

ABBREVIATIONS

SYMBOL	NUMBER	I	IN OTHER WORDS
()	INCH OR INCHES	IBC	INTERNATIONAL BUILDING CODE
()	FOOT OR FEET	ID	INSIDE DIAMETER
()	DEGREE	IN	INCH(ES)
C()	EQUAL	INCL	INCLUDED(YING), INCLUSIVE
CL	CHANNEL	INFO	INFORMATION
CL	CENTERLINE	INT	INTERIOR
HSS()	HOLLOW STRUCTURAL SECTION	ISO JT	ISOLATION JOINT
K()	OPEN WEB STEEL JOIST		
L()	ANGLE	J	
LL()	DOUBLE ANGLE	JB	JOIST BEARING
MC()	MISCELLANEOUS CHANNEL	JST	JOIST
S()	AMERICAN STANDARD SHAPE	JT	JOINT
W()	WIDE FLANGE		
WT()	STRUCTURAL TEE	K	
A		K	KIP(S)
A/E	ARCHITECT/ENGINEER	KB	KNEE BRACE
AB	ANCHOR BOLT	KCF	KIPS PER CUBIC FOOT
ABV	ABOVE	KLF	KIPS PER LINEAR FOOT
ACI	AMERICAN CONCRETE INSTITUTE	KSF	KIPS PER SQUARE FOOT
ADDL	ADDITIONAL	KSI	KIPS PER SQUARE INCH
AFF	ABOVE FINISH FLOOR	L	
AHU	AIR HANDLING UNIT	L	LENGTH
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	LB	LOAD
ALT	ALTERNATE	LG	LONG
APPROX	APPROXIMATE	LL	LIVE LOAD
ARCH	ARCHITECT OR ARCHITECTURAL(S)	LLH	LONG LEG HORIZONTAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LLO	LONG LEG OUTSTANDING
AT/FP	ANTI-TERRORISM/FORCE PROTECTION	LLV	LONG LEG VERTICAL
B		LONG	LONGITUDINAL
B/	BOTTOM OF	LP	LOW POINT
BF	BOTH FACES	ℓ	DEVELOPMENT LENGTH
BLDG	BUILDING	M	
BLK	BLOCK	MATL	MATERIAL
BM	BEAM	MAX	MAXIMUM
BOT	BOTTOM	MECH	MECHANICAL(S)
BP	BASE PLATE OR BEARING PLATE	MEP	MECHANICAL, ELECTRICAL, AND PLUMBING
BRG	BEARING	MFR	MANUFACTURER
BS	BOTH SIDES	MID	MIDDLE
BT	BET	MIN	MINIMUM
BTR	BETTER	MISC	MISCELLANEOUS
BTWN	BETWEEN	N	
C		N	NORTH
C-C	CENTER TO CENTER	NF	NEAR FACE
CF	CUBIC FOOT OR CUBIC FEET	NIC	NOT IN CONTRACT
CF3	COLD FORMED STEEL	NO	NUMBER
CHAM	CHAMFER	NS	NEAR SIDE
CIP	CAST IN PLACE	NTS	NOT TO SCALE
CJ	CONTROL JOINT/CONSTRUCTION JOINT	O	
CLR	CLEAR	OC	ON CENTER
CMU	CONCRETE MASONRY UNIT	OD	OUTSIDE DIAMETER
COL	COLUMN	OH	OVERHEAD
COMP	COMPOSITE	OHNG	OVERHANG
CONC	CONCRETE	OPNG	OPENING
CONN	CONNECTION	OPP (HAND)	OPPOSITE HAND
CONST	CONSTRUCTION	P	
CONT	CONTINUOUS	PC	PIER CAP
COORD	COORDINATE	PCF	POUNDS PER CUBIC FOOT
CRSI	CONCRETE REINFORCING STEEL INSTITUTE	PCI	POUNDS PER CUBIC INCH
D		PEN	PENETRATION
d	DISTANCE	PL	PLATE
DB	DECK BEARING	PLF	POUNDS PER LINEAR FOOT
db	BAR DIAMETER	PROJ	PROJECTION
DBE	DECK BEARING ELEVATION	PSF	POUNDS PER SQUARE FOOT
DBL	DOUBLE	PSI	POUNDS PER SQUARE INCH
DEV	DEVELOP	PVMT	PAVEMENT
DIA	DIAMETER	Q	
DIAG	DIAGONAL	QTY	QUANTITY
DIM	DIMENSION	R	
DL	DEAD LOAD	RAD	RADIUS OR RADII
DN	DOWN	RE	REFER TO
DT	DOUBLE TEE	REF	REFERENCE
DTL	DETAIL	REINF	REINFORCEMENT/REINFORCING
DWG(S)	DRAWING(S)	REQD	REQUIRED
DWL	DOWEL	REV	REVISION OR REVISE
E		ROT	ROTATE
(E)	EXISTING	RTU	ROOF TOP UNIT
EA	EACH	S	
EF	EACH FACE	SC	SLIP RIB
EL	ELEVATION	SCHED	SCHEDULE
ELEC	ELECTRICAL	SDI	STEEL DECK INSTITUTE
EMBED	EMBEDMENT	SECT	SECTION
ENGR	ENGINEER	SHT	SHEET
EOR	ENGINEER OF RECORD	SIM	SIMILAR
EOS	EDGE OF SLAB	SJ	SLAB CONTROL JOINT
EQUAL	EQUAL	SL	SLOPE(D) OR SLOPING
EQUIP	EQUIPMENT	SLO	SHORT LEG OUTSTANDING
EST	ESTIMATED(E/D)	SLV	SLEEVE
ET CETERA	ET CETERA	SOG	SLAB-ON-GRADE
EW	EACH WAY	SP	SPACE(S)
EXC	EXCAVATE OR EXCAVATION	SPEC	SPECIFICATIONS
EXIST	EXISTING	STD	STANDARD
EXP	EXPANSION	STIFF	STIFFEN
EXT	EXTERIOR	STL	STEEL
F		STRUCT	STRUCTURAL
FD	FLOOR DRAIN	SUB	SUBSTITUTE
FDN	FOUNDATION	T	
FF	FAR FACE	T	THICKNESS
FIN	FINISHED	T&B	TOP AND BOTTOM
FL	FLOOR	T&S	TEMPERATURE AND SHRINKAGE
FS	FAR SIDE	T/	TOP OF
FT	FOOT OR FEET	THD	THREAD(ED)
FTG	FOOTING	THK	THICKNESS
FULL PEN	FULL PENETRATION WELD	THRU	THROUGH
Fy	STEEL YIELD STRENGTH	TMS	THE MASONRY SOCIETY
G		TRANS	TRANSVERSE
GA	GAGE OR GAUGE	TYP	TYPICAL
GALV	GALVANIZED	U	
GB	GRADE BEAM	UNO	UNLESS NOTED OTHERWISE
GC	GENERAL CONTRACTOR	V	
GR	GRADE	VERT	VERTICAL
GSN	GENERAL STRUCTURAL NOTES	VIF	VERIFY IN FIELD
H		W	
Hef	EFFECTIVE EMBEDMENT	W	WIDTH
HORIZ	HORIZONTAL		
HP	HIGH POINT		
HSA	HEADED STUD ANCHOR		
HT	HEIGHT		

DESIGN CRITERIA

- GOVERNING BUILDING CODES
 - A. IBC 2015 INTERNATIONAL BUILDING CODE
 - B. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
 - C. UFC 1-200-01 GENERAL BUILDING REQUIREMENTS
 - D. UFC 3-301-01 STRUCTURAL LOAD DATA
 - E. UFC 3-310-04 SEISMIC DESIGN FOR BUILDINGS
 - F. UFC 4-010-01 DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS
 2. WIND DESIGN CRITERIA
 - A. ULTIMATE WIND SPEED (V_{ult}) 115 MPH
 - B. NOMINAL DESIGN WIND SPEED (V_{nom}) 89 MPH
 - C. EXPOSURE CATEGORY C
 - D. INTERNAL PRESSURE COEFFICIENT +1.0-1.8
 3. SEISMIC DESIGN CATEGORY
 - A. RISK CATEGORY II
 - B. SEISMIC IMPORTANCE FACTOR (I_h) 1.0
 - C. SITE CLASS D
 - D. SEISMIC DESIGN CATEGORY A
 - E. SHORT PERIOD SPECTRAL ACCELERATION (S_1) 0.06
 - F. ONE SECOND SPECTRAL ACCELERATION (S_2) 0.03
 - G. SHORT PERIOD RESPONSE ACCELERATION (S_{a1}) 0.064
 - H. ONE SECOND RESPONSE ACCELERATION (S_{a2}) 0.048
 - I. ANALYSIS METHOD ASCE 7-10 CHAPTER 11, SECTION 11.7
 4. DEAD LOADS
 - a. HIPPED ROOF 23 PSF
 - b. FLAT ROOF 25 PSF
 - B. MINIMUM (FOR UPLIFT) 6 PSF
 5. LIVE LOADS
 - A. ROOF 20 PSF (NON-REDUCIBLE)
 - B. DINING 100 PSF
 - C. OFFICE 50 PSF
 - D. PARTITIONS 15 PSF (APPLIED IN OFFICES ONLY)
 - E. VESTIBULE/CORRIDOR 100 PSF
 - F. MECHANICAL/ELECTRICAL/STORAGE 125 PSF
 6. SNOW LOADS
 - A. GROUND SNOW LOAD (P_g) 5 PSF
 - B. FLAT ROOF SNOW LOAD (P_f) 3.5 PSF
 - C. SLOPED ROOF SNOW LOAD (P_s) 3.5 PSF
 - D. SNOW IMPORTANCE FACTOR (I_h) 1.0
 - E. SNOW EXPOSURE FACTOR (C_e) 1.0
 - F. SNOW THERMAL FACTOR (C_t) 1.0
 - G. ADDITIONAL SNOW DRIFT AS PER APPLICABLE BUILDING CODE(S).
NOT TO EXCEED THE DESIGN LIVE LOADS OR CONSTRUCTION LOADS.
 7. FOUNDATION DESIGN CRITERIA
 - A. ALLOWABLE SKIN FRICTION FOR DRILLED PIERS 0.350 KSF (10 FEET AND BELOW)
 - B. ALLOWABLE END BEARING PRESSURE FOR DRILLED PIERS 12.2 KSF
 - C. SOIL DENSITY (ASSUMED) 120 PCF
 - D. MINIMUM GRADE BEAM DEPTH BELOW FINISHED GRADE 30 INCHES
 8. AT/FP DESIGN CRITERIA
 - A. MINIMUM STANDOFF DISTANCE 13 FT
 - B. CONVENTIONAL CONSTRUCTION STANDOFF DISTANCE 82 FT
 - C. STANDOFF DISTANCE TO CONTROLLED PERIMETER GREATER THAN 200 FT
 - D. ACTUAL STANDOFF DISTANCES RE: C-110
 - E. BUILDING CLASSIFICATION PRIMARY GATHERING
 - F. APPLICABLE LEVEL OF PROTECTION LOW
 - G. APPLICABLE EXPLOSIVE WEIGHT II
 - H. EXTERIOR WALL CONSTRUCTION NON-LOADBEARING METAL STUDS WITH BRICK VENEER
 - I. LOCATION PARKING AND ROADWAYS WITHIN A CONTROLLED PERIMETER

GENERAL

 1. THE CONSTRUCTION DOCUMENTS CONSIST OF THE DRAWINGS, PROJECT SPECIFICATIONS, ADDENDA ISSUED PRIOR TO EXECUTION OF THE CONTRACT, OTHER DOCUMENTS LISTED IN THE AGREEMENT AND MODIFICATIONS ISSUED VIA SUPPLEMENT INSTRUCTION.
 2. THE CONSTRUCTION DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IF CONFLICTING REQUIREMENTS ARE FOUND BETWEEN THE DRAWINGS, SPECIFICATIONS AND/OR THESE GENERAL STRUCTURAL NOTES, THE MORE STRINGENT PROVISION SHALL CONTROL UNLESS DIRECTED OTHERWISE IN WRITING BY THE STRUCTURAL ENGINEER.
 3. THE STRUCTURAL GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 4. METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND IMPLEMENTING THE NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
 5. TEMPORARY BRACING, SHEETING, SHORING, ETC. REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY/STABILITY OF EXISTING BUILDINGS, SIDEWALKS, UTILITIES, ETC. DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR.
 6. IMPLEMENTATION OF JOB SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
 7. SLEEVES OR BLOCK-OUTS REQUIRED FOR PASSAGE OF DUCTWORK, PIPING, DRAINS, CONDUIT, ETC. IN ADDITION TO ANCHORS AND HANGERS REQUIRED FOR EQUIPMENT AND PIPING AND UNDER-SLAB UTILITIES ARE NOT SPECIFICALLY, NOR GENERALLY, INDICATED ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING SUCH REQUIREMENTS PRIOR TO FABRICATION OR ERECTION OF THE STRUCTURE. PENETRATIONS OF STRUCTURAL MEMBERS ARE SUBJECT TO APPROVAL BY THE ENGINEER.
 8. DIMENSIONS AND INSTALLATION DETAILS OF PURCHASED EQUIPMENT MUST BE VERIFIED AND COORDINATED WITH THE SUPPORTING STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING SUCH REQUIREMENTS FROM SUBCONTRACTORS AND EQUIPMENT SUPPLIERS ALONG WITH COORDINATING THE LOCATIONS AND DETAILS FOR THESE ITEMS PRIOR TO FABRICATION OR ERECTION OF THE SUPPORTING STRUCTURE. ADDITIONAL FRAMING MAY BE REQUIRED FOR THE PROPER SUPPORT OF SUCH UNITS AND/OR EQUIPMENT. LATERAL SUPPORT FOR THE EQUIPMENT SHALL BE PROVIDED BY THE EQUIPMENT INSTALLER. ANY CONFLICTS BETWEEN THESE ITEMS AND THE BUILDING STRUCTURE IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
 9. THE STRUCTURAL DRAWINGS GOVERN THE WORK FOR STRUCTURAL FEATURES, UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ON PLANS AND DETAILS ARE TO GOVERN THE STRUCTURAL WORK. THE CONTRACTOR IS TO REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND DETAILS NOT PROVIDED. DIMENSIONAL CONFLICTS IN THE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 10. WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATIONS, IS TO BE REPEATED.
 11. EXISTING BUILDING INFORMATION SHOWN IS BASED UPON EXISTING BUILDING DOCUMENTS AND/OR FROM FIELD OBSERVATION. THE INFORMATION CONTAINED HEREIN MAY REQUIRE ADJUSTMENTS AND/OR MODIFICATIONS TO CONFORM TO EXISTING CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, ETC) AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT.
 12. DETAILS DESIGNATED AS "TYPICAL DETAILS," APPLY GENERALLY TO THE DRAWINGS IN AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS.
 13. SHOP DRAWINGS:
 - A. SHOP DRAWINGS FOR ALL MATERIALS ARE TO BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE START OF FABRICATION OR COMMENCEMENT OF WORK PER THE PROJECT SPECIFICATIONS.

GENERAL

- B. SHOP DRAWINGS MUST BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION. THE CONTRACTOR'S STAMP OF APPROVAL WILL CONSTITUTE CERTIFICATION THAT HE HAS VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.
SHOP DRAWINGS SHALL BE ORIGINAL DRAWINGS, PREPARED BY CONTRACTOR, SUBCONTRACTOR, SUPPLIER OR DISTRIBUTOR. REPRODUCTION OF STRUCTURAL CONSTRUCTION DOCUMENTS AS ERECTION PLANS OR DETAILS WILL NOT BE PERMITTED AND WILL BE REJECTED WITHOUT REVIEW.
- C. CHANGES TO SHOP DRAWINGS THAT ARE RE-SUBMITTED MUST BE CLOUDED OR SOMEHOW INDICATE THAT A CHANGE HAS BEEN MADE TO PREVIOUSLY ISSUED AND REVIEWED DRAWING.
- D. THE CONTRACTOR IS TO PROVIDE THE ENGINEER WITH WRITTEN NOTICE OF DEVIATIONS OF ANY TYPE FROM THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE NOTICE MUST BE RECEIVED PRIOR TO SHOP DRAWING SUBMITTAL. THE CONTRACTOR REMAINS LIABLE FOR ANY DEVIATION UNLESS REVIEWED BY THE ENGINEER AND ACKNOWLEDGED IN WRITING, PRIOR TO THE RECEIPT OF THE SHOP DRAWINGS.
14. THE GENERAL CONTRACTOR SHALL REPORT PROGRESS OF WORK TO ENGINEER OF RECORD.
15. THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE OVER SHOP DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.
16. INSPECTION, TESTING, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNING BUILDING CODES AND REFERENCED STANDARDS. ASTM, ASCE, IBC, UFC AND OTHER STANDARDS SHALL BE PER THE EDITIONS INDICATED IN THE IBC, OR AS AMENDED TO LATEST DATE IF NOT SO INDICATED.
17. COORDINATE ANY CONSTRUCTION SITUATION NOT COVERED BY THESE PLANS, GENERAL NOTES, OR SPECIFICATIONS WITH THE ENGINEER OF RECORD.
18. NON-BEARING INTERIOR WALLS SHALL BE ADEQUATELY BRACED TO THE STRUCTURE ABOVE WITH ALLOWANCE FOR DEFLECTION OF THE STRUCTURE ABOVE AND/OR BELOW.
19. OBSERVATION VISITS TO THE SITE BY REPRESENTATIVES OF THE ENGINEER OF RECORD SHALL NOT BE CONSTRUED AS INSPECTION OR APPROVAL OF CONSTRUCTION.

FOUNDATION

- GEOTECHNICAL REPORT: A SUBSURFACE ENGINEERING SERVICES REPORT FOR THE CRESSMAN DINING FACILITY EXPANSION, GOWDOWELL AFB FORCE BASE, TEXAS, WERE PERFORMED BY SKG ENGINEERING, LLC IN THEIR GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT DATED APRIL 23, 2018, FILE NUMBER 18-E-0427.
2. SITE SUB-GRADE PREPARATION:
- A. STRIPPING: SITE PREPARATION FOR THE BUILDING PAD SHALL INCLUDE REMOVING ANY SOFT OR UNSUITABLE MATERIALS ENCOUNTERED DURING CONSTRUCTION. VEGETATION ROOTS, PAVEMENT, UTILITIES GRAVEL, FOOTINGS, SLABS, AND ANY TOPSOIL WILL REQUIRE REMOVAL DURING INITIAL SITE STRIPPING. REMOVAL DEPTHS SHALL BE DETERMINED BY A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE.
 - B. PROOF-ROLLING: AFTER MAKING ANY REQUIRED CUTS, THE BUILDING PAD SHALL BE PROOF-ROLLED UNDER OBSERVATION OF A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE(S) WITH A TWENTY-FIVE (25) TON LOADED, TANDEM AXLE DUMP TRUCK TO LOCATE ANY SOFT OVERLAPPING PASSES IN MUTUALLY PERPENDICULAR DIRECTIONS. SOILS IN AREAS WHERE RUTTING (DEFLECTION GREATER THAN 1 INCH) OR PUMPING OCCURS DURING PROOF-ROLLING SHALL BE OVER EXCAVATED, MOISTURE CONDITIONED AND REPLACED WITH PROPERLY COMPACTED LOW VOLUME CHANGE SOILS.
 - C. ACCEPTABLE FILL: THE IN-SITU SOILS ARE NOT SUITABLE FOR USE AS STRUCTURAL FILL. STRUCTURAL FILL MATERIALS SHALL BE FREE OF ORGANIC OR OTHER DELETERIOUS MATTER AND BE A LOW VOLUME CHANGE SOIL OF COHESIVE MATERIALS HAVING A LIQUID LIMIT OF LESS THAN 40 AND A PLASTICITY INDEX BETWEEN 6 AND 14 WITH GRADATION AS SPECIFIED IN THE GEOTECHNICAL REPORT. BASE CONSISTING OF T&OT TYPE A, GRADE 2 LIMESTONE IS AN ACCEPTABLE ENGINEERED FILL. BLENDED MATERIALS UTILIZED FOR ENGINEERED FILL WILL HAVE TO MEET GEOTECHNICAL SPECIFICATIONS AND APPROVAL.
 - D. SITE DRAINAGE: THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE AREAS OF EXCAVATION DURING CONSTRUCTION TO PREVENT PONDING UNDER FUTURE FLOOR SLABS AND FOOTINGS. THE CONTRACTOR SHALL PROVIDE POSITIVE CUTOFF IN UTILITY TRENCHES AS REQUIRED PREVENTING WATER MIGRATION INTO THE AREAS OF EXCAVATION AND FUTURE FLOOR SLABS AND FOOTINGS.
 - E. MAINTENANCE OF SOIL MOISTURE: SOIL MOISTURE SHALL BE MAINTAINED UP UNTIL CONCRETE PLACEMENT TO PREVENT SHRINKAGE AND SUBSEQUENT POST-CONSTRUCTION SWELL OF SUBGRADE SOILS.
3. BUILDING FOUNDATIONS
- A. DRILLED PIERS:
 - a. PIER DESIGN PARAMETERS: DRILLED PIERS HAVE BEEN DESIGNED FOR A MAXIMUM ALLOWABLE END BEARING PRESSURE PER THE DESIGN CRITERIA AT A MINIMUM PENETRATION INTO BEARING STRATUM OF TWO FEET OR ONE (1) PIER DIAMETER, WHICHEVER IS DEEPER. MAXIMUM ALLOWABLE SKIN FRICTION CAPACITY IS PER THE DESIGN CRITERIA. FOR THE PART OF THE PIER THAT PENETRATES THE CLAYEY SAND, ALLOWABLE SKIN FRICTION WAS NOT USED. DESIGN UPLIFT FORCES ARE RESISTED BY AN ALLOWANCE FOR PIER WEIGHT AND THE DEAD LOAD OF THE STRUCTURE.
- 1

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FOUNDATION



guernsey

- ## FOUNDATION
- c. EARTH FORMING: GRADE BEAMS ARE DETAILED IN THE DRAWINGS AS BEING MATERIAL-FORMED. EARTH-FORMING IS NOT ALLOWED.
4. **STRUCTURAL SLAB CONSTRUCTION:**
- A. **SLAB THICKNESS AND REINFORCING:** STRUCTURAL SLABS MUST BE OF THICKNESS AND REINFORCED AS INDICATED ON DRAWINGS. REINFORCING BARS SHALL BE PLACED AT MID-DEPTH OF SLAB AND AS INDICATED IN THE CONCRETE COVER SCHEDULE USING CHAIRS OR SLAB BOLSTERS COMPLYING WITH CRSI'S "MANUAL OF STANDARD PRACTICE".
- B. **CONSTRUCTION MONITORING:** CONSTRUCTION ACTIVITY MAY CAUSE DAMAGE AND DETERIORATION TO THE PREPARED SUBGRADE. A FIELD REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHALL OBSERVE THE FINAL SUBGRADE PRIOR TO PLACEMENT OF THE SLAB-ON-GRADE. PERFORM FURTHER TESTING AS NECESSARY, AND DETERMINE IF ANY REMEDIAL MEASURES ARE NECESSARY PRIOR TO SLAB PLACEMENT.
- C. **VAPOR RETARDER:** A VAPOR RETARDER SHALL BE PLACED IMMEDIATELY BELOW THE CONCRETE SLAB. VAPOR RETARDER SHALL BE SEALED TO PREVIOUSLY PLACED CONCRETE AS RECOMMEND BY VAPOR RETARDER MANUFACTURER. BEFORE PLACING CONCRETE, PATCH AND SEAL ANY RIPS, TEARS, OR HOLES IN VAPOR RETARDER INCURRED DURING CONSTRUCTION.
- D. **VOID FORMS:** VOID FORMS SHALL BE CONSTRUCTED OF BIODEGRADABLE PAPER SURFACE, TREATED FOR MOISTURE RESISTANCE, AND STRUCTURALLY SUFFICIENT TO SUPPORT WEIGHT OF PLASTIC CONCRETE AND OTHER SUPER IMPOSED LOADS.
- E. **CURING OF SLAB:** CONCRETE SLABS SHALL BE CURED BY METHOD COMPATIBLE WITH SPECIFIED FLOOR FINISH. WHERE ACCEPTABLE USE A LIQUID MEMBRANE-CURING COMPOUND AT THE MANUFACTURER'S RECOMMEND COVERAGE. STRUCTURAL SLABS SHALL BE WATER CURED FOR A MINIMUM OF 7 DAYS OF PONDING, SPRAYING, SPRINKLING OR BY USE OF SATURATED COVERINGS.
- F. **ISOLATION JOINTS:** PROVIDE SLAB ISOLATION AROUND COLUMNS PENETRATING THE SLAB-ON-GRADE. PROVIDE 30# FELT AROUND PERIMETER OF ISOLATION JOINTS. REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
- G. **SLAB CONSTRUCTION JOINTS:** PLACE SLAB CONSTRUCTION JOINT AT ONE-THIRD OF SLAB SPAN AND PARALLEL TO SLAB SPAN AS REQUIRED FOR MEANS AND METHODS OF CONSTRUCTION. CONFORM TO ACI REQUIREMENTS. SUBMIT CONSTRUCTION JOINT PLAN TO EOR FOR REVIEW PRIOR TO PLACING CONCRETE.
- H. SEE ARCHITECTURAL AND/OR CIVIL FOR EXTERIOR SLABS-ON-GRADE, TYPICAL UNLESS NOTED OTHERWISE.
5. **MISCELLANEOUS:**
- A. **GROUNDWATER CONDITIONS:** GROUNDWATER WAS NOT ENCOUNTERED IN THE BORINGS AT THE TIME OF DRILLING. HOWEVER, IT IS POSSIBLE THAT TRANSIENT OVER-SATURATED GROUND CONDITIONS COULD DEVELOP AT SHALLOWER DEPTHS AT A LATER TIME DUE TO PERIODS OF HEAVY PRECIPITATION, LANDSCAPE WATERING, LEAKING WATER LINES, OR OTHER UNFORESEEN CAUSES. THE CONTRACTOR SHALL DETERMINE THE ACTUAL GROUNDWATER LEVELS AT TIME OF CONSTRUCTION. IF GROUNDWATER ISSUES ARE ENCOUNTERED DURING CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED.
- B. **DRAINAGE CONSIDERATIONS:** DUE TO ADVERSE EFFECT ON STRUCTURES, WATER SHALL NOT BE ALLOWED TO COLLECT IN THE FOUNDATION EXCAVATION OR ON PREPARED SUBGRADE OF THE CONSTRUCTION AREA EITHER DURING OR AFTER CONSTRUCTION. UNDERCUT OR EXCAVATED AREAS SHALL BE SLOPED TOWARD ONE CORNER TO FACILITATE REMOVAL OF ANY COLLECTED RAINWATER, OR POSITIVE RUNOFF SHALL BE PROVIDED. THE CONTRACTOR SHALL EXERCISE CARE IN CREATING DRAINAGE PATHS FOR WATER DURING THE CONSTRUCTION PHASE OF THE PROJECT. TO REDUCE INFILTRATION OF SURFACE WATER AROUND THE PERIMETER OF THE BUILDING AND BENEATH THE FLOOR SLABS, POSITIVE DRAINAGE SHALL BE PROVIDED DURING ALL PHASES OF CONSTRUCTION.
- C. **EXCAVATION AND TEMPORARY SLOPES:** THE CONTRACTOR, DESIGNATED AS "RESPONSIBLE PERSON" IN OSHA CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926, IS SOLELY RESPONSIBLE FOR PLANNING AND IMPLEMENTING ALL SAFETY PROCEDURES. ALL EXCAVATION HEIGHT, SLOPE, AND DEPTH MUST ADHERE TO ALL SPECIFICATIONS OUTLINED IN LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS. GUERNSEY DOES NOT ASSUME ANY RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY OR ANY PARTYS, INCLUDING THE CONTRACTORS, COMPLIANCE WITH THE APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS OR ANY OTHER APPLICABLE REGULATIONS.
- D. **TRENCH BACKFILL:** ALL REQUIRED TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED IN LAYERS TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. SOME SETTLEMENT OF THE BACKFILL MAY BE EXPECTED AND ANY UTILITIES WITHIN THE TRENCHES SHALL BE CONSTRUCTED TO ALLOW THESE DIFFERENTIAL MOVEMENTS.
- E. **CONSTRUCTION MONITORING:** A GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE OBSERVATIONS AND TESTING OF SOILS EXPOSED DURING PROJECT CONSTRUCTION IN ORDER TO VERIFY THAT SOIL CONDITIONS ARE AS ANTICIPATED. CONSTRUCTION ACTIVITIES PERTAINING TO EARTHWORK, FOUNDATIONS, AND OTHER RELATED ACTIVITIES SHALL ALSO BE OBSERVED BY THE GEOTECHNICAL ENGINEER'S REPRESENTATIVES AS OUTLINED ABOVE.

[illegible][illegible]

Designed by: M. MAURICIO
Drawn by: M. MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

NATURE OF WORK:
GRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

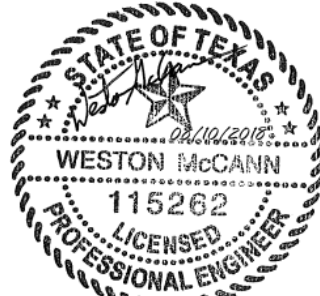
PROJECT TITLE

Project Number:

OK70374-000

SHEET TITLE
GENERAL STRUCTURAL NOTES

Date: 12 JUL 2018



SEQ.	SHEET	OF
S-001		

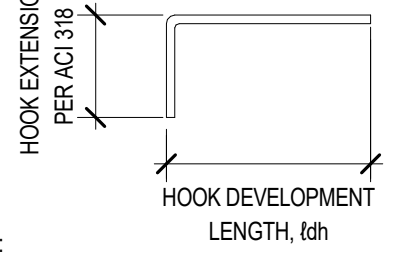
REINFORCED CONCRETE

1. REINFORCED CONCRETE WORK IS TO BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) EDITIONS OF:
- A. ACI 301 (LATEST EDITION), "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
 - B. ACI 318 (2014), "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", EXCEPT AS MODIFIED BY THE IBC.
 - C. ACI 347 (LATEST EDITION), "GUIDE TO FORMWORK FOR CONCRETE".
2. MIXING, TRANSPORTING, PLACING AND TESTING OF CONCRETE IS TO BE DONE IN ACCORDANCE WITH ACI 301.
3. PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR MUST SUBMIT CONCRETE MIX DESIGNS FOR EACH TYPE OF CONCRETE TO BE USED, PREPARED IN ACCORDANCE WITH THE SPECIFICATIONS TO THE ENGINEER FOR REVIEW.
4. CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f_c) AS INDICATED ON THE CONCRETE MATERIALS SCHEDULE ON DRAWING S-002.
5. THE SLUMP AT POINT OF PLACEMENT IS NOT TO EXCEED 4"-1/2" AND THE WATER/CEMENT RATIO IS NOT TO EXCEED 0.45. IF ADDITIONAL SLUMP (UP TO 8") IS DESIRED FOR PUMPING, A SUPER-PLASTICIZER ADMIXTURE MAY BE ADDED.
6. CONCRETE EXPOSED TO WEATHER AND FREEZE/THAW SHALL HAVE AN AIR CONTENT FROM 5% TO 7% IN ACCORDANCE WITH ACI RECOMMENDATIONS. AIR ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260.
7. CONCRETE TO BE NORMAL WEIGHT CONCRETE (150 PCF) WITH CEMENT CONFORMING TO ASTM C150 TYPE I, II, OR III.
8. CONTINUOUS REINFORCING BARS TO BE TURNED AND LAPPED AT CORNERS AND INTERSECTIONS OF WALLS AND FOOTINGS. HOOKED BARS TO HAVE STANDARD ACI HOOKS UNLESS NOTED OTHERWISE.
9. CONCRETE SHALL BE PROPERLY VIBRATED DURING PLACEMENT.
10. PRIOR TO PLACING CONCRETE, CHECK WITH ALL TRADES TO INSURE SLEEVES, INSERTS, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES, DEPRESSIONS, CURBS AND OTHER EMBEDDED ITEMS TO BE PROVIDED AS SHOWN ON THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND AS REQUIRED BY EQUIPMENT MANUFACTURERS ARE INSTALLED, COORDINATED, AND PROVIDED FOR.
- A. ANCHOR RODS AND DOWELS SHALL BE PLACED PRIOR TO CASTING CONCRETE.
11. ALL CONTACT SURFACES, NEW OR EXISTING, AT CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED TO 1/4" AMPLITUDE PRIOR TO CASTING ADJACENT POUR.
12. OPENINGS IN FLOORS AND/OR WALLS SHALL HAVE ADDITIONAL REINFORCING AROUND ALL SIDES AS SHOWN IN TYPICAL DETAILS.
13. NO PENETRATION SHALL BE ALLOWED THROUGH ANY CONCRETE BEAM, PIER CAP, OR PIER WITHOUT THE ENGINEER'S PRIOR WRITTEN APPROVAL. PENETRATIONS SHALL BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.
14. LEVELING GROUT TO BE NON-SHRINK, FACTORY PREMIXED GROUT IN ACCORDANCE WITH ASTM C1107, HAVING A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 5000 PSI.
15. ANCHOR RODS TO BE ASTM F1554 Fy=36 KSI MINIMUM, UNLESS NOTED OTHERWISE. ANCHOR ROD EMBEDMENT SHALL BE AS INDICATED ON THESE STRUCTURAL DRAWINGS.
- A. ALL BOLT HOLES TO BE FILLED WITH EPOXY SHALL BE WIRE BRUSHED AND CLEANED WITH COMPRESSED AIR PER MANUFACTURER'S RECOMMENDATIONS.
16. SUSPENDED FLOOR SLABS:
- A. CONSTRUCTION JOINTS IN SUSPENDED SLABS AND/OR BEAMS SHALL OCCUR AT THIRD POINTS OF SLAB SPAN. COORDINATE PLACEMENT WITH THE ENGINEER.

CONCRETE MATERIALS SCHEDULE

STRUCTURAL ELEMENT	MIN f _c 28 DAYS (PSI)	MAX WATER/CEMENT RATIO	AGGREGATE	AIR CONTENT	REMARKS
PIERS	3500	0.45	#57	5-7%	
GRADE BEAMS & PIER CAPS	4000	0.45	#57	EXT 5-7% INT 2%	
INTERIOR SLABS	4000	0.45	#57	2%	
EXTERIOR SLABS	4000	0.45	#57	5-7%	

STANDARD CONCRETE HOOK SCHEDULE

STANDARD HOOKS IN TENSION PER ACI 318			
HOOK DEVELOPMENT LENGTH l _{dh} (INCHES)			
BAR SIZE	f _c =3000 PSI	f _c =4000 PSI	
#3	9	8	
#4	11	10	
#5	14	12	
#6	17	15	
#7	20	17	
#8	22	19	
#9	25	22	

NOTES:
1. CONCRETE IS NORMAL WEIGHT CONCRETE FOR LIGHTWEIGHT CONC MULTIPLY VALUES BY 1.33.
2. BAR YIELD STRENGTH, F_y = 80 KSI.
3. SIDE COVER REQUIREMENTS OF ACI 318 ARE ASSUMED TO NOT BE MET.
4. TIE OR STIRRUP REQUIREMENTS OF ACI 318 ARE ASSUMED TO NOT BE MET.
5. REDUCTION FOR EXCESS REINFORCEMENT IS NOT TAKEN.
6. HOOK DEVELOPMENT LENGTH IS VALID FOR 180° HOOKS ALSO.

CONCRETE COVER SCHEDULE

MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (RE: ACI 318 LATEST EDITION FOR CONDITIONS NOT NOTED). DIMENSIONS FOR BAR PLACEMENT GIVEN IN SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM COVER REQUIREMENTS GIVEN HERE.	
FOOTINGS (EARTH FORMED)	3 INCHES
SLAB ON GRADE:	
BOTTOM SIDES (EARTH FORMED)	3 INCHES
SIDES (BOARD FORMED):	
#5 BAR & SMALLER	1 1/2 INCHES
#6 THROUGH #11 BAR	2 INCHES
SLAB ON GRADE (NO EXPOSURE TO WEATHER) FROM TOP	1 1/2 INCHES
SLAB ON GRADE (EXPOSURE TO WEATHER) FROM TOP	1 1/2 INCHES
RETAINING WALLS (NO SURFACES SHALL BE EARTH FORMED) EARTH SIDE AND FRONT SIDE (EXPOSED TO WEATHER):	
#5 BAR & SMALLER	1 1/2 INCHES
#6 THROUGH #11 BAR	2 INCHES
WALLS & SLABS	3/4 INCHES
CONCRETE BEAMS	1 1/2 INCHES
PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED	

REINFORCING STEEL - CONCRETE

1. REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO ASTM A615 GRADE 60, WITH A DESIGN YIELD STRENGTH OF 60,000 PSI, EXCEPT AS NOTED BELOW.
- A. DOWELS TO BE BENT IN THE FIELD DURING CONSTRUCTION SHALL BE ASTM A706 GRADE 60, "LOW-ALLOY STEEL".
- B. REINFORCING TO BE WELDED SHALL BE ASTM A706 GRADE 60, "LOW-ALLOY STEEL".
2. MECHANICAL SPLICE COUPLERS SHALL BE CAPABLE OF DEVELOPING 125% OF THE SPECIFIED STRENGTH OF THE BAR.
3. REINFORCING STEEL SHALL BE FREE OF LOOSE FLAKY RUST, SCALE, GREASE, OIL, DIRT, AND OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND.
4. BENDS SHALL BE MADE COLD. DO NOT USE HEAT. BENDS SHALL BE DONE IN THE FABRICATOR'S SHOP UNLESS SPECIFICALLY NOTED FOR THE FIELD. DO NOT UN-BEND OR RE-BEND A PREVIOUSLY BENT BAR.
5. NO REINFORCING SHALL BE WELDED UNLESS SPECIFICALLY NOTED AS SUCH. USE E90XX ELECTRODES AND ASTM A706 REINFORCING. COMPLY WITH AWS D1.4 REQUIREMENTS.
6. CODES AND STANDARDS:
- A. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE".
- B. AMERICAN CONCRETE INSTITUTE, ACI 315 (OR SP-66) "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT".
7. REINFORCING SHALL BE DETAILED, FABRICATED, BOLSTERED, AND SUPPORTED PER ACI 315.
8. SPLICES IN CONTINUOUS REINFORCING IN CONCRETE SHALL BE PER THE CONCRETE REINFORCING LAP SPLICE SCHEDULE.
- A. SPLICES SHALL BE MADE IN AREAS OF COMPRESSION AND/OR AT POINTS OF MINIMUM STRESS, TYPICAL UNLESS NOTED OTHERWISE. TENSION SPLICES SHALL BE USED IN CONCRETE; USE CLASS B SPLICE UNLESS NOTED OTHERWISE. SPLICES IN TOP BARS IN SUSPENDED CONCRETE SLABS AND BEAMS SHALL BE MADE AT MID SPAN. SPLICES IN BOTTOM BARS IN SUSPENDED CONCRETE SLABS AND BEAMS SHALL BE MADE AT SUPPORTS.
9. REINFORCING STEEL IN CONCRETE SHALL HAVE COVER PER THE CONCRETE COVER SCHEDULE.
10. REINFORCING STEEL IN CONCRETE SHALL BE SECURELY ANCHORED AND TIED IN PLACE PRIOR TO PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS, STIRRUPS, OR CHAIRS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS WHERE NECESSARY DURING CONSTRUCTION.

STRUCTURAL STEEL

1. STRUCTURAL STEEL WORK IS TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH:
- A. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" (FOURTEENTH EDITION)
- B. THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
- C. RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS".
2. STRUCTURAL STEEL, UNLESS NOTED OTHERWISE, TO BE NEW STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A 6/A 6M AND AS INDICATED ON THE STEEL MATERIAL SCHEDULE ON DRAWING S-002.
3. PRIOR TO FABRICATION, THE STEEL FABRICATOR IS TO SUBMIT TO THE ENGINEER FOR REVIEW THE FOLLOWING:
- A. SHOP DRAWINGS SHOWING ERECTION PLANS, PIECE DRAWINGS, AND CONNECTION DETAILS.
4. THE STRUCTURAL STEEL FABRICATOR, AND/OR GENERAL CONTRACTOR, MUST VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AT THE SITE. ALL DISCREPANCIES FOUND ARE TO BE REPORTED TO THE ENGINEER PRIOR TO PREPARATION OF SHOP DRAWINGS. SHOP DRAWINGS ARE TO INCLUDE ALL FIELD MEASUREMENTS AND CONDITIONS.
5. STRUCTURAL STEEL FABRICATOR IS TO PROVIDE FOR VERTICAL AND HORIZONTAL FIELD ADJUSTMENT OF ALL SUPPORT ASSEMBLIES.
6. CUTS, HOLES, COPING, ETC REQUIRED FOR OTHER TRADES MUST BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING OF HOLES IN THE FIELD WILL NOT BE PERMITTED.
7. STEEL BEAMS ARE TO BE EQUALLY SPACED IN BAYS UNLESS OTHERWISE NOTED.
8. FABRICATE AND INSTALL BEAMS WITH NATURAL CAMBER UP UNLESS CAMBER IS NOTED ON THE DRAWINGS.
9. PROVIDE CAMBER IN BEAMS WHERE INDICATED ON THE DRAWINGS. CAMBER INDICATED ON PLANS AFTER BEAM SIZE AS: C=##
10. ALL STRUCTURAL STEEL FRAMES ARE TO BE SECURELY BRACED UNTIL ALL ROOF DECKS HAVE BEEN INSTALLED AND BECOME CAPABLE OF STABILIZING THE FRAMES.
11. BOLTED CONNECTIONS:
- A. STEEL-TO-STEEL BOLTED CONNECTIONS: 3/4" DIAMETER ASTM A325 UNO WITH MATCHING WASHERS AND HEAVY HEX NUTS. USE TENSION CONTROL BOLT ASSEMBLIES CONFORMING TO ASTM F1852 AT CONTRACTOR'S OPTION. NUTS AND WASHERS SHALL CONFORM TO ASTM A563 AND ASTM F436 RESPECTIVELY.
- B. ALL OTHER BOLTED CONNECTIONS SHALL BE MADE WITH BOLTS AND NUTS CONFORMING TO ASTM A307 UNLESS NOTED OTHERWISE.
- C. STANDARD SPACING SHALL BE 3" OC AND STANDARD EDGE DISTANCE SHALL BE 1 1/2" TYPICAL, UNLESS NOTED OTHERWISE.

CONCRETE REINFORCING LAP SPLICE SCHEDULE (IN)

BAR SIZE	f _c = 3000 PSI		f _c = 4000 PSI		f _c = 5000 PSI		f _c = 6000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	28	22	24	19	22	17	20	15
#4	37	29	29	25	29	22	26	20
#5	47	36	40	31	36	28	33	25
#6	56	43	48	37	43	33	40	31
#7	81	63	70	54	63	49	58	44
#8	93	72	80	62	72	55	66	51
#9	105	81	91	70	81	63	74	57
#10	118	91	102	79	91	70	83	64
#11	131	101	113	87	101	78	93	71

- NOTES:
- TABULATED VALUES ARE BASED ON A MINIMUM YIELD STRENGTH OF 60,000 PSI. LENGTHS ARE IN INCHES.
 - TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER ACI 318.
 - TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
 - LAP SPLICE LENGTHS (MINIMUM OF 12 INCHES) ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS; CLASS B = 1.3 l_d. WHEN DETERMINING THE LAP SPLICE LENGTH, l_d IS CALCULATED WITHOUT THE 12-INCH MINIMUM OF ACI.
 - ACI 318 DOES NOT ALLOW TENSION LAP SPLICES OF #14 OR #18 BARS. THE TABULATED VALUES FOR THOSE BAR SIZES ARE THE TENSION DEVELOPMENT LENGTHS.
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
 - FOR EPOXY-COATED BARS, IF THE C-C SPACING IS AT LEAST 7.0 d_b AND THE CONCRETE COVER IS AT LEAST 3.0 d_b, THEN CASE 1 LENGTHS MAY BE MULTIPLIED BY 0.918 (FOR TOP BARS) OR 0.8 (FOR OTHER BARS).
 - FOR GRADE 75 (MINIMUM YIELD STRENGTH OF 75,000 PSI) REINFORCING BARS, LENGTHS MUST BE MULTIPLIED BY 1.25.
 - FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.33.
 - TABULATED VALUES ARE BASED ON CLASS B LAP SPLICES AND CASE 1 PER ACI 318.
 - CASE 1, WHICH DEPENDS ON THE TYPE OF STRUCTURAL MEMBER, CONCRETE COVER, AND CENTER-TO-CENTER SPACING OF THE BARS, IS DEFINED AS:

BEAMS, COLUMNS	CONCRETE COVER AT LEAST 1.0 d _b AND C-C SPACING AT LEAST 2.0 d _b
ALL OTHERS	CONCRETE COVER AT LEAST 1.0 d _b AND C-C SPACING AT LEAST 3.0 d _b

STRUCTURAL STEEL

- D. BOLT SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE.
- E. BOLTED CONNECTIONS SHALL HAVE WASHERS AND SHALL BE TIGHTENED TO SNUG TIGHT CONDITION.
- F. ENLARGING OF HOLES SHALL BE ACCOMPLISHED BY MEANS OF REAMING. DO NOT USE A TORCH ON ANY BOLT HOLES.
12. WELDED CONNECTIONS:
- A. WELDING AND GAS CUTTING SHALL BE DONE PER AWS.
- B. WELDING TO BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE-ANS/AWS D1.1/D1.1M" (LATEST EDITION), USE E70XX ELECTRODES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- C. WELDERS SHALL BE CURRENTLY CERTIFIED ACCORDING TO AWS WITHIN THE LAST 12 MONTHS. ALL WELDING PROCEDURES SHALL BE PRE-QUALIFIED. WELDERS SHALL FOLLOW WELDING PROCEDURES.
- D. WELDS SHALL HAVE THE SLAG REMOVED.
- E. FULL PENETRATION WELDS, SHOP OR FIELD, SHALL HAVE BACKER BARS REMOVED, BE BACK GOUGED, AND WELDED PER AWS TO HAVE FULL PENETRATION WELD.
13. POST INSTALLED ANCHORS HAVE BEEN DESIGNED WITH HILTI ANCHORS (NOTED BELOW) AS THE BASIS OF DESIGN. PROVIDE ANY APPROPRIATE ANCHOR WITH SIZE AND FINISH AS NOTED AND EQUIVALENT SHEAR AND TENSION CAPACITIES AFTER MODIFICATION DUE TO EMBEDMENT, SPACING AND EDGE DISTANCES. OTHER AVAILABLE MANUFACTURERS INCLUDE SIMPSON, ITW RED HEAD AND POWERS FASTENERS. INSTALL ANCHORS PER THE MANUFACTURER'S INSTRUCTIONS/RECOMMENDATIONS.
- A. EXPANSION ANCHORS: KWIK BOLT T2 EXPANSION ANCHOR
- B. ADHESIVE ANCHORS: HIT-HY 200
- C. SCREEN TUBE ANCHORS: HIT-HY 70
- D. SCREW ANCHORS: KWIK HUS-EZ SCREW ANCHOR
14. SUBSTITUTION OF EXPANSION ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS WILL NOT BE PERMITTED.
15. PAINT AND PROTECTION:
- A. STRUCTURAL STEEL, UNLESS INDICATED OTHERWISE, TO BE SHOP CLEANED PER SSPC SP3 AND PAINTED ONE SHOP COAT OF FABRICATOR'S STANDARD RUST INHIBITING PRIMER. TOUCH UP AFTER ERECTION.
- B. DO NOT PAINT STEEL WHERE ENCASED WITH CONCRETE, OR AT FIELD WELD AREAS.
- C. DO NOT PAINT STRUCTURAL STEEL TO BE FIREPROOFED. SHOP CLEAN PER SSPC SP3.
- D. EXPOSED STRUCTURAL STEEL TO RECEIVE PAINTED FINISH TO BE SHOP CLEANED AND PRIME PAINTED PER THE SPECIFICATIONS. REFERENCE ARCHITECTURE FOR FINISH PAINT SYSTEMS.
- E. EXPOSED STRUCTURAL STEEL FOR SCREEN WALLS, EQUIPMENT PLATFORMS, LOOSE ANGLE LINTELS ETC, TO BE HOT DIPPED GALVANIZED PER ASTM A123.
- F. GALVANIZED FASTENERS AND ACCESSORIES TO BE HOT DIPPED GALVANIZED PER ASTM A153/A153M.
- G. REPAIR DAMAGE TO GALVANIZED COATINGS USING ASTM A780 ZINC RICH PAINT.
- H. PROVIDE MINIMUM 3" CONCRETE COVER FOR ALL STEEL BELOW GRADE.
16. DEFORMED BAR ANCHORS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
17. CONSTRUCTION:
- A. FABRICATION SHALL BE DONE IN AN APPROVED FABRICATOR'S SHOP.
- B. USE HIGH STRENGTH (5000 PSI MINIMUM AT 28 DAY), NON-SHRINK, FACTORY PRE-MIXED GROUT IN ACCORDANCE WITH ASTM C1107 BENEATH ALL STEEL BASE PLATES AND BEARING PLATES. MIX GROUT WITH SAND OR PEA GRAVEL AS RECOMMENDED BY THE MANUFACTURER. PLACE GROUT AS SOON AS STEEL MEMBER HAS BEEN PROPERLY POSITIONED AND ALIGNED.
1. DESIGN, FABRICATION AND ERECTION OF OPEN WEB STEEL JOISTS MUST CONFORM TO THE STEEL JOIST INSTITUTE (SJI) "STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS"(LATEST EDITION).
2. THE JOIST MANUFACTURER IS TO PROVIDE ALL ANCHORS AND FASTENERS REQUIRED FOR INSTALLATION OF JOISTS, BRIDGING AND BOTTOM CHORD EXTENSIONS.
3. PROVIDE BRIDGING AND ANCHORAGE IN ACCORDANCE WITH SJI REQUIREMENTS. WHERE ERECTION BRIDGING IS REQUIRED, HAVE IN PLACE A ROW OF BOLTED BRIDGING BEFORE RELEASING HOIST LINES. BRIDGING IN LAST BAY SHALL BE ATTACHED TO A STRUCTURAL WALL OR STEEL BEAM.
4. NO LOADS MAY BE APPLIED TO THE JOISTS UNTIL BRIDGING HAS BEEN COMPLETELY INSTALLED AND THE JOIST ENDS HAVE BEEN SECURED TO THEIR SUPPORTS.
5. STEEL JOISTS ARE TO BE EQUALLY SPACED IN BAYS UNO. DO NOT EXCEED JOIST SPACING INDICATED ON THE DRAWINGS.
6. STEEL JOIST MANUFACTURER IS TO PROVIDE ADDITIONAL BOTTOM CHORD BRIDGING AS REQUIRED FOR UPLIFT LOADS.
7. HANGERS SUPPORTING MECHANICAL, ELECTRICAL OR OTHER EQUIPMENT ARE TO BE PLACED AT JOIST PANEL POINTS (WELDING NOT PERMITTED) AND APPLIED LOADS ARE TO BE COORDINATED WITH STEEL JOIST MANUFACTURER. DO NOT SUSPEND ANY EQUIPMENT FROM BRIDGING OR METAL DECK.
8. STEEL JOIST MANUFACTURER TO VERIFY SIZE, LOCATION AND WEIGHT OF ALL SUPPORTED MECHANICAL UNITS AND ASSOCIATED OPENINGS PRIOR TO FABRICATION.

OPEN WEB STEEL JOISTS

10. THE STEEL JOIST/GIRDER MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL STEEL JOISTS AND THEIR ASSOCIATED HARDWARE.
- A. ALL STEEL JOISTS AND SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WHICH THE PROJECT IS CONSTRUCTED AND BEARING THE SEAL OF THE PROFESSIONAL ENGINEER. DESIGN CALCULATIONS AND SHOP DRAWINGS BEARING THE ENGINEER'S STAMP SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.
- B. JOISTS SHALL BE DESIGNED TO SAFELY SUPPORT ALL LOADS TO WHICH THEY ARE SUBJECTED, INCLUDING THE LOADS INDICATED IN THE DESIGN CRITERIA SECTION OF THESE GENERAL NOTES, OTHER LOADS SHOWN OR INDICATED ON THE DRAWINGS, AND ANY ADDITIONAL LOADS FROM MECHANICAL OR OTHER EQUIPMENT OR ELEMENTS. THEY SHALL ALSO BE DESIGNED IN ACCORDANCE WITH SNOW DRIFT REQUIREMENTS OF THE IBC AND ASCE 7, FOR UNBALANCED LOADS, LOWER ROOFS, OVERHANGS, VALLEYS, RIDGES, GABLES, ETC. REFERENCE MECHANICAL AND/OR OTHER DRAWINGS FOR LOCATIONS AND WEIGHTS OF EQUIPMENT OR ELEMENTS TO BE SUPPORTED. COORDINATE AS REQUIRED.
- C. JOISTS SHALL BE DESIGNED FOR AN ULTIMATE TOP CHORD AXIAL LOAD OF 1.9 KLF.
- D. IN ADDITION, JOISTS SHALL BE DESIGNED TO SUPPORT THE UPLIFT LOADS INDICATED IN THE C&C DIAGRAM AND SCHEDULE. FOR NET UPLIFT, USE 6 PSF FOR DEAD LOAD.
- E. LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO L/240 FOR ROOF JOISTS.
11. PROVIDE ADEQUATE BEARING LENGTH AT ALL SUPPORTS. EXTEND BEARING TO AT LEAST 1 INCH PAST CENTERLINE OF STEEL BEAM SUPPORTS WHERE EVER POSSIBLE.
12. NO LOADS SHALL BE APPLIED TO THE JOISTS UNTIL BRIDGING HAS BEEN COMPLETELY INSTALLED AND THE JOIST ENDS HAVE BEEN SECURED TO THEIR SUPPORTS.
13. DO NOT CUT, DRILL, MODIFY, OR OMIT ANY PART OF ANY JOIST WITHOUT PRIOR WRITTEN CONSENT AND DIRECTION FROM THE MANUFACTURER.
14. DO NOT WELD THE BOTTOM CHORD OF THE JOISTS TO THE STABILIZER PLATES.

METAL DECK

1. METAL DECK MUST BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS" (LATEST EDITION).
2. STEEL DECK SHALL BE SIZE AND GAUGE AS SPECIFIED ON PLANS.
3. ROOF DECK TO BE FASTENED TO THE SUPPORTING STEEL PER PLAN AND DETAILS. ANY SPLIT OR PARTIAL PANELS TO BE FASTENED TO THE SUPPORTING STRUCTURE IN EVERY VALLEY REGARDLESS OF ADJACENT FASTENER PATTERNS.
4. DECK UNITS TO BE A MINIMUM OF THREE (3) SPANS CONTINUOUS WITH LAPS PLACED OVER SUPPORTS.
5. STEEL DECK AND ACCESSORIES SHALL BE MANUFACTURED FROM COLD ROLLED STEEL CONFORMING TO ASTM A653, (GALVANIZED G-60), AND SHALL CONFORM TO THE STEEL DECK INSTITUTE (SDI) AND AISC STANDARDS.
6. WELDING SHALL BE DONE WITH E60XX OR E70XX ELECTRODES.
7. END LAPS SHALL OVERLAP AT LEAST 2" AND SHALL OCCUR OVER A SINGLE MEMBER STEEL SUPPORT.
8. DO NOT STRETCH DECK PERPENDICULAR TO FLUTES.
9. DO NOT BEND OR MAR DECK.
10. STORE DECKING OFF THE GROUND WITH ONE END ELEVATED. COVER DECK WITH WATERPROOF MATERIAL AND VENTILATE TO AVOID CONDENSATION.

COLD FORMED STEEL FRAMING

1. STRUCTURAL MEMBERS MUST BE DESIGNED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) S100 "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" (LATEST EDITION).
2. STRUCTURAL MEMBERS TO BE FORMED FROM CORROSION RESISTANT STEEL CONFORMING TO ASTM A1003 WITH MINIMUM YIELD STRESS (F_y) AS REQUIRED BY STRUCTURAL PERFORMANCE. ALL COLD FORMED METAL COMPONENTS TO HAVE A MINIMUM GALVANIZING RATING OF G-60.
3. INTERIOR STUD WALLS SHALL BE DESIGNED FOR A MINIMUM OUT OF PLANE UNIFORM LIVE LOAD PRESSURE OF 5 PSF UNLESS NOTED OTHERWISE, WITH A MAXIMUM DEFLECTION OF L/240.
4. MAXIMUM STUD SPACING TO BE 16" ON CENTER WITH DOUBLED STUDS (MINIMUM) AT EACH SIDE OF OPENINGS.
5. FRAMING COMPONENTS ARE TO BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
6. FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING, TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.
7. INSTALLATION OF ALL COLD FORMED FRAMING SHALL BE BY AN EXPERIENCED INSTALLER APPROVED BY THE MANUFACTURER. INSTALLATION SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
8. ALL LATERAL BRACING SHALL CONFORM TO SECTION D3 OF AISI S100 SPECIFICATIONS.
9. FASTENING OF COMPONENTS IS TO BE WITH SELF-DRILLING SCREWS OR WELDING. WELDING OF STUDS MUST COMPLY WITH AWS D1.1/D1.1M AND AWS D1.3/D1.3M. 16 GAGE OR HEAVIER MATERIAL IS REQUIRED FOR WELDING. ALL WELDS TO BE TOUCHED-UP WITH ZINC-RICH PAINT. SCREWS AND WELDS TO BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION. WIRE TYING OF COMPONENTS IS NOT PERMITTED.
10. COLD FORMED STEEL FRAMING MEMBERS ARE TO BE SECURELY ATTACHED TO THE STRUCTURE WHERE INDICATED ON THE DRAWINGS, OR APPROVED SHOP DRAWINGS. FASTENERS TO BE COMPATIBLE TO THE STRUCTURAL MEMBERS.
11. PROVIDE VERTICAL SLIDE TRACKS, OR SLIDE CLIPS, WHERE INDICATED ON THE DRAWINGS OR OTHERWISE REQUIRED TO ALLOW FOR VERTICAL STRUCTURAL MOVEMENTS. MAXIMUM EXPECTED STRUCTURE LIVE LOAD DEFLECTION IS L/240 AT ROOFS.
12. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION, INCLUDING SHEATHING TYPE, FINISHES, OPENINGS, LOCATIONS, ETC.



Symbol	Description	Date	Appr.

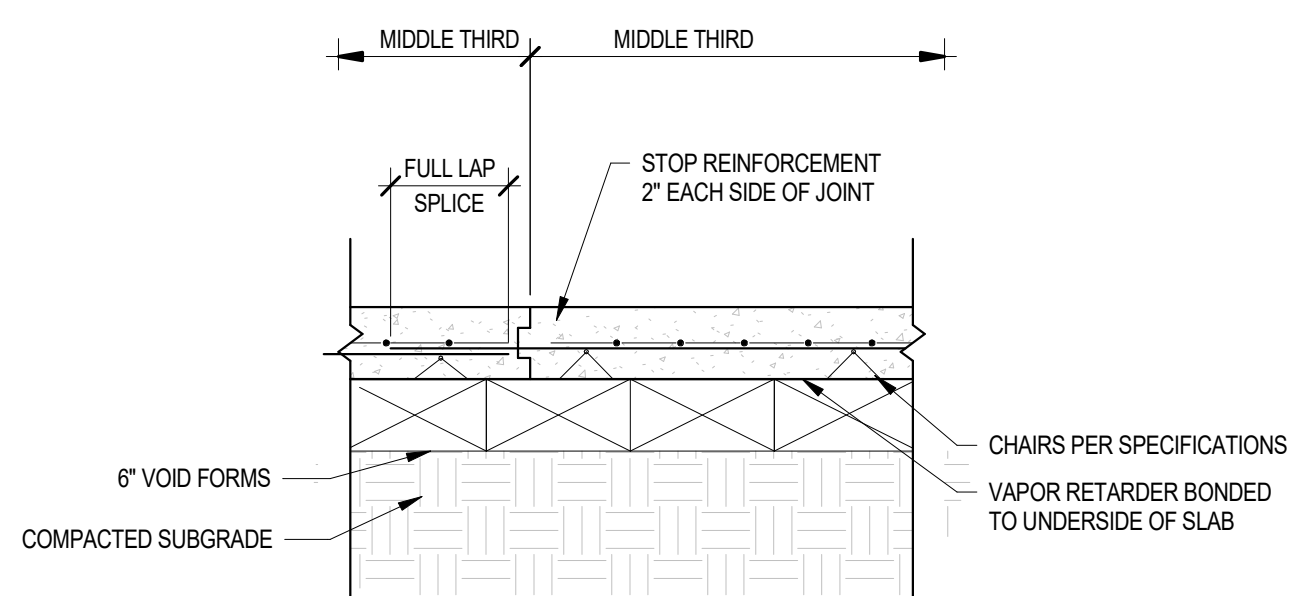
Symbol	Description	Date	Appr.
1	ADW #01	08/10/18	MM

Designed by: M. MAURICIO	Drawn by: M. MAURICIO	Reviewed by: W. McCANN	Submitted by: B. MCCOMES
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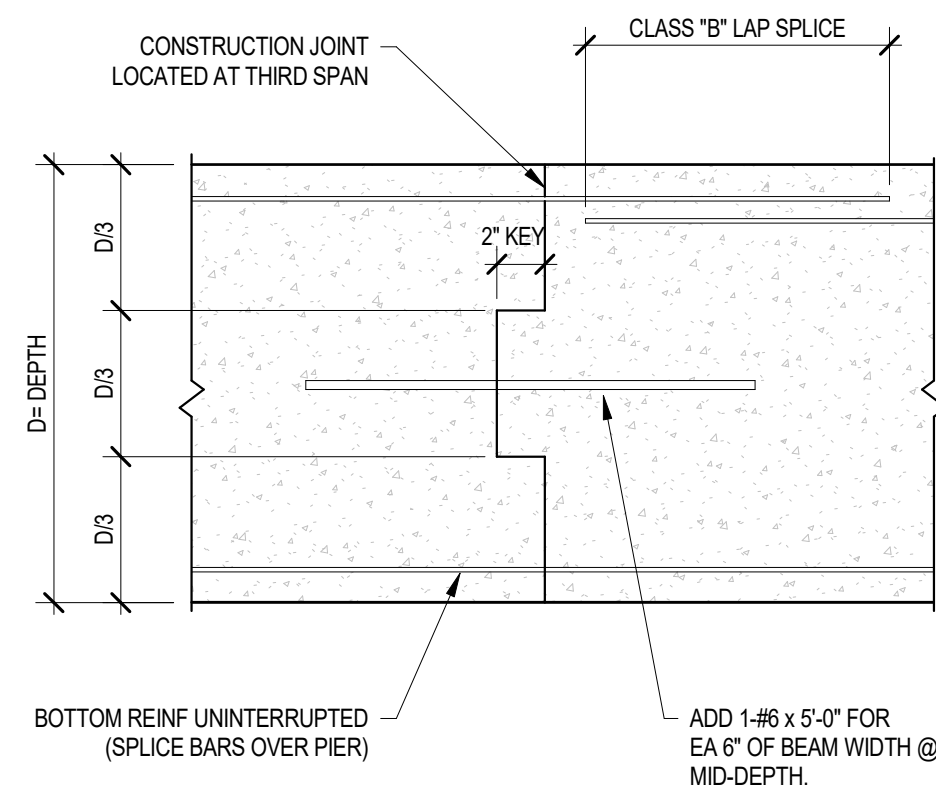
PROJECT TITLE
NATURE OF WORK: CRESSMAN DINING FACILITY EXPANSION 17th TRAINING WING GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE GENERAL STRUCTURAL NOTES
Date: 12 JUL 2018

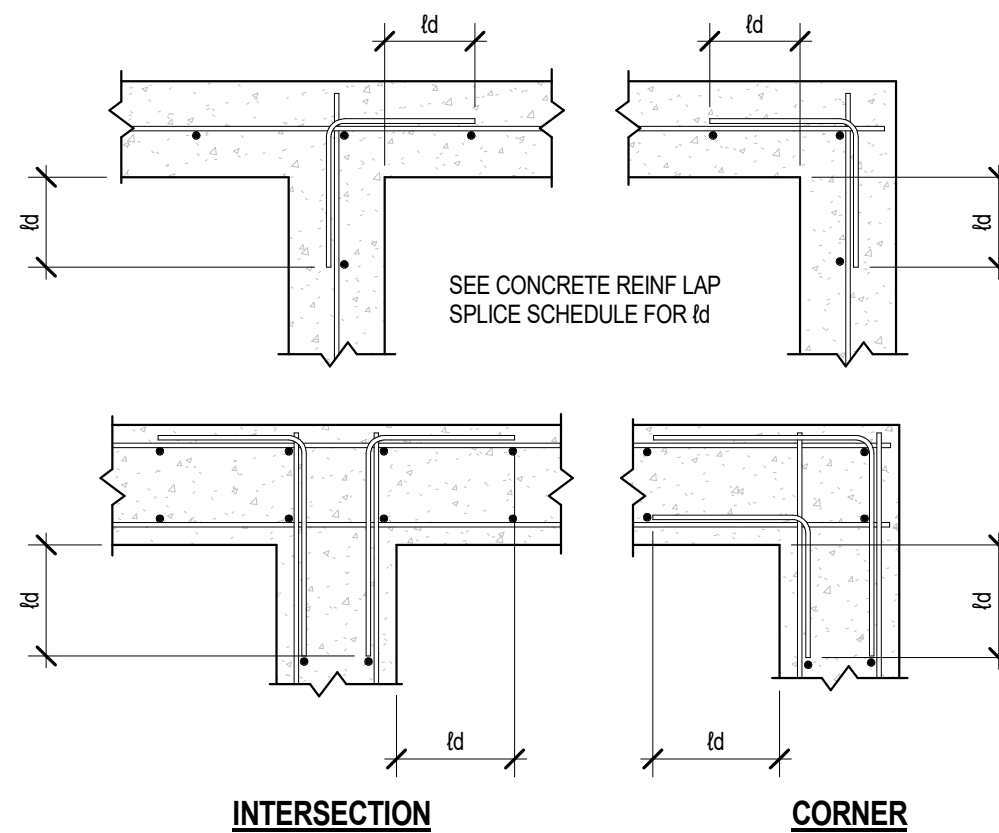
SEQ.	SHEET	OF
	S-002	



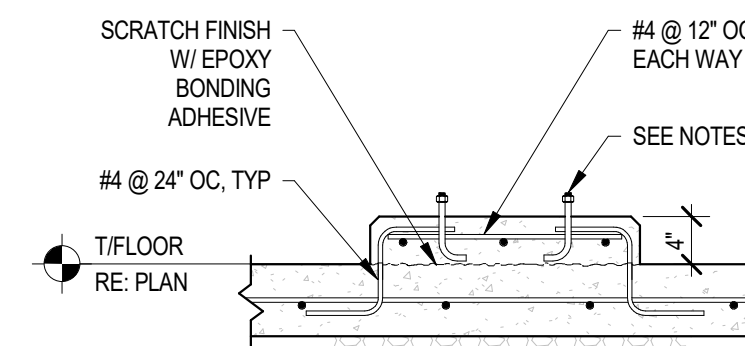
1 TYPICAL STRUCTURAL SLAB
CONSTRUCTION JOINT DETAIL
NOT TO SCALE



2 TYPICAL GRADE BEAM CONSTRUCTION JOINT



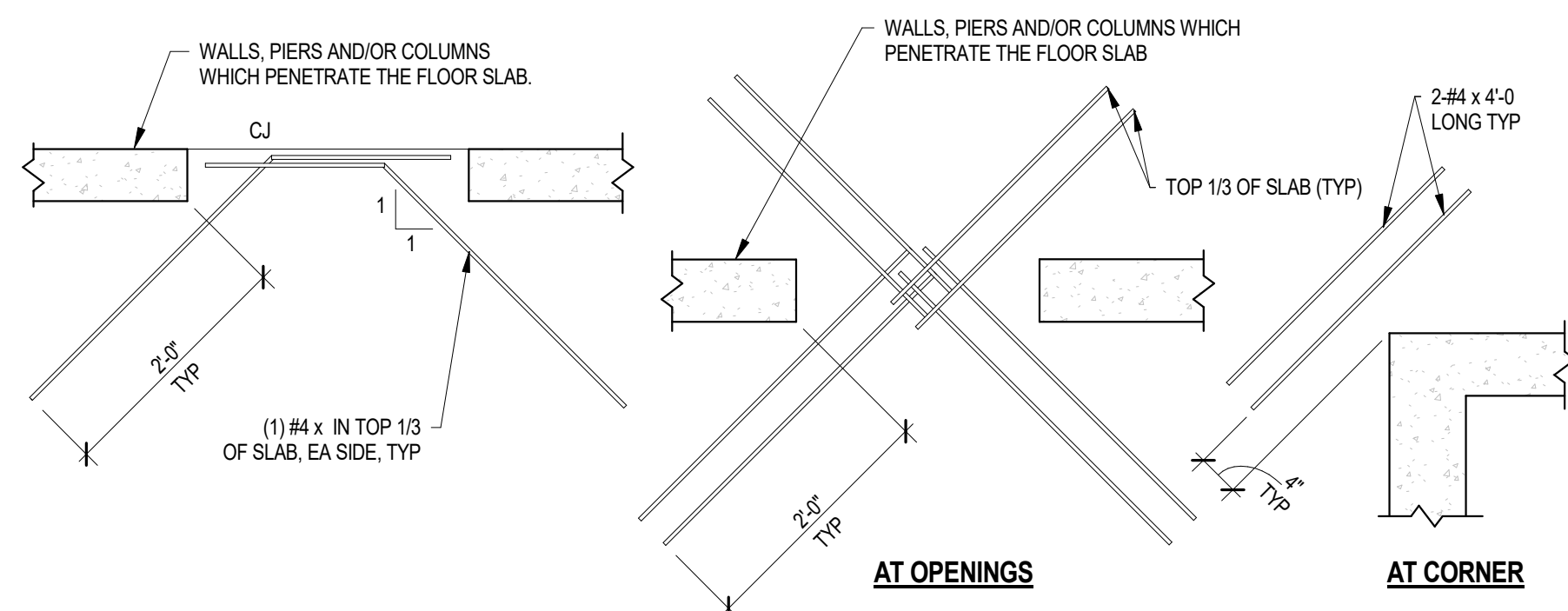
3 TYPICAL CORNER BAR DETAIL



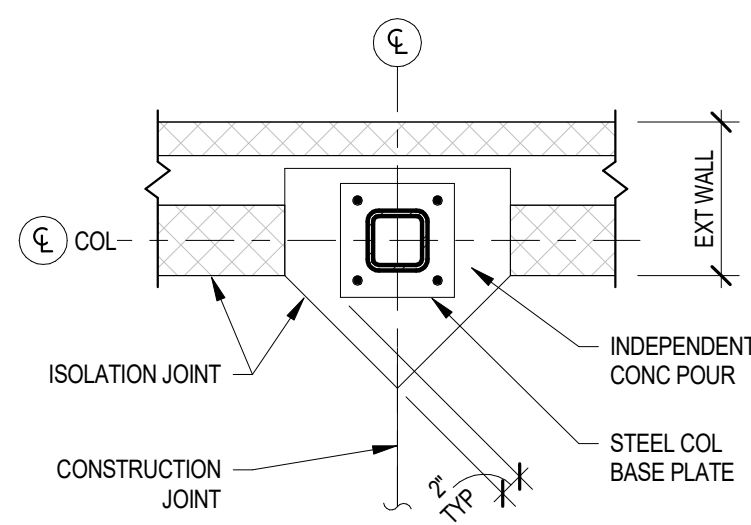
NOTES:

1. SIZE OF EQUIPMENT BASE TO SUIT EQUIPMENT MIN BEYOND EDGE OF EQUIPMENT.
2. PROVIDE ANCHOR BOLTS AS REQUIRED BY EQUIPMENT MANUFACTURER.
3. FINISH T/EQUIPMENT BASE TO DRAIN.

4 TYPICAL INTERIOR EQUIPMENT PAD
NOT TO SCALE



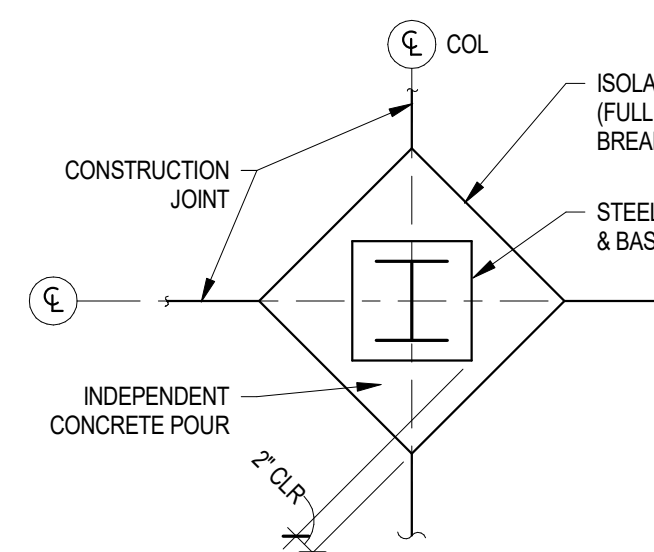
5 TYPICAL RE-ENTRANT CORNER REINFORCING
NOT TO SCALE



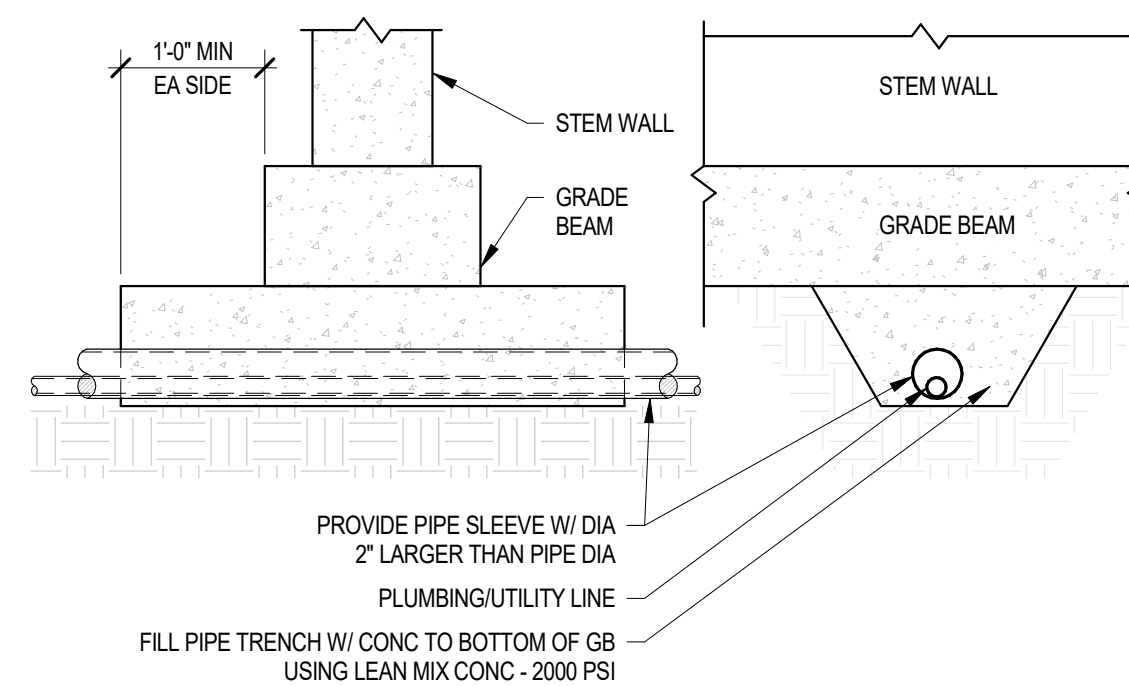
EXTERIOR COLUMN

6 TYPICAL ISOLATION JOINT DETAIL

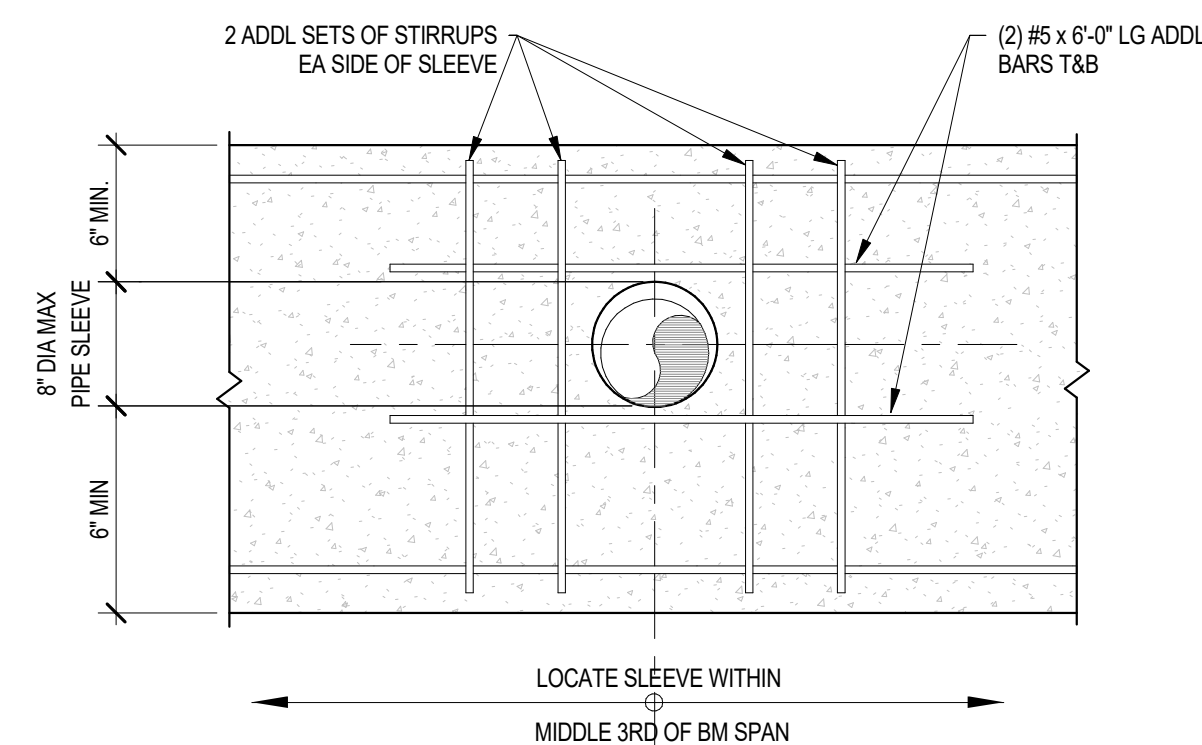
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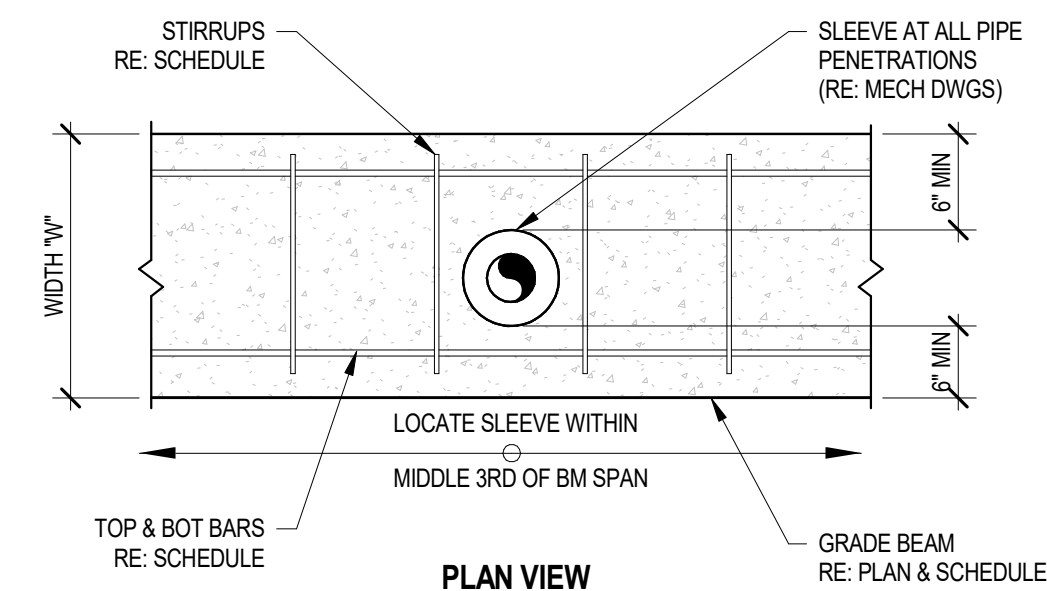
INTERIOR COLUMN



7 UTILITY PIPE UNDER GRADE BEAM
NOT TO SCALE



8 UTILITY PIPE THROUGH GRADE BEAM
NOT TO SCALE



VERTICAL PIPE PENETRATION
THROUGH GRADE BEAM

9 NOT TO SCALE

[illegible][illegible]

Designed by: M. MAURICIO
Drawn by: M. MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

OBJECT TITLE

NATURE OF WORK:
DRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

PROJECT TITLE E

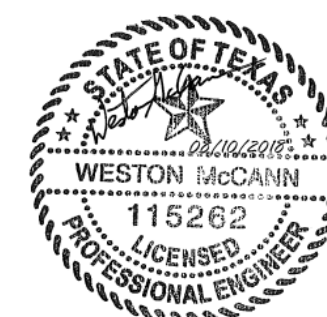
Project Number:

OK70374-000

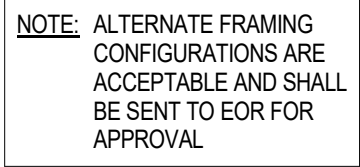
SHEET TITLE

TYPICAL DETAILS

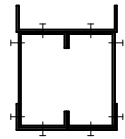
Date: 12 JUL 2018



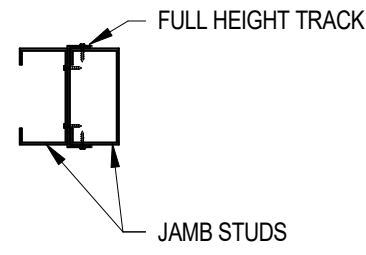
SEQ.	SHEET	OF
S-010		



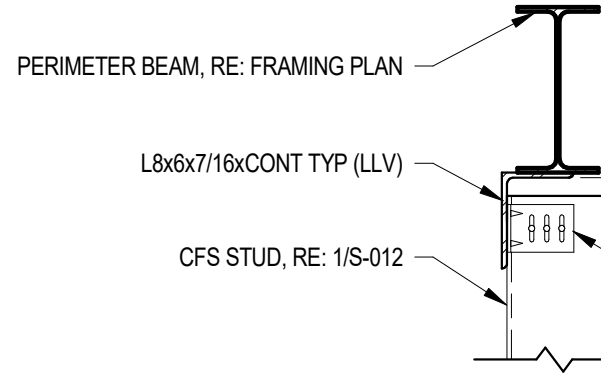
NOTES:
1. 'L' IS THE CLEAR OPENING WIDTH



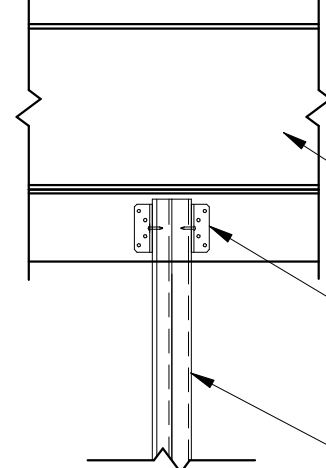
DETAIL B



DETAIL C

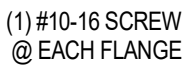


TYP EXT WALL STUD

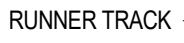


JAMB STUD

NOT TO SCALE



NOT TO SCALE

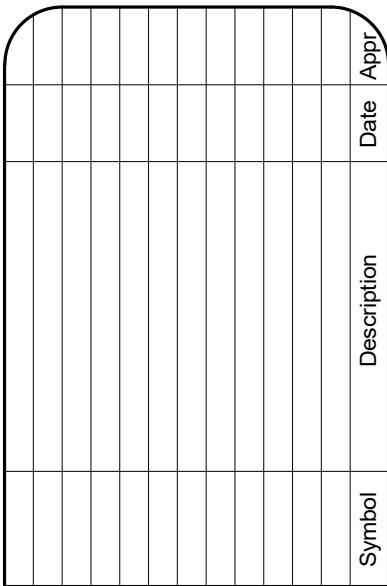


JAMB ATTACHMENT FOR 54 MIL JAMB STUDS

NOT TO SCALE



NOT TO SCALE



REVISIONS

Designed by:

PROJECT TITLE

Project Number:

S-012

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE - #BRC268 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING - #F-2268 EXPIRES DECEMBER 31, 2018

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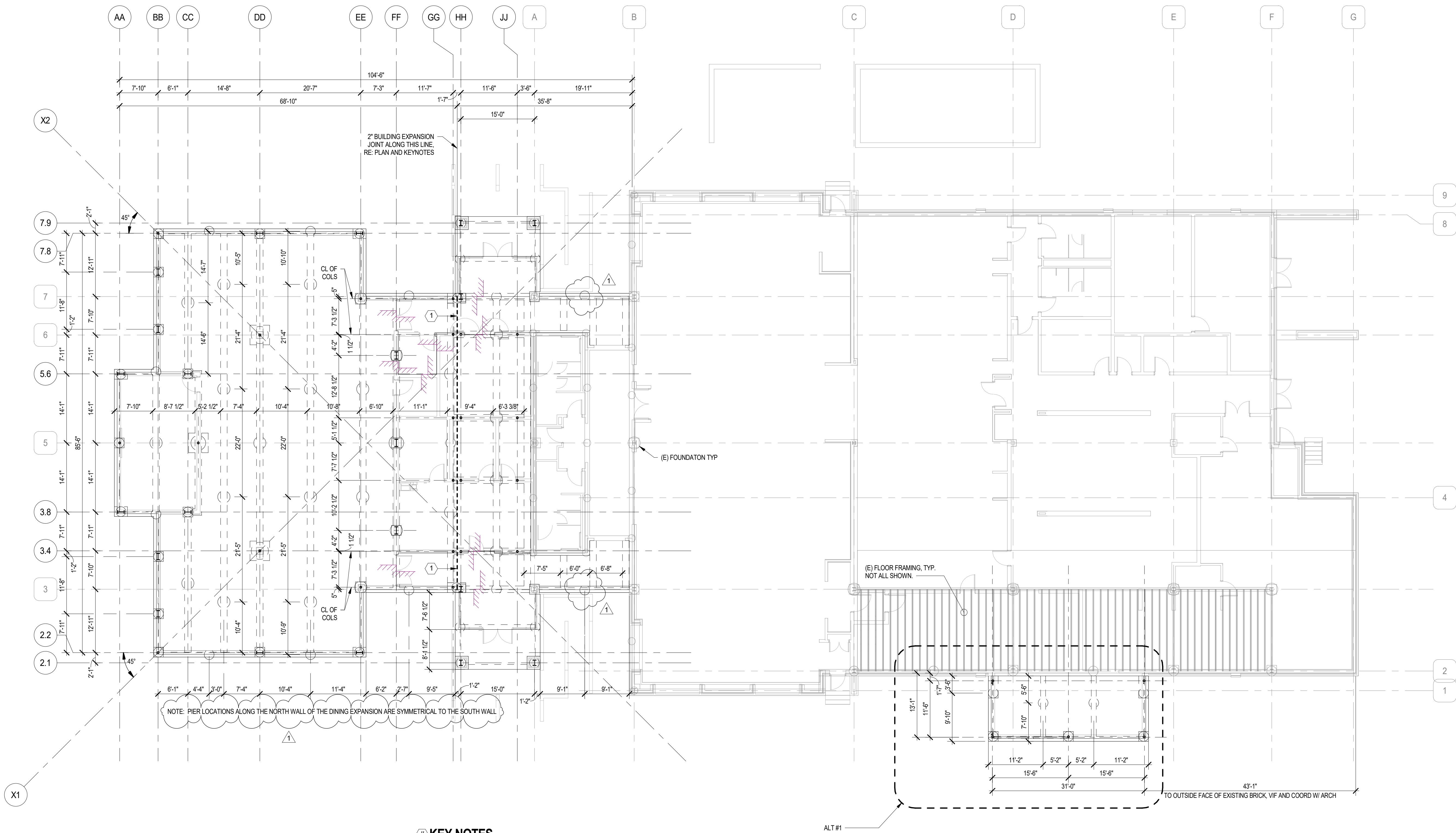
Designed by: MMAURICIO	Drawn by: MMAURICIO	Reviewed by: W. McCANN	Submitted by: B. MCCOMES
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PROJECT TITLE

NATURE OF WORK:
GRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:	OK70374-000
SHEET TITLE	COMPOSITE FOUNDATION PLAN
Date:	12 JUL 2018

SEQ.	SHEET	OF
	S-101	

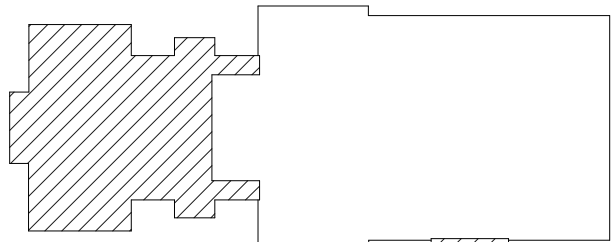


1 COMPOSITE FOUNDATION PLAN
SCALE: 3/32" = 1'-0"

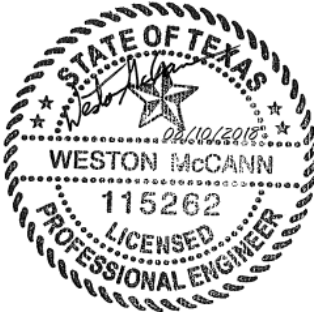
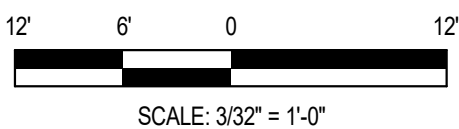
- # KEY NOTES
- BUILDING EXPANSION JOINT PER THE FOLLOWING:
A. NOMINAL DIMENSION: 2"
B. MINIMUM DIMENSION: 1"
C. MAXIMUM DIMENSION: 3"

LEGEND

SLAB STEP RE: FOUNDATION PLAN AND DETAILS



KEY PLAN



C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE - #BR258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING - #F-2288 EXPIRES DECEMBER 31, 2018

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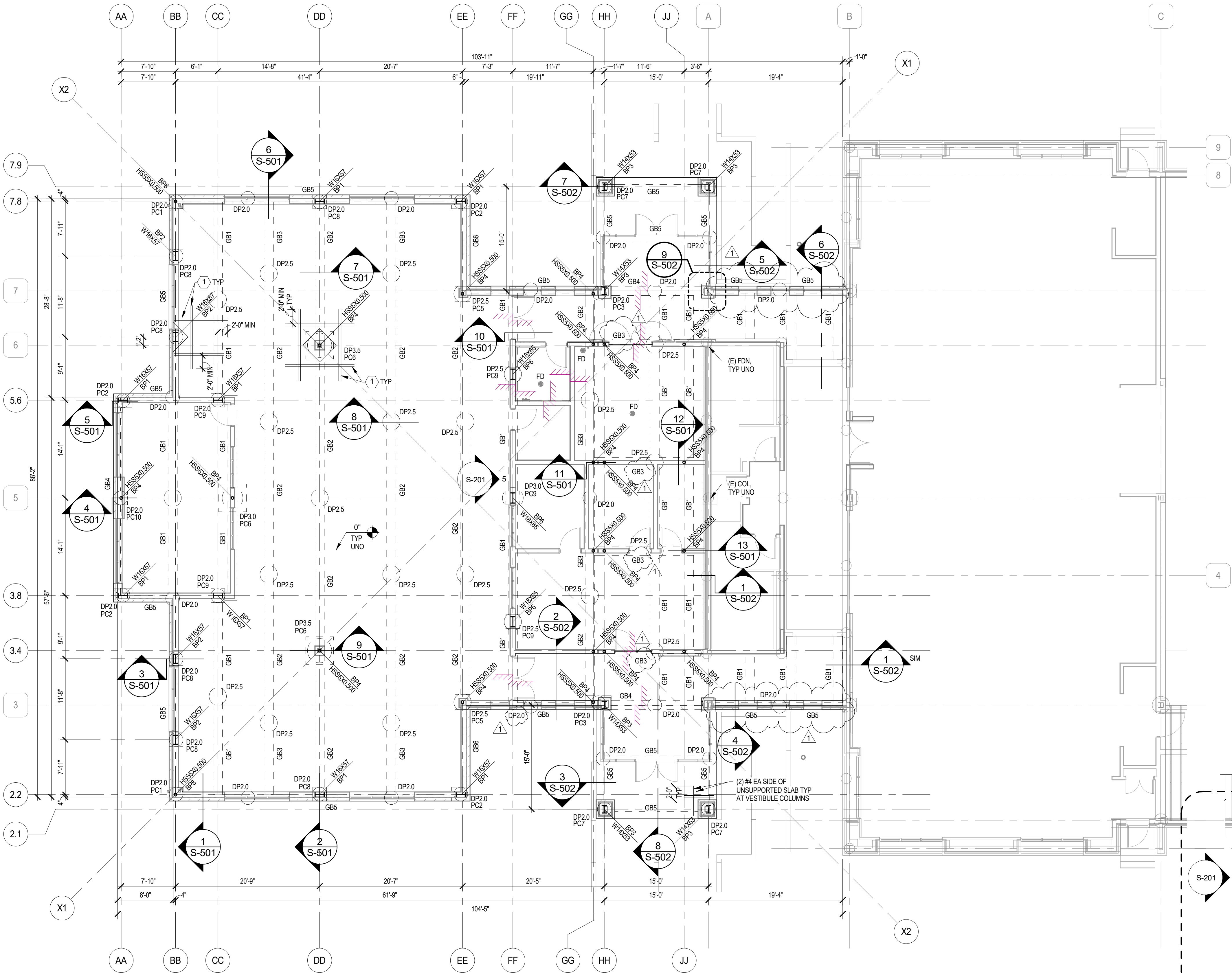
Symbol	Description	Date	Appr.

Designed by: MMAURICIO	Drawn by: MMAURICIO	Reviewed by: W. McCANN	Submitted by: B. MCCOMBS
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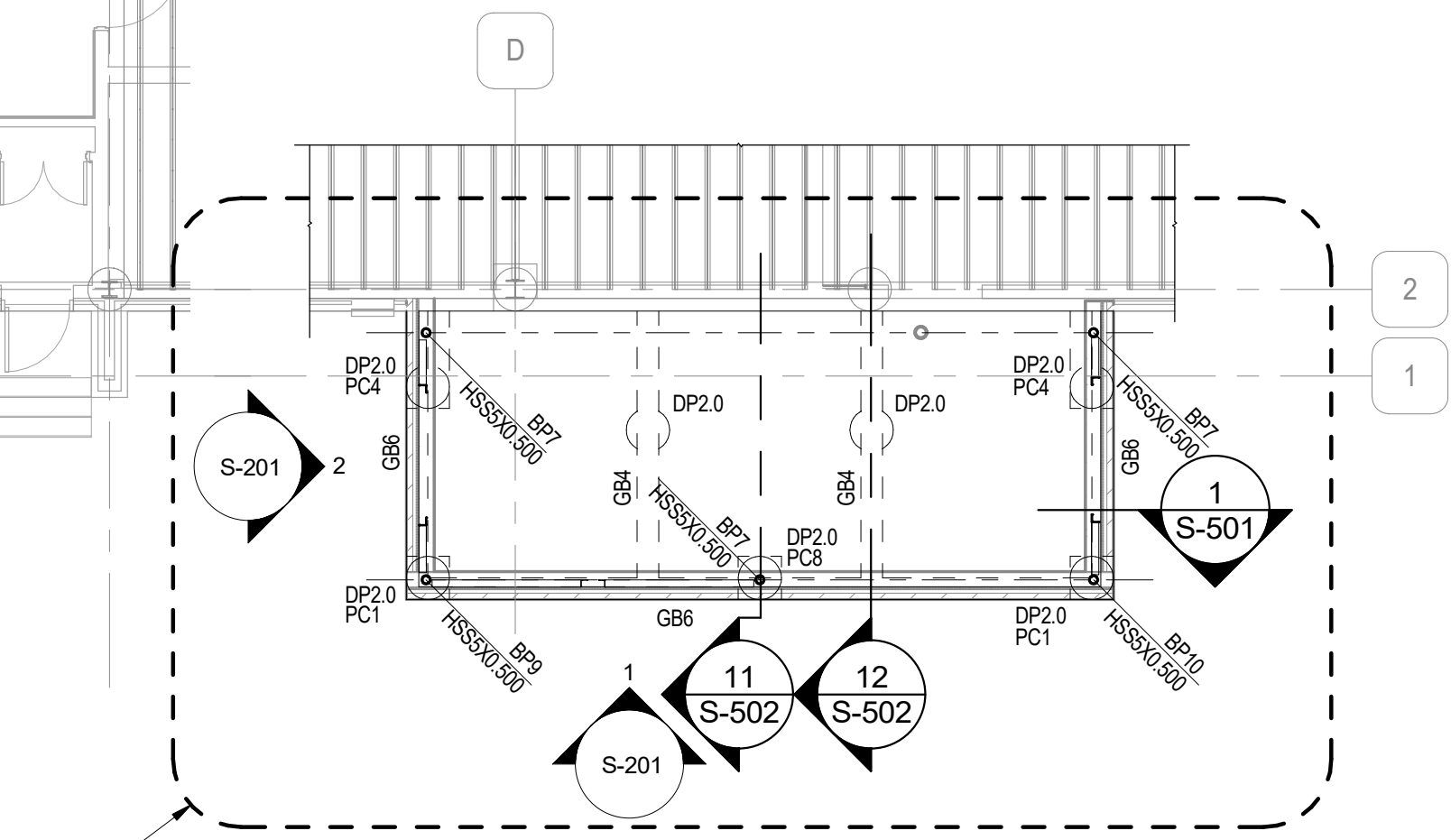
PROJECT TITLE
NATURE OF WORK:
GRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number: OK70374-000
SHEET TITLE FOUNDATION PLAN
Date: 12 JUL 2018

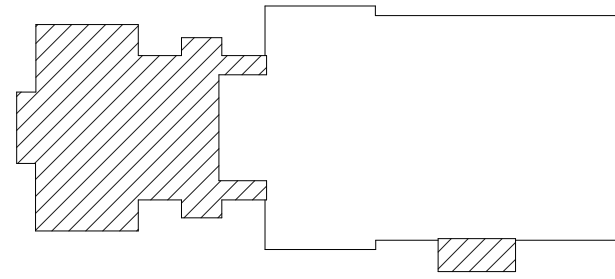
SEQ.	SHEET	OF
	S-111	



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



2 FOUNDATION PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN

FOUNDATION PLAN NOTES

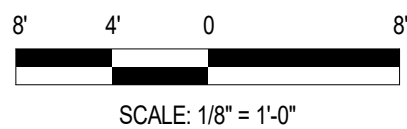
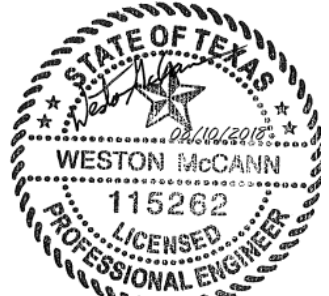
- RE: DRAWINGS S-001 THROUGH S-003 FOR GENERAL NOTES, DESIGN CRITERIA, AND ABBREVIATIONS.
- COORDINATE DIMENSIONS, WALL OPENINGS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL DWGS.
- TOP OF SLAB ELEVATION = 1870.38 FT TO MATCH EXISTING. RE: C-110. THIS IS THE DATUM ELEVATION = 0'-0". ALL ELEVATIONS ARE REFERENCED FROM THIS ELEVATION.
- TOP OF CONCRETE PIER CAP ELEVATIONS = -0'-8" (TYP UNO).
- TOP OF CONCRETE PIER ELEVATIONS = -3'-2" (TYP UNO).
- TOP OF CONCRETE GRADE BEAM ELEVATIONS VARY. RE: PLAN AND DETAILS.
- STRUCTURAL SLAB: 6" CONCRETE SLAB REINFORCED WITH #4 AT 8" OC EACH WAY, CENTERED IN SLAB TYP. PLACE SLAB OVER 15 MIL VAPOR RETARDER AND 6" CARTON VOID FORMS. VAPOR RETARDER SHALL BOND TO SLAB AND MEET ADHESION TESTS PER SPECS.
- PROVIDE SLAB ISOLATION JOINT AT ALL COLUMNS. RE: 6/S-010.
- PROVIDE ADDITIONAL SLAB REINFORCEMENT AT ALL RE-ENTRANT CORNERS. RE: 5/S-010.
- COORDINATE LOCATIONS AND EXTENTS OF ALL DEPRESSED SLAB AREAS WITH THE ARCHITECTURAL DWGS. RE: 6/S-010.
- RE: DRAWING S-010 FOR TYPICAL FOUNDATION AND SLAB DETAILS.
- RE: DRAWING S-001 AND S-002 FOR FOUNDATION SCHEDULES.

KEY NOTES

- PROVIDE TYPICAL ISOLATION JOINT PER DETAIL 6/S-010 AT EACH COLUMN TYPICAL. ALSO PROVIDE ADDITIONAL REINFORCING AS SHOWN ON PLAN FOR UNSUPPORTED SLAB. ADDITIONAL REINFORCING SHALL BE (2) #4 BARS EACH SIDE OF SLAB OPENING TYPICAL. NOT SHOWN AT ALL LOCATIONS FOR CLARITY.

LEGEND

- GBx CONTINUOUS GRADE BEAM, RE: PLAN AND SCHEDULE
PCx PIER CAP, RE: PLAN AND SCHEDULE
DPx DRILLED PIER, RE: PLAN AND SCHEDULE
BPx COLUMN BASE PLATE, RE: PLAN AND SCHEDULE
W#x# WIDE FLANGE COLUMN, RE: PLAN AND SCHEDULE
HSS#x# HSS ROUND COLUMN, RE: PLAN AND SCHEDULE
SLAB STEP, RE: FOUNDATION DETAILS
FD APPROXIMATE LOCATION OF FLOOR DRAIN. COORDINATE W/ MEP DRAWINGS.



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

C.H. GUERNSEY & COMPANY
5555 N. GRAND BLVD.
OKLAHOMA CITY, OK 73112 405.416.8100
C.A. ARCHITECTURE - #BRC258 EXPIRES FEBRUARY 28, 2019
C.A. ENGINEERING - #F-2268 EXPIRES DECEMBER 31, 2018

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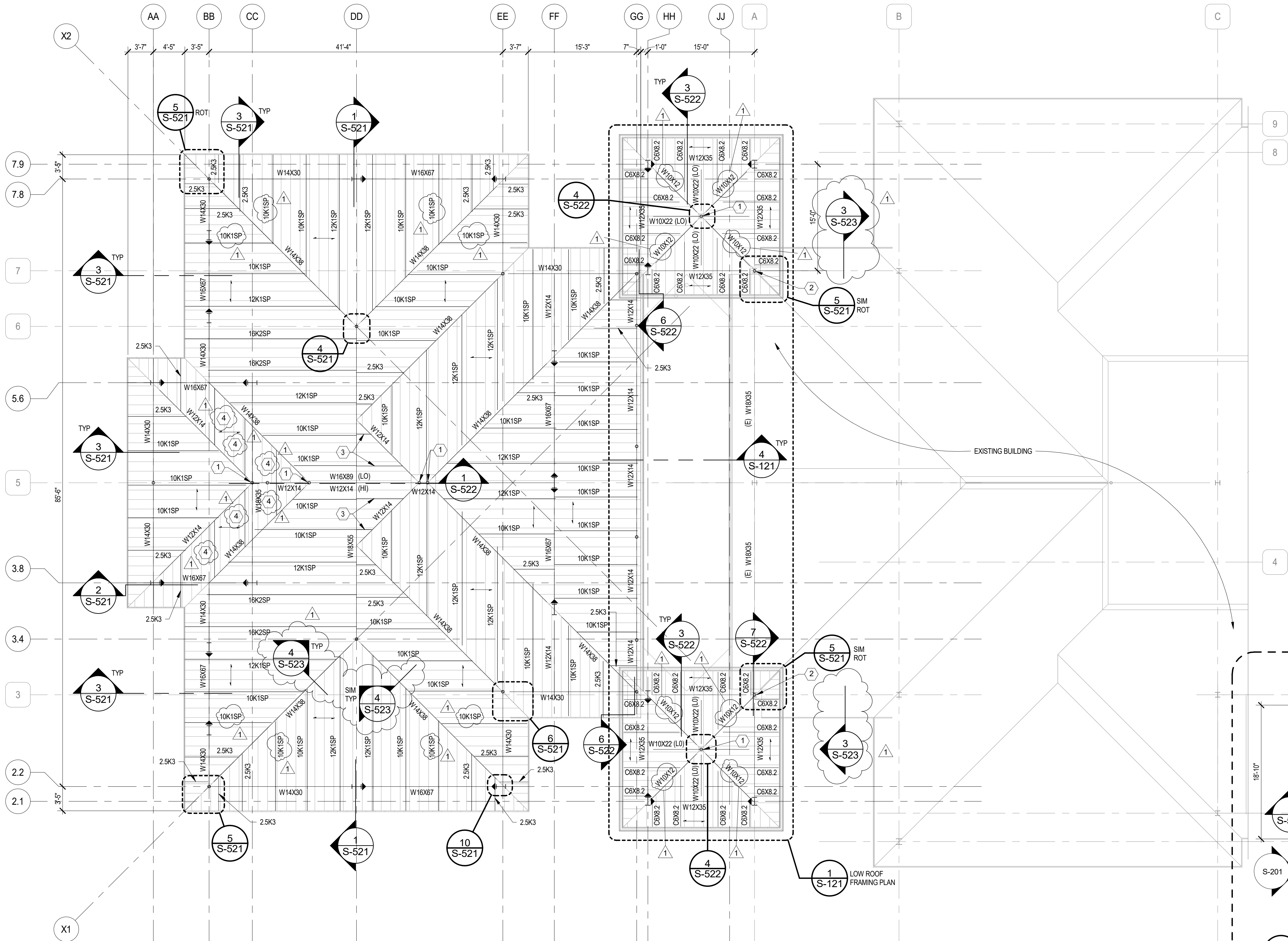
REVISIONS

Designed by:	MMAURICIO
Drawn by:	MMAURICIO
Reviewed by:	W. MCCANN
Submitted by:	B. MCCOMES

PROJECT TITLE
NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:	OK70374-000
SHEET TITLE	FRAMING PLAN - HIGH ROOF
Date:	12 JUL 2018

SEQ.	SHEET	OF
	S-122	



1 HIGH ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

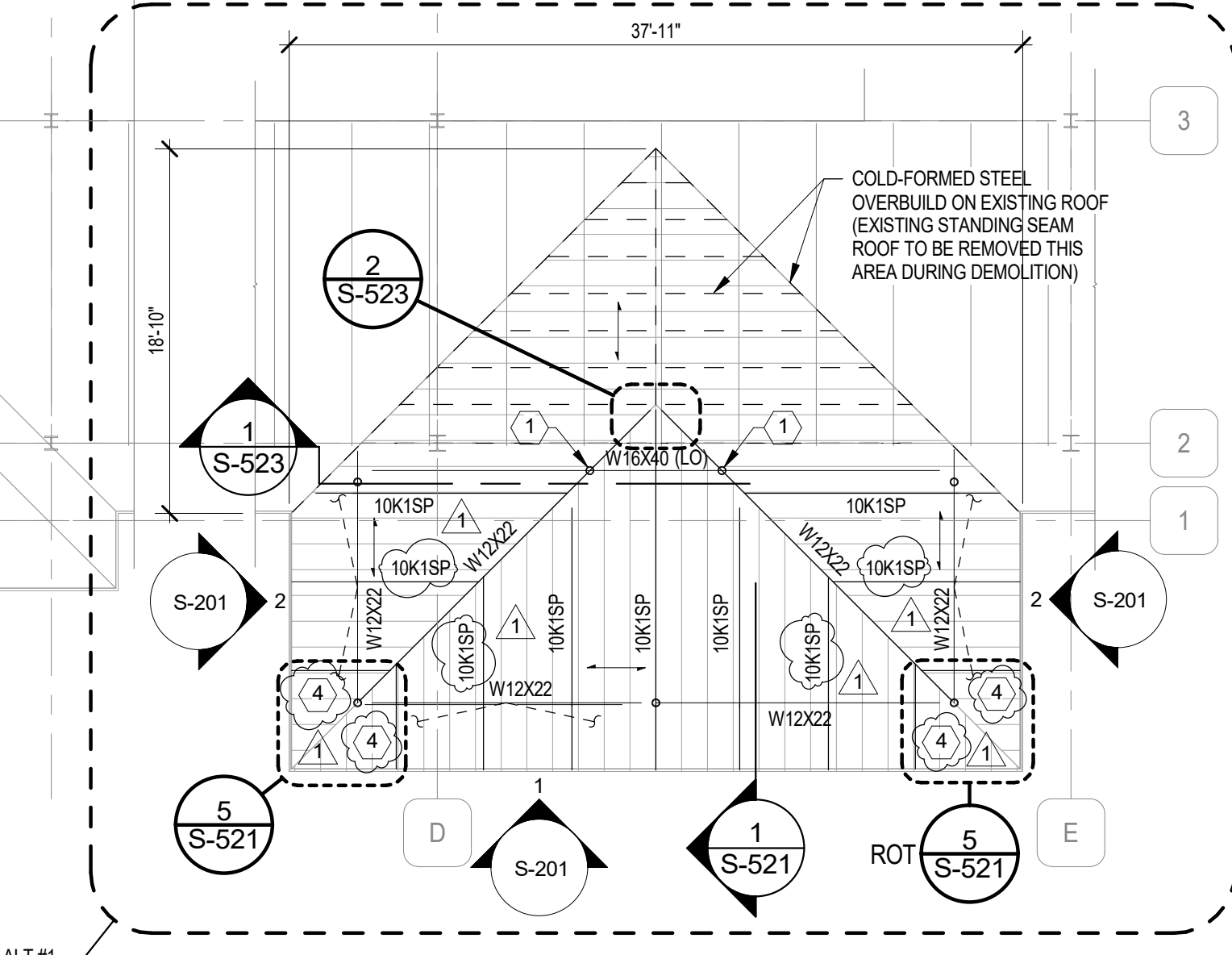
- RE: DRAWINGS S-001 THROUGH S-003 FOR GENERAL NOTES, DESIGN CRITERIA, AND ABBREVIATIONS.
- COORDINATE DIMENSIONS, WALL OPENINGS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL DWGS.
- ROOF STEEL SLOPES. JOIST BEARING/TOP OF STEEL ELEVATION AROUND THE PERIMETER = +14'-3" FROM THE DATUM ELEVATION UNLESS NOTED OTHERWISE. (+/- X'-X") DENOTES STEEL ELEVATION VARIATIONS FROM THE SLOPING STEEL PLANE.
- RE: DRAWING S-102 FOR JOIST SPACING TYPICAL.
- ROOF DECK: 1 1/2" - 20 GAGE, TYPE B, GALVANIZED METAL DECK. DECK ATTACHMENT PER 1/S-011.
- ALL CONTINUOUS DECK ANGLES TO BE FULL DEVELOPMENT BUTT WELDED AT SPLICES, SEE DETAIL 5/S-011.
- RE: DRAWING S-201 AND S-202 FOR FRAME ELEVATIONS.
- RE: FOUNDATION PLAN FOR COLUMN SIZES.
- REFER TO TYPICAL ROOF OPENING DETAIL ON 3/S-011 & 4/S-011 FOR ROOF OPENING FRAMING.
- COORDINATE SIZE, LOCATION, AND QUANTITY OF OPENINGS WITH MEP DRAWINGS AND MECHANICAL CONTRACTOR.
- RE: DRAWING S-603 FOR CONNECTION SCHEDULE.
- RE: DRAWINGS S-011 THROUGH S-012 FOR TYPICAL FRAMING DETAILS.
- LOCATIONS AND WEIGHTS OF THE EQUIPMENT SHOWN ON THE PLAN HAVE BEEN ASSUMED FOR BIDDING PURPOSES ONLY. CONTRACTOR TO COORDINATE FINAL UNIT LOCATIONS AND WEIGHTS (AND ADDITIONAL UNITS) AND SUBMIT TO CONTRACTING OFFICER FOR REVIEW PRIOR TO PROCEEDING WITH ANY FABRICATION.

KEY NOTES

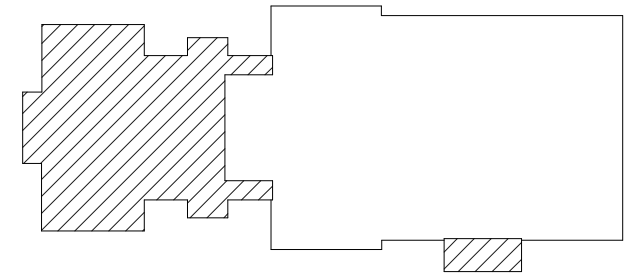
- HSSx0 500 POST
- HSSx0 500 POST CONNECTED TO TOP OF EXISTING WF COLUMN, RE: 10/S-521
- PROVIDE JOIST EXTENDED ENDS THIS END ONLY FOR SUPPORT OF ROOF DECK
- 2.5K3 JOIST SUBSTITUTE

LEGEND

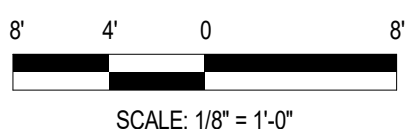
- FULLY RESTRAINED MOMENT CONNECTION
→ SPAN DIRECTION



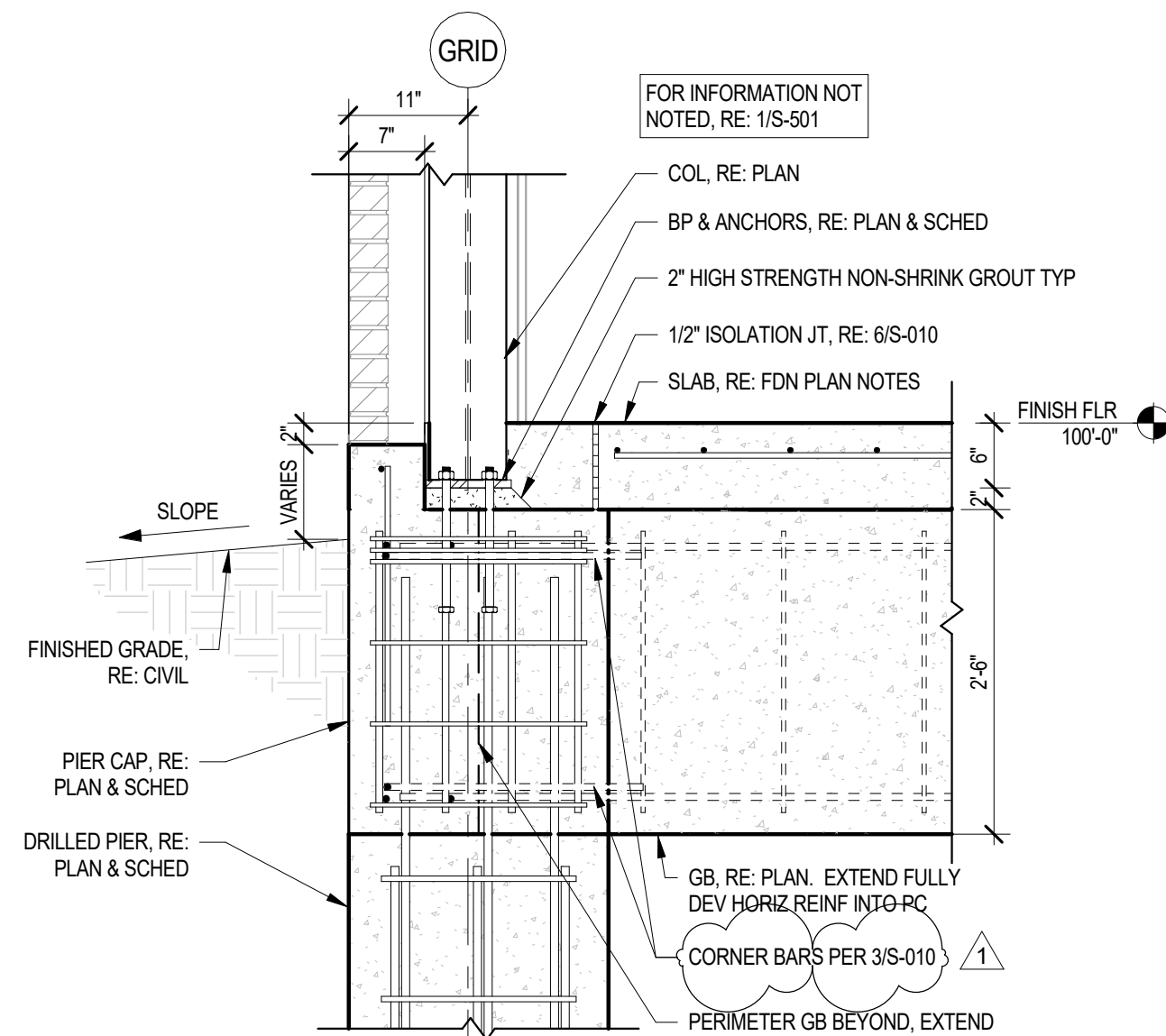
2 ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



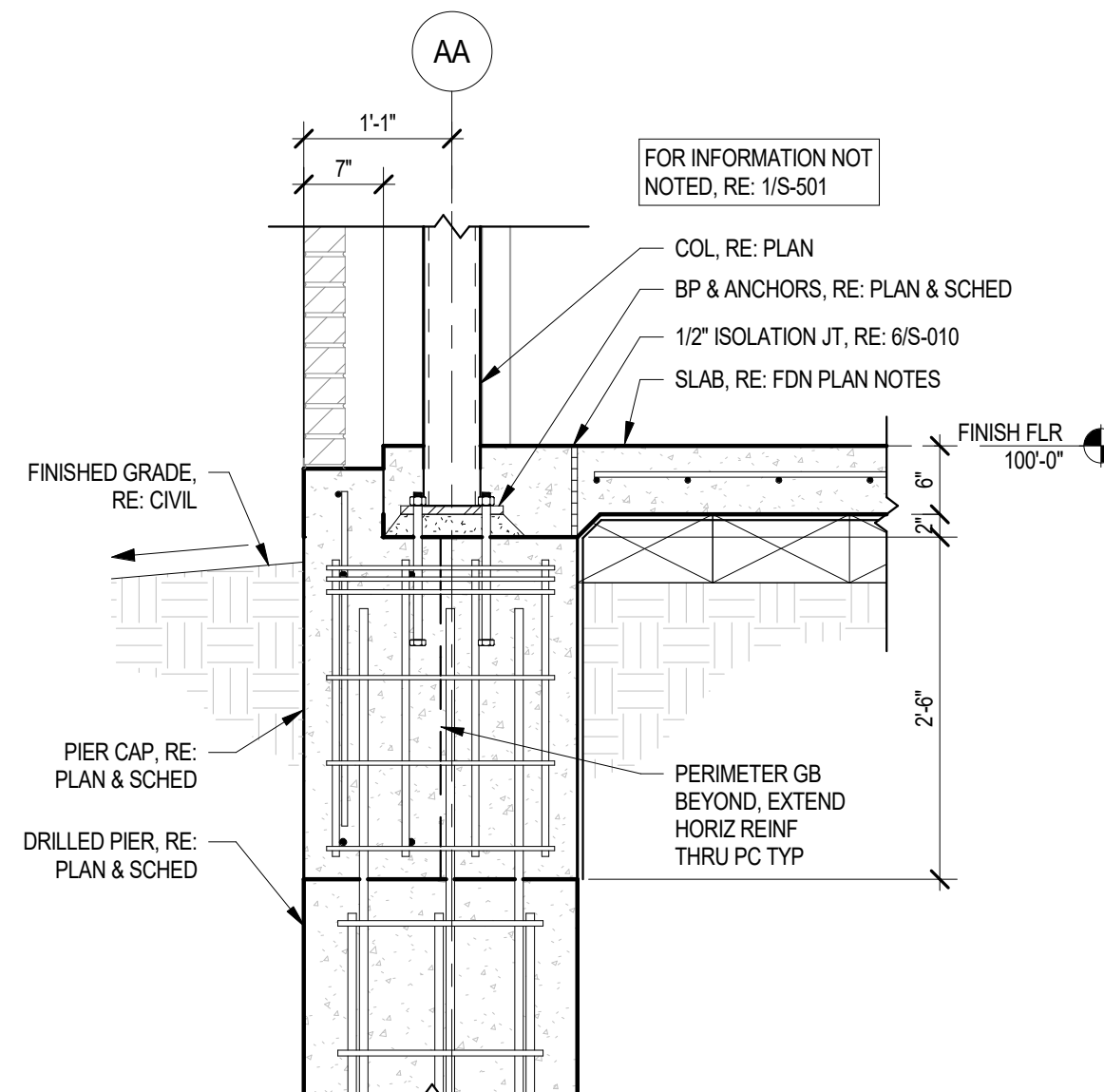
KEY PLAN



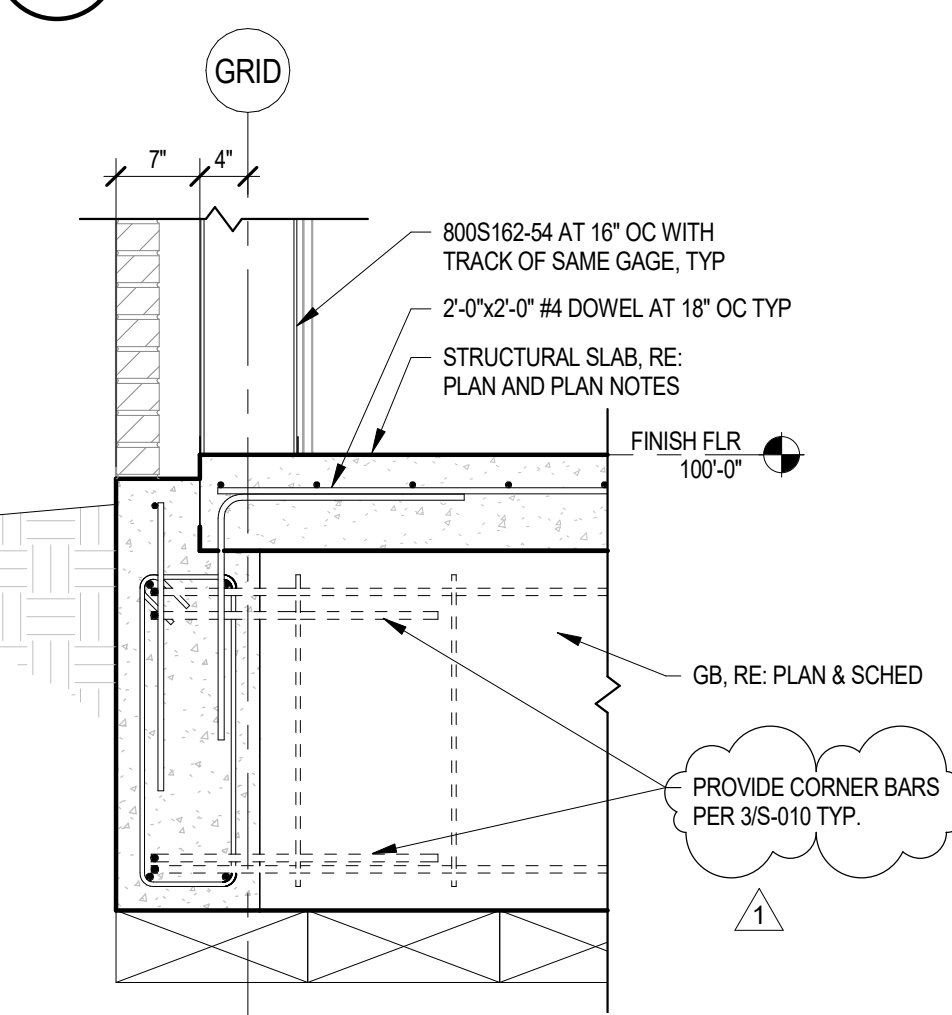
SCALE: 1/8" = 1'-0"



2 SECTION AT PERIMETER WF COL
SCALE: 3/4" = 1'-0"

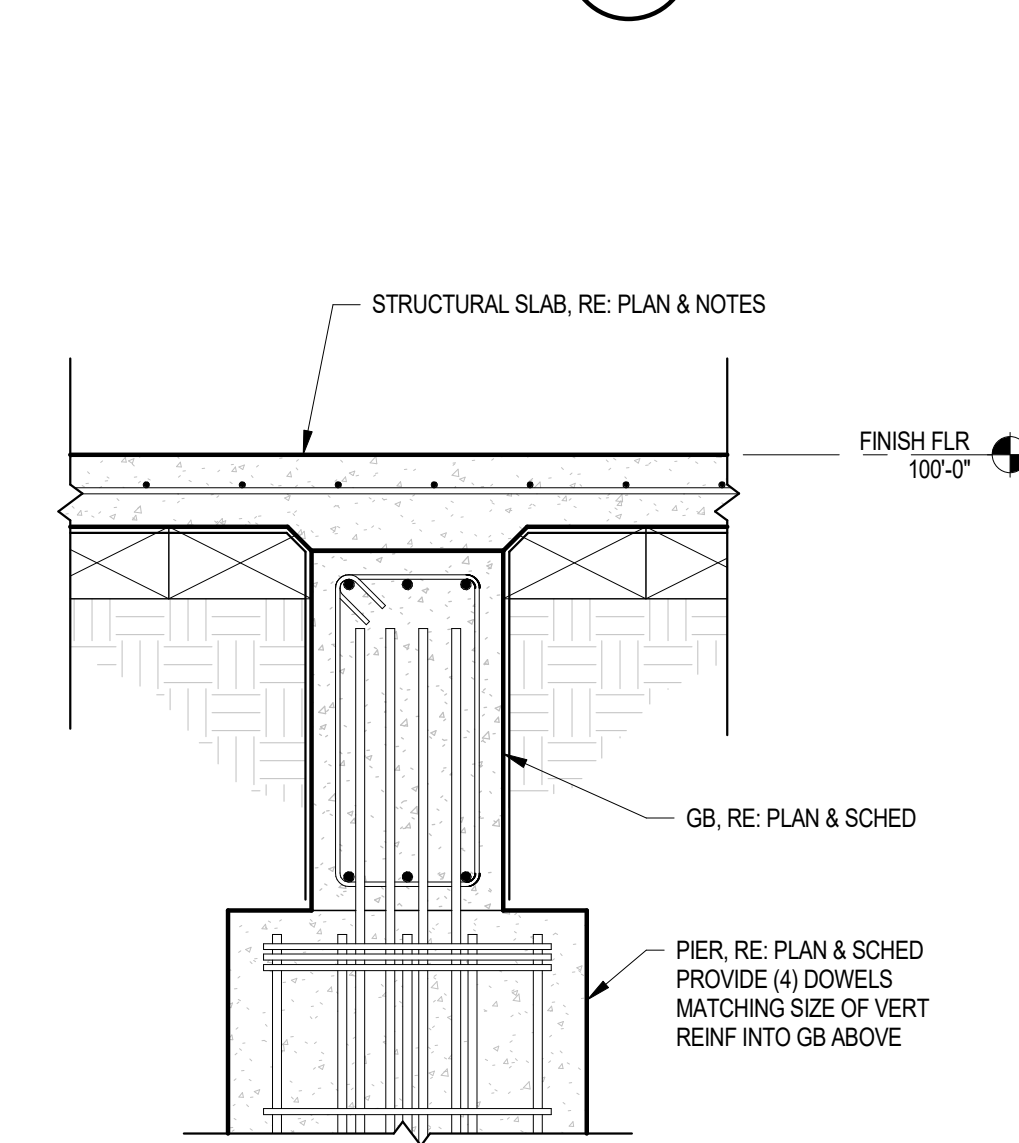


4 SECTION AT PERIMETER HSS COL
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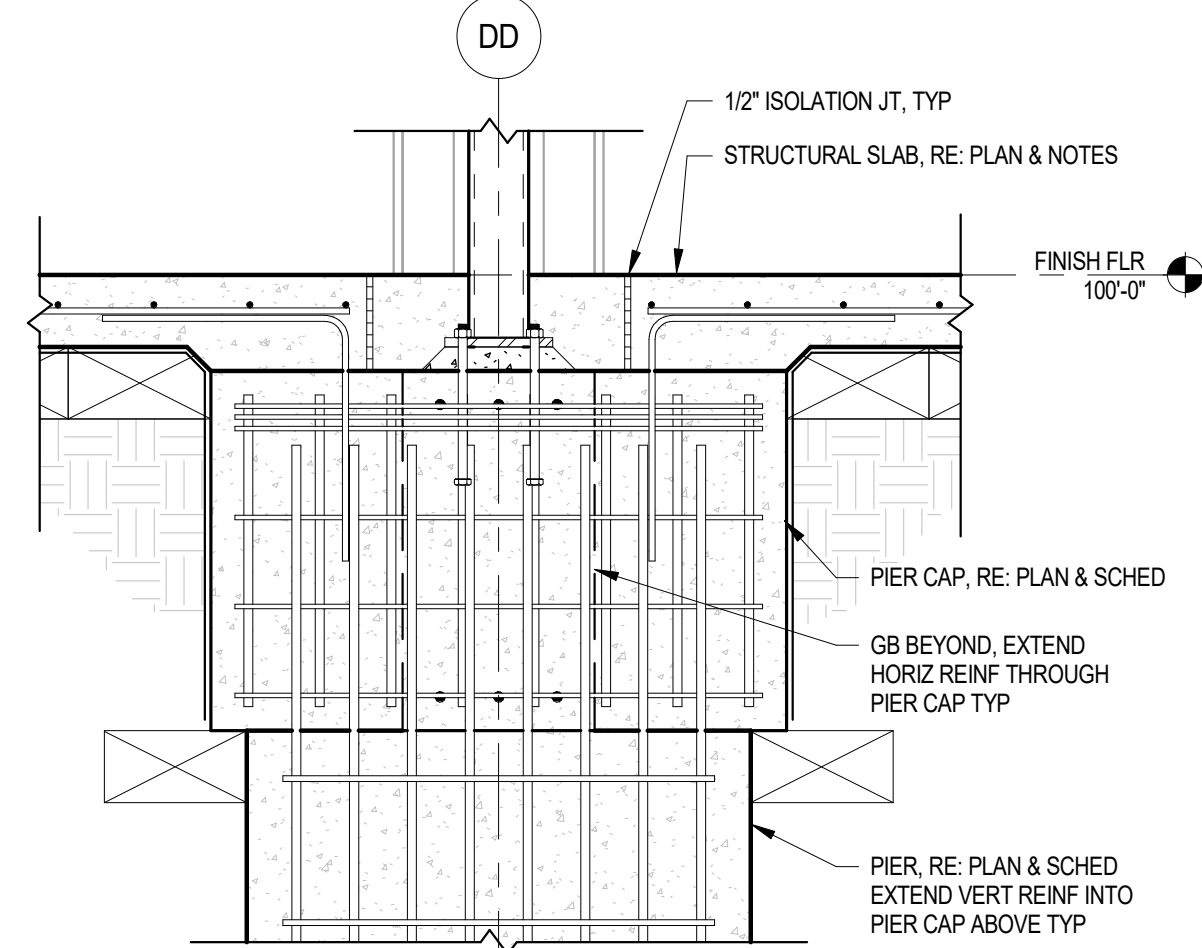


GRADE BEAM INTERSECTION

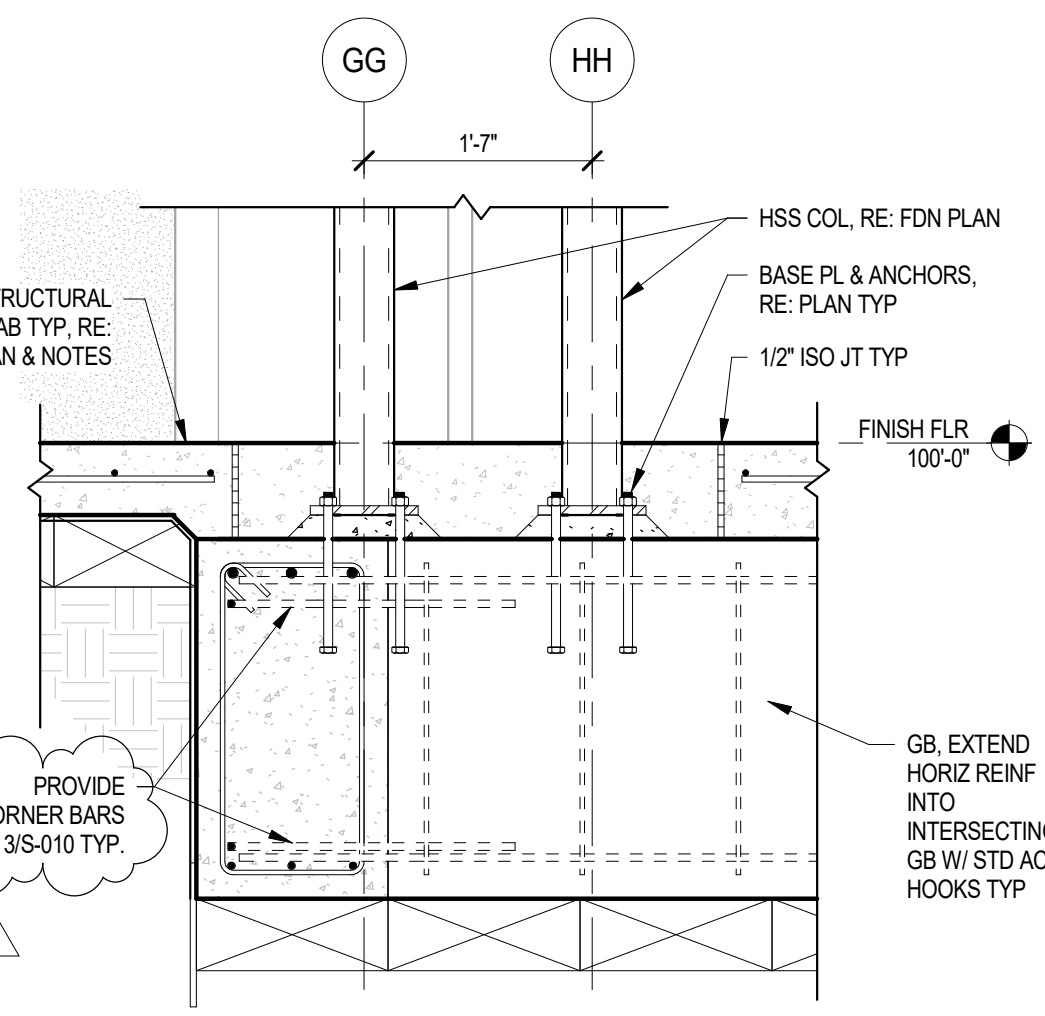
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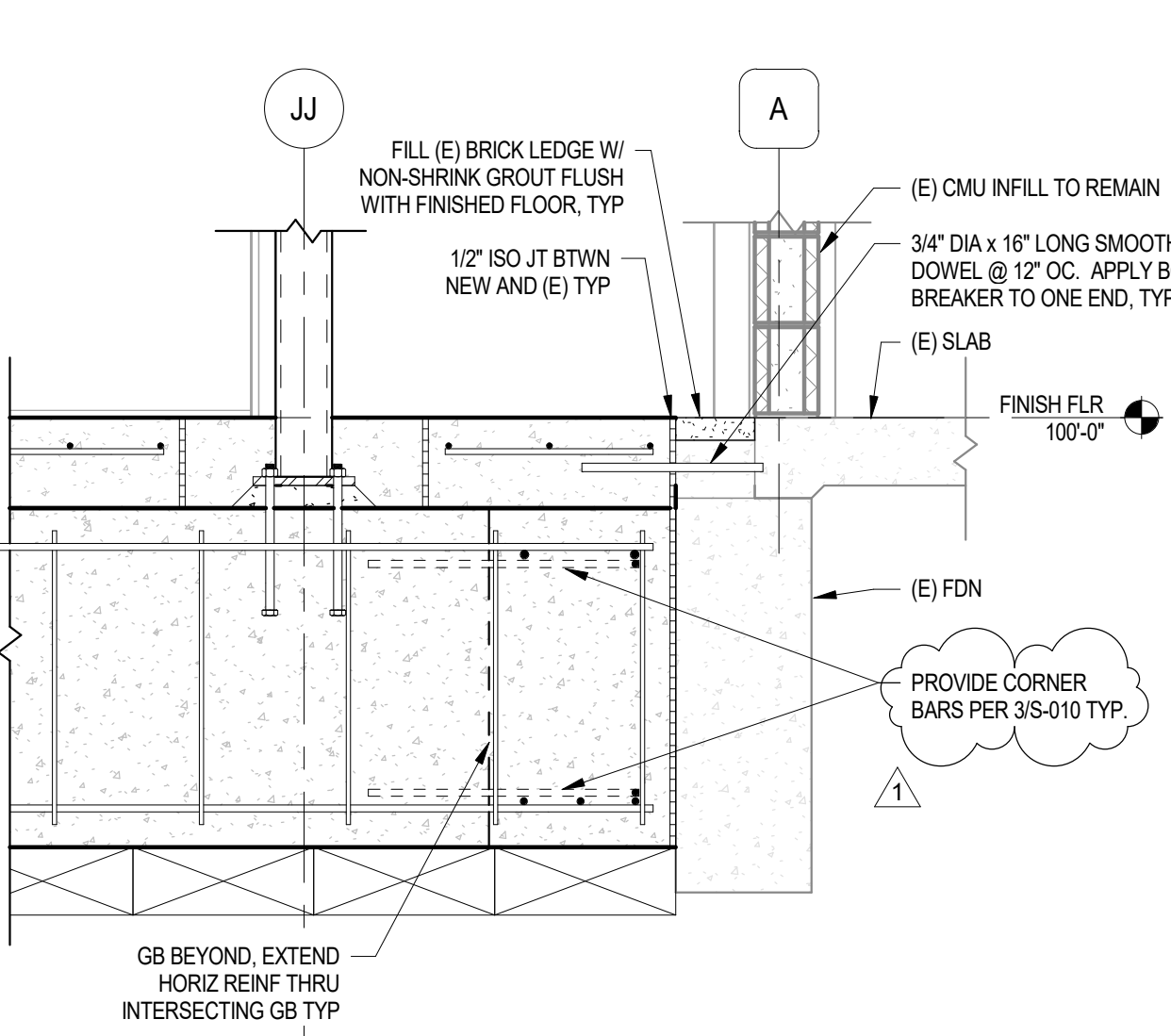
8 TYPICAL INTERIOR PIER



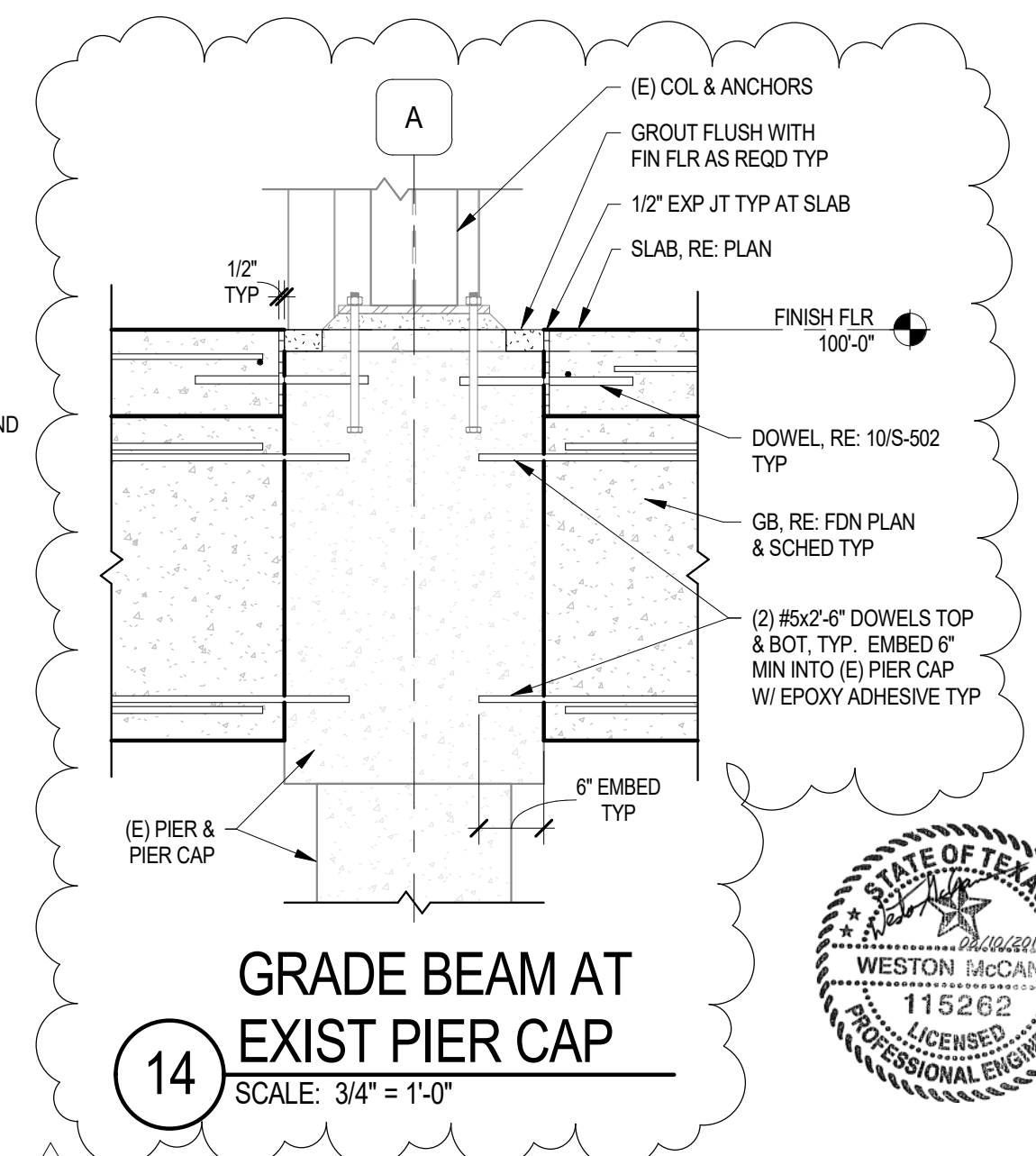
9 SECTION AT INTERIOR COLUMN
SCALE: 3/4" = 1'-0"



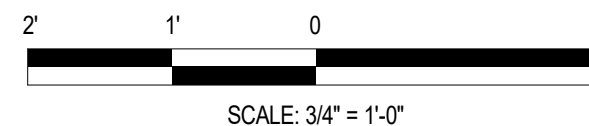
11 COLUMN TO GRADE BEAM
SCALE: 3/4" = 1'-0"



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



14 GRADE BEAM AT
EXIST PIER CAP
SCALE: 3/4" = 1'-0"

[illegible]

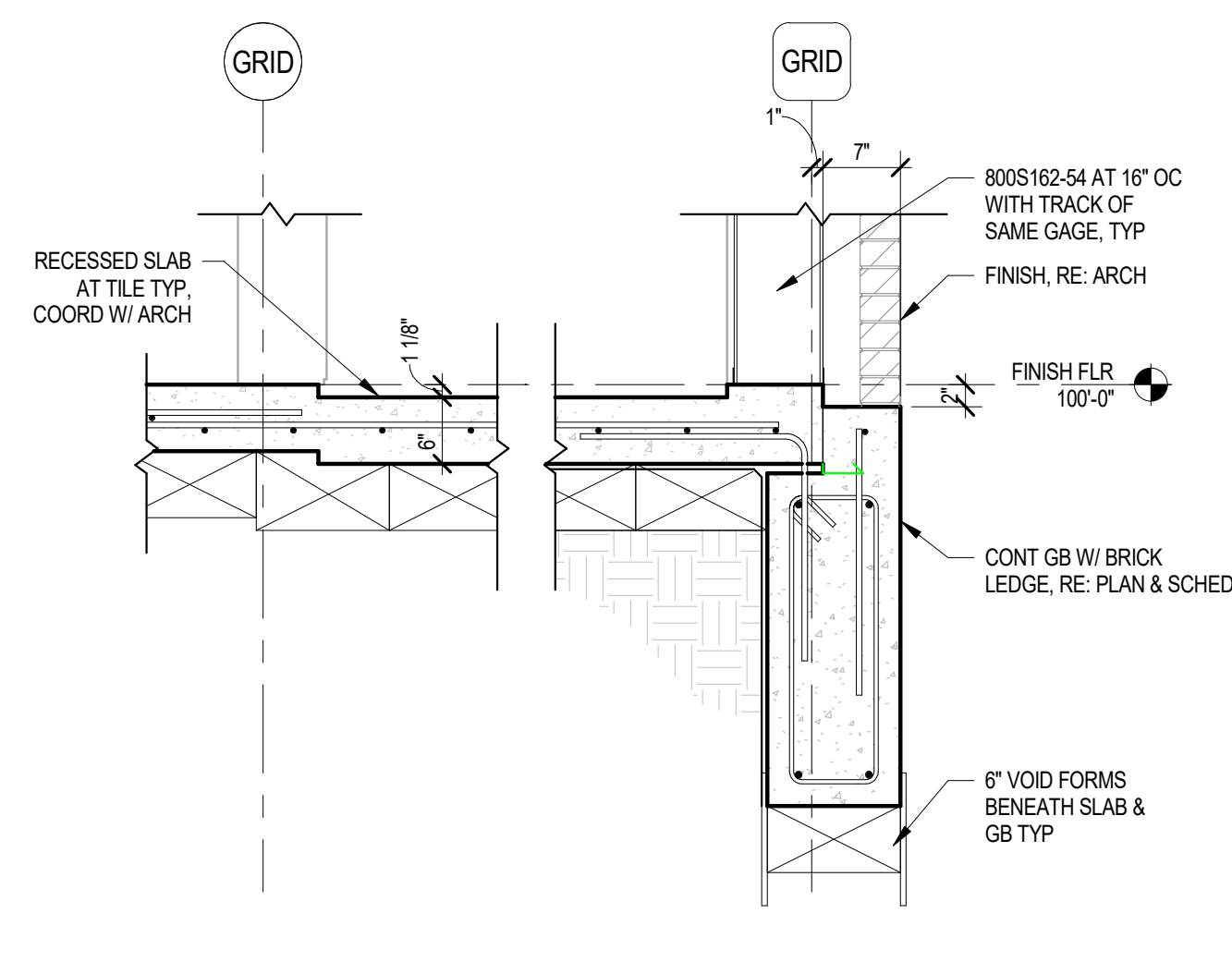
Designed by: MMAURICIO
Drawn by: MMAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

PROJECT TITLE

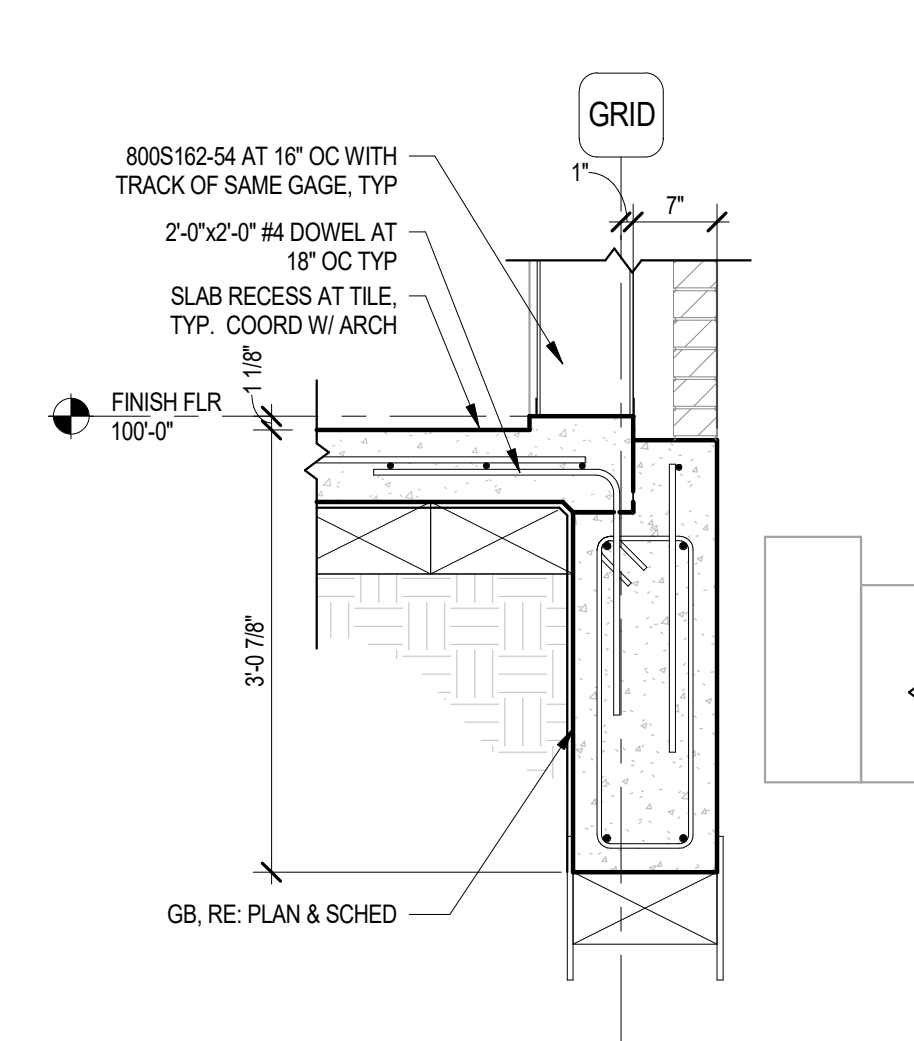
NATURE OF WORK:
 CROSSMAN DINING FACILITY EXPANSION
 17th TRAINING WING
 GOODFELLOW AIR FORCE BASE, TEXAS

SEQ.	SHEET	OF
S-501		

8/10/2018 11:19:19 AM C:\Work\R18_70374-000_S_mmauricio.rvt



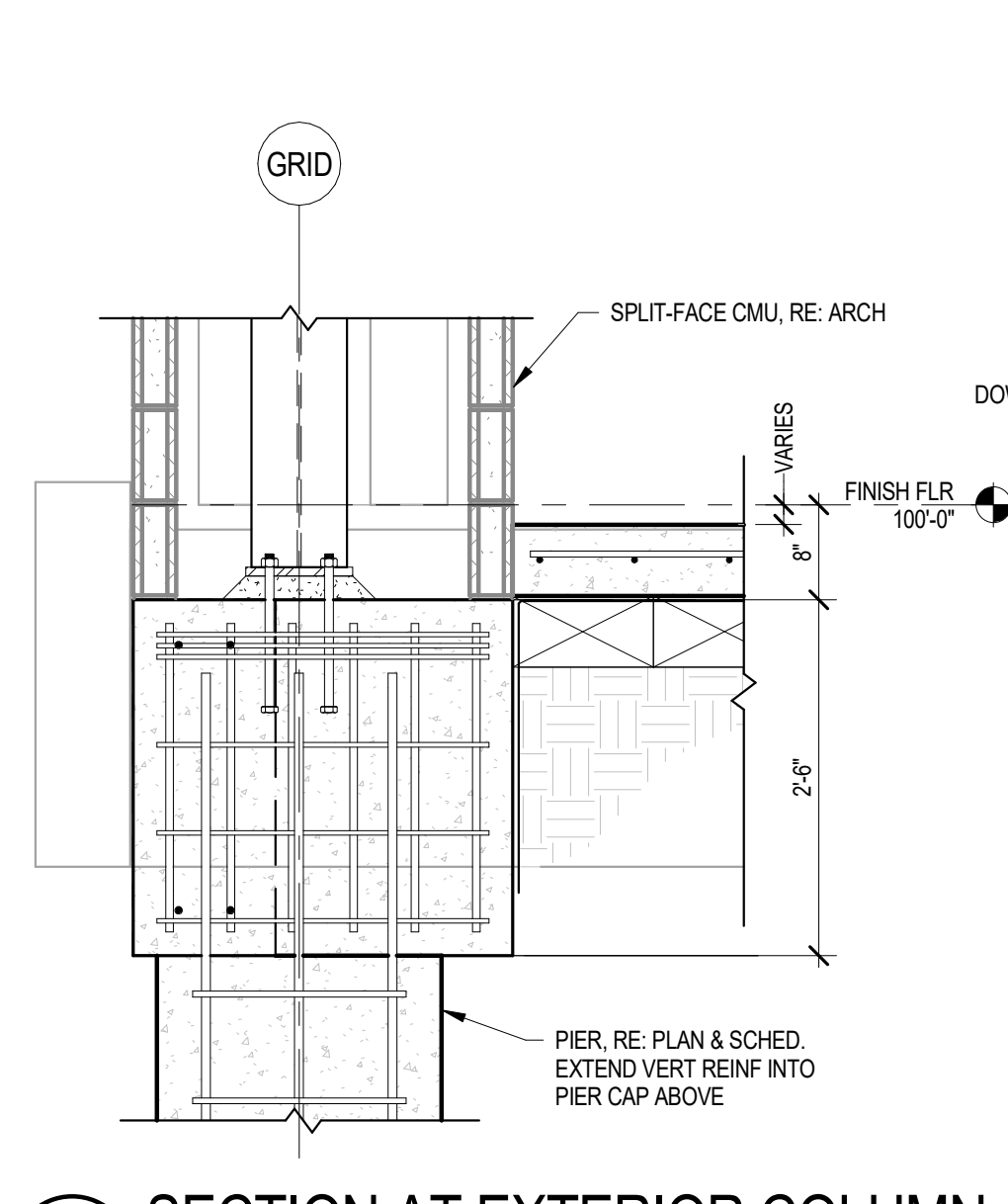
2 SLAB AT TILE
SCALE: 3/4" = 1'-0"



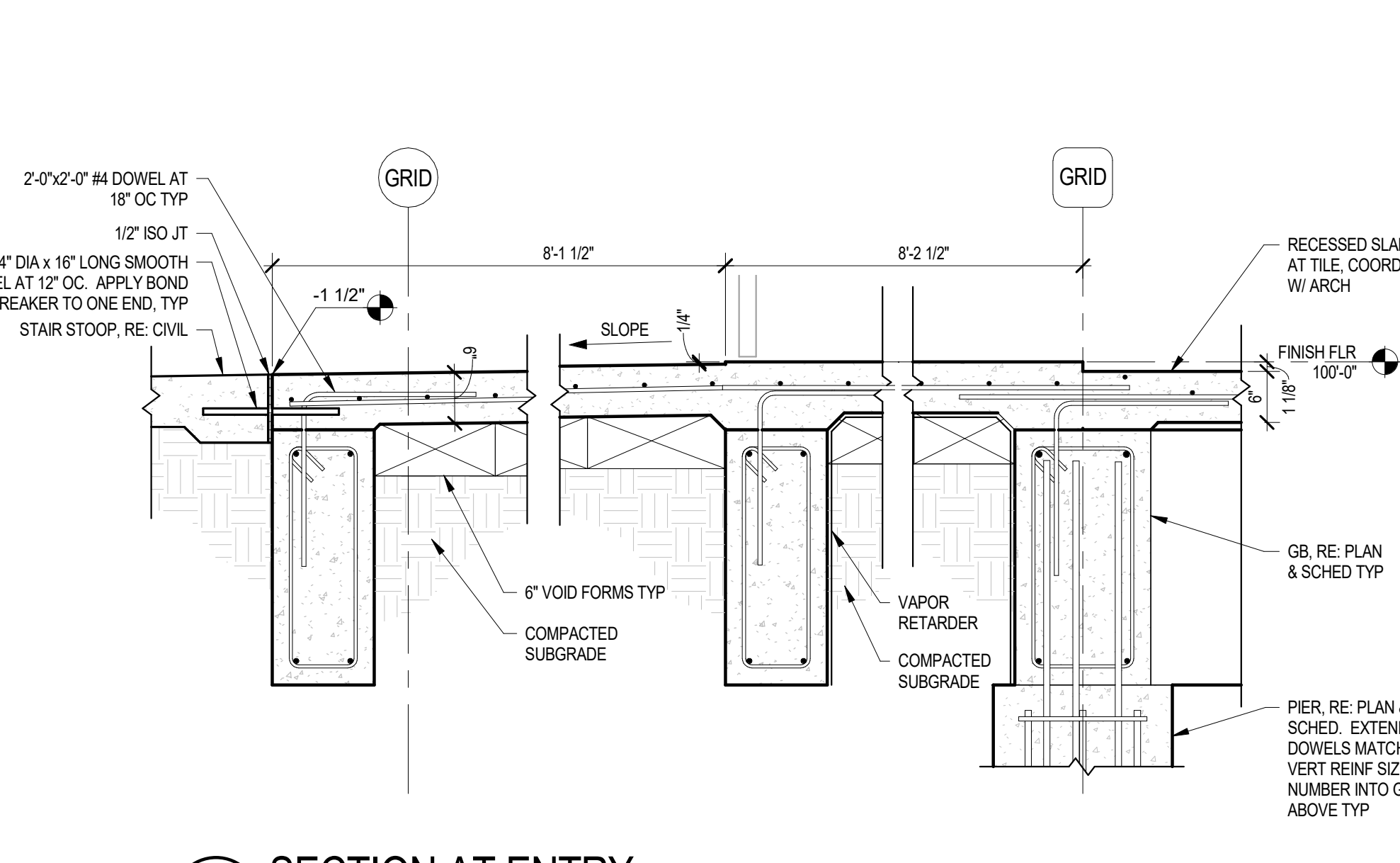
4 EXTERIOR WALL AT RAMP
SCALE: 3/4" = 1'-0"



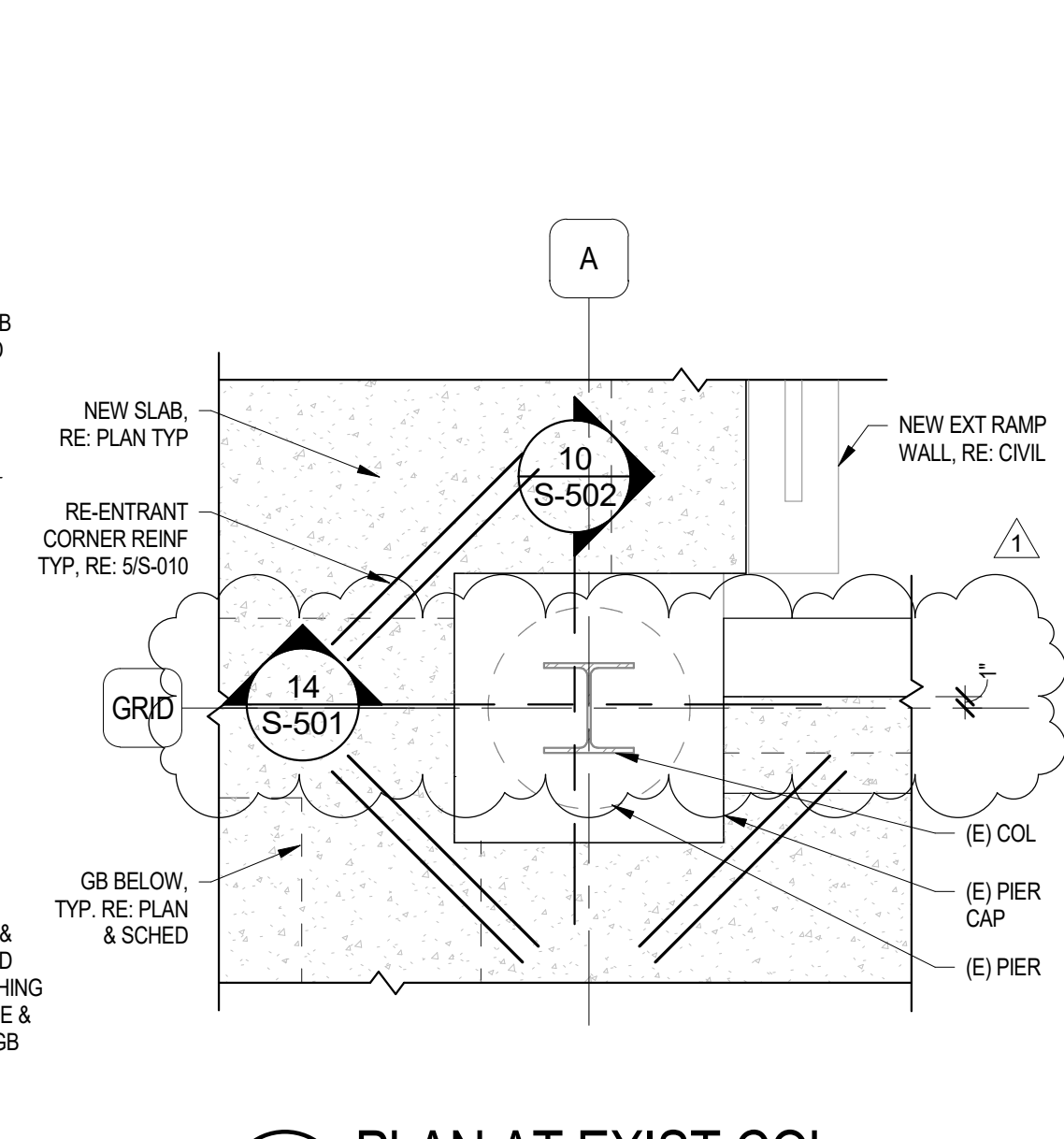
5 SECTION AT ENTRY
SCALE: 3/4" = 1'-0"



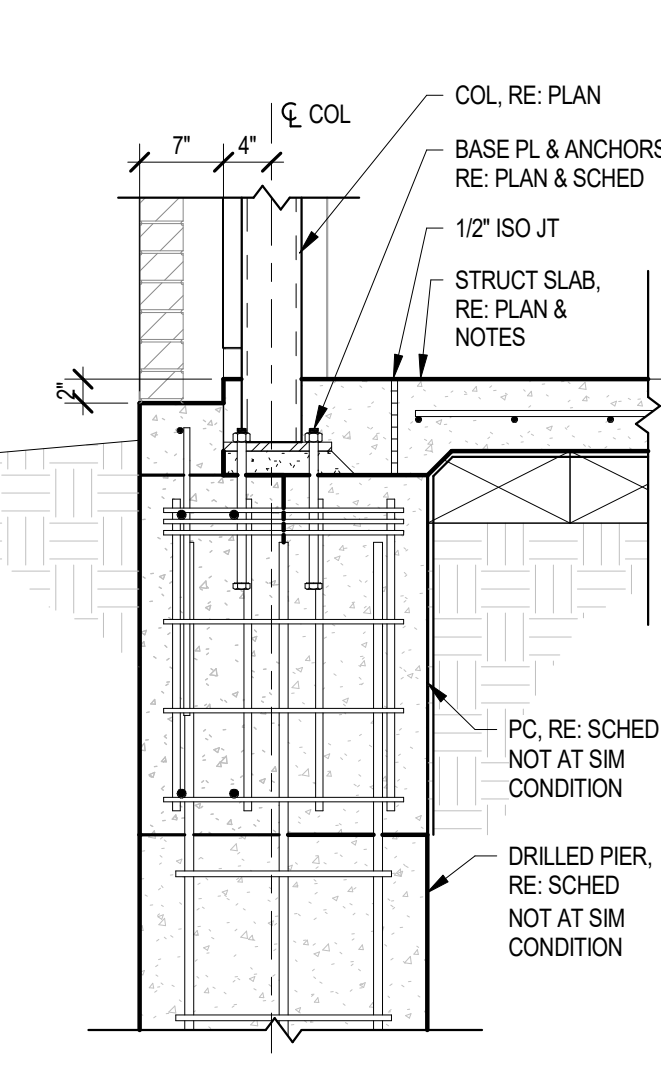
7 SECTION AT EXTERIOR COLUMN
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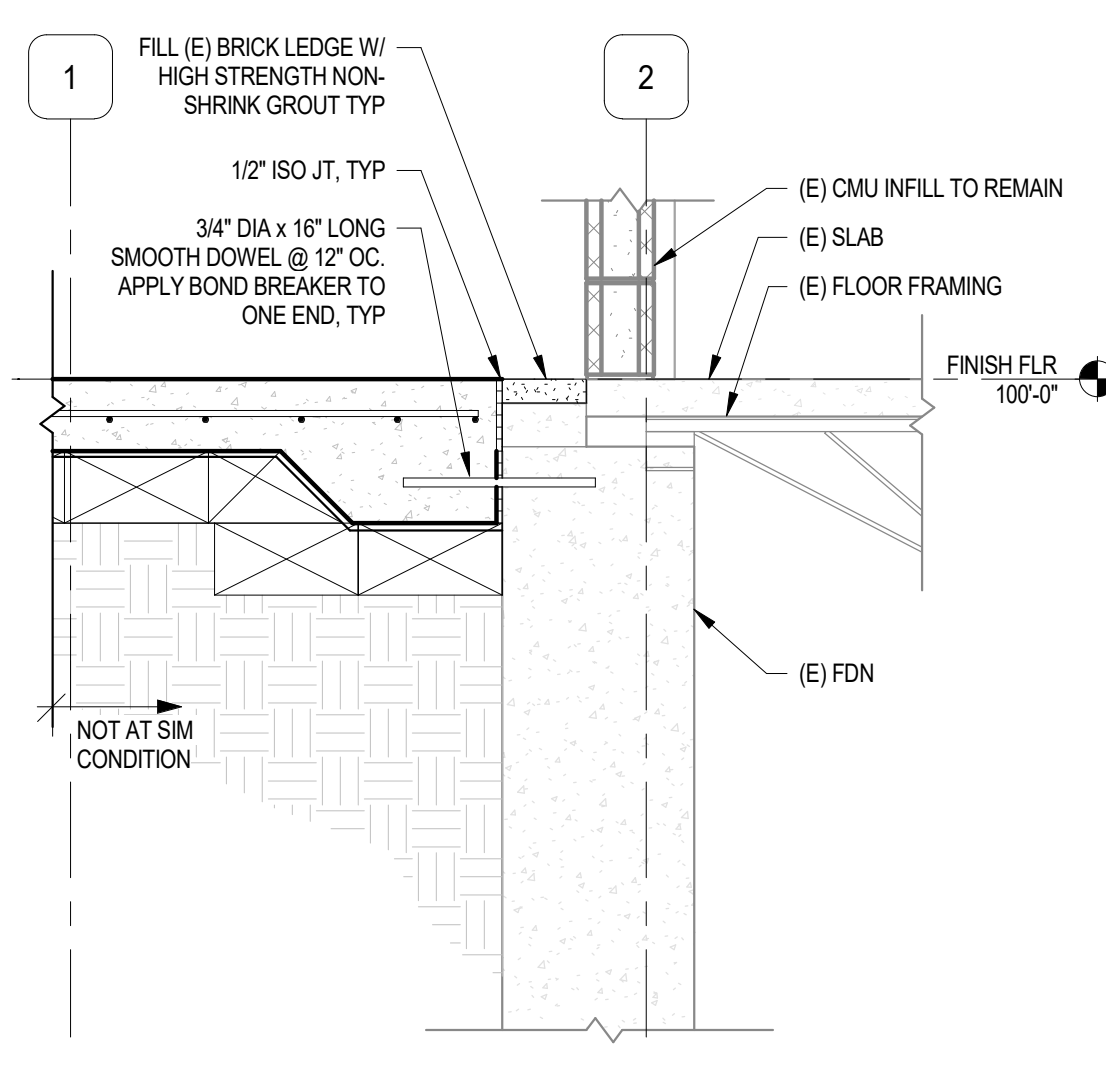
8 SECTION AT ENTRY
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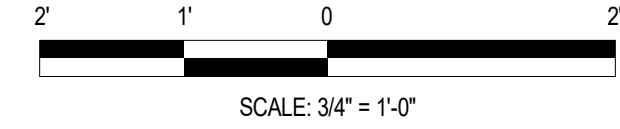
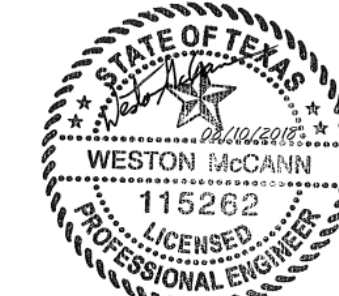
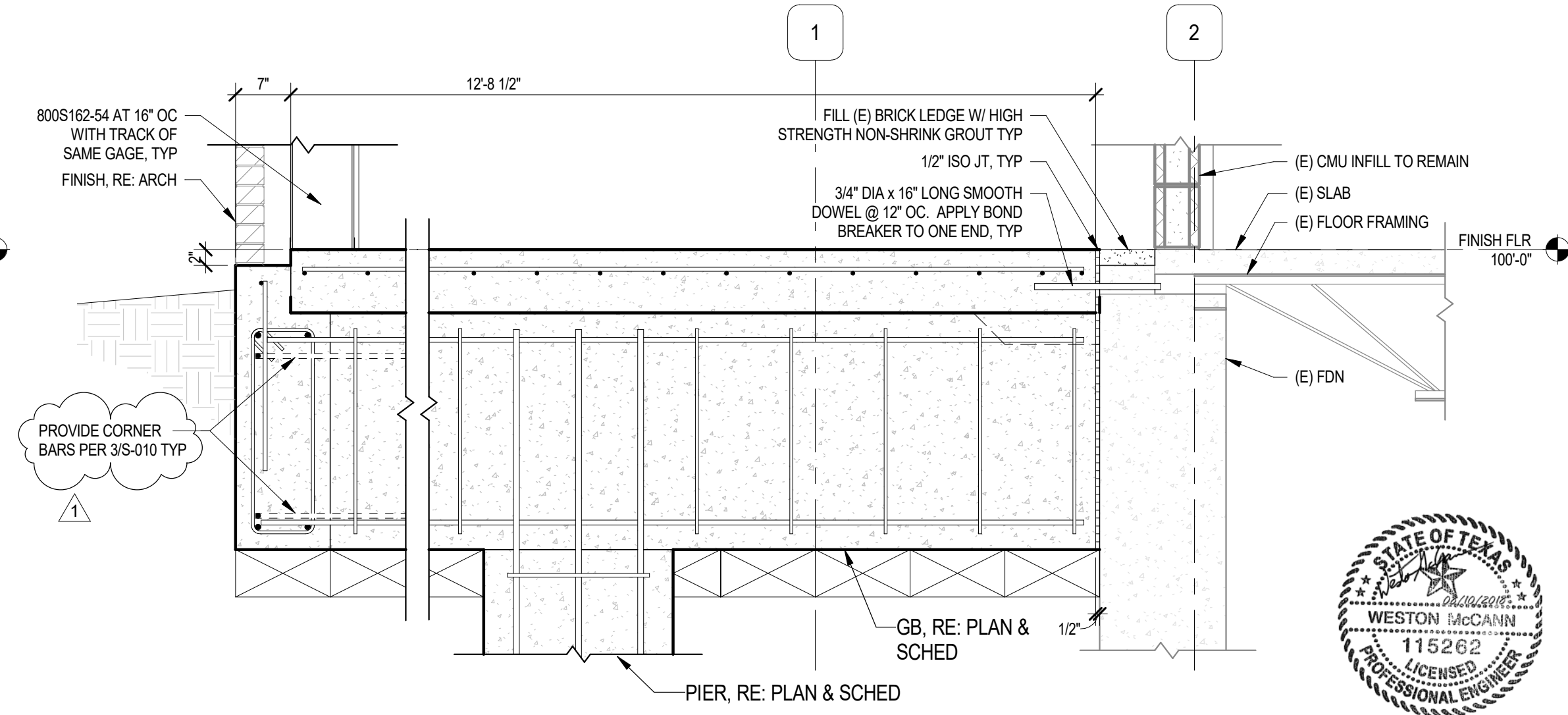
9 PLAN AT EXIST COL
SCALE: 3/4" = 1'-0"



11 SECTION AT PREP AREA
SCALE: 3/4" = 1'-0"



12 SECTION AT PREP AREA
SCALE: 3/4" = 1'-0"

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Designed by: M MAURICIO
Drawn by: M MAURICIO
Reviewed by: W. McCANN
Submitted by: B. McCOMBS

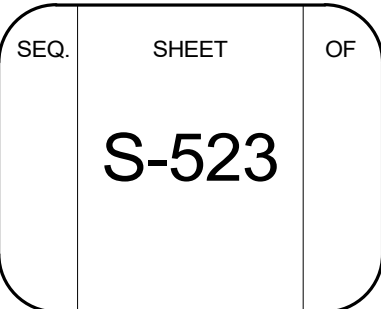
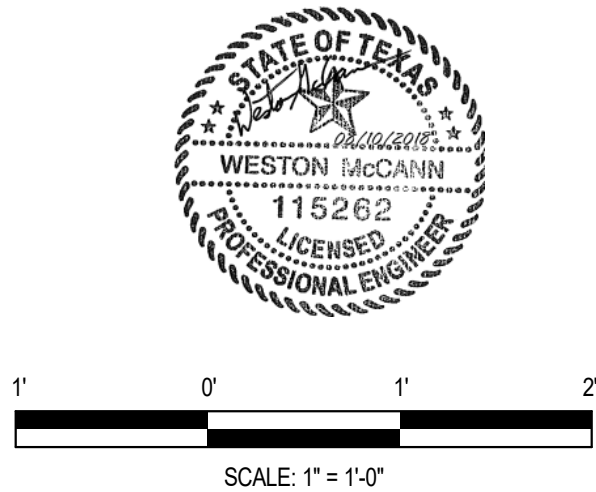
PROJECT TITLE

NATURE OF WORK:
 CRESSMAN DINING FACILITY EXPANSION
 17th TRAINING WING
 GOODFELLOW AIR FORCE BASE, TEXAS

Project Number:	OK70374-000
SHEET TITLE	FOUNDATION SECTIONS
Date:	12 JUL 2018

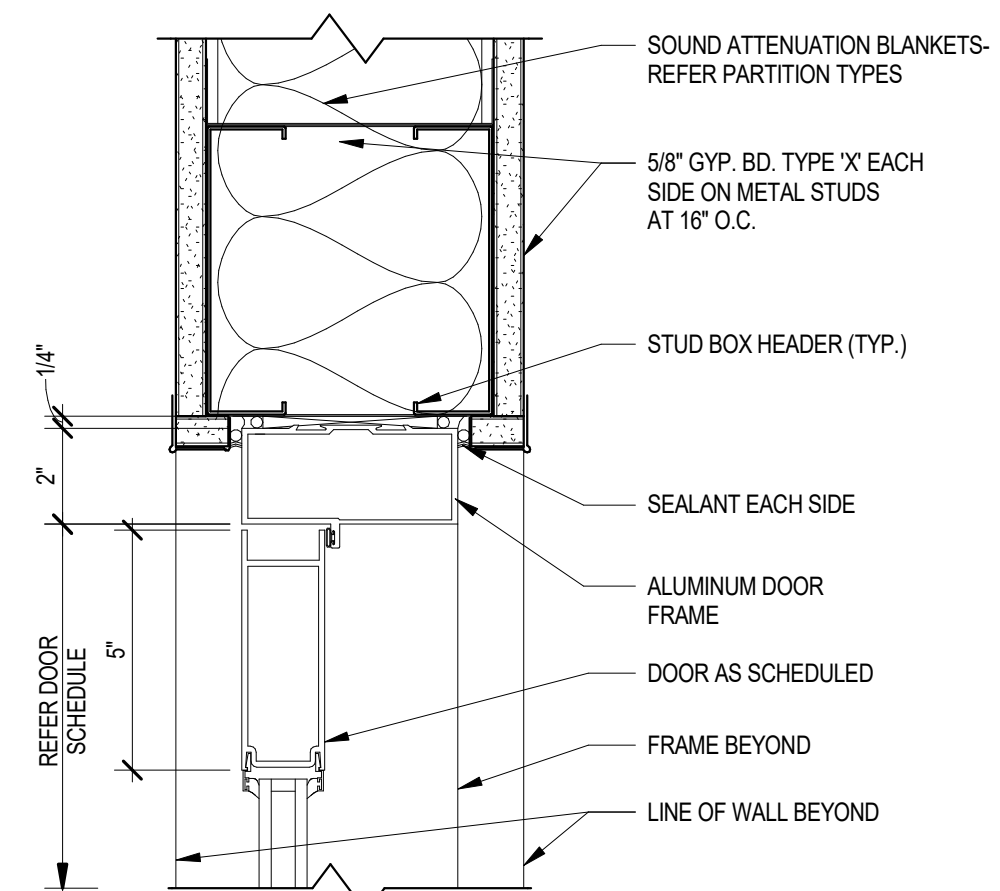
SEQ.	SHEET	OF
S-502		

8/10/2018 11:19:19 AM



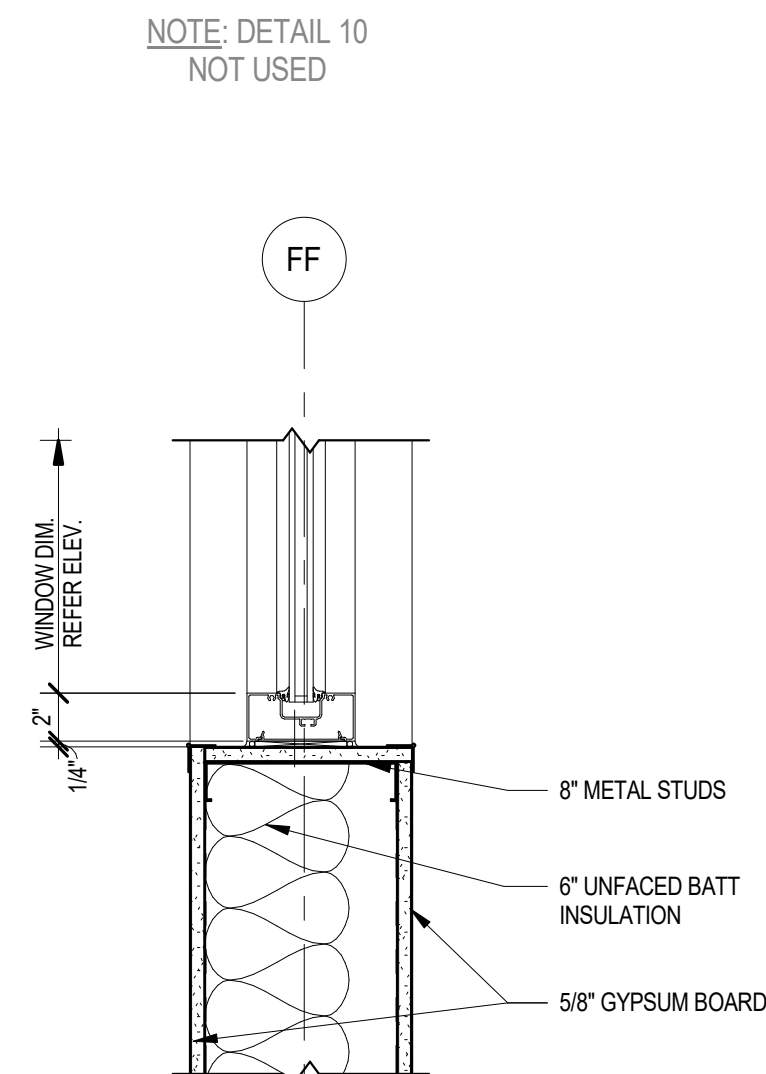
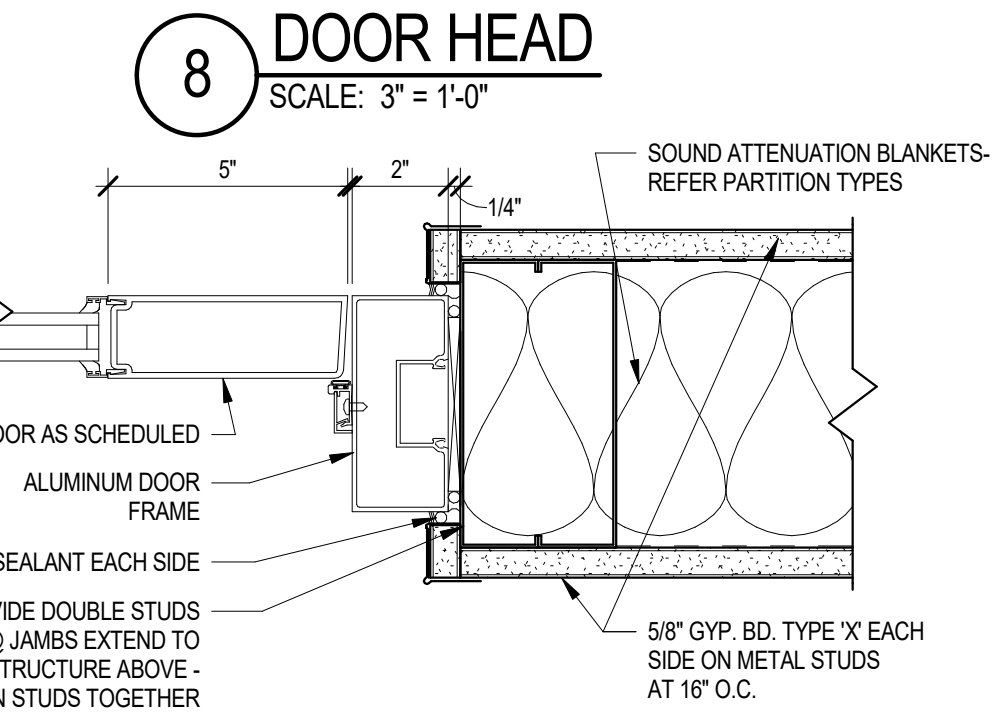
DOOR SCHEDULE

MARK	DOOR					FRAME				DETAILS			FIRE RATING	HW SET	COMMENTS
	PANEL SIZE			MATERIAL	TYPE	WIDTH		MATERIAL	TYPE	HEAD	JAMB	SILL			
	PANEL 1 WIDTH	PANEL 2 WIDTH	HEIGHT			HEAD	JAMB								
101A	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	5/A-601	6/A-601	7/A-601	0	1	DOOR AND DOOR GLAZING SHALL MEET AT1/FP REQUIREMENTS
101B	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	8/A-601	9/A-601	N/A	0	2	
103	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	7	
104A	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	5/A-601	6/A-601	7/A-601	0	1	DOOR AND DOOR GLAZING SHALL MEET AT1/FP REQUIREMENTS
104B	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	8/A-601	9/A-601	N/A	0	2	
105	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	8	
106	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	6	
107	3'-0"	3'-0"	7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	11	
110	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	9	
111	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	10	
112	3'-0"		7'-0"	WOOD	WDD1	2"	2"	HOLLOW METAL	HMF1	2/A-601	3/A-601	N/A	0	5	
113	3'-0"		7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF2	2/A-601	3/A-601	N/A	0	4	
115	3'-0"	3'-0"	7'-0"	ALUMINUM	ALD1	2"	2"	ALUMINUM	ALF1	8/A-601	9/A-601	N/A	0	2	



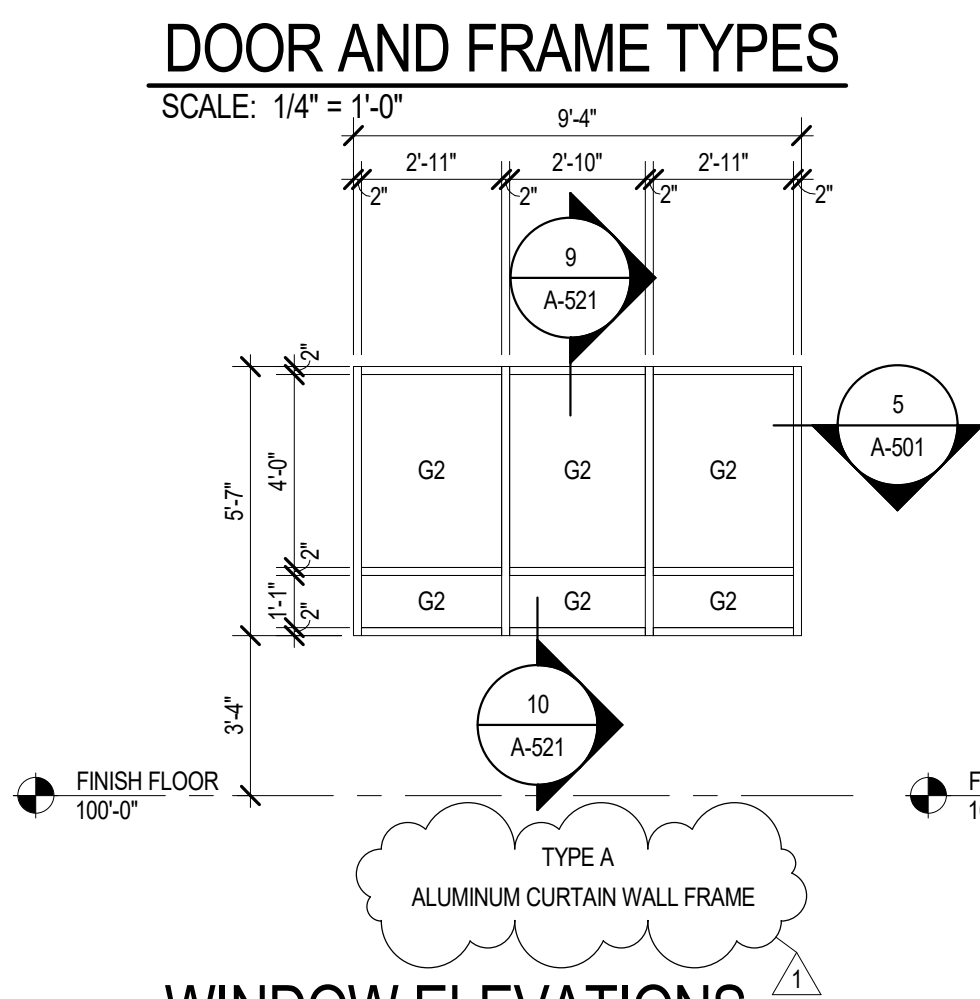
GLAZING TYPES

MARK	COMMENTS
G1	1/4" CLEAR TEMPERED GLASS
G2	1" INSULATED, LOW-E, LAMINATED, TEMPERED, TINTED TO MATCH EXISTING GLASS. ALL NEW EXTERIOR GLAZING SHALL MEET ATFP REQUIREMENTS



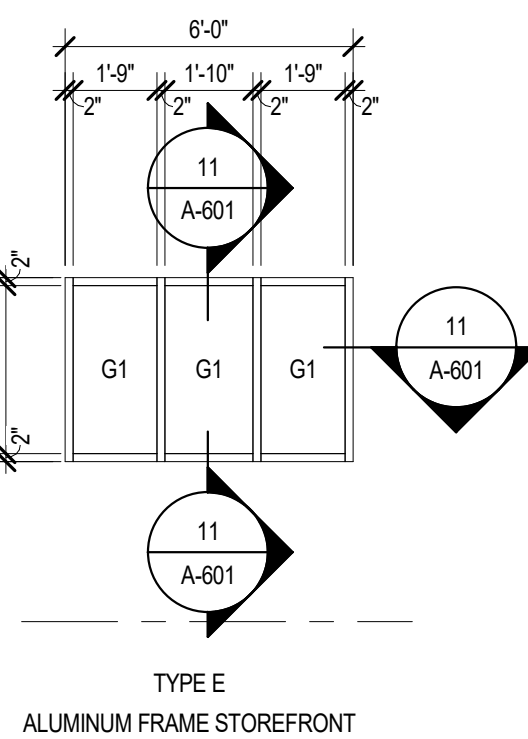
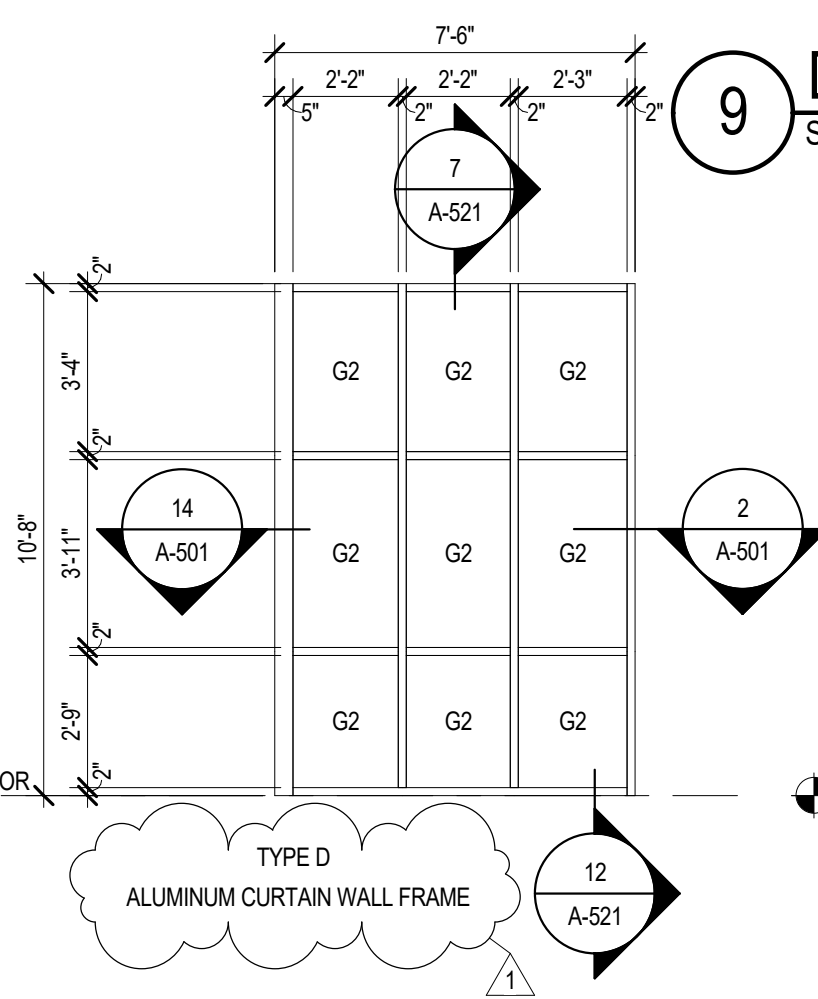
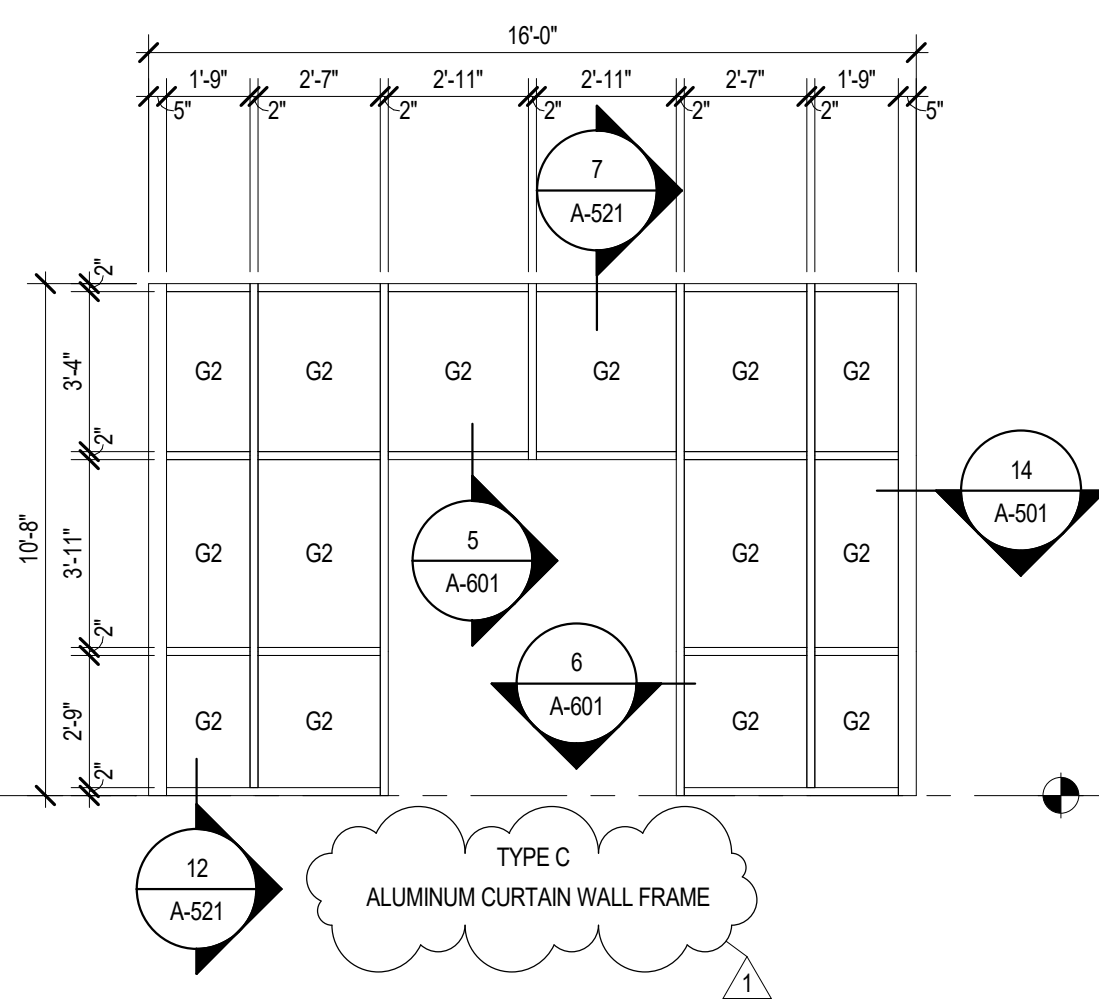
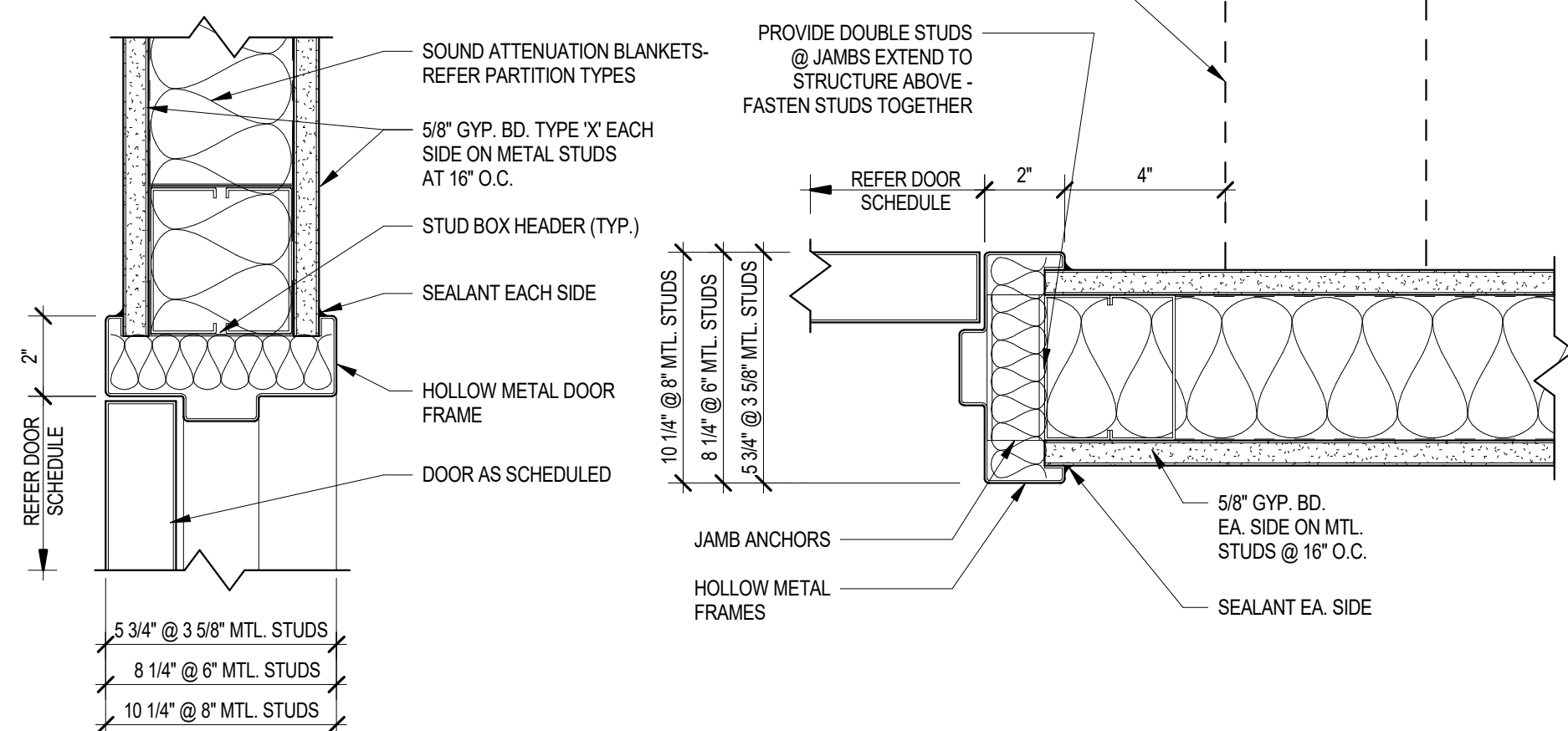
DOOR AND FRAME TYPES

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



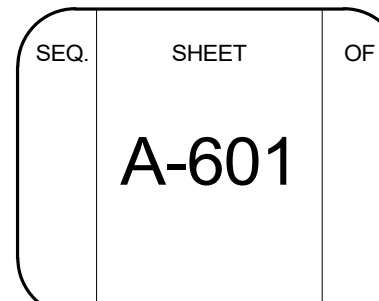
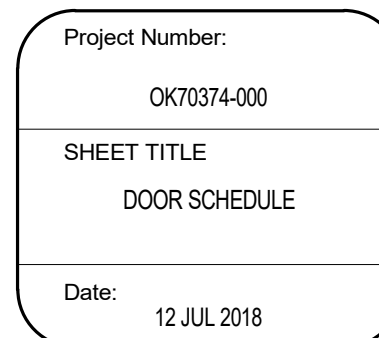
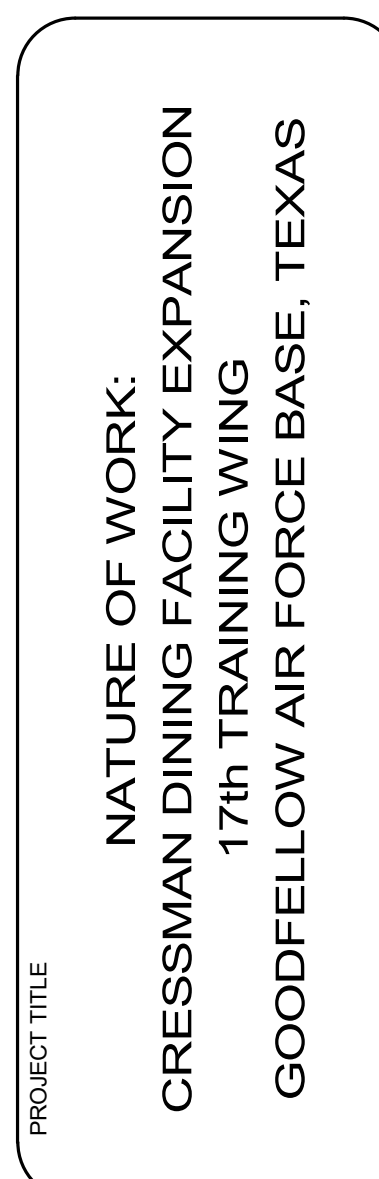
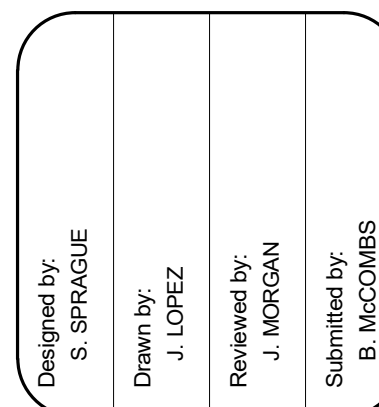
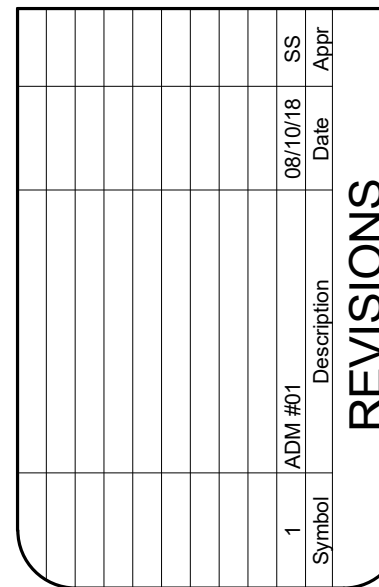
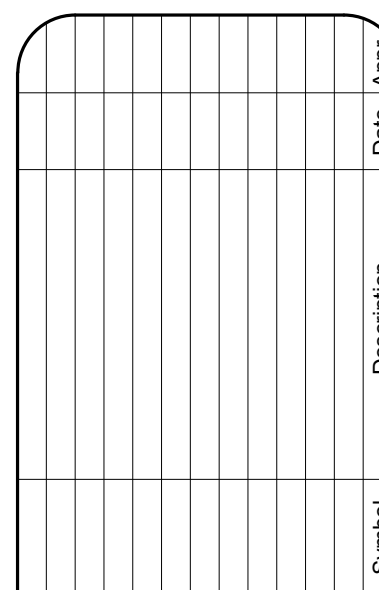
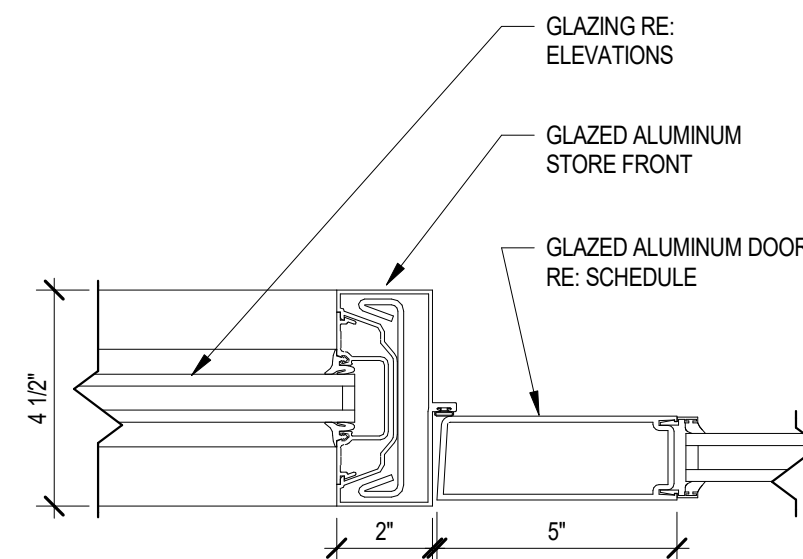
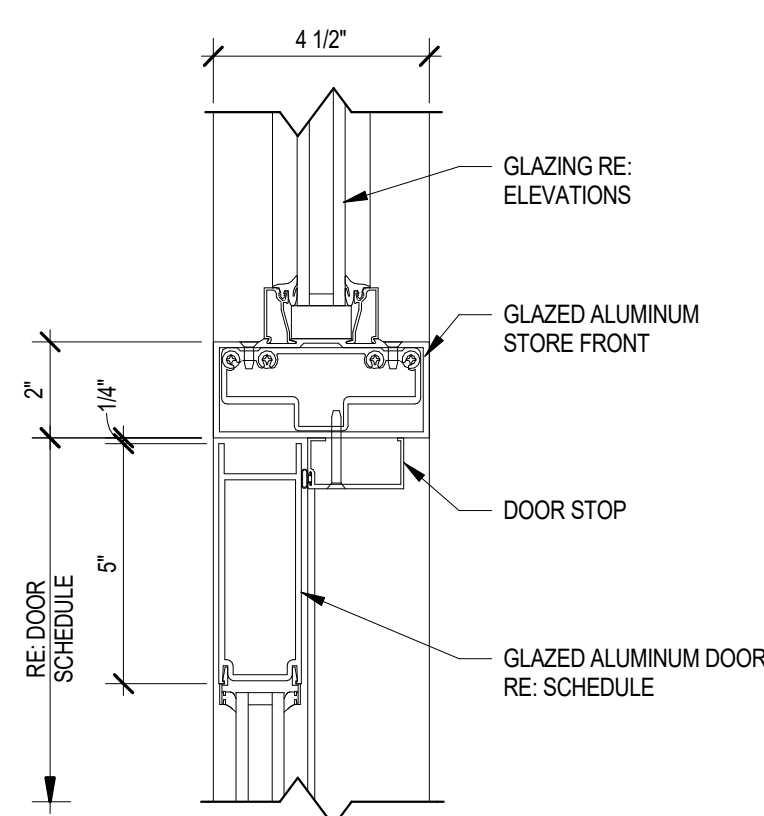
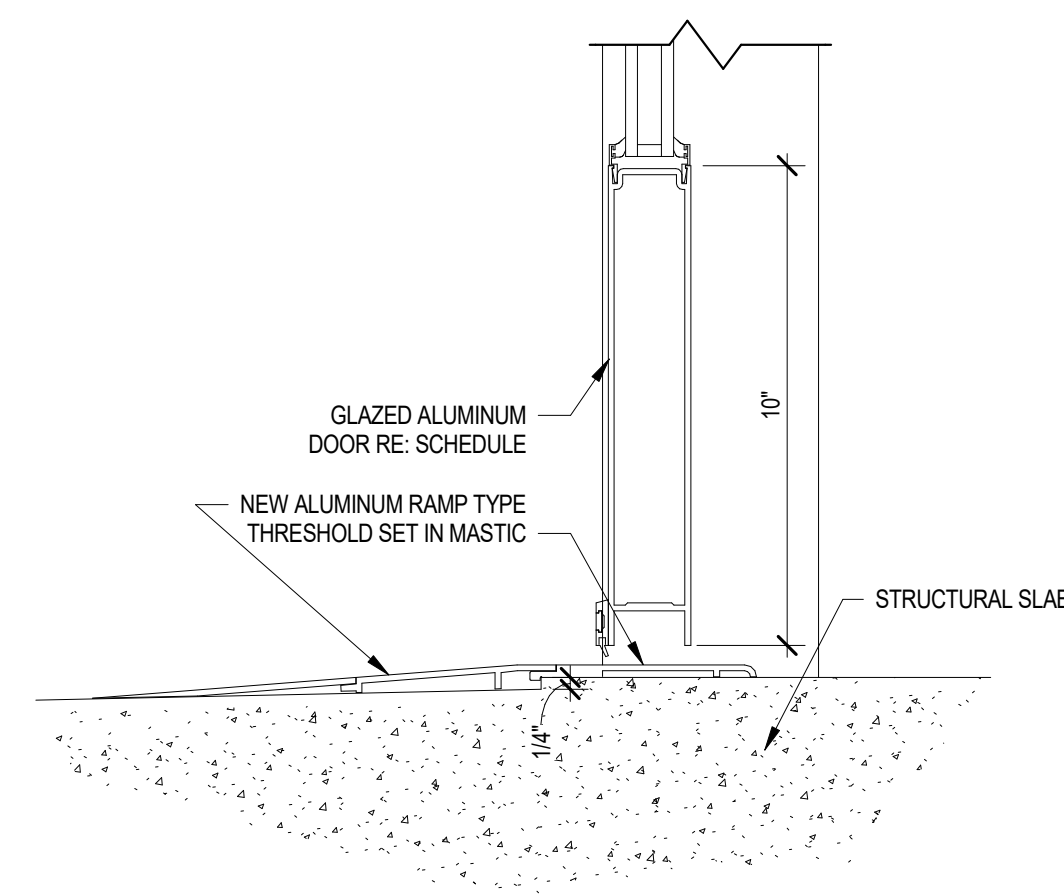
WINDOW ELEVATIONS

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



11 WINDOW JAMB/SILL

SCALE: 1 1/2" = 1'-0"





KEYED NOTES:

1. EXISTING MCC BUS TAP AND 250A ENCLOSED BREAKER MOUNTED WITHIN 10' OF MCC.

Location:
Supply From: T1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10000
Mains Type: COPPER
Mains Rating: 400 A
MCB Rating: 400 A

Notes:
PROVIDE FEED THROUGH LUGS FOR PANEL P3

Legend:					
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	8860 VA	100.00%	8860 VA		
LIGHTING 100%	168 VA	100.00%	168 VA	Total Conn. Load:	102049 VA
RECEPTACLES	23240 VA	71.51%	16620 VA	Total Est. Demand:	81473 VA
MOTOR 80%	69781 VA	80.00%	55825 VA	Total Conn. Current:	283 A
				Total Est. Demand Current:	226 A
				Future Est. Demand:	97768 VA

Notes:

Location:
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22000
Mains Type: COPPER
Mains Rating: 250 A
MCB Rating: 250 A

Notes:

Legend:				
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Other	8860 VA	100.00%	8860 VA	
LIGHTING 100%	5232 VA	100.00%	5232 VA	Total Conn. Load: 107113 VA
RECEPTACLES	23240 VA	71.51%	16620 VA	Total Est. Demand: 86537 VA
MOTOR 80%	69781 VA	80.00%	55825 VA	Total Conn. Current: 129 A
				Total Est. Demand Current: 104 A
				Future Est. Demand: 103845 VA

Notes:

Location:
Supply From: P2
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10000
Mains Type: COPPER
Mains Rating: 400 A
MCB Rating: MLO

Notes:

Legend:					
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	4990 VA	100.00%	4990 VA		
LIGHTING 100%	168 VA	100.00%	168 VA	Total Conn. Load:	60573 VA
RECEPTACLES	6240 VA	100.00%	6240 VA	Total Est. Demand:	50738 VA
MOTOR 80%	49175 VA	80.00%	39340 VA	Total Conn. Current:	168 A
				Total Est. Demand Current:	141 A

Notes:



PROJECT TITLE

NATURE OF WORK:
CRESSMAN DINING FACILITY EXPANSION
17th TRAINING WING
GOODFELLOW AIR FORCE BASE TEXAS

Project Number:

TITLE

LINE AND SCHEDULES

Date: 12 JUL 2018

SEQ.	SHEET	OF
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E-601

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Designed by: S. HUDSON
Drawn by: S. HUDSON
Reviewed by: Z. KORENAK
Submitted by: B. MCCOMBS