

Issued:	Date:
A BKC Approval	10/29/2021
B Permit Set	1/21/2022
C Bid Set	1/24/2022
D Construction Set	3/14/2022
E	
Revisions:	Date:
1 Addendum #1	2/8/2022
2 Addendum #2	2/21/2022
3	
4	
5	
6	
7	
8	
9	

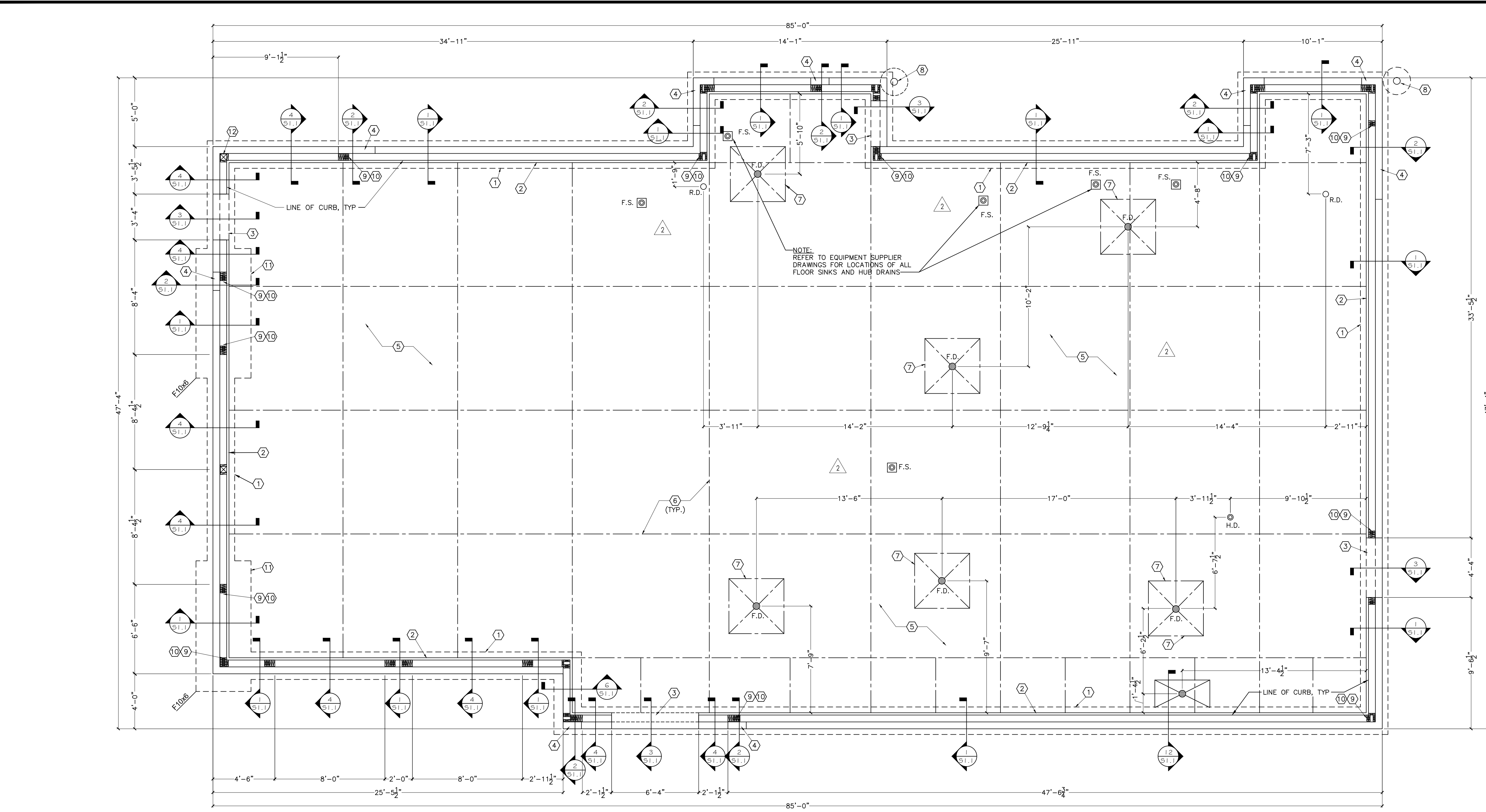
Seal	Seal
PROJECT ARCHITECT/ENGINEER	DATE
PROJECT LEAD	DATE
PROJECT DESIGNER	DATE

Copyright © 2022
 APD Engineering & Architecture, LLC
 Drawing Alteration
 It is a violation of law for any person, unless acting under the direction of a Licensed Architect, Professional Engineer, Landscape Architect, or Land Surveyor to alter any item on this document in any way. Any licensee who alters this document is required by law to affix his or her seal and to add the notation "Altered by" followed by his or her signature and the specific description of the alteration or revision.
 DO NOT SCALE PLANS
 Copying, Printing, Software and other processes required to produce these prints can stretch or shrink the actual paper or layout. Therefore, scaling of this drawing may be inaccurate. Contact APD E&A with any need for additional dimensions or clarifications.



Burger King Inc.
 Store #
 322 Pottstown Ave
 Pennsburg, PA 18073
 Montgomery County
 Project Name & Location:

Foundation Plan & Structural Notes
 Drawing Name: _____
 Date: 11/8/2021
 Type: ROC-2502T
 Drawn By: SJF
 Scale: As Noted
 Project No. 21-0327
 S-1
 Drawing No. _____



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

DESIGN CRITERIA:
 2015 INTERNATIONAL BUILDING CODE
ROOF LOADS:
 LIVE LOAD: 20 PSF
 DEAD LOAD: 20 PSF
SNOW LOADS:
 P_s: 30 PSF
 C_e: 1.0
 C_t: 1.0
 I: 1.0
 F_t: 21 PSF
WIND LOADS:
 3 SECOND GUST: 115 MPH
 IMPORTANCE FACTOR: 1.0
 EXPOSURE CATEGORY (MFRS): B
 INTERNAL PRESSURE COEFF.: ±0.18

SEISMIC LOADS:
 RISK CATEGORY: II
 SEISMIC IMPORTANCE FACTOR: 1.0
 SITE CLASS: C
MAPPED SPECTRAL RESPONSE ACCEL:
 S_s: 0.202
 S₁: 0.062
SPECTRAL RESPONSE COEFF.:
 1 SEC. PERIODS (SD₁): 0.162
 1 SEC. PERIODS (SD₂): 0.070
SEISMIC DESIGN CATEGORY: B
WOOD SHEAR WALLS:
 LONG DIRECTION:
 RESPONSE MOD. FACTOR (R): 6.5
 DESIGN BASE SHEAR (C_s): 0.025W
 SHORT DIRECTION:
 RESPONSE MOD. FACTOR (R): 6.5
 DESIGN BASE SHEAR (C_s): 0.025W
ANALYSIS: EQUIVALENT LATERAL FORCE

MASONRY
 1. HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, NORMALWEIGHT, TYPE N-1 WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI ON THE NET AREA (m = 1500 PSI).
 2. MORTAR FOR USE IN MASONRY SHALL MEET ASTM C270, TYPE S.
 3. GROUT FOR USE IN MASONRY SHALL MEET ASTM C476, MIN 2000 PSI AND NOT LESS THAN A 6-1/2 SACK MIX.
 4. REINFORCING BARS SHALL MEET ASTM A615, GRADE 60.
 5. PROVIDE AT LEAST 2 VERTICAL BARS AT EACH END, CORNERS, AND INTERSECTIONS OF ALL WALLS. SEE WALL SECTIONS FOR TYPICAL VERTICAL REINFORCEMENT.
 6. CMU SHALL BE LAID IN RUNNING BOND PATTERN.
 7. VERTICAL AND HORIZONTAL REINFORCEMENT SHALL BE CONTINUOUS AND LAPPED PER TMS 402.
 8. PROVIDE STANDARD GAGE TRUSS TYPE OR LADDER-TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" OC MAX.
 9. HOLD VERTICAL BARS STRAIGHT, TRUE, AND ACCURATE IN ALL WALLS AS DETAILED. INSTALL REBAR POSITIONERS @ 4'-0" OC MAX AND ENSURE REBAR IS HELD IN PROPER LOCATION WITHIN THE CELL.
 10. REINFORCEMENT, REBAR POSITIONERS, AND TIES SHALL BE PLACED PRIOR TO GROUTING.
 11. SOLID GROUT WALL CELLS BELOW GRADE. FILL JOINTS BETWEEN WITHES BELOW GRADE.
 12. GROUT ALL REINFORCED CELLS. PROVIDE A MINIMUM OF 1/2" GROUT BETWEEN REINFORCEMENT AND MASONRY UNITS.
 13. GROUT PLACEMENT SHALL CONFORM TO TMS 602. HOWEVER, THE MAXIMUM GROUT POUR HEIGHT SHALL NOT EXCEED 8 FEET AND THE MAXIMUM HEIGHT WHICH GROUT IS PLACED IN ONE CONTINUOUS OPERATION (GROUT LIFT) SHALL NOT EXCEED 4 FEET. THERE SHALL BE A MINIMUM OF 1 HOUR SETTING TIME BETWEEN EACH GROUT LIFT.
 14. PLACE INTERMEDIATE LIFTS TO 1' BELOW THE BED JOINT.
 15. CLEANOUTS SHALL BE CONSTRUCTED ADJACENT TO EACH VERTICAL BAR IN THE BOTTOM COURSE OF MASONRY FOR EACH GROUT POUR HEIGHT THAT EXCEEDS 5 FEET. CONSTRUCT CLEANOUTS WITH AN OPENING OF SUFFICIENT SIZE TO PERMIT REMOVAL OF DEBRIS, BUT NOT LESS THAN 3" DIMENSION. AFTER CLEANING, CLOSE CLEANOUTS WITH CLOSURES BRACED TO RESIST GROUT PRESSURE. CLEANOUTS SHALL BE LOCATED ON WALL FACE NOT EXPOSED TO VIEW.

WOOD
 1. SAWN LUMBER SHALL COMPLY WITH THE RULES OF AN APPROVED GRADING AGENCY LISTED IN THE AFPA NATIONAL DESIGN SPECIFICATION SUPPLEMENT AND SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED GRADING AGENCY.
 2. SAWN LUMBER SHALL BE SPRUCE PINE FIR, HEM FIR, DOUGLAS FIR, OR SOUTHERN PINE.
 3. MIN. GRADE SHALL BE NO. 2 EXCEPT 2x4 MEMBERS MAY BE STUD GRADE.
 4. LUMBER IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED. WALL FRAMING BELOW WINDOW OPENINGS AND ALL JACK STUDS SHALL BE PRESERVATIVE TREATED. FASTENERS IN PRESERVATIVE TREATED LUMBER SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL.
 5. ALL WOOD CONSTRUCTION CONNECTORS SHOWN ON PLANS OR DETAILS SHALL BE SIMPSON STRONG-TIE OR EQUAL UNO. HARDWARE SHALL BE INSTALLED WITH ALL REQ'D FASTENERS PER MFRS SPECS. HARDWARE BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY ARE OF EQUIVALENT CAPACITY FOR THE INTENDED APPLICATION. HARDWARE SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER. STRAPS OF HEAVIER GAGE THAN SPECIFIED ON PLANS MAY BE USED W/ MIN FASTENER REQUIREMENTS PER PLAN (e.g. C316 w/ (2) 8x16 LBU OF C316 w/ (2) 8x8).
 6. ALL PLYWOOD SHALL BE TYPE CDX, LAID WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
MISCELLANEOUS:
 1. DIMENSIONS NOTED ARE TO FACE OF CONCRETE. REFER TO ARCH DWGS FOR DIMENSIONS TO FACE OF STUD AND OTHER DIMENSIONS NOT OTHERWISE NOTED.
 2. DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS AND FIT SHALL BE DETERMINED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
 3. DETAILS NOT FULLY OR SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
 4. SEE PLUMB DWGS. FOR PLUMB LAYOUT DIMENSIONS, UNO.
 5. SEE ELEC DWGS. FOR ELEC LAYOUT DIMENSIONS, UNO.
 6. COORDINATE FOUNDATION AND SLAB LAYOUT WITH OTHER TRADES PRIOR TO POURING SLAB.

SPECIAL INSPECTIONS AND TESTS
 THE FOLLOWING INSPECTIONS AND TESTS ARE REQUIRED AND SHALL BE PERFORMED BY AN APPROVED TESTING AGENCY, PAID FOR BY THE OWNER:
 1. VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION PER AISC 360-10 CHAPTER N
 2. VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION PER BUILDING CODE TABLE 1705.3
 3. SPECIAL INSPECTION OF MASONRY CONSTRUCTION PER TMS 402-11 TABLE 1.19.2. EXCEPTION: MASONRY VENEER ONLY REQUIRES VERIFICATION OF COMPLIANCE WITH THE APPROVED SUBMITTALS PER TABLE 1.19.1.
 4. INSPECTION OF SITE SOLS, FILL PLACEMENT, AND BEARING CAPACITIES BY A LICENSED GEOTECHNICAL ENGINEER AS FOLLOWS:
 a. OBSERVATION OF PROOF ROLLING FOR THE SITE PRIOR TO FILL PLACEMENT.
 b. COMPACTION TESTING OF STRUCTURAL FILL PLACEMENT. LIFTS SHALL NOT EXCEED 8".
 c. PROVIDE BEARING TESTS AT EACH FOOTING LOCATION TO CONFIRM BEARING CAPACITY.
 d. REQUIRED VERIFICATION AND INSPECTION OF SOLS PER BUILDING CODE TABLE 1705.6.

FOUNDATION PLAN KEY NOTES:
 (1) TYPICAL WALL FOOTING - REFERENCE SECTION 1/S-1.1.
 (2) CMU FOUNDATION WALL (SEE SECTIONS OR NOTES FOR MASONRY SIZE & REINFORCEMENT).
 (3) EXTEND SLAB THRU AT OPENINGS (SEE SECTIONS).
 (4) 6" CMU FOR FURR-OUT ELEMENTS AT TOWERS. WIDTH TO BE DETERMINED BY FINISH FURR-OUT WIDTH. REFER TO SHEET A-1 FOR REQUIRED WIDTH AND DETAIL 2/S-1.1.
 (5) 4" MIN. CONCRETE SLAB-ON-GRADE. SEE SLAB NOTES FOR ADDITIONAL INFORMATION.
 (6) CONTROL/CONSTRUCTION JOINTS - REFERENCE DETAIL 10/S-1.1.
 (7) 4'x4' AREA SLOPED TO DRAIN @ 2% (TYP.)
 (8) 6"Øx 8'-0" STEEL BOLLARD, FILL WITH CONCRETE, TOP OF BOLLARD AT 5'-0" ABOVE SURFACE OF PAVING WITH 24"Ø x 4'-0" DEEP CONCRETE FOOTING.
 (9) SIMPSON HOLD-DOWN PER SHEAR WALL SCHEDULE.
 (10) SHEAR WALL END POST PER SHEAR WALL SCHEDULE.
 (11) SHEAR WALL FOOTING PER FOOTING SCHEDULE BELOW, CENTER FOOTING BELOW SHEAR WALL.
 (12) SIMPSON ABU66Z POST BASE W/ 5/8"Ø x 24" EMBED HEADED ANCHOR ROD. ATTACH POST TO BASE W/ NAILS OR SD SCREWS PER MFR RECOMMENDATIONS.

FOUNDATION:
 1. COORDINATE STRUCTURAL PLANS AND DETAILS WITH REQUIREMENTS OF GEOTECHNICAL REPORT. FOUNDATION DESIGN IS BASED ON 2,000 PSF ALLOWABLE SOIL BEARING CAPACITY.
 2. BOTTOM OF ALL PERIMETER FOOTINGS SHALL BE A MINIMUM OF 3'-4" BELOW ADJACENT GRADE.
 3. SITE WORK SHALL BE PERFORMED UNDER THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER OR SOILS TECHNICIAN.
 4. FOUNDATIONS SHALL BE LOCATED AT ELEVATIONS SHOWN ON PLANS AND DETAILS. FOUNDATIONS AND SLABS-ON-GRADE SHALL BEAR ON SUB-BASE MATERIAL, APPROVED BY THE GEOTECHNICAL CONSULTANT.
 5. FOOTINGS, OR PORTIONS THEREOF, MAY BE EARTH FORMED BY NEAT EXCAVATIONS IF SOIL CONDITIONS ALLOW.
 6. FOOTINGS SHALL BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
 7. REFER TO THE GEOTECHNICAL REPORT FOR REQUIREMENTS OF EARTHWORK, OVEREXCAVATION, SUBGRADE PREPARATION, FILL MATERIALS AND COMPACTION, WATERPROOFING AND OTHER PERTINENT REQUIREMENTS AND INFORMATION.
 8. PROVIDE SCHEDULE 40 PVC PIPE SLEEVES FOR ALL PIPES AND CONDUITS RUNNING THROUGH WALLS AND SLABS. LOWER CONTINUOUS FOOTINGS AND GRADE BEAMS PERPENDICULAR TO PIPE RUNS TO ALLOW PIPES TO PASS ABOVE THE FOOTINGS OR THROUGH THE GRADE BEAMS. ALTERNATIVELY, PROVIDE A CONCRETE JACKET IF PIPES ARE LOW ENOUGH TO BE PLACED BELOW THE FOOTINGS AND GRADE BEAMS.
 9. PROXIMITY OF UTILITY TRENCHES TO THE BUILDING FOUNDATION SYSTEM SHALL BE AS APPROVED BY THE ARCHITECT AND/OR SOILS ENGINEER TO INSURE THE INTEGRITY OF THE BEARING SOILS. THE RESULTING TOTAL LOAD SOIL PRESSURES FOR IN-SITU SOILS MAY NOT EXCEED THE ALLOWABLE BEARING PRESSURE.
 10. MAINTAIN SUBGRADE AND FILL MOISTURE CONTENT UNTIL FOUNDATIONS ARE PLACED.
 11. ARRANGE FOR OWNER'S INDEPENDENT TESTING AGENCY TO MONITOR CUT AND FILL OPERATIONS AND PERFORM FIELD DENSITY AND MOISTURE CONTENT TESTS TO VERIFY COMPACTION AND APPROVE FOOTING SUBGRADES PRIOR TO PLACING CONCRETE.
 12. DO NOT PLACE FOOTINGS OR SLABS AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.
 13. MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION TO ENSURE SURFACE RUNOFF AWAY FROM STRUCTURES AND TO PREVENT PONDING OF SURFACE RUNOFF NEAR THE STRUCTURES.

CONCRETE:
 1. CONCRETE SHALL BE NORMAL WEIGHT CONC. (3 SACK CEMENT PER CUYD. MIN.) AND MEET THE FOLLOWING MIN. ULTIMATE COMPRESSIVE STRENGTHS AT 28 DAYS:

LOCATION	MIN. STRENGTH 28 DAYS PSI	AGGREGATE SIZE - INCHES	SUMP INCHES	AIR ENTRAINMENT % OR LESS	W/C RATIO
INT. SLAB ON GRADE	3000	1" x #4	3-1/2" ± 1/2"	6% ± 1-1/2%	0.50
EXTERIOR CONCRETE	4000	1" x #4	3-1/2" ± 1/2"	6% ± 1-1/2%	0.45
PIERS	4000	1" x #4	3-1/2" ± 1/2"	6% ± 1-1/2%	0.50
FOOTINGS	3000	1" x #4	3-1/2" ± 1/2"	6% ± 1-1/2%	0.50

2. CONCRETE MIX DESIGN AND TESTING SHALL COMPLY WITH THESE SPECS. CEMENT SHALL BE IN ACCORDANCE WITH ASTM C 150 TYPE II. VERIFY MIN. CONC. STRENGTH AND CEMENT TYPE.
 3. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. STEEL SHALL BE KEPT CLEAN AND FREE OF RUST.
 4. CONCRETE CURING SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF ACI-318-98 SECTION 5.11 AND STANDARD PRACTICE FOR CURING CONCRETE REPORTED BY COMMITTEE 309.

SLAB:
 1. 4" THICK CONCRETE SLAB REINFORCED W/ WWF #6xW1.4x1.4 OR #4 BARS @ 18" O.C. EA. WAY, OVER 15 MIL VAPOR RETARDER, OVER 2" SAND BED, OVER 4" AGGREGATE BASE, OVER ENGINEERED SUBGRADE. MODIFY AS REQUIRED TO COMPLY WITH REQUIREMENTS OF GEOTECHNICAL REPORT. SLAB REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS CHAIRS SPACED AT 4'-0" OC MAX.

MARK	DIMENSIONS	REINFORCEMENT	COMMENTS
F10x6	10'-0" x 6'-0" x 1'-4"	#5 @ 12" O.C. SHORT DIRECTION, (5) #6 EQ SPACED LONG DIRECTION, TOP & BOT	

PLOTED: 11/11/2022 1:53 PM; 3021 250x337 - cmpldr - bk.sxd - pen:rbzjg; pen:tbl; bkg:color; vport:foundations; vport:foundations