

CODES AND SPECIFICATIONS:

- DESIGN, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS UNLESS OTHERWISE MODIFIED IN THE DRAWINGS OR IN THE PROJECT MANUAL.
- BUILDING CODES/STRUCTURAL CODES:
 - A. THE BOCA NATIONAL BUILDING CODE/1996.
 - ANSI/ASCE 7-85 "MINIMUM DESIGN LOADS FOR BUILDING & OTHER STRUCTURES".
 - THE DESIGN OF STRUCTURAL STEEL IS IN ACCORDANCE WITH THE REQUIREMENTS OF AISC "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN", NINTH EDITION.
 - FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE ABOVE AISC SPECIFICATION.
 - THE DESIGN OF REINFORCED CONCRETE IS IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-99).
 - CRSI RECOMMENDED PRACTICE FOR PLACING REINFORCED CONCRETE.

GENERAL NOTES:

- THE STRUCTURAL DRAWINGS SHALL BE WORKED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND THE PROJECT MANUAL. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS WITH DRAWINGS, NOTES AND PROJECT MANUAL.
- ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED BY CONTRACTOR AT THE SITE PRIOR TO ANY CONSTRUCTION OR FABRICATIONS.
- CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS BY MEASUREMENT AT THE JOB SITE BEFORE SUBMITTING SHOP DRAWINGS.
- CONTRACTOR SHALL VERIFY FRAMING OR SUPPORT FOR MECHANICAL EQUIPMENT AND ANY MECHANICAL OPENINGS WITH MECHANICAL TRADES PRIOR TO SUBMISSION OF SHOP DRAWINGS.
- DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTR. SAFETY.
- BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED.
- CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE APPROVAL.
- EACH CONTRACTOR SHALL COOPERATE WITH THE OWNERS REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- ANY DEVIATION FROM DRAWINGS OR NOTES SHALL BE COORDINATED WITH STRUCTURAL ENGINEER.
- ALL PENETRATIONS SHALL BE COORDINATED WITH STRUCTURAL DRAWINGS AND STRUCTURAL ENGINEER.

EXCAVATION NOTES

- EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS WITHIN A TOLERANCE OF PLUS OR MINUS ONE (1) INCH. EXTEND EXCAVATIONS A SUFFICIENT DISTANCE FROM STRUCTURES FOR PLACING AND REMOVING CONCRETE FORMWORK, FOR INSTALLING SERVICES AND OTHER CONSTRUCTION, AND FOR INSPECTIONS.
 - A. EXCAVATIONS FOR FOOTINGS AND FOUNDATIONS: DO NOT DISTURB BOTTOM OF EXCAVATION. EXCAVATE BY HAND TO FINAL GRADE JUST BEFORE PLACING CONCRETE REINFORCEMENT. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE AND TO RECEIVE OTHER WORK.
 - B. EXCAVATIONS BELOW AND ADJACENT TO EXISTING FOUNDATIONS SHALL MAINTAIN A 1/2 SLOPE FROM THE BOTTOM OF FOOTING UNLESS NOTED OTHERWISE.

COMPACTION OF BACKFILLS

- PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN FOUR (4) INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
- PLACE BACKFILL AND FILL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATION UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.
- COMPACT SOIL TO NOT LESS THAN THE 95% PERCENT OF MAXIMUM DRY UNIT WEIGHTS ACCORDING TO ASTM D 1557.

FOUNDATION:

- ALL FOOTINGS ARE DESIGNED FOR NET ALLOWABLE CONTACT PRESSURE OF 15,000 PSF WITH AN ULTIMATE FRICTION COEFFICIENT OF 0.7 BETWEEN NEW FOOTINGS AND CLEAN BEDROCK SUBGRADE AND A MIN SAFETY FACTOR OF 1.5 TO RESIST SLIDING.
- CONTRACTOR TO PROVIDE A SUITABLE MEANS OF KEEPING EXCAVATION FREE OF STANDING GROUND, OR SURFACE WATER.
- FOOTINGS ARE TO BE CENTERED ON WALLS OR COLUMNS UNLESS NOTED OTHERWISE (UNO).
- ALL FOOTINGS TO BE PLACED ON UNDISTURBED BEDROCK, FREE OF ORGANIC MATTER, DEBRIS, RUBBLE, FROZEN, OR MUDDY SOIL, ETC., OR AS APPROVED BY ENGINEER; REFER TO SPECIFICATIONS.

- FOOTINGS BEARING ON BEDROCK AT EXTERIOR OR OTHERWISE UNHEATED LOCATIONS SHOULD BE FOUNDED AT LEAST 2'-0" BELOW ADJACENT GROUND SURFACE FOR FROST PROTECTION.
- ALL FOOTINGS SHALL BEAR ON BEDROCK. CONTRACTOR SHALL INFORM STRUCTURAL ENGINEER OF ANY LARGE VARIATIONS IN BEDROCK.
- ALL CONCRETE SLABS TO REST ON SELECT GRANULAR MATERIAL, REFER TO SPECIFICATIONS.
- BACKFILL BOTH SIDES OF ALL WALLS EVENLY UNTIL THE LOWEST ELEVATION IS REACHED.
- CONCRETE WALLS SHALL ATTAIN A MINIMUM STRENGTH OF 70% F_c BEFORE PLACING BACKFILL AGAINST THEM.
- LEVELS OF BACKFILL AGAINST FOUNDATION WALLS (EXCEPT CANTILEVER RETAINING WALLS) SHALL NOT DIFFER BY MORE THAN 2'-0" ON EITHER SIDE OF WALLS UNLESS WALLS ARE ADEQUATELY BRACED OR ALL FLOOR FRAMING AND CONCRETE IS IN PLACE UP TO AND INCLUDING FIRST FLOOR LEVEL CONCRETE SLABS.
- PROTECT EXCAVATION FROM FLOODING UNTIL ALL WALLS & FLOOR FRAMING UP TO AND INCLUDING FIRST FLOOR LEVEL ARE IN PLACE AND BACK-FILLING HAS BEGUN. WATER LEVEL SHALL BE MAINTAINED BELOW TOP OF BACKFILL AT ALL TIMES.
- REFER TO SPECIFICATIONS FOR SDIL TESTING AND FOUNDATION SUBGRADE INSPECTION REQUIREMENTS PRIOR TO FORMWORK CONSTRUCTION.

CONCRETE NOTES:

- DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES: ACI 301, "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE"; ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE";
- MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
- CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (±1.5%) WITH A MAXIMUM 4" SLUMP, AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
- MAXIMUM AGGREGATE SIZE SHALL BE 3/4".
- NON SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE (CUBE) STRENGTH OF 5,000 PSI @ 28 DAYS.
- THE FOLLOWING MATERIALS SHALL BE USED:
 - PORTLAND CEMENT: ASTM C 150, TYPE I
 - REINFORCEMENT: ASTM A 185
 - NORMAL WT. AGGREGATE: ASTM C 33
 - WATER: POTABLE
 - ADMIXTURES: NON-CHLORIDE CONTAINING
- REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 318.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- REINFORCING BARS AND WELDED WIRE FABRIC SHALL NOT BE WELDED, TACK-WELDED, OR USED FOR A STRIKING ARC.
- REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- DO NOT USE VIBRATORS TO TRANSPORT CONCRETE THROUGH CHUTES OR FORMWORK.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
 - CONCRETE CAST AGAINST EARTH.....3 IN.
 - CONCRETE EXPOSED TO EARTH OR WEATHER:
 - #6 AND LARGER2 IN.
 - #5 AND SMALLER & WWF1 1/2 IN.
 - CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
 - SLAB AND WALL3/4 IN.
 - BEAMS AND COLUMNS1 1/2 IN.
- A 3/4" MIN. CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 2.2.3.2.
- INSTALLATION OF CONCRETE ANCHORS, SHALL BE PER MANUFACTURERS WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
- CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
- ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301
- ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT AND SHALL FOLLOW ALL PROVISIONS SPECIFIED IN ACI 318-95. SEE MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION DRAWINGS FOR SIZE & LOCATION

- LOCATE ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION
- PLACE CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANES OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING.
- DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- DO NOT ALLOW CONCRETE SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING
- FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.
- CONCRETE SAMPLES & TESTS SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318-95, SECT. 5.
- LAP ALL HORIZONTAL BARS MARKED "CONT" MINIMUM 40 BAR DIAMETERS.
- ALL VERTICAL CONCRETE SURFACES TO BE FORMED INCLUDING EDGES OF FOOTINGS.

CONCRETE MASONRY UNIT (CMU)

- ALL CONCRETE BLOCK WORK SHALL CONFORM TO THE "NATIONAL CONCRETE MASONRY ASSOCIATION SPECIFICATIONS," LATEST EDITION AND SHALL BE IN ACCORDANCE WITH "ACI 530 BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES," LATEST EDITION.
- CONCRETE MASONRY UNITS SHALL BE OF NORMAL WEIGHT AGGREGATE. COORDINATE BLOCK TYPES WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
- ALL MORTAR SHALL BE ASTM C270, TYPE S.
- ALL BLOCK DIMENSIONS INDICATED ON STRUCTURAL PLANS ARE NOMINAL DIMENSIONS.
- GROUT TO CONFORM TO ASTM C476, COMPRESSIVE STRENGTH OF 2,000 PSI AFTER 28 DAYS. GROUT ALL BOND BEAMS & CMU CORES WITH STEEL REINFORCEMENT SOLID
- ALL CONCRETE BLOCK BELOW GRADE SHALL BE FILLED SOLID WITH MORTAR.
- CONCRETE BLOCK BELOW BEAM BEARING POINTS SHALL BE FILLED SOLID FOR A MINIMUM OF TWO COURSES IN DEPTH AND A MINIMUM OF 32" IN WIDTH, UNO.

STRUCTURAL STEEL NOTES:

- STRUCTURAL STEEL SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING:
 - A. W-SHAPES: ASTM A572, GRADE 50, (WITH SPECIAL REQUIREMENTS) AS PER AISC TECHNICAL BULLETIN #5, DATED MARCH 1997 (ASTM A992)
 - B. CHANNELS, ANGLES, AND PLATES: ASTM A36
 - C. TUBE STEEL - ASTM A500 GRADE C
- ALL STRUCTURAL STEEL USED SHALL BE DELIVERED, FINISHED WITH ONE COAT FABRICATOR'S NON-LEAD, RED OXIDE PRIMER, PRIMING SHALL BE PERFORMED AFTER SHOP FABRICATION. (SEE PAINTING NOTES)
- DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
- WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE "STRUCTURAL WELDING CODE - STEEL (ANSI/AWS D1.1) OF THE AMERICAN WELDING SOCIETY", CLASS 7D SERIES ELECTRODES.
- BOLTS AND BOLTED CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS OR A480 BOLTS" AS APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED JOINTS.
- BEAM CONNECTIONS:
 - A. WHERE BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS ARE NOT DETAILED THEY SHALL BE DESIGNED TO TRANSFER THE REACTION FOR A SIMPLY SUPPORTED, UNIFORMLY LOADED BEAM OF SAME SIZE, SPAN AND F_y AS LISTED IN THE TABLE OF UNIFORM LOAD CONSTANTS, AISC MANUAL OF STEEL CONSTRUCTION, EIGHTH EDITION, OR FOR THE REACTION SHOWN ON THE FRAMING PLAN, WHICHEVER IS GREATER. WHERE NO REACTION IS SHOWN ON THE FRAMING PLAN, CONNECTION SHALL TRANSFER THE REACTION AS DESCRIBED ABOVE, UNLESS NOTED OTHERWISE.
 - B. ALL FRAMED BEAM CONNECTIONS NOT DETAILED SHALL BE DESIGNED AS DOUBLE ANGLE CONNECTION. PROVIDE THE MINIMUM NUMBER OF HORIZONTAL BOLT ROWS AS SHOWN BELOW, BASED ON 3" C/C, UNLESS NOTED OTHERWISE:

NOMINAL DEPTH OF BEAM	MIN. NO. OF HORIZ. BOLT ROWS
6"	1
8", 10"	2
12", 14", 16", 18"	3
21", 24"	4
27", 30"	5
33", 36"	6

MINIMUM OF 2 BOLTS PER CONNECTION IS REQUIRED

DRAWING LIST:

- SDD1 GENERAL NOTES
- SDD2 GENERAL NOTES SYMBOLS AND ABBREVIATIONS
- SD101 FIRST FLOOR DEMOLITION PLAN
- S101 FOUNDATION PLAN
- S102 SLAB PLAN & DETAILS
- S103 RETAINING WALL PLAN & DETAILS
- S201 ROOF/SECOND FLOOR FRAMING PLAN
- S203 ROOF/SCREEN WALL FRAMING PLAN
- S401 FOUNDATION DETAILS & SECTIONS
- S402 FOUNDATION DETAILS & SECTIONS
- S403 MISCELLANEOUS DETAILS & SECTIONS
- S404 MISCELLANEOUS DETAILS & SECTIONS
- SSD1 FRAMING DETAILS & SECTIONS
- SSD2 MISCELLANEOUS DETAILS & SECTIONS
- SSD3 FRAMING DETAILS & SECTIONS

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0	FOR CONSTRUCTION	7/13/01
no.	revisions/submissions	date



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drawing title
GENERAL NOTES

designed by TF	project no. 5501001.00
drawn by RT	CAD file no. CTL-S001.DWG
checked by TF	drawing no. S001
date 07/13/01	
scale NONE	of