GENERAL / DESIGN CRITERIA

1. THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2003 EDITION.
2. DESIGN LOADS:
   - ROOF LOAD — LIVE 20 PSF
   - ATTIC LOAD (ONLY AT AREA NOTED FOR HVAC) — LIVE 40 PSF
   - DEAD LOAD – SELF WT OF MATLS AND EQUIPMENT.
   - SNOW LOADS: DO NOT EXCEED THE MINIMUM ROOF LIVE LOADS.
   - WIND LOADS: WIND PRESSURES ARE CALCULATED FOR A BASIC WIND SPEED OF 90 MPH, EXPOSURE C, AND IMPORTANCE FACTOR 1.0.
   - SEISMIC LOADS: SEISMIC IMPORTANCE FACTOR: I_E=1.0, S_s= 11.8%, S_1= 5.55%, SITE CLASS D, S_{DS}= .13, S_{D1}= .09, SEISMIC DESIGN CATEGORY B, BASE SHEAR = 3% W.
3. PLAN SHOWS THE LOCATION OF STRUCTURAL MEMBERS ONLY. ARCHITECTURAL DIMENSIONS MUST BE COMPARED TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER. THE STRUCTURE SHOULD BE BUILT USING THE ARCHITECTURAL PLANS – NOT THE ENGINEER'S PLAN. DO NOT SCALE PLAN.
4. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALL WATERPROOFING AND DAMP PROOFING DETAILS.
5. EXISTING UTILITIES ARE NOT SHOWN ON DRAWINGS FOR CLARITY. VERIFY ALL LOCATIONS AND ELEVATIONS OF UTILITIES AND NOTIFY ENGINEER BEFORE BEGINNING NEW CONSTRUCTION OF ANY INTERFERENCES WHICH MIGHT EXIST.
6. SHOULD CONDITIONS ARISE THAT ARE NOT COVERED BY DETAILS ON THIS PLAN, CONTACT ENGINEER AT ONCE FOR ADDITIONAL INSTRUCTIONS.
7. THE FOUNDATION DESIGN SHOWN REFLECTS THE MINIMUM REQUIREMENTS TO ACHIEVE A FOUNDATION WHICH WILL PERFORM ADEQUATELY WITH THE SOIL PARAMETERS PROVIDED BY THE GEOTECHNICAL ENGINEER. THE INTENT IS NOT TO ELIMINATE BUT LIMIT DEFLECTION SUCH THAT DIFFERENTIAL MOVEMENT WILL NOT CAUSE UNDUE STRESS.
8. CARE SHOULD BE TAKEN TO MAINTAIN THE MOISTURE CONTENT OF THE SOIL UNDER AND AROUND THE BUILDING FOUNDATION DURING AND AFTER CONSTRUCTION. GRADING SHOULD PROVIDE POSITIVE DRAINAGE SUCH THAT WATER DOES NOT COLLECT ADJACENT TO OR UNDER THE FOUNDATION. HEAVY VEGETATION (TREES, LARGE SHRUBS, ETC.) SHOULD NOT BE PLACED WITHIN 10 FEET (OR ½ THE MATURE HEIGHT OF THE PLANT) OF THE FOUNDATION.

STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE A.I.S.C. SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, AND WITH ALL LOCAL LAWS AND ORDINANCES. WHERE CONFLICTING REQUIREMENTS OCCUR, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
2. ALL STRUCTURAL STEEL W, S, M, & HP SHAPES AND CHANNELS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A992 OR ASTM A572, GRADE 50.
3. ALL STRUCTURAL STEEL ANGLES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
4. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B, FY=46 KSI.
5. STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A501 OR A53, TYPE E OR S, GRADE B, FY=35 KSI.
6. UNLESS NOTED OTHERWISE, ALL SHOP CONNECTIONS SHALL BE MADE BY WELDING OR HIGH STRENGTH BOLTS.
7. UNLESS OTHERWISE NOTED, ALL FIELD CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS, CONFORMING TO ASTM A325. CONNECTIONS SHALL BE DESIGNED AS BEARING TYPE WITH THREADS IN SHEAR PLANE.
8. UNLESS OTHERWISE NOTED, BOLTS SHALL BE 3/4" DIA A325 AND HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE.
9. ALL ANCHOR BOLTS SHALL BE ASTM A36 OR A307, UNLESS NOTED OTHERWISE.
10. ALL WELDING SHALL CONFORM TO THE SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY.
11. UNLESS NOTED OTHERWISE, ALL BEAM CONNECTIONS SHALL BE STANDARD FRAMED CONNECTIONS AS SHOWN IN PART 4 OF THE A.I.S.C. MANUAL OF STEEL CONSTRUCTION. UNLESS LARGER REACTIONS ARE INDICATED ON THE PLANS, CONNECTIONS SHALL DEVELOP AT LEAST ONE–HALF OF THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE TABLES OF THE MANUAL FOR THE GIVEN SHAPE AND SPAN OF THE BEAM IN QUESTION, IN NO CASE, HOWEVER, SHALL THE LENGTH OF CONNECTION BE LESS THAN ONE–HALF THE "T" DISTANCE OF THE MEMBER. SEATED CONNECTIONS TO COLUMN WEBS MAY BE USED IN LIEU OF STANDARD FRAMED CONNECTIONS. SEATED CONNECTIONS SHALL HAVE TOP ANGLES OR TOP SIDE CLIPS.
12. NO OPENINGS SHALL BE CUT IN STRUCTURAL MEMBERS UNLESS SHOWN ON THE DRAWINGS.
13. ANCHOR BOLT HOLES IN BASE PLATES AND DETAIL MATERIAL SHALL BE SIZED IN ACCORDANCE WITH A.I.S.C. "DETAILING FOR STEEL CONSTRUCTION".
14. COLUMN ANCHOR BOLTS ARE DESIGNED FOR A COMPLETE CONDITION ONLY. CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING REQUIRED TO MAINTAIN STABILITY UNTIL ALL ELEMENTS REQUIRED FOR STRUCTURAL STABILITY ARE IN PLACE.

SUBGRADE PREPARATION AND FOUNDATION

1. REFER SUBSURFACE EXPLORATION AND REPORT BY CMJ ENGINEERING, INC.. (REPORT NO. 110–08–28, DATED OCTOBER 10, 2008) FOR DETAILED DESCRIPTION OF SUBSURFACE SOIL CONDITIONS.
2. THE CONTRACTOR SHALL PROVIDE A LICENSED GEOTECHNICAL ENGINEER TO VERIFY THAT THE BUILDING SUBGRADE PREPARATION IS SUITABLE AND APPROPRIATE BEARING MATERIAL IS ACHIEVED PRIOR TO SLAB POUR AND DRILLED PIER PLACEMENT.
3. DESIGN FOUNDATION BEARING PRESSURE FOR DRILLED PIERS (NET): 30 KSF IN GRAY LIMESTONE WITH SHALE SEAMS AT A DEPTH OF APPROXIMATELY 13 FEET BELOW EXISTING GRADE. THE ACTUAL DEPTH OF THE PIERS SHALL BE DETERMINED IN THE FIELD BY THE OWNER'S TESTING LABORATORY.
4. DESIGN FOUNDATION BEARING DOWNWARD RESISTING SKIN FRICTION IS 5.5 KSF (NEGLECTING FIRST 2 FEET OF EMBEDMENT) IN GRAY LIMESTONE.
5. DESIGN FOUNDATION BEARING UPLIFT RESISTING SKIN FRICTION IS 4 KSF (NEGLECTING FIRST 2 FEET OF EMBEDMENT) IN GRAY LIMESTONE.
6. DESIGN UPLIFT OF 1.0 KSF OVER THE UPPER 9 FEET OF DRILLED PIERS.
7. SELECT FILL SHALL BE A SANDY CLAY OR CLAYEY SAND NONEXPANSIVE MATERIRAL WITH A LIQUID LIMIT LESS THAN 35 AND A PLASTICITY INDEX (PI) BETWEEN 5 AND 16. SELECT FILL SHALL BE PLACED IN 9 INCH (MAXIMUM) LIFTS AND COMPACTED TO BETWEEN 95% AND 100% OF STANDARD PROCTOR DENSITY (ASTM D698). SELECT FILL SHALL BE MOISTURE CONDITIONED SUCH THAT MOISTURE IS BETWEEN –2% AND +3% OF OPTIMUM MOISTURE CONTENT.
8. SUBGRADE PREPARATION SHALL BE AS FOLLOWS:
   - A. REMOVE ALL EXISTING PAVEMENTS, SURFACE VEGETATION, TREES AND ASSOCIATED ROOT MATS, ORGANIC TOPSOIL AND ANY OTHER DELETERIOUS MATERIAL.
   - B. EXCAVATE THE SURFICIAL CLAYS TO A MINIMUM DEPTH OF 4.5 FEET BELOW EXISTING GROUND.
   - C. SCARIFY THE EXPOSED SUBGRADE AT THE BASE OF THE EXCAVATION TO A DEPTH OF 8 INCHES, ADJUST THE MOISTURE, AND COMPACT AT A MINIMUM OF 3 PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE TO BETWEEN 93 AND 98 PERCENTAGE OF STANDARD PROCTOR DENSITY (ASTM D698).
   - D. FILL PAD TO 1 FOOT BELOW FINAL GRADE USING SITE EXCAVATED OR SIMILAR CLAY SOILS. COMPACT IN MAXIMUM 9" LOOSE LIFTS AT A MINIMUM OF 3 PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE TO BETWEEN 93 AND 98 PERCENTAGE OF STANDARD PROCTOR DENSITY (ASTM D698). OVER–COMPACTION SHALL NOT BE ALLOWED. SELECT FILL SHALL BE PLACED WITHIN 48 HOURS OF COMPLETING THE INSTALLATION OF MOISTURE CONDITIONED SOIL.
   - E. FROM THIS LEVEL UP TO FINAL PAD GRADE, PLACE SELECT FILL AS NOTED ABOVE.
   - F. PLACE A 6 MIL VAPOR BARRIER ATOP THE SELECT FILL BENEATH THE FLOOR SLAB.
   - G. EACH LIFT SHALL BE TESTED FOR MOISTURE CONTENT AND COMPACTION BY A TESTING LABORATORY AT A RATE OF ONE TEST PER 5,000 SQUARE FEET WITH A MINIMUM OF 2 TESTS PER LIFT.
   - H. MOISTURE, EROSION AND SEDIMENT CONTROLS OUTLINED IN THE GEOTECHNICAL INVESTIGATION SHOULD BE FOLLOWED.
9. DRAINAGE SHALL BE MAINTAINED AROUND THE FOUNDATION AT ALL TIMES DURING AND AFTER THE CONSTRUCTION PERIOD.
10. TRENCHES FOR PLUMBING LINES SHALL NOT BE PLACED DIRECTLY UNDER (PARALLEL TO) GRADE BEAMS. PLUMBING LINES SHALL BE PLACED PERPENDICULAR TO GRADE BEAMS.

CONCRETE

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. ALL CONCRETE WORK SHALL MEET THE REQUIREMENTS OF A.C.I. 318. CONCRETE SHALL BE DEPOSITED IN FORMS NOT LATER THAN TWO HOURS AFTER WATER IS MIXED AT THE PLANT. ONE ADDITION OF WATER WILL BE PERMITTED AT THE JOB SITE TO ADJUST THE SLUMP TO A MAXIMUM OF 6 INCHES.
2. UNLESS OTHERWISE NOTED, ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (A.C.I. 315).
3. UNLESS OTHERWISE NOTED, ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60, INCLUDING SUPPLEMENTARY REQUIREMENTS.
4. ALL REINFORCING BAR SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
5. UNLESS NOTED OTHERWISE CONCRETE COVER OVER STEEL REINFORCEMENT SHALL CONFORM TO THE MINIMUMS REQUIRED BY CURRENT EDITION OF ACI 318.
6. WIRE MESH REINFORCING SHALL LAP TWO FULL SPACINGS OF THE CROSS WIRES AND BE SECURELY WIRED AT EACH SIDE AND END.
7. ALL SLOTS, SLEEVES AND OTHER EMBEDDED ITEMS SHALL BE SET BEFORE CONCRETE IS PLACED. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND VENDOR'S DRAWINGS FOR SIZE AND LOCATIONS.
8. CONDUIT IN SLAB REQUIRED PRIOR TO CONCRETE PLACEMENT. LOCATION TO BE VERIFIED IN FIELD. PIPING, VENTS OR ELECTRICAL CABLES SHALL BE PLACED SO AS NOT TO REDUCE SLAB THICKNESS.
9. ALL REINFORCING BAR HOOKS SHOWN ON DRAWINGS SHALL BE A.C.I. STANDARD 90° HOOKS, UNLESS NOTED OTHERWISE.
10. PROVIDE 2–#4 x 4'–0' LONG DIAGONAL BARS IN TOP FACE AT ALL REENTRANT CORNERS IN SLABS.
11. ALL REINFORCING BARS AT REENTRANT CORNERS SHALL EXTEND FOR THE FULL EMBEDMENT LENGTH PAST THE CORNER, UNLESS NOTED OTHERWISE.
12. #4 BAR – 36 INCH x 36 INCH CORNER BARS ARE REQUIRED AT ALL EXTERIOR CORNERS TOP, U.N.O.. DEEPENED BEAMS TO HAVE CORNER BARS WITH DIAMETER EQUAL TO HORIZONTAL STEEL AT EACH HORIZONTAL BAR.
13. IN AREAS TO RECEIVE TILE, WE RECOMMEND INSTALLING 6x6x1.4x1.4 WWF 1½" BELOW CONCRETE SURFACE AND BEDDING THE TILE ON A BOND BREAKER TO PREVENT SHRINKAGE CRACKS FROM REFLECTING THROUGH THE TILE.
14. CONCRETE SHALL BE WELL CONSOLIDATED USING PROPER MECHANICAL VIBRATION.
15. USE "SIKA" ARMATEC 110 (OR EQUIVALENT) BONDING AGENT AT ALL COLD JOINTS.
16. COLD WEATHER AND HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306 AND ACI 305 RECOMMENDED PRACTICES RESPECTIVELY.
17. ADMIXTURES WHICH IMPROVE WORKABILITY AND AIR ENTRAINMENT ARE PERMITTED AND MUST BE NOTED IN MIX DESIGNS IF USED. ADMIXTURES, IF USED, SHOULD HAVE NO CHEMICALS WHICH WILL BE HARMFUL TO THE REINFORCING STEEL OR CEMENT. ADMIXTURES WITH CHLORIDES, FLUORIDES, SULPHITES OR NITRATES ARE NOT PERMITTED. FLY ASH MAY BE USED ONLY WITH THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
18. CONTRACTOR TO SUBMIT THE PROPOSED CONCRETE MIX DESIGN FOR ENGINEER'S RECORD AND REVIEW WELL IN ADVANCE OF CONCRETE PLACEMENT. THE STRUCTURAL ENGINEER DOES NOT APPROVE THE DESIGN OF CONCRETE MIXES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PERFORMANCE OF THE CONCRETE SUPPLIED TO THE JOB. PROPOSED MIX DESIGNS SHALL BE PREPARED AND/OR REVIEWED AND APPROVED FOR CONFORMANCE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY AN INDEPENDENT TESTING LABORATORY. MIX DESIGNS SHALL BE IN ACCORDANCE WITH CHAPTER 5 OF THE LATEST VERSION OF ACI 318.
19. SHOP DRAWINGS SHALL BE SUBMITTED SHOWING ALL REINFORCEMENT TO BE PLACED. SHOP DRAWINGS SHALL INCLUDE PLANS AND ELEVATIONS SHOWING BAR SIZE, LOCATION AND PLACEMENT WITHIN FOUNDATION SLAB, WALLS, AND BEAMS.

STRUCTURAL SHEATHING

1. STRUCTURAL REQUIREMENTS FOR SHEATHING ARE AS FOLLOWS:
   - A. ALL PLYWOOD/OSB SHEATHING SHALL BE APA PERFORMANCE RATED PANELS.
   - B. FOR WALL SHEATHING AND ROOF SHEATHING SHEATHING ALL JOINTS SHALL BE BLOCKED.
   - C. AT LOCATIONS WHERE STRUCTURAL PANELS ARE APPLIED TO BOTH SIDES OF THE SAME STUDS, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
   - D. ROOF DECK PANELS SHALL BE CONTINUOUS OVER TWO OR MORE SPANS WITH THE LONG DIMENSION OR STRENGTH AXIS ACROSS SUPPORTS. PROVIDE ⅛" SPACING BETWEEN ADJACENT PANELS AT ALL END AND EDGE JOINTS.
   - E. FASTENERS SHALL BE LOCATED A MINIMUM OF ⅜" FROM PANEL EDGES.

LOCATION	EXPOSURE	THICKNESS	SPAN RATING	PANEL GRADE
ROOF	EXPOSURE 1	19/32"	40/20	STRUCTURAL I
WALLS (EXT. FACE OR PER SHEAR WALL SCHEDULE	EXPOSURE 1	15/32"	24/16	STRUCTURAL I

2. STRUCUTRAL SHEATHING SHALL BE AS NOTED ON SHEAR WALL TABLE AND ROOF DECK NOTES ON S1.1, S2.1 AND S3.1.
3. ALL ROOF DIAPHRAGMS ARE TO BE BLOCKED WITH 2x MEMBERS AT ALL PANEL EDGES.

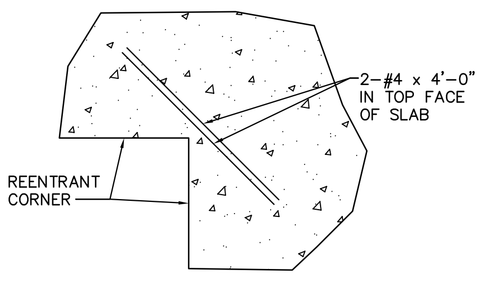
WOOD FRAMING

1. WOOD FRAMING SHALL CONFORM TO THE FOLLOWING WITH LUMBER GRADES IN ACCORDANCE WITH AMERICAN FOREST AND PAPER ASSOCIATION "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION":

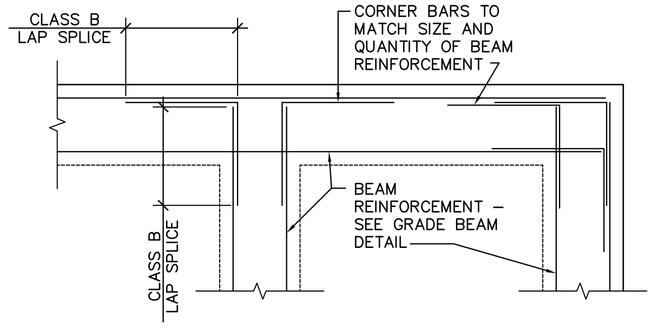
   DIMENSIONAL LUMBER SHALL BE SP/DF–L #2 OR BETTER
   GLU–LAM (GL) LUMBER SHALL BE 24F–V5 SOUTHERN PINE WITH F_v > 240 PSI, F_b > 2900 PSI, E_w> 1,800,000 PSI.
2. ALL SILLS AND WOOD TOUCHING THE FOUNDATION SHALL BE PRESERVATIVE TREATED. ALL MEMBERS PERMANENTLY EXPOSED TO WEATHER SHALL BE PRESERVATIVE TREATED.
3. FINGER–JOINTED STUDS MAY BE USED AT ALL LOCATIONS EXCEPT HOLD–DOWN LOCATIONS AT THE ENDS OF SHEAR WALLS.
4. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL CANTILEVERED JOISTS SHALL EXTEND INTO THE BUILDING A DISTANCE AT LEAST EQUAL THE CANTILEVER. CANTILEVERED JOISTS RUNNING PERPENDICULAR TO FRAMING INSIDE THE BUILDING SHALL BE CONNECTED TO INSIDE MEMBERS WITH METAL JOIST HANGERS. CANTILEVERED JOISTS RUNNING PARALLEL TO FRAMING INSIDE THE BUILDING SHALL BE NAILED TO THE SIDE OF INSIDE MEMBERS WITH 10d NAILS AT 12" O.C. TOP AND BOTTOM.
5. WHERE MULTIPLE JOISTS OR HEADERS OCCUR, THERE SHALL BE A MINIMUM OF ONE STUD FOR EACH MEMBER OF THE BEAM. I.E. PROVIDE DOUBLE STUDS UNDER DOUBLE JOISTS.
6. WHERE STUDS AND DOUBLE STUDS OCCUR, THEY ARE TO BE DOUBLED AT ALL ANGLES, CORNERS AND AROUND ALL OPENINGS.
7. WALL STUD SIZE AND SPACING SHALL BE AS FOLLOWS:
   - A. LOAD BEARING STUDS WITHIN 8'–0" OF BUILDING CORNERS ARE TO BE 2x6'S AT 12" O.C.
   - B. LOAD BEARING STUDS ELSEWHERE ARE TO BE 2x6'S AT 16" O.C.
   - C. NON–LOAD BEARING STUDS MAY BE 2x4'S OR 2x6'S (PER ARCHITECTURAL PLANS) AT 16" O.C.
8. ALL OUTSIDE CORNERS OF BUILDING SHALL BE BRACED DURING CONSTRUCTION WITH PLYWOOD OR DIAGONAL 1x4 NAILED TO EXTERIOR OF WALL. LET–IN DIAGONALS SHALL NOT BE USED.
9. PROVIDE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE FOR ALL STUD WALLS. SPLICES IN THE TOP PLATE SHALL BE 5–0" MINIMUM.
10. UNLESS NOTED OTHERWISE, BOTTOM SILL PLATE ATTACHMENT TO THE FOUNDATION SHALL BE AS FOLLOWS:
    - A. INTERIOR OR EXTERIOR PLATES SHALL BE ANCHORED WITH ½" DIAMETER BOLTS (WITH WASHERS) EMBEDDED 7" (MINIMUM) INTO THE FOUNDATION. BOLTS SHALL BE SPACED AT 4'–0" O.C. (MAXIMUM).
    - B. A POWDER ACTUATED FASTENING SYSTEM MAY BE SUBSTITUTED FOR BOLTS AT INTERIOR WALLS IF ACCEPTED BY GOVERNING AUTHORITIES. IF POWDER ACTUATED FASTENING SYSTEM IS TO BE USED AT INTERIOR WALLS, HILTI ZF72/P8S36 (OR EQUIVALENT) PINS MAY BE USED. POWDER ACTUATED FASTENER SHALL HAVE 1 ¼"MINIMUM PENETRATION INTO CONCRETE AND SHALL BE SPACED AT 16" O.C. FOR LOAD BEARING WALLS AND 32" O.C. FOR NON–LOAD BEARING WALLS.
11. TYPICAL ROOF FRAMING SHALL BE FABRICATED TRUSSES CAPABLE OF SPANNING AS SHOWN ON THE FLOOR FRAMING PLANS. VERIFY ALL MECHANICAL AND EQUIPMENT LOADS WITH MECHANICAL CONTRACTOR AND GENERAL CONTRACTOR.
12. PROVIDE SOLID, SECURE BLOCKING FOR ALL NAILS, SCREWS, BOLTS, ANCHORS AND FASTENERS OF ANY KIND.
13. ALL BOLTS, LAG SCREWS, WOOD SCREWS, ETC. SHALL BE GALVANIZED A307 STEEL (U.N.O.) OR BETTER.
14. ALL FASTENERS AT EXPOSED CONDITIONS SHALL BE GALVANIZED.
15. FOR BEAMS OR GIRDERS FRAMING INTO WALL, PROVIDE ONE SUPPORTING STUD FOR EACH 1½" OF BEAM WIDTH, U.N.O..
16. CONTRACTOR SHALL COMPARE STRUCTURAL DIMENSIONS AND SECTIONS WITH ARCHITECTURAL DIMENSIONS AND SECTIONS AND REPORT ANY DISCREPANCY TO ARCHITECT PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS.
17. THE STRUCTURE DESCRIBED IN THESE DOCUMENTS IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORTS THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
18. CONNECTION SCHEDULE (UNLESS NOTED OTHERWISE ON FRAMING PLANS OR DETAILS):
    - A. BUILT–UP BEAMS AND HEADERS: 12d @ 12" O.C. TOP AND BOTTOM (STAGGERED) AND 2–12d AT ENDS FOR EACH PLY.
    - B. STUD TO SOLE PLATE: END NAIL 2–12d OR TOE NAIL EACH SIDE 2–8d
    - C. DOUBLE TOP PLATE: LOWER MEMBER TO STUDS – END NAIL 2–12d; UPPER MEMBER TO LOWER – 12d @ 12" O.C. STAGGERED; AT INTERSECTION – 3–12d; AT LAPS – 2–12d.
    - D. SOLE PLATE (BOTTOM) PLATE TO TRUSS JOIST OR BLOCKING: FACE NAIL 16d PER SCHEDULE AT SHEAR WALLS, 16d @16" OTHER WALLS.
    - E. HEADER TO STUD: TOE NAIL EACH SIDE 2–8d.
    - F. BLOCKING BETWEEN STUDS: END NAIL 2–12d EACH END OR TOE NAIL 2–8d EACH END.
    - G. MULTIPLE STUDS: 12d @ 12" O.C. STAGGERED AND 2–12d AT ENDS FOR EACH PLY.
    - H. TRUSSES, DIMENSION JOISTS AND RAFTERS, AND GIRDERS: TOE NAIL – 3–8d.
    - I. BLOCKING OR BRIDGING BETWEEN JOISTS AND RAFTERS – TOE NAIL EACH END 2–8d.
    - J. ALL WOOD TRUSSES TO HAVE 2x BLOCKING EVERY THIRD SPACE (MINIMUM) BETWEEN ADJACENT TRUSSES AT BEARING POINTS:
      - i. BLOCKING TO EACH TRUSS: 2–12d END NAILS.
      - ii. BLOCKING TO BEARING PLATE: 4–12d FACE NAILS.
    - K. SOLE PLATE TO STRUCTURAL STEEL MEMBERS W/ HILTI DNI62P8 FASTENERS WITH 36mm WASHERS @ 12" O.C..
19. WHERE NOT NOTED ON THESE DRAWINGS, FASTENING SHALL BE PER TABLE 2304.9.1 IN THE 2003 EDITION OF THE INTERNATIONAL BUILDING CODE.

WOOD TRUSSES

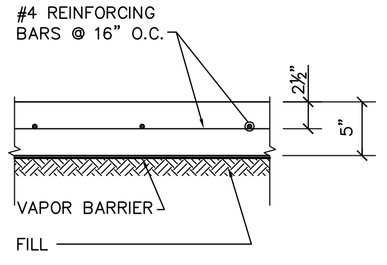
1. WOOD TRUSSES SHALL COMPLY WITH REQUIREMENTS OF ALL APPLICABLE CODES AND ORDINANCES.
2. SIZES OF WOOD MEMBERS PER AMERICAN SOFTWOOD STANDARD PS20–70.
3. GRADING RULES PER WESTERN WOOD PRODUCTS ASSOCIATION OR APPROVED EQUAL AUTHORITY.
4. DESIGN AND FABRICATION OF WOOD TRUSSES SHALL MEET REQUIREMENTS OF LATEST EDITION AND REVISIONS OF "NATIONAL DESIGN SPECIFICATIONS FOR STRESS–GRADE LUMBER AND ITS FASTENINGS" BY AMERICAN FOREST AND PAPER ASSOCIATION, "TIMBER CONSTRUCTION STANDARDS" BY A.I.T.C. AND "DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES" BY TRUSS PLATE INSTITUTE.
5. STANDARD OF QUALITY: MANUFACTURED TRUSSES WITH ICBO/SBCCI APPROVED GALVANIZED STEEL CONNECTOR PLATES.
6. TRUSS SUPPLIER SHALL VERIFY AND COORDINATE ALL TRUSS DIMENSIONS WITH ARCHITECT'S AND ENGINEERS PLANS.
7. SHOP DRAWINGS AND DESIGNS SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER OR ARCHITECT PRIOR TO THE FABRICATION OF ANY COMPONENTS.
8. ALL TRUSS DESIGNS SHALL BEAR THE NAME, SEAL AND REGISTRATION NUMBER OF A PROFESSIONAL ENGINEER REGISTERED IN TEXAS.
9. SHOP DRAWINGS SHALL CLEARLY INDICATE WHERE RAFTER EXTENSIONS OR ADDITIONAL CONVENTIONAL FRAMING IS REQUIRED BY OTHERS TO COMPLETE OVERHANGS, PLATFORMS, ETC.
10. TRUSS DESIGNS SHALL CONTAIN THE FOLLOWING DATA:
    - A. DESIGN AND FABRICATION DATA, INCLUDING ALL DESIGN LOADS.
    - B. METAL PLATE CONNECTORS AND ALL HARDWARE FOR TRUSS CONNECTIONS WILL SHOW GAGE, SIZES OF CONNECTOR, AND MANUFACTURER AND SHALL BE DESIGNED AND SPECIFIED BY REGISTERED TRUSS DESIGN ENGINEER OF RECORD.
    - C. LUMBER SPECIFICATIONS.
    - D. PLAN OF TRUSS LAYOUT SHOWING LOCATIONS AND WEIGHTS OF ALL FLOOR AND/OR ROOF MOUNTED EQUIPMENT COORDINATED WITH MECHANICAL AND ELECTRICAL CONTRACTORS.
    - E. PITCH, SPAN AND SPACING OF TRUSSES.
    - F. FORCE ANALYSIS OR BAR FORCES IN EACH MEMBER.
    - G. SIZE AND LOCATION OF ALL CONNECTOR PLATES.
    - H. TRUSS SUPPORTS.
    - I. CAMBER (IF ANY).
    - J. PERMANENT BRACING AND/OR BRIDGING.
    - K. HANDLING AND ERECTION DETAILS/INSTRUCTIONS.
    - L. DETAILS OF CONNECTIONS BETWEEN TRUSSES AND SUPPORTS (BEAMS, BEARING WALLS, OR OTHER TRUSSES).
11. TRUSS SHOP DRAWINGS SHALL BE MADE AVAILABLE AT JOB SITE AND SHALL BEAR CLEAR INDICATION THAT THEY HAVE BEEN APPROVED BY STRUCTURAL ENGINEER OR ARCHITECT OF RECORD.



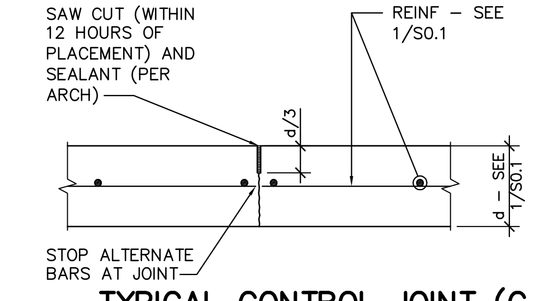
4 S0.1 — TYPICAL SLAB REENTRANT CORNER BARS DETAIL
SCALE: NTS



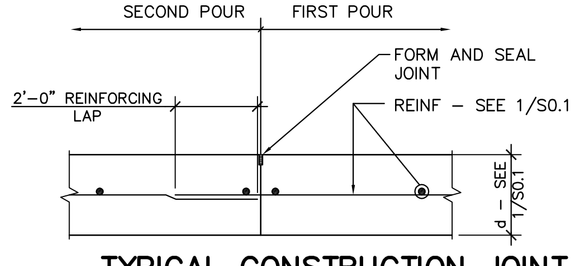
5 S0.1 — TYPICAL CORNER BAR DETAIL – PARTIAL PLAN
SCALE: 1/2"=1'–0"



1 S0.1 — TYPICAL SLAB SECTION
SCALE: NTS



2 S0.1 — TYPICAL CONTROL JOINT (CJ) FOR SLAB ON GRADE
SCALE: NTS



3 S0.1 — TYPICAL CONSTRUCTION JOINT (CJ) FOR SLAB ON GRADE
SCALE: NTS

STRUCTURAL ENGINEER OF RECORD
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