STRUCTURAL ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR
ADD'L.	ADDITIONAL
ALT.	ALTERNATE
ANCH.	ANCHOR
A.B.	ANCHOR BOLT (S)
&	AND
L	ANGLE
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
BRG.	BEARING
BTWN.	BETWEEN
BOT.	BOTTOM
BR.	BRICK
BRDG.	BRIDGING
BLDG.	BUILDING
CTRD	CENTERED
CL.	CENTERLINE
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
C.M.U.	CONCRETE MASONRY UNIT
CONN.	CONNECTION (S)
CONST.	CONSTRUCTION
C.J.	CONSTRUCTION JOINT
CONT.	CONTINUOUS
D.L.	DEAD LOAD
DIAG.	DIAGONAL
DIA.	DIAMETER
DIM.	DIMENSION
DBL.	DOUBLE
DWG.	DRAWING
EA.	EACH
E.F.	EACH FACE
E.W.	EACH WAY
E.H.	EAVE HEIGHT
EL.	ELEVATION (HEIGHT)
ELEV.	ELEVATION (VIEW)
EMBED.	EMBEDMENT
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION
EXP. JT.	EXPANSION JOINT
EXT.	EXTERIOR
F. TO F.	FACE TO FACE
F.S.	FAR SIDE
FIN. FLR.	FINISHED FLOOR
FLR.	FLOOR
FTG.	FOOTING
FDN.	FOUNDATION
GA.	GAUGE OR GAGE
HORIZ.	HORIZONTAL
HSS	HOLLOW STEEL SECTION
IBC	INTERNATIONAL BUILDING CODE
IN.	INCH
INFO.	INFORMATION
I.F.	INSIDE FACE
INT.	INTERIOR
K	KIPS
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L.L.	LIVE LOAD
LONG.	LONGITUDINAL
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL

M.B.M.	METAL BUILDING MANUFACTURER
MAX.	MAXIMUM
MTL.	METAL
MID.	MIDDLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
N.F.	NEAR FACE
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
NO.	NUMBER
O.C.	ON CENTER
OPNG.	OPENING
OPP.	OPPOSITE
O.F.	OUTSIDE FACE
O.D.	OUTSIDE DIAMETER
PL.	PLATE
LBS	POUNDS
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF.	REINFORCING
REQ'D.	REQUIRED
R.T.U.	ROOF TOP UNIT
SCHED.	SCHEDULE
S.D.	SELF DRILLER
SIM.	SIMILAR
S.J.I.	STEEL JOIST INSTITUTE
S.O.G.	SLAB ON GRADE
SPECS.	SPECIFICATIONS
SQ.	SQUARE
S.F.	SQUARE FOOT
STD.	STANDARD
STL.	STEEL
STIFF.	STIFFENER
STIR.	STIRRUP
STRUCT.	STRUCTURAL
SYMM.	SYMMETRICAL
WT	STRUCTURAL TEE
T.O.FLOOR	TOP OF FLOOR
T.O.F.	TOP OF FOOTING
T.O.SLAB	TOP OF SLAB
T.O.STL.	TOP OF STEEL
T.O.WALL	TOP OF WALL
TS	STEEL TUBE
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
U.S.G.S.	UNITED STATES GEOLOGICAL SURVEY
VERT.	VERTICAL
W.W.F.	WELDED WIRE FABRIC
	WIDE FLANGE SHAPE
W.L.	WIND LOAD
W/	WITH
W/O	WITHOUT
W.P.	WORK POINT

NOTE:
ABBREVIATIONS ARE THE SAME WHETHER USED WITH OR WITHOUT PERIODS.

DESIGN LOADS

1.	**STRUCTURAL DESIGN CODE**	IBC 2012
2.	**SNOW LOAD**	
	A. GROUND SNOW LOAD	10 PSF
	B. IMPORTANCE FACTOR	1.0
	C. SNOW EXPOSURE FACTOR (Ce)	1.0
3.	**WIND LOADS**	
	A. ULTIMATE WIND DESIGN SPEED (IBC FIG. 1609a)	115 MPH
	B. EXPOSURE CATEGORY	C
	C. IMPORTANCE FACTOR	1.0
	(NOTE: WIND SPEED IS BASED ON STRENGTH DESIGN)	
4.	**GRAVITY LOADS**	
	A. ROOF LOADS	
	DEAD LOAD + COLLATERAL LOAD (NO BALLAST)	17 PSF
	LIVE LOAD	20 PSF
	NOTE: COORDINATE WEIGHTS OF ROOF TOP UNITS WITH MANUFACTURER	
5.	**SEISMIC DESIGN LOADS**	
	Ss	0.425g
	S1	0.180g
	SDs	0.397g
	SD1	0.240g
	SEISMIC RISK CATEGORY:	II
	SEISMIC DESIGN CATEGORY:	C
	IMPORTANCE FACTOR:	1.00
	SOIL PROFILE TYPE:	D
	BASIC STRUCTURAL SYSTEM:	CMU SHEARWALL
	RESPONSE MODIFICATION FACTOR, R:	6.5
	DEFLECTION AMPLIFICATION FACTOR, Cd:	3
	ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE
	BASE SHEAR:	304 KIPS

A. GENERAL

1. GENERAL:
THE BUILDING IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE DOWNS WHICH MIGHT BE NECESSARY.

2. SAFETY:
IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.

3. MISCELLANEOUS:
EQUIPMENT FRAMING LOADS, OPENINGS AND STRUCTURES IN ANY WAY RELATED TO HVAC, PLUMBING, OR ELECTRICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. OBTAIN APPROVAL OF THE INVOLVED TRADES BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK. EXCESS COST RELATED TO VARIATION IN THESE REQUIREMENTS TO BE BORNE BY THE CONTRACTOR.

4. DISCREPANCIES:
SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THESE STRUCTURAL NOTES, THE SPECIFICATIONS, OTHER CONTRACT DOCUMENTS, OR WITH EACH OTHER, THE STRICTEST PROVISION SHALL GOVERN. REQUEST CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

5. SUBMITTALS:
A. SUBMITTALS SHALL BE REVIEWED BY CONTRACTOR PRIOR TO SUBMITTING TO ARCHITECT.
B. SUBMITTALS WILL BE REVIEWED BY THE STRUCTURAL ENGINEER FOR GENERAL CONFORMANCE WITH THE PRINCIPLES AND CONTRACT DOCUMENTS OF THE PROJECT. CONTRACTOR IS NOT RELIEVED FROM HIS SOLE RESPONSIBILITY REGARDING CHECKING OF DIMENSIONS, QUANTITIES, COORDINATION OF THE WORK OF ALL TRADES, CORRELATION OF DESIGN DOCUMENTS THAT MAY CONTAIN CONTRADICTORY INFORMATION AND FOR INFORMATION THAT PERTAINS TO THE FABRICATION, CONSTRUCTION PROCESSES AND/OR SAFETY REQUIREMENTS

6. QUALITY REQUIREMENTS:
A. REFERENCE TO STANDARD SPECIFICATIONS OR CODES OF ANY TECHNICAL SOCIETY, ORGANIZATION, OR ASSOCIATION OR TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE STANDARDS IN EFFECT AS OF DATE OF THE CONTRACT DOCUMENTS, UNLESS OTHERWISE NOTED.
B. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS AT THE JOB SITE. ANY DISCREPANCIES BETWEEN THE CONDITIONS FOUND AND THOSE INDICATED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
C. NO PIPES, DUCTS, CHASES, ETC. SHALL BE PLACED IN STRUCTURAL BEAM AND COLUMN MEMBERS NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC., UNLESS NOTED OTHERWISE. NOTIFY THE STRUCTURAL ENGINEER WHEN DOCUMENTS BY OTHER DISCIPLINES SHOW OPENINGS, POCKETS, ETC. NOT INDICATED ON THE STRUCTURAL DRAWINGS, BUT ARE LOCATED IN STRUCTURAL MEMBERS.
D. CONTRACTOR DESIGNED ELEMENTS SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER REGISTERED IN THE STATE OF MISSISSIPPI. SUBMIT SHOP DRAWINGS, DESIGN LOAD DATA, SUPPORT REACTIONS, AND CERTIFICATION THAT ELEMENTS ARE DESIGNED FOR LOADS SPECIFIED IN THE CONTRACT DOCUMENTS OR IN THE BUILDING CODE. ALL DOCUMENTS NOTED SHALL BE SEALED BY THE LICENSED ENGINEER. THE FOLLOWING ELEMENTS AND THEIR CONNECTIONS SHALL BE BY THE CONTRACTOR'S STRUCTURAL ENGINEER:
- TEMPORARY BRACING AND SHORING
- STEEL STAIRS AND STAIR LANDINGS

B. REINFORCED CONCRETE

1. MATERIALS:
A. SPECIFICATIONS: IN GENERAL, COMPLY WITH ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, LATEST EDITION."
B. STRUCTURAL CONCRETE WILL BE:

CLASS I, 3000 PSI
COLUMN FOOTINGS AND WALL FOOTINGS

CLASS II, 3000 PSI
INTERIOR SLAB ON GRADE AND INTERIOR CONCRETE NOT OTHERWISE IDENTIFIED

CLASS III, 4000 PSI WITH AIR
WALLS, PIERS, EXTERIOR SLAB ON GRADE AND EXTERIOR CONCRETE NOT OTHERWISE IDENTIFIED

CLASS IV, 4000 PSI
NOT USED

CLASS V, 1500 PSI
BACK FILL BELOW FOOTINGS

C. DEFORMED REINFORCING BARS: FY = 60,000 PSI

2. FOOTINGS, BEAMS, PIERS, AND WALL:
A. DOWELS IN GRADE BEAMS AND CAISSONS TO MATCH VERTICAL PIER AND WALL REINFORCING.
B. PROVIDE LEAN CONCRETE (CLASS V) UNDER FOUNDATIONS AND SLABS FOR ACCIDENTAL OVER-EXCAVATION, OR OTHER SOFT SPOTS.

3. SPLICES: UNLESS NOTED OTHERWISE, MINIMUM LAP SPLICE LENGTHS TO BE AS FOLLOWS:
A. HORIZONTAL BARS IN FOOTINGS AND SLABS 50 BAR DIAMETERS
B. VERTICAL BARS

4. CONSTRUCTION JOINTS:
A. CONSTRUCTION JOINTS PERMITTED ONLY WHERE SHOWN OR AS APPROVED BY THE STRUCTURAL ENGINEER. CONSTRUCTION JOINTS ARE TO BE KEYED.

5. CONCRETE COVER: UNLESS NOTED OTHERWISE, DETAIL REINFORCING TO PROVIDE CONCRETE COVER AS FOLLOWS:
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 INCHES
B. CONCRETE EXPOSED TO EARTH OR WEATHER:
#5 BARS AND SMALLER 1-1/2 INCHES
OTHERS 2 INCHES

6. ADDITIONAL INFORMATION:
A. PROVIDE SUPPORTS AS REQUIRED TO MAINTAIN ALIGNMENT OF SCHEDULED REINFORCING. SUCH SUPPORTS ARE TO BE REFLECTED IN THE BID.

C. STRUCTURAL STEEL

1. MATERIALS:
A. STRUCTURAL STEEL: W SHAPES: ASTM A992, FY=50 KSI; HIGH STRENGTH BOLTS: ASTM A325 OR A490; ANCHOR BOLTS: ASTM A307 OR A36; ELECTRODES: SERIES E70; STRUCTURAL PIPES: ASTM A53 OR A501, FY = 35 KSI MIN; SQUARE AND RECTANGULAR TUBING: ASTM A500, FY = 46 KSI; CHANNEL, ANGLES, PLATES AND BARS: A36; EXPANSION BOLTS: HILTI "KWIK-BOLTS II" OR APPROVED EQUAL.

2. SPECIFICATION:
WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1. UNLESS SPECIFICALLY SHOWN OTHERWISE. DESIGN, FABRICATION AND ERECTION TO BE GOVERNED BY:
A. AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (LATEST EDITION).
B. AISC CODE OF STANDARD PRACTICE (LATEST EDITION).
C. STRUCTURAL WELDING CODE, AWS D1.1 OF THE AMERICAN WELDING SOCIETY.
D. SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS (LATEST EDITION).

3. CONNECTIONS:
A. STEEL BEAM CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE DESIGNED BY THE PROFESSIONAL ENGINEER OF STRUCTURAL STEEL FABRICATOR. THE BEAM CONNECTION SHALL DEVELOP 110% OF THE END REACTION CAPACITY PER AISC-ASD ALLOWABLE UNIFORM LOADS ON BEAM TABLES. A MINIMUM CONNECTION CAPACITY OF 15.0 KIPS SHALL BE PROVIDED FOR BEAMS.
B. FIELD CONNECTIONS TO BE BOLTED. SHOP CONNECTIONS TO BE WELDED OR BOLTED. FOLLOW INSTRUCTIONS ON DRAWINGS FOR GENERAL ARRANGEMENT OR PARTICULAR DETAILS.
C. FULL STRENGTH FIELD WELDS IN MATERIAL OVER 5/16 INCH THICK AND WELDED FIELD SPLICE OF MAIN MEMBERS SHALL BE SUBJECTED TO NONDESTRUCTIVE TESTING (OTHER THAN VISUAL INSPECTION) BY AN INDEPENDENT LABORATORY.

4. PAINT:
A. DO NOT PAINT STEEL OR ANCHOR BOLTS WHICH WILL BE ENCASED IN CONCRETE OR ANY STEEL WHICH WILL BE LOCATED INSIDE THE FINISHED PRODUCT CONCEALED FROM VIEW.
B. LINTELS AND COLUMNS IN EXTERIOR MASONRY WALLS ARE TO RECEIVE TWO COATS OF SHOP PAINT.

5. MISCELLANEOUS:
A. PROVIDE HOLES FOR OTHERS. IF OPENING IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, OBTAIN PRIOR APPROVAL.
B. STEEL SUPPORTING OR CONNECTING TO HVAC AND OTHER EQUIPMENT AND ROOF OPENINGS AS SHOWN ON DRAWINGS IS SHOWN FOR BIDDING PURPOSES ONLY. RECONCILE EXACT SIZE AND LOCATION BEFORE PROCEEDING WITH THIS WORK.
C. GROUT UNDER BEARING PLATES TO BE NONMETALLIC NON-SHRINKING TYPE.
D. STEEL BELOW GRADE TO BE PROTECTED BY A MINIMUM OF 4 INCHES OF CONCRETE COVER.
E. UNLESS NOTED OTHERWISE PROVIDE 1/4 INCH THICK SETTING PLATES FOR BEAMS BEARING ON MASONRY WHICH DO NOT REQUIRE A BEARING PLATE.
F. PROVIDE SHOP WELDED ANCHORS FOR ATTACHMENTS OF MASONRY.
G. PROVIDE HEAVY WASHER AT ANCHOR BOLTS (BOTH ENDS).
J. FINISH ENDS OF COLUMNS, STIFFENERS AND OTHER MEMBERS IN DIRECT BEARING.
I. PROVIDE BOLT HOLES FOR JOISTS BOLTED TO BEAMS AND ATTACHMENT FOR JOINING EXTENDED JOIST BOTTOM CHORDS.
J. MINIMUM BEAM BEARING ON MASONRY = 12 INCHES UNLESS NOTED OTHERWISE.
K. EMBEDMENT LENGTH OF EXPANSION BOLTS INTO SOLID MASONRY OR CONCRETE SHALL BE 6 INCHES U.N.O..
L. TUBE MEMBERS TO HAVE 1/4" THICK END PLATE UNLESS NOTED OTHERWISE.

D. STEEL JOISTS

1. SPECIFICATIONS:
A. FABRICATION AND ERECTION TO BE PER SJI REQUIREMENTS.
B. MANUFACTURER TO BE A MEMBER OF SJI.

2. BRIDGING:
A. NUMBER OF ROWS AS THAN REQUIRED BY SJI. UNLESS NOTED OTHERWISE, USE HORIZONTAL BRIDGING FOR K-SERIES (EXCEPT USE DIAGONAL ROW NEAREST THE MID SPAN WHERE THREE OR MORE ROWS ARE SHOWN OR REQUIRED BY SJI).
B. HORIZONTAL BRIDGING MAY BE WELDED TO THE JOISTS.
C. ANCHOR BRIDGING TO INTERSECTING STRUCTURAL STEEL OR MASONRY WALLS.

3. BEARING:
A. WELD JOISTS TO SUPPORTING STEEL AS SHOWN ON THE RELEVANT DETAILS. JOISTS TO BE FIELD BOLTED AT COLUMN LINES, OR, IF THERE IS NO JOIST AT A COLUMN LINE, FIELD BOLT THE JOIST NEAREST THE COLUMN ON EACH SIDE. EXTEND BOTTOM CHORDS OF THE SAME JOISTS AND WELD THEM TO THE BEAM OR COLUMN.
B. EXTEND JOISTS 1 INCH MINIMUM PAST CENTERLINE OF SUPPORTING MEMBER WHERE POSSIBLE.
C. BEARINGS TO BE PER DRAWINGS, OR, WHERE SPECIAL INSTRUCTION IS NOT GIVEN, ACCORDING TO THE STANDARD SPECIFICATIONS OF SJI.
D. AS A MINIMUM EXTEND BOTTOM CHORD OF JOISTS TO JOIST-GIRDERS AT QUARTER POINTS OF THE GIRDER SPAN.

4. MISCELLANEOUS:
A. ADJACENT JOISTS OF THE SAME DEPTH ARE TO HAVE WEB MEMBERS IN LINE TO PERMIT PASSAGE OF HVAC DUCTS, PIPING ... ETC.
B. REFER TO DRAWINGS FOR SPECIAL BEARING SEATS, EXTENDED ENDS, ETC.

F. MASONRY

1. MATERIALS:
A. CONCRETE BLOCK: ASTM C90 (HOLLOW) ASTM C145 (SOLID).
B. MORTAR: ASTM C270 TYPE PER SPEC, MINIMUM COMPRESSIVE STRENGTH: 1800 PSI PROPERTY SPECIFICATIONS.
C. BOND BEAM AND CORE FILL: ASTM C476, COARSE TYPE.
D. JOINT REINFORCING: MILL GALVANIZED FINISH, 9 GAGE MINIMUM SIDE WIRES AND CROSS WIRES, EXCEPT USE 3/16 INCH DIAMETER SIDE WIRES WHERE "HEAVY-WEIGHT" IS REQUIRED.
E. BAR REINFORCING: ASTM A615, GRADE 60.

2. REINFORCED MASONRY: WHERE VERTICAL BARS ARE TO BE GROUTED INTO CORES, THE FOLLOWING REQUIREMENTS APPLY:
A. PROVIDE DOWELS FROM CONCRETE BELOW, SAME SIZE AND SPACING AS WALL BARS.
B. PROVIDE A CONTINUOUS VERTICAL CAVITY, FREE OF MORTAR DROPPINGS.
C. PROVIDE REBAR ALIGNMENT DEVICES AT A MAXIMUM SPACING OF 192 BAR DIAMETERS (MINIMUM 2 PER BAR).
D. AT SPLICES IN VERTICAL BARS, PROVIDE MECHANICAL COUPLERS OR 48 BAR DIAMETER LAP
E. MAXIMUM HEIGHT OF GROUT LIFT = 4'-0".

3. MISCELLANEOUS:
A. VERTICAL COLLAR JOINTS TO BE FILLED SOLID WITH MORTAR.
B. PROVIDE 100% SOLID BEARING, MINIMUM THREE COURSES UNDER BEAMS, ONE COURSE UNDER JOISTS, UNLESS DETAILED OTHERWISE.
C. FILL CORE SOLID AROUND ANCHOR BOLTS.
D. SET WELD PLATES IN BOND BEAMS AFTER THE GROUT IS PLACED, BUT WHILE IT IS STILL PLASTIC.
E. HOLLOW MASONRY UNITS TO BE LAID WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. WEBS SHALL ALSO BE BEDDED IN COURSES OF PIERS AND PILASTERS, AND IN THE STARTING COURSE ON FOOTINGS, AND WHEN ADJACENT TO CELLS OR CAVITIES TO BE REINFORCED OR FILLED WITH CONCRETE OR GROUT. SOLID UNITS TO BE LAID WITH FULL HEAD AND BED JOINTS.
F. PROVIDE JOINT REINFORCING AT 16 INCHES, EXCEPT AS NOTED.
G. LAP JOINT REINFORCING 6 INCHES FOR STANDARD, 15 INCHES FOR HEAVY WEIGHT.
H. GROUT CMU 100% SOLID AT HORIZONTAL AND VERTICAL BARS AND ALL BARS BELOW GRADE.
I. SEE CMU DETAILS ON SHEET S3.4 FOR MORE INFORMATION.

G. LINTEL NOTES

1. PROVIDE LINTELS FOR ALL OPENINGS IN MASONRY WALLS. REFER TO ARCHITECTURAL AND HVAC DRAWINGS FOR LOCATION, NUMBER AND SIZES OF OPENINGS.

2. FOR LINTELS FOR OPENINGS 8'-0" WIDE OR LESS, PROVIDE THE FOLLOWING FOR EACH 4 INCHES OF WALL THICKNESS (USE 8 INCHES MINIMUM BEARING EACH END); IN CAVITY WALLS, ADD CONTINUOUS BOTTOM PLATE 5/16 X (WALL "T"-1/2) AND STOP PLATE 1/8" SHORT OF JAMBS.

MASONRY OPENING	SECTION
TO 4'-0"	L4 X 4 X 3/8
4'-1" TO 5'-6"	L5 X 5 X 3/8
5'-7" TO 8'-0"	L5 X 5 X 3/8

H. STEEL DECK ATTACHMENT

1. REFERENCES
A. AMERICAN IRON AND STEEL INSTITUTE (AISI) - SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS - AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) A611 - STANDARD SPECIFICATION FOR STEEL, SHEET, CARBON, COLD-ROLLED, STRUCTURAL QUALITY
B. AMERICAN WELDING SOCIETY (AWS) D1.1 - STRUCTURAL WELDING CODE - STEEL AND D1.3 STRUCTURAL WELDING CODE, SHEET STEEL
C. STEEL DECK INSTITUTE (SDI) PUBLICATION NO. 29 - DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS AND CELLULAR DECK FLOOR SYSTEMS WITH ELECTRICAL DISTRIBUTION

2. QUALITY ASSURANCE
A. WELDING PROCEDURES: DEVELOP WRITTEN WELDING PROCEDURE SPECIFICATION (WPS) DOCUMENT PER AWS CODE REQUIREMENTS.
B. QUALIFICATION OF FIELD WELDERS: WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH AWS D1.1 AND D1.3 WITHIN THE LAST TWELVE (12) MONTHS.
C. SHOW CONFORMANCE TO THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES).

3. SUBMITTALS
A. SHOP DRAWINGS TO INCLUDE:
1. WELD AND/OR MECHANICAL FASTENER TYPES SIZES AND PATTERNS.
2. SIDE LAP CONNECTOR TYPES, SIZES AND PATTERNS.
3. ACCESSORY DETAILS

B. DESIGN DATA TO INCLUDE:
1. WELD AND/OR MECHANICAL FASTENER PERFORMANCE DATA.

4. ACCESSORIES
A. GENERAL: PROVIDE ACCESSORY MATERIALS FOR STEEL DECK THAT COMPLY WITH REQUIREMENTS INDICATED AND RECOMMENDATIONS OF THE STEEL DECK MANUFACTURER.
B. FASTENERS: MANUFACTURER'S STANDARD GALVANIZED HARDENED STEEL, SELF-TAPPING.
C. WELD WASHERS: MANUFACTURER'S STANDARD UNCOATED STEEL SHEET WELD WASHERS, MINIMUM THICKNESS OF 0.056 IN. (1.5 MM) WITH A MINIMUM 3/8-INCH (9.5 MM) DIAMETER HOLE.

5. ANCHORAGE
A. GENERAL: FASTEN DECK UNITS TO SUPPORTING MEMBERS INCLUDING PERIMETER SUPPORT STEEL AND/OR BEARING WALLS BY EITHER WELDING OR BY MECHANICAL FASTENING, IMMEDIATELY AFTER ALIGNMENT. COMPLY WITH THE REQUIREMENTS OF STEEL DECK INSTITUTE.
B. COMPLY WITH AWS D1.1 AND D1.3 FOR REQUIREMENTS AND PROCEDURES FOR WELDING.
C. CARE SHALL BE EXERCISED IN THE SELECTION OF ELECTRODES AND AMPERAGES TO PROVIDE POSITIVE WELDS AND TO PREVENT BURN THROUGH OF THE SUPPORTING MEMBERS. IF SUPPORTING MEMBRANE DO BECOME CUT DURING DECK WELDING. REPAIR OR REPLACE THE MEMBER AT NO COST TO THE OWNER.
D. WELD SPACING: WELD/FASTEN EDGE RIBS OF PANELS AT EACH SUPPORT. SPACE WELDS AS FOLLOWS: ROOF DECK: MAXIMUM 6 INCHES APART.

QUALITY ASSURANCE PLAN

ALL INSPECTIONS, TESTINGS, AND VERIFICATIONS SHALL BE IN ACCORDANCE WITH IBC'S TABLES 1704.3 AND 1704.4 AND AS OUTLINED IN THE TABLE BELOW. THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION BY A CERTIFIED DEPUTY INSPECTOR. THE SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER OR AN AGENT OF THE OWNER BUT NOT BY THE CONTRACTOR OR ANY OTHER PERSON RESPONSIBLE FOR THE WORK. THE SPECIAL INSPECTOR'S DUTIES ARE TO INSPECT THE ITEMS LISTED BELOW AND SUBMIT REPORTS TO THE BUILDING OFFICIAL AND THE ENGINEER/ARCHITECT DESCRIBING THE WORK AND ANY DEFICIENCIES OBSERVED.

ITEM	FREQUENCY	
1. SPREAD AND CONTINUOUS FOOTINGS, WALLS AND PIERS	CONTINUOUS	PERIODIC
A. INSPECT PLAN DIMENSIONS AND DEPTH.		X
B. INSPECT COMPACTED FILL, GRADING, AND EXCAVATIONS.		X
C. INSPECT QUANTITY AND SPACING OF BARS.		X
D. INSPECT PROPER CLEARANCE TO TOP AND BOTTOM BARS IS PROVIDED.		X
E. VERIFY PROPER LAPS ARE PROVIDED.		X
F. INSPECT FOR CORNER BARS, STEP BARS, DOWELS, ANCHOR BOLTS, OR EMBEDDED MATERIAL.		X
G. INSPECT FOR PROPER DOWEL EMBEDMENT INTO FOOTING AND EXTENSION ABOVE FOOTING.	X	
H. VERIFY SOILS ENGINEER HAS APPROVED DESIGN BEARING CAPACITY.		X
I. VERIFY THAT ALL LOOSE MATERIAL IS REMOVED FROM BOTTOM OF FOOTING. NO SIDE FORMING IS PERMITTED.		X
J. INSPECT BOLTS TO BE INSTALLED IN FOOTING AND PIERS PRIOR TO AND DURING CONCRETE PLACEMENT.		X
2. CONCRETE TILT-UP PANELS		
A. INSPECT DOWEL LENGTH AND OFFSET REQUIREMENTS.	X	
B. INSPECT TIE ARRANGEMENT AND SPACING.	X	
C. INSPECT PROPER CLEARANCE TO BARS ARE AS REQUIRED.	X	
D. CHECK NUMBER AND SIZE OF BARS. CHECK SPACING AND EXTENSION OF BARS.	X	
E. INSPECT EMBEDDED ITEMS.		X
3. STRUCTURAL STEEL		
A. VERIFY MATERIAL FOR HIGH STRENGTH BOLTS, NUTS, AND WASHERS.		X
B. CHECK ANCHOR BOLTS AND GROUTING OF BASE.		X
C. INSPECT COMPLETE PENETRATION MULTI-PASS FILLET WELDS.	X	
D. INSPECT COMPLETE PENETRATION SINGLE PASS FILLET WELDS > 5/16.	X	
E. INSPECT COMPLETE PENETRATION SINGLE PASS FILLET WELDS < 5/16.		X
F. VERIFY REQUIRED TORQUE ATTAINED FOR HIGH STRENGTH A325SC BOLTS.		X
G. VERIFY SNUG CONTACT OF PLYS FOR HIGH STRENGTH A325N BOLTS.		X
H. INSPECT EXPANSION/ADHESIVE ANCHORS IN CONCRETE OR MASONRY.		X
I. INSPECT ANCHOR BOLTS AT CONCRETE MASONRY WALLS.		X
J. INSPECT ALL JOISTS ARE WELDED DOWN OR CONNECTED TO STEEL.		X
K. INSPECT ALL BRIDGING, "X" BRIDGING, AND MISCELLANEOUS STEEL IS IN PLACE.		X
L. VERIFY THAT FIELD WELDED AREAS ARE PAINTED.		X
M. INSPECT THAT METAL DECK IS WELDED AS CALLED FOR ON DRAWINGS.		X
N. INSPECT THAT PROPER BEARING IS PROVIDED FOR JOISTS AND BEAMS ON STEEL OR CONCRETE.		X
O. INSPECT STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS: MEMBER LOCATIONS APPLICATION OF JOINT DETAILS AT EACH CONNECTION		X
4. CONCRETE VERIFICATION AND INSPECTION		
A. VERIFY USE OF REQUIRED DESIGN MIX.		X
B. SAMPLE FRESH CONCRETE AND PERFORM SLUMP AND AIR CONTENT TESTS. DETERMINE THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS.	X	
C. INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	
D. INSPECT FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X
E. VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO ERECTION OF TILT-UP PANELS.		X
F. INSPECT PLACEMENT OF REINFORCING STEEL IN CONCRETE FOOTINGS, WALLS, SLABS AND CMU WALLS.		X
G. VERIFY SAMPLING AND TESTING OF REINFORCING STEEL (MILL REPORTS AND IDENTIFICATION OF STEEL).		X

CMU WALL REINFORCING SCHEDULE
(GROUT ALL CELLS BELOW FLOOR SLAB 100% SOLID)

WALL LOCATION	CMU NOMINAL SIZE	VERTICAL REINFORCEMENT	REMARKS
CLICKLIST SPACE	12"	#5 AT 40" o.c.	
LINE C	8"	#5 AT 8" o.c.	
ALL CMU WALLS EAST OF LINE C	8"	#5 AT 8" o.c.	
LINE 11	8"	#5 AT 16" o.c.	
LINE 11	12"	#5 AT 24" o.c.	
LINE G.8	12"	#5 AT 24" o.c.	
LINE H	12"	#5 AT 24" o.c.	
LINE J	12"	#5 AT 24" o.c.	
DIAGONAL BETWEEN 8 & 9	12"	#5 AT 24" o.c.	

NOTES:
1. ALL WALLS SHALL HAVE (2) #5 HORIZONTAL BOND BEAMS AT 4'-0"o.c. FOR ENTIRE HEIGHT OF WALL.
2. PROVIDE BOND BEAM AT FINISHED SLAB LEVEL.
3. GROUT SOLID REINFORCED CELLS.
4. GROUT SOLID CELLS AT BEAM, JOIST BEARING, AND BOLTS.

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FIRE PROTECTION

ISSUE LOG

NO.	REV.	DESCRIPTION	DATE
1	-	PERMIT SET	12/06/18
2	-	BID SET	03/21/19

JOB:	SCALE:
2018041	AS SHOWN

SHEET NO.
S0.1
STRUCTURAL NOTES

F:\25453.00\CAD-V-473\Sheets\S0.1 STRUCTURAL NOTES.dwg/March 21, 2019 5:16pm/ekuykendall