GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE (CBC); THE MOST RECENT VERSIONS OF THE CMC, CPC AND CEC; ALL APPLICABLE LOCAL CODES AND ORDINANCES; AND LOCALLY ACCEPTED STANDARDS OF PRACTICE.
2. THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED EXCLUSIVELY FOR USE ON THIS PROJECT ONLY. THE DRAWINGS AND SPECIFICATIONS, OR PORTIONS THEREOF, SHALL NOT BE USED ON OTHER PROJECTS OR ADDITIONS TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION OF THE ENGINEER.
3. WRITTEN INFORMATION AND DIMENSIONS SHALL TAKE PRECEDENCE OVER GRAPHIC INFORMATION.
4. STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL SYSTEMS. REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND CIVIL DRAWINGS FOR ITEMS WHICH REQUIRE SPECIAL PROVISIONS DURING CONSTRUCTION.
5. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: TYPES OF FINISH MATERIALS AND THEIR LOCATIONS, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR STAIRS, CURBS, ETC.
6. ALL DETAIL REFERENCES SHALL BE CONSIDERED "TYPICAL". THE INTENT OF TYPICAL DETAILS SHALL BE APPLIED TO SIMILAR CONDITIONS ELSEWHERE IN THE PROJECT. WHEN DETAILS LABELED "SIMILAR" ARE GIVEN ON DRAWINGS, THE CONTRACTOR SHALL APPLY THE GENERAL INTENT OF THE DETAIL TO THE REFERENCED CONDITION.
7. **THE CONTRACTOR SHALL REVIEW ALL DRAWINGS IMMEDIATELY UPON RECEIPT AND SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.**
8. STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR THIS WORK HAVE BEEN PREPARED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS OF PRACTICE TO MEET THE MINIMUM REQUIREMENTS OF THE APPLICABLE EDITION OF THE CBC. ANY OMISSIONS OR DISCREPANCIES ON THE PLANS OR ANY DEVIATIONS FROM THE PLANS THAT ARE NECESSITATED BY FIELD CONDITIONS OR ANY CONDITION DIFFERENT FROM THOSE INDICATED ON THE PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONTINUING CONSTRUCTION. ALL WORK SHALL BE COORDINATED SO COOPERATION BETWEEN THE TRADES IS ACCOMPLISHED.
9. CONNECTIONS AND IMPLIED CONSTRUCTION ASSEMBLIES THAT ARE NOT SPECIFICALLY DESCRIBED OR DETAILED SHALL BE CONSTRUCTED USING STANDARD CONSTRUCTION PRACTICES IN COMPLIANCE WITH THE GOVERNING CODES AND LOCAL ORDINANCES.
10. THE STRUCTURAL SYSTEMS HAVE BEEN DESIGNED TO CARRY THE SUPERIMPOSED LIVE LOADS AS PRESCRIBED BY THE CALIFORNIA BUILDING CODE AND IN ACCORDANCE WITH STANDARD ENGINEERING PRACTICES, WITH NO SPECIAL PROVISIONS TO CARRY CONCENTRATED LOADS FROM STORAGE AND HANDLING OF CONSTRUCTION MATERIALS OR FROM OPERATION OF CONSTRUCTION EQUIPMENT.
11. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURE TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER OR CONSTRUCTION MANAGER SHALL NOT RELIEVE THE CONTRACTOR OF SUCH RESPONSIBILITY.
12. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL MAINTAIN THE INTEGRITY OF ALL SCAFFOLDING, BRACING, AND SHORING SYSTEMS AS REQUIRED FOR INSTALLATION, STABILITY AND SAFETY OF NEW WORK AND EXISTING STRUCTURES, PIPING, AND FOUNDATION SYSTEMS. CONTRACTOR SHALL ALSO PROVIDE FOR THE SAFETY OF PEDESTRIANS AND JOB SITE PERSONNEL. AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITION OF THE JOB SITE, INCLUDING SAFETY OF PERSONS AND PROPERTY. THE CONTRACTOR SHALL PROTECT NEW AND EXISTING CONSTRUCTION FROM INCLEMENT WEATHER AND PHYSICAL DAMAGE.
13. CONTRACTOR SHALL COORDINATE WITH THE CITY TO ENSURE ALL INSPECTIONS (INCLUDING SPECIAL INSPECTIONS) ARE COMPLETED PER THE LOCAL BUILDING DEPARTMENT REQUIREMENTS. APPROVALS BY BUILDING INSPECTORS SHALL NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE PLANS AND SPECIFICATIONS.
14. IF PROVIDED, OBSERVATION OF THE CONSTRUCTION BY THE ENGINEER IS INTENDED TO IMPROVE THE PROBABILITY THAT THE WORK IS COMPLETED IN GENERAL CONFORMANCE WITH THE ENGINEERING INTENT OF THE DESIGN. OBSERVATION OF THE CONSTRUCTION BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR COMPLETING THE CONSTRUCTION IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS, GENERALLY ACCEPTED STANDARDS OF PRACTICE, AND CITY/COUNTY REQUIRED INSPECTIONS.
15. ALL FRAMING HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONGTIE, OR EQUAL. ALTERNATE FRAMING HARDWARE MANUFACTURERS SHALL NOT BE PROVIDED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER AND THE BUILDING OWNER. IF ALTERNATE HARDWARE SYSTEMS ARE AUTHORIZED, THE CONTRACTOR SHALL FORWARD COMPLETE SHOP DRAWINGS FOR REVIEW AND APPROVAL.

FOUNDATION NOTES

1. FOUNDATION ELEMENT EMBEDMENT IS INTO UNDISTURBED SOIL OR ENGINEERED FILL APPROVED BY THE GEOTECHNICAL ENGINEER, IF APPLICABLE. FINAL EMBEDMENT SHALL BE MEASURED FROM LOWEST ADJACENT GRADE OR BOTTOM OF APPROVED FILL.
2. REMOVE LOOSE SOIL AND STANDING WATER FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE. THE GEOTECHNICAL ENGINEER (IF APPLICABLE) SHALL INSPECT AND APPROVE ALL EXCAVATIONS, SOIL COMPACTION WORK PRIOR TO PLACEMENT OF ANY REBAR OR CONCRETE, SHORING INSTALLATIONS, BACKFILL MATERIALS AND BACK FILLING PROCEDURES.
3. MINIMUM CLEARANCE OF 8" SHALL BE PROVIDED BETWEEN EARTH AND WOOD IN ALL LOCATIONS PER CBC 2304.12
4. DRAINAGE AND SURFACE RUNOFF:
PERIMETER GRADES SHOULD BE POSITIVELY SLOPED AT ALL TIMES TO PROVIDE FOR RAPID REMOVAL OF SURFACE WATER RUNOFF AWAY FROM THE FOUNDATION SYSTEMS AND TO PREVENT PONDING OF WATER UNDER FOUNDATIONS OR SEEPAGE TOWARD THE FOUNDATION SYSTEMS AT ANY TIME DURING OR AFTER CONSTRUCTION. PONDED WATER MAY CAUSE UNDESIRABLE SOIL SWELL OR SETTLEMENT AND LOSS OF STRENGTH.
   A. AS A MINIMUM REQUIREMENT, FINISHED GRADES SHOULD HAVE SLOPES OF AT LEAST 5 PERCENT WITHIN 10 FEET FROM THE EXTERIOR WALLS AND AT RIGHT ANGLES TO ALLOW SURFACE WATER TO DRAIN POSITIVELY AWAY FROM THE STRUCTURE. FOR PAVED AREAS, THE SLOPE GRADIENT CAN BE REDUCED TO 2 PERCENT.
   B. ALL SURFACE WATER SHOULD BE COLLECTED AND DISCHARGED INTO APPROVED DRAINAGE FACILITIES. APPROVED DRAINAGE FACILITIES SHALL BE SPECIFIED BY THE THE CIVIL ENGINEER, IF APPLICABLE.
   C. ALL ROOF STORMWATER SHOULD BE COLLECTED AND DIRECTED TO DOWNSPOUTS. STORMWATER FROM ROOF DOWNSPOUTS SHOULD NOT BE ALLOWED TO DISCHARGE DIRECTLY ONTO THE GROUND SURFACE IN CLOSE PROXIMITY TO THE FOUNDATION SYSTEM. RATHER, STORMWATER FROM ROOF DOWNSPOUTS SHOULD BE DIRECTED BY AN IMPERMEABLE SURFACE INTO THE STREET OR TO AN APPROVED DRAINAGE FACILITY. IF THIS IS NOT ACCEPTABLE, WE RECOMMEND DOWNSPOUTS DISCHARGE AT LEAST 5 FEET AWAY FROM FOUNDATIONS.
5. OVER-OPTIMUM SOIL MOISTURE CONDITIONS:
THE CONTRACTOR SHOULD ANTICIPATE ENCOUNTERING EXCESSIVELY OVER-OPTIMUM (WET) SOIL MOISTURE CONDITIONS DURING WINTER OR SPRING GRADING, OR DURING OR FOLLOWING PERIODS OF RAIN. IN ADDITION, WET SOIL CONDITIONS MAY BE ENCOUNTERED NEAR THE BOTTOM OF EXCAVATIONS. WET SOIL CAN MAKE PROPER COMPACTION DIFFICULT OR IMPOSSIBLE. WET SOIL CONDITIONS SHALL BE MITIGATED BY APPROVED MEANS.
6. VAPOR TRANSMISSION
WHERE MOISTURE VAPOR TRANSMISSION IS A CONCERN, CONSULT A WATERPROOFING EXPERT. THE ELIMINATION OF MOISTURE TRANSMISSION IS OUTSIDE THE SCOPE OF THESE PLANS.
   A. AT A MINIMUM, A TOUGH, WATER VAPOR RETARDING MEMBRANE SHOULD BE INSTALLED BELOW ALL SLAB FOUNDATIONS SYSTEMS TO REDUCE MOISTURE CONDENSATION UNDER FLOOR COVERINGS. THE VAPOR RETARDER SHOULD MEET ASTM E 1745 CLASS A REQUIREMENTS FOR WATER VAPOR PERMEABILITY, TENSILE STRENGTH, AND PUNCTURE RESISTANCE. VAPOR TRANSMISSION THROUGH THE SLAB FOUNDATIONS CAN ALSO BE REDUCED BY USING HIGH STRENGTH CONCRETE WITH A LOW WATER-CEMENT RATIO.
7. DEEPEN PERIMETER FOUNDATION AS REQUIRED WHEN 3'-0" (OR LESS) FROM EDGE OF BIO-SWALE, BIO-RETENTION FACILITIES, TRENCHES, ETC. DEEPEN FOUNDATION SUCH THAT A 1:1 PLANE IS MAINTAINED BETWEEN BOTTOM OF FOUNDATION AND BOTTOM OF ADJACENT EXCAVATION. FOR MORE INFORMATION SEE DETAIL 307/SD3
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT EXISTING UTILITIES TO REMAIN DURING AND/OR AFTER CONSTRUCTION.
9. CONTRACTOR TO REMOVE ABANDONED FOOTINGS, UTILITIES, ETC. WHICH INTERFERE WITH NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED. NOTIFY THE OWNER'S REPRESENTATIVE IF ANY BURIED STRUCTURES NOT INDICATED, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC., ARE FOUND.
10. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION.
11. PLACE BACKFILL BEHIND RETAINING WALLS AFTER CONCRETE OR MASONRY HAS ATTAINED FULL DESIGN STRENGTH. BRACE BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHED FLOORS AND SLABS ON GRADE ARE COMPLETE AND HAVE ATTAINED FULL DESIGN STRENGTH.

SHEAR WALL NOTES

1. WHERE A STRUCTURAL SHEAR WALL IS INDICATED ON PLANS THE ASSEMBLY SHALL RUN HORIZONTALLY AND CONTINUOUSLY TO THE NEAREST WALL OPENING OR END OF THE WALL; THE ASSEMBLY SHALL RUN VERTICALLY CONTINUOUSLY FROM THE BOTTOM OF THE NEAREST SOLE OR BOTTOM PLATE UP TO THE TOP OF THE NEAREST DOUBLE TOP PLATE (OR BEAM). ALL PLYWOOD PANEL EDGES SHALL BE BLOCKED AND EDGE NAILED.
2. WHERE HOLDOWN POSTS OR STUDS ARE INDICATED AT THE END OF A SHEAR WALL, THE SHEAR PLYWOOD SHALL BE EDGE NAILED AND THE POST SHALL RUN CONTINUOUSLY FROM THE SOLE PLATE TO THE DOUBLE TOP PLATE. HOLDOWNS SHALL BE ATTACHED TO POSTS AT THE ENDS OF SHEAR WALL AND SHALL EXTEND TO EITHER FRAMING BELOW OR TO FOUNDATION AS SHOWN ON PLANS.
3. SEE SHEAR WALL SCHEDULE ON PLANS FOR REQUIRED SHEAR WALL NAILING, ANCHOR BOLTS, SILL NAILS, AND OTHER SHEAR TRANSFER HARDWARE.
4. SHEAR WALL PLYWOOD SHALL NOT BE CUT FOR PIPE, DUCTS, SLEEVES, ETC., U.N.O. OR DETAILED.
5. UNLESS OTHERWISE DETAILED, ALL INTERIOR SHEAR WALL SHALL BE CONTINUOUS TO THE ROOF OR FLOOR PLYWOOD IN ACCORDANCE WITH THE TYPICAL SHEAR TRANSFER DETAILS
6. PLYWOOD SHEETS LOCATED AT SHEAR WALL EDGES SHALL BE AT LEAST 12" WIDE. PLYWOOD EDGES SHALL BE EDGE NAILED TO ALL SHEAR WALL FRAMING MEMBERS. SEE SHEAR WALL SCHEDULE FOR FIELD NAILING REQUIREMENTS.
7. SEE SHEAR WALL SCHEDULE FOR SHEAR WALL THAT REQUIRE 3x MUDSILLS AND 3x FRAMING AT ADJOINING PLYWOOD PANEL EDGES. SILL PLATES, TOP PLATES AND MEMBERS IN THE FIELD OF INDIVIDUAL PLYWOOD PANELS DO NOT TYPICALLY BACK ADJOINING PANEL EDGES AND THUS MAY BE 2x.

OBSERVATION OF CONSTRUCTION

1. IN ADDITION TO OBSERVATIONS BY THE SOILS ENGINEER(IF APPLICABLE), AND CITY INSPECTOR, OBSERVATION OF THE CONSTRUCTION BY THE PROJECT ENGINEER IS RECOMMENDED FOR THIS PROJECT. IF OBSERVATIONS WILL BE PROVIDED BY PROJECT ENGINEER, THE CONTRACTOR SHALL PHASE THE PROJECT AND COORDINATE WITH THE ENGINEER TO ENSURE THAT THE PRIMARY STRUCTURAL ELEMENTS OF THE CONSTRUCTION ARE OBSERVED PRIOR TO COVERING WITH FINISHES OR OTHER MATERIALS. AS A MINIMUM, OBSERVATION BY THE ENGINEER ARE AS FOLLOWS:
   A. REINF. STEEL AND HARDWARE EMBEDDED IN THE FOUNDATION SHALL BE OBSERVED PRIOR TO CONC. PLACEMENT
   B. FLOOR FRAMING AND SHEAR TRANSFER ELEMENTS SHALL BE OBSERVED PRIOR TO INSTALLATION OF THE PLYWOOD SUBFLOOR AT RAISED FLOOR FOUNDATION SYSTEMS.
   C. SHEAR WALL AND FRAMING ELEMENTS SHALL BE OBSERVED PRIOR TO INSTALLATION OF FINISHES.
2. OBSERVATION OF THE CONSTRUCTION BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY TO COMPLETE THE CONSTRUCTION IN CONFORMANCE WITH THE PROJECT DOCUMENTS AND GENERALLY ACCEPTED STANDARDS OF PRACTICE. THE PURPOSE OF OUR VISITS WILL BE TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE CONTRACTOR'S WORK AND DETERMINE IF THE WORK IS PROGRESSING IN GENERAL CONFORMANCE WITH OUR DESIGN INTENT. DURING OUR VISITS, DPAE STRUCTURAL WILL NOT BE MAKING DETAILED INSPECTIONS, OR VERIFYING DIMENSIONS. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING APPLICABLE CODES AND THE APPROVED CONSTRUCTION DOCUMENTS.

DEFERRED SUBMITTALS

1. THE FOLLOWING DEFERRED SUBMITTALS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL. PRIOR TO THE DOCUMENTS BEING SUBMITTED TO THE PROJECT ENGINEER, THE CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS FOR 1.) COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, 2.) COORDINATION WITH OTHER TRADES, 3.) CONTRACTIBILITY, AND 4.) DIMENSIONAL ACCURACY. REVIEW OF THE SHOP DRAWINGS BY THE PROJECT ENGINEER DOES NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR COMPLETING THE WORK IN CONFORMANCE WITH THE PROJECT DOCUMENTS.
   A. ROOF TRUSS SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE PROJECT ENGINEER PRIOR TO FABRICATION OF THE TRUSSES.
2. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH A LETTER INDICATING IF THE SHOP DRAWINGS DEMONSTRATE GENERAL CONFORMANCE WITH THE INTENT OF THE STRUCTURAL DESIGN. THE CONFORMANCE LETTER FROM THE ENGINEER SHALL BE SUBMITTED TOGETHER WITH THE SHOP DRAWINGS TO THE BUILDING OFFICIAL FOR APPROVAL.
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING BUILDING DEPARTMENT APPROVAL OF ALL DEFERRED SUBMITTALS PRIOR TO BEGINNING OF CONSTRUCTION.

FASTENING SCHEDULE (C.B.C. TABLE 2304.10.2)

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[c]		
	COMMON	BOX	SPACING AND LOCATION
JOIST TO SILL, TOP PLATE, OR GIRDER	(3) 8d	(4) 8d	TOENAIL
BLOCKING TO JOIST, RAFTER OR TRUSS	(2) 8d	(2) 10d	EACH END TOENAIL
1" x 6" SUBFLOOR OR LESS, TO EACH JOIST	(2) 8d	(3) 8d	FACE NAIL
1" x 8" AND WIDER SHEATHING TO BEARING	(3) 8d	(3) 10d	FACE NAIL
BOTTOM PLATE TO JOIST OR BLOCKING, TYPICAL	16d	16d	12" O.C. FACE NAIL
BOTTOM PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	(2) 16d	(3) 16d	16" O.C. FACE NAIL
STUD TO TOP/BOTTOM PLATE	(4) 8d	(3) 16d (4) 10d	TOENAIL
STUD TO TOP/BOTTOM PLATE	(2) 16d	(3) 16d (3) 10d	END NAIL
DOUBLE STUDS	16d	10d	16" O.C. FACE NAIL
TOP PLATE TO TOP PLATE	16d	10d	12" O.C. FACE NAIL
TOP PLATE TO TOP PLATE, AT END JOINTS	(8) 16d	(12) 10d (12) 16d	EA. SIDE OF END JOINT, FACE NAIL (24" MIN. LAP SPLICE)
BLOCKING BETWEEN JOISTS OR RAFTERS, TO TOP PLATE	(3) 8d	(4) 8d (3) 10d	EACH END TOENAIL
RIM JOIST OR BLKG TO T.P., SILL OR OTHER	8d	10d	6" O.C. TOENAIL
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	(2) 16d	(3) 10d	FACE NAIL
BUILT-UP HEADER (2" TO 2" HEADER)	16d	16d	12" O.C. EA. EDGE, FACE NAIL
CEILING JOIST TO PLATE	(3) 8d	(4) 8d (3) 10d	EACH JOIST TOENAIL
CONTINUOUS HEADER TO STUD	(4) 8d	(5) 8d (4) 10d	TOENAIL
CEILING JOISTS: LAPS OVER PARTITIONS, *(SEE C.B.C. TABLE 2308.7.3.1)*	(3) 16d	(4) 10d	FACE NAIL
CEILING JOISTS ATTACHED TO PARALLEL RAFTER *(SEE C.B.C. TABLE 2308.7.3.1)*	PER TABLE	PER TABLE	FACE NAIL
RAFTER OR TRUSS TO PLATE *(SEE C.B.C. TABLE 2308.7.5)*	(3) 10d	(4) 10d (3)16d	(2) TOENAILS ON ONE SIDE AND (1) TOENAIL ON OPPOSITE SIDE
1" BRACE TO EACH STUD AND PLATE	(2) 8d	(3) 8d (2) 10d	FACE NAIL
2" SUBFLOOR TO JOISTS OR GIRDER	(2) 16d	(3) 16d	BLIND AND FACE NAIL
2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	(2) 16d	(3) 16d	EA. BEARING FACE NAIL
STUD TO STUD AND ABUTTING STUDS AT INTER. WALL CORNERS (BRACED PANEL)	16d	16d	12" O.C. FACE NAIL
BUILT-UP GIRDERS AND BEAMS 2" LUMBER LAYERS - **BETWEEN ENDS AND**	N/A	10d	24" O.C. FACE NAIL, T + B STAGG. ON OPPOSITE SIDES
BUILT-UP GIRDERS AND BEAMS 2" LUMBER LAYERS - **ENDS**	N/A	(3) 10d	FACE NAIL
COLLAR TIE TO RAFTER	(3) 10d	(4) 10d	FACE NAIL
ROOF RAFTER TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" RIDGE BEAM	(2) 16d	(3) 10d (3) 16d	END NAIL
ROOF RAFTER TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" RIDGE BEAM	(3) 10d	(4) 10d (4) 16d	TOENAIL
JOIST TO BAND JOIST	(3) 16d	(4) 10d	END NAIL
LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	(3) 16d	(4) 10d (4) 16d	EACH JOIST OR RAFTER,FACE NAIL
WOOD STRUCTURAL PANELS AND PARTICLE BOARD (NOTE a): SUBFLOOR, ROOF & INT. WALL SHEATHING TO FRAMING:	COMMON	EDGES (INCHES)	INTERMEDIATE SUPPORT (INCHES)
3/8" TO 1/2"	8d	6	12 (SUBFLOOR AND WALL) 6 (ROOF)
19/32" TO 3/4"	8d	6	12 (SUBFLOOR AND WALL) 6 (ROOF)
7/8" TO 1-1/4"	10d	6	12
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING:			
3/4" AND LESS	8d	6	12
7/8" TO 1"	8d	6	12
1-1/8" TO 1-1/4"	10d	6	12
PANEL SIDING TO FRAMING (NOTE 2):			
1/2" AND LESS	8d	6	12
5/8"	8d	6	12

NOTES: FOR SI: 1 inch = 25.4 mm

a. NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON OR BOX.
b. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOISTS IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.
c. NAILS ARE CARBON STEEL MEETING SPECIFICATIONS OF ASTM F1667.

NAIL SCHEDULE

FASTENER PER PLAN	SHANK DIA.	HEAD DIA.	MIN. LENGTH
8d BOX	0.113"	0.281"	2-1/2"
8d COMMON	0.131"	0.281"	2-1/2"
10d BOX	0.128"	0.312"	3"
10d COMMON	0.148"	0.312"	3"
16d BOX	0.148"	0.344"	3-1/4"
16d COMMON	0.162"	0.344"	3-1/2"

NOTES:
1. ALL NAILS IN MANUF. HARDWARE SHALL BE PER MANUFACTURERS SPECIFICATIONS AS NOTED TO ACHIEVE MAX HARDWARE VALUE.
2. FASTENERS, INCLUDING NUTS AND WASHERS, IN CONTACT WITH SODIUM BORATE SBX/DOT PRESERVATIVE-TREATED WOOD IN AN INT., DRY ENVIRONMENT SHALL BE PERMITTED.
3. FASTENERS IN CONTACT WITH PRESERVATIVE -TREATED TREATED WOOD USING ALKALINE COPPER QUAT (ACQ-C, ACQ-D, ACQ-D CARBONATE), COPPER AZOLE (CA-B & CA-C, MCA-C) OR EXPOSED TO WEATHER SHALL BE HOT DIPPED GALV. OR STAINLESS STEEL

SYMBOLS LEGEND

NOT ALL SYMBOLS USED IN THE DRAWING ARE LISTED BELOW. REFER TO AMERICAN WELDING SOCIETY PUBLICATIONS FOR WELDING SYMBOLS.

- (LENGTH) SW-# — INDICATES SHEAR WALL NUMBER AND MINIMUM DESIGN LENGTH. SHEAR WALL SHALL BE AS NOTED IN THE SHEAR WALL SCHEDULE 103/SD1
- HD — INDICATES HOLDOWN TYPE AS MANUFACTURED BY THE "SIMPSON STRONGTIE COMPANY." HOLDOWNS SHALL BE AS NOTED IN THE HOLDOWN SCHEDULE, PER 203/SD2
- INDICATES INTERIOR BEARING WALL BELOW
- INDICATES HEADER PER HEADER SCHEDULE 401D/SD4
- INDICATES WALL BELOW (NON-BEARING AT INTERIOR CONDITION)
- INDICATES WALL ABOVE
- INDICATES BALLOON FRAMED WALL. REFER TO NOTE 6. UNDER GENERAL FRAMING NOTES FOR STUD SIZE AND SPACING REQUIREMENTS, U.N.O.
- P.A. — INDICATES POST BELOW
- INDICATES POST ABOVE
- # — DETAIL NUMBER
- # — SHEET NUMBER
- INDICATES ELEVATION
- # — REFERENCE TO STRUCTURAL CALCULATIONS FOR THE BENEFIT OF THE BUILDING OFFICIAL
- # — INDICATES REVISION NUMBER AND PLAN REVISIONS INSIDE CLOUD
- E — REFERENCE TO STRUCTURAL CALCULATIONS FOR THE BENEFIT OF THE BUILDING OFFICIAL
- INDICATES HANGER.
- HANGERS SHALL BE AS NOTED IN THE HANGER SCHEDULE PER 409/SD4

ABBREVIATION LEGEND

ABBREVIATION	MEANING
@	AT
A.B.	ANCHOR BOLT
ABV	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ADD'L	ADDITIONAL
A.F.F.	ABOVE FINISHED FLOOR
AGGREG.	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALT.	ALTERNATE
ARCH.	ARCHITECT(URAL)
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
B/	BOTTOM OF
B.C.	BOTTOM CHORD
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLW	BELOW
BM	BEAM
B.N.	BOUNDARY NAILING
B.O.	BY OTHERS / BOTTOM OF
B.O.C.	BOTTOM OF CONCRETE
B.O.F.	BOTTOM OF FOOTING
B.O.S.	BOTTOM OF STEEL
BRG	BEARING
B.S.	BOTH SIDES
BTM	BOTTOM
BTWN	BETWEEN
CALCS	CALCULATIONS
CANT.	CANTILEVER
C.B.	CEILING BEAM
C.B.C.	CALIFORNIA BUILDING CODE
C.C.	CENTER TO CENTER
C.C.J.	CRACK CONTROL JOINT
C.F.	CUBIC FOOT
C.J.	CONTROL JOINT - OR - CEILING JOIST
℄	CENTERLINE
CLG	CEILING
CLR	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
COLL.	COLLECTOR
CONC.	CONCRETE
COND.	CONDITION
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
C.P.	COMPLETE PENETRATION WELD
C.S.	COUNTERSUNK
C.T.	COLLECTOR TRUSS
CTR	CENTER
CTRD	CENTERED
C.Y.	CUBIC YARD
DBL	DOUBLE
DET.	DETAIL
D.F.	DOUGLAS FIR
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
D.L.	DEAD LOAD
D.J.	DECK JOIST
D.T.	DRAG TRUSS
DP	DEEP
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING
EA.	EACH
E.B.	EXPANSION BOLT
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEV.	ELEVATOR
EMB.	EMBEDMENT
EMBED.	EMBEDMENT
E.N.	EDGE NAIL
E.O.R.	ENGINEER OF RECORD
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.S.	EACH SIDE
E.W.	EACH WAY
EXT.	EXTERIOR
FDN	FOUNDATION
F.F.	FINISH FLOOR
FIN.	FINISH
F.J.	FLOOR JOIST
FLG	FLANGE
FLR	FLOOR
F.O.B.	FACE OF BLOCK
F.N.	FACE NAIL
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.P.	FIREPLACE - OR - FULL PENETRATION
FRMD	FRAMED
FRMG	FRAMING
F.S.	FAR SIDE
FT	FOOT
FTG	FOOTING
G & N	GLUE AND NAIL
GA.	GAGE
GALV.	GALVANIZED
G.B.	GRADE BEAM
GEN.	GENERAL
GLB	GLUED-LAMINATED BEAM
GR.	GRADE
G.T.	GIRDER TRUSS
GYP.	GYPSUM
G.W.B.	GYPSUM WALL BOARD
HD	HOLDOWN
H.D.G.	HOT-DIP GALVANIZED
HDR	HEADER
HGR	HANGER
H.H.N.	HEAVY HEX NUT
H.N.	HEX NUT
HORIZ.	HORIZONTAL
HS	HIGH STRENGTH
H.S.B.	HIGH STRENGTH BOLT
HSS	STRUCTURAL TUBE
HT	HEIGHT
I.D.	INSIDE DIAMETER
INFO.	INFORMATION
INT.	INTERIOR
INV.	INVERT(ED)
JNT	JOINT
JST	JOIST
J.T.	JACK TRUSS
	KIPS
K.D.	KILN-DRIED
KLF	KIPS PER LINEAL FOOT
K.P.	KING POST
lbs	POUNDS
L.B.	LAG BOLT
L.F.	LINEAL FOOT
LONG.	LONGITUDINAL
LG	LONG
L.L.	LIVE LOAD
LSL	LAMINATED STRAND LUMBER
LT	LIGHT
LTWT	LIGHTWEIGHT
LVL	LAMINATED VENEER LUMBER
MATL	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MEMB.	MEMBRANE
MID.	MIDDLE
MIN.	MINIMUM
M.I.W.	MALLEABLE IRON WASHER
M.O.	MASONRY OPENING
MFR	MANUFACTURER
MFRD	MANUFACTURED
MTL	METAL
(N)	NEW
N.A.	NOT APPLICABLE
N.B.	NON-BEARING
N.D.T.	NON-DESTRUCTIVE TESTING
N.I.C.	NOT IN CONTRACT
NLG	NAILING
No.	NUMBER
N.S.	NEAR SIDE
N.S.G.	NON-SHRINK GROUT
N.T.S.	NOT TO SCALE
O/	OVER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.O.S.	OUTSIDE FACE OF STUD
O.H.	OVERHANG - OR - OPPOSITE HAND
OPNG	OPENING
O.S.B.	ORIENTED STRAND BOARD
O.W.S.J.	OPEN WEB STEEL JOIST
O.W.J.G.	OPEN WEB JOIST GIRDER
P.A.	POST ABOVE
P.A.F.	POWDER-ACTUATED FASTENER
PARL	PARALLEL
P.C.F.	POUNDS PER CUBIC FOOT
PEN.	PENETRATION
PERF.	PERFORATED
PERP.	PERPENDICULAR
PL.	PLATE
PLY.	PLYWOOD
PLYWD	PLYWOOD
PR	PAIR
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
P.S.L.	PARALLEL-STRAND LUMBER
PST	POST
PT	POINT
P.T.	PRESSURE TREATED - OR - POST-TENSION
R	RADIUS
RECM'D	RECOMMEND(ATION)
REF.	REFERENCE
REINF.	REINFORCED - OR - REINFORCING - OR - REINFORCEMENT
REQD	REQUIRED
RET.	RETAINING
RETAIN.	RETAINING
R.J.	ROOF JOIST
R.O.	ROUGH OPENING
R.P.	"REAL POST"
R.R.	ROOF RAFTER
R/S	RESAWN (ROUGH-SAWN)
R.T.	ROOF TRUSS
R.W.	RETAINING WALL
RWD	REDWOOD
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.B.	SOLID BLOCK
S.B.T.	SET-BACK TRUSS
SCHED.	SCHEDULE
SEP.	SEPARATION
S.G.T.	SUB-GIRDER TRUSS
SHT	SHEET
SIM.	SIMILAR
S.M.S.	SHEET METAL SCREW
S.J.	SOFFIT JOIST
SPEC.	SPECIFICATION
SQ.	SQUARE
S.S.	SELECT STRUCTURAL
S4S	SURFACED 4 SIDES
STAGG.	STAGGER - OR - STAGGERED
STD	STANDARD
STIFF.	STIFFENER
STL	STEEL
STRUCT.	STRUCTURAL
SW	SHEAR WALL
SYMM.	SYMMETRICAL
T + B	TOP AND BOTTOM
T + G	TONGUE AND GROOVE
T.C.	TOP CHORD
THK	THICK
THKND	THICKENED
T.N.	TOE NAIL
T.O.B.	TOP OF BLOCK
T.O.C.	TOP OF CONCRETE
T.O.P.	TOP OF PLATE
T.O.S.	TOP OF STEEL - OR - TOP OF SHEATHING
T.O.W.	TOP OF WALL
T/	TOP OF
T.P.	TOP PLATE
TRANSV.	TRANSVERSE
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
w/	WITH
WD	WOOD
W.P.	WORK POINT - OR - WATERPROOF(ING)
WT	WEIGHT
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH
#	NUMBER (PREFIX)
#	POUNDS (SUFFIX)

NOTE REGARDING STRUCTURAL DRAWINGS:

THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL FRAME. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR NONSTRUCTURAL ITEMS INCLUDING NONSTRUCTURAL WALLS, WHICH REQUIRE SPECIAL PROVISIONS DURING CONSTRUCTION. ONLY OPENINGS REQUIRING SPECIAL FRAMING ARE SHOWN ON STRUCTURAL PLANS. SEE TYPICAL DETAILS FOR REINFORCING AROUND NOMINAL OPENINGS NOT SHOWN.

STRUCTURAL DESIGN INFORMATION

BASIS OF STRUCTURAL DESIGN: 2022 CALIFORNIA BUILDING CODE

LATERAL SYSTEM DESIGN DATA

GENERAL DESIGN DATA:

IMPORTANCE FACTOR -	1
OCCUPANCY CATEGORY -	II
ANALYSIS PROCEDURE USED -	EQUIVALENT LATERAL FORCE
LATERAL FORCE RESISTING SYSTEM -	WOOD SHEAR WALLS

WIND DESIGN DATA:

3 SECOND GUST SPEED -	95 mph
WIND EXPOSURE RATING -	Exp. C

SEISMIC DESIGN DATA:

SOIL SITE CLASS -	D
SEISMIC DESIGN CATEGORY -	D
SEISMIC BASE SHEAR -	5.448 kips
SEISMIC RESPONSE COEFFICIENT, C_s -	0.134
RESPONSE MODIFICATION FACTOR, R -	6.5
MAPPED SPECTRAL RESPONSE ACCELERATION, S_s -	1.308
MAPPED SPECTRAL RESPONSE ACCELERATION, S_1 -	0.464
SPECTRAL RESPONSE COEFFICIENTS, S_{DS} -	0.872
SPECTRAL RESPONSE COEFFICIENTS, S_{D1} -	0.852

SOILS & FOUNDATION DESIGN DATA

SOILS ENGINEER -	WAYNE TING & ASSOCIATES, INC.
REPORT NUMBER -	6950
REPORT DATE -	MAY 23, 2025

MAT SLAB FOUNDATION

ALLOWABLE SOIL PRESSURE -	1500 PSF
MODULUS OF SUBGRADE REACTION -	50 KCF
THICKENED EDGE -	12 INCHES BELOW BTM OF SLAB

GRAVITY LOAD SCHEDULE

MATERIAL	DEAD LOAD	LIVE LOAD
ROOF	6.0 psf	20.0 psf
CEILING	8.0 psf	10.0 psf
EXT. WALL	12.0 psf	
INT. WALL	7.0 psf	

NOTE: BUILDING BASE SHEAR INCLUDES A PHOTOVOLTAIC DEAD LOAD CONSISTING OF 3 psf OVER 250 SQ. FT. OR 25% OF THE ROOF AREA (WHICHEVER IS GREATER) WAS USED FOR LATERAL AND BASE SHEAR ANALYSIS.

PROJECT MANAGER

PROJECT MANAGER -	Justen Peek
CONTACT EMAIL -	jp@advengineering.com
CONTACT PHONE -	(925) 306-0023

DO NOT SCALE THESE DRAWINGS

DPAE STRUCTURAL
3381 WALNUT BLVD. STE. 220
BRENTWOOD, CA 94513
PHONE: 925.516.3502
FAX: 925.262.4662
EMAIL: INFO@DPAEstructural.COM

PROGRESS PRINT - NOT FOR CONSTRUCTION

BRENTWOOD CEMETRY OFFICE BUILDING

11545 BRENTWOOD BLVD.
BRENTWOOD, CALIFORNIA

1
2
3
4
5
6

PLEASE NOTE THE REVISION NUMBER AND DATE ARE FOR STRUCTURAL SHEETS ONLY.

Engineering Seal:

Sheet Description:
GENERAL NOTES AND DESIGN CRITERIA

No Scale

Initial Issue Date:	August 29, 2025
Drawn By:	H. Castro
Project Engineer:	C. La Brie
Project Manager:	S. Kaeding
Job No.	W020725
Sheet No.	SN1

ROOF TRUSS DESIGN REQUIREMENTS

ROOF TRUSSES SHALL NOT BE INSTALLED UNTIL MOISTURE CONTENT OF TRUSS MEMBERS (AS MEASURED AND DOCUMENTED BY THE CONTRACTOR) IS EQUAL TO OR LESS THAN 19%

1. ROOF TRUSS MANUFACTURER SHALL SUPPLY TO THE CONTRACTOR ROOF TRUSS SHOP DRAWINGS FOR REVIEW AND APPROVAL. ROOF TRUSS SHOP DRAWINGS SHALL BE SIGNED BY A CALIFORNIA REGISTERED PROFESSIONAL ENGINEER AND SHALL INCLUDE TRUSS LAYOUTS, CALCULATIONS, HANGERS REQUIREMENTS, SPECIFICATIONS, AND DETAILS. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST LOCAL AND STATE BUILDING CODE FOR ALL LOADS IMPOSED, INCLUDING LATERAL LOADS AND MECHANICAL EQUIPMENT LOADS. SEE THE LOAD SCHEDULE FOR TYPICAL DEAD AND LIVE LOADS USED IN THE STRUCTURAL DESIGN. **TRUSS DESIGNER SHALL SIZE AND SPECIFY ALL HANGERS NECESSARY TO SUPPORT TRUSSES.**

2. TRUSS MANUFACTURER TO SPECIFY AND ADEQUATELY DETAIL ALL STRONG-BACKS, CROSS BRIDGING, AND/OR BRACING WHICH SHALL BE REQUIRED TO BRACE ALL TRUSSES. ALL CONNECTORS SHALL BE ICC APPROVED.

3. TRUSS DESIGNER SHALL REINFORCE ALL GABLE AND SHEAR TRUSSES TO TRANSFER LATERAL LOADS INDICATED ON THE PLANS FROM THE TOP CHORD TO THE BOTTOM CHORD. **ALL GABLE TRUSSES SHALL HAVE A MINIMUM OF 1500 POUND DRAG LOAD APPLIED U.N.O. ON PLANS.**

4. TRUSS MANUFACTURER TO REFER TO ARCHITECTURAL PLANS FOR SPECIAL TRUSS REQUIREMENTS INCLUDING CEILING CONFIGURATIONS, OVERHANGS, ATTIC MOUNTED FAU UNITS, AND OPENINGS FOR SKYLIGHTS, VENTS, CHIMNEYS, ACCESS DOORS, ATTIC STORAGE AREAS, ETC.

5. TRUSS LAYOUT SHOWN ON THE PLANS IS FOR TRUSS MANUFACTURER'S AID IN DESIGNING THE TRUSSES. ACTUAL TRUSS LAYOUT SHALL UTILIZE BEARING WALLS SHOWN ON THE PLANS AND SHALL MAINTAIN ARCHITECTURAL ROOF AND CEILING PROFILES. INTERIOR WALLS, INCLUDING INTERIOR SHEAR WALLS, SHALL NOT BE USED FOR BEARING UNLESS SPECIFICALLY NOTED IN THE STRUCTURAL PLANS.

6. TOTAL LOAD AND LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO THE FOLLOWING:

DEFLECTION AND CAMBER LIMITATIONS

MAX DEFLECTION (LIVE LOAD)	SPAN / 360
	3/4" (INCL. CREEP)
MAX DEFLECTION (TOTAL LOAD)	SPAN / 240
	1" (INCL. CREEP)
REQUIRED CAMBER	DEAD LOAD DEFL.[A.]

NOTE:
A. PROVIDE A MIN. SLOPE 1/4" PER FOOT OF SPAN FOR PROPER DRAINAGE TO PREVENT WATER PONDING
B. DIFFERENTIAL DEFLECTION BETWEEN TWO CONSECUTIVE TRUSSES SHALL NOT EXCEED 0.30"
C. DEFLECTIONS SHALL BE FURTHER REDUCED TO ELIMINATE UNDESIRABLE APPEARANCE, FINISH CRACKING, SHIFTING, OR AS DIRECTED BY DEVELOPER/OWNER BASED ON DESIRED SPEC LEVEL.

7. TRUSS SHOP DRAWINGS SHALL BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS (APPROVED BY THE ENGINEER) SHALL BE FORWARDED TO THE BUILDING DEPARTMENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN BUILDING DEPARTMENT APPROVAL OF CALCULATIONS AND SHOP DRAWINGS PRIOR TO FABRICATION AND CONSTRUCTION. APPROVED TRUSS DRAWINGS SHALL BECOME PART OF CONSTRUCTION DOCUMENTS.

8. TRUSS MANUFACTURER TO DESIGN TRUSSES FOR A BOTTOM CHORD LIVE LOAD AS PRESCRIBED BY THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE OR ASCE.
   8.1 UNINHABITABLE ATTIC AREAS WITHOUT STORAGE SHALL BE DESIGNED FOR A **BTM CHORD LIVE LOAD OF 10 PSF**.
      A. UNINHABITABLE ATTIC AREAS WITHOUT STORAGE ARE THOSE WHERE THE MAXIMUM CLEAR HEIGHT BETWEEN THE JOIST AND RAFTER IS LESS THAN 42 INCHES, OR WHERE THERE ARE NOT TWO OR MORE ADJACENT TRUSSES WITH WEB CONFIGURATION CAPABLE OF ACCOMMODATING AN ASSUMED RECTANGLE OF 42 INCHES IN HEIGHT BY 24 INCHES IN WIDTH, OR GREATER, WITHIN THE PLANE OF THE TRUSSES. **THIS LOAD NEED NOT BE ASSUMED TO ACT CONCURRENTLY WITH ANY OTHER LIVE LOAD REQUIREMENT.**

   8.2 UNINHABITABLE ATTIC AREAS WITH STORAGE SHALL BE DESIGNED FOR A **BOTTOM CHORD LIVE LOAD OF 20 PSF.**
      A. UNINHABITABLE ATTIC AREAS WITH STORAGE ARE THOSE WHERE THE MAXIMUM CLEAR HEIGHT BETWEEN THE JOIST AND RAFTER IS 42 INCHES OR GREATER, OR WHERE THERE ARE TWO OR MORE ADJACENT TRUSSES WITH WEB CONFIGURATION CAPABLE OF ACCOMMODATING AN ASSUMED RECTANGLE OF 42 INCHES IN HEIGHT BY 24 INCHES IN WIDTH, OR GREATER, WITHIN THE PLANE OF THE TRUSSES. **THIS LOAD IS ASSUMED TO ACT CONCURRENTLY WITH ALL OTHER LIVE LOAD REQUIREMENTS.**

9. TRUSSES ARE TO BE DESIGNED FOR THE FOLLOWING LOADS, U.N.O.:

DEAD LOADS

TOP CHORD DEAD LOAD	14.0 PSF
BTM CHORD DEAD LOAD	8.0 PSF
PHOTOVOLTAIC LOAD	3.0 PSF [A. B.]

NOTE:
A. PHOTOVOLTAIC DEAD LOAD SHALL BE APPLIED NON-CONCURRENT WITH LIVE LOAD.
B. SEE ARCHITECTURAL AND SOLAR DRAWINGS PANEL PLACEMENT AND LOCATIONS.

LIVE LOADS

TOP CHORD LIVE LOAD	20.0 PSF
BTM CHORD LIVE LOAD	10.0 PSF [A.]
	20.0 PSF [B.]

NOTE:
A. UNINHABITABLE LIVE LOAD PER SECTION 8.1. LOAD DOES NOT ACT CONCURRENTLY WITH TOP CHORD
B. UNINHABITABLE LIVE LOAD PER SECTION 8.2. LOAD ACTS CONCURRENTLY WITH TOP CHORD

10. PER SECTION 1704.5 OF THE CURRENT EDITION OF THE C.B.C., THE TRUSS MANUFACTURER IS TO PROVIDE REPORTS OF SPECIAL INSPECTIONS AND TESTS IN ACCORDANCE WITH SECTION 1704.2.4. OF THE CURRENT C.B.C. ADDITIONALLY, REPORTS AND CERTIFICATES SHALL BE SUBMITTED BY THE OWNER OR THE OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL FOR EACH OF THE FOLLOWING:
    A. CERTIFICATES OF COMPLIANCE FOR THE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES ON THE PREMISES OF A REGISTERED AND APPROVED FABRICATOR IN ACCORDANCE WITH SECTION 1704.2.5.1.

GEOTECHNICAL REQUIREMENTS / EARTHWORK

1. GEOTECHNICAL ENGINEER SHALL BE RETAINED BY OWNER OR OWNERS REPRESENTATIVE TO PROVIDE GEOTECHNICAL SERVICES, REVIEWS, EARTHWORK OPERATIONS, AND FOUNDATION INSTALLATION TO CONFIRM AND OBSERVE COMPLIANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS.
   A. ALL EARTHWORK SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION WORK.
   B. ALL INSPECTION AND TESTING REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT.

2. THE SITE SHOULD BE CLEARED OF ALL OBSTRUCTIONS INCLUDING ANY EXISTING STRUCTURES AND THEIR ENTIRE FOUNDATION SYSTEM, EXISTING UTILITIES AND PIPELINES AND THEIR ASSOCIATED BACKFILL, DESIGNATED TREES AND THEIR ENTIRE ROOT SYSTEM, AND DEBRIS. HOLES RESULTING FROM THE REMOVAL OF UNDERGROUND OBSTRUCTIONS EXTENDING BELOW THE PROPOSED FINISH GRADE (INCLUDING TREE ROOT SYSTEM) SHOULD BE CLEARED AND BACKFILLED WITH FILL MATERIALS AND COMPACTED AS SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT.

3. EXTREME CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS SO AS NOT TO DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.

4. ANY IMPORT FILL SOIL THAT MAY BE REQUIRED SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.

5. ALL REQUIRED BACKFILL SHALL BE MECHANICALLY COMPACTED IN CONFORMANCE WITH THE GEOTECHNICAL REPORT.

GENERAL FRAMING NOTES

1. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED, OR APPROVED BY THE ENGINEER. NOTCH DETAILS, IF PROVIDED, ARE FOR GENERAL GUIDANCE ONLY. THE ENGINEER SHALL BE CONTACTED TO APPROVE LOCATIONS OF PROPOSED NOTCHES. STUDS IN EXTERIOR WALLS AND BEARING PARTITIONS MAY BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF STUD WIDTH. CUTTING OR NOTCHING OF STUDS IN NON-BEARING PARTITIONS SHALL NOT EXCEED 40% OF THE WIDTH. SEE DETAIL 404/SD4 FOR MORE INFORMATION.

2. **TYPICAL FRAMING AND STRUCTURAL MATERIALS:**
ALL FRAMING LUMBER SHALL BE DOUGLAS FIR, AND SHALL BE STAMPED WITH A GRADE MARK WITH THE FOLLOWING GRADES. FRAMING LUMBER SHALL CONFORM TO GRADING RULES OF WWPA AND COMPLIES WITH DOC PS 20.
MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 19% AT THE TIME OF CONSTRUCTION.

FRAMING MATERIAL	GRADE
TYPICAL WALL STUDS	PER NOTE 6 BELOW
SOLE PLATES (2x MIN.) [1.]	STUD GRADE, MINIMUM
MUDSILLS (2x MIN.) [2.]	P.T. DF. STD & BETTER
TOP PLATES (2x MIN.)	D.F. #2, MIN. U.N.O.
RIM JOIST (2x DIMENSIONAL)	D.F. #2, MIN. U.N.O.
FLR JOISTS (2x DIMENSIONAL)	D.F. #2, MIN. U.N.O.

FRAMING MATERIAL	GRADE
RAFTERS (2x DIMENSIONAL)	D.F. #2, MIN. U.N.O.
BUILT UP HEADERS (2-2x)	D.F. #2, MIN. U.N.O.
4x POSTS/BEAMS/RAFTERS	D.F. #2, MIN. U.N.O.
6x POSTS/BEAMS/RAFTERS	D.F. #1, MIN. U.N.O.
STRUCTURAL PLYWOOD	APA RATED SHTG
LUMBER EXPOSED TO WEATHER [3.]	P.T. D.F. #2 U.N.O.

   A. SOLE PLATES, AS NOTED ABOVE, ARE ALL INTERIOR SILL PLATES NOT IN CONTACT WITH CONCRETE. MATERIAL SHALL BE UC1 INTERIOR/DRY CATEGORY AS DEFINED BY AWPA STANDARD U1.
   B. MUDSILLS, AS NOTED ABOVE, ARE ALL INTERIOR SILL PLATES IN DIRECT CONTACT WITH CONCRETE. MATERIAL SHALL BE UC2 INTERIOR/DAMP CATEGORY AS DEFINED BY AWPA STANDARD U1.
   C. LUMBER EXPOSED TO WEATHER, AS NOTED ABOVE, IS ALL EXTERIOR LUMBER ABOVE GROUND AND EXPOSED TO WEATHER. MATERIAL SHALL BE UC3B ABOVE GROUND EXPOSED CATEGORY AS DEFINED BY AWPA STANDARD U1.

3. PRESERVATIVE TREATED OR NATURALLY DURABLE MATERIALS:
LUMBER SHALL BE TREATED WITH TYPICAL WATERBORNE PRESERVATIVES: ALKALINE COPPER QUAT (ACQ-C, ACQ-D, ACQ-D CARBONATE), COPPER AZOLE (CA-B & CA-C, MCA-C) AND SODIUM BORATES (SBX/DOT). THESE TREATMENTS ARE OFTEN REFERRED TO BY TRADE NAMES SUCH AS: WOLMANIZED NATURAL SELECT™ (COPPER AZOLE), PRESERVE AND NATUREWOOD® (ACQ), MICROPRO™, SMART SENSE™ (MCQ), AND ADVANCE GUARD® (BORATE).
   A. ALL INTERIOR/DAMP CONSTRUCTION, UC2 CATEGORY, SHALL BE TREATED WITH SODIUM BORATE SBX/DOT.
      1. PLAIN CARBON STEEL FASTENERS, INCLUDING NUTS AND WASHERS, IN CONTACT WITH SODIUM BORATE SBX/DOT PRESERVATIVE-TREATED WOOD IN AN INTERIOR, DRY ENVIRONMENT SHALL BE PERMITTED.

   B. ALL EXTERIOR ABOVE GROUND CONSTRUCTION (INCL. DECK FRAMING), UC3B CATEGORY, SHALL BE TREATED WITH ALKALINE COPPER QUAT (ACQ-C, ACQ-D, ACQ-D CARBONATE), OR COPPER AZOLE (CA-B & CA-C, MCA-C)
      1. ALL FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED TREATED WOOD USING ALKALINE COPPER QUAT (ACQ-C, ACQ-D, ACQ-D CARBONATE), OR COPPER AZOLE (CA-B & CA-C, MCA-C) SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL IN ACCORDANCE WITH GOVERNING CBC SEC. 2304.10 AND SHALL BE IN ACCORDANCE WITH ASTM A 153.

   C. WOOD JOISTS OR WOOD STRUCTURAL FLOORS THAT ARE CLOSER THAN 18 INCHES OR WOOD GIRDERS THAT ARE CLOSER THAN 12 INCHES TO EXPOSED GROUND IN CRAWL SPACES OR UNEXCAVATED AREAS LOCATED WITHIN THE PERIMETER OF THE BUILDING FOUNDATION SHALL BE PRESERVATIVE-TREATED WOOD IN ACCORDANCE CBC.

4. TYPICAL STUD WALL FRAMING MATERIALS:

SUPPORTING ROOF ONLY (L/360 DEFLECTION)
EXTERIOR & HATCHED BEARING WALL STUD TABLE

MAX. PLATE HT	STUD TYPE	SPACING
22'-1"	(2) 2x6 DOUG-FIR #2	12" O.C.
20'-1"	(2) 2x6 DOUR-FIR #2	16" O.C.
16'-1"	2x6 DOUR-FIR #2	16" O.C.
12'-1"	(2)-2x4 DOUG-FIR #2	16" O.C.
	2x6 STUD GRADE	16" O.C.
10'-1"	2x4 STUD GRADE	12" O.C.
	2x4 DOUG-FIR #2	16" O.C.
	2x6 STUD GRADE	16" O.C.
9'-1"	2x4 STUD GRADE	16" O.C.
	2x6 STUD GRADE	16" O.C.

INTERIOR NON-STRUCTURAL WALL STUD TABLE

MAX. PLATE HT	STUD TYPE	SPACING
21'-5"	2x6 STUD GRADE	12" O.C.
19'-5"	2x6 STUD GRADE	16" O.C.
15'-1"	2x6 STUD GRADE	16" O.C.
12'-1"	2x4 STUD GRADE	16" O.C.
	2x6 STUD GRADE	16" O.C.

NOTE:
A. STUD HEIGHTS EXCEEDING 10'-1" SHALL BE BRACED MID-HEIGHT USING FULL DEPTH 2x BLOCKING.

SUPPORTING 1-FLOOR & 1-ROOF (L/360 DEFLECTION)
EXTERIOR & HATCHED BEARING WALL STUD TABLE

MAX. PLATE HT	STUD TYPE	SPACING
12'-1"	(2)-2x4 DOUG-FIR #2	16" O.C.
	2x6 STUD GRADE	16" O.C.
10'-1"	2x4 DOUG-FIR #2	12" O.C.
	2x6 STUD GRADE	16" O.C.
9'-1"	2x4 STUD GRADE	12" O.C.
	2x4 DOUG-FIR #2	16" O.C.
	2x6 STUD GRADE	16" O.C.

SUPPORTING 2-FLOORS & 1-ROOF (L/360 DEFLECTION)
EXTERIOR & HATCHED BEARING WALL STUD TABLE

MAX. PLATE HT	STUD TYPE	SPACING
12'-1"	3x4 DOUG-FIR #2	12" O.C.
	2x6 STUD GRADE	16" O.C.
10'-1"	3x4 DOUG-FIR #2	16" O.C.
	2x6 STUD GRADE	16" O.C.
9'-1"	2x4 DOUG-FIR #2	12" O.C.
	3x4 DOUG-FIR #2	16" O.C.
	2x6 STUD GRADE	16" O.C.

   A. TOP PLATES SHALL BE DOUBLED ON ALL STUD WALLS. LAP 4'-0" MINIMUM AT TOP PLATE SPLICES, WITH (12) 16d NAILS EACH SIDE OF SPLICE, U.N.O. SPLICES IN UPPER AND LOWER PLATES SHALL BE STAGGERED 4'-0" MINIMUM. FOR MORE INFORMATION SEE DETAIL 405/SD4
   B. POSTS IN WALLS MAY BE MADE WITH MULTIPLE STUDS OF EQUIVALENT WIDTH AND DEPTH, U.N.O. SECURE MULTIPLE STUDS WITH 16d NAILS AT 8" O.C. STAGGERED.
   C. BLOCK ALL STUD WALLS AS REQUIRED FOR SHEATHING AND FINISHES. BALLOON FRAME ALL WALLS WITH SLOPING CEILING OR WITH RAISED CEILINGS.

5. **GLUE-LAMINATED STRUCTURAL MATERIALS:**
STANDARD SPECIFICATIONS FOR GLUE-LAMINATED STRUCTURAL MEMBERS, ANSI/AITC A 190.1 AND ASTM D3737. GLUE-LAMINATED BEAMS SHALL BE INSPECTED AND A CERTIFICATE PROVIDED TO THE FILED INSPECTOR AT THE TIME OF FRAMING INSPECTION. FABRICATION SHALL BE PERFORMED IN ACCORDANCE WITH CBC 1705.5. ALL GLUE-LAMINATED BEAMS THAT ARE CONTINUOUS OVER SUPPORTS OR CANTILEVERED SHALL HAVE TENSION LAMINATIONS ON TOP OF BEAMS. **MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 16% AT THE TIME OF CONSTRUCTION.**
   A. GLULAM MEMBERS IN DRY SERVICE USE SHALL BE DOUGLAS-FIR 24F-V4 (SINGLE SPAN) OR COMBINATION 24F-V8 (MULTI-SPAN & CANTILEVER) U.N.O. BEAMS SHALL BE ARCHITECTURAL GRADE WHEN EXPOSED TO VIEW, S.A.D.
      1. GLULAM MEMBERS, SEE PLAN SPECIFICATIONS FOR CAMBER WHERE OCCURS.

MATERIAL GRADE	E ($x10^6$ psi)	Fb (psi)	Fv (psi)	Fc (psi)	RADIUS, U.N.O.
DF/DF 24F-V4	1.8	2400	265	650	3500' RADIUS
DF/DF 24F-V8	1.8	2400	265	650	NO CAMBER

   B. GLULAM MEMBERS IN WET SERVICE USE SHALL BE ALASKAN CEDAR 20F-V12 (SINGLE SPAN) OR COMBINATION 20F-V13 (MULTI-SPAN & CANTILEVER) U.N.O.
      1. GLULAM MEMBERS, SEE PLAN SPECIFICATIONS FOR CAMBER WHERE OCCURS.

MATERIAL GRADE	E ($x10^6$ psi)	Fb (psi)	Fv (psi)	Fc (psi)	RADIUS, U.N.O.
AC/AC 20F-V12	1.5	2000	265	560	3500' RADIUS
AC/AC 20F-V13	1.5	2000	265	560	NO CAMBER

   C. DESIGN, FABRICATION AND CONSTRUCTION OF STRUCTURAL GLULAM MEMBERS SHALL CONFORM TO THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION STANDARD, MANUAL No. 301 AND THE COMMERCIAL STANDARD FOR STRUCTURAL GLUED LAMINATED TIMBER, CS 253.

   D. STRUCTURAL PLYWOOD SHALL BE GRADED PER APA PSI-83AND SHALL BE INTERIOR TYPE SHEATHING C-D GRADE WITH EXTERIOR GLUE. EQUIVALENT O.S.B. WOOD STRUCTURAL PANEL MAY BE USED AS AN ALTERNATE TO PLYWOOD. HOWEVER, IN ACCORDANCE WITH THE TILE COUNCIL OF AMERICA RECOMMENDATIONS, O.S.B. SHALL NOT BE USED BELOW TILE MORTAR. ALL HORIZONTAL PLYWOOD SHALL BE LAID WITH FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS, WITH STAGGERED JOINTS.

6. **STRUCTURAL COMPOSITE LUMBER (SCL) MATERIALS:**
ALL STRUCTURAL COMPOSITE LUMBER (SCL) SHALL BE MANUFACTURED PER ASTM D5055 AND ASTM D5456. STRUCTURAL COMPOSITE LUMBER SHALL BE MANUFACTURED BY TRUS JOIST WEYERHAEUSER, OR EQUAL. ALTERNATE MANUFACTURERS ARE PERMITTED AND CONSIDERED AN EQUIVALENT SUBSTITUTION IF THE SUBSTITUTED MATERIAL MEETS, OR EXCEEDS, ALL THE DESIGN PROPERTIES LISTED BELOW.

SPECIFICATION	MATERIAL	WIDTH (in.)[B.]	E ($x10^6$ psi)	Fb (psi)	Fv (psi)	$Fc_{\perp}$(psi)	$Fc_{\parallel}$(psi)
RIM BOARD	TIMBERSTRAND	1.5	1.3E	1,700	425	710	1,835
1.3E LSL STUD	TIMBERSTRAND	1.5	1.3E	1,700	425	860	1,835
1.55E LSL STUD	TIMBERSTRAND	1.75	1.55E	2,325	310	900	2,170
LSL BEAM	TIMBERSTRAND	1.75, 3.5	1.55E	2,325	310	900	2,170
LVL BEAM	MICROLAM	1.75, 3.5, 5.25, 7	2.0E	2,600	285	750	2,510
PSL POST	PARALLAM	3.5, 5.25, 7	1.8E	1,995	190	545	2,500
PSL BEAM	PARALLAM	3.5, 5.25, 7	2.2E	2,900	290	625	2,900

   A. BEAM DEPTH IS ASSUMED TO MATCH FLOOR FRAMING DEPTH U.N.O.
   B. MFR BEAM MEMBERS MAY BE BUILT UP TO ACHIEVE SPECIFIED WIDTHS PER DETAIL 609/SD6 U.N.O. ON PLANS.

7. **ALL MEMBERS IN BEARING SHALL BE ACCURATELY CUT AND ALIGNED SO THAT FULL BEARING IS PROVIDED WITHOUT THE USE OF SHIMS.**

8. PROVIDE FULL DEPTH BLOCKING OR CONTINUOUS RIM JOIST AT ALL FLOOR AND ROOF FRAMING SUPPORTS. FRAMING MEMBERS SHALL HAVE A MINIMUM OF 2" BEARING AT SUPPORTS. LAPPING JOISTS SHALL HAVE 6" MINIMUM OVERLAP CENTERED OVER INTERIOR SUPPORTS.

9. ALL BOLTED WOOD CONNECTIONS SHALL HAVE A WASHER UNLESS A STEEL PLATE IS SPECIFIED. HOLES SHALL BE PROPERLY ALIGNED. OVERSIZED HOLES ARE NOT ALLOWED. NUTS SHALL BE SNUG TIGHTENED. BOLT HOLES SHALL BE NOMINAL DIAMETER OF BOLT PLUS 1/16".

10. INSTALL LAG SCREWS IN DRILLED LEAD HOLES WITH A DIA. EQUAL TO 3/4" OF THE SHANK DIAMETER. LAG SCREWS SHALL NOT BE HAMMERED IN. PROVIDE WASHERS UNDER HEADS BEARING ON WOOD. HOLES SHALL BE PROPERLY ALIGNED.

11. ALL MANUFACTURED CONNECTION HARDWARE SHALL BE AS DESIGNATED ON DRAWINGS AND INSTALLED (WITH ALL NAIL HOLES FILLED) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE ICC APPROVALS.

CONCRETE NOTES

CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2022 BUILDING CODE (C.B.C.) AND THE LATEST EDITION OF THE ACI 318-19, UNLESS NOTED OTHERWISE.

1. CONCRETE REQUIREMENTS: BASED ON NORMAL WEIGHT CONCRETE (UNIT WEIGHT OF 145 TO 150 pcf).

	MINIMUM COMPRESSIVE STRENGTH (psi) (AT 28 DAYS)	SLUMP (+/- 1/2")	AGGREG. SIZE	SPEC. INSP. REQD	MAXIMUM WATER TO CEMENT RATIO (NOTE 1F)	CEMENT TYPE ASTM C150
FLOOR SLABS ON GRADE	3000	4"	1"	NO **	.5	II OR V

** **SPECIAL INSPECTION IS NOT REQUIRED, DESIGN COMPRESSIVE STRENGTH IS 2500 psi, HIGHER STRENGTHS HAVE BEEN SPECIFIED FOR QUALITY CONTROL.**

   A. COARSE AGGREGATE SHALL BE HARD, DURABLE CRUSHED STONE OR GRAVEL GRADED PER ASTM C33. MAXIMUM SIZE OF AGGREGATE SHALL BE AS NOTED IN SCHEDULE ABOVE AND DEFINED BELOW. SAND SHALL BE CLEAN, HARD, DURABLE, WASHED FREE FROM SILT, LOAM OR CLAY.
      1. GRADE BEAMS, STEM WALLS, RETAINING WALLS AND OTHER CONCRETE FRAMEWORK LESS THAN 10" WIDE SHALL USE 3/4" AGGREGATE CONFORMING TO ASTM C33 WITH 100% PASSING 1" SIEVE AND 90% (MINIMUM) PASSING 3/4" SIEVE. TO ENSURE PROPER CONCRETE COVER AND CONSOLIDATION.

      2. FOOTING AND SLABS ON GRADE, INCLUDING POST-TENSION AND MAT SLABS, SHALL USE 1" AGGREGATE CONFORMING TO ASTM C33 WITH 95% (MINIMUM) PASSING 1" SIEVE.

   B. MIXING WATER SHALL BE CLEAN AND FREE FROM INJURIOUS AMOUNTS OF OIL, ACIDS, ALKALIES, ORGANIC MATERIALS OR OTHER DELETERIOUS SUBSTANCES.
   C. CONCRETE EXPOSED TO SULFATE SHALL USE TYPE V CEMENT WITH POZZOLAN.
   D. FLY ASH OR POZZOLANS, IF USED, SHALL CONFORM WITH ASTM C618, COAL FLY ASH AND RAW OR CALCINED NATURAL POLZZLAN FOR USE AS A MINERAL ADMIXTURE IN CONCRETE. USAGE SHALL NOT EXCEED 25 PERCENT, BY WEIGHT OF THE TOTAL CEMENTITIOUS MATERIALS. WHEN POZZOLANS ARE USED TO MITIGATE THE EFFECT OF SULFATE CONTAINING SOILS THEY SHALL BE OF A TYPE THAT HAS DEMONSTRATED SUCH ABILITY BY TEST OR SERVICE RECORD.
   E. ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED.
   F. CEMENT SHALL CONFORM WITH ASTM C150 & C 595, PORTLAND CEMENT AND BLENDED HYDRAULIC CEMENTS
   G. TRANSIT MIX SHALL BE PER ASTM C-94.
   H. MIX DESIGN SHALL MEET THE RECOMMENDED SPECIFICATION UNLESS AN ALTERNATE MIX IS SUBMITTED AND REVIEWED BY THE ENGINEER.

2. SPECIAL INSPECTION OF CONCRETE WORK IS REQD WHERE NOTED ABOVE. WHEN REQD, SPECIAL INSPECTION SHALL INCLUDE THE INSPECTION OF THE PLACEMENT OF REINFORCEMENT, AND THE INSPECTION OF THE CONCRETE PLACEMENT OPERATIONS AS WELL AS CONCRETE CYLINDER TESTS, PER C.B.C. SECTION 1705.3. THE FOLLOWING THREE CRITERIA ESTABLISH THE REQD MINIMUM SAMPLING FREQUENCY FOR EACH CLASS OF CONCRETE:
   A. ONE EACH DAY A GIVEN CLASS IS PLACED, NOR LESS THAN
   B. ONCE FOR EACH 150 yd OF EACH CLASS PLACED EACH DAY, NOR LESS THAN
   C. ONCE FOR EACH 5000 ft OF SLAB OR WALL SURFACE AREA PLACED EACH DAY.

3. SPLICES OF CONTINUOUS REINFORCEMENT SHALL HAVE A MINIMUM LAP PER DETAILS 302/SD3 AND 303/SD3 UNLESS NOTED OTHERWISE. ALL REINFORCING STEEL SHALL BE SECURELY WIRED AND PROPERLY SUPPORTED ABOVE GROUND, AND AWAY FROM FORMS. REINFORCING BAR FABRICATION, LAPS AND PLACEMENT SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE OF THE CONCRETE REINFORCING STEEL INSTITUTE.

4. REINFORCING SHALL BE NEW STOCK, DEFORMED BARS, CONFORMING TO ASTM A-615 AS FOLLOWS (U.N.O.) :
   NO. 3 AND SMALLER: GRADE 40
   NO. 4 AND LARGER: GRADE 60
   A. ALL BARS TO BE WELDED SHALL MEET THE REQUIREMENTS OF ASTM A706, GRADE 60.
   B. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185, FLAT SHEETS ONLY. LAP FABRIC 6" MINIMUM.
   C. REINFORCEMENT PLACEMENT SHALL CONFORM TO DETAIL A/SD5
   D. ANCHOR BOLTS SHALL BE ASTM A307, U.N.O. AND SHALL CONFORM TO DETAIL 108/SD1

5. REINFORCEMENT COVER: ALL DIMENSIONS SHOWING THE LOCATIONS OF REINFORCEMENT STEEL NOT NOTED AS "CLEAR", ARE TO THE CENTER OF THE STEEL. MINIMUM CLEAR COVERAGE OF REINFORCEMENT SHALL BE AS FOLLOWS:
   A. CONCRETE CAST AGAINST EARTH,
      EXCEPT SLABS ON GRADE: 3"
      SLABS ON GRADE: 1-1/2" U.N.O.

   B. CONCRETE CAST IN FORMS, BUT EXPOSED TO EARTH OR WEATHER:
      No. 5 REINFORCING AND SMALLER: 1-1/2"
      No. 6 REINFORCING AND LARGER: 2"

   C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:
      SLABS, WALLS AND JOISTS: 3/4"
      BEAMS AND COLUMNS: 1-1/2"

6. UNFORMED CONCRETE SURFACE CURING:
   A. CURE FOR ONE TO SEVEN DAYS BY MAINTAINING TEMPERATURE ABOVE 50 DEGREES FAHRENHEIT, AND IN A MOIST CONDITION.
   B. APPLY MEMBRANE-FORMING CURING COMPOUND TO DAMP CONCRETE IMMEDIATELY AFTER COMPLETION OF THE MOIST-CURING PERIOD.

7. THE CONTRACTOR SHALL INFORM THE ENGINEER AT LEAST TWO DAYS PRIOR TO POURING ANY STRUCTURAL CONCRETE SO THAT OBSERVATION OF THE WORK MAY BE PERFORMED AS REQUIRED BY THE ENGINEER'S CONTRACT OR THE CODE.

8. FOOTING/GRADE BEAM CONSTRUCTION JOINTS SHALL CONFORM TO DETAIL 304/SD3

9. CRACK CONTROL JOINTS SHALL BE PLACED IN CONCRETE SLABS ON GRADE AT A SPACING OF 12'-0" MAX. O.C. EACH WAY (U.N.O. ON PLAN) PER DETAIL 305A/SD3 LOCATION OF SLAB ON GRADE CONSTRUCTION JOINTS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. SLAB ON GRADE CONSTRUCTION JOINTS SHALL CONFORM TO 305B/SD3

10. ALL PIPES AND DUCTS THROUGH CONCRETE SHALL BE SLEEVED. VERIFY OPENINGS WITH PLUMBER AND ELECTRICIAN. SEE DETAIL 306/SD3

11. IF SPECIFIED, WELDED WIRE FABRIC SHALL BE 6x6-W1.4xW1.4. WIRE FABRIC SHALL BE ELECTRICALLY WELDED STEEL PER ASTM A185. LAP 6" MINIMUM AT ALL EDGES AND TIE AT THREE PLACES TO REINFORCING DOWELS (WHERE OCCUR) EXCEPT LOCATIONS WHERE SLAB IS INDEPENDENT OF FOUNDATION. CONTRACTOR SHALL PROVIDE SUPPORT CHAIRS TO ENSURE FABRIC IS LOCATED IN THE CENTER OF THE SLAB.

12. WELDING OF REINFORCING BARS SHALL CONFORM TO AWS D1.4 USING ASTM A706 REINFORCING BAR SPECIFICATIONS.

STRUCTURAL STEEL NOTES

1. THE FOLLOWING SECTION APPLIES TO ALL STRUCTURAL STEEL 1/8" THICK OR LARGER.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE CBC CHAPTER 22, AISC 15th EDITION, AND THE 2020 A.W.S. D1.1.
3. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING: IDENTIFIED WITH MARK & MILL MATERIAL
   A. PLATES AND SHAPES (W.C. ETC.), U.N.O.: ASTM A992 (fy = 50 ksi), OR ASTM A572, GRADE 50
   B. STRUCTURAL TUBE COLUMNS AND BEAMS: ASTM A500, GRADE B.
   C. PIPE COLUMNS: ASTM A53, TYPE E OR S, GRADE B
   D. ROD: ASTM A36 (fy = 36 ksi)
4. FASTENERS SHALL CONFORM TO THE FOLLOWING:
   A. ANCHOR BOLTS & NUTS: ASTM A307, U.N.O.
   B. STEEL TO WOOD CONNECTIONS: ASTM A307, U.N.O. USE CUT WASHERS (IF CONCEALED) AND MALLEABLE IRON WASHERS (IF EXPOSED)
   C. STEEL TO STEEL CONNECTIONS: ASTM A325 USE CUT WASHERS
5. **EXPOSED EXTERIOR STEEL SHALL BE GALVANIZED, U.N.O. EXPOSED INTERIOR STEEL SHALL BE SHOP PRIMED AND FIELD (FINAL) COATED.**
6. FIELD PAINT ALL EXPOSED STEEL SURFACES AFTER INSTALLATION, PER THE SPECIFICATIONS.
7. WELDING ELECTRODES SHALL CONFORM TO 2020 A.W.S. D1.1 AND SHALL BE LOW HYDROGEN MATCHING FILLER METAL.
8. ALL WELDERS SHALL BE QUALIFIED BY A.W.S. PROCEDURES FOR THE REQUIRED WELDING.
9. SURFACES OF STEEL TO BE FIELD WELDED SHALL BE FREE AND CLEAR OF ALL MILL SCALE, PAINT, DIRT, GREASE, OR OTHER DELETERIOUS COATINGS.
10. STEEL FRAMING, EXCEPT THOSE PORTIONS TO BE EMBEDDED IN CONCRETE, CONCEALED IN FRAMING, FIELD WELDED, OR HIGH STRENGTH BOLTED SHALL BE SHOP-PAINTED PER THE SPECIFICATIONS.
11. SUBMIT CERTIFICATION OF COMPLIANCE FOR ALL STEEL MATERIALS.

DO NOT SCALE THESE DRAWINGS

DPAE STRUCTURAL
3381 WALNUT BLVD. STE. 220
BRENTWOOD, CA 94513
PHONE: 925.516.3502
FAX: 925.262.4662
EMAIL: INFO@DPAEstructural.COM

PROGRESS PRINT - NOT FOR CONSTRUCTION

BRENTWOOD CEMETRY OFFICE BUILDING

11545 BRENTWOOD BLVD.
BRENTWOOD, CALIFORNIA

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PLEASE NOTE THE REVISION NUMBER AND DATE ARE FOR STRUCTURAL SHEETS ONLY.

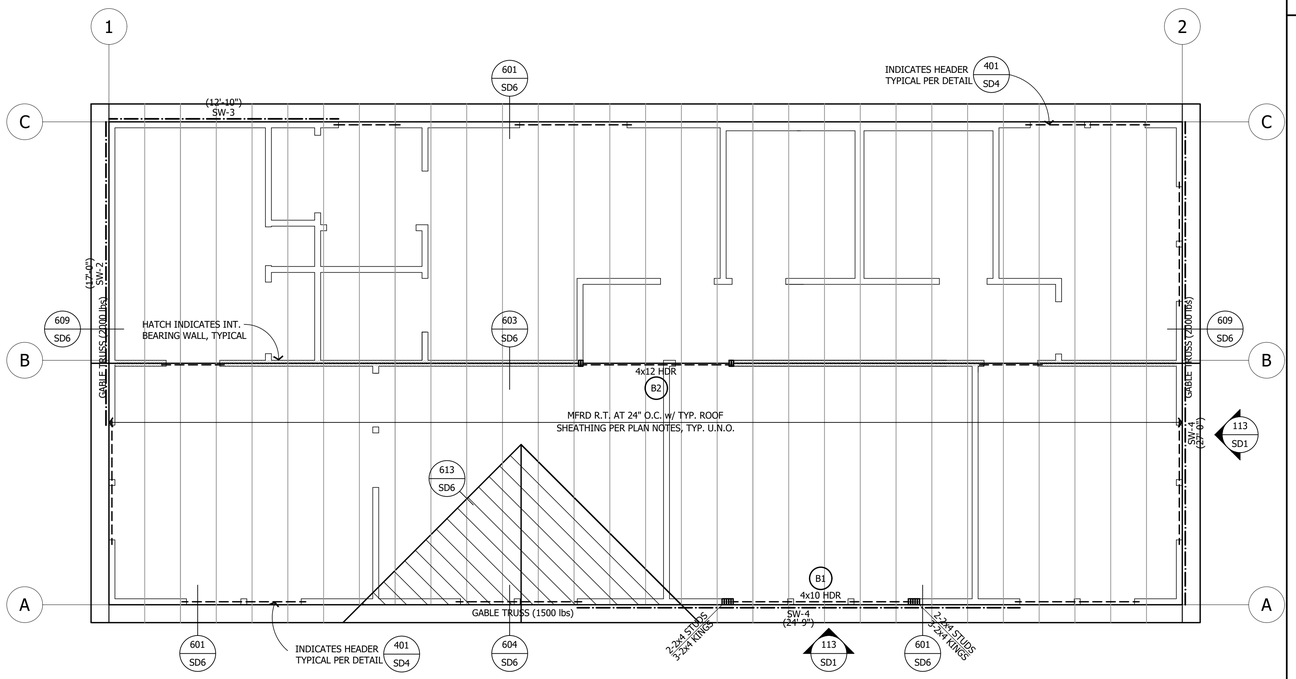
Engineering Seal:

Sheet Description:
GENERAL SPECIFICATIONS AND NOTES

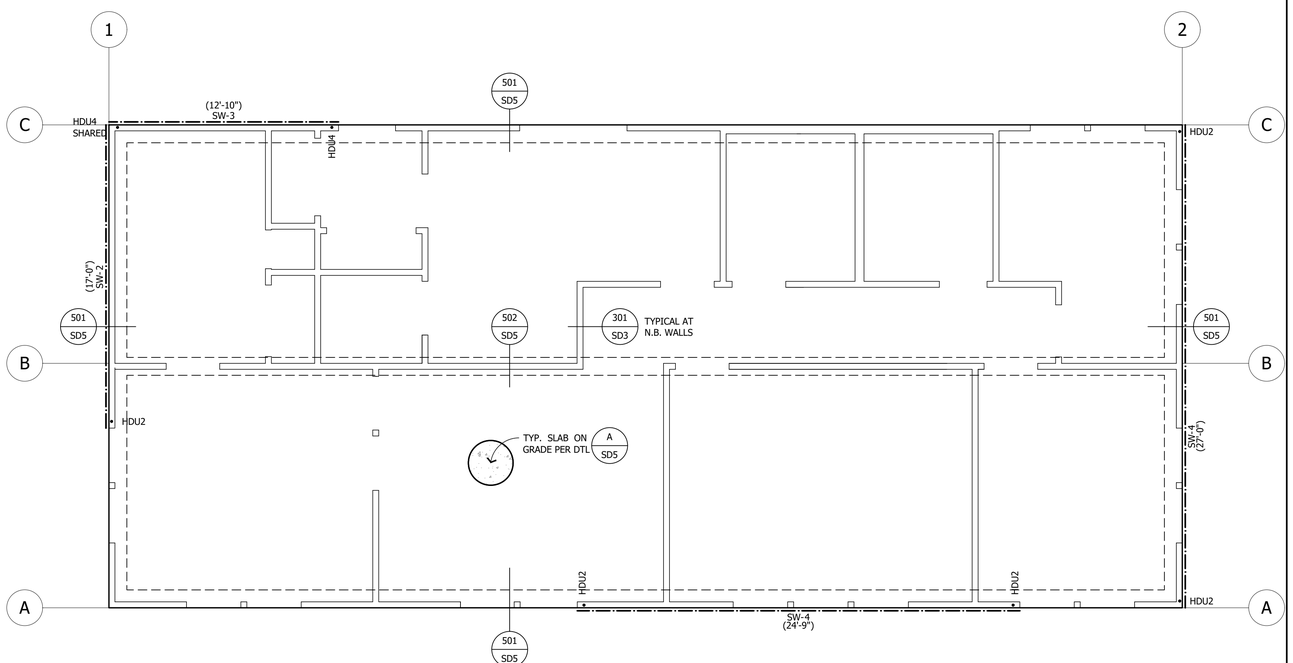
No Scale

Initial Issue Date: August 29, 2025
Drawn By: H. Castro
Project Engineer: C. La Brie
Project Manager: S. Kaeding
Job No. W020725

Sheet No.
SN2



A ROOF FRAMING PLAN



B FOUNDATION PLAN

ROOF FRAMING PLAN NOTES

1. WALLS SHOWN AS SOLID ARE BELOW FRAMING. SEE ARCHITECTURAL DRAWINGS FOR STUD SIZES AND OTHER REQUIREMENTS.
2. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, ELEVATIONS, ETC. THE PROJECT ARCHITECT IS RESPONSIBLE FOR SPECIFYING DIMENSIONS TO ALL PROJECT ELEMENTS.
3. DETAIL KEYS AND OTHER INFORMATION ARE TYPICAL.
4. ROOF FRAMING TERMS:
   ALL BEAMS SHALL BE CONSIDERED FLUSH, (TOP OF BEAM EQUAL TO TOP OF ROOF FRAMING AND BOTTOM OF ROOF FRAMING) UNLESS NOTED OTHERWISE ON PLANS AS ONE OF THE FOLLOWING:
   A. **DROPPED:** BEAM IS SET BELOW ROOF FRAMING WITH TOP OF BEAM SET AT BOTTOM OF ROOF FRAMING.
   B. **DOWNSET:** BEAM IS DEEPER THAN THE ROOF FRAMING AND SET WITH TOP OF BEAM EQUAL TO TOP OF ROOF FRAMING. BOTTOM OF BEAM EXTENDS BELOW ROOF FRAMING.
   C. **UPSET:** BEAM IS DEEPER THAN THE ROOF FRAMING AND SET WITH BOTTOM OF BEAM EQUAL TO BOTTOM OF ROOF FRAMING. TOP OF BEAM EXTENDS ABOVE ROOF FRAMING.
   D. **"HDR":** BOTTOM OF HEADER IS SET AT ROUGH OPENING (R.O.). SEE ARCH. FOR HEIGHT. IF HEADER BREAKS TOP PLATES INSTALL CS14 x 36" STRAP FROM FACE OF PLATE TO FACE OF HEADER, TYPICAL AT EACH END OF HEADER.
5. ROOF FRAMING:
   ROOF SHALL BE FRAMED WITH PRE-MANUFACTURED ROOF TRUSSES AT 24" O.C. INSTALLED PER APPROVED ROOF TRUSS SHOP DRAWINGS. ROOF TRUSS MANUFACTURER SHALL DESIGN THE ROOF TRUSSES AS SPECIFIED IN THE GENERAL NOTES (SHEET SN-2, U.N.O.). SEE ROOF TRUSS DETAILS DETAILS ON SHEET SD7 FOR TYPICAL DETAILING.
   A. ROOF TRUSSES WITH FLAT BOTTOM CHORDS SHALL BE SECURED TO END BEARING POINTS WITH "H1" CLIP TO TOP PLATE. ROOF TRUSSES WITH SLOPED BOTTOM CHORDS SHALL BE SECURED TO BEARING POINTS WITH SIMPSON "TC" CLIPS OR EQUIVALENT CONNECTORS THAT ALLOW HORIZONTAL MOVEMENT IN ACCORDANCE WITH THE ROOF TRUSS DESIGNER'S REQUIREMENTS.
   B. PROVIDE 2x BLOCKING BELOW ALL HIPS, VALLEYS, AND RIDGES. CONTRACTOR SHALL INSTALL STRONGBACKS, CROSS BRIDGING, AND/OR BRACING AS SPECIFIED BY THE ROOF TRUSS SHOP DRAWINGS.
6. MANUFACTURED BEAM FRAMING:
   ALL MANUFACTURED WOOD BEAMS SHALL BE "VERSA-LAM" MANUFACTURED BY BOISE CASCADE. REFER TO "GENERAL FRAMING NOTES" ON SHEET SN2 FOR MATERIAL SPECIFICATIONS.
7. ROOF SHEATHING:
   TYPICAL ROOF SHEATHING SHALL BE 15/32" THICK (24/0 OR 32/16) CDX GRADE PLYWOOD (OR EQUIVALENT-RATED ORIENTED STRAND BOARD (O.S.B.) WITH GAP PER MANUFACTURER. ROOF SHEATHING SHALL BE NAILED WITH 8d AT 6" O.C. (EDGES) AND 8d AT 12" O.C. (FIELD), UNLESS NOTED OTHERWISE ON THE PLAN. ORIENT SHEATHING WITH FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS, AND STAGGER END JOINTS.
   A. PLYWOOD SHEETS LOCATED AT ROOF EDGES OR CHANGES IN FRAMING SHALL BE AT LEAST 24 INCHES WIDE OR SHALL BE EDGE BLOCKED AND NAILED. EDGE NAIL PLYWOOD TO ALL GABLE AND SHEAR TRUSSES (TRUSSES WITH DRAG LOADS).
   B. EDGE NAIL ROOF PLYWOOD TO ALL ROOF COLLECTORS (JOISTS WITH HORIZ. STRAPS).
8. SUPPORT OF BEAMS, HIPS, GIRDERS, ETC.:
   INSTALL POSTS (POST SIZE TO MATCH BEAM AND WALL SIZE), MINIMUM BELOW ALL ROOF BEAMS AND GIRDERS. CONTRACTOR SHALL VERIFY FRAMING LAYOUT TO ENSURE CONTINUOUS AND SOLID BLOCKING UNDER ALL CONCENTRATED LOADS.
9. CRICKETS AND/OR CALIFORNIA (BUILT-UP FRAMING):
   CRICKETS AND/OR CALIFORNIA FRAMING SHALL BE CONSTRUCTED WITH 2x6 MEMBERS AT 24" O.C. SUPPORTED TO THE ROOF BELOW AT 48 INCHES ON CENTER. ROOF PLY SHALL CONTINUE BELOW CRICKETS AND/OR CALIFORNIA FRAMING.
10. DRAG / COLLECTOR MEMBERS:
    FRAMING MEMBERS NOTED AS "DRAG" OR "COLLECTOR" SHALL HAVE CONTINUOUS ROOF PLYWOOD EDGE NAILING FOR THE FULL LENGTH OF THE MEMBER.
    A. ANCHOR ALL DRAG / COLLECTOR MEMBERS TO TOP PLATE PER DETAIL 706 SD7
11. HEADERS:
    WINDOW AND DOOR HEADERS SHALL CONFORM TO THE HEADER SCHEDULE, U.N.O. ON THE PLAN 401 SD4
12. TOP PLATE SPLICES:
    TOP PLATE SPLICES OF ALL WALLS SHALL CONFORM TO DETAIL 405 SD4
    INSTALL CS14 x 3'-0" LONG STRAPS AT TOP PLATE SLOPE CHANGES AND OTHER DISCONTINUOUS TOP PLATE CONDITIONS.
    (CONTRACTORS OPTION TO USE 1x TOP PLATE AT NON-BEARING NON-STRUCTURAL WALLS)
13. NON-BEARING PARTITION WALLS
    NON-BEARING PARTITION WALLS SHALL BE SUPPORTED FOR OUT-OF-PLANE LOADING.
    A. THE TOP PLATE OF THE PARTITION WALL SHALL BE SECURELY ATTACHED TO THE TRUSSES ABOVE. FOR MORE INFORMATION, REFER TO DETAIL 711 SD7
    B. THE BOTTOM PLATE OR SILL PLATE OF THE PARTITION WALL SHALL BE SECURELY ATTACHED TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING BELOW. USE 16d COMMON (3-1/2" x 0.162") FACE NAILS ALONG THE BOTTOM PLATE AT 16" O.C. MAXIMUM.
14. EXTERIOR WALLS AND LOAD BEARING PARTITION WALLS
    EXTERIOR AND LOAD-BEARING PARTITION WALLS SHALL BE SUPPORTED FOR BOTH OUT-OF-PLANE AND IN-PLANE LOADING.
    A. TOP CONNECTORS, SEE SHEAR WALL SCHEDULE, SHALL BE INSTALLED AT ALL EXTERIOR WALLS AND INTERIOR LOAD BEARING PARTITION WALLS SECURELY ATTACHED TO DRAG/COLLECTOR MEMBERS ABOVE. USE "A35", "LTP4", "LSS0", "RBC" OR SIMILAR SPACED AT 48" ON CENTER, MAX, U.N.O. BY SHEAR WALL SCHEDULE. FOR MORE INFO SEE 103 SD1
    B. THE BOTTOM PLATE OR SILL PLATE OF THE EXTERIOR WALL AND LOAD BEARING PARTITION SHALL BE ATTACHED TO JOIST, RIM JOIST, DRAG OR COLLECTOR BELOW. USE SILL CONNECTION SPECIFIED IN SHEAR WALL SCHEDULE, SEE DTL. 103 SD1
15. SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS. ALL DETAIL CALLOUTS SHALL BE CONSIDERED TYPICAL. THE CONTRACTOR SHALL REVIEW THE DETAIL SHEETS FOR DETAILS NOT SPECIFICALLY REFERENCED.
16. ROOF BEAM I.D. No's:
    BEAM ID NUMBERS (IN CALCULATIONS ONLY) NOTED THUS: B#
17. HANGERS:
    ALL HANGERS SHALL CONFORM TO THE HEADER SCHEDULE PER U.N.O. ON THE PLAN 409 SD4
18. SHEAR WALL AT OPENING TRIMMERS:
    WHERE SHEAR WALL LENGTH SPECIFIED ON PLANS REQUIRES EDGE NAILING TO WINDOW AND/OR DOOR TRIMMERS, REFER TO DETAIL 211 SD2
19. SHEAR WALLS:
    LENGTHS OF SHEAR WALLS ARE SHOWN ABOVE OR BELOW SHEAR WALL NUMBER (SEE PLAN). THE NUMBERS INDICATE THE MIN. DESIGN LENGTH OF THE SHEAR WALL. SEE 103 SD1
20. HOLDOWN STRAPS
    WHERE HOLDOWN STRAPS ARE SPECIFIED ON PLANS, INSTALL PER DETAIL 210 SD2
    A. **ALL NAIL HOLES SHALL BE FILLED ON HOLDOWN STRAPS**
    B. STRAPS INDICATED ON ROOF FRAMING PLAN ARE INSTALLED VERTICALLY AND LOCATED AT THE BASE OF THE INDICATED SHEAR WALL.
    C. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL HOLDOWN STRAPS FROM UPPER LEVELS HAVE AN ALIGNED ANCHOR INSTALLED IN THE CONCRETE BELOW. ANCHORS SHOWN ON THE FOUNDATION PLAN ARE TO AID IN PLACEMENT BUT MAY NOT REPRESENT EVERY ANCHOR REQUIRED. SEE DETAILS FOR ADDITIONAL ANCHOR LOCATIONS REQUIRED BELOW BEAMS AND HEADERS.
    FOR MORE INFORMATION PLEASE REFER TO DETAILS: 212 SD2

FOUNDATION PLAN NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR STUD SIZES AND OTHER REQUIREMENTS.
2. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, ELEVATIONS, ETC. THE PROJECT ARCHITECT IS RESPONSIBLE FOR SPECIFYING DIMENSIONS TO ALL PROJECT ELEMENTS. THE DIMENSIONS SHOWN ON THE FOUNDATION PLANS SHALL NOT BE USED FOR CONSTRUCTION. THE FOUNDATION SHALL BE CONSTRUCTED USING THE DIMENSIONS SHOWN ON THE ARCHITECTURAL PLANS.
3. DETAIL KEYS AND OTHER INFORMATION ARE TYPICAL.
4. THE FOUNDATION SHALL CONSIST OF A UNIFORM THICK MAT SLAB PER DTL A SD5
5. CONCRETE TIE BEAMS SHALL BE 12" SQUARE AND SHALL BE REINFORCED WITH (2) #4 HORIZONTAL REINFORCING, TOP AND BOTTOM. TIE BEAM REINFORCEMENT SHALL SHALL CONTINUE THROUGH FOUNDATION ELEMENTS OR SHALL BE PROPERLY TIED TO FOUNDATION REINFORCING.
6. LANDSCAPE SLABS SHALL BE INDEPENDENT OF THE FOUNDATION. THE CONTRACTOR SHALL INSTALL EXPANSIVE JOINT MATERIAL BETWEEN SLABS AND THE FOUNDATION.
7. HOLDOWNS:
   HOLDOWNS NOTED OCCUR AT THE LEVEL OF FRAMING SHOWN FOR CONNECTION OF WALLS ABOVE TO FOOTING.
   A. ALL HOLDOWN MEMBERS IN CONTACT WITH P.T. MATERIAL SHALL BE HOT-DIP GALVANIZED. USE HOT-DIPPED GALVANIZED ANCHOR BOLTS WITH 3" X 3" X 1/4" PLATE WASHERS. PLAIN CARBON STEEL FASTENERS IN SBX/DOT AND ZINC BORATE PRESERVATIVE-TREATED WOOD SHALL BE PERMITTED.
   B. ALL HOLDOWNS SHALL BE INSTALLED WITH ANCHORS PER DETAIL 203 SD2
   C. CONTRACTOR SHALL REVIEW HOLDOWN ANCHOR REQUIREMENTS FOR EMBEDMENT CONDITIONS THAT REQUIRE DEEPENED STEM WALL. REFER TO FOR REQUIREMENTS. 203 SD2 205 SD2
   D. PROVIDE POSTS AT ALL HOLDOWNS AS SHOWN IN DETAIL 203 SD2 WHERE DOUBLE 2x POSTS ARE USED, SISTER WITH 16d FACE NAILS AT SILL NAILING PER SHEAR WALL SCHEDULE. WHERE 3x MEMBERS AT PANEL EDGES ARE REQUIRED, USE 4x MINIMUM POST FOR HOLDOWN PER FRAMER SHALL CONFIRM LAYOUT BEFORE CONCRETE IS POURED. NOTIFY ENGINEER OF CONFLICTS PRIOR TO PROCEEDING. 103 SD1
8. CONTRACTOR SHALL REVIEW HOLDOWN ANCHOR REQUIREMENTS FOR EMBEDMENT CONDITIONS THAT REQUIRE DEEPENED FTG. REFER TO FOR REQUIREMENTS. 203 SD2 208 SD2
9. REFER TO THE PROJECT SOILS REPORT IF APPLICABLE, FOR ADDITIONAL FOUNDATION AND SITE CONSTRUCTION REQUIREMENTS. ALL FOUNDATION ELEMENTS SHALL COMPLY WITH ALL CONDITIONS CONTAINED WITHIN APPROPRIATE SOILS REPORT AND REQUIREMENTS OF 2022 CBC CHAPTER 18. THE RESPONSIBLE SOILS ENGINEER IF APPLICABLE, SHALL OBSERVE ALL SLAB AND FOUNDATION SUBGRADES PRIOR TO PLACING CONCRETE. SEE SOILS REPORT FOR SPECIFIC INSPECTION REQUIREMENTS.
10. ALL FOUNDATION PLATES AND MUDSILLS SHALL BE PRESSURE-TREATED DOUGLAS FIR MARKED OR BRANDED BY AN APPROVED AGENCY. SEE SHEAR WALL SCHEDULE FOR SHEAR WALL LOCATIONS THAT REQUIRE 3x MINIMUM MUDSILLS. FOUNDATION PLATES AND MUDSILLS SHALL BE BOLTED TO THE FOUNDATION WITH NOT LESS THAN 5/8" DIA. HOT-DIPPED GALVANIZED ANCHOR BOLTS WITH 3" x 3" x 1/4" PLATE WASHERS. PLAIN CARBON STEEL FASTENERS IN SBX/DOT AND ZINC BORATE PRESERVATIVE-TREATED WOOD SHALL BE PERMITTED. EMBED ANCHOR BOLTS 7" INTO CONCRETE FOUNDATION, WALL OR 12" INTO GROUTED MASONRY, AND SPACE NOT MORE THAN 4'-0" APART, UNLESS NOTED OTHERWISE ON THE SHEAR WALL SCHEDULE. THERE SHALL BE A MINIMUM OF TWO BOLTS PER BOARD WITH ONE BOLT LOCATED 12" MAXIMUM AND 4-3/8" MINIMUM OF EACH END. FOR ADDITIONAL INFORMATION SEE DETAIL 108 SD1
11. SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
    ALL DETAIL CALLOUTS SHALL BE CONSIDERED TYPICAL. CONTRACTOR SHALL REVIEW THE DETAIL SHEETS FOR DETAILS NOT SPECIFICALLY REFERENCED.
12. SHEAR WALLS:
    LENGTHS OF SHEAR WALLS ARE SHOWN ABOVE OR BELOW SHEAR WALL NUMBER (SEE PLAN). THE NUMBERS INDICATE THE MINIMUM DESIGN LENGTH OF THE SHEAR WALL. SEE DETAIL 103 SD1

DO NOT SCALE THESE DRAWINGS

DPAE STRUCTURAL
3381 WALNUT BLVD. STE. 220
BRENTWOOD, CA 94513
PHONE: 925.516.3502
FAX: 925.262.4662
EMAIL: INFO@DPAEstructural.COM

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BRENTWOOD CEMETERY OFFICE BUILDING

11545 BRENTWOOD BLVD.
BRENTWOOD, CALIFORNIA

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PLEASE NOTE THE REVISION NUMBER AND DATE ARE FOR STRUCTURAL SHEETS ONLY.

Engineering Seal:

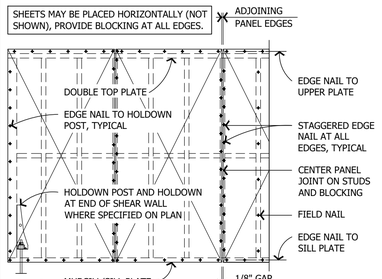
Sheet Description:
ROOF FRAMING AND FOUNDATION PLAN

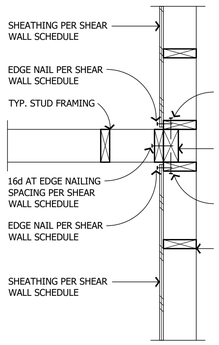
Scale: 1/4" = 1'-0"

Initial Issue Date: August 29, 2025
Drawn By: H. Castro
Project Engineer: C. La Brie
Project Manager: S. Kaeding
Job No. W020725

Sheet No.
S1

SHEETS MAY BE PLACED HORIZONTALLY (NOT SHOWN), PROVIDE BLOCKING AT ALL EDGES.





NOTES:

1. SEE SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING, NAILING, AND SILL CONNECTIONS.
2. FOR LOCATION OF HOLDOWNS AND HD POSTS, SEE TYPICAL DETAILS ON SHEET SD2.

3/8" PLYWOOD SHEATHING

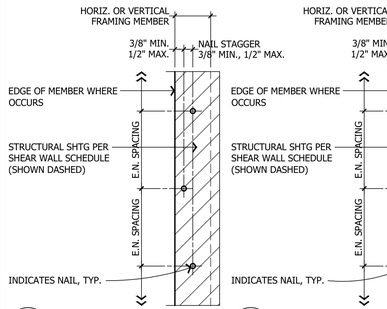
SHEAR WALL LENGTH: / SHEAR WALL DESIGNATION:	HATCHED BEARING	X'-X" SW-1	X'-X" SW-2	X'-X" SW-3	X'-X" SW-4	X'-X" SW-5
APA RATED SHEATHING:	NO PLY REQD.	3/8"	3/8"	3/8"	3/8"	3/8" STR. 1
8d EDGE NAIL (0.131 DIA):	--	8d @ 6" O.C.	8d @ 4" O.C.	8d @ 3" O.C.	8d @ 2" O.C.	8d @ 2" O.C.
8d FIELD NAIL (0.131 DIA.):	--	8d @ 12" O.C.	8d @ 12" O.C.	8d @ 12" O.C.	8d @ 12" O.C.	8d @ 12" O.C.
FRAMING MEMBER AT ADJOINING PANEL EDGES:	--	SINGLE 2x	SINGLE 2x	SINGLE 3x, 4x OR 2-2x w/ 16d @ 4" O.C.	SINGLE 3x, 4x OR 2-2x w/ 16d @ 3" O.C.	SINGLE 3x OR 4x
3x SILL REQUIRED:	NO	NO	NO	NO	NO	NO
SILL CONN. (BEAM/BLKG): 16d NAIL (0.148 DIA.x3.25"): OR SDWS SCREW (SDWS19600):	16d @ 8" O.C. --	16d @ 6" O.C. SDWS @ 16" O.C.	16d @ 4" O.C. SDWS @16" O.C.	16d @ 4" O.C. SDWS @ 12" O.C.	16d @ 3" O.C. STAGGERED SDWS @ 10" O.C.	16d @ 2" O.C. STAGGERED SDWS @ 8" O.C.
SILL CONNECTION (RIM): 16d NAIL (0.148 DIA.x3.25"): OR SDWS SCREW (SDWS19600):	16d @ 8" O.C. --	16d @ 6" O.C. SDWS @ 16" O.C.	16d @ 4" O.C. SDWS @16" O.C.	16d @ 4" O.C. SDWS @ 12" O.C.	16d @ 4" O.C. & LTP5 @ 36" O.C. SDWS @ 10" O.C.	16d @ 4" O.C. & LTP5 @ 24" O.C. SDWS @ 8" O.C.
5/8" A.B. W/ 2x MUDSILL: OR 5/8" A.B. W/ 3x MUDSILL:	@ 48" O.C. MAX @ 48" O.C. MAX	@ 32" O.C. MAX @ 48" O.C. MAX	@ 32" O.C. MAX @ 48" O.C. MAX	@ 24" O.C. MAX @ 32" O.C. MAX	@ 16" O.C. MAX @ 32" O.C. MAX	@ 16" O.C. MAX @ 24" O.C. MAX
TOP CONNECTION - "RBC" OR TOP CONNECTION - "LTP4" OR TOP CONNECTION - "LS50" OR TOP CONNECTION - "A35"	@ 48" O.C. MAX @ 48" O.C. MAX @ 48" O.C. MAX @ 48" O.C. MAX	@ 20" O.C. MAX @ 24" O.C. MAX @ 24" O.C. MAX @ 30" O.C. MAX	@ 12" O.C. MAX @ 18" O.C. MAX @ 18" O.C. MAX @ 22" O.C. MAX	@ 10" O.C. MAX @ 12" O.C. MAX @ 12" O.C. MAX @ 16" O.C. MAX	@ 8" O.C. MAX @ 10" O.C. MAX @ 10" O.C. MAX @ 12" O.C. MAX	@ 6" O.C. MAX @ 8" O.C. MAX @ 8" O.C. MAX @ 10" O.C. MAX

1/2" PLYWOOD SHEATHING

SHEAR WALL LENGTH: / SHEAR WALL DESIGNATION:	X'-X" SW-6	X'-X" SW-7	X'-X" SW-8
APA RATED SHEATHING:	15/32" STR. 1	15/32" STR. 1 EACH FACE	15/32" STR. 1 EACH FACE
10d EDGE NAIL (0.148 DIA):	10d @ 2" O.C.	10d @ 4" O.C.	10d @ 3" O.C.
10d FIELD NAIL (0.148 DIA.):	10d @ 12" O.C.	10d @ 12" O.C.	10d @ 12" O.C.
FRAMING MEMBER AT ADJOINING PANEL EDGES:	SINGLE 3x OR 4x	SINGLE 3x OR 4x	SINGLE 3x OR 4x
3x SILL REQUIRED (NOTE 5):	YES	YES	YES
SILL CONN. (BEAM/BLKG): SDWS SCREW (SDWS19600):	SDWS @ 6" O.C. STAGGERED	SDWS @ 4" O.C. STAGGERED	SDWS @ 4" O.C. STAGGERED
SILL CONNECTION (RIM): 16d NAIL (0.148 DIA.x3.25"): OR SDWS SCREW (SDWS19600):	16d @ 4" O.C. & LTP5 @ 12" O.C. SDWS @ 6" O.C.	16d @ 3" O.C. & LTP5 @ 12" O.C. SDWS @ 4" O.C.	16d @ 2" O.C. & LTP5 @ 12" O.C. SDWS @ 4" O.C.
5/8" A.B. W/ 2x MUDSILL: OR 5/8" A.B. W/ 3x MUDSILL:	-- @ 24" O.C. MAX	-- @ 16" O.C. MAX	-- @ 16" O.C. MAX
TOP CONNECTION - "RBC" OR TOP CONNECTION - "LTP4" OR TOP CONNECTION - "LS50" OR TOP CONNECTION - "A35"	@ 6" O.C. MAX @ 8" O.C. MAX @ 8" O.C. MAX @ 8" O.C. MAX	-- -- @ 6" O.C. MAX @ 6" O.C. MAX	-- -- -- @ 6" O.C. MAX

1. APA RATED SHEATHING SHALL BE 4'-0" x 8'-0" MIN. EXCEPT AT BOUNDARIES OR AT CHANGES IN FRAMING WHERE A 16" MINIMUM WIDTH IS ALLOWED. ALL PANEL EDGES AND BOUNDARIES SHALL BE NAILED TO 2X FRAMING U.N.O.
   A. PLYWOOD AND OSB SHALL BE TYPE CDX GRADE OR BETTER (EXCEPT WHERE STRUCTURAL 1 GRADE IS NOTED).
   B. STR. 1 = STRUCTURAL 1 GRADE PLYWOOD OR O.S.B.
2. ALL NAILS SHALL HAVE MINIMUM SHANK DIAMETER AS SPECIFIED IN SCHED.
   A. ALL FASTENERS THAT ARE INSTALLED INTO OR IN CONTACT WITH PRESSURE TREADED LUMBER ARE TO BE HOT DIPPED GALVANIZED
   B. PLAIN CARBON STEEL FASTENERS IN SEA/DOT AND ZINC BORATE PRESERVATIVE-TREATED LUMBER SHALL BE PERMITTED.
3. FASTENERS ARE SPACED LESS THEN 4" ON CENTER AT PANEL EDGES: (104A / SD1)
   A. NAILING AT PANEL EDGES SHOULD BE STAGGERED PER DETAIL
4. FASTENERS AT SILL CONN. ARE INDICATED TO BE STAGGERED:
   A. STAGG. NAILING SHALL BE TWO ROWS OF FASTENERS PER SCHED. FROM SILL TO DBL RIM, DBL JOIST, DBL BLKG OR 3.5" WIDE (MIN.) MEMBER.
5. 3x SILL PLATES MAY BE OMITTED WHEN ALTERNATE SHEATHING JOINT AT RIM OR BLOCKING IS PROVIDED PER DETAIL (107 / SD1)
6. ALL ANCHOR BOLTS MUST BE INSTALLED WITH 3"x3"x0.229" GALVANIZED PLATE WASHERS PER THE CURRENT CBC.
   A. PLAIN CARBON STEEL FASTENERS IN SEA/DOT AND ZINC BORATE PRESERVATIVE-TREATED LUMBER SHALL BE PERMITTED.
7. WHERE SHEAR MATERIAL IS APPLIED ON BOTH FACES OF A SHEAR WALL, AND NAIL SPACING IS LESS THAN 6" O.C. ALL THE FOLLOWING REQ. SHALL BE MET:
   A. THE VERTICAL SHEAR PANEL JOINTS ON OPPOSITE FACES SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, UNLESS SUCH FRAMING MEMBERS ARE 4x OR THICKER.
   B. INSTALL 3.5" (MIN.) MEMBER BELOW ALL DOUBLE SIDED SHEAR WALLS.
   C. **USE 3x SILLS.**
8. FOR ALTERNATE MUDSILL ANCHORAGE, SEE DETAIL (109 / SD1)

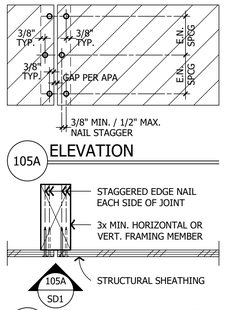
101 TYP. SHEAR WALL ELEVATION



104A STAGGERED NAILING AT SPACING OF 4" OR LESS

104B STANDARD NAILING AT SPACE OF 6" ON CENTER

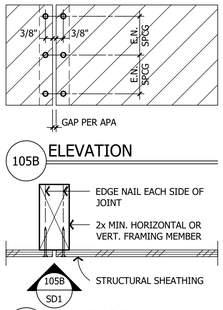
102 SHEAR TRANSFER AT WALL INTERSECTION



105A ELEVATION

- STAGGERED EDGE NAIL EACH SIDE OF JOINT
- 3x MIN. HORIZONTAL OR VERT. FRAMING MEMBER
- STRUCTURAL SHEATHING

105C STAGG., WHERE NOTED PLAN VIEW

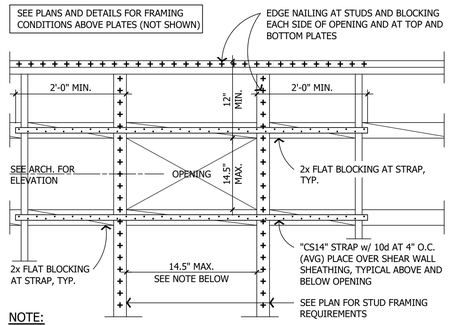


105B ELEVATION

- EDGE NAIL EACH SIDE OF JOINT
- 2x MIN. HORIZONTAL OR VERT. FRAMING MEMBER
- STRUCTURAL SHEATHING

105D STANDARD PLAN VIEW

103 SHEAR AND BEARING WALL SCHEDULE



NOTE:

OPENING MAY BE PROVIDED IN SHEAR WALLS FOR VENTS, ETC. PROVIDING THE VENT(S) WIDTH DOES NOT EXCEED 10 PERCENT OF THE TOTAL SHEAR WALL LENGTH IN THAT LINE OF SHEAR WALLS.

104 TYP. SHEAR WALL EDGE NAIL PATTERN

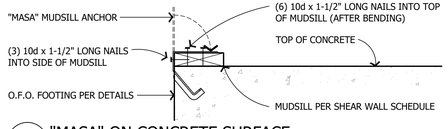
ALTERNATIVE MUDSILL ANCHORAGE

ALTERNATIVE ANCHORAGE MAY BE INSTALLED IN LIEU OF 5/8" DIA. ANCHOR BOLTS NOTED IN THE SHEAR WALL SCHEDULE AND PLAN NOTES.

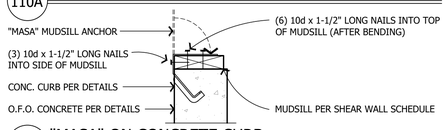
SHEAR WALL DESIGNATION	"MASA" (NOTE 1.) (110 / SD1)	"TITEN HD" (NOTE 2.) (111 / SD1)	EPOXY THREAD ROD (112 / SD1)
HATCHED BEARING	36" O.C.	48" O.C.	48" O.C.
X'-X" SW-1	24" O.C.	32" O.C.	32" O.C.
X'-X" SW-2	16" O.C.	32" O.C.	32" O.C.
X'-X" SW-3	12" O.C.	24" O.C.	24" O.C.
X'-X" SW-4	10" O.C.	16" O.C.	16" O.C.
X'-X" SW-5	10" O.C.	16" O.C.	16" O.C.
X'-X" SW-6	NOT ALLOWED	16" O.C. 3x SILL REQUIRED	16" O.C. 3x MUDSILL REQD
X'-X" SW-7 & SW-8	NOT ALLOWED	8" O.C. 3x SILL REQUIRED	8" O.C. 3x MUDSILL REQD

1. SIMPSON "MASA" ANCHORS SHALL BE INSTALLED PER ICC REPORT No. ESR-2555.
2. SIMPSON TITEN HD ANCHORS SHALL BE INSTALLED PER ICC REPORT No. ESR-2713.

105 SHEATHING AT ADJOINING PANEL EDGE



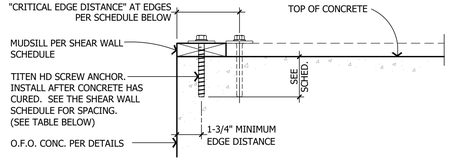
110A "MASA" ON CONCRETE SURFACE



110B "MASA" ON CONCRETE CURB

1. FULL LOADS APPLY FOR SPALLS UP TO A MAX OF 1-1/4" AND A MAX DEPTH OF 7/8". ANY EXPOSED PORTION OF THE "MASA" MUST BE PROTECTED AGAINST POSSIBLE CORROSION.
2. MINIMUM "MASA" END DISTANCE IS 4" AND MINIMUM CENTER-TO-CENTER SPACING IS 8"

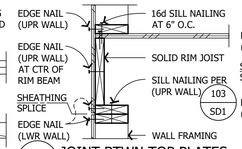
106 SMALL OPENING IN SHEAR WALL



1. DRILL THE HOLE TO THE SPECIFIED EMBEDMENT DEPTH PLUS 1/2" MINIMUM TO ALLOW THE THREAD TAPPING DUST TO SETTLE AND BLOW IT CLEAN USING COMPRESSED AIR.
2. INSERT THE ANCHOR THROUGH THE WASHER AND INTO THE HOLE.
3. TIGHTEN THE ANCHOR UNTIL THE HEX WASHER HEAD COMES IN CONTACT WITH THE WASHER.
4. CAUTION: OVERSIZED HOLES IN THE BASE MATERIAL WILL REDUCE OR ELIMINATE THE MECHANICAL INTERLOCK OF THE THREADS WITH THE BASE MATERIAL AND WILL REDUCE THE ANCHOR'S LOAD CAPACITY. USE A TITEN HD SCREW ANCHOR ONE TIME ONLY. INSTALLING THE ANCHOR MULTIPLE TIMES MAY RESULT IN THREAD WEAR AND REDUCE LOAD CAPACITY.

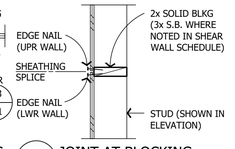
SILL PLATE	ANCHOR MODEL	NOMINAL ANCHOR DIA.	DRILL BIT DIAMETER	EMBEDMENT DEPTH	CRITICAL END DISTANCE
2x	THDB62800H	5/8"	5/8"	5 1/4"	6"
3x	THDB62100H	5/8"	5/8"	7"	9 3/8"

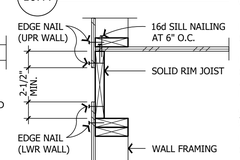
107 JOINT BTWN TOP PLATES



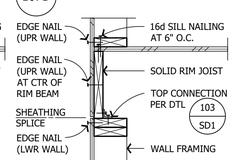
107A JOINT BTWN TOP PLATES

107B JOINT AT BLOCKING





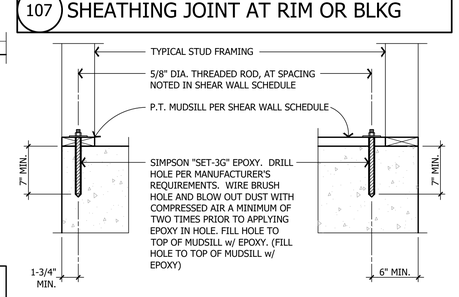
107C JOINT AT SOLID RIM



107D JOINT AT B.O. RIM (SIM. AT T.O. RIM)

1. FOR ADDITIONAL EDGE NAIL REQUIREMENTS, SEE DETAIL (104 / SD1) AND (105 / SD1)

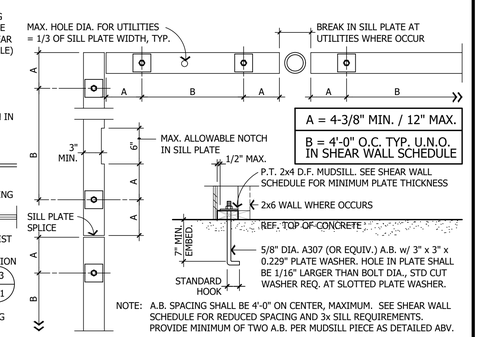
107 SHEATHING JOINT AT RIM OR BLKG



112A AT EDGE

112B AT CORNER

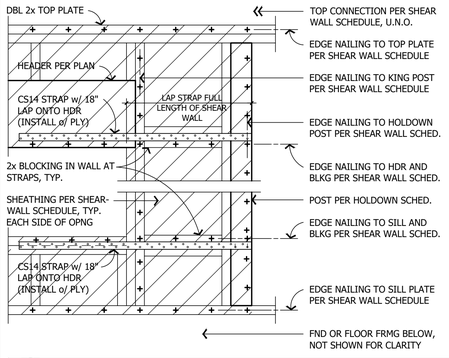
108 TYPICAL ANCHOR BOLT PLACEMENT



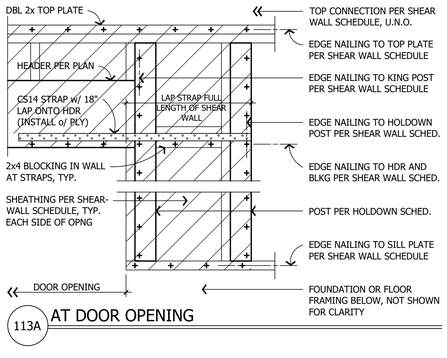
NOTE: A.B. SPACING SHALL BE 4'-0" ON CENTER, MAXIMUM. SEE SHEAR WALL SCHEDULE FOR REDUCED SPACING AND 3x SILL REQUIREMENTS. PROVIDE MINIMUM OF TWO A.B. PER MUDSILL PIECE AS DETAILED ABV.

VERIFY EXACT LOCATION OF FRAMING BEFORE ANCHOR BOLT PLACEMENT.

109 ALTERNATIVE MUDSILL ANCHORAGE



110 MASA ANCHORAGES



113A AT DOOR OPENING

111 "TITEN HD" ANCHORAGE & NOTES

112 RETROFIT ANCHOR BOLT

113 SHEAR PANEL AT OPENING (EA. SIDE OF OPENING WHERE INDICATED ON THE PLANS)

DO NOT SCALE THESE DRAWINGS

DPAE STRUCTURAL
3381 WALNUT BLVD. STE. 220
BRENTWOOD, CA 94513
PHONE: 925.516.3502
FAX: 925.262.4662
EMAIL: INFO@DPAEstructural.com

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BRENTWOOD, CALIFORNIA

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PLEASE NOTE THE REVISION NUMBER AND DATE ARE FOR STRUCTURAL SHEETS ONLY.

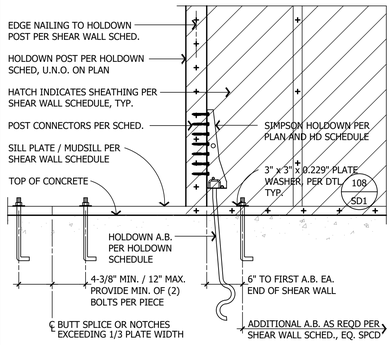
Engineering Seal:

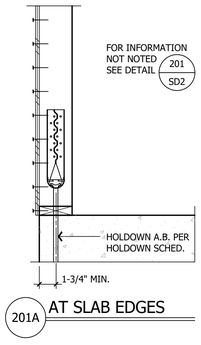
Sheet Description:
SHEAR WALL SCHEDULE AND TYPICAL DETAILS

No Scale

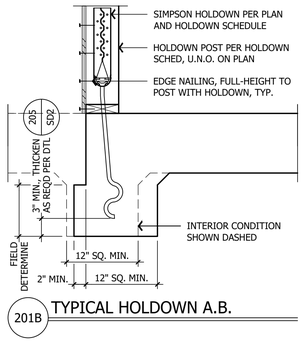
Initial Issue Date: August 29, 2025
Drawn By: H. Castro
Project Engineer: C. La Brie
Project Manager: S. Kaeding
Job No. W020725

Sheet No.
SD1

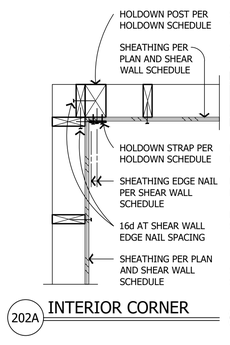




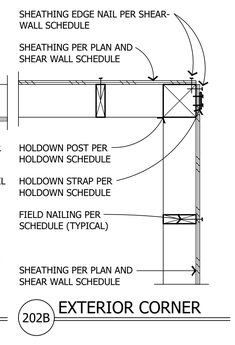
201A AT SLAB EDGES



201B TYPICAL HOLDOWN A.B.



202A INTERIOR CORNER



202B EXTERIOR CORNER

STRAP HOLDOWN SCHEDULE

STRAP	END LENGTH	FASTENERS EA. END	MIN. POST SIZE	ALLOWABLE LOAD
"CS14"	15"	(13) 10d (0.148 DIA . x 2-1/2")	(2) 2x	2490 lbs
(2) "CS14"	15"	(13) 10d (0.148 DIA . x 2-1/2") EACH STRAP	4x4 / (2) 2x6	4980 lbs
"CMST14"	30"	(33) 10d (0.148 DIA . x 2-1/2")	4x6 / 6x6	6490 lbs
"CMST12"	39"	(43) 10d (0.148 DIA . x 2-1/2")	4x8 / 6x6	9215 lbs

1. FILL ALL NAIL HOLES PER MANUFACTURER'S REQUIREMENTS.
2. STRAPS SHALL BE INSTALLED OVER PLYWOOD SHEATHING.
3. STRAPS MUST BE INSTALLED FLAT TO THE FACE OF THE POST. NO BENDS, NICKS OR SLACK OF ANY KIND ARE ALLOWED. STRAPS INSTALLED WITH ANY BENDS, NICKS OR SLACK SHALL BE CONSIDERED AS INADEQUATE AND MUST BE RE-INSTALLED.
4. STRAPS MUST BE INSTALLED VERTICALLY WHEN USED AS A HOLDOWN. STRAPS INSTALLED ON A SLOPE OR AT AN ANGLE SHALL BE CONSIDERED AS INADEQUATE AND MUST BE RE-INSTALLED.
5. LOADS INCLUDE A 60% LOAD DURATION INCREASE ON THE FASTENERS FOR WIND OR SEISMIC.
6. CMST STRAPS ONLY - USE EVERY OTHER ROUND HOLE IF THE WOOD TENDS TO SPLIT. INCREASE STRAP LENGTH AS REQUIRED TO ACHIEVE MINIMUM NUMBER OF FASTENERS LISTED IN TABLE ABOVE.
7. PRE-DRILL HOLES TO PREVENT WOOD SPLITTING AS REQUIRED.

SCREWED / BOLTED HOLDOWN SCHEDULE

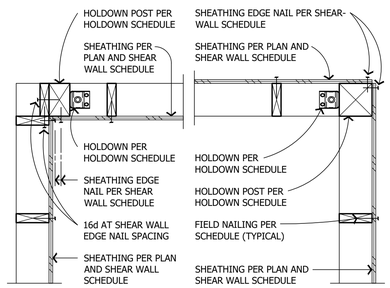
ANCHOR	POST CONNECTORS	HOLDOWN ANCHOR	MIN. POST	ALLOW. LOAD
"HDU2"	(6) SDS25212 SCREWS	SSTB24 OR SB5/8x24	(2) 2x	2940 lbs
"HDU4"	(10) SDS25212 SCREWS	SSTB24 OR SB5/8x24	(2) 2x	3815 lbs
"HDU5"	(14) SDS25212 SCREWS	SSTB24 OR SB5/8x24	(2) 2x	5645 lbs
"HDU8"	(20) SDS25212 SCREWS	SSTB28 OR SB7/8x24	4x6 / 6x6	7855 lbs
"HDU11"	(30) SDS25212 SCREWS	SB1x30 (A)	4x8 / 6x6	11175 lbs
"HDU14"	(36) SDS25212 SCREWS	PAB8 (OR EQUIV.)	4x8 / 6x6	14390 lbs
"HD19"	(5) 1" DIA. A307 BOLTS	PAB10 (OR EQUIV.)	4x8 / 6x6	19070 lbs

1. RE-TIGHTEN ALL BOLTS PRIOR TO SHEAR WALL CLOSE-IN.
2. DOUBLE 2x HOLDOWN POSTS SHALL BE SISTERED TOGETHER PER 103 SD1 FOR MORE INFORMATION.
3. CONTRACTOR'S OPTION TO SUBSTITUTE "STHD" TYPE HOLDOWNS:

ANCHOR	"STHD" OPTION	POST CONNECTORS	MIN. POST	ALLOW. LOAD
"HDU2"	"STHD10"	(20) 16d SINKERS	(2) 2x	2940 lbs
"HDU4"	"STHD14"	(24) 16d SINKERS	(2) 2x	3815 lbs

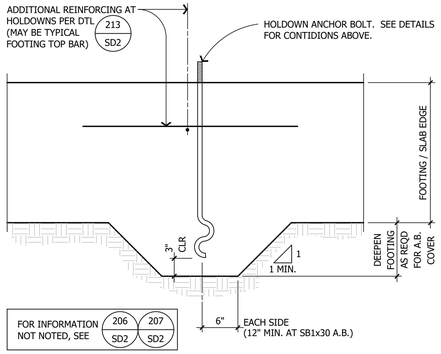
NOTE: A. WHERE NOTED, SB1x30 REQUIRES FOOTING WIDTH TO BE 18" WIDE.

201 TYPICAL HOLDOWN AND HOLDOWN ANCHOR BOLT INSTALLATION

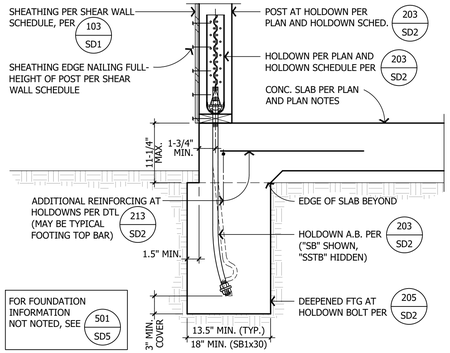


204A INTERIOR CORNER

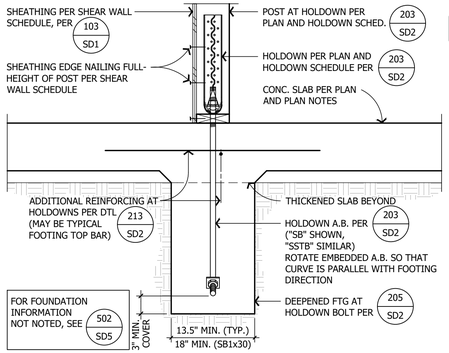
204B EXTERIOR CORNER

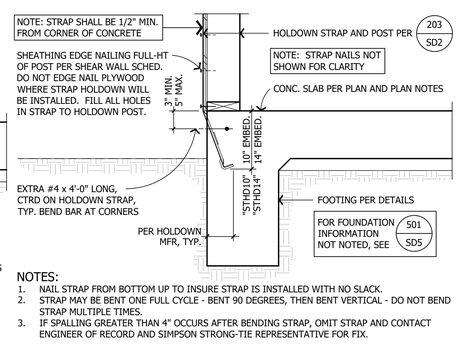


202 SHARED STRAP AT SHEAR WALL CORNER



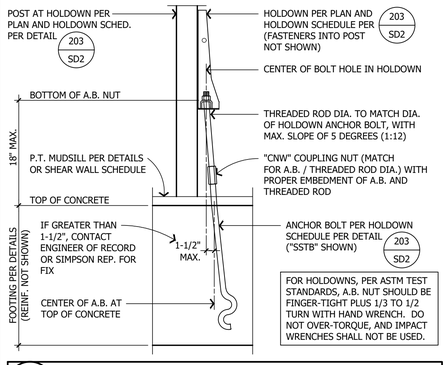
203 SLAB HOLDOWN SCHEDULES





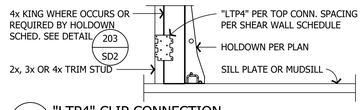
NOTES:
1. NAIL STRAP FROM BOTTOM UP TO INSURE STRAP IS INSTALLED WITH NO SLACK.
2. STRAP MAY BE BENT ONE FULL CYCLE - BENT 90 DEGREES, THEN BENT VERTICAL - DO NOT BEND STRAP MULTIPLE TIMES.
3. IF SPALLING GREATER THAN 4" OCCURS AFTER BENDING STRAP, OMIT STRAP AND CONTACT ENGINEER OF RECORD AND SIMPSON STRONG-TIE REPRESENTATIVE FOR FIX.

204 HOLDOWN AT SHEAR WALL CORNER (PLAN)

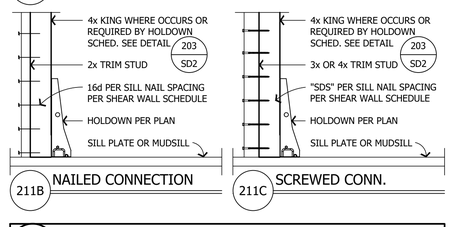


FOR HOLDOWNS, PER ASTM TEST STANDARDS, A.B. NUT SHOULD BE FINGER-TIGHT PLUS 1/3 TO 1/2 TURN WITH HAND WRENCH. DO NOT OVER-TORQUE, AND IMPACT WRENCHES SHALL NOT BE USED.

205 DEEPENED FOUNDATION (FOR A.B.)



211A "LTP4" CLIP CONNECTION



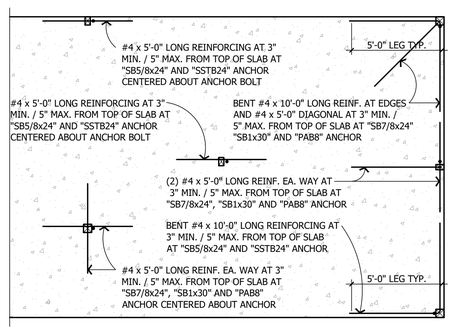
211B NAILED CONNECTION

211C SCREWED CONN.

206 HOLDOWN A.B. TO EXTERIOR FOOTING

207 HOLDOWN A.B. TO INTERIOR FOOTING

208 "STHD" STRAP TO EXTERIOR FOOTING



NOTE: O.K. TO COMBINE REBAR REQUIREMENTS AT ADJACENT ANCHORS

209 RAISED HOLDOWN AT OFFSET C.I.P. A.B.

211 TRIM STUD TO HOLDOWN POST

213 REINF. AT HOLDOWN BOLTS (PLAN)

DPAE STRUCTURAL
3381 WALNUT BLVD. STE. 220
BRENTWOOD, CA 94513
PHONE: 925.516.3502
FAX: 925.262.4662
EMAIL: INFO@DPAEstructural.com

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PLEASE NOTE THE REVISION NUMBER AND DATE ARE FOR STRUCTURAL SHEETS ONLY.

Engineering Seal:

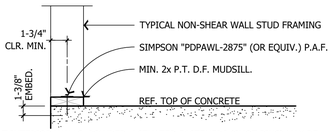
Sheet Description:
HOLDOWN SCHEDULE AND TYPICAL DETAILS (MAT - PT)

No Scale

Initial Issue Date: August 29, 2025
Drawn By: H. Castro
Project Engineer: C. La Brie
Project Manager: S. Kaeding
Job No. W020725

Sheet No.
SD2

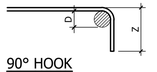
DO NOT SCALE THESE DRAWINGS



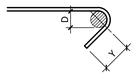
SHOT PIN ALTERNATE: AT INTERIOR WALLS, POWDER ACTUATED FASTENERS (SHOT PINS) MAY BE USED TO ANCHOR MUDSILL TO THE FOUNDATION AT NON-SHEAR WALL LOCATIONS ONLY. PROVIDED THE POWDER ACTUATED FASTENERS ARE INSTALLED PER THE REQUIREMENTS LISTED BELOW:

1. P.A.F. ARE ONLY PERMITTED AT INT. NON-STRUC. WALLS. DO NOT INSTALL P.A.F. IN LOCATIONS WHERE BEARING, SHEAR WALLS OR BRACED WALLS ARE NOTED ON THE PLANS
2. SIMPSON P.A.F. SHALL BE GALVANIZED AND INSTALLED PER I.C.C. REPORT ESR-2138
3. MIN. EMBED. OF FASTENER IS ACHIEVED WHEN THE WASHER IS FULLY BRNG ON THE PLATE.
4. FASTENERS MUST NOT BE DRIVEN UNTIL CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 2000 psi.
5. FASTENERS MUST BE DRIVEN INTO A PRESSURE-TREATED 2x WOOD SILL PLATE AND MUST BE AT LEAST 1-3/4" FROM THE CONCRETE EDGE.
6. P.A.F. SHALL BE INSTALLED AT 32" O.C. EACH PIECE OF PLATE SHALL HAVE A MIN. OF TWO FASTENERS PLACED AT 6" FROM THE ENDS WITH A MIN. SPACING OF 4" BETWEEN P.A.F.

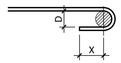
301 SHOT PIN AT NON-STRUC WALLS



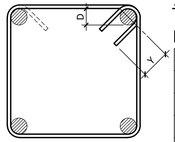
90° HOOK



135° HOOK



180° HOOK



TIES / STIRRUPS

MIN. REQUIRED HOOK LENGTHS

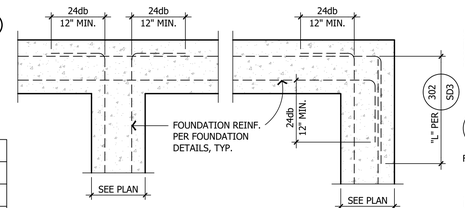
BAR	#3	#4	#5	#6	#7	#8
"D"	2-1/4"	3"	3-3/4"	4-1/2"	5-1/4"	6"
"X"	2-1/2"	2-1/2"	2-1/2"	3"	3-1/2"	4"
"Y"	3"	3"	3-3/4"	4-1/2"	5-1/4"	6"
"Z"	5"	6"	7"	8"	10"	11"

LAP SPLICE

MIN. REQUIRED LAP LENGTHS

BAR SIZE	#3	#4	#5	#6	#7	#8
"L"	22"	29"	36"	43"	63"	72"

302 TYP. REINFORCING HOOKS AND LAPS



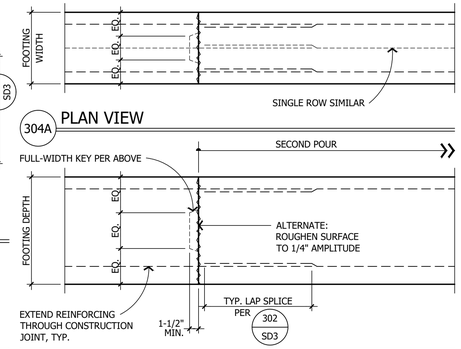
303A TEE COND.

303B CORNER COND.

NOTES:

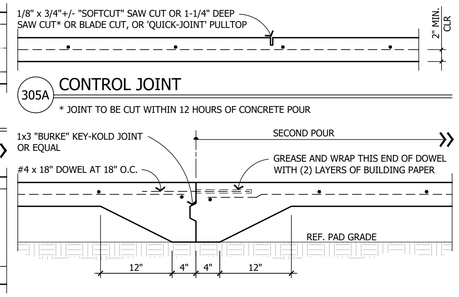
1. db = BAR DIAMETER
2. PLACE ALL BENDS HORIZONTALLY.
3. FOR SINGLE CURTAIN STEEL PROVIDE SIMILAR BENDS AT 3" CLEAR FROM FAR FACE OF FOOTING, U.N.O.

303 STD REINF. HOOKS - DOUBLE ROW



304A PLAN VIEW

304 FOOTING CONSTRUCTION JOINT

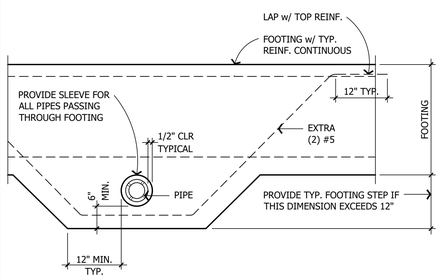


305A CONTROL JOINT

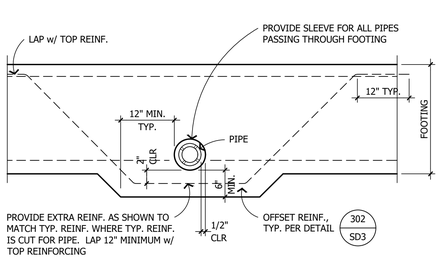
* JOINT TO BE CUT WITHIN 12 HOURS OF CONCRETE POUR

305B CONSTRUCTION JOINT

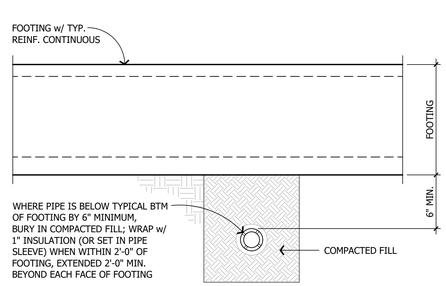
305 CRACK CONTROL JOINTS (SLAB-ON-GRADE)



306A PIPE BELOW FOOTING

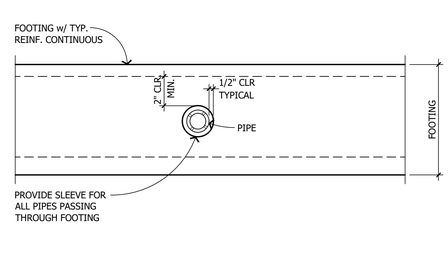


306B PIPE THROUGH FOOTING



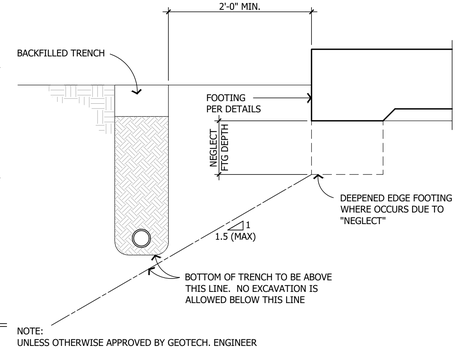
306C PIPE BELOW FOOTING

WHERE FOOTING NEED NOT BE DEEPENED

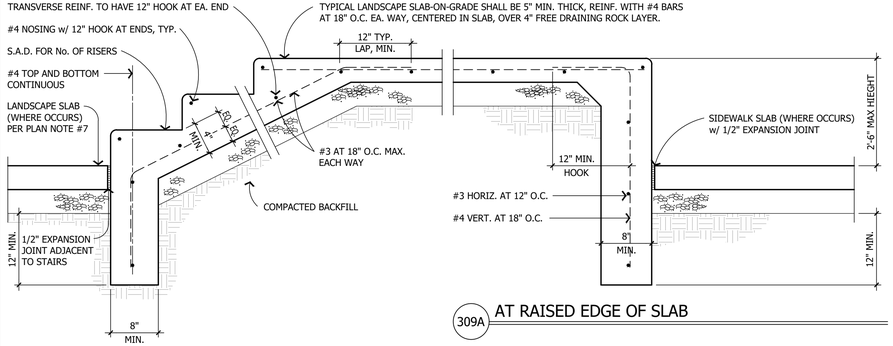


306D PIPE BETWEEN BARS

306 PIPE PERPENDICULAR TO FOOTING



307 PIPE / TRENCH PARALLEL TO FOOTING



309A AT RAISED EDGE OF SLAB

309 NON-STRUCTURAL CONCRETE LANDSCAPE STAIRS

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BRENTWOOD, CA 94513
PHONE: 925.516.3502
FAX: 925.262.4662
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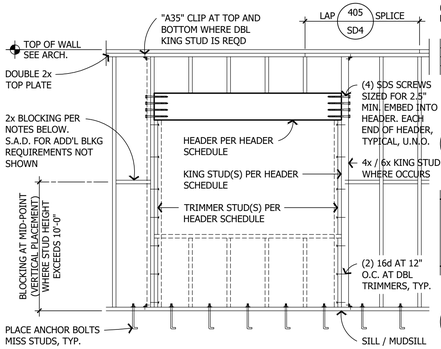
Engineering Seal:

Sheet Description:
TYPICAL CONCRETE DETAILS

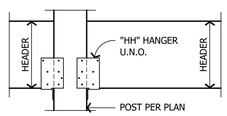
No Scale

Initial Issue Date: August 29, 2025
Drawn By: H. Castro
Project Engineer: C. La Brie
Project Manager: S. Kaeding
Job No. W020725

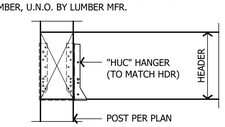
Sheet No.
SD3



401A TOP PLATE CORNER LAP



401B HEADER AT POST ELEVATION



401C HEADER AT CORNER POST - ELEVATION

SILL ANCHORS AND P.T. D.F. MUDSILLS

1. PLATES AND MUDSILLS SHALL BE BOLTED TO THE FOUNDATION WITH NOT LESS THAN 5/8" DIA. HOT DIPPED GALVANIZED ANCHOR BOLTS WITH 3 x 3 x 1/4" PLATE WASHERS. EMBED ANCHOR BOLTS 7" INTO CONCRETE OR 12" INTO GROUTED MASONRY, AND SPACE NOT MORE THAN 48" APART, U.N.O. THERE SHALL BE A MINIMUM OF TWO BOLTS PER BOARD WITH ONE BOLT LOCATED 12" MAX/5" MIN. OFF EACH END.
2. ALL PLATES AND MUDSILLS ON CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED DOUGLAS FIR (P.T. D.F.)
3. USE ONLY HOT-DIPPED GALVANIZED ANCHOR BOLTS, PLATE WASHERS, NAILS AND OTHER HARDWARE WHEN IN CONTACT WITH P.T. LUMBER, U.N.O. BY LUMBER MFR.

HEADER SCHEDULE - TYP. U.N.O. ON PLAN

MAX. ROUGH OPENING		3'-6"	4'-6"	5'-6"	6'-6"	8'-6"
BEARING (ROOF)	2x4 WALL	4x6 D.F. #2	4x8 D.F. #2	4x10 D.F. #2	4x10 D.F. #2	3.5 x 10.5 GLB
	2x6 WALL	6x6 D.F. #1	6x6 D.F. #1	6x8 D.F. #1	6x8 D.F. #1	5.5 x 9 GLB
BEARING (FLOOR)	2x4 WALL	4x8 D.F. #2	4x10 D.F. #2	4x10 D.F. #2	3.5 x 9 GLB	3.5 x 12 GLB
	2x6 WALL	6x6 D.F. #1	6x8 D.F. #1	6x10 D.F. #1	6x10 D.F. #1	5.5 x 9 GLB
NON- BRG WALLS	2x4 WALL	4x4 D.F. #2	4x4 D.F. #2	4x4 D.F. #2	4x6 D.F. #2	4x8 D.F. #2
	2x6 WALL	4x6 (FLAT)	4x6 (FLAT)	4x6 (FLAT)	6x6 D.F. #1	6x6 D.F. #1

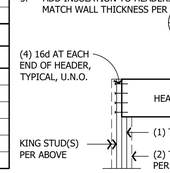
KING STUD SCHEDULE - TYP. U.N.O. ON PLAN

MAX. ROUGH OPENING		3'-6"	4'-6"	5'-6"	6'-6"	8'-6"
MAX. PLATE HEIGHT 8'-1"	2x4 WALL	(1) - 2x4	(2) - 2x4	(2) - 2x4	(2) - 2x4	(2) - 2x4
	2x6 WALL	(1) - 2x6	(1) - 2x6	(1) - 2x6	(1) - 2x6	(2) - 2x6
MAX. PLATE HEIGHT 9'-1"	2x4 WALL	(2) - 2x4	(2) - 2x4	(2) - 2x4	(3) - 2x4	(3) - 2x4
	2x6 WALL	(1) - 2x6	(1) - 2x6	(1) - 2x6	(1) - 2x6	(2) - 2x6
MAX. PLATE HEIGHT 10'-1"	2x4 WALL	(2) - 2x4	(2) - 2x4	(3) - 2x4	(4) - 2x4	(5) - 2x4
	2x6 WALL	(1) - 2x6	(1) - 2x6	(1) - 2x6	(2) - 2x6	(2) - 2x6

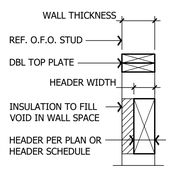
401D HEADER SCHEDULE - TYPICAL U.N.O. ON THE PLAN

NOTES

1. ALL ROUGH OPENINGS 6'-0" AND GREATER SHALL HAVE DOUBLE 2x TRIM STUDS.
2. TRIM STUDS SHALL BE CONTINUOUS FROM BOTTOM OF HEADER TO THE TOP OF THE SILL PLATE BELOW.
3. STACK ALL KING AND TRIM STUDS FROM LEVEL AT WHICH THEY OCCUR CONTINUOUS DOWN TO SILL PLATE AT FOUNDATION LEVEL. PROVIDE SOLID FILLER IN JOIST SPACE.
4. USE 1-3/4" LSL FILLER OF MATCHING DEPTH TO SHIM TO WALL WIDTH.
5. ADD INSULATION TO HEADERS WHICH DO NOT MATCH WALL THICKNESS PER 401D SD4

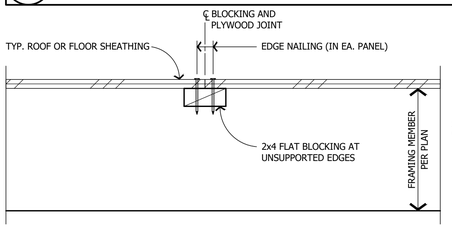


401E TRIM / KING STUDS

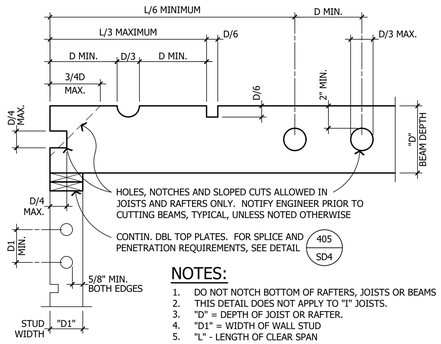


401F INSULATION AT HEADER

401 TYPICAL FRAMED WALL OPENING AND HEADER SCHEDULE



403 BLOCKED + NAILED PLYWOOD DIAPHRAGM



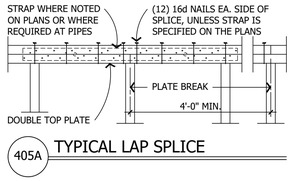
NOTES:

1. DO NOT NOTCH BOTTOM OF RAFTERS, JOISTS OR BEAMS
2. THIS DETAIL DOES NOT APPLY TO "I" JOISTS.
3. "D" = DEPTH OF JOIST OR RAFTER.
4. "D1" = WIDTH OF WALL STUD
5. "L" - LENGTH OF CLEAR SPAN

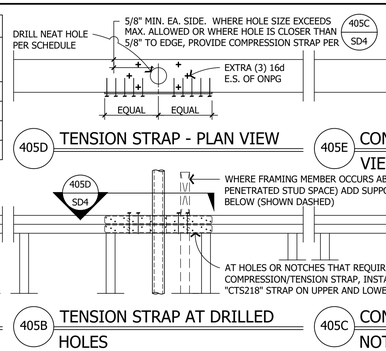
404 TYPICAL HOLES AND NOTCHES

DRILLED HOLE SCHEDULE

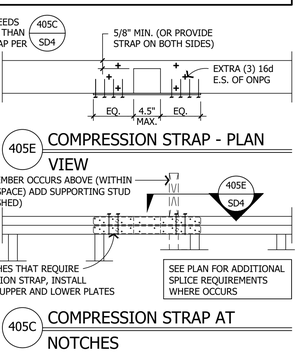
	TOP PLATE SIZE	MAX. HOLE SIZE SIZE WITHOUT TENSION STRAPS	MAX. HOLE * SIZE WITH TENSION STRAPS
EXT. OR INT. BRG WALL OR SHEAR WALL	2x4	7/8" DIA.	2-1/4" DIA.
	2x6	2-7/8" DIA.	4-1/4" DIA.
INT. NON-STRUCTURAL PARTITION	2x4	2-1/8" DIA.	2-1/4" DIA.
	2x6	4-1/8" DIA.	4-1/4" DIA.



405A TYPICAL LAP SPLICE



405D TENSION STRAP - PLAN VIEW

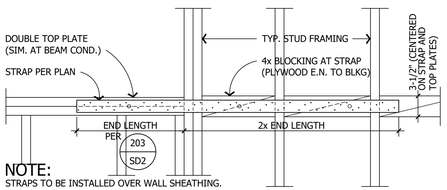


405E COMPRESSION STRAP - PLAN VIEW

405B TENSION STRAP AT DRILLED HOLES

405C COMPRESSION STRAP AT NOTCHES

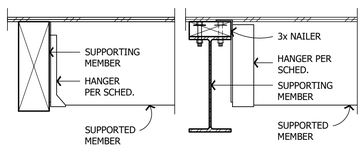
405 TOP PLATE SPLICES, BREAKS AND PENETRATIONS



NOTE:
STRAPS TO BE INSTALLED OVER WALL SHEATHING.

406 HORIZ. STRAP TO WALL BLOCKING

SUPPORTED MEMBER	SUPPORTING MEMBER	
	SOLID WOOD BM	STEEL BM w/ 3x NAILER
(1) TJI JOIST	"IUS" HANGER	"MIT" HANGER
(2) TJI JOIST	"MIU" HANGER	"MIT" HANGER
(1) LVL	"HUS" HANGER	"MIT" HANGER
(2) LVL OR 3-1/2 PSL	"HUS" HANGER	"BA" HANGER
(3) LVL OR 5-1/4 PSL	"HHUS" HANGER	"HW" HANGER (NOTE 4.)
7" PSL	"HGUS" HANGER	"GLTV" HANGER (NOTE 4.)
GLULAM	"HGUS" HANGER	"GLTV" HANGER (NOTE 4.)
2x SOLID SAWN	"LUS" HANGER	"JB" HANGER
(2) 2x SOLID SAWN	"HUS" HANGER	"WNP" HANGER
3x SOLID SAWN	"HU" HANGER	"B" HANGER
4x SOLID SAWN	"HUS" HANGER	"BA" HANGER
6x SOLID SAWN	"HU" HANGER	"B" OR "HW" HANGER
(1) FLOOR TRUSS	"U" HANGER (MIN).	"MIT" OR "BA" HANGER
(2) FLOOR TRUSSES	"HU" HANGER	"HB" HANGER
GIRDER FLOOR TRUSS	"HHUS" HANGER	"HB" HANGER
(1) ROOF TRUSS	"LUS" HANGER (MIN.)	N/A
(2) ROOF TRUSSES	"HUS" HANGER	N/A
GIRDER ROOF TRUSS	"HGUS" HANGER	N/A



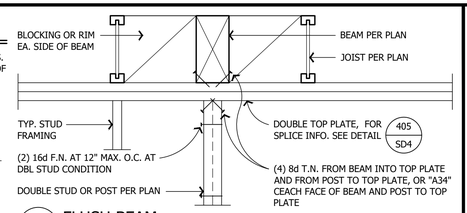
409A FLUSH OR TOP MOUNTED ONLY

409B TOP MOUNTED (TO 3x NAILER)

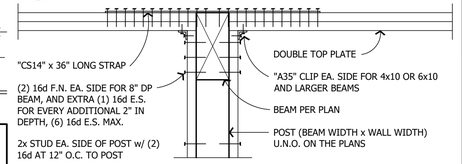
NOTES:

1. USE THIS SCHEDULE, UNLESS NOTED OTHERWISE ON THE PLANS AND DETAILS.
2. HANGERS ARE MANUFACTURED BY SIMPSON STRONG-TIE OR APPROVED EQUAL. INSTALL PER MFR'S INSTRUCTIONS, U.N.O. USE HANGERS AS SCHEDULED, U.N.O. FILL ALL NAIL HOLES.
3. FOR MANUFACTURED FRAMING, (ie. TJI, FABRICATED WOOD TRUSSES, ETC.), HANGERS SHALL BE AS REQUIRED BY THE MANUFACTURER, UNLESS NOTED OTHERWISE.
4. HANGER SHALL BE DIRECTLY WELDED TO STEEL BEAM PER HANGER MANUFACTURER'S RECOMMENDATIONS.

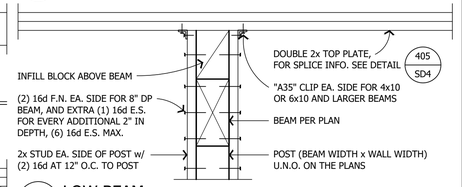
409 HANGER SCHEDULE - TYP. UNLESS NOTED OTHERWISE ON THE PLAN



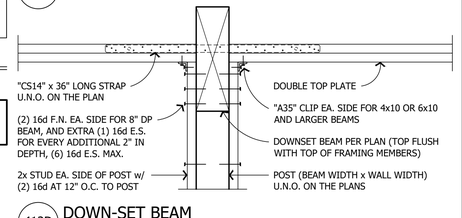
412A FLUSH BEAM



412B DROPPED BEAM



412C LOW BEAM



412D DOWN-SET BEAM

412 TYPICAL BEAM SUPPORT IN WALL

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Project Engineer: C. La Brie
Project Manager: S. Kaeding
Job No. W020725

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SD4

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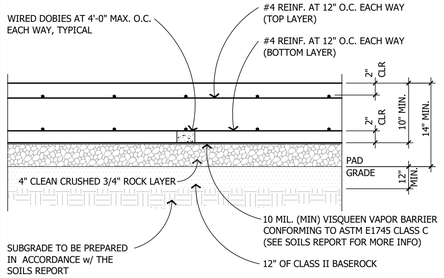
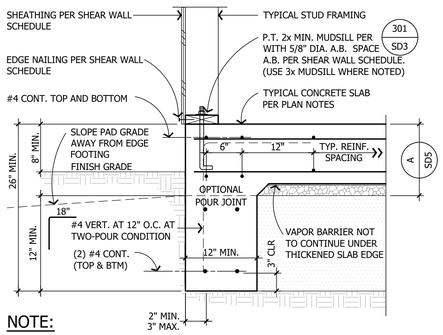


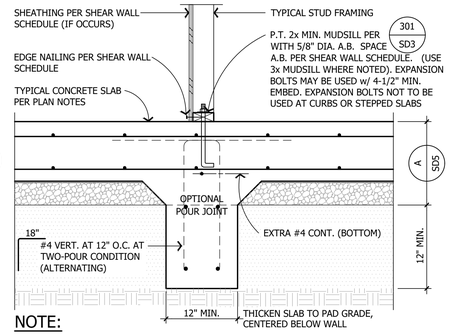
A TYPICAL MAT SLAB SECTION



NOTE:

PLAIN CARBON STEEL FASTENERS IN SEA/DOT AND ZINC BORATE PRESERVATIVE-TREATED LUMBER SHALL BE PERMITTED.

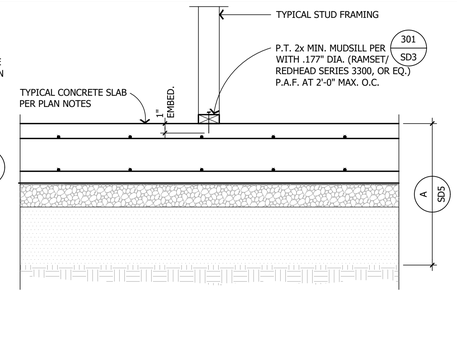
501 TYPICAL PERIMETER EDGE FOOTING



NOTE:

PLAIN CARBON STEEL FASTENERS IN SEA/DOT AND ZINC BORATE PRESERVATIVE-TREATED LUMBER SHALL BE PERMITTED.

502 TYPICAL INT. SHEAR WALL MUDSILL CONN.



503 TYPICAL INTERIOR WALL

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Project Engineer: C. La Brie

Project Manager: S. Kaeding

Job No. W020725

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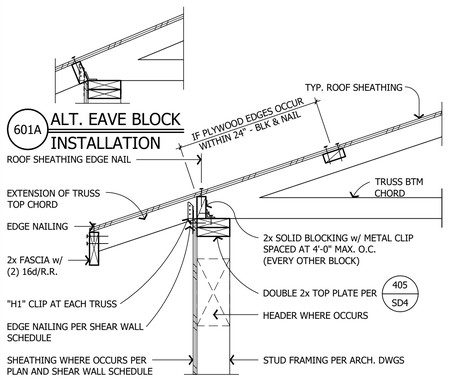
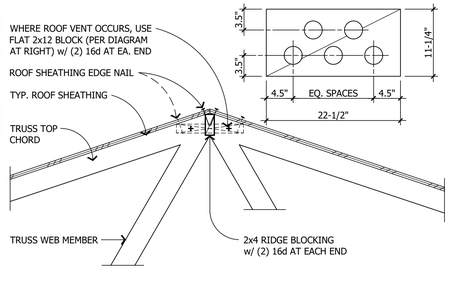
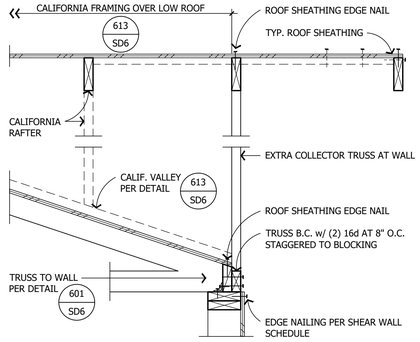


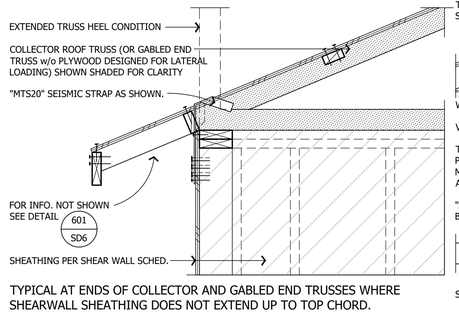
601 TRUSS PERPEND. TO EXTERIOR WALL



603 RIDGE BLOCKING AT ROOF TRUSSES

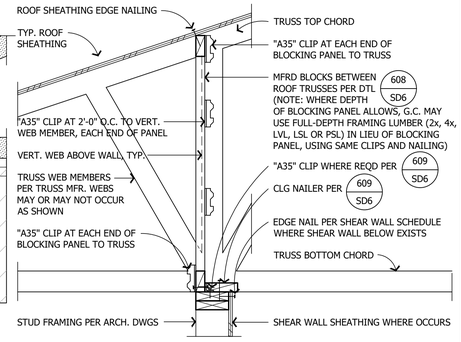


604 GABLE END TRUSS AT EXTERIOR WALL

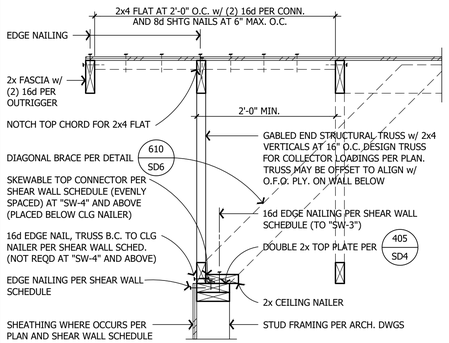


TYPICAL AT ENDS OF COLLECTOR AND GABLED END TRUSSES WHERE SHEARWALL SHEATHING DOES NOT EXTEND UP TO TOP CHORD.

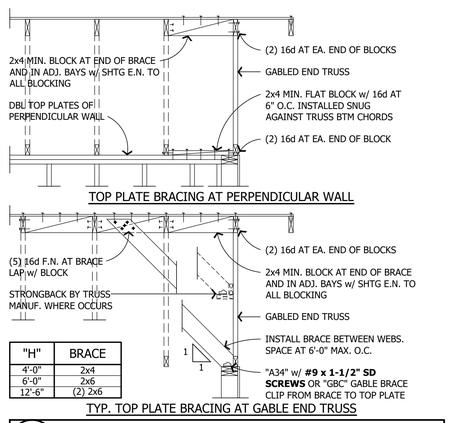
606 COLLECTOR TRUSS UPLIFT ANCHORAGE



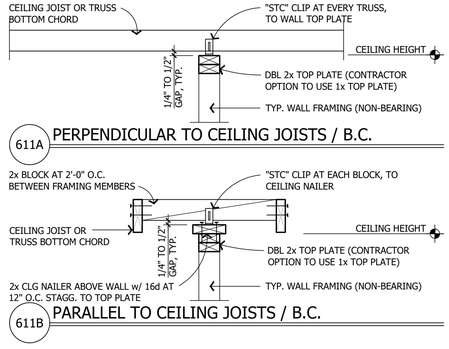
607 TRUSS TO INTERIOR SHEAR WALL



609 GABLED END TRUSS



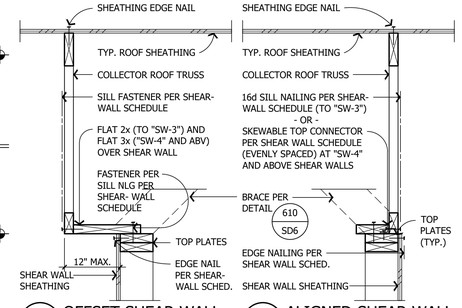
610 GABLE END TRUSS BRACING



611A PERPENDICULAR TO CEILING JOISTS / B.C.

611B PARALLEL TO CEILING JOISTS / B.C.

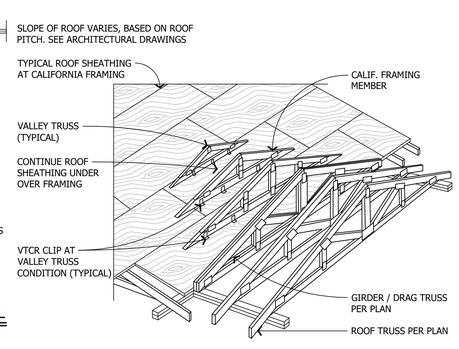
611 INTERIOR NON-BEARING WALL TO TRUSS



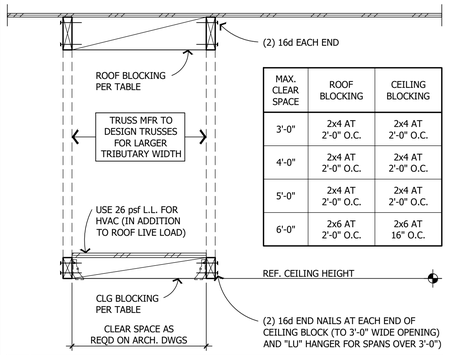
612A OFFSET SHEAR WALL

612B ALIGNED SHEAR WALL

612 PARALLEL TRUSS TO INTERIOR SHEAR WALL



613 CALIFORNIA FRAMING DETAIL



MAX. CLEAR SPACE	ROOF BLOCKING	CEILING BLOCKING
3'-0"	2x4 AT 2'-0" O.C.	2x4 AT 2'-0" O.C.
4'-0"	2x4 AT 2'-0" O.C.	2x4 AT 2'-0" O.C.
5'-0"	2x4 AT 2'-0" O.C.	2x4 AT 2'-0" O.C.
6'-0"	2x6 AT 2'-0" O.C.	2x6 AT 16" O.C.

617 ROOF TRUSSES AT HVAC / ATTIC ACCESS

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Project Manager: S. Kaeding
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