

DESIGN PARAMETERS

1. BUILDING CODE	2017 FLORIDA BUILDING CODE
2. LIVE LOADS	
A. ROOF	20 PSF
3. ROOF SNOW LOAD	
A. GROUND SNOW LOAD, Pg	0 PSF
4. WIND DESIGN DATA	
A. ULTIMATE WIND SPEED (3 SECOND GUST),	139 MPH
B. RISK CATEGORY	II
C. WIND EXPOSURE CATEGORY	B
D. INTERNAL PRESSURE COEFFICIENT, Gcpi	+/- 0.18
E. ENCLOSURE CLASSIFICATION	ENCLOSED
F. STOREFRONT AND OVERHEAD DOOR COMPONENT PRESSURE (ASD)	26 PSF
5. EARTHQUAKE DESIGN DATA	
A. SEISMIC IMPORTANCE FACTOR, I	1.0
B. MAPPED SPECTRAL RESPONSE ACCELERATION, Ss	0.057
C. MAPPED SPECTRAL RESPONSE ACCELERATION, S1	0.031
D. SITE CLASS (ASSUMED FUNDAMENTAL PERIOD < 5 SEC)	B
E. SPECTRAL RESPONSE COEFFICIENT, Sds	0.038
F. SPECTRAL RESPONSE COEFFICIENT, Sd1	0.021
G. SEISMIC DESIGN CATEGORY	A

GENERAL NOTES

GENERAL

- STRUCTURAL ELEMENTS ARE NON-SELF SUPPORTING AND REQUIRE INTERACTION WITH OTHER ELEMENTS FOR STABILITY AND RESISTANCE TO LATERAL FORCES. FRAMING AND WALLS SHALL BE TEMPORARILY BRACED BY THE CONTRACTOR UNTIL PERMANENT BRACING, FLOOR AND ROOF DECKS, AND WALLS HAVE BEEN INSTALLED AND CONNECTIONS BETWEEN THESE ELEMENTS HAVE BEEN MADE.
- THE SPECIFICATIONS AND STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION, UNLESS NOTED OTHERWISE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATION OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.
- THE SIZE AND LOCATION OF EQUIPMENT PADS AND PENETRATIONS THROUGH THE STRUCTURE FOR MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL BE VERIFIED BY THE CONTRACTOR. PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR OPENING LOCATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DRAWING FILES.
- ASSUME EQUAL SPACING IS NOT INDICATED ON DRAWINGS.
- ARCHITECTURAL MECHANICAL AND ELECTRICAL COMPONENTS AND SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED TO RESIST SEISMIC FORCES AS DETERMINED IN ACE 7.
- SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS NOT SHOWN AND FOR EXACT LOCATIONS OF ALL SLAB DEPRESSIONS AND CURBS.
- THE PROJECT SPECIFICATIONS SHALL BE CONSIDERED AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REVIEW THE SPECIFICATIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS SUBGRADE PREPARATION, FOUNDATION CONSTRUCTION, WALL BACKFILL, CONCRETE FORMING AND TESTING AND INSPECTION REQUIREMENTS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

FOUNDATIONS

- FOUNDATION DESIGNS ARE BASED ON A NET ALLOWABLE BEARING PRESSURE OF 2500 PSF FOR CONTINUOUS AND INDIVIDUAL SPOT FOOTINGS PER GEOTECHNICAL REPORT BY INTERTEK PROFESSIONAL SERVICES INDUSTRIES, INC., DATED MARCH 5, 2020.
- CONTRACTOR AND TESTING LABORATORY REPRESENTATIVE SHALL READ THE GEOTECHNICAL REPORT AND BECOME THOROUGHLY FAMILIAR WITH SITE AND SUBGRADE INFORMATION GIVEN THEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT QUANTITIES OF CUT AND FILL FOR ESTIMATING AND CONSTRUCTION. SUBGRADE SHALL BE PREPARED AS NOTED IN THE GEOTECHNICAL REPORT, INCLUDING COMPACTION TO AT LEAST 95% OF MAX. DRY DENSITY (ASTM D-1557).
- A QUALIFIED AND REGISTERED GEOTECHNICAL ENGINEER, LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND WORKING FOR THE TESTING LABORATORY, SHALL DETERMINE CONFORMANCE OF THE SUBGRADE PREPARATION AND FOUNDATIONS BEARING STRATA WITH THE FOUNDATION DESIGN CRITERIA ABOVE, THE GEOTECHNICAL REPORT AND ALL OTHER CONTRACT DOCUMENTS. TESTING LABORATORY SHALL NOTIFY CONTRACTOR, ARCHITECT AND CONSULTING ENGINEER OF ANY DISCREPANCIES NOT IN ACCORDANCE WITH FOUNDATION DESIGN CRITERIA OR CONTRACT DOCUMENTS.
- USE ONLY THE SELECT STRUCTURAL FILL OPTION AS NOTED IN THE GEOTECHNICAL REPORT FOR FILL BELOW BUILDING AND FIVE FEET BELOW THE EDGES OF THE BUILDING INCLUDING COMPACTED SELECT FILL BELOW FOUNDATIONS.
- EXTERIOR FOOTINGS SHALL BEAR AT OR BELOW MINIMUM BEARING DEPTH. MINIMUM BEARING DEPTH IS 18 INCHES BELOW ADJACENT FINISHED GRADE.
- AVOID DAMAGE TO UNDERGROUND UTILITIES SUCH AS WATER MAINS, SANITARY SEWERS, BURIED CABLES, ETC., WHICH MIGHT EXTEND ACROSS OR ADJOIN SITE.

SLAB ON GRADE

- THE SUBGRADE FOR THE SLAB ON GRADE SHALL BE COMPACTED AND PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT INCLUDING COMPACTION TO AT LEAST 95% OF MAX. DRY DENSITY (ASTM D-1557). THE SUBGRADE SHALL PROVIDE A MINIMUM OF 150 POUNDS PER CUBIC INCH (PCF) MODULUS OF SUB-GRADE REACTION AND SHALL BE PROOF-ROLLED TO ENSURE THAT THERE ARE NO PUMPING OR SOFT ZONES.
- A QUALIFIED AND REGISTERED GEOTECHNICAL ENGINEER, LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND WORKING FOR THE TESTING LABORATORY, SHALL DETERMINE CONFORMANCE OF THE SUBGRADE PREPARATION AND SLAB BEARING STRATA WITH THE SLAB DESIGN CRITERIA ABOVE, THE GEOTECHNICAL REPORT AND ALL OTHER CONTRACT DOCUMENTS. TESTING LABORATORY SHALL NOTIFY CONTRACTOR, ARCHITECT AND CONSULTING ENGINEER OF ANY CONDITIONS NOT IN ACCORDANCE WITH SLAB DESIGN CRITERIA OR CONTRACT DOCUMENTS.
- THE SLAB ON GRADE SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE STANDARDS OF THE AMERICAN CONCRETE INSTITUTE (ACI). THE BUILDING CODES REFERENCED BY THE AUTHORITY HAVING JURISDICTION AND THESE REQUIREMENTS SHALL BE A MINIMUM OF 5" THICK OVER A VAPOR RETARDER (REF SPECIFIED OVER COMPACTED STRUCTURAL FILL AS SPECIFIED IN THE GEOTECHNICAL REPORT. SLAB SHALL BE REINFORCED AS SHOWN ON THE PLAN. REINFORCING SHALL BE LOCATED AT MID-DEPTH OF THE SLAB. CONCRETE AGGREGATE SHALL MEET ASTM C33, SHALL BE WELDED, AND CONTAIN A NOMINAL MAXIMUM AGGREGATE SIZE OF AT LEAST 3/4" (9.5mm). CONTRACTION JOINTS SHALL BE A MINIMUM OF 1/4" DEPTH OF THE SLAB SHALL BE PROVIDED IN ALL PRINCIPAL DIRECTIONS ACROSS THE ENTIRE FLOOR SLAB PLACED AT COLUMN CENTER LINES AND SPACED FURTHER THAN 15 FEET ON CENTER. THE JOINTS SHALL BE CUT WITHIN 2 HOURS OF INITIAL CONCRETE PLACEMENT.

MISCELLANEOUS

- THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- THE STRUCTURAL DRAWINGS ARE TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING REQUIREMENTS FROM SUCH DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.
- NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE PROFESSIONAL-OF-RECORD.
- NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE PROFESSIONAL-OF-RECORD.
- DO NOT SCALE THESE DRAWINGS. USE SPECIFIED DIMENSIONS.
- STEEL FRAMING IS NON-SELF SUPPORTING AND REQUIRES INTERACTION WITH OTHER ELEMENTS NOT CLASSIFIED AS STRUCTURAL STEEL TO PROVIDE THE REQUIRED STABILITY AND RESISTANCE TO LATERAL FORCES.
- THE STEEL FRAMING AND ALL CONCRETE AND CMU WALLS SHALL BE TEMPORARILY BRACED UNTIL ALL STEEL BRACING, FLOOR AND ROOF DECKS, AND CONCRETE AND CMU WALLS HAVE BEEN INSTALLED AND ALL CONNECTIONS BETWEEN THESE ELEMENTS HAVE BEEN MADE.

CONCRETE

- MINIMUM COMPRESSIVE STRENGTH (fc) AT THE END OF 28 DAYS SHALL BE AS FOLLOWS:

A. FOOTINGS	4,000 PSI
B. SLABS-ON-GRADE	4,000 PSI
C. EXTERIOR CONCRETE/SIDEWALKS	4,500 PSI

REFER TO SPECIFICATIONS FOR OTHER MIX DESIGN REQUIREMENTS. CONCRETE SHALL BE NORMAL WEIGHT (145 PCF), UNLESS NOTED OTHERWISE.

- EXTERIOR CONCRETE AND CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL BE AIR-ENTRAINED.
- NEITHER MATERIALS NOR ADMIXTURES SHALL CONTAIN ANY CALCIUM CHLORIDE.
- REINFORCING STEEL SHALL MEET THE FOLLOWING:

A. DEFORMED BARS	ASTM A615, GRADE 60
B. WELDABLE DEFORMED BARS	ASTM A706, GRADE 60
C. WELDED WIRE FABRIC	ASTM A185

- WHERE DOWELS ARE INDICATED BUT NOT SIZED, PROVIDE DOWELS THAT MATCH SIZE AND LOCATION OF MAIN REINFORCING STEEL AND LAP SPICE WITH THE MAIN REINFORCING STEEL. REINFORCING BARS SHALL BE SPLICED AS NOTED IN THE REINFORCING LAP SCHEDULE. REFER TO ACI 318 LATEST EDITION FOR CONCRETE COVER, ACI 315 LATEST EDITION FOR REINFORCING PRACTICES AND FABRICATION, AND ACI 301 LATEST EDITION FOR STANDARD PRACTICE FOR MIXING AND PLACING CONCRETE.
- PROVIDE CORNER BARS THAT MATCH CONTINUOUS REINFORCEMENT SIZE AND QUANTITY AT INTERSECTIONS AND CORNERS OF WALLS AND FOUNDATIONS.
- CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS: REFER TO ACI 318, SECTION 7.7 FOR CONDITIONS NOT NOTED.

FOUNDATIONS	1 1/2" TOP
	2" SIDES
	3" BOTTOM

- SLABS-ON-GRADE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS. ALL CONSTRUCTION JOINTS SHALL BE MADE IN THE CENTER OF SPANS WITH VERTICAL BULKHEADS. THE LOCATION OF CONSTRUCTION JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
- SHOP DRAWINGS AND/OR PRODUCT DATA FOR THE FOLLOWING ITEMS ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL:
 - REINFORCING STEEL
 - CONCRETE MIXES
- ALL LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE UNLESS NOTED OTHERWISE.

BAR SIZE	TENSION SPLICES (%)	
	TOP BARS	OTHER BARS
#3	16	16
#4	20	16
#5	25	18
#6	29	23
#7	43	37

REINFORCED MASONRY

- MASONRY WALLS HAVE BEEN DESIGNED TO SPAN VERTICALLY, AS SIMPLE SPANS, FROM FOUNDATION TO ROOF, AND ARE DEPENDENT UPON THE COMPLETED ROOF STRUCTURE, ROOF SHEATHING, AND COMPLETION OF ALL MASONRY WALLS FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ALL NECESSARY BRACING AS REQUIRED FOR STABILITY, RESISTANCE OF CONCRETE LOADS, AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL THE ENTIRE STRUCTURE IS COMPLETE. THE SHORING SHALL NOT RELY ON ANY MOMENT RESISTANCE CAPACITY OF THE FOOTINGS.
- REINFORCED MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH, fm = 2000 PSI. MASONRY UNITS SHALL BE NORMAL WEIGHT BLOCK CONFORMING TO ASTM C90, GRADE 1 TYPE 1, AND SHALL HAVE A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2800 PSI. MORTAR SHALL CONFORM TO ASTM C270, TYPE S, PORTLAND CEMENT TYPE 1 OR 2, LOW ALKALI PER ASTM C150 NON AIR ENTRAINED OR HYDRATED LIME PER ASTM C207 TYPES. MORTAR SHALL CONFORM TO ASTM C476 AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI. GROUT SHALL BE MECHANICALLY CONSOLIDATED USING A VIBRATOR WITH A MINIMUM 3/4" DIAMETER HEAD.
- PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS AT LOCATIONS AND ON PLENS. HORIZONTAL BOND BEAM AND Lintel REINFORCING SHALL BE CONTINUOUS ACROSS VERTICAL CONTROL JOINTS. JOINT REINFORCING SHALL BE STOPPED EITHER SIDE OF VERTICAL CONTROL JOINTS.
- MORTAR SHALL MEET THE PROPORTION SPECIFICATIONS OF ASTM C270 TYPE "S" MORTAR. MASONRY CEMENT SHALL NOT BE USED FOR MORTAR.
- MASONRY REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
- CONTINUOUS WIRE REINFORCING (JOINT REINFORCING) SHALL BE GALVANIZED TRUSS OR LADDER TYPE GALVANIZED DRAIN COVERS SHALL BE PROVIDED WITH ASTM A62. JOINT REINFORCING SHALL BE SPACED AT 16" O.C. VERTICALLY AND GRADE AND 8" OC BELOW GRADE IN ALL MASONRY WALLS.
- ALL REINFORCED CELLS AND ALL CELLS BELOW THE FINISHED FLOOR ELEVATION SHALL BE GROUTED SOLID. CONCRETE MASONRY UNITS ABOVE FINISHED FLOOR SHALL BE NORMAL WEIGHT UNITS.
- CONCRETE MASONRY UNITS ABOVE FINISHED FLOOR SHALL BE NORMAL WEIGHT UNITS.
- GROUTING SHALL BE PLACED 1" BELOW THE TOP OF A COURSE SO AS TO FORM A KEY AT THE POUR JOINT.
- GROUTING OF MASONRY COLUMNS AND LINTELS OVER OPENINGS SHALL BE DONE IN ONE CONTINUOUS POUR.
- ALL BULKHEAD ANCHORS, ETC., INSERTED IN THE WALLS, SHALL BE GROUTED SOLID INTO POSITION. COORDINATE LOCATIONS OF EMBEDDED STEEL ITEMS FOR OVERHEAD DOORS WITH DOOR MANUFACTURER.
- USE OPEN KNIFE MORTAR BOND BEAM BLOCK. DO NOT USE TROUGH TYPE CLOCK FOR BOND BEAM.
- REINFORCING LAP SPLICES SHALL BE PER THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE.

BAR SIZE	SPLICE (%)
#3	20
#4	26
#5	32
#6	39
#7	45

COLD-FORMED STEEL

- ALL SIZING BASED ON STEEL STUD MANUFACTURERS ASSOCIATION (ICBO ER-4943P) PRODUCT TECHNICAL INFORMATION.
- ALL GALVANIZED STUDS AND JOISTS 12, 14 AND 16 GAUGE SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF ASTM A653 SS, GRADE 50, CLASS 1 OR 3 WITH A MINIMUM YIELD OF 50,000 PSI.
- ALL GALVANIZED 18 AND 20 GAUGE STUDS AND JOISTS: ALL GALVANIZED TRACK, BRIDGING, END CLOSURES AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF ASTM A653 SS, GRADE 33 WITH A MINIMUM YIELD OF 33,000 PSI.
- ALL GALVANIZED STUDS, JOISTS, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A653.
- THE PHYSICAL AND STRUCTURAL PROPERTIES LISTED BY THE STEEL STUD MANUFACTURER ASSOCIATION AND AISI DESIGN MANUAL SHALL BE CONSIDERED THE MINIMUM PERMITTED FOR ALL FRAMING MEMBERS. SPECIFICALLY, THE FOLLOWING MINIMUM PROPERTIES, CALCULATED IN ACCORDANCE WITH THE LATEST AISI SPECIFICATION SHALL BE PROVIDED: IX (N.4), SX (N.3), AREA (N.2), RX (N.1), FY (KSI), RESISTING MOMENT (N.-LB.).
- ANY SUBSTITUTIONS MUST BE APPROVED IN WRITING PRIOR TO DELIVERY, BY THE ARCHITECT AND/OR ENGINEER OF RECORD.

COLD-FORMED STEEL (CONT.)

- INSTALLATION OF STUDS SHALL BE AS PER ASTM C1007-04 "INSTALLATION OF LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS AND ACCESSORIES", ASTM C955-06 "SPECIFICATION FOR LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS, RUNNERS (TRACK), AND BRACING OR BRIDGING FOR SCREW APPLICATION OF GYPSUM BOARD AND METAL PLASTER BASES", AND ASTM C754-04 "SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE SCREWS AT ATTACHED GYPSUM BOARD". ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS, OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.
- ALL TRACK BUTT JOINTS ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT-WELDED OR SPLICED TOGETHER.
- ALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED ACCORDING TO SUPPLIERS RECOMMENDATIONS.
- TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED.
- STUD ENDS MUST BE SQUARELY SITED AGAINST THE TRACK WEB. BOTH STUD FLANGES MUST BE ATTACHED TO TRACK MEMBERS AT TOP AND BOTTOM.
- STUD BRIDGING SHALL BE PROVIDED BY 1-1/2" COLD ROLLED U-CHANNEL. THE U-CHANNEL MUST BE ATTACHED TO EACH STUD BY WELDING OR ATTACHING WITH CLIP ANGLES AND SCREWS. HORIZONTAL STRAPPING AND SOLID BRIDGING WITH TRACK MEMBERS CAN ALSO BE USED FOR BRIDGING. BRIDGING SHALL BE SPACED AT 4'0" O.C. MAXIMUM.
- THE FOLLOWING MINIMUM COLD FORMED STEEL ATTACHMENTS SHALL BE PROVIDED U.N.O.:
 - TRACK TO STRUCTURAL STEEL
 - 1.45"Ø POWDER DRIVEN FASTENER AT 16" O.C.
 - #10 TEK SCREW AT 16" O.C.
 - TRACK TO METAL DECK
 - 1.45"Ø POWDER DRIVEN FASTENER AT 16" O.C.
 - #10 TEK SCREWS INTO METAL STUD AND
 - 1.45"Ø POWDER DRIVEN FASTENERS INTO STRUCTURAL STEEL.
 - TRACK TO STUD
 - #10 TEK SCREWS
 - #10 TEK SCREWS

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING GRADES:
 - ALL CHANNELS, ANGLES, PLATES, ETC. (U.N.O.).....A36 (Fy=36 KSI)
 - ALL WIDE FLANGES (U.N.O.).....A992 (Fy=50 KSI)
 - HOLLOW STRUCTURAL SECTIONS (SHAPED).....A500 GRADE B (Fy=46 KSI)
 - HOLLOW STRUCTURAL SECTIONS (ROUND).....A500 GRADE B (Fy=42 KSI)
 - STEEL PIPE.....A53 GRADE B (Fy=35 KSI)
 - BOLTS.....A325 (U.N.O.)
 - ANCHOR RODS.....F1554 (GRADE 36)
 - WELDING ELECTRODES.....E70XX, LOW HYDROGEN
- ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE, EXCEPT AS MODIFIED IN THE PROJECT SPECIFICATIONS.
- ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS. ALL WELDING SHALL BE TO CLEAN DRY STEEL. SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS TO BE SHOWN WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER-OF-RECORD.
- PROVIDE L5x3x1/4 (LV) FIELD-FABRICATED FRAME BETWEEN JOISTS AT OPENINGS IN ROOF GREATER THAN 10"x10", UNO, (INCLUDING ROOF DRAIN AND EXHAUST FAN OPENINGS REGARDLESS OF OPENING SIZE).

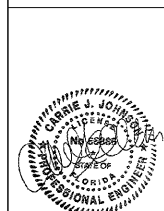
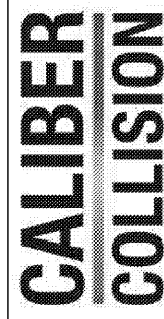
STEEL JOISTS AND JOIST GIRDERS

- HANGERS SUPPORTING MECHANICAL EQUIPMENT FROM JOIST GIRDERS SHALL BE LOCATED WITHIN 3 INCHES OF JOIST PANEL POINTS OR JOIST SHALL BE REINFORCED PER JOIST REINFORCING DETAIL. HANGER LOADS GREATER THAN 100 POUNDS SHALL NOT BE ATTACHED TO THE EDGE OF CHORD ANGLES AND SHALL BE CENTERED ON JOIST CHORD.
 - JOISTS AND JOIST GIRDERS SHALL RESIST A 1" UP-LIFT PRESSURE OF 17.0 PSF (ASD).
 - SPECIAL JOISTS AND JOIST GIRDERS THAT REQUIRE SPECIFIC ORIENTATION SHALL BE TAGGED AT ONE END.
 - DIAPHRAGM BRACING SHALL BE PROVIDED BETWEEN ADJACENT JOISTS WHENEVER BOTTOM CHORD HORIZONTAL BRIDGING IS CONSIDERED.
 - JOIST MANUFACTURER SHALL DESIGN THE COMPRESSION CHORD OF ALL JOISTS SUPPORTING ROOF TOP UNITS, SKY LIGHTS, AND OTHER STRUCTURES FOR AN UNBRACED LENGTH APPLICABLE TO THE CONDITIONS AT THE POINT WHERE THE UNBRACED LENGTH IS GREATER THAN THE SJ MAXIMUM.
- ROOF DECK SHALL BE G90 GALVANIZED TYPE "B" (WIDE RIB) THREE SPAN MIN (UNO) ON FRAMING PLAN, AS SHOWN ON ROOF FRAMING PLAN. THE STEEL ROOF DECK IS REQUIRED TO ACT AS A DIAPHRAGM. REFER TO THE ROOF DIAPHRAGM CONNECTION DIAGRAM AND SCHEDULE FOR ATTACHMENT PATTERN OPTIONS. PROVIDE 2 LAYERS OF ROOF DECK WHERE SINGLE SPAN CONDITION EXISTS. MAKE DIAPHRAGM CONNECTIONS AFTER PLACEMENT OF BOTH LAYERS OF ROOF DECK.
 - WHEN THE ROOF DECK IS WELDED, WELDING RODS SHALL BE E 6022.
 - "C" CANOPY DECK CONNECTION TO STRUCTURAL STEEL CONNECTION SHALL BE BUILDEX #12-24x1 1/2" HWH TEKS SELF DRILLING SCREWS WITH NEOPRENE WASHERS SPACED AT 12" OC. INSTALL DECK WITH LAPS AT TOP SIDE. PROVIDE SIDE LAP CONNECTIONS AT 2'-0" OC (VULCORATED DECK: #12-24 TEK SCREWS, CSI DECK: 1/2" LONG WELDS, WHEELING CORRUGATED DECK: #10-16 TEK SCREWS).

SPECIAL INSPECTIONS

- THE OWNER WILL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION FOR THE REQUIRED SPECIAL INSPECTION ITEMS.
- THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN OF THE STRUCTURE, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
- DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
 - THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAIVE ANY OF THE REQUIREMENTS OF THE DOCUMENTS.
 - THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE PROFESSIONAL-OF-RECORD, AND THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN, IF UNCORRECTED, SUBMIT A COMPLETE LIST OF ALL OUTSTANDING DISCREPANCIES ON A WEEKLY BASIS TO THE OWNER, THE BUILDING OFFICIAL, AND THE PROFESSIONAL-OF-RECORD, UNTIL ALL CORRECTIONS HAVE BEEN COMPLETED.
 - 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 BUILDING CODE.
- SPECIAL INSPECTIONS SHALL BE REQUIRED FOR THE FOLLOWING GENERAL AREAS. REFERENCE THE FOLLOWING TABLE FOR MORE DETAILED INSPECTION REQUIREMENTS IN EACH AREA.
 - INSPECTION OF FABRICATORS: PER IBC SECTION 1704.2.5.
 - STEEL CONSTRUCTION: PER IBC SECTION 1705.2.
 - CONCRETE: PER IBC SECTION 1705.3 AND IBC TABLE 1705.3.
 - MASONRY CONSTRUCTION: PER IBC SECTION 1705.4.
 - SOILS: PER IBC SECTION 1705.6 AND THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
- STRUCTURAL OBSERVATION (AS DEFINED IN CHAPTER 17 OF THE BUILDING CODE) IS NOT REQUIRED, UNLESS SPECIFICALLY REQUIRED BY THE BUILDING OFFICIAL.

SPECIAL INSPECTIONS SCHEDULE			
	SPECIAL INSPECTION	FREQ.	REFERENCED STANDARD(S)
SOILS:			
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		PERIODIC	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		PERIODIC	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		PERIODIC	IBC 1706.6
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.		CONT.	
5. PRIOR TO THE PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY.		PERIODIC	
CONCRETE (NOT APPLICABLE TO FOUNDATIONS OR NON-STRUCTURAL SLABS ON GROUND):			
1. INSPECTION OF REINFORCING STEEL TYPE AND PLACEMENT.		PERIODIC	ACI 318.3.5, 7.1-7.7
2. VERIFYING USE OF REQUIRED DESIGN MIX.		PERIODIC	ACI 318. Ch. 4, 6.3-6.4
3. SAMPLING FRESH CONCRETE AND PERFORMING SLUMP TESTS, AND VERIFYING THE TIME OF CURING OF FRESH CONCRETE AT THE TIME OF TESTING SPECIMENS FOR STRENGTH TESTS.		CONT.	ASTM C 172; ASTM C 31; ACI 318.5.8, 5.8
4. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.		CONT.	ACI 318.6.8, 6.10
5. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		PERIODIC	ACI 318.5.11-5.13
STEEL CONSTRUCTION:			
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS, HIGH-STRENGTH BOLTING.			APPLICABLE ASTM MATERIAL SPECIFICATIONS; AISC 360. SEC. A3.4
A. IDENTIFICATION MARKINGS TO CONFORM TO AISC STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		PERIODIC	
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		PERIODIC	
2. INSPECTION OF BEARING-TYPE CONNECTIONS.		PERIODIC	AISC LRFD SEC. M2.5
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD FORMED METAL DECK:			
A. FOR STRUCTURAL STEEL IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.			AISC 360. SEC. M5.5; ASTM A-6 OR ASTM A-368
B. FOR OTHER STEEL IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.			APPLICABLE ASTM MATERIAL STANDARDS
C. MANUFACTURER'S CERTIFIED MILL TEST REPORTS REQUIRED.			
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:			
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.		PERIODIC	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		PERIODIC	
5. INSPECTION OF WELDING:			
A. SINGLE-PASS FILLET WELDS ≤ 5/16"		PERIODIC	AWS D1.1
B. ROOF DECK WELDS		PERIODIC	AWS D1.3
MASONRY CONSTRUCTION			
1. AS MASONRY CONSTRUCTION BEGINS THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE.			
A. PROPORTIONS OF SITE PREPARED MORTAR.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 2.6A
B. CONSTRUCTION OF MORTAR JOINTS.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 3.3B
C. LOCATION OF REINFORCEMENT AND CONNECTORS.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 3.4, 3.6A
D. VERIFICATION OF fm.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 1.5
2. DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY:			
A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 3.3F
B. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.		PERIODIC	ACI 530/ASCE 9/TMS 602. Sec. 1.2.2(a), 1.16.1
C. SPECIFIED SIZE, GRADE, AND TYPE OF REINFORCEMENT AND ANCHOR BOLTS.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Sec. 1.15; ACI 530.1/ASCE 9/TMS 602. Art. 2.4, 3.4
E. PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40° F) OR HOT WEATHER (TEMPERATURE ABOVE 90° F)		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 1.9C, 1.8D; IBC SECTION 2104.3.2104.4
3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:			
A. GROUT SPAGE IS CLEAN.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 3.2D
B. PLACEMENT OF REINFORCEMENT AND CONNECTORS.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 3.4
C. PROPORTIONS OF SITE PREPARED GROUT.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 2.6B
D. CONSTRUCTION OF MORTAR JOINTS.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 3.3B
4. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS.		CONT.	ACI 530.1/ASCE 9/TMS 602. Art. 3.5
5. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS SHALL BE OBSERVED.		PERIODIC	IBC SECTION 2105.2.2, 2105.3; ACI 530.1/ASCE 9/TMS 602. Art. 1.4
6. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.		PERIODIC	ACI 530.1/ASCE 9/TMS 602. Art. 1.6
ADHESIVE ANCHORS/REINFORCEMENT:			
1. DURING PLACEMENT OF ADHESIVE ANCHORS OR REINFORCEMENT EMBEDDED WITH ADHESIVE (AS SPECIFIED ON THE CONSTRUCTION DOCUMENTS) IN MASONRY AND CONCRETE:			
A. SIZE AND EMBEDMENT OF ANCHORS/REINFORCING	CONTINUOUS		MANUFACTURERS INSTALLATION INSTRUCTIONS
B. ANCHORS/REINFORCEMENT INSTALLED PER MANUFACTURERS RECOMMENDATIONS.	CONTINUOUS		



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GENERAL NOTES