SECTION 03300 – 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 CRSI'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. AIR-ENTRAINING ADMIXTURE: ASTM C 260.

G. CHEMICAL ADMIXTURES: ASTM C 494, WATER REDUCING.

H. WATER STOPS: FLAT DUMBBELL OR CENTER-BULB TYPE, OF EITHER RUBBER (CRD C 513) OR PVC (CRD C 572).

I. VAPOR RETARDER: SEE ARCHITECT

J. 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: 5.0 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 WATERTIGHTNESS.

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, COATED, 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 FLOORS TO RECEIVE FLOOR COVERINGS, 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 MOIST CURING UNTIL FORMS ARE REMOVED.

K. BEGIN CURING UNFORMED CONCRETE AFTER FINISHING. APPLY MEMBRANE-FORMING CURING COMPOUND TO CONCRETE.

L. PROTECT CONCRETE FROM DAMAGE. REPAIR SURFACE DEFECTS IN CONCRETE.

SECTION 04810 – UNIT MASONRY ASSEMBLIES

PART 1 – GENERAL

1.1 SECTION REQUIREMENTS

A. COMPLY WITH ACI 530.1/ASCE 6/TMS 602.

PART 2 – PRODUCTS

2.1 MASONRY UNITS

A. CONCRETE MASONRY UNITS: ASTM C 90; WEIGHT CLASSIFICATION, LIGHTWEIGHT TYPE II, NONMOISTURE-CONTROLLED UNITS. f'm=1500PSI

1. SPECIAL SHAPES FOR LINTELS, CORNERS, JAMBS, SASH, CONTROL JOINTS, AND OTHER SPECIAL CONDITIONS.
2. SQUARE-EDGED UNITS FOR OUTSIDE CORNERS, UNLESS OTHERWISE INDICATED.

2.2 MORTAR

A. MORTAR: ASTM C 270, PROPORTION SPECIFICATION, FOR JOB-MIXED MORTAR; AND ASTM C 1142 FOR READY-MIXED MORTAR.

1. DO NOT USE CALCIUM CHLORIDE IN MORTAR.
2. FOR MASONRY BELOW GRADE, IN CONTACT WITH EARTH, REINFORCED MASONRY, AND WHERE INDICATED, USE TYPE S.
3. FOR EXTERIOR, ABOVE-GRADE, LOAD-BEARING AND NONLOAD-BEARING WALLS AND PARAPET WALLS; FOR INTERIOR LOAD-BEARING WALLS; FOR INTERIOR NON-LOAD-BEARING PARTITIONS, AND FOR OTHER APPLICATIONS WHERE ANOTHER TYPE IS NOT INDICATED, USE TYPE N.

2.3 GROUT

A. GROUT FILL CELLS WITH f'c = 3500PSI MIN. FINE GROUT.

2.4 JOINT REINFORCEMENT, TIES AND ANCHORS

A. PROVIDE JOINT REINFORCEMENT FORMED FROM GALVANIZED CARBON-STEEL WIRE, ASTM A82/3, CLASS B-2, FOR USE IN INTERIOR AND EXTERIOR WALLS.

1. WIRE DIAMETER FOR SIDE RODS: 0.1483 INCH (3.8 MM).
2. WIRE DIAMETER FOR CROSS RODS: 0.1483 INCH (3.8 MM).
3. FOR 2-WYTHE MASONRY, PROVIDE TRUSS DESIGN.
4. FOR MORE THAN 2 WYTHE MASONRY, PROVIDE TRUSS DESIGN WITH 3 SIDE RODS.

B. VENEER ANCHORS: FOR BRICK VENEER WITH CMU WITH HORIZONTAL JOIN REINFORCEMENT.

2.5 EMBEDDED FLASHING MATERIALS

A. SHEET METAL FLASHING: SEE ARCHITECT

2.6 MISCELLANEOUS MASONRY ACCESSORIES

A. WEEP HOLES: SEE ARCHITCT.

B. MASONRY CLEANER: ½-CUP TETRASODIUM POLYPHOSPHATE AND ½-CUP LAUNDRY DETERGENT DISSOLVED IN 1 GAL. OF WATER.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

A. CUT MASONRY UNITS WITH MOTOR-DRIVEN SAWS. INSTALL CUT UNITS WITH CUT SURFACES AND, WHERE POSSIBLE, CUT EDGES CONCEALED.

B. MIX UNITS FOR EXPOSED UNIT MASONRY FROM SEVERAL PALLETS OR CUBES AS THEY ARE PLACED TO PRODUCE UNIFORM BLEND OF COLORS AND TEXTURES.

C. STOPPING AND RESUMING WORK: IN EACH COURSE, RACK BACK UNITS; DO NOT TOOTH.

D. FILL CORES IN HOLLOW CONCRETE MASONRY UNITS WITH GROUT 24 INCHES (600 MM) UNDER BEARING PLATES, BEAMS, LINTELS, POSTS, AND SIMILAR ITEMS, UNLESS OTHERWISE INDICATED.

ADD VERTICAL WALL CONTROL JOINTS @ 30' MAX. HORIZONTAL SPACING. MASONRY CONTRACTOR TO LOCATE WALL CONTROL JOINTS.

F. TOOL EXPOSED JOINTS SLIGHTLY CONCAVE WHEN THUMBPRINT HARD, UNLESS OTHERWISE INDICATED.

G. KEEP CAVITIES CLEAN OF MORTAR DROPPINGS AND OTHER MATERIALS DURING CONSTRUCTION. STRIKE JOINTS FACING CAVITIES FLUSH.

3.2 LINTELS

A. INSTALL STEEL LINTELS WHERE INDICATED.

B. MASONRY LINTELS WHERE SHOWN. PRECAST LINTELS MADE FROM CONCRETE MATCHING CONCRETE MASONRY UNITS IN COLOR, TEXTURE, AND COMPRESSIVE STRENGTH AND WITH REINFORCEMENT BARS INDICATED OR REQUIRED TO SUPPORT LOADS INDICATED.

C. MINIMUM BEARING OF 8 INCHES (200 MM) AT EACH JAMB, UNLESS OTHERWISE INDICATED.

3.3 FLASHING AND WEEP HOLES

A. INSTALL EMBEDDED FLASHING AND WEEP HOLES IN MASONRY AT SHELF ANGLES, LINTELS, LEDGES, OTHER OBSTRUCTIONS TO THE DOWNWARD FLOW OF WATER IN THE WALL, AND WHERE INDICATED.

B. PLACE THROUGH-WALL FLASHING ON SLOPING BED OF MORTAR AND COVER WITH MORTAR. SEAL PENETRATIONS IN FLASHING BEFORE COVERING WITH MORTAR.

1. EXTEND FLASHING 4 INCHES (100 MM) INTO MASONRY AT EACH END AND TURN UP 2 INCHES (50 MM) TO FORM A PAN.

C. TRIM WICKING MATERIAL USED IN WEEP HOLES FLUSH WITH OUTSIDE FACE OF WALL AFTER MORTAR HAS SET.

3.4 PARGING

A. PARGE PREDAMPENED MASONRY WALLS, WHERE INDICATED, WITH TYPE S OR TYPE N MORTAR APPLIED IN 2 UNIFORM COATS WITH A STEEL-TROWEL FINISH. FORM A WASH AT TOP OF PARGING AND A COVE AT BOTTOM. DAMP CURE PARGING FOR AT LEAST 24 HOURS.

3.6 CLEANING

A. CLEAN STONE MASONRY VENEER AS WORK PROGRESSES. REMOVE MORTAR FINS AND SMEARS BEFORE TOOLING JOINTS.

B. FINAL CLEANING: AFTER MORTAR IS THOROUGHLY SET AND CURED, REMOVE LARGE MORTAR PARTICLES AND SCRUB UNIT MASONRY.

1. WET WALL SURFACES WITH WATER, APPLY CLEANER, THEN REMOVE CLEANER BY RINSING THOROUGHLY WITH CLEAR WATER.

SECTION 05120 – STRUCTURAL STEEL

PART 1 – GENERAL

1.1 SECTION REQUIREMENTS

A. COMPLY WITH AISC'S "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS—ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN," RCSC'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, AND STUDS: ASTM A 36 (ASTM A 36M), UNTHREADED 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: ZINC-AND CHROMATE-FREE, NONLEAD, 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 RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS."

D. WELD CONNECTIONS: COMPLY WITH AWS D1.1.

SECTION 05210 – 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 CONSTRUCTION ACCORDING TO SJI'S SPECIFICATIONS.

SECTION 05310 – STEEL DECK

PART 1 – GENERAL

1.1 SECTION REQUIREMENTS

A. COMPLY WITH SDI PUBLICATION NO. 28, "SPECIFICATIONS 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: G60 (Z180).
2. GRADE: GRADE 60 .

2.2 DECKING

A. ROOF DECK: FABRICATE PANELS FROM GALVANIZED STEEL WITHOUT TOP-FLANGE STIFFENING GROOVES AND AS FOLLOWS:

1. DECK PROFILE: VULCRAFT TYPE B OR EQUAL.
2. PROFILE DEPTH: TYPE B, 1½ INCHES (38 MM).
3. DESIGN UNCOATED STEEL THICKNESS: 0.0295 INCH.

2.3 MISCELLANEOUS

A. ACCESSORIES: MANUFACTURER'S RECOMMENDED ROOF DECK ACCESSORY MATERIALS.

B. SHEAR CONNECTORS: AWS D1.1, TYPE B, HEADED-STUD TYPE, WITH 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 AND REINFORCE DECK PANELS AND ACCESSORIES AROUND OPENINGS AND PROJECTIONS.

E. ROOF DECK ACCESSORIES: HEADER 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.

SECTION 05400 – 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.

1. 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 SCREWS.

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 SCREW FASTENING.

C. INSTALL INSULATION IN BUILT-UP EXTERIOR FRAMING MEMBERS.

D. FASTEN REINFORCEMENT PLATES OVER WEB PENETRATIONS LARGER THAN STANDARD PUNCHED OPENINGS.

E. STUDS: INSTALL, ALIGN, AND SECURELY ANCHOR CONTINUOUS TRACKS TO SUPPORTING STRUCTURE. SQUARELY SEAT STUDS AGAINST WEBS OF TOP AND BOTTOM TRACKS. SPACE STUDS AS INDICATED; PLUMB, ALIGN, AND FASTEN BOTH FLANGES OF STUDS TO TOP AND BOTTOM TRACK.

1. INSTALL AND FASTEN HORIZONTAL BRIDGING IN STUD SYSTEM, SPACED IN ROWS NOT MORE THAN 72 INCHES APART.
2. INSTALL STEEL-SHEET DIAGONAL BRACING STRAPS TO BOTH STUD FLANGES, TERMINATE AT AND FASTEN TO REINFORCED TOP AND BOTTOM TRACK ANCHOR TO STRUCTURE.
3. INSTALL MISCELLANEOUS CONNECTIONS, ACCESSORIES, AND SUPPLEMENTARY FRAMING.
4. ISOLATE CURTAINWALL FRAMING FROM BUILDING STRUCTURE USING SLIDE CLIP OR DEFLECTION TRACK TO PREVENT TRANSFER OF VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT.

DESIGN LOADS – NCBC 2012

I. FLOOR LIVE LOAD: SECTION 1607

1. 100 PSF (SLAB ON GRADE)

II. ROOF LIVE LOAD: SECTION 1607.12

1. 20 PSF

III. ROOF SNOW LOAD: SECTION 1608

1. 10 PSF (Pf= FLAT ROOF SNOW LOAD)
2. 0.9 (Ce= SNOW EXPOSURE FACTOR)
3. 1.0 (I= SNOW IMPORTANCE FACTOR)
4. 1.0 (Ct= THERMAL FACTOR)

IV. WIND LOAD: SECTION 1609

1. 100 MPH (Vasd= NOMINAL DESIGN AND WIND SPEED)
2. 1.0 (I= WIND IMPORTANCE FACTOR)
3. B (WIND EXPOSURE CATEGORY)
4. 0.18 (GCpi= INTERNAL PRESSURE COEFFICIENT)
5. 18 PSF (INTERIOR ZONES) COMPONENTS AND CLADDING DESIGN PRESSURE (ROOF)
   31 PSF (EDGE ZONES) COMPONENTS AND CLADDING DESIGN PRESSURE (ROOF)
   46 PSF (CORNER ZONES) COMPONENTS AND CLADDING DESIGN PRESSURE (ROOF)
   18 PSF (INTERIOR ZONES) COMPONENTS AND CLADDING DESIGN PRESSURE (WALL)
   22 PSF (EDGE ZONES) COMPONENTS AND CLADDING DESIGN PRESSURES (WALL)
6. DESIGN BASE SHEAR – WIND
   6.1k (Vx)
   21.6k (Vy)

V. EARTHQUAKE LOAD: SECTION 1613

1. II (S.U.G.– SEISMIC USE GROUP)
2. 1.0 (SEISMIC IMPORTANCE FACTOR)
3. 0.409 (Ss= SHORT PERIOD MAPPED SPECTRAL RESPONSE ACCELERATION)
   0.126 (S1= 1 SECOND PERIOD MAPPED SPECTRAL RESPONSE ACCELERATION)
4. D (SITE CLASS)
5. 0.402 (Sds= SHORT PERIOD SPECTRAL RESPONSE COEFFICIENT)
   0.193 (Sd1= 1 SECOND PERIOD SPECTRAL RESPONSE COEFFICIENT)
6. C (SEISMIC DESIGN CATEGORY)
7. BASIC SEISMIC-FORCE-RESISTING SYSTEM
   BRACED FRAME (ORTHOGONAL DIRECTION X & Y)
8. DESIGN BASE SHEAR – SEISMIC
   8.6k (Vx)
   18.0k (Vy)
9. 0.1339 (Cs= SEISMIC RESPONSE COEFFICIENT)
10. 3.0 (R= RESPONSE MODIFICATION FACTOR)
11. ANALYSIS PROCEDURE
    SIMPLIFIED (1613)
    EQUIVALENT LATERAL FORCE (1613)
    MODAL ANALYSIS (1613)

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REVISIONS

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1-5-18

FIRM REGISTRATION NO.: C-1323

DATE 01-05-2018
DRAWN BY JKP
CHECK BY JWM
JOB NO. 17-103-000
SHEET

S7 of S7