GENERAL NOTES

1. THIS CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL NCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING SAFETY NETS, SUPPORT AND BRACING FOR CRANES, POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE AND BELOW ITEMS.

2. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS.

3. THE CONTRACTOR SHALL Verify ALL DIMENSIONS, ELEVATIONS, TOLERANCES AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND ENGINEER IN WRITING. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.

4. IN CASE OF CONFLICT; NOTES AND DETAILS ON THE BALANCE OF THE DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS.

5. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS. WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.

6. EACH SUBCONTRACTOR IS CONSIDERED AN EXPERT IN HIS RESPECTIVE FIELD AND SHALL PRIOR TO THE SUBMISSION OF A BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER OR OWNER, IN WRITING OF ANY WORK CALLED OUT ON THE DRAWINGS IN HIS TRADE THAT CANNOT BE GUARANTEED OR PERFORMED AS INDICATED.

7. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT DEVIATES IN WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.

8. THIS STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, OR ANY PORTION THEREOF, DURING CONSTRUCTION.

9. NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

10. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE ENGINEER.

11. ANY OPTIONS OR APPROVED SUBSTITUTIONS ARE FOR CONTRACTORS CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES, ADDITIONAL COSTS (INCLUDING REDESIGN BY THE ENGINEER), AND COORDINATION WITH ALL ITEMS THAT THE SUBSTITUTIONS MAY IMPACT.

12. THE ARCHITECT AND ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.

13. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.

14. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROJECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK.

15. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR **SHALL** ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. UNLESS NOTED CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

DESIGN CRITERIA

DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED UPON THE FOLLOWING CRITERIA:

1.	CODE:	IBC 2018
2.	LATERAL LOADS	
	A. WIND SPEED (V_{3s}):	135 MPH
	B. EXPOSURE CATEGORY:	C
	C. IMPORTANCE FACTOR:	1.0
	D. BUILDING CATEGORY	II
4.	SUBSURFACE INFORMATION	
	A. PREPARED BY:	n/a
	PROJECT NO.:	n/a
	DATE:	n/a
	B. SHALLOW FOUNDATION	
	MINIMUM FOOTING DEPTH:	18 INCHES
	MINIMUM FOOTING WIDTH:	12 INCHES
	ALLOWABLE BEARING PRESSURE (CONTINUOUS FOOTINGS):	1000 PSF

THE OWNER OF THIS PROJECT HAS DECLINED TO FURNISH A GEOTECHNICAL INVESTIGATION REPORT, THEREFORE THE FOUNDATION DESIGN WAS BASED UPON AVERAGE SOIL CONDITIONS IN HIDALGO COUNTY, TEXAS. IF HIGHLY EXPANSIVE OR MODERATELY EXPANSIVE SOILS OR SOFT SOILS ARE ENCOUNTERED, DIFFERENTIAL FOUNDATION MOVEMENTS CAN BE EXPECTED. ALTHOUGH WE ATTEMPT TO MAKE ASSUMPTIONS THAT WILL NOT IMPAIR STRUCTURAL INTEGRITY OF THE PROJECT, WE DO NOT HAVE THE EXPERTISE OR BENEFIT OF LABORATORY TESTING OF A GEOTECHNICAL ENGINEER. THEREFORE THIS FIRM CANNOT ASSUME RESPONSIBILITY FOR THE PERFORMANCE OF THE DESIGNED FOUNDATION SHOULD ACTUAL SURFACE OR SUBSURFACE SOIL CONDITIONS VARY FROM THOSE ASSUMED.

SPECIAL NOTES TO OWNER

1. UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AND MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.

2. THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACKS, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.

3. MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.01 INCH MAY NEED TO BE PRESSURE EPOXIED. REFER TO THE NOTES UNDER "ALLOWANCES".

4. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION, BEYOND WHICH MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERSIST.

SHOP DRAWINGS AND SUBMITTALS

1. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW TO THE ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS INDICATED IN THE STRUCTURAL GENERAL NOTES AND THE CONTRACT SPECIFICATIONS. SEE THE CONTRACT SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND ADDITIONAL INFORMATION
2. SHOP DRAWINGS SHALL USE DRAFTING LINE WORK AND LETTERING THAT IS CLEARLY LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN NO REPRODUCTIONS OF THE CONTRACT DRAWING PLANS OR DETAILS.
3. SUBMIT STRUCTURAL SHOP DRAWINGS IN PDF FORMAT.
4. SHOP DRAWINGS SHALL NOT SHOW MATERIALS FOR MORE THAN ONE LEVEL OF THE SAME PLAN.
5. SHOP DRAWINGS SHALL SHOW CLEAR AND COMPLETE INFORMATION FOR THE FABRICATION (DETAIL SHEETS AND/OR MATERIAL LISTS) AND INSTALLATION.
6. ALLOW A MINIMUM OF (2) WEEKS FOR REVIEW OF EACH SET OF SHOP DRAWINGS.
7. CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS SUBMITTED BY THE SUB-CONTRACTOR AND COORDINATE SHOP DRAWINGS WITH ALL OTHER TRADING.
8. CONTRACTOR SHALL ANSWER ALL QUESTIONS OR CLARIFICATIONS BY THE SUB-CONTRACTOR BEFORE SUBMITTING TO ENGINEER FOR REVIEW. ANY QUESTIONS THAT THE CONTRACTOR CANNOT ANSWER WITH THE INFORMATION ON THE DRAWINGS SHALL CLEARLY BE MARKED FOR THE ENGINEER FOR REVIEW.
9. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, SEE NOTE NUMBER 3 UNDER GENERAL NOTES.
10. REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR GENERAL CONFORMANCE TO THE STRUCTURAL DRAWINGS. REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEF THE CONTRACTOR FOR ANY ERRORS IN DIMENSIONS OR MATERIALS INDICATED ON THE SHOP DRAWINGS.
11. IF THERE IS ANY DISCREPANCY BETWEEN THE STRUCTURAL DRAWINGS AND SHOP DRAWINGS, THE INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS GOVERN. INFORMATION THAT IS NOT INDICATED ON THE SHOP DRAWINGS SHALL BE OBTAINED FROM THE STRUCTURAL DRAWINGS.
12. PROVIDE SUBMITTALS FOR THE FOLLOWING ITEMS:

ITEM	REQUIRED
A. CONCRETE MIX DESIGN	X
B. CURING COMPOUND FOR CONCRETE	X
C. REINFORCING STEEL	X
D. STRUCTURAL STEEL	X
E. STEEL JOIST	
F. METAL DECKING (INDICATE LAYOUT AND TYPES OF DECK PANELS, ANCHORAGE DETAILS, REINFORCING CHANNELS, PANS, DECK OPENINGS, SPECIAL JOINTING, ACCESSORIES, AND ATTACHMENTS TO OTHER CONSTRUCTION.)	
G. PRE-MANUFACTURED METAL BUILDING (INCLUDE CALC'S & REACTIONS)	
H. PRE-MANUFACTURED WOOD TRUSSES	

REINFORCING STEEL

1. BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A615, INCLUDING SUPPLEMENT S1. GRADE 40 - #3 AND SMALLER GRADE 60 - #4 AND LARGER
2. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318, UNLESS OTHERWISE NOTED.
3. VERTICAL REINFORCEMENT SHALL BE TIED OR OTHERWISE FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 192 BAR DIAMETERS NOR FOUR (4) FEET ON CENTER.
4. WELDED STEEL WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185
5. LAPS OF WELDED STEEL WIRE FABRIC AT SPLICES SHALL BE NOT LESS THAN 12 INCHES.
6. WALLS, PILASTER, COLUMNS SHALL BE DOWELED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND AT THE SAME SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILASTER, OR COLUMNS.
7. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
8. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
9. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT. PROVIDE CONCRETE OR MASONRY CHAIRS AT 4'-0" O.C. MAX. (PLASTIC CHAIRS NOT ALLOWED.
10. PROVIDE CORNER BARS TOP AND BOTTOM AT ALL BEAM CORNERS AND DEAD END BEAM INTERSECTIONS. BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL. BARS SHALL LAP BEAM REINFORCEMENT 40 BAR DIAMETERS.
11. BARS DETAILED AS CONTINUOUS SHALL BE LAPPED 40 BAR DIAMETERS AT SPLICES.
12. EXTEND SLAB REINFORCING STEEL, PERPENDICULAR TO BEAM, TO THE TOP OUTSIDE REINFORCING BAR OF PERIMETER BEAMS. START THE SLAB REINFORCING STEEL, PARALLEL TO BEAM, NOT MORE THAN 6" FROM THE TOP INSIDE REINFORCING BAR OF PERIMETER BEAMS.
13. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 3". THE "Z" BARS SHALL LAP THE MAIN SLAB REINFORCING STEEL 40 BAR DIAMETERS.
14. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB REINFORCING. ALL CONDUIT TO BE NO GREATER THAN 1" DIAMETER AND TO BE PLACED IN CENTER OF SLAB. NO PLUMBING LINES GREATER THAN 1 INCH ALLOWED IN THE SLAB.
15. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
16. WELDING OF REINFORCING STEEL, IF PERMITTED BY THE STRUCTURAL ENGINEER, SHALL BE PERFORMED IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE REINFORCING STEEL" ON THE AMERICAN WELDING SOCIETY, AWS D1.4-96 AS INCORPORATED IN CBC CHAPTER No. 19, AND BY CERTIFIED WELDERS QUALIFIED USING PROCEDURES CONTAINED THEREIN, E70XX ELECTRODES SHALL BE USED IN WELDING GRADE 60 REINFORCEMENT. REINFORCEMENT SHALL NOT BE WELDED UNTIL A CHEMICAL ANALYSIS SUFFICIENT TO DETERMINE THE CARBON EQUIVALENT (C.E.) IS PERFORMED. THE C.E. OF REINFORCING STEEL SHALL BE CALCULATED FORM THE CHEMICAL COMPOSITION AS SHOWN IN THE MILL TEST REPORT. IF MILL TEST REPORTS ARE NOT AVAILABLE, A CHEMICAL ANALYSIS SHALL BE MADE ON REINFORCEMENT REPRESENTATIVE OF THOSE TO BE WELDED. THE C.E. SHALL NOT EXCEED 0.55 AS CALCULATED PER CBC CHAPTER 19, A COPY OF THE MILL TEST OF REINFORCING STEEL IN CONCRETE MEMBERS. (SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING).
17. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
18. CONCRETE COVER FOR REINFORCING AS FOLLOWS:

EXPOSURE CONDITION	MINIMUM COVER	TOLERANCE
DRILLED PIERS, FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST GROUND:	3"	3/8"
WHERE CONCRETE SURFACES, AFTER REMOVAL OF FORMS, ARE EXPOSED TO WEATHER OR GROUND:		
FOR BARS 5/8" IN DIAMETER	2"	1/4"
FOR BARS 5/8" OR LESS IN DIAMETER	1 1/2"	1/4"
WHERE SURFACES ARE NOT DIRECTLY EXPOSED TO WEATHER OR GROUND:		
FOR SLAB ON GRADE (FROM TOP OF SLAB)	1 1/2"	1/4"
FOR BEAMS, COLUMNS	1 1/2"	1/4"
FOR JOISTS AND SLABS	1"	1/8"

20. LAPS AT BAR SPLICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

MASONRY - GRADE 60: LAP 50 DIA. (30" MIN.)
GRADE 40: LAP 48 DIA. (24" MIN.)

CONCRETE - LAP PER SCHEDULE BELOW

BAR SPLICE LAP LENGTH IN CONCRETE

BAR SIZE	f'c = 2000 PSI	f'c = 3000 PSI	f'c = 4000 PSI	f'c = 5000 PSI
#3	22	22	22	22
#4	29	29	29	29
#5	40	36	36	36
#6	57	46	43	43
#7	77	63	54	54
#8	100	82	71	71
#9	128	104	90	90
#10	162	132	115	115
#11	200	163	141	141

FOR WELDED WIRE FABRIC: SPACING OF WIRE PLUS 12".

CAST-IN-PLACE CONCRETE

1. VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS, ACI #301 LATEST EDITION. DRILLED PIERS SHALL COMPLY WITH ACI 336.1 AND ACI 336.3R, LATEST EDITIONS
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, ACCESSORIES UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI #315 LATEST EDITION
4. THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:

LOCATION	STRENGTH AT 28 DAYS	MAXIMUM SLUMP	SIZE OF LARGE AGGREGATE	WATER/CEMENT RATIO
FOUNDATIONS	3000 PSI	5"	1 1/2"	0.53
SLAB ON GRADE	3000 PSI	5"	1 1/2"	0.53
GRADE BEAMS	3000 PSI	5"	1 1/2"	0.53
WALL	3000 PSI	6"	3/4"	0.53

5. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN SLABS OR BEAMS.
6. VERTICAL CONSTRUCTION JOINTS IN SLABS ARE TO BE AS SHOWN ON PLANS OR AS APPROVED BY ENGINEER.
7. ALL OPENINGS IN SLAB (FOR PIPING, DRAINS, ETC.) SHALL BE SEALED WITH 1/2 SEALANT '2A' (SELF-LEVELING 2-PART POLYURETHANE).
8. UTILITIES THAT PROJECT THROUGH SLAB FLOORS SHOULD BE DESIGNED WITH EITHER SOME DEGREE OF FLEXIBILITY OR WITH SLEEVES IN ORDER TO PREVENT DAMAGE TO THESE LINE SHOULD VERTICAL MOVEMENT OCCUR.
9. BACKFILL AROUND PERIMETER TO PROVIDE POSITIVE DRAINAGE AWAY FROM SLAB.
10. FLOOR TOLERANCES
F-NUMBER SYSTEM

	COMPOSITE	MINIMUM LOCAL VALUE
FLATNESS (F):	30	23
LEVELNESS (F)	25	19

IN ALL INSTANCES MINIMUM SLAB THICKNESS SHALL BE OBTAINED. COORDINATE SLAB FINISHES WITH ARCHITECTURAL PLANS.

11. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
12. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ALL MOLDS. GROOVES, REGLETS, ORNAMENTAL CLIPS, PIPES, CONDUITS, INSERTS, ETC. TO BE CAST IN CONCRETE. PROVIDE OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS AND PIPES. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE, FOOTINGS, OR SLAB UNLESS SPECIFICALLY DETAILED IN THESE PLANS, OR AS DIRECTED BY THE ENGINEER.
MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.
13. CONCRETE TESTING SHALL BE ONE SET OF CYLINDERS FOR EVERY 50 CUBIC YARDS
14. OR PORTION THEREOF FOR EACH TYPE OF CONCRETE POURED ON ANY GIVEN DAY. ONE SET CONSISTS OF 2 CYLINDERS TESTED FOR COMPRESSION AT 7 DAYS AND 2 CYLINDERS AT 28 DAYS.

C. CONCRETE MATERIAL:
1. CEMENT: TEXAS LEHIGH ASTM C 150, TYPE I. USE ONE BRAND OF CEMENT THROUGHOUT THE PROJECT; OR APPROVED EQUAL BEFORE BIDDING PER SECTION 01600.
2. COARSE AND FINE AGGREGATES: ASTM C33. COMBINED AGGREGATE GRADATION FOR SLABS ON GRADE AND OTHER DESIGNATED CONCRETE SHALL BE 8% - 18% FOR LARGE TOP AGGREGATES (1 1/2") OR 8% - 22% FOR SMALLER TOP SIZE AGGREGATES (1" OR 3/4") RETAINED ON EACH SIEVE BELOW THE TOP SIZE AND ABOVE THE NO. 100 SIEVE. SLABS ON GRADE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1-1/2" FOOTINGS AND PIERS 1" AND BEAMS 3/4".
3. WATER: COMPLYING WITH ASTM C 94.
4. ALL CONCRETE SHALL CONTAIN "POZZOLITH" ADMIX AS PER MANUFACTURER'S SPECIFICATIONS, IN ACCORDANCE WITH ASTM C494.

D. ADMIXTURES:
1. AIR-ENTRAINING ADMIXTURES: SHALL CONFORM TO ASTM C-260. ADMIXTURE MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION THAT THE AIR-ENTRAINING ADMIXTURE IS COMPATIBLE WITH OTHER REQUIRED ADMIXTURES. ALL EXTERIOR SLABS SHALL BE AIR-ENTRAINED (4% - 6%). ACCEPTABLE PRODUCTS: EUCLID CHEMICAL AEA-92 AND AIRMIX 200, MASTER BUILDERS MICROAIR, W.R. GRACE DARAVAIR 1000 AND DAREX-11.
NOTE: AIR-ENTRAINING ADMIXTURE SHALL NOT BE USED ON INTERIOR CONCRETE.
2. WATER-REDUCING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE A AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL WR-89 AND WR-91, MASTER BUILDERS 200N AND 322N, W.R. GRACE WRDA 36 AND WRDA 64.
3. WATER REDUCING, RETARDING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE D, AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL RETARDER 75, MASTER BUILDERS POZZOLITH R, W.R. GRACE DARATARD 17.
4. HIGH RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER): SHALL CONFORM TO ASTM C494, TYPE F OR TYPE G AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS : EUCLID CHEMICAL EUCON 37, MASTER BUILDERS REOBUILD 1000 W.R. GRACE DARACEM - 1000.
5. WATER-REDUCING, NON-CORROSIVE ACCELERATING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE C OR E, AND CONTAIN NOT MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. THE ADMIXTURE MANUFACTURER MUST HAVE LONG-TERM, NON-CORROSIVE TEST DATA FROM AN INDEPENDENT TESTING LABORATORY (OF AT LEAST A YEAR'S DURATION) USING AN ACCEPTABLE ACCELERATED CORROSION TEST METHOD SUCH AS THAT USING ELECTRICAL POTENTIAL MEASURES. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL ACCELGUARD 80/90 AND ACCELGUARD NCA, MASTER BUILDERS NC534 AND POZZUTEC 20, W.R. GRACE POLARSET.
6. PROHIBITED ADMIXTURES:
   a.) CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS ARE NOT PERMITTED.
   b.) FLYASH; A MAXIMUM OF 20% AS CEMENT REPLACEMENT ALLOWED

G. CONCRETE MIXES
1. COMPLY WITH ACI 301 REQUIREMENTS FOR CONCRETE MIXTURE, U.N.O..
2. PREPARE DESIGN MIXES SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, PROPORTIONED ACCORDING TO ACI 301, FOR NORMAL WEIGHT CONCRETE DETERMINED BY EITHER LABORATORY TRIAL MIX OR FIELD TEST DATA AS FOLLOWS:
CONCRETE MATERIALS INCLUDED IN THE MIX DESIGN SHALL BE THE SAME MATERIALS PROVIDED TO THE PROJECT, AND SHALL BE PREPARED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE OWNER. THE LABORATORY MIX DESIGN SHALL NOT EXCEED THE DESIRED JOB STRENGTH OF CONCRETE BY 1,200 PSI. FOUR COPIES OF THE MIX DESIGN SHALL BE SUBMITTED TO THE OWNER BEFORE CONCRETE WORK BEGINS.
3. SLUMP: CONCRETE CONTAINING HRWR SHALL HAVE A MAXIMUM SLUMP OF 8" (200MM). ALL OTHER CONCRETE SHALL NOT EXCEED 4 INCHES (100 MM) UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
4. ADJUSTMENT TO CONCRETE MIXES: MIX DESIGN ADJUSTMENTS MAY BE REQUESTED BY CONTRACTOR WHEN CHARACTERISTICS OF MATERIALS, JOB CONDITIONS, WEATHER, TEST RESULTS OR OTHER CIRCUMSTANCES WARRANT, AT NO ADDITIONAL COST TO OWNER AND AS ACCEPTED BY OWNER. LABORATORY TEST DATA FOR REVISED MIX DESIGN AND STRENGTH RESULTS MUST BE SUBMITTED TO AND ACCEPTED BY OWNER BEFORE USING IN WORK. BOTH THE CONCRETE TESTING AND INSPECTION AGENCY AND THE CONCRETE CONTRACTOR SHALL SATISFY THEMSELVES THAT THE CONCRETE MIX DESIGN WILL PRODUCE A CONCRETE WHICH WILL MEET THE SPECIFICATIONS FOR THIS PROJECT. IN ADDITION, THE CONTRACTOR AND CONCRETE FINISHER SHALL VERIFY THAT THE WORKABILITY, FINISHABILITY AND SETTING TIMES ARE APPROPRIATE FOR SLAB INSTALLATIONS. PLACEMENT SHALL BE MADE BY CHUTE DIRECTLY FROM THE CONCRETE TRUCKS. IF PUMPING OF THE CONCRETE IS CONTEMPLATED FOR ANY SPECIAL LOCATIONS, THE PROPORTIONS ESTABLISHED ABOVE SHALL NOT BE ALTERED TO SUIT THE CAPABILITIES OF THE PUMPING EQUIPMENT.
5. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94. WHEN AIR TEMPERATURE IS BETWEEN 85° AND 90° F, REDUCE MIXING AND DELIVERY TIME FROM 90 MINUTES TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90° F, REDUCE MIXING AND DELIVERY TIME TO 6O MINUTES.
6. WATER CEMENT RATIO SHALL BE BASED ON SURFACE DRY MATERIAL.

STRUCTURAL STEEL

1. MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING ASTM DESIGNATIONS:

MATERIAL	DESIGNATION	STRENGTH
ANCHOR BOLTS	A36	Fy=36 ksi
PLATES	A36	Fy=36 ksi
ANGLES	A36	Fy=36 ksi
CHANNELS	A36	Fy=36 ksi
WIDE FLANGE SHAPES	A572	Fy=50 ksi
STEEL PIPE	A53 GRADE B	Fy=35 ksi
SQUARE & RECT. STEEL TUBES (HSS)	A500 GRADE B	Fy=46 ksi
ROUND TUBES (HSS)	500 GRADE B	Fy=42 ksi

3. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
   SECTION 4.2.1, DELETE FIRST TWO SENTENCES.
   SECTION 7., ALL REFERENCE TO OWNER SHALL BE CHANGED TO GENERAL CONTRACTOR.
   SECTION 7.9.3, THE CONTRACTOR SHALL PROVIDE THE SEQUENCE AND SCHEDULE OF PLACEMENT OF NON-SELF SUPPORTING STEEL FRAMES.
   SECTION 7.9.4, THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
4. WELDING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION AS PUBLISHED BY THE AMERICAN WELDING SOCIETY, EXCEPT THAT ALL WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO ANSI/AWS D1.1-04
5. DETAILED AND OR SCHEDULED CONNECTIONS HAVE BEEN DESIGNED BY STRUCTURAL ENGINEER. ANY CONNECTION NOT DETAILED OR SCHEDULED OR ALTERED FOR FABRICATION PURPOSES SHALL BE SIZED AND DETAILED BY FABRICATOR AND SHALL BE MARKED FOR ENGINEER'S VERIFICATION. FABRICATOR SIZED AND DETAILED CONNECTIONS SHALL SUPPORT ONE HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE TABLES OF UNIFORM CONSTANTS, PART 2 OF THE AISC MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED. THE EFFECT OF ANY CONCENTRATION LOADS MUST BE TAKEN INTO ACCOUNT.
6. SEE ARCHITECTURAL PLANS FOR MISCELLANEOUS STEEL ITEMS NOT INDICATED ON STRUCTURAL DRAWINGS. STEEL ITEMS SHOWN ON ARCHITECTURAL DRAWINGS AND NOT SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGN BY THE STEEL FABRICATOR. SEE DESIGN CRITERIA FOR LOADING.
7. ALL WELDED CONNECTIONS SHALL BE MADE USING 1/4" FILLET WELD, U.N.O.
8. ALL BOLTED CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER HIGH STRENGTH BOLTS, ASTM A325, BEARING TYPE CONNECTION w/ WASHERS ASTM F436, U.N.O. ON DESIGN DRAWINGS. SPECIAL INSPECTION REQUIRED FOR ALL HIGH STRENGTH BOLTING. ALL NUTS SHALL BE PER ASTM A563
9. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES, UNLESS OTHERWISE NOTED ON PLANS.

ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED. (INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO). SEE ARCHITECTURAL PLANS IF STRICTER REQUIREMENTS ARE REQUIRED.

ALL EXPOSED STEEL SHALL FOLLOW SECTION 10 OF THE CODE OF STANDARD PRACTICE OF AISC. SECTION 10 OF THE CODE ADDRESSES ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)

CONNECTIONS SHALL BE PER HOLLOW STRUCTURAL SECTIONS, CONNECTION MANUAL BY AISC

WHERE STEEL MEMBER PASS THROUGH CMU WALLS, PROVIDE HALF INCH GAP BETWEEN THE CMU AND THE STEEL MEMBER. PROVIDE ELASTOMERIC MATERIAL BETWEEN THE THE STEEL MEMBER AND CMU WALL.

ALL BEAMS NOT SHOWN SHALL BE W14x26. ALL COLUMNS NOT SHOWN SHALL BE HSS4x4x1/4.

STEEL SHOP SHALL BE AISC CERTIFIED.

HOLES FOR BOLTS IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED. UNLESS NOTED OTHERWISE, HOLES SHALL BE STANDARD SIZE 1/16 INCH LARGER THAN THE BOLT.

ALL STRUCTURAL STEEL SHAPES SHALL BE PRIMED WITH A RUST RESISTANT PRIMER BEFORE SHIPMENT TO THE PROJECT SITE. PRIMER SHALL NOT BE APPLIED TO THE IMMEDIATE AREA OF STEEL INTENDED TO RECEIVE SLIP CRITICAL BOLTED CONNECTIONS

HIGH STRENGTH BOLTS INSTALLATION SHALL BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR. FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
   A. HE SHALL VERIFY THE MILL CERTIFICATES FOR MATERIAL.
   B. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
   C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES, TOOL CALIBRATIONS WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND AND BUILDING CODE.
   D. FOR SNUG-TIGHT CONNECTIONS, HE SHALL VERIFY THAT THE PLIES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO SNUG CONTACT WITH EACH OTHER.
   E. FOR SLIP-TIGHT CONNECTIONS, HE SHALL VERIFY THE PRETENSION METHOD SELECTED BY THE CONTRACTOR HAS INDUCED THE REQUIRED MINIMUM TENSION IN THE BOLT.
   F. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.

10. WELDING IN THE FIELD SHALL BE CONTINUOUSLY INSPECTED, BY A SPECIAL INSPECTOR FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
   A. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
   B. HE SHALL VERIFY THE WELDER'S QUALIFICATIONS.
   C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES AND WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND BUILDING CODE.
   D. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.

Drawing List	
Sheet Number	Sheet Name
S101	General Notes
S201	Foundation Plan
S301	Roof Framing Plan
S401	Typical Concrete Details

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For Construction

Carmen Avila Elementary School
Canopy Addition
Edinburg, Texas

PROJECT NUMBER
20271

DATE
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General Notes

SHEET
S101

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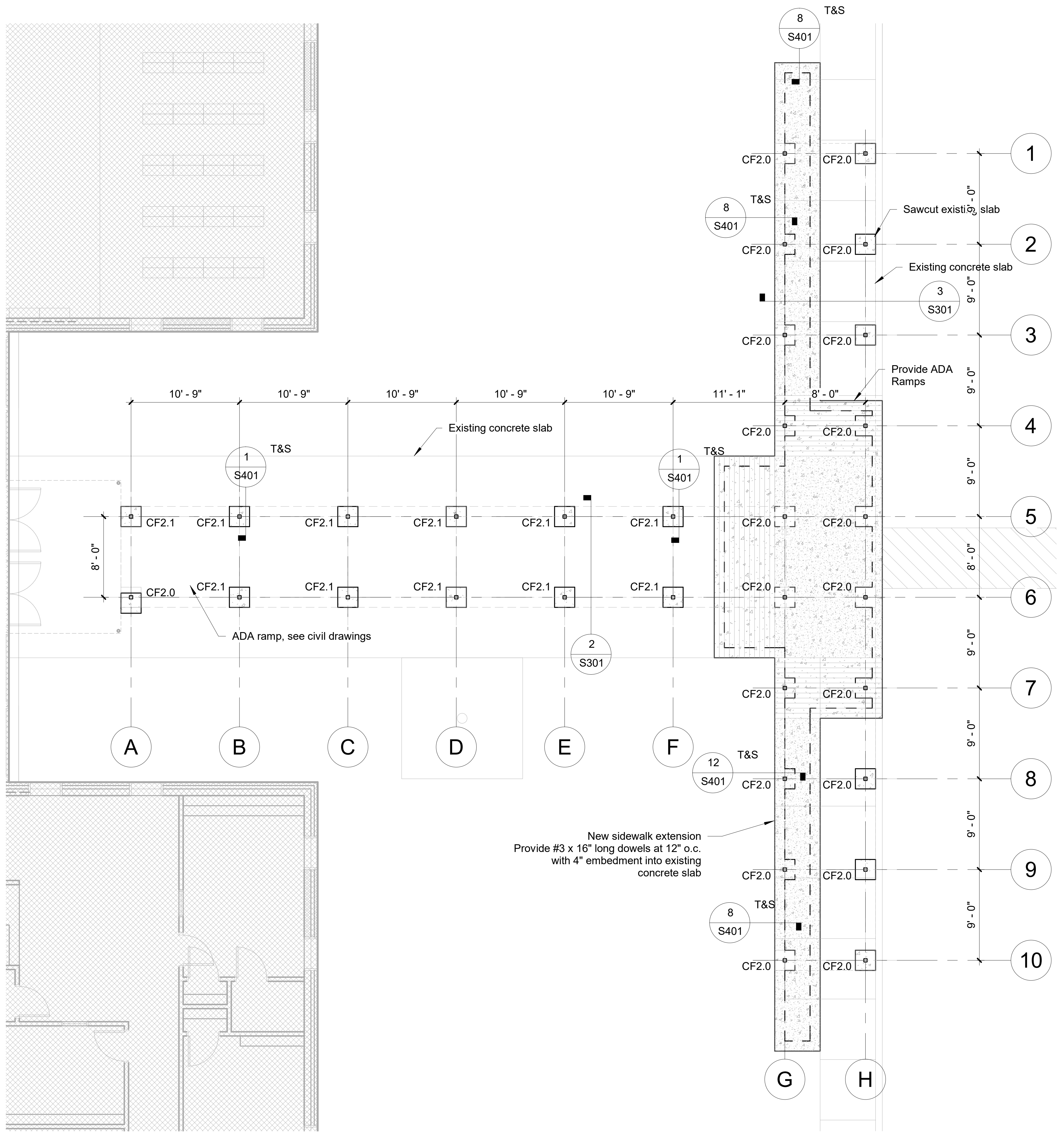

Foundation Plan 1
1/8" = 1'-0" S301 S201

Structural Foundation Schedule									
Type	Length	Width	Thickness	Elevation at Bottom	Reinforcing A Bar Quantity	Reinforcing A Bar Size	Reinforcing B Bar Quantity	Reinforcing B Bar Size
CF2.0	2' - 0"	2' - 0"	1' - 4"	-1' - 4"	3	4	3	4
CF2.1	2' - 0"	2' - 0"	2' - 0"	-2' - 0"	3	4	3	4

FOUNDATION NOTES

1. FOR GENERAL NOTES SEE SHEET S101 AND S102.
2. FOR TYPICAL DETAILS SEE SHEETS NUMBER S400
3. CONTRACTOR/SUBCONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANY WORK. THE CONTRACTOR AND OR SUBCONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT AND ENGINEER BEFORE THE WORK HAS BEGUN.
4. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS.
5. REFER TO ARCHITECTURAL PLANS FOR FLOOR DRAIN LOCATIONS.
6. SLOPE SLAB TO DRAINS, SEE ARCHITECTURAL PLANS FOR SLOPE.
7. REFER TO ARCHITECTURAL PLANS FOR FLOOR FINISHES. ENGINEER IS NOT RESPONSIBLE FOR TYPE OF FLOOR FINISHES.
8. PROVIDE SLAB CONTRACTION JOINTS PER TYPICAL DETAIL
9. THE TESTING LABORATORY SHALL BE THE OWNERS REPRESENTATIVE TO CONTROL THE PLACEMENT OF COMPACTED FILL. THE TESTING LABORATORY SHALL APPROVE THE SUBGRADE PREPARATION, THE FILL MATERIALS, THE METHOD OF PLACEMENT AND COMPACTION, AND COMPACTION, AND SHALL GIVE WRITTEN APPROVAL OF THE COMPLETED FILL. THE TESTING LABORATORY SHALL INDICATE ON THERE REPORT THE ELEVATION OF THE COMPACTED SUBGRADE.
10. ALL EARTHWORK AND GRADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING STUDY. THE MORE STRINGENT REQUIREMENTS BETWEEN THESE SUBGRADE NOTES AND GEOTECHNICAL ENGINEERING STUDY SHALL GOVERN AND EXECUTED BY THE CONTRACTOR.
11. IN THE EVENT FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
12. THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER.
13. THE FOUNDATION EXCAVATIONS SHOULD BE OBSERVED BY THE TESTING LABORATORY PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND ARE CONSISTENT WITH THE MATERIALS DISCUSSED IN THE STUDY. THIS IS ESPECIALLY IMPORTANT TO IDENTIFY THE ACCEPTABILITY OF THE SUBGRADE OR FILL MATERIAL UNDER THE FOOTING. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE FOOTING OR BEAM EXCAVATIONS SHOULD BE EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF COMPETENT SOIL AS DIRECTED BY THE TESTING LABORATORY. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHOULD BE BACKFILLED WITH LEAN CONCRETE OR SELECT FILL AS DETERMINED BY THE TESTING LABORATORY.
14. CARE SHOULD BE TAKEN TO SHAPE THE BUILDING AREAS SUCH THAT WATER WILL NOT POND AROUND THE STRUCTURE DURING CONSTRUCTION AND CAUSE THE NEAR SURFACE CLAYS TO SWELL. THE PROPOSED STRUCTURE SHALL BE ISOLATED FROM ANY MOISTURE SOURCE WHICH MIGHT ALSO CAUSE SWELLING OF THE CLAYS AFTER COMPLETION OF THE CONSTRUCTION.
15. WHEN THE STRUCTURE IS COMPLETE, THE GROUND SURFACE SHOULD SLOPE AWAY FROM THE STRUCTURE AND DOWN SPOUTS SHOULD CARRY RUNOFF WATER SEVERAL FEET FROM THE BUILDING, PREFERABLY INTO PAVED AREAS OR SEWERS, BEFORE DISCHARGING.
16. DO NOT PLANT, OR LEAVE IN PLACE, DEEP ROOTED TREES WITHIN CLOSE PROXIMITY TO THE PERIMETER OF THE STRUCTURE. DEEP ROOTED TREES HAVE POTENTIAL TO REMOVE MOISTURE FROM BENEATH THE BUILDING IF PLANTED CLOSE ENOUGH TO ALLOW THE ROOT BULB EXTEND NEAR OR BENEATH THE BUILDING.
17. AIR CONDITIONING CONDENSER DRAIN LINES TO DISCHARGE WATER A MINIMUM OF 5 FEET FROM THE PERIMETER OF THE STRUCTURE. THE DISCHARGE AREA SHALL HAVE SUFFICIENT SLOPE AWAY FROM THE STRUCTURE TO PREVENT STANDING WATER.
18. THE FINAL ONE (1) FOOT OF FILL OUTSIDE THE BUILDING AREA SHOULD CONSIST OF A COHESIVE CLAYEY (CL) SOIL. FILL CAN NOT BE ALLOWED TO DRY OUT DURING OR AFTER COMPACTION. (P1 BETWEEN 15 AND 25)
19. NOTE THAT SOME LEVELS OF RISK ARE ASSOCIATED WITH ALL FOUNDATION SYSTEMS AND THERE IS NO SUCH THING AS A "ZERO RISK" FOUNDATION. IT ALSO SHOULD BE NOTED THAT THE FOUNDATION PROVIDED IS NOT DESIGNED TO RESIST SOIL MOVEMENT AS A RESULT OF SEWER/PLUMBING LEAKS, EXCESSIVE IRRIGATION, NON UNIFORM IRRIGATION, POOR DRAINAGE, AND WATER PONDING NEAR THE FOUNDATION SYSTEM.
20. CONSTRUCTION FOLLOWING WET WEATHER PERIODS WILL LIKELY ENCOUNTER DIFFICULTIES DUE TO THE WET OR SOFT SURFACE SOILS BECOMING A GENERAL HINDRANCE TO EQUIPMENT DUE TO RUTTING AND PUMPING OF THE SOIL SURFACE. IF THE SUBGRADE CANNOT BE ADEQUATELY COMPACTED TO MINIMUM DENSITIES AS DESCRIBED ABOVE, ONE OF THE FOLLOWING MEASURES WILL BE REQUIRED:
    a) REMOVAL AND REPLACEMENT WITH SELECT FILL;
    b) CHEMICAL TREATMENT OF THE SOIL TO DRY SOIL AND INCREASE THE STABILITY OF THE SUBGRADE,
    c) DRYING BY NATURAL MEANS.

SLAB ON GRADE	
THICKNESS	4.0 INCHES
REINFORCING (EACH WAY)	#3 AT 12" O.C.
REINFORCING LOCATION	2" from top of slab
VISQUEEN	10 MIL
CONCRETE CHAIRS (NO PLASTIC CHAIRS ALLOWED)	3' O.C. EACH WAY

SUBGRADE PREPARATION

1. SITE PREPARATION

A. PREPARATION OF EXISTING GROUND

ALL AREAS TO SUPPORT SELECT FILL SHALL BE STRIPPED OF ALL VEGETATION AND/OR ORGANIC TOPSOIL:	6	INCHES
ADDITIONAL DEPTH OF REMOVAL:	*6	INCHES
EXTEND BEYOND BUILDING FOOT PRINT:	3	FEET
EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF:	9	INCHES
MOISTURE: (OPTIMUM MOISTURE CONTENT)	1 TO +3%	
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):	95%	

B. SELECT FILL MATERIAL

AMOUNT OF COMPACTED SELECT FILL:	12*	INCHES
NO ORGANIC OR OTHER PERISHABLE MATERIAL		
NO STONES LARGER THAN	2	INCHES

*FINISHED FLOOR SHALL BE AS INDICATED ON CIVIL DRAWINGS, INCREASE INDICATED AMOUNT OF FILL AS REQUIRED TO ACHIEVE MOST STRINGENT REQUIREMENT. INCREASE EXCAVATION AS REQUIRED TO MEET MINIMUM AMOUNT OF SELECT FILL

SELECT FILL SHALL MEET Tx DOT 2004 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES, ITEM 247 FLEXIBLE BASE, TYPE A, TYPE B, OR TYPE C GRADES I THROUGH 3

C. PLACING SELECT FILL

FILL LIFTS (LOOSE MEASURE, NOT EXCEEDING):	8	INCHES

D. COMPACTION OF SELECT FILL

MOISTURE: (OPTIMUM MOISTURE CONTENT)	2 TO +2
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):	95%

E. COMPACTION TESTING

ATTERBERG LIMITS (ONE AT A RATE OF):	5,000 CU. YDS.
COMPACTION (ONE TEST PER):	2,500 SQ. FT./ LIFT (MIN. OF 3 PER LIFT)

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Edinburg, Texas

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Foundation Plan

SHEET
S201

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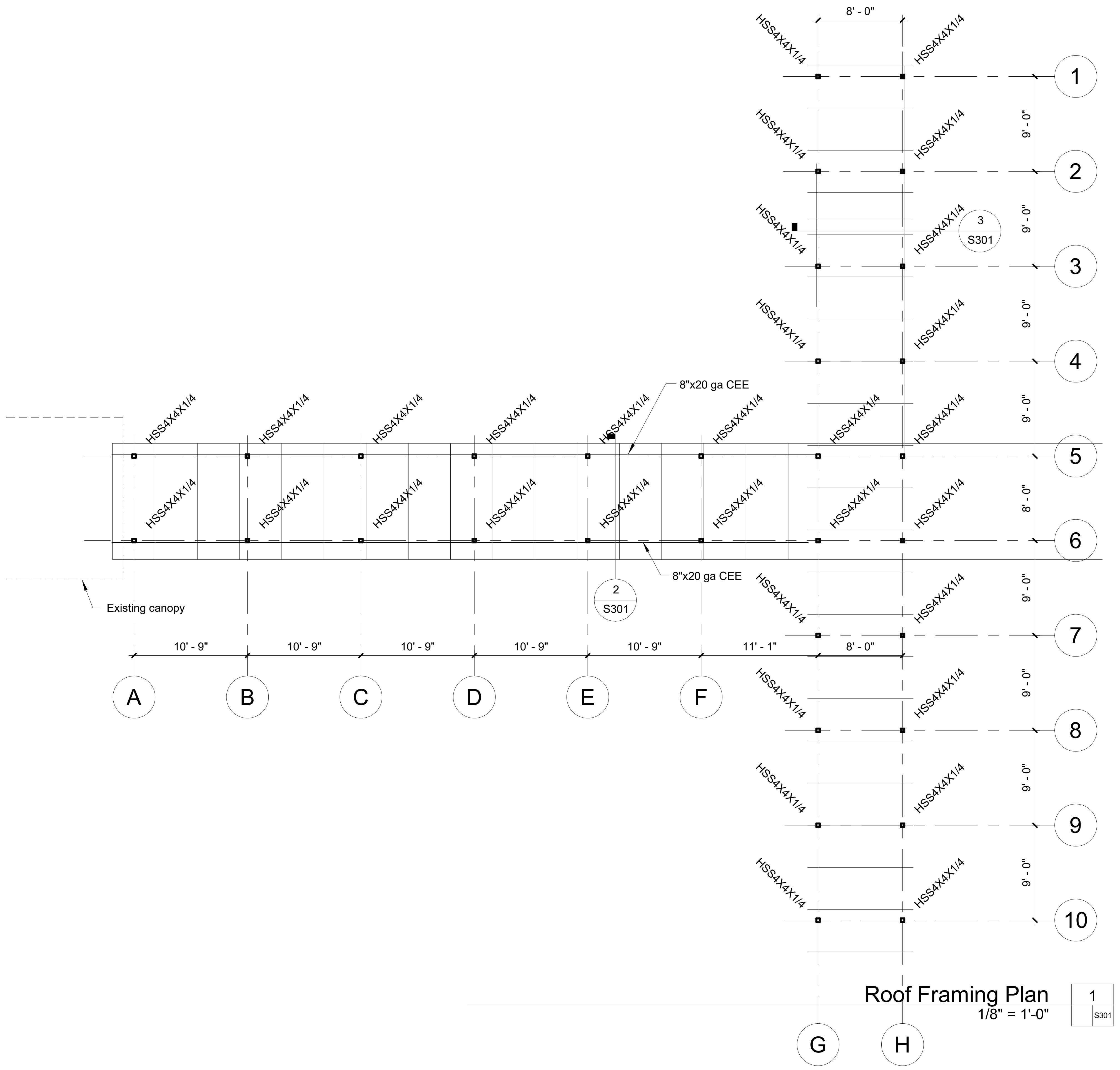
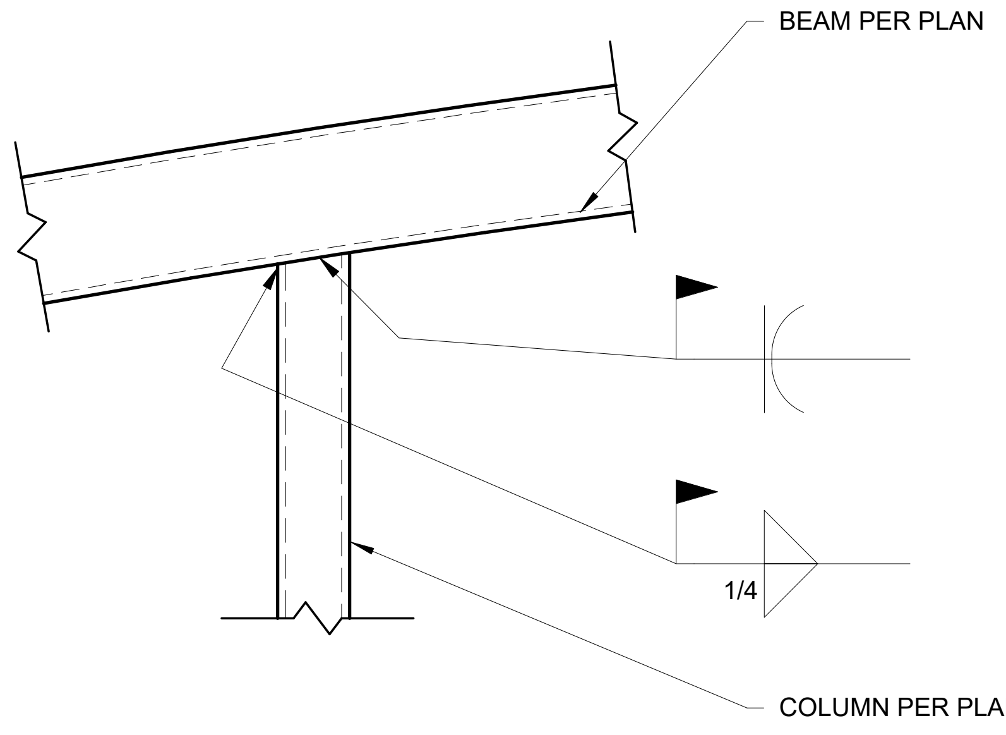


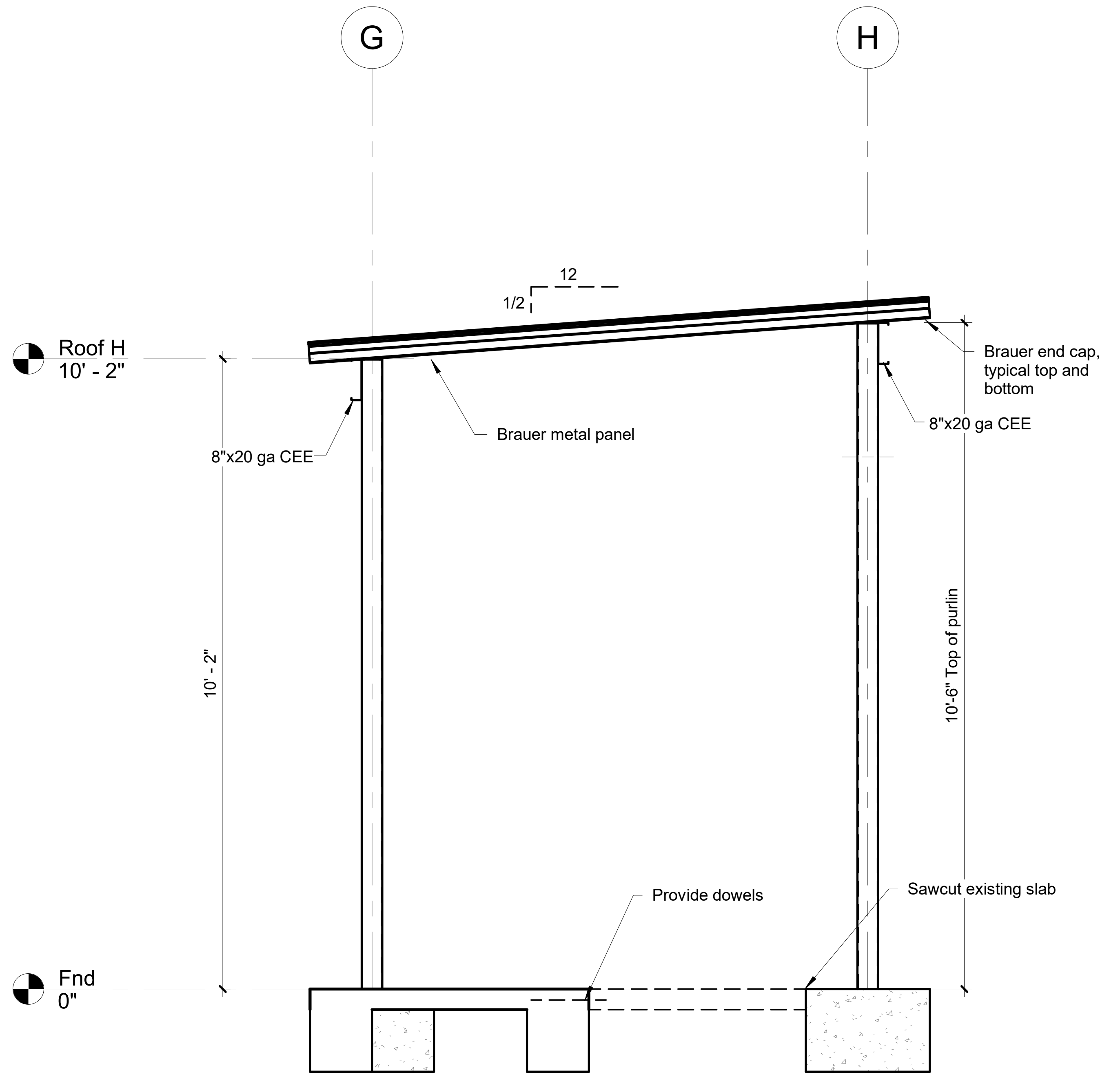
Roof Framing Plan

1
1/8" = 1'-0"
S301



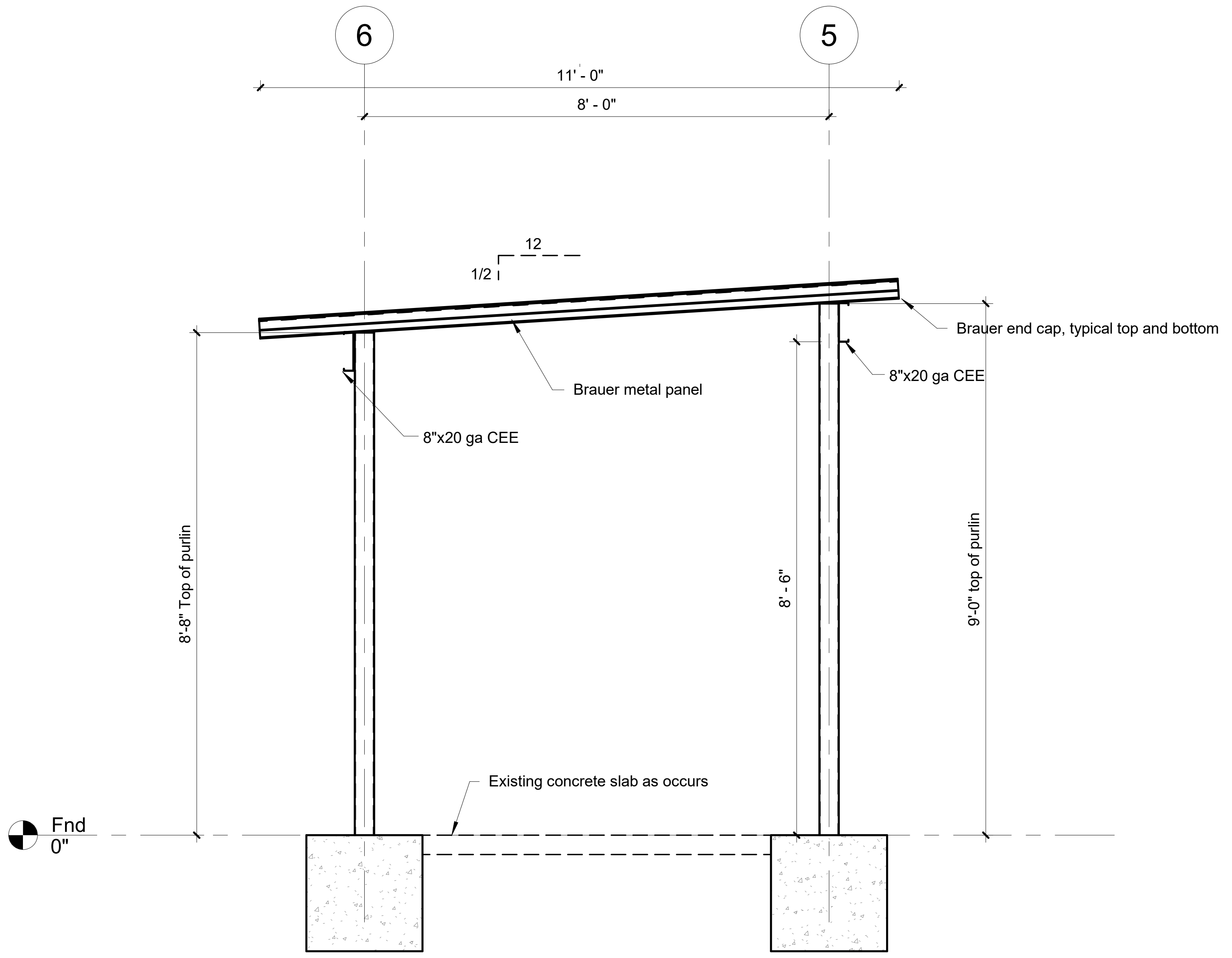
HSS Curved Beam to HSS Column

5
1" = 1'-0"
S301



Canopy Section High

3
1/2" = 1'-0"
S201 S301



Canopy Section

2
1/2" = 1'-0"
S201 S301

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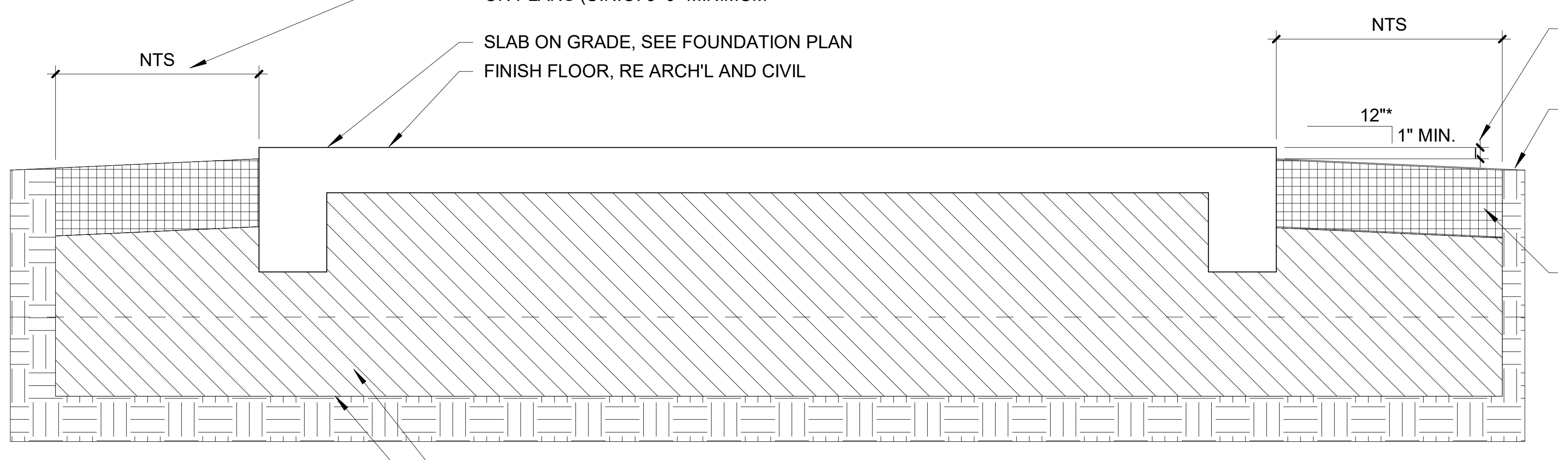
Roof Framing Plan

SHEET
S301

NOTE TO OWNER:
DRAINAGE OF THE SITE MUST BE MAINTAINED THROUGHOUT THE LIFE OF THE STRUCTURE. THE SOIL AT THIS SITE IS HIGHLY SENSITIVE TO CHANGE IN THE SOIL MOISTURE CONTENT AND WILL DAMAGE THE STRUCTURE IF THE MOISTURE CONTENT INCREASES OR DECREASES.

* INITIAL ROUGH GRADING SHALL BE COMPLETED w/ NATURAL CLAY MATERIALS (NO SAND ALLOWED) PRIOR TO FORM SETTING IT SHALL SLOPE 1"/ FOOT FOR THE FIRST 5', AND 6' MIN. IN 10' TO INSURE POSITIVE DRAINAGE AWAY FROM THE SLAB.

NOTE TO CONTRACTOR
PROVIDE PUMPS ON SITE AND REMOVE ANY WATER FROM THE SITE 100% OF THE TIME. STANDING WATER IN THE EXCAVATION AT ANYTIME, DAY OR NIGHT, IS UNACCEPTABLE.

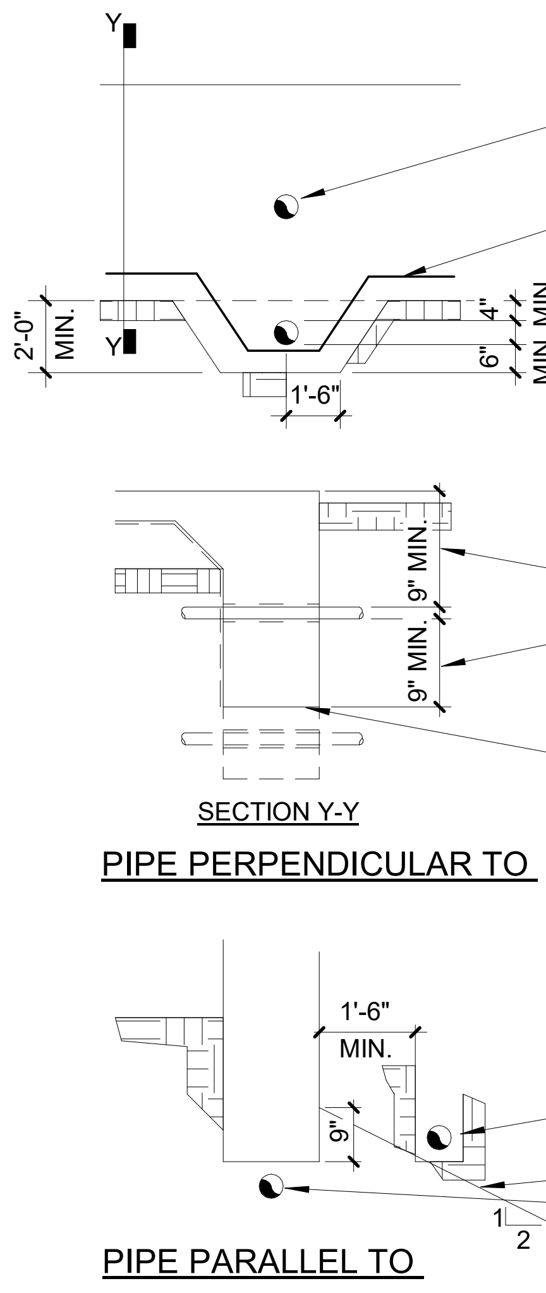


THE SUB GRADE SHALL BE PREPARED IN ACCORDANCE w/ GEOTECHNICAL REPORT RECOMMENDATIONS, THE TESTING LABORATORY SHALL TEST AND APPROVE THE MOISTURE AND DENSITY OF THE SUBGRADE PRIOR TO PLACEMENT OF ANY FILL MATERIAL.

Typical Building Subgrade Preparation

1" = 1'-0"

7 | S401

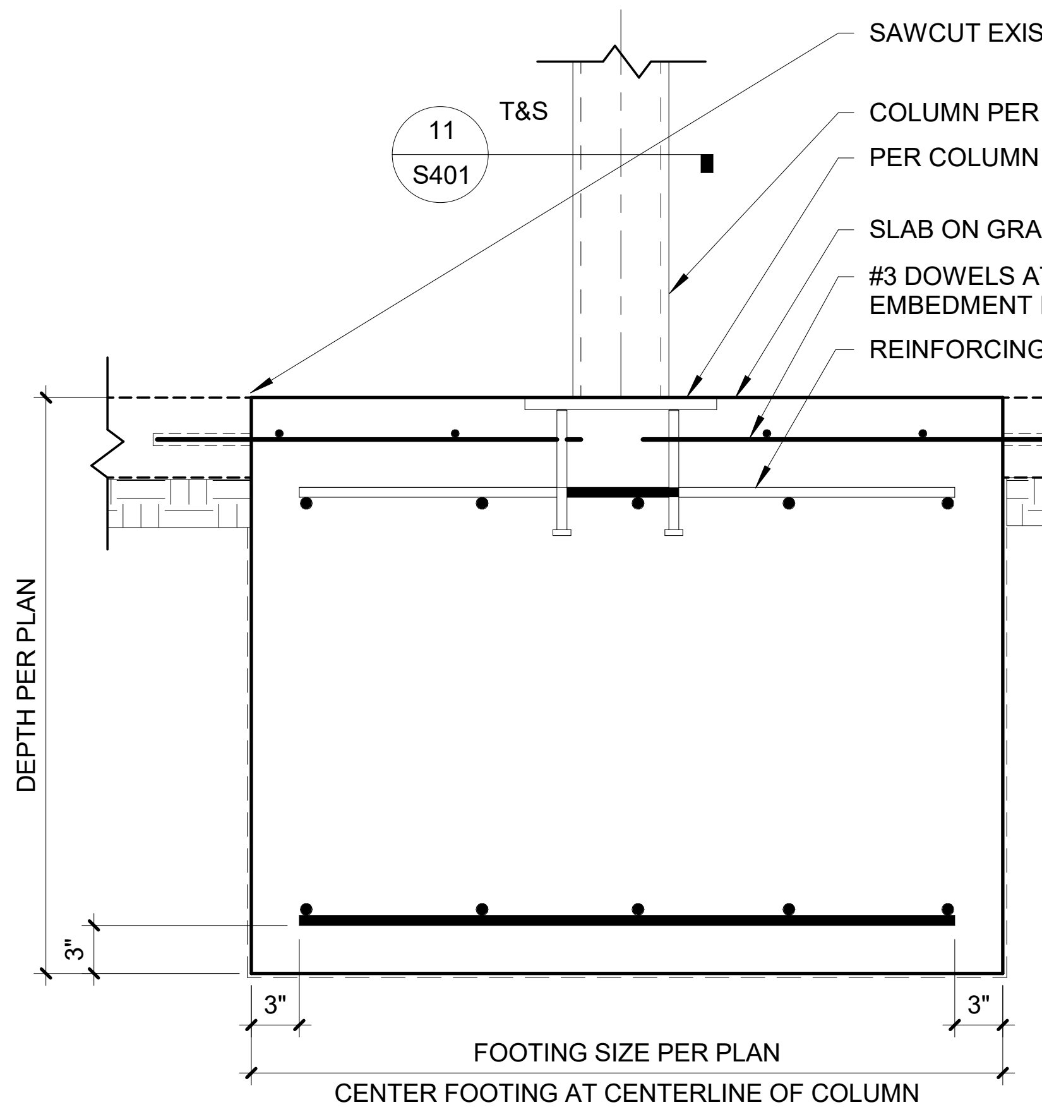


NOTE:
WHERE PIPES ARE MORE THAN 2'-O" BELOW BOTTOM OF FOOTING STEP FOOTING PER TYPICAL STEPPED WALL FOOTING DETAIL.

Typical Piping Through Footing

3/8" = 1'-0"

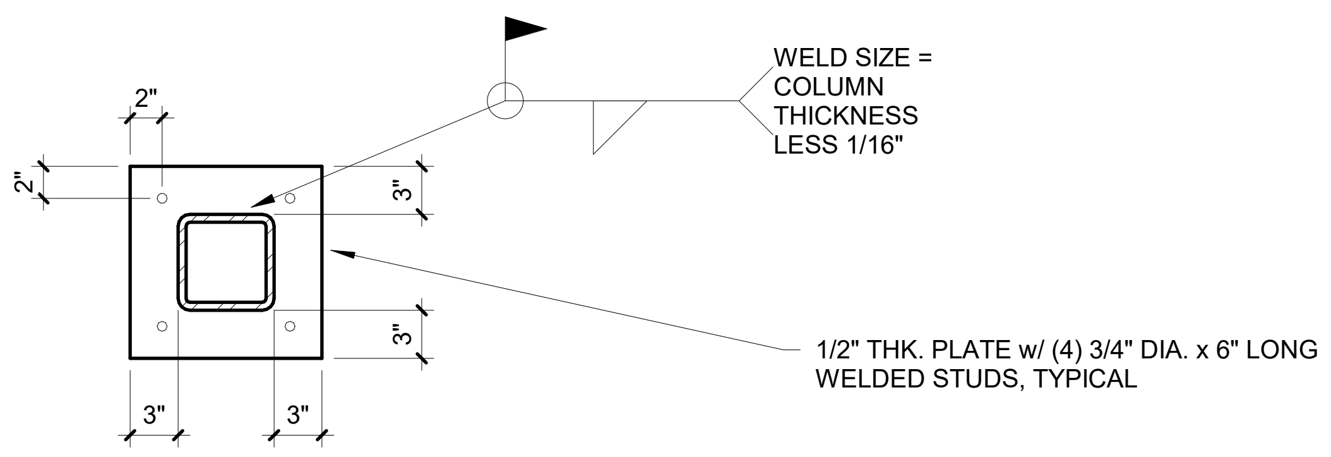
4 | S401



Footing at Interior Steel Column (E)

1" = 1'-0"

1 | S201 | S401

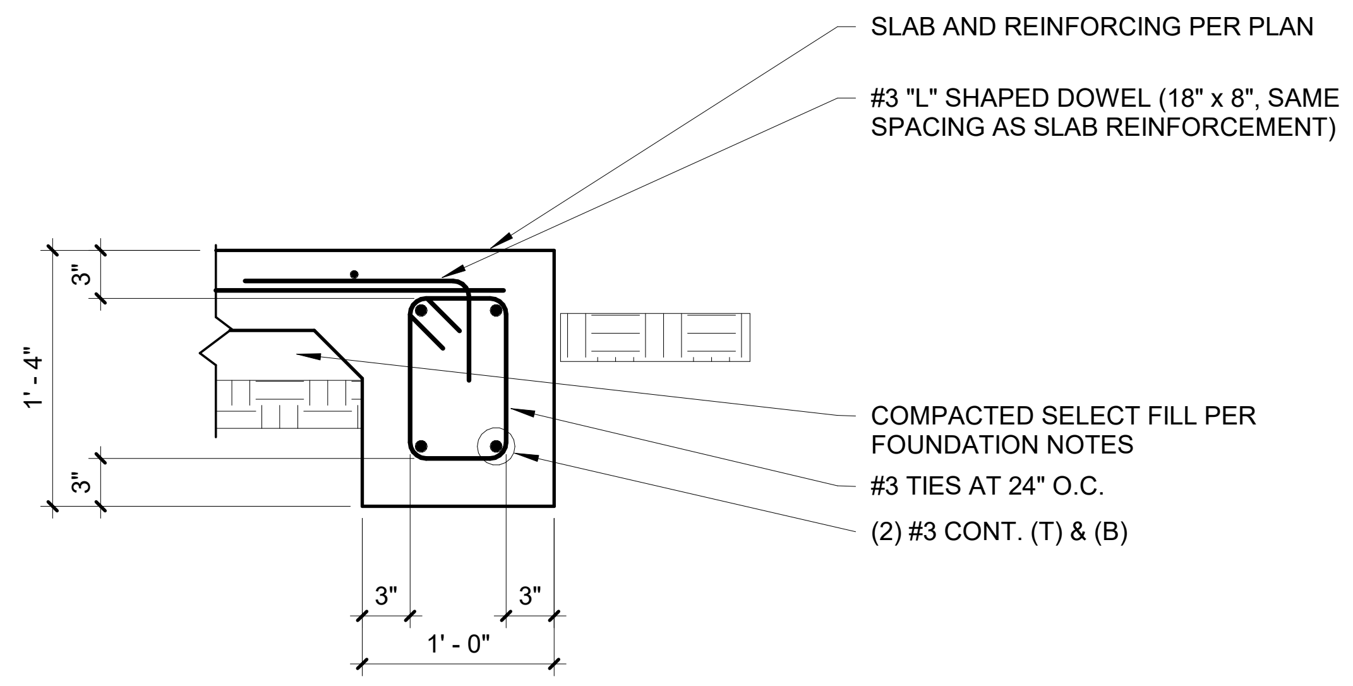


NOTES:
1. DIMENSIONS ARE FROM FACE OF PLATE TO FACE OF COLUMN
2 DIMENSIONS FOR WELDED STUDS ARE FROM FACE OF PLATE TO CENTERLINE OF STUD

Steel Column Base Plate

1" = 1'-0"

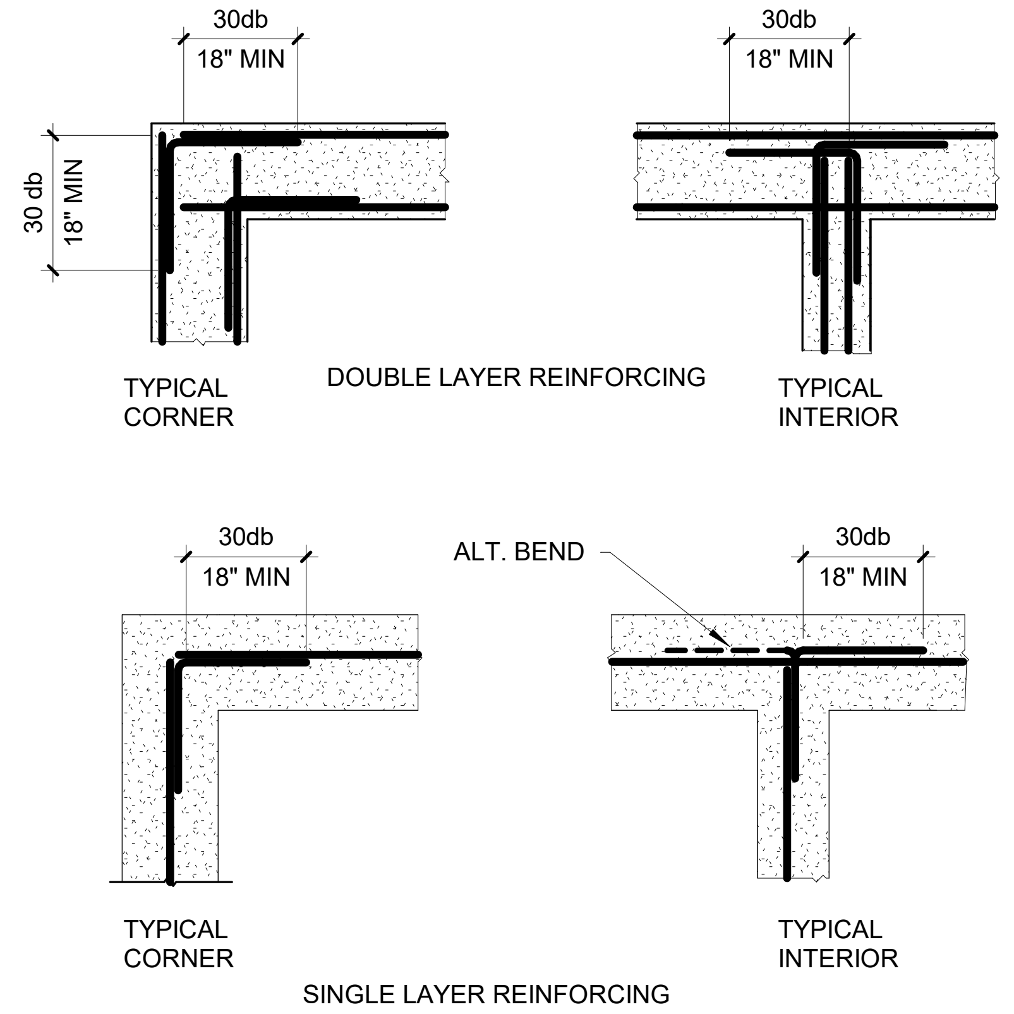
11 | S401 | S401



Footing at Exterior

1" = 1'-0"

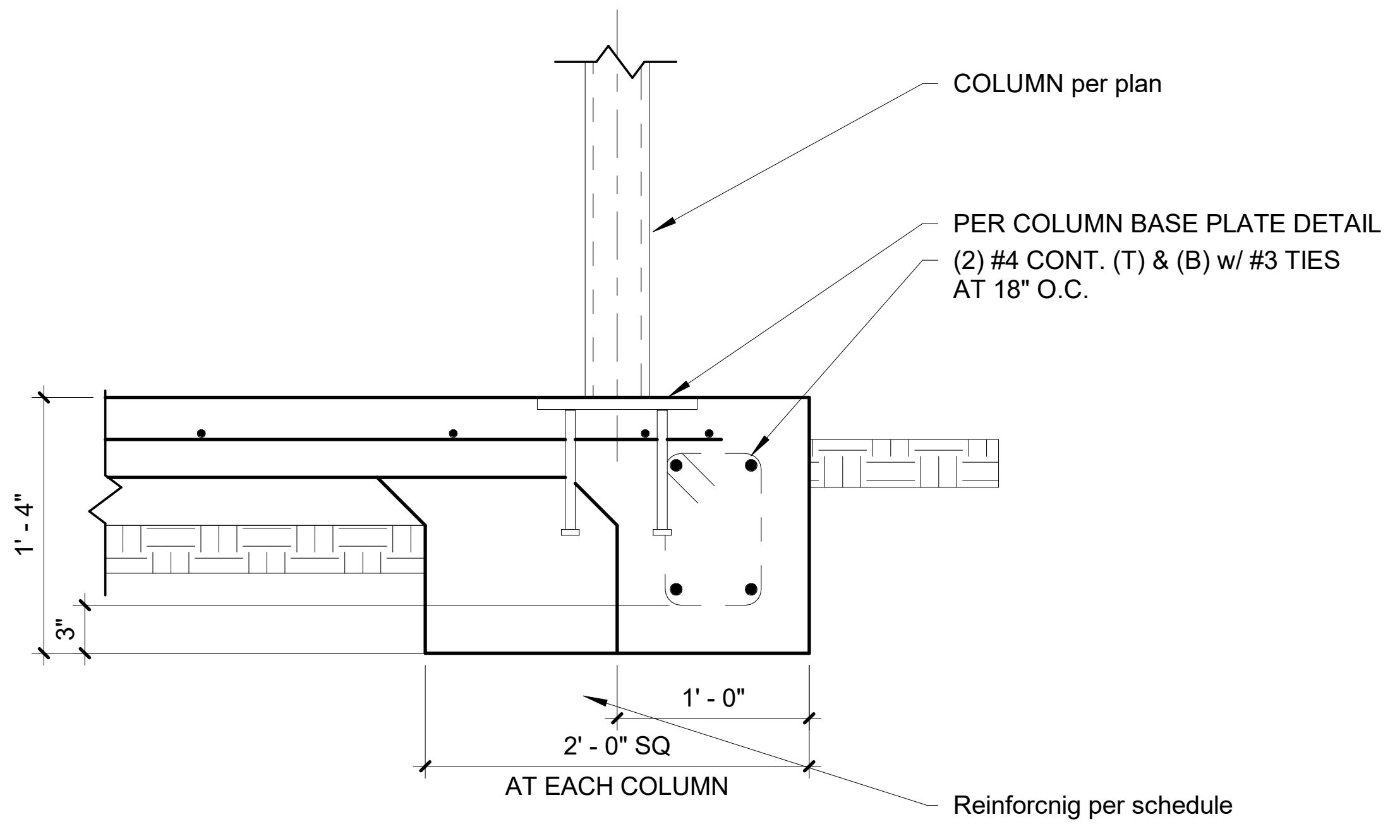
8 | S201 | S401



Typical Reinforcing at Concrete Intersections

1/4" = 1'-0"

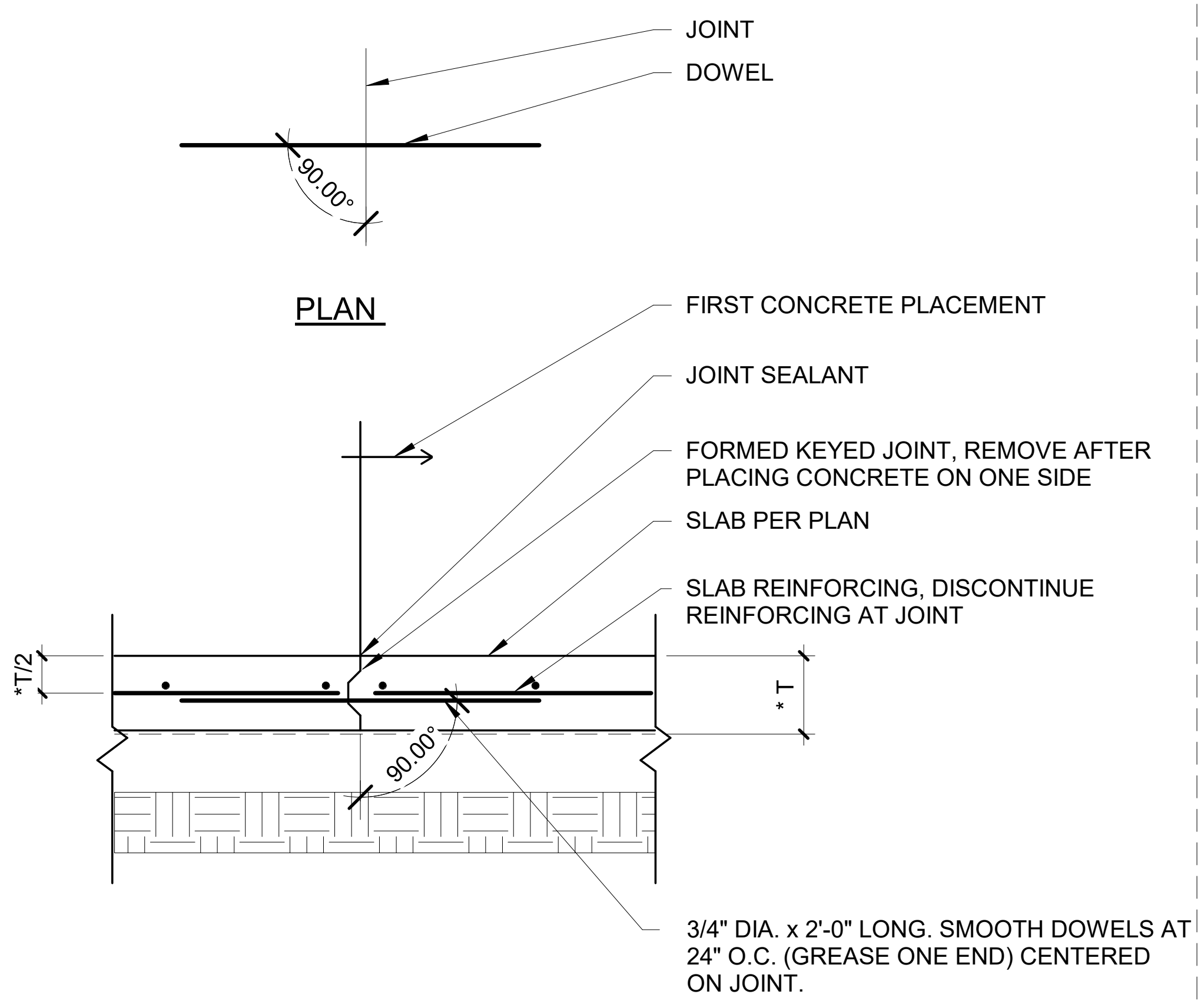
2 | S401



Footing at Exterior Steel Column, Canopy

1" = 1'-0"

12 | S201 | S401

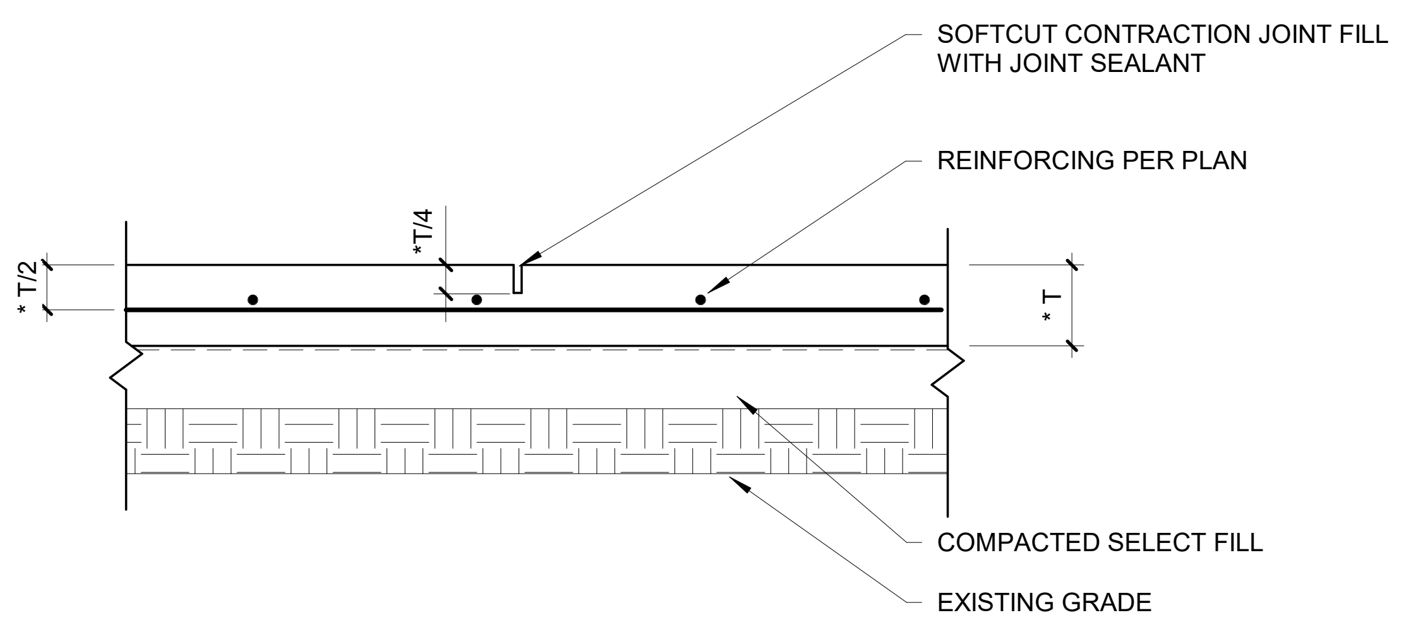


* T = THICKNESS PER PLAN

Typical Slab Construction Joint

1" = 1'-0"

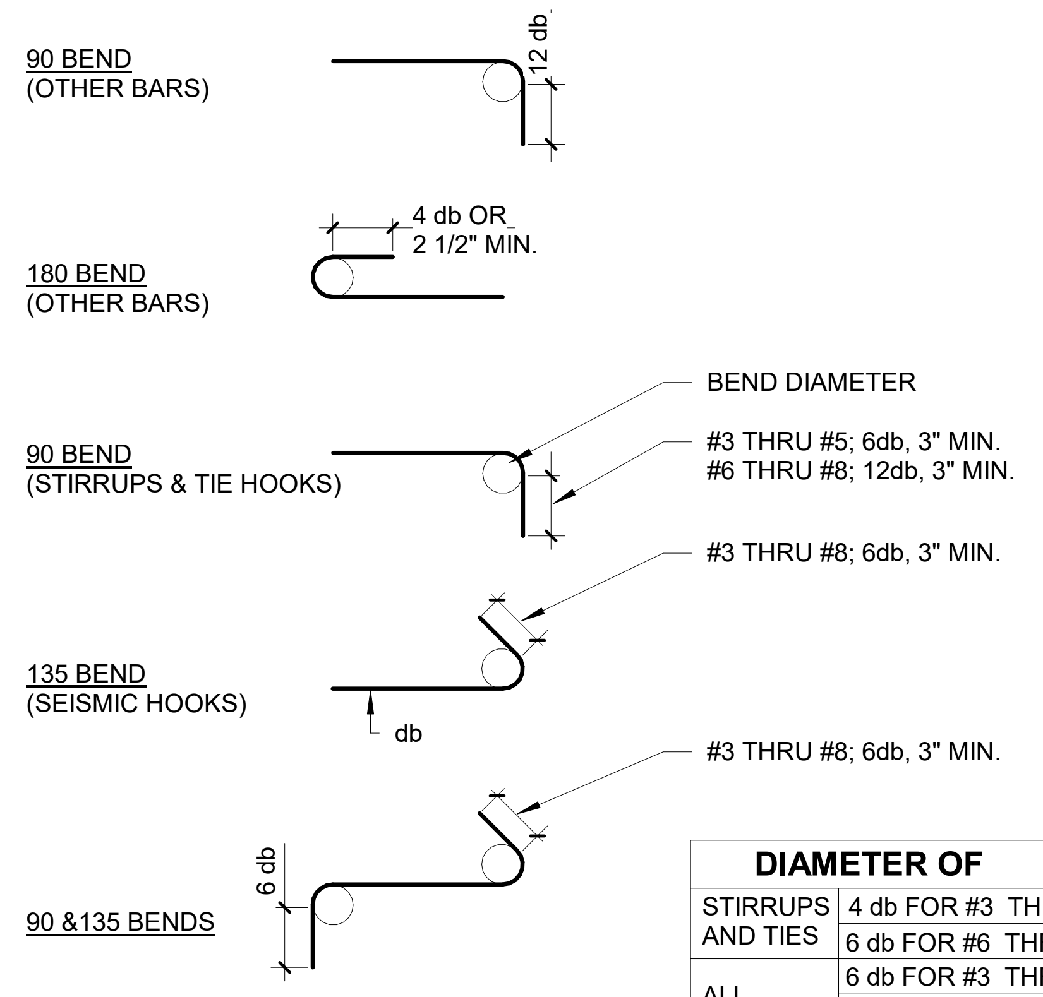
9 | S401



* T = THICKNESS PER PLAN AND GEOTECHNICAL REPORT

NOTES

1. SPACING SHALL NOT EXCEED 15 FEET.
2. JOINT PATTERN SHOULD BE NEARLY SQUARE.
3. SAW CUT SHALL BE MADE WITHIN 4 HOURS OF PLACEMENT (OR AS SOON AS SLAB SURFACE CAN BE WALKED UPON WITHOUT MARKING).
4. FILL SAW CUT FULL DEPTH WITH "SKQOUR S1" AFTER SLAB IS CURED (28 DAYS, MINIMUM)
5. THIS DETAIL TO BE USED ONLY IN THE ABSENCE OF ARCHITECTURAL INFORMATION FOR CONTRACTION JOINTS



DIAMETER OF	
STIRRUPS AND TIES	4 db FOR #3 THRU #5 BARS
	6 db FOR #6 THRU #8 BARS
ALL OTHERS	6 db FOR #3 THRU #8 BARS
	8 db FOR #9 THRU #11 BARS
	10 db FOR #14 THRU #18 BARS

Typical Reinforcing Bends

1/4" = 1'-0"

3 | S401

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Typical Concrete Details

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