Abbreviation	Abbreviation Name
+/- ADDNL	PLUS OR MINUS ADDITIONAL
ADDNL	ADJACENT
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISHED FLOOR
ALT AR	ALTERNATE ANCHOR ROD
ARCH B/	ARCHITECT OR ARCHITECTURAL BOTTOM OF
B/W	BETWEEN
BLDG BLKG	BUILDING BLOCKING
BM	BEAM
BOT BRG	BOTTOM BEARING
BWP	BRACED WALL PANEL
CFS CHKD	COLD FORMED STEEL CHECKED
CIP	CAST IN PLACE
CJ CJP	CONTROL JOINT COMPLETE JOINT PENETRATION
CL CLR	CENTERLINE CLEAR
COL	COLUMN
CONC	CONCRETE CONNECTION
CONT	CONTINUOUS
CTR db	CENTER DIA OF REINF BAR, DIA OF BOLT
DBA	DEFORMED BAR ANCHOR
DIA or Ø DIAG	DIAMETER DIAGONAL
DIR	DIRECTION
DWL EA	DOWEL EACH
EE	EXTENDED END
EJ ELEV	EXPANSION JOINT ELEVATION
ENGR	ENGINEER
EOD EOS	EDGE OF DECK EDGE OF SLAB
EQ	EQUAL
EW EXIST	EACH WAY EXISTING
EXT FDN	EXTERIOR FOUNDATION
FLG	FLANGE
FLR FS	FLOOR FAR SIDE
FTG	FOOTING
FV GA	FIELD VERIFY GAUGE
GALV	GALVANIZED
GB GC	GRADE BEAM GENERAL CONTRACTOR
HORIZ	HORIZONTAL
HSA HSS	HEADED STUD ANCHOR HOLLOW STRUCTURAL SECTION
IF	INSIDE FACE
INT JST	INTERIOR JOIST
K	KIPS (1000 LBS)
LCE LCS	COMPRESSION EMBEDMENT LENGTH COMPRESSION LAP SPLICE LENGTH
LLH	LONG LEG HORIZONTAL LONG LEG VERTICAL
LLV LTE	TENSION EMBEDMENT LENGTH
LTS LW	TENSION LAP SLICE LENGTH LIGHTWEIGHT
MFCR	MANUFACTURER
MTL NIC	METAL NOT IN CONTRACT
NS	NEAR SIDE
NTS OC	NOT TO SCALE ON CENTER
OF	OUTSIDE FACE
OPP OVS	OPPOSITE OVERSIZED
P/C	PRECAST
PAF PAR	POWDER ACTUATED FASTENER PARALLEL
PEMB	PRE-ENGINEERED METAL BUILDING
B	DENETDATION
PEN PERP	PENETRATION PERPENDICULAR
PERP PL	PERPENDICULAR PLATE
PERP	PERPENDICULAR
PERP PL PLF PREFAB PRELIM	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY
PERP PL PLF PREFAB	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED
PERP PL PLF PREFAB PRELIM PSF PSI RC	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE
PERP PL PLF PREFAB PRELIM PSF PSI	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR STL	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIERUPS STEEL
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIRRUPS STEEL SHEAR WALL
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR STL SW SYM T&B	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIRRUPS STEEL SHEAR WALL SYMMETRIC TOP AND BOTTOM
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR STL SW SYM	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIRRUPS STEEL SHEAR WALL SYMMETRIC
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR STL SW SYM T&B T/ TRANS TYP	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIRRUPS STEEL SHEAR WALL SYMMETRIC TOP AND BOTTOM TOP OF TRANSVERSE TYPICAL
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR STL SW SYM T&B T/ TRANS	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIRRUPS STEEL SHEAR WALL SYMMETRIC TOP AND BOTTOM TOP OF TRANSVERSE
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR STL SW SYM T&B T/ TRANS TYP UNO VERT W/	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIRRUPS STEEL SHEAR WALL SYMMETRIC TOP AND BOTTOM TOP OF TRANSVERSE TYPICAL UNLESS NOTED OTHERWISE VERTICAL WITH
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR STL SW SYM T&B T/ TRANS TYP UNO VERT	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIRRUPS STEEL SHEAR WALL SYMMETRIC TOP AND BOTTOM TOP OF TRANSVERSE TYPICAL UNLESS NOTED OTHERWISE VERTICAL
PERP PL PLF PREFAB PRELIM PSF PSI RC RE: REINF REQD RF SC SDS SIM SLV SOG SQ SS STD STIR STL SW SYM T&B T/ TRANS TYP UNO VERT W/ W/O	PERPENDICULAR PLATE POUNDS PER LINEAR FOOT PREFABRICATED PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH REINFORCED CONCRETE REFER TO REINFORCING REQUIRED RIGID FRAME SLIP CRITICAL SELF DRILLING SCREW SIMILAR SHORT LEG VERTICAL SLAB ON GRADE SQUARE STAINLESS STEEL STANDARD STIRRUPS STEEL SHEAR WALL SYMMETRIC TOP AND BOTTOM TOP OF TRANSVERSE TYPICAL UNLESS NOTED OTHERWISE VERTICAL WITH WITHOUT

STRUCTURAL DESIGN CRITERIA (2018 IBC AND ASCE 7-16):

1. BUILDING OCCUPANCY RISK CATEGORY I

2. LIVE LOADS [UNIFORM (PSF) / POINT LOADS (KIPS)]:

ROOF SNOW LOAD: -- GROUND SNOW LOAD (Pg):. -- FLAT ROOF SNOW LOAD (Pf): ..16.9 PSF W/ DRIFT -- SNOW EXPOSURE FACTOR (Ce):......1.0, EXPOSURE C

-- MIN UNIFORM ROOF SNOW LOAD (Pm):.........20 PSF (NO DRIFT OR RAIN) -- SNOW LOAD IMPORTANCE FACTOR (Is):......1.0 -- THERMAL FACTOR (Ct):...

4. WIND DESIGN DATA: -- BASIC WIND SPEED (3 SEC GUST):. ..115 MPH -- WIND EXPOSURE:.. -- DIRECTIONALITY FACTOR (Kd) . -- INTERNAL PRESSURE COEFF::

STRUCTURAL GENERAL NOTES:

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE "INTERNATIONAL BUILDING CODE, 2018 EDITION". REFER TO THE SPECIAL STRUCTURAL INSPECTION NOTES FOR ADDITIONAL REQUIREMENTS.

...0.18

2. CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.

3. IF DISCREPANCIES EXIST BETWEEN STRUCTURAL PLANS, ARCHITECTURAL PLANS, OTHER PLANS, OR SPECIFICATIONS, THE CONTRACTOR OR SUBCONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK

4. THE STRUCTURE AND FOUNDATIONS ARE NOT DESIGNED FOR FUTURE EXPANSION.

5. FOR DEFERRED SUBMITTALS (EXAMPLES: PRE-ENGINEERED CANOPIES, WOOD TRUSSES, PRECAST CONCRETE ELEMENTS, COLD FORMED FRAMING), SHOP DRAWINGS AND CALCULATIONS SEALED BY A STRUCTURAL ENGINEER LICENSED TO PRACTICE IN THE JURISDICTION OF THE PROJECT SHALL BE FURNISHED TO THE ENGINEER OF RECORD FOR REIVEW.

6. TYPICAL DETAILS ARE SHOWN ON SHEETS DESIGNATED "S0XX". THE INCLUDED TYPICAL DETAILS MAY OR MAY NOT BE CUT / REFERENCED ON PLANS OR SECTIONS. BUT ARE TO BE USED AS APPLICABLE

EARTHWORK AND FOUNDATIONS:

1. ALLOWABLE BEARING PRESSURE = 2500 PSF (MUST BE CONFIRMED BY SPECIAL INSPECTION)

2. ALL FOOTINGS SHALL BEAR A MINIMUM DEPTH BELOW GRADE OF 3'-0" ON FIRM NATIVE MATERIALS, COMPACTED OR ENGINEERED FILL CAPABLE OF SUPPORTING AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF. DEEPEN FOOTINGS, AND REMOVE AND REPLACE SOFT SOILS WITH A 3'-0" GRAVEL TRENCH TO PROVIDE THIS MINIMUM DEPTH AND SUITABLE BEARING.

3. UNDERCUT THE PAD TO A DEPTH OF 18-INCHES BELOW BOTTOM OF FLOOR SLAB ELEVATION AND REPLACE WITH LOW-VOLUME-CHANGE MATERIALS PER THE GEOTECHNICAL REPORT.

4. FILL PLACEMENT, COMPACTION, AND SOIL BEARING TESTS SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEER PRIOR TO INSTALLING FOOTINGS TO ENSURE DESIGN ALLOWABLE BEARING VALUES AND SLAB SUBGRADE REQUIREMENTS ARE SATISFIED. IF ACTUAL SITE CONDITIONS DO NOT SATISFY THESE REQUIREMENTS, COORDINATE ADJUSTMENTS WITH ARCHITECT/ENGINEER/ GEOTECHNICAL ENGINEER

5. SURFACE WATER SHALL NOT BE ALLOWED TO STAND ADJACENT TO OR DRAIN TOWARDS THE FOUNDATION AND SLAB SUBGRADES UNDER ANY CIRCUMSTANCES. PAVEMENTS OR GRADED SOILS AT THE PERIMETER OF THE BUILDING, EXCEPT AS REQUIRED AT EXITS OR AS NOTED, SHALL BE SLOPED AWAY AT 5% OR 6" MIN FOR THE FIRST TEN FEET AND AS REQUIRED TO PROVIDE POSITIVE DRAINAGE.

6. FOOTINGS MAY BE POURED TO NEAT LINES OF EXCAVATIONS PROVIDING VERTICAL LINES OF EXCAVATIONS CAN BE MAINTAINED DURING CONCRETE PLACEMENT.

7. FOUNDATION WALL BACKFILL SHALL NOT BE UNBALANCED BY MORE THAN TWO FEET ON EITHER SIDE AT ANY TIME. BASEMENT WALL AND RESTRAINED RETAINING WALL BACKFILL SHALL NOT BE PLACED, UNLESS THE WALL IS ADEQUATELY BRACED. RETAINING WALL AND BASEMENT WALL BACKFILL SHALL BE FREE DRAINING GRANULAR BACKFILL ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.

CONCRETE REINFORCING STEEL:

1. SUBMIT SHOP DRAWINGS FOR REBAR. ALL REINFORCING BARS SHALL MEET ASTM A615 GRADE 60.

2. ALL MESH SHALL MEET ASTM A-185: LAP A MINIMUM OF 8" OR ONE FULL MESH, WHICHEVER IS GREATER.

TO CONCRETE PLACEMENT, "WET STICKING" DOWELS WILL NOT BE ALLOWED.

3. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 3/4" CLEAR FOR SLABS, 2" CLEAR FOR FORMED SURFACES AND 3" CLEAR FOR FOOTINGS (TYPICAL UNLESS NOTED).

4. CONTRACTOR SHALL VERIFY THAT ALL REINFORCEMENT, SLAB DOWELS, INSERTS, SLEEVES AND EMBEDDED ITEMS ARE PROPERLY LOCATED AND RIGIDLY SECURED PRIOR

5. REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST A.C.I. DETAILING MANUAL BY A QUALIFIED AND EXPERIENCED FIRM AND PERSON. PLACE AND SUPPORT REINFORCEMENT WITH ACCESSORIES: MAXIMUM SPACING - 48" CENTERS (PLASTIC-TIPPED LEGS FOR EXPOSED SURFACES). USE 3" SBP SUPPORTS AT ALL FOOTINGS.

CAST IN PLACE CONCRETE:

1. SUBMIT PROPOSED MIXED DEIGNS OF EACH TYPE FOR REVIEW. REQUIRED MINIMUM CONCRETE COMPRESSIVE STRENGTHS AT 28 DAYS:

a. FOOTING AND GRADEBEAM CONCRETE...

b. SLAB ON GRADE . ..4000 PSI

2. ALL CONCRETE MIX DESIGNS SHALL HAVE WATER TO CEMENT RATIOS LESS THAN 0.52, WITH A MAXIMUM 60/40 FINE TO COARSE AGGREGATE RATIO. CONCRETE MIX DESIGNS THAT DO NOT CONFORM TO THE ABOVE STANDARD AND/OR CONTAIN WATER REDUCING ADMIXTURES SHALL BE SUBMITTED WITH APPROPRIATE TEST DATA PER A.C.I.. ALL CONCRETE SHALL BE IN CONFORMANCE WITH THE LATEST A.C.I. 301 STANDARDS PUBLICATION.

3. EXTERIOR CONCRETE (FLOOR SLABS, WALLS, ETC) SHALL HAVE 6% (PLUS/MINUS 1%) ENTRAINED AIR.

4. NO ALUMINUM SHALL BE EMBEDDED IN ANY CONCRETE.

5. NO CALCIUM CHLORIDE SHALL BE USED IN CONCRETE

6. THE DESIGN, CONSTRUCTION, AND SAFETY OF ALL FORMWORK IS THE RESPONSIBILITY OF THE CONTRACTOR

7. ALL CONCRETE IS REINFORCED UNLESS SPECIFICALLY NOTED AS UNREINFORCED. REINFORCE ALL CONCRETE NOT OTHERWISE SHOWN WITH THE SAME REINFORCING AS SIMILAR SECTIONS OR AREAS.

8. CONSTRUCTION JOINTS IN GRADE BEAMS, CONTINUOUS FOOTINGS, AND WALLS THAT DO NOT CHANGE DIRECTION SHALL BE SPACED NO GREATER THAN 100'-0".

9. WHERE FRESH CONCRETE IS DEPOSITED AGAINST HARDENED CONCRETE (GREATER THAN 8 HRS OLD), CLEAN EXISTING SURFACE OF LAITANCE AND FOREIGN MATERIAL AND DAMPEN THE EXISTING SURFACE. IF REQUIRED, ROUGHEN EXISTING CONCRETE TO 1/2" AMPLITUDE.

10. SLABS ON GRADE SHALL BE 4" THICK MINIMUM ON 4" OF GRANULAR FILL REINFORCED WITH 6x6-W2.1xW2.1. PLACE REINF IN UPPER 1/3 OF SLAB THICKNESS. AT INTERIOR SLABS, A 10 MIL VAPOR BARRIER SHALL BE PLACED BETWEEN THE CONCRETE AND GRANULAR BASE AND CARE SHOULD BE TAKEN DURING CURING TO PREVENT SLAB CURLING. THIS NOTE SHALL BE TYPICAL UNLESS NOTED OTHERWISE

11. SAW CUT JOINTS OR KEYED CONSTRUCTION JOINTS IN SLABS ON GRADE SHALL BE SPACED TO DIVIDE THE SLAB INTO PANELS NOT TO EXCEED 225 SQUARE FEET. THE LONGER DIMENSION OF EACH PANEL SHALL NOT EXCEED THE SHORTER DIMENSIONS BY MORE THAN 40%. JOINTS SHALL BE LOCATED AT COLUMN CENTERLINES WHERE POSSIBLE. SPACING BETWEEN JOINTS SHALL NOT EXCEED 15 FEET. CONTRACTOR SHALL SUBMIT JOINT LAYOUT TO ARCHITECT FOR APPROVAL. REFER TO TYP DETAIL RC-001A.

12. REINFORCEMENT SHALL BE CONTINUOUS AND LAPPED 53 BAR DIAMETERS (2' -6" MIN.) EXCEPT AS NOTED AND PROVIDE CORNER BARS OF SAME SIZE AND SPACING.

13. CONTRACTOR SHALL COORDINATE ALL CURING COMPOUNDS WITH FLOOR FINISH REQUIREMENTS TO ENSURE COMPATIBILITY.

14. FOUNDATION CONTRACTOR TO ENSURE PROPER ANCHOR ROD PROJECTION AND THAT ANCHOR RODS ARE HELD SECURELY IN POSITION PRIOR TO CONCRETE PLACEMENT. INSTALL ANCHOR RODS TO THE STRICT DIMENSIONAL TOLERANCES PER AISC REQUIREMENTS. STRUCTURAL STEEL COLUMN ANCHOR RODS SHALL BE SET WITH A RIGID TEMPLATE.

15. AGGREGATES AND/OR CONCRETE MIXES SHALL BE CERTIFIED TO BE FREE OF AND ELIMINATE DAMAGE OF CONCRETE DUE TO ALKALI-SILICA REACTION OR ALKALI-AGGREGATE REACTIONS WHEN EXPOSED TO SOILS AND/OR AN EXTERIOR

CONCRETE MASONRY UNITS:

1. ALL MASONRY SHALL BE IN ACCORDNACE WITH ACI 530/TMS 402. INDIVIDUAL CMU'S SHALL BE PER ASTM C90 (4950 PSI). GROUT SHALL BE PER ASTM C476, MORTAR SHALL BE PER ASTM C270.

2. MASONRY MATERIALS SHALL BE AS FOLLOWS: A. fm = 2,000 PSI MINIMUM. ALL UNITS SHALL BE NORMAL-WEIGHT BLOCK. B. GROUT STRENGTH NOT LESS THAN 2,000 PSI.

C. MORTAR TYPE S. 3. PROVIDE NOT LESS THAN 9-GAUGE HORIZONTAL LADDER-TYPE REINFORCEENT AT NOT MORE THAN 16" OC VERTICALLY, LAPPED 8" MINIMUM. REBAR POSITIOERS SHALL BE USED FOR ALL VERTICAL BARS SUCH THAT A MINIMUM 3" OF SPACE IS MAINTAINED

4. PLACEMENT OF REINFORCEMENT SHALL OCCUR PRIOR TO PLACEMENT OF GROUT.

CLEAR FOR PLACMENT OF GROUT.

1. PROVIDE SPECIAL STRUCTURAL INSPECTIONS AND VERIFICATIONS BY A THIRD PARTY MEETING THE REQUIRMENTS OF CHAPTER 17 OF THE BUILDING CODE AND THE BUILDING

2. SPECIAL INSPECTORS SHALL BE QUALIFIED AND FURNISH THEIR REPORTS IN A TIMELY MANNER TO THE CONTRACTOR, BUILDING OFFICALS, ARCHITECT, AND/OR

3. SHOULD INSPECTOR IDENTIFY ANY DISCREPANCY, THEY SHAL NOTIFY CONTRACTOR FIRST, AND THEN ARCH/ ENGINEER IMMEDIATELY THEREAFTER IF CORRECTIVE ACTION

4. SPECIAL INSPECTIONS AS REQUIRED BY CODE:

DETAIL NOTES:

(1) SLAB ON GRADE RE: PLAN

(4) #4 x 5'-9" @ 24" OC (FIELD BEND 2'-6" INTO

(2) (1)#4 CONT TOP & BOT

(3)1#4 CONT

1' - 0"

A. CONCRETE: SECTION 1705.3 AND TABLE 1705.3 CONCRETE MATERIAL SAMPLING AND TESTING, REBAR OBSERVATIONS. TAKE SET OF (3) CYLINDERS FOR EVERY 50 C.Y., BUT NOT LESS THAN ONE SET OF SAMPLES PER DAY'S WORK AND PER MIX. B. EARTHWORK: FOUNDATION BEARING, EXCAVATION, FILL PLACEMENT.

C. STEEL: SECTION 1705.2 AND AISC 360. PERIODIC OBSERVATIONS OF CONNECTIONS, ALL BRACED FRAME CONNECTIONS, WELDERS AND FIELD WELDING.

DETAIL NOTES: (1) MB COLUMN. (2) SPREAD FTG PER PLAN (3) NOT USED. (1)(4) SOG. RE PLAN. (5) NOT USED. (6) #4 DWLS (2'-6" X 2'-6") @ 12" OC. (7) ANCHOR ROD DIA. PER MB DWGS. (8) HAIRPINS. RE: PLAN FOR SIZE AND LOCATIONS.

ANCHOR ROD

PRE-ENGINEERED METAL BUILDING:

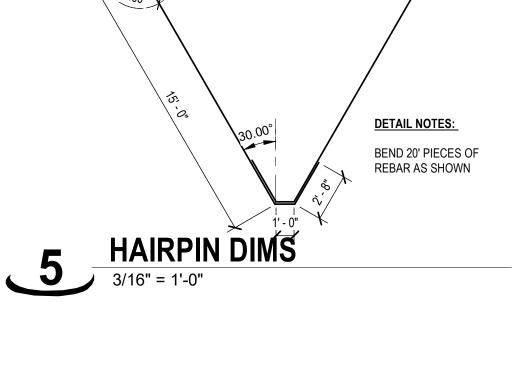
1. THE FRAMING OF THE PRE-ENGINEERED METAL BUILDINGS IS THE RESPONSIBILITY OF THE OTHER PARTIES AND THEIR ENGINEER OF RECORD, AND NOT PART OF THESE STRUCTURAL DOCUMENTS.

2. ALL BASE REACTIONS ARE ASSUMED TO BE PINNED.

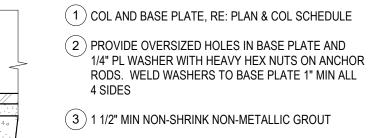
3. METAL BUILDING REACTIONS AND FOUNDATIONS HAVE BEEN ESTIMATED ONLY BASED ON STANDARD METAL BUILDING DETAILING PRACTICES. PRELIMINARY METAL BUILDING REACTIONS AND LAYOUT HAS NOT BEEN PROVIDED. FINAL METAL BUILDING DRAWINGS MUST BE PROVIDED FOR VERIFICATION OF ALL FOUNDATION SIZES AND LOCATIONS. OTHERWISE, ALL DRAWINGS ARE CONSIDERED NULL AND VOID.

	SPECIAL INSPECTION OF SOILS	- TABLE 1704.	7
REQ'D	VERIFICATION & INSPECTION	CONTINUOUS	PERIODIC
Х	1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		Х
Х	2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH & HAVE REACHED PROPER MATERIAL		X
Х	3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X
Х	4. VERIFY USE OF PROPER MATERIALS, DESITIES & LIFT THICKNESSES DURING PLACEMENT & COMPACTION OF CONTROLLED FILL	X	
Х	5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X

		SPECIAL INSPECTION OF CONSTRUCTION - TABLE		
C	REQ'D	VERIFICATION & INSPECTION	CONTINUOUS	PERIODIC
	Х	1. INSPECTION OF REINFORCING STEEL & PLACEMENT		Х
		2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE W/ TABLE 1704.3 ITEM 5B	Х	
	Х	3. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO & DURING PLACEMENT OF CONCRETE	Х	
	Х	4. VERIFYING USE OF REQUIRED MIX DESIGN		Х
	Х	5. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUP & AIR CONTENT TESTS, & DETERMINE THE TEMPERATURE OF THE CONCRETE	Х	
	Х	6. INSPECTION OF CONCRETE & SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	Х	
	Х	7. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE & TECHNIQUES		Х
		8. INSPECTION OF PRESTRESSED CONCRETE		Х
		9. ERECTION OF PRECAST CONCRETE MEMBERS		Х
	Х	10. VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES & FORMS FROM BEAMS & STRUCTURAL SLABS		Х
	Х	11. INSPECT FORMWORK FOR SHAPE, LOCATION, & DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		Х



DETAIL NOTES:



(4) 3" SQ x 1/4" PL WASHER WITH HEAVY HEX NUT. TACK WELD WASHER TO ANCHOR ROD

(5) 3/4"ø ANCHOR ROD. RODS TO EXTEND 1/2" MIN THRU NUTS TOP AND BOT

A. ACCOUNT FOR GROUT THICKNESS WHEN DETERMINING BOTTOM OF BASE PLATE ELEVATION B. ANCHOR RODS SHALL BE F1554 GR. 36 UNO

DETAIL NOTES: (1) SAW CUT JOINT SAW JOINT CUT JUST AS SOON AS EQUIPMENT CAN BE PLACED ON SLAB WITHOUT DAMAGE

(3) MESH OR REBAR CONT (4) KEYED CONSTRUCTION JOINT USE BOND BREAKER

(5) FORMED KEY (NO METAL KEY) (6) CUT MESH OR REBAR AT JOINT 7)3/4" x 16" SMOOTH DWLS @ 12" OC

THIS DETAIL MAY BE USED IN

LIEU OF SAW CUT JOINT SLAB ON GRADE CONTROL JOINTS

					DEVI	ELOPMEN	T AND LA	AP SPLICE SCHED	ULE					
	F'c=3000 psi					F'c=4000 psi								
	ЕМВЕ	EMBEDMENT		ι	LAP SPLICE		EMBEDMENT		LAP SPLICE					
	COMPRESSION	TENSI	ON (LTE)	COMPRESSION	TENSI	ON (LTS)	НООК	COMPRESSION	TENSIC	N (LTE)	COMPRESSION	TENSI	ON (LTS)	ноок
BAR	(LCE)	TOP	OTHER	(LCS)	TOP	OTHER	(LDH)	(LCE)	TOP	OTHER	(LCS)	TOP	OTHER	(LDH)
#3	8	13	12	12	28	21	6	8	12	12	12	16	16	7
#4	11	21	16	15	37	28	8	9	18	14	15	24	18	9
#5	14	31	24	19	46	36	10	12	27	21	19	35	27	12
#6	16	43	33	23	56	43	12	14	37	28	23	48	37	14
#7	19	69	53	26	81	62	13	17	60	46	26	78	60	17
#8	22	85	66	30	93	71	15	19	74	57	30	96	74	19
#9	25	103	80	34	105	80	17	21	90	69	34	116	90	21
#10	28	124	96	38	118	90	19	24	108	83	38	140	108	24
#11	31	146	112	42	131	100	22	27	126	97	42	164	126	27

NOTES (PERTAINING TO TABLE):

A. TOP BARS ARE HORIZONTAL BARS THAT HAVE MORE THAN 12" OF FRESH CONCRETE CAST BELOW THEM.

B. ALL BARS THAT ARE NOT "TOP BARS" ARE "OTHER" BARS C. ABBREVIATIONS:

- LCE - COMPRESSION EMBEDMENT LENGTH - LTE - TENSION EMBEDMENT LENGTH

- LCS - COMPRESSION LAP SPLICE LENGTH

- LTS - TENSION LAP SPLICE LENGTH - LDH - HOOKED BAR TENSION EMBEDMENT LENGTH

SPLICE & DEVELOPMENT SCHEDULE

A. STAGGER ALL SPLICES 12 db MIN, BUT NOT LESS THAN 12" B. ALL DIMENSIONS INDICATED IN TABLE ARE IN INCHES C. BARS GREATER THAN #11 SHALL BE MECHANICALLY SPLICED

D. ALL SPLICES SHALL BE WIRED IN CONTACT STACKED VERTICAL

ALL EMBEDMENT AND LAP SPLICE LENGTHS SHALL BE INCREASED AS REQ'D BY THE MULIPLIERS BELOW. APPLY MULTIPLE MULTIPLIERS IF APPLICABLE 1.3 -- IF CONC CONTAINS LIGHT WEIGHT AGGREGATES

1.3 -- IF EPOXY COATED REBAR USED

DRAWN BY: TJS CHECKED BY: **JF** PROJECT #: 21094 ISSUE DATE: 08/09/2021 ISSUED FOR:

WE OF MISO

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JOHN e. Funk

NUMBER

E-2000173299.

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913-214-2169

Overland Park, KS 66204

S001

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ERING/SUI

Certificates of Authority

Engineering: MO 4 / KS 241

Land Surveying: MO 123 / KS 36

WARD DEVELOPMENT

1120 EAGLE RIDGE BLVD

GRAIN VALLEY, MO 64029

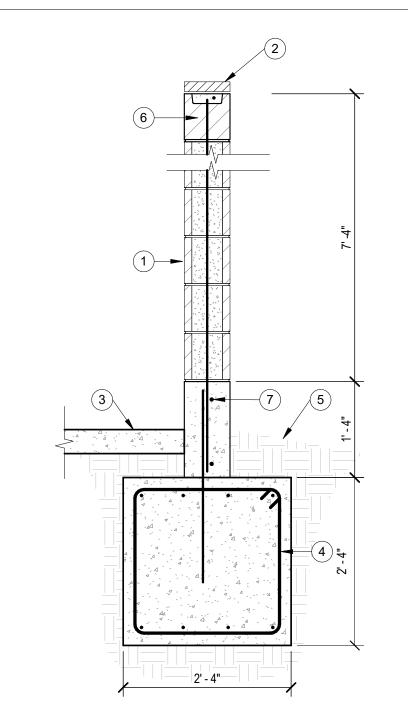
david@safetyministorage.com

CLIENT

DAVID WARD

Architecture: MO 310 / KS 73

STRUCTURAL GENERAL NOTES



DETAIL NOTES:

- 1) 8" CMU WALL, FULLY GROUTED. REINF W/ #4 VERT @ 24" O.C.
- (2) CAP STONE, RE: ARCH
- 3 CONC SLAB RE: CIVIL
- 4) CONC FTG W/ (4) #6 TOP & BOT & #3 TIES @ 24" OC
- (5) GRADE RE: CIVIL
- 6 8" CMU BOND BM W/ (1) #4 CONT
- 7 (2) #4 CONT HOR & #4 @ 24" OC VERT

SHEET NOTES:

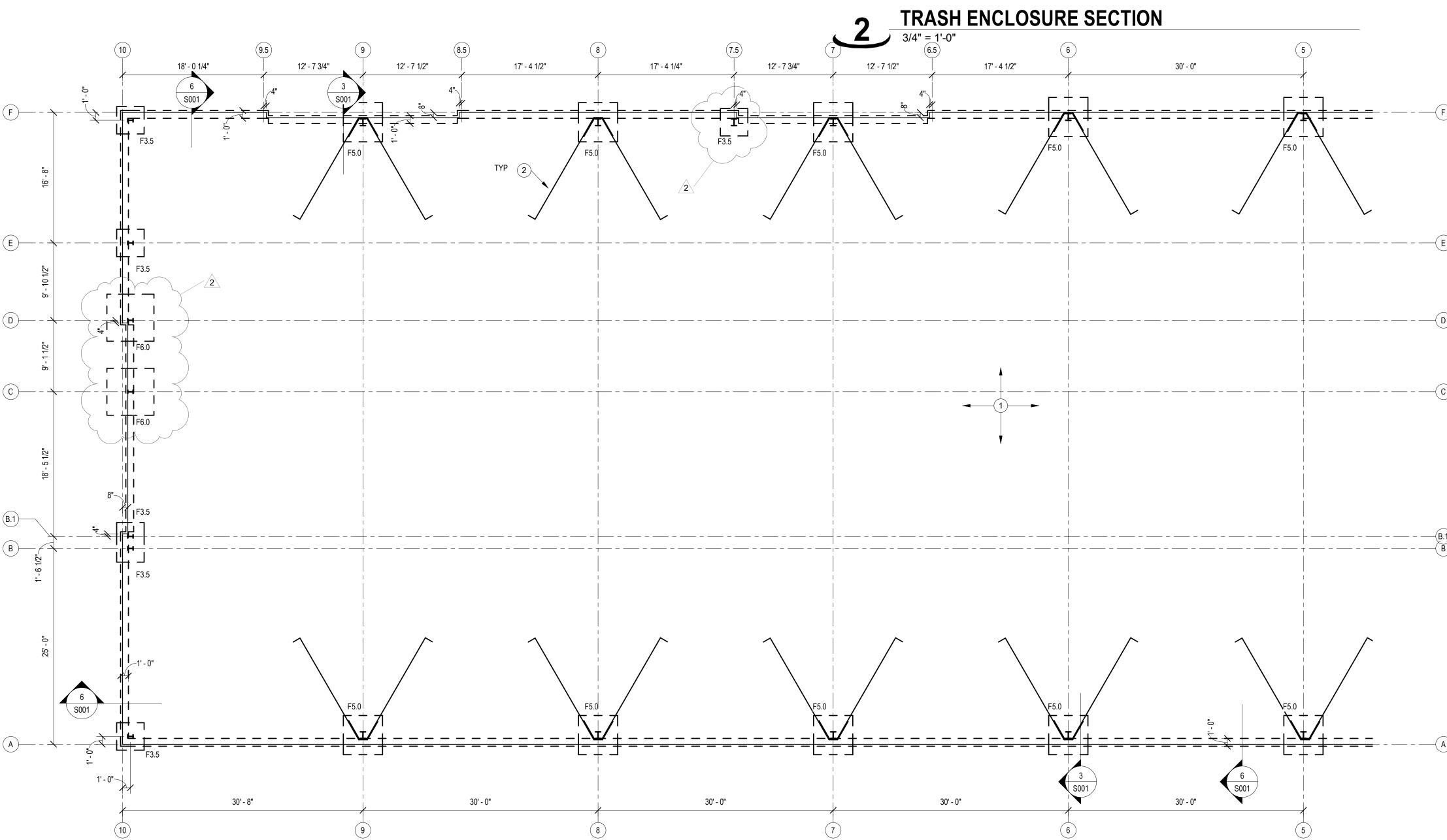
- A. REFERENCE SHEET S00x FOR STRUCTRURAL GENERAL NOTES. REVIEW NOTES & DETAILS FOR APPLICABILITY.
- B. SEE ARCHITECTURAL DRAWING FOR DETAILS & DIMENSIONS NOT SHOWN.
- C. REFER TO S0xx FOR TYPICAL DETAILS.
- D. TOP OF SLAB ELEVATION = 100'-0" UNO.
- E. TOP OF TRENCH FOOTING ELEVATION = 99'-4" UNO. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 3'-0" MIN BELOW GRADE, DEEPEN FOOTINGS AS REQUIRED. GRADE IS GENERALLY 6" BELOW FINISH FLOOR ELEVATION (COORDINATE WITH CIVIL).
- F. SPREAD FOOTINGS DENOTED ON PLAN BY "Fx.x". REFER TO SCHEDULE ON THIS SHEET FOR SIZE AND REINFORCING.

PLAN NOTES:

1 4" CONCRETE SLAB ON GRADE. RE:GENERAL NOTES FOR REINFORCING, GRANULAR FILL, VAPOR BARRIER AND JOINTING REQUIREMENTS

2 PROVIDE #5 HAIR-PIN BARS @ ALL PEMB COLUMNS RE: 5/S001

SCHEDULE - SPREAD FOOTING					
TYPE MARK	LENGTH	WIDTH	THICKNESS	REINF	
F3.5	3' - 6"	3' - 6"	3' - 0"		
F5.0	5' - 0"	5' - 0"	3' - 0"	(8) #4 EW TOP & BOT	
F6.0	6' - 0"	6' - 0"	3' - 0"	(10) #4 EW TOP & BOT	
1	1	1	ı	1	



FOUNDATION PLAN

1/8" = 1'-0"

OT 10 LAKEWC
USINESS
T 10 I-470 BUSINESS

ARCHITECTURE/ENGINEERING/SURVEYING 3200 S. State Route 291, Bldg. 1, Independence, MO 64057

Certificates of Authority
Architecture: MO 310 / KS 73
Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 36

WARD DEVELOPMENT 1120 EAGLE RIDGE BLVD GRAIN VALLEY, MO 64029

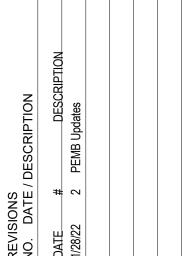
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FOUNDATION PLAN

S100

B. SEE ARCHITECTURAL DRAWING FOR DETAILS & DIMENSIONS NOT SHOWN.

C. REFER TO S0xx FOR TYPICAL DETAILS.

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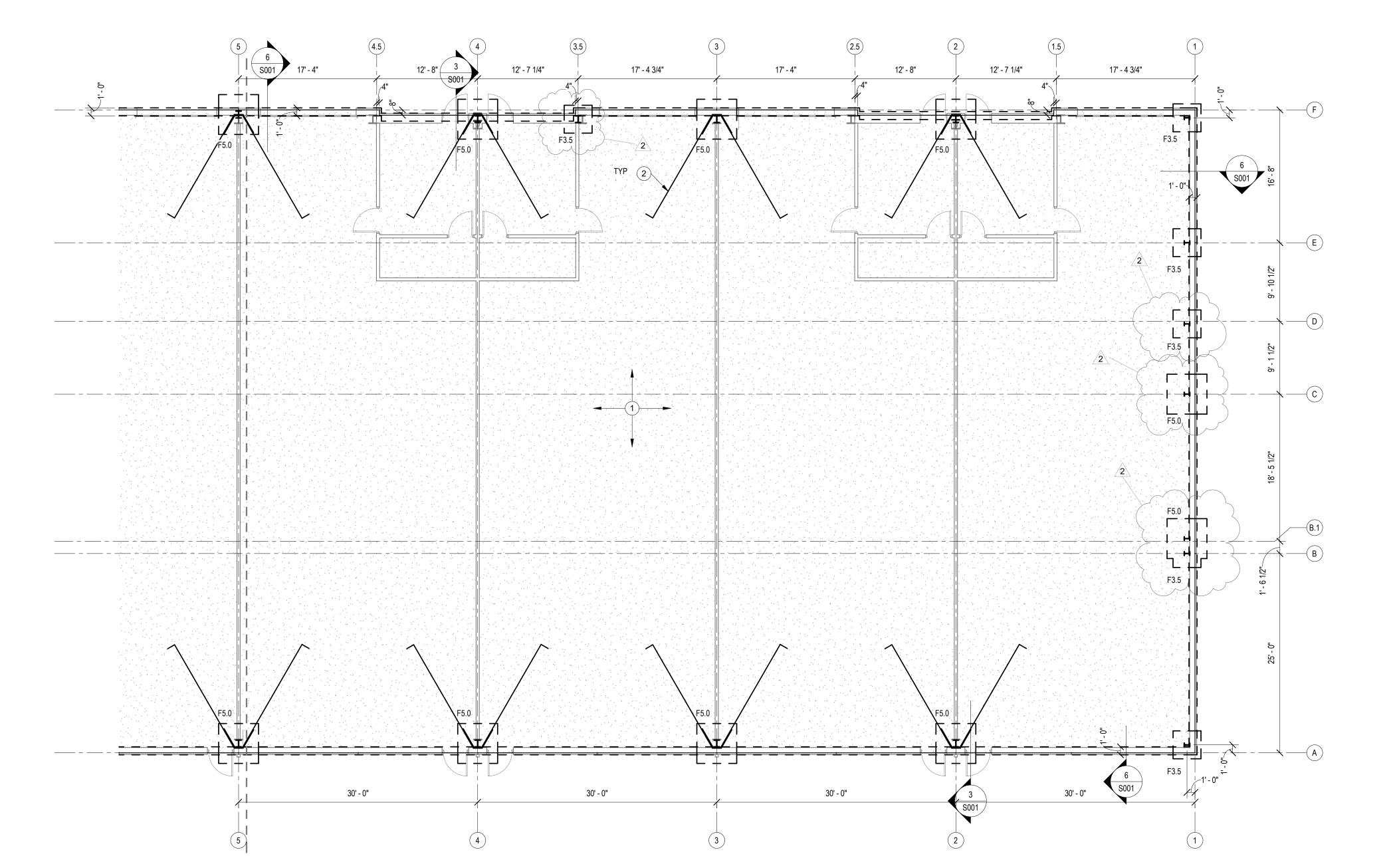
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LOT 10 LAKEW
BUSINESSINES

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REVISIONS
NO. DATE / DESCRIPTION
DATE # DESCRIPTION
16/2021 1 City Comments
1/28/22 2 PEMB Updates

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FOUNDATION PLAN

FOUNDATION PLAN

1/8" = 1'-0"