



AVN STUDIO - HOUSE PLAN A504

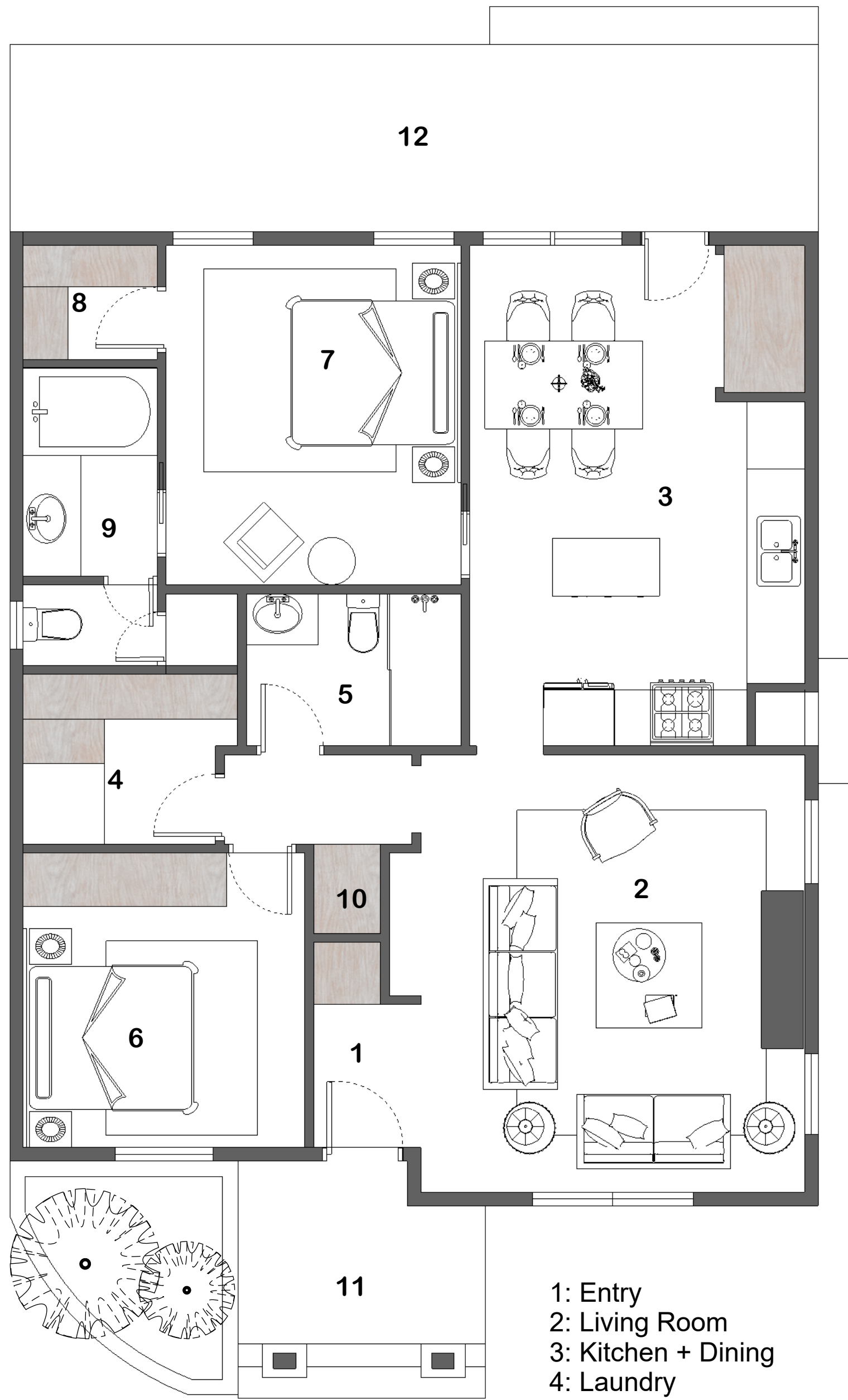
CLIENT
Sergio Luna

PROJECT
A504

PROJECT NO.
354

ISSUE
02/25/2024

DRAWN BY
AVN STUDIO



LAYOUT: SCALE | 1/4":1- 0"

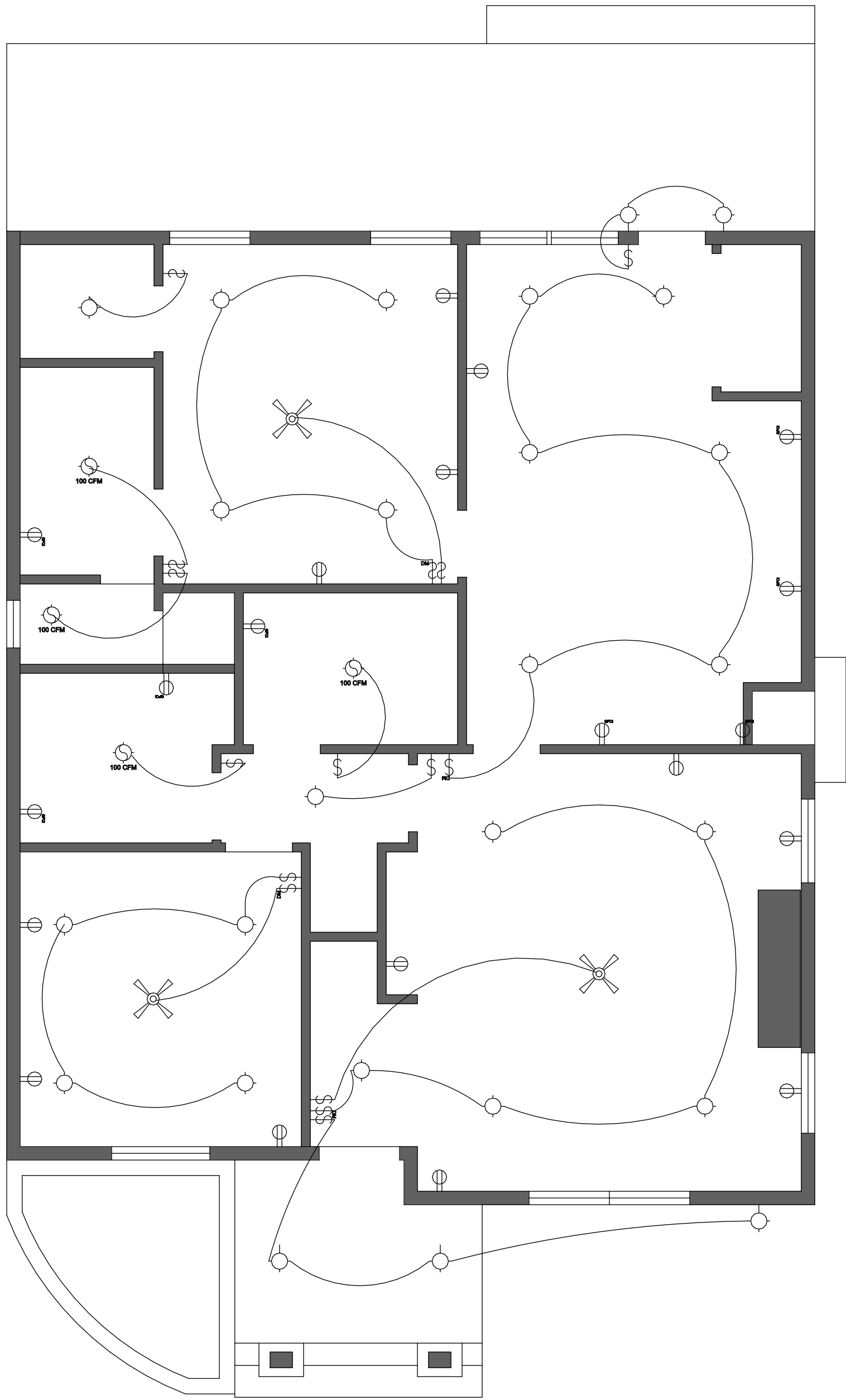
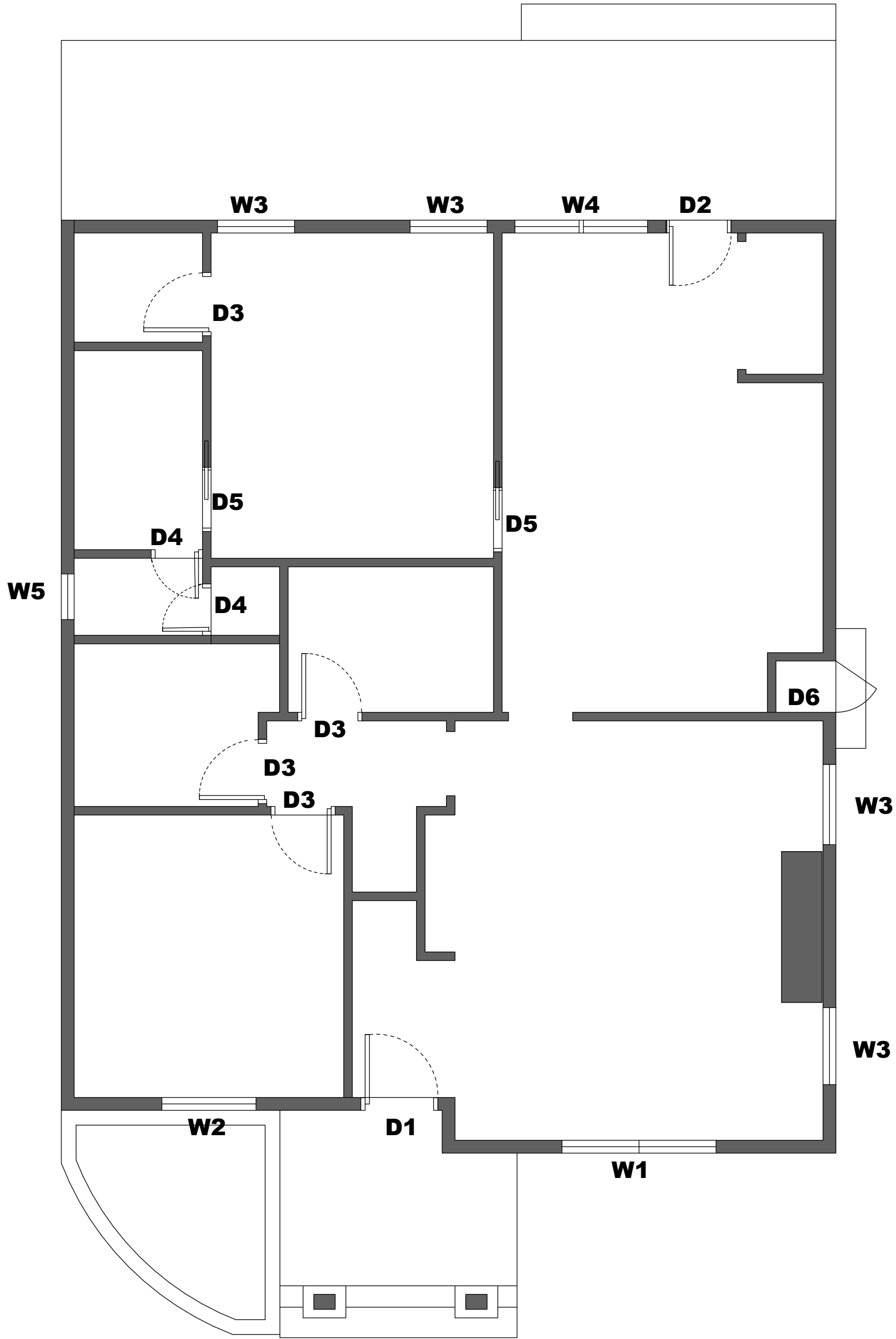
- 1: Entry
- 2: Living Room
- 3: Kitchen + Dining
- 4: Laundry
- 5: Bathroom
- 6: Bedroom
- 7: Master Bedroom
- 8: Closet
- 9: Master Bathroom
- 10: Water Heater Closet
- 11: Front Porch
- 12: Back Porch



DIMENSIONS: SCALE | 1/4":1- 0"

SY M.	SIZE			TYPE	MATERIAL
	WIDT H	HEI GHT	THICKN ESS		
DOOR					
D1	36"	7'6"	1 3/4"	Single, inward- swinging door	**
D2	2'6"	7'6"	1 3/4"	Single, inward- swinging door	
D3	2'6"	7'6"	1 3/4"	Single, inward- swinging door	
D4	2'	7'6"	1 3/4"	Single, inward- swinging door	
D5	2'6"	7'6"	1 3/4"	Poket door	
D6	2'	7'6"	1 3/4"	Single, Outward- swinging door	
WINDOW					
W1	6'0"	5' 1"	1 3/4"	Double-hung window	***
W2	3'8"	5' 1"	1 3/4"	Double-hung window	
W3	3'0"	5' 1"	1 3/4"	Double-hung window	
W4	5'2"	5'1"	1 3/4"	Double-hung window	
W5	1'9"	2' 0"	1 3/4"	Awning window	

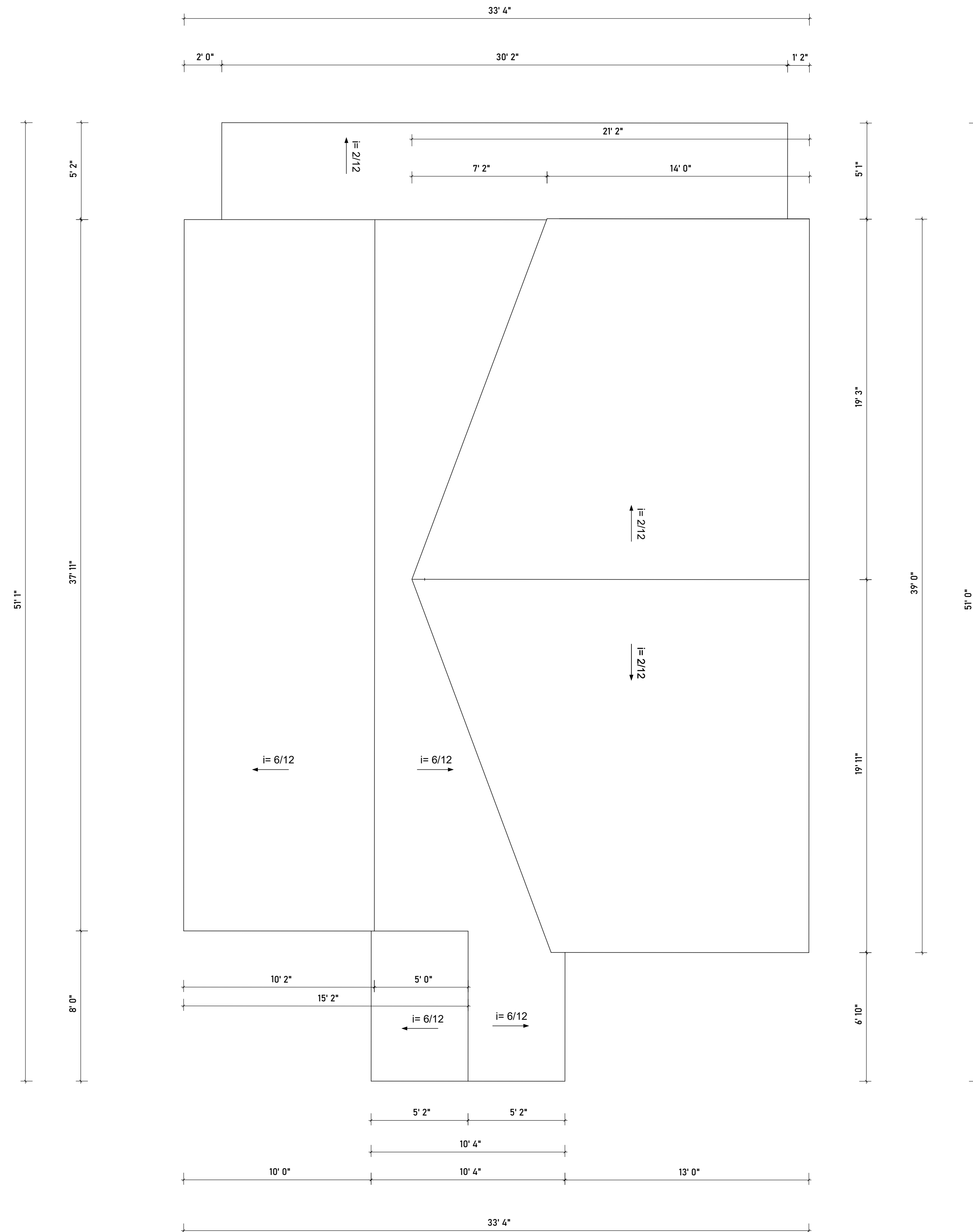
DOOR & WINDOW: SCALE | 1/4":1- 0"



ELECTRICAL PLAN: SCALE | 1/4":1- 0"

*** Note:
- Bedrooms and living rooms: Use THHN or PVC wire with a cross-sectional area of 2.5 mm² for electrical outlets and lighting fixtures.
- Kitchen: Use THHN or XLPE wire with a cross-sectional area of 4 mm² for high-power appliances such as electric stoves and ovens.
- Bathrooms: Use moisture-resistant XLPE wire

ELECTRICAL SYMBOLS	
	DUPLEX OUTLET
	JUNCTION BOX
	DRYER OUTLET
	GFCI OUTLET
	SPECIAL USE OUTLET
	SINGLE POLE SWITCH
	DIMMER SWITCH
	FAN SWITCH
	TV
	DATA
	DATA / PHONE / TV / RCA
	PANEL
	VANITY LIGHT
	WALL FLUORESCENT
	WALL LIGHT
	CEILING FAN
	SUSPENDED FLUORESCENT
	RECESSED FLUORESCENT
	Under-cabinet lights
	CEILING FAN w/ LIGHT
	RECESSED LIGHT
	LIGHT
	Post Light/ Motion Light
	WALL SMOKE DETECTOR
	WALL CO DETECTOR
	WALL HORN STROBE
	SMOKE DETECTOR
	HORN STROBE
	CO DETECTOR
	EXIT SIGN
	HEATER
	EXHAUST FAN
	EXHAUST FAN w/ LIGHT



ROOF: SCALE | 1/4":1- 0"

CONTINUOUS FOOTING WITH STEM WALL

- ## 1. Excavation & Site Prep

Remove topsoil and compact the subgrade. Install a 4-6" layer of compacted gravel for drainage.

- ## 2. Concrete Slab

4" thick reinforced concrete slab (3000-3500 psi).
6-mil polyethylene vapor barrier below the slab.
Control joints to prevent cracking.

- ### 3. Footings & Reinforcement

10" x 16" continuous footings around the perimeter.
Reinforce with #4 rebar (12" O.C.).

- #### 4. Insulation & Frost Protection

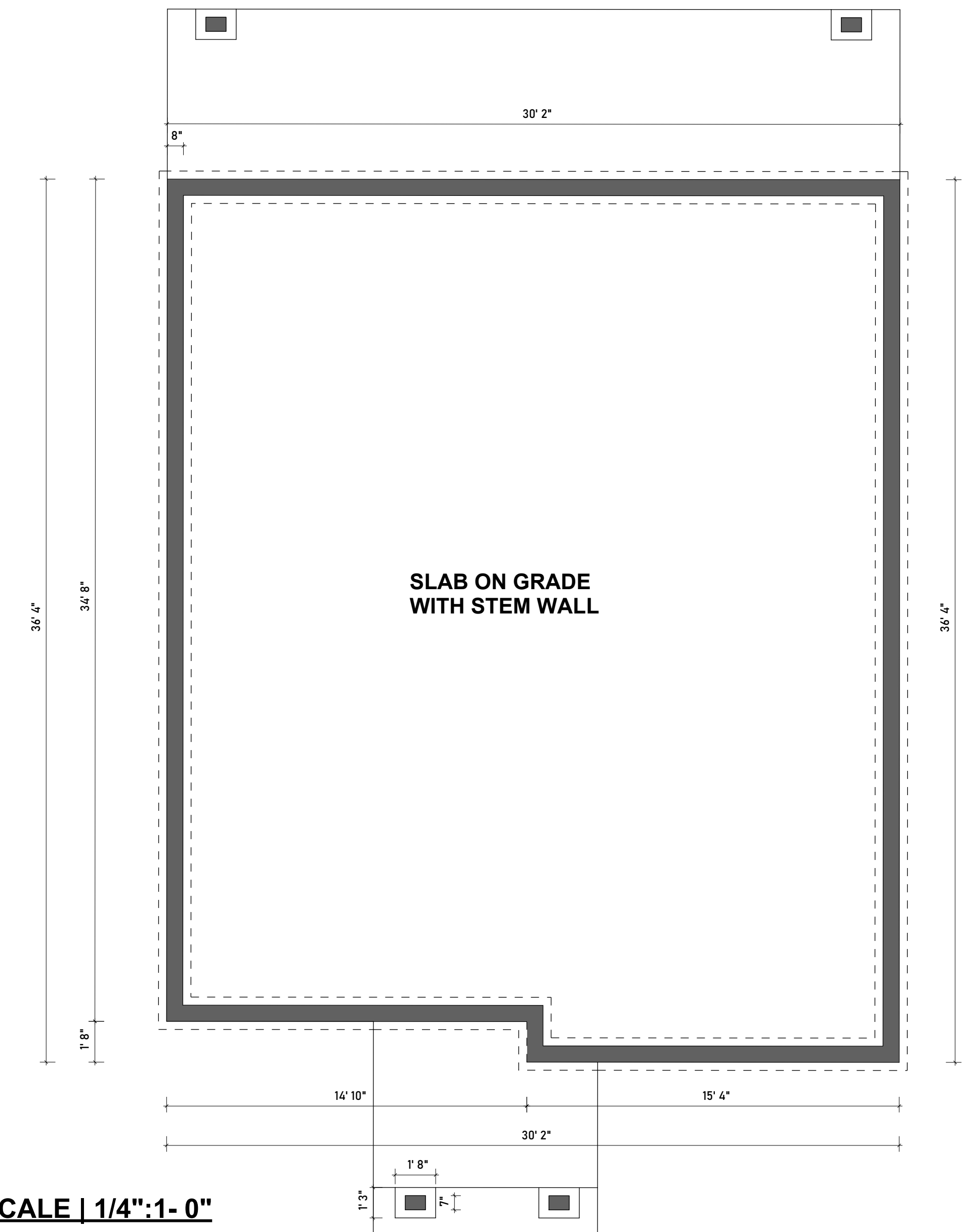
R-10 rigid foam insulation around the perimeter (as per climate zone).
Minimum 12" depth for warm climates, 24-36" for frost-prone areas.

- ## 5. Anchor Bolts & Connections

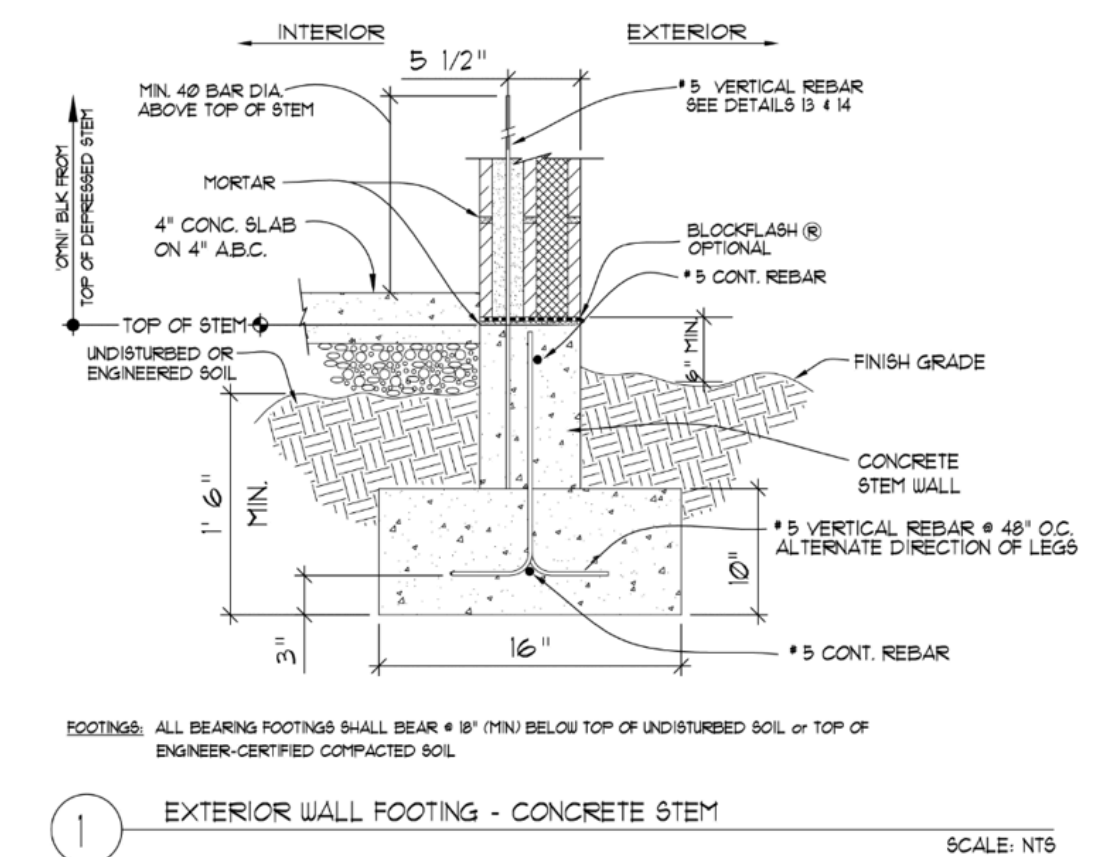
1/2" anchor bolts embedded 7" into the concrete every 6'.
Expansion joints at necessary locations.

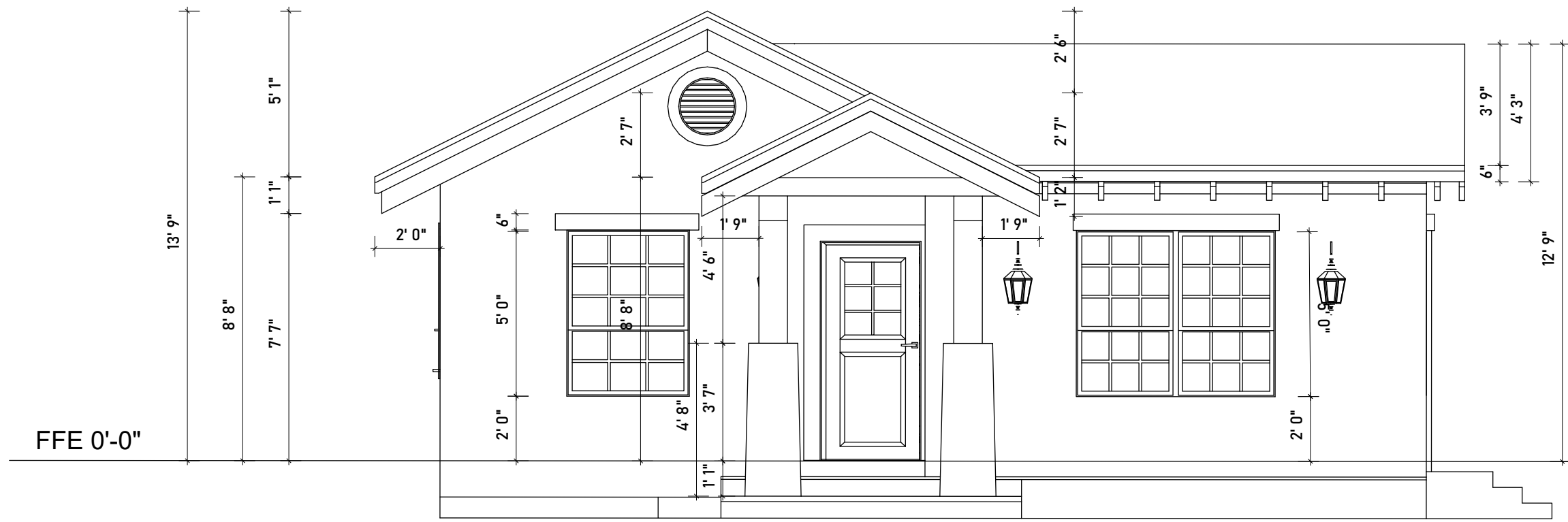
****Stem Wall Specifications:****

- ****Thickness:**** 8"
- ****Height:**** 12" - 24" (based on frost depth)
- ****Reinforcement:****
 - Horizontal: #4 rebar @ 12"-16" O.C.
 - Vertical: #4 rebar tied to footing
- ****Waterproofing:**** Damp-proof coating if required.

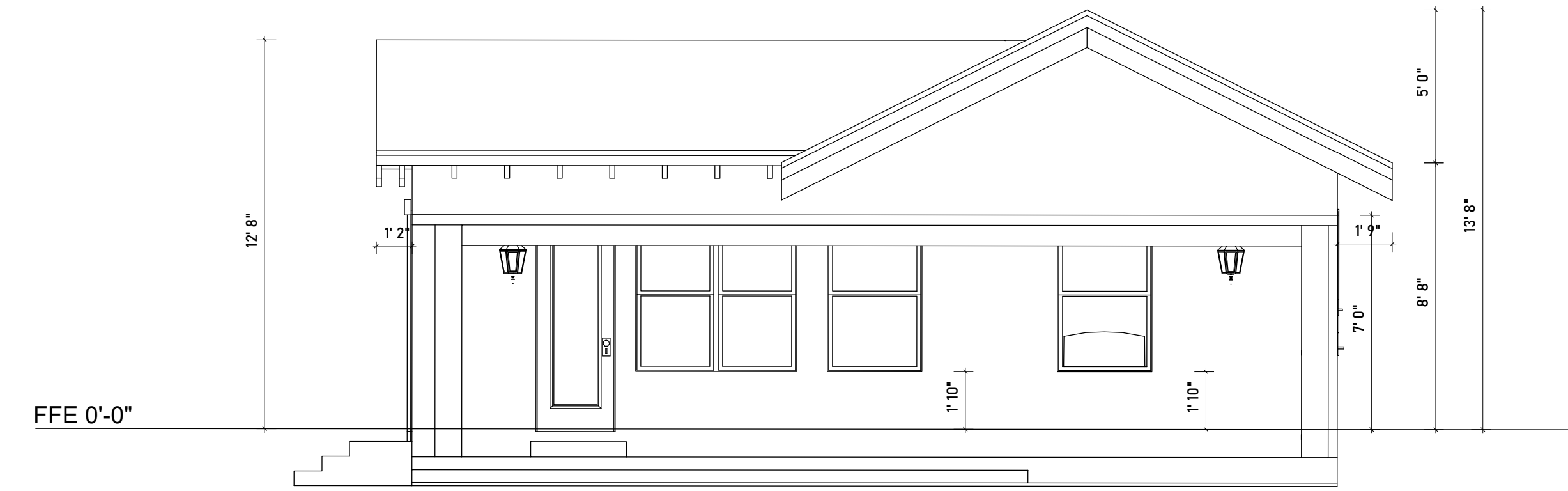


FOUNDATION: SCALE | 1/4":1- 0"

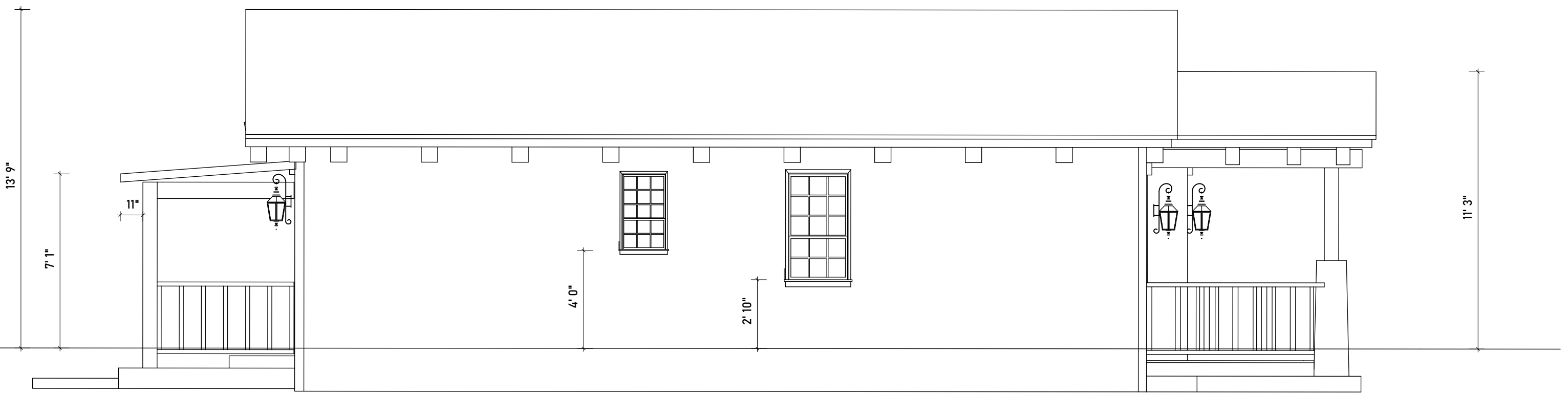




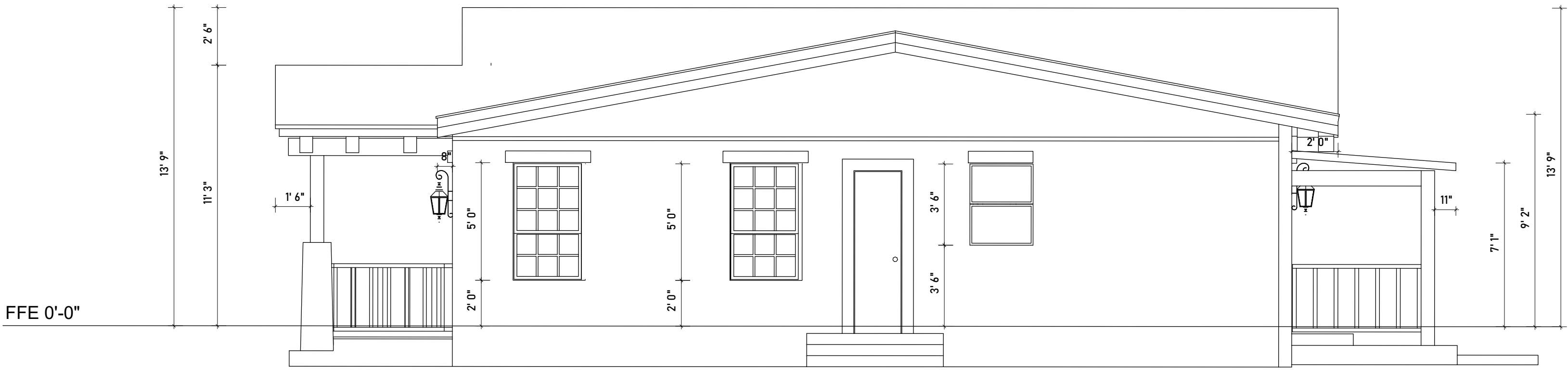
FRONT VIEW: SCALE | 1/4":1- 0"



REAR VIEW: SCALE | 1/4":1- 0"



LEFT VIEW: SCALE | 1/4":1- 0"



RIGHT VIEW: SCALE | 1/4":1- 0"

*** Note:
Please refer to the provided 3D exterior model for accurate representation of exterior finishes. All materials selected should be readily available in the local market and compatible with the overall design aesthetic.

BUILDING CODE AND STANDARDS		GENERAL NOTES		WOOD FRAMING NOTES		ENGINEERED WOOD TRUSSES																																													
<div><div>1. CALIFORNIA BUILDING CODE (CBC), 2022 EDITION</div><div>2. THE MINIMUM DESIGN LOAD FOR BUILDING AND OTHER STRUCTURES, ASCE 7-16</div><div>3. AMERICAN CONCRETE INSTITUTE, ACI</div><div>4. NATIONAL DESIGN SPECIFICATION (NDS) ASD EDITION</div><div>5. ALLOWABLE STRESS DESIGN, NINTH ED. (AISC) FOR STEEL STRUCTURE DESIGN</div></div>		<div><div>1. CONTRACTOR TO VERIFY ALL DIMENSIONS, SPANS, AND CONDITIONS WITH ARCHITECTURAL DRAWINGS. IF ANY OMISSIONS, MISTAKES, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE CONSTRUCTION DRAWINGS, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH A FAILURE.</div><div>2. IF DISCREPANCIES ARE FOUND, THE MORE STRINGENT SPECIFICATION SHALL BE FOLLOWED. CONTRACTOR RESPONSIBLE FOR ADEQUATE BRACING OF STRUCTURAL MEMBERS, WALLS, AND NON-STRUCTURAL ITEMS DURING CONSTRUCTION</div><div>3. THE ENGINEER AND HIS CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE WORK HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY OMISSIONS, MISTAKES, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE WORK PRODUCT, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH A FAILURE.</div><div>4. MANY PORTIONS OF THESE DRAWINGS, NOTES AND SPECIFICATIONS ARE THE RESULT OF DEMANDS BY VARIOUS APPROVING AGENCIES THAT MUST BE PERFORMED AS PART OF THIS WORK. ANY ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ENGINEER SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER, BUT OF THE PARTIES RESPONSIBLE FOR MAKING THE CHANGE AND TAKING ACTION TO DO SO. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ENGINEER OR THE CONTRADICTION TO THE ENGINEER'S WORK PRODUCT, THE INTENT AND/OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER, BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION. THE ENGINEER SHOULD BE CONTACTED IN MATTERS OF ANY AND ALL CHANGES TO THE DRAWINGS AND SPECIFICATIONS HEREIN WITHOUT EXCEPTION.</div><div>5. NON STRUCTURAL FRAMING REQUIREMENTS ARE NOT SPECIFIED ON STRUCTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING REQUIRED.</div><div>6. CONTRACTOR SHALL ASSURE THAT ALL PRODUCTS AND HARDWARE ARE USED PER MANUFACTURER'S RECOMMENDATIONS.</div><div>7. CONTRACTOR SHALL PROVIDE NAME OF AN APPROVED FABRICATOR OR ICC EVALUATION REPORT FOR STEEL ROOF JOISTS, STEEL FLOOR JOISTS, AND STEEL DECKING TO BUILDING OFFICIAL FOR APPROVAL PRIOR TO CONSTRUCTION.</div><div>8. CONTRACTOR SHALL PROVIDE NAME OF AN APPROVED FABRICATOR FOR ALL FABRICATED STRUCTURAL COMPONENTS TO BUILDING OFFICIAL FOR APPROVAL PRIOR TO CONSTRUCTION</div><div>9. CONTRACTOR SHALL PROVIDE NAME OF AN APPROVED SPECIAL INSPECTION AGENCY AND QUALIFICATION OF INDIVIDUAL TO BUILDING OFFICIAL FOR APPROVAL PRIOR TO CONSTRUCTION.</div></div>		<div><div>1. ALL DIMENSIONAL LUMBER SHALL BE DF#2 GRADE OR BETTER. SAWN LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK OF A LUMBER GRADING OR INSPECTION AGENCY THAT HAS BEEN APPROVED BY AN ACCREDITATION BODY THAT COMPLIES WITH DOC PS 20 OR EQUIVALENT.</div><div>2. ALL SHEATHING TO BE APA RATED SHEATHING EXPOSURE 1 AND SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN DOC P51 OR P52. ALL EXTERIOR WALL ARE REQUIRED TO BE SHEATHED. ALL SHEATHING SHALL HAVE SPAN RATINGS ACCORDING TO THE FOLLOWING:<div>FLOOR W/ 12" JOIST/TRUSS SPACING.....24/12</div><div>FLOOR W/ 16" JOIST/TRUSS SPACING.....32/16</div><div>FLOOR W/ 24" JOIST/TRUSS SPACING.....48/24</div><div>ROOF W/ 12" JOIST/TRUSS SPACING.....12/0</div><div>ROOF W/ 24" JOIST/TRUSS SPACING.....24/0</div><div>ROOF W/ 48" JOIST/TRUSS SPACING.....48/24</div><div>WALL W/ 12" JOIST/TRUSS SPACING.....16/0</div><div>WALL W/ 16" JOIST/TRUSS SPACING.....24/0</div></div></div> <div>3. ALL LUMBER, TIMBER, PLYWOOD, REQUIRED TO BE TREATED SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE AWPA STANDARD U1 AND M4 FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVE TREATED WOOD SHALL BEAR THE QUALITY MARK OF AN INSPECTION AGENCY THAT MAINTAINS CONTINUING SUPERVISION, TESTING, AND INSPECTION OVER THE QUALITY OF THE PRESERVATIVE TREATED WOOD.</div> <div>4. THE FOLLOWING SHALL BE PRESERVATIVE TREATED LUMBER OF REDWOOD:<div>A. ALL WALL SILL PLATES ON A CONCRETE SLAB THAT ARE IN DIRECT CONTACT WITH EARTH.</div><div>B. WOOD FRAMING MEMBERS THAT REST ON EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8" FROM EXPOSED EARTH.</div><div>C. WOOD FRAMING MEMBERS AND FURRING STRIPS ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY OR CONCRETE WALLS BELOW GRADE.</div><div>D. WOOD JOISTS THAT ARE CLOSER THAN 18", OR WOOD GIRDERS THAT ARE CLOSER THAN 12" FROM EXPOSED EARTH IN CRAWL SPACES OR UNEXCAVATED AREA'S LOCATED WITHIN THE PERIMETER OF THE BUILDING FOUNDATION.</div></div> <div>5. PREFABRICATED JOISTS SHALL CONFORM TO ASTM D 5065.</div> <div>6. LAMINATED LUMBER (LL) SHALL BE 1-3/4" WIDE 1.9E WITH AN ALLOWABLE BENDING STRESS OF 2,600 PSI AND AN ALLOWABLE SHEAR STRESS OF 285 PSI. LAMINATED STRAND LUMBER (LSL) SHALL BE 1-3/4" WIDE 1.55E WITH AN ALLOWABLE BENDING STRESS OF 2,325 PSI AND AN ALLOWABLE SHEAR STRESS OF 310 PSI.</div> <div>7. STRUCTURAL GLUE LAMINATED TIMBER SHALL BE 24F-V4 UNLESS NOTED OTHERWISE AND MANUFACTURED AND IDENTIFIED AS REQUIRED IN AISC A190.1 AND ASTM D 3373.</div> <div>8. PROVIDE SO BLOCKING FOR ROOF AND OR FLOOR LOAD PATHS TO FOUNDATION. PROVIDE 1 TRIMMER ON EACH SIDE OF ALL OPENINGS LESS THAN 4'-0" WIDE. PROVIDE 2 TRIMMERS MIN. ON EACH SIDE OF ALL OPENINGS 4'-0" WIDE AND GREATER. A MINIMUM 2 STUDS SHALL BE PROVIDED AT ALL VERTICAL EDGES OF SHEAR WALLS, GIRDER TRUSSES, AND BEAMS UNLESS NOTED OTHERWISE.</div> <div>9. BUILT UP BEAMS SHALL BE FASTENED ACCORDING TO THE FOLLOWING:<div>(2) & (3) PLY MEMBERS WITH PLIES UP TO 1-3/4" THICK</div><div>12" DEEP BEAMS: (2) ROWS OF 16D COMMON NAILS AT 12" O.C.</div><div>14" AND DEEPER: (3) ROWS OF 16D COMMON NAILS AT 12" O.C.</div><div>*NAILED CONNECTIONS REQUIRE AN ADDITIONAL ROW OF NAILS WHEN NAIL SIZE IS SMALLER THAN SPECIFIED ABOVE.</div><div>(4) PLY MEMBERS WITH PLIES UP TO 1-3/4" THICK AND (2) PLY MEMBERS WITH PLIES 3-1/2" THICK: 12" DEEP BEAMS: (2) STAGGERED ROWS OF 1/2"x A307 BOLTS W/ WASHERS @ 16" O.C.</div><div>14" AND DEEPER: (2) STAGGERED ROWS OF 1/2"x A307 BOLTS W/ WASHERS @ 16" O.C.</div></div> <div>10. OPENINGS SHALL BE FRAMED WITH THE MINIMUM KING STUDS AS FOLLOWS:<div>OPENINGS UP TO 2'-0": 1 KING STUD AT EACH SIDE OF OPENING</div><div>OPENINGS UP TO 4'-0": 2 KING STUDS AT EACH SIDE OF OPENING</div><div>OPENINGS UP TO 8'-0": 3 KING STUDS AT EACH SIDE OF OPENING</div><div>OPENINGS UP TO 12'-0": 4 KING STUDS AT EACH SIDE OF OPENING</div><div>OPENINGS UP TO 16'-0": 5 KING STUD AT EACH SIDE OF OPENING</div><div>REFER TO PLANS FOR KING STUD REQUIREMENTS ON OPENINGS GREATER THAN 23'-0"</div></div> <div>11. SIMPSON H1 IS REQUIRED AT EACH END EACH ROOF TRUSS UNLESS NOTED OTHERWISE. NAIL TJS TO TOP PLATE W/ (1) 8D BOX NAIL EACH SIDE. DRIVE NAILS AT AN ANGLE AT LEAST 1-1/2" FROM END OF EACH FLOOR JOIST.</div> <div>12. PROVIDE 1 1/8" WIDE TIMBER STRAND OR EQUIVALENT FOR ALL RIM JOISTS.</div> <div>13. BEARING, SHEAR AND EXTERIOR WALL STUDS SHALL BE CAPPED WITH DOUBLE TOP PLATES INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH OTHER PARTITIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 48".</div> <div>14. DOUBLE TOP PLATES SHALL BE NAILED WITH 16D NAILS @ 16" O.C. A MINIMUM OF 8-16D NAILS SHALL BE PLACED EACH SIDE OF TOP PLATE SPLICES UNLESS NOTED OTHERWISE.</div> <div>15. NON BEARING INTERIOR WALLS SHALL BE FRAMED A MINIMUM OF 1/2" SHORTER THAN BEARING WALLS TO ACCOMMODATE TRUSS DEFLECTION AND PRESERVE THE INTENDED LOAD PATH. JOISTS WITH CANTILEVERS SMALLER THAN 1'-6" AND WITHOUT A DIRECT APPLIED CEILING SHALL HAVE CONTINUOUS BLOCKING INSTALLED AT THE 1/3 POINTS OF THE BACK SPAN UNLESS NOTED OTHERWISE.</div> <div>16. FLOOR JOISTS SPANNING 16'-0" OR MORE WITHOUT A DIRECT APPLIED CEILING SHALL HAVE ROWS OF CONTINUOUS BLOCKING INSTALLED AT A MAXIMUM SPACING OF 6'-0" O.C.</div> <div>17. PARTITION WALLS THAT ARE PARALLEL WITH FLOOR JOISTS SHALL BE SUPPORTED WITH DOUBLE JOISTS OR CROSS BLOCKING BETWEEN THE TWO CLOSEST ADJACENT JOISTS UNLESS NOTED OTHERWISE ON THE CONSTRUCTION DRAWINGS.</div> <div>18. ALL METAL HARDWARE TO BE SIMPSON STRONG TIE OR EQUAL AND INSTALLED ACCORDING TO MANUFACTURERS REQUIREMENTS.</div> <div>19. HOLES FOR BOLTS SHALL BE DRILLED AT THE SAME NOMINAL DIAMETER OF THE BOLT 1 1/16".</div> <div>20. HOLES FOR LAG SCREWS AND WOOD SCREWS SHALL BE DRILLED THE SAME NOMINAL LENGTH AND DIAMETER OF THE SHANK. LAG SCREWS AND WOOD SCREWS SHALL NOT BE DRIVEN INTO PLACE.</div> <div>21. NAIL SHANK DIAMETER AND LENGTHS SHALL CONFORM TO THE FOLLOWING:<div>8D.....0.131" ΦX2.50"</div><div>10D.....0.148" ΦX3.00"</div><div>12D.....0.148" ΦX3.25"</div><div>16D.....0.162" ΦX3.50"</div><div>20D.....0.192" ΦX4.00"</div><div>30D.....0.207" ΦX4.50"</div><div>40D.....0.225" ΦX5.00"</div></div> <div>22. WHEN APPLICABLE STAPLES MAY BE SUBSTITUTED FOR NAILS TO FASTEN STRUCTURAL SHEATHING TO SUPPORTING MEMBERS PROVIDED THAT THE STAPLES HAVE A CROWN WIDTH OF 7/16" AND SHALL BE INSTALLED WITH THEIR CROWNS PARALLEL TO THE LONG DIMENSION OF THE FRAMING MEMBERS. SUBSTITUTE STAPLES FOR NAILS ACCORDING TO THE FOLLOWING:<div>8D COMMON NAILS.....14 GAUGE 1 1/2" STAPLES</div><div>10D COMMON NAILS.....13 GAUGE 1 1/2" STAPLES</div><div>8D COMMON NAILS AT 6" O.C.....16 GAUGE STAPLES AT 4" O.C.</div><div>8D COMMON NAILS AT 4" O.C.....16 GAUGE STAPLES AT 2 1/2" O.C.</div><div>8D COMMON NAILS AT 12" O.C.....16 GAUGE STAPLES AT 7 3/4" O.C.</div></div> <div>23. FASTENERS INSTALLED INTO PRESERVATIVE TREATED WOOD AND FIRE RETARDANT TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. CAST IN SET POST INSTALLED BO STUDS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B695.</div> <div>24. CLASS 55 MINIMUM. WASHERS AND OTHER HARDWARE IN CONTACT WITH FASTENERS SHALL BE OF THE SAME ANTI-CORROSIVE TREATMENT AS THE FASTENERS THEY ARE IN CONTACT WITH.</div> <div>25. SHEATHING FASTENERS SHALL BE DRIVEN FLUSH BUT SHALL NOT FRACTURE THE SHEATHING SURFACE.</div> <div>26. SILL PLATES OF EXTERIOR WALLS AND INTERIOR BEARING WALLS MUST BE ANCHORED TO THE FOUNDATION WITH A MINIMUM OF 1/2"x10" ANCHOR BOLTS @ 36" O.C. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4" FROM EACH END OF EACH PIECE. A PROPERLY SIZED NUT AND STANDARD CUT WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE.</div> <div>27. SHEAR WALL SILL PLATE ANCHOR BOLTS SHALL INCLUDE 0.229"x3"x3" STEEL PLATE WASHERS BETWEEN THE SILL PLATE AND NO 0.229"x3"x3" STEEL PLATE WASHERS ARE PERMITTED TO HAVE A DIAGONALLY SLOTTED HOLE WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4" IF A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE OF THE SHEAR WALL. SHEAR WALL SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH A MINIMUM OF 2 ANCHOR BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4" FROM EACH END OF EACH PIECE.</div> <div>28. CAST IN ANCHOR BOLTS FOR INTERIOR BEARING AND SHEAR WALLS MAY BE REPLACED WITH SIMPSON STRONG-BOLTS, SIMPSON TITEN HD, OR HILTI KWIK BOLT TY ANCHORS OF THE SAME DIAMETER AND 4-1/2" MINIMUM EMBEDMENT. INTERIOR SHEAR WALL ANCHOR BOLTS MAY ALSO BE EPOXIED INTO CONCRETE WITH SIMPSON SET-XP HILTI HIT-RE 500-SD EPOXY AND A MINIMUM 4-1/2" EMBEDMENT.</div>																																															
REINFORCED CONCRETE NOTES		STRUCTURAL CRITERIA				DEFERRED SUBMITTALS																																													
<div><div>1. MINIMUM CONCRETE MIX REQUIREMENTS:<div>CONCRETE COMPRESSIVE STRENGTH, f_c:3000 PSI</div><div>MAXIMUM WATER TO CEMENT RATIO:0.45</div><div>CEMENTITIOUS MATERIAL:TYPE V + POZZOLAN OR SLAG</div></div></div> <div>3. STRUCTURAL CONCRETE SHALL REACH A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1500 PSI AND SHALL REACH THE SPECIFIED COMPRESSIVE STRENGTH IN 28 DAYS. CONCRETE COMPRESSIVE TESTS SHALL CONFORM TO ASTM C 150 "TEST METHOD SAMPLING AND TESTING CONCRETE MASONRY UNITS AND RELATED UNITS". CEMENTITIOUS MATERIAL SHALL CONFORM TO ASTM C 150 "SPECIFICATION FOR PORTLAND CEMENT"</div> <div>4. THE CONCRETE SHALL BE PROPORTIONED AND PRODUCED TO HAVE A SLUMP OF 4 INCHES OR LESS. A TOLERANCE OF 1 INCH ABOVE THIS AMOUNT SHALL BE PERMITTED FOR INDIVIDUAL BATCHES PROVIDED THE AVERAGE FOR ALL BATCHES DOES NOT EXCEED 4 INCHES. THE SLUMP SHALL BE DETERMINED BY "STANDARD TESTING METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE" (ASTM C 143).</div> <div>5. WATER USED IN MIXING CONCRETE SHALL BE CLEAN FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS, OR OTHER SUBSTANCES DELETERIOUS TO CONCRETE OR REINFORCEMENT. NONPOTABLE WATER SHALL NOT BE USED.</div> <div>6. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C330 "STANDARD SPECIFICATIONS FOR CONCRETE AGGREGATES". THE NORMAL MAXIMUM SIZE OF COARSE AGGREGATES SHALL NOT BE LARGER THAN: 1/5 THE DISTANCE BETWEEN THE SIDES OF FORMS, 1/3 THE SLAB DEPTH, OR 3/4 THE MINIMUM CLEAR SPACING BETWEEN INDIVIDUAL REINFORCING BARS OR WIRES, BUNDLES OF BARS, INDIVIDUAL TENDONS, OR DUCTS.</div> <div>7. DEFORMED CONCRETE REINFORCING SHALL BE GRADE 60 REINFORCING STEEL CONFORMING TO ASTM A 615 "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN CARBON-STEEL BARS FOR CONCRETE REINFORCEMENT".</div> <div>8. BAR MATS FOR CONCRETE REINFORCING SHALL CONFORM TO ASTM A 184 "STANDARD SPECIFICATION FOR WELDED DEFORMED STEEL BAR MATS FOR CONCRETE REINFORCEMENT. REINFORCING BARS USED IN BAR MATS SHALL CONFORM TO ASTM A 515 OR ASTM A 706.</div> <div>9. WELDED PLAIN WIRE FOR CONCRETE REINFORCEMENT SHALL NOT BE SMALLER THEN D4 AND SHALL CONFORM TO ASTM A 496 "STANDARD SPECIFICATION FOR STEEL WIRE, DEFORMED, FOR CONCRETE REINFORCEMENT". WELDED DEFORMED WIRE FOR CONCRETE REINFORCEMENT SHALL CONFORM TO ASTM A 497 "STANDARD SPECIFICATION FOR STEEL WELDED WIRE, DEFORMED, FOR CONCRETE REINFORCEMENT".</div> <div>10. WELDED WIRE FOR CONCRETE REINFORCEMENT SHALL NOT BE SMALLER THAN D4 AND SHALL CONFORM TO ASTM A 496 "STANDARD SPECIFICATION FOR STEEL WIRE, DEFORMED, FOR CONCRETE REINFORCEMENT".</div> <div>11. NO ADMIXTURES, OTHER THAN AIR-ENTRAINING ADMIXTURE CONFORMING TO "STANDARD SPECIFICATIONS FOR AIR ENTRAINING ADMIXTURES FOR CONCRETE" (ASTM C 260) MAY BE USED WITHOUT THE WRITTEN APPROVAL FROM THE ENGINEER, CALCIUM CHLORIDE AND CONCRETE ADMIXTURES CONTAINING CHLORIDE SALTS ARE NOT PERMITTED.</div> <div>12. LAP ALL REINFORCING BARS ACCORDING TO THE FOLLOWING LAP SPICE SCHEDULE, WHERE BEAM REINFORCING IS REQUIRED TO BE SPLICED, SPLICING SHALL ONLY TAKE PLACE IN COMPRESSION REGIONS, I.E. BOTTOM REINFORCING SPLICES ALLOWED OVER SUPPORTS AND TOP REINFORCING SPLICES ALLOWED IN THE BEAM MIDSPANS, WHERE COLUMN VERTICAL REINFORCING IS REQUIRED TO BE SPLICED, SPLICING WILL BE PERMITTED ONLY AT FLOOR LEVELS OR AREAS OF LATERAL SUPPORT.</div>		<div><div>ANALYSIS ITEMS</div><div>GRAVITY LOADS<div>ROOF LIVE:20 PSF</div><div>ROOF DEAD:15 PSF FOR SHEATHING AND 23 PSF FOR TILES.</div><div>FLOOR LIVE:40 PSF [LIVING]</div><div>DECK LIVE:60 PSF</div><div>FLOOR/DECK DEAD:15 PSF [WOOD FLOOR]</div><div>N/A PSF [SUSPENDED SLAB]</div><div>CEILING LIVE:10 PSF</div><div>CEILING DEAD:10 PSF</div></div><div>DEFLECTION CRITERIA<div>ROOF MEMBERS<div>Δ(LIVE)L/360</div><div>Δ(TOTAL LOAD)L/240</div></div><div>FLOOR MEMBERS<div>Δ(LIVE)L/360</div><div>Δ(TOTAL LOAD)L/240</div></div><div>WALLS<div>Δ(LIVE)L/240</div></div></div><div><div>SEISMIC DESIGN PARAMETERS</div><div>SEISMIC DESIGN CATEGORY: A</div><div>SITE CLASS: D</div><div>OCCUPANCY CATEGORY: II</div><div>IMPORTANCE FACTOR, I_p: 1.00</div><div>RESPONSE MOD. FACTOR, R: 6.5</div><div>OVER STRENGTH FACTOR, Q: 2.5</div><div>DEFLECTION AMPLIFICATION FACTOR, C_d: 4.0</div><div>BASIC SIESMIC-FORCE-RESISTING SYSTEM(S): LIGHT FRAMED WALLS SHEATHED W/ WOOD STRUCTURAL PANELS</div><div>DESIGN BASE SHEAR, V: C&W</div><div>SEISMIC DESIGN COEFFICIENT, C_s: 0.10</div><div>ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE</div><div>S_s: 0.057</div><div>S_i: 0.039</div><div>F_a: 1.6</div><div>F_v: 2.4</div><div>S_{ps}: 0.062</div><div>S_{ds}: 0.061</div><div>p: 1.3</div></div><div><div>WIND DESIGN PARAMETERS</div><div>BASIC WIND SPEED: 110 MPH</div><div>EXPOSURE: 'C'</div><div>OCCUPANCY CATEGORY: II</div><div>COMPONENTS AND CLADDING DESIGN WIND LOADS TO BE PER ASCE 7-16</div></div></div>																																																	
LAP LENGTH SCHEDULE AND CONCRETE COVERING																																																			
<div>ALL REINFORCING BAR WILL BE GRADE 60 PER A.S.T.M A615</div> <div><div>REINFORCED CONCRETE LAP SPICE SCHEDULE</div><table><thead><tr><th colspan="2">F'c= 3000 PSI AT 28 DAYS</th><th colspan="6">REINFORCEMENT LENGTH (INCHES)</th></tr><tr><th>SLICE CLASS</th><th>REINFORCEMENT LOCATION</th><th>#3 BARS</th><th>#4 BARS</th><th>#5 BARS</th><th>#6 BARS</th><th>#7 BARS</th><th>#8 BARS</th></tr></thead><tbody><tr><td rowspan="2">A</td><td>TOP</td><td>24</td><td>32</td><td>39</td><td>47</td><td>69</td><td>78</td></tr><tr><td>BOTTOM</td><td>18</td><td>24</td><td>30</td><td>36</td><td>53</td><td>60</td></tr><tr><td rowspan="2">B</td><td>TOP</td><td>31</td><td>41</td><td>51</td><td>61</td><td>89</td><td>102</td></tr><tr><td>BOTTOM</td><td>24</td><td>32</td><td>39</td><td>47</td><td>69</td><td>78</td></tr></tbody></table></div> <div><div>MINIMUM CONCRETE COVERAGE OF REINFORCING STEEL SHALL BE AS FOLLOWS:</div><div>CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO SOIL.....3"</div><div>CONCRETE EXPOSED TO SOIL OR WEATHER:<div>#5 BARS, W31 OR D31 WIRES, AND SMALLER.....1½"</div><div>#6 BARS AND LARGER2"</div></div><div>CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:<div>SLABS, WALLS AND JOISTS:<div>#11 BARS AND SMALLER3/4"</div><div>#14 BARS AND LARGER1½"</div></div><div>BEAMS AND COLUMNS.....1½"</div></div></div>		F'c= 3000 PSI AT 28 DAYS		REINFORCEMENT LENGTH (INCHES)						SLICE CLASS	REINFORCEMENT LOCATION	#3 BARS	#4 BARS	#5 BARS	#6 BARS	#7 BARS	#8 BARS	A	TOP	24	32	39	47	69	78	BOTTOM	18	24	30	36	53	60	B	TOP	31	41	51	61	89	102	BOTTOM	24	32	39	47	69	78				
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<div><div>1. HOLD-DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.</div><div>2. SEE ARCHITECTURAL PLANS FOR HORIZONTAL DIMENSIONS AND ELEVATIONS.</div><div>3. THE CONCRETE CONTRACTOR SHALL COORDINATE WITH FRAMING CONTRACTOR ON PLACEMENT OF ANCHOR BOLTS AND HARDWARE.</div><div>4. PROVIDE SLAB JOINT AT 12'-0" O.C. MAX.</div><div>5. ALLOWABLE SOIL BEARING PRESSURE, 1500, PSF BASED UPON CODE.</div><div>6. VERIFY ALL EXISTING CONDITIONS & NOTIFY THE ENGINEER OF RECORD WITH ANY DISCREPANCIES.</div><div>7. CONSTRUCTION SHALL COMPLY WITH 2022 EDITION OF CALIFORNIA BUILDING AND OTHER RELATED CODES.</div><div>8. STRUCTURAL DESIGN AND DETAILS SHALL COMPLY TO CBC (2022 EDITION).</div></div>																																																			
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<div>DRAINAGE OF THE SURFACE WATER AWAY FROM THE FOUNDATION SHOULD BE MAINTAINED FOR THE LIFE OF THE STRUCTURE. IN NO CASE SHOULD WATER BE ALLOWED TO POND NEXT TO THE STRUCTURE FOUNDATION. DESERT TYPE OR ZERO-SPACE LANDSCAPING WHICH REQUIRES MINIMAL WATER IS RECOMMENDED. RAIN GUTTERS SHOULD BE INSTALLED AND ROOF DOWNSPOUTS SHOULD DISCHARGE RAIN WATER AWAY FROM THE FOUNDATION TO REDUCE THE POTENTIAL OF WATER INFILTRATION INTO THE SUB GRADE. WHERE POSSIBLE WE RECOMMEND THAT ALL ROOF DOWNSPOUTS BE TIED TOGETHER WITH A SUB GRADE COLLECTION SYSTEM THAT DISCHARGES RAIN WATER INTO THE CURB AND GUTTER OR DIRECTLY INTO THE STORM DRAIN. ALL DRAINAGE RECOMMENDATIONS IN THE SOILS REPORT MUST BE STRICTLY FOLLOWED WITHOUT VARIATION.</div>																																																			

5. PREFABRICATED I-JOISTS SHALL CONFORM TO ASTM D 5055.

6. LAMINATED VENEER LUMBER (LVL) SHALL BE 1-3/4" WIDE 1.9E WITH AN ALLOWABLE BENDING STRESS OF 2,800 PSI AND AN ALLOWABLE SHEAR STRESS OF 285 PSI. LAMINATED STRAND LUMBER (LSL) SHALL BE 1-3/4" WIDE WITH AN ALLOWABLE BENDING STRESS OF 2,325 PSI AND AN ALLOWABLE SHEAR STRESS OF 310 PSI.

7. STRUCTURAL GLUE LAMINATED TIMBER SHALL BE 24F-V4 UNLESS NOTED OTHERWISE AND MANUFACTURED AND IDENTIFIED AS REQUIRED IN AITC A190.1 AND ASTM D 3737.

8. PROVIDE SOLID BLOCKING FOR ALL VERTICAL LOAD PATHS TO FOUNDATION. PROVIDE 1 TRIMMER ON EACH SIDE OF ALL OPENINGS LESS THAN 4'-0" WIDE. PROVIDE 2 TRIMMERS MIN. ON EACH SIDE OF ALL OPENINGS 4'-0" WIDE AND GREATER. A MINIMUM 2 STUDS SHALL BE PROVIDED AT ALL VERTICAL EDGES OF SHEAR WALLS, GIRDER TRUSSES, AND BEAMS UNLESS NOTED OTHERWISE.

9. BUILT UP BEAMS SHALL BE FASTENED ACCORDING TO THE FOLLOWING:

(2) & (3) PLY MEMBERS WITH PLIES UP TO 1-3/4" THICK:

12" DEEP BEAMS: (2) ROWS OF 16D COMMON NAILS AT 12" O.C.

14" AND DEEPER: (3) ROWS OF 16D COMMON NAILS AT 12" O.C.

NAILSD CONNECT REQUIRE AN ADDITIONAL ROW OF NAILS WHEN NAIL SIZE IS SMALLER THAN SPECIFIED ABOVE.

(4) PLY MEMBERS WITH PLIES UP TO 1-3/4" THICK AND (2) PLY MEMBERS WITH PLIES 3-1/2" THICK:

12" DEEP BEAMS: (2) STAGGERED ROWS OF 1/2"Ø A307 BOLTS W/ WASHERS @ 16" O.C.

14" AND DEEPER: (3) STAGGERED ROWS OF 1/2"Ø A307 BOLTS W/ WASHERS @ 16" O.C.

10. OPENINGS SHALL BE FRAMED WITH THE MINIMUM KING STUDS AS FOLLOWS:

OPENINGS UP TO 2'-0": 1 KING STUD AT EACH SIDE OF OPENING

OPENINGS UP TO 4'-0": 2 KING STUDS AT EACH SIDE OF OPENING

OPENINGS UP TO 8'-0": 3 KING STUDS AT EACH SIDE OF OPENING

OPENINGS UP TO 12'-0": 4 KING STUD AT EACH SIDE OF OPENING

OPENINGS UP TO 16'-0": 5 KING STUD AT EACH SIDE OF OPENING

REFER TO PLANS FOR KING STUD REQUIREMENTS ON OPENINGS GREATER THAN 23'-0"

11. SIMPSON H1 IS REQUIRED AT EACH END EACH ROOF TRUSS UNLESS NOTED OTHERWISE. NAIL T/J'S TO TOP PLATE W/ (1) 8D BOX NAIL EACH SIDE. DRIVE NAILS AT AN ANGLE AT LEAST 1-1/2" FROM END OF EACH FLOOR JOIST.

12. PROVIDE 1 1/8" WIDE TIMBER STRAND OR EQUIVALENT FOR ALL RIM JOISTS.

13. BEARING, SHEAR AND EXTERIOR WALL STUDS SHALL BE CAPPPED WITH DOUBLE TOP PLATES INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH OTHER PARTITIONITIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 48".

14. DOUBLE TOP PLATES SHALL BE NAILED WITH 16D NAILS @ 16" O.C. A MINIMUM OF 8-16D NAILS SHALL BE PLACED EACH SIDE OF TOP PLATE SPLICES UNLESS NOTED OTHERWISE.

15. NON BEARING INTERIOR PARTITION WALLS SHALL BE FRAMED A MINIMUM OF 1/2" SHORTER THAN BEARING WALLS TO ACCOMMODATE TRUSS DEFLECTION AND PRESERVE THE INTENDED LOAD PATH.

17. JOISTS WITH CANTILEVERED LATH AND WITHOUT A DIRECT APPLIED CEILING SHALL BE DRIVEN INTO PLACE. SHALL HAVE CONTINUOUS BLOCKING INSTALLED AT THE 1/3 POINTS OF THE BACK SPAN UNLESS NOTED OTHERWISE.

18. FLOOR JOISTS SPANNING 16'-0" OR MORE WITHOUT A DIRECT APPLIED CEILING SHALL HAVE ROWS OF CONTINUOUS BLOCKING INSTALLED AT A MAXIMUM SPACING OF 8'-0" O.C.

19. PARTITION WALLS THAT ARE PARALLEL WITH FLOOR JOISTS SHALL BE SUPPORTED WITH DOUBLE JOISTS OR CROSS BLOCKING BETWEEN THE TWO CLOSEST ADJACENT JOISTS UNLESS NOTED OTHERWISE ON THE CONSTRUCTION DRAWINGS.

20. ALL METAL HARDWARE TO BE SIMPSON STRONG TIE OR EQUAL AND INSTALLED ACCORDING TO MANUFACTURERS REQUIREMENTS.

21. HOLES FOR BOLTS SHALL BE DRILLED AT THE SAME NOMINAL DIAMETER OF THE BOLT +1/16".

22. HOLES FOR LAG SCREWS AND WOOD SCREWS SHALL BE DRILLED THE SAME NOMINAL LENGTH AND DIAMETER OF THE SHANK. LAG SCREWS AND WOOD SCREWS SHALL NOT BE DRIVEN INTO PLACE.

23. NAIL SHANK DIAMETER AND LENGTHS SHALL CONFORM TO THE FOLLOWING:

8D.....0.131" ΦX2.50"

10D.....0.148" ΦX3.00"

12D.....0.148" ΦX3.25"

16D.....0.162" ΦX3.50"

20D.....0.192" ΦX4.00"

30D.....0.207" ΦX4.50"

40D.....0.225" ΦX5.00"

24. WHEN APPLICABLE STAPLES MAY BE SUBSTITUTED FOR NAILS TO FASTEN STRUCTURAL SHEATHING TO SUPPORTING MEMBERS PROVIDED THAT THE STAPLES HAVE A CROWN WIDTH OF 7/16" AND SHALL BE INSTALLED WITH THEIR CROWNS PARALLEL TO THE LONG DIMENSION OF THE FRAMING MEMBERS. SUBSTITUTE STAPLES FOR NAILS ACCORDING TO THE FOLLOWING:

8D COMMON NAILS.....14 GAUGE 1 1/2" STAPLES

10D COMMON NAILS.....13 GAUGE 1 1/2" STAPLES

8D COMMON NAILS AT 6" O.C.....16 GAUGE STAPLES AT 4" O.C.

8D COMMON NAILS AT 4" O.C.....16 GAUGE STAPLES AT 2 1/2" O.C.

8D COMMON NAILS AT 12" O.C.....16 GAUGE STAPLES AT 7 3/4" O.C.

25. FASTENERS INSTALLED INTO PRESERVATIVE TREATED WOOD AND FIRE RETARDANT TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. CAST IN AND POST INSTALLED BOLTS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B685, CLASS 55 MINIMUM. WASHERS AND OTHER HARDWARE IN CONTACT WITH FASTENERS SHALL BE OF THE SAME ANTI-CORROSIVE TREATMENT AS THE FASTENERS THEY ARE IN CONTACT WITH.

26. SHEATHING FASTENERS SHALL BE DRIVEN FLUSH BUT SHALL NOT FRACTURE THE SHEATHING SURFACE.

27. SILL PLATES OF EXTERIOR WALLS AND INTERIOR BEARING WALLS MUST BE ANCHORED TO THE FOUNDATION WITH A MINIMUM OF 1/2X10" ANCHOR BOLTS @ 36" O.C. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4" FROM EACH END OF EACH PIECE. A PROPERLY SIZED NUT AND STANDARD CUT WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE.

28. SHEAR WALL SILL PLATE ANCHOR BOLTS SHALL INCLUDE 0.229"X3"X3" STEEL PLATE WASHERS BETWEEN THE SILL PLATE AND NUT. 0.229"X3"X3" STEEL PLATE WASHERS ARE PERMITTED TO HAVE A DIAGONALLY SLOTTED HOLE WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4" IF A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE OF THE SHEAR WALL. SHEAR WALL SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH A MINIMUM OF 2 ANCHOR BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4" FROM EACH END OF EACH PIECE.

29. CAST IN ANCHOR BOLTS FOR INTERIOR BEARING AND SHEAR WALLS MAY BE REPLACED WITH SIMPSON STRONG-BOLTS, SIMPSON TITEN HD, OR HILTI KWIK BOLT TV ANCHORS OF THE SAME DIAMETER AND 4-1/2" MINIMUM EMBEDMENT. INTERIOR SHEAR WALL ANCHOR BOLTS MAY ALSO BE EPOXIED INTO CONCRETE WITH SIMPSON SET-XP HILTI HIT-RE 500-SD EPOXY AND A MINIMUM 4-1/2" EMBEDMENT.

	Main Consultants	Project Architect	Designed For	Signature of the applicant	Designed by	
				Drawing GENERAL NOTES	Drawn.	
					Job No	
					Scale	
					Date	2024.19.01
				Sheet No.	S1.1	