GENERAL

1. THE GENERAL NOTES ARE NOT A SUBSTITUTE OR A REPLACEMENT FOR THE PROJECT SPECIFICATIONS. THESE NOTES ARE INTENDED AS A GUIDE TO THE DESIGN AND/OR CONSTRUCTION REQUIREMENTS ESTABLISHED FOR THIS PROJECT. NO CONTRACTOR SHOULD ATTEMPT TO DESIGN, BID OR CONSTRUCT ANY PORTION OF THE WORK HEREIN WITHOUT CONSULTING THE PROJECT SPECIFICATIONS. IF ANY CONFLICTS OCCUR BETWEEN THE NOTES, PROJECT SPECIFICATIONS AND DETAILS, THE MOST STRINGENT REQUIREMENT SHALL GOVERN UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND 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, SEQUENCE AND SAFETY. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED TEMPORARY BRACING AND SHORING DURING CONSTRUCTION TO MAINTAIN THE STABILITY OF THE STRUCTURE. CONSTRUCTION LOADS SHALL NOT EXCEED THE CAPACITY OF THE INSTALLED STRUCTURE AT ANY TIME.

3. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL, AND OTHER CONTRACT DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THESE DRAWINGS. DISCREPENCIES, INCLUDING DIMENSIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR DESIGN ENGINEER PRIOR TO PROCEEDING WITH FABRICATION OR CONSTRUCTION.
5. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES IN THE DESIGN DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO FABRICATION OR CONSTRUCTION.
6. DETAILS/SECTIONS SHOWN ON DRAWINGS ARE TYPICAL AND MAY APPLY TO LOCATIONS OTHER THAN WHERE SPECIFICALLY MARKED ON THE PLANS. IF SECTIONS OR DETAILS DO NOT REPRESENT ALL REQUIRED CONDITIONS, THE ENGINEER SHALL BE CONTACTED FOR CLARIFICATION BY THE GENERAL CONTRACTOR.
7. IF EXISTING CONDITIONS MAKE IT NECESSARY TO REVISE STRUCTURAL DETAILS, NOTIFY DESIGN ENGINEER BEFORE PROCEEDING WITH ANY CHANGES.
8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONTRACT DRAWINGS AND LATEST ADDENDA AND SUBMITTING THESE DOCUMENTS TO SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBER AND ERECTION IN THE FIELD.
9. THE GENERAL CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITIES FROM ALL DAMAGE.
10. EQUIPMENT PADS ARE TO BE PROVIDED BY THE MECHANICAL OR ELECTRICAL CONTRACTORS REQUIRING THE PADS.
11. ALL WORK SHALL BE DONE IN ACCORDANCE WITH OSHA AND OWNER'S REGULATIONS
12. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY CONTRACTOR AT BEGINNING OF PROJECT. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN DESIGN DRAWINGS AND FIELD CONDITIONS. NO MATERIALS SHALL BE ORDERED OR FABRICATED PRIOR TO VERIFYING ALL STRUCTURAL DETAILS AND PLANS MATCH FIELD CONDITIONS.

FOUNDATION

1. ALL FOUNDATION AND SLAB ON GRADE EXCAVATIONS ARE TO FOLLOW RECOMMENDATIONS STATED IN THE REPORT OF GEOTECHNICAL EXPLORATION TO BE PROVIDED BY OWNER.
2. ALL EXISTING TOPSOIL, VEGETATION, DISTURBED SOILS AND SURFACE SOILS CONTAINING ORGANIC MATTER OR OTHER DELETERIOUS MATERIALS SHOULD BE STRIPPED FROM WITHIN THE PROPOSED BUILDING AND PAVED AREAS.
3. CONTRACTOR SHALL REMOVE AND REPLACE UNNACCEPTABLE SOILS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND/OR AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.
4. FOUNDATIONS AND SLABS ARE TO BE PLACED ON FIRM UNDISTURBED NATURAL SOIL OR PROPERLY COMPACTED FILL MATERIAL. FILL MATERIAL SHALL BE COMPACTED IN THIN LIFTS TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698). IN ADDITION, AT LEAST THE UPPER 18 INCHES OF SUBGRADE FILL BENEATH PAVEMENTS AND FLOOR SLABS SHOULD BE COMPACTED TO 100 PERCENT OF THE SAME SPECIFICATION.
5. IN ORDER TO VERIFY THAT THE SOILS ENCOUNTERED IN FOOTING EXCAVATIONS ARE SIMILAR TO THOSE ENCOUNTERED IN THE SOIL TEST BORINGS, FOOTING EXCAVATIONS ARE TO BE EXAMINED AND CHECKED WITH A DYNAMIC HAND PENETROMETER BY AN EXPERIENCED ENGINEERING TECHNICIAN WORKING UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER.
6. FOOTINGS SHOULD BE POURED AS SOON AS POSSIBLE AFTER EXCAVATION. THE FOUNDATION BEARING AREA SHOULD BE LEVEL AND BE FREE OF LOOSE SOIL, PONDED WATER, AND DEBRIS. FOUNDATION CONCRETE SHOULD NOT BE PLACED ON SOILS THAT HAVE BEEN DISTURBED BY SEEPAGE. IF BEARING SOILS ARE SOFTENED BY SURFACE WATER INTRUSION OR EXPOSURE, THE SOFTENED SOILS MUST BE REMOVED FROM THE FOUNDATION EXCAVATION BOTTOM IMMEDIATELY PRIOR TO PLACEMENT OF CONCRETE.
7. WHERE FOOTING EXCAVATIONS MUST REMAIN OPEN FOR AN EXTENDED PERIOD OR IF RAINFALL BECOMES IMMINENT WHILE BEARING SOILS ARE EXPOSED, A 2" TO 4" THICK MUD MAT OF UNREINFORCED LEAN (F'c=2000psi) CONCRETE SHALL BE PLACED ON THE BEARING SOILS BEFORE PLACEMENT OF THE FOOTING REINFORCING.
8. CENTER ALL FOOTINGS UNDER WALLS, COLUMNS OR GRID LINES UNLESS NOTED OTHERWISE.
9. RETAINING WALLS TO BE PROPERLY SHORED BEFORE BACKFILLING. HEAVY EQUIPMENT SHALL NOT BE ALLOWED WITHIN 5 FEET OF THESE WALLS. USE MECHANICAL HAND TAMPERS FOR COMPACTING BACKFILL AGAINST WALLS.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION OF ALL EXCAVATION SLOPES. WHERE NECESSARY SHEETING AND SHORING OF EXCAVATION SHALL BE PROVIDED WITH ALL REQUIRED TIE BACKS AND BRACING, TO BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT LOCATION.
11. FOUNDATION DESIGN PARAMETERS (VALUES ASSUMED IF NOT SPECIFICALLY STATED IN SOILS REPORT)

ACTIVE EARTH PRESSURE	69 psf/ft
PASSIVE EARTH PRESSURE	287 psf/ft
AT REST EARTH PRESSURE	46 psf/ft
SOIL FRICTION COEFFICIENT	.35
MODULUS OF SUBGRADE UNDER SLAB ON GRADE (K)	125 PCI

12. RETAINING WALLS SHALL HAVE A MINIMUM OF TWO FEET OF FREE DRAINING GRANULAR FILL AGAINST THE BACK OF THE WALL OR SHALL HAVE AN ACCEPTABLE COMMERCIAL GRADE DRAINAGE MAT PLACED AGAINST THE WALL.
13. REINFORCING IN ALL CONTINUOUS STRIP FOOTINGS SHALL HAVE CORNER BARS OR DOWELS PROVIDED AT ALL CORNERS AND INTERSECTIONS.

SHOP DRAWINGS

1. ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.
2. CONTRACTOR SHALL PROVIDE IN HIS SCHEDULE FOR A SHOP DRAWING REVIEW AND RETURN TIME OF A MINIMUM OF FIFTEEN WORKING DAYS IN THE STRUCTURAL ENGINEER'S OFFICE.
3. THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW OF THE FOLLOWING APPLICABLE ITEMS:
   A. ALL STRUCTURAL STEEL INCLUDING MISCELLANEOUS EMBEDMENTS. STEEL FABRICATION SHOP DRAWINGS ARE TO BE SUBMITTED TO STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION. THE STRUCTURAL ENGINEER IS TO REVIEW DRAWINGS FOR COMPLIANCE WITH DESIGN DOCUMENTS. ENGINEER IS TO REVIEW TYPE OF MATERIAL, MEMBER SIZES, AND CONNECTIONS AND RETURN DRAWINGS TO THE STEEL FABRICATOR NOTING ANY DISCREPANCIES. THE STEEL FABRICATOR IS RESPONSIBLE FOR ALL FABRICATION DIMENSIONS.
   B. REINFORCING STEEL.
   C. CONCRETE MIX DESIGNS.
   D. CONSTRUCTION JOINT LOCATIONS ON STRUCTURAL FLOORS.
   E. WOOD TRUSSES WITH CALCULATIONS (*)
   F. PRECAST CMU LINTELS
   G. ANCHOR BOLT SUBMITTAL
   H. MECHANICAL EQUIPMENT REQUIRING STRUCTURAL SUPPORT
   I. CONCRETE CURING MATERIALS
   J. MECHANICAL ANCHOR SUBSTITUTIONS
   K. ARCHITECTURAL AND STRUCTURAL PRECAST ELEMENTS

   ITEMS MARKED (*) SHALL HAVE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT LOCATION.

CONCRETE

A. GENERAL SPECIFICATIONS

1. ALL CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 'SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS', (A.C.I. 301-99) AND 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE', (A.C.I. 318-02).
2. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE 'SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS, (ACI 117-90)
3. ALL CONCRETE SHALL BE READY-MIXED MEETING THE REQUIREMENTS OF ASTM C-94, "SPECIFICATION FOR READY-MIXED CONCRETE".
   NO WATER SHALL BE ADDED TO THE CONCRETE AT THE JOBSITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE CONCRETE SUPPLIER TO ENSURE A PUMPABLE AND WORKABLE MIX WITHOUT THE ADDITION OF WATER AT THE JOBSITE.
   CONCRETE PLACEMENT IS TO CONFORM WITH ACI 305-99 HOT WEATHER CONCRETING AND ACI 306-88 COLD WEATHER CONCRETING. MINIMUM TEMPERATURE OF CONCRETE AT TIME OF PLACEMENT AND MAINTAINED DURING CURING IS 55 DEGREES FAHRENHEIT.
   GROUT AT COLUMN BASES AND AT EXTERIOR WALL BASE SHALL BE NON-METALLIC, NON-SHRINK AND SHALL BE A FACTORY PREPARED MIXTURE OF NON AIR-ENTRAINING PORTLAND CEMENT, WELL GRADED, SHARP SILICA SAND AND OTHER ADMIXTURES AS REQUIRED TO PRODUCE A NON SHRINK GROUT. GROUT SHALL CONFORM TO ASTM C-1107 GRADE C.
   FORMWORK SHALL BE DESIGNED AND CONSTRUCTED/INSTALLED IN ACCORDANCE WITH ACI 347, "GUIDE TO FORMWORK FOR CONCRETE"
8. MEMBERS NOT TO BE LOADED UNTIL CONCRETE HAS REACHED ITS REQUIRED COMPRESSIVE STRENGTH.
9. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH SECTION 5.6 OF ACI 318-02 (EVALUATION AND ACCEPTANCE OF CONCRETE).
10. ALL CONCRETE DEFECTS SHALL BE PROPERLY REPAIRED IMMEDIATELY IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF SECTION 5 OF ACI 301-LATEST EDITION.
11. ELEVATED FLOOR SLABS ARE TO HAVE A CONSTANT FLOOR THICKNESS AS SHOWN ON THE DESIGN DRAWINGS. FLOOR THICKNESS IS NOT TO BE ADJUSTED IN THE FIELD TO PROVIDE LEVEL SLAB.
12. ELEVATED SLABS ARE TO BE REINFORCED WITH WELDED WIRE FABRIC.
13. ELEVATED SLABS ARE NOT TO HAVE SAWED CONTROL JOINTS.
14. ADHESIVE ANCHORS SHALL BE HIT HY 150 MAX INJECTION ADHESIVE ANCHORING SYSTEM WITH 'HAS' STANDARD RODS BY HILTI FASTENING SYSTEMS OR APPROVED EQUAL. MINIMUM EMBEDMENT SHALL BE AS SPECIFIED BY THE MFG. UNLESS NOTED OTHERWISE ON THE ENGINEERING DRAWINGS.
15. EXPANSION ANCHORS SHALL BE KWIK BOLT II WEDGE TYPE ANCHORS BY HILTI FASTENING OR APPROVED EQUAL. MINIMUM EMBEDMENT SHALL BE AS SPECIFIED BY THE MANUFACTURER UNLESS NOTED OTHERWISE ON THE ENGINEERING DRAWINGS.

B. MIX DESIGN SPECIFICATIONS

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) AT 28 DAYS AS FOLLOWS:
   COLUMN AND WALL FOOTINGS, EXTERIOR SLAB ON GRADE — f'c = 3000 PSI
   INTERIOR SLAB ON GRADE — f'c = 3000 PSI
2. CONCRETE IS TO BE NORMAL WEIGHT AND MADE WITH TYPE 1 PORTLAND CEMENT CONFORMING TO ASTM C150 SPECIFICATION, "STANDARD SPECIFICATION FOR PORTLAND CEMENT".
3. CLASS F FLYASH IS TO BE LIMITED TO A MAXIMUM OF 20% OF TOTAL CEMENTITIOUS MATERIAL WEIGHT. FLYASH IS NOT PERMITTED FOR INTERIOR FLOOR SLABS.
4. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED IN ANY MIX DESIGN.
5. A MID RANGE WATER REDUCING ADMIXTURE IN CONFORMANCE WITH ASTM C494 TYPE 'A' IS TO BE USED TO REDUCE WATER REQUIREMENTS. DOSAGE AMOUNT IS NOT TO EXCEED 6 OZ. PER 100 POUNDS OF CEMENTITIOUS MATERIAL.
5. WATER/CEMENT RATIOS SHALL NOT EXCEED 0.6 FOR f'c=3000 PSI CONCRETE NOR 0.5 FOR f'c=4000 PSI CONCRETE
6. MAXIMUM SLUMP SHALL BE 5".
7. CONCRETE AGGREGATE GRADATION SHALL BE IN ACCORDANCE WITH ASTM C33. "SPECIFICATION FOR CONCRETE AGGREGATE".
   A. COARSE AGGREGATE
      COARSE AGGREGATE GRADATION SHALL HAVE A MINIMUM SIZE #57 STONE MIX PER ASTM C33. FOR 6" SLABS OR GREATER, LARGER COURSE AGGREGATE MIXS UP TO #467 ARE ACCEPTABLE TO MINIMIZE SHRINKAGE CRACKING.
   B. FINE AGGREGATE
      FINE AGGREGATE SHALL CONSIST OF NATURAL SAND OR A COMBINATION THEREOF, WITH A FINENESS MODULUS BETWEEN 2.3 AND 3.1.
      FINE AGGREGATE CONTENT IS TO BE BETWEEN 35% AND 45% BY WEIGHT OR VOLUME OF THE TOTAL AGGREGATE CONTENT.
8. CONCRETE MIX DESIGNS INCLUDING W/C RATIOS AND SLUMPS ARE TO BE PREPARED BY CONCRETE SUPPLIER AND SUBMITTED TO ENGINEER FOR APPROVAL A MINIMUM OF 14 DAYS PRIOR TO CONCRETE WORK COMMENCING. CONCRETE MIX DESIGNS ARE TO BE PROPORTIONED IN ACCORDANCE WITH SECTION 5.3 OR 5.4 OF ACI 318-02.
9. ALL EXTERIOR CONCRETE IS TO HAVE 5 PERCENT AIR ENTRAINMENT IN ACCORDANCE WITH ASTM C260.

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE HIGH STRENGTH DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT REINFORCING THAT IS TO BE WELDED SHALL CONFORM TO ASTM A706.
2. WELDED WIRE MESH SHALL CONFORM TO ASTM A185 AND SHALL BE LAPPED ONE FULL MESH AT END SPLICES AND BE WIRED TOGETHER. MESH SHALL BE SUPPLIED IN SHEETS, NOT ROLLS AND BE INSTALLED ON CHAIRS.
3. REINFORCING STEEL DETAILING, FABRICATION AND PLACING SHALL CONFORM TO THE FOLLOWING:
   -C.R.S.I. "MANUAL OF STANDARD PRACTICE", LATEST EDITION
   -A.C.I. 318-02 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
   -ACI 315-99, "DETAILS AND DETAILING OF CONCRETE REINFORCING".
4. BARS SPLICED BY NONCONTACT LAP SPLICES SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN ONE-FIFTH THE REQUIRED LAP SPLICE LENGTH, NOR 6".
5. REINFORCEMENT PROTECTION SHALL BE:
   CONCRETE POURED AGAINST EARTH----------3"
   CONCRETE POURED IN FORMS EXPOSED TO WEATHER OR EARTH------2"
   COLUMNS AND BEAMS (TIE BARS)----------1 1/2"
   SLABS AND WALLS NOT EXPOSED TO WEATHER----------3/4"
4. REINFORCING BARS SHALL NOT BE WELDED UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS. IF WELDING HAS BEEN NOTED ON THE STRUCTURAL DRAWINGS THOSE WELDS SHALL BE IN ACCORDANCE WITH THE 'STRUCTURAL WELDING CODE-REINFORCING STEEL' (AWS D1.4).

SLABS ON GRADE

1. CONCRETE FLOOR SLAB ON GRADE CONSTRUCTION SHALL CONFORM TO ACI 302.1R96 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION". FLOOR IS TO BE A SINGLE COURSE, MONOLITHIC SLAB ON GRADE.
2. FLOOR SLABS ARE TO BE PLACED OVER COMPACTED EARTH BASE OR CRUSHED STONE BASE, AS NOTED ON THE SLAB PLAN. SUB-GRADE FOR SLAB SHALL BE COMPACTED AND TESTED AND HAVE A MAXIMUM ELEVATION DIFFERENCE OF PLUS OR MINUS 1/10 OF A FOOT.
3. CRUSHED STONE BASE IS TO BE TYPE 1, GRADATION C, IN CONFORMANCE WITH ASTM D 1241-68 STANDARD SPECIFICATION FOR MATERIALS FOR SOIL-AGGREGATE SUBBASE, BASE AND SURFACE COURSES.
4. IN ORDER TO MINIMIZE PLASTIC SHRINKAGE CRACKS IN THE FLOOR SLAB, CONCRETE IS NOT TO BE PLACED WHEN THE EVAPORATION RATE OF WATER IS GREATER THAN 0.2 POUNDS PER SQUARE FOOT SURFACE AREA PER HOUR UNLESS MEASURES ARE TAKEN TO COMPENSATE FOR THE HIGH RATE OF EVAPORATION AS DESCRIBED IN ACI 305-99. EVAPORATION RATES GREATER THAN 0.2 LB/SF/HR TYPICALLY OCCUR WHEN THE AIR TEMPERATURE IS GREATER THAN 90°F, RELATIVE HUMIDITY IS 80% OR LESS, AND WIND VELOCITY IS 10 MPH OR GREATER.
5. THE FOLLOWING INFORMATION IS TO BE RECORDED BY THE GENERAL CONTRACTOR DURING PLACEMENT OF THE SLAB CONCRETE AND SENT TO THE ENGINEER OF RECORD:
   - AIR TEMPERATURE
   - CONCRETE TEMPERATURE IN ACCORDANCE WITH ASTM C1064.
   - WEATHER CONDITIONS
   - RELATIVE HUMIDITY
   - WIND SPEED
   - EVAPORATIVE RATE OF WATER
   - CONCRETE SLUMP
6. FLOOR SLAB IS TO HAVE APPROPRIATELY SPACED CONSTRUCTION AND CONTROL JOINTS.
7. ISOLATION JOINTS SHALL BE AS SHOWN ON DRAWING AND FILLED WITH POLYURETHANE JOINT FILLER UNO BY ARCHITECT.

GENERAL WOOD NOTES:

1. LUMBER GRADES BASED ON 1997 SOUTHERN PINE INSPECTION BUREAU (SPIB) GRADING RULES CONFORMING TO U.S. DEPT. OF COMMERCE VOLUNTARY PRODUCT STANDARD PS 20-70 (AMERICAN SOFTWOOD LUMBER STANDARD).
2. ALL WOOD FRAMING SHALL BE SOUTHERN PINE, GRADE 2, KILN DRIED WITH A 19% MAXIMUM MOISTURE CONTENT UNO.
3. ALL LUMBER DIMENSIONS SHOWN ON DRAWINGS ARE NOMINAL.
4. PRESSURE TREATED LUMBER SHALL CONFORM TO THE AMERICAN WOOD PRESERVER'S ASSOCIATION (AWPA) STANDARDS WITH 0.25 POUNDS PER CUBIC FOOT OF CHROMATED COPPER ARSENATE (CCA). ALL PRESSURE TREATED LUMBER CONNECTORS SHALL BE GALVANIZED.
5. LUMBER SHALL BE UNLOADED IN A DRY PLACE, NOT IN CONTACT WITH GROUND. LUMBER STORED IN OPEN AREA SHOULD BE ELEVATED ON STRINGERS TO ALLOW AIR CIRCULATION AND COVERED WITH MATERIAL THAT WILL GIVE PROTECTION FROM THE ELEMENTS BUT POROUS ENOUGH FOR MOISTURE TO ESCAPE. FRAMING LUMBER SHOULD BE ENCLOSED AND UNDER ROOF AS SOON AS POSSIBLE FOR PROTECTION FROM THE ELEMENTS.
6. ALL SHEATHING SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF U.S PRODUCT STD PS-1 OR APA PRP-108 PERFORMANCE STANDARDS AND IDENTIFIED WITH APPROPRIATE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION (APA).
7. ROOF SHEATHING SHALL BE 5/8" THICK, APA RATED EXPOSURE 1. PANELS SHALL BE INSTALLED WITH THE LONG DIMENSION OR STRENGTH AXIS OF THE PANEL ACROSS SUPPORTS WITH PANEL CONTINUOUS OVER TWO OR MORE SUPPORTS. ALLOW 1/8" SPACING AT PANEL ENDS AND EDGES USING GALVANIZED PANEL CLIPS. STAGGER ENDS OF PANELS. NAIL TO RAFTERS OR WOOD TRUSS TOP CHORDS 6" ON CENTER ALONG SUPPORTED EDGES AND 12" ON CENTER AT INTERMEDIATE SUPPORTS USING GALVANIZED 6d NAILS.
8. SOFFIT SHEATHING SHALL BE 7/16" THICK, APA RATED A-C EXTERIOR.
9. EXTERIOR WALL SHEATHING SHALL BE 7/16" THICK, APA RATED EXPOSURE 1.
10. PREFABRICATED ROOF AND FLOOR TRUSSES TO BE DESIGNED PER MANUFACTURER BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT LOCATION, USING THE LOADS SHOWN. TRUSSES ARE TO BE METAL PLATE CONNECTED AND DESIGNED AND FABRICATED PER TRUSS PLATE INSTITUTE SPECIFICATIONS (TPI) AND THE WOOD TRUSS COUNCIL OF AMERICA. TRUSSES ARE TO BE TEMPORARILY BRACED DURING ERECTION UNTIL ROOF SHEATHING AND BOTTOM CHORD BRACING IS IN PLACE. TRUSSES ARE TO BE BRACED PER TPI SPECIFICATIONS. TRUSS FABRICATOR TO SUBMIT APPROVAL DRAWINGS TO ENGINEER PRIOR TO CONSTRUCTION
11. UNLESS NOTED OTHERWISE, WOOD FRAMING FASTENING IS TO BE INSTALLED PER TABLE 2304.9.1.2, FASTENING SCHEDULE OF THE N.C. STATE BUILDING CODE, 2012 EDITION.
12. (3) STAIR STRINGERS ARE TO BE PROVIDED AT STAIRS WITH THE MINIMUM EFFECTIVE DEPTH NOT LESS THAN 3-1/2" AT NOTCHES.
13. WALL STUDS SHALL BE CAPPED WITH DOUBLE TOP PLATES TO PROVIDE OVERLAPPING AT CORNERS AND INTERSECTIONS.
14. DESIGN, DETAILING AND FABRICATION OF GLULAM SHALL CONFORM TO THE REQUIREMENTS OF NATIONAL EVALUATION SERVICE, INC. (NES) REPORT NO. NER-481.
15. LVL MEMBERS SHALL BE 1.9E MICROLAM AS MANUFACTURED BY TRUS JOIST MACMILLAN, OR APPROVED EQUIVALENT WITH ALLOWABLE STRESS AS LITED BELOW:
   A. Fb, EXTREME FIBER IN BENDING---------2600 psi
   B. Fv, HORIZONTAL SHEAR----------285 psi
   C. Fc, COMP. PERPENDICULAR TO GRAIN----750 psi
   D. Fc, COMP. PARALLEL TO GRAIN---------2310 psi
   E. E, MODULUS OF ELASTICITY----------1,900,000 psi

GENERAL MASONRY NOTES:

1. MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE 'BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES' (ACI 530-99/ASCE 5-99) AND THE 'SPECIFICATIONS FOR MASONRY STRUCTURES' (ACI 530.1-99/ASCE 6-99).
2. MATERIALS:
   A. WATER SHALL BE CLEAN AND FREE FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIS, ORGANIC MATERIALS, OR OTHER DELETERIOUS SUBSTANCES.
   B. AGGREGATE FOR MORTAR SHALL CONFORM TO THE STANDARD SPECIFICATION FOR MASONRY MORTAR AGGREGATE (ASTM C144)
   C. MORTAR SHALL BE TYPE "S" AND CONFORM TO THE REQUIREMENTS OF ASTM STANDARD SPECIFICATIONS FOR UNIT MASONRY MORTAR (ASTM C270).
3. MASONRY MATERIALS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR AGAINST GROUNDWATER AND RAIN PRIOR TO AND DURING CONSTRUCTION OF THE WALLS.
4. MASONRY SHALL BE LAID IN RUNNING BOND PATTERN (U.N.O.), MORTAR SHALL BE TROWELLED ON FULL SHELL. TOP AND ENDS WITH UNIT SHOVED INTO PLACE AND ALIGNED. MORTAR JOINTS ON EACH SIDE TO BE STRUCK CLEAN WITH THE EXTERIOR JOINTS TOOLED WITH A CONCAVE JOINTER. AIR SPACE IS TO BE FREE OF MORTAR BETWEEN SHEATHING AND MASONRY.
5. THRU-WALL FLASHING SHALL BE 20 MIL P.V.C. CONFORMING TO A.S.T.M. D822 AND PROVIDED AT FLOOR LINE AND ABOVE ALL OPENINGS WITH WEEP HOLES AT 24" ON CENTER. WEEP HOLES TO BE MADE BY OMITTING MORTAR IN HEAD JOINTS.
6. MASONRY VENEER (4" AND 6" SPLITFACED CMU) TO BE ATTACHED TO STUDS USING CORROSION RESISTANT 2 PIECE ADJUSTABLE METAL TIES, 3/16" DIAMETER MINIMUM, LOCATED 16" ON CENTER HORIZONTALLY AND 16" ON CENTER VERTICALLY. TIES TO SCREW TO STUDS. TIES TO EMBED INTO MASONRY 2" MINIMUM.

STRUCTURAL DESIGN

DESIGN LOADS:

IMPORTANCE FACTORS: WIND (Iw) 1.0; SNOW (Is) 1.0; SEISMIC (Ie) 1.0

LIVE LOADS: Table 1607.1 — ROOF 20 psf; MEZZANINE N/A psf; FLOOR 50 psf

GROUND SNOW LOAD: Section 1608 — 18 psf

WIND LOAD: Table 1609 — BASIC WIND SPEED 90 mph (ASCE 7-05); EXPOSURE CATEGORY C

WIND BASE SHEAR (MWFRS): Vx = 12k; Vy = 10K

RAIN LOAD: 3.5 Inches/Hour — Section 1611

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☒ C ☐ D

OCCUPANCY CATEGORY (T1604.5): II

SPECRAL RESPONSE ACCELERATION: Ss .35 %g; S1 .1 %g

SITE CLASSIFICATION: ☐ FIELD TEST ☒ PRESUMPTIVE ☐ HISTORICAL DATA

BASIC STRUCTURAL SYSTEM:
- X BEARING WALL
- ___ BUILDING FRAME
- ___ MOMENT FRAME
- ___ DUAL W/SPECIAL MOMENT FRAME
- ___ DUAL W/ INTERMEDIATE R/C OR SPECIAL STEEL
- ___ INVERTED PENDULUM

SEISMIC BASE SHEAR: Vx = 6K; Vy = 6K

ANALYSIS PROCEDURE:
- ___ SIMPLIFIED
- X EQUIVALENT LATERAL FORCE
- ___ MODAL

ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? YES

LATERAL DESIGN CONTROL: EARTHQUAKE ___ WIND X

SOIL BEARING CAPACITIES:

FIELD TEST (provide copy of test report)	___ psf
PRESUMPTIVE BEARING CAPACITY	2,000 psf
PILE SIZE, TYPE, AND CAPACITY	___ psf

COMPONENTS AND CLADDING WIND LOADING

WINDOW/DOOR AREA	WIND PRESSURE
10 SF	±20.4 PSF
20 SF	±19.5 PSF
50 SF	±18.5 PSF
100 SF	±17.5 PSF

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027444 — WESTMORELAND

Scott Westmoreland
Jan 9, 2015 8:56PM

cosign SRS

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NEW SOUTHEASTERN EMS FOR RUTHERFORD COUNTY North Carolina

ISSUE DATE: 1-5-15
REVISION 1: --
REVISION 2: --
REVISION 3: --
REVISION 4: --

PROJECT #:
CONTENT:

GENERAL NOTES

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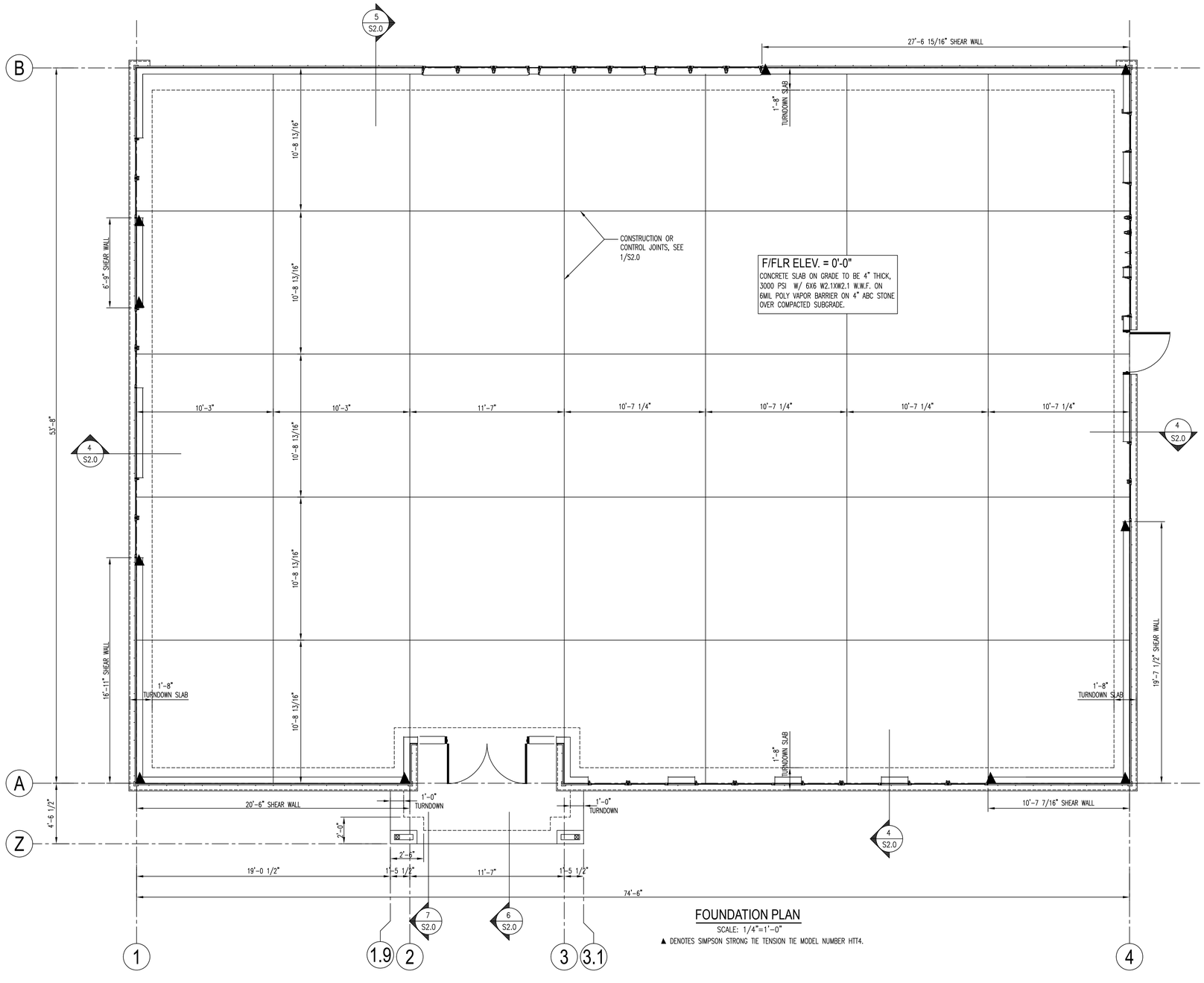

FOUNDATION PLAN

SCALE: 1/4"=1'-0"

▲ DENOTES SIMPSON STRONG TIE TENSION TIE MODEL NUMBER HIT4.

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FOUNDATION PLAN

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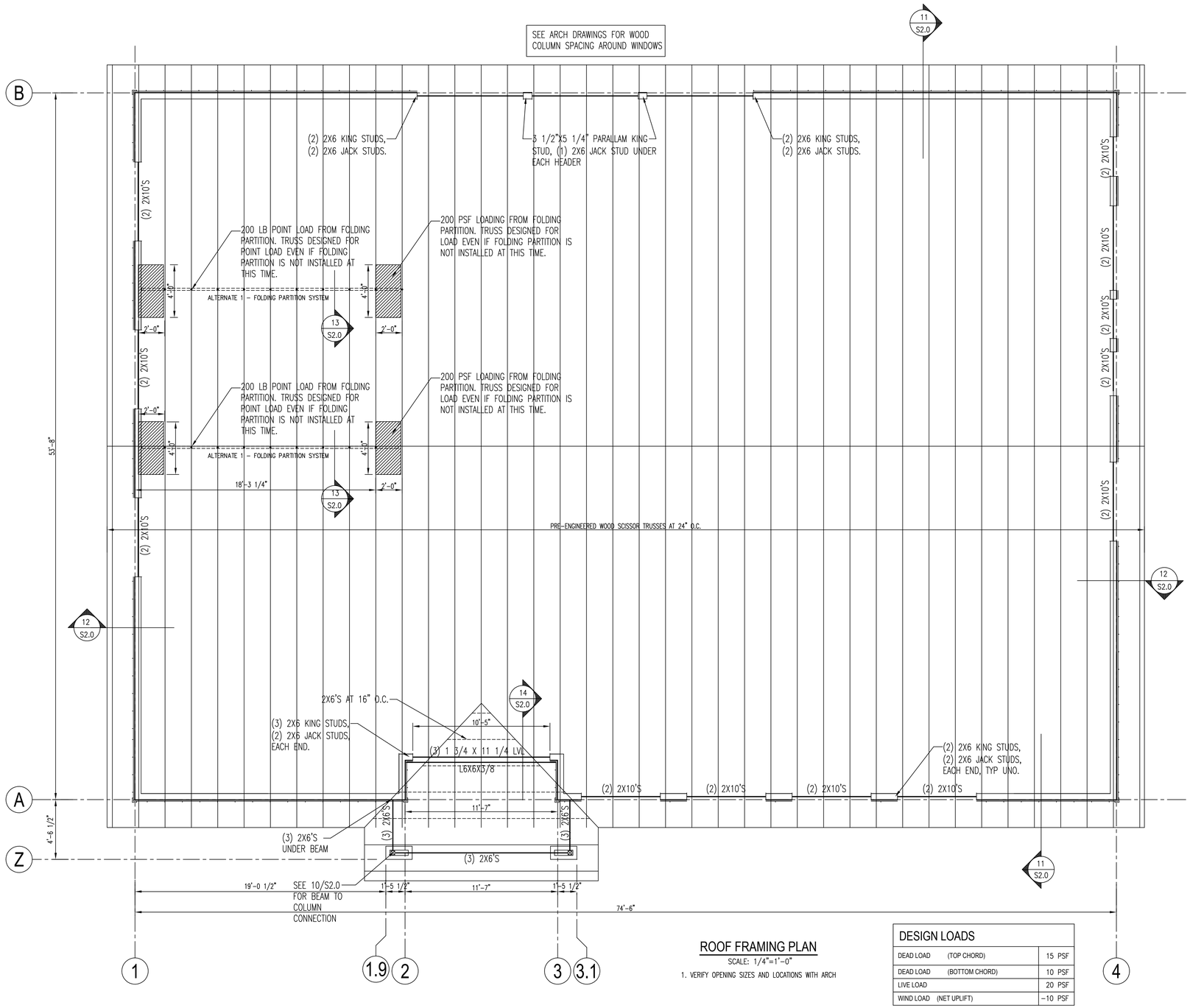

ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"

1. VERIFY OPENING SIZES AND LOCATIONS WITH ARCH

DESIGN LOADS	
DEAD LOAD (TOP CHORD)	15 PSF
DEAD LOAD (BOTTOM CHORD)	10 PSF
LIVE LOAD	20 PSF
WIND LOAD (NET UPLIFT)	-10 PSF

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ROOF FRAMING PLAN

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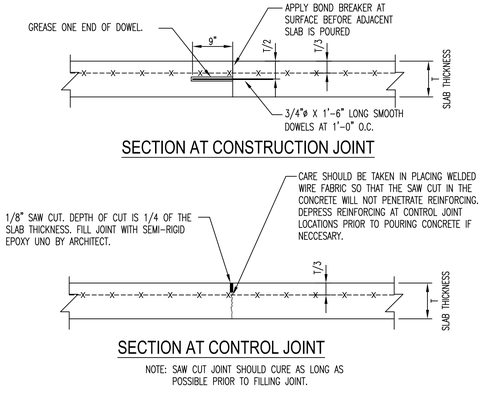
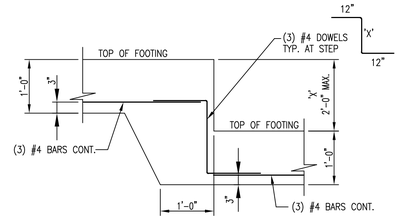
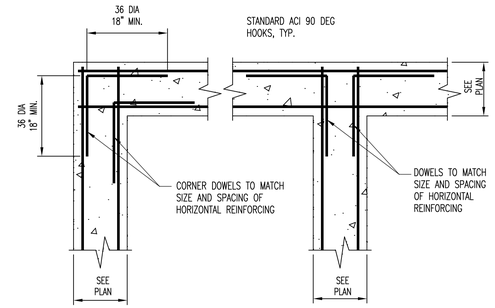
S1.1



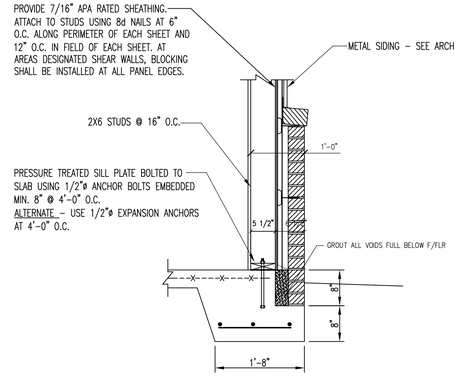
1 SLAB CONSTRUCTION / CONTROL JOINT N.T.S.



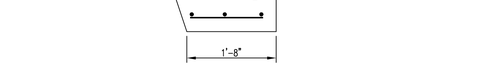
2 FOOTING STEP DETAIL 3/4" = 1'-0"



3 DETAIL AT FOOTING INTERSECTIONS 3/4" = 1'-0"

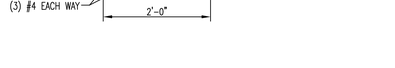


4 SECTION 3/4" = 1'-0"



5 SECTION 3/4" = 1'-0"

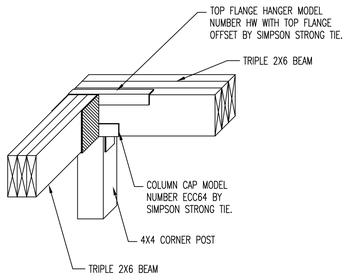
6 TURNDOWN SLAB 3/4" = 1'-0"



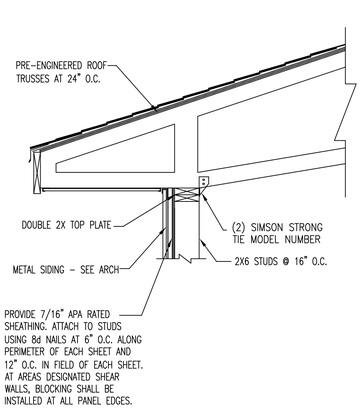
7 THICKENED SLAB 3/4" = 1'-0"

8 EXTERIOR HEADER DETAIL N.T.S.

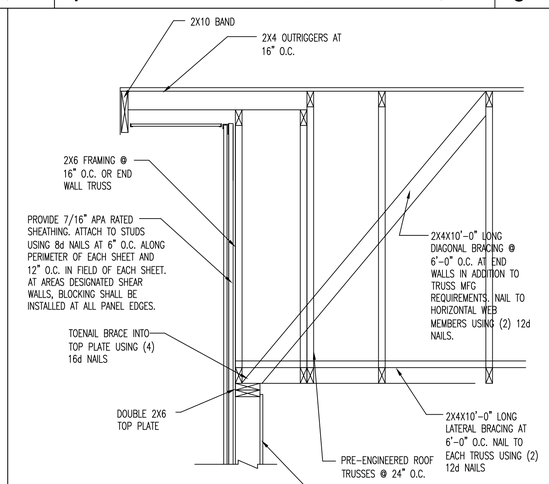
9 TYP. CORNER STUD LAYOUT 3/4" = 1'-0"



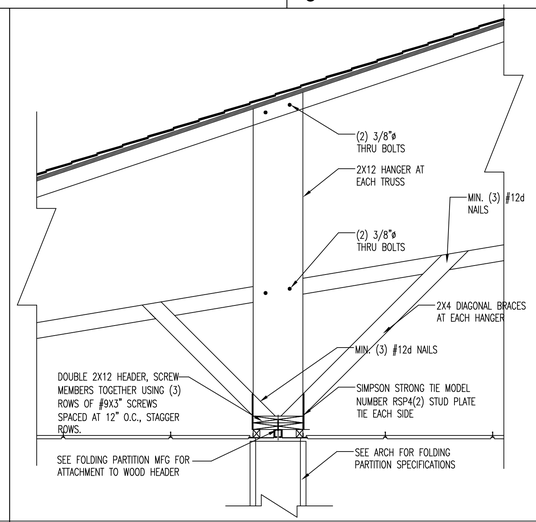
10 WOOD POST CONN. 3/4" = 1'-0"



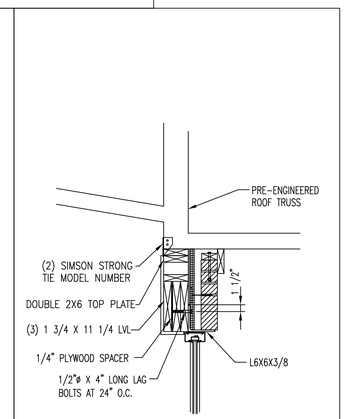
11 SECTION 3/4" = 1'-0"



12 SECTION 3/4" = 1'-0"



13 SECTION 3/4" = 1'-0"



14 SECTION 3/4" = 1'-0"

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DETAILS SHEET 1

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