

DIVISION 1 -- GENERAL REQUIREMENTS

- I. GENERAL
A. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCES.
B. THE STRUCTURE HAS BEEN DESIGNED TO RESIST DESIGN LOADS ONLY AS A COMPLETED STRUCTURE. APPLICATIONS OF CONSTRUCTION LOADS TO THE PARTIALLY COMPLETED STRUCTURE SHALL BE CONSIDERED BY THE CONTRACTOR AND SO INCLUDED IN THE DESIGN OF SHORING, BRACING, FORMWORK, AND ANY OTHER SUPPORTING ELEMENTS PROVIDED FOR CONSTRUCTION OF THE STRUCTURE. DURING ERECTION AND UNTIL ALL PERMANENT ARE MADE, THE CONTRACTOR MUST PROVIDE TEMPORARY BRACING FOR THE STRUCTURE IN ALL DIRECTIONS.
C. THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND GRADE CONDITIONS (BOTH NEW AND EXISTING), REPORTING ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH ANY PHASE OF THE WORK.
D. THE CONTRACTOR SHALL COMPARE STRUCTURAL SECTIONS WITH ARCHITECTURAL SECTIONS AND REPORT ANY DISCREPANCY TO THE ARCHITECT PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS.
E. DO NOT SCALE DIMENSIONS FROM DRAWINGS. THE CONTRACTOR SHALL REQUEST, FROM THE ARCHITECT, NECESSARY DIMENSIONS SHOWN ON THE DRAWINGS.
F. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, STRUCTURAL GENERAL NOTES, AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

- II. CODES, SPECIFICATIONS AND STANDARDS
A. APPLICABLE BUILDING CODE: THE CONTRACT DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE:
1. INTERNATIONAL BUILDING CODE (IBC 2015)
2. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14)
3. 2010 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360-10)

- III. DESIGN LOADS (IBC 2015):
A. FLOOR LIVE LOAD: SECTION 1607.10
1. SLAB ON GRADE = 100 PSF
B. ROOF LIVE LOAD: SECTION 1607.12
1. ROOF = 20 PSF
C. ROOF SNOW LOAD DATA: SECTION 1608
1. FLAT ROOF SNOW LOAD, P1 = 5 PSF
2. SNOW EXPOSURE FACTOR, Ce = 0.9
3. SNOW IMPORTANCE FACTOR, Is = 1.0
4. ROOF THERMAL FACTOR, Ct = 1.0
D. WIND DESIGN DATA: SECTION 1609
1. BASIC DESIGN WIND SPEED, Vref = 120 MPH
2. RISK CATEGORY = II
3. WIND EXPOSURE CATEGORY = B
4. COMPONENTS & CLADDING DESIGN PRESSURES (Pnet):
a. ROOF INTERIOR ZONES = 26 PSF
b. ROOF EDGE ZONES = 44 PSF
c. ROOF CORNER ZONES = 66 PSF
d. WALL INTERIOR ZONES = 26 PSF
e. WALL EDGE ZONES = 32 PSF
5. DESIGN BASE SHEAR
a. Vb = 31.4
b. Vb = 81.1
E. EARTHQUAKE DESIGN DATA: SECTION 1613
1. RISK CATEGORY = II
2. SEISMIC IMPORTANCE FACTOR, Is = 1.0
3. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:
a. SHORT PERIOD, Ss = 0.141
b. 1 SECOND PERIOD, S1 = 0.077
4. SITE CLASS = D
5. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
a. SHORT PERIOD, Sps = 0.151
b. 1 SECOND PERIOD, Sp1 = 0.123
6. SEISMIC DESIGN CATEGORY = B
7. BASIC SEISMIC FORCE-RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
8. DESIGN BASE SHEAR
a. Vb = 17.6
b. Vb = 44.6
9. SEISMIC RESPONSE COEFFICIENT, Co = 0.0501
10. RESPONSE MODIFICATION COEFFICIENT, R = 3
11. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE (1613)

- IV. SUBMITTALS
A. SHOP DRAWINGS AND SUBMITTALS SHALL BE SUBMITTED TO THE ENGINEER BEFORE BEGINNING CONSTRUCTION.
B. CLEARLY SPECIFY AND DEVIATIONS FROM THE CONTRACT DOCUMENTS ON ALL SUBMITTALS.
C. THE CONTRACTOR SHALL REVIEW EACH SUBMITTAL BEFORE SUBMITTING TO THE ENGINEER.
D. THE FOLLOWING SUBMITTALS ARE RECOMMENDED FOR THIS PROJECT:
1. CAST-IN-PLACE CONCRETE
a. COMPLY WITH SUBMITTAL REQUIREMENTS IN ACI 301/318
b. PRODUCT DATA
c. DESIGN MIXTURES (HISTORICAL DATA OR TRIAL BATCH)
d. REBAR SHOP DRAWING
e. SHOP DRAWINGS FOR THE DESIGN, ERECTION, AND REMOVAL OF FORMWORK, SHORES, AND RESHORES APPROVED BY A QUALIFIED PROFESSIONAL ENGINEER WHO APPROVED THE SHOP DRAWINGS.
2. STRUCTURAL STEEL
a. PRODUCT DATA
b. SHOP DRAWINGS
c. WELDING CERTIFICATES
3. CONCRETE MASONRY UNIT ASSEMBLIES
a. PRODUCT DATA
4. COLD-FORMED METAL FRAMING
a. PRODUCT DATA
b. SHOP DRAWINGS, FOR ITEMS NOT DESIGNED BY THE ENGINEER OF RECORD INCLUDE: STRUCTURAL DESIGN CALCULATIONS SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER.

DIVISION 2 -- FOUNDATIONS

- I. GEOTECHNICAL REPORT -- FOUNDATION DESIGN IS BASED ON A PRELIMINARY BEARING CAPACITY OF 2000 PSF (TO BE VERIFIED BY THE GENERAL CONTRACTOR AT THE TIME OF CONSTRUCTION).
II. SOIL EXCAVATION AND REPLACEMENT
A. REMOVE ALL LOOSE FILL MATERIAL WITH DEBRIS EXISTING 5 FOOT BELOW BUILDING FOOTPRINT TO THE MORE CONSOLIDATED MATERIAL AS APPROVED BY THE GEOTECHNICAL ENGINEER. REPLACE WITH SELECT FILL MATERIAL IN 8" TO 10" LOOSE LIFTS AS DIRECTED BY GEOTECHNICAL ENGINEER. COMPACT SELECT FILL MATERIAL TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY ACCORDING TO ASTM D 1557.
B. REVIEW SOIL REPORT BORING HOLES FOR INITIAL ESTIMATES OF EXCAVATION DEPTHS. THE GEOTECHNICAL ENGINEER SHALL APPROVE FINAL EXCAVATIONS OF FOOTING AND DRILLED PIER BEARING STRATA.
III. SLAB-ON-GRADE CONSTRUCTION
A. SUBGRADE PREPARATION
1. IMMEDIATELY PRIOR TO PLACEMENT OF CRUSHED STONE BELOW SLAB, THE LAST ONE FOOT OF SUBGRADE SHOULD BE RECOMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TO DENSIFY ANY SOILS DISTURBED BY CONSTRUCTION OPERATIONS.
2. PROVIDE A 4" MINIMUM LAYER OF CLEAN #4 CRUSHED STONE OR WASHED GRAVEL BELOW THE SLAB ON GRADE.

- 3. PROVIDE VAPOR BARRIER OF 8 MIL. POLYETHYLENE SHEET OVER THE FINAL FILL BELOW THE CONCRETE SLABS.
B. CRANE LOADS -- THE CONTRACTOR IS CAUTIONED AGAINST LOADING THE SLAB ON GRADE WITH CRANE LOADS. THE SLAB HAS NOT BEEN DESIGNED FOR CRANE LOADS AND MAY REQUIRE AN INCREASE IN SLAB THICKNESS AND/OR REINFORCEMENT. THE CONTRACTOR IS REQUIRED TO SUBMIT A PROPOSED PLAN IF CRANE SUPPORT IS REQUIRED ON SLABS-ON-GRADE TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCING WORK.
IV. SPREAD FOOTINGS
A. FOOTING EXCAVATION -- FOOTINGS SHALL BE NEAT EXCAVATED WHERE POSSIBLE WITH SIDES AND TOP EDGES FREE OF LOOSE OR WET MATERIALS. WHERE NEAT EXCAVATION IS NOT POSSIBLE, FOOTINGS EXCAVATION SHALL BE OPEN CUT WITH EDGES FORMED AND BRACED. ALL FOOTINGS WITH FORMED EDGES SHALL BE BACKFILLED WITH LEAN CONCRETE, GEMENT STABILIZED SAND OR SELECT FILL MATERIAL PLACED IN 8" LIFTS AND COMPACTED TO 95% OF MODIFIED STANDARD PROCTOR MAXIMUM DENSITY OF EACH LIFT. THE BOTTOM EXCAVATION SHALL BE CLEAN AND DRY WITH ALL LOOSE MATERIAL REMOVED FOR AN ESSENTIALLY FLAT BEARING SURFACE. EXCAVATIONS SHALL NOT BE LEFT OVERNIGHT UNLESS A 2" UNREINFORCED SEAL (MUD) SLAB IS PLACED AT THE BOTTOM OF THE FOOTING EXCAVATION.

- DIVISION 3
I. CAST-IN-PLACE CONCRETE
PART 1 -- GENERAL
1.1 SECTION REQUIREMENTS
A. SUBMIT CONCRETE MIX DESIGNS.
B. COMPLY WITH ASTM C 94, ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"; AND CRIS'S "MANUAL OF STANDARD PRACTICE."
PART 2 -- PRODUCTS
2.1 MATERIALS
A. DEFORMED REINFORCING BARS: ASTM A 615, GRADE 60.
B. WELDED STEEL WIRE FABRIC: ASTM A 185, FLAT SHEETS, NOT ROLLS.
C. PORTLAND CEMENT: ASTM C 150, TYPE 1.
D. FLY ASH: ASTM C 618, TYPE F.
E. AGGREGATES: ASTM C 33, CLASS 4S.
F. FIBER REINFORCEMENT: NOT ALLOWED
G. AIR-ENTRAINING ADMIXTURE: ASTM C 260.
H. CHEMICAL ADMIXTURES: ASTM C 494, WATER REDUCING.
I. WATER STOPS: FLAT DUMBBELL OR CENTER-BUILD TYPE, OF EITHER RUBBER (CRD C 513) OR PVC (CRD C 572).
J. VAPOR RETARDER: SEE ARCH.
K. LIQUID MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, CLEAR.

- 2.2 MIXES
A. PROPORTION NORMAL-WEIGHT CONCRETE MIXES TO PROVIDE THE FOLLOWING PROPERTIES:
1. COMPRESSIVE STRENGTH: 3500 PSI (24.13 MPa) AT 28 DAYS.
2. SLUMP LIMIT: 4 INCHES (100 MM) AT POINT OF PLACEMENT.
3. WATER-CEMENT RATIO: 0.50 MAXIMUM AT POINT OF PLACEMENT.
4. AIR CONTENT: 5.5 TO 7.0 PERCENT FOR CONCRETE EXPOSED TO FREEZING AND THAWING, 2 TO 4 PERCENT ELSEWHERE.
PART 3 -- EXECUTION
3.1 CONCRETING
A. CONSTRUCT FORMWORK AND MAINTAIN TOLERANCES AND SURFACE IRREGULARITIES WITHIN ACI 117 LIMITS OF CLASS A FOR CONCRETE EXPOSED TO VIEW AND CLASS C FOR OTHER CONCRETE SURFACES.
B. SET WATER STOPS WHERE INDICATED TO ENSURE JOINT WATERIGHTNESS.
C. PLACE VAPOR RETARDER ON PREPARED SUBGRADE, WITH JOINTS LAPPED 6 INCHES (150 MM) AND SEALED.
D. ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT.
E. INSTALL CONSTRUCTION, ISOLATION, AND CONTROL JOINTS.
F. PLACE CONCRETE IN A CONTINUOUS OPERATION AND CONSOLIDATE USING MECHANICAL VIBRATING EQUIPMENT.
G. PROTECT CONCRETE FROM PHYSICAL DAMAGE OR REDUCED STRENGTH DUE TO WEATHER EXTREMES DURING MIXING, PLACING, AND CURING.
H. FORMED SURFACE FINISH: SMOOTH-FORMED FINISH FOR CONCRETE EXPOSED TO VIEW, COMBED, OR COVERED BY WATERPROOFING OR OTHER DIRECT-APPLIED MATERIAL; ROUGH-FORMED FINISH ELSEWHERE.
I. UNFORMED SLAB FINISHES: SCRATCH FINISH FOR SURFACES TO RECEIVE MORTAR SETTING BEDS; FLOAT FINISH SURFACES FOR INTERIOR STEPS AND RAMPS AND SURFACES TO RECEIVE WATERPROOFING, ROOFING, OR OTHER DIRECT-APPLIED MATERIAL; TROWELED FINISH FOR FLOOR SURFACES AND FLOORING DECK REPAIRS, PAINT, OR OTHER THIN FILM-FINISH COATINGS; TROWEL AND FINE BROOM FINISH FOR SURFACES TO RECEIVE THIN-SET TILE NONSLIP BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS, STEPS, AND RAMPS.
J. CURE FORMED SURFACES BY MOISTENING LIFT FORMS TO BE REMOVED.
K. BEGIN CURING UNFORMED CONCRETE FORMS BY APPLY MEMBRANE-FORMING CURING COMPOUND TO CONCRETE.

- CONCRETE REPAIRS
I. CORRECT CONCRETE FINISH DAMAGE/REPAIR SURFACE DEFECTS IN CONCRETE.
PART 1 -- GENERAL
1.1 SECTION REQUIREMENTS
A. COMPLY WITH AISC'S "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS---ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN," AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS," AND AWS D1.1 "STRUCTURAL WELDING CODE---STEEL."
PART 2 -- PRODUCTS
2.1 STRUCTURAL STEEL AND ACCESSORIES
A. STRUCTURAL---STEEL SHAPES, PLATES, AND BARS: ASTM A992, CARBON STEEL.
B. COLD-FORMED STRUCTURAL---STEEL TUBING: ASTM A 500, GRADE B.
C. ANCHOR RODS, BOLTS, NUTS: ASTM A 36 (ASTM A 36M), UNHEADED RODS.
D. BOLTS, NUTS, AND WASHERS: ASTM A 325 (ASTM A 325M), TYPE 1, HIGH-STRENGTH HEAVY HEX STEEL STRUCTURAL BOLTS, HEAVY HEX CARBON---STEEL NUTS, AND HARDENED CARBON---STEEL WASHERS, UNCOATED.
E. PRIMER: LEAD-- AND CHROMATE--FREE, NONASPHALTIC, RUST--INHIBITING PRIMER.
F. GROUT: ASTM C 1107, NONMETALLIC, SHRINKAGE RESISTANT, PREMIXED.
2.2 FABRICATION
A. FABRICATE STRUCTURAL STEEL ACCORDING TO AISC SPECIFICATIONS AND TOLERANCE LIMITS OF AISC'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" FOR STRUCTURAL STEEL.
B. SHOP PRIMING: PREPARE SURFACES ACCORDING TO SSPC-SP 2 OR SSPC-SP 3. SHOP PRIME STEEL TO A DRY FILM THICKNESS OF AT LEAST 1.5 MILS (0.038 MM). DO NOT PRIME SURFACES TO BE EMBEDDED IN CONCRETE OR MORTAR OR TO BE FIELD WELDED.

- PART 3 -- EXECUTION
3.1 ERECTION
A. ERECT STRUCTURAL STEEL ACCORDING TO AISC SPECIFICATIONS AND WITHIN ERECTION TOLERANCES OF AISC'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."
B. SET BASE AND BEARING PLATES ON WEDGES, SHIMS, OR SETTING NUTS. TIGHTEN ANCHOR BOLTS, CUT OFF WEDGES OR SHIMS FLUSH WITH EDGE OF PLATE, AND PACK GROUT SOLIDLY BETWEEN BEARING SURFACES AND PLATES.
C. BOLTED CONNECTIONS: INSTALL AND TIGHTEN NONHIGH-STRENGTH BOLTS, UNLESS HIGH-STRENGTH BOLTS ARE INDICATED. SNUG TIGHTEN HIGH-STRENGTH BOLTS ACCORDING TO AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS."
D. WELD CONNECTIONS: COMPLY WITH AWS D1.1.
II. STEEL JOISTS
PART 1 -- GENERAL
1.1 SECTION REQUIREMENTS
A. COMPLY WITH RECOMMENDATIONS OF SJI'S "STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS" AND AWS D1.1 "STRUCTURAL WELDING CODE---STEEL."
PART 2 -- PRODUCTS
2.1 JOISTS AND ACCESSORIES
A. BOLTS, NUTS, AND WASHERS: ASTM A 325 (ASTM A 325M), TYPE 1, HIGH-STRENGTH HEAVY HEX STEEL STRUCTURAL BOLTS, HEAVY HEX CARBON---STEEL NUTS, AND HARDENED CARBON---STEEL WASHERS, UNCOATED.
B. PRIMER: MANUFACTURER'S STANDARD SHOP PRIMER.
C. MANUFACTURE JOISTS ACCORDING TO SJI'S SPECIFICATIONS WITH STEEL ANGLE TOP AND BOTTOM CHORD MEMBERS.
D. JOIST BRIDGING ACCORDING TO SJI'S SPECIFICATIONS.
E. SHOP PRIMING: PREPARE SURFACES ACCORDING TO SSPC-SP 2 OR SSPC-SP 3. SHOP PRIME STEEL JOISTS TO A DRY FILM THICKNESS AT LEAST 1 MIL (0.025 MM).

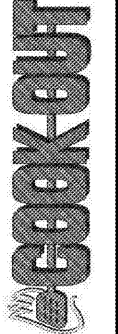
- PART 3 -- EXECUTION
3.1 INSTALLATION
A. INSTALL JOISTS AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE; SECURELY FASTEN TO SUPPORTING STRUCTURE ACCORDING TO SJI'S SPECIFICATIONS.
II. STEEL DECK
PART 1 -- GENERAL
1.1 SECTION REQUIREMENTS
A. COMPLY WITH SDI PUBLICATION NO. 28, "SPECIFICATION AND COMMENTARY FOR STEEL ROOF DECK AND NON-COMPOSITE STEEL FORM DECK."
B. COMPLY WITH AWS D1.1, "STRUCTURAL WELDING CODE---STEEL," AND AWS D1.3, "STRUCTURAL WELDING CODE---SHEET STEEL."
PART 2 -- PRODUCTS
2.1 MATERIALS
A. GALVANIZED STEEL SHEET: ASTM A 653 (ASTM A 653M), STRUCTURAL QUALITY, AND AS FOLLOWS:
1. ZINC-COATING WEIGHT (EO):
a. 2.5 MINIMUM (ASTM A 653-2.5)
b. GRADE: 35
2.2 DECKING
A. ROOF DECK: FABRICATE PANELS FROM PRIME PAINTED STEEL WITHOUT TOP-FLANGE STIFFENING GROOVES AND AS FOLLOWS:
1. PRIME-PAINTED STEEL SHEET: ASTM A611, GRADE C MINIMUM, SHOP PRIMED WITH GRAY OR WHITE BAKED-ON, LEAD- AND CHROMATE--FREE RUST--INHIBITIVE PRIMER.
2. DECK PROFILE: YULCRAFT TYPE B OR EQUAL.
3. PROFILE DEPTH: TYPE B, 1/2 INCHES (38 MM).
4. DESIGN UNCOATED STEEL THICKNESS: 0.0295 INCH.
2.5 MISCELLANEOUS
A. ACCESSORIES: MANUFACTURER'S RECOMMENDED ROOF DECK ACCESSORY MATERIALS.
B. SHEAR CONNECTORS: AWS D1.1, TYPE B, HEADED-STUD TYPE, COLD-FINISHED CARBON STEEL.
C. GALVANIZING REPAIR PAINT: SSPC-PAINT 20 OR DOD-P-21035.

- PART 3 -- EXECUTION
3.1 DECK INSTALLATION
A. INSTALL DECK PANELS AND ACCESSORIES ACCORDING TO SDI PUBLICATION NO. 28.
B. PLACE, ADJUST, ALIGN, AND BEAR DECK PANELS ON STRUCTURE. DO NOT STRETCH OR CONTRACT SIDE LAP INTERLOCKS.
C. PLACE DECK PANELS FLAT AND SQUARE AND WELD TO STRUCTURE WITHOUT WARP OR DEFLECTION.
D. CUT, REINFORCE, AND FIT DECK PANELS AND ACCESSORIES AROUND OPENINGS AND PROJECTIONS.
E. ROOF DECK ACCESSORIES: INSTALL SUMP PANS, SUMP PLATES, RIDGE AND VALLEY PLATES, FINISH STRIPS, COVER PLATES, END CLOSURES, AND REINFORCING CHANNELS. WELD TO SUBSTRATE.
F. FLOOR POUR STOPS AND GIRDER FILLERS. WELD POUR STOPS AND GIRDER FILLERS TO STRUCTURE.
G. FLOOR DECK CLOSURES: WELD TIGHT-FITTING CLOSURES AT OPEN ENDS OF RIBS AND SIDES OF DECKING. WELD COVER PLATES AT CHANGES IN DIRECTION OF FLOOR DECK PANELS.
H. WELD SHEAR CONNECTORS THROUGH DECK TO STRUCTURE.
I. PREPARE AND REPAIR DAMAGED GALVANIZED COATINGS ON BOTH SURFACES WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A 780.
WIRE BRUSH, CLEAN, AND PAINT SCARRED AREAS, WELDS, AND RUST SPOTS ON BOTH SURFACES OF PAINTED DECK PANELS.
IV. COLD-FORMED METAL FRAMING
PART 1 -- GENERAL
1.1 SECTION REQUIREMENTS
A. ENGINEER, FABRICATE, AND ERECT COLD-FORMED METAL FRAMING WITH THE FOLLOWING MINIMUM PHYSICAL AND STRUCTURAL PROPERTIES TO WITHSTAND DESIGN LOADS WITHIN THE FOLLOWING LIMITS: SEE PLANS FOR STUD SIZE AND GAUGE.
I. NON-BEARING WALLS TYPICAL: LATERAL DEFLECTION OF L/360. NON-BEARING WALLS W/ BRICK VENEER: LATERAL DEFLECTION OF L/600.
B. CALCULATE STRUCTURAL CHARACTERISTICS OF COLD-FORMED METAL FRAMING ACCORDING TO AISI'S "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
C. SUBMIT PRODUCT DATA.
D. COMPLY WITH AWS D1.1, "STRUCTURAL WELDING CODE---STEEL," AND AWS D1.3, "STRUCTURAL WELDING CODE---SHEET STEEL."

- E. PROTECT COLD-FORMED METAL FRAMING FROM CORROSION AND OTHER DAMAGE DURING DELIVERY, STORAGE, AND HANDLING.
PART 2 -- PRODUCTS
2.1 MATERIALS
A. GALVANIZED STEEL SHEET: ASTM A 653, G60 (ASTM A 653M, Z180) ZINC COATED; STRUCTURAL QUALITY; GRADE 33.
B. STEEL STUDS AND TRACK: FABRICATE WITH FLANGE WIDTH AND OF DEPTHS INDICATED IN SECTIONS.
2.2 ACCESSORIES
A. STEEL SHAPES AND CLIPS: ASTM A 653, G60 (ASTM A 653M, Z180) ZINC COATED; STRUCTURAL QUALITY; GRADE 33.
B. CAST-IN-PLACE ANCHOR BOLTS AND STUDS: ASTM A 307, GRADE A (ASTM F 568, PROPERTY CLASS 4.6), CARBON---STEEL HEX-HEAD BOLTS AND STUDS; CARBON---STEEL NUTS, AND FLAT, UNHARDENED---STEEL WASHERS. HOT-DIP GALVANIZE ACCORDING TO ASTM A 153.
C. MECHANICAL FASTENERS: CORROSION--RESISTANT COATED, SELF--DRILLING, SELF--THREADING STEEL DRILL BITS.
D. INSULATION: SEE ARCHITECTURAL PLANS.
E. GALVANIZING REPAIR PAINT: SSPC-PAINT 20 OR DOD-P-21035.
PART 3 -- EXECUTION
3.1 FRAMING
A. INSTALL FRAMING AND ACCESSORIES LEVEL, PLUMB, SQUARE, AND TRUE TO LINE, AND SECURELY FASTEN. TEMPORARILY BRACE FRAMING.
B. FASTEN FRAMING MEMBERS BY WELDING OR MECHANICAL FASTENING.
C. INSTALL INSULATION IN BUILT-UP EXTERIOR FRAMING MEMBERS.
D. FASTEN REINFORCEMENT PLATES OVER PENETRATIONS LARGER THAN STANDARD PUNCHED OPENINGS.
E. STUDS: INSTALL ALONG AND SECONDARY ANCHORS CONTINUOUS TRACKS TO SUPPORTING STRUCTURE. SQUARELY SEAT STUDS AGAINST WEB TO TOP AND BOTTOM TRACKS. SPACE STUDS AS INDICATED; PLUMB, ALIGN, AND FASTEN BOTH FLANGES OF STUDS TO TOP AND BOTTOM TRACK.
F. INSTALL AND FASTEN HORIZONTAL BRIDGING IN STUD SYSTEM, SPACED IN ROWS NOT MORE THAN 72 INCHES APART. INSTALL STEEL SHEET METAL BRACING STRIPS TO BOTH STUD FLANGES, TERMINATE AT AND FASTEN TO REINFORCED TOP AND BOTTOM TRACK AND ANCHOR TO STRUCTURE.
G. INSTALL MECHANICAL CONNECTIONS, ACCESSORIES, AND SUPPLEMENTARY FRAMING.
H. INSTALL PERIMETER WALL FRAMING FROM BUILDING STRUCTURE USING SLIDE CLIPS OR DEFLECTION TRACK TO PREVENT TRANSFER OF VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT.

- INSTALL AND FASTEN HORIZONTAL BRIDGING IN STUD SYSTEM, SPACED IN ROWS NOT MORE THAN 72 INCHES APART. INSTALL STEEL SHEET METAL BRACING STRIPS TO BOTH STUD FLANGES, TERMINATE AT AND FASTEN TO REINFORCED TOP AND BOTTOM TRACK AND ANCHOR TO STRUCTURE.
3. INSTALL MECHANICAL CONNECTIONS, ACCESSORIES, AND SUPPLEMENTARY FRAMING.
4. INSTALL PERIMETER WALL FRAMING FROM BUILDING STRUCTURE USING SLIDE CLIPS OR DEFLECTION TRACK TO PREVENT TRANSFER OF VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT.

STRUCTURAL ABBREVIATIONS
@ = ALL
A.B. = ANCHOR BOLTS
ABC = AGGREGATE BASE COARSE
A.E.F.F.E. = ABOVE EXISTING FINISHED FLOOR ELEVATION
A.F.F.E. = ABOVE FINISHED FLOOR ELEVATION
A.R.F.F.E. = ABOVE REFERENCE FINISHED FLOOR ELEVATION
ALT. = ALTERNATE
ARCH. = ARCHITECTURAL
B.F.F.E. = BELOW FINISHED FLOOR ELEVATION
B.M.B.M. = BY METAL BUILDING MANUFACTURE
B.R.F.F.E. = BELOW REFERENCE FINISHED FLOOR ELEVATION
BLDG. = BUILDING
BOT. = BOTTOM
B.O.W. = BOTTOM OF WALL
BRG. = BEARING
C.J. = CONSTRUCTION/CONTROL JOINT
CL = CENTER LINE
CLR. = CLEAR
CMU = CONCRETE MASONRY UNIT
COL. = COLUMN
CONC. = CONCRETE
CONN. = CONNECTION
CONS. = CONSTRUCTION
CONT. = CONTINUOUS
COORD. = COORDINATE
DET. = DETAIL
DIA. = DIAMETER
DIM. = DIMENSION
DWGS. = DRAWINGS
DWL. = DWEL
E.A. = EACH
E.F.F.E. = EXISTING FINISHED FLOOR ELEVATION
E.J. = EXPANSION JOINT
ELEV. = ELEVATION
E.W. = EACH WAY
EXP. = EXPANSION
EXIST. = EXISTING
EXT. = EXTENSION
FLR. = FLOOR
FD = FLOOR DRAIN
FND. = FOUNDATION
FP = FULL PENETRATION
FTO. = FOOTING
HK. = HOOK
HORIZ. = HORIZONTAL
HSS. = HOLLOW STRUCTURAL SECTION (TUBE OR PIPE)
INT. = INTERIOR
JT. = JOINT
K = KIP (1000 lbs)
L1H = LONG LEG HORIZONTAL
L1V = LONG LEG VERTICAL
MANUF. = MANUFACTURER
MAS. = MASONRY
MAX. = MAXIMUM
MECH. = MECHANICAL
MIN. = MINIMUM
NOM. = NOMINAL
O.C. = ON CENTER SPACING
OPNG. = OPENING
PC. = PRECAST
PL. = PLATE
REIN. = REINFORCEMENT
REQD. = REQUIRED
SC. = SLIP CRITICAL
SCHD. = SCHEDULE
SECT. = SECTION
T&B = TOP AND BOTTOM
T.O.F. = TOP OF FOOTING
T.O.P. = TOP OF PIECE
T.O.S. = TOP OF STEEL
T.O.W. = TOP OF WALL
TYP. = TYPICAL
U.N.C.D. = UNLESS NOTED OTHERWISE
VERT. = VERTICAL
W. = WIDE FLANGE MEMBER
W/ = WITH
WWF = WELDED WIRE FABRIC
\* = COORD. WITH SITE PLAN
MEPC
MEPC No. 57-19
ALABAMA LICENSED PROFESSIONAL ENGINEER



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Table with 2 columns: HK, DATE, DESCRIPTION, REVISIONS

SPECIFICATIONS & DESIGN LOADS

DATE 06-24-2015
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CHECK BY JUM
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