BUILDING CODE AND STANDARDS

1. INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION
2. THE MINIMUM DESIGN LOAD FOR BUILDING AND OTHER STRUCTURES, ASCE 7-16
3. AMERICAN CONCRETE INSTITUTE, ACI
4. NATIONAL DESIGN SPECIFICATION (NDS) ASD EDITION
5. ALLOWABLE STRESS DESIGN, NINTH ED. (AISC) FOR STEEL STRUCTURE DESIGN

REINFORCED CONCRETE NOTES

1. MINIMUM CONCRETE MIX REQUIREMENTS:
   CONCRETE COMPRESSIVE STRENGTH, fc: 3000 PSI
   MAXIMUM WATER TO CEMENT RATIO: 0.45
   CEMENTITIOUS MATERIAL: TYPE V + POZZOLAN OR SLAG
3. STRUCTURAL CONCRETE SHALL REACH A MINIMUM 3-DAY COMPRESSIVE STRENTH OF 1500 PSI AND SHALL REACH THE SPECIFIED COMPRESSIVE STRENGTH IN 28 DAYS. CONCRETE COMPRESSIVE TESTS SHALL CONFIRM TO ASTM C 150 "TEST METHOD SAMPLING AND TESTING CONCRETE MASONRY UNITS AND RELATED UNITS", CEMENTITIOUS MATERIAL SHALL CONFORM TO ASTM C 150 "SPECIFICATION FOR PORTLAND CEMENT"
4. THE CONCRETE SHALL BE PROPORTIONED AND PRODUCED TO HAVE A SLUMP OF 4 INCHES OR LESS. A TOLERANCE OF 1 INCH ABOVE THIS AMOUNT SHALL BE PERMITTED FOR INDIVIDUAL BATCHES PROVIDED THE AVERAGE FOR ALL BATCHES DOES NOT EXCEED 4 INCHES, THE SLUMP SHALL BE DETERMINED BY "STANDARD TESTING METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE" (ASTM C 143).
5. WATER USED IN MIXING CONCRETE SHALL BE CLEAN FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS, OR OTHER SUBSTANCES DELETERIOUS TO CONCRETE OR REINFORCEMENT, NONPOTABLE WATER SHALL NOT BE USED.
6. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C330 "STANDARD SPECIFICATIONS FOR CONCRETE AGGREGATES", THE NORMAL MAXIMUM SIZE OF COARSE AGGREGATES SHALL NOT BE LARGER THAN: 1/5 THE DISTANCE BETWEEN THE SIDES OF FORMS, 1/3 THE SLAB DEPTH, OR 3/4 THE MINIMUM CLEAR SPACING BETWEEN INDIVIDUAL REINFORCING BARS OR WIRES, BUNDLES OF BARS, INDIVIDUAL TENDONS, OR DUCTS.
7. DEFORMED CONCRETE REINFORCING SHALL BE GRADE 60 REINFORCING STEEL CONFORMING TO ASTM A 615 "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN CARBON-STEEL BARS FOR CONCRETE REINFORCEMENT.
8. BAR MATS FOR CONCRETE REINFORCING SHALL CONFORM TO ASTM A 184 "STANDARD SPECIFICATION FOR WELDED DEFORMED STEEL BAR MATS FOR CONCRETE REINFORCEMENT. REINFORCING BARS USED IN BAR MATS SHALL CONFORM TO ASTM A 515 OR ASTM A 706.
9. WELDED PLAIN WIRE FOR CONCRETE REINFORCEMENT SHALL NOT BE SMALLER THEN D4 AND SHALL CONFORM TO ASTM A 496 "STANDARD SPECIFICATION FOR STEEL WIRE, DEFORMED, FOR CONCRETE REINFORCEMENT". WELDED DEFORMED WIRE FOR CONCRETE REINFORCEMENT SHALL CONFORM TO ASTM A 497 "STANDARD SPECIFICATION FOR STEEL WELDED WIRE, DEFORMED, FOR CONCRETE REINFORCEMENT".
10. WELDED WIRE FOR CONCRETE REINFORCEMENT SHALL NOT BE SMALLER THAN D4 AND SHALL CONFORM TO ASTM A 496 "STANDARD SPECIFICATION FOR STEEL WIRE, DEFORMED, FOR CONCRETE REINFORCEMENT".
11. NO ADMIXTURES, OTHER THAN AIR-ENTRAINING ADMIXTURE CONFORMING TO "STANDARD SPECIFICATIONS FOR AIR ENTRAINING ADMIXTURES FOR CONCRETE" (ASTM C 260) MAY BE USED WITHOUT THE WRITTEN APPROVAL FROM THE ENGINEER. CALCIUM CHLORIDE AND CONCRETE ADMIXTURES CONTAINING CHLORIDE SALTS ARE NOT PERMITTED.
12. LAP ALL REINFORCING BARS ACCORDING TO THE FOLLOWING LAP SPLICE SCHEDULE, WHERE BEAM REINFORCING IS REQUIRED TO BE SPLICED, SPLICING SHALL ONLY TAKE PLACE IN COMPRESSION REGIONS, I.E. BOTTOM REINFORCING SPLICES ALLOWED OVER SUPPORTS AND TOP REINFORCING SLICES ALLOWED IN THE BEAM MIDSPANS, WHERE COLUMN VERTICAL REINFORCING IS REQUIRED TO BE SPLICED, SPLICING WILL BE PERMITTED ONLY AT FLOOR LEVELS OR AREAS OF LATERAL SUPPORT.

LAP LENGTH SCHEDULE AND CONCRETE COVERING

ALL REINFORCING BAR WILL BE GRADE 60 PER A.S.T.M A615

REINFORCED CONCRETE LAP SPLICE SCHEDULE

F'c= 3000 PSI AT 28 DAYS		REINFORCEMENT LENGTH (INCHES)					
SLICE CLASS	REINFORCEMENT LOCATION	#3 BARS	#4 BARS	#5 BARS	#6 BARS	#7 BARS	#8 BARS
A	TOP	24	32	39	47	69	78
	BOTTOM	18	24	30	36	53	60
B	TOP	31	41	51	61	89	102
	BOTTOM	24	32	39	47	69	78

MINIMUM CONCRETE COVERAGE OF REINFORCING STEEL SHALL BE AS FOLLOWS:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO SOIL.....3"

CONCRETE EXPOSED TO SOIL OR WEATHER:
#5 BARS, W31 OR D31 WIRES, AND SMALLER.....1½"
#6 BARS AND LARGER .....2"

CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:

SLABS, WALLS AND JOISTS:
#11 BARS AND SMALLER .....3/4"
#14 BARS AND LARGER.....1½"

BEAMS AND COLUMNS.....1½"

FOUNDATION NOTES

1. HOLD-DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.
2. SEE ARCHITECTURAL PLANS FOR HORIZONTAL DIMENSIONS AND ELEVATIONS.
3. THE CONCRETE CONTRACTOR SHALL COORDINATE WITH FRAMING CONTRACTOR ON PLACEMENT OF ANCHOR BOLTS AND HARDWARE.
4. PROVIDE SLAB JOINT AT 12'-0" O.C. MAX.
5. ALLOWABLE SOIL BEARING PRESSURE , 1500. PSF BASED UPON CODE.
6. VERIFY ALL EXISTING CONDITIONS & NOTIFY THE ENGINEER OF RECORD WITH ANY DISCREPANCIES.
7. CONSTRUCTION SHALL COMPLY WITH 2015 EDITION OF INTERNATIONAL BUILDING AND OTHER RELATED CODES.
8. STRUCTURAL DESIGN AND DETAILS SHALL COMPLY TO IBC (2015 EDITION).

SITE DRAINAGE RECOMMENDATIONS

DRAINAGE OF THE SURFACE WATER AWAY FROM THE FOUNDATION SHOULD BE MAINTAINED FOR THE LIFE OF THE STRUCTURE. IN NO CASE SHOULD WATER BE ALLOWED TO POND NEXT TO THE STRUCTURE FOUNDATION. DESERT TYPE OR ZEROSPACE LANDSCAPING WHICH REQUIRES MINIMAL WATER IS RECOMMENDED. RAIN GUTTERS SHOULD BE INSTALLED AND ROOF DOWNSPOUTS SHOULD DISCHARGE RAIN WATER AWAY FROM THE FOUNDATION TO REDUCE THE POTENTIAL OF WATER INFILTRATION INTO THE SUB GRADE. WHERE POSSIBLE WE RECOMMEND THAT ALL ROOF DOWNSPOUTS BE TIED TOGETHER WITH A SUB GRADE COLLECTION SYSTEM THAT DISCHARGES RAIN WATER INTO THE CURB AND GUTTER OR DIRECTLY INTO THE STORM DRAIN. ALL DRAINAGE RECOMMENDATIONS IN THE SOILS REPORT MUST BE STRICTLY FOLLOWED WITHOUT VARIATION.

GENERAL NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS, SPANS, AND CONDITIONS WITH ARCHITECTURAL DRAWINGS. IF ANY OMISSIONS, MISTAKES, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE CONSTRUCTION DRAWINGS, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH A FAILURE.
2. IF DISCREPANCIES ARE FOUND, THE MORE STRINGENT SPECIFICATION SHALL BE FOLLOWED. CONTRACTOR RESPONSIBLE FOR ADEQUATE BRACING OF STRUCTURAL MEMBERS, WALLS, AND NON-STRUCTURAL ITEMS DURING CONSTRUCTION
3. THE ENGINEER AND HIS CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE WORK HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY OMISSIONS, MISTAKES, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE WORK PRODUCT, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH A FAILURE.
4. MANY PORTIONS OF THESE DRAWINGS, NOTES AND SPECIFICATIONS ARE THE RESULT OF DEMANDS BY VARIOUS APPROVING AGENCIES THAT MUST BE PERFORMED AS PART OF THIS WORK. ANY ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ENGINEER SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER, BUT OF THE PARTIES RESPONSIBLE FOR MAKING THE CHANGE AND TAKING ACTION TO DO SO. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ENGINEER OR THE CONTRADICTION TO THE ENGINEER'S WORK PRODUCT, THE INTENT AND/OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER, BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION. THE ENGINEER SHOULD BE CONTACTED IN MATTERS OF ANY AND ALL CHANGES TO THE DRAWINGS AND SPECIFICATIONS HEREIN WITHOUT EXCEPTION.
5. NON STRUCTURAL FRAMING REQUIREMENTS ARE NOT SPECIFIED ON STRUCTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING REQUIRED.
6. CONTRACTOR SHALL ASSURE THAT ALL PRODUCTS AND HARDWARE ARE USED PER MANUFACTURER'S RECOMMENDATIONS.
7. CONTRACTOR SHALL PROVIDE NAME OF AN APPROVED FABRICATOR OR ICC EVALUATION REPORT FOR STEEL ROOF JOISTS, STEEL FLOOR JOISTS, AND STEEL DECKING TO BUILDING OFFICIAL FOR APPROVAL PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL PROVIDE NAME OF AN APPROVED FABRICATOR FOR ALL FABRICATED STRUCTURAL COMPONENTS TO BUILDING OFFICIAL FOR APPROVAL PRIOR TO CONSTRUCTION
9. CONTRACTOR SHALL PROVIDE NAME OF AN APPROVED SPECIAL INSPECTION AGENCY AND QUALIFICATION OF INDIVIDUAL TO BUILDING OFFICIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

STRUCTURAL CRITERIA

WOOD FRAMING NOTES

1. ALL DIMENSIONAL LUMBER SHALL BE DF#2 GRADE OR BETTER. SAWN LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK OF A LUMBER GRADING OR INSPECTION AGENCY THAT HAS BEEN APPROVED BY AN ACCREDITATION BODY THAT COMPLIES WITH DOC PS 20 OR EQUIVALENT.
2. ALL SHEATHING TO BE APA RATED SHEATHING EXPOSURE 1 AND SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN DOC PS1 OR PS2. ALL EXTERIOR WALL ARE REQUIRED TO BE SHEATHED. ALL SHEATHING SHALL HAVE SPAN RATINGS ACCORDING TO THE FOLLOWING:
   FLOOR W/ 12" JOIST/TRUSS SPACING.....24/12
   FLOOR W/ 16" JOIST/TRUSS SPACING.....32/16
   FLOOR W/ 24" JOIST/TRUSS SPACING.....48/24
   ROOF W/ 12" JOIST/TRUSS SPACING.....12/0
   ROOF W/ 24" JOIST/TRUSS SPACING.....24/0
   ROOF W/ 48" JOIST/TRUSS SPACING.....48/24
   WALL W/ 12" JOIST/TRUSS SPACING.....16/0
   WALL W/ 16" JOIST/TRUSS SPACING.....24/0
3. ALL LUMBER, TIMBER, PLYWOOD, REQUIRED TO BE TREATED SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE AWPA STANDARD U1 AND M4 FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVE TREATED WOOD SHALL BEAR THE QUALITY MARK OF AN INSPECTION AGENCY THAT MAINTAINS CONTINUING SUPERVISION, TESTING, AND INSPECTION OVER THE QUALITY OF THE PRESERVATIVE TREATED WOOD.
4. THE FOLLOWING SHALL BE PRESERVATIVE TREATED LUMBER OF REDWOOD:
   A. ALL WALL SILL PLATES ON A CONCRETE SLAB THAT ARE IN DIRECT CONTACT WITH EARTH.
   B. WOOD FRAMING MEMBERS THAT REST ON EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8" FROM EXPOSED EARTH.
   C. WOOD FRAMING MEMBERS AND FURRING STRIPS ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY OR CONCRETE WALLS BELLOW GRADE.
   D. WOOD JOISTS THAT ARE CLOSER THAN 18", OR WOOD GIRDERS THAT ARE CLOSER THAN 12" FROM EXPOSED EARTH IN CRAWL SPACES OR UNEXCAVATED AREA'S LOCATED WITHIN THE PERIMETER OF THE BUILDING FOUNDATION.
5. PREFABRICATED I-JOISTS SHALL CONFORM TO ASTM D 5055.
6. LAMINATED VENEER LUMBER (LVL) SHALL BE 1-3/4" WIDE 1.9E WITH AN ALLOWABLE BENDING STRESS OF 2,600 PSI AND AN ALLOWABLE SHEAR STRESS OF 285 PSI. LAMINATED STRAND LUMBER (LSL) SHALL BE 1-3/4" WIDE 1.55E WITH AN ALLOWABLE BENDING STRESS OF 2,325 PSI AND AN ALLOWABLE SHEAR STRESS OF 310 PSI.
7. STRUCTURAL GLUE LAMINATED TIMBER SHALL BE 24F-V4 UNLESS NOTED OTHERWISE AND MANUFACTURED AND IDENTIFIED AS REQUIRED IN AITC A190.1 AND ASTM D 3737.
8. PROVIDE SOLID BLOCKING FOR ALL VERTICAL LOAD PATHS TO FOUNDATION. PROVIDE 1 TRIMMER ON EACH SIDE OF ALL OPENINGS LESS THAN 4'-0" WIDE. PROVIDE 2 TRIMMERS MIN. ON EACH SIDE OF ALL OPENINGS 4'0" WIDE AND GREATER. A MINIMUM 2 STUDS SHALL BE PROVIDED AT ALL VERTICAL EDGES OF SHEAR WALLS, GIRDER TRUSSES, AND BEAMS UNLESS NOTED OTHERWISE.
9. BUILT UP BEAMS SHALL BE FASTENED ACCORDING TO THE FOLLOWING:
   (2) & (3) PLY MEMBERS WITH PLIES UP TO 1-3/4" THICK:
   12" DEEP BEAMS: (2) ROWS OF 16D COMMON NAILS AT 12" O.C.
   14" AND DEEPER: (3) ROWS OF 16D COMMON NAILS AT 12" O.C.
   *NAILED CONNECTIONS REQUIRE AN ADDITIONAL ROW OF NAILS WHEN NAIL SIZE IS SMALLER THAN SPECIFIED ABOVE.
   (4) PLY MEMBERS WITH PLIES UP TO 1-3/4" THICK AND (2) PLY MEMBERS WITH PLIES 3-1/2" THICK:
   12" DEEP BEAMS: (2) STAGGERED ROWS OF 1/2"Ø A307 BOLTS W/ WASHERS @ 16" O.C.
   14" AND DEEPER: (3) STAGGERED ROWS OF 1/2"Ø A307 BOLTS W/ WASHERS @ 16" O.C.
10. OPENINGS SHALL BE FRAMED WITH THE MINIMUM KING STUDS AS FOLLOWS:
    OPENINGS UP TO 2'-0": 1 KING STUD AT EACH SIDE OF OPENING
    OPENINGS UP TO 4'-0": 2 KING STUDS AT EACH SIDE OF OPENING
    OPENINGS UP TO 8'-0": 3 KING STUDS AT EACH SIDE OF OPENING
    OPENINGS UP TO 12'-0": 4 KING STUD AT EACH SIDE OF OPENING
    OPENINGS UP TO 16'-0": 5 KING STUD AT EACH SIDE OF OPENING
    REFER TO PLANS FOR KING STUD REQUIREMENTS ON OPENINGS GREATER THAN 23'-0"
11. SIMPSON H1 IS REQUIRED AT EACH END EACH ROOF TRUSS UNLESS NOTED OTHERWISE. NAIL TJI'S TO TOP PLATE W/ (1) 8D BOX NAIL EACH SIDE. DRIVE NAILS AT AN ANGLE AT LEAST 1-1/2" FROM END OF EACH FLOOR JOIST.
12. PROVIDE 1 1/8" WIDE TIMBER STRAND OR EQUIVALENT FOR ALL RIM JOISTS.
13. BEARING, SHEAR AND EXTERIOR WALL STUDS SHALL BE CAPPED WITH DOUBLE TOP PLATES INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH OTHER PARTITITIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 48".
14. DOUBLE TOP PLATES SHALL BE NAILED WITH 16D NAILS @ 16" O.C. A MINIMUM OF 8-16D NAILS SHALL BE PLACED EACH SIDE OF TOP PLATE SPLICES UNLESS NOTED OTHERWISE.
15. NON BEARING INTERIOR PARTITION WALLS SHALL BE FRAMED A MINIMUM OF 1/2" SHORTER THAN BEARING WALLS TO ACCOMMODATE TRUSS DEFLECTION AND PRESERVE THE INTENDED LOAD PATH.
17. JOISTS WITH CANTILEVERS LARGER THAN 1'-6" AND WITHOUT A DIRECT APPLIED CEILING SHALL HAVE CONTINUOUS BLOCKING INSTALLED AT THE 1/3 POINTS OF THE BACK SPAN UNLESS NOTED OTHERWISE.
18. FLOOR JOISTS SPANNING 16'-0" OR MORE WITHOUT A DIRECT APPLIED CEILING SHALL HAVE ROWS OF CONTINUOUS BLOCKING INSTALLED AT A MAXIMUM SPACING OF 8'-0" O.C.
19. PARTITION WALLS THAT ARE PARALLEL WITH FLOOR JOISTS SHALL BE SUPPORTED WITH DOUBLE JOISTS OR CROSS BLOCKING BETWEEN THE TWO CLOSEST ADJACENT JOISTS UNLESS NOTED OTHERWISE ON THE CONSTRUCTION DRAWINGS.
20. ALL METAL HARDWARE TO BE SIMPSON STRONG TIE OR EQUAL AND INSTALLED ACCORDING TO MANUFACTURERS REQUIREMENTS.
21. HOLES FOR BOLTS SHALL BE DRILLED AT THE SAME NOMINAL DIAMETER OF THE BOLT +1/16".
22. HOLES FOR LAG SCREWS AND WOOD SCREWS SHALL BE DRILLED THE SAME NOMINAL LENGTH AND DIAMETER OF THE SHANK. LAG SCREWS AND WOOD SCREWS SHALL NOT BE DRIVEN INTO PLACE.
23. NAIL SHANK DIAMETER AND LENGTHS SHALL CONFORM TO THE FOLLOWING:
    8D.....0.131" ΦX2.50"
    10D.....0.148" ΦX3.00"
    12D.....0.148" ΦX3.25"
    16D.....0.162" ΦX3.50"
    20D.....0.192" ΦX4.00"
    30D.....0.207" ΦX4.50"
    40D.....0.225" ΦX5.00"
24. WHEN APPLICABLE STAPLES MAY BE SUBSTITUTED FOR NAILS TO FASTEN STRUCTURAL SHEATHING TO SUPPORTING MEMBERS PROVIDED THAT THE STAPLES HAVE A CROWN WIDTH OF 7/16" AND SHALL BE INSTALLED WITH THEIR CROWNS PARALLEL TO THE LONG DIMENSION OF THE FRAMING MEMBERS. SUBSTITUTE STAPLES FOR NAILS ACCORDING TO THE FOLLOWING:
    8D COMMON NAILS.....14 GAUGE 1 1/2" STAPLES
    10D COMMON NAILS.....13 GAUGE 1 1/2" STAPLES
    8D COMMON NAILS AT 6" O.C.....16 GAUGE STAPLES AT 4" O.C.
    8D COMMON NAILS AT 4" O.C.....16 GAUGE STAPLES AT 2 1/2" O.C.
    8D COMMON NAILS AT 12" O.C.....16 GAUGE STAPLES AT 7 3/4" O.C.
25. FASTENERS INSTALLED INTO PRESERVATIVE TREATED WOOD AND FIRE RETARDANT TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. CAST IN AND POST INSTALLED BOLTS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM. WASHERS AND OTHER HARDWARE IN CONTACT WITH FASTENERS SHALL BE OF THE SAME ANTI-CORROSIVE TREATMENT AS THE FASTENERS THEY ARE IN CONTACT WITH.
26. SHEATHING FASTENERS SHALL BE DRIVER FLUSH BUT SHALL NOT FRACTURE THE SHEATHING SURFACE.
27. SILL PLATES OF EXTERIOR WALLS AND INTERIOR BEARING WALLS MUST BE ANCHORED TO THE FOUNDATION WITH A MINIMUM OF 1/2"X10" ANCHOR BOLTS @ 72" O.C. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4" FROM EACH END OF EACH PIECE. A PROPERLY SIZED NUT AND STANDARD CUT WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE.
28. SHEAR WALL SILL PLATE ANCHOR BOLTS SHALL INCLUDE 0.229"X3"X3" STEEL PLATE WASHERS BETWEEN THE SILL PLATE AND NUT. 0.229"X3"X3" STEEL PLATE WASHERS ARE PERMITTED TO HAVE A DIAGONALLY SLOTTED HOLE WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4" IF A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE OF THE SHEAR WALL. SHEAR WALL SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH A MINIMUM OF 2 ANCHOR BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4" FROM EACH END OF EACH PIECE.
29. CAST IN ANCHOR BOLTS FOR INTERIOR BEARING AND SHEAR WALLS MAY BE REPLACED WITH SIMPSON STRONG-BOLTS, SIMPSON TITEN HD, OR HILIT KWIK BOLT TY ANCHORS OF THE SAME DIAMETER AND 4-1/2" MINIMUM EMBEDMENT. INTERIOR SHEAR WALL ANCHOR BOLTS MAY ALSO BE EPOXIED INTO CONCRETE WITH SIMPSON SET-XP HILTI HIT-RE 500-SD EPOXY AND A MINIMUM 4-1/2" EMBEDMENT.

POST INSTALLED ANCHORS

1. EXPANSION AND EPOXIED ANCHORS REQUIRE SPECIAL INSPECTION AS STATED IN THE STATEMENT OF SPECIAL INSPECTIONS SECTION. COPIES OF SPECIAL INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL.
2. EXPANSION ANCHORS SHALL BE AS FOLLOWS:
   A. INSTALLED IN CONCRETE
      -SIMPSON TITEN HD (3/8", 1/2", AND 3/4"DIAMETERS) ICC-ES ESR-2713
      -SIMPSON STRONG-BOLT, ICC-ES ESR-3037
      -HILTI KWIK BOLT TZ, ICC-ES AC 193
      -HILTI "HIT-HY 150 MAX-SD" EPOXY ADHESIVE LARR# 25881, ICC-ESR# 3013
      -SIMPSON STRONG-TIE "SET-XP" STRUCTURAL EPOXY-TIE ANCHORING ADHESIVE LARR# 25744, ICC-ESR# 2508
   B.INSTALLED IN MASONRY
      -HILTI KWIK BOLT 3,ICC-ES ESR-1385
      -SIMPSON TITEN HD, ICC-ES ESR-2713
      -SIMPSON WEDGE-ALL
3. INSTALLATION AND MIN. EMBEDMENT SHALL BE IN ACCORDANCE WITH SPECS. OR AS SPECIFIED ON DRAWINGS, WHICH EVER IS GREATER.
3. CONTRACTOR TO FOLLOW MANUFACTURERS REQUIRMENTS FOR INSTALLATION OF EXPANSION ANCHORS INCLUDING DRILL BIT DIAMTER, DRILLED HOLE DEPTH, MINIMUM EDGE DISTANCE AND MINIMUM SPACING REQUIREMENTS.
4. WHERE ANCHOR BOLTS ARE SET IN MASONRY WALLS, FILLBLOCK CELLS WITH CONCRETE FOR BOLTED COURSE AND ONE COURSE BELOW ANCHOR ELEVATION.
2. CONTINUOUS SPECIAL INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR ALL EPOXY ANCHORS INSTALLATIONS.

ENGINEERED WOOD TRUSSES

1. ENGINEERED WOOD TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM LOADS:
   ROOF TRUSS TOP CHORD: 20 PSF DL (INCLUDING TRUSS WT), 20 PSF LL
   ROOF TRUSS BOTTOM CHORD: 5PSF DL, 10 PSF LL (NOT CONCURRENT W/ TOP CHORD LL)
   FLOOR TRUSS TOP CHORD: 10 PSF DL (INCLUDING TRUSS WEIGHT), 40PSF LL
   FLOOR TRUSS BOTTOM CHORD: 5 PSF DL, 10 PSF LL (NOT CONCURRENT W* TOP CHORD LL)
   *WIND AND SEISMIC LOADS SHALL CONFORM TO ASCE 7-05 AND LOCAL BUILDING DEPT. *
2. TRUSS MAXIMUM DEFLECTION SHALL NOT EXCEED L/240 FOR TOTAL LOAD OR L/360 FOR LIVE LOAD.
3. LUMBER GRADE FOR ENGINEERED WOOD TRUSSES SHALL BE DF #2 OR BETTER.
4. TRUSS TOP CHORDS SHALL BE 2X4 MINIMUM. TRUSS WEBS SHALL BE 2X4 MINIMUM.
5. MAXIMUM LOAD DURATION FACTOR SHALL NOT BE GREATER THAN 1.15. MAXIMUM PLATE BEARING STRESS FC' = 625 PSI. IF BEARING STRESS ON THE TOP PLATE EXCEEDS 625 PSI, THE TRUSS DESIGN SHALL INCLUDE ALL OF THE REQUIRED BEARING IMPROVEMENTS.
6. DESIGN AND CONSTRUCTION OF ALL ENGINEERED WOOD TRUSSES SHALL CONFORM TO THE CURRENT EDITION OF THE IBC. THE DESIGN MANUFACTURE AND QUALITY ASSURANCE SHALL CONFORM TO TPI 1.
7. ALL TRUSSES SHALL BE DESIGNED FOR ALL LOADING FROM MECHANICAL, ELECTRICAL, FIRE SPRINKLER, HVAC AND OTHER SUPER IMPOSED LOADS, TRUSS DESIGNER SHALL CORRELATE LOAD LOCATIONS WITH MECHANICAL, PLUMBING AND ELECTRICAL PLANS.
8. ALL TRUSS SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THIS PROJECT IS BEING CONSTRUCTED.
9. TRUSS ERECTION SHALL BE ACCORDING TO TRUSS MANUFACTURERS RECOMMENDATIONS.
10. TRUSS DESIGNER SHALL DESIGN ENTIRE TRUSS SYSTEM, INCLUDING ALL TEMPORARY BRACING, PERMANENT LATERAL BRACING, AND TRUSS TO TRUSS CONNECTIONS THAT ARE REQUIRED. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN CONCURRENCE AND APPROVAL OF THE TRUSS MANUFACTURER AND THE ENGINEER OF RECORD.

DEFERRED SUBMITTALS

1. FOR ALL DEFERRED SUBMITTAL ITEMS, CONTRACTOR SHALL SUBMIT CONSTRUCTION DETAILS AND DRAWINGS PRIOR TO CONSTRUCTION WITH CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS BEING CONSTRUCTED.
2. ALL DEFERRED SUBMITTAL ITEMS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE CITY BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.
3. THE FOLLOWING ITEMS SHALL BE CONSIDERED AS DEFERRED SUBMITTAL ITEMS:
   A. ENGINEERED WOOD ROOF TRUSSES
   B. ENGINEERED WOOD FLOOR TRUSSES

N

PERMIT NUMBER: XXX

PROJECT TITLE : **RESIDENTIAL HOUSE**

PROJECT ADDDRESS: 28051 TRADE WIND CT ROSHARON, TX 77583

NO.	REVISION

CONTACT:

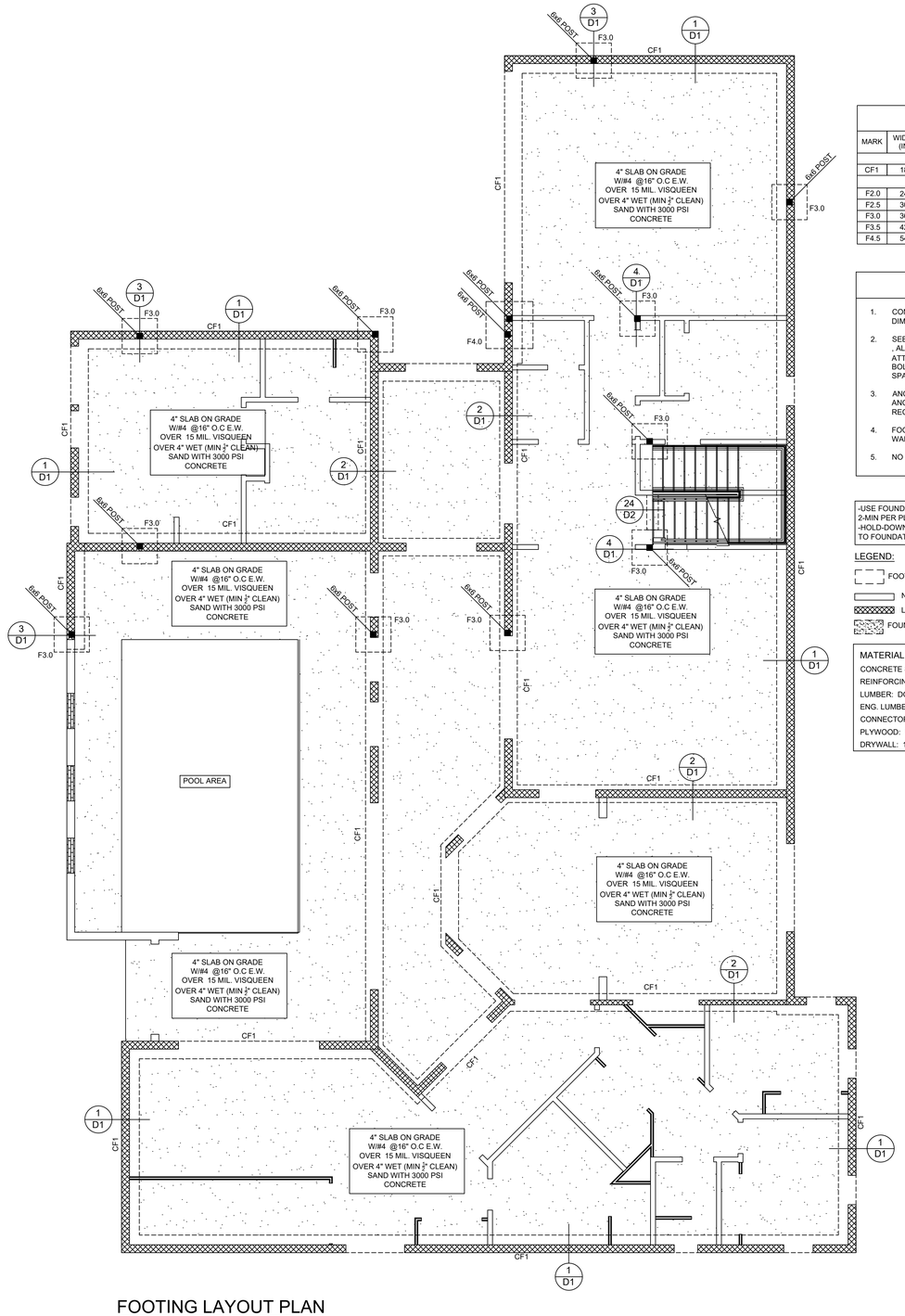
SCALE:

DRAWING TITEL:

GENERAL NOTES

SHEET NO:

S1.1



FOOTING LAYOUT PLAN

SCALE-3/16"=1'-0"

FOOTING SCHEDULE				
MARK	WIDTH (IN)	REBAR	SPACING	THICK.(T)
CONTINUOUS FOOTINGS				
CF1	18	(2) #4 BARS x CONT.	CONT.	15"
SQUARE FOOTINGS				
F2.0	24	(3) #4 BARS EACH DIR.	EQ.	15"
F2.5	30	(3) #4 BARS EACH DIR.	EQ.	15"
F3.0	36	(4) #4 BARS EACH DIR.	EQ.	15"
F3.5	42	(5) #4 BARS EACH DIR.	EQ.	15"
F4.5	54	(6) #4 BARS EACH DIR.	EQ.	15"

GENERAL NOTES

1. CONTRACTOR TO REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. SEE SILL PLATE SCHEDULE FOR ANCHOR BOLT SPACING. AS A , ALL EXTERIOR WALL AND INTERIOR BEARING/SHEAR WALLS TO BE ATTACHED TO THE FOUNDATION W/ ½" DIA. x 10" LONG ANCHOR BOLTS EMBEDDED 7" INTO CONCRETE, WITH 3x3x3/16 PLATE WASHER. SPACING AT 3 ft O.C. UNLESS NOTED OTHERWISE.
3. ANCHOR BOLTS MAY BE SUBSTITUTED WITH SIMPSON MASA MUDSILL ANCHORS AT 3 ft O.C. UNO. INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
4. FOOTINGS TO BE CENTERED BELOW POSTS AND BEARING/SHEAR WALLS.
5. NO COLUMN LABEL INDICATES (2) 2X6/(2) 2X4 DF#2 MINIMUM.

-USE FOUNDATION ANCHOR, MIN. 5/8"Ø @ 3ft O.C, 12" FROM END , 2-MIN PER PLATE, WITH3x3x3/16 WASHER
-HOLD-DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.

LEGEND:

- FOOTING
- NON LOAD BEARING WALL
- LOAD BEARING WALL
- FOUNDATION WITH SLAB ON GRADE AREA

MATERIAL GRADE:

CONCRETE STRENGTH: 3000 PSI
REINFORCING STEEL: GRADE 60
LUMBER: DOUGLAS FIR #2 OR BETTER
ENG. LUMBER: 2.0E PARALLAM PSL
CONNECTORS: SIMPSON OR EQUIVALENT
PLYWOOD: 7/16 APA RATED SHEATHING
DRYWALL: 1/2 OR 5/8"

PERMIT NUMBER: XXX

PROJECT TITLE : **RESIDENTIAL HOUSE**

PROJECT ADDDRESS: 28051 TRADE WIND CT ROSHARON, TX 77583

NO.	REVISION

CONTACT:

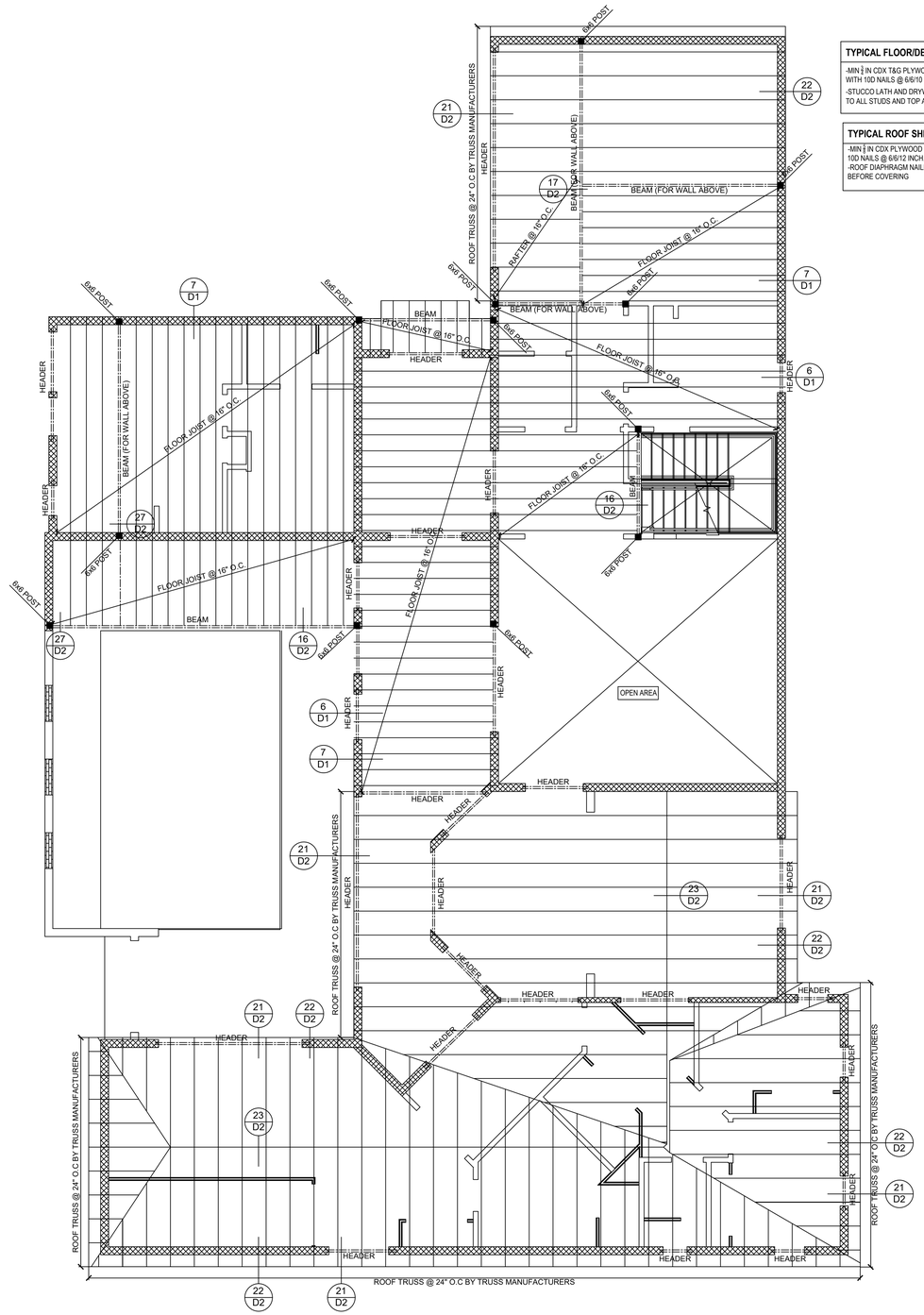
SCALE:

DRAWING TITEL:

FOOTING LAYOUT PLAN

SHEET NO:

S1.2



FIRST FLOOR FRAMING PLAN

SCALE-3/16"=1'-0"

TYPICAL FLOOR/DECK SHEATHING

-MIN ¾ IN CDX T&G PLYWOOD UNBLOCKED GLUE NAILED WITH 10D NAILS @ 6/6/10 INCH
-STUCCO LATH AND DRYWALL SHALL BE NAILED TO ALL STUDS AND TOP AND BOTTOM PLATE

TYPICAL ROOF SHEATHING

-MIN ½ IN CDX PLYWOOD UNBLOCKED WITH 10D NAILS @ 6/6/12 INCH.
-ROOF DIAPHIRAGM NAILING TO BE INSPECTED BEFORE COVERING

PERMIT NUMBER: XXX

PROJECT TITLE : **RESIDENTIAL HOUSE**

PROJECT ADDDRESS: 28051 TRADE WIND CT
ROSHARON, TX 77583

NO.	REVISION

CONTACT:

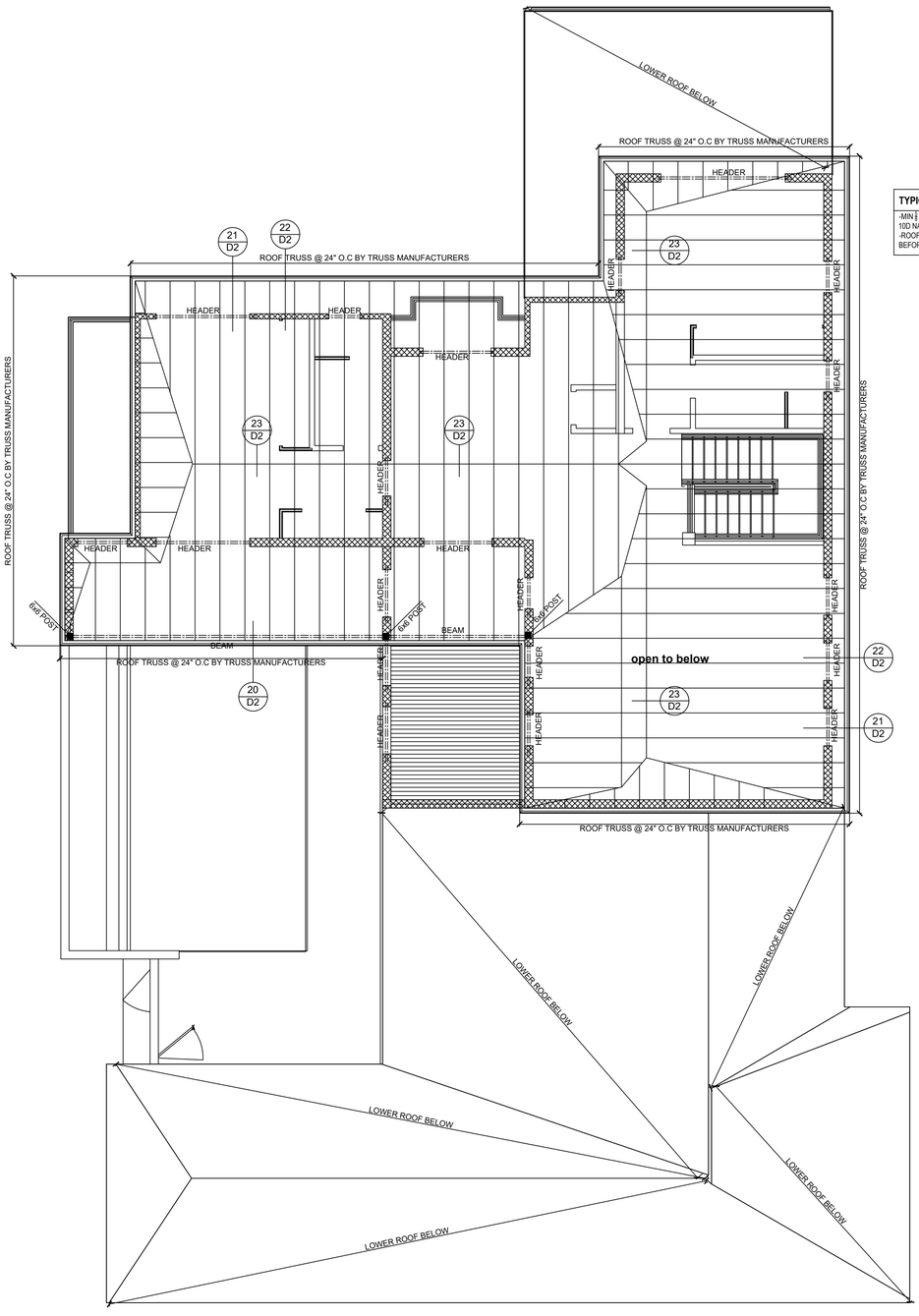
SCALE:

DRAWING TITEL:

FIRST FLOOR
FRAMING PLAN

SHEET NO:

S1.3



TYPICAL ROOF SHEATHING

-MIN ½ IN CDX PLYWOOD UNBLOCKED WITH 10D NAILS @ 6/6/12 INCH .
-ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING

UPPER FLOOR ROOF FRAMING PLAN

SCALE-3/16"=1'-0"

PERMIT NUMBER: XXX

PROJECT TITLE : **RESIDENTIAL HOUSE**

PROJECT ADDDRESS: 28051 TRADE WIND CT
ROSHARON, TX 77583

NO.	REVISION

CONTACT:

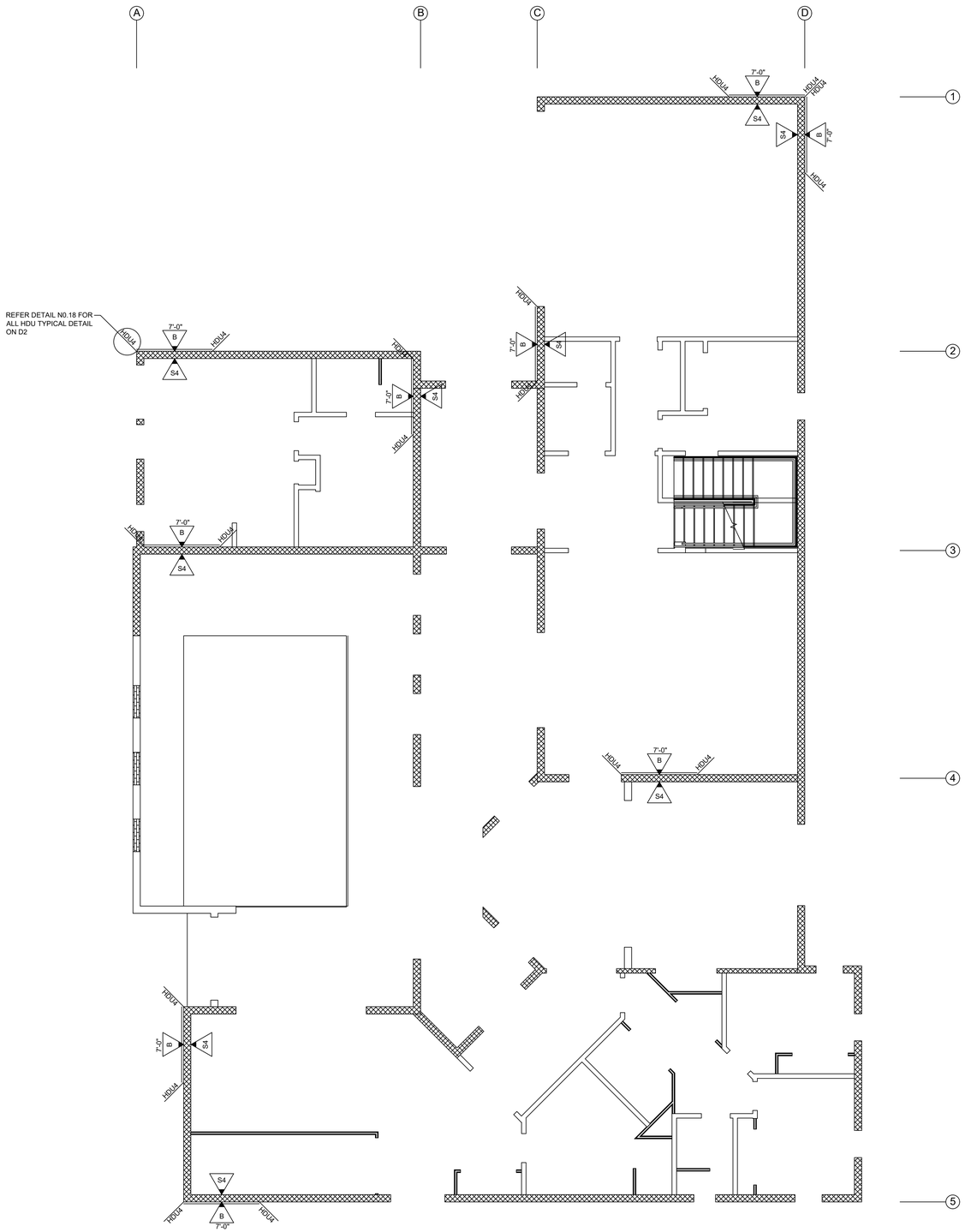
SCALE:

DRAWING TITEL:

ROOF FRAMING PLAN

SHEET NO:

S1.4



FIRST FLOOR SHEAR WALL PLAN

SCALE-3/16"=1'-0"

PERMIT NUMBER: XXX

PROJECT TITLE : **RESIDENTIAL HOUSE**

PROJECT ADDDRESS: 28051 TRADE WIND CT
ROSHARON, TX 77583

NO.	REVISION

CONTACT:

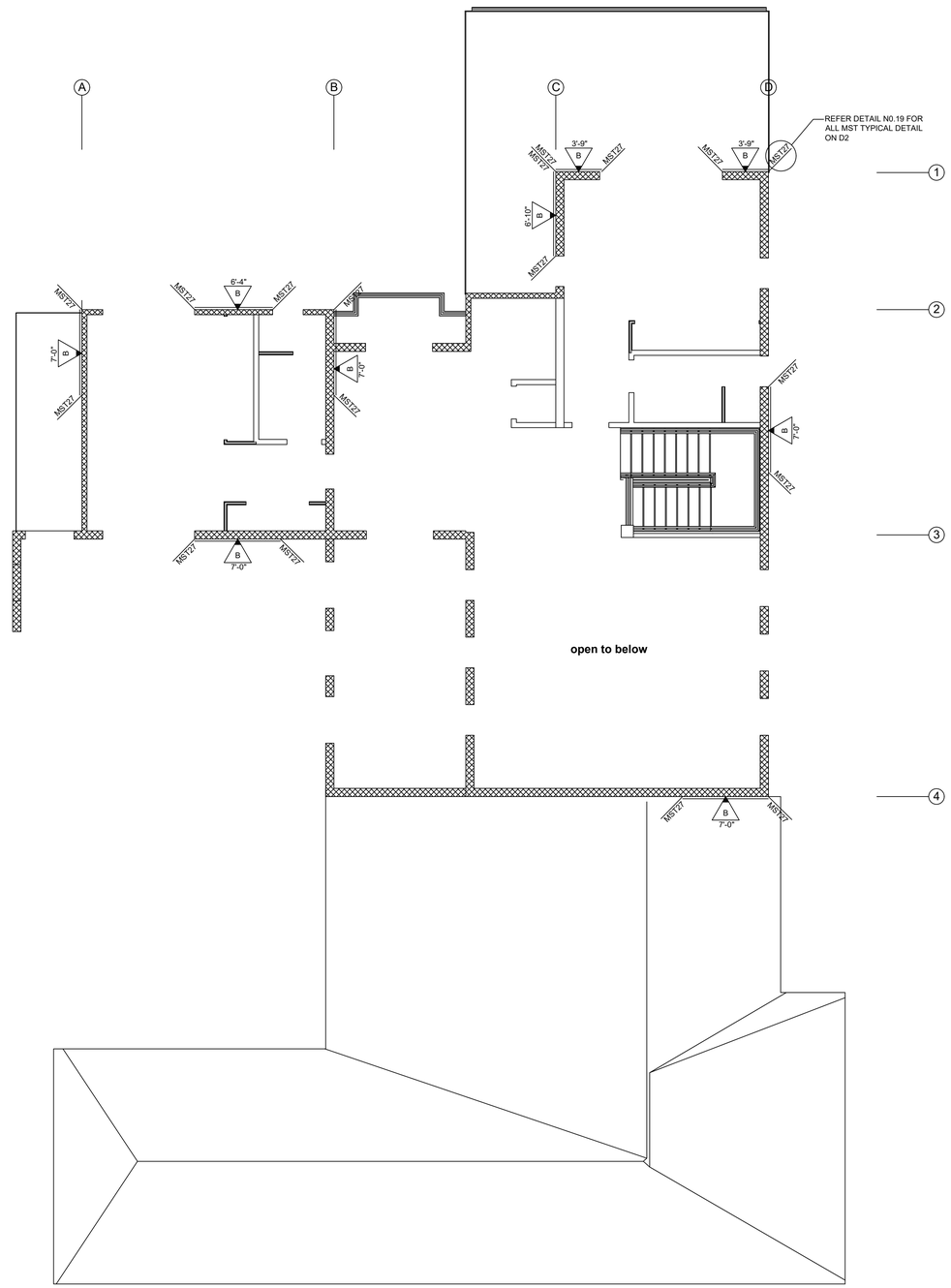
SCALE:

DRAWING TITEL:

FIRST FLOOR
SHEAR WALL PLAN

SHEET NO:

S1.5



SECOND FLOOR SHEAR WALL PLAN

SCALE-3/16"=1'-0"

PERMIT NUMBER: XXX

PROJECT TITLE : **RESIDENTIAL HOUSE**

PROJECT ADDDRESS: 28051 TRADE WIND CT ROSHARON, TX 77583

NO.	REVISION

CONTACT:

SCALE:

DRAWING TITEL:

SECOND FLOOR SHEAR WALL PLAN

SHEET NO:

S1.6

LAP LENGTH SCHEDULE

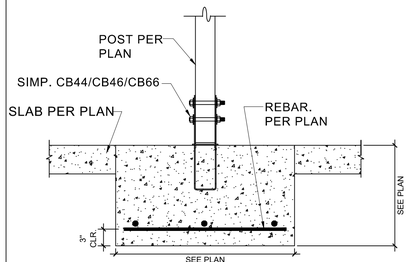
BAR SIZE	UNCOATED				EPOXY COATED			
	3,000 psi (IN.)		4,000 psi (IN.)		3,000 psi (IN.)		4,000 psi (IN.)	
	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#4	37	30	32	25	48	45	42	38
#5	47	36	40	31	62	54	53	47
#6	56	43	48	37	74	64	63	56
#7	81	63	70	54	107	94	92	81
#8	93	72	80	62	122	107	105	93
#9	105	81	91	70	138	121	120	105
#10	118	91	102	79	155	136	134	118
#11	131	101	113	87	172	151	148	131

CLASS "B" (FORMERLY CLASS "C")

AT STRUCTURAL SLABS:
TOP BARS: LAP AT MIDSPAN, U.N.O
BOTTOM BARS: LAP AT SUPPORTS, U.N.O.

LAP LENGTH SCHEDULE

DETAIL 5



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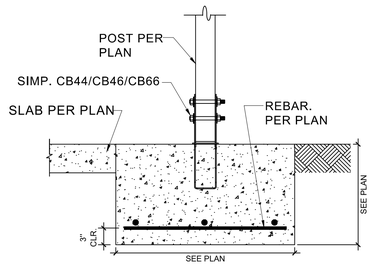
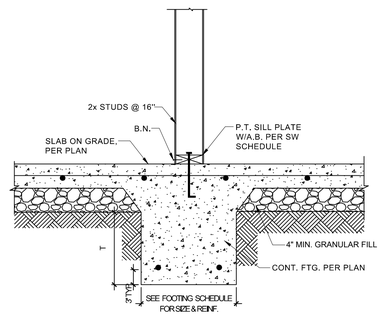
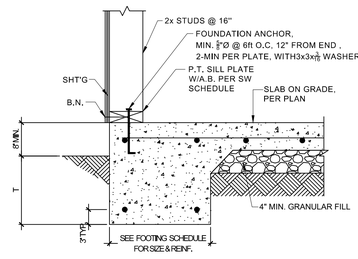


DETAIL 3

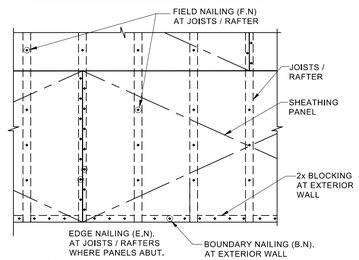


DETAIL 2



DETAIL 1

ROOF / FLOOR SHEATHING



PANEL NAILING SCHEDULE

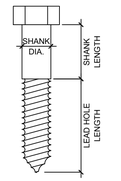
	B.N. / E.N. / F.N.
ROOFS:	8d @ 6" / 6" / 12"
FLOORS:	10d @ 6" / 6" / 10"
WALLS:(NOT SHEAR WALL)	8d @ 6" / 6" / 12"

NOTES:

(1) NAILS SHALL BE PLACED 3/8" FROM PANEL EDGES.
(2) PROVIDE 1/8" GAP BETWEEN SHEATHING PANEL.
(3) MINIMUM DIMENSION OF SHEATHING PANEL IN ANY DIRECTION SHALL BE 2'-0"
(4) WALL SHEATHING PANEL MAY BE INSTALLED WITH THE LONG DIRECTION ORIENTED VERTICALLY.

DETAIL 10

LAG SCREW ASSEMBLY[1,2,3,4]		
SCRREW DIAMETER (IN.)	LEAD HOLE[5] DIAMETER (IN.)	
	DOUG. FIR & SO. PINE	REDWOOD
1/4, 5/16, 3/8	NOT REQ.	NOT REQ.
7/16	5/16	1/4
1/2	3/8	5/16
5/8	7/16	3/8
3/4	1/2	7/16
7/8	5/8	1/2
1	3/4	5/8



NOTE:
1. TABLE APPLIES FOR DOUGLAS FIR LARCH, SOUTHERN PINE WOODS, AND REDWOOD (PER NDS 2001 SEC. 11.1.4).
2. LAG SCREWS SHALL BE WRENCH TIGHTENED; HAMMERING OF LAG SCREWS IS NOT PERMITTED.
3. SOAP OR OTHER APPROVED LUBRICANTS SHALL BE USED ON THE THREADED PORTION OF THE LAG SCREW TO PREVENT DAMAGING THE SCREW AND FACILITATE INSERTION.
4. THE SHANK HOLE SHALL HAVE THE SAME DIAMETER AND DEPTH OF PENETRATION AS THE SHANK LENGTH AND DIAMETER.
5. THE LEAD HOLE SHALL HAVE THE SAME DEPTH AS THE THREADED PORTION OF THE SCREW.

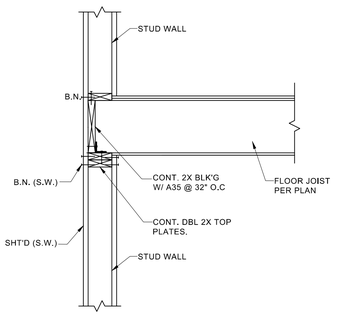
LAG SCREW REQUIREMENTSDETAIL 9

NAILING SCHEDULE

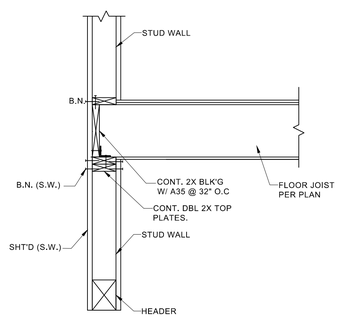
JOISTS TO SILL OR GIRDER, TOENAIL	3-8d
BRIDGING TO JOIST, TOENAIL EACH END	2-8d
JOISTS TO BLOCKING, END NAIL	16d top & bott,
RIM JOIST TO JOISTS, END NAIL	16d top & bott,
FLOOR JOIST LAP @ BEARING, FACE NAIL	2-16d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	6d @ 16" oc
STUD TO TOP PLATE, END NAIL	2-16d
STUD TO SOLE PLATE	4-8d, toenail or 2-16d,end nail
DOUBLE STUDS, FACE NAIL	16d @ 24" oc
DOUBLE TOP PLATES, FACE NAIL	16d @ 16" oc
DOUBLE TOP PLATES, LAP SPLICE, FACE NAIL	8-16d
DOUBLE TOP PLATES, INTERSECTIONS, FACE NAIL	2-16d
13CEILING JOIST TO PLATE, TOENAIL	3-8d
CEILING JOIST, LAP OVER PARTITIONS, FACE NAIL	3-16d
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3-16d
RAFTER TO PLATE, TOENAIL	3-8d
RAFTER TO RIDGE	2-16d
BUILT-UP CORNER STUDS	16d @ 24" oc
POST TO PIER PAD, TOENAIL	3-16d
GIRDER TO POST, TOENAIL	3-16d
2X PLANKS, FACE NAIL @ BEARING	2-16d
1X6 SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-8d
1X8 & WIDER SUBFLOOR TO EACH JOIST , FACE NAIL	3-8d
2X SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d
1X BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d
1X8 SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2-8d
1X10 & WIDER SHEATHING TO EACH BEARING, FACE NAIL	3-8d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3-8d
RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6" o.c.
CONTINUOUS HEADER, TWO PIECES	16d @ 16" o.c. along each edge
CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
BUILT-UP GIRDER AND BEAMS	20d @ 32" o.c. at top and bottom and staggered 2-20d at ends and at each splice

NOTE:
1. COMMON OR BOX NAILS MAY BE USED.
2. SCHEDULE BASED ON DOUGLAS FIR-LARCH FRAMING.
3. TABLE BASED ON 2015 IBC TABLE 2304.10.1
4. THESE CONNECTIONS ARE MINIMUM CONDITIONS AND MAY BE SUPERSEDED BY MORE SPECIFIC DETAILS AS INDICATED ON THESE PLANS.

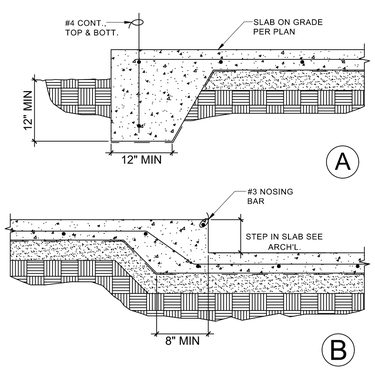
NAILING SCHEDULE 8



DETAIL 7

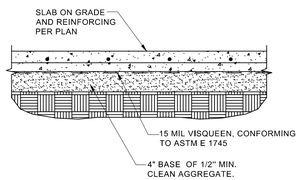


DETAIL 6



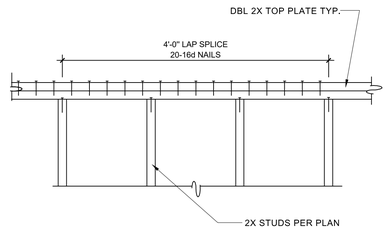
SLAB EDGE DETAILS

DETAIL 14



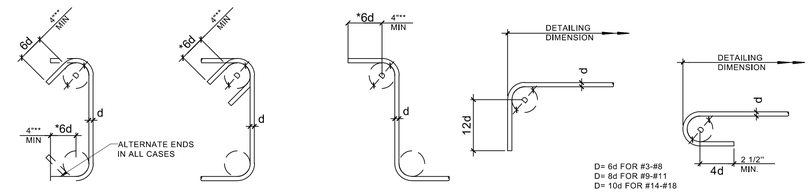
GREEN CODE SLAB DETAIL

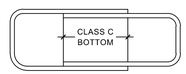
DETAIL 13



DOUBLE TOP PLATE CONNECTION

DETAIL 12





FRAME COLUMN & GIRDER TIE LAP DETAIL

NOTE:
THIS TIE LAP DETAIL IS NOT PERMISSIBLE FOR OUTER TIES.

TIES AND STIRRUPS ONLY
#3: D= 1 1/2"
#4: D= 2"
#5: D= 2 1/2"
#6: D= 41/2"

TIE NOTES:
**1. PROVIDE 10d EXTENSIONS IN LIEU OF 6d AT ALL FRAME COLUMNS AND GIRDERS.
**2. 2 1/2 "Ø SEISMIC ZONES 0 & 1.

DETAIL 11

N

PERMIT NUMBER: XXX

PROJECT TITLE : **RESIDENTIAL HOUSE**

PROJECT ADDDRESS: 28051 TRADE WIND CT ROSHARON, TX 77583

NO.	REVISION

CONTACT:

SCALE:

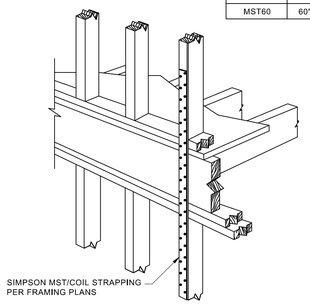
DRAWING TITEL:

DETAILS

SHEET NO:

D1

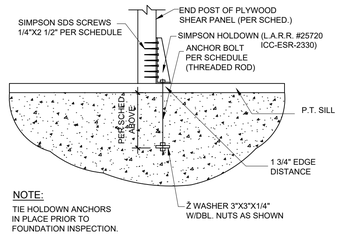
STRAP LENGTH SCHEDULE		
MODEL NO.	LENGTH	FASTENER
MST27	27"	30-16d Nail
MST37	37 1/2"	42-16d Nail
MST48	48"	50-16d Nail
MST60	60"	68-16d Nail



HOLD DOWN DETAIL

DETAIL 19

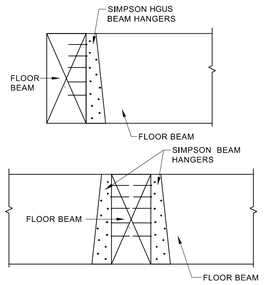
HOLDOWN ANCHOR BOLT SCHEDULE			
MODEL NO.	BOLT DIA.	EMBED	WASHER
HDU2	5/8" Ø	10"	2 1/2" SQ.
HDU4	5/8" Ø	12"	2 1/2" SQ.
HDU5	5/8" Ø	14"	2 1/2" SQ.
HDU8	7/8" Ø	18"	3" SQ.
HDU11	1" Ø	20"	3 1/2" SQ.
HDU14	1" Ø	20"	3 1/2" SQ.



NOTE:
TIE HOLDOWN ANCHORS
IN PLACE PRIOR TO
FOUNDATION INSPECTION.

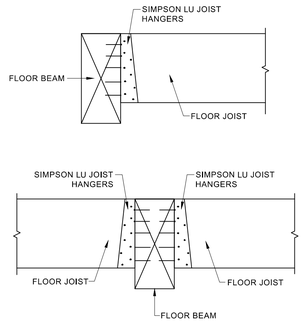
HOLD DOWN DETAIL

DETAIL 18



BEAM TO BEAM HANGER DETAIL

DETAIL 17



BEAM TO JOIST HANGER DETAIL

DETAIL 16

CONNECTION OF TOP LOADED AND SIDE LOADED MULTIPLE PLY BEAMS

1¾" WIDTH PIECES:

(2) PLIES:
UP TO 12" DEEP BEAMS: 3 ROWS 10d COMMON NAILS @ 12" O.C. ON SIDE
14" AND DEEPER BEAMS: 3 ROWS OF 10d COMMON NAILS @ 6" O.C. ONE SIDE

(3) PLIES:
UP TO 12" DEEP BEAMS: 3 ROWS 10d COMMON NAILS @ 12" O.C. EA. SIDE STAGGERED
14" AND DEEPER BEAMS: 3 ROWS OF 10d COMMON NAILS @ 6" O.C. EA. SIDE STAGGERED

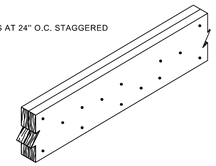
(4) PLIES:
UP TO 12" DEEP BEAMS: 2 ROWS OF 1/2" ∅ A307 BOLTS W/WASHERS @ 16" O.C.
OR (2) ROWS OF SIMPSON SDS 1/4" x6" SCREWS @ 16" O.C.

14" AND DEEPER BEAMS: 3 ROWS OF 1/2" ∅ A307 BOLTS W/WASHERS @ 16" O.C.
OR (3) ROWS OF SIMPSON SDS 1/4" X6" SCREWS @ 16" O.C.

NOTE: NAILED CONNECTIONS REQUIRE AN ADDITIONAL ROW OF NAILS WHEN NAIL SIZE IS SMALLER THAN SPECIFIED ABOVE.

3½" WIDTH PIECES:

MINIMUM OF 2 ROWS ½ " BOLTS AT 24" O.C. STAGGERED



MULTIPLE-PLY BEAM DETAIL

DETAIL 15

SHEAR WALL DETAIL

DETAIL 28

DETAIL 23

TRUSS TO WALL DETAIL

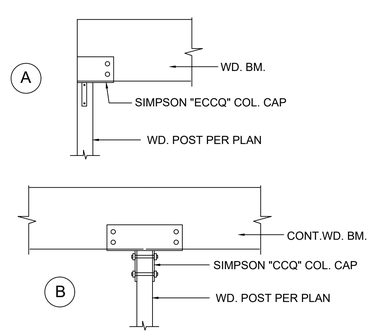
DETAIL 22

TRUSS TO WALL DETAIL

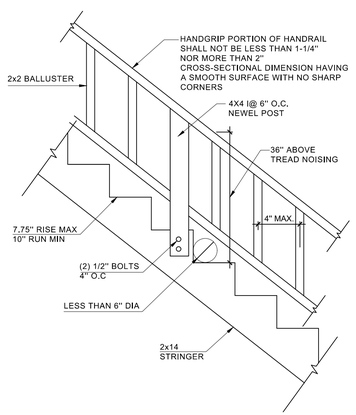
DETAIL 21

TRUSS TO BEAM DETAIL

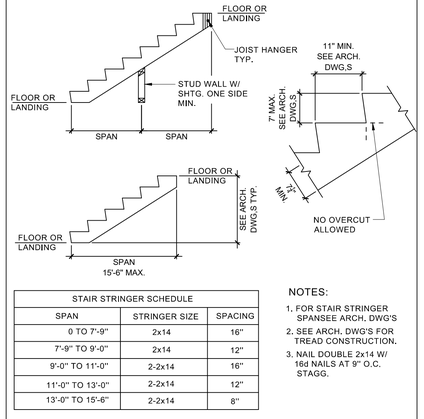
DETAIL 20



DETAIL 27



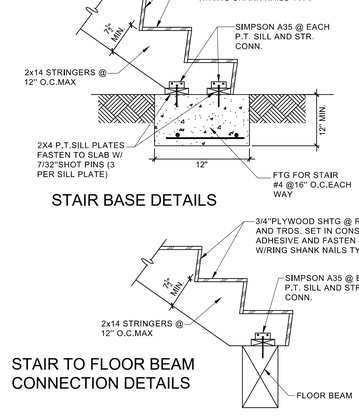
DETAIL 26



STAIR STRINGER SCHEDULE		
SPAN	STRINGER SIZE	SPACING
0 TO 7'-9"	2x14	16"
7'-9" TO 9'-0"	2x14	12"
9'-0" TO 11'-0"	2-2x14	16"
11'-0" TO 13'-0"	2-2x14	12"
13'-0" TO 15'-6"	2-2x14	8"

NOTES:
1. FOR STAIR STRINGER SPANSEE ARCH. DWG'S
2. SEE ARCH. DWG'S FOR TREAD CONSTRUCTION.
3. NAIL DOUBLE 2x14 W/ 16d NAILS AT 9" O.C. STAGG.

DETAIL 25



STAIR BASE DETAILS

STAIR TO FLOOR BEAM
CONNECTION DETAILS

DETAIL 24

PERMIT NUMBER: XXX
PROJECT TITLE : RESIDENTIAL HOUSE
PROJECT ADDDRESS: 28051 TRADE WIND CT
ROSHARON, TX 77583

NO.	REVISION

CONTACT:

SCALE:

DRAWING TITEL:

DETAILS

SHEET NO:

D2