS UNLESS NOTED OTHERWISE ON DRAWINGS. FURNISH HARDENED PLATE WASHERS, LOCK WASHERS AND MATCHING HEAVY HEX NUTS FOR SECURING THE BASE PLATE TO THE ANCHOR RODS. ALL NUTS USED WITH ANCHOR BOLTS SHALL BE HEX HEAD CONFORMING TO ASTM A563.WASHERS FOR ALL BASE PLATE SHALL BE ¼" THICK PLATES EXTENDING MINIMUM 1" FROM EDGE OF BASE PLATE HOLE ON EACH SIDE WITH HOLES 1/16" LARGER THAN NOMINAL BOLT DIAMETER. WASHERS SHALL COMFORT TO A36 STEEL. ANCHOR RODS INSTALLATION SHALL BE COORDINATED WITH REINFORCING AND FORMWORK. AFTER BASE INSTALLATION, ANCHOR RODS NUTS SHALL BE INSTALLED TO A SNUG TIGHT CONDITION. NO HEATING OR BENDING OF THE ANCHOR RODS IS PERMITTED. HOLES IN THE BASE MATERIAL SHALL NOT BE ENLARGED.

10. STEEL STAIR FRAMING AND CONNECTION DESIGN SHALL BE THE RESPONSIBILITY OF THE STAIRWAY SUPPLIER, PERFORMANCE BY OR UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA. ALL STAIRWAY STEEL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF *CHANGE TO STATE OF PROJECT*.

OPEN-WEB STEEL JOISTS

1. STEEL JOISTS SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, K-SERIES" OR THE STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, "LH-SERIES" OF THE STEEL JOIST INSTITUTE (SJI).

2. THE JOIST MANUFACTURER SHALL REVIEW THE DRAWINGS AND PROVIDE JOIST CAPABLE OF CARRYING THE FOLLOWING LOADS:
   A. DEAD LOAD: SEE DESIGN LOADS
   B. LIVE LOAD: SEE DESIGN LOADS.

3. THE STEEL JOIST MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN, ADEQUACY AND SAFETY OF ALL STEEL JOISTS.

4. UNLESS OTHERWISE NOTED, STEEL JOISTS SHALL BE DESIGNED AS SIMPLY SUPPORTED, UNIFORMLY LOADED TRUSSES WITH TOP CHORD BRACED AGAINST LATERAL BUCKLING. THE UNIFORM DESIGN LOAD SHALL BE THE TOTAL SAFE UNIFORMLY DISTRIBUTED LOAD AS SHOWN IN THE SJI STANDARD LOAD TABLE.

5. WHEN NET UPLIFT FORCES DUE TO WIND ARE SHOWN ON THE DRAWINGS, THE MANUFACTURER SHALL DESIGN THE JOISTS AND BRIDGING FOR THE NET UPLIFT. A SINGLE LINE OF BOTTOM CHORD BRIDGING MUST BE PROVIDED NEAR THE FIRST BOTTOM CHORD PANEL POINTS WHENEVER UPLIFT DUE TO WIND FORCES ARE SHOWN ON THE DESIGN DRAWINGS.

6. WHEN NON-UNIFORM OR CONCENTRATED LOADS ARE SHOWN ON THE DRAWINGS, THE MANUFACTURER SHALL DESIGN THE JOISTS IN ACCORDANCE WITH PARAGRAPH 4.1 OF "THE STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS, K-SERIES" OR PARAGRAPH 103.1 OF "THE STANDARD SPECIFICATION FOR OPEN WEB STEEL JOIST, LH-SERIES".

7. STEEL JOIST BRIDGING SHALL BE PROVIDED IN ACCORDANCE WITH THE SJI SPECIFICATION. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE PLACED AND STEEL JOIST ENDS FIXED PRIOR TO THE APPLICATION OF ANY LOADS. BRIDGING THAT TERMINATES AT, OR IS INTERRUPTED BY, STRUCTURAL STEEL BEAMS, MASONRY WALLS, OR CONCRETE WALLS SHALL BE ATTACHED THERETO. COORDINATE BRIDGING LOCATIONS TO AVOID INTERFERENCE WITH MECHANICAL, ELECTRICAL, AND FIRE PROTECTION EQUIPMENT.

8. MINIMUM BEARING REQUIREMENT FOR K-SERIES JOISTS, UNLESS NOTED OTHERWISE, IS 2 1/2" ON STRUCTURAL STEEL INCLUDING STEEL BEARING SEATS PROJECTING FROM WALLS AND 4" ON STEEL BEARING PLATES DIRECTLY OVER MASONRY OR CONCRETE WALLS.

9. MINIMUM BEARING REQUIREMENT FOR LH-SERIES JOISTS, UNLESS NOTED OTHERWISE, IS 4" ON STRUCTURAL STEEL INCLUDING STEEL BEARING SEATS PROJECTING FROM THE WALLS AND 6" ON STEEL BEARING PLATES DIRECTLY OVER MASONRY OR CONCRETE WALLS.

10. STEEL JOISTS AT COLUMN CENTER LINES SHALL BE BOLTED TO STRUCTURAL STEEL WITH (2) 1/2" DIAMETER BOLTS OR (2) 3/4" DIAMETER BOLTS FOR LH SERIES. WHERE STEEL JOISTS DO NOT SPACE TO COLUMN CENTER LINES, USE BOLTED CONNECTIONS FOR THE STEEL JOIST CLOSEST TO THE CENTER LINE. WHERE THE DRAWINGS INDICATE THAT THE JOIST SEAT IS TO BE WELDED TO THE SUPPORTING STEEL OR JOIST GIRDER, THE BOLTS PROVIDED ARE FOR ERECTION ONLY. ERECTION BOLTS MAY BE REMOVED AFTER WELDS ARE COMPLETED BUT AND ADDITIONAL WELD SHALL BE MADE ALONG THE INSIDE EDGE OF SEAT SLOTS.

11. JOISTS SHOULD BE CAMBERED IN ACCORDANCE WITH SJI CAMBERS.

COLD FORMED STEEL CONSTRUCTION

1. DESIGN OF COLD FORMED STEEL FRAMING SHALL CONFORM TO THE LATEST EDITION OF "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STRUCTURAL STEEL MEMBERS (AISI).

2. MATERIAL: STUDS, RUNNER, AND ANGLES SHALL MEET THE REQUIREMENTS OF ASTM C955 WITH MINIMUM YIELD STRENGTH AS FOLLOWS:

16, 14, AND 12 GAGE STUDS	50 KSI
22, 20, AND 18 GAGE STUDS	33 KSI
TRACKS	33 KSI

3. GALVANIZED FINISH SHALL COMPLY WITH ASTM A653/A653M WITH A G90 COATING. ALL WELDS SHALL BE TOUCHED UP WITH ZINC-RICH PROTECTIVE PAINT FOR CORROSION RESISTANCE.

4. THE COLD FORMED STEEL CONSTRUCTION SHALL BE A DELEGATED DESIGN. THE FABRICATOR SHALL FURNISH A STRUCTURAL SUBMITTAL BEARING THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THIS SUBMITTAL SHALL BE CHECKED BY THE CONTRACTOR FOR COMPLETENESS AND CONTENT PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW. THE SUBMITTAL SHALL INCLUDE COMPONENT DETAILS AND SYSTEM LAYOUT DRAWINGS, IT SHALL IDENTIFY THE PROJECT LIST LOADING AND OTHER CRITERIA. THE DRAWING SHALL IDENTIFY AND LOCATE COMPONENTS AND SHALL SPECIFY MEMBER SIZES BRACING, ANCHORAGE CONNECTIONS AND ALL OTHER NECESSARY FABRICATION AND ERECTION INFORMATION. THE SUBMITTAL SHALL INCLUDE CALCULATIONS VERIFYING ITS ADEQUACY TO RESIST THE LOADS INDICATED ON THE CONSTRUCTION DOCUMENTS. FABRICATION SHALL NOT COMMENCE UNTIL THIS REVIEW IS COMPLETED.

5. COLD FORMED STEEL FRAMING INCLUDE BUT NOT LIMITED TO TRUSSES, WALL, EXTERIOR CEILINGS, FASCIAS, AND SOFFITS.

STEEL ROOF DECK

1. THE FABRICATION AND ERECTION OF ALL STEEL ROOF DECK SHALL CONFORM TO STEEL DECK INSTITUTE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECK, AND ROOF DECK AS PUBLISHED BY STEEL DECK INSTITUTE (SDI).

2. STEEL ROOF DECK SHALL BE MANUFACTURED FROM STEEL CONFORMING TO ASTM DESIGNATION A611 GRADES C, D, OR E OR FROM A653-94 STRUCTURAL QUALITY GRADE 33 OR HIGHER, THE MINIMUM YIELD STRENGTH SHALL BE 33,000 PSI.

3. STEEL ROOF DECK SHALL BE GALVANIZED WITH A PROTECTIVE ZINC COATING CONFORMING WITH ASTM A924/A924M-04a, UNLESS NOTED OTHERWISE. TOUCH UP GALVANIZED SURFACES WITH GALVANIZED REPAIR PAINT APPLIED IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS.

4. ATTACHMENTS: STEEL ROOF DECK UNITS SHALL BE FASTENED TO EACH STRUCTURAL SUPPORT MEMBER WITH #12 SELF-DRILLING SCREWS (SDS) AT ALL RIBS, 36/7 PATTERN. SCREWS SHALL PENETRATE ALL LAYERS OF DECK MATERIAL AT END LAPS AND SIDE JOINTS AND SHALL BE COMPLETELY FASTENED TO THE SUPPORTING MEMBER.

5. SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED WITH #10 SDS, OR LARGER SO SPACING BETWEEN FASTENERS AND BETWEEN FIRST FASTENER AND SUPPORT DOES NOT EXCEED 18" ON CENTER.

6. AT ALL ROOF OPENINGS AND PERIMETER ROOF EDGE CONDITIONS, ROOF DECK UNITS SHALL BE FASTENED TO EDGE STEEL USING #12 SDS AT 6" OC.

7. END LAPS OF SHEETS SHALL BE A MINIMUM OF 2" AND SHALL OCCUR OVER SUPPORTS. ROOF DECK PANELS SHALL BE ERECTED BEGINNING AT THE LOW SIDE TO INSURE THE END LAPS ARE OVER LAPPING IN SHINGLE FASHION.

8. PROVIDE A MINIMUM END BEARING OF 1½" FOR ALL DECK SUPPORTS. ALIGN FLUTES AND BUTT DECK AT SUPPORT.

9. STEEL DECK SPAN SHALL NOT EXCEED THE MAXIMUM CENTER TO CENTER SPANS AS REQUIRED BY SDI CRITERIA, WHERE POSSIBLE, ALL STEEL DECK SHALL EXTEND OVER THREE OR MORE SUPPORTS. TWO SPAN DECK SHALL BE USED ONLY WHERE DECK LAYOUT DOES NOT PERMIT THE USE OF THREE SPANS. SINGLE SPAN DECK IS NOT PERMITTED.

10. NO LOADS SHALL BE PERMITTED TO BE SUSPENDED FROM ANY STEEL ROOF DECKING. ALL HANGERS FOR CEILING, DUCTWORK, PIPING AND ALL ELECTRICAL DEVICES, SUCH AS BUT NOT LIMITED TO LIGHTS, SHALL BE SUSPENDED DIRECTLY FROM STRUCTURAL STEEL FRAMING. PROVIDE AND DESIGN UNISTRUT OR APPROVED EQUAL TO SPAN BETWEEN FRAMING.

ABBREVIATIONS

ABBREV	ABBREVIATION
ACI	AMERICAN CONCRETE INSTITUTE
ADD	ADDITIVE
ADDL	ADDITIONAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE / ALTERNATIVE
ALUM	ALUMINUM
AR	ANCHOR ROD
ARCH	ARCHITECTURE / ARCHITECTURAL
ASD	ALLOWABLE STRESS DESIGN
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BIT	BITUMINOUS / BITUMASTIC
BLDG	BUILDING
BLK	BLOCK
BM	BEAM
BMM	BENCH MARK
BOT	BOTTOM
BP	BASE PLATE
BRG	BEARING
BTWN	BETWEEN
BU	BUILT UP
C	CHANNEL
CB	CONCRETE BEAM
CC	CONCRETE COLUMN
CF	CUBIC FEET (FOOT)
CFS	COLD FORMED STEEL
CI	CAST-IRON
CIP	CAST IN PLACE
CJ	CONSTRUCTION / CONTRACTION JOINT
CL	CENTERLINE
CLR	CLEAR / CLEARANCE
CM	CONCRETE MASONRY
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CS	CAST-STEEL
CTR	CENTER
CTRD	CENTERED
CVR	COVER
CY	CUBIC YARD
DBA	DEFORMED BAR ANCHOR
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIST	DISTANCE
DN	DOWN
DR	DRAIN
DTL	DETAIL
DWG	DRAWING(S)
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC / ELECTRICAL
ELEV	ELEVATOR
ENGR	ENGINEER
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR

FD	FLOOR DRAIN
FDN	FOUNDATION
FIN	FINISH
FLR	FLOOR
FMG	FRAMING
FP	FULL PENETRATION WELD
FS	FAR SIDE
FT	FOOT / FEET
FTG	FOOTING
GA	GAGE / GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GEN	GENERAL
GL	GRID LINE
GRTG	GRATING
GS	GALVANIZED STEEL
HCP	HOLLOW CORE PLANK
HDG	HOT DIP GALVANIZED
HK	HOOK
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
HSB	HIGH STRENGTH BOLT
HSS	HOLLOW STRUCTURAL STEEL
HT	HEIGHT
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH
INFO	INFORMATION
INT	INTERIOR
INV	INVERT
JST	JOIST
JT	JOINT
K	KIP (1000 LB)
KO	KNOCK OUT
KWY	KEYWAY
L	ANGLE
LB	POUND
LDG	LANDING
LDT	LONG DIAMETER TAPCON
LG	LONG
LGTH	LENGTH
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL LOC LOCATION
LRFD	LOAD RESISTANCE FACTOR DESIGN
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LT WT	LIGHT WEIGHT
MATL	MATERIAL
MAX	MAXIMUM
MB	MASONRY BEAM / MACHINE BOLT
MECH	MECHANICAL
MEP	MECHANICAL/ELECTRICAL/PLUMBING
MFG	MANUFACTURING
MFR	MANUFACTURE / MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MPH	MILES PER HOUR
MTL	METAL
NIC	NOT IN CONTRACT
NO	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE PAR PARALLEL

PC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FEET
PEN	PENETRATION
PERP	PERPENDICULAR
PJF	PRE-MOLDED BITUMINOUS JOINT FILLER
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PLY	PLYWOOD PREFAB PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
QTY	QUANTITY
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCE(MENT)
REQD	REQUIRED
RW	RETAINING WALL
SCHED	SCHEDULE
SDS	SELF-DRILLING SCREWS
SIM	SIMILAR
SF	SQUARE FOOT
SJ	SAWCUT CONTRACTION JOINT
SJI	STEEL JOIST INSTITUTE
SOG	SLAB ON GRADE
SPC	SPACE / SPACES
SPCG	SPACING SPECS SPECIFICATION(S)
SQ	SQUARE
SS	STAINLESS STEEL
SSLT	SHORT SLOTTED TRANSVERSE
SSMA	STEEL STUD MANUFACTURER'S ASSOCIATION
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURE / STRUCTURAL
SYM	SYMMETRICAL
T/	TOP OF
T&B	TOP AND BOTTOM
TB	TIE BEAM
TDS	TURNED DOWN SLAB
TEMP	TEMPERATURE
TENS	TENSION
THD	THREAD / THREADED
THK	THICK
THRU	THROUGH
TOL	TOLERANCE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VOL	VOLUME
W	WIDE FLANGE
W/	WITH
WD	WOOD
WF	WALL FOOTING
WFE	WALL FOOTING EXTENSION
WH	WEEP HOLE
W/O	WITHOUT
WP	WORK POINT
WS	WATER STOP
WT	STRUCTURAL TEE SECTION
WWR	WELDED WIRE REINFORCING
@	AT
#	NUMBER OR POUND
±	PLUS OR MINUS
Ø	DIAMETER
&	AND
S_x	SECTION MODULUS
I_x	MOMENT OF INERTIA
℄	CENTERLINE

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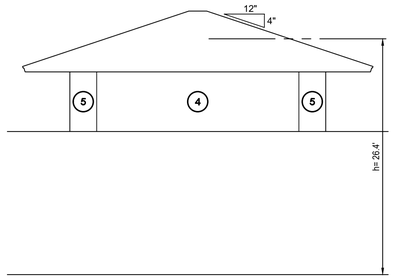
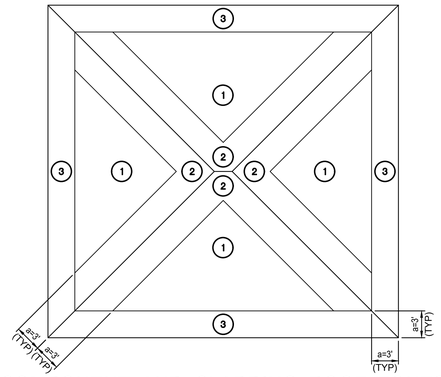


COMPONENT AND CLADDING WALL ZONES



COMPONENT AND CLADDING ROOF ZONES

	a (FT)	h (FT)
RETAIL BLDG	3.0	26.4

COMPONENTS AND CLADDING PRESSURES ROOF TOWER STRUCTURE

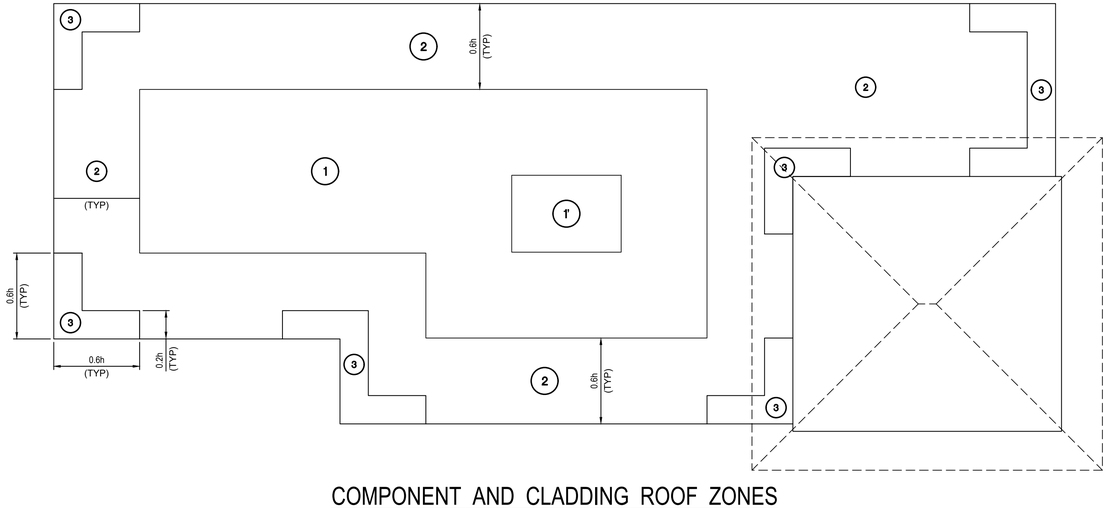
AREA (FT^2)	ZONE 1		ZONE 2		ZONE 3		ZONE 4		ZONE 5	
10	28.8	-64.8	28.8	-84.4	28.8	-91.0	38.6	-41.9	38.6	-51.7
20	24.9	-57.2	24.9	-76.1	24.9	-81.9	36.9	-40.2	36.9	-48.2
50	19.7	-47.1	19.7	-65.1	19.7	-69.9	34.6	-37.9	34.6	-43.6
100	16.0	-39.7	16.0	-56.8	16.0	-60.8	32.8	-36.1	32.8	-40.2
200	16.0	-32.1	16.0	-48.4	16.0	-51.7	31.1	-34.4	31.1	-36.7

1. PRESSURE VALUES ARE INDICATED IN PSF (POUNDS / FT^2).

2. POSITIVE VALUES ACT TOWARD TO SURFACES WHILE NEGATIVE VALUES ACT AWAY FROM SURFACES.

3. WIND PRESSURES SHOWN ARE SERVICE LOAD VALUES. TO OBTAIN ULTIMATE LOAD DESIGN PRESSURES FOR ASCE 7-22 LOAD COMBINATIONS, MULTIPLY THE PRESSURES INDICATED BY A FACTOR OF 1.67.

COMPONENT AND CLADDING WALL ZONES



COMPONENT AND CLADDING ROOF ZONES

	a (FT)	h (FT)
RETAIL BLDG	4.7	16.0

COMPONENTS AND CLADDING PRESSURES - RETAIL BUILDING

AREA (FT^2)	ZONE 1'		ZONE 1		ZONE 2		ZONE 3		ZONE 4		ZONE 5		45'-8" PARAPET			
													ZONE 4		ZONE 5	
													CASE A	CASE B	CASE A	CASE B
10	16.0	-31.9	16.0	-55.6	31.9	-73.3	31.9	-73.3	31.9	-34.6	31.9	-42.6	95.5	-58.8	95.5	-67.2
20	16.0	-31.9	16.0	-51.9	30.5	-68.6	30.5	-68.6	30.5	-33.2	30.5	-39.7	93.0	-55.8	93.0	-62.7
50	16.0	-31.9	16.0	-47.1	28.6	-62.4	28.6	-62.4	28.6	-31.3	28.6	-36.0	84.5	-51.9	84.5	-56.8
100	16.0	-31.9	16.0	-43.4	27.2	-57.6	27.2	-57.6	27.2	-29.9	27.2	-33.2	78.1	-48.9	78.1	-52.3
200	16.0	-27.5	16.0	-39.7	25.8	-52.9	25.8	-52.9	25.8	-28.5	25.8	-30.3	71.6	-45.9	71.6	-47.9

1. PRESSURE VALUES ARE INDICATED IN PSF (POUNDS / FT^2).

2. POSITIVE VALUES ACT TOWARD TO SURFACES WHILE NEGATIVE VALUES ACT AWAY FROM SURFACES.

3. WIND PRESSURES SHOWN ARE SERVICE LOAD VALUES. TO OBTAIN ULTIMATE LOAD DESIGN PRESSURES FOR ASCE 7-22 LOAD COMBINATIONS, MULTIPLY THE PRESSURES INDICATED BY A FACTOR OF 1.67.

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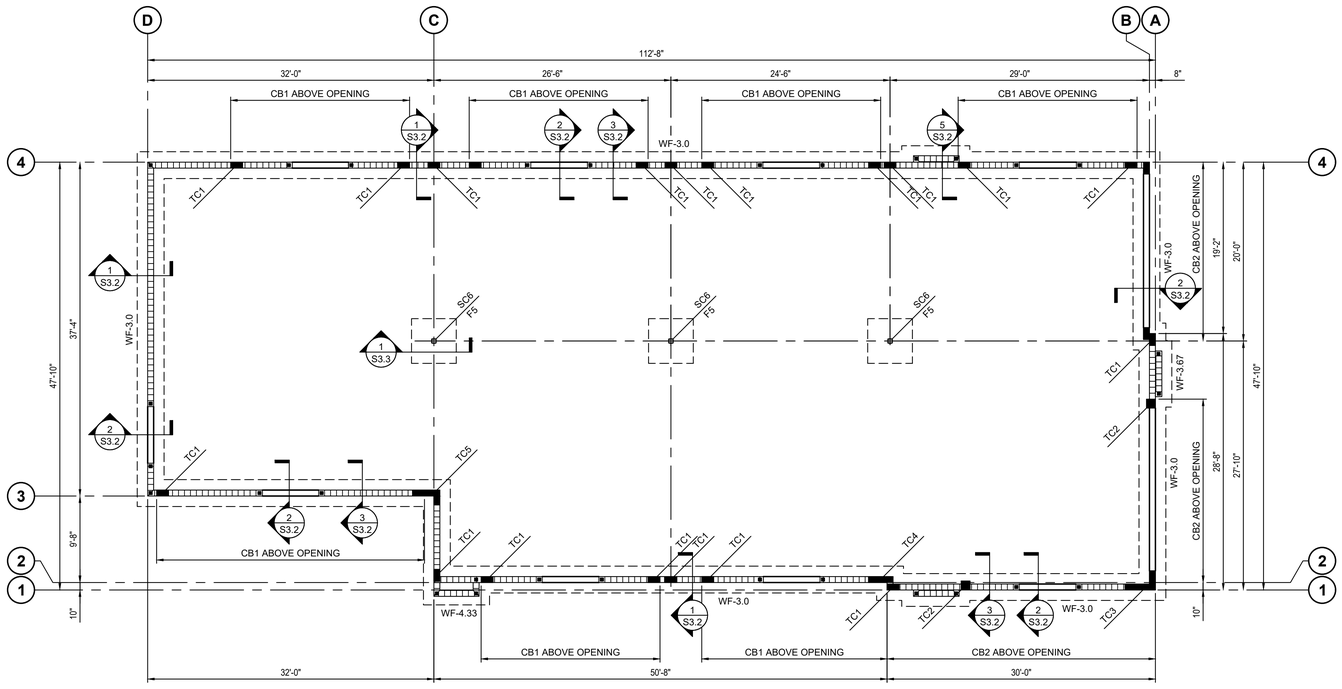
PLAN NOTES:

1. SEE SHEETS S0.01 FOR GENERAL STRUCTURAL NOTES.
2. DO NOT SCALE DRAWINGS. SEE ARCH. DWGS. FOR ADDITIONAL DIMENSIONS NOT SHOWN. VERIFY ALL DIMENSIONS W/ ARCH. DWGS. PRIOR TO START OF CONSTRUCTION. IF A DISCREPANCY SHOULD OCCUR, CONTACT THE ARCHITECT IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.
3. "WF- " (WALL FOOTING) AND "F- " (PAD / SPREAD FOOTINGS) "TSWF- " (THICKENED SLAB WALL FOOTING) AND "TSF- " (THICKENED SLAB PAD / SPREAD FOOTINGS) INDICATES FOOTING TYPES. SEE PLAN AND "FOOTING SCHEDULE" FOR SIZE AND REINFORCING INFORMATION.
4. STEP WALL FOOTINGS: (SF-) AS REQUIRED, SEE SECTION 2/S3.1 FOR ADDITIONAL INFORMATION. COORDINATE STEP FOOTING LOCATIONS WITH ARCH'L. AND / OR CIVIL DRAWINGS.
5. PROVIDE CORNER BARS WHERE ALL WALL FOOTINGS: (WF-) AND THICKENED WALL FOOTINGS: (TSWF-) CHANGE DIRECTION, AT ALL WALL FOOTINGS: (WF-) AND THICKENED SLAB WALL FOOTINGS: (TSWF-) INTERSECTIONS. SEE SECTION 1/S3.10 FOR ADDITIONAL INFORMATION.
6. INDICATES 8" MASONRY WALLS: REINFORCED WITH (1) - #6 VERTICAL (WITH MATCHING DOWEL AT FOOTINGS) IN SOLID GROUT FILLED CELLS AT ALL CORNERS, INTERSECTIONS, ADJACENT MASONRY OPENINGS (COORDINATE SIZE, LOCATIONS AND ELEVATIONS WITH ARCH'L DRAWINGS) AND BETWEEN AT 24"O.C. (MAX.) TYPICAL SPACING OF REINFORCED CELLS APPLIES ABOVE AND BELOW ALL MASONRY OPENINGS. EXTEND VERTICAL REINFORCING BARS THRU (SPLICE / LAP AS REQUIRED) TO UPPER CONCRETE TIE BEAM OR KNOCK-OUT BLOCK COURSE AND TERMINATE WITH STANDARD 90 DEGREE HOOK.
7. FUTURE FLOOR SLAB CONSTRUCTION: 4" (TOTAL THICKNESS) CONCRETE SLAB REINFORCED WITH (1) LAYER 6x6-W2.9xW2.9 WWR OR #4's SPACED AT 16" OC, MAX, EACH WAY ON VAPOR BARRIER OVER COMPACTED SUBGRADE. SEE THE ARCHITECTURAL DRAWINGS FOR VAPOR BARRIER REQUIREMENTS. COORDINATE ANY AND ALL SLAB SLOPES, DEPRESSIONS AND LIMITS OF THE SLAB WITH THE ARCHITECTURAL DRAWINGS. SEE THE ARCHITECTURAL AND / OR CIVIL DRAWINGS FOR THE ACTUAL TOP OF SLAB ELEVATIONS.
8. PROVIDE ADDITIONAL RE-ENTRANT CORNER BARS: (2) - #4x5'-0"LG. SPACED AT 3"O.C. (VERTICALLY) PLACED WITHIN MID-DEPTH OF CONCRETE SLAB THICKNESS AND 2" CLEAR (HORIZONTALLY) FROM RE-ENTRANT CORNERS.
9. ( ) INDICATES SLAB CONTROL JOINTS: SEE SECTION 5/S3.10 FOR ADDITIONAL INFORMATION. (COORDINATE / VERIFY WITH ARCH'L. DRAWINGS FOR ADDITIONAL LOCATIONS) THE SLAB AREA BETWEEN CONTROL JOINTS SHALL NOT EXCEED 400 SQUARE FEET (MAX.)



1 RETAIL BUILDING - FOUNDATION PLAN

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

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JOB NO.
22039

DATE
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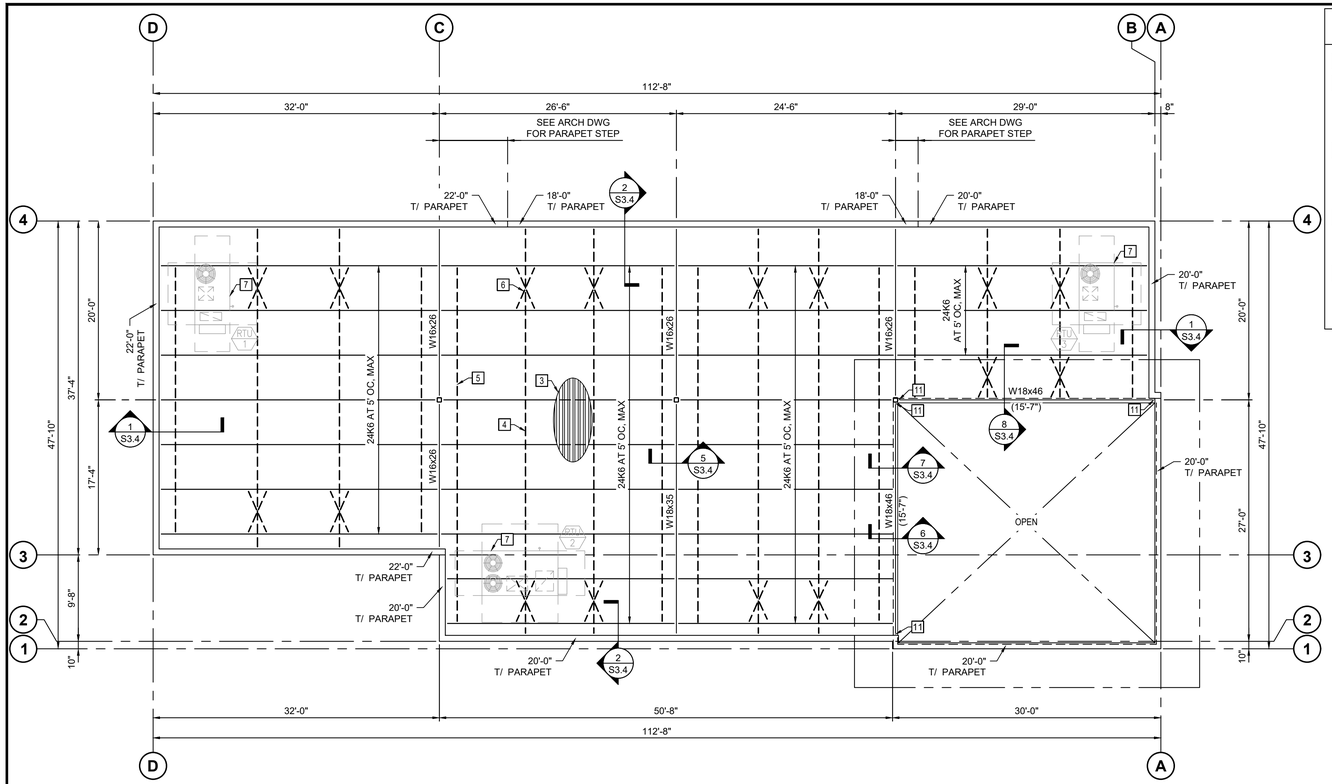
S2.1

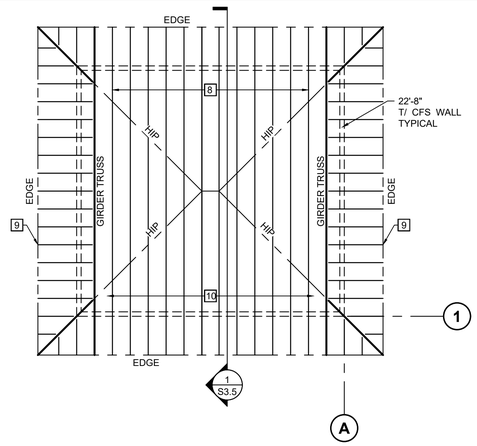


1 RETAIL BUILDING - ROOF FRAMING PLAN

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

ROOF FRAMING PLAN NOTES

1. SEE SHEETS S0.01 FOR GENERAL STRUCTURAL NOTES.
2. DO NOT SCALE DRAWINGS. COORDINATE WITH THE ARCHITECTURAL DRAWINGS THE VERIFY THE DIMENSIONS INDICATED AND ANY DIMENSIONS NOT SHOWN. VERIFY ALL OF THE DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. IF A DISCREPANCY SHOULD OCCUR, CONTACT THE ARCHITECT IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.
3. TYPICAL ROOF CONSTRUCTION: 1½" DEEP, 20 GAGE, WIDE-RIBBED GALVANIZED STEEL DECK ON OPEN-WEB STEEL JOISTS OR COLD-FORMED STEEL TRUSSES. SEE THE GENERAL NOTES FOR DECK ATTACHMENT AND ADDITIONAL REQUIREMENTS. SEE THE ARCHITECTURAL DRAWINGS FOR THE ROOF SYSTEM REQUIREMENTS.
4. — — — — INDICATES CONTINUOUS HORIZONTAL JOIST BRIDGING, SIZE, CONFIGURATION AND LOCATIONS SHALL BE IN ACCORDANCE WITH "SJI" REQUIREMENTS. COORDINATE WITH THE JOIST MANUFACTURER / SUPPLIERS APPROVED SHOP DRAWINGS FOR ADDITIONAL REQUIREMENTS.
5. PROVIDE CONTINUOUS HORIZONTAL JOIST UPLIFT BRIDGING LOCATED AT FIRST BOTTOM CHORD PANEL POINT OF JOIST. SIZE, CONFIGURATION AND LOCATIONS SHALL BE IN ACCORDANCE WITH THE SJI REQUIREMENTS. COORDINATE WITH THE JOIST MANUFACTURER / SUPPLIERS APPROVED SHOP DRAWINGS FOR ADDITIONAL REQUIREMENTS.
6. >><< INDICATES JOIST X-BRIDGING. THE SIZE, CONFIGURATION AND LOCATIONS SHALL BE IN ACCORDANCE WITH SJI REQUIREMENTS. COORDINATE WITH THE JOIST MANUFACTURER / SUPPLIER'S APPROVED SHOP DRAWINGS FOR ADDITIONAL REQUIREMENTS.
7. INDICATES MECHANICAL RTUs, REFER TO THE MECHANICAL DRAWINGS FOR WEIGHT AND FURTHER INFORMATION
8. COLD-FORMED STEEL ROOF TRUSSES AT 2'-0" OC, MAX SPACING.
9. COLD-FORMED STEEL ROOF JACK TRUSSES AT 2'-0" OC, MAX SPACING.
10. ¾" PLYWOOD SHEATHING FASTENED WITH #12 SDS AT 6" OC, MAX. AT ALL PANEL EDGES AND 12" OC, MAX. IN THE FIELD. COORDINATE ALL TRUSS PROFILES AND LAYOUT WITH THE ARCHITECTURAL DRAWINGS AND MANUFACTURER'S / SUPPLIER'S DRAWINGS.
11. PROVIDE FULL-PEN WELDS AT TOP AND BOTTOM FLANGES TO STEEL COLUMN OR STEEL EMBED PLATE AT THESE LOCATIONS.



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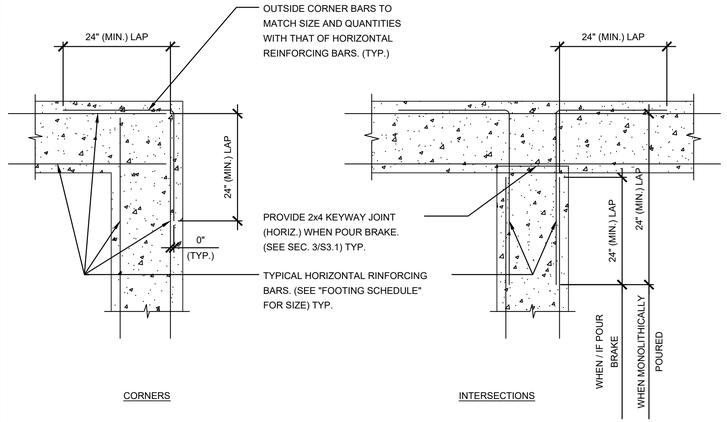
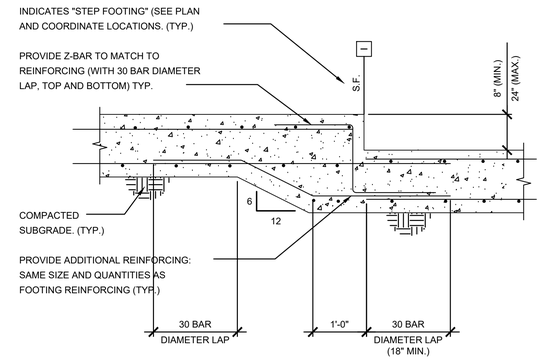


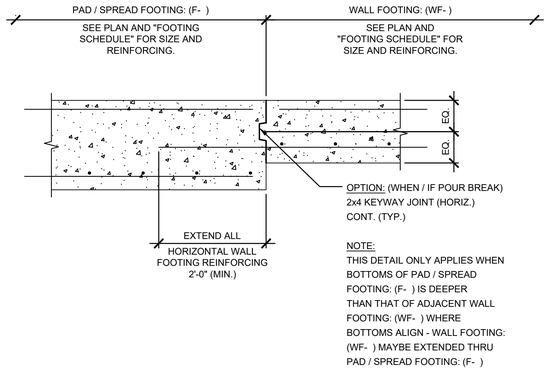
1 HORIZONTAL REINFORCING: FOOTINGS, WALLS, BOND AND CONCRETE BEAMS

SCALE: 3/4" = 1'-0"



2 TYPICAL STEP FOOTING DETAIL

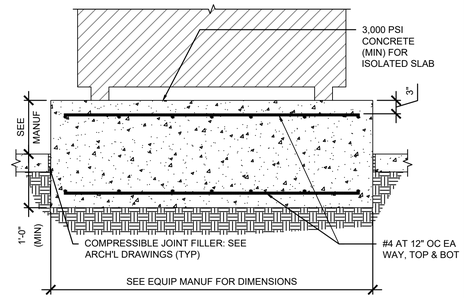
SCALE: 3/4" = 1'-0"



NOTE:
THIS DETAIL ONLY APPLIES WHEN BOTTOMS OF PAD / SPREAD FOOTING: (F-) IS DEEPER THAN THAT OF ADJACENT WALL FOOTING: (WF-) WHERE BOTTOMS ALIGN - WALL FOOTING: (WF-) MAYBE EXTENDED THRU PAD / SPREAD FOOTING: (F-)

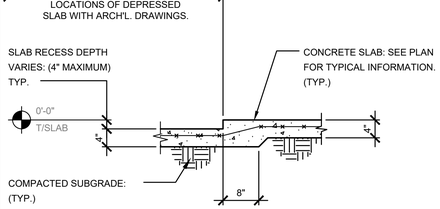
3 TYPICAL FOOTING DETAIL

SCALE: 3/4" = 1'-0"



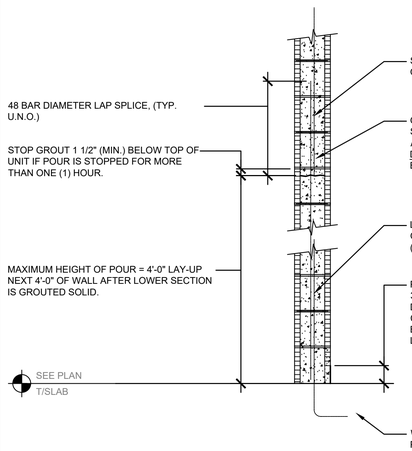
4 TYP. ELEVATED DRYER PAD

SCALE: 3/4" = 1'-0"



5 TYPICAL LOW LIFT FILLED CELL GROUTING DIAGRAM

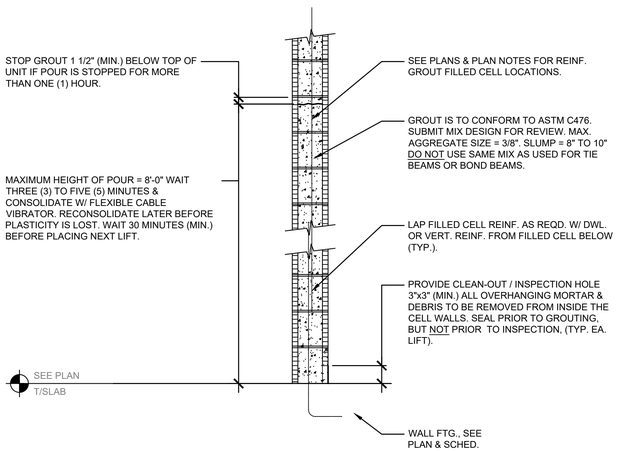
N.T.S.



NOTE:
DO NOT GROUT FILL CELLS UNTIL MORTAR HAS SET SUFFICIENTLY TO WITHSTAND THE PRESSURE OF THE GROUT. (WAIT 24 HRS. MIN.)

6 TYPICAL HIGH LIFT FILLED CELL GROUTING DIAGRAM

N.T.S.



NOTE:
DO NOT GROUT FILL CELLS UNTIL MORTAR HAS SET SUFFICIENTLY TO WITHSTAND THE PRESSURE OF THE GROUT. (WAIT 24 HRS. MIN.)

7 TYPICAL CONTROL JOINT DETAIL

SCALE: 3/4" = 1'-0"

SAW CONTROL JOINT NOTES

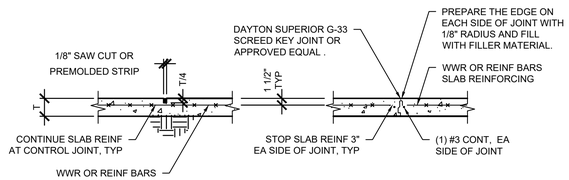
1. MAKE SAW CUT AS SOON AS SLAB IS ABLE TO SUPPORT WEIGHT OF WORKERS AND SAWING EQUIPMENT WITHOUT DAMAGE TO FINISH SURFACE OF SLAB.
2. ALL SAW CUT CONTROL JOINTS SHALL BE "SOFT CUT" WITHIN 2 HOURS AFTER FINAL FINISHING.
3. CLEAN JOINT PRIOR TO FILLING THE JOINT.

JOINT FILLER MATERIAL NOTES

1. FILLER MATERIAL USED SHALL HAVE A MINIMUM SHORE A HARDNESS OF 35, AND SHALL CONFORM TO ASTM D2240. JOINT FILLER SHALL BE APPROVED BY ENGINEER PRIOR TO APPLICATION. APPROVED JOINT FILLER IS VULKEM 245 AS MANUFACTURED BY MAMECO INTERNATIONAL OR APPROVED EQ.
2. WHERE POSSIBLE, FILLER MATERIAL SHALL BE APPLIED WHEN BUILDING IS UNDER PERMANENT TEMPERATURE CONTROL. THIS SHALL BE EITHER AT THE END OF CONSTRUCTION OF THE COMPLETE BUILDING SHELL, OR A MINIMUM OF 90 DAYS AFTER SLAB CONSTRUCTION.
3. STRICTLY FOLLOW THE MANUFACTURERS RECOMMENDED PROCEDURES FOR APPLYING THE JOINT FILLER.

CONSTRUCTION JOINT NOTES

1. SEE PLAN FOR SLAB THICKNESS, T, AND REINFORCEMENT.
2. SLAB REINFORCEMENT SHALL BE CHAIRED BY SOIL SUPPORTED SLAB BOLSTERS 3'-0" OC, EA WAY.
3. BREAK BOND BETWEEN NEW AND PREVIOUSLY PLACED SLAB BY SPRAYING OR PAINTING EXPOSED SIDE OF SLAB AND DOWEL WITH A CURING COMPOUND, ASPHALTIC EMULSION, OR FORM OIL.
4. REFER TO GENERAL NOTES, GENERAL SPECIFICATIONS, AND DRAWINGS FOR SUB-FLOOR DRAINAGE SYSTEM, SUBGRADE PREPARATION AND/OR MUD SLAB REQUIREMENTS.
5. SUBGRADE SHALL BE FREE OF STANDING WATER AT THE TIME OF CONCRETE PLACEMENT.



CONTROL JOINT

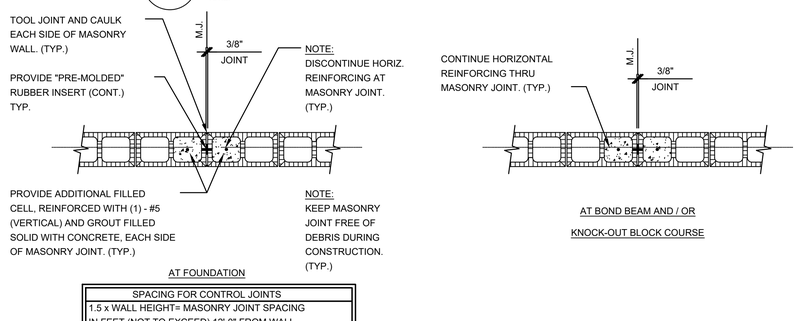
CONSTRUCTION JOINT

JOINT SPACING NOTE:

1. PROVIDE CONTROL AND / OR CONSTRUCTION JOINTS AT EACH COLUMN LINE AND BETWEEN THE COLUMN LINES SUCH THAT THE JOINT SPACING DOES NOT EXCEED 12 FEET. THE SLAB AREA BETWEEN JOINTS SHALL NOT EXCEED A 2:1 RATIO OF PROPORTION, 150 SF, MAX.

8 DEPRESSED SLAB DETAIL

SCALE: 3/4" = 1'-0"



SPACING FOR CONTROL JOINTS
1.5 x WALL HEIGHT= MASONRY JOINT SPACING IN FEET (NOT TO EXCEED) 12'-0" FROM WALL CORNER ZONES AND 24'-0" FOR INTERIOR WALL ZONES

9 TYPICAL MASONRY JOINTS

SCALE: 3/4" = 1'-0"

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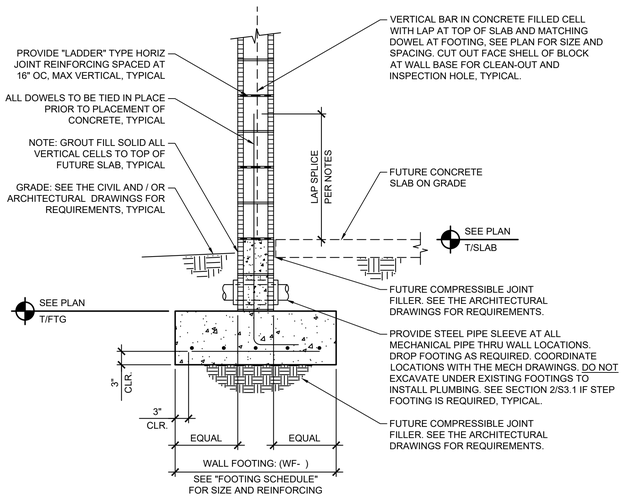
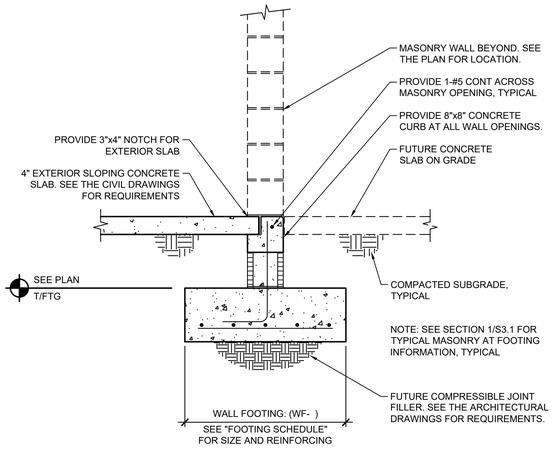


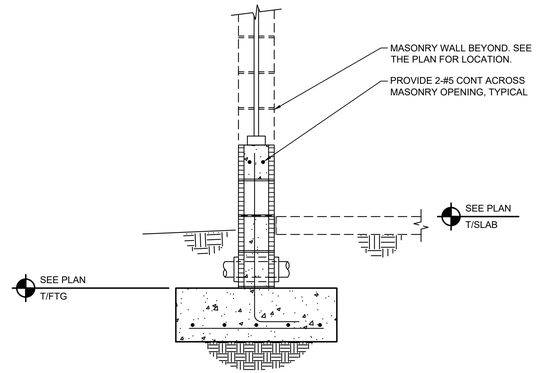
1 EXTERIOR CMU WALL AT FOOTING

SCALE: 3/4" = 1'-0"



2 SECTION

SCALE: 3/4" = 1'-0"

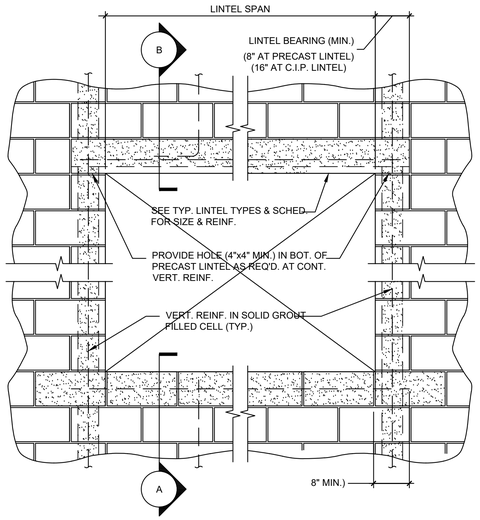


3 EXTERIOR CMU WALL AT FOOTING AND SILL

SCALE: 3/4" = 1'-0"

FOOTING SCHEDULE

MARK	SIZE		REINFORCING		REMARKS:
	WxL (FT-IN x FT-IN)	D (IN)	BOTTOM	TOP	
WF-3.0	3-0 x CONT	14	3-#5 x CONT		#3 TRANSVERSE AT 36" OC
WF-3.67	3-8 x CONT	14	4-#5 x CONT		#3 TRANSVERSE AT 36" OC
WF-4.33	4-4 x CONT	14	5-#5 x CONT		#3 TRANSVERSE AT 36" OC
F6	6-0 x 6-0	18	7-#6, EA WAY	-	



4 TYPICAL MASONRY OPENING DETAIL

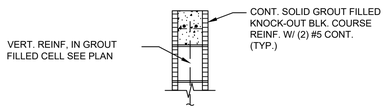
SCALE: 3/4" = 1'-0" (FOR 8" AND 12" CMU)

LINTEL SCHEDULE

TYPE	MAXIMUM SPAN	REMARK
L-1		
L-2	10'-0"	
L-3	16'-0"	C.I.P. CONCRETE
L-4	20'-0"	C.I.P. CONCRETE

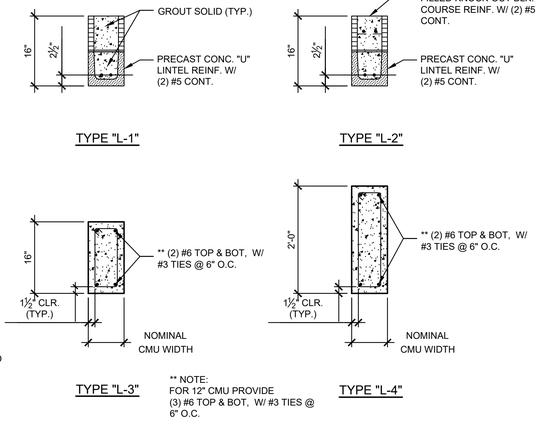
MASONRY LINTEL NOTES:

1. FOR 8" & 12" CMU WALLS
2. PRE-CAST LINTELS SHALL BE CAPABLE OF SUPPORTING 500 PER LINEAL FOOT IN ADDITION TO THEIR OWN WEIGHT
3. PROVIDE CAST-IN-PLACE LINTEL FOR OPENING GREATER THAN 10'-0"
4. PROVIDE CAST-IN-PLACE LINTEL L-3 OR L-4 WHERE LINTEL SUPPORT IS A CAST-IN-PLACE COLUMN.



A TYP. WINDOW SILL

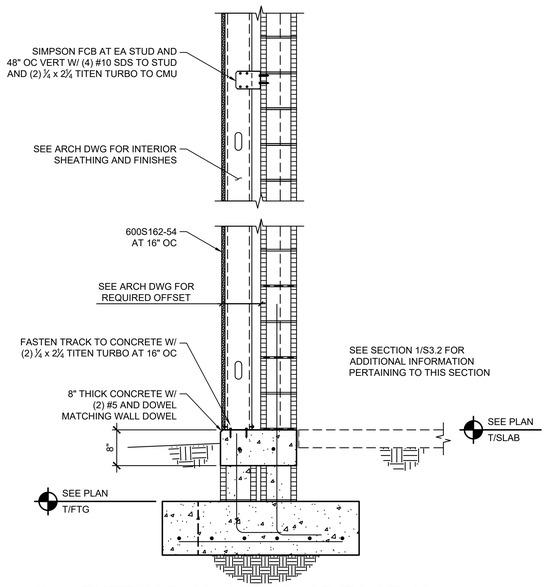
SCALE: 3/4" = 1'-0"



** NOTE:
FOR 12" CMU PROVIDE (3) #6 TOP & BOT, W/ #3 TIES @ 6" O.C.

B TYPICAL LINTEL TYPES

SCALE: 3/4" = 1'-0"



5 EXTERIOR CMU WALL AT FOOTING

SCALE: 3/4" = 1'-0"

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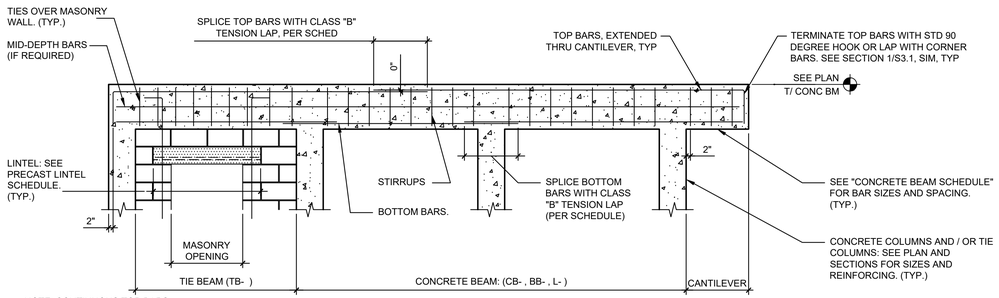


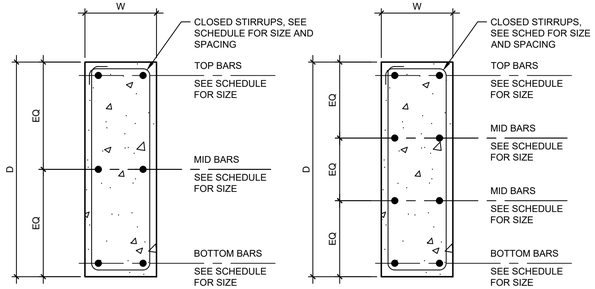
NOTE: CONTINUOUS TOP BARS SHALL BE SPLICED AT MID-SPAN. CONTINUOUS BOTTOM BARS SHALL BE SPLICED AT CENTER LINES OF SUPPORTS.

CONCRETE BEAM DIAGRAM

CONCRETE BEAM SCHEDULE

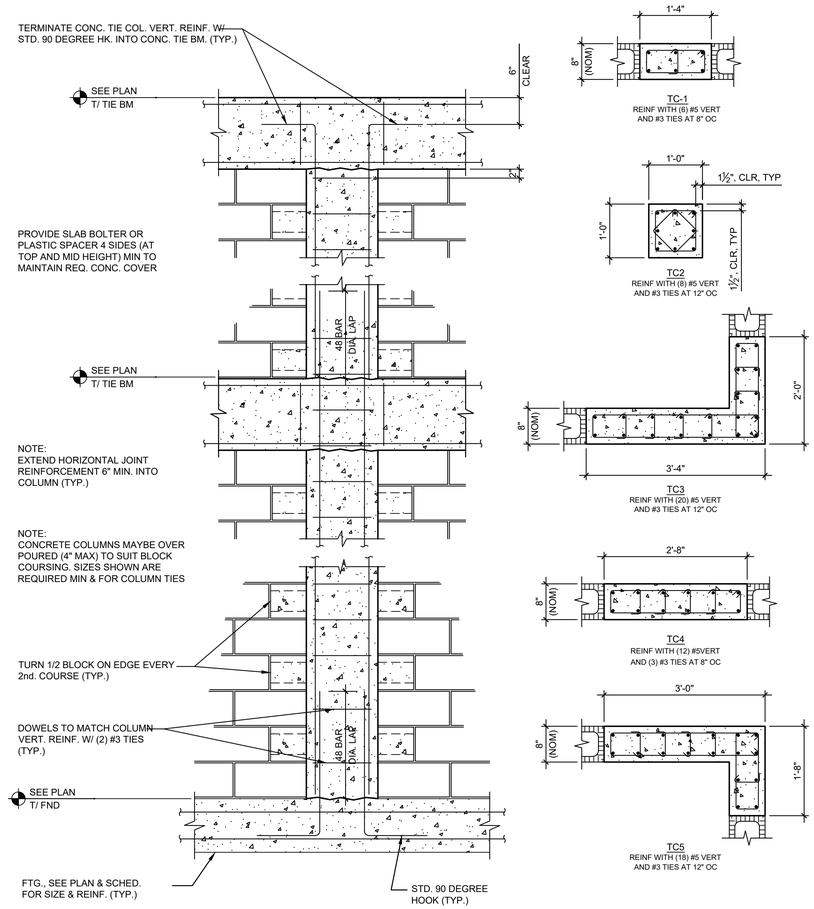
BEAM MARK	BEAM SIZE (W x D) (IN x IN)	TOP BARS	MID BARS	BOTTOM BARS	"C"	"E"	STIRRUPS		REMARKS
							SIZE	SPACING, IN	
BB1	8 x 16	(2) #5	-	(2) #5	-	-	-	-	MASONRY BOND BEAM
BB2	8 x 24	(2) #5	(2) #5	(2) #5	-	-	#3	12	DETAIL A
CB1	8 x 24	(2) #5	(2) #5	(2) #5	-	-	#3	12	DETAIL B
CB2	8 x 24	(2) #7	(2) #7	(2) #7	-	-	#3	12	DETAIL B

NOTE:
1. CONCRETE TIE BEAMS (TB-) AND CONCRETE BEAMS (CB-) WIDTHS SHOWN IN SCHEDULE ARE NOMINAL.
2. WHERE CONCRETE BEAMS HAVE ADJACENT MASONRY, ADJUST BEAM WIDTHS TO MATCH MASONRY WIDTH. ADJUST STIRRUP WIDTHS ACCORDINGLY.

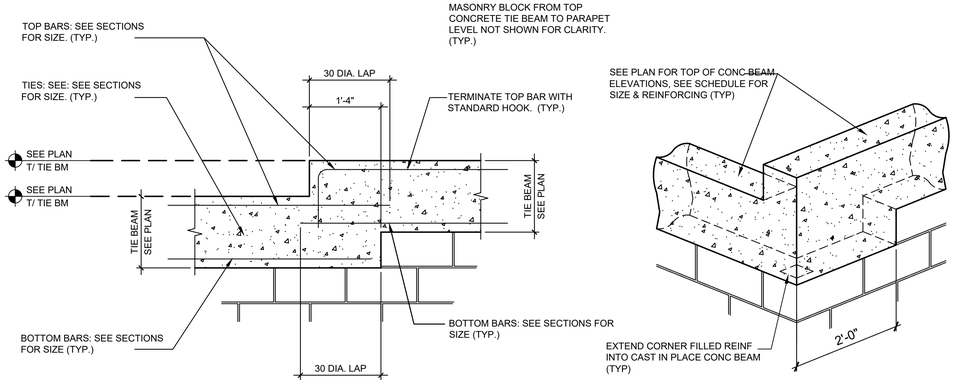


DETAIL A DETAIL B

1 CONCRETE BEAM SCHEDULE
SCALE: 3/4" = 1'-0"

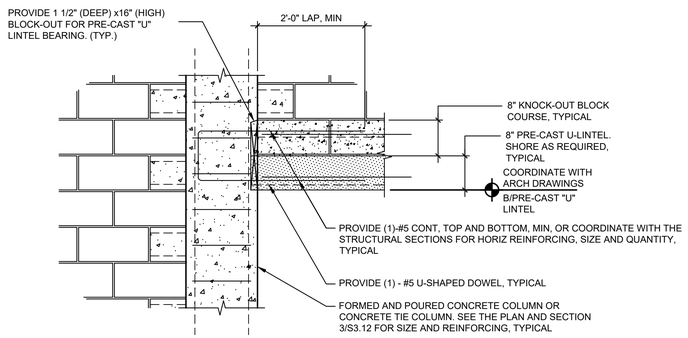


2 CONCRETE TIE COLUMN AT FOOTING AND TYPES
SCALE: 3/4" = 1'-0"



ELEVATION VIEW CORNER VIEW

3 STEPPED TIE BEAM DETAIL
SCALE: 3/4" = 1'-0"



4 TYP. PRE-CAST "U" LINTEL AT CONCRETE COLUMN.
SCALE: 3/4" = 1'-0"

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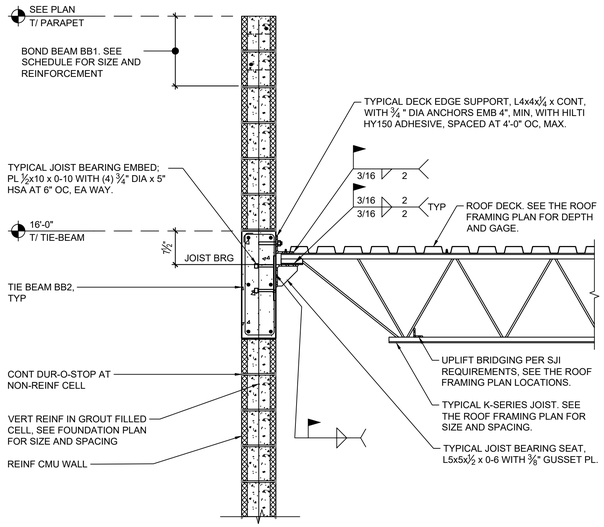
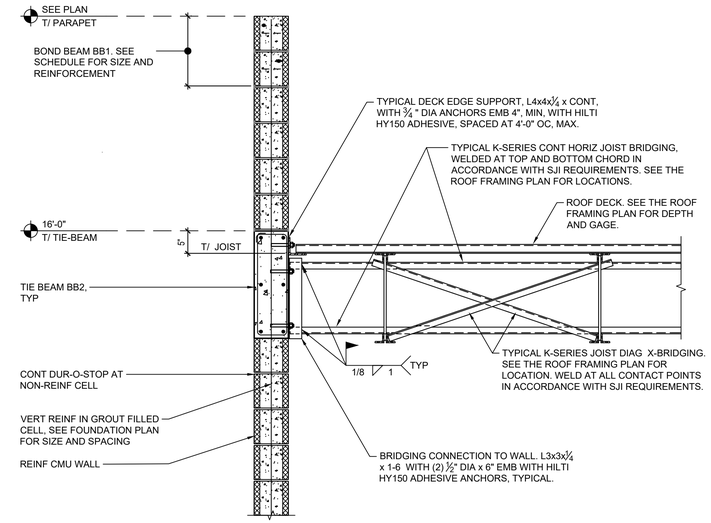
SHEET S3.3



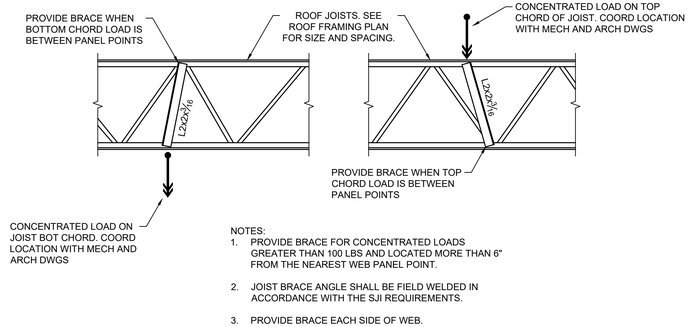
1 TYPICAL JOIST BEARING AT EXTERIOR CMU WALL

SCALE: 3/4" = 1'-0"



2 TYPICAL JOIST BRIDGING AT EXTERIOR CMU WALL

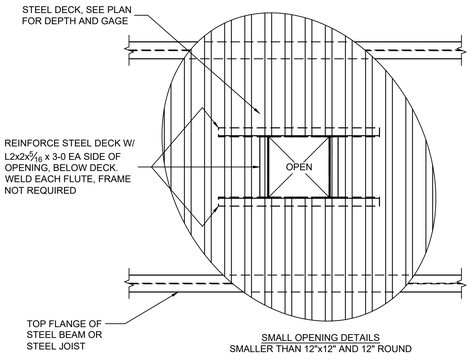
SCALE: 3/4" = 1'-0"



NOTES:
1. PROVIDE BRACE FOR CONCENTRATED LOADS GREATER THAN 100 LBS AND LOCATED MORE THAN 6" FROM THE NEAREST WEB PANEL POINT.
2. JOIST BRACE ANGLE SHALL BE FIELD WELDED IN ACCORDANCE WITH THE SJI REQUIREMENTS.
3. PROVIDE BRACE EACH SIDE OF WEB.

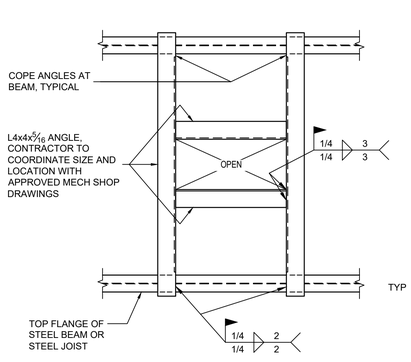
3 TYPICAL ADDITIONAL JOIST REINFORCING

SCALE: 3/4" = 1'-0"



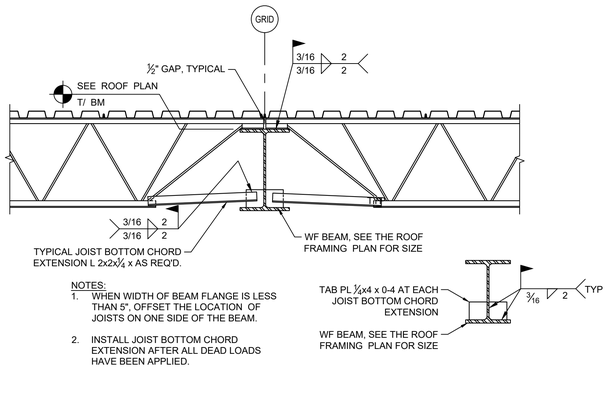
4 TYPICAL ROOF OPENING DETAIL

SCALE: 3/4" = 1'-0"

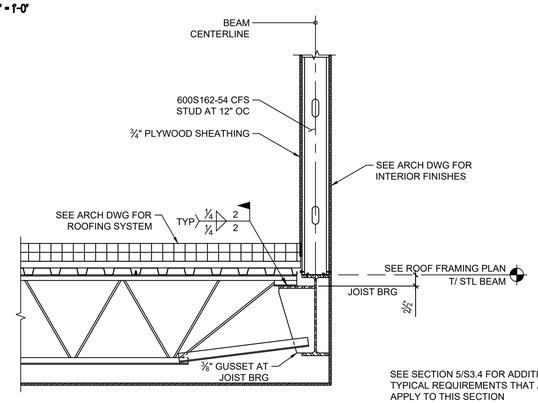


5 TYPICAL JOIST BEARING AT STEEL BEAM

SCALE: 3/4" = 1'-0"



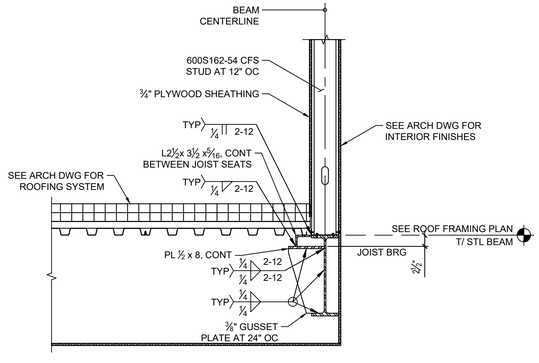
NOTES:
1. WHEN WIDTH OF BEAM FLANGE IS LESS THAN 5", OFFSET THE LOCATION OF JOISTS ON ONE SIDE OF THE BEAM.
2. INSTALL JOIST BOTTOM CHORD EXTENSION AFTER ALL DEAD LOADS HAVE BEEN APPLIED.



SEE SECTION 5/S3.4 FOR ADDITIONAL, TYPICAL REQUIREMENTS THAT ALSO APPLY TO THIS SECTION

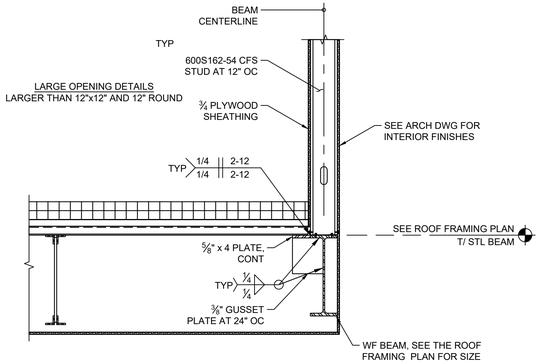
6 JOIST BEARING AT STEEL BEAM AT ROOF TOWER STRUCTURE

SCALE: 3/4" = 1'-0"



7 DECK BEARING AT STEEL BEAM AT ROOF TOWER STRUCTURE

SCALE: 3/4" = 1'-0"



8 DECK BEARING AT STEEL BEAM AT ROOF TOWER STRUCTURE

SCALE: 3/4" = 1'-0"

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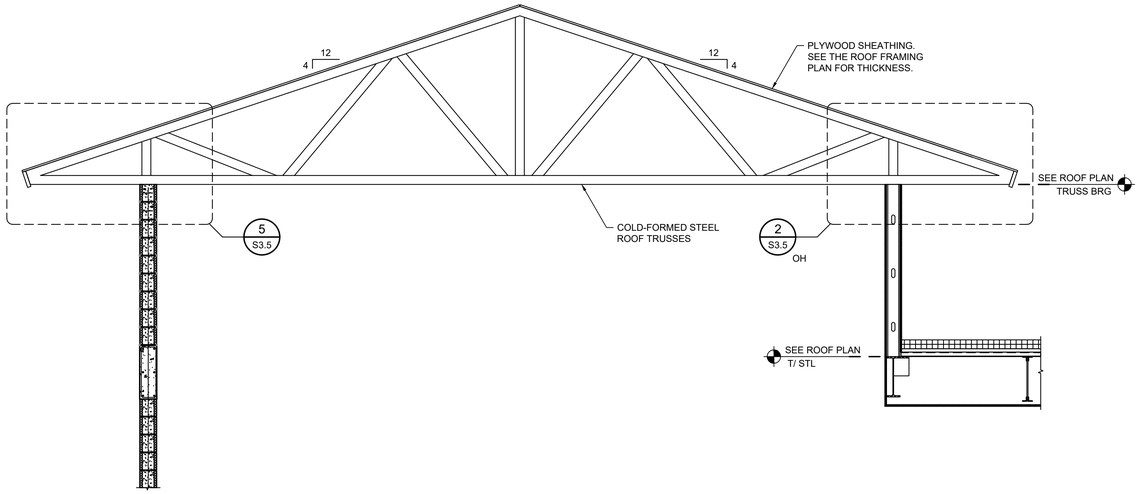
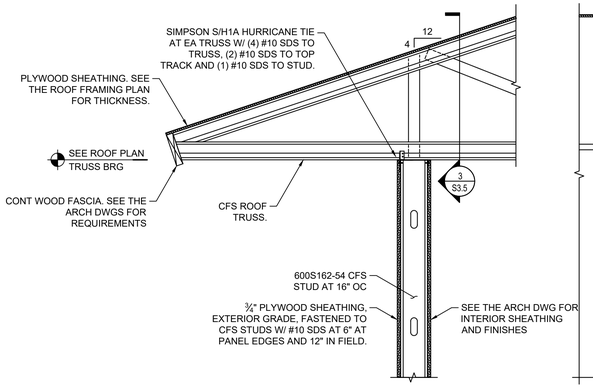
DATE 07-11-2024

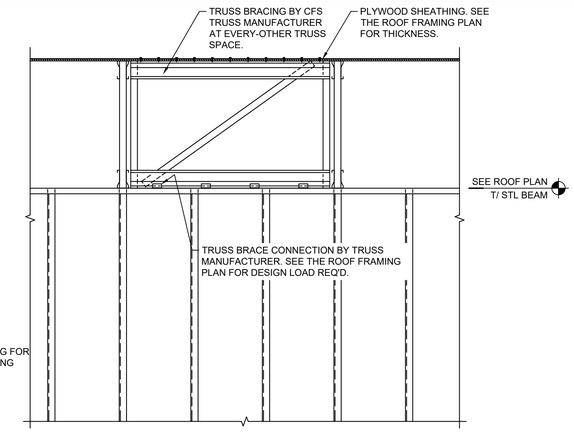
SHEET S3.4



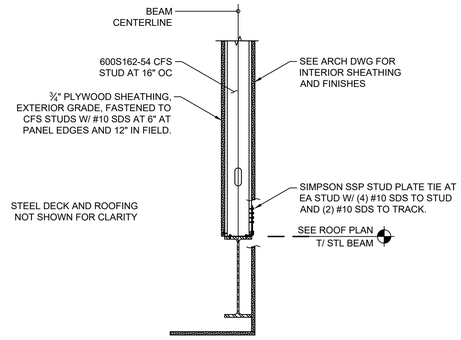
1 SECTION
SCALE: 3/8" = 1'-0"



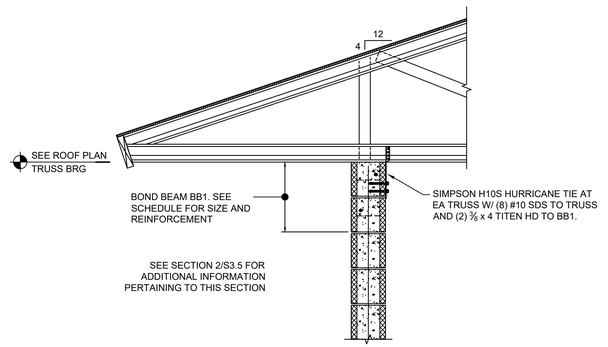
2 SECTION
SCALE: 3/4" = 1'-0"



3 SECTION
SCALE: 3/4" = 1'-0"



4 STUD FASTENING TO BOTTOM TRACK
SCALE: 3/4" = 1'-0"



5 SECTION
SCALE: 3/4" = 1'-0"

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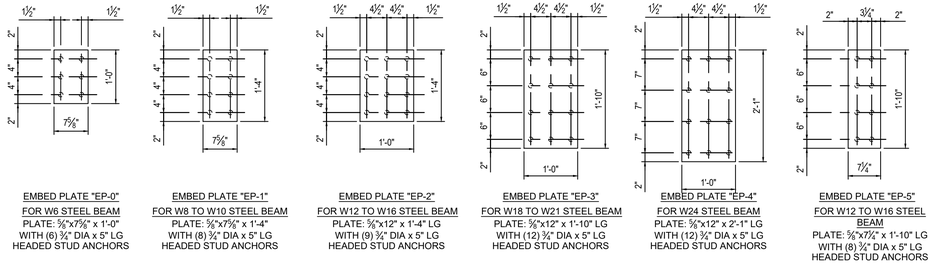


EMBED PLATE "EP-0"
FOR W6 STEEL BEAM
PLATE: ⅜"x7⅝" x 1'-0"
WITH (6) ¾" DIA x 5" LG
HEADED STUD ANCHORS

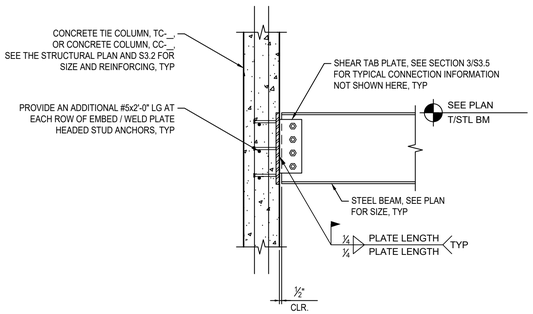
EMBED PLATE "EP-1"
FOR W8 TO W10 STEEL BEAM
PLATE: ⅜"x7⅝" x 1'-4"
WITH (8) ¾" DIA x 5" LG
HEADED STUD ANCHORS

EMBED PLATE "EP-2"
FOR W12 TO W16 STEEL BEAM
PLATE: ⅜"x12" x 1'-4" LG
WITH (9) ¾" DIA x 5" LG
HEADED STUD ANCHORS

EMBED PLATE "EP-3"
FOR W18 TO W21 STEEL BEAM
PLATE: ⅜"x12" x 1'-10" LG
WITH (12) ¾" DIA x 5" LG
HEADED STUD ANCHORS

EMBED PLATE "EP-4"
FOR W24 STEEL BEAM
PLATE: ⅜"x12" x 2'-1" LG
WITH (12) ¾" DIA x 5" LG
HEADED STUD ANCHORS

EMBED PLATE "EP-5"
FOR W12 TO W16 STEEL BEAM
PLATE: ⅜"x7¼" x 1'-10" LG
WITH (8) ¾" DIA x 5" LG
HEADED STUD ANCHORS



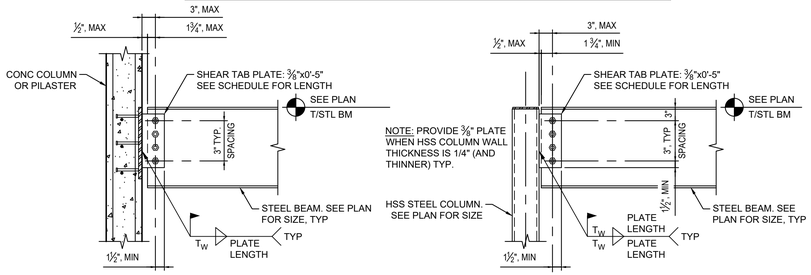
NOTE:
ALL HEADED STUD ANCHORS SHALL BE WELDED WITH AUTOMATIC WELDING MACHINE. DO NOT HAND WELD.

1 TYPICAL STEEL TO CONCRETE CONNECTION

SCALE: 3/4" = 1'-0"

SINGLE PLATE - BEAM TO COLUMN (WF OR HSS) OR CONCRETE EMBED CONNECTIONS				
MIN CONNX FOR BEAM SIZES SHOWN	MAX CONNX FOR BEAM SIZES SHOWN	NUMBER OF BOLT SPACES (IN, FT-IN)	PLATE LENGTH (FT-IN)	ALLOWABLE SHEAR (KIP)
W8, W10, W12	W8, W10	1 AT 3 = 0-3	0-6	19.8
W12, W14, HSS-10	W12, W14, HSS-10	2 AT 3 = 0-6	0-9	31.8
W16, W18	W16	3 AT 3 = 0-9	1-0	42.4
W20, W21, W24	W18	4 AT 3 = 1-0	1-3	53.0
W27, W30	W21	5 AT 3 = 1-3	1-6	63.6
W33, W36	W24, W27	6 AT 3 = 1-6	1-9	74.2

NOTES:
1. CONNECTIONS USE ¾" DIA, A325-N BOLTS.
2. CONNECTIONS USE ⅜" THICK, A36 PLATES.
3. SHEAR PLATES WELDED WITH T_W= ¼" FILLET WELDS.
4. CONNECTIONS ARE FOR SIMPLE BEAM SHEAR ONLY.
5. ALLOWABLE SHEAR LOADS ARE ASD LOADS.
6. PROVIDE 13/16" x 1" LONG HORIZ SLOTTED HOLES IN SHEAR PLATE.
7. PROVIDE 13/16" DIA HOLES IN BEAM WEB.
8. COVER ALL SLOTTED HOLES WITH 5/16" THICK PLATE WASHERS OR 5/16" THICK CONTINUOUS BAR.
9. PROVIDE CONTINUOUS CONTACT BETWEEN FLAYING SURFACES.
10. FINGER TIGHTEN BOLTS, AFTER COMPLETED INSTALLATION, JAM / SPOIL THREADS, TYPICAL.

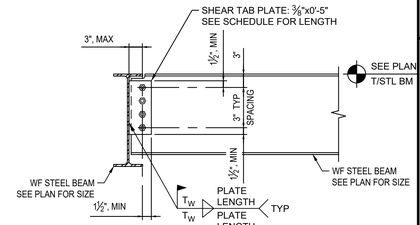


2 TYPICAL W-BM. TO EMBED PLATE OR HSS COLUMN SHEAR CONNECTION DETAIL

SCALE: 3/4" = 1'-0"

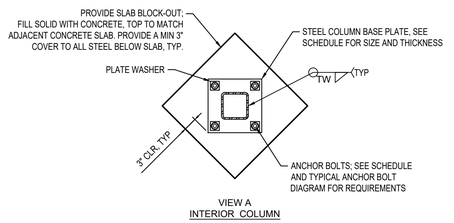
SINGLE PLATE - BEAM TO BEAM CONNECTION			
BEAM SIZE	NUMBER OF BOLT SPACES (IN, FT-IN)	PLATE LENGTH (FT-IN)	ALLOWABLE SHEAR (KIP)
W6, W8, W10	1 AT 3 = 0-3	0-6	16.5
W12, W14	2 AT 3 = 0-6	0-9	28.8
W16	3 AT 3 = 0-9	1-0	41.5
W18	4 AT 3 = 1-0	1-3	54.1
W21, W24	5 AT 3 = 1-3	1-6	66.5
W27	6 AT 3 = 1-6	1-9	78.7

NOTES:
1. CONNECTIONS USE ¾" DIA, A325-N BOLTS.
2. CONNECTIONS USE ⅜" THICK, A36 PLATES.
3. SHEAR PLATES WELDED WITH T_W= ¼" FILLET WELDS.
4. CONNECTIONS ARE FOR SIMPLE BEAM SHEAR ONLY.
5. ALLOWABLE SHEAR LOADS ARE ASD LOADS.
6. PROVIDE 13/16" x 1" LONG HORIZ SLOTTED HOLES IN SHEAR PLATE.
7. PROVIDE 13/16" DIA HOLES IN BEAM WEB.
8. COVER ALL SLOTTED HOLES WITH 5/16" THICK PLATE WASHERS OR 5/16" THICK CONTINUOUS BAR.
9. PROVIDE CONTINUOUS CONTACT BETWEEN FLAYING SURFACES.
10. FINGER TIGHTEN BOLTS, AFTER COMPLETED INSTALLATION, JAM / SPOIL THREADS, TYPICAL.

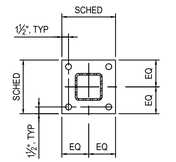


3 TYPICAL WF BM TO WF BM SHEAR CONNECTION DETAIL

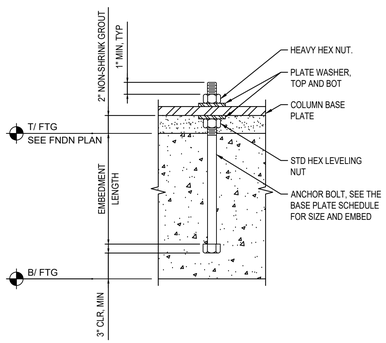
SCALE: 3/4" = 1'-0"



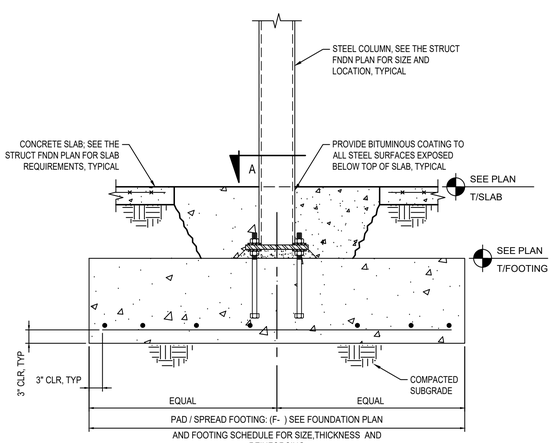
VIEW A
INTERIOR COLUMN



INTERIOR COLUMN BASE PLATE A



TYPICAL ANCHOR BOLT DIAGRAM



4 INTERIOR STEEL COLUMN AT FOUNDATION

SCALE: 3/4" = 1'-0"

BASE PLATE SCHEDULE								
COLUMN MARK	BASE PLATE SIZE (IN x IN x FT-IN)	BASE PLATE HOLE DIA (IN)	ANCHOR BOLTS	T_W (IN)	EMBED (IN)	PLATE WASHER (IN x IN x FT-IN)	PLATE WASHER HOLE DIA (IN)	BASE PLATE
SC6	¾ x 12 x 1-0	1 5/16	(4) ¾" DIA	⅜	12	⅜ x 2 x 0-2	13/16	A

NOTES:
1. BASE PLATES SHALL BE F_y= 36 KSI, UNO.
2. ANCHOR RODS SHALL BE ASTM 1554, GRADE 36, UNO.
3. IN LIEU OF ANCHOR BOLTS, A THREADED ROD, OF EQUAL STRENGTH, MAY BE SUBSTITUTED WITH A HEAVY HEX NUT TACK WELDED TO THE ANCHOR ROD.
4. ALL BOLTS SHALL BE, UNLESS NOTED OTHERWISE, TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC AFTER THE CONCRETE IS AT LEAST 14 DAYS OLD.
5. ALL ANCHOR BOLTS AND WASHERS SHALL BE HOT DIPPED GALVANIZED.
6. ANCHOR BOLT MINIMUM PROJECTION SHALL ACCOMMODATE GROUT THICKNESS , BASE PLATE THICKNESS, WASHERS AND NUTS, PLUS 1", TYPICAL

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