

1. THE SOILS REPORT IN ITS ENTIRETY SHALL BE INCLUDED AS PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR READING AND UNDERSTANDING ALL OF THE SOILS REPORTS RECOMMENDATIONS. ALL OF THE SOILS REPORTS RECOMMENDATIONS MUST BE FOLLOWED FOR RECOMMENDED SOIL BEARING PRESSURE, FOUNDATION MATERIAL AND SITE GRADING. SEE SOILS AND GEOTECHNICAL REPORT BY:

PROFESSIONAL SERVICE INDUSTRIES, INC. REPORT #0046249 DATED FEBRUARY 25, 2011

DESIGN SOIL BEARING VALUE = $\frac{2500}{\text{PSF FOR: DL + LL}}$
DESIGN SOIL BEARING VALUE = $\frac{3333}{\text{PSF FOR: DL + LL (EO OR W)}}$

2. EXISTING FOOTING OR FOUNDATIONS WHICH MAY BE AFFECTED BY ANY EXCAVATION SHALL BE UNDERPINNED ADEQUATELY OR OTHERWISE PROTECTED AGAINST SETTLEMENT AND SHALL BE PROTECTED AGAINST LATERAL MOVEMENT.

3. FILLS USED TO SUPPORT THE FOUNDATIONS OF ANY BUILDING OR STRUCTURE SHALL BE PLACED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. A SOIL INVESTIGATION REPORT AND A REPORT OF SATISFACTORY PLACEMENT OF FILL BOTH ACCEPTABLE TO THE BUILDING OFFICIAL AND THE ENGINEER AND RECORD SHALL BE SUBMITTED. A SOILS REPORT PROVIDES THE BUILDING DESIGN ENGINEER WITH SITE PREPARATION AND FOUNDATION DESIGN RECOMMENDATIONS. IF THE BUILDING OWNER OR TENANT AUTHORIZING THE CURRENT CONSTRUCTION DOES NOT PROVIDE A SOILS REPORT TO THE ENGINEER OF RECORD, THE OWNER OR TENANT AUTHORIZING THE CURRENT CONSTRUCTION IS PROCEEDING WITH CONSTRUCTION, PROCEEDING AT THEIR OWN RISK AND THIS ENGINEER ASSUMES NO RESPONSIBILITY FOR THE POSSIBLE MOVEMENT OF THE SOILS SUPPORTING THE BUILDING FOUNDATION.

4. FOUNDATIONS SUPPORTING WOOD SHALL EXTEND AT LEAST 8" ABOVE THE ADJACENT FINISH GRADE.

5. VAPOR BARRIER SHALL CONFORM WITH ASTM 8 775-85 STANDARD PRACTICE FOR SELECTION OF VAPOR RETARDER FOR THE BUILDING INSULATION.

6. SITE PREPARATION SHOULD BE DONE ACCORDING TO THE SITE SOILS REPORT. GENERAL SITE CLEARING SHOULD INCLUDE REMOVAL OF VEGETATION; EXISTING UTILITIES, STRUCTURES INCLUDING FOUNDATION, BASEMENT WALLS AND FLOORS; EXISTING STOCKPILES SOIL, TREES AND ASSOCIATED ROOT SYSTEMS, RUBBLE, BRUSH, AND ANY LOOSE AND/OR SATURATED MATERIAL. SITE STRIPPING SHOULD EXTEND TO A MINIMUM DEPTH OF 2 TO 4 INCHES, OR UNTIL ALL ORGANICS IN EXCESS OF 3 PERCENT VOLUME ARE REMOVED. DEEPER STRIPPING MAY BE REQUIRED IN LOCALIZED AREAS. THESE MATERIALS WILL NOT BE SUITABLE FOR USE AS ENGINEERED FILL.

7. DEVELOP AND MAINTAIN SITE GRADES WHICH WILL RAPIDLY DRAIN SURFACE AND ROOF RUNOFF AWAY FROM FOUNDATIONS AND FLOOR SLABS. MAINTAIN DRAINING AND AFTER CONSTRUCTION, ADVANCE IT AT LEAST 5' AWAY FROM STRUCTURES TO PRECLUDE FLOODING OF WATER ADJACENT TO FOUNDATIONS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING NECESSARY TO SUPPORT CUT AND / OR TALL BANKS DURING THE EXCAVATION AND FOR THE REMOVAL AND PLACEMENT OF CONCRETE. GENERAL CONTRACTOR AND CONCRETE SUB-CONTRACTOR SHALL REVIEW AND FAMILIARIZE THEMSELVES WITH THE SOILS REPORT.

9. VERIFY BUILDING ORIENTATION & PLACEMENT ON THE SITE WITH THE APPROVED PROJECT SITE PLAN. THE PROJECT SITE PLAN SUPERSEDES NORTH ARROW SHOWN ON THE STRUCTURAL PLANS.

10. A LETTER FROM SOIL ENGINEER SHALL BE PROVIDED CONFIRMING THAT THE FOUNDATIONS PLAN, GRADING PLAN, AND SPECIFICATIONS HAVE BEEN REVIEWED AND THAT IT HAS BEEN DETERMINED THAT THE RECOMMENDATIONS IN THE SOILS REPORT ARE PROPERLY INCORPORATED INTO THE PLANS.

11. CONTINUOUS AND PAD FOOTINGS SHOULD HAVE A MINIMUM EMBEDMENT DEPTH AS SPECIFIED IN THE FOOTING SCHEDULE ("T") OR NOTED IN THE PLANS BELOW ROUGH PAD GRADE OR ADJACENT EXTERIOR GRADE, WHICHEVER IS LOWER. THE ENGINEER MUST BE NOTIFIED IF THERE IS A DISCREPANCY BETWEEN THE SOILS REPORT REQUIREMENTS AND THE STRUCTURAL PLANS.

12. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CIVIL & ARCHITECTURAL PLANS, WITH RESPECT TO GRADE, WITH THE FOUNDATION PLAN. THIS INCLUDES, BUT IS NOT LIMITED TO, COORDINATING ALL REQUIRED STEP FOOTING LOCATIONS BASED ON THE GUIDE LINES IN THE FOOTING DETAIL BETWEEN THE FOUNDATION REQUIRED FINAL GRADING / CIVIL PLANS & ARCHITECTURAL PLANS AND FOOTING FOUNDATION LAYOUT. ANY DISCREPANCIES MUST BE BROUGHT TO THE ENGINEERS ATTENTION BEFORE ANY CONSTRUCTION BEGINS.

13. THE EXTERIOR FLOORWORK SHALL BE POURED SEPARATELY IN ORDER TO ACT INDEPENDENTLY OF THE WALLS AND FOUNDATION SYSTEM. SEE CIVIL / ARCH. PLANS FOR EXTERIOR FLOORWORK INFO.

14. THE GEOTECHNICAL ENGINEER SHALL SUBMIT A WRITTEN STATEMENT WITH A COPY DIRECTLY TO THE STRUCTURAL ENGINEER AT THE PROJECT OFFICE AND TO THE PROJECT SUMMARIZING THE TEST RESULTS / ITEMS MONITORED WITH THE SPECIFIC REQUIREMENTS.

FOOTNOTE:

1. IF NO SOILS REPORT HAS BEEN PROVIDED BY THE OWNER OR TENANT AUTHORIZING THE CURRENT CONSTRUCTION AS INDICATED BY NOTE, THE OWNER OR TENANT AUTHORIZING THE CURRENT CONSTRUCTION BY PROCEEDING WITH CONSTRUCTION, IS PROCEEDING AT THEIR OWN RISK AND THIS ENGINEER ASSUMES NO RESPONSIBILITY FOR THE POSSIBLE MOVEMENT OF THE SOILS SUPPORTING THE BUILDING FOUNDATION. IF NO SOILS REPORT HAS BEEN PROVIDED IGNORE THE SOILS REPORT REFERENCE IN NOTES 3,6,8,10 & 11.

9 FOUNDATION NOTES

1. THESE ADDITIONAL NOTES ARE SUPPLEMENTAL TO THE "GENERAL NOTES" INDICATED AND THE PROJECT SPECIFICATIONS IF APPLICABLE. THE CONTRACTOR SHALL FOLLOW THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS IF APPLICABLE.

2. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL, PLUMBING, ELECTRICAL, CIVIL AND MECHANICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH DRAWINGS AND WORKING DRAWINGS AND FOR OBTAINING APPROVAL OF THE ENGINEER OF RECORD.

3. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.

4. NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.

5. OPENINGS 1"-4" AND LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SUCH OPENINGS.

6. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.

7. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND / OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTORS CONSTRUCTION METHODS AND / OR SEQUENCE.

8. CONTRACTOR'S CONSTRUCTION AND / OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL & MOISTURE CHANGES THAT WILL RESULT IN MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

9. THE CONTRACTOR SHALL INFORM THE ENGINEER OF RECORD IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY OF SUCH DEVIATION BY THE ENGINEER OF RECORD. REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ENGINEER OF RECORD OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ENGINEER OF RECORD HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.

10. THE CONTRACTOR MUST ENSURE THAT MANUFACTURED (ENGINEERED BY OTHERS) ROOF & FLOOR FRAMING IS DESIGNED TO RESIST UPLIFT LOADS DURING & AFTER CONSTRUCTION.

EXISTING CONSTRUCTION NOTES:

11. WORK SHOWN IS NEW UNLESS INDICATED AS EXISTING.

12. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING JOB CONDITIONS, REVIEW ALL DRAWINGS AND VERIFY DIMENSIONS, ELEVATION, AND MEMBER SIZES PRIOR TO CONSTRUCTION OR MATERIAL PURCHASE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IN WRITING OF ALL DISCREPANCIES AND EXCEPTIONS BEFORE PROCEEDING WITH THE WORK.

13. THE REMOVAL, CUTTING DRILLING, ETC. OF EXISTING CONSTRUCTION SHALL BE PERFORMED WITH GREAT CARE IN ORDER NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING. STRUCTURAL SYSTEM MEMBERS OF MECHANICAL, ELECTRICAL, OR ARCHITECTURAL FEATURES NOT INDICATED FOR REMOVAL INTERFERE WITH THE NEW WORK. THE ENGINEER OF RECORD SHALL BE IMMEDIATELY NOTIFIED AND PRIOR WRITTEN APPROVAL SHALL BE OBTAINED BEFORE REMOVAL OR MODIFICATION OF MEMBERS.

14. THE CONTRACTOR SHALL PROMPTLY REPAIR DAMAGE TO EXISTING FRAMING CAUSED DURING CONSTRUCTION WITH SIMILAR MATERIALS AND WORKMANSHIP. CONTACT THE ENGINEER OF RECORD TO VERIFY THE PROPOSED REPAIR SOLUTION.

15. THE CONTRACTOR MUST NOTIFY THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION OR FABRICATION REGARDING ANY EXISTING MECHANICAL UNITS OR OTHER HEAVY ITEMS (GOODS LESS) ON EXISTING ROOF/FLOOR FRAMING NOT SHOWN IN THESE PLANS BUT LOCATED ON STRUCTURAL MEMBERS THAT ARE BEING MODIFIED OR RECEIVING NEW LOADS FROM THESE PLANS.

DEMOLITION SHORING NOTES:

16. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF ALL DEMOLITION WORK AND FOR PROVIDING ALL NECESSARY TEMPORARY BRACING AND PROTECTION AS NECESSARY FOR SAFETY, STABILITY AND PROTECTION OF ALL EXISTING ELEMENTS AND STRUCTURE TO REMAIN. TEMPORARY SHORING AND BRACING SHALL BE ADEQUATE TO RESIST ALL APPLIED LOADS INCLUDING DEAD LOAD, LIVE LOADS, SNOW LOADS AND CONSTRUCTION LOADS, TO PROVIDE STABILITY, AND TO PROVIDE FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL ANY REQUIRED MODIFICATIONS TO THE STRUCTURE ARE COMPLETED.

10 MISCELLANEOUS

GN008

1. THIS BUILDING HAS BEEN DESIGNED TO SUSTAIN, WITHIN THE LIMITATIONS SPECIFIED IN THE 2015 INTERNATIONAL BUILDING CODE (IBC) DEAD LOADS AND OTHER APPLICABLE LOADS SPECIFIED IN CHAPTER 16 OR ELSEWHERE IN THE CODE.

2. ALL ALLOWABLE STRESSES AND SOIL-BEARING VALUES SPECIFIED IN THE CODE FOR WORKING STRESS DESIGN HAVE BEEN INCREASED ONE THIRD WHEN CONSIDERING WIND OR EARTHQUAKE FORCES EITHER ALONE OR WHEN COMBINED WITH VERTICAL LOADS. NO INCREASE HAS BEEN TAKEN FOR VERTICAL LOADS ACTING ALONE.

3. EACH COMPONENT HAS BEEN DESIGNED TO RESIST THE MOST CRITICAL EFFECT RESULTING FROM ALL APPLICABLE LOAD COMBINATIONS REQUIRED BY THE CODE WITH THE TABLE LOADS.

4. DEAD LOADS:

ROOF DEAD LOAD = 17 PSF
NEW ENTRY ROOF DEAD LOAD = N/A
CANOPY ROOF DEAD LOAD = N/A
WOOD STUD WALL = N/A
CMU WALL = 84 PSF

4.B. LIVE LOADS:

ROOF LIVE LOAD = 20 PSF
ROOF POPUP/MANSARD LIVE LOAD = N/A
FLOOR OFFICE = N/A
PARTITION WALL = N/A
FLOOR EXTERIOR = N/A
FLOOR LIGHT STORAGE = N/A
FLOOR HEAVY STORAGE = N/A
FLOOR RESIDENTIAL BASIC = N/A
BALCONIES/DECKS STORAGE = N/A

4.C. SNOW LOADS:

GROUND SNOW LOAD, P_g = 30 PSI
SLOPED ROOF SNOW LOAD, P_s = 25.2 PSI

5. WIND LOADS:

a) BASIC WIND SPEED (3-SECOND GUST), V = 110 mph
b) RISK CATEGORY II
c) EXPOSURE C
d) IMPORTANCE FACTOR I = 1.00 (RISK CATEGORY II)
e) SPECTRAL RESPONSE ACCELERATION, S_s = 0.118
f) SPECTRAL RESPONSE ACCELERATION, S₁ = 0.056
g) SEISMIC DESIGN CATEGORY D
h) SEISMIC DESIGN CATEGORY D
i) INTERMEDIATE-REINFORCED MASONRY WALLS 3.5 2.5 2.25
j) SEISMIC RESPONSE COEFFICIENT, C_s = SEE CALCS

6. FROST LINE DEPTH = 3'-6"

7. BY ISSUING A BUILDING PERMIT, THE GOVERNING BUILDING DEPARTMENT FOR THIS PROJECT IS APPROVING ALL LOADS AND LOAD FACTORS LISTED IN ITEMS 4B, 4C, 5, 6, & 7.

9. N/A INDICATES THAT THIS ITEM IS NOT APPLICABLE TO THIS PROJECT.

4.C. SNOW LOADS:

GROUND SNOW LOAD, P_g = 30 PSI
SLOPED ROOF SNOW LOAD, P_s = 25.2 PSI

5. WIND LOADS:

a) BASIC WIND SPEED (3-SECOND GUST), V = 110 mph
b) RISK CATEGORY II
c) EXPOSURE C
d) IMPORTANCE FACTOR I = 1.00 (RISK CATEGORY II)
e) SPECTRAL RESPONSE ACCELERATION, S_s = 0.118
f) SPECTRAL RESPONSE ACCELERATION, S₁ = 0.056
g) SEISMIC DESIGN CATEGORY D
h) SEISMIC DESIGN CATEGORY D
i) INTERMEDIATE-REINFORCED MASONRY WALLS 3.5 2.5 2.25
j) SEISMIC RESPONSE COEFFICIENT, C_s = SEE CALCS

6. FROST LINE DEPTH = 3'-6"

7. BY ISSUING A BUILDING PERMIT, THE GOVERNING BUILDING DEPARTMENT FOR THIS PROJECT IS APPROVING ALL LOADS AND LOAD FACTORS LISTED IN ITEMS 4B, 4C, 5, 6, & 7.

9. N/A INDICATES THAT THIS ITEM IS NOT APPLICABLE TO THIS PROJECT.

6 DESIGN CRITERIA

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFETY. THE FOLLOWING REQUIREMENTS ARE NOT INTENDED TO BE A COMPLETE LIST, BUT ARE ADDITIONAL REQUIREMENTS TO BE OBSERVED BY THE CONTRACTOR. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE FOLLOWING ITEMS:

1. THE STRUCTURE SHOWN IN THESE DRAWINGS IS STRUCTURALLY SOUND ONLY IN ITS COMPLETION. THE DESIGN ADEQUACY AND SAFETY OR ERECTION BRACING SHORING TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE PRIOR TO THE APPLICATION OF ALL WALLS AND ROOF & FLOOR SHEATHING. HE SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE APPLICATION OF THE AFORESAID MATERIALS.

2. AN ERECTION PLAN IS REQUIRED FOR MOST CONSTRUCTION PHASES. CONTRACTOR SHALL DETERMINE ALL CONSTRUCTION PHASES WHICH REQUIRE ERECTION PLANS AND THE USE OF ANY TYPE OF MATERIAL HANDLING EQUIPMENT IS PROHIBITED FROM USE ON WOOD ROOFS AND ELEVATED FLOORS.

3. THE CONTRACTOR SHALL PROVIDE ATTACHED VISIBLE PLATES INDICATING THE DESIGN LOADS IN ALL SPACES AS REQUIRED BY APPLICABLE SAFETY REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE ACTUAL LOAD BELOW THE ALLOWABLE LIMITS.

4. TEMPORARY LOADING DURING CONSTRUCTION SHALL NOT OVERLOAD DESIGN VALUES. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL TRADES OF SUCH DESIGN VALUES.

5. THE CONTRACTOR SHALL PROVIDE ATTACHED VISIBLE PLATES INDICATING THE DESIGN LOADS IN ALL SPACES AS REQUIRED BY APPLICABLE SAFETY REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE ACTUAL LOAD BELOW THE ALLOWABLE LIMITS.

6. CONTRACTOR SHALL DETERMINE IF A CALOSHA PERMIT IS REQUIRED, IF SO, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN SUCH PERMIT.

7. THE LACK OF A HIGH GUARDRAIL AT BUILDING PARAPETS FLOOR OPENINGS & ROOF OPENINGS DOES NOT MEET CURRENT LABOR CODE FOR AN OCCUPIED SPACE. THIS ENGINEER RECOMMENDS THE USE OF GUARDRAILS AT STATED LOCATIONS. IF GUARDRAILS ARE NOT USED THE OWNERS SHALL ACCEPT FULL RESPONSIBILITY. IN ADDITION, THE CONTRACTOR SHALL PROVIDE CLEARLY LEGIBLE SIGNS AT THESE LOCATIONS STATING "CAUTION: NO GUARDRAIL".

8. ALL TEMPORARY FLOOR AND ROOF OPENINGS LACKING GUARDRAILS SHALL BE ADEQUATELY COVERED AND DESIGNED TO RESIST CONSTRUCTION TRAFFIC LOADS.

9. CONTRACTOR SHALL VERIFY THAT ALL SCHEDULES ARE DESIGNED TO WITH STAND THE LOADS SPECIFIED IN THE APPLICABLE CODE LISTED UNDER "DESIGN CRITERIA".

10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.

11. MATERIAL USED IN THIS DESIGN MAY BE HAZARDOUS TO ONE'S HEALTH. THE CONTRACTOR AND OWNER SHALL ACCEPT ALL RESPONSIBILITY AND SHALL POST SUCH WARNING DURING CONSTRUCTION.

12. THE CONTRACTOR, DURING CONSTRUCTION, AND THE OWNER, DURING OCCUPANCY, SHALL ASSUME ALL RESPONSIBILITY FOR PROPER ROOF MAINTENANCE TO INSURE PROPER ROOF DRAINAGE.

13. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION INCLUDING BUILDING ERECTION SAFETY. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL ERECTION LAWS AND GUIDELINES. IF THE CONTRACTOR FEELS THAT THE ERECTION OF THE STRUCTURE REPRESENTED IN THESE PLANS WILL NOT MEET THOSE LAWS & GUIDELINES, THE CONTRACTOR MUST NOTIFY THE ENGINEER BEFORE CONSTRUCTION AND FABRICATION BEGINS.

7 ADDITIONAL SAFETY NOTES

1. SHOP DRAWINGS ARE REQUIRED FOR THE FOLLOWING ITEMS. SUBMIT AT LEAST (1) ELECTRONIC SET (FULL SIZE PDF) FOR ENGINEERS RECORDS. (1) ELECTRONIC SET (FULL SIZE PDF) OF CALCULATIONS (IF APPLICABLE) FOR REVIEW AND APPROVAL. PRIOR TO FABRICATION, THE ELECTRONIC SETS SHALL BE LEGIBLE FOR THE REVIEW. IF ELECTRONIC SET IS NOT LEGIBLE IT MAY DELAY THE REVIEW WITHIN THE ALLOTTED TIME BELOW.

1.a. CONCRETE REINFORCING BARS
1.b. CONCRETE MIX DESIGN
1.c. STRUCTURAL STEEL
1.d. GROUT MIX DESIGN
1.e. MASONRY REINFORCING BARS

1.g. ROOF TRUSSES - DEFERRED SUBMITTAL

2. ALLOW TEN (10) WORKING DAYS FOR SHOP DRAWINGS REVIEW COMMENCING THE NEXT WORKING DAY AFTER RECEIPT. PLEASE PLAN YOUR SCHEDULE ACCORDINGLY. NO PART OF THE CONTRACT DOCUMENTS ARE TO BE REPRODUCED AS PART OF THE SHOP DRAWINGS. SHOP DRAWINGS CONTAINING DETAILS, SECTIONS OR PLANS PHOTO COPIED FROM THE CONTRACT DOCUMENTS WILL BE REJECTED.

3. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THIS ENGINEER, THE CONTRACTOR SHALL REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR; AND APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY CHANGES OR DELAYS CAUSED BY PREMATURELY SUBMITTING SHOP DRAWINGS. THIS ENGINEER'S SHOP DRAWINGS REVIEW AND STAMP DOES NOT ALLEVIATE THE CONTRACTORS RESPONSIBILITY TO REVIEW THE SAME SHOP DRAWINGS. THIS ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRESSES AN INTENTIONAL VARIATION UNLESS CONTRACTOR ADVISES THIS ENGINEER THEREIN IN WRITING WHICH IS THEN ACKNOWLEDGED BY THIS ENGINEER IN WRITING.

8 SHOP DRAWINGS

GN005

1. THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR'S DUTIES ARE AS DESCRIBED IN THE 2015 INTERNATIONAL BUILDING CODE (IBC).

DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:

1.0. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL AND THE ENGINEER OF RECORD, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATIONS REQUIRING SPECIAL INSPECTIONS.

1.1. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS IF APPLICABLE.

1.2. COPIES OF TEST RESULTS AND FINAL REPORTS SHALL BE FURNISHED TO THIS ENGINEER IN ADDITION TO OTHER NORMAL DISTRIBUTIONS WITHIN ONE WEEK OF THE TEST OR INSPECTION.

1.3. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED TO THE ENGINEER OF RECORD AND TO THE BUILDING OFFICIAL.

1.4. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.

2. ALL TEST AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY EMPLOYED BY THE OWNER OR ARCHITECT AND NOT THE CONTRACTOR PER CBC SECTION 109, APPENDIX GAP CHAPTER, JOB SITE VISITS BY THE ENGINEER OF RECORD DOES NOT CONSTITUTE A SPECIAL INSPECTION.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND INSPECTION FIRM WITH A SCHEDULE TO FACILITATE THE PROPER COORDINATION OF WORK.

4. PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:

4.A. SOIL AND FOUNDATION: YES N/A
a.) SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS PER IBC 1705.6.6. YES N/A

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODIC DURING TASK LISTED	REFERENCE STANDARD
1. VERIFY MATERIALS BELOW FOOTING ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY PRIOR TO PLACEMENT OF BEARS	X		IBC 1705.6.6
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	X		
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	X		
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND FILL THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X		
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBTAIN SUBGRADE AND VERIFY SITE HAS BEEN PREPARED PROPERLY	X		

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODIC DURING TASK LISTED	REFERENCE STANDARD
1. VERIFY PILE MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS	X		
2. VERIFY DETERMINE CAPACITIES OF TEST PILES AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED	X		
3. OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH PILE	X		
4. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS OF PILES AND SIZE OF HAMMER RECORDS, NUMBER OF BLOWS PER FOOT OF PENETRATION, PENETRATION RATE, PENETRATION RATE, DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY FIELD CORRECTIONS	X		

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODIC DURING TASK LISTED	REFERENCE STANDARD
1. OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH PILE	X		
2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFORM PER DIMETERS, BELL DIAMETER OF PILES AND RECORD ELEVATION AND BENCHMARK (IF APPLICABLE) AND ADEQUATE END BEARING STRAIN CAPACITY	X		

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODIC DURING TASK LISTED	REFERENCE STANDARD
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:			
a. MATERIAL IDENTIFICATION CORRELATES TO ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS	X		ASTM A308, SECTION A3.3
b. MATERIAL MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	X		
2. INSPECTION OF HIGH-STRENGTH BOLTING:			
a. BEARING - TYPE CONNECTIONS	X		ASC 360, SECTION M2.5
b. SLIP - CRITICAL CONNECTIONS	X	X	ASC 360, SECTION M2.5
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL:			
a. IDENTIFICATION MARKING TO CORRELATE TO IBC SPECIFICATION IN THE CONSTRUCTION DOCUMENTS			ASTM A6 OR ASTM A568
b. MANUFACTURER'S CERTIFIED MILL TEST REPORTS			ASTM A6 OR ASTM A568
4. MATERIAL VERIFICATION OF WELD JOINTS:			
a. IDENTIFICATION MARKING TO CORRELATE TO IBC SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS			ASC 360, SECTION A3.3
b. MANUFACTURER'S CERTIFIED COMPLIANCE REQUIRED			
5. INSPECTION OF WELDING:			
a. STRUCTURAL STEEL:			
1. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	X		AWS D1.1
2. MULTIPASS FILLET WELDS	X		AWS D1.1
3. SINGLE PASS FILLET WELDS > 5/16"	X		AWS D1.1
4. SINGLE PASS FILLET WELDS < 5/16"	X		AWS D1.1
5. FLOOR AND ROOF DECK WELDS	X		AWS D1.3
b. REINFORCING STEEL:			
1.g. ROOF TRUSSES - DEFERRED SUBMITTAL			
1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A603	X		AWS D14 ACI 318-5.2
2. REINFORCING STEEL-RESISTING FLEXURAL AND MOMENT RESISTING	X		AWS D14 ACI 318-5.2
3. SHEAR REINFORCEMENT	X		AWS D14 ACI 318-5.2
4. OTHER REINFORCEMENT	X		AWS D14 ACI 318-5.2
6. DETAILS SUCH AS BRACING AND STIFFENING			
b. MEMBER LOADINGS			
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION			

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODIC DURING TASK LISTED	REFERENCE STANDARD
1. VERIFY COMPLIANCE WITH APPROVED SUBMITTALS	X		ART. 1.5
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE CONTRACTOR IS IN COMPLIANCE WITH THE FOLLOWING:			
a. PROPORTIONS OF SITE PREPARED MORTAR	X		ART. 2.1 ART. 2.6A
b. CONSTRUCTION OF MORTAR JOINTS	X		ART. 3.38
c. GRADE AND SIZE OF PRESSURE TENDONS AND ANCHORAGES	X		ART. 2.48 ART. 2.4H
d. LOCATION OF REINFORCEMENT, CONNECTORS, PRESSURE TENDONS AND ANCHORAGES	X		ART. 3.4 ART. 3.6A
e. PRESSURE TENDONS	X		ART. 3.6B
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:			
a. GROUT SPACE IS CLEAN	X		ART. 3.20 ART. 3.2F
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS AND PRESSURE TENDONS AND ANCHORAGES	X		SEC. 6.1 ART. 2.4 ART. 3.4
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESSURE TENDONS AND ANCHORAGES	X		SEC. 6.1 ART. 3.2F ART. 3.4 ART. 3.6A
d. PROPORTIONS OF SITE PREPARED GROUT AND PRESSURE GROUT FOR BONDED TENDONS	X		ART. 2.6B
e. CONSTRUCTION OF MORTAR JOINTS	X		ART. 3.38
4. VERIFY DURING CONSTRUCTION:			
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	X		ART. 3.3F
b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORING MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	X		SEC. 1.2(2)(b)
c. WELDING OF REINFORCING BARS	X		SEC. 11.7.2.2, (11.3.3.4)(b)
d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)	X		ART. 1.8C ART. 1.8D
e. APPLICATION AND MEASUREMENT OF PRESSURE-FORCE	X		ART. 3.6B
f. PLACEMENT OF GROUT AND PRESSURE GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X		ART. 3.5 ART. 3.6C
5. PREPARATION OF ANY REQUIRED GROUT STRENGTH, MORTAR STRENGTH AND/OR PROPS SHALL BE OBSERVED	X		ART. 1.4

5 SPECIAL INSPECTION NOTES

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VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODIC DURING TASK LISTED	REFERENCE STANDARD
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESSURE TENDONS AND PLACEMENT		X	ACI 318-5.2, 7.1-7.7
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH THE IBC			AWS D14 ACI 318-5.2
3. INSPECTION BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO THE TEST OR INSPECTION. CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED.		X	
4. VERIFY USE OF REQUIRED GROUT MIX		X	ACI 318-3.5 CH. 4, 5.2-5.4
5. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ACI 318-5.2 CH. 4, 5.2-5.4
6. INSPECTION OF CONCRETE AND GROUT PLACEMENT FOR PROPER APPLICATION OF TECHNIQUES	X		ACI 318-5.9, 5.10
7. INSPECTION FOR MAINTENANCE OF SPECIFIED DURING TEMPERATURES AND TECHNIQUES		X	ACI 318-5.11, 5.13
8. INSPECTION OF PRE-STRESSED CONCRETE:			
a. APPLICATION OF PRESSURE-FORCES	X		ACI 318-18.02 ACI 318-18.18.4
b. GROUTING OF BONDED PRESSURE TENDONS IN THE SEISMIC RESISTING SYSTEM	X		
9. ERECTION OF PRECAST CONCRETE MEMBERS		X	ACI 318-10.16
10. VERIFICATION ON-IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS IN OR DISCREPANCIES EXIST ON THE DRAWINGS OR SPECIFICATIONS, CONTACT THE ENGINEER.		X	ACI 318-6.2
11. INSPECTION FORMWORK FOR SHAPE, LOCATION AND OTHER SIMILAR OPERATIONS NOT INDICATED ON THE DRAWINGS OR OTHER MEANS BEING FORMED.		X	ACI 318-6.1.1

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODIC DURING TASK LISTED	REFERENCE STANDARD
1. VERIFY COMPLIANCE WITH APPROVED SUBMITTALS	X		ART. 1.5
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE CONTRACTOR IS IN COMPLIANCE WITH THE FOLLOWING:			
a. PROPORTIONS OF SITE PREPARED MORTAR	X		ART. 2.1 ART. 2.6A
b. CONSTRUCTION OF MORTAR JOINTS	X		ART. 3.38
c. GRADE AND SIZE OF PRESSURE TENDONS AND ANCHORAGES	X		ART. 2.48 ART. 2.4H
d. LOCATION OF REINFORCEMENT, CONNECTORS, PRESSURE TENDONS AND ANCHORAGES	X		ART. 3.4 ART. 3.6A
e. PRESSURE TENDONS	X		ART. 3.6B
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:			
a. GROUT SPACE IS CLEAN	X		ART. 3.20 ART. 3.2F
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS AND PRESSURE TENDONS AND ANCHORAGES	X		SEC. 6.1 ART. 2.4 ART. 3.4
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESSURE TENDONS AND ANCHORAGES	X		SEC. 6.1 ART. 3.2F ART. 3.4 ART. 3.6A
d. PROPORTIONS OF SITE PREPARED GROUT AND PRESSURE GROUT FOR BONDED TENDONS	X		ART. 2.6B
e. CONSTRUCTION OF MORTAR JOINTS	X		ART. 3.38
4. VERIFY DURING CONSTRUCTION:			
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	X		ART. 3.3F
b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORING MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	X		SEC. 1.2(2)(b)
c. WELDING OF REINFORCING BARS	X		SEC. 11.7.2.2, (11.3.3.4)(b)
d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)	X		ART. 1.8C ART. 1.8D
e. APPLICATION AND MEASUREMENT OF PRESSURE-FORCE	X		ART. 3.6B
f. PLACEMENT OF GROUT AND PRESSURE GROUT FOR			