



**GENERAL STRUCTURAL NOTES**

**BUILDING CODES USED FOR DESIGN**

- INTERNATIONAL BUILDING CODE, 2006 EDITION

**DESIGN LOADS**

- DESIGN LIVE LOADS:
  - RESIDENTIAL ROOFS: 100 PSF
  - ROOFS: 20 PSF
- ROOF SNOW:
  - GROUND SNOW LOAD: 30 PSF
  - SNOW EXPOSURE FACTOR: 1.0
  - SNOW IMPORTANCE FACTOR: 1.0
  - THERMAL FACTOR: 1.0
- WIND:
  - BASIC WIND SPEED: 90 MPH
  - WIND IMPORTANCE FACTOR: 1.0
  - WIND EXPOSURE: B
  - INTERNAL PRESSURE COEFFICIENT COMPONENTS & CLADDING: ASCE7
- SEISMIC:
  - SEISMIC IMPORTANCE FACTOR: 1.0
  - OCCUPANCY CATEGORY: II
  - S<sub>s</sub>: 0.165
  - S<sub>1</sub>: 0.057
  - SITE CLASS: D
  - S<sub>ms</sub>: 0.176
  - S<sub>m1</sub>: 0.091
  - DESIGN CATEGORY: B
  - BASIC RESISTING SYSTEM: LIGHT-FRAMED WALLS FRAMED W/ WOOD NON-STRUCTURAL PANELS
  - BASE SHEAR RESPONSE COEFFICIENT: 27k
  - RESPONSE MODIFICATION COEFFICIENT: 0.088
  - ANALYSIS PROCEDURE: 2 ELFP

**NEW CONSTRUCTION**

- THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS.
- ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE CONSTRUED TO APPLY AT ANY SIMILAR CONDITION ELSEWHERE ON THE JOB EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. WHERE DISCREPANCIES OCCUR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT PRIOR TO CONSTRUCTION.

**EXCAVATION AND EARTHWORK**

- THE SOILS AND FOUNDATION ENGINEERING REPORT IS FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT BE CONSIDERED PART OF THE CONTRACT DOCUMENTS. FURTHERMORE, NO WARRANTY IS MADE BY THE OWNER WITH REGARD TO THE COMPLETENESS AND ACCURACY OF THE SUBSURFACE INVESTIGATION DATA, SOIL TEST DATA OR STATEMENTS AND INTERPRETATIONS GIVEN IN REPORT NO. 16-8014 PREPARED BY ECS LLP ON 06-10-10.
- WATER LEVELS INDICATED ON THE BORING LOGS MAY BE SUBJECT TO SEASONAL AND/OR ANNUAL VARIATIONS. A Dewatering SYSTEM OF SUFFICIENT CAPACITY SHALL BE INSTALLED AND OPERATED TO MAINTAIN THE CONSTRUCTION AREA FREE OF WATER AT ALL TIMES.
- THE BEARING VALUE OF THE SOIL WAS DETERMINED BY FIELD EXPLORATION AND LABORATORY ANALYSIS. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING NET ALLOWABLE BEARING PRESSURE(S):
  - SPREAD FOOTINGS: 3000 PSF
  - WALL FOOTINGS: 3000 PSF
- ALL FOUNDATIONS SHALL BE PLACED ON SOIL TESTED FOR SUITABLE BEARING MATERIAL AND SPECIFIED CAPACITY PER THE SOILS REPORT REQUIREMENTS.
- WITHIN THE EXCAVATION AREA OF THE FOUNDATIONS, ALL VEGETATION, TOPSOIL, PREVIOUSLY PLACED FILL AND UNSUITABLE SOILS SHALL BE REMOVED. ALL FOOTINGS SHALL BEAR ON VIRGIN SOIL OR PROPERLY PLACED AND COMPACTED ENGINEERED FILL.
- FOUNDATION DESIGN DOES NOT ACCOUNT FOR WINTER CONSTRUCTION. ANY UNENCLOSED/UNHEATED SPACES SHALL BE ADEQUATELY PROTECTED AGAINST FROST DURING WINTER CONSTRUCTION BY CONTRACTOR.

**BACKFILLING**

- FOUNDATIONS SHALL BE BACKFILLED AS SOON AS PRACTICABLE SO AS TO LIMIT THE EFFECTS OF WATER INFILTRATION AND FROST HEAVE.
- UNLESS NOTED OTHERWISE, INTERIOR FOUNDATIONS WERE NOT DESIGNED TO BEAR AT ELEVATIONS REQUIRED TO PROTECT AGAINST FROST HEAVE. IF WINTER CONSTRUCTION IS ANTICIPATED, CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR PROVIDING ADEQUATE MEASURES TO PROTECT AGAINST FROST HEAVE.

**CONCRETE**

- ALL CONCRETE WORK INCLUDING FORMING, REINFORCING, MIXING, PLACING AND CURING SHALL BE IN ACCORDANCE WITH THE ACI MANUAL OF CONCRETE PRACTICE INCLUDING "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318 AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE," ACI 301.
- ALL CONCRETE SHALL ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH f'<sub>c</sub> = 3000 PSI FOR FOUNDATIONS AND SLABS AT 28 DAYS.
- CONCRETE SHALL BE VIBRATED INTO FORMS WHILE PLACING, WITHOUT OVER-VIBRATING. REINFORCING SHALL BE PROTECTED BY CONCRETE OF THICKNESS AS FOLLOWS:
  - FOOTINGS: 3"
  - OTHER FOUNDATION: 2" BOTH FACES
  - EXPOSED EXTERIOR CONCRETE: 2"
  - SLAB ON GRADE: 1/3 FROM TOP
- SLABS-ON-GRADE SHALL BE PLACED IN CONTINUOUS STRIPS PER ACI RECOMMENDATIONS.
- COORDINATE CONCRETE WORK WITH THAT OF OTHER TRADES TO ALLOW FOR SETTING OF SLEEVES, ACCESSORIES, ETC.
- ALL ANCHOR RODS SHALL BE IN PLACE PRIOR TO POURING OF CONCRETE.

**REINFORCING STEEL**

- THE REINFORCING STEEL CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ACCESSORIES, CHAIRS, SPACER BARS AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT UNLESS SHOWN OTHERWISE ON THE PLANS AND/OR DETAILS.
- REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.
- WELDED WIRE REINFORCING SHALL BE SUPPLIED IN FLAT SHEETS AND SHALL CONFORM TO ASTM A185.
- CONCRETE REINFORCEMENT SHALL BE PLACED ACCORDING TO CRSI "RECOMMENDED PRACTICE FOR PLACING REINFORCEMENT BARS."
- ALL REINFORCEMENT SPLICES SHALL BE LAPPED 48 BAR DIAMETERS MINIMUM UNLESS OTHERWISE NOTED. PROVIDE CORNER BARS FOR ALL HORIZONTAL REINFORCEMENT AT CORNERS AND INTERSECTIONS.
- TOP BARS SHALL BE HOOKED AT END SPANS.
- FIBERMESH BLENDED FIBER REINFORCING BLEND SHALL CONSIST OF MULTIFILAMENT POLYPROPYLENE FIBERS AND COLD DRAWN STEEL WIRE FIBERS, NOVOMESH 850 OR APPROVED EQUIVALENT, APPLIED AT A DOSAGE RATE OF 24 lb/cy UNLESS NOTED OTHERWISE OR A DIFFERENT RECOMMENDATION IS MADE BY THE MANUFACTURER.

**JOINTS IN CONCRETE**

- CONSTRUCTION AND/OR CONTROL JOINTS SHALL BE MADE AS DETAILED ON THE DRAWINGS.
- MAXIMUM SPACING OF CONSTRUCTION AND/OR CONTROL JOINTS IN SLAB-ON-GRADE CONSTRUCTION SHALL BE 10'-0". JOINTS SHALL BE PLACED TO PRODUCE PANELS THAT ARE AS SQUARE AS POSSIBLE AND NEVER EXCEEDING A LENGTH TO WIDTH RATIO OF 1.5 TO 1.

**EXPANSION BOLTS**

- ALL EXPANSION BOLTS INSTALLED INTO NORMAL OR LIGHTWEIGHT CONCRETE SHALL BE HILTI KWIK BOLT TZ OR SIMPSON STRONG-BOLT AS NOTED ON THE DRAWINGS. MINIMUM EMBEDMENT, UNLESS OTHERWISE NOTED, SHALL BE: 4" FOR 1/2" DIAMETER, 5" FOR 5/8" AND 6" FOR 3/4" DIAMETER.
- ALL EXPANSION ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S GUIDELINES FOR INSTALLATION.
- SUBSTITUTE EXPANSION ANCHORS QUALIFIED PER ACI 355.2 AND ICC-ES AC193. SPECIFICATION FS A-A 1923A, TYPE 4 MAY BE USED ONLY AFTER SUBMISSION OF TEST DATA OR DESIGN CHARTS AND APPROVAL BY ARCHITECT/ENGINEER.

**PREENGINEERED WOOD TRUSS**

- WOOD TRUSSES SHALL BE DESIGNED TO MEET THE SPANS AND CODE REQUIRED LOADS.
- ALL LUMBER USED IN THE FABRICATION OF WOOD TRUSSES SHALL BE VISUALLY GRADED LUMBER.
- CONNECTOR PLATED FOR WOOD WEB MEMBERS SHALL BE MADE OF GRADE "A" GALVANIZED STEEL, MINIMUM 20 GAGE, PER TRUSS PLATE INSTITUTE SPECIFICATIONS - LATEST EDITION.
- WOOD TRUSSES AND RAFTERS SHALL BE DESIGNED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER WHO IS LEGALLY AUTHORIZED TO PRACTICE IN THE JURISDICTION WHERE THE PROJECT IS LOCATED AND WHO IS EXPERIENCED IN PROVIDING ENGINEERING SERVICES OF THE KIND INDICATED. SIGNED AND SEALED CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
- SUPPLIER SHALL BE RESPONSIBLE FOR DESIGN OF ALL BRACING AND/OR BRIDGING REQUIRED FOR THE DESIGN OF THE TRUSS MEMBERS PER THE PROCEDURES DESCRIBED IN "BRACING WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS", PUBLISHED BY THE TRUSS PLATE INSTITUTE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING AND/OR BRIDGING REQUIRED DURING CONSTRUCTION PER THE PROCEDURES DESCRIBED IN "BRACING WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS", PUBLISHED BY THE TRUSS PLATE INSTITUTE.
- ALL TRUSS TO TRUSS HANGERS SHALL BE DESIGNED AND SUPPLIED BY THE TRUSS MANUFACTURER. ALL HANGERS SHALL BE BY SIMPSON STRONG TIE OR AN I.C.B.O. APPROVED EQUAL.
- ADDITIONAL TRUSSES SHALL BE SUPPLIED AS REQUIRED TO SUPPORT MECHANICAL EQUIPMENT.
- TOP CHORD OF TRUSSES SHALL BE CONSTRUCTED OF WOOD WITH A MINIMUM SPECIFIC GRAVITY OF 0.49.

**DIMENSION LUMBER**

- ALL DIMENSION LUMBER SHALL BE HEM FIR NO 2, SPRUCE-PINE-FIR NO 2 OR BETTER AS DEFINED BY THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION "DESIGN VALUES FOR VISUALLY GRADED STRUCTURAL LUMBER" - LATEST EDITION. UNO
- ALL MEMBER SIZES GIVEN ON PLAN ARE NOMINAL DIMENSIONS.
- ALL WOOD SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% PRIOR TO INSTALLATION.
- WOOD HEADER SHALL HAVE A FULL 3" LENGTH OF BEARING AT EACH END UNLESS NOTED OTHERWISE.
- ALL NAILED CONNECTIONS SHALL BE FABRICATED AS FOLLOWS: (MINIMUM REQUIREMENTS FOR 10d NAILS)
  - PROVIDE 1 1/2" END DIST. AND 1 1/4" EDGE DIST.
  - SPACE NAILS 1 1/2" OC
  - ALL NAILS TO BE CLINCHED.
  - ALL NAILS TO BE COMMON TYPE.
- SPACING OF BRIDGING FOR ROOF JOISTS SHALL NOT EXCEED 8'-0" OR 6 TIMES THE NOMINAL JOIST DEPTH (WHICHEVER IS GREATER).
- ALL BEAMS AND JOISTS NOT BEARING ON SUPPORTING MEMBERS SHALL BE FRAMED WITH "SIMPSON" JOIST HANGERS OR EQUAL USE TYPE REQUIRED FOR LOADING. HANGERS AND OTHER MISCELLANEOUS FRAMING ANCHORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY OR AN APPROVED EQUAL WITH CURRENT ICBO OR CABO APPROVAL. MULTIPLE, SKEWED AND OR SLOPED HANGERS SHALL BE SUPPLIED BY THE CONTRACTOR WHERE NECESSARY. ALL NAIL HOLES IN HANGERS AND MISCELLANEOUS FRAMING ANCHORS SHALL BE FILLED WITH NAILS OF THE LARGEST SIZE SHOWN IN THE MANUFACTURER'S LATEST CATALOG.
- WOOD JOISTS SHALL BEAR ON THE FULL WIDTH OF SUPPORTING MEMBERS (STUD WALLS, BEAMS, ETC) UNLESS NOTED OTHERWISE. JOISTS FROM OPPOSITE SIDES SHALL BE STAGGERED AT BEARING.
- ALL WOOD PERMANENTLY EXPOSED TO THE WEATHER, IN CONTACT WITH CONCRETE OR MASONRY OR IN CONTACT WITH THE GROUND SHALL HAVE A PRESERVATIVE TREATMENT EQUAL TO 0.4 P.C.F. RETENTION OF PRESSURE. INJECTED CCA.
- SILL PLATE ANCHOR BOLTS SHALL BE 1/2" DIAMETER PLACED NOT TO EXCEED 4'-0" ON CENTER UNLESS NOTED OTHERWISE ON PLANS. ANCHOR BOLTS SHALL BE PLACED AT ALL JAMBS, CORNERS, INTERSECTIONS AND WALL ENDS. ALL SILL PLATES SHALL HAVE A MINIMUM OF 2 BOLTS.
- DO NOT NOTCH, DRILL OR SPLICE JOISTS, BEAMS OR STRUCTURAL STUDS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
- ALL FASTENERS USED FOR PRESERVATIVE TREATED WOOD SHALL BE GALVANIZED.
- NON-LOAD BEARING HEADERS SHALL BE (1) 2x TO MATCH WIDTH OF WALL.

**STRUCTURAL STEEL**

- FABRICATION AND ERECTION OF STRUCTURAL STEEL MEMBERS SHALL BE IN ACCORDANCE WITH THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AS INDICATED IN THE NINTH EDITION OF THE "MANUAL OF STEEL CONSTRUCTION" FOR ALLOWABLE STRESS DESIGN UNLESS NOTED OTHERWISE.
- ALL CONNECTIONS SHALL BE BOLTED OR WELDED AND SHALL BE DESIGNED FOR THE SERVICE-LOAD END REACTIONS INDICATED ON PLANS, OR IF NOT INDICATED, SHALL BE DESIGNED TO DEVELOP 60% OF THE ALLOWABLE UNIFORM LOAD TABULATED IN THE NINTH EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION" FOR ALLOWABLE STRESS DESIGN, UNLESS NOTED OTHERWISE. NUMBER OF BOLTS MUST SATISFY MINIMUM REQUIREMENTS AS FOLLOWS: 2 BOLTS PER CONNECTION FOR 8" AND 10" DEEP MEMBERS, 3 FOR 12" AND 14" DEEP MEMBERS, 4 FOR 16" AND 18" DEEP MEMBERS, 5 FOR 21" AND 24" DEEP MEMBERS, AND 6 FOR 27" AND DEEPER MEMBERS. SINGLE SHEAR PLATE CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF APPENDIX C OF THE AISC CONNECTIONS MANUAL.
- ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:
  - STEEL WIDE FLANGES: ASTM A992
  - STEEL ANGLES, CHANNELS AND PLATES: ASTM A36
  - STEEL PIPE: ASTM A53, GRADE B OR ASTM A501
  - STEEL TUBE: ASTM A500, GRADE B
- ALL FILLER METAL USED IN WELDING SHALL BE 70 KSI YIELD, LOW-HYDROGEN.
- ALL WELDING SHALL BE BY CERTIFIED WELDERS AND SHALL CONFORM TO THE "STRUCTURAL WELDING CODE", AWS D1.1 AND MEET AISC MINIMUM REQUIREMENTS FOR WELD SIZE.
- FIELD CONNECTIONS ARE TO BE BOLTED AND INSTALLED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS." USE MIN 3/4" DIAMETER HIGH STRENGTH BOLTS AND NUTS, A325-TYPE 1, UNLESS NOTED OTHERWISE. CONNECTIONS SHALL BE ST TYPE EXCEPT WHERE PT OR SC TYPE CONNECTIONS ARE SPECIFICALLY NOTED. WHERE SC TYPE CONNECTIONS ARE NOTED PROVIDED CLASS A FAYING SURFACES, WITH SLIP CHECKED AT SERVICE LEVEL.
- STEEL COLUMN BASE PLATES SHALL BE SIZE SHOWN ON PLAN WITH 3/4" DIAMETER ANCHOR RODS (F1554, GR 36) UNO AND 3/4" NON-METALLIC, NON-SHRINK GROUT FOR UNIFORM BEARING.
- UNLESS NOTED OTHERWISE, STRUCTURAL STEEL SUPPLIER IS TO FURNISH 15x3 1/2x3 1/2x3/16 LLV SHOP WELDED ANGLE FRAMES AT ALL FLOOR AND ROOF OPENINGS. VERIFY SIZE AND LOCATION WITH MECHANICAL (M/E/P/FP) CONTRACTOR. NOT ALL OPENINGS REQUIRING FRAMES SHOWN ON DRAWINGS. NO EXTRAS FOR ADDITIONAL FRAMES WILL BE APPROVED DUE TO FAILURE OF GC TO COORDINATE BETWEEN TRADES.
- ALL PLATES USED IN BOLTED CONNECTIONS SHALL HAVE ROLLED OR GAS CUT EDGES.
- ALL STRUCTURAL STEEL AND MISCELLANEOUS METALS SHALL BE PRIME PAINTED WITH ONE COAT OF FABRICATOR'S STANDARD RUST-INHIBITIVE PRIMER OR AS INDICATED IN THE PROJECT SPECIFICATION. TOUCH UP ALL DISTURBED AREAS AFTER ERECTION. STEEL TO BE FIREPROOFED SHALL RECEIVE PAINT/FINISH PROCESS COMPATIBLE WITH FIREPROOFING.
- ADJUSTABLE MASONRY TIES SHALL BE FURNISHED AT 16" OC VERTICALLY AND 24" OC HORIZONTALLY ON ALL STEEL MEMBERS ENCASED IN OR ADJACENT TO MASONRY WALLS WHETHER OR NOT SUCH ANCHORS ARE SHOWN ON THE DRAWINGS. TIES SHALL BE CAPABLE OF TRANSMITTING FORCES PERPENDICULAR TO THE PLANE OF THE WALL.

**PLYWOOD/OSB SHEATHING**

- PLYWOOD OR OSB ROOF SHEATHING SHALL BE APA RATED 15/32" MIN CDX SHEATHING OR BETTER.
  - NAIL SPACING: PANEL EDGES 6" OC
  - INTERMEDIATE SUPPORTS 12" OC
  - 8d COMMON NAILS
  - 1 3/8" MIN FASTENER PENETRATION
- CONSTRUCTION ADHESIVE SHALL MEET APA PERFORMANCE SPECIFICATION AFG-01.
- PLYWOOD SHEATHING PANELS SHALL BE INSTALLED WITH FACE GRAIN ACROSS (PERPENDICULAR) THE SUPPORT JOISTS. STAGGER PANEL END JOINTS.

**MISCELLANEOUS**

- ALL ANCHOR BOLTS FOR MECHANICAL AND ELECTRICAL EQUIPMENT ARE FURNISHED AND LOCATED BY THE RESPECTIVE CONTRACTORS AND SET BY THE GENERAL CONTRACTOR EXCEPT WHERE THE OTHER CONTRACTORS FURNISH THEIR OWN CONCRETE PADS.
- ALL PIPE SLEEVES ARE FURNISHED BY AND LOCATED BY THE MECHANICAL AND ELECTRICAL CONTRACTOR AND SET BY THE GENERAL CONTRACTOR.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL OPENING SIZES, PAD SIZES, AND LOCATIONS WITH THE RESPECTIVE CONTRACTORS.
- ALL CORE DRILLING SHALL BE DONE BY THE MECHANICAL AND ELECTRICAL CONTRACTORS FOR THEIR OWN WORK UNDER THE SUPERVISION OF THE GENERAL CONTRACTOR. NO REINFORCING SHALL BE CUT. VERIFY LOCATION OF REINFORCING BEFORE CORE DRILLING. THERE SHALL NOT BE ANY CORE DRILLING THROUGH BEAMS OR COLUMNS. MAXIMUM CORE HOLE THROUGH SLABS SHALL BE PIPE DIAMETER PLUS 1".

**SHOP DRAWINGS**

- SHOP DRAWINGS, UNLESS NOTED OTHERWISE, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- PRIOR TO SUBMITTAL, THE CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS AND MAKE ANY CORRECTIONS REQUIRED. THE CONTRACTOR SHALL STAMP AND SIGN THE DRAWINGS THAT HE HAS REVIEWED THEM. ANY SHOP DRAWINGS RECEIVED WITHOUT THE CONTRACTOR'S SIGNED REVIEW STAMP SHALL BE IMMEDIATELY RETURNED WITHOUT ENGINEER'S REVIEW.
- SHOP DRAWINGS SHALL BE FURNISHED FOR ALL STRUCTURAL COMPONENTS. ALL SUBMITTALS TO BE TWO (2) SETS PRINTS AND ONE (1) SET REPRODUCIBLES ONLY.

**LIGHT GAUGE METAL TRUSSES**

- CALCULATE STRUCTURAL CHARACTERISTICS OF COLD-FORMED STEEL TRUSS MEMBERS ACCORDING TO NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, 2001.
- STRUCTURAL PERFORMANCE: DESIGN, ENGINEER, FABRICATE AND ERECT COLD-FORMED STEEL TRUSSES TO WITHSTAND SPECIFIED DESIGN LOADS WITHIN LIMITS AND UNDERCONDITIONS REQUIRED.
  - DESIGN LOADS: AS SPECIFIED.
  - DEFLECTIONS: LIVE LOAD DEFLECTION MEETING THE FOLLOWING (UNLESS SPECIFIED OTHERWISE):
    - FLOOR TRUSSES: VERTICAL DEFLECTION LESS THAN OR EQUAL TO 1/360 OF THE SPAN.
    - ROOF TRUSSES: VERTICAL DEFLECTION LESS THAN OR EQUAL TO 1/240 OF THE SPAN.
- DESIGN FRAMING SYSTEMS TO PROVIDE FOR MOVEMENT OF FRAMING MEMBERS WITHOUT DAMAGE OR OVER STRESSING, SHEATHING FAILURE, CONNECTION FAILURE, UNDEQ STRAIN ON FASTENERS AND ANCHORS, OR OTHER DETRIMENTAL EFFECTS WHEN SUBJECT TO A MAXIMUM AMBIENT TEMPERATURE CHANGE (RANGE) OF 120°F (67°C).
- ALL COMPONENT GAUGES: FABRICATE COMPONENTS OF STRUCTURAL QUALITY STEEL SHEET PER ASTM A653 WITH A MINIMUM YIELD STRENGTH OF 40,000 PSI.
- BRACING, BRIDGING AND BLOCKING MEMBERS: FABRICATE COMPONENTS OF COMMERCIAL QUALITY STEEL SHEET PER ASTM A653 WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI.
- STEEL TRUSS COMPONENTS: PROVIDE SIZES, SHAPES AND GAUGES INDICATED. PROVIDE 43 MIL. MINIMUM.
  - DESIGN UNCOATED-STEEL THICKNESS: 43 MIL., 0.0470 INCH (1.20mm).
  - DESIGN UNCOATED-STEEL THICKNESS: 54 MIL., 0.0580 INCH (1.52mm).
  - DESIGN UNCOATED-STEEL THICKNESS: 68 MIL., 0.0750 INCH (1.90mm).
- FINISH: PROVIDE COMPONENTS WITH PROTECTIVE ZINC COATING COMPLYING WITH ASTM A653, MINIMUM G60 COATING.
- FASTENINGS:
  - MANUFACTURER RECOMMENDED SELF-DRILLING, SELF-TAPPING SCREWS WITH CORROSION-RESISTANT PLATED FINISH. FASTENERS SHALL BE OF SUFFICIENT SIZE AND NUMBER TO ENSURE THE STRENGTH OF THE CONNECTION.
  - WELDING: COMPLY WITH AWS D1.1 WHEN APPLICABLE AND AWS D1.3 FOR WELDING BASE METALS LESS THAN 1/8" THICK.
  - OTHER FASTENERS AS ACCEPTED BY ENGINEER.

**LIGHT GAUGE METAL FRAMING**

- ALL LIGHT GAUGE MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
- ALL LIGHT GAUGE METAL FRAMING MEMBERS SHALL BE OF THE TYPE, SIZE AND GAUGE AS SHOWN ON THE PLANS, MIN 43 MIL.
- ALL STUDS, JOISTS, AND ACCESSORIES SHALL BE PRIMED WITH RUST INHIBITIVE PAINT MEETING THE PERFORMANCE REQUIREMENTS OF TT-P-636C, OR SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COATING CONFORMING TO ASTM A924.
- ALL PAINTED 97, 68 AND 54 MIL. MEMBERS SHALL MEET THE REQUIREMENTS OF ASTM A570 WITH A MINIMUM YIELD OF 50,000 PSI. ALL GALVANIZED 97, 68, AND 54 MIL. MEMBERS SHALL MEET THE REQUIREMENTS OF ASTM A653 WITH A MINIMUM YIELD OF 50,000 PSI.
- ALL PAINTED 43 AND 33 MIL. MEMBERS SHALL MEET THE REQUIREMENTS OF ASTM A611 WITH A MINIMUM YIELD OF 33,000 PSI. ALL GALVANIZED 43 AND 33 MIL. MEMBERS SHALL MEET THE REQUIREMENTS OF ASTM A653 WITH A MINIMUM YIELD OF 33,000 PSI.
- WELDING, WHERE PERMITTED, IS TO BE DONE PER MANUFACTURER'S RECOMMENDATIONS ON ROD TYPE AND AMPERAGE. MINIMUM GAUGE FOR WELDING SHALL BE 54 MIL. WELDS WITHIN EXTERIOR FRAMING WALLS SHALL BE TOUCHED UP WITH ZINC RICH PRIMER.
- ALL LIGHT GAUGE METAL STUDS AND JOIST SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS REGARDING MINIMUM INSTALLATION STANDARDS FOR BEARING, BRIDGING AND BRACING.
- LIGHT GAUGE STUDS USED AS BACKUP FOR MASONRY SHALL BE OF A CONFIGURATION AND GAUGE (54 MIL. MIN) TO PROVIDE SUFFICIENT STIFFNESS AS CONTROLLED BY A MAXIMUM DEFLECTION OF L/600 UNDER FULL LATERAL LOAD. ALL STUDS AND ACCESSORIES USED AS BACKUP FOR MASONRY SHALL BE FORMED FROM STEEL HAVING A G-90 GALVANIZED COATING CONFORMING TO ASTM A653. FIELD WELDING SHALL NOT BE PERMITTED.
- LIGHT GAUGE MEMBER DESIGNATIONS ARE PER THE STEEL STUDS MANUFACTURERS ASSOCIATION (SSMA). THE FOLLOWING IS AN EXAMPLE OF HOW TO READ SSMA'S DESIGNATIONS FOR STUDS, TRACK SIZES AND MIL THICKNESSES:

**TYPICAL STUD AND RAFTER**

MEMBERS ARE DESIGNATED ON THIS DRAWING AS FOLLOWS:

STUDS AND RAFTERS - 600S162 - 68

D = TRACK THICKNESS IN MILS  
S = STUD THICKNESS IN MILS

TRACKS - 600T125 - 68

D = TRACK THICKNESS IN MILS  
T = TRACK THICKNESS IN MILS

ANGLES - 13 x 3 x 68 x 4 1/2

SIZE = LENGTH (INCHES)

125 = 1.25" = 1 1/4"  
137 = 1.37" = 1 3/8"  
162 = 1.62" = 1 5/8"  
200 = 2.00" = 2"

250 = 2.5" = 2 1/2"  
300 = 3.0" = 3"  
362 = 3.62" = 3 5/8"  
400 = 4.0" = 4"

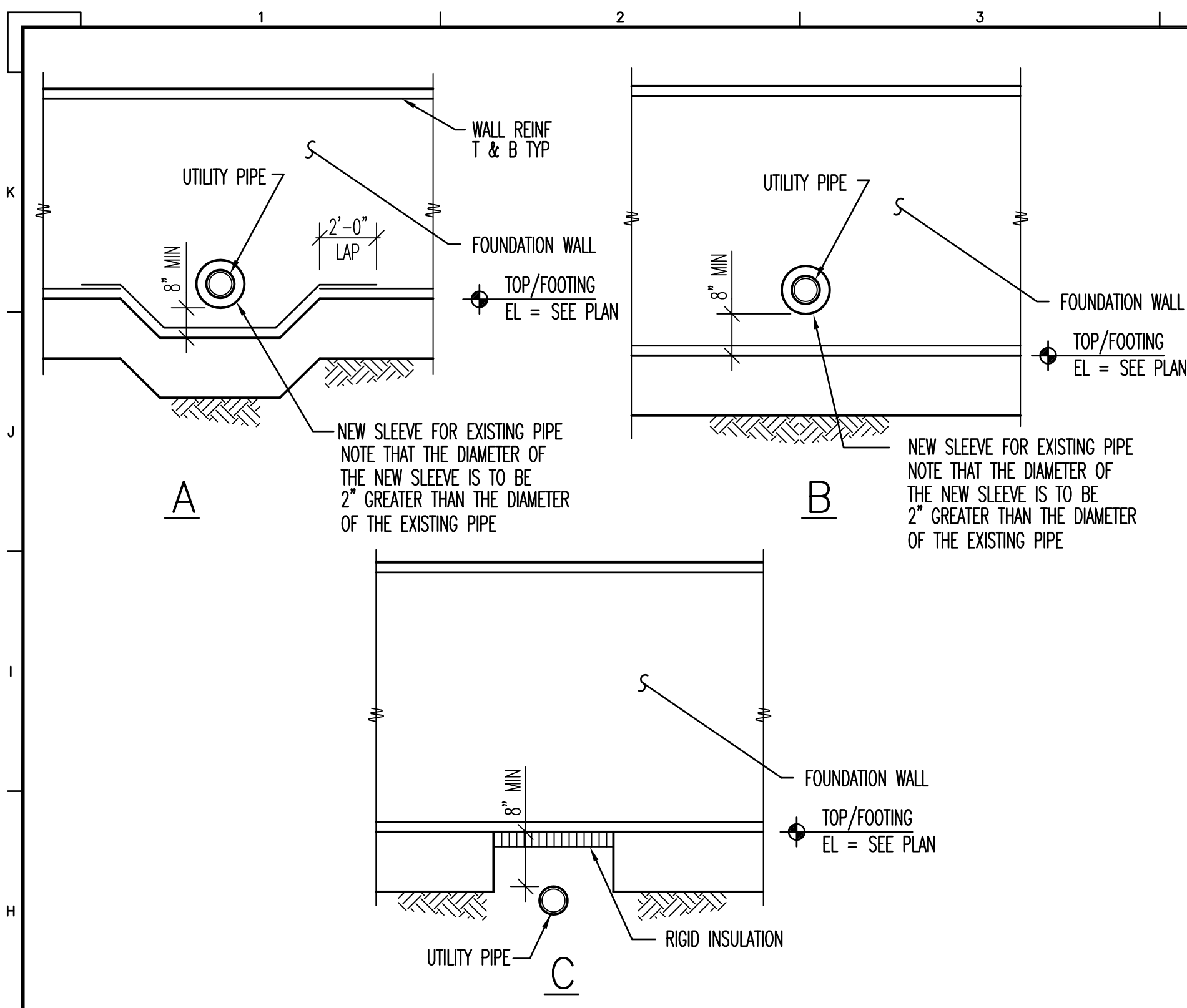
500 = 5.5" = 5 1/2"  
600 = 6.0" = 6"  
725 = 7.25" = 7 1/4"  
800 = 8.0" = 8"

**REQUIRED VERIFICATION AND INSPECTION OF SOILS**

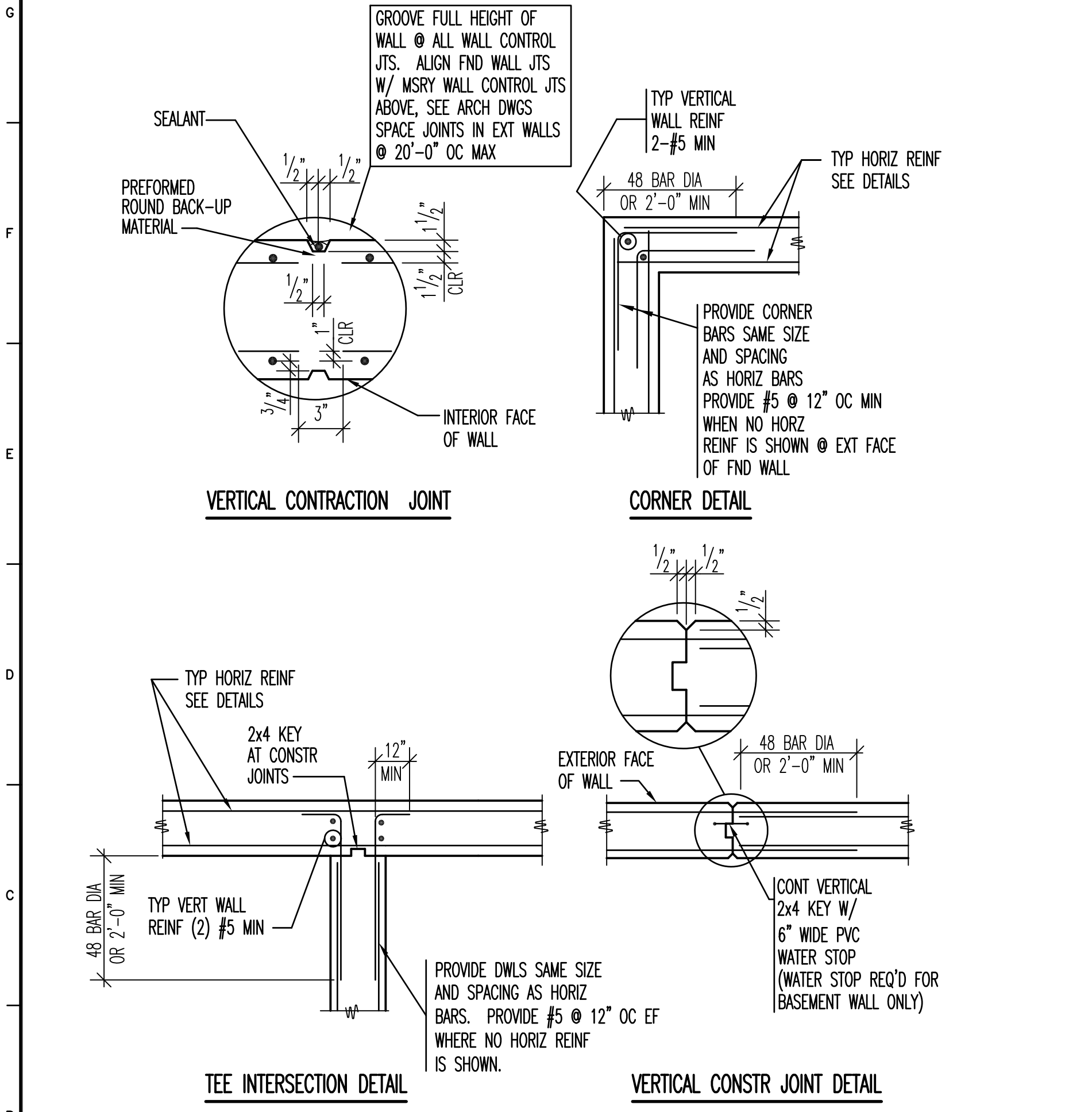
VERIFICATION AND INSPECTION	REQUIRED VERIFICATION AND INSPECTION OF SOILS	
	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY	X	-
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	X	-
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTMENT OF CONTROLLED FILL	X	-
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	X	-

**REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION**

VERIFICATION AND INSPECTION	REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION			
	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED.	X	-	-	1912.5
2. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	ACIS 318: Chg. 4, 5.2-5.4	1904, 1905.2-1905.4, 1914.2, 1914.3
3. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TEST, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172, ASTM C 31, ACIS 318: 5.6, 5.8	1905.6, 1914.10
4. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318:5.8, 5.10	1905.9, 1905.10, 1914.6, 1914.7, 1914.8
5. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING AND TEMPERATURE TECHNIQUES	-	X	ACI 318: 5.11-5.13	1905.11, 1905.13, 1914.9



1 UTILITY PIPE THROUGH NEW FOUNDATION  
S001 NO SCALE



2 TYPICAL CONCRETE WALL DETAILS  
S001 NO SCALE

FOOTING SCHEDULE						
MARK	SIZE			REINFORCING		REMARKS
	L	S	D	LONG BARS	SHORT BARS	
F4.0	4'-0"	4'-0"	1'-0"	4 #5	4 #5	

fs = 3000 psf  
fc = 3000 psi

COLUMN SCHEDULE							
MARK	COLUMN SIZE	BASE PL t x B x N	ELEV OF BOT OF BASE PL	ANCHOR BOLTS	CAP PL t	BASE PL DETAIL	REMARKS
C1	HSS8x6x1/4	1/2"x14"x1'-2"	T/FTG OR PIER +1"	(4) 3/4" #	1/2"	15/S300	
C2	HSS6x3x3/8	1/2"x12"x0'-9"	T/FTG OR PIER +1"	(4) 3/4" #	1/2"	16/S300	
C3	(2)600S300-54	16GA TRACK	T/FTG OR PIER +1"	(2) 3/4" #	-	17/S300	

PIER SCHEDULE						
MARK	PIER SIZE B x N	VERTICAL REIN	REIN DETAIL	PIER TIES	ELEV OF TOP OF PIER	REMARKS
P1	30"x30"	8 #6	13/S300	(3) #3 @ 2' OC REST @ 12" OC	105'-0"	
P2	18"x15"	4 #6	14/S300	(3) #3 @ 2' OC REST @ 12" OC	99'-4"	

HEADER SCHEDULE				
OPENING	MEMBER	BEARING	JAMB	REMARKS
H1	(3) 2x12 SPF#2 OR BETTER	DOUBLE STUD AS SHOWN	(2) 2x6 SPF #2 OR BETTER	
H2	(1) 3 1/2"x9 1/4" LVL 2.0E OR BETTER	TRIPLE STUD AS SHOWN	(3) 2x6 SPF#2 OR BETTER	
H3	(1) 3 1/2"x11 1/4" LVL 2.0E OR BETTER	TRIPLE STUD AS SHOWN	(5) 2x6 SPF#2 OR BETTER	
H4	(2) 2x12 SPF#2 OR BETTER	SINGLE STUD AS SHOWN	(1) 2x6 SPF #2 OR BETTER	

NOTE: PROVIDE CONNECTION TO JAMB PER DETAIL 5/S401

SHEAR WALL SCHEDULE								
MARK	MATERIAL	EDGE NAILING	FIELD NAILING	SILL ANCHORAGE	TRUSS BLK'G ANCHOR (1)	GABLE END ANCHOR	HOLDDOWN AT EA END	END CHORD
SW1	15/32" APA RATED SHEATHING	8d @ 6" OC	8d @ 12" OC	MSA @ 3'-6"	(1) H10 @ EA BLK	-	(1) HDU4 - SDS 2.5 W/ 5/8" ANCHOR BOLTS AND (10) SDS 1/4"x2 1/2" SCREWS	(2) 2x STUDS
SW2	15/32" APA RATED SHEATHING	8d @ 4" OC	8d @ 12" OC	MSA @ 3'-0" OR 1/2" TITEN HD @ 3'-0"	(1) H10S @ EA BLK	-	(1) HDU4 - SDS 2.5 W/ 5/8" ANCHOR BOLTS AND (10) SDS 1/4"x2 1/2" SCREWS	(2) 2x STUDS

NOTE: \* WHERE SCISSOR TRUSSES BEAR ON SHEAR WALL, REPLACE H10S WITH SIMPSON CONNECTOR SHOWN IN DETAIL 2/S400.  
1) TRUSS MANUFACTURER TO DESIGN AND PROVIDE BLOCKING EVERY OTHER TRUSS SPACE AT SHEAR WALLS CAPABLE OF TRANSFERRING 240 PLF OF FORCE.  
2) NAILS SHALL BE COMMON TYPE.  
3) SEE TYPICAL SHEAR WALL DIAGRAM ON DETAIL 7/S401.

NAILING SCHEDULE-INT'L BUILDING CODE (UNO)	
CONNECTION (COMMON NAILS ONLY)	NAILING
JOIST TO SILL OR GIRDER, TOENAIL	3 - 8d
BRIDGING TO JOIST, TOENAIL EACH END	2 - 8d
SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANEL	16d @ 16" OC 3-16d PER 16"
TOP PLATE TO STUD, END NAIL	2 - 16d
STUD TO SOLE PLATE	4 - 8d, TOENAIL OR: 2 - 16d, END NAIL
DOUBLED STUDS, FACE NAIL	16d AT 24" OC
DOUBLED TOP PLATES, TYPICAL FACE NAIL DOUBLED TOP PLATES, LAP SPLICE	16d AT 16" OC SEE DET 10/S4.0
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	4 - 10d
RIM JOIST TO TOP PLATE, TOENAIL	8d AT 6" O.C.
TOP PLATE, LAPS AND INTERSECTIONS, FACE NAIL	2 - 16d
CONTINUOUS HEADER, TWO PIECES	16d @ 16" OC ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	3 - 8d
CONTINUOUS HEADER TO STUDS, TOENAIL	4 - 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3 - 16d
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3 - 16d
RAFTER TO PLATE, TOENAIL	3 - 8d
BUILT-UP CORNER STUDS	16d @ 24" OC
BUILT-UP GIRDER AND BEAMS	20d @ 32" OC TOP AND BOTTOM, AND STAGGERED 2-20d EACH END AND SPLICES

ENGINEERS  
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ILLINOIS LICENSE NO. 184-001442

PROJECT:  
WISH - Fair Oaks

**Rehabilitation Center Addition**

471 West Terra Cotta Avenue  
Crystal Lake, IL. 60014

Date: 1-5-2012  
Design/Drawn: SWL  
Reviewed: AE  
Book No.: -

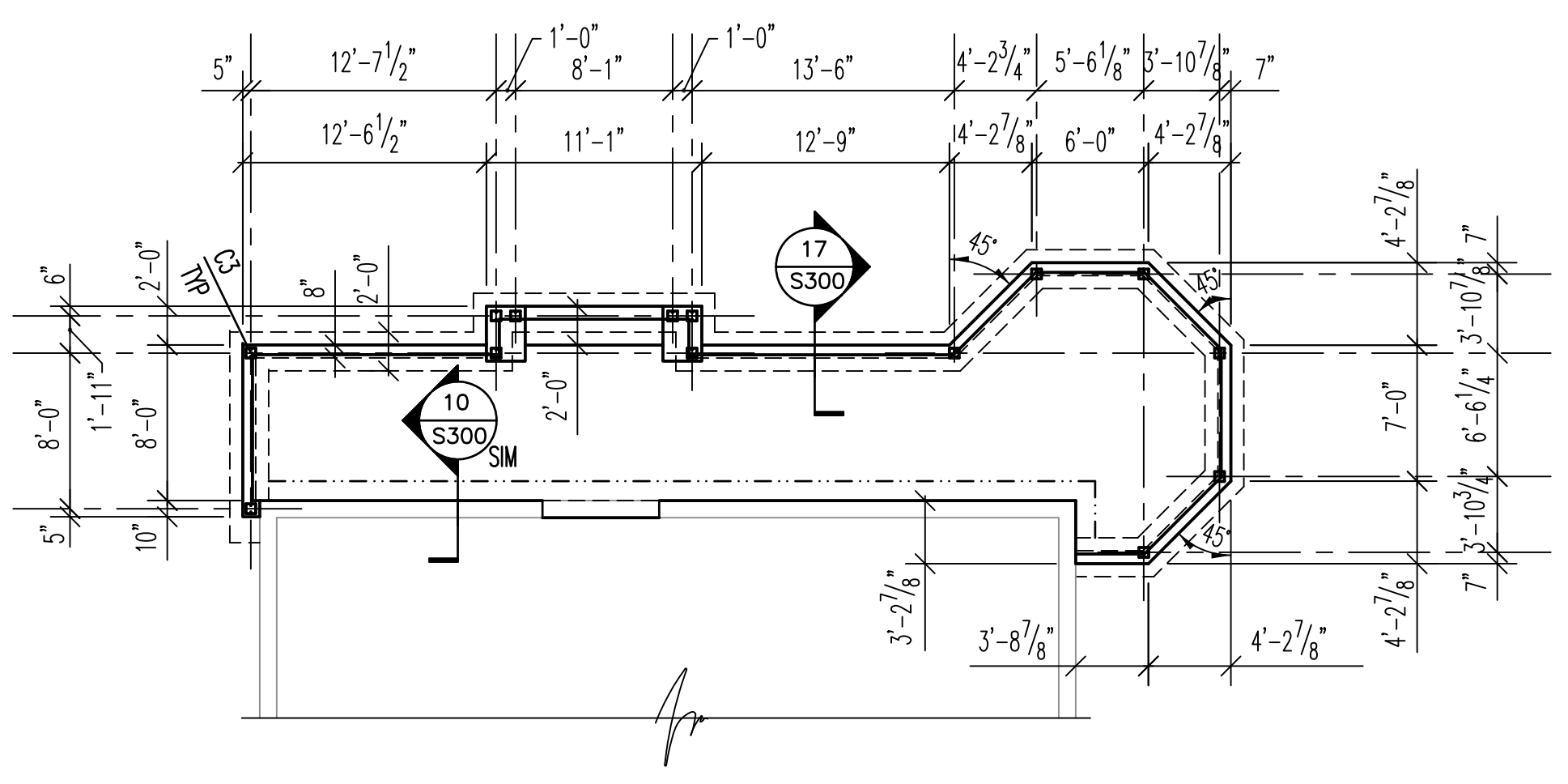
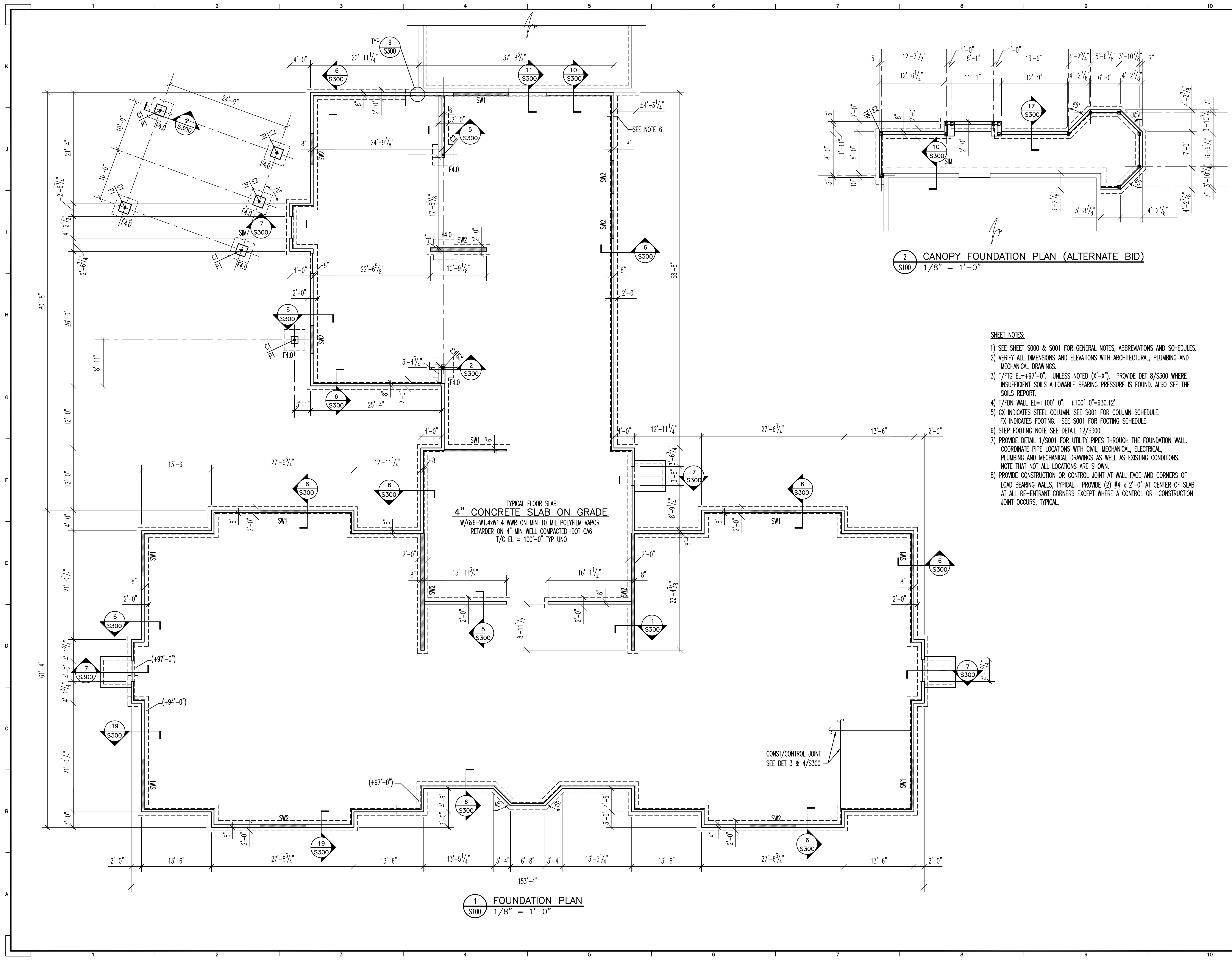
SHEET TITLE:  
**SCHEDULES**

SHEET NUMBER:  
**S001**  
SHEET 2 OF 7  
Project No.: 0101114.00

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2 CANOPY FOUNDATION PLAN (ALTERNATE BID)  
 S100 1/8" = 1'-0"

- SHEET NOTES:**
- SEE SHEET S000 & S001 FOR GENERAL NOTES, ABBREVIATIONS AND SCHEDULES.
  - VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL, PLUMBING AND MECHANICAL DRAWINGS.
  - T/FTG EL=+97'-0". UNLESS NOTED (X'-X"). PROVIDE DET 8/S300 WHERE INSUFFICIENT SOILS ALLOWABLE BEARING PRESSURE IS FOUND. ALSO SEE THE SOILS REPORT.
  - T/FDN WALL EL=+100'-0". +100'-0"=930.12'
  - CX INDICATES STEEL COLUMN. SEE S001 FOR COLUMN SCHEDULE. FX INDICATES FOOTING. SEE S001 FOR FOOTING SCHEDULE.
  - STEP FOOTING NOTE SEE DETAIL 12/S300.
  - PROVIDE DETAIL 1/S001 FOR UTILITY PIPES THROUGH THE FOUNDATION WALL. COORDINATE PIPE LOCATIONS WITH CIVIL, MECHANICAL, ELECTRICAL, PLUMBING AND MECHANICAL DRAWINGS AS WELL AS EXISTING CONDITIONS. NOTE THAT NOT ALL LOCATIONS ARE SHOWN.
  - PROVIDE CONSTRUCTION OR CONTROL JOINT AT WALL FACE AND CORNERS OF LOAD BEARING WALLS, TYPICAL. PROVIDE (2) #4 x 2'-0" AT CENTER OF SLAB AT ALL RE-ENTRANT CORNERS EXCEPT WHERE A CONTROL OR CONSTRUCTION JOINT OCCURS, TYPICAL.

1 FOUNDATION PLAN  
 S100 1/8" = 1'-0"



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PROJECT:  
 WISH - Fair Oaks

**Rehabilitation Center Addition**

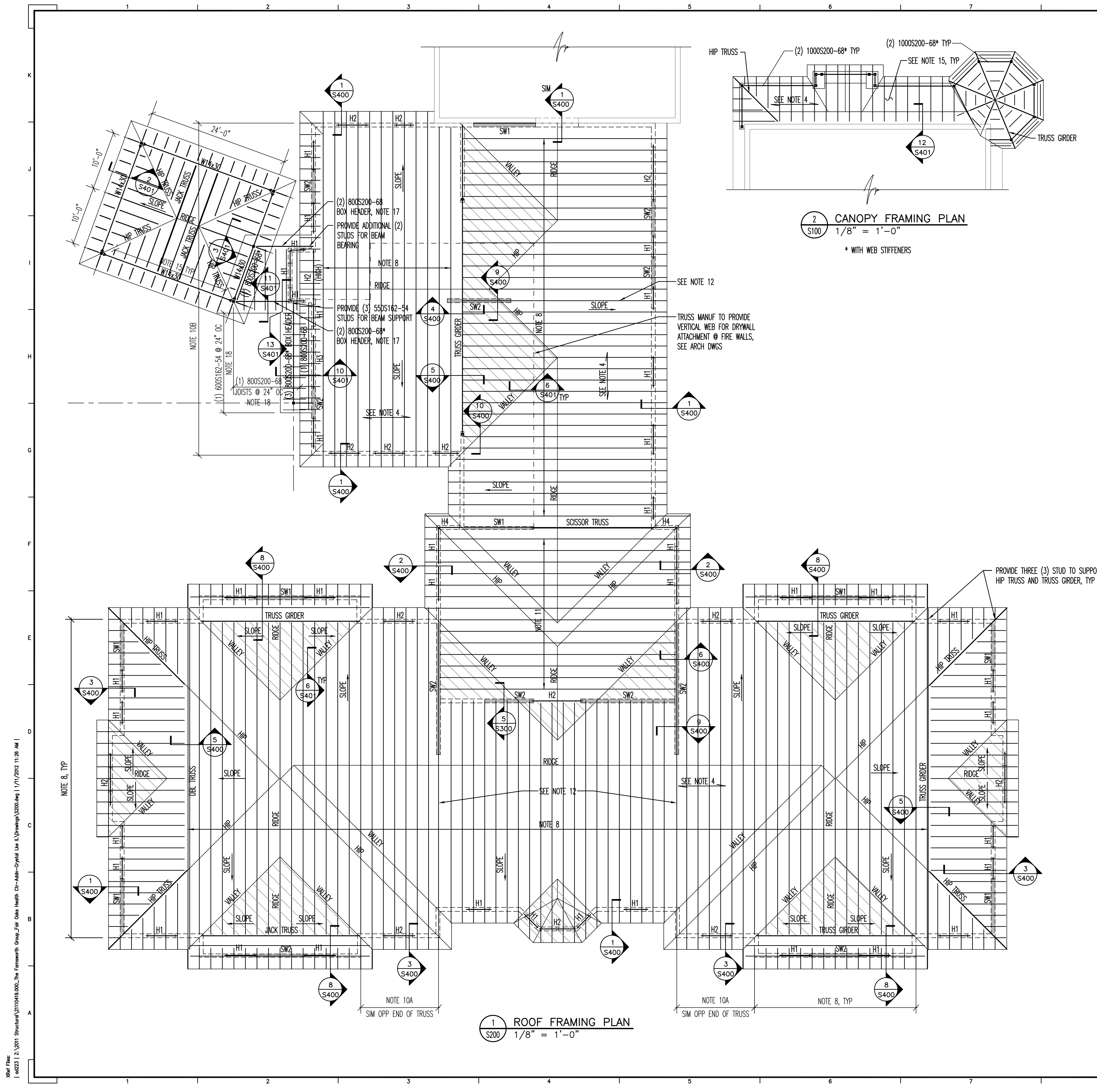
471 West Terra Cotta Avenue  
 Crystal Lake, IL. 60014

Date: 1-5-2012  
 Design/Drawn: SWL  
 Reviewed: AE  
 Book No.:

SHEET TITLE:  
**FOUNDATION PLAN**

SHEET NUMBER:  
**S100**  
 SHEET 3 OF 7

Project No.: 0101114.00



- SHEET NOTES:**
- SEE SHEET S000 AND S001 FOR GENERAL NOTES, ABBREVIATIONS AND SCHEDULES.
  - VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL, PLUMBING AND MECHANICAL DRAWINGS.
  - TRUSS BEARING ELEVATION = +109'-1". VERIFY W/ ARCH DWGS.
  - 15/32" SHEATHING OR OSB CONT. OVER 3 SPANS MIN. PANELS SHALL BE INSTALLED WITH FACE GRAIN ACROSS THE SUPPORT JOISTS W/ STAGGERED PANEL END JOINTS (SEE DETAIL 8/S401). SEE PLYWOOD NOTES ON S000 FOR FASTENER PATTERN.
  - GENERAL CONTRACTOR SHALL COORD. ALL LOCATIONS AND SIZES OF ROOF OPENING W/ARCH. AND MECH. DWGS. NOT ALL OPENINGS ARE INDICATED ON PLAN. TRUSS FABRICATOR TO DESIGN AND PROVIDE HEADERS AND ADD'L JOISTS AS REQ.
  - H\*X INDICATES LOAD BEARING HEADER. SEE HEADER SCHEDULE ON SHEET S001. NON-LOAD BEARING HEADERS ARE PER HEADER NOTES ON SHEET S001. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
  - INDICATES SHEAR WALL. SEE SHEAR WALL SCHEDULE ON SHEET S000.
  - PROVIDE SLOPED TOP CHORD TRUSSES 24" OC (MAX) TO SUPPORT THE FOLLOWING LOADS AND STRUCTURAL REQUIREMENTS. PROVIDE BRIDGING AS REQUIRED. ALIGN TRUSSES WITH SHEAR WALLS. PROVIDE ADDITIONAL TRUSSES AS NECESSARY AT CORRIDORS, PROVIDE BOTTOM CHORD @ +110'-3", SEE ARCH DWGS. SUPERIMPOSED DL = 20 PSF (BC = 7PSF) + OVERBUILD TRUSSES LL = SEE DESIGN LIVE LOADS ON S000 (INCLUDE POINT LOADS FROM OVERBUILD TRUSSES AND MECH UNITS). WIND = DESIGN FOR CODE REQUIRED FORCE. LL DEFLECTION < L/360 TL DEFLECTION < L/240
  - INDICATES AREA TO PROVIDE OVERBUILD WOOD TRUSSES. DESIGN OVERBUILD TRUSSES FOR SUPERIMPOSED 10 PSF DL + LL + CODE REQUIRED WL PER GENERAL NOTES ON S000. WHEN THE ROOF TRUSS ARE PERPENDICULAR, PROVIDE OVERBUILD TRUSSES @ 24" O.C. WHEN THE ROOF TRUSS ARE PARALLEL, PROVIDE OVERBUILD TRUSSES TO MATCH ROOF TRUSSES SPACING. SEE ARCH DWGS FOR TRUSS PROFILES, DIMENSIONS, SLOPE AND LOCATIONS. PROVIDE 15/32" SHEATHING PLYWOOD CONT. OVER 3 SPANS MIN. PANELS SHALL BE INSTALLED WITH FACE GRAIN ACROSS THE SUPPORT JOISTS W/ STAGGERED PANEL END JOINTS (SEE DETAIL 8/S401). SEE PLYWOOD NOTES ON S000 FOR FASTENER PATTERN.
  - PROVIDE TYPICAL EXTERIOR WALL CONSTRUCTION UNO:
    - (1) 2x6 SPF (NO. 2 OR BETTER) @ 24" OC.
    - (2) 15/32" PLYWOOD OR OSB SHEATHING.
    - (3) 2x6 TOP PLATE W/SPICES OFFSET. SEE DET 7/S400 FOR SPLICE.
    - (4) 2x6 SOUTHERN YELLOW PINE NO. 2 OR BETTER SILL PLATE.
  - PROVIDE EXTERIOR WALL CONSTRUCTION IN ACCORDANCE WITH NOTE 10, EXCEPT:
    - (1) 2x6 SPF (NO. 2 OR BETTER) @ 24" OC.
  - PROVIDE TYP GABLE END WALL CONSTRUCTION IN ACCORDANCE W/ NOTE 10, EXCEPT:
    - (1) 2x6 SPF (NO. 2 OR BETTER) @ 18" OC.
  - PROVIDE SCISSOR TRUSSES 24" OC (MAX) TO SUPPORT THE FOLLOWING LOADS AND STRUCTURAL REQUIREMENTS. PROVIDE BRIDGING AS REQUIRED. SUPERIMPOSED DL = 20 PSF (BC = 7PSF) + OVERBUILD TRUSSES LL = SEE DESIGN LIVE LOADS ON S000 (INCLUDE POINT LOADS FROM OVERBUILD TRUSSES AND MECH UNITS). WIND = DESIGN FOR CODE REQUIRED FORCE. LL DEFLECTION < L/360 TL DEFLECTION < L/240
  - DESIGN TRUSSES THAT ALIGN WITH SHEAR WALL FOR ADDITIONAL AXIAL WIND/SEISMIC LOAD OF 175 PLF.
  - PROVIDE TYPICAL INTERIOR BEARING WALL CONSTRUCTION:
    - (1) 2x4 SPF (NO. 2 OR BETTER) @ 24" OC.
    - (2) 2x4 TOP PLATE W/SPICES OFFSET. SEE DET 7/S400 FOR SPLICE.
    - (3) 2x4 SOUTHERN YELLOW PINE NO. 2 OR BETTER SILL PLATE.
    - (4) 15/32" PLYWOOD OR OSB SHEATHING.
  - TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR DESIGN OF BLOCKING MEMBERS AND/OR BRACING REQUIRED TO RESIST LATERAL LOADS ON GABLE FACE
  - PROVIDE SLOPED TOP CHORD LIGHT GAGE STEEL TRUSSES 24" OC (MAX) TO SUPPORT THE FOLLOWING LOADS AND STRUCTURAL REQUIREMENTS. SUPERIMPOSED DL = 25 PSF LL = SEE DESIGN LIVE LOADS ON S000 WIND = DESIGN FOR CODE REQUIRED FORCE. LL DEFLECTION < L/360 TL DEFLECTION < L/240 PROVIDE BRIDGING AS REQUIRED.
  - PROVIDE MOMENT CONNECTION. SEE DETAIL 1/S401.
  - CONNECT BOX HEADER TO HSS COLUMN USING (1) STIFF CLIP LB600 EACH SIDE W/(4) SCREWS.
  - CONNECT JOISTS TO BOX HEADER USING (1) STIFF CLIP RT650 HOLD DOWN W/(2) #12 SCREWS.

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WISH - Fair Oaks

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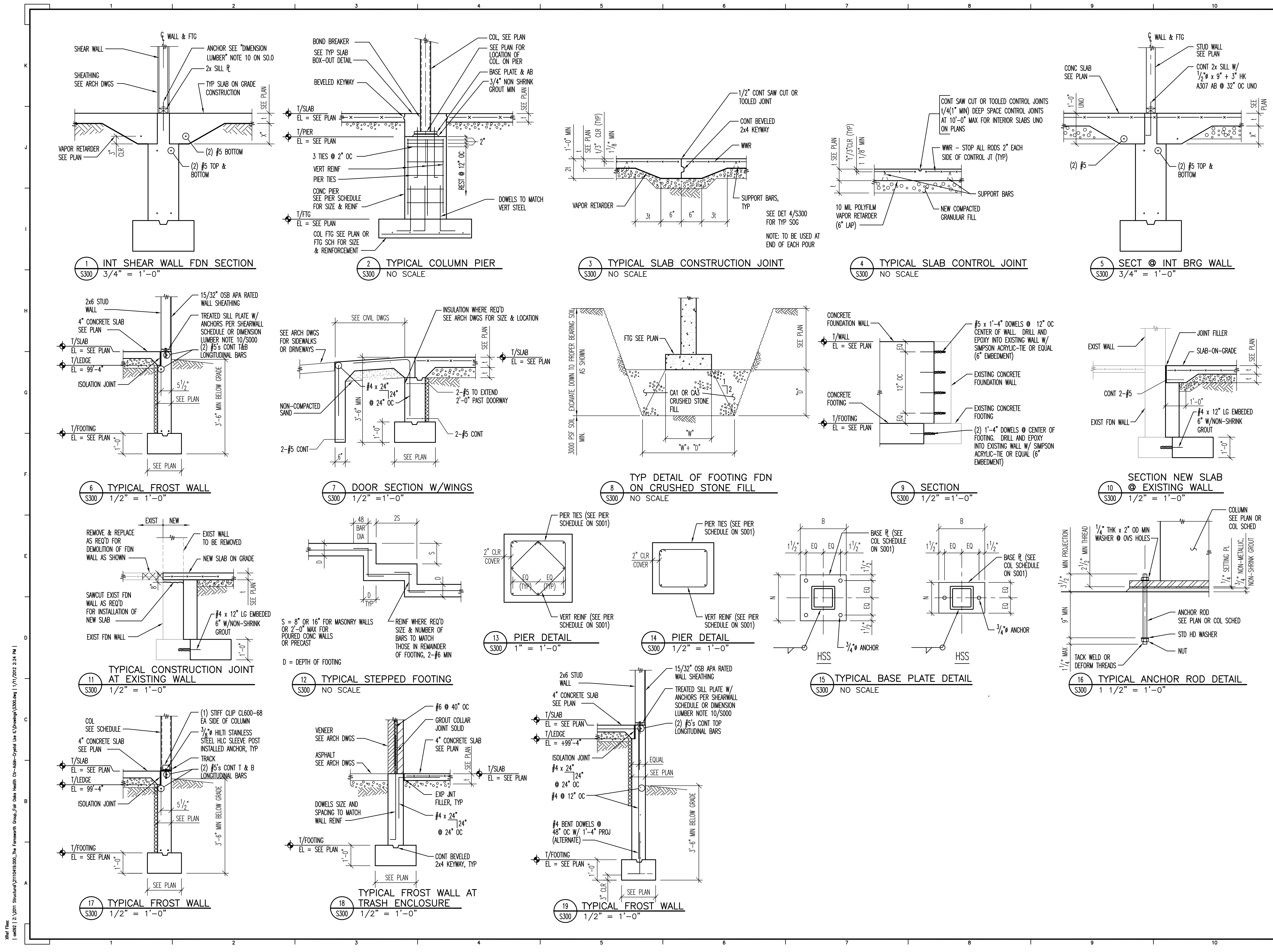
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Reviewed: AE  
Book No.:

SHEET TITLE:  
**ROOF FRAMING PLAN**

SHEET NUMBER:  
**S200**  
SHEET 4 OF 7

Project No.: 0101114.00

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WISH - Fair Oaks

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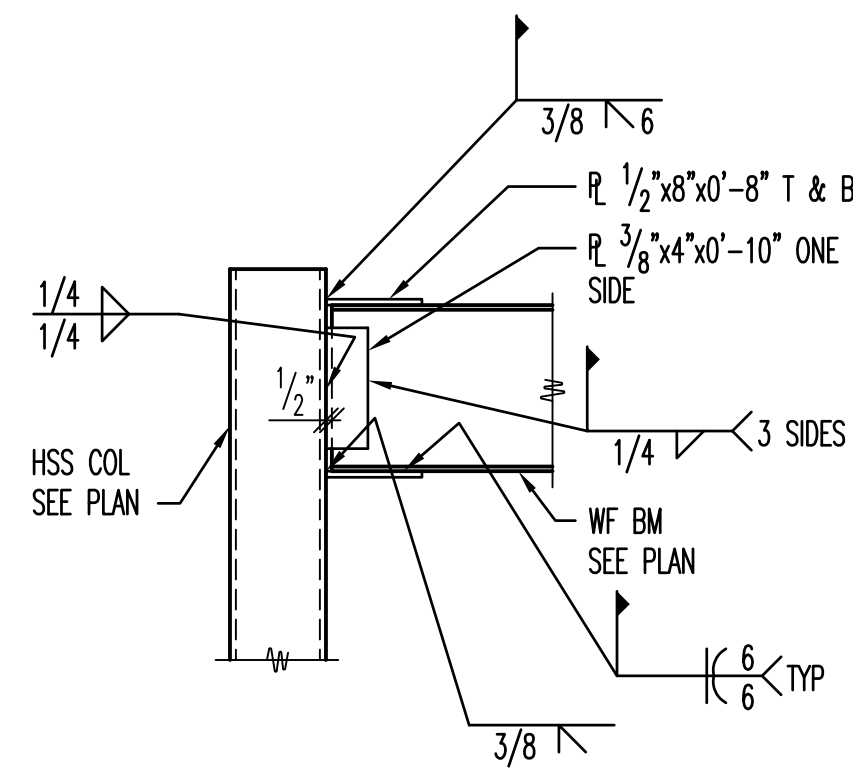
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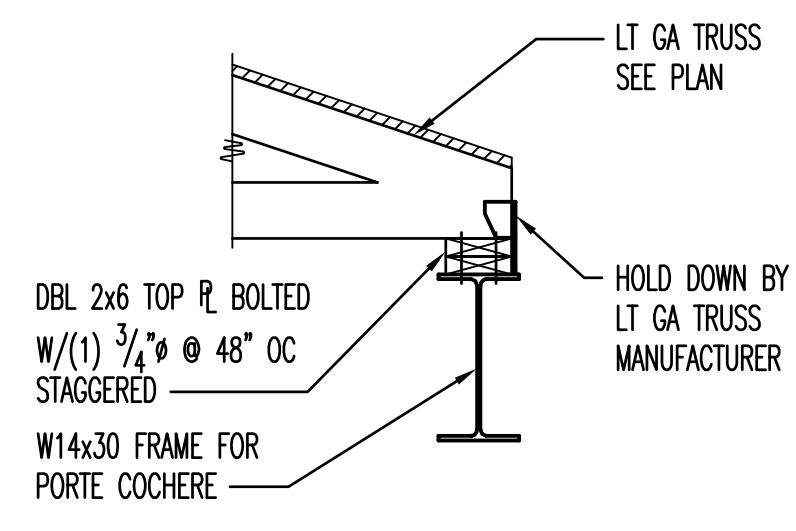
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SHEET 5 OF 7  
Project No.: 0101114.00

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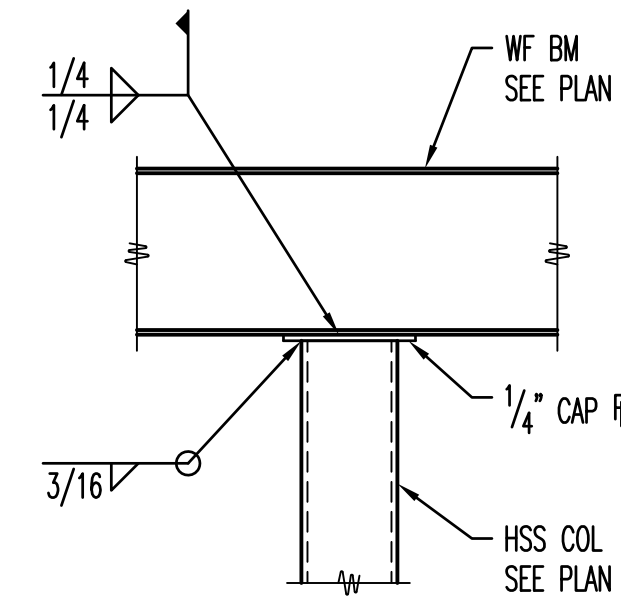




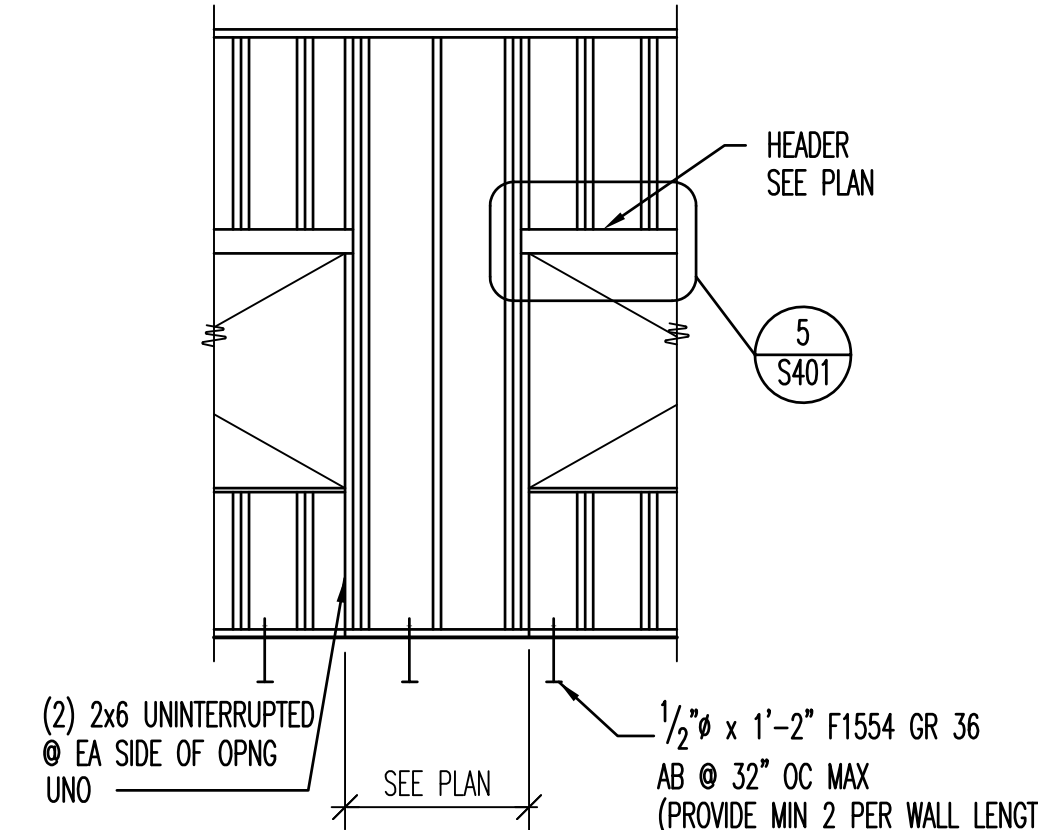
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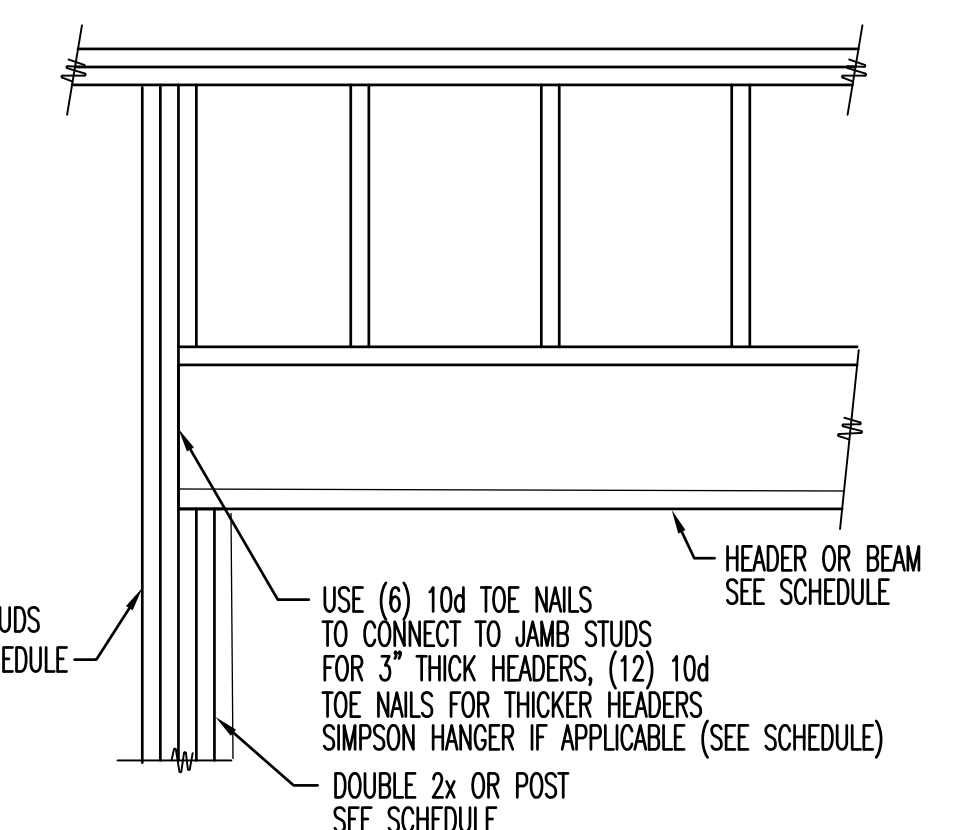
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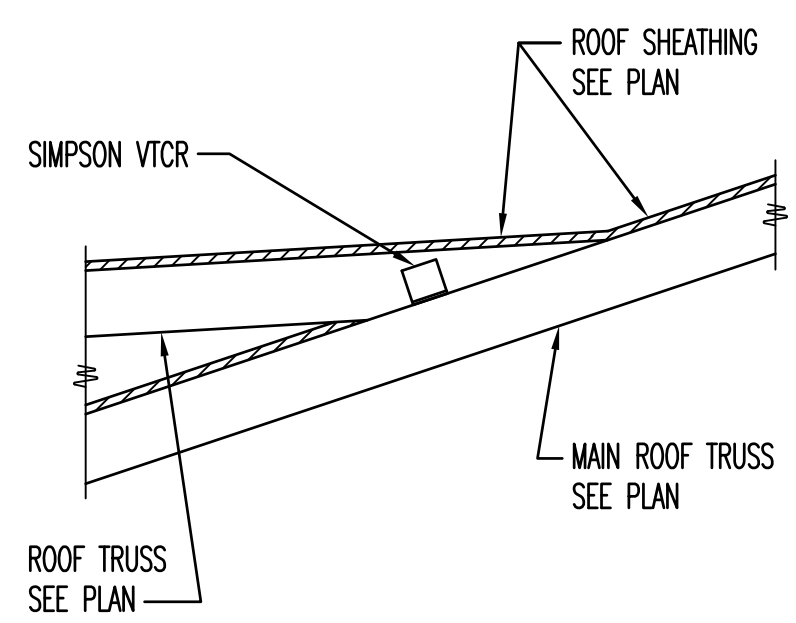
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S401 3/4" = 1'-0"



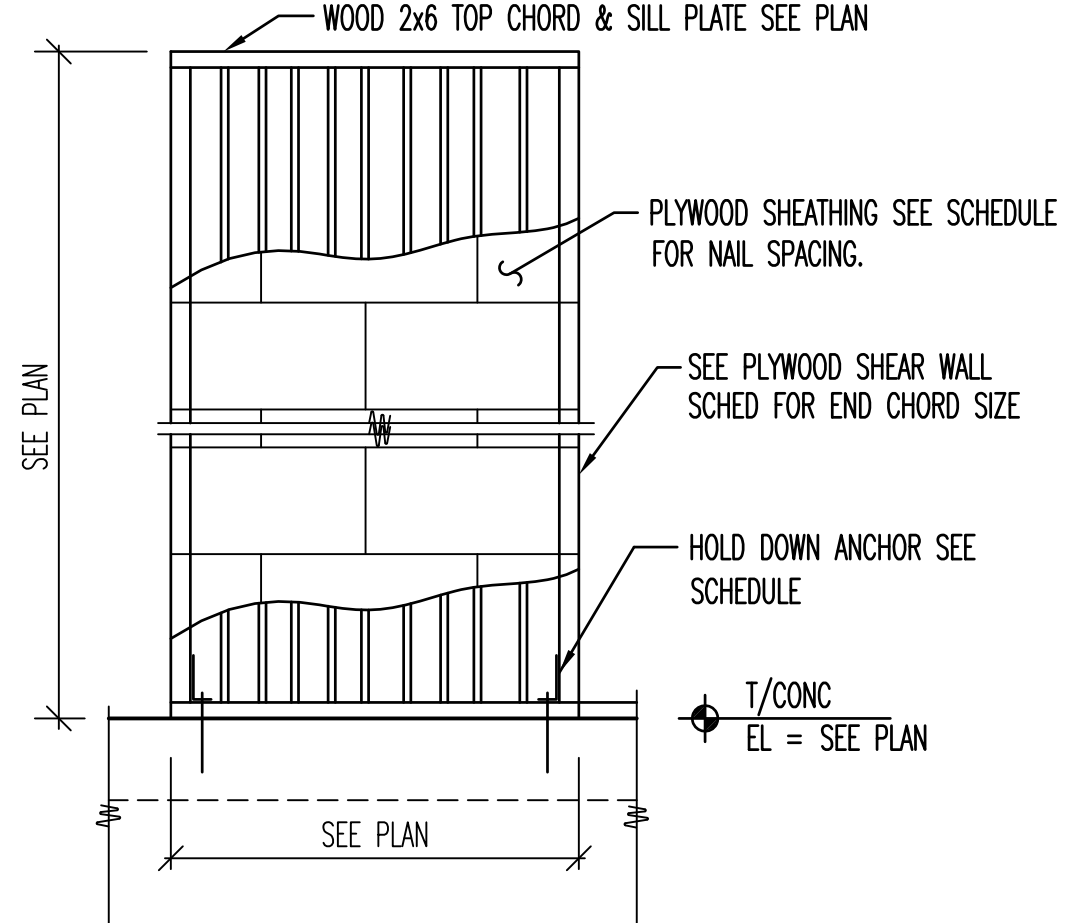
4 TYP ELEV STUDS @ OPENING  
S401 NO SCALE



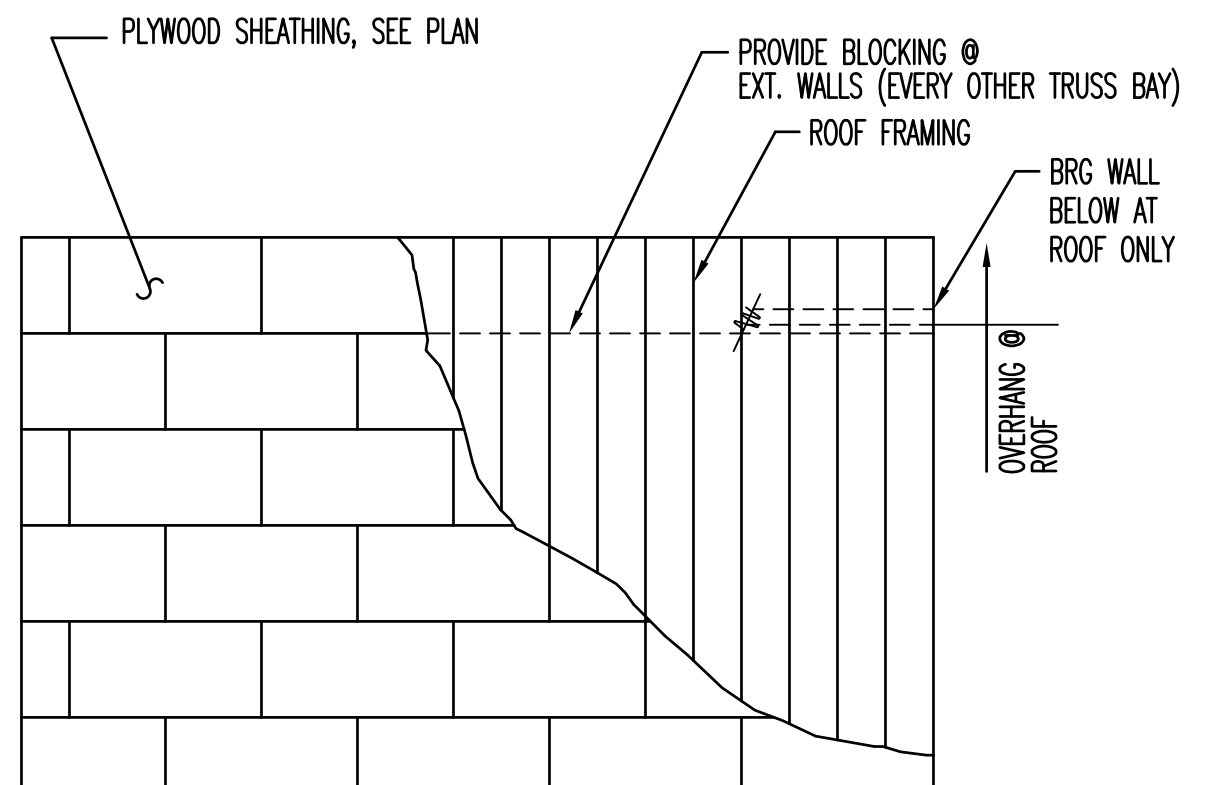
5 TYPICAL HEADER DETAIL  
S401 3/4" = 1'-0"



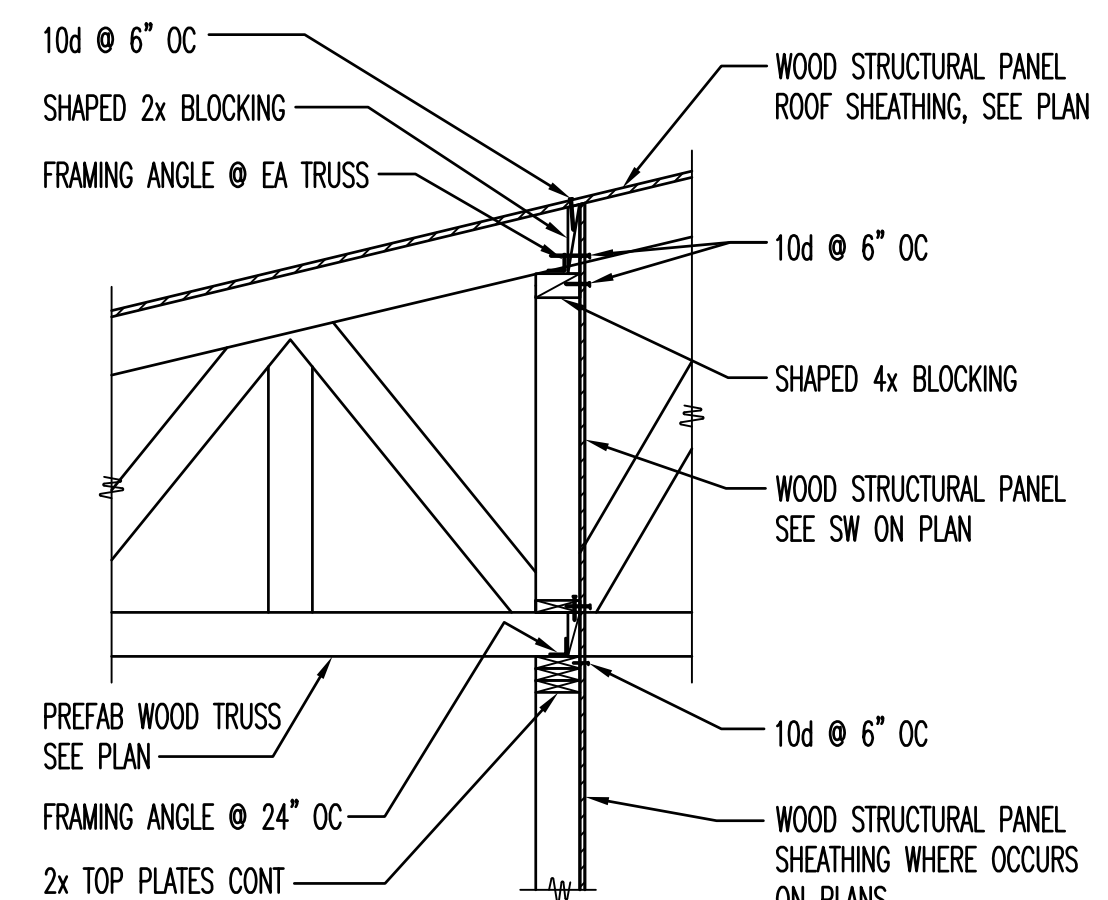
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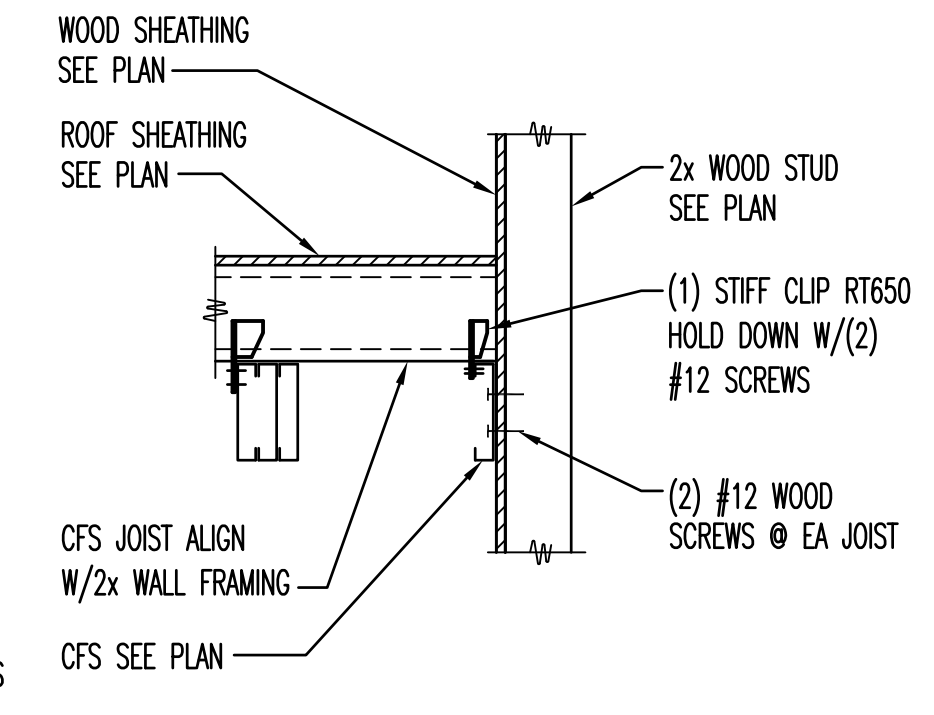
7 TYP PLYWOOD SHEAR WALL DIAGRAM  
S401 NO SCALE



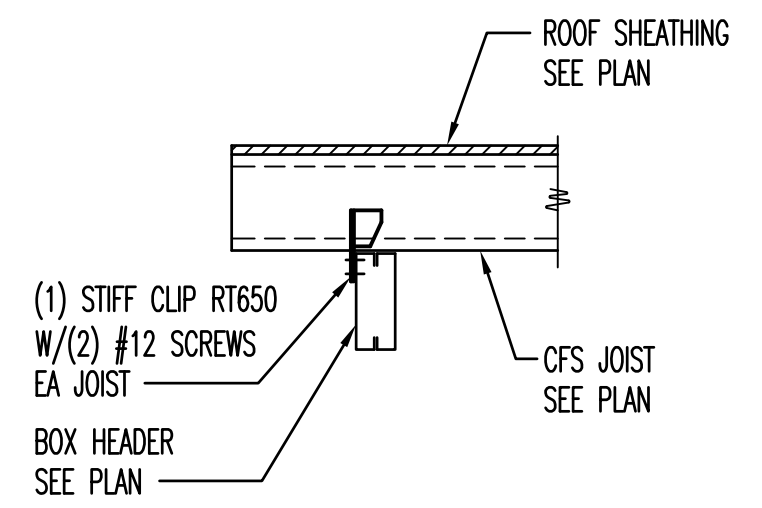
8 PLYWOOD @ ROOF DIAPHRAGM  
S401 NO SCALE



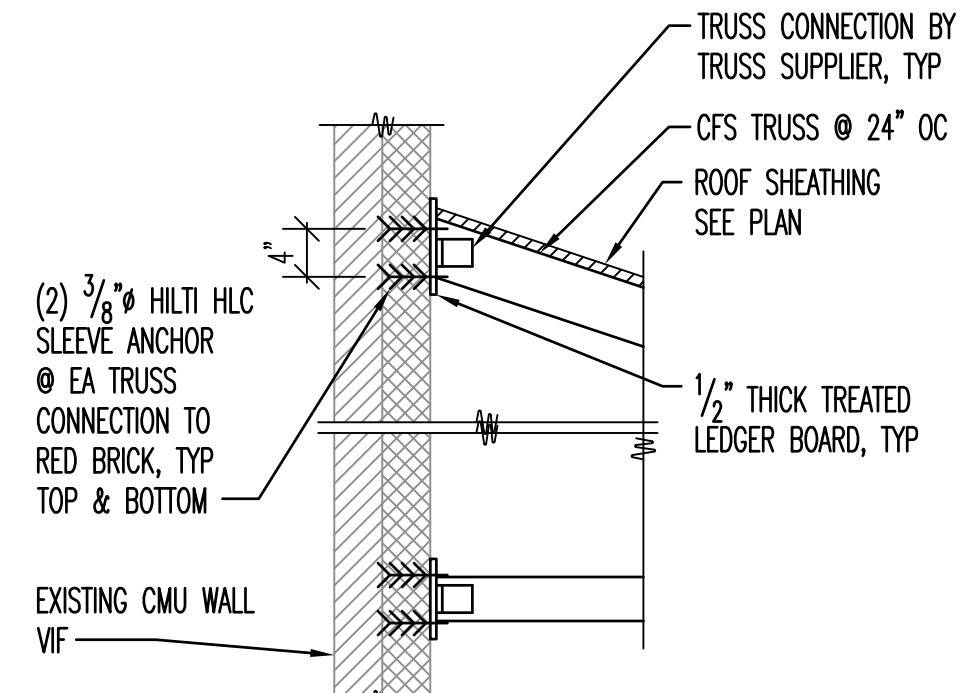
9 SHEAR TRANSFER PERP TO TRUSS  
S401 3/4" = 1'-0"



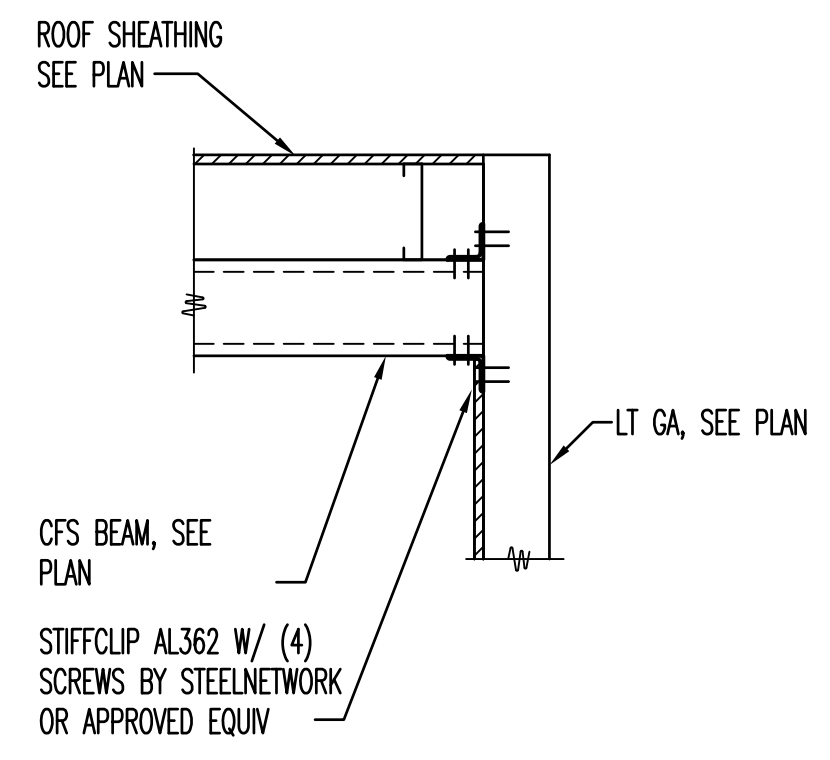
10 SECTION  
S401 3/4" = 1'-0"



11 SECTION  
S401 3/4" = 1'-0"



12 SECTION  
S401 3/4" = 1'-0"



13 CONN OF BOX HEADER TO WALL FRAMING  
S401 3/4" = 1'-0"



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