GENERAL

A. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SHOP DRAWINGS AND SPECIFICATIONS.
B. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT TO ALL SUBCONTRACTORS AND SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS.
C. THE GENERAL CONTRACTOR SHALL COMPARE ALL CONTRACT DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN DISCIPLINES AND WITHIN A GIVEN DISCIPLINE TO THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION AND ERECTION.
D. IF A CONFLICT EXISTS AMONG THE STRUCTURAL DRAWINGS, GENERAL NOTES, OR THE SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.
E. THE CONTRACTOR SHALL COORDINATE ALL ELEVATIONS AND DIMENSIONS, INCLUDING BUT NOT LIMITED TO THOSE FOR OPENINGS IN WALLS AND IN ROOF AND FLOOR SYSTEMS, WITH THE ARCHITECTURAL, PLUMBING, ELECTRICAL, AND MECHANICAL PLANS.
F. ALL DIMENSIONS, ELEVATIONS, AND ANY OTHER CONDITIONS OF ANY EXISTING STRUCTURES OR OTHER FEATURES SHALL BE VERIFIED BY THE GENERAL CONTRACTOR AND ANY DISCREPANCIES WITH THE CONTRACT DRAWINGS REPORTED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK. DURING THE CONSTRUCTION PROCESS, IT SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF THE EXISTING STRUCTURE AND TO PROTECT FROM DAMAGE ANY PORTIONS THAT ARE TO REMAIN.
G. THE COMPLETED LATERAL-FORCE RESISTING SYSTEMS AND DIAPHRAGMS ARE REQUIRED FOR THE STRUCTURE TO RESIST LATERAL LOADS AND PROVIDE STABILITY UNDER GRAVITY LOADS. DURING THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY TIED TOGETHER.
H. UNLESS NOTED OTHERWISE, DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
I. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS AND FOR SAFETY PRECAUTIONS AND PROGRAMS.
J. BRITT, PETERS & ASSOCIATES, INC. SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSION OF THE CONTRACTOR OR FOR THEIR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
K. PERIODIC SITE OBSERVATION BY BRITT, PETERS & ASSOCIATES, INC. IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS AND IS NOT EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK.
L. THE BUILDING OWNER SHALL PROVIDE PERIODIC MAINTENANCE TO INSURE STRUCTURAL INTEGRITY. SUCH MAINTENANCE SHALL INCLUDE BUT IS NOT LIMITED TO PAINTING OF STEEL, PROTECTIVE COATING FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS.

DESIGN CRITERIA

A. THE CONTRACT DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE
   1. 2018 INTERNATIONAL EXISTING BUILDING CODE
B. DEAD LOADS
   1. TYPICAL FLOOR SYSTEMS: (25 PSF TOTAL)
      a. MEP*: 10 PSF
      b. PARTITIONS AND FINISHES: 15 PSF**
   2. TYPICAL ROOF SYSTEMS: (20 PSF TOTAL)
      a. MEP*: 10 PSF
      b. INSULATION & ROOFING: 10 PSF
         • MISCELLANEOUS CEILING AND HANGING MECHANICAL LOADS SUCH AS DUCT WORK AND SPRINKLER PIPES.
C. LIVE LOADS*
   1. SEE LIVE LOADS TABLE.
   2. LIVE LOADS ARE BASED ON THE MORE RESTRICTIVE OF THE UNIFORM LOAD LISTED BELOW OR THE CONCENTRATED LOAD LISTED ACTING OVER A 6.25 SQUARE FOOT AREA EXCEPT FOR PARKING GARAGES WHICH ACT OVER AN AREA OF 20 SQUARE INCHES. LIVE LOADS HAVE BEEN REDUCED AS PRESCRIBED IN THE AFOREMENTIONED BUILDING CODE.

D. DESIGN SNOW LOAD:

GROUND SNOW LOAD,	P_G	5 PSF
FLAT ROOF SNOW LOAD,	P_F	5 PSF
EXPOSURE FACTOR,	C_E	1.0
SNOW THERMAL FACTOR,	C_T	1.1
SNOW IMPORTANCE FACTOR,	I	1.0
RAIN-ON-SNOW SURCHARGE		5 PSF

E. DESIGN WIND LOADS:

BASIC WIND SPEED,	Vult/Vasd	143 MPH/111 MPH (3-SEC GUST)
RISK CATEGORY,		II
EXPOSURE,		C
INTERNAL PRESSURE COEFF	GC_{PI}	0.18

COMPONENTS & CLADDING WIND PRESSURES (ULTIMATE):
WIDTH OF ZONE, a = 6.7 FT

Ultimate Design Wind Pressure (psf)

			Effective Wind Area (sq ft)					
Walls:			10	20	50	100	200	500
Interior	Zone 4	+	40.5	39.0	35.8	34.2	32.9	30.6
		-	-44.2	-42.4	-40.0	-38.2	-35.9	-34.0
Edge	Zone 5	+	40.8	39.0	36.5	34.8	33.0	30.6
		-	-54.4	-50.8	-45.0	-42.4	-38.2	-34.0
Roof:			10	20	50	100	200	500
Interior	Zone 1	+	18.1	17.0	16.0	16.0	16.0	16.0
		-	-71.0	-65.3	-60.1	-55.5	-50.6	-44.8
Interior	Zone 1'	+	18.1	17.0	16.0	16.0	16.0	16.0
		-	-40.8	-40.8	-40.8	-40.8	-35.1	-27.5
Edge	Zone 2	+	15.1	17.0	16.0	16.0	15.0	16.0
		-	-93.7	-87.7	-79.7	-73.7	-67.8	-59.7
Edge	Zone 2	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Edge	Zone 2r	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Edge	Zone 2e	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Edge	Zone 2n	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Corner	Zone 3	+	15.1	17.0	16.0	16.0	15.0	16.0
		-	-127.7	N/A	N/A	N/A	N/A	N/A
Corner	Zone 3	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Corner	Zone 3r	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Corner	Zone 3e	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Overhang:			10	20	50	100	200	500
Interior	Zone 1	+	18.1	17.0	16.0	16.0	16.0	16.0
		-	-64.2	-63.1	-61.6	-60.4	-55.7	-37.5
Interior	Zone 1'	+	15.1	17.0	16.0	16.0	15.0	16.0
		-	-64.2	-63.1	-61.6	-60.4	-50.7	-37.8
Edge	Zone 2	+	18.1	17.0	16.0	16.0	16.0	16.0
		-	-88.5	-79.0	-68.2	-60.2	-52.2	-41.6
Edge	Zone 2r	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Edge	Zone 2e	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Edge	Zone 2n	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Corner	Zone 3	+	15.1	17.0	16.0	16.0	15.0	16.0
		-	-120.9	-108.8	-88.2	-74.2	-60.1	-41.8
Corner	Zone 3r	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Corner	Zone 3e	+	N/A	N/A	N/A	N/A	N/A	N/A
		-	N/A	N/A	N/A	N/A	N/A	N/A
Parapet:			10	20	50	100	200	500
Edge	Zone 3	+	122.5	114.5	104.1	96.2	88.2	77.7
		-	-72.4	-66.7	-63.9	-60.2	-56.5	-51.7
Corner	Zone 3	+	157.0	140.9	124.4	110.3	88.3	77.7
		-	-82.7	-77.2	-69.9	-64.4	-58.0	-51.7

F. SEISMIC LOADS ASCE 41-17:

BUILDING PERFORMANCE LEVEL	LIFE SAFETY	
SEISMIC HAZZARD	BSE-1E	
SHORT PERIOD SPECTRAL RESPONSE ACCELERATION,	S_S	0.262g
1-SEC PERIOD SPECTRAL RESPONSE ACCELERATION,	S_1	0.040g
SHORT PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION,	S_{XS}	0.417g
1-SEC PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION,	S_{X1}	0.097g
RISK CATEGORY	II	
SEISMIC DESIGN CATEGORY,	D	
SITE CLASS,	D	
BASIC SEISMIC-FORCE RESISTING SYSTEM:		
EXISTING UNREINFORCED CLAY BRICK MASONRY		
ANALYSIS PROCEDURE:	LINEAR STATIC ANALYSIS	

G. THE CONTRACTOR SHALL SUBMIT FINAL ELEVATOR SHOP DRAWINGS SHOWING ALL LOADS PRIOR TO THE FABRICATION OF THE SUPPORTING STRUCTURE.
H. THE CONTRACTOR SHALL VERIFY ALL MECHANICAL EQUIPMENT WEIGHTS, LOCATIONS AND ASSOCIATED OPENINGS WITH THE MECHANICAL CONTRACTOR AND SUBMIT SUCH INFORMATION PRIOR TO FABRICATION OF THE SUPPORTING STRUCTURE. PROMPTLY NOTIFY THE ENGINEER IF THE ACTUAL WEIGHT EXCEEDS THE WEIGHT SHOWN ON THE STRUCTURAL DRAWINGS.
I. PROVISIONS SHALL BE MADE IN THE DETAILING, FABRICATION, AND ERECTION OF ALL CLADDING, PARTITIONS, WALLS, ETC. TO ACCOUNT FOR FLOOR TO FLOOR DEFLECTIONS AND LATERAL FRAME DEFLECTION.
J. FLOOD DESIGN (HAZARD): FIRM 45019C0285J
   FLOOD DESIGN CLASS: 2
   FLOOD HAZARD AREA: ZONE X

FOUNDATIONS

A. AN ALLOWABLE BEARING CAPACITY OF 2000 PSF HAS BEEN ASSUMED AND SHALL BE CONFIRMED BY A QUALIFIED SOILS ENGINEER TO INSURE THE INTEGRITY OF THE BEARING SOILS.
B. CONTRACTOR SHALL OBTAIN A COPY OF THE SOILS REPORT AND ADHERE TO ALL RECOMMENDATIONS WITHIN, INCLUDING PREPARATION OF SOILS AT BUILDING PAD.
C. ALL SOILS WORK, INCLUDING BACKFILL OF UTILITY TRENCHES AND THE VERIFICATION OF BEARING CAPACITY OF SAME SHALL BE UNDER THE DIRECTION OF A QUALIFIED SOILS ENGINEER. PROXIMITY OF UTILITY TRENCHES TO BUILDING FOUNDATION SYSTEM SHALL BE AS APPROVED BY THE SOILS ENGINEER TO ENSURE INTEGRITY OF THE BEARING SOILS.
D. ALL FOOTINGS SHALL BEAR ON UNDISTURBED EARTH OR ENGINEERED FILL AT ELEVATIONS SHOWN ON PLANS AND DETAILS. GC TO COORDINATE FINAL TOP OF FOOTING ELEVATIONS WITH THE ARCHITECTURAL ELEVATIONS, MEP DRAWINGS AND CIVIL GRADING PLANS PRIOR TO PLACEMENT. FOOTING STEPS DENOTED ON PLAN ARE APPROXIMATE, UNLESS NOTED OTHERWISE, AND SHALL BE FIELD COORDINATED.
E. FLOOR SLABS SHALL BEAR ON 4 INCHES OF COMPACTED STONE MINIMUM UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT. THE MOISTURE RETARDER SHALL BE PLACED BETWEEN THE STONE AND THE SLAB.
F. NO FOUNDATION CONCRETE SHALL BE INSTALLED UNTIL ALL FOUNDATION WORK HAS BEEN COORDINATED WITH UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD OF ALL CONFLICTS THAT EXIST BETWEEN FOOTINGS AND UTILITIES.
G. ALL FOUNDATIONS OR PORTIONS THEREOF BELOW GRADE MAY BE EARTH FORMED BY NEAT EXCAVATIONS.
H. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL BE CENTERED ON WALLS AND/OR COLUMNS.
I. THE CONTRACTOR SHALL DETERMINE THE EXTENT OF CONSTRUCTION DEWATERING REQUIRED FOR THE EXCAVATION. THE CONTRACTOR SHALL SUBMIT TO THE GEOTECHNICAL ENGINEER FOR REVIEW THE PROPOSED PLAN FOR CONSTRUCTION DEWATERING PRIOR TO EXCAVATION.
J. FOOTINGS SHALL NOT BE PLACED ON FROZEN SUBGRADE OR IN STANDING WATER.

CONCRETE

A. CONCRETE SHALL CONFORM TO THE CONCRETE PROPERTIES SPECIFIED IN THE CONCRETE PROPERTIES TABLE.
B. ALL CONCRETE SHALL HAVE ALLOWABLE UNIT SHRINKAGE OF 0.045% AT 28 DAYS. (SEE ASTM C157) {0.03% CAN BE ACHIEVED WITH ADMIXTURES AND SHOULD BE CONSIDERED FOR PT SLABS AND OTHER SPECIFIC USES}
C. ALL SLABS TO RECEIVE MOISTURE SENSITIVE FLOOR COVERINGS SHALL HAVE MAXIMUM WATER/ CEMENT RATIO OF 0.45.
D. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE CURRENT "ACI MANUAL OF CONCRETE PRACTICE".
E. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE I OR II.
F. ALL AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C 33.
G. ALL REINFORCEMENT SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
   1. ALL REINFORCING, UNO: ASTM A615 GRADE 60
   2. DEFORMED BAR ANCHORS (DBA): ASTM A496 (75 KSI)
   3. EPOXY-COATED REINFORCING: ASTM A775
   4. GALVANIZED REINFORCING: ASTM A767 CLASS II (2.0 OZ. ZINC PSF)
   5. WELDED REINFORCING: ASTM A706
   6. WELDED WIRE REINFORCEMENT (WWR):
      a. SMOOTH WIRE: ASTM A 185 (65 KSI)
      b. DEFORMED WIRE: ASTM A 497 (70 KSI)
      c. POLYPROPYLENE FIBRILLATED FIBER MAY BE USED TO SUBSTITUTE WWR IN SLABS ON GRADE, WHEN ADDED TO CONCRETE MIX ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDED DOSAGES.
      d. A STEEL AND POLYPROPYLENE FIBER BLEND MAY BE USED TO SUBSTITUTE WWR IN SLABS ON COMPOSITE DECK, WHEN ADDED TO CONCRETE MIX IN ACCORDANCE TO THE STEEL DECK INSTITUTE DESIGN MANUAL, PUBLICATION NUMBER 30-ANSI/SDI-C.10 SPECIFICATION FOR COMPOSITE STEEL FLOOR DECK, SECTION 5.5 (STEEL FIBERS SHALL PROVIDE 80 PSI OF RESIDUAL STRENGTH WHEN TESTED IN ACCORDANCE WITH ASTM C 1399).
   7. SPECIAL MOMENT FRAMES: ASTM 706 GRADE 60
   8. SPECIAL STRUCTURAL WALLS: ASTM 706 GRADE 60
   9. COLUMNS AND BEAMS (IN SDC D,E, & F): ASTM 706 GRADE 60
H. REINFORCEMENT DETAILING:
   1. REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315.
   2. DEVELOPMENT AND SPLICE LENGTHS ARE IN TENSION UNLESS OTHERWISE INDICATED AND SHALL BE AS TABULATED IN THE SPLICE LENGTH TABLE, (THIS SHEET). UNLESS OTHERWISE INDICATED. INCLUDE STANDARD DETAIL "REINFORCEMENT SPLICE LENGTH TABLE"
   3. PIER AND COLUMN VERTICAL BARS ARE IN COMPRESSION UNLESS OTHERWISE INDICATED AS TENSION-CONTROLLED.
      a. COMPRESSION EMBEDMENT: 22X BAR DIAMETER (28 BAR DIAMETERS, GRADE 75);
      b. COMPRESSION SPLICE: 30X BAR DIAMETER (44 BAR DIAMETERS, GRADE 75).
   4. LAP WWR ONE CROSSWIRE SPACING PLUS 2".
   5. PROVIDE CORNER BARS AT ALL FOOTINGS AND WALL INTERSECTIONS TO MATCH HORIZONTAL REINFORCING SIZE AND SPACING. AT INTERSECTIONS OF CONTINUOUS SPREAD FOOTINGS EXTEND ALL BARS TO FAR SIDE OF INTERSECTING FOOTING.
   6. REINFORCEMENT SHALL BE SECURELY PLACED TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. PROVIDE THE FOLLOWING CONCRETE COVER FOR REINFORCING [ACI 318 SECTION 7.7 AND IBC TABLE 720.1], UNLESS SPECIFICALLY NOTED OTHERWISE:
      a. CAST AGAINST EARTH — 3"
      b. EXPOSED TO EARTH/WEATHER: #6 THRU #18 — 2"
      c. EXPOSED TO EARTH/WEATHER: #5 & SMALLER — 1 1/2"
      d. SLABS, WALLS, JOISTS: #14 & #18 — 1 1/2"
      e. SLABS, WALLS, JOISTS: #11 & SMALLER — 3/4"
      f. BEAMS, COLUMNS — 1 1/2"
      g. SHELLS FOLDED PLATE MEMBERS: #6 & LARGER — 1 1/2"
      h. SHELLS FOLDED PLATE MEMBERS: #5 & SMALLER — 3/4"
   7. PROVIDE DOWELS TO MATCH REINFORCEMENT SIZE AND SPACING INDICATED FOR ALL STRUCTURAL ELEMENTS, UNLESS NOTED OTHERWISE.
I. FOUNDATION WALLS, GRADE BEAMS AND FOOTINGS SHALL BE CAST IN ALTERNATE PANELS NOT TO EXCEED 60'-0" IN LENGTH. SHEAR KEYS SHALL BE PROVIDED AT EACH CONSTRUCTION JOINT AND SHALL BE LOCATED AT 1/3 POINTS OF SPANS.
J. CONCRETE WALLS SHALL BE TEMPORARILY BRACED AGAINST EARTH PRESSURE AND OTHER FORCES UNTIL FLOOR SLABS ARE IN PLACE AND HAVE ATTAINED REQUIRED STRENGTHS.
K. PROVIDE CONTROL JOINTS IN CONCRETE CANTILEVERED RETAINING WALLS AT EQUAL INTERVALS NOT TO EXCEED 25'-0". PROVIDE EXPANSION JOINTS AT EVERY FOURTH CONTROL JOINT.
L. HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS SHALL NOT BE USED UNLESS SHOWN ON THE DRAWINGS. THE ARCHITECT/ENGINEER SHALL APPROVE ALL DEVIATIONS OR ADDITIONAL JOINTS IN WRITING.
M. SLABS AND BEAMS OR JOISTS SHALL BE CAST MONOLITHICALLY UNLESS NOTED OTHERWISE.
N. CHAMFER ALL PERMANENTLY EXPOSED CONCRETE EDGES 3/4 INCH, UNLESS NOTED OTHERWISE.
O. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF OPENINGS AND SLEEVES IN CONCRETE WALLS AND SUPPORTED FLOORS. SPREAD REINFORCEMENT AT OPENINGS AND SLEEVES UNLESS OTHERWISE SHOWN. DO NOT CUT REINFORCEMENT. SEE TYPICAL REINFORCEMENT DETAILS FOR OPENINGS IN SLABS AND WALLS FOR ADDITIONAL REQUIREMENTS.
P. NO HOLES OR OPENINGS THROUGH FOUNDATION WALLS AND/OR FOOTINGS WITHOUT ENGINEER'S APPROVAL.
Q. ALUMINUM SHALL NOT BE EMBEDDED IN ANY CONCRETE.

CONCRETE PROPERTIES TABLE NOTES:
   1. STRENGTH (PSI) DENOTES 28-DAY COMPRESSIVE STRENGTH AND DENSITY REQUIREMENTS
   2. NWT = NORMAL WEIGHT CONCRETE
   3. LWT = SAND-LIGHTWEIGHT CONCRETE (120 PCF MAX)
      a. SAND-LIGHT WEIGHT CONCRETE USED FOR COMPOSITE METAL DECKS SHALL HAVE 4 TO 7% AIR ENTRAINMENT.
   4. DURABILITY CLASSIFICATION DENOTES CONCRETE REQUIREMENTS BY EXPOSURE CLASS, REFER TO TABLE 19.3.2.1 OF ACI 318-14

STRUCTURAL STEEL

A. ALL HOT ROLLED STEEL PLATES, SHAPES, SHEET PILING, AND BARS SHALL BE NEW STEEL CONFORMING TO ASTM SPECIFICATION A6-90A.
B. STRUCTURAL STEEL SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
   1. WIDE FLANGE SHAPES ASTM A992 — F_Y = 50 KSI
   2. STEEL PIPE ASTM A53 GRADE B — F_Y = 35 KSI
   3. STRUCTURAL RECTANGULAR TUBING ASTM A500 GRADE B — F_Y = 46 KSI
   4. STRUCTURAL ROUND TUBING ASTM A500 GRADE B — F_Y = 42 KSI
   5. ALL OTHER STRUCTURAL STEEL ASTM A36 — F_Y = 36 KSI
   6. SAG RODS ASTM A36 — F_Y = 36 KSI
   7. CONNECTION MATERIALS:
      a. [illegible] COLUMN STIFFENER PLATES AND DOUBLER PLATES: ASTM A572 GRADE 50
      b. ALL OTHER CONNECTION MATERIAL, U.N.O.: ASTM A36 UNLESS A HIGHER GRADE OF STEEL IS REQUIRED BY STRENGTH AND PROVIDED THE RESULTING SIZES ARE COMPATIBLE WITH THE CONNECTED MEMBERS.
   8. ASTM A572 GRADE 50 IS ACCEPTABLE AS A SUBSTITUTE FOR A992
C. STRUCTURAL STEEL SHALL MEET THE LATEST AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
D. THE CENTERLINES OF ALL COLUMNS AND BEAMS SHALL BE LOCATED ON COLUMN LINES UNLESS OTHERWISE SHOWN.
E. CONNECTIONS:
   1. BOLTS SHALL BE A325N TYPE 1, UNLESS NOTED OTHERWISE.
   2. ALL BOLTS SHALL BE SNUG TIGHT, UNLESS NOTED OTHERWISE, BOLTS SHALL BE TIGHTENED UNTIL ALL PLIES OF THE JOINT ARE IN FIRM CONTACT.
   3. BOLTS THAT ARE DESIGNATED AS SLIP-CRITICAL SHALL BE FULLY TENSIONED TO THE MINIMUM LOADS AS INDICATED IN THE "SPECIFICATION OF STRUCTURAL JOINTS USING ASTM325 OR A490 BOLTS".
   4. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE.
   5. THREADED RODS SHALL CONFORM TO ASTM A36.
   6. BOLTED MOMENT CONNECTIONS SHALL BE SLIP-CRITICAL CONNECTIONS. OTHER CONNECTIONS SHALL BE BEARING CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANES.
   7. WELDING SHALL CONFORM TO THE STANDARDS SET FORTH IN AWS PUBLICATION, "WELDING IN BUILDING CONSTRUCTION".
   8. UNLESS NOTED OTHERWISE, ELECTRODES FOR WELDING SHALL CONFORM TO E70XX (SMAW), F7XX-EXXX (SAW), ER70S-X (GMAW), OR E7XT-X (FCAW). WEATHERING STEEL ELECTRODES SHALL CONFORM TO THE ANSI/AWS D1.1 MANUAL. ELECTRODES FOR GRADE 60 OR GRADE 65 MATERIAL SHALL CONFORM TO E80XX (SMAW), F8XX-EXX-XX (SAW), ER80S-X (GMAW), OR E8XT-X (FCAW).
   9. WELDS INDICATED "CJP" SHALL BE COMPLETE JOINT PENETRATION GROOVE WELDS. FABRICATOR SHALL PRODUCE COMPLETE JOINT PENETRATION GROOVE WELDS WHICH CONFORM TO ALL AWS D1.1 QUALIFIED WELD REQUIREMENTS AND WHICH ARE APPLICABLE TO THE SPECIFIC CONDITIONS SHOWN.
   10. ALL ERECTION DRAWINGS SHALL SHOW ALL FIELD WELDS REQUIRED.
   11. ALL STEEL BEAMS BEARING ON MASONRY TO HAVE MINIMUM OF 8" BEARING LENGTH.
   12. CONNECTION DETAILS NOT COMPLETELY DETAILED ON THE DRAWINGS SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER TO RESIST FORCES INDICATED ON THE DRAWINGS. INDICATED FORCES ARE BASED ON FACTORED LOADS AND ARE INTENDED FOR USE WITH THE LOAD AND RESISTANCE FACTOR DESIGN METHOD. WHERE NONE ARE INDICATED, BEAMS SHALL BE DESIGNED FOR AN END REACTION EQUAL TO 1/2 OF THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE UNIFORM LOAD TABLES OF THE AISC MANUAL. THE CONTRACTOR SHALL EMPLOY THE ASSISTANCE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. DESIGN CALCULATIONS FOR THE CONNECTIONS DESIGNED BY THE SPECIALTY ENGINEER SHALL BE SUBMITTED FOR THE FILES OF THE ARCHITECT AND ENGINEER. CALCULATIONS SHALL BEAR THE SEAL OF THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. SHOP DRAWINGS CONTAINING CONNECTIONS FOR WHICH CALCULATIONS HAVE NOT BEEN RECEIVED WILL BE RETURNED UNCHECKED AS AN INCOMPLETE SUBMITTAL. CONNECTIONS ECCENTRICITY SHALL BE TAKEN INTO ACCOUNT WHEN DESIGNING AND DETAILING THE CONNECTION.
F. WHERE THE WORK OF OTHER TRADES REQUIRES CUTS, HOLES, ETC., IN STRUCTURAL STEEL MEMBERS, CUTS, HOLES, ETC., SHALL BE MADE IN THE SHOP AND SHALL BE SHOWN ON THE SHOP DRAWINGS. MAKING HOLES OR CUTS IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED WITHOUT SPECIFIC APPROVAL OF THE ENGINEER.
G. ALL MEMBERS MARKED "AESS" SHALL MEET THE REQUIREMENTS OF AISC 303-16 FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL LEVEL 1 UNLESS NOTED OTHERWISE.
H. BAR GRATINGS SHALL BE STEEL 1 1/2 x 3/16 GALVANIZED GRATING. GRATING SHALL BE CLAMPED TO SUPPORT BEAMS WITH GALVANIZED CLAMPS THAT DO NOT REQUIRE DRILLING OF BEAMS. EDGES AND OPENINGS IN GRATING MORE THAN 4" IN DIAMETER SHALL BE BANDED.
I. GROUT BELOW BASE PLATES SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH A MINIMUM STRENGTH OF 6000 PSI WHEN BEARING ON 3000 PSI CONCRETE OR LESS, STRENGTH OF 8000 PSI WHEN BEARING ON CONCRETE BETWEEN 3000 AND 4000 PSI.
J. ALL STRUCTURAL STEEL SHALL BE SHIPPED WITH ONE COAT OF SHOP PRIMER EXCEPT THOSE MEMBERS THAT ARE GALVANIZED OR IN AREAS SCHEDULED TO RECEIVE FIRE PROOFING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AREAS TO BE FIRE PROOFED.

METAL STUD FRAMING

A. DESIGN OF COLD-FORMED FRAMING MEMBERS AND CONNECTIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. SHOW SIZE AND GAUGE OF MEMBERS AND ALL CONNECTIONS IN SHOP DRAWINGS AND SUBMIT WITH SUPPORTING CALCULATIONS. SHOP DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A PROFESSIONAL ENGINEER IN THE PROJECT STATE.
B. DESIGN, FABRICATION, AND ERECTION SHALL CONFORM TO AISI "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION. ALL METAL STUDS SHALL BE GALVANIZED.
C. ALL 33 MIL AND 43 MIL STUDS, JOISTS, TRACK, BRIDGING, END CLOSURES, AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF AISI "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" WITH A MINIMUM YIELD OF 33 KSI U.N.O. ALL 54 MIL AND THICKER MEMBERS SHALL HAVE A MINIMUM YIELD OF 50 KSI.
D. ALL MATERIAL AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COATING MEETING ASTM A 635.
E. UNLESS NOTED OTHERWISE, ALL SCREWS OR PINS SHALL BE NON-CORROSIVE NO. 8-18 (D=.125") OR LARGER. DO NOT USE STAINLESS STEEL OR COPPER-COATED FASTENERS.
F. UNLESS NOTED OTHERWISE, TRACKS SHALL BE THE SAME DEPTH AS STUDS OR JOISTS AND OF EQUAL OR THICKER GAUGE THAN STUDS OR JOISTS. TRACKS SHALL BE CONNECTED TO SUPPORT AT 16" O.C. MAX. STUDS OR JOISTS SHALL BE CONNECTED TO TRACKS AT EACH SIDE.
G. THE QUANTITY OF STUDS AND JOISTS DISPLACED OR CUT FOR OPENING SHALL BE PLACED HALF ON EACH SIDE OF OPENING PER METAL STUD HEADER SCHEDULE ON THIS SHEET.
H. INSTALLATION OF CURTAIN WALL FRAMING SHALL ACCOMMODATE VERTICAL DISPLACEMENT OF THE PRIMARY STRUCTURE.
I. THE DESIGN OF SLIP TRACKS SHALL CONFORM TO GUIDELINES ESTABLISHED IN SSMA TECHNICAL NOTE NO. 1 PUBLISHED JAN. 2001.
J. PROVIDE THE MANUFACTURER'S STANDARD TRACK, CLIP ANGLES, BRACING, REINFORCEMENTS, FASTENERS, AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER FOR THE APPLICATION INDICATED AND AS NEEDED TO PROVIDE A COMPLETE FRAMING SYSTEM. UNLESS OTHERWISE NOTED, INSTALL THE FRAMING SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.
K. ALL EXTERIOR METAL WALL STUDS FOR THE TYPICAL WALL CONDITIONS SHALL BE 6" - 18 GAUGE STUDS SPACED @ 16" ON CENTER. MINIMUM SECTION PROPERTIES FOR STUDS SHALL BE:
   1. I = 2.316 IN.
   2. S = 0.77 IN.
   3. FY = 33 KSI
L. ALL METAL WALL STUDS AT THE CELESTORY SHALL BE 4" - 16 GAUGE STUDS SPACED @ 16" ON CENTER. MINIMUM SECTION PROPERTIES FOR STUDS SHALL BE:
   1. I = 1.098 IN.
   2. S = 0.55 IN.
   3. FY = 43 KSI
M. WALL SHEATHING SHALL BE FASTENED TO SUPPORTING FRAMING WITH NO. 10, FLAT-HEAD SELF-DRILLING TAPPING SCREWS WITH A MINIMUM HEAD DIAMETER OF 0.333 INCHES AT THE SPACING INDICATED BELOW UNLESS NOTED OTHERWISE IN THE SHEAR WALL SCHEDULE:
   1. WALL EDGE — 6"OC
   2. SUPPORTED PANEL EDGES AWAY FROM EDGE OF WALL — 6"OC
   3. CENTER OF PANELS — 12"OC
N. PREPUNCHED HOLES SHALL NOT BE LOCATED WITHIN 10 INCHES OF THE STUD SUPPORT LOCATIONS.
O. USE FLUX COVERED, MILD STEEL ELECTRODES AWS E-6012, E-6013, OR E-7014 FOR WELDING STEEL STUDS. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS PROCEDURES. CONSULT MANUFACTURER FOR EQUIPMENT RECOMMENDATIONS AND PROPER ELECTRODE SELECTION. TOUCH UP WELDED AREAS WITH ZINC RICH PAINT.

DEMOLITION

A. REMOVE STRUCTURE FROM TOP DOWN. DO NOT ALLOW DEBRIS TO PILE UP OR FALL ON SLABS WHICH ARE TO REMAIN IN PLACE. PROVIDE PLYWOOD AND/OR PLANKING TO CUSHION AND PROTECT SLABS FROM DAMAGE. REPAIR OR REPLACE DAMAGED SLABS, BEAMS, OR GIRDERS AS DIRECTED BY OWNER.
B. THESE DRAWINGS ARE INTENDED TO DEFINE LIMITS OF REMOVAL OF STRUCTURAL ELEMENTS AND PRECAUTIONS TO BE TAKEN TO PREVENT DAMAGE TO STRUCTURE WHICH WILL REMAIN. THE GUIDELINES LISTED ARE TO BE FOLLOWED IN THE REMOVAL OF STEEL MEMBERS:
   1. IN ORDER TO PREVENT DAMAGE TO COLUMNS WHEN REMOVING ANY BEAMS OR GIRDERS CONNECTED TO A COLUMN WHICH IS TO REMAIN, DO NOT BURN OFF CONNECTION TO COLUMN AT THE FACE OF COLUMN FLANGE OR WEB. OUTSTANDING LEGS OF CONNECTION ANGLES MAY BE BURNED OFF BUT ANY LEG OR PLATE IN CONTACT WITH THE COLUMNS (WELDED [illegible]) SHALL NOT BE BURNED. SUCH MATERIAL SHALL BE LEFT IN PLACE, AND WILL BE COVERED BY FIREPROOFING MATERIAL.
   2. SIMILARLY, WHERE BEAMS WHICH ARE TO BE REMOVED, ARE CONNECTED TO GIRDERS OR OTHER BEAMS WHICH WILL REMAIN, DO NOT BURN OFF CONNECTIONS AT THE FACE OF THE MEMBER WHICH WILL REMAIN.
   3. BOLTED CONNECTIONS MAY BE REMOVED BY WITHDRAWING BOLTS AFTER SUPPORTED MEMBERS HAVE BEEN REMOVED.
   4. ANY QUESTIONABLE LOCATIONS OR SPECIAL CONDITIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR CLARIFICATION.
C. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND SUBMIT A WRITTEN REPORT TO THE ENGINEER FOR REVIEW AND/OR INSTRUCTION OF ACTUAL FIELD CONDITIONS, WHICH MAY VARY FROM INFORMATION, INDICATED ON DRAWINGS.
D. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING OF STRUCTURE AS REQUIRED.
E. THE DETAILS AND ENGINEERING OF SHORING, BRACING AND OTHER CONSTRUCTION REQUIRED FOR SUCH WORK AND THE PHASING, STAGING, AND SEQUENCE OF SUCH OPERATION SHALL BE PREPARED IN THE FORM OF SHOP OR DETAIL DRAWINGS BY A PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR OR SUB-CONTRACTOR. THE DRAWINGS SHALL BE PROVIDED TO THE REGISTERED ARCHITECT OR PROFESSIONAL ENGINEER RESPONSIBLE FOR THE INSPECTION OF SUCH WORK, WHO SHALL REPORT TO THE OWNER ANY DEVIATIONS OBSERVED DURING HIS INSPECTION.

SUBMITTALS

A. THE GENERAL CONTRACTORS SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING FOR REVIEW. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND/OR ENGINEER AND HAVE THE ENGINEER'S SHOP DRAWING STAMP AFFIXED PRIOR TO FABRICATION. FABRICATION AND ERECTION SHALL BE FROM REVIEWED SHOP DRAWINGS.
B. A RECORD SET OF APPROVED SHOP DRAWINGS SHALL BE KEPT IN THE FIELD BY THE GENERAL CONTRACTOR.
C. ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATION TO THE STRUCTURE OR ANY PART OF THE STRUCTURE DETAILED ON THE CONTRACT DOCUMENTS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN-WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING SUGGESTED.
D. THE CONTRACTOR SHALL PREPARE A LIST AND SCHEDULE OF ALL STRUCTURAL SUBMITTALS PRIOR TO CONSTRUCTION.
E. THE FOLLOWING SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S REVIEW:
1. STRUCTURAL STEEL, SHOP AND ERECTION DRAWINGS (1, 3)
2. ROOF METAL DECK
3. CONCRETE MIX DESIGNS
4. LIGHT GAUGE METAL (1, 3) USED TO SUPPORT EXTERIOR CLADDING OR AS LOAD BEARING MEMBERS
F. ITEMS MARKED (1) SHALL HAVE SHOP DRAWINGS SEALED BY A REGISTERED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. ITEMS MARKED (2) SHALL BE SUBMITTED TO ENGINEER FOR OWNER'S RECORD ONLY AND WILL NOT HAVE THE ENGINEER'S SHOP DRAWING STAMP AFFIXED. ITEMS MARKED (3) SHALL HAVE DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED.
1. CONTRACTOR SHALL SUBMIT ONE SET OF REPRODUCIBLES AND TWO SETS OF PRINTS FOR ALL SHOP DRAWINGS SPECIFIED TO BE RETURNED BY THE ENGINEER.
2. THE OMISSION FROM THE SHOP DRAWINGS OF ANY MATERIALS REQUIRED BY THE CONTRACT DOCUMENTS TO BE FURNISHED SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING SUCH MATERIALS, REGARDLESS OF WHETHER THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED.
G. THE USE OF ELECTRONIC FILES OR REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES THEIR ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES THEMSELVES TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.

mcmillan | pazdan | smith
ARCHITECTURE
asheville atlanta charleston charlotte greenville spartanburg
po box 8922 greenville, sc 29604 o: 864 242 2033
www.mcmillanpazdansmith.com

CONSULTANT LOGO
BRITT, PETERS AND ASSOCIATES
consulting engineers
1100 Queensborough Blvd.
Suite 202
Mount Pleasant, SC 29464
(843) 284-0400
www.brittpeters.com
BPA # 190864

SEALS
SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 28665 DANIEL B. MARTIN 01/24/2020
SOUTH CAROLINA BRITT, PETERS & ASSOCIATES, INC. CONSULTING ENGINEERS No. C00781 CERTIFICATE OF AUTHORIZATION

DON OGLESBY
THE OPPORTUNITY CENTER
8570 RIVERS AVE, N. CHARLESTON, SC

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