

GENERAL NOTES

GENERAL CONDITIONS AND COORDINATION

- NOTES SHOWN ON GENERAL NOTES SHEET SHALL GOVERN THE MINIMUM STANDARDS FOR MATERIALS, WORKMANSHIP, AND GENERAL CONSTRUCTION PRACTICES UNLESS NOTED OTHERWISE IN SPECIFICATIONS OR ON DRAWINGS.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN AND DISTRIBUTE ALL CURRENT CONTRACT DOCUMENTS AND ADDENDA TO SUPPLIERS AND SUBCONTRACTORS FOR THE USE OF SHOP DRAWING PRODUCTION AND FABRICATION PRIOR TO CONSTRUCTION.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COMPARE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DRAWINGS, AND REPORT ANY DISCREPANCIES AMONG OR WITHIN THE DRAWING SETS PRIOR TO FABRICATION OR CONSTRUCTION.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS, FLOOR ELEVATIONS, DROPS, SLOPES, DRAINS, EMBEDDED ITEMS, ETC., PRIOR TO CONSTRUCTION.
- THE DETAILS AND SECTIONS SHOWN ON STRUCTURAL DRAWINGS APPLY GENERALLY TO ALL AREAS OF SIMILAR OR LIKE CONDITIONS THROUGHOUT THE DRAWINGS.
- STRUCTURAL DRAWINGS INDICATE TYPICAL AND INDIVIDUAL SPECIFIC CONDITIONS ONLY. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTORS/SUBCONTRACTOR TO PREPARE SHOP DRAWINGS DETAILING CONDITIONS IN ACCORDANCE WITH SPECIFIED STANDARDS AND SPECIFIC REQUIREMENTS OF THIS PROJECT AS INDICATED ON DRAWINGS.
- THE USE OF THESE STRUCTURAL DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, MATERIAL SUPPLIER, FABRICATOR, OR ERECTOR WITHOUT THE PREPARATION OF SHOP DRAWINGS REPRESENTS HIS ACCEPTANCE OF THESE DRAWINGS AS COMPLETE AND CORRECT. AS A RESULT, ANY EXPENSE ACQUIRED AS A RESULT OF ERRORS OCCURRING ON DRAWINGS IS THE RESPONSIBILITY OF THE INDIVIDUAL PARTY.
- SHOP DRAWINGS MAY BE SUBMITTED TO ENGINEER FOR REVIEW FOR CORRECTNESS OF STRUCTURAL INTENT. CONTRACTOR, SUBCONTRACTOR, MATERIAL SUPPLIER, FABRICATOR, OR ERECTOR SHOULD ANTICIPATE A MINIMUM 10-DAY REVIEW PERIOD BY ENGINEER.
- THE DESIGN AND PROVISION FOR ALL TEMPORARY SUPPORTS OR FRAMING, AND NON-STRUCTURAL FRAMING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. TEMPORARY SUPPORTS SHALL NOT OVER STRESS OR CAUSE DAMAGE TO THE PERMANENT STRUCTURAL ELEMENTS. REFERENCE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALL NON-STRUCTURAL FRAMING REQUIRED.
- THE STRUCTURAL DRAWINGS AND ITEMS SHOWN HEREIN REPRESENT THE FINISHED STRUCTURE AND DO NOT NECESSARILY REPRESENT THE MEANS OR METHODS OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SUPERVISING THE WORK, AND THE MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCES OF CONSTRUCTION.
- THE STRUCTURE SHOWN HEREIN IS STRUCTURALLY SOUND WHEN ALL HORIZONTAL AND LATERAL PERMANENT BRACING INDICATED ON DRAWINGS IS INSTALLED IN THEIR ENTIRETY. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SUPPORT OF ALL ELEMENTS TO RESIST GRAVITY, EARTH, WIND, SEISMIC, AND CONSTRUCTION LOADS DURING CONSTRUCTION.

BUILDING CODES

- BUILDING CODE: 2003 INTERNATIONAL BUILDING CODE
- CONCRETE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AMERICAN CONCRETE INSTITUTE, ACI 318-05.
- MASONRY: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, AMERICAN CONCRETE INSTITUTE, ACI 530-05.
- STRUCTURAL STEEL: MANUAL OF STEEL CONSTRUCTION, LOAD RESISTANCE AND FACTOR DESIGN, AMERICAN INSTITUTE OF STEEL CONSTRUCTION, THIRTEENTH EDITION.

DESIGN LOADS

- DESIGN DEAD LOADS:
 - 1st FLOOR - 65 PSF
 - 2nd FLOOR - 60 PSF
 - 3rd FLOOR PLAZA W/ CONCRETE - 65 PSF
 - 3rd FLOOR PLAZA W/OUT CONCRETE - 25 PSF
 - 3rd FLOOR PENTHOUSE SLAB (STAIR LANDINGS) - 72 PSF
 - ROOF MANSARDS & HIGH ROOFS - 9 PSF
 - KALWALL SYSTEM - 5 PSF MAXIMUM (VERIFY W/ MFR.)
- DESIGN LIVE LOADS:

REFER TO SHEET S1.1 FOR LIVE LOAD DIAGRAMS, LIVE LOADS MEET OR EXCEED IBC 2003 TABLE 1607.1 REQUIREMENTS.
- DESIGN GUARD LOADS:

GUARDRAILS AND THEIR COMPONENTS ARE DESIGNED PER IBC 2003, SECTION 1607.7.1.
- SNOW LOAD:

GROUND SNOW LOAD (Pg) = 5 PSF
- WIND LOAD ON STRUCTURAL FRAME IS BASED ON THE FOLLOWING:
 - BASIC 3-SECOND GUST - 110 M.P.H
 - IMPORTANCE FACTOR, T.C. - 1.15
 - EXPOSURE CATEGORY - B
 - AVERAGE MWFRS WALL PRESSURE - 23.6 PSF
 - AVERAGE MWFRS PARAPET PRESSURE - 36.0 PSF
 - COMPONENTS AND CLADDING WALLS - 24.3 PSF (25.5 PSF ENDS)
 - COMPONENTS AND CLADDING PARAPETS - 56.5 PSF
 - MWFRS 3rd FLOOR PLAZA UPLIFT (NET) - 5.6 PSF (24.3 PSF ENDS), 0 PSF AT CONC. AREAS, REF. DETAILS FOR GABLE TRUSS WIND LOADS
 - MWFRS MANSARD ROOF LOADS - 6.0 PSF TOWARDS, 11.7 PSF AWAY
 - C & C F3rd FLOOR PLAZA UPLIFT (NET) - 18.0 PSF (24.3 PSF ENDS), 0 PSF AT CONC. AREAS
 - C & C MANSARD ROOF LOADS- 8.6 PSF TOWARDS, 24.3 PSF AWAY
 - C & C MANSARD EAVE UPLIFT - 50 PSF
- SEISMIC LOADS:

A. Ss	0.088
S1	0.036
B. IMPORTANCE FACTOR	1.25
C. USE GROUP	II
D. SITE CLASS	D
E. SEISMIC RESPONSE COEFF.:	Sds = 0.093; Sd1 = 0.058
F. DESIGN CATEGORY:	A
G. STRUCTURAL SYSTEM:	ORDINARY REINFORCED CONCRETE MOMENT FRAMES
H. DESIGN BASE SHEAR	212 KIPS
I. ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE

FOUNDATION - SOILS, SUBSURFACE CONDITIONS

- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO THOROUGHLY READ AND UNDERSTAND THE DESIGN CRITERIA AND BUILDING PAD PREPARATION REQUIREMENTS SET FORTH IN THE GEOTECHNICAL REPORT SUPPLIED BY THE OWNER AND PREPARED FOR THIS PROJECT.
- BUILDING PAD PREPARATION AND FOUNDATION DESIGN IS BASED UPON RECOMMENDATIONS IN GEOTECHNICAL REPORT PROJECT NO. 08-774E, PREPARED BY GEOTECH ENGINEERING AND TESTING, DATED 01-09-09, ALLOWABLE UNDERREAMED PIER BEARING CAPACITY = 4.0 K.S.F. FOR DEAD

- LOADS AND 8.0 K.S.F. FOR TOTAL LOADS AT A DEPTH OF 13 FEET BELOW EXISTING NATURAL GRADE AND AN ALLOWABLE SKIN FRICTION OF 0.2 K.S.F. FOR THE PORTION OF THE PIER BEYOND A MINIMUM DEPTH OF 10 FEET FROM EXISTING GRADE.
- BUILDING PAD PREPARATION SHALL BE IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS FOUND IN REPORT TO ACHIEVE A MAXIMUM PVR OF 1 INCH. FILL WORK SHALL EXTEND A MINIMUM OF 5 FT. AROUND THE FOOTPRINT OF THE FOUNDATION. THE FLOOR SLAB SHALL BEAR ON A15 MIL VAPOR BARRIER, DISCUSSED BELOW, AND A UNIFORM 12 INCH THICKNESS OF IMPORTED SELECT FILL AFTER REMOVAL OF SURFICIAL SILTY SANDS AND FAT CLAYS. THE TOP TWO INCHES OF THE SELECT FILL LAYER SHALL BE A 2 INCH SAND CUSHION FOR LEVELING PURPOSES. REFER TO THE GEOTECHNICAL REPORT FOR SITE PREPARATION REQUIREMENTS.
- COMPACTION AND MOISTURE CONTENT OF SUB GRADE AND EACH LIFT OF STRUCTURAL FILL SHALL BE INSPECTED AND APPROVED BY A QUALIFIED REPRESENTATIVE OF A PROFESSIONALLY LICENSED GEOTECHNICAL ENGINEER.
- POSITIVE DRAINAGE SHALL BE PROVIDED AND MAINTAINED AWAY FROM THE BUILDING DURING CONSTRUCTION. PERMANENTLY STORED EXCAVATION MATERIAL AND/OR CONSTRUCTION MATERIALS SHALL NOT DISRUPT POSITIVE DRAINAGE AWAY FROM THE BUILDING.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY REQUIRED BACK FILLING OF WALLS, PIERS, FOOTINGS, ETC., SUCH THAT SYMMETRICAL LOADING OCCURS. IN THE EVENT THAT CONDITIONS PREVENT SUCH SYMMETRICAL LOADING, TEMPORARY SHORING SHALL BE PROVIDED AND MAINTAINED UNTIL PERMANENT HORIZONTAL AND VERTICAL BRACING ELEMENTS ARE PLACED AND PROPERLY SET.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN STABILITY OF EXCAVATIONS UNTIL PROPERLY BACK FILLED. EXCAVATIONS SHALL REMAIN FREE OF LOOSE DEBRIS/MATERIAL AND WATER. EXCAVATIONS SHALL BE DEWATERED AND ALL WET MATERIAL REMOVED/REPLACED PRIOR TO CONCRETE PLACEMENT.
- HEAVY EQUIPMENT NECESSARY FOR SPREADING AND COMPACTING BACK FILL MATERIAL SHALL NOT BE OPERATED CLOSER THAN A DISTANCE EQUAL TO THE HEIGHT OF BACK FILL MATERIAL ABOVE THE WALL, PIER, FOOTING, ETC. HAND TAMING SHALL BE USED TO COMPACT THE REMAINING AREA.
- EXCAVATED MATERIAL MAY BE USED AS BACK FILL IF FOUND TO BE ACCEPTABLE TO GEOTECHNICAL ENGINEER OF RECORD. OTHERWISE, PROVIDE SELECT FILL IN ACCORDANCE WITH GEOTECHNICAL REPORT AS BACK FILL MATERIAL.
- BUILDING PAD PREPARATION SHALL BE SUCH THAT THE THICKNESS OF FOUNDATION SLAB-ON-GRADE SHALL NOT BE REDUCED BY MORE THAN 5 PERCENT OF DEPTH SHOWN ON DRAWINGS.
- PROVIDE 15 MIL STEGO WRAP VAPOR BARRIER BELOW FOUNDATION SLAB-ON-GRADE. VAPOR BARRIER SHALL EXTEND DOWN SIDES OF GRADE BEAMS 12" AND UNDER NAIL CONDITIONS SHALL BE PRESENT IN THE BOTTOM EXCAVATION OF GRADE BEAMS. VAPOR BARRIER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, LAP AND TAPE JOINTS PER RECOMMENDATIONS.

CAST IN PLACE CONCRETE

- CONCRETE WORK SHALL CONFORM TO THE FOLLOWING:
 - ACI 318 - REINFORCED CONCRETE
 - ACI 318.1 - PLAIN CONCRETE
 - ACI 308R - COLD WEATHER CONCRETING
 - ACI 305R - FOR ANY COMBINATION OF HIGH TEMPERATURE, LOW RELATIVE HUMIDITY, AND WIND VELOCITY MAY IMPAIR CONCRETE QUALITY.
- CONCRETE USED FOR STRUCTURAL APPLICATIONS AS SHOWN ON DRAWINGS SHALL BE STANDARD WEIGHT, WITH 28-DAY COMPRESSIVE STRENGTH (f'c) AS NOTED IN THE TABLE BELOW, REFER TO NOTE 3. COMPRESSIVE STRENGTH TESTING SHALL BE IN ACCORDANCE WITH ASTM C-39 "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS."
- CONCRETE SHALL BE PROPORTIONED AND PRODUCED WITH A MAXIMUM SLUMP AS NOTED BELOW. SLUMP SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C-143 "SLUMP OF PORTLAND CEMENT CONCRETE." AGGREGATES USED FOR NORMAL WEIGHT CONCRETE SHALL HAVE A NOMINAL MAXIMUM COARSE AGGREGATE SIZE AS NOTED BELOW AND SHALL CONFORM TO ASTM C-33 "SPECIFICATIONS FOR CONCRETE AGGREGATE."

LOCATION	f'c	SLUMP	MAX. AGGREGATE SIZE
PIERS	3000 PSI	6" ± 1"	1 1/2"
GRADE BEAMS	3000 PSI	4" ± 1"	1"
SLAB-ON-GRADE	3000 PSI	4" ± 1"	3/4"
ELEVATED SLABS	3000 PSI	4" ± 1"	3/4"
THERMOBLOCK WALLS	4500 PSI	6" ± 1"	3/8"

- AIR ENTRAINMENT OF 5 PERCENT, +/- 1 1/2 PERCENT, MAY BE USED AT THE CONTRACTORS OPTION FOR CONCRETE PERMANENTLY EXPOSED TO WEATHER, AND ELSEWHERE. AIR ENTRAINMENT SHALL CONFORM TO ASTM C-260 "AIR ENTRAINING ADMIXTURES FOR CONCRETE."
- CONCRETE TESTING SHALL BE PROVIDED BY AN APPROVED AGENCY, AND IN ACCORDANCE WITH ASTM C-31 "MAKING AND CURING CONCRETE TEST SPECIMENS IN THE FIELD."
- CURING COMPOUNDS AND SURFACE HARDENERS SHALL BE APPROVED BY ENGINEER PRIOR TO USE. APPLICATION OF CURING COMPOUNDS AND SURFACE HARDENERS SHALL BE IN COMPLIANCE WITH MANUFACTURERS RECOMMENDATIONS.
- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH SHALL BE PROTECTED BY WATERPROOFING AS DETAILED BY ARCHITECTURAL DRAWINGS.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE EMBEDDED ITEMS NECESSARY FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL, OR OTHER PURPOSES NOT SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.
- EMBEDDED CONDUITS, PIPES, AND SLEEVES SHALL MEET THE REQUIREMENTS OF ACI 318-95, SECTION 8.3, INCLUDING THE FOLLOWING:
 - CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL, OR BEAM (OTHER THAN PASSING THROUGH) SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 THE THICKNESS OF THE SLAB, WALL, OR BEAM.
 - CONDUITS, PIPES AND SLEEVES SHALL NOT BE SPACED CLOSER THAN 3 WIDTHS OR DIAMETERS O.C.
 - CONDUITS, PIPES AND SLEEVES SHALL BE FABRICATED FROM UNCOATED OR GALVANIZED IRON OR STEEL NOT THINNER THAN STANDARD SCHEDULE 40 STEEL PIPE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PLACE AND FINISH CONCRETE SLABS WITH A MINIMUM FLATNESS OF F1 = 35 AND A MINIMUM LEVELNESS OF FL = 25. ANY DEVIATION FROM THIS TOLERANCE THAT REQUIRES CUTTING OR ADDITIONAL FINISHING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMITTED UNLESS SPECIFICALLY SHOWN AND DETAILED ON STRUCTURAL PLANS. VERTICAL CONSTRUCTION JOINT LOCATIONS, OTHER THAN THOSE SHOWN ON PLAN, SHALL BE SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW. ADDITIONAL DETAILING AND REINFORCING MAY BE REQUIRED AND SPECIFIED BY THE ENGINEER FOR UNSCHEDULED CONSTRUCTION JOINTS, AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
- SAW-CUT CONTROL JOINTS SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS OR SO THAT THE TOTAL AREA ENCLOSED BY SUCH JOINTS DOES

NOT EXCEED 250 SQUARE FEET. SAW-CUT JOINTS SHALL BE A MINIMUM OF 1/4 THE DEPTH OF THE SLAB.

CONCRETE REINFORCING

- REINFORCING STEEL SHALL BE GRADE 60, DEFORMED NEWBILLET STEEL BARS IN ACCORDANCE WITH ASTM A615.
- REINFORCING STEEL DETAILING SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE DETAILING MANUAL. ALL HOOKS AND BENDS IN REINFORCING STEEL SHALL CONFORM TO ACI DETAILING STANDARDS, UNLESS NOTED OTHERWISE.
- REINFORCING STEEL SUPPORT DEVICES SHALL BE IN ACCORDANCE WITH THE CRSI MANUAL OF STANDARD PRACTICE.
- UNSCHEDULED BEAMS, SLABS, COLUMNS, AND WALLS, SHALL HAVE REINFORCING STEEL DETAILED IN ACCORDANCE WITH THE FOLLOWING:
 - MINIMUM LAP SPLICE FOR ALL REINFORCING BARS SHALL BE 42 TIMES THE BAR DIAMETER, UNLESS NOTED OTHERWISE.
 - LAP TOP REINFORCING BARS AT MID SPAN
 - LAP BOTTOM REINFORCING BARS AT SUPPORTS.
 - LAP VERTICAL BARS IN WALLS AND COLUMNS AT FLOOR LINES ONLY, UNLESS SPECIFIED ON STRUCTURAL DRAWINGS OTHERWISE.
 - PROVIDE CORNER BARS, OF SAME SIZE, FOR ALL HORIZONTAL BARS AT THE INSIDE AND OUTSIDE FACES OF INTERSECTING BEAMS OR WALLS.
- PROVIDE MINIMUM (2) #4 x 8'-0" BARS AT 45° AT ALL REINTRANS CORNERS IN SLAB ON GRADE AND ELEVATED SLABS.
- REINFORCING STEEL INTERRUPTED BY OPENINGS OR EMBEDDED ITEMS IN SLABS OR WALLS, SHALL BE COMPENSATED FOR BY REPLACING AN EQUAL AMOUNT OF REINFORCING BARS AT THE SIDES OF THE OPENING, PARALLEL TO UNINTERRUPTED STEEL. COMPENSATION STEEL SHALL EXTEND BEYOND THE EDGE OF OPENING OR EMBED A MINIMUM OF 40 TIMES THE BAR DIAMETER.
- WELDING OF REINFORCING BARS IS NOT PERMITTED, AND HEAT SHALL NOT BE PERMITTED IN THE FABRICATION OR INSTALLATION OF REINFORCEMENT.
- WELDED STEEL WIRE FABRIC USED FOR CONCRETE REINFORCING SHALL BE INSTALLED IN FLAT SHEETS, AND SHALL CONFORM TO ASTM A-185.
- MINIMUM CONCRETE COVERAGE FOR REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING:
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH - 3".
 - CONCRETE EXPOSED TO EARTH OR WEATHER - #6 BAR OR LARGER - 2"; #5 BAR AND SMALLER - 1 1/2".
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND - SLABS, WALLS, JOISTS - #11 BARS AND SMALLER - 3/4" BEAMS AND COLUMNS - 1 1/2".
 - E.G. GRADE BEAMS - 1 1/2" TOP, 3" BOTTOM, 2" FORMED SIDES, 3" SIDES FORMED BY EARTH.

CONCRETE ANCHORS

- CONCRETE ANCHOR BOLT MATERIAL SHALL COMPLY WITH ASTM F1554, GRADE 36. ASTM A307 SHALL GOVERN ALL OTHER PROPERTIES. ANCHOR BOLTS SHALL HAVE CUT THREADS AND SHALL BE FURNISHED WITH WASHER AND HEAVY HEX NUT.
- EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT II OR APPROVED EQUIVALENT.
- ADHESIVE ANCHOR SYSTEM SHALL BE HILTI HY150 INJECTION ADHESIVE ANCHOR OR APPROVED EQUIVALENT.
- ANCHORS SHALL BE OF SIZE AND EMBEDMENT AS SHOWN ON DRAWINGS, AND SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL REINFORCING AND EMBEDDED ITEMS THROUGH NON-DESTRUCTIVE METHODS PRIOR TO DRILLING FOR ANCHOR INSTALLATION. ANCHOR LOCATIONS MAY BE RELOCATED WITH ENGINEERS APPROVAL TO AVOID CONFLICTS.
- DRILLED HOLES FOR ANCHOR INSTALLATION SHALL BE OF SIZE AND DEPTH AS RECOMMENDED BY THE ANCHOR MANUFACTURER.
- INSTALLATION OF EXPANSION ANCHORS SHALL BE CONTINUOUSLY INSPECTED BY THE TESTING AGENCY. INSPECTIONS SHALL ENSURE THAT HOLES ARE REQUIRED SIZE, AND THAT BOLTS ARE PROPERLY INSTALLED AND TORQUED.

INSULATED CONCRETE FORM WALLS (ICF)

- INSULATED CONCRETE FORMS SHALL BE 8" NOMINAL IN WIDTH AND PRODUCED BY THERMOBLOCK 902-728-0525.
- CONCRETE FILL FOR FORMS SHALL BE STANDARD WEIGHT, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI.
- REFER TO SHEET S4 FOR STANDARD DETAILS REGARDING REINFORCEMENT SIZE, SPACING, PLACEMENT, AND LOCATION OF HORIZONTAL BOND BEAMS. REINFORCEMENT SHALL BE PLACED IN THE CENTER OF EACH CELL AND HELD IN PLACE DURING CONCRETE POUR. BOND BEAM STEEL SHALL BE TIED TO THE FACE OF VERTICAL STEEL.
- PROVIDE DOWELS FROM FOUNDATION OF MATCHING SIZE AS WALL REINFORCING @ MAX 16" O.C. TO LAP WALL REINFORCING MIN. 44 BAR DIAMETERS. EMBED DOWELS MIN. 24" INTO FOUNDATION.
- WALL LIFTS SHALL BE A MAXIMUM OF 5 FT AND CONCRETE SHALL BE PLACED AND VIBRATED PER THE MANUFACTURERS RECOMMENDATIONS. THE LIFT PROCESS SHALL NOT EXTEND PAST 13 FT A.F.F. UNTIL CONCRETE HAS CURED FOR 28 DAYS OR STRENGTH TEST RESULTS EXCEED 4,000 PSI.
- PROVIDE CORNER BARS AT ALL WALL INTERSECTIONS OF BOND BEAMS. CORNER BARS SHALL BE OF THE SAME SIZE AND SPACING AS THE LARGER OF THE HORIZONTAL BOND BEAM STEEL. EACH LEG OF CORNER BARS SHALL BE 44 BAR DIAMETERS IN LENGTH. CORNER BARS NOT REQUIRED AT NON-LOAD BEARING DEMISING WALLS.
- PERFORM SPECIAL INSPECTIONS OF THERMOBLOCK PER TABLE 1704.5/3 FOR ALL SECTIONS THAT APPLY. SUBSTITUTE LANGUAGE REFERENCEING GROUT TO CONCRETE.

CONCRETE MASONRY

- CONCRETE MASONRY UNITS SHALL BE HOLLOW LOAD BEARING TYPE N-1 UNITS WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 P.S.I. UNITS SHALL CONFORM TO ASTM C90.
- COMPRESSIVE PRISM STRENGTH OF MASONRY (f'm) SHALL BE 1500 P.S.I., MINIMUM, AT 28 DAY TESTING.
- MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 P.S.I. WHEN TESTED IN ACCORDANCE WITH ASTM C780.
- COARSE MASONRY GROUT SHALL CONFORM TO ASTM C476, WITH A MAXIMUM AGGREGATE SIZE OF 1/2", AND A MINIMUM COMPRESSIVE STRENGTH OF 2500 P.S.I.
- HORIZONTAL JOINT REINFORCEMENT SHALL CONSIST OF LADDER TYPE, HOT DIPPED GALVANIZED, COLD-DRAWN STEEL CONFORMING TO ANSI/ASTM A82. REINFORCEMENT SHALL HAVE NO. 9 GAUGE, OR 3/16" SIDE RODS, WITH NO. 9 GAUGE CROSS RODS. JOINT REINFORCEMENT SHALL BE SPACED AT 16" O.C., LAPPED MINIMUM 14" AT SPLICES, AND CONTINUOUS AROUND CORNERS. DISCONTINUE JOINT REINFORCEMENT AT VERTICAL CONTROL AND EXPANSION JOINTS.
- PROVIDE REINFORCED AND GROUTED CELLS AT 32" O.C., UNLESS NOTED

OTHERWISE ON STRUCTURAL DRAWINGS. ADDITIONALLY, PROVIDE REINFORCED AND GROUTED CELLS AT ENDS OF WALLS, AND CORNERS. REINFORCEMENT SHALL BE A #5 BAR, WITH MINIMUM 48 TIMES BAR DIAMETER LAP SPLICES.

- PROVIDE REINFORCED AND GROUTED CELLS AT EACH SIDE OF OPENINGS. REINFORCEMENT SHALL BE #6 MINIMUM, AND GROUTED CELL SHALL BE FULL HEIGHT OF WALL.
- BOND BEAMS CONSISTING OF A U-SHAPED BLOCK SHALL BE LOCATED AT TOP OF WALLS, AT EACH FLOOR LEVEL, AND OTHER LOCATIONS AS SHOWN ON DRAWINGS. BOND BEAMS SHALL BE CONTINUOUSLY REINFORCED AND GROUTED. REINFORCEMENT SHALL CONSIST OF (1) #6 BOTTOM BAR FOR 8" BLOCK, AND (2) #6 BOTTOM BARS FOR 12" BLOCK.
- CONTRACTOR SHALL COORDINATE LOCATIONS FOR CONTRACTION AND EXPANSION JOINTS WITH ARCHITECTURE. JOINTS SHALL OCCUR WITHIN TWO FEET OF ONE SIDE OF EACH CORNER AND AT THE LESSER OF 30 FT. O.C., OR THREE TIMES THE WALL HEIGHT.

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
 - W-SHAPES - ASTM A992.
 - PLATES, ANGLES, & CHANNELS - ASTM A572, GR. 50, OR ASTM A36.
 - STEEL PIPE - ASTM A500, GRADE B FOR HSS OR ASTM A53, TYPE E OR TYPE S, GRADE B FOR P, X, & XX.
 - STEEL TUBE - ASTM A500, GRADE B, Fy=48 K.S.I.
- SPLICING OF STEEL MEMBERS IS PROHIBITED UNLESS LOCATION AND TYPE OF SPLICE IS SUBMITTED TO ENGINEER IN SHOP DRAWINGS, AND APPROVED. ANY MEMBERS FOUND TO BE SPICED AND NOT PREVIOUSLY APPROVED WILL BE REJECTED.
- COLUMN BASE PLATES SHALL BE GROUTED WITH A HIGH-STRENGTH, NON-SHRINK, NON-METALLIC GROUT.
- STRUCTURAL STEEL DETAILING, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STEEL CONSTRUCTION," AMERICAN INSTITUTE OF STEEL CONSTRUCTION, THIRTEENTH EDITION.
- CONTRACTOR SHALL VERIFY CORRECTNESS OF FIELD CONDITIONS, INCLUDING FOUNDATION, ANCHOR PLACEMENT, AND OTHER WORK AFFECTING THE STEEL PRIOR TO ERECTION.
- ALL STRUCTURAL STEEL SHALL BE PRIME PAINTED WITH 1.0 TO 1.5 MIL DRY FILM THICKNESS GRAY OXIDE-ZINC CHROMATE PRIMER, EXCEPT WHERE FIRE PROTECTION MATERIALS ARE REQUIRED.

STRUCTURAL STEEL CONNECTIONS

- WELDING SHALL CONFORM TO ANSIAWMS D1.1, LATEST EDITION.
- BOLTS SHALL CONFORM TO ASTM A325. BOLT VALUES USED SHALL BE THOSE FOR BEARING TYPE BOLTS WITH THREADS ALLOWED IN THE SHEAR PLANE.
- STRUCTURAL STEEL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE DESIGNED BY FABRICATOR, UNDER THE DIRECT SUPERVISION OF A STATE LICENSED REGISTERED PROFESSIONAL ENGINEER, AND SEALED CALCULATIONS FOR ALL CONNECTIONS SHALL BE SUBMITTED FOR ARCHITECTS FILES.
- DESIGN AND DETAILING OF BEAM CONNECTIONS NOT SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS SHALL CONFORM TO THE FOLLOWING:
 - CONNECTIONS SHALL BE ALSO TYPE 2, SIMPLE FRAMING CONNECTIONS (R-PARTIALLY RESTRAINED.) NO SHEAR TAB CONNECTIONS WILL BE PERMITTED.
 - IN GENERAL, SHOP CONNECTIONS SHALL BE WELDED, AND FIELD CONNECTIONS SHALL BE BOLTED.
 - CONNECTIONS SHALL BE DESIGNED FOR THE SCHEDULED SHEAR FORCES, THE SHEAR FORCE DENOTED AS "V," AND THE HORIZONTAL FORCE DENOTED AS "H," ON THE STRUCTURAL DRAWINGS.
 - UNLESS OTHERWISE INDICATED ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED FOR 55 PERCENT OF THE TOTAL LOAD CAPACITY FOR THE BEAM SPAN SHOWN IN THE BEAM TABLES, SECTION 2 OF THE AISC MANUAL, NINTH EDITION.
 - PROVIDE MINIMUM NUMBER OF ROWS OF BOLTS EQUAL TO 1/6 OF THE BEAM DEPTH. ROUNDING FRACTIONS TO THE NEXT HIGHEST NUMBER.
 - BOLTS SHALL BE INSTALLED SUCH THAT THEY ARE "SNUG TIGHT," UNLESS SPECIFIED OTHERWISE.
 - SHORT SLOTTED HOLES SHALL BE PERMITTED PROVIDED WASHERS ARE INSTALLED IN ACCORDANCE WITH AISC REQUIREMENTS. PROVIDE HARDENED WASHERS WHERE A325 BOLTS ARE USED.
- WHERE CONNECTIONS ARE NOT SPECIFICALLY ADDRESSED BY THE ABOVE NOTES OR ON STRUCTURAL DRAWINGS, FILLET WELDS SHALL BE PROVIDED AT ALL CONTACT SURFACES SUFFICIENT TO DEVELOP THE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT.
- MINIMUM SIZE OF FILLET WELDS SHALL BE 3/16", OR MINIMUM SIZE REQUIRED BY AISC, WHICHEVER IS GREATER.

STRUCTURAL STEEL JOISTS

- STEEL JOISTS MUST CONFORM TO THE SPECIFICATION & STANDARDS OF THE STEEL JOISTS INSTITUTE.
- JOIST BRIDGING SHALL BE INSTALLED IN ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS.
- ALL JOISTS TO BE VULCRAFT OR AN APPROVED EQUAL.
- HORIZONTAL BRIDGING TO BE 1" X 1 1/2" X 0. 109 ANGLE UNLESS NOTED OTHERWISE.
- DIAGONAL BRIDGING TO BE 1" X 1" X 0. 109 ANGLE UNLESS NOTED OTHERWISE.
- WHERE HORIZONTAL BRIDGING IS MADE DISCONTINUOUS DUE TO OBSTRUCTIONS, X-TYPE BRIDGING SHALL BE PLACED EITHER SIDE OF THE OBSTRUCTION.
- ALL STEEL JOISTS, GIRDERS, AND ACCESSORIES SHALL BE PAINTED WITH ONE COAT OF RUST INHIBITIVE PAINT.
- JOISTS DESIGNATED WITH THE TERM "ADDLOAD" SHALL BE DESIGNED BY THE JOIST MANUFACTURER TO SUPPORT THE CONCENTRATED LOADS INDICATED ON THE ROOF FRAMING PLAN, LOCATED ANYWHERE ALONG THE JOIST, IN ADDITION TO THE DEAD, LIVE, AND WIND LOADS INDICATED IN THE 'DESIGN LOADS' SECTION OF THE GENERAL NOTES.

LIGHT GAUGE STEEL

- LIGHT GAUGE STUDS SHALL BE CLARK OR DIETRICH OR APPROVED ALTERNATE.
- ALL MEMBERS SHALL BE FASTENED W/ MIN. (4) #10 TEK TO EACH SUPPORTING ELEMENT, EXCEPT STUD TO TRACKS WHICH SHALL BE (2) #12 TEK SCREWS.
- CUT MEMBERS BY SHEARING OR SAWING. ALL VERTICAL MEMBERS SHALL BE CUT PRIOR TO SITE DELIVERY.
- INSTALL MEMBERS IN SINGLE PIECE LENGTHS EXCEPT THAT TRACKS MAY BE SPLICED, BUT WELDED, OR EACH LENGTH ANCHORED TO A COMMON BUILDING FRAME ELEMENT.
- TOLERANCES:
 - VARIATION FROM PLUMB, LEVEL, AND TRUE TO LINE: 1/8 INCH IN 10 FEET (1/960).
 - MEMBER SPACING: NOT MORE THAN 1/8 INCH (3 MM) PLUS OR MINUS FROM SPACING INDICATED.
- SUBMIT THE FOLLOWING ITEMS TO THE ENGINEER PRIOR TO ERECTION OF

- FRAMING MEMBERS: PRODUCT DATA, PROOF OF MANUFACTURER QUALIFICATIONS, MILL CERTIFICATES SIGNED BY FRAMING MEMBER/ACCESSORY MANUFACTURER CERTIFYING COMPLIANCE WITH MATERIAL REQUIREMENTS.
- THE MINIMUM YIELD STRENGTH OF ALL MEMBERS SHALL BE 33 KSI FOR 20 THROUGH 18 GAUGES AND 50 KSI FOR 16 GAUGE AND HEAVIER.
- THE INSTALLATION OF ALL MEMBERS SHALL MEET AISI - STANDARD FOR COLD-FORMED STEEL FRAMING GENERAL PROVISIONS.
- TRUSSES TO BE DESIGNED IN ACCORDANCE WITH AISI 'DESIGN GUIDE FOR COLD-FORMED STEEL TRUSSES, PUBLICATION RG-9518." TRUSSES SHALL BE DESIGNED BY A STATE LICENSED REGISTERED PROFESSIONAL ENGINEER.
- FASTENERS SHALL BE:
 - SCREWS: CORROSION RESISTANT COATED, SELF-DRILLING, PAN OR HEX WASHER HEAD, PROVIDE SCREW TYPE AND SIZE AS SHOWN ON PLAN AND DETAILS.
 - POWDER ACTUATED FASTENERS: HILTI X-DNI OR X-DNI AS NOTES ON THE PLANS.

METAL DECK

- STANDARD ROOF DECK SHALL BE GALV. VULCRAFT 1.58 22 Ga. METAL DECK.
- STANDARD ROOF DECK SHALL BE FASTENED PER THE FOLLOWING:
 - AT SUPPORTS - #12 TEKS IN 36 / 7 PATTERN.
 - AT SIDE LAPS - (5) #10 TEKS PER SPAN.
- SPECIAL ROOF DECK AT PENTHOUSES SHALL BE GALV. VULCRAFT 1.0E 24 Ga. METAL DECK.
- SPECIAL ROOF DECK AT PENTHOUSES SHALL BE FASTENED PER THE FOLLOWING:
 - AT SUPPORTS - #12 TEKS IN 36 / 4 PATTERN.
 - AT SIDE LAPS - (8) #10 TEKS PER SPAN.
- SPECIAL ROOF DECK AT PLAYGROUND ROOF SHALL BE GALV. VULCRAFT 3.0N 20 Ga. METAL DECK.
- SPECIAL ROOF DECK AT PLAYGROUND ROOF SHALL BE FASTENED PER THE FOLLOWING:
 - AT SUPPORTS - #12 TEKS IN 24 / 4 PATTERN.
 - AT SIDE LAPS - (8) #10 TEKS PER SPAN.
- NON-COMPOSITE FLOOR AND ROOF DECK W/ N.W.C. SHALL BE GALV. VULCRAFT 1.0C 24 Ga. METAL DECK.
- NON-COMPOSITE FLOOR AND ROOF DECK SHALL BE FASTENED PER THE FOLLOWING:
 - AT SUPPORTS - #12 TEKS IN 33/4 PATTERN.
 - AT SIDE LAPS - (1) #10 TEK PER SPAN.
- ALL DECKING SHALL BE INSTALLED IN MIN. 3 SPAN CONDITION.
- ALL METAL DECK SHALL GALVANIZED.

PRE-FAB METAL STRUCTURES

- METAL BUILDING MANUFACTURER SHALL DESIGN THE PLAYGROUND ROOF FRAMES ALL APPLICABLE CODE REQUIREMENTS IN ADDITION TO ANY FRAMING LOADS NOTED ON THE DRAWINGS: IBC 2003, ASCE 7, AISC 13th EDITION, AND ALL MBMA STANDARD PRACTICE REQUIREMENTS.
- METAL BUILDING DESIGN SHALL BE PERFORMED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF TEXAS.
- METAL BUILDING ROOFS SHALL BE DESIGNED TO ACCOMMODATE A SUSPENDED DEAD LOAD OF FIRE SPRINKLERS. COORDINATE WITH SUBCONTRACTOR. ROOF FRAMING MEMBERS SHALL BE DESIGNED TO MAINTAIN MAXIMUM DEFLECTIONS OF L/240 FOR TOTAL LOADS AND L/360 FOR LIVE LOADS.
- METAL BUILDING FRAMES SHALL BE DESIGNED TO MAINTAIN A MAXIMUM FRAME DEFLECTION OF 1" AT HIGHEST POINT OF FRAME FOR FRAME 1 AND 2 AND 0.7" FOR THE PORTAL FRAME.
- STRUCTURE SHALL BE DESIGNED AS AN OPEN STRUCTURE WITH CLEAR WIND FLOW PER ASCE7 (<50% OBSTRUCTED BELOW ROOF).
- METAL BUILDING MANUFACTURER SHALL PROVIDE FINAL UNFACTORED COLUMN BASE REACTIONS TO ENGINEER TO VERIFY SUPPORT ADEQUACY PRIOR TO MATERIAL FABRICATION.
- NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS WITH THE METAL BUILDING REQUIREMENTS IMMEDIATELY.

WOOD DECK

- THE STRUCTURAL PANEL ROOF SHEATHING SHALL BE MANUFACTURED WITH EXTERIOR GLUE. ALL GLUE SHEETS SHALL BE A MINIMUM OF 5/8". MINIMUM PANEL FASTENING TO SUPPORTS SHALL BE AS FOLLOWS:
 - LONG DIMENSION OF PANEL SHALL BE PERPENDICULAR TO MAIN SUPPORTS.
 - #10 TEKS SCREWS AT 6" O.C. AT PANEL EDGES AND #10 TEKS SCREWS AT 12" O.C. AT INTERIOR SUPPORTS.

SPECIAL INSPECTIONS

- THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (RDPIRC) FOR THIS PROJECT IS THE ARCHITECT. SUBMIT ALL INSPECTION REPORTS DIRECTLY TO THE RDPIRC FOR REVIEW. ALSO, SUBMIT THE STRUCTURAL RELATED SPECIAL INSPECTION REPORTS TO THE STRUCTURAL ENGINEER FOR REVIEW.
- THE RDPIRC CONTRACTS WITH OR IS EMPLOYED BY THE OWNER. IN ORDER TO COMPLY WITH THE CODE REQUIREMENTS, THE RDPIRC AND THE SPECIAL INSPECTORS AND TESTING TECHNICIANS MAY NOT BE IN THE EMPLOY OF THE GENERAL CONTRACTOR (GC), SUBCONTRACTORS OR MATERIAL SUPPLIERS. IN THE CASE OF AN OWNER/CONTRACTOR, THE BUILDING OFFICIAL SHALL SPECIFY WHO EMPLOYS THE RDPIRC, SPECIAL INSPECTORS AND TESTING TECHNICIANS.
- THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN SECTION 109 OF THE IBC. REFER TO THE BUILDING CODE, AND ANY AMENDMENTS TO THE BUILDING CODE FOR THIS JURISDICTION, TO DETERMINE ALL THE REQUIRED INSPECTIONS IN ADDITION TO THE SPECIAL INSPECTIONS LISTED BELOW.
- INSPECTION OF FABRICATORS - FABRICATOR SHALL SUBMIT TO THE RDPIRC, WITH A COPY TO THE OWNER AND THE GC, A CERTIFICATE OF COMPLIANCE STATING THAT HE FABRICATED HIS WORK UNDER THE INSPECTIONS SERVICES OF A SPECIAL INSPECTOR OR UNDER THE INSPECTION SERVICES OF A NATIONALLY RECOGNIZED TRADE ORGANIZATION THAT REQUIRED QUALITY CONTROL INSPECTIONS.
- STRUCTURAL STEEL INSPECTIONS SHALL BE PERFORMED PER TABLE 1704.3
- CONCRETE CONSTRUCTION INSPECTIONS SHALL BE PERFORMED PER TABLE 1704.4.
- MASONRY LEVEL 1 INSPECTIONS SHALL BE PERFORMED PER TABLE 1704.5.1.
- SOIL INSPECTIONS SHALL BE PERFORMED PER TABLE 1704.7.
- PIER FOUNDATION INSPECTIONS SHALL BE PERFORMED PER TABLE 1704.9.

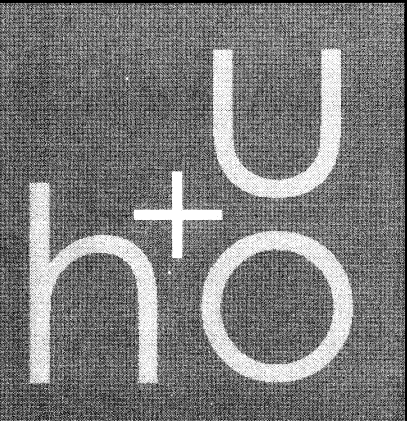
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