GENERAL STRUCTURAL NOTES

GENERAL

1. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUB-CONTRACTORS. STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES FROM STRUCTURAL PLANS.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE PERFORMED IN ACCORDANCE WITH 2022 CALIFORNIA BUILDING CODE.
3. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
4. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
5. WHERE NO DETAILS SHOWN OR NOTED ON THE DRAWINGS, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
6. OPENINGS, POCKETS, SLEEVES, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS, WALLS, COLUMNS AND FOOTINGS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
7. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOADS SHALL NOT EXCEED DESIGN LIVE LOADS FOR EACH PARTICULAR LEVEL. PROVIDE ADEQUATE SHORING AND BRACING IF LOAD EXCEED DESIGN LIVE LOAD OR WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
8. THIS SET OF DRAWINGS REPRESENT THE FINISHED STRUCTURE, METHOD OF CONSTRUCTION NOT NECESSARY INDICATED, THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO BRACING, SHORING, SCAFFOLDING, ETC.

FOUNDATION

1. THE SOILS BEARING PRESSURE = 1,500 p.s.f.
2. FOUNDATION DESIGN SHALL BE 18" MIN. DEPTH OF FTG BELOW LOWEST ADJACENT FINAL GRADE, AND 12" MINIMUM WIDTH FOR 1 STORY, 15" MIN. WIDTH FOR 2 STORY, BEAR ON FIRM NATIVE OR PROPERLY COMPACTED SOILS.
3. NOT USED
4. GEOTECHNICAL ENGINEER OR DEPUTY INSPECTOR SHALL VERIFY THAT CONSTRUCTION AT THE SITE IS IN ACCORDANCE WITH THE RECOMMENDATIONS AND CONCLUSIONS OF HIS REPORT. FINISHED EXCAVATION FOR FOUNDATION SHALL BE NEAT AND TRUE TO LINE WITH ALL LOOSE MATERIAL AND STANDING WATER REMOVED FROM EXCAVATIONS.
5. BEFORE ANY CONCRETE IS PLACED, EXCAVATIONS SHALL BE CHECKED AND APPROVED BY A QUALIFIED SOILS ENGINEER OR DEPUTY INSPECTOR TO ENSURE COMPLIANCE WITH THE REQUIREMENTS.
6. ALL FILL MATERIAL IS TO BE APPROVED BY THE SOILS ENGINEER OR DEPUTY INSPECTOR AND APPROVED BY A QUALIFIED SOILS ENGINEER OR DEPUTY INSPECTOR TO ENSURE COMPLIANCE W/ THE REQUIREMENTS.
7. SUBGRADE SHALL BE 2".
8. SIDE OF FOUNDATION MAY BE POURED AGAINST STABLE EARTH UNLESS SHOWN OR NOTED OTHERWISE.
9. CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT DEWATERING FOR EITHER SURFACE WATER, GROUND WATER OR SEEPAGE WATER.
10. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATIONS AND BACKFILLING.
11. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CRIBBING SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANK.
12. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL SHALL BE PROPERLY COMPACTED.
13. CONTRACTOR SHALL BRACE OR PROTECT FROM LATERAL LOADS FOR THE PIT AND RETAINING WALLS UNTILL ATTACHING SLABS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH.
14. NO VERTICAL EXCAVATIONS 4'-0" OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESEND SHALL BE PERMITTED.

STRUCTURAL DESIGN CRITERIA

ROOF LOAD: DL= 19 PSF LL= 20 PSF

WIND DESIGN DATA:

BASIC WIND SPEED	100 MPH
IMPORTANCE FACTOR I	1
RISK CATEGORY	II
WIND EXPOSURE	C

EARTHQUAKE DESIGN DATA:

IMPORTANCE FACTOR I	1
SITE CLASS	D (D-DEFAULT)
Ss	1.18
S1	0.43
SDs	1.0
SD1	0.42
SEISMIC DESIGN CATEGORY	D
BASIC SEISMIC FORCE-RESISTING SYSTEM	A-15 (ASCE 7-16 TABLE 12.2-1)
DESIGN BASE SHEAR	0.7Vs=0.101*W (ASD LEVEL)
Cs	0.16
R	6.5

USE EQUVALENT LATERAL FORCE PROCEDURE

EPOXY ANCHORS

1. EPOXY FOR EPOXY ANCHORS SHALL BE SET-XP EPOXY BY "SIMPSON STRONG-TIE" (ICC ESR. #2508)
2. ANCHORS USED FOR EPOXY ANCHORS SHALL BE ASTM A-307 THREADED RODS UNO. SIZE AND EMBEDMENT SHALL BE AS INDICATED ON PLANS.
3. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE EPOXY MANUFACTURER'S RECOMMENDATIONS AND THE CURRENT ICC REPORT.
4. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH CBC-2022 SECTION 1704 AND IN ACCORDANCE WITH THE SPECIFIC SPECIAL INSPECTION REQUIREMENTS SET FORTH IN THE CORRESPONDING ICC REPORT.
5. DRILLED HOLES SHALL BE CLEANED OF DUST AND ANY DEBRIS USING NYLON BRUSH AND COMPRESSED AIR. OIL, SCALE, AND RUST SHALL BE REMOVED FROM THREADED RODS PRIOR TO INSTALLATION.
6. UNLESS NOTED OTHERWISE IN THE PLANS, EPOXY ANCHORS SHALL HAVE THE FOLLOWING MINIMUM EMBEDMENT

BAR SIZE	MINIMUM EMBEDMENT *	REMARKS
#3	3 1/2"	
#4 OR 1/2"ø	4 1/4"	
#5 OR 5/8"ø	5 1/2"	
#6 OR 3/4"ø	6 3/4"	

* UNLESS NOTED OR DETAILED

CONCRETE

1. ALL CONCRETE SHALL BE NORMAL WEIGHT CONFORMING TO THE FOLLOWING:

LOCATION	28-DAY MIN. COMPRESSIVE STRENGTH	MAXIMUM AGGREGATE SIZE (IN.)	MIX DESIGN SLUMP (INCHES)
A. SLAB ON GRADE	2500 psi	1	3 (4" MAX)
B. FOOTING	2500 psi	1	4 (5" MAX)

W/C=0.45

2. ALL CONCRETE MIX DESIGN SHALL BE REVIEWED BY THE ENGINEER PRIOR TO CONSTRUCTION.
3. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE V CEMENT.
4. AGGREGATE SHALL CONFORM TO ASTM C-33.
5. WATER SHALL BE CLEAN, FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS OR ORGANIC MATERIALS, OILS, SALTS AS PER ACI 318.
6. CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C-94. WATER-CEMENT RATIO IS LESS THAN 0.50
7. UNLESS SHOWN OR NOTED OTHERWISE, CONCRETE COVERAGE FOR REINFORCING BAR TO FACE OF BAR SHALL BE AS FOLLOWS:

A. CONCRETE IN CONTACT WITH EARTH, UNFORMED	3"
B. CONCRETE IN CONTACT WITH EARTH, FORMED	2"
C. WALLS	1.5"
D. BEAMS, GIRDERS & COLUMNS (TO TIES OR STIRRUPS)	1.5"

8. CONDUIT PLACED IN A CONCRETE SLAB SHALL NOT EXCEED 1/3 OF THE THICKNESS OF THE SLAB AND SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCING STEEL. MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE 6".
9. CONSTRUCTION JOINTS:

   THE SURFACES OF ALL CONSTRUCTION JOINTS SHALL BE CLEAN, FREE FROM LOOSE DEBRIS. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.
10. CONCRETE SHALL BE CURED IN ACCORDANCE WITH SECT 1905.11 OF 2022 C.B.C.
11. REMOVAL OF CONCRETE FORMS AND SHORES SHALL BE IN ACCORDANCE WITH SECTION 1906.2 OF 2022 C.B.C.
12. CONDUITS AND PIPES EMBEDDED IN CONCRETE SHALL COMPLY WITH THE PROVISION OF SECTION 1906.3 OF 2022 C.B.C.
13. DESIGN AND CONSTRUCTION OF CONCRETE FORMWORK SHALL CONFORM TO ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK".
14. ALL SAW CUTS IN SLAB ON GRADE SHALL BE MADE NOT LATER THAN 24 HOURS AFTER PLACING CONCRETE.

REINFORCING STEEL

1. ALL REINFORCING BARS SHALL BE ASTM A-615 GRADE 60 DEFORMED BILLET STEEL BARS.
2. GRADE 60 BARS SHALL BE MARKED SO ITS IDENTIFICATION CAN BE MADE WHEN THE FINAL IN PLACE INSPECTION IS MADE.
3. THE TIE WIRE USED SHALL BE BLACK ANNEALED WIRE, 16 GA. OR HEAVIER.
4. BAR SUPPORTS SHALL CONFORM TO THE BAR SUPPORT SPECIFICATIONS CONTAINED IN THE "MANUAL OF STANDARD PRACTICE" BY ACI.
5. A CERTIFIED COPY OF MILL TEST ON EACH HEAT OF REINFORCING STEEL DELIVERED SHOWING PHYSICAL AND CHEMICAL ANALYSIS SHALL BE PROVIDED UPON REQUEST AT THE TIME OF SHIPMENT.
6. ALL REQUIREMENT OF CONCRETE REINFORCEMENT NOT COVERED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH ACI "MANUAL OF STANDARD PRACTICE".
7. REINFORCING STEEL AT THE TIME OF THE CONCRETE IS PLACED SHALL BE FREE FROM MUD, OIL, OR OTHER NON METALLIC COATINGS THAT ADVERSELY AFFECT BONDING CAPACITY.
8. ALL HOOKS SHALL CONFORM TO THE BEND DIMENSION PER ACI "STANDARD HOOK" UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
9. REINFORCING BARS SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER THAT WILL INJURE THE MATERIAL.
10. REINFORCING BARS SHALL CONFORM ACCURATELY TO THE DIMENSIONS SHOWN ON THE DRAWINGS WITH THE FABRICATING TOLERANCES PER ACI "MANUAL OF STANDARD PRACTICE."
11. BARS SHALL BE SECURELY TIED TO PREVENT DISPLACEMENT DURING THE CONCRETE OPERATION AND ALL DOWELS SHALL BE WIRED IN PLACE BEFORE DEPOSITING CONCRETE.
12. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL HAVE SAME SIZE AS THE VERTICAL REINFORCEMENT, EMBEDMENT OF DOWELS SHALL BE 36 BAR DIAMETER OR 2'-0" MINIMUM UNLESS OTHERWISE SHOWN.
13. MINIMUM LAP OF MESH SHALL BE NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS TWO INCHES OR 60 DIA. OR 8 IN. WHICHEVER IS GREATER.

WOOD

1. ALL LUMBER SHALL BE GRADE MARKED DOUGLAS FIR-LARCH AND SHALL HAVE THE FOLLOWING GRADES, UNLESS NOTED OTHERWISE:

JOISTS & RAFTERS	GRADE NO. 2 OR BETTER
BEAMS & STRINGERS	GRADE NO. 1 AND BETTER
DOUBLE TOP PLATES	GRADE NO. 1 AND BETTER
2X4 STUDS	CONSTRUCTION GRADE OR BETTER
3X4 & 2X6 STUDS	GRADE NO. 2 OR BETTER
POSTS AND TIMBERS	GRADE NO. 1 AND BETTER
LAGGING	GRADE NO. 2 AND BETTER

2. PLYWOOD SHEATHING SHALL BE FULL SIZE SHEET WHERE POSSIBLE WITH 48" X 32" MINIMUM SHEET SIZE AND LAID CONTINUOUSLY OVER TWO OR MORE SPANS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
   A. FLOOR OR TERRACE SHEATHING SHALL BE GRADE MARKED "D.F.P.A. EXTERIOR SHEATHING C-D GRADE" 3/4" THICK WITH EXTERIOR GLUE. PANEL I.D. RATING 32/16 OR BETTER. EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS. NAILED WITH 10d DEFORMED SHANK NAILS AT 6" O.C. AT EDGES AND BOUNDARIES, AT 10" O.C. IN FIELD. U.N.O.
   B. ROOF SHEATHING SHALL BE GRADE MARKED "D.F.P.A. EXTERIOR SHEATHING C-D GRADE" 1/2" THICK WITH EXTERIOR GLUE. PANEL SPAN RATING 24/0 OR BETTER. NAILED WITH 8d COMMON NAILS AT 6" O.C. AT EDGES AND BOUNDARIES, AT 12" O.C. IN FIELD UNLESS NOTED OTHERWISE.
   C. WOOD STRUCTURAL PANELS, WHEN USED STRUCTURALLY, SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN DOC PS 1-09 AND PS 2-10.
3. ALL NAILS SHALL BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. SEE FRAMING PLANS OR DETAILS FOR NAIL SIZES AND SPACINGS. NAILS THAT NOT DETAILED OR NOTED SHALL BE IN ACCORDANCE WITH 2022 CBC TABLE 2304.10.1 - FOR NAILING SCHEDULE.
4. ALL JOIST HANGERS AND FRAMING CONNECTORS SHALL BE "SIMPSON" OR APPROVED EQUAL.
5. NO STRUCTURAL MEMBER SHALL BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY NOTED.
6. BOLT HOLES SHALL BE SAME DIAMETER AS THAT OF THE BOLTS. PROVIDE WASHERS BETWEEN BOLT HEADS OR NUTS AND WOOD MEMBERS.
7. A PROPERLY SIZED NUT AND WASHER SHALL BE TIGHTENED ON EACH ANCHOR BOLT TO THE PLATE BEFORE CLOSING IN COMPLETION OF JOB.
8. ALL SILL PLATES RESTING ON CONCRETE OR MASONRY THAT ARE LESS THAN 8" ABOVE GRADE SHALL BE PRESSURE TREATED DOUGLAS FIR.
9. ALL SILL BOLTS SHALL BE PLACED STARTING 9" FROM THE ENDS OF A BOARD OR FROM A NOTCH AND SPACED AT INTERVALS AS NOTED ON THE PLANS.
10. BLOCKING OR BRIDGING SHALL BE PROVIDED AS REQUIRED PER C.B.C.
11. PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS THAT ARE PARALLEL TO JOISTS. USE 2-16d NAILS AT 16" O.C. TO NAIL THE DOUBLE JOISTS TOGETHER.
12. TOP PLATES FOR ALL STUD WALLS SHALL BE 2-2X. LAP FOR TOP PLATES SHALL BE 48" LONG MINIMUM NAILED WITH 16d AT 4" AT EACH LAP UNLESS NOTED OTHERWISE. SPLICES IN UPPER AND LOWER PLATES SHALL BE STAGGERED 10'-0" MINIMUM.
13. PRE-DRILL FOR NAILING AS REQUIRED WHEN NAIL SPACING RESULTS IN WOOD SPLITTING. PRE-DRILL HOLES SHALL BE SMALLER THAN THE DIAMETER OF THE NAILS.
14. ALL WOOD STUD WALLS SHALL HAVE 2X4 STUDS AT 16" O.C. WHEN HEIGHT BETWEEN LATERAL SUPPORTS LESS THAN 10'-0". WHEN HEIGHT BETWEEN LATERAL SUPPORTS MORE THAN 10'-0", USE 2X6 STUDS AT 16" O.C. UNLESS NOTICED OTHERWISE.
15. THE BOLT HOLES SHALL BE 1/16" (MAX.) OVERSIZED AT THE CONNECTOR OF THE HOLD-DOWN TO THE POST. "INSPECTOR TO VERIFY."
16. THE HOLD-DOWN CONNECTORS SHALL BE TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
17. APPROVED PLATE WASHERS, IN-LIEU OF CUT WASHERS, SHALL BE PROVIDED FOR ALL PLYWOOD SHEARWALL SILL PLATE ANCHOR BOLTS.
18. THE SILL PLATE ANCHOR BOLTS AND HOLD-DOWN CONNECTOR BOLTS AT ALL PLYWOOD SHEARWALL SHALL HAVE THE PLATE WASHERS AS LISTED IN ITEM 20.
19. CUTTING OR NOTCHING OF WOOD STUDS OR PLATES SHALL NOT EXCEED 25% OF THE STUD/PLATE WIDTH WITH THE EXTERIOR AND BEARING WALL AND NOT TO EXCEED 40% OF THE STUD/PLATE WIDTH IN NONBEARING PARTITIONS. BORED HOLES DIAMETER IS LIMITED TO 40% OF THE STUD/PLATE WIDTH IN ANY STUD AND MAY BE 60% IN NONBEARING PARTITIONS OR WHEN THE BORED STUD IS DOUBLED.
20. PLATE WASHERS FOR ALL ANCHOR BOLTS TYPICAL:

BOLT SIZE	PLATE SIZE (ASTM A-36)	MIN. EDGE DISTANCE (in)
5/8"ø	0.229"x3"x3"	1 7/8
3/4"ø	0.229"x3"x3"	2 1/2
7/8"ø	5/16"x3"x3"	2 5/8
1 1/4"ø	3/8"x3 1/2"x3 1/2"	3 3/4

NOTE:
1. APPROVE PLATE WASHERS TO BE USED FOR PLYWOOD SHEARWALL SILL PLATE ANCHOR BOLTS* AND FOR HOLDOWN CONNECTOR BOLTS AT SHEARWALLS. FOR WOOD TO WOOD OR WOOD TO STEEL CONNECTION.

NOTES:

1. ALL THE FASTENERS IN PRESSURE-TREATED AND FIRE-RETARDANT, TREATED WOOD SHALL BE OF HOT-DIPPED, ZINC-COATED GALVANIZED STEEL, STAINLESS, SILICON BRONZE OR COPPER.
2. SHEAR WALL ANCHOR BOLTS AND HOLD-DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.
3. SILLS AND SLEEPERS IN DIRECT CONTACT WITH CONCRETE OR MASONRY THAT IS IN DIRECT CONTACT WITH THE GROUND AND GIRDERS WITH LESS THAN 1/2" CLEARANCE TO MASONRY AND CONCRETE SHALL BE PRESSURE TREATED OR NATURALLY DURABLE TO DECAY.
4. ALL WOOD FRAMING MEMBERS THAT REST ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8" TO THE EXPOSED GROUND SHALL BE PRESSURE TREATED OR NATURALLY DURABLE TO DECAY.

FASTENING SCHEDULE

	CONNECTION	NAILING *
1.	JOIST TO SILL OR GIRDER, TOENAIL	3-8d
2.	BRIDGING TO JOIST, TOENAIL EACH END	2-8d
3.	1" X 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-8d
4.	WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3-8d
5.	2" SUBFLOOR TO JOIST OR GIRDER, BUND AND FACE NAIL	2-16d
6.	SOLE PLATE TO JOIST OR BLOCKING FACE NAIL	16d AT 16" O.C.
	SOLE PLATE TO JOIST, AT BRACED WALL PANEL	3"-16d PER 16"
7.	TOP PLATE TO STUD, END NAIL	2-16d
8.	STUD TO SOLE PLATE	4-8d, TOE NAIL OR SUPERSEDE THE SPECIFICATIONS OF WPSE.(END NAIL) 2-16d, END NAIL
9.	DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10.	DOUBLE TOP PLATES, FACE NAIL	16d AT 16" O.C.
	DOUBLE TOP PLATES, LAP SPLICE	8-16d
11.	BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE, TOE NAIL	3-8d
12.	RIM JOIST TO TOP PLATE, TOE NAIL	8d AT 6" O.C.
13.	TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2-16d
14.	CONTINUOUS HEADER TO STUD, TOE NAIL	16d AT 16" O.C. ALONG EACH EDGE
15.	CEILING JOISTS TO PLATE, TOE NAIL	3-8d
16.	CONTINUOUS HEADER TO STUD, TOE NAIL	4-8d
17.	CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-16d
18.	CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-16d
19.	RAFTER TO PLATE, TOE NAIL	3-8d
20.	1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d
21.	1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	3-8d
22.	WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3-8d
23.	BUILT-UP CORNER STUDS	16d AT 24" O.C.
24.	BUILT-UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2-20d AT ENDS AND AT EACH SPLICE
25.	2" PLANKS	2-16d AT EACH BEARING
26.	COLLAR TIE TO RAFTER	3-10d
27.	JACK RAFTER TO HIP	3-10d TOENAIL 2-16d FACE NAIL
28.	ROOF RAFTER TO 2-BY RIDGE BEAM	2-16d
29.	JOIST TO BAND JOIST	3-16d

* NOTE: COMMON OR BOX NAILS MAY BE USED (U.N.O.)

GLUED LAMINATED WOOD

1. MATERIALS, MANUFACTURE, AND QUALITY CONTROL FOR STRUCTURAL GLUED LAMINATED TIMBER SHALL BE IN CONFORMANCE WITH AMERICAN NATIONAL STANDARD ANSI/AITC A190.1-1983, "STRUCTURAL GLUED LAMINATED TIMBER", AND AITC 117, "DESIGN AND MANUFACTURING".
2. ALL GLU-LAM BEAMS SHALL BE FABRICATED USING EXTERIOR GLUE (WATERPROOF). ADHESIVES SHALL MEET THE REQUIREMENTS FOR DRY CONDITIONS OF SERVICE FOR INTERIOR USE AND WET CONDITIONS OF SERVICE FOR EXTERIOR BEAMS EXCEPT AS NOTED.
3. ALL GLU-LAM BEAMS SHALL BE IN ACCORDANCE WITH UBC TABLE 25C-1 AND SHALL HAVE THE FOLLOWING COMBINATION:
   SIMPLE SPAN . . . . .24F-V4 DF/DF
   CANTILEVER . . . . . 24F-V8 DF/DF
4. MANUFACTURER OF GLU-LAM BEAMS SHALL STAMP MEMBERS WITH AN I.D. MARK OF A QUALIFIED CENTRAL INSPECTION ORGANIZATION AND A CERTIFICATE OF CONFORMANCE SHALL BE SUBMITTED TO THE BUILDING INSPECTION DEPARTMENT AND ENGINEER PRIOR TO INSTALLATION.
5. ALL GLU-LAM BEAMS EXPOSED TO WEATHER SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN SECTION 2306.12 OF THE IBC.
6. ALL LAMINATIONS SHALL BE 1 1/2" THICK. LAMINATION COMBINATIONS SHALL MEET REQUIREMENTS OF PS 56 LATEST EDITION.
7. MOISTURE CONTENT SHALL BE BETWEEN 6 AND 16 PERCENT.
8. APPEARANCE SHALL BE INDUSTRIAL GRADE UNO.
9. PROVIDE TEMPORARY BRACING, BRIDGING AND SUPPORT UNTIL ROOF AND/OR FLOOR DIAPHRAGMS ARE SECURELY NAILED IN PLACE.
10. USE STANDARD CAMBER FOR ALL GIVE-LAM BEAM, U.N.O. ON FRAMING PLAN.
11. ADHESIVES SHALL MEET THE REQUIREMENTS FOR DRY CONDITIONS OF SERVICE FOR INTERIOR USE AND WET CONDITIONS OF SERVICE FOR EXTERIOR BEAMS EXCEPT AS NOTED.

SHEET INDEX

MANUFACTURED WOOD MEMBERS

1. WHERE PARALLAM "PSL" MEMBERS ARE INDICATED ON THE PLANS AND SCHEDULES THEY SHALL BE MANUFACTURED BY THE LEVEL TRUSS-JOIST "PSL" (ICC ESR-1387), GRADE: 2.0E. E=2000ksi, Fb=2900psi, Fv=290psi
2. PLYWOOD WEB JOISTS DENOTED TJI ARE TO BE MANUFACTURED

#	REVISION	DATE

AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mandi@aqxeng.com

REGISTERED PROFESSIONAL ENGINEER
QIANG XIAO
NO. S. 5289
EXP. 6/30/24
CIVIL
STATE OF CALIFORNIA

PROJECT NAME
THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
GENERAL NOTES

PROJECT#: DM23-013
DATE 10/20/2023
SCALE AS REFERENCED
SHEET NO.
SN-1

GENERAL STRUCTURAL NOTES

STRUCTURAL OBSERVATION

1. STRUCTURAL OBSERVATIONS BY AN INDEPENDENT ENGINEER OR THE ENGINEER OF RECORD SHALL BE MADE IN ACCORDANCE WITH SECTION 1709 OF THE CALIFORNIA BUILDING CODE AT THE EXPENSE OF THE OWNER TO REVIEW THE CONSTRUCTION OF THE PROJECT. STRUCTURAL OBSERVATION NEED TO PERFORM AS DEFINED IN SECTION 1702. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES, AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR(S).
2. THE OWNER SHALL EMPLOY THE STRUCTURAL ENGINEER OR ARCHITECT OF RECORD OR THEIR DESIGNATED AGENT TO PERFORM THE STRUCTURAL OBSERVATION.
3. EVIDENCE OF EMPLOYMENT BY THE OWNER SHALL BE PROVIDED TO THE BUILDING INSPECTOR BEFORE THE FIRST SITE VISIT. THE OWNER SHALL BE MADE AWARE OF ANY PRECONSTRUCTION MEETING TO BE ATTENDED BY THE STRUCTURAL OBSERVER.
4. IN THE PRECONSTRUCTION MEETING ATTENDED BY THE GENERAL CONTRACTOR, APPROPRIATE SUBCONTRACTORS, AND DEPUTY INSPECTORS, THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS WHICH REQUIRE STRUCTURAL OBSERVATION WILL BE IDENTIFIED. A RECORD OF THE MEETING SHALL BE INCLUDED IN THE FIRST OBSERVATION REPORT.
5. REQUIRED OBSERVATIONS ARE TO OCCUR AT THE FOLLOWING STAGES OF CONSTRUCTION AS A MINIMUM, FOR EACH BUILDING. NOTIFY ENGINEER 72 HOURS PRIOR TO EACH OBSERVATION.

REQUIRED IF CHECKED	ITEMS
●	A. PRIOR TO PLACEMENT OF CONCRETE FOR THE FIRST FOUNDATION POUR.
	B. REBAR LAYOUTS AND HOLDOWN ANCHORS AT BASEMENT WALLS
●	C. AFTER NAILING OF ALL OR ANY PLYWOOD SHEAR WALLS AND ALL HOLDOWNS, DRAGS, STRAPS ARE IN PLACE. PRIOR TO COVERING.
	D. AFTER NAILING OF FLOOR PLYWOOD DIAPHRAGM(S); PRIOR TO COVERING.
●	E. AFTER NAILING OF ROOF PLYWOOD DIAPHRAGM(S); PRIOR TO COVERING.

6. A REPORT PREPARED ON DEPARTMENT FORMS OR FORMS PREPARED BY THE ENGINEER OR ARCHITECT OF RECORD FOR EACH SIGNIFICANT STAGE OF CONSTRUCTION OBSERVED, SHALL BE SENT TO THE CONTRACTOR OR LEFT AT THE PROJECT SITE FOR THE CONTRACTOR TO FORWARD TO THE BUILDING INSPECTOR. THE FORMS SHALL BE WET SIGNED AND SEALED BY THE RESPONSIBLE STRUCTURAL OBSERVER, AN ADDITIONAL SINGED COPY OF THE REPORT SHALL BE PROVIDED TO THE OWNER, CONTRACTOR, AND DEPUTY INSPECTOR AS REQUESTED.
7. A FINAL OBSERVATION REPORT MUST BE SUBMITTED TO THE BUILDING OFFICIAL WHICH SHOWS THAT THE STRUCTURAL SYSTEM GENERALLY CONFORMS TO THE APPROVED PLANS AND SPECIFICATIONS. IF ALL DEFICIENCIES HAVE NOT BEEN ADEQUATELY ADDRESS TO THE STRUCTURAL ENGINEERS KNOWLEDGE, THIS FINAL OBSERVATION REPORT WILL DELINEATE OUTSTANDING ISSUES.
8. IF THE OWNER ELECTS TO CHANGE THE STRUCTURAL OBSERVER OF RECORD, THE OWNER SHALL:
   A. NOTIFY THE BUILDING INSPECTOR IN WRITING BEFORE THE NEXT INSPECTION.
   B. CALL AN ADDITIONAL PRECONSTRUCTION MEETING, AND, FURNISH THE REPLACEMENT STRUCTURAL OBSERVER WITH A COPY OF PREVIOUS OBSERVER REPORTS.
   C. THE NEW OBSERVER SHALL BE RESPONSIBLE FOR APPROVAL OF THE CORRECTION OF ALL THE ORIGINAL OBSERVED NOTED DEFICIENCIES.
9. THE ENGINEER OR ARCHITECT OF RECORD SHALL DEVELOP ALL CHANGES TO THE STRUCTURAL SYSTEMS AT THE CONTRACTORS EXPENSE.

SPECIAL INSPECTION PROGRAM AND STRUCTURAL TEST

1. THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR'S DUTIES ARE AS DESCRIBED IN CBC 1701.1 AND CBC 1704.4. COPIES OF TEST RESULTS AND FINAL REPORTS SHALL BE FURNISHED TO THE ENGINEER IN ADDITION TO OTHER NORMAL DISTRIBUTIONS WITHIN ONE WEEK OF THE TEST OR INSPECTION.
2. ALL TEST AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY EMPLOYED BY THE OWNER OR THE ENGINEER OR THE ARCHITECT AND NOT THE CONTRACTOR PER CBC SECTION 106.3.5. JOB SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE A SPECIAL INSPECTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND INSPECTION FIRM WITH A SCHEDULE TO FACILITATE THE PROPER COORDINATION OF WORK.
4. IN ADDITION TO THE REQUIRED INSPECTIONS, THE FOLLOWING CHECKED ITEMS WILL REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1704.5 OF THE CALIFORNIA BUILDING CODE.

ITEM	REQ'D. IF CHECKED	REMARKS
GRADING AND SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION SEE FOUNDATION THIS SHEET.		TO BE PROVIDED BY THE GEOTECHNICAL ENGINEER
DURING THE TAKING OF TEST SPECIMENS AND PLACING OF ALL REINFORCED CONCRETE, WITH THE EXCEPTION OF FOUNDATION CONCRETE WHEN THE STRUCTURAL DESIGN STRENGTH IS GREATER THAN F'C = 2500 PSI. U.N.O.	●	SLAB ON GRADE DOES NOT REQUIRE SPECIAL INSPECTION
DURING PLACING OF AND STRESSING OF PT TENDONS		
ALL STRUCTURAL FIELD WELDING, INCLUDING WELDING OF STRUCTURAL STEEL, REINFORCING STEEL, AND STEEL DECKING.		
INSTALLATION AND TIGHTENING OPERATIONS FOR ALL HIGH-STRENGTH FRICTION BOLTING (A325F) AND (A490F). INSTALLATION AND TIGHTENING OPERATIONS FOR HIGH-STRENGTH ANCHOR BOLTS.		HARDY FRAME
DURING INSTALLATION OF EPOXY AND/OR EXPANSION ANCHORS.	●	FOR REPAIR ONLY
DURING THE PLACEMENT OF AND TAKING OF TEXT SPECIMENS FOR ALL MASONRY UNLESS SPECIFICALLY INDICATED AS NOT REQUIRING SPECIAL INSPECTION.		
DURING PLACING OF REINFORCING STEEL.		
ANCHOR BOLTS IN CONCRETE AND/OR MASONRY.		INCLUDING HARDY FRAMES, HDU
WOOD SHEAR WALLS AND DIAPHRAGMS WITH NAILING 4"O.C. OR LESS.	●	

5. APPROVED FABRICATORS: (MUST SUBMIT CERTIFICATE OF COMPLIANCE) FOR ALL OFFSITE FABRICATION SUCH AS STRUCTURAL STEEL, GLU-LAMS, PRECAST CONCRETE, ETC.
6. ALL STRUCTURAL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 1905.6. RESULTS OF TESTS SHALL BE SUBMITTED BY THE TESTING AGENCY TO THE ENGINEER FOR REVIEW. WHERE STRENGTH TEST RESULTS INDICATE A STRENGTH LOWER THAN THE SPECIFIED COMPRESSIVE STRENGTH, FURTHER INVESTIGATION SHALL BE MADE PER CBC SECTION 1905.6.4 AT THE EXPENSE OF THE CONTRACTOR.
7. ALL STRUCTURAL MASONRY SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 2105 (INCLUDING MORTAR AND GROUT). MASONRY PRISMS SHALL BE PREPARED AND TESTED IN ACCORDANCE WITH CBC STANDARD 21-17. (NOTE – FULL ALLOWABLE MASONRY STRESSES HAVE BEEN USED IN DESIGN) ADDITIONAL TESTING AND WORK REQUIRED AS A RESULT OF DEFICIENT MASONRY STRENGTH SHALL BE AT THE EXPENSE OF THE CONTRACTOR. TEST RESULTS SHALL BE SUBMITTED BY THE TESTING AGENCY TO THE ENGINEER FOR REVIEW.

STANDARD ABBREVIATIONS:

A.B.	ANCHOR BOLT	HDR.	HEADER
A.W.P.A.	ALIGN WITH POST ABOVE	HT.	HEIGHT
ABV./A.	ABOVE	HORIZ.	HORIZONTAL
B	BOTTOM	JT.	JOINT
BAR	REINF. BAR	K	KIPS
BD	BOARD	KCJ	KEYED CONTROL JOINT
BLD'G.	BUILDING	KSF	KIPS PER SQUARE FOOT
BLW.	BELOW	L	LENGTH
BM	BEAM	LT.	LIGHT
B.N.	BOUNDARY NAIL	LT.WT.	LIGHT WEIGHT
BOT.	BOTTOM	MAS.	MASONRY
B.W.	BOTH WAYS	MAT'L.	MATERIAL
C	CHANNEL	MAX.	MAXIMUM
CANT.	CANTILEVERED MEMBER	MIN.	MINIMUM
C/F	CONTINUOUS FOOTING	M.B.	MACHINE BOLT
C/J	CEILING JOIST	(N)	NEW
CL	CENTERLINE	N.G.	NATURAL GRADE
CLR.	CLEAR	O/C	ON CENTER
COL.	COLUMN	P.	POST
CONC.	CONCRETE	PJ	POUR JOINT
CONN.	CONNECTION	PL.	PLATE
CONT.	CONTINUOUS	PLYWD	PLYWOOD
D	DEPTH	PSI	POUNDS PER SQUARE INCH
db	DIAMETER OF BAR	P.T.	PRESSURE TREATED
DBA	DEFORMED BAR ANCHOR	P.T.	POST-TENSIONED
DBL	DOUBLE	REVE.	REVERSE
DIA.	DIAMETER	REINF.	REINFORCING
DIM.	DIMENSION	REQ'D	REQUIRED
DO	DITTO	RF	ROOF
(E)	EXISTING	RJ	ROOF JOIST
EA.	EACH	RR	ROOF RAFTER
E.F.	EACH FACE	SECT.	SECTION
EL.	ELEVATION	SHT.	SHEET
E.J.	EXPANSION JOINT	SHT'G	SHEATHING
E.N.	EDGE NAILING	SIM	SIMILAR
E.O.S.	EDGE OF SLAB	SIMP.	SIMPSON PRODUCT
EQ.	EQUAL	SQ.	SQUARE
E.S.	EDGE SCREW	STD.	STANDARD
E/W	EACH WAY	STL	STEEL
EXP.	EXPANSION	SW	SHEAR WALL
FB	FLOOR BEAM	T	TOP
F.D.	FOUNDATION DRAIN	T.F.	TOP OF FOOTING
FDN.	FOUNDATION	THK.	THICK
FG	FINISH GRADE	T.O.B.	TOP OF BEAM
F/J	FLOOR JOIST	T.O.C.	TOP OF CONCRETE
FL.	FLUSH	T.O.L.	TOP OF LEDGER
FLR.	FLOOR	T.O.M.	TOP OF MASONRY
FMG.	FRAMING	T.O.S.	TOP OF STEEL/SHT'G/SLAB
F.N.	FIELD NAILING	T.O.W.	TOP OF WALL
		TS	TUBE STEEL

Notes :
1. All concrete shall be Pc=4500 psi(minimum) with type V cement maximum water cement ratio of 0.45. No special inspection required if concrete truck mix ticket is provided.
2. "The contractor shall notify inspector prior to starting excavations or any grading work."
3. "extend all excavations for footings below natural grade as shown on structural drawing."
4. "all excavations for footings must be inspected and approved by inspector prior to pouring of concrete."
5. "All fill shall be placed in maximum 2" layers and compacted to 90% density to support footings."
6. Sill plates shall be 8" min. above grade. Reminder: alternate detail of 3 1/2" wide, 2" tall curb can be added on to meet the requirement.
7. Pre-construction meeting with the city inspector is required.
8. Verify the size of existing footing, show the depth and width to be verified.

#	REVISION	DATE

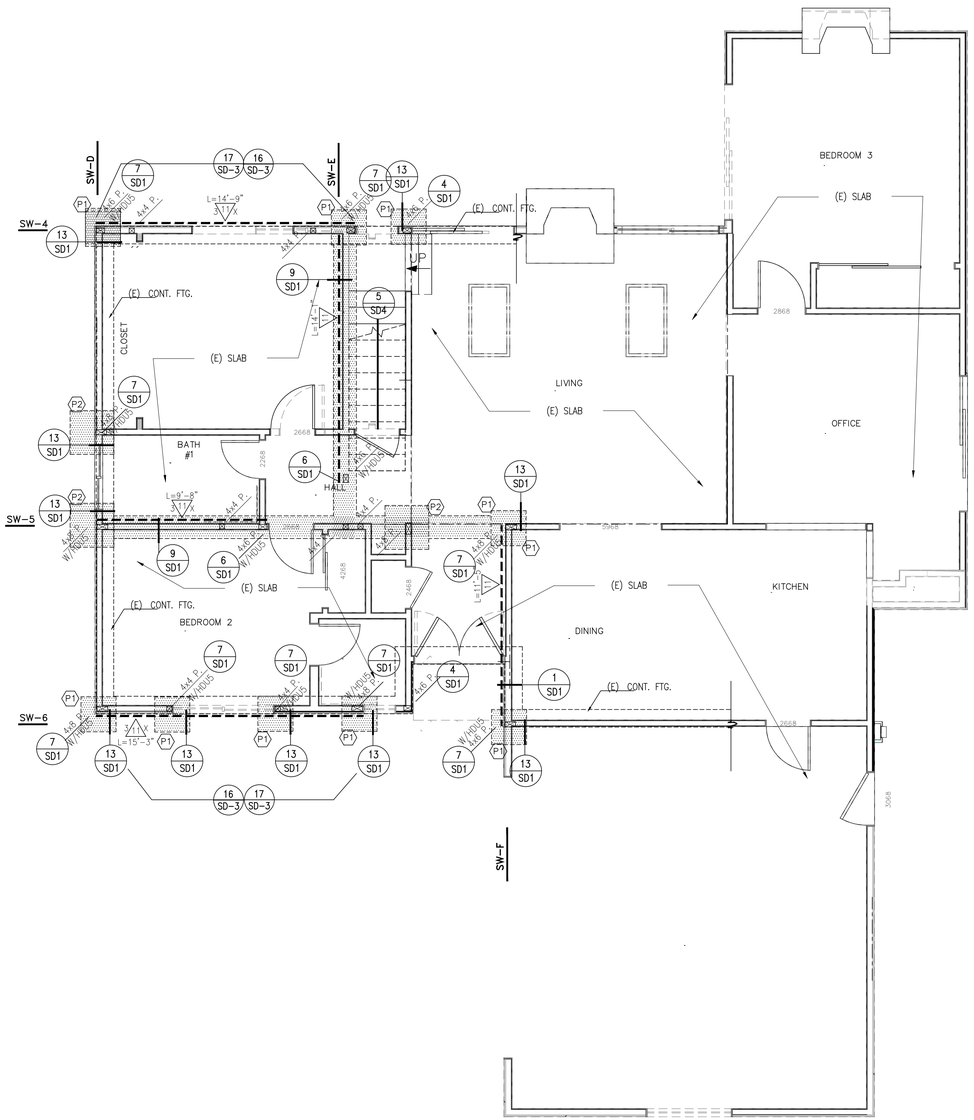
AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

REGISTERED PROFESSIONAL ENGINEER
QIANG XIAO
NO. S. 5289
EXP. 6/30/24
STRUCTURAL
STATE OF CALIFORNIA

PROJECT NAME
THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
GENERAL NOTES

PROJECT#: DM23-013
DATE 10/20/2023
SCALE AS REFERENCED
SHEET NO.
SN-2



FOUNDATION PLAN

SCALE: 1/4" = 1'-0" NOTE: COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCH'L DRAWINGS

FOUNDATION NOTES

1. SEE SPECIFICATIONS ON SHEET SN-1 FOR ADDITIONAL INFORMATION.
2. BUILDING PAD SOIL BEARING VALUE SHOULD BE AT LEAST 1500 p.s.f.
3. CEMENT USED IN FOUNDATIONS SHALL BE TYPE V UNLESS OTHERWISE REQUIRED BY THE SOIL ENGINEER.
4. THE FLOOR SLAB SHALL BE POURED LEVEL TO WITHIN 1/8 INCH IN 10 FEET.
5. THE FLOOR SLAB AND FOUNDATION MAY BE POURED HOMOGENEOUSLY (AT THE SAME TIME) OR IN TWO POURS, WITH A COLD JOINT BETWEEN THE SLAB AND FOUNDATION, AT THE CONTRACTORS DISCRESSION. THE DETAILS DRAWN GENERALLY SHOW TWO POURS.
6. ANCHOR BOLTS: AT ALL EXTERIOR WALLS, INSTALL A 5/8" DIA. ANC. BOLTS @ 48" O.C. WITH MINIMUM EMBEDMENT OF 7 INCHES INTO CONCRETE (U.N.O. ON SHEAR WALL SCHED.) INCLUDING AT LEATST ONE WITHIN A MAXIMUM OF 12" FROM EACH END. PLATES SMALLER THAN 24" IN LENGTH, SHALL BE PROVIDED WITH AT LEAST TWO ANC. BOLTS UNLESS OTHERWISE INDICATED ON PLANS. PROVIDE ALL EXTERIOR WALLS AS INDICATED ON PLANS. SEE FLOOR FRAMING PLAN FOR REFERENCE IN PROVIDING AN EXTENSION OF ANCHOR BOLTS ABOVE CONCRETE. HARDWARE SHALL BE TIED INPLACE PRIOR TO PLACEMENT OF CONCRETE.
7. ANY PENETRATIONS INTO PRESSURE TREATED WOOD MUST BE GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER NAILS.
8. FOUNDATION SILL PLATE SHALL BE TREATED LUMBER OR FOUNDATION RED WOOD.
9. HOLDOWNS: SEE FOUNDATION PLAN OR FLOOR FRAMING PLAN FOR REFERENCE TO HOLDOWN LOCATION AND HARDWARE EXTENSIONS TO CONCRETE FOUNDATION.

   SEE: 6/SD1, 7/SD1, 10/SD1 FOR HOLDOWN DETAILS.
10. RESIDENTIAL FLOOR SLAB: PLACE SLAB REINFORCEMENT IN CENTER OF SLAB. REINFORCEMENT SHALL BE CHAIRED AND TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE. A VISQUEEN VAPOR BARRIER SHALL BE PLACED AT ALL MOISTURE SENSITIVE FLOOR AREAS. PROVIDE SEAMS WITH AT LEAST A 6" OVERLAP AND SEAL TAPE.

FLOOR SLAB THICKNESS	FLOOR SLAB REINFORCEMENT	VISQUEEN	LOWER SAND LAYER
5"	#4 BARS AT 16" O.C. EACH WAY	10 MIL LOCATED UNDER THE SLAB.	4"THK. BASE OF 1/2" OR LAGER CLEAR AGGREGATE

11. REFER TO ARCH. DWG. FOR TOP-OF-SLAB ELEVATIONS.
12. NEW / EXISTING OR DEMO STUD WALLS NEED TO BE VERIFIED WITH ARCH. DRAWINGS.
13. ALL HOLDOWNS ANCHOR BOLTS AND STRAPS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION AND POURING CONCRETE.
14. SHOT PINS: AT ALL INTERIOR, NON BEARING, NON SHEAR WALLS AND PARTITIONS, INSTALL A 0.145" DIA. X 2.875" LONG, SHANK AND METAL PLATE WASHER AT 36" O.C. ADDING ONE AT EACH END. PLATES SMALLER THAN 16" IN LENGTH SHALL HAVE A MINIMUM OF TWO FASTENERS, ONE AT EACH END. PLATES 16" OR LONGER AND INDICATED AS SHEAR WALLS, PLACE TWO ADDITIONAL FASTENERS, ONE AT 6" AND ANOTHER AT 10" FROM EACH END.
15. COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECT DRAWINGS.

SYMBOLS & LEGENDS

- WOOD STUD WALL
- (N) CONTINUE/PAD FTG.
- SHEAR PANEL NUMBER, MIN. LENGTH NOTED, REFER TO DETAIL 14/SD2 FOR PANEL TYPE
- (E) CONTINUE FTG.
- DETAIL NUMBER / DETAIL SHEET NUMBER

PAD FOOTING SCHEDULE

NO.	SIZE	THICKNESS	REINFORCEMENT EACH WAY
P1	2'-0" SQ.	1'-0"	(3)-#4, BOTTOM
P2	2'-6" SQ.	1'-0"	(3)-#4, BOTTOM
P3	3'-0" SQ.	1'-0"	(4)-#5, BOTTOM
P4	3'-6" SQ.	1'-0"	(4)-#5, BOTTOM
P5	4'-0" SQ.	1'-0"	(4)-#5, BOTTOM

CONTRACTOR NOTE:

- CONTRACTOR TO VERIFY ALL EXISTING FRAMING/CONDITIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMMEDIATELY PRIOR TO COMMENCING ANY WORK.

IMPORTANT (E) POST TENSION SLAB VERIFICATION NOTE: CONTRACTOR SHALL BE VERIFIED & PROTECTED THE (E)CABLES AT THE (E) POST TENSION SLAB (WHERE OCCURS)DURING THE CONSTRUCTION TASK.

#	REVISION	DATE

AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

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QIANG XIAO
NO. S. 5289
EXP. 6/30/24
STATE OF CALIFORNIA

PROJECT NAME
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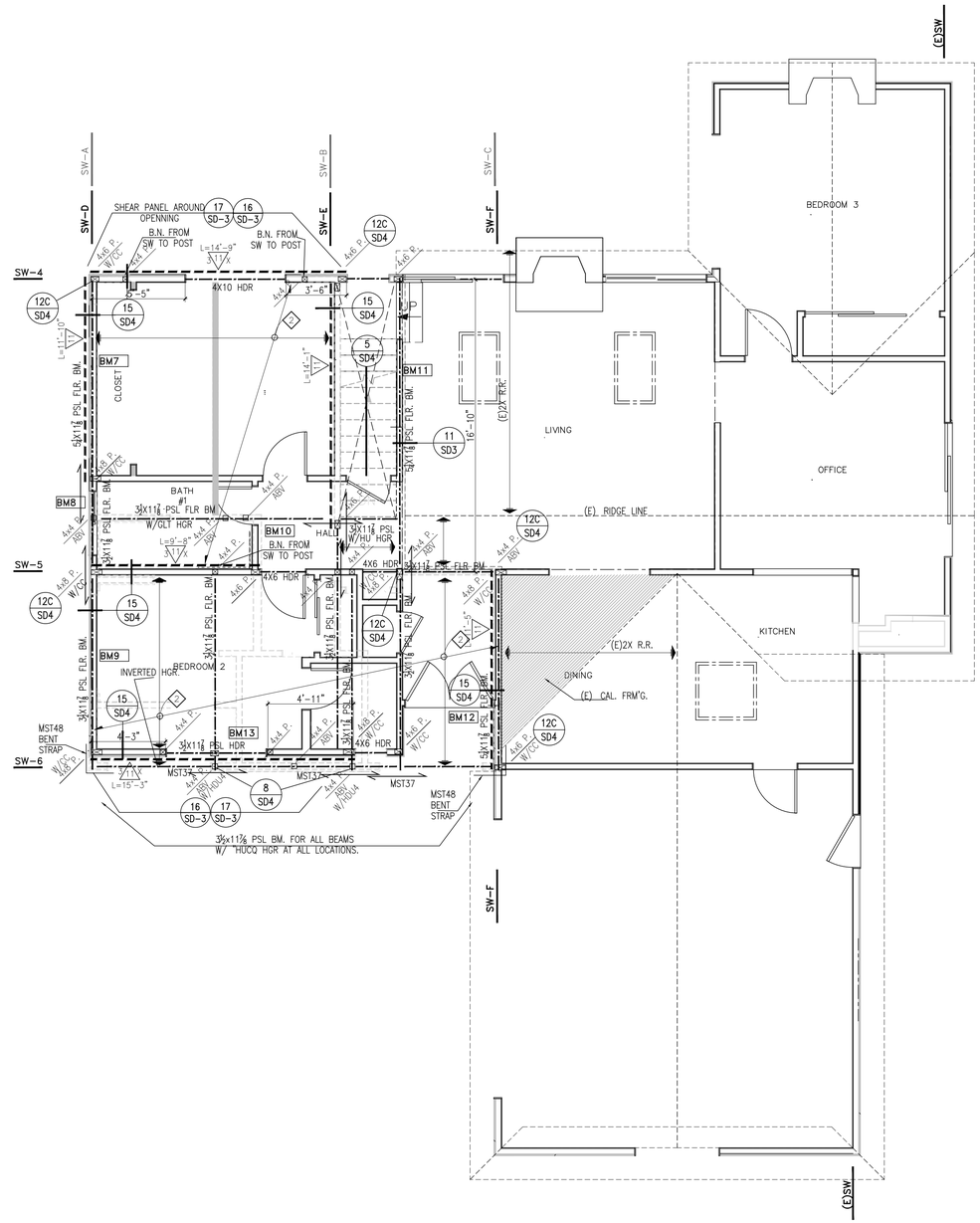
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
FOUNDATION PLAN

PROJECT#: DM23-013
DATE 10/20/2023
SCALE AS REFERENCED
SHEET NO.
S-1



LOW ROOF/FLOOR FRAMING PLAN

SCALE: 1/4" = 1'-0" NOTE: COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCH'L DRAWINGS

FRAMING NOTES

1. FOR GENERAL NOTE SEE SN-1.
2. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. FOR DIMENSIONS NOT SHOWN SEE ARCHITECTURAL DRAWINGS.
3. DOUBLE TOP PLATES SHOULD BE CONTINUOUS OVER ALL HEADERS. U.N.O. ON FRAMING PLAN OR DETAILS, SEE 18/SD2 FOR DOUBLE TOP PLATES SPLICES.
4. ALL BEAMS AT HARDY FRAME SHEAR LINES, SHOULD BE CONTINUED OVER HARDY-FRAMES, (U.N.O. ON FRAMING PLAN OR RELATED DETAILS. SEE DETAIL PER PLAN.
5. ALL BEAMS WITH WIDTH 5¼" OR MORE, OR MARKED AS "DRAG" NEED TO HAVE (2) ROWS OF B.N.
6. FOR PLYWOOD X SHEAR WALL SCHEDULE SILL PLATE AND ANCHOR BOL REQUIREMENTS SEE DETAIL. 14/SD2 FOR NAILING SCHEDULE SEE
7. FOR TYPICAL DIAPHRAGM DET. SEE 17/SD2
   FOR ROOF DIAPHRAGM 1/2" CDX, PLYWOOD W/8d @ 6:6:12 (COMMON NAIL) PANEL SPAN RATING 24/0 OR BETTER.
   FLOOR/DECK DIAPHRAGM 3/4" CDX, PLYWOOD W/10d @ 6:6:10 (COMMON NAIL), U.N.O. PANEL I.D. RATING 32/16 OR BETTER, T&G.
8. NOT USED.
9. FOR LOCATION AND FRAMING OF NON-BEARING WALLS, SEE ARCHITECTURAL DRAWINGS.
10. NOT USED.
11. ALL GLU-LAM BEAMS SHALL BE 24F V4 DF/DF U.N.O.
12. MULTIPLE ELEMENT MEMBERS (i.e. DBL JOISTS, DBL STUDS, etc.) SHALL BE NAILED TOGETHER W/ 16d's @ 16" O.C. STAGGERED. BEAMS COMPOSED OF MULTIPLE PIECES (4x OR LARGER) SHALL BE BOLTED TOGETHER W/ 5/8"ø M.B.'S @ 12" O.C., STAG'D. ALSO SEE DET. 1/SD2 FOR DBL. JOIST CONNECTION.
13. WALL STUDS:
    1) EXTERIOR WALLS:
       a) 2x4 STUDS @16" O.C., U.N.O. ON ARCHITECTURAL PLAN.
       b) ALL OUTSIDE WALL OF EXTERIOR WALL ARE BEARING WALL (U.N.O.).
    2) INTERIOR WALLS:
       a) ALL INTERIOR SHEAR/ BEARING WALLS SHALL BE 2x4 MIN. STUD GRADE OR BETTER STUDS @16" O.C. FOR 4" WALLS & 2X6 MIN. DFL STUD GRADE OR BETTER STUDS @16" O.C. FOR 6" WALLS,
       b) ALL INTERIOR NON-BEARING/ NON-SHEAR WALL SHALL BE 2x4 OR 2x6 STUD GRADE OR BETTER STUDS @16" O.C. U.N.O.
14. U.N.O. PROVIDE SOLID BLOCKING OR DBL. JOIST UNDER ALL WALLS ABOVE.
15. WHERE HANGERS ARE NEEDED, WHETHER INDICATED ON PLAN OR NOT, U.N.O., USE "U" "ITT" OR "LB" HANGERS FOR JOISTS/RAFTERS, & "HUTF" OR "HW" HANGERS FOR BEAMS OR MULTIPLE JOISTS.
16. WHERE SHEAR WALLS ARE THRU WALLS AS INDICATED ON PLANS, SHEAR MATERIAL SHALL BE CONT. THRU WALLS.
17. ALL POSTS/MULTIPLE STUDS IN WALLS SHALL RECEIVE EDGE NAILING FROM WALL SHEATHING. ALL BM'S, DRAGS GIRDER TRUSSES SHALL RECEIVE BOUNDARY NAILING FROM SHEATHING.
18. WHENEVER A DETAIL IS CALLED ON A WALL LINE (FOR EXAMPLE, 2/S6. WITH A35'S AT 18" O.C.), IT NEEDS TO BE APPLIED TO THE FULL LENGTH OF THAT WALL. NOT JUST AT THE SPOTS IT IS KEYED OUT OR JUST AT SHEAR PANEL PORTION OF THE WALL.
19. CONTRACTOR SHALL VERIFY EXACT HEIGHT AND LOCATION OF HARDY FRAME.
20. FURR CEILINGS TO CONCEAL VALLEY OR HIP THAT ARE BELOW TOP PLATE LINE.
21. FURR ALL WALL AS REQ'D IF SHEAR WALL DOES NOT COVER ENTIRE WALL TO WALL FLUSH.
22. SHEAR WALLS ARE TO ROOF SHEATHING.
23. WHERE TOP PLATES OR SOLE PLATES ARE CUT FOR WIDE SHALL BE FASTENED TO EACH PLATE ACROSS AND TO EACH SIDE OF THE OPENING WITH NOT LESS THAN 6-16d NAILS.
24. ALL WATER HEATERS SHALL BE PROVIDED WITH SEISMIC STRAPS.

FRAMING MEMBERS:

- 2X8 R.R. @16"O.C.
- 11 7/8" TJI 360 F.J. @16"O.C.

SYMBOLS & LEGENDS

- COLUMN OR TRIMMER AS NOTED
- SPAN AND DIRECTION OF JOIST FRAMING MEMBER PER PLAN
- (E) WOOD STUD WALL
- WALL FLOOR ABOVE
- WOOD STUD WALL
- SHEAR PANEL NUMBER, MIN. LENGTH NOTED, REFER TO DETAIL 14/SD2 FOR PANEL TYPE
- FLOOR/ROOF JOIST / CEILING JOIST
- DETAIL NUMBER / DETAIL SHEET NUMBER

CONTRACTOR NOTE:

- CONTRACTOR TO VERIFY ALL EXISTING FRAMING/CONDITIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMMEDIATELY PRIOR TO COMMENCING ANY WORK.

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AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

REGISTERED PROFESSIONAL ENGINEER GANG KYAO NO. S. 5289 EXP. 6/30/24 STRUCTURAL OF CALIFORNIA

PROJECT NAME
THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
LOW ROOF/ FLOOR FRAMING PLAN

PROJECT#: DM23-013
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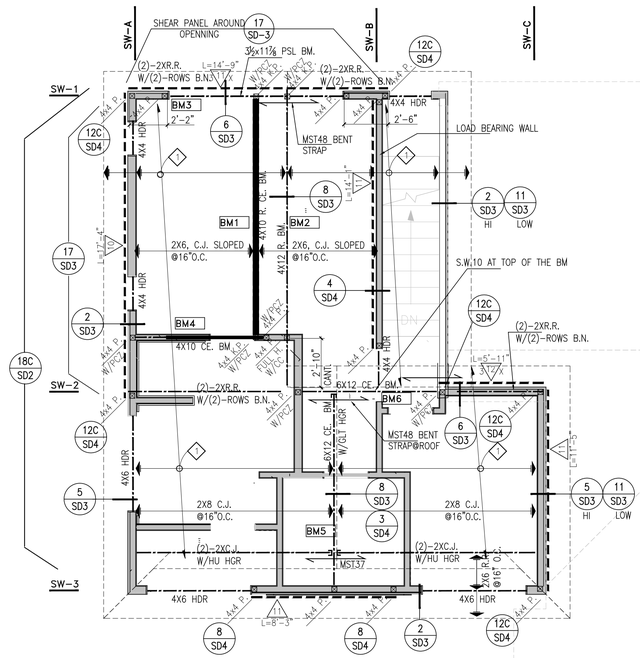

ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0" NOTE: COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCH'L DRAWINGS

FRAMING NOTES

1. FOR GENERAL NOTE SEE SN-1.
2. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. FOR DIMENSIONS NOT SHOWN SEE ARCHITECTURAL DRAWINGS.
3. DOUBLE TOP PLATE'S SHOULD BE CONTINUOUS OVER ALL HEADERS. U.N.O. ON FRAMING PLAN OR DETAILS, SEE 18/SD2 FOR DOUBLE TOP PLATES SPLICES.
4. ALL BEAMS AT HARDY FRAME SHEAR LINES, SHOULD BE CONTINUED OVER HARDY-FRAMES, (U.N.O. ON FRAMING PLAN OR RELATED DETAILS. SEE DETAIL PER PLAN.
5. ALL BEAMS WITH WIDTH 5¼" OR MORE, OR MARKED AS "DRAG" NEED TO HAVE (2) ROWS OF B.N.
6. FOR PLYWOOD X SHEAR WALL SCHEDULE SILL PLATE AND ANCHOR BOL REQUIREMENTS SEE DETAIL. 14/SD2 FOR NAILING SCHEDULE SEE
7. FOR TYPICAL DIAPHRAGM DET. SEE 17/SD2
   FOR ROOF DIAPHRAGM 1/2" CDX, PLYWOOD W/8d @ 6:6:12 (COMMON NAIL) PANEL SPAN RATING 24/0 OR BETTER.
   FLOOR/DECK DIAPHRAGM 3/4" CDX, PLYWOOD W/10d @ 6:6:10 (COMMON NAIL), U.N.O. PANEL I.D. RATING 32/16 OR BETTER, T&G.
8. NOT USED.
9. FOR LOCATION AND FRAMING OF NON-BEARING WALLS, SEE ARCHITECTURAL DRAWINGS.
10. NOT USED.
11. ALL GLU-LAM BEAMS SHALL BE 24F V4 DF/DF U.N.O.
12. MULTIPLE ELEMENT MEMBERS (i.e. DBL JOISTS, DBL STUDS, etc.) SHALL BE NAILED TOGETHER W/ 16d's @ 16" O.C. STAGGERED. BEAMS COMPOSED OF MULTIPLE PIECES (4x OR LARGER) SHALL BE BOLTED TOGETHER W/ 5/8"ø M.B.'S @ 12" O.C., STAG'D. ALSO SEE DET. 1/SD2 FOR DBL. JOIST CONNECTION.
13. WALL STUDS:
    1) EXTERIOR WALLS:
       a) 2x4 STUDS @16" O.C., U.N.O. ON ARCHITECTURAL PLAN.
       b) ALL OUTSIDE WALL OF EXTERIOR WALL ARE BEARING WALL (U.N.O.).
    2) INTERIOR WALLS:
       a) ALL INTERIOR SHEAR/ BEARING WALLS SHALL BE 2x4 MIN. STUD GRADE OR BETTER STUDS @16" O.C.. FOR 4" WALLS & 2X6 MIN. DFL STUD GRADE OR BETTER STUDS @16" O.C.. FOR 6" WALLS,
       b) ALL INTERIOR NON-BEARING/ NON-SHEAR WALL SHALL BE 2x4 OR 2x6 STUD GRADE OR BETTER STUDS @16" O.C. U.N.O.
14. U.N.O. PROVIDE SOLID BLOCKING OR DBL. JOIST UNDER ALL WALLS ABOVE.
15. WHERE HANGERS ARE NEEDED, WHETHER INDICATED ON PLAN OR NOT, U.N.O., USE "U" "ITT" OR "LB" HANGERS FOR JOISTS/RAFTERS, & "HUTF" OR "HW" HANGERS FOR BEAMS OR MULTIPLE JOISTS.
16. WHERE SHEAR WALLS ARE THRU WALLS AS INDICATED ON PLANS, SHEAR MATERIAL SHALL BE CONT. THRU WALLS.
17. ALL POSTS/MULTIPLE STUDS IN WALLS SHALL RECEIVE EDGE NAILING FROM WALL SHEATHING. ALL BM'S, DRAGS GIRDER TRUSSES SHALL RECEIVE BOUNDARY NAILING FROM SHEATHING.
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19. CONTRACTOR SHALL VERIFY EXACT HEIGHT AND LOCATION OF HARDY FRAME.
20. FURR CEILINGS TO CONCEAL VALLEY OR HIP THAT ARE BELOW TOP PLATE LINE.
21. FURR ALL WALL AS REQ'D IF SHEAR WALL DOES NOT COVER ENTIRE WALL TO WALL FLUSH.
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24. ALL WATER HEATERS SHALL BE PROVIDED WITH SEISMIC STRAPS.

FRAMING MEMBERS:

1 (N)2X8 R.R. @16"O.C.

SYMBOLS & LEGENDS

- COLUMN OR TRIMMER AS NOTED
- (E) WOOD STUD WALL
- SPAN AND DIRECTION OF JOIST FRAMING MEMBER PER PLAN
- WOOD STUD WALL
- SHEAR PANEL NUMBER, MIN. LENGTH NOTED, REFER TO DETAIL 14/SD2 FOR PANEL TYPE
- FLOOR/ROOF JOIST / CEILING JOIST
- DETAIL NUMBER / DETAIL SHEET NUMBER

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AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

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THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
ROOF FRAM'G. PLAN

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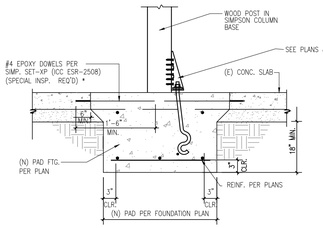
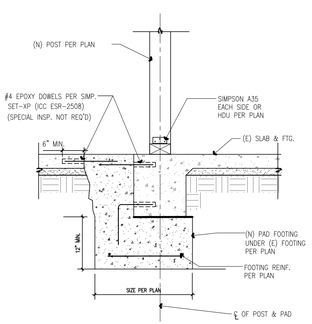


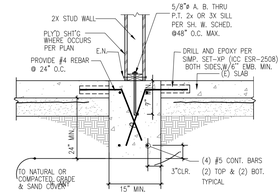
(N) COLUMN PAD WITH "HDU"

18



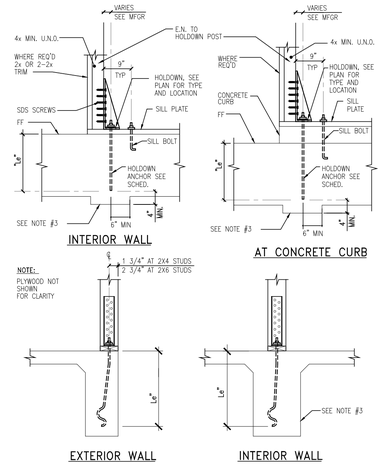
(N) PAD FOOTING @ (E) INT. FTG.

13



ADD (N) SHEAR WALL AT (E) FTG.

9



HOLDOWN AND EMBEDMENT SCHEDULE
(MIN. 2500 PSI CONCRETE)

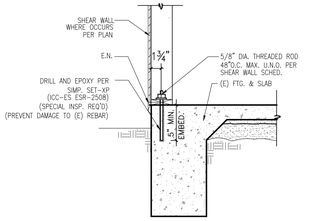
MODEL NO	MINIMUM POST SIZE	ANCHOR BOLT SIZE	MIN. EMBED "La"	ANCHOR * TYPE	CAPACITY (lbs.) CORNER	CAPACITY (lbs.) END
HDU2-SDS2.5	2-2X (4X @ CORNER)	5/8"	21"	SSTB24	3325	3325
HDU4-SDS2.5	2-2X (4X @ CORNER)	5/8"	18"	SBS/BX24	5730	5730
HDU5-SDS2.5	2-2X (4X @ CORNER)	5/8"	18"	SBS/BX24	5730	5730
HDU8-SDS2.5	4x	7/8"	25"	SSTB28	7315	**

* MATERIAL OF SSTB IS ASTM A36 PER SIMP. GUIDE EVALUATION SERVICE, INC. NO. ICC ER-4935 & L.A. RR 2548.

NOTES:
1. BOLT HOLD DOWN TO POST PER MFGR, PROVIDE STANDARD CUT WASHERS ON OPPOSITE SIDE OF POST FROM HOLD DOWN. POST MAY BE COUNTER SUNK A MAXIMUM OF 1/2 INCH TO RECESS BOLT AND WASHER.
2. TO PROPERLY LOCATE HOLDOWN ANCHOR BOLTS, CONTRACTOR TO CHECK STRUCTURAL AND ARCHITECTURAL DRAWINGS, FOR OPENINGS ETC. BEFORE PLACING BOLTS.
3. DEEPEN FOOTING AREA AS REQUIRED AT HOLDOWN ANCHORS TO INSURE PROPER EMBEDMENT.
4. FOR SPECIAL HD LOCATIONS SEE FOUNDATION PLAN.

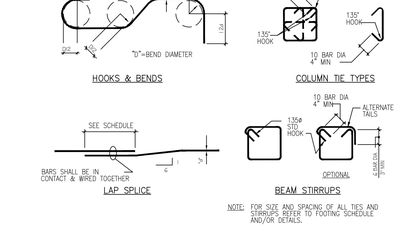
HOLDOWN AT (N) FTG.

6



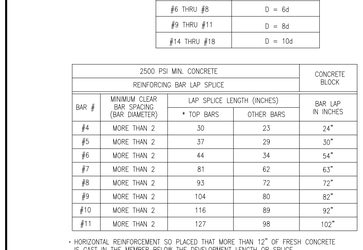
ADD (N) SHEAR WALL AT (E) FTG.

1



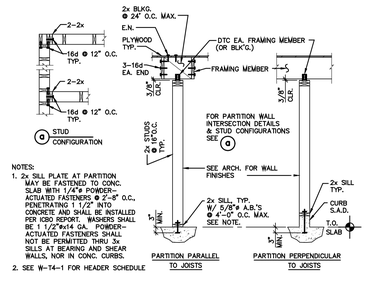
SHEAR WALL INTERSECTIONS

19



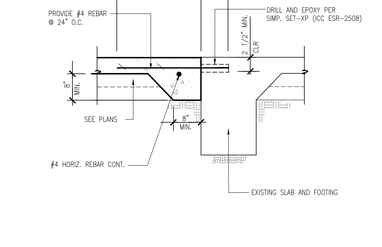
TYP. REINFORCING BENDS

15



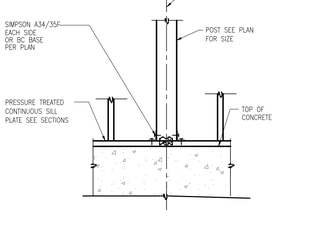
NON-STRUCTRAL PARTITION

12



SLAB TIE CONNECTION

8



WOOD POST ON SILL PLATE

4

BEND DIAMETER SCHEDULE	
BAR SIZE	BEND DIAMETER
#3 THRU #5	D = 4d
#6 THRU #8	D = 6d
#9 THRU #11	D = 8d
#14 THRU #18	D = 10d

2500 PSI MIN. CONCRETE REINFORCING BAR LAP SPLICE				CONCRETE BLOCK
BAR #	MINIMUM CLEAR BAR SPACING (BAR DIAMETER)	LAP SPLICE LENGTH (INCHES) * TOP BARS	LAP SPLICE LENGTH (INCHES) OTHER BARS	BAR LAP IN INCHES
#4	MORE THAN 2	30	23	24"
#5	MORE THAN 2	37	29	30"
#6	MORE THAN 2	44	34	54"
#7	MORE THAN 2	81	62	63"
#8	MORE THAN 2	93	72	72"
#9	MORE THAN 2	104	80	82"
#10	MORE THAN 2	116	89	92"
#11	MORE THAN 2	127	98	102"

* HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE

NOTE: FOR SIZE AND SPACING OF ALL TIES AND STIRRUPS REFER TO FOOTING SCHEDULE AND/OR DETAILS.

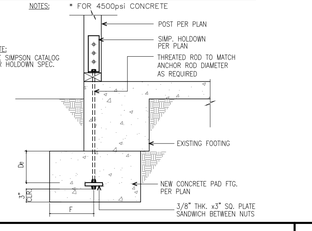
TYPICAL REINFORCEMENT DETAILS

16

HOLDOWN AND EMBEDMENT SCHEDULE

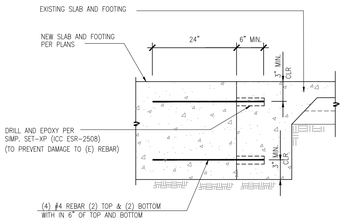
HOLDOWN NO.	ANCHOR BALT DIAMETER	ANCHOR BALT MODEL	d_e (in.)	F (in.)	
HDU2-SDS2.5	5/8"	PAB5	8	7 *	10" 9" *
HDU4-SDS2.5	5/8"	PAB5	10	9 *	13" 11" *
HDU5-SDS2.5	5/8"	PAB5	12	10 *	15" 12" *
HDU8-SDS2.5	7/8"	PAB7	14	12 *	18" 15" *
HDU11-SDS2.5	1"	PAB8	18	15 *	24" 19" *
HDU14-SDS2.5	1"	PAB8H	20	17 *	27" 23" *

NOTES: * FOR 4500psi CONCRETE



HOLDOWN AT (E) EXT. FTG.

7



FOOTING CONNECTION

3

SHEET TITLE

STRUCTURAL DETAILS

PROJECT#: DM23-013
DATE 10/20/2023
SCALE AS REFERENCED
SHEET NO.

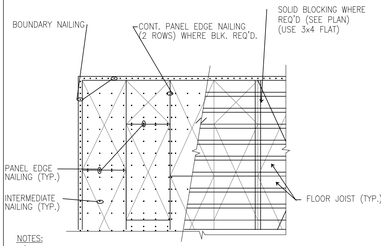
SD-1

#	REVISION	DATE

AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

REGISTERED PROFESSIONAL ENGINEER
QIANG XIAO
NO. S. 5289
EXP. 6/30/24
CIVIL
STATE OF CALIFORNIA

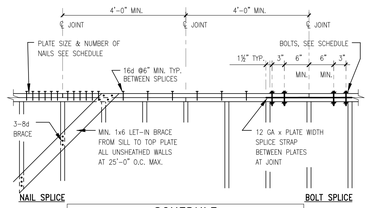
PROJECT NAME
THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692



NOTES:
1.) SEE PLAN FOR PLYWOOD SIZE & NAILING SCHEDULE.
2.) LAY PLYWOOD FACE GRAIN PERPENDICULAR TO FLOOR JOISTS. (STAGGERED)
3.) 4' SIDE OF PLYWOOD. SHEETS TO BE SPLICED OVER JOISTS
4.) ALL NAILING TO BE 3/8" MIN. TO EDGE OF SUPPORT & SHT.

TYPE	PLYWOOD THICKNESS	NAIL SIZE	BOUNDARY	EDGE	FIELD	PANEL INDEX
ROOF	½" CDX	8d	6"	6"	12"	32/16
FLOOR	¾"	10d	6"	6"	10"	32/16

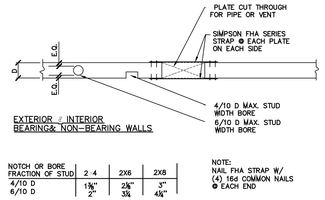
PLY.FLR./ROOF DIAPHRAGM 17



SCHEDULE

TYPE	NO. NAILS OR BOLTS EACH SIDE OF JOINT	PLATE SIZE UNO
A	8 – 16d NAILS	2 – 2x
B	12 – 16d NAILS	2 – 2x
C	16 – 16d NAILS	2 – 2x
D	22 – 16d NAILS	2 – 2x
E	3 – 3/4" ø BOLTS OR MST60	2x 2x

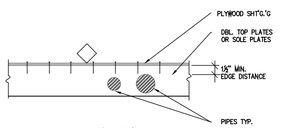
TOP PLATE SPLICE 18



NOTCH OR BORE FRACTION OF STUD	2 x 4	2X6	2X8
4/10 D	1⅝"	2⅝"	3"
6/10 D	2"	3⅜	4⅛"

NOTE:
NAIL FHA STRAP W/ (4) 16d COMMON NAILS @ EACH END

BORE & NOTCH @ PLATE 19



PLAN VIEW

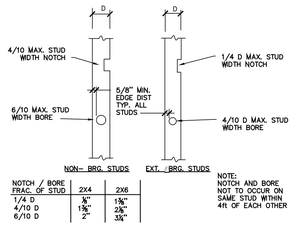
PIPE PENETRATION AT PLATES 20

SHEAR SCHEDULE

SYM	SIDE	#FT	MATERIAL	NAILS	EDGE	FIELD	GRD. FLOOR	UPPER FLR.	A35
6	ONE	180	7/8" PAPER BACKED LATH C.B.C.#1823 UNEL'D W/16 GA. STAPLES		6	12	5/8" @ 48"	16d @ 10"	24" O.C.
1	ONE	280	3/8" PLYWD (24/0)	8d	6	12	5/8" @ 48"	16d @ 6"	18" O.C.
	WALL CONSTRUCTION: 2X SILL, STUDS, & TOP PLATES. USE END POST PER HOLDOWN REQUIREMENTS								
	TWO	560	3/8" PLYWD (24/0)	8d	6	12	5/8" @ 24"	3/8"ø@5" O.C.	10" O.C.
	WALL CONSTRUCTION: 3X SILL, 3X STUDS @ BOUNDARIES, & 3X TOP PLATE, OFFSET ADJOINING PANELS ON OPPOSING SIDES. USE MIN. 4X END POST.								
1	ONE	350	3/8" PLYWD (24/0)	8d	4	12	5/8" @ 32"	16d @ 5"	16" O.C.
	WALL CONSTRUCTION: 2X SILL, STUDS, & TOP PLATES. USE END POST PER HOLDOWN REQUIREMENTS								
3/X	ONE	430	3/8" PLYWD (24/0)	8d	4	12	5/8" @ 32"	16d @ 4"	12" O.C.
	WALL CONSTRUCTION: 3X SILL@ FOUNDATION, 2X SILL @ RAISED FLOOR OR SECOND STORY, 3X STUDS @ ADJOINING PANELS, & 2-2X TOP PLATES. USE 3X END POST (MIN) OR AS REQ'D BY HOLDOWN								
3/X	TWO	860	3/8" PLYWD (24/0)	8d	4	12	5/8" @ 16"	3/8"ø@3" O.C.	6" O.C.
	WALL CONSTRUCTION: 3X SILL, 3X STUDS @ BOUNDARIES, & 3X TOP PLATE, OFFSET ADJOINING PANELS ON OPPOSING SIDES. USE MIN. 4X END POST.								
3/X	ONE	550	3/8" PLYWD (24/0)	8d	3	12	5/8" @ 24"	16d @ 3"	10" O.C.
2	WALL CONSTRUCTION: 3X SILL@ FOUNDATION, 2X SILL @ RAISED FLOOR OR SECOND STORY, 3X STUDS @ ADJOINING PANELS, & 2-2X TOP PLATES. USE 3X END POST (MIN) OR AS REQ'D BY HOLDOWN								
	TWO	1100	3/8" PLYWD (24/0)	8d	3	12	5/8" @ 12"	7/2"ø@4" O.C.	8" O.C. @ E.S.
	WALL CONSTRUCTION: 3X SILL, 3X STUDS @ BOUNDARIES, & 3X TOP PLATE, OFFSET ADJOINING PANELS ON OPPOSING SIDES. USE MIN. 4X END POST.								
3/X	ONE	730	3/8" PLYWD (24/0)	8d	2	12	5/8" @ 16"	16d @ 2"	8" O.C.
2	WALL CONSTRUCTION: 3X SILL@ FOUNDATION, 2X SILL @ RAISED FLOOR OR SECOND STORY(O/3X BLK'G, 3X STUDS @ ADJOINING PANELS, & 2-2X TOP PLATES. USE 3X END POST (MIN) OR AS REQ'D BY HOLDOWN								
	TWO	1460	3/8" PLYWD (24/0)	8d	2	12	5/8" @ 8"	7/2"ø@3" O.C.	6" O.C. @ E.S.
	WALL CONSTRUCTION: 3X SILL, 3X STUDS @ BOUNDARIES, & 3X TOP PLATE, OFFSET ADJOINING PANELS ON OPPOSING SIDES. USE MIN. 4X END POST.								
3/X	ONE	870	1/2" PLYWD (32/16)	10d	2	12	5/8" @ 16"	16d @ 2"	5" O.C.
2	WALL CONSTRUCTION: 3X SILL@ FOUNDATION, 2X SILL @ RAISED FLOOR OR SECOND STORY(O/3X BLK'G, 3X STUDS @ ADJOINING PANELS, & 2-2X TOP PLATES. USE 3X END POST (MIN) OR AS REQ'D BY HOLDOWN								
	TWO	1740	1/2" PLYWD (32/16)	10d	2	12	5/8" @ 8"	7/2"ø@3" O.C.	5" O.C. @ E.S.
	WALL CONSTRUCTION: 3X SILL, 3X STUDS @ BOUNDARIES, & 3X TOP PLATE, OFFSET ADJOINING PANELS ON OPPOSING SIDES. USE MIN. 4X END POST.								

NOTES:
1. WHERE PANEL NAILING IS SPACED @2" O.C. OR CALCULATED SHEAR LOAD EXCEEDS 350 PLF, USE:
   a) 3x STUDS @ ADJOINING PANELS w/ STAGGERED NAILS
   b) 3x SILLS @ FOUNDATION LEVEL.
   c) NAIL DOUBLE TOP PLATES TOGETHER w/ 16d SINKER NAILS @4" O.C.
2. WHERE PLYWOOD SHEAR PANELS OCCUR ON BOTH SIDES OF WALL:
   a) USE 3x STUDS @ ALL BOUNDARIES (BOT. PLATES, TOP PLATES, & ADJOINING PANELS)
   b) OFFSET ADJOINING PANELS ON OPPOSING SIDES.
3. WHERE SILL NAILING IS 2" OR LESS, OR LAG SCREW IS USED PROVIDE 3x BLK'G, RIM JOIST, OR BEAM INSURE THAT THE WOOD BEAM BELOW AND DOES NOT TEND TO SPLIT. PRE-DRILL FOR NAILS IF SPLITTING IS OBSERVED, USING A DRILL SIZE 3/4 OF THE DIAMETER OF THE SILL NAILING.
4. SHOT PINS BY "HILTI", CONFORMING TO I.C.C. # 1917 MAY BE USED IN LIEU OF A.B. FOR INTERIOR NON-SHEAR WALLS ONLY ON CONCRETE FOUNDATION.
5. USE 5/8" x 8" SIMPSON SET-XP (CC ES ESR-2508) EPOXY ADHESIVE AS A FIX SILL PLATE BOLT @ EXISTING FOUNDATIONS PER SHEAR SCHEDULE SPACING.
6. ALL PLYWOOD EDGES TO BE BLOCKED–USE 3X BLOCKING AT 2" O.C. NAILING.
7. PLYWOOD USE STRUCTURAL 1.
8. TABLE BASED ON C.B.C. 2019 EDITION, SEISMIC FORCE IS INCREASED 25% FOR CONNECTIONS OF DIAPHRAGM TO SHEAR WALL.

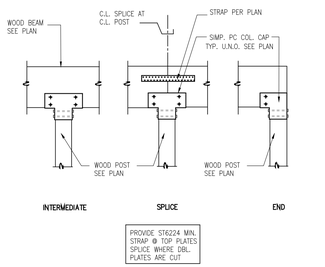
SHEAR WALL SCHEDULE 14



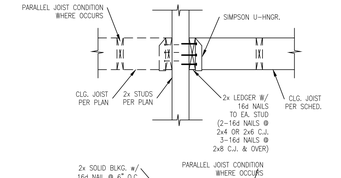
NOTCH / BORE FRAC. OF STUD	2X4	2X6
1/4 D	⅜"	1⅝"
4/10 D	1⅝"	2⅝"
6/10 D	2"	3⅜"

NOTE:
NOTCH AND BORE NOT TO OCCUR ON SAME STUD WITHIN 4ft OF EACH OTHER

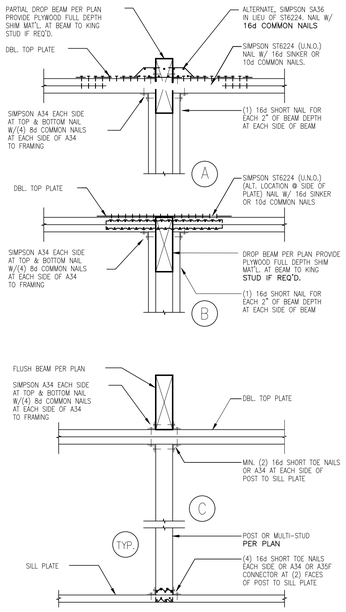
BORE & NOTCH @ STUDS 15



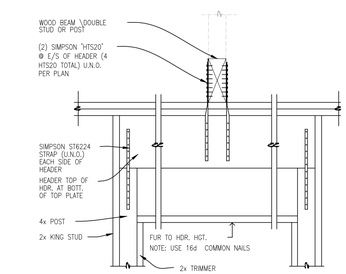
TYP. BEAM TO POST CONNECTION W/ PCZ 16



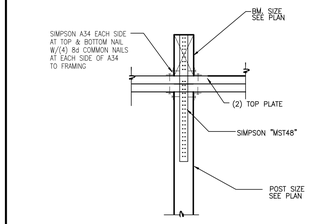
TYPICAL CEILING JOIST DETAILS 9



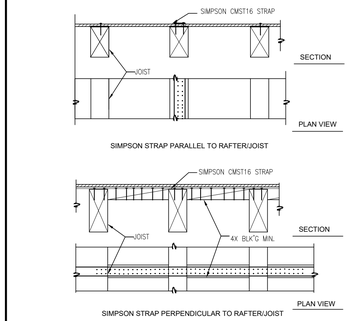
TYP. BEAM TO POST WITH TOP PLATE 11



CONNECTION DETAIL 12



POST TO BM. CONN. W/ STRAP 6



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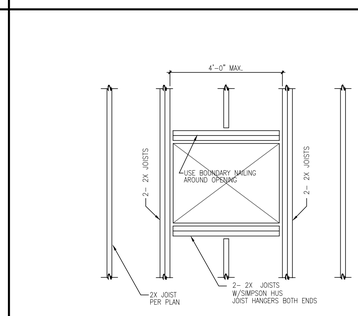
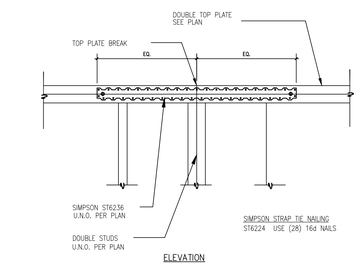


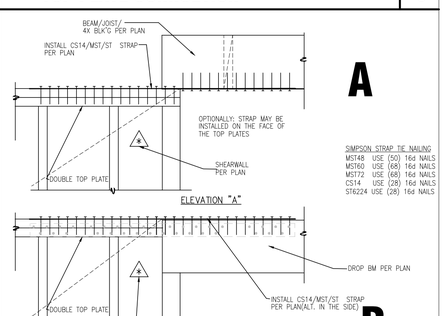
PLAN DET. @ ROOF OPENING 8

TYP. FRAMING DETAIL 1

2



TOP PLATE CONNCETION 3



DRAG STRUT TYP. 4

AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

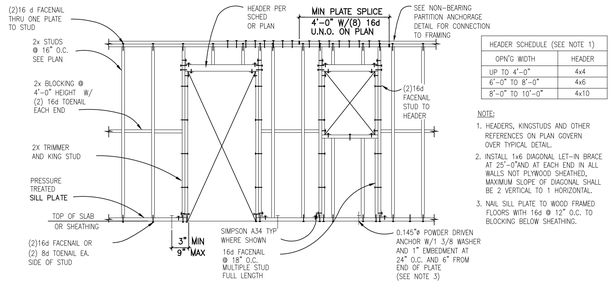
REGISTERED PROFESSIONAL ENGINEER
DIANG XIAO
NO. S. 5289
EXP. 6/30/24
CIVIL
STATE OF CALIFORNIA

#	REVISION	DATE

PROJECT NAME
THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
STRUCTURAL DETAILS

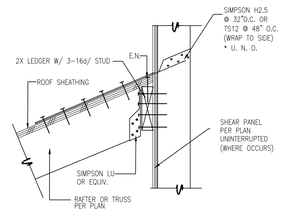
PROJECT#: DM23-013
DATE 10/20/2023
SCALE AS REFERENCED
SHEET NO.
SD-2



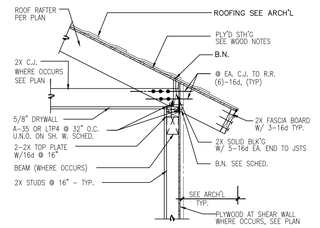
HEADER SCHEDULE (SEE NOTE 1)	
OPN'G WIDTH	HEADER
UP TO 4'-0"	4x4
6'-0" TO 8'-0"	4x6
8'-0" TO 10'-0"	4x10

NOTE:
1. HEADERS, KINGSTUDS AND OTHER REFERENCES ON PLAN GOVERN OVER TYPICAL DETAIL.
2. INSTALL 1x6 DIAGONAL LET-IN BRACE AT 25'-0"AND AT EACH END IN ALL WALLS NOT PLYWOOD SHEATHED., MAXIMUM SLOPE OF DIAGONAL SHALL BE 2 VERTICAL TO 1 HORIZONTAL.
3. NAIL SILL PLATE TO WOOD FRAMED FLOORS WITH 16d @ 12" O.C. TO BLOCKING BELOW SHEATHING.

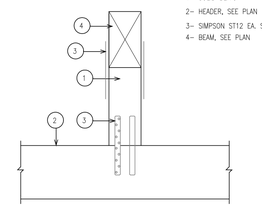
INTERIOR NON-BEARING STUD WALL FRAMING | 14



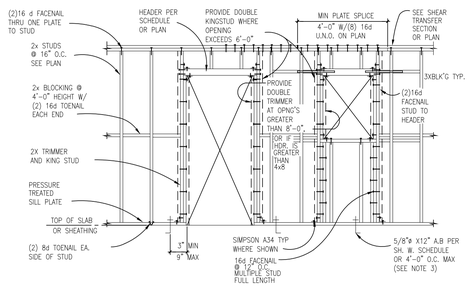
9



EXT. BEARING WALL @ ROOF | 5



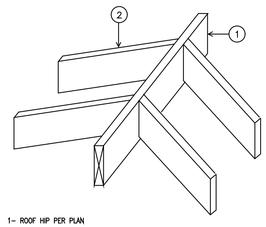
CONNECTION DETAIL | 1



HEADER SCHEDULE (SEE NOTE 1)	
OPN'G WIDTH	HEADER
UP TO 6'-0"	4x6
6'-0" TO 8'-0"	4x8
8'-0" TO 10'-0"	4x10

NOTE:
1. HEADERS, KINGSTUDS AND OTHER REFERENCES ON PLAN GOVERN OVER TYPICAL DETAIL.
2. SEE SHEARWALL PLYWOOD NAILING DETAIL FOR ADDITIONAL INFORMATION
3. AT WOOD FRAMED WALLS USE SILL CONNECTION PER SHEARWALL SCHEDULE

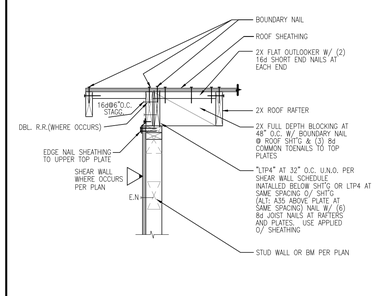
EXTERIOR AND INTERIOR BEARING/SHEAR WALL FRAMING | 15



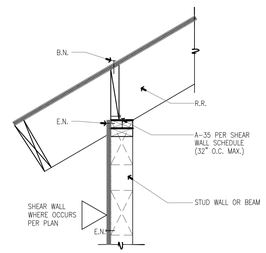
1- ROOF HIP PER PLAN

2- ROOF RAFTER W/(4)-16d'S TOE NAIL'G TO HIP WHEN SPAN < 8'-0" AND "U" HANGER FOR SPAN > 8'-0"

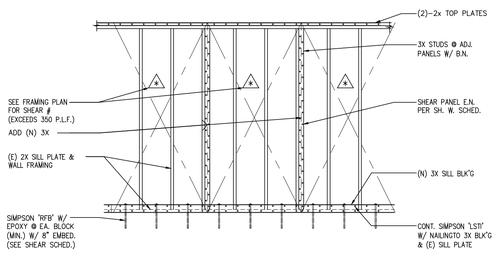
RAFTER TO HIP/VALLEY | 10



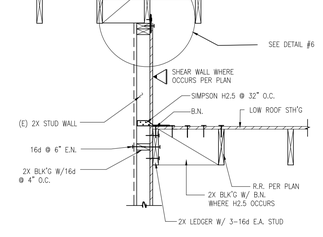
SHEAR TRANSFER | 6



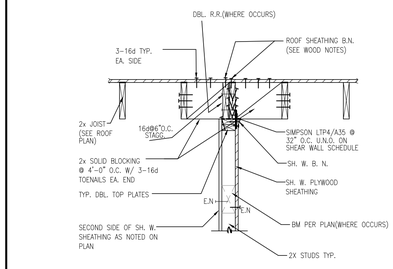
ROOF S.T. @ EXT. BEARING WALL | 2



SPECIAL SHEAR @ EXISTING WALLS | 16

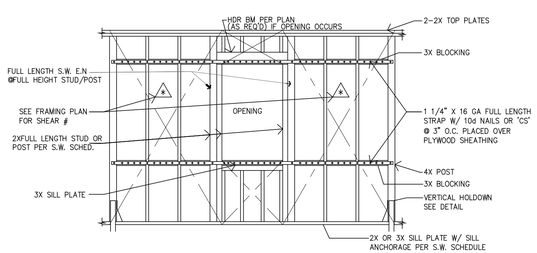


SHEAR TRANSFER | 11

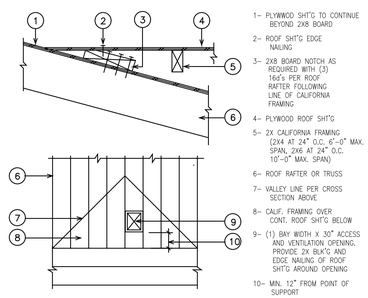


INT. SHEAR WALL SECTION | 7

DBL. BM DETAIL | 3

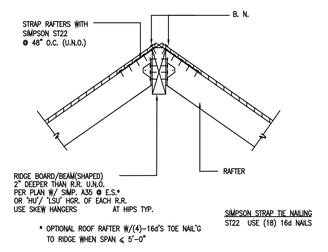


TYP. PIER WALL DETAIL | 17



1- PLYWOOD SHT'G TO CONTINUE BEYOND 2X8 BOARD
2- ROOF SHT'G EDGE NAILING
3- 2X8 BOARD NOTCH AS REQUIRED WITH (3) 16d's PER ROOF RAFTER FOLLOWING LINE OF CALIFORNIA FRAMING
4- PLYWOOD ROOF SHT'G
5- 2X CALIFORNIA FRAMING (2X4 AT 24" O.C. 6'-0" MAX. SPAN, 2X6 AT 24" O.C. 10'-0" MAX. SPAN)
6- ROOF RAFTER OR TRUSS
7- VALLEY LINE PER CROSS SECTION ABOVE
8- CALIF. FRAMING OVER CONT. ROOF SHT'G BELOW
9- (1) BAY WIDTH X 30" ACCESS AND VENTILATION OPENING. PROVIDE 2X BLK'G AND EDGE NAILING OF ROOF SHT'G AROUND OPENING
10- MIN. 12" FROM POINT OF SUPPORT

CALIF. FRAMING | 12



TYP. ROOF FRAMING DETAIL | 8

FRAMING CONNECTION DETAIL | 4

#	REVISION	DATE

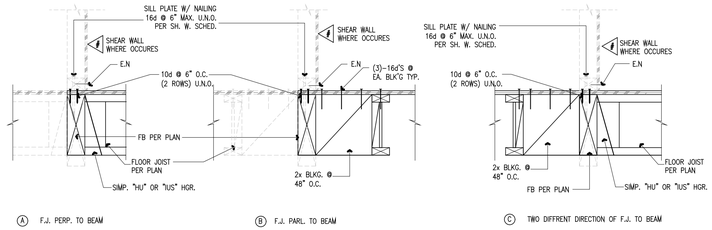
AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

REGISTERED PROFESSIONAL ENGINEER
QIANG XIAO
NO. S. 5289
EXP. 6/30/24
STATE OF CALIFORNIA
CIVIL

PROJECT NAME
THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
STRUCTURAL DETAILS

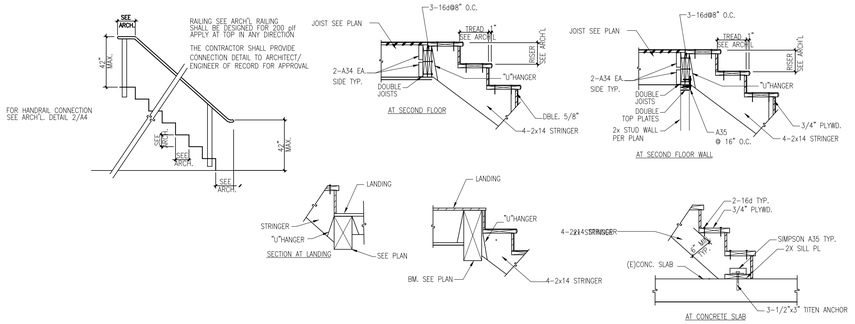
PROJECT#: DM23-013
DATE 10/20/2023
SCALE AS REFERENCED
SHEET NO.
SD-3



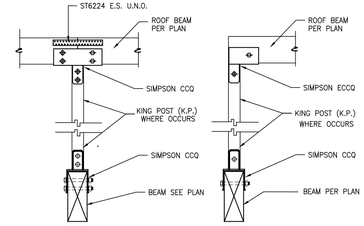
Ⓐ F.J. PERP. TO BEAM Ⓑ F.J. PARL TO BEAM Ⓒ TWO DIFFRENT DIRECTION OF F.J. TO BEAM

NOTE:
* SEE PLAN FOR PLYWOOD SHEATING SIZE

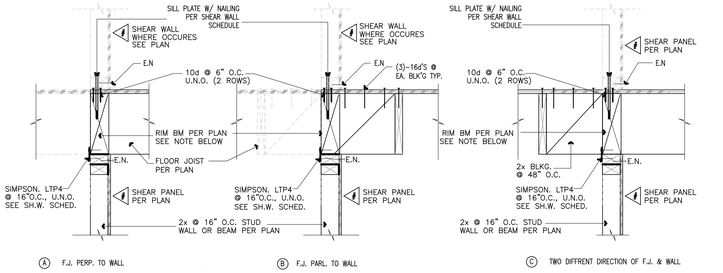
TYP. SHEAR WALL @ BEAM DETAIL 14



WOOD STAIR FRAMING DETAIL 5



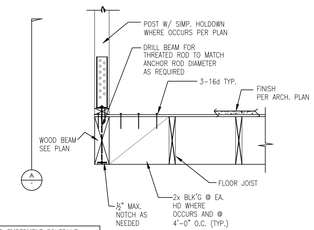
KING POST 1



Ⓐ F.J. PERP. TO WALL Ⓑ F.J. PARL TO WALL Ⓒ TWO DIFFRENT DIRECTION OF F.J. & WALL

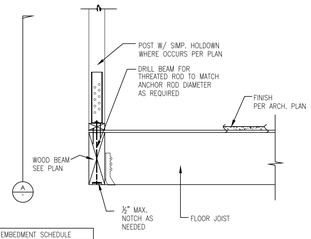
NOTE:
1. SEE PLAN FOR PLYWOOD SHEATING SIZE
2. 3x RIM JOIST OR 3x BLK'G FOR SHEARWALL SCHED.

TYP. SHEAR TRANSFER AT FLOOR FRAMING 15



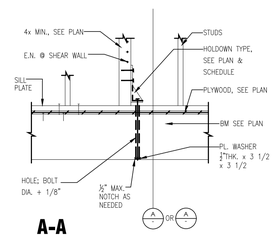
HOLDOWN AND EMBEDMENT SCHEDULE		
HOLDOWN NO.	ANCHOR BALT	
	DIAMETER	ASTM
HDU2-SDS2.5	5/8"	A36
HDU4-SDS2.5	5/8"	A36
HDU5-SDS2.5	5/8"	A36
HDU8-SDS2.5	7/8"	A36
HDU11-SDS2.5	1"	A36
HDU14-SDS2.5	1"	A36

TYP. HD @ WOOD BEAM (PARALLEL)

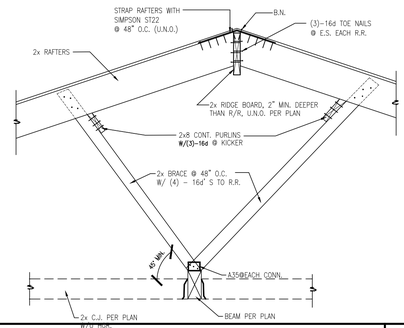


HOLDOWN AND EMBEDMENT SCHEDULE		
HOLDOWN NO.	ANCHOR BALT	
	DIAMETER	ASTM
HDU2-SDS2.5	5/8"	A36
HDU4-SDS2.5	5/8"	A36
HDU5-SDS2.5	5/8"	A36
HDU8-SDS2.5	7/8"	A36
HDU11-SDS2.5	1"	A36
HDU14-SDS2.5	1"	A36

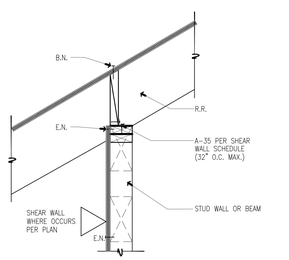
TYP. HD @ WOOD BEAM (PERPEN.)



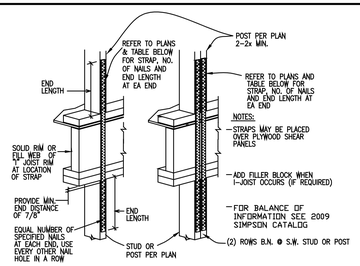
TYP. (N)JOIST TO (E) JOIST CONNECTION 2



3



TYP. (N)JOIST TO (E) JOIST CONNECTION 2



TYPE	STRAP	NAILING(MIN)	END LENGTH (MIN)
A	MST27	22-16d	EQUAL BASED ON STRAPSTANDARD LENGTH
B	MST48	34-16d	
C	MST60	48-16d	
D	CMST14	56-16d	30"
E	CMST12	74-16d	38"

TYP. HD @ FLOOR FRAMING 12

ROOF S.T. @ INT. BEARING WALL 4

#	REVISION	DATE

AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

REGISTERED PROFESSIONAL ENGINEER
DIANG XIAO
NO. S. 5289
EXP. 6/30/24
CIVIL
STATE OF CALIFORNIA

PROJECT NAME
THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
STRUCTURAL DETAILS

PROJECT#: DM23-013
DATE 10/20/2023
SCALE AS REFERENCED
SHEET NO.
SD-4

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01E**

Project Name: Residential Building **Calculation Date/Time:** 2023-10-28T12:47:24-07:00 **(Page 1 of 10)**

Calculation Description: Title 24 Analysis **Input File Name:** Building1.ribd22x

GENERAL INFORMATION					
01	Project Name	Residential Building			
02	Run Title	Title 24 Analysis			
03	Project Location	28771 ESCALONA DR.			
04	City	MISSION VIEJO	05	Standards Version	2022
06	Zip code	92692	07	Software Version	EnergyPro 9.1
08	Climate Zone	8	09	Front Orientation (deg/ Cardinal)	135
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Addition and/or Alteration	13	Number of Bedrooms	4
14	Addition Cond. Floor Area (ft^2)	524	15	Number of Stories	2
16	Existing Cond. Floor Area (ft^2)	1477	17	Fenestration Average U-factor	0.34
18	Total Cond. Floor Area (ft^2)	2001	19	Glazing Percentage (%)	19.00%
20	ADU Bedroom Count	n/a			

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01E**

Project Name: Residential Building **Calculation Date/Time:** 2023-10-28T12:47:24-07:00 **(Page 2 of 10)**

Calculation Description: Title 24 Analysis **Input File Name:** Building1.ribd22x

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0	6.79	0	8.15	0	-1.36
Space Cooling	0	35.49	0	33.96	0	1.53
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	27.06	0	27.06	0	0
Self Utilization/Flexibility Credit						
Efficiency Compliance Total	**0**	**69.34**	**0**	**69.17**	**0**	**0.17**
Photovoltaics	0		0			
Battery			0			
Flexibility						
Indoor Lighting	0	6.6	0	6.6		
Appl. & Cooking	0	19.5	0	19.49		
Plug Loads	0	32.6	0	32.6		
Outdoor Lighting	0	1.63	0	1.63		
TOTAL COMPLIANCE	**0**	**129.67**	**0**	**129.49**		

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01E**

Project Name: Residential Building **Calculation Date/Time:** 2023-10-28T12:47:24-07:00 **(Page 3 of 10)**

Calculation Description: Title 24 Analysis **Input File Name:** Building1.ribd22x

ENERGY USE INTENSITY

	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Compliance Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	20.51	20.72	-0.21	-1.02
Net EUI[2]	20.51	20.72	-0.21	-1.02

Notes
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- New ductwork added is less than 25 ft. in length

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry.

- Quality insulation installation (QII)
- Kitchen range hood
- Duct Sealing required if a duct system component, plenum, or air handling unit is altered

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	**Conditioned Floor Area (ft^2)**	**Number of Dwelling Units**	**Number of Bedrooms**	**Number of Zones**	**Number of Ventilation Cooling Systems**	**Number of Water Heating Systems**
Residential Building	2001	1	4	2	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	**Zone Type**	**HVAC System Name**	**Zone Floor Area (ft^2)**	**Avg. Ceiling Height**	**Water Heating System 1**	**Status**
Zone 1	Conditioned	HVAC System1	1477	8	DHW Sys 1	Existing Unchanged

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01E**

Project Name: Residential Building **Calculation Date/Time:** 2023-10-28T12:47:24-07:00 **(Page 4 of 10)**

Calculation Description: Title 24 Analysis **Input File Name:** Building1.ribd22x

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	**Zone Type**	**HVAC System Name**	**Zone Floor Area (ft^2)**	**Avg. Ceiling Height**	**Water Heating System 1**	**Status**
Zone 2	Conditioned	HVAC System1	524	8	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	**Zone**	**Construction**	**Azimuth**	**Orientation**	**Gross Area (ft^2)**	**Window and Door Area (ft2)**	**Tilt (deg)**	**Wall Exceptions**	**Status**	**Verified Existing Condition**
Front Wall	Zone 1	Default Wall 1992 to Pres	135	Front	400	58.2	90	none	Existing	No
Left Wall	Zone 1	Default Wall 1992 to Pres	225	Left	240	56	90	none	Existing	No
Rear Wall	Zone 1	Default Wall 1992 to Pres	315	Back	400	105	90	none	Existing	No
Right Wall	Zone 1	Default Wall 1992 to Pres	45	Right	240	52	90	none	Existing	No
Front Wall 2	Zone 2	R-13 Wall	135	Front	136	18	90	none	New	n/a
Left Wall 2	Zone 2	R-13 Wall	225	Left	200	38	90	none	New	n/a
Rear Wall 2	Zone 2	R-13 Wall	315	Back	136	53.8	90	none	New	n/a
Right Wall 2	Zone 2	R-13 Wall	45	Right	200	0	90	none	New	n/a
Roof	Zone 1	Default Roof 1978-2013	n/a	n/a	1477	n/a	n/a		Existing	No
Roof 2	Zone 2	R-30 Roof Attic	n/a	n/a	524	n/a	n/a		New	n/a
Floor	Zone 2	R-19 Floor Crawlspace	n/a	n/a	524	n/a	n/a		New	n/a

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	**Construction**	**Type**	**Roof Rise (x in 12)**	**Roof Reflectance**	**Roof Emittance**	**Radiant Barrier**	**Cool Roof**	**Status**	**Verified Existing Condition**
Attic Zone 1	Attic RoofZone 1	Ventilated	4	0.1	0.85	No	No	Existing	No

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01E**

Project Name: Residential Building **Calculation Date/Time:** 2023-10-28T12:47:24-07:00 **(Page 5 of 10)**

Calculation Description: Title 24 Analysis **Input File Name:** Building1.ribd22x

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	**Construction**	**Type**	**Roof Rise (x in 12)**	**Roof Reflectance**	**Roof Emittance**	**Radiant Barrier**	**Cool Roof**	**Status**	**Verified Existing Condition**
Attic Zone 2	Attic RoofZone 2	Ventilated	4	0.1	0.85	Yes	No	New	n/a

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	**Type**	**Surface**	**Orientation**	**Azimuth**	**Width (ft)**	**Height (ft)**	**Mult.**	**Area (ft^2)**	**U-factor**	**U-factor Source**	**SHGC**	**SHGC Source**	**Exterior Shading**	**Status**	**Verified Existing Condition**
Window/BED2	Window	Front Wall	Front	135			1	24.2	0.45	NFRC	0.3	NFRC	Bug Screen	Existing	No
Window/ENTRY	Window	Front Wall	Front	135			1	34	0.45	NFRC	0.3	NFRC	Bug Screen	Existing	No
Window	Window	Left Wall	Left	225			1	56	0.45	NFRC	0.3	NFRC	Bug Screen	Existing	No
WindowW6+W2	Window	Rear Wall	Back	315			1	38	0.45	NFRC	0.3	NFRC	Bug Screen	New	NA
Window/ALL	Window	Rear Wall	Back	315			1	67	0.45	NFRC	0.3	NFRC	Bug Screen	Existing	No
Window/OFFICE	Window	Right Wall	Right	45			1	52	0.45	NFRC	0.3	NFRC	Bug Screen	Existing	No
Window/W7+W7	Window	Front Wall 2	Front	135			1	18	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window/W1+W5+W5	Window	Left Wall 2	Left	225			1	38	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA
Window/W4+W3	Window	Rear Wall 2	Back	315			1	53.8	0.3	NFRC	0.23	NFRC	Bug Screen	New	NA

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01E**

Project Name: Residential Building **Calculation Date/Time:** 2023-10-28T12:47:24-07:00 **(Page 6 of 10)**

Calculation Description: Title 24 Analysis **Input File Name:** Building1.ribd22x

SLAB FLOORS

01	02	03	04	05	06	07	08	09	10
Name	**Zone**	**Area (ft^2)**	**Perimeter (ft)**	**Edge Insul. R-value and Depth**	**Edge Insul. R-value and Depth**	**Carpeted Fraction**	**Heated**	**Status**	**Verified Existing Condition**
Slab	Zone 1	1500	160	none	0	80%	No	Existing	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	**Surface Type**	**Construction Type**	**Framing**	**Total Cavity R-value**	**Interior / Exterior Continuous R-value**	**U-factor**	**Assembly Layers**
Default Wall 1992 to Pres	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-13	None / None	0.101	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Exterior Finish: 3 Coat Stucco
R-13 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-13	None / None	0.101	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Exterior Finish: 3 Coat Stucco
Attic RoofZone 1	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
Attic RoofZone 2	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
R-19 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x10 @ 16 in. O. C.	R-19	None / None	0.046	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10

#	REVISION	DATE

AQX ENGINEERING INC.
1520 Brookhollow, Suite #45
Santa Ana, CA 92705
Off. (714) 662-0510
Fax. (714) 662-0559
Mahdi@aqxeng.com

PROJECT NAME
THE PECK RESIDENCE
28771 ESCALONA DR.
MISSION VIEJO
CALIFORNIA, 92692

SHEET TITLE
TITLE 24

PROJECT NO.	DM23-013
DATE	10/20/2023
SCALE	AS REFERENCED

SHEET NO.
T-24.1

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
Default Roof 1978-2013	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-19	None / None	0.049	Over Ceiling Joists: R-9.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01 Quality Insulation Installation (QII)	02 High R-value Spray Foam Insulation	03 Building Envelope Air Leakage	04 CFM50	05 CFM50
Required	Not Required	N/A	n/a	n/a

WATER HEATING SYSTEMS

01 Name	02 System Type	03 Distribution Type	04 Water Heater Name	05 Number of Units	06 Solar Heating System	07 Compact Distribution	08 HERS Verification	09 Water Heater Name (#)	10 Status	11 Verified Existing Condition	12 Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	Existing	No	

WATER HEATERS

01 Name	02 Heating Element Type	03 Tank Type	04 # of Units	05 Tank Vol. (gal)	06 Heating Efficiency Type	07 Efficiency	08 Rated Input Type	09 Input Rating or Pilot	10 Tank Insulation R-value (Int/Ext)	11 Standby Loss or Recovery Eff	12 1st Hr. Rating or Flow Rate	13 Tank Location	14 Status	15 Verified Existing Condition
DHW Heater 1	Gas	Small Storage	1	50	EF	0.63	Btu/Hr	75000	0	80			Existing	No

WATER HEATING - HERS VERIFICATION

01 Name	02 Pipe Insulation	03 Parallel Piping	04 Compact Distribution	05 Compact Distribution Type	06 Recirculation Control	07 Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01 Name	02 System Type	03 Heating Unit Name	04 Heating Equipment Count	05 Cooling Unit Name	06 Cooling Equipment Count	07 Fan Name	08 Distribution Name	09 Required Thermostat Type	10 Status	11 Verified Existing Condition	12 Existing HVAC System
HVAC System1	Heating and cooling system other	Heating Component 1	1	Cooling Component 1	1	HVAC Fan 1	Air Distribution System 1	n/a	Existing	No	

HVAC - HEATING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-84

HVAC - COOLING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Efficiency Metric	05 Efficiency EER/EER2/CEER	06 Efficiency SEER/SEER2	07 Zonally Controlled	08 Mulit-speed Compressor	09 HERS Verification
Cooling Component 1	No Cooling	1		n/a	n/a	Not Zonal	Single Speed	n/a

HVAC - DISTRIBUTION SYSTEMS

01 Name	02 Type	03 Design Type	04 Duct Ins. R-value Supply	05 Duct Ins. R-value Return	06 Duct Location Supply	07 Duct Location Return	08 Surface Area Supply	09 Surface Area Return	10 Bypass Duct	11 Duct Leakage	12 HERS Verification	13 Status	14 Verified Existing Condition	15 Existing Distribution system	16 New Ducts 25 ft
Air Distribution System 1	Unconditioned attic	Non-Verified	R-6	R-6	Attic	Attic	n/a	n/a	No Bypass Duct	Existing (not specified)	Air Distribution System 1-hers-dist	Existing + New	No		No

HVAC - FAN SYSTEMS

01 Name	02 Type	03 Fan Power (Watts/CFM)	04 Name
HVAC Fan 1	HVAC Fan	0.28	n/a

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Mahdi Khaleghi	
Company:	Signature Date:
AQX Engineering	2023-10-28 13:05:49
Address:	CEA/ HERS Certification Identification (If applicable):
1520 Brrookhollow Drive	NA
City/State/Zip:	Phone:
Santa Ana, CA 92705	714-662-0510

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name:	Responsible Designer Signature:
David Michael	
Company:	Date Signed:
David Michael Designs	2023-10-28 13:07:02
Address:	License:
712 Center Street	NA
City/State/Zip:	Phone:
COSTA MESA, CA 92627	949-701-9539

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Easy to Verify at CalCERTS.com

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