PLAN 1 | COTTAGE

PLAN 1 | RANCH

PLAN 1 | SPANISH

CITY OF AGOURA HILLS | ACCESSORY DWELLING UNIT | PLAN 1

CITY OF AGOURA HILLS

PROJECT DIRECTORY

*FOR PLANNING STAFF ONLY

INITIAL WHEN SECTION HAS BEEN REVIEWED. STAFF INITIALS:_____

APPLICANT (TO BE PROVIDED BY OWNER)

ADDRESS:
CONTACT:
EMAIL:
PHONE:

ARCHITECT RRM DESIGN GROUP

ADDRESS: 3765 S. HIGUERA ST, SUITE 102
SAN LUIS OBISPO, CA 93401
CONTACT: RANDY RUSSOM
EMAIL: RWRUSSOM@RRMDESIGN.COM
PHONE: P:(805) 543-1794

ENERGY CONSULTANT CARSTAIRS ENERGY INC.

ADDRESS: 2238 BAYVIEW HEIGHTS DRIVE, SUITE E
LOS OSOS, CA 93402
CONTACT: TIMOTHY CARSTAIRS
EMAIL: TITLE24@YAHOO.COM
P:(805) 904-9048

SUPPORTING DOCUMENTS

ENERGY COMPLIANCE

PREPARED BY: TIMOTHY CARSTAIRS, CARSTAIRS ENERGY INC.
DATE PREPARED: 05/04/23
JOB NUMBER: 23-050313

TRUSS CALCULATIONS (TO BE PROVIDED BY OWNER)

PREPARED BY:
DATE PREPARED:
JOB NUMBER:

VICINITY MAP

*FOR PLANNING STAFF ONLY

INITIAL WHEN SECTION HAS BEEN REVIEWED. STAFF INITIALS:_____

(TO BE PROVIDED BY OWNER)

PROJECT INFORMATION

*FOR PLANNING STAFF ONLY

INITIAL WHEN SECTION HAS BEEN REVIEWED. STAFF INITIALS: _____

PROJECT SCOPE:

1. CONSTRUCTION OF A NEW DETACHED 1 STORY 554 SF ACCESSORY DWELLING UNIT WITH 1 BATH.
2. ALL SITE WORK WITHIN THE PROPERTY LINE.
3. ALL THE WORK SHOWN IN THE DRAWINGS AND SPECIFICATIONS.

SITE INFORMATION: (TO BE PROVIDED BY CITY OF AGOURA HILLS)

STREET ADDRESS: _____
APN: _____
ZONING: _____
LOT SIZE: _____
LAND USE: _____
EXISTING USE: _____
PROPOSED USE: _____

SETBACKS (TO BE PROVIDED BY CITY OF AGOURA HILLS)

	REQUIRED	PROPOSED
FRONT:		
REAR:	4' - 0"	
SIDES:	4' - 0"	
STRUCTURE SEPARATIONS:	10' - 0"	

BUILDING INFORMATION:

NUMBER OF STORIES: 1
OCCUPANCY GROUP: R-3
CONSTRUCTION TYPE:
SPRINKLERED: SEE FIRE SPRINKLER SECTION ON S
MAX. HEIGHT ALLO
FROM G 16'
MAX. HEIGHT PROP 13' - 5

UTILITIES

WATER AND SEWER SERVICE	CITY OF AGOURA HILLS/MUNICIPAL WATER DISTRICT
ELECTRICAL SERVICE	SOUTHERN CALIFORNIA EDISON
GAS SERVICE	SOUTHER CALIFORNIA GAS COMPANY
TELEPHONE SERVICE	AT&T
GARBAGE SERVICE	WM
CABLE SERVICE	SPECTRUM

BUILDING AREAS

PLAN 1 - STUDIO

BUILIDING AREA:	554	SF
FRONT PORCH AREA:	73	SF

HERS TESTS REQUIRED

1. QUALITY INSULATION INSTALLATION (QII)
2. KITCHEN RANGE HOOD
3. REFRIGERANT CHARGE
4. DUCT SEALING
5. IAQ
6. OTHERS AS REQUIRED BY ENERGY DOCUMENTATION

SPECIAL FEATURES REQUIRED

THE FOLLOWING ARE FEATURES THAT MUST BE INSTALLED AS CONDITION FOR MEETING THE MODELED ENERGY PERFORMANCE. SEE TITLE 24 REPORT FOR MORE INFO.

1. VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION
2. NORTHWEST ENERGY EFFICIENCY ALLIANCE (NEEA) RATED HEAT PUMP WATER HEATER; SPECIFIC BRAND/MODEL, OR EQUIVALENT, MUST BE INSTALLED

PROJECT CHECKLIST

*FOR PLANNING STAFF ONLY

INITIAL WHEN SECTION HAS BEEN REVIEWED. STAFF INITIALS: _____

WASTE WATER

- ☐ SEWER
- ☐ SEPTIC (REQUIRES APPROVAL BY LA COUNTY HEALTH DEPT.)

FIRE SPRINKLERS

DOES THE PRIMARY RESIDENCE HAVE NFPA 13D SPRINKLERS?

- ☐ NO
- ☐ YES

REQUIRED AT PROPOSED ADU:

- ☐ NO (NOT REQU IF PRIMARY RESIDENCE IS UNSPR D
- ☐ YES RED IF PRIMARY RESIDENCE IS SPR ERE

STYLE SELECTION

COLOR PALETTES OWNER SELECTED TO MATCH EXISTING PRIMARY RESIDENCE

☐ COTTAGE

STONE VENEER COLOR: _____
STUCCO (CEMENT PLASTER) COLOR: _____
FIBER CEMENT TRIM COLOR: _____
SHINGLE ROOF COLOR: _____

☐ RANCH

FIBER CEMENT COLOR: _____
FIBER CEMENT TRIM COLOR: _____
SHINGLE ROOF COLOR: _____

☐ SPANISH

STUCCO (CEMENT PLASTER) COLOR: _____
STUCCO (CEMENT PLASTER) ACCENT COLOR: _____
FIBER CEMENT TRIM COLOR: _____
TILE ROOF COLOR: _____

ONSITE PARKING REQUIRED

☐ NONE, EXCEPTION USED:

- ☐ THE ADU IS LESS THAN 800 SF, NO PARKING REQUIRED.
- ☐ THE ADU IS LOCATED WITHIN 1/2 MILE OF PUBLIC TRANSIT.
- ☐ OFF STREET PARKING PERMITS ARE REQUIRED BUT NOT OFFERED TO THE OCCUPANT OF THE ADU.
- ☐ THE ADU IS LOCATED WITHIN AN AREA WHERE ON-STREET PARKING PERMITS ARE REQUIRED, BUT NOT OFFERED TO AN ADU OCCUPANT.
- ☐ WHEN THERE IS A CAR SHARE VEHICLE LOCATED WITHING ONE BLOCK OF THE ADU.

☐ ONE PARKING SPACE, NO EXEMPTION

CA RESIDENTIAL CODE ADOPTED WITH LOCAL AMENDMENTS

1. PER CITY ORDINANCE NO-22-465 SECTION 1208.13.1, FOR ANY ALTERATION OR ADDITION THAT EXCEEDS $10,000.00 VALUATION, SEISMIC GAS SHUT OFF VALVE INSTALLATION SHALL BE ADDED TO SCOPE OF WORK.

ADDRESS IDENTIFICATION [R319.1]

1. BUILDINGS SHALL HAVE APPROVED ADDRESS NUMBERS OR APPROVED BUILDING IDENTIFICATION PLACED IN A POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. THESE NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBER SHALL BE A MINIMUM OF 4" HIGH WITH A MINIMUM STROKE OF 1/2". WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE, OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE (R319.1).

USER LICENSE AGREEMENT

BY USING THESE PERMIT READY ACCESSORY DWELLING UNIT PLANS, THE USER AGREES TO RELEASE, INDEMNIFY, AND HOLD HARMLESS THE CITY OF AGOURA HILLS, ITS ELECTED OFFICIALS, OFFICERS, AND EMPLOYEES, RRM DESIGN GROUP, AND THE ARCHITECT OF RECORD AND ENGINEER OF RECORD WHO PREPARED THESE PLANS (COLLECTIVELY, "INDEMNITEES") FROM ANY AND ALL CLAIMS, LIABILITIES, SUITS AND ACTIONS OF ANY KIND OR NATURE, ON ACCOUNT OF ANY DEATH, DAMAGE OR INJURY TO PERSONS OR PROPERTY, INCLUDING INJURY OR DEATH, OR ECONOMIC LOSSES, ARISING OUT OF THE USE OF THESE CONSTRUCTION DOCUMENTS.

THE PLANS ATTACHED HEREIN ARE APPROVED FOR ONLY USE IN CITY OF AGOURA HILLS. NO CHANGES, ALTERATIONS, OR OPTIONS BEYOND THOSE SPECIFICALLY INDICATED IN THE PLANS ARE ALLOWED WITHOUT PRIOR APPROVAL BY THE ISSUING JURISDICTION'S CHIEF BUILDING OFFICIAL. ANY UNAPPROVED PLAN REVISIONS SHALL BE DEVELOPED THROUGH RRM DESIGN GROUP AND THE APPROPRIATE JURISDICTION IF REQUIRED.

OWNER'S SIGNATURE DATE

VERY HIGH FIRE HAZARD SEVERITY ZONES (VHFHSZ) REQUIRMENTS [R337]

1. THE USE OF PAINTS, COATINGS, STAINS OR OTHER SURFACE TREATMENTS ARE NOT AN APPROVED METHOD OF PROTECTION IN VHFHSZ.
2. ADDITIONAL ACCEPTABLE PRODUCTS FOR EXTERIOR WILDFIRE EXPOSURE CAN BE FOUND AT THE OFFICE OF THE STATE FIRE MARSHAL. ACCESS TO THE "BUILDING MATERIALS LISTING PROGRAM" CAN BE FOUND AT THE FOLLOWING LINK: HTTPS://OSFM.FIRE.CA.GOV/DIVISIONS/FIRE-ENGINEERING-AND-INVESTIGATIONS/BUILDINGS-MATERIALS-LSITING/BML-SEARCH-BUILDING-MATERIALS-LISTING/

FIRE SPRINKLERS NOTES

1. IF FIRE SPRINKLERS ARE REQUIRED AT PROPOSED ADU THEN THE FOLLOWING NOTES APPLY.
2. A SEPARATE FIRE SPRINKLER PERMIT FROM THE LOS ANGELES COUNTY FIRE DEPARTMENT IS REQUIRED.
3. AUTOMATIC FIRE SPRINKLER SYSTEM - AN AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED AS PER NFPA 13D THE MOST CURRENT EDITION. DETAILED SPRINKLER PLANS SHALL BE SUBMITTED TO THE FIRE PREVENTION BUREAU AND APPROVED PRIOR TO INSTALLATION. PLANS AND INSTALLATION MUST BE BY A C16 LICENSED SPRINKLER CONTRACTOR.
4. **SECTION 903.2.1 GROUP R** AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3 SHALL BE PROVIDED THROUGHOUT ALL BUILDINGS WITH A GROUP R FIRE AREA, THIS INCLUDES SINGLE FAMILY DWELLINGS, MULTI-FAMILY DWELLINGS AND ALL RESIDENTIAL CARE FACILITIES REGARDLESS OF OCCUPANT LOAD.
5. LOCATION AND SIZE OF WATER SERVICE UNDERGROUND SHALL BE INSTALLED AS SHOWN ON APPROVED FIRE SPRINKLER PLANS. A MINIMUM 1 INCH WATER SHALL BE INSTALLED.
6. A FIRE UNDERGROUND FLUSH CERTIFICATION SHALL BE REQUIRED AT FINAL INSPECTION.
7. A HYDRO INSPECTION OF THE FIRE SPRINKLER SYSTEM IS REQUIRED PRIOR TO FRAME INSPECTION. ONLY THE NEW PIPING SHALL BE TESTED.

SEPARATE SUBMITTALS

- ☐ RETAINING WALL
- ☐ GRADING WORK
- ☐ BLOCK WALL
- ☐ SWIMMING POOL
- ☐ FIRE SPRINKLER SYSTEM
- ☐ SEPARATE STRUCTURE
- ☐ PHOTOVOLTAIC (SOLAR) - PV AS REQUIRED BY THE ENERGY T24 REPORT SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
- ☐ DEMOLITION

SHEET INDEX

PROJECT GENERAL NOTES

THESE NOTES APPLY TO ALL PORTIONS, PHASES AND SUBCONTRACTORS OF THIS PROJECT.

APPLICABLE CODES AND STANDARDS:

- *2022 CALIFORNIA RESIDENTIAL CODE AND ITS APPENDICES AND STANDARDS.*
- *2022 CALIFORNIA PLUMBING CODE AND ITS APPENDICES AND STANDARDS.*
- *2022 CALIFORNIA MECHANICAL CODE AND ITS APPENDICES AND STANDARDS.*
- *2022 CALIFORNIA FIRE CODE AND ITS APPENDICES AND STANDARDS.*
- *2022 CALIFORNIA ELECTRICAL CODE AND ITS APPENDICES AND STANDARDS.*
- *2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.*
- *2022 CALIFORNIA GREEN BUILDING STANDARDS CODE AND ITS APPENDICIES AND STANDARDS.*
- *CURRENT CITY OF AGOURA HILLS MUNICIPAL CODE.*

1. ALL WORK DESCRIBED IN THE DRAWINGS SHALL BE VERIFIED FOR DIMENSION, GRADE, EXTENT AND COMPATIBILITY WITH EXISTING SITE CONDITIONS. ANY DISCREPANCIES AND UNEXPECTED CONDITIONS THAT AFFECT OR CHANGE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY. DO NOT PROCEED WITH THE WORK IN THE AREA OF DISCREPANCIES UNTIL ALL SUCH DISCREPANCIES ARE RESOLVED. IF THE CONTRACTOR CHOOSES TO DO SO, HE/SHE SHALL BE PRECEDING AT HIS/HER OWN RISK.
2. DIMENSIONS SHOWN SHALL TAKE PRECEDENCE OVER DRAWING SCALE OR PROPORTION. LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS. ALL DIMENSIONS ARE ROUGH AND TO FACE OF FRAMING.
3. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
4. IN THE EVENT OF THE UNFORESEEN ENCOUNTER OF MATERIALS SUSPECTED TO BE OF AN ARCHAEOLOGICAL OR PALEONTOLOGICAL NATURE, ALL GRADING AND EXCAVATION SHALL CEASE IN THE IMMEDIATE AREA AND THE CONTRACTOR SHALL NOTIFY THE OWNER. THE FIND SHALL BE LEFT UNTOUCHED UNTIL AN EVALUATION BY A QUALIFIED ARCHAEOLOGIST OR PALEONTOLOGIST IS MADE.
5. CONTRACTOR IS TO BE RESPONSIBLE FOR BEING FAMILIAR WITH THESE DOCUMENTS INCLUDING ALL CONTRACT REQUIREMENTS.
6. CONTRACTOR TO REVIEW CALIFORNIA GREEN CODE REQUIREMENTS FOR CONTRACTOR REQUIREMENTS.
7. TEMPORARY FACILITIES: CONTRACTOR SHALL PAY FOR, PROVIDE AND MAINTAIN TEMPORARY FACILITIES FOR PROJECT PROTECTION AND CONSTRUCTION, AND AS REQUIRED BY LOCAL REGULATION AND THESE DOCUMENTS. SUCH FACILITIES INCLUDE, BUT ARE NOT LIMITED TO: TOILETS, LIGHTS, HEATERS, POWER, GAS, FANS, WATER, PHONES, FENCES, SIGNS, SHEDS, ETC. REMOVE FROM SITE UPON COMPLETION OF WORK. OBTAIN BUILDING OFFICIAL OR FIRE MARTIAL APPROVAL PRIOR TO USE OF ANY TEMPORARY HEATING DEVICE.
8. CONTRACTOR SHALL PROVIDE FOR PROTECTION AND SAFETY: RESPONSIBLE FOR ALL ITEMS (SIGNS, LIGHTS, FENCES, BRACING, ANCHORAGE, FIRE-EXTINGUISHERS, ETC.) NECESSARY FOR THE PROTECTION OF THE PUBLIC, WORKERS, MATERIALS, CONSTRUCTION AND PROPERTY PER LOCAL, STATE AND FEDERAL REQUIREMENTS (INCLUDING EARTHQUAKES, FIRES, SPILLS, ACCIDENTS, EROSION, MUD, DUST, ETC.).
9. CONTRACTOR TO PROVIDE COMPLETE DETAILS OF ENGINEERED TEMPORARY SHORING OR SLOT CUTTING PROCEDURES ON PLANS. CALL FOR INSPECTION BEFORE EXCAVATION BEGINS.
10. THE SOILS ENGINEER IS TO APPROVE THE KEY OR BOTTOM AND LEAVE A CERTIFICATE ON THE SITE FOR THE GRADING INSPECTOR. THE GRADING INSPECTOR IS TO BE NOTIFIED BEFORE ANY GRADING BEGINS, AND FOR BOTTOM INSPECTION, BEFORE FILL IS PLACED. FILL MAY NOT BE PLACED WITHOUT APPROVAL OF THE GRADING INSPECTOR.
11. A SEPERATE OFFICER, ACCESS EASEMENT/AGREEMENT, AND/OR RECIPRICAL ACCESS EASEMENT/AGREEMENT MAY BE REQUIRED TO ENSURE THAT THE PROPOSED PRIVATE ACCESS ROADWAY WILL REMAIN OPEN TO THROUGH TRAFFIC AND EMERGENCY VEHICLES PRIOR TO FINAL OF BUILDING PERMIT.
12. SHOP WELDS MUST BE PERFORMED BY A LICENSED FABRICATORS SHOP.
13. OSHA PERMITS REQUIRED FOR VERTICAL CUTS 5' OR OVER.
14. FIRE SPRINKLER SHOP DRAWINGS & CALCULATIONS SHALL BE SUBMITTED TO FIRE DEPT. & APPROVED BY FIRE DEPT. PRIOR TO INSTALLATION.
15. PROVIDE FIRE ALARM SYSTEM. FIRE ALARM SYSTEM SHALL ACTIVATE UPON FIRE SPRINKLER SYSTEM OPERATION.

CITY OF AGOURA HILLS

THESE PLANS ARE PROVIDED BY THE CITY OF AGOURA HILLS AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

AGOURA HILLS | ADU

CITY OF AGOURA HILLS

TITLE SHEET

APPROVED SET

DATE 09/28/23

SHEET G-001

FLOOR PLAN NOTES

1. **WATER HEATER** (REFER TO BUILDING ENERGY ANALYSIS REPORT):
   a. ALL DOMESTIC HOT WATER PIPING SHALL BE INSULATED. *(2022 CPC 609.12.1)*
      - PIPES UP TO 2 INCHES IN DIAMETER: INSULATION WALL THICKNESS NOT LESS THAN DIAMETER OF PIPE. *(2022 CPC 609.12.2)*
      - PIPES GREATER THAN 2 INCHES IN DIAMETER: INSULATION WALL THICKNESS NOT LESS THAN 2 INCHES. *(2022 CPC 609.12.2)*

      EXCEPTIONS:
      1. PIPING THAT PENETRATES FRAMING MEMBERS SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION FOR THE DISTANCE OF THE FRAMING PENETRATION. *(2022 CPC 609.12.2)*
      2. HOT WATER PIPING BETWEEN THE FIXTURE CONTROL VALVE OR SUPPLY STOP AND THE FIXTURE OR APPLIANCE SHALL NOT BE REQUIRED TO BE INSULATED. *(2022 CPC 609.12.2)*

   a. PROVIDE A TEMPERATURE AND PRESSURE RELIEF VALVE WITH A FULL SIZE DRAIN OF GALVANIZED STEEL OR HARD DRAWN COPPER TO THE OUTSIDE OF THE BUILDING WITH THE END OF THE PIPE PROTRUDING 6" MINIMUM @ 2' MAX. ABOVE GRADE POINTING DOWNWARD TO THE TERMINATION - UNTHREADED.
   b. COMBUSTION AIR PER MANUFACTURE REQUIREMENTS.
   c. CLEARANCES PER MANUFACTURE REQUIREMENTS.
1. **INSULATION FOR PIPING AND TANKS** (2022 CEC. 105.0(j)):
   A. WATER PIPING, SOLAR WATER-HEATING SYSTEM PIPING, AND SPACE-CONDITIONING SYSTEM LINE INSULATION THICKNESS AND CONDUCTIVITY. PIPING SHALL BE INSULATED AS FOLLOWS:
      a. DOMESTIC HOT WATER PIPING, SEE NOTES ABOVE.
      b. PIPING FOR SPACE-CONDITIONING SYSTMES, SOLAR WATERHEATER SYSTEM COLLECTOR LOOP, SEE 2022 CEC SECTION 120.3(c).

      EXCEPTION:
      1. PIPING SURROUNDED WITH A MINIMUM OF 1 INCH OF WALL INSULATION, 2 INCHES OF CRAWLSPACE INSULATION, OR 4 INCHES OF ATTIC INSULATION SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION.

   A. I**NSULATION PROTECTION**. PIPE INSULATION SHALL BE PROTECTED FROM DAMAGE DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND. PROTECTION SHALL, AT MINIMUM, INCLUDE THE FOLLOWING *(2022 CEC SECTION 120.3(B))*:
      a. PIPE INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED BY A COVER SUITABLE FOR OUTDOOR SERVICE. THE COVER SHALL BE WATER RETARDANT AND PROVIDES SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVE TAPE SHALL NOT BE USED TO PROVIDE THIS PROTECTION.
      b. PIPE INSULATION COVERING CHILLED WATER PIPING AND REFRIGERANT SUCTION PIPING LOCATED OUTSIDE THE CONDITIONED SPACE SHALL INCLUDE, OR BE PROTECTED BY, A CLASS I OR CLASS II VAPOR RETARDER. ALL PENETRATIONS AND JOINTS SHALL BE SEALED.
      c. PIPE INSULATION BURIED BELOW GRADE MUST BE INSTALLED IN A WATER PROOF AND NONCRUSHABLE CASING OR SLEEVE.
1. **WEATHER BARRIERS.**
   A. NOT FEWER THAN ONE-LAYER WATER-RESISTIVE BARRIER SHALL BE APPLIED OVER STUDS OR SHEATHING OF ALL EXTERIOR WALLS. CONTINUOUS FROM TOP OF WALS AND TERMINATED AT PENETRATIONS AND BUILDING APPENDAGES WITH FLASHING. MINIMUM NO. 15 FELT COMPLYING WITH ASTM D226, TYPE 1.
   B. PROVIDE (2) LAYERS OF GRADE D PAPER OR EQUAL WHEN PLASTER IS INSTALLED OVER WOOD BASED SHEATHING. *(2022 CRC R703.7.3)*
2. **DOMESTIC RANGE** VENTILATION DUCTS SHALL HAVE SMOOTH INTERIOR SURFACES. (2022 CMC 504.3)
3. **CLOTHES DRYER** MOISTURE EXHAUST DUCTS SHALL TERMINATE OUTSIDE THE BUILDING AND HAVE A BACK-DRAFT DAMPER. EXHAUST DUCT IS LIMITED TO 14'-0" W/ TWO ELBOWS. THIS SHALL BE REDUCED 2'-0" FOR EVERY ELBOW IN EXCESS OF TWO. MIN. DIA. 4", SMOOTH, METAL DUCT *(2022 CMC 504.4)*
4. **ALL MANUFACTURED EQUIPMENT** SHALL BE INSTALLED AS PER MANUFACTURER'S SPECIFICATION AND DIMENSIONS VERIFIED WITH INSTALLATION REQUIREMENTS. ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS SHOULD BE ON SITE FOR INSPECTIONS.
5. **SHOWERS AND TUB-SHOWER COMBINATIONS:** CONTROL VALVES MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. *(2022 CPC 417.0.)*
6. **WET-ROOM GLAZING.** PROVIDE TEMPERED GLAZING IN DOORS AND ENCLOSURES FOR SHOWERS, BATHTUBS, SAUNAS, STEAM ROOMS, HOT TUBS & SIMILAR USES WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 60-INCHES ABOVE A STANDING SURFACE. *(2022 CRC R308.4.5)*
7. **HEATING AND AIR-CONDITIONING SYSTEM DESIGN** SHALL CONFORM TO CALGREEN SEC. 4.507, ENVIRONMENTAL COMFORT.
8. **WATER CLOSETS.**
   a. CLEARANCES: 24" MIN. FRONT, 30" MIN COMPARTMENT WIDTH.
   b. PROVIDE A MIN 3 SF WINDOW, 1/2 OF WHICH SHALL BE OPENABLE OR AN EXHAUST FAN 50 CFM FOR INTERMITTENT OR 20 CFM FOR CONTINUOUS. DIRECT VENT TO OUTSIDE WITH BACKDRAFT DAMPER. *(2022 CRC R303.3)*
   c. NEW WATER CLOSETS AND ASSOCIATED FLUSHOMETER VALVES, IF ANY SHALL USE NO MORE THAN 1.28 GALLONS PER FLUSH AND SHALL MEET PERFORMANCE STANDARDS ESTABLISHED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS STANDARD A112.19.2. H & S CODE, SECTION 17921.3(B).
9. **BATH ACCESSORIES:** PROVIDE MINIMUM 1 TOILET PAPER HOLDER AND 1 TOWEL BAR PER BATHROOM. PROVIDE NECESSARY BLOCKNG FOR TOILET PAPER HOLDER AND TOWEL BARS.
10. **WHOLE-BUILDING MECHANICAL VENTILATION SYSTEM** PER ASHRAE STANDARD 62.2. PROVIDE THE COUNTY INSPECTOR THE FOLLOWING INFORMATION AT OR BEFORE THE TIME OF INSPECTION:
    a. CALCULATIONS FOR REQUIRED VENTING RATES.
    b. CALCULATION ADJUSTMENTS FOR INTERMITTENT SYSTEMS IF APPLICABLE.
    c. DUCT DIAMETER AND MAXIMUM DUCT LENGTH PER ASHRAE 62.2 TABLE 7.1.
    d. TYPE OF SYSTEM USED AND PROVIDE COMPLETED CF-6R-MECH-05 FORM.
    e. FANS SHALL BE A MAXIMUM OF 1 SONE.
    f. FANS SHALL BE PROVIDED A COVER OF R-4.2 WHEN OFF.
11. **ATTIC ACCESS:**
    a. PROVIDE 30" MIN. HEADROOM IN THE ATTIC SPACE (2019 CRC R807.1)
    b. IN ATTIC, PROVIDE LIGHT AND SWITCH, AND ALL NECESSARY ELECTRICAL. PROVIDE UNOBSTRUCTED PASSAGEWAY 24" WIDE OF SOLID CONTINUOUS FLOORING FROM ACCESS TO EQUIPMENT AND IT'S CONTROLS. ALSO PROVIDE UNOBSTRUCTED WORK SPACE IN FRONT OF EQUIPMENT 30" DEPTH MINIMUM. PROVIDE COMBUSTION AIR AND CONDENSATE LINE TO OUTSIDE OR AN APPROVED DRAIN FOR OPTIONAL AIR CONDITIONING.
    c. BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN ATTIC ACCESS OPENING TO ATTIC AREAS THAT EXCEED 30 SQUARE FEET AND HAVE A VERTICAL HEIGHT OF 30-INCHES OR GREATER. THE VERTICAL HEIGHT SHALL BE MEASURED FROM TOP OF THE CEILING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS.
    d. THE ROUGH-FRAMED OPENING SHALL NOT BE LESS THAN 22" X 30" AND SHALL BE LOCATED NOT OVER 20 FEET FROM THE EQUIPMENT. (2022 CRC R807.1)
    e. PROVIDE A 120V RECEPTACLE AND A LIGHT NEAR THE EQUIPMENT WITH LIGHT SWITCH LOCATED AT THE ATTIC ACCESS.

ELECTRICAL NOTES

1. CONFORM WITH CURRENT CEC, NFPA, MFR'S, AND LOCAL REQUIREMENTS.
2. ELECTRICAL SYSTEM GROUND TO BE PROVIDED PER NEC ARTICLE 250-81.
3. ALL MATERIALS TO BE U.L. LABELED.
4. METER: "SQUARE D", 120 VOLT/ 240 VOLT, 1 AND 3 WIRE GROUND OR EQUAL.
5. ELECTRICAL SUB PANEL: FLUSH MOUNT, 30" CLEARANCE. 100 AMP.
6. CONDUCTORS: TW, THW, COPPER, MINIMUM 14 AT LIGHTING, 12 AT OTHER CIRCUITS.
7. LAMPS: FOR GENERAL LIGHTING IN KITCHENS AND BATH SHALL HAVE AN EFFICIENCY OF NOT LESS THAN 40 LUMENS/ WATT. ALL SOCKETS FILLED WITH SOFT-WHITE, 55 WATT FLUORESCENT: COOL WHITE, RS, SOUND RATING "A", 40 WATT (U.O.N.).
8. ALL ELECTRICAL OUTLETS INSTALLED IN BATHROOMS, GARAGES, BASEMENTS, CRAWL SPACES, OUTDOORS, KITCHEN COUNTERS, AND AT WET BAR SINKS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION IN COMPLIANCE WITH NEC ART. 210-8, CONSISTING OF 125 VOLT, SINGLE-PHASE, 15- AND 20- AMPERE RECEPTACLES.
9. ALL BATHROOM RECEPTACLE OUTLETS SHALL BE SUPPLIED BY A MINIMUM OF ONE 120-VOLT, 20-AMPERE BRANCH CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. THIS DEDICATED CIRCUIT MAY SERVE MORE THAN ONE BATHROOM. (2022 CEC 210.11(C))
10. PROVIDE ELECTRIC OUTLET AND PUSH-BUTTON WIRE FOR GARAGE OPENER (INCLUDE OPENER).
11. THERMOSTAT SHALL BE A PROGRAMMABLE TYPE, HONEYWELL TH8320 OR EQUAL.
12. RECESSED LUMINAIRES INSTALLED IN AREAS TO RECEIVE INSULATION SHALL BE "IC" LUMINAIRES AND ARE CERTIFIED AND LABELED AS AIRTIGHT TO THE STANDARDS PRESCRIBED IN THE RESIDENTIAL ENERGY CODE.
13. CEILING-SUSPENDED (PADDLE) FANS SHALL BE SUPPORTED INDEPENDENTLY OF AN OUTLET BOX OR BY LISTED OUTLET BOX OR OUTLET BOX SYSTEMS IDENTIFIED FOR THE USE AND INSTALLED IN ACCORDANCE WITH 2022 CEC 314.27(C) (2022 CEC 422.18).
14. ALL LUMINARIES, LAMPHOLDERS, AND RETROFIT KITS SHALL BE LISTED (2022 CEC 410.6).
15. ALL 120-VOLT, SINGLE PHASE 15- AND 20- AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, LIVING ROOMS, DINING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. (2022 CEC 210-12(A)).
16. ALL NON-LOCKING 4PE 125-VOLT, 15 AND 20 AMPERE RECEPTACLES IN A DWELLING UNIT SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. EXCEPTIONS: (1) RECEPTACLES MORE THAN 5'6" ABOVE THE FLOOR, (2) RECEPTACLES PART OF A LUMINAIRE OR APPLIANCE, (3) A SINGLE RECEPTACLE OR A DUPLEX RECEPTACLE FOR TWO APPLIANCES THAT ARE NOT EASILY MOVED AND LOCATED WITHIN DEDICATED SPACE AND ARE CHORD-AND-PLUG CONNECTED AS PER CEC 400.7, AND (4) NON-GROUNDING RECEPTACLES USED FOR REPLACEMNETS AS PERMITTED IN CEC 406.4(D)(2)(A).
17. HIGH EFFICACY LUMINAIRES OTHER THAN OUTDOOR HID LIGHTING CONTAIN ONLY ONLY HIGH EFFICACY LAMPS AS OUTLINED IN TABLE 150-C OF THE RESIDENTIAL ENERGY CODE AND NOT CONTAIN A MEDIUM SCREW BASE SOCKET.
18. BALLAST FOR LAMPS 13 WATTS OR GREATER SHALL BE ELECTRONIC AND HAVE AN OUTPUT FREQUENCY NO LESS THAT 20 kHz.
19. SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND PROVIDED WITH A BATTERY BACK-UP. ALL SMOKE DETECTORS SHALL BE INTERCONNECTED. ALL SMOKE DETECTORS SHALL MAINTAIN A MINIMUM 3 FOOT CLEARANCE TO HVAC SUPPLY OR RETURN AIR REGISTERS.
20. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND PROVIDED WITH A BATTERY BACK-UP. ALL CARBON MONOXIDE ALARMS SHALL BE INTERCONNECTED.
21. LIGHTS IN OTHER THAN KITCHENS, BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS MUST BE CONTROLLED BY A DIMMER OR CONTROLLED BY A MANUAL-ON OCCUPANT SENSOR. SUCH SENSORS SHALL BE CAPABLE OF AUTOMATICALLY TURNING OFF THE LIGHTS NO MORE THAN 30 MINUTES AFTER THE AREA HAS BEEN VACATED.
22. EXHAUST FANS WILL BE CONTROLLED BY A HUMIDISTAT PER THE GREEN BUILDING STANDARDS CODE SECTION 4.506. EXHAUST FANS MUST BE SWITCHED SEPARATELY FROM LIGHTS *(CEngC 150.0(k)(2))*.
23. OUTDOOR LIGHTING PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY AND MUST MEET THE REQUIREMENTS IN ITEM I AND THE REQUIREMENTS IN EITHER ITEM ii OR ITEM iii:
    - i) CONTROLLED BY A MANUAL **ON** AND **OFF** SWITCH THAT PERMITS THE AUTOMATIC ACTIONS OF ITEMS ii OR iii BELOW; AND
    - ii) CONTROLLED BY A PHOTOCELL AND EITHER A MOTION SENSOR OR AUTOMATIC TIME SWITCH CONTROL' OR
    - iii) CONTROLLED BY AN ASTRONOMICAL TIME CLOCK CONTR

    NOTE: CONTROLS THAT OVERRIDE TO ON SHALL NOT BE UNLESS THE OVERRIDE AUTOMATICALLY RETURNS THE CONTROL TO ITS NORMAL OPERATION WITHIN MANAGEMENT CONTROL SYSTEM THAT PR LIGHTING CONTROL FUNCTIONALITY REQUIREMENTS APPLICABLE TO USED TO MEET THESE REQUI

1. AT LEAST ONE LUMINAIRE IN EACH BATHROOM, LAUNDRY ROOM, AND UTILITY ROOM SHALL BE CONTROLLED BY A MANUAL ON/AUTOMATIC-OFF VACANCY SENSOR.
2. EXCEPT FOR CLOSETS LESS THAN 70 SQUARE FEET AND HALLWAYS, ALL LUMINAIRES THAT ARE INSTALLED WITH JA8-CERTIFIED LIGHT SOURCES ARE REQUIRED TO BE CONTROLLED BY EITHER A DIMMER, VACANCY SENSOR OR FAN SPEED CONTROL.

PLUMBING NOTES

1. CONFORM WITH CURRENT CODE AND LOCAL REQUIREMENTS.
2. PIPING:
   a. DOMESTIC WATER (WITHIN BUILDING): COPPER OR PEX PIPE OR APPROVED EQUAL.
   b. GAS, EXPOSED TO WEATHER: GALVANIZED
   c. AIR CHAMBERS: 12" LONG CAPPED NIPPLE AT END OF EACH BRANCH TO EACH FIXTURE.
   d. DIELECTRIC UNIONS "F.P.C.O." REQUIREMENT AT ALL DISSIMILAR MATERIAL CONNECTIONS.
   e. WHEN "OPTIONAL" SOFT-WATER LOOP INTALLED, PROVIDE WITH 2 GATE VALVES.
3. WATER SERVICE PIPE SHALL BE PER CIVIL PLANS OR AS REQUIRED BY THE JURISDICTION.
4. WATER METER: PER WATER DISTRICT (REFER SIZE W/ FIRE SPRINKLER PLANS IF APPLICABLE)
5. SHOWER HEADS AND FAUCETS: FLOW RATES PER 2022 *CGBSC SECTION 4.303*.
6. PIPE INSULATION: REFER TO TITLE 24 - MANDATORY MEASURES - "SPACE CONDITIONING, WATER HEATING & PLUMBING SYSTEM MEASURES"
7. STRAPS AND HANGERS: PROVIDE AS NECESSARY TO INSURE A STABLE INSTALLATION. SEE TITLE-24 FOR WATER HEATER REQUIREMENTS.
8. ALL HOSE BIBS SHALL HAVE APPROVED BACK FLOW PREVENTION DEVICES.
9. PLUMBING FIXTURES (WATER CLOSETS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL MEET THE STANDARDS REFERENCED IN CALGREEN TABLE 4.303.3.
10. WATER HEATER SHALL BE PROVIDED WITH A TEMPERATURE AND PRESSURE RELIEF VALVE. PER [2022 CPC 505.2] THE RELIEF VALVE SHALL BE PROVIDED WITH A DRAIN LINE WHICH EXTENDS FROM THE VALVES TO THE OUTSIDE OF THE BUILDING. PER [2022 608.5 CPC]
11. PER 2022 CPC 603.5.7 OUTLETS WITH HOSE ATTATCHMENTS. POTABLE WATER OUTLETS WITH HOSE ATTACHMENTS, OTHER THAN WATER HEATER DRAINS, BOILER DRAINS, AND CLOTHES WASHER CONNECTIONS, SHALL BE PROTECTED BY A NONREMOVABLE HOSE BIBB TYPE BACKFLOW PREVENTER, A NONREMOVABLE HOSE BIBB TYPE VACUMM BREAKER, OR BY AN ATMOSPHERE VACUUM BREAKER INSTALLED NOT LESS THAN 6 INCHES ABOVE THE HIGHEST POINT OF USAGE LOCATED ON THE DISCHARGE SIDE OF THE LAST VALVE. IN CLIMATES WHERE FREEZING TEMPERATURES OCCUR, A LISTED SELF DRAINING FROST-PROOF HOSE BIBB WITH AN INTEGRAL BACKFLOW PREVENTER OR VACUUM BREAKER SHALL BE USED.

MECHANICAL NOTES

1. CONFORM WITH CURRENT ADOPTED CRC, CMC, SMACCNA, NFPA AND LOCAL REQUIREMENTS.
2. DUCTWORK: SMACCNA "LOW VELOCITY DUCT CONSTRUCTION" NFPA STANDARD #90A. ALL TRANSVERSE DUCT PLENUM AND FITTING JOINTS SHALL BE SEALED WITH PRESSURE SENSITIVE NON-CLOTH TAPE MEETING THE REQUIREMENTS OF UL 181, 181A, OR 181B, OR MASTIC TO PREVENT AIR LOSS. DUCTS SHALL BE INSULATED AS REQUIRED BY THE UMC. SEE FLOOR PLAN FOR F.A.U. AND FIREPLACES. DUCTS PENETRATING A WALL OR FLOOR-CEILING BETWEEN GARAGE & DWELLING TO BE MINIMUM 26 GAUGE METAL WITHOUT OPENING IN GARAGE. FIRE DAMPER REQUIRED OTHERWISE.
3. GRILLES AND REGISTERS, DIFFUSERS, ETC: SUBJECT TO OWNERS APPROVAL. "CARNES" OR EQUAL FANS: DIRECTLY VENTED TO OUTSIDE, BACK DRAFT DAMPERS ARE REQUIRED (PER TABLE 2-53V, TITLE 24 C.A.C.).
4. THE RETURN AIR PLENUM SERVING THE MECHANICAL EQUIPMENT MUST BE FULLY DUCTED FROM THE EQUIPMENT TO THE CONDITIONED SPACE. DROP CEILINGS, WALL CAVITIES AND EQUIPMENT PLATFORMS MAY NOT BE USED AS PLENUMS.
5. LAUNDRY DRYER VENT TO EXTERIOR TO BE 14 FEET MAXIMUM, LESS 2 FEET PER 90 DEGREE TURN PER CMC 504.3.2.2. IF VENT IS OVER 14' AN APPROVED POWER ASSISTED DEVICE IS REQUIRED.
6. BATHROOM EXHAUST FANS (BATHROOM APPLIES TO ROOMS CONTAINING BATHTUB, SHOWER, OR TUB/SHOWER COMBINATION) WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING *(2022 CGBSC SEC. 4.506.1):*
   a. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING MIN 3' FROM OPENINGS.
   b. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.
      - HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF ≤ 50 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.
      - A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL(I.E. BUILT IN)
7. BATHROOM EXHAUST FANS SHALL PROVIDE MINIMUM 50 CFM EXHAUST RATE *(2022 CMC TABLE 403.7).*
8. KITCHEN EXHAUST FANS SHALL PROVIDE MINIMUM 100 CFM EXHAUST RATE *(2022 CMC TABLE 403.7).*
9. PER 2022 CEnC 150(m) PORTIONS OF SUPPLY-AIR AND RETURN-AIR DUCTS AND PLENUMS SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-6.0 (OR ANY LEVEL HIGHER LEVEL REQUIRED BY 2022 CMC SECTION 605) OR BE ENCLOSED ENTIRELY IN CONDITIONED SPACE.

TITLE 24 COMPLIANCE

1. ALL INTERIOR RESIDENTIAL LIGHTING IS TO BE HIGH EFFICACY.
2. THE FOLLOWING LIGHTING IS HIGH EFFICACY: PIN BASED LINEAR FLUORESCENT, PIN BASED COMPACT FLUORESCENT, PULSE-START METAL HALIDE, HIGH PRESSURE SODIUM, GU-24 (OTHER THAN LED'S), INSEPARABLE SOLID STATE LUMINAIRES (SSL'S) INSTALLED OUTDOORS, INSEPARABLE SSL LUMINAIRES WITH COLORED LIGHT SOURCES FOR DECORATIVE LIGHTING PURPOSES. (2022 CEnC TABLE 150.0-A)
3. THE FOLLOWING LAMPS AND LIGHT SOURCES ARE HIGH EFFICACY: LAMPS AND LIGHT SOURCES ARE JOINT APPENDIX JA8-CERTIFIED. JA-8 CERTIFIED LAMPS AND LIGHT SOURCES ARE MARKED AS "JA8-2016" OR "JA8-2019". THESE FIXTURES INCLUDE: LED LUMINAIRES WITH INTEGRAL SOLID STATE LIGHT SOURCES ARE CERTIFIED TO THE ENERGY COMMISION, SCREW-BASED LAMPS, PAR LAMPS, ETC.), PIN BASED LED LAMPS, PIN BASED COMPACT FLUORESCENT LAMPS, GU-24 BASED LED LIGHT SOURCES AND OTHER LUMINAIRES (2022 CEnC TABLE 150.0-A) *LISTING OF CA CERTIFIED EXTERIOR LUMINAIRES IS LOCATED ON THE CALIFORNIA ENERGY COMMISSION WEBSITE AT: HTTP://APPLIANCES.ENERGY.CA.GOV/LEDSEARCH/ASPX*
4. RECESSED LUMINAIRES IN INSULATED CEILING AREAS TO RECEIVE INSULATION SHALL BE "IC" LUMINAIRES AND ARE CERTIFIED AND LABELED AS AIRTIGHT TO THE STANDARDS PRESCRIBED BY THE RESIDENTIAL ENERGY CODE.
5. ADDITIONAL REQUIREMENTS FOR ANY RECESSED DOWNLIGHTING FIXTURES ARE AS FOLLOWS:
   a. THEY MUST HAVE SCREW BASED SOCKETS AND CONTAIN JA8-CERTIFIED LIGHT SOURCES, AND
   b. THEY MUST MEET PERFORMANCE REQUIREMENTS IN 2022 CEnC SECTION 150.0(K)1C.
6. THE NUMBER OF ELECTRICAL BOXES LOCATED MORE THAN 5 FEET ABOVE THE FINISHED FLOOR THAT DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL NOT EXCEED THE NUMBER OF BEDROOMS. THESE BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR OR FAN SPEED CONTROL. (2022 CEnC SECTION 150(K)1(B))
7. UNDER-CABINET LIGHTING MUST BE SWITCHED SEPARATE FROM ALL OTHER LIGHTING.
8. HIGH EFFICACY LUMINAIRES MUST HAVE READILY ACCESSIBLE MANUAL CONTROLS EXCEPT THEY MUST BE SWITCHED SEPARATE FROM LIGHTING OR UTILIZE A DIMMER SO THAT THE LIGHTING CAN BE TURNED OFF WHILE THE FAN IS RUNNING.
9. FOR ALL SPACE TYPES EXCEPT HALLWAYS AND CLOSETS THAT ARE 70 SF OR LESS, OCCUPANT SENSOR, VANCANY SENSORS OR DIMMERS ARE REQUIRED WHEN USING A SOURCE REGULATED BY JA8.
10. IN KITCHENS, IF THE LUMINAIRE IS AN ENCLOSED OR RECESSED LUMINAIRE, YOU MUST USE A DIMMER OR VACANY SENSOR.
11. AT LEAST ONE LUMINAIRE IN THE BATHROOM, GARAGE, LAUNDRY ROOM AND UTILITY ROOM MUST BE CONTROLLED BY A VACANY SENSOR.
12. THE BUILDER MUST PROVIDE NEW HOMEWONERS WITH A LUMINAIRE SCHEDULE THAT INCLUDES A LIST OF INSTALLED LAMPS AND LUMINARIES.
13. ALL JOINTS, PENETRATIONS AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHER-STRIPPED OR OTHERWISE SEALED TO LIMIT INFILTRATION AND EXFILTRATION (2022 CEnC 110.7).
14. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE (2022 CEnC 150.0(a)2)
15. ALL INSTALLED LUMINAIRES SHALL BE HIGH EFFICACY IN ACCORDANCE WITH CEnC TABLE 150.0-A. (2022 CEnC 150(k)1A).
16. THE NUMBER OF ELECTRICAL BOXES THAT ARE MORE THAN 5 FEET ABOVE THE FINISHED FLOOR AND DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL BE NO GREATER THAN THE NUMBER OF BEDROOMS. THESE ELECTRICAL BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR CONTROL, OR FAN SPEED CONTROL. (2022 CEnC 150(k)1B).

SOLAR READY NOTES

SOLAR READY REQUIREMENTS PER CeNC 110.10(b) THROUGH 110.10(e)

SOLAR ZONE:

1. **MINIMUM AREA.** THE SOLAR ZONE SHALL HAVE A MINIMUM TOTAL AREA AS DESCRIBED BELOW. THE SOLAR ZONE SHALL COMPLY WITH ACCESS, PATHWAY, SMOKE VENTILATION, AND SPACING REQUIREMENTS AS SPECIFIED IN TITLE 24, PART 9 OR OTHER PARTS OF TITLE 24 OR IN ANY REQUIREMENTS ADOPTED BY A LOCAL JURISDICTION.
2. THE SOLAR ZONE TOTAL AREA SHALL BE COMPRISED OF AREAS THAT HAVE NO DIMENSION LESS THAN FIVE FEET AND ARE NO LESS THAN 80 SQUARE FEET EACH FOR BUILDINGS WITH ROOF AREAS LESS THAN OR EQUAL TO 10,000 SQUARE FEET OR NO LESS THAN 160 SQUARE FEET EACH FOR BUILDINGS WITH ROOF AREAS GREATER THAN 10,000 SQUARE FEET.
   A. **SINGLE FAMILY RESIDENCES.** THE SOLAR ZONE SHALL BE LOCATED ON THE ROOF OR OVERHANG OF THE BUILDING AND HAVE A TOTAL AREA NO LESS THAN 250 SQUARE FEET.

      EXCEPTION 1 TO SECTION 110.10(B)1A: SINGLE FAMILY RESIDENCES WITH A PERMANENTLY INSTALLED DOMESTIC SOLAR WATER-HEATING SYSTEM MEETING THE INSTALLATION CRITERIA SPECIFIED IN THE REFERENCE RESIDENTIAL APPENDIX RA4 AND WITH A MINIMUM SOLAR SAVINGS FRACTION OF 0.50.

      EXCEPTION 5 TO SECTION 110.10(B)1A: SINGLE FAMILY RESIDENCES HAVING A SOLAR ZONE TOTAL AREA NO LESS THAN 150 SQUARE FEET AND WHERE ALL THERMOSTATS ARE DEMAND RESPONSIVE CONTROLS AND COMPLY WITH SECTION 110.12(A), AND ARE CAPABLE OF RECEIVING AND RESPONDING TO DEMAND RESPONSE SIGNALS PRIOR TO GRANTING OF AN OCCUPANCY PERMIT BY THE ENFORCING AGENCY.

      EXCEPTION 6 TO SECTION 110.10(B)1A: SINGLE-FAMILY RESIDENCES MEETING THE FOLLOWING CONDITIONS:
      A. ALL THERMOSTATS ARE DEMAND RESPONSIVE CONTROLS THAT COMPLY WITH SECTION 110.12(A), AND ARE CAPABLE OF RECEIVING AND RESPONDING TO DEMAND RESPONSE SIGNALS PRIOR TO GRANTING OF AN OCCUPANCY PERMIT BY THE ENFORCING AGENCY.
      B. COMPLY WITH ONE OF THE FOLLOWING MEASURES:
         a. INSTALL A DISHWASHER THAT MEETS OR EXCEEDS THE ENERGY STAR® PROGRAM REQUIREMENTS WITH A REFRIGERATOR THAT MEETS OR EXCEEDS THE ENERGY STAR PROGRAM REQUIREMENTS; A WHOLE HOUSE FAN DRIVEN BY AN ELECTRONICALLY COMMUTATED MOTOR, OR AN SAE J1772 LEVEL 2 ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE OR EV CHARGER) WITH A MINIMUM OF 40 AMPERES; OR
         b. INSTALL A HOME AUTOMATION SYSTEM CAPABLE OF, AT A MINIMUM, CONTROLLING THE APPLIANCES AND LIGHTING OF THE DWELLING UNIT AND RESPONDING TO DEMAND RESPONSE SIGNALS PRIOR TO [illegible]
         c. INSTALL ALTERNATIVE PLUMBING PIPING TO PERMIT WATER FROM THE CLOTHES WASHER DISCHARGE TO BE USED FOR [illegible] AND BATHROOMS TO BE USED FOR [illegible] IN COMPLIANCE WITH THE CALIFORNIA PLUMBING CODE AND ANY APPLICABLE LOCAL ORDINANCES. INSTALL A RAINWATER CATCHMENT SYSTEM DESIGNED TO COMPLY WITH THE CALIFORNIA PLUMBING CODE AND ANY APPLICABLE LOCAL ORDINANCES, AND THAT USES RAINWATER FLOWING FROM AT LEAST 65 PERCENT OF THE AVAILABLE ROOF AREA.

SITE NOTES

CALL BEFORE YOU DIG! CONTACT UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600 AT LEAST 2 WORKING DAYS BEFORE EXCAVATING.

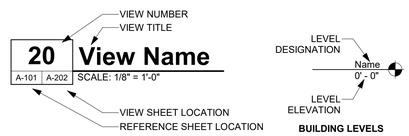
UNLESS OTHERWISE NOTED ON THE PLANS, FINISHED GROUND SURFACES SHALL BE GRADED TO DRAIN THE FINISHED SITE PROPERLY WITHIN 10-FEET OF ANY BUILDING FOUNDATION WITH A SLOPE OF 5% AWAY FROM ANY BUILDING OR STRUCTURE. ALL EXTERIOR HARDSCAPE WITHIN 10-FEET OF A BUILDING FOUNDATION SHALL BE INSTALLED WITH A 2% MINIMUM SLOPE AWAY FROM ANY BUILDING OR STRUCTURE. DRAINAGE SWALES SHALL BE A 1.5% MINIMUM SLOPE. ALL GRADED SLOPES SHALL HAVE A MAXIMUM SLOPE OF 3H TO 1V (33%), UNLESS SHOWN OTHERWISE ON THE PLANS.

3. LOT GRADING SHALL CONFORM AT THE PROPERTY LINES AND SHALL NOT SLOPE TOWARD PROPERTY LINES IN A MANNER WHICH WOULD CAUSE STORM WATER TO FLOW ONTO NEIGHBORING PROPERTY. HISTORIC DRAINAGE PATTERNS SHALL NOT BE ALTERED IN A MANNER TO CAUSE DRAINAGE PROBLEMS TO NEIGHBORING PROPERTY.
4. NEW RAINWATER DOWNSPOUTS SHALL BE DISCONNECTED AND DIRECT RUNOFF TO A LANDSCAPED AREA. DOWNSPOUTS MAY BE CONNECTED TO A POP-UP DRAINAGE EMITTER IN THE LANDSCAPED AREA OR MAY DRAIN TO SPLASH BLOCKS OR COBBLESTONES THAT DIRECT WATER AWAY FROM THE BUILDING.
5. CONTRACTOR TO FIELD VERIFY EXISTING DRAINAGE. IF THE EXISTING DRAINAGE SYSTEM IS DAMAGED DURING EXCAVATION, CONTRACTOR SHALL REPAIR AND/OR REROUTE DRAINAGE SYSTEM AND CON

ABBREVIATIONS

A/C	AIR CONDITIONING
ABV	ABOVE
ACOUS	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISH FLOOR
AL	ALUMINUM
ALT	ALTERNATE
ARCH	ARCHITECT(URAL)
BD	BOARD
BDRM	BEDROOM
BET	BETWEEN
BIT	BITUMINOUS
BLDG	BUILDNG
BLKG	BLOCKING
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BUR	BUILT UP ROOF
CB	CATCH BASIN
CBC	CALIFORNIA BUILDING CODE
CEM	CEMENT
CFM	CUBIC FEET PER MINUTE
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CPT	CARPET
CT	CERAMIC TILE
CTR	CENTER
DBL	DOUBLE
DF	DRINKING FOUN
DIA	DIAMET
DIM	DIMENSION
DN	DOWN
DR	DOOR
D	DISPOSAL
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION
ENCL	ENCLOSURE
EQ	EQUAL
EQUIP	EQUIPMENT
EXH	EXHAUST
EXP	EXPANSION
EXT	EXTERIOR
FACP	FIRE ALARM CONTROL PANEL
FAU	FORCED AIR UNIT
FAWP	FLUID APPLIED WATERPROOFING
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLOURESCENT
FND	FOUNDATION
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PANELS
FT	FOOT OR FEET
FTG	FOOTING
GA	GAUGE, GAGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GWB	GYPSUM BOARD
GYP	GYPSUM
HB	HOSE BIBB
HC	HOLLOW CORE
HDWD	HARDWOOD
HDWR	HARDWARE
HGT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HVAC	HEATING, VENTILATION, A/C
ID	INSIDE DIAMETER
IIC	IMPACT INSULATION CLASS
IN	INCH
INCAND	INCANDESCENT
INSUL	INSULATION, INSULATED
INT	INTERIOR
JC	JANITORS CLOSET
JT	JOINT
LAM	LAMINATE
LAV	LAVATORY
LBS	POUNDS
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LF	LINEAR FEET
LIN	LINEN CLOSET
LINO	LINOLEUM
LT(G)	LIGHT(ING)
LVL	LAMINATED VENEER LUMBER
LVT	LUXURY V
LW	LIGHTWEIGH
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MEZZ	MEZZANINE
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O.P.	OVERFLOW PIPE
OC	ON CENTER
OD	OVERFLOW DRAIN
OFF	OFFICE
OH	OPPOSITE HAND
OPG	OPENING
OPP	OPPOSITE
(P)	PROPOSED
PERM	PERIMETER
PERP	PERPENDICULAR
PG	PAINT GRADE
PL	PLATE, PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRTN	PARTITION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
PTD	PAINTED
PV	PHOTO VOLTAIC
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QTY	QUANTITY
R	RADIUS, RISER
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFRIGERATOR
REINF	REINFORCED
REQD	REQUIRED
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
RTU	ROOF TOP UNIT (MECH)
S	SOUTH
SAFB	SOUND ATTENUATION FIBER BATT
SAWP	SELF ADHEREING WATERPROOFING
SC	SCUPPER/SOLID CORE
SCHED	SCHEDULE
SEAL	SEALANT
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SM	SHEET METAL
SPEC	SPECIFICATION
SQ	SQURE
SS	SOLID SURFACE
SSTL	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUPSPENDED
SV	SHEET VINYL
SYM	SYMMMETRICAL
T	TREAD
T&G	TONGUE & GROOVE
TEL	TELEPHONE
TEMP	TEMPERED
TER	TERRAZZO
THK	THICK
THR	THRESHOLD
TJI	TRUSS JOIST I-JOIST
TO	TOP OF
TOS	TOP OF SLAB
TOW	TOP OF WALL
TRANS	TRANSFORMER
TV	TELEVISION
TYP	TYPICAL
UFAS	UNIFORM FEDERAL ACCESSIBILITY STANDARDS
UG	UNDERGROUND
UNFIN	UNFINISHED
UNO	ULNESS NOTED OTHERWISE
UV	UTRAVIOLET
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT TERMINATION PIPE
VWC	VINYL WALL COVERING
W	WEST
W/	WITH
W/D	WASHER DRYER
W/O	WITHOUT
WC	WATERCLOSET
WD	WOOD
WDW	WINDOW
WH	WATER HEATER
WI	WROUGHT IRON
WIN	WINDOW
WP	WATERPROOF(ING)
WR	WEATHER RESISTIVE
WRB	WATER RESISTIVE BARRIER
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

SYMBOLS



BUILDING LEVELS

NORTH ARROW

GRID REFERENCE

DOOR W/CLOSER

BUILDING ELEVATION

SECTION REFERENCE

DOOR TAG
WINDOW TAG

INTERIOR ELEVATIONS

DETAIL REFERENCE

WALL TAG
STOREFRONT TAG

REVISION TAG

CENTERLINE

MATERIAL TAG

CITY OF AGOURA HILLS

THESE PLANS ARE PROVIDED BY THE CITY OF AGOURA HILLS AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

AGOURA HILLS | ADU

CITY OF AGOURA HILLS

GENERAL NOTES

APPROVED SET

DATE
09/28/23

SHEET
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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES (SHEET 1)

CHAPTER 1 - ADMINISTRATION

SECTION 101 GENERAL

101.1 TITLE.
THESE REGULATIONS SHALL BE KNOWN AS THE CALIFORNIA GREEN BUILDING STANDARDS CODE AND MAY BE CITED AS SUCH AND WILL BE REFERRED TO HEREIN AS "THIS CODE." IT IS INTENDED THAT IT SHALL ALSO BE KNOWN AS THE CALGREEN CODE. THE CALIFORNIA GREEN BUILDING STANDARDS CODE IS PART 11 OF THIRTEEN PARTS OF THE OFFICIAL COMPILATION AND PUBLICATION OF THE ADOPTION, AMENDMENT AND REPEAL OF BUILDING REGULATIONS TO THE CALIFORNIA CODE OF REGULATIONS, TITLE 24, ALSO REFERRED TO AS THE CALIFORNIA BUILDING STANDARDS CODE.

101.2 PURPOSE.
THE PURPOSE OF THIS CODE IS TO IMPROVE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE BY ENHANCING THE DESIGN AND CONSTRUCTION OF BUILDINGS THROUGH THE USE OF BUILDING CONCEPTS HAVING A REDUCED NEGATIVE IMPACT OR POSITIVE ENVIRONMENTAL IMPACT AND ENCOURAGING SUSTAINABLE CONSTRUCTION PRACTICES IN THE FOLLOWING CATEGORIES:
1. PLANNING AND DESIGN.
2. ENERGY EFFICIENCY.
3. WATER EFFICIENCY AND CONSERVATION.
4. MATERIAL CONSERVATION AND RESOURCE EFFICIENCY.
5. ENVIRONMENTAL QUALITY.

101.3 SCOPE.
THE PROVISIONS OF THIS CODE SHALL APPLY TO THE PLANNING, DESIGN, OPERATION, CONSTRUCTION, USE AND OCCUPANCY OF EVERY NEWLY CONSTRUCTED BUILDING OR STRUCTURE, UNLESS OTHERWISE INDICATED IN THIS CODE, THROUGHOUT THE STATE OF CALIFORNIA.

IT IS NOT THE INTENT THAT THIS CODE SUBSTITUTE OR BE IDENTIFIED AS MEETING THE CERTIFICATION REQUIREMENTS OF ANY GREEN BUILDING PROGRAM.

SECTION 102 CONSTRUCTION DOCUMENTS AND INSTALLATION VERIFICATION

102.1 SUBMITTAL DOCUMENTS.
CONSTRUCTION DOCUMENTS AND OTHER DATA SHALL BE SUBMITTED IN ONE OR MORE SETS WITH EACH APPLICATION FOR A PERMIT. WHERE SPECIAL CONDITIONS EXIST, THE ENFORCING AGENCY IS AUTHORIZED TO REQUIRE ADDITIONAL CONSTRUCTION DOCUMENTS TO BE PREPARED BY A LICENSED DESIGN PROFESSIONAL AND MAY BE SUBMITTED SEPARATELY.

EXCEPTION: THE ENFORCING AGENCY IS AUTHORIZED TO WAIVE THE SUBMISSION OF CONSTRUCTION DOCUMENTS AND OTHER DATA NOT REQUIRED TO BE PREPARED BY A LICENSED DESIGN PROFESSIONAL.

102.2 INFORMATION ON CONSTRUCTION DOCUMENTS.
CONSTRUCTION DOCUMENTS SHALL BE OF SUFFICIENT CLARITY TO INDICATE THE LOCATION, NATURE AND SCOPE OF THE PROPOSED GREEN BUILDING FEATURE AND SHOW THAT IT WILL CONFORM TO THE PROVISIONS OF THIS CODE, THE CALIFORNIA BUILDING STANDARDS CODE AND OTHER RELEVANT LAWS, ORDINANCES, RULES AND REGULATIONS AS DETERMINED BY THE ENFORCING AGENCY.

102.3 VERIFICATION.
DOCUMENTATION OF CONFORMANCE FOR APPLICABLE GREEN BUILDING MEASURES SHALL BE PROVIDED TO THE ENFORCING AGENCY. ALTERNATE METHODS OF DOCUMENTATION SHALL BE ACCEPTABLE WHEN THE ENFORCING AGENCY FINDS THAT THE PROPOSED ALTERNATE DOCUMENTATION IS SATISFACTORY TO DEMONSTRATE SUBSTANTIAL CONFORMANCE WITH THE INTENT OF THE PROPOSED GREEN BUILDING MEASURE.

CHAPTER 3 - GREEN BUILDING

SECTION 301 GENERAL

301.1 SCOPE.
BUILDINGS SHALL BE DESIGNED TO INCLUDE THE GREEN BUILDING MEASURES SPECIFIED AS MANDATORY IN THE APPLICATION CHECKLISTS CONTAINED IN THIS CODE. VOLUNTARY GREEN BUILDING MEASURES ARE ALSO INCLUDED IN THE APPLICATION CHECKLISTS AND MAY BE INCLUDED IN THE DESIGN AND CONSTRUCTION OF STRUCTURES COVERED BY THIS CODE, BUT ARE NOT REQUIRED UNLESS ADOPTED BY A CITY, COUNTY, OR CITY AND COUNTY AS SPECIFIED IN SECTION 101.7.

301.1.1 ADDITIONS AND ALTERATIONS. [HCD] THE MANDATORY PROVISIONS OF CHAPTER 4 SHALL BE APPLIED TO ADDITIONS OR ALTERATIONS OF EXISTING RESIDENTIAL BUILDINGS WHERE THE ADDITION OR ALTERATION INCREASES THE BUILDING'S CONDITIONED AREA, VOLUME, OR SIZE. THE REQUIREMENTS SHALL APPLY ONLY TO AND/OR WITHIN THE SPECIFIC AREA OF THE ADDITION OR ALTERATION.

THE MANDATORY PROVISIONS OF SECTION 4.106.4.2 MAY APPLY TO ADDITIONS OR ALTERATIONS OF EXISTING PARKING FACILITIES OR THE ADDITION OF NEW PARKING FACILITIES SERVING EXISTING MULTIFAMILY BUILDINGS. SEE SECTION 4.106.4.3 FOR APPLICATION.

NOTE: REPAIRS INCLUDING, BUT NOT LIMITED TO, RESURFACING, RESTRIPING, AND REPAIRING OR MAINTAINING EXISTING LIGHTING FIXTURES ARE NOT CONSIDERED ALTERATIONS FOR THE PURPOSE OF THIS SECTION.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS [HCD].
THE PROVISIONS OF INDIVIDUAL SECTIONS OF CALGREEN MAY APPLY TO EITHER LOW-RISE RESIDENTIAL BUILDINGS, HIGH-RISE RESIDENTIAL BUILDINGS, OR BOTH. INDIVIDUAL SECTIONS WILL BE DESIGNATED BY BANNERS TO INDICATE WHERE THE SECTION APPLIES SPECIFICALLY TO LOW-RISE ONLY (LR) OR HIGH-RISE ONLY (HR). WHEN THE SECTION APPLIES TO BOTH LOW-RISE AND HIGH-RISE BUILDINGS, NO BANNER WILL BE USED.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS.
IN MIXED OCCUPANCY BUILDINGS, EACH PORTION OF A BUILDING SHALL COMPLY WITH THE SPECIFIC GREEN BUILDING MEASURES APPLICABLE TO EACH SPECIFIC OCCUPANCY.

CHAPTER 4 - RESIDENTIAL MANDATORY MEASURES

DIVISION 4.1 PLANNING AND DESIGN

4.106 SITE DEVELOPMENT

4.106.1 GENERAL.
PRESERVATION AND USE OF AVAILABLE NATURAL RESOURCES SHALL BE ACCOMPLISHED THROUGH EVALUATION AND CAREFUL PLANNING TO MINIMIZE NEGATIVE EFFECTS ON THE SITE AND ADJACENT AREAS. PRESERVATION OF SLOPES, MANAGEMENT OF STORM WATER DRAINAGE AND EROSION CONTROLS SHALL COMPLY WITH THIS SECTION.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION
PROJECTS WHICH DISTURB LESS THAN ONE ACRE OF SOIL AND ARE NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT WHICH IN TOTAL DISTURBS ONE ACRE OR MORE, SHALL MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION. IN ORDER TO MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION, ONE OR MORE OF THE FOLLOWING MEASURES SHALL BE IMPLEMENTED TO PREVENT FLOODING OF ADJACENT PROPERTY, PREVENT EROSION AND RETAIN SOIL RUNOFF ON THE SITE.
1. RETENTION BASINS OF SUFFICIENT SIZE SHALL BE UTILIZED TO RETAIN STORM WATER ON THE SITE.
2. WHERE STORM WATER IS CONVEYED TO A PUBLIC DRAINAGE SYSTEM, COLLECTION POINT, GUTTER OR SIMILAR DISPOSAL METHOD, WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WATTLE OR OTHER METHOD APPROVED BY THE ENFORCING AGENCY.
3. COMPLIANCE WITH A LAWFULLY ENACTED STORM WATER MANAGEMENT ORDINANCE.

4.106.3 GRADING AND PAVING
CONSTRUCTION PLANS SHALL INDICATE HOW THE SITE GRADING OR DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS. EXAMPLES OF METHODS TO MANAGE SURFACE WATER INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
1. SWALES
2. WATER COLLECTION AND DISPOSAL SYSTEMS
3. FRENCH DRAINS
4. WATER RETENTION GARDENS
5. OTHER WATER MEASURES WHICH KEEP SURFACE WATER AWAY FROM BUILDINGS AND AID IN GROUNDWATER RECHARGE.
EXCEPTIONS: ADDITIONS AND ALTERATIONS NOT ALTERING THE DRAINAGE PATH.

4.106.4 ELECTRIC VEHICLE (EV) CHARGING FOR NEW CONSTRUCTION
NEW CONSTRUCTION SHALL COMPLY WITH SECTION 4.106.4.1, 4.106.4.2, OR 4.106.4.3, TO FACILITATE FUTURE INSTALLATION AND USE OF EV CHARGERS. ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) SHALL BE INSTALLED IN ACCORDANCE WITH THE *CALIFORNIA ELECTRICAL CODE*, ARTICLE 625.

EXCEPTIONS:
1. ON A CASE-BY-CASE BASIS, WHERE THE LOCAL ENFORCING AGENCY HAS DETERMINED EV CHARGING AND INFRASTRUCTURE ARE NOT FEASIBLE BASED UPON ONE OR MORE OF THE FOLLOWING CONDITIONS:
1.1. WHERE THERE IS NO LOCAL UTILITY POWER SUPPLY OR THE LOCAL UTILITY IS UNABLE TO SUPPLY ADEQUATE POWER.
1.2. WHERE THERE IS EVIDENCE SUITABLE TO THE LOCAL ENFORCING AGENCY SUBSTANTIATING THAT ADDITIONAL LOCAL UTILITY INFRASTRUCTURE DESIGN REQUIREMENTS, DIRECTLY RELATED TO THE IMPLEMENTATION OF SECTION 4.106.4, MAY ADVERSELY IMPACT THE CONSTRUCTION COST OF THE PROJECT.
2. ACCESSORY DWELLING UNITS (ADU) AND JUNIOR ACCESSORY DWELLING UNITS (JADU) WITHOUT ADDITIONAL PARKING FACILITIES.

4.106.4.1 NEW ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES WITH ATTACHED PRIVATE GARAGES
FOR EACH DWELLING UNIT, INSTALL A LISTED RACEWAY TO ACCOMODATE A DEDICATED 208/240-VOLT BRANCH CIRCUIT. THE RACEWAY SHALL NOT BE LESS THAN TRADE SIZE 1 (NOMINAL 1-INCH INSIDE DIAMTER). THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED LOCATION OF AN EV CHARGER. RACEWAYS ARE REQUIRED TO BE CONTINUOUS AT ENCLOSED, INACCESSIBLE OR CONCEALED AREAS AND SPACES. THE SERVICE PANEL AND/OR SUBPANEL SHALL PROVIDE CAPACITY TO INSTALL A 40-AMPERE MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.

4.106.4.1.1 IDENTIFICATION
THE SERVICE PANEL OR SUBPANEL DIRECTORY SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE". THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE".

4.106.4.2 NEW MULTIFAMILY DWELLINGS, HOTELS AND MOTELS, AND NEW RESIDENTIAL PARKING FACILITIES
WHEN PARKING IS PROVIDED, PARKING SPACES FOR NEW MULTIFAMILY DWELLINGS, HOTELS AND MOTELS SHALL MEET THE REQUIREMENTS OF SECTIONS 4.106.4.2.2 AND 4.106.4.2.3. CALCULATIONS FOR THE TOTAL NUMBER OF SPACES SHALL BE ROUNDED UP TO THE NEAREST WHOLE NUMBER. A PARKING SPACE SERVED BY ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) SHALL BE DESIGNED AS A FUTURE EV CHARGING SPACE SHALL BE LOCATED AT LEAST ONE STANDARD AUTOMOBILE PARKING SPACE, AND SHALL BE MADE READILY ACCESSIBLE FOR THE PURPOSE OF COMPLYING WITH ANY APPLICABLE MINIMUM EV SPACE REQUIREMENTS ESTABLISHED BY A LOCAL JURISDICTION. SEE VEHICLE CODE SECTION 22511.2 FOR FURTHER DETAILS.

4.106.4.2.1 MULTIFAMILY DEVELOPMENT PROJECTS WITH LESS THAN 20 DWELLING UNITS; AND HOTELS AND MOTELS WITH LESS THAN 20 SLEEPING UNITS OR GUEST ROOMS
THE NUMBER OF DWELLING UNITS, SLEEPING UNITS OR GUEST ROOMS SHALL BE BASED ON ALL BUILDINGS ON A PROJECT SITE SUBJECT TO THIS SECTION.

1. **EV CAPABLE.** TEN (10) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES ON A BUILDING SITE, PROVIDED FOR ALL TYPES OF PARKING FACILITIES, SHALL BE ELECTRIC VEHICLE CHARGING SPACES (EV SPACES) CAPABLE OF SUPPORTING FUTURE LEVEL 2 EVSE. ELECTRICAL LOAD CALCULATIONS SHALL DEMONSTRATE THAT THE ELECTRICAL PANEL SERVICE CAPACITY AND ELECTRICAL SYSTEM, INCLUDING ANY ON-SITE DISTRIBUTION TRANSFORMER(S), HAVE SUFFICIENT CAPACITY TO SIMULTANEOUSLY CHARGE ALL EVS AT ALL REQUIRED EV SPACES AT A MINIMUM OF 40 AMPERES.

THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING PURPOSES AS "EV CAPABLE" IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.
EXCEPTIONS:
1. WHEN EV CHARGERS (LEVEL 2 EVSE) ARE INSTALLED IN A NUMBER EQUAL TO OR GREATER THAN THE REQUIRED NUMBER OF EV CAPABLE SPACES.
2. WHEN EV CHARGERS (LEVEL 2 EVSE) ARE INSTALLED IN A NUMBER LESS THAN THE REQUIRED NUMBER OF EV CAPABLE SPACES, THE NUMBER OF EV CAPABLE SPACES REQUIRED MAY BE REDUCED BY A NUMBER EQUAL TO THE NUMBER OF EV CHARGERS INSTALLED.

NOTES:
a. CONSTRUCTION DOCUMENTS ARE INTENDED TO DEMONSTRATE THE PROJECT'S CAPABILITY AND CAPACITY FOR FACILITATING FUTURE EV CHARGING.
b. THERE IS NO REQUIREMENT FOR EV SPACES TO BE CONSTRUCTED OR AVAILABLE UNTIL RECEPTACLES FOR EV CHARGING OR EV CHARGERS ARE INSTALLED FOR USE.

2. **EV READY.** TWENTY-FIVE (25) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES SHALL BE EQUIPPED WITH LOW POWER LEVEL 2 EV CHARGING RECEPTACLES. FOR MULTIFAMILY PARKING FACILITIES, NO MORE THAN ONE RECEPTACLE IS REQUIRED PER DWELLING UNIT WHEN MORE THAN ONE PARKING SPACE IS PROVIDED FOR USE BY A SINGLE DWELLING UNIT.
EXCEPTION: AREAS OF PARKING FACILITIES SERVED BY PARKING LIFTS.

3. **EV CHARGERS.** FIVE (5) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES SHALL BE EQUIPPED WITH LEVEL 2 EVSE. WHERE COMMON USE PARKING IS PROVIDED, AT LEAST ONE EV CHARGER SHALL BE LOCATED IN THE COMMON USE PARKING AREA AND SHALL BE AVAILABLE FOR USE BY ALL RESIDENTS OR GUESTS.

WHEN LOW POWER LEVEL 2 EV CHARGING RECEPTACLES OR LEVEL 2 EVSE ARE INSTALLED BEYOND THE MINIMUM REQUIRED, AN AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS) MAY BE USED TO REDUCE THE MAXIMUM REQUIRED ELECTRICAL CAPACITY TO THE REQUIRED PANEL CAPACITY BY THE ALMS. THE ELECTRICAL SYSTEM AND ON-SITE DISTRIBUTION TRANSFORMERS SHALL HAVE SUFFICIENT CAPACITY TO DELIVER AT LEAST 3.3 KW SIMULTANEOUSLY TO EACH EV CHARGING STATION (EVCS) SERVED BY THE ALMS. THE BRANCH CIRCUIT SHALL HAVE A MINIMUM CAPACITY OF 40 AMPERES, AND SHALL HAVE A CAPACITY OF NOT LESS THAN 30 AMPERES. ALMS SHALL NOT BE USED TO REDUCE THE MINIMUM REQUIRED ELECTRICAL CAPACITY TO THE REQUIRED PANEL CAPACITY.

4.106.4.2.2 ELECTRIC VEHICLE CHARGING STATIONS (EVCS)
EACH EV CHARGING STATION SHALL COMPLY WITH ONE OF THE FOLLOWING:
1. EVCS INSTALLED SHALL COMPLY WITH AT LEAST ONE OF THE FOLLOWING OPTIONS:
a. THE CHARGING SPACE SHALL BE LOCATED ADJACENT TO AN ACCESSIBLE PARKING SPACE COMPLYING THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE, CHAPTER 11A, TO ALLOW USE OF THE EV CHARGER FROM THE ACCESSIBLE PARKING SPACE.

THE CHARGING SPACE SHALL BE LOCATED ON AN ACCESSIBLE ROUTE, AS DEFINED IN THE CALIFORNIA BUILDING CODE, CHAPTER 2, TO THE BUILDING.

EXCEPTION: ELECTRIC VEHICLE CHARGING STATIONS DESIGNED AND CONSTRUCTED IN COMPLIANCE WITH THE CALIFORNIA BUILDING CODE, CHAPTER 11B, ARE NOT REQUIRED TO COMPLY WITH SECTION 4.106.4.2.2.1.1 AND SECTION 4.106.4.2.2.1.2, ITEM 3.

4.106.4.2.2.1.2 ELECTRIC VEHICLE CHARGING STATIONS (EVCS) DIMENSIONS
THE CHARGING SPACES SHALL BE DESIGNED TO COMPLY WITH THE FOLLOWING:
1. THE MINIMUM LENGTH OF EACH EV SPACE SHALL BE 18 FEET.
2. THE MINIMUM WIDTH OF EACH EV SPACE SHALL BE 9 FEET.
3. ONE IN EVERY 25 CHARGING SPACES, BUT NOT LESS THAN ONE, SHALL ALSO HAVE AN 8-FOOT WIDE MINIMUM AISLE. A 5-FOOT WIDE MINIMUM AISLE SHALL BE PERMITTED PROVIDED THE MINIMUM WIDTH OF THE EV SPACE IS 12 FEET.
a. SURFACE SLOPE FOR THIS EV SPACE AND THE AISLE SHALL NOT EXCEED 1 UNIT VERTICAL IN 48 UNITS HORIZONTAL (2.083 PERCENT SLOPE) IN ANY DIRECTION.

4.106.4.2.3 ELECTRIC VEHICLE CHARGING STATIONS (EVCS)
EACH EV CHARGING STATION SHALL COMPLY WITH ONE OF THE FOLLOWING:
1. EVCS INSTALLED SHALL COMPLY WITH AT LEAST ONE OF THE FOLLOWING OPTIONS:
a. THE CHARGING SPACE SHALL BE LOCATED ADJACENT TO AN ACCESSIBLE PARKING SPACE COMPLYING THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE, CHAPTER 11A, TO ALLOW USE OF THE EV CHARGER FROM THE ACCESSIBLE PARKING SPACE.

THE CHARGING SPACE SHALL BE LOCATED ON AN ACCESSIBLE ROUTE, AS DEFINED IN THE CALIFORNIA BUILDING CODE, CHAPTER 2, TO THE BUILDING.

EXCEPTION: ELECTRIC VEHICLE CHARGING STATIONS DESIGNED AND CONSTRUCTED IN COMPLIANCE WITH THE CALIFORNIA BUILDING CODE, CHAPTER 11B, ARE NOT REQUIRED TO COMPLY WITH SECTION 4.106.4.2.2.1.1 AND SECTION 4.106.4.2.2.1.2, ITEM 3.

4.106.4.2.2.1.2 ELECTRIC VEHICLE CHARGING STATIONS (EVCS) DIMENSIONS
THE CHARGING SPACES SHALL BE DESIGNED TO COMPLY WITH THE FOLLOWING:
1. THE MINIMUM LENGTH OF EACH EV SPACE SHALL BE 18 FEET.
2. THE MINIMUM WIDTH OF EACH EV SPACE SHALL BE 9 FEET.
3. ONE IN EVERY 25 CHARGING SPACES, BUT NOT LESS THAN ONE, SHALL ALSO HAVE AN 8-FOOT WIDE MINIMUM AISLE. A 5-FOOT WIDE MINIMUM AISLE SHALL BE PERMITTED PROVIDED THE MINIMUM WIDTH OF THE EV SPACE IS 12 FEET.
a. SURFACE SLOPE FOR THIS EV SPACE AND THE AISLE SHALL NOT EXCEED 1 UNIT VERTICAL IN 48 UNITS HORIZONTAL (2.083 PERCENT SLOPE) IN ANY DIRECTION.

4.106.4.2.2.1.3 ACCESSIBLE EV SPACES
IN ADDITION TO THE REQUIREMENTS IN SECTIONS 4.106.4.2.2.1.1 AND 4.106.4.2.2.1.2, ALL EVSE, WHEN INSTALLED, SHALL COMPLY WITH THE ACCESSIBILITY PROVISIONS FOR EV CHARGERS IN THE CALIFORNIA BUILDING CODE, CHAPTER 11B. EV READY SPACES AND EVCS IN MULTIFAMILY DEVELOPMENTS SHALL COMPLY WITH CALIFORNIA BUILDING CODE, CHAPTER 11A, SECTION 1109A.

4.106.4.2.3 EV SPACE REQUIREMENTS

1. **SINGLE EV SPACE REQUIRED.** INSTALL A LISTED RACEWAY CAPABLE OF ACCOMMODATING A 208/240-VOLT DEDICATED BRANCH CIRCUIT. THE RACEWAY SHALL NOT BE LESS THAN TRADE SIZE 1 (NOMINAL 1-INCH INSIDE DIAMETER). THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX OR ENCLOSURE IN CLOSE PROXIMITY TO THE LOCATION OR THE PROPOSED LOCATION OF THE EV SPACE. CONSTRUCTION DOCUMENTS SHALL IDENTIFY THE RACEWAY TERMINATION POINT, RECEPTACLE OR CHARGER LOCATION, AS APPLICABLE. THE SERVICE PANEL AND/ OR SUBPANEL SHALL HAVE A 40-AMPERE MINIMUM DEDICATED BRANCH CIRCUIT, INCLUDING BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE INSTALLED, OR SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.

EXCEPTION: A RACEWAY IS NOT REQUIRED IF A MINIMUM 40-AMPERE 208/240-VOLT DEDICATED EV BRANCH CIRCUIT IS INSTALLED IN CLOSE PROXIMITY TO THE LOCATION OR THE PROPOSED LOCATION OF THE EV SPACE, AT THE TIME OF ORIGINAL CONSTRUCTION IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

2. **MULTIPLE EV SPACES REQUIRED.** CONSTRUCTION DOCUMENTS SHALL INDICATE THE RACEWAY TERMINATION POINT AND THE LOCATION OF INSTALLED OR FUTURE EV SPACES, RECEPTACLES OR EV CHARGERS. CONSTRUCTION DOCUMENTS SHALL ALSO PROVIDE INFORMATION ON AMPERAGE OF INSTALLED OR FUTURE RECEPTACLES OR EVSE, RACEWAY METHOD(S), WIRING SCHEMATICS AND ELECTRICAL LOAD CALCULATIONS. PLAN DESIGN SHALL BE BASED UPON A 40-AMPERE MINIMUM BRANCH CIRCUIT. REQUIRED RACEWAYS AND RELATED COMPONENTS THAT ARE PLANNED TO BE INSTALLED UNDERGROUND, ENCLOSED, INACCESSIBLE OR IN CONCEALED AREAS AND SPACES SHALL BE INSTALLED AT THE TIME OF ORIGINAL CONSTRUCTION.

EXCEPTION: A RACEWAY IS NOT REQUIRED IF A MINIMUM 40-AMPERE 208/240-VOLT DEDICATED EV BRANCH CIRCUIT IS INSTALLED IN CLOSE PROXIMITY TO THE LOCATION OR THE PROPOSED LOCATION OF THE EV SPACE AT THE TIME OF ORIGINAL CONSTRUCTION IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

4.106.4.2.4 IDENTIFICATION
THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING PURPOSES AS "EV CAPABLE" IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

4.106.4.2.5 ELECTRIC VEHICLE READY SPACE SIGNAGE
ELECTRIC VEHICLE READY SPACES SHALL BE IDENTIFIED BY SIGNAGE OR PAVEMENT MARKINGS, IN COMPLIANCE WITH CALTRANS TRAFFIC OPERATIONS POLICY DIRECTIVE 13-01 (ZERO EMISSION VEHICLE SIGNS AND PAVEMENT MARKINGS) OR ITS SUCCESSOR(S).

4.106.4.3 ELECTRIC VEHICLE CHARGING FOR ADDITIONS AND ALTERATIONS OF PARKING FACILITIES SERVING EXISTING MULTIFAMILY BUILDINGS
WHEN NEW PARKING FACILITIES ARE ADDED, OR ELECTRICAL SYSTEMS OR LIGHTING OF EXISTING PARKING FACILITIES ARE ADDED OR ALTERED AND THE WORK REQUIRES A BUILDING PERMIT, TEN (10) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES ADDED OR ALTERED SHALL BE ELECTRIC VEHICLE CHARGING SPACES (EV SPACES) CAPABLE OF SUPPORTING FUTURE LEVEL 2 EVSE.

NOTES:
1. CONSTRUCTION DOCUMENTS ARE INTENDED TO DEMONSTRATE THE PROJECT'S CAPABILITY AND CAPACITY FOR FACILITATING FUTURE EV CHARGING.
2. THERE IS NO REQUIREMENT FOR EV SPACES TO BE CONSTRUCTED OR AVAILABLE UNTIL EV CHARGERS ARE INSTALLED FOR USE.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

4.201.1 SCOPE.
FOR THE PURPOSES OF MANDATORY ENERGY EFFICIENCY STANDARDS IN THIS CODE, THE CALIFORNIA ENERGY COMMISSION WILL CONTINUE TO ADOPT MANDATORY STANDARDS.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS
PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH THE FOLLOWING:

4.303.1.1 WATER CLOSETS
THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK TYPE TOILET.

NOTE: THE EFFECTIVE FLUSH VOLUME OF DUAL FLUSH TOILETS IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

4.303.1.2 URINALS
THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH. THE EFFECTIVE FLUSH VOLUME OF ALL OTHER URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

4.303.1.3 SHOWERHEADS
4.303.1.3.1 SINGLE SHOWERHEAD
SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR SHOWERHEADS.

4.303.1.3.2 MULTIPLE SHOWERHEADS SERVING ONE SHOWER
WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME.

NOTE: A HAND HELD SHOWER SHALL BE CONSIDERED A SHOWERHEAD.

4.303.1.4 FAUCETS
4.303.1.4.1 RESIDENTIAL LAVATORY FAUCETS
THE MAXIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT EXCEED 1.2 GALLONS PER MINUTE AT 60 PSI. THE MINIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT BE LESS THAN 0.8 GALLONS PER MINUTE AT 20 PSI.

4.303.1.4.2 LAVATORY FAUCETS IN COMMON AND PUBLIC USE AREAS
THE MAXIMUM FLOW RATE OF LAVATORY FAUCETS INSTALLED IN COMMON AND PUBLIC USE AREAS (OUTSIDE OF DWELLINGS OR SLEEPING UNITS) IN RESIDENTIAL BUILDINGS SHALL NOT EXCEED 0.5 GALLONS PER MINUTE AT 60 PSI.

4.303.1.4.3 METERING FAUCETS
METERING FAUCETS WHEN INSTALLED IN RESIDENTIAL BUILDINGS SHALL NOT DELIVER MORE THAN 0.2 GALLONS PER CYCLE.

4.303.1.4.4 KITCHEN FAUCETS
THE MAXIMUM FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.

NOTE: WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.

4.303.2 SUBMETERS FOR MULTIFAMILY BUILDINGS AND DWELLING UNITS IN MIXED-USE RESIDENTIAL/COMMERCIAL BUILDINGS
SUBMETERS SHALL BE INSTALLED TO MEASURE WATER USAGE OF INDIVIDUAL RENTAL DWELLING UNITS IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE.

4.303.3 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS
PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE STANDARDS REFERENCED IN TABLE 1701.1 OF THE CALIFORNIA PLUMBING CODE.

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1 AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS
RESIDENTIAL DEVELOPMENTS SHALL COMPLY WITH A LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE OR THE CURRENT CALIFORNIA DEPARTMENT OF WATER RESOURCES' MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO), WHICHEVER IS MORE STRINGENT.
NOTES:
1. THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) IS LOCATED IN THE CALIFORNIA CODE OF REGULATIONS, TITLE 23, CHAPTER 2.7, DIVISION 2.

MWELO AND SUPPORTING DOCUMENTS, INCLUDING A WATER BUDGET CALCULATOR, ARE AVAILABLE AT: HTTPS://WWW.WATER.CA.GOV/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTEN

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES (SHEET 2)

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL
AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISC, WEB-BASED REFERENCE OR OTHER MEDIA ACCEPTABLE TO THE ENFORCING AGENCY WHICH INCLUDES ALL OF THE FOLLOWING SHALL BE PLACED IN THE BUILDING:

1. DIRECTIONS TO THE OWNER OR OCCUPANT THAT THE MANUAL SHALL REMAIN WITH THE BUILDING THROUGHOUT THE LIFE CYCLE OF THE STRUCTURE.
2. OPERATION AND MAINTENANCE INSTRUCTIONS FOR THE FOLLOWING:
   a. EQUIPMENT AND APPLIANCES, INCLUDING WATER-SAVING DEVICES AND SYSTEMS, HVAC SYSTEMS, PHOTOVOLTAIC SYSTEMS, ELECTRIC VEHICLE CHARGERS, WATER-HEATING SYSTEMS AND OTHER MAJOR APPLIANCES AND EQUIPMENT.
   b. ROOF AND YARD DRAINAGE, INCLUDING GUTTERS AND DOWNSPOUTS.
   c. SPACE CONDITIONING SYSTEMS, INCLUDING CONDENSERS AND AIR FILTERS.
   d. LANDSCAPE IRRIGATION SYSTEMS.
   e. WATER REUSE SYSTEMS.
3. INFORMATION FROM LOCAL UTILITY, WATER AND WASTE RECOVERY PROVIDERS ON METHODS TO FURTHER REDUCE RESOURCE CONSUMPTION, INCLUDING RECYCLE PROGRAMS AND LOCATIONS.
4. PUBLIC TRANSPORTATION AND/OR CARPOOL OPTIONS AVAILABLE IN THE AREA.
5. EDUCATIONAL MATERIAL ON THE POSITIVE IMPACTS OF AN INTERIOR RELATIVE HUMIDITY BETWEEN 30–60 PERCENT AND WHAT METHODS AN OCCUPANT MAY USE TO MAINTAIN THE RELATIVE HUMIDITY LEVEL IN THAT RANGE.
6. INFORMATION ABOUT WATER-CONSERVING LANDSCAPE AND IRRIGATION DESIGN AND CONTROLLERS WHICH CONSERVE WATER.
7. INSTRUCTIONS FOR MAINTAINING GUTTERS AND DOWNSPOUTS AND THE IMPORTANCE OF DIVERTING WATER AT LEAST 5 FEET AWAY FROM THE FOUNDATION.
8. INFORMATION ON REQUIRED ROUTINE MAINTENANCE MEASURES, INCLUDING, BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDING, ETC.
9. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE.
10. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.
11. INFORMATION FROM CAL FIRE ON MAINTENANCE OF DEFENSIBLE SPACE AROUND RESIDENTIAL STRUCTURES.
12. INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENTS.

4.410.2 RECYCLING BY OCCUPANTS.
WHERE 5 OR MORE MULTIFAMILY DWELLING UNITS ARE CONSTRUCTED ON A BUILDING SITE, PROVIDE READILY ACCESSIBLE AREA(S) THAT SERVES ALL BUILDINGS ON THE SITE AND IS IDENTIFIED FOR THE DEPOSITING, STORAGE AND COLLECTION OF NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS, ORGANIC WASTE, AND METALS, OR MEEL A LAWFULLY ENACTED LOCAL RECYCLING ORDINANCE, IF MORE RESTRICTIVE.

EXCEPTION:
RURAL JURISDICTIONS THAT MEET AND APPLY FOR THE EXEMPTION IN PUBLIC RESOURCES CODE SECTION 42649.82 (A)(2)(A) ET SEQ. ARE NOT REQUIRED TO COMPLY WITH THE ORGANIC WASTE PORTION OF THIS SECTION.

DIVISION 4.5 ENVIROMENTAL QUALITY

4.501 GENERAL

4.501.1 SCOPE
THE PROVISIONS OF THIS CHAPTER SHALL OUTLINE MEANS OF REDUCING THE QUANTITY OF AIR CONTAMINANTS THAT ARE ODOROUS, IRRITATING AND/OR HARMFUL TO THE COMFORT AND WELL-BEING OF A BUILDING'S INSTALLERS, OCCUPANTS AND NEIGHBORS.

4.503 FIREPLACES

4.503.1 GENERAL
ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOODSTOVE OR PELLET STOVE SHALL COMPLY WITH U.S. EPA NEW SOURCE PERFORMANCE STANDARDS (NSPS) EMISSION LIMITS AS APPLICABLE, AND SHALL HAVE A PERMANENT LABEL INDICATING THEY ARE CERTIFIED TO MEET THE EMISSION LIMITS. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE LOCAL ORDINANCES.

4.504 POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION
AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL
FINISH MATERIALS SHALL COMPLY WITH THIS SECTION.

4.504.2.1 ADHESIVES, SEALANTS AND CAULKS
ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS UNLESS MORE STRINGENT LOCAL OR REGIONAL AIR POLLUTION OR AIR QUALITY MANAGEMENT DISTRICT RULES APPLY:

1. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS, AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLE 4.504.1 OR 4.504.2, AS APPLICABLE. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS, AS SPECIFIED IN SUBSECTION 2 BELOW.
2. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN 1 POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

4.504.2.2 PAINTS AND COATINGS
ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS IN TABLE 1 OF THE ARB ARCHITECTURAL SUGGESTED CONTROL MEASURE, AS SHOWN IN TABLE 4.504.3, UNLESS MORE STRINGENT LOCAL LIMITS APPLY. THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36, AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3 SHALL APPLY.

4.504.2.3 AEROSOL PAINTS AND COATINGS
AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 94522(A)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(E)(1) AND (F)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520; AND IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC BY WEIGHT OF PRODUCT LIMITS OF REGULATION 8, RULE 49.

4.504.2.4 VERIFICATION
VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING:

1. MANUFACTURER'S PRODUCT SPECIFICATION.
2. FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS.

4.504.3 CARPET SYSTEMS

4.504.3.1 CARPET CUSHION
ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

HTTPS://WWW.CDPH.CA.GOV/PROGRAMS/CCDPHP/DEODC/EHLB/IAQ/PAGES/VOC.ASPX

4.504.3.2 CARPET ADHESIVE
ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS
WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

HTTPS://WWW.CDPH.CA.GOV/PROGRAMS/CCDPHP/DEODC/EHLB/IAQ/PAGES/VOC.ASPX

4.504.5 COMPOSITE WOOD PRODUCTS
HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.) AS SHOWN IN TABLE 4.504.5.

4.504.5.1 DOCUMENTATION
VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AS REQUESTED BY THE ENFORCING AGENCY. DOCUMENTATION SHALL INCLUDE AT LEAST ONE OF THE FOLLOWING:

1. PRODUCT CERTIFICATIONS AND SPECIFICATIONS.
2. CHAIN OF CUSTODY CERTIFICATIONS.
3. PRODUCT LABELED AND INVOICED AS MEETING THE COMPOSITE WOOD PRODUCTS REGULATION (SEE CCR, TITLE 17, SECTION 93120, ET SEQ.).
4. EXTERIOR GRADE PRODUCTS MARKED AS MEETING THE PS-1 OR PS-2 STANDARDS OF THE ENGINEERED WOOD ASSOCIATION, THE AUSTRALIAN AS/NZS 2269, EUROPEAN 636 3S, AND CANADIAN CSA O121, CSA O151, CSA O153 AND CSA O325 STANDARDS.
5. OTHER METHODS ACCEPTABLE TO THE ENFORCING

TABLE 4.504.2 - SEALANT VOC LIMIT
(LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER)

SEALANTS	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	**CURRENT VOC LIMIT**
ARCHITECTURAL	
NONPOROUS	250
POROUS	250
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2, 3]
(GRAMS OF VOC PER LITER OF COATING, LESS WATER AND LESS EXEMPT COMPOUNDS)

COATING CATEGORY	CURRENT VOC LIMIT
FLAT COATINGS	50
NONFLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	**CURRENT VOC LIMIT**
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
IDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, AND UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS AND UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB AND TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER AND INCLUDING EXEMPT COMPOUNDS.
2. THE SPECIFIED LIMITS REMAIN IN EFFECT ENLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEBUARY 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.4 - ADHESIVE VOC LIMIT
(LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER)

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOORING ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT AND ASPHALT TILE ADHESIVES	50
DRYWALL AND PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY LISTED	50
SPECIALTY APPLICATIONS	**CURRENT VOC LIMIT**
PVC WELDING	510
CPVC WELDING	490
ABD WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP AND TRIM ADHESIVES	250
SUBSTRATE SPECIFIC APPLICATIONS	**CURRENT VOC LIMIT**
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]
(MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION)

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLEBOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCH (8MM).

DIVISION 4.5 ENVIORNMENTAL QUALITY CONTINUED

4.505 INTERIOR MOISTURE CONTROL

4.505.1 GENERAL
BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF THE CALIFORNIA BUILDING STANDARDS CODE.

4.505.2 CONCRETE SLAB FOUNDATIONS
CONCRETE SLAB FOUNDATIONS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA BUILDING CODE CHAPTER 19 OR CONCRETE SLAB-ON-GROUND FLOORS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA RESIDENTIAL CODE, CHAPTER 5, SHALL ALSO COMPLY WITH THIS SECTION.

4.505.2.1 CAPILLARY BREAK
A CAPILLARY BREAK SHALL BE INSTALLED IN COMPLIANCE WITH AT LEAST ONE OF THE FOLLOWING:

1. A 4-INCH-THICK (101.6 MM) BASE OF 1/2 INCH (12.7 MM) OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR RETARDER IN DIRECT CONTACT WITH CONCRETE AND A CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE, AND CURLING, SHALL BE USED. FOR ADDITIONAL INFORMATION, SEE AMERICAN CONCRETE INSTITUTE, ACI 302.2R-06.
2. OTHER EQUIVALENT METHODS APPROVED BY THE ENFORCING AGENCY.
3. A SLAB DESIGN SPECIFIED BY A LICENSED DESIGN PROFESSIONAL.

4.505.3 MOISTURE CONTENT OF A BUILDING
BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19-PERCENT MOISTURE CONTENT. MOISTURE CONTENT SHALL BE VERIFIED IN COMPLIANCE WITH THE FOLLOWING:

1. MOISTURE CONTENT SHALL BE DETERMINED WITH EITHER A PROBE-TYPE OR CONTACT-TYPE MOISTURE METER. EQUIVALENT MOISTURE VERIFICATION METHODS MAY BE APPROVED BY THE ENFORCING AGENCY AND SHALL SATISFY REQUIREMENTS FOUND IN SECTION 101.8 OF THIS
2. MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET (610 MM) TO 4 FEET (1219 MM) FROM THE GRADE STAMPED END OF EACH PIECE TO BE VERIFIED.
3. AT LEAST THREE RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION ACCEPTABLE TO THE ENFORCING AGENCY PROVIDED AT THE TIME OF APPROVAL ENCLOSURE OF THE WALL AND FLOOR FRAMING.

INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTENT SHALL BE REPLACED OR ALLOWED TO DRY PRIOR TO ENCLOSURE IN WALL OR FLOOR CAVITIES. WET-APPLIED INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURERS' DRYING RECOMMENDATIONS PRIOR TO ENCLOSURE.

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 BATHROOM EXHAUST FANS
EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING:

1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.
   a. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF ≤ 50 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.
   b. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E., BUILT-IN).

NOTES:

1. FOR THE PURPOSES OF THIS SECTION, A BATHROOM IS A ROOM WHICH CONTAINS A BATHTUB, SHOWER, OR TUB/ SHOWER COMBINATION.
2. LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE CALIFORNIA ENERGY CODE.

4.507 ENVIROMENTAL COMFORT

4.507.1 RESERVED

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN
HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS:

1. THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J—2016 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
2. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D—2016 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
3. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S—2016 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEMS FUNCTION ARE ACCEPTABLE.

CHAPTER 7 - INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING
HVAC SYSTEM INSTALLERS SHALL BE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS INCLUDING DUCTS AND EQUIPMENT BY A NATIONALLY OR REGIONALLY RECOGNIZED TRAINING OR CERTIFICATION PROGRAM. UNCERTIFIED PERSONS MAY PERFORM HVAC INSTALLATIONS WHEN UNDER THE DIRECT SUPERVISION AND RESPONSIBILITY OF A PERSON TRAINED AND CERTIFIED TO INSTALL HVAC SYSTEMS OR CONTRACTOR LICENSED TO INSTALL HVAC SYSTEMS. EXAMPLES OF ACCEPTABLE HVAC TRAINING AND CERTIFICATION PROGRAMS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

1. STATE CERTIFIED APPRENTICESHIP PROGRAMS.
2. PUBLIC UTILITY TRAINING PROGRAMS.
3. TRAINING PROGRAMS SPONSORED BY TRADE, LABOR OR STATEWIDE ENERGY CONSULTING OR VERIFICATION ORGANIZATIONS.
4. PROGRAMS SPONSORED BY MANUFACTURING ORGANIZATIONS.
5. OTHER PROGRAMS ACCEPTABLE TO THE ENFORCING AGENCY.

702.2 SPECIAL INSPECTION [HCD]
WHEN REQUIRED BY THE ENFORCING AGENCY, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENFORCING AGENCY FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. IN ADDITION TO OTHER CERTIFICATIONS OR QUALIFICATIONS ACCEPTABLE TO THE ENFORCING AGENCY, THE FOLLOWING CERTIFICATIONS OR EDUCATION MAY BE CONSIDERED BY THE ENFORCING AGENCY WHEN EVALUATING THE QUALIFICATIONS OF A SPECIAL INSPECTOR:

1. CERTIFICATION BY A NATIONAL OR REGIONAL GREEN BUILDING PROGRAM OR STANDARD PUBLISHER.
2. CERTIFICATION BY A STATEWIDE ENERGY CONSULTING OR VERIFICATION ORGANIZATION, SUCH AS HERS RATERS, BUILDING PERFORMANCE CONTRACTORS, AND HOME ENERGY AUDITORS.
3. SUCCESSFUL COMPLETION OF A THIRD PARTY APPRENTICE TRAINING PROGRAM IN THE APPROPRIATE TRADE.
4. OTHER PROGRAMS ACCEPTABLE TO THE ENFORCING AGENCY.

NOTES:

1. SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.
2. HERS RATERS ARE SPECIAL INSPECTORS CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION (CEC) TO RATE HOMES IN CALIFORNIA ACCORDING TO THE HOME ENERGY RATING SYSTEM (HERS).

[BSC] WHEN REQUIRED BY THE ENFORCING AGENCY, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENFORCING AGENCY FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. IN ADDITION, THE SPECIAL INSPECTOR SHALL HAVE A CERTIFICATION FROM A RECOGNIZED STATE, NATIONAL OR INTERNATIONAL ASSOCIATION, AS DETERMINED BY THE LOCAL AGENCY. THE AREA OF CERTIFICATION SHALL BE CLOSELY RELATED TO THE PRIMARY JOB FUNCTION, AS DETERMINED BY THE LOCAL AGENCY.

NOTE:
SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.

703 VERIFICATIONS

703.1 DOCUMENTATION.
DOCUMENTATION USED TO SHOW COMPLIANCE WITH THIS CODE SHALL INCLUDE BUT IS NOT LIMITED TO, CONSTRUCTION DOCUMENTS, PLANS, SPECIFICATIONS, BUILDER OR INSTALLER CERTIFICATION, INSPECTION REPORTS, OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY WHICH DEMONSTRATE SUBSTANTIAL CONFORMANCE. WHEN SPECIFIC DOCUMENTATION OR SPECIAL INSPECTION IS NECESSARY TO VERIFY COMPLIANCE, THAT METHOD OF COMPLIANCE WILL BE SPECIFIED IN THE APPROPRIATE SECTION OR IDENTIFIED APPLICABLE CHECKLIST.

CITY OF AGOURA HILLS

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AGOURA HILLS | ADU
CITY OF AGOURA HILLS
CAL GREEN RESIDENTIAL REQUIREMENTS

APPROVED SET

DATE
09/28/23

SHEET
G-202

BUILDING ENERGY ANALYSIS REPORT

PROJECT:

Agoura Hills ADU (Plan 1)

Agoura Hills , CA

Project Designer:

RRM Design Group
3765 South Higuera St Ste 102
San Luis Obispo, CA 93401

Report Prepared by:

Timothy Carstairs, CEA, HERS, GPR
Carstairs Energy Inc.
2238 Bayview Heights Drive, Suite E
Los Osos, CA 93402
805-904-9048

CARSTAIRS ENERGY

Job Number:

23-050313

Date:

5/4/2023

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2022 Building Energy Efficiency Standards.

This program developed by EnergySoft, LLC – www.energysoft.com.

TABLE OF CONTENTS

GENERAL INFORMATION

01	**Project Name**	Agoura Hills ADU (Plan 1)			
02	**Run Title**	Title 24 Analysis			
03	**Project Location**	_			
04	**City**	Agoura Hills	05	**Standards Version**	2022
06	**Zip code**		07	**Software Version**	EnergyPro 9.1
08	**Climate Zone**	9	09	**Front Orientation (deg/ Cardinal)**	All orientations
10	**Building Type**	Single family	11	**Number of Dwelling Units**	1
12	**Project Scope**	Newly Constructed	13	**Number of Bedrooms**	1
14	**Addition Cond. Floor Area (ft²)**	0	15	**Number of Stories**	1
16	**Existing Cond. Floor Area (ft²)**	n/a	17	**Fenestration Average U-factor**	0.3
18	**Total Cond. Floor Area (ft²)**	554	19	**Glazing Percentage (%)**	14.90%
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**

ENERGY DESIGN RATINGS

	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)
Standard Design	29.2	27.5	27.1			
Proposed Design						
North Facing	28.7	25.8	26.1	0.5	1.7	1
East Facing	28.3	24.7	25.5	0.9	2.8	1.6
South Facing	28.4	25.7	26.1	0.8	1.8	1
West Facing	28.5	25.9	26.2	0.7	1.6	0.9
RESULT[3]: PASS						

[1]Efficiency EDR includes improvements like a better building envelope and more efficient equipment
[2]Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries
[3]Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

- Standard Design PV Capacity: 1.62 kWdc
- Proposed PV Capacity Scaling: North (1.62 kWdc) East (1.62 kWdc) South (1.62 kWdc) West (1.62 kWdc)

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft²-yr)	Standard Design TDV Energy (EDR2) (kTDV/ft²-yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²-yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft²-yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0.19	1.33	1.23	9		-7.77
Space Cooling	1.48	33.47	1.03		0	5.63
IAQ Ventilation	0.44	4.61	0.44	4.6	0	0
Water Heating	2.99	31.09	2.1	24.48	0.81	6.61
Self Utilization/Flexibility Credit				0		
North Facing Efficiency Compliance Total	**5.1**			**66.0**	**0.2**	**4.47**
Space Heating	0.19		1.07		-0.88	-6.56
Space Cooling	1.48		0.95		0.53	7.16
IAQ Ventilation	0.44				0	0
Water Heating	2.99	31.09	2.17	24.4	0.82	6.69
Self Utilization/Flexibility Credit				0		0
East Facing Efficiency Compliance Total	**5.1**	**70.5**	**4.63**	**63.21**	**0.47**	**7.29**

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft²-yr)	Standard Design TDV Energy (EDR2) (kTDV/ft²-yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²-yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft²-yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0.19	1.33	1.02	7.5	-0.83	-6.17
Space Cooling	1.48	33.47	1.08	29.36	0.4	4.11
IAQ Ventilation	0.44	4.61	0.44	4.61	0	0
Water Heating	2.99	31.09	2.16	24.31	0.83	6.78
Self Utilization/Flexibility Credit				0		0
South Facing Efficiency Compliance Total	**5.1**	**70.5**	**4.7**	**65.78**	**0.4**	**4.72**
Space Heating	0.19	1.33	1.11	8.32	-0.92	-6.99
Space Cooling	1.48	33.47	1.02	28.9	0.46	4.57
IAQ Ventilation	0.44	4.61	0.44	4.61	0	0
Water Heating	2.99	31.09	2.17	24.43	0.82	6.66
Self Utilization/Flexibility Credit				0		0
West Facing Efficiency Compliance Total	**5.1**	**70.5**	**4.74**	**66.26**	**0.36**	**4.24**

ENERGY USE INTENSITY

	Standard Design (kBtu/ft² - yr)	Proposed Design (kBtu/ft² - yr)	Compliance Margin (kBtu/ft² - yr)	Margin Percentage
North Facing				
Gross EUI[1]	26.74	25.81	0.93	3.48
Net EUI[2]	9.68	8.75	0.93	9.61
East Facing				
Gross EUI[1]	26.74	25.61	1.13	4.23
Net EUI[2]	9.68	8.55	1.13	11.67
South Facing				
Gross EUI[1]	26.74	25.77	0.97	3.63
Net EUI[2]	9.68	8.71	0.97	10.02
West Facing				
Gross EUI[1]	26.74	25.7	1.04	3.89
Net EUI[2]	9.68	8.64	1.04	10.74

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 PV SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	**Exception**	**Module Type**	**Array Type**	**Power Electronics**	**CFI**	**Azimuth (deg)**	**Tilt Input**	**Array Angle (deg)**	**Tilt: (x in 12)**	**Inverter Eff. (%)**	**Annual Solar Access (%)**
1.62	NA	Standard (14-17%)	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98

REQUIRED SPECIAL FEATURES

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

- Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)
- Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

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

- Indoor air quality ventilation
- Kitchen range hood
- Verified Refrigerant Charge
- Airflow in habitable rooms (SC3.1.4.1.7)
- Verified heat pump rated heating capacity
- Wall-mounted thermostat in zones greater than 150 ft2 (SC3.4.5)
- Ductless indoor units located entirely in conditioned space (SC3.1.4.1.8)

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	**Conditioned Floor Area (ft²)**	**Number of Dwelling Units**	**Number of Bedrooms**	**Number of Zones**	**Number of Ventilation Cooling Systems**	**Number of Water Heating Systems**
Agoura Hills ADU (Plan 1)	554	1	1	1	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	**Zone Type**	**HVAC System Name**	**Zone Floor Area (ft²)**	**Avg. Ceiling Height**	**Water Heating System 1**	**Status**
Living Area	Conditioned	HVAC System1	554	8	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	**Zone**	**Construction**	**Azimuth**	**Orientation**	**Gross Area (ft²)**	**Window and Door Area (ft2)**	**Tilt (deg)**
Front Wall	Living Area	R21 Wall	0	Front	96	60	90
Left Wall	Living Area	R21 Wall	90	Left	272	20	90
Rear Wall	Living Area	R21 Wall	180	Back	96	7.5	90
Right Wall	Living Area	R21 Wall	270	Right	272	15	90
Roof	Living Area	R-38 Roof Attic	n/a	n/a	554	n/a	n/a

ATTIC

01	02	03	04	05	06	07	08
Name	**Construction**	**Type**	**Roof Rise (x in 12)**	**Roof Reflectance**	**Roof Emittance**	**Radiant Barrier**	**Cool Roof**
Attic Living Area	Attic RoofLiving Area	Ventilated	4	0.1	0.85	Yes	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	**Type**	**Surface**	**Orientation**	**Azimuth**	**Width (ft)**	**Height (ft)**	**Mult.**	**Area (ft²)**	**U-factor**	**U-factor Source**	**SHGC**	**SHGC Source**	**Exterior Shading**
101	Window	Front Wall	Front	0			1	20	0.3	NFRC	0.23	NFRC	Bug Screen
102	Window	Front Wall	Front	0			1	20	0.3	NFRC	0.23	NFRC	Bug Screen
103	Window	Left Wall	Left	90			1	10	0.3	NFRC	0.23	NFRC	Bug Screen

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APPROVED SET

AGOURA HILLS | ADU
CITY OF AGOURA HILLS

TITLE 24 - PLAN 1

DATE
09/28/23

SHEET
T24-101

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

Project Name: Agoura Hills ADU (Plan 1) **Calculation Date/Time:** 2023-05-03T10:06:31-07:00 **(Page 8 of 12)**

Calculation Description: Title 24 Analysis **Input File Name:** Agoura Hills ADU (Plan 1).ribd22x

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Width (ft)	07 Height (ft)	08 Mult.	09 Area (ft^2)	10 U-factor	11 U-factor Source	12 SHGC	13 SHGC Source	14 Exterior Shading
104	Window	Left Wall	Left	90			1	10	0.3	NFRC	0.23	NFRC	Bug Screen
105	Window	Rear Wall	Back	180			1	7.5	0.3	NFRC	0.23	NFRC	Bug Screen
106	Window	Right Wall	Right	270			1	5	0.3	NFRC	0.23	NFRC	Bug Screen
107	Window	Right Wall	Right	270			1	10	0.3	NFRC	0.23	NFRC	Bug Screen

OPAQUE DOORS

01 Name	02 Side of Building	03 Area (ft^2)	04 U-factor
Door 101	Front Wall	20	0.2

SLAB FLOORS

01 Name	02 Zone	03 Area (ft^2)	04 Perimeter (ft)	05 Edge Insul. R-value and Depth	06 Edge Insul. R-value and Depth	07 Carpeted Fraction	08 Heated
Slab	Living Area	554	92	none	0	80%	No

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
R21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.069	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco

Registration Number: 223-P010052527A-000-000-0000000-0000 Registration Date/Time: 2023-05-09 09:49:59 HERS Provider: CalCERTS Inc.

CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901 Report Generated: 2023-05-03 10:07:38

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

Project Name: Agoura Hills ADU (Plan 1) **Calculation Date/Time:** 2023-05-03T10:06:31-07:00 **(Page 9 of 12)**

Calculation Description: Title 24 Analysis **Input File Name:** Agoura Hills ADU (Plan 1).ribd22x

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
Attic Roof/Living Area	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-38 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 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
Not 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 (#)
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)

WATER HEATERS - NEEA HEAT PUMP

01 Name	02 # of Units	03 Tank Vol. (gal)	04 NEEA Heat Pump Brand	05 NEEA Heat Pump Model	06 Tank Location	07 Duct Inlet Air Source	08 Duct Outlet Air Source
DHW Heater 1	1	40	Rheem	RheemHPLD401RH	Living Area	Living Area	Living Area

Registration Number: 223-P010052527A-000-000-0000000-0000 Registration Date/Time: 2023-05-09 09:49:59 HERS Provider: CalCERTS Inc.

CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901 Report Generated: 2023-05-03 10:07:38

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Project Name: Agoura Hills ADU (Plan 1) **Calculation Date/Time:** 2023-05-03T10:06:31-07:00 **(Page 10 of 12)**

Calculation Description: Title 24 Analysis **Input File Name:** Agoura Hills ADU (Plan 1).ribd22x

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
HVAC System1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	n/a	n/a	Setback

HVAC - HEAT PUMPS

01 Name	02 System Type	03 Heating: Number of Units	04 Heating: Efficiency Type	05 Heating: HSPF / HSPF2 / COP	06 Cooling: Cap 47	07 Cooling: Cap 17	08 Cooling: Efficiency Type	09 Cooling: SEER / SEER2	10 Cooling: EER / EER / CEER	11 Zonally Controlled	12 Compressor Type	13 HERS Verification
Heat Pump System 1	VCHP-ductless	1	HSPF	8.8	12000	11400	EERSEER	15	12.2	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION

01 Name	02 Verified Airflow	03 Airflow Target	04 Verified EER/EER2	05 Verified SEER/SEER2	06 Verified Refrigerant Charge	07 Verified HSPF/HSPF2	08 Verified Heating Cap 47	09 Verified Heating Cap 17
Heat Pump System 1-hers-htpump	Not Required	0	Not Required	Not Required	Yes	No	Yes	Yes

Registration Number: 223-P010052527A-000-000-0000000-0000 Registration Date/Time: 2023-05-09 09:49:59 HERS Provider: CalCERTS Inc.

CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901 Report Generated: 2023-05-03 10:07:38

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

Project Name: Agoura Hills ADU (Plan 1) **Calculation Date/Time:** 2023-05-03T10:06:31-07:00 **(Page 11 of 12)**

Calculation Description: Title 24 Analysis **Input File Name:** Agoura Hills ADU (Plan 1).ribd22x

VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION - HERS VERIFICATION

01 Name	02 Certified Low-Static VCHP System	03 Airflow to Habitable Rooms	04 Ductless Units in Conditioned Space	05 Wall Mount Thermostat	06 Air Filter Sizing & Pressure Drop Rating	07 Low Leakage Ducts in Conditioned Space	08 Minimum Airflow per RA3.3 and 5C3.3.3.4.1	09 Certified non-continuous Fan	10 Indoor Fan not Running Continuously
Heat Pump System 1	Not required	Required	Required	Required	Not required	Not required	Not required	Not required	Not required

INDOOR AIR QUALITY (IAQ) FANS

01 Dwelling Unit	02 Airflow (CFM)	03 Fan Efficacy (W/CFM)	04 IAQ Fan Type	05 Includes Heat/Energy Recovery?	06 IAQ Recovery Effectiveness - SRE	07 Includes Fault Indicator Display?	08 HERS Verification	09 Status
SFam IAQVentRpt	31	0.35	Exhaust	No	n/a	No	Yes	

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

Project Name: Agoura Hills ADU (Plan 1) **Calculation Date/Time:** 2023-05-03T10:06:31-07:00 **(Page 12 of 12)**

Calculation Description: Title 24 Analysis **Input File Name:** Agoura Hills ADU (Plan 1).ribd22x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Timothy Carstairs	Timothy Carstairs
Company:	Signature Date:
Carstairs Energy Inc.	2023-05-04 14:03:50
Address:	CEA/ HERS Certification Identification (if applicable):
2238 Bayview Heights Drive, Suite E	r160610042
City/State/Zip:	Phone:
Los Osos, CA 93402	805-90

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 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 6 of the California Code of Regulations
3. The building design features or system design features identified on this Certificate of Compliance conform to the information provided on all applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building application.

Responsible Designer Name:	Responsible Designer Signature:
Randy Russom	
Company:	Date Signed:
RRM Design Group	2023-05-09 09:49
Address:	License
3765 S. Higuera Street,	n/a
City/State/Zip:	Phone:
San Luis Obi	805-7

Easy to Verify at CalCERTS.com

Registration Number: 223-P010052527A-000-000-0000000-0000 Registration Date/Time: 2023-05-09 09:49:59 HERS Provider: CalCERTS Inc.

CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901 Report Generated: 2023-05-03 10:07:38

RESIDENTIAL ENVELOPE MEASURES SUMMARY **RMS-1**

Project Name: Agoura Hills ADU (Plan 1)	Building Type: ☑ Single Family ☐ Multi Family ☐ Addition Alone ☐ Existing+ Addition/Alteration	Date: 5/4/2023
Address:	California Energy Climate Zone / CA Climate Zone 09	Total Cond. Floor Area: 554 / Addition: n/a / # of Units: 1

Construction Type		Cavity	Area (ft^2)	Special Features	Status
Wall	Wood Framed	R-21	634		New
	Opaque Door	R-5	20		New
Roof	Wood Framed Attic	R-38	554		New
Slab	Unheated Slab-on-Grade	- no insulation	554	Perim = 92'	New

FENESTRATION Total Area: 83 Glazing Percentage: 14.9 % New/Altered Average U-Factor: 0.30

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Front (N)	40.0	0.300	0.23	none	none	N/A	New
Left (E)	20.0	0.300	0.23	none	none	N/A	New
Rear (S)	7.5	0.300	0.23	none	none	N/A	New
Right (W)	15.0	0.300	0.23	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Electric Heat Pump	8.80 HSPF	Split Heat Pump	15.0 SEER	Setback	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ductless / No Fan	Ductless	n/a	n/a	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Heat Pump	40	3.10	Standard	New

EnergyPro 9.1 by EnergySoft User Number: 6249 ID: 23-090313 Page 15 of 21

2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas, tankless water heaters, fan-type central furnaces, household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour) ; and pool and spa heaters. *
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume, the SMACNA Residential Comfort System Installation Standards Manual, or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(i)1:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2' higher than the base of the water heater.
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼". If mastic or tape is used, Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.

Building Envelope:

§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped. *
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e):	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device. *
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. *
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

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§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
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5/6/22

CITY OF AGOURA HILLS

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AGOURA HILLS | ADU

CITY OF AGOURA HILLS

TITLE 24 - PLAN 1

APPROVED SET

DATE
09/28/23

SHEET
T24-102

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment. *
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(s)	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, *or* a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	**Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

ROOM LOAD SUMMARY

Project Name *Agoura Hills ADU (Plan 1)*	Date *5/4/2023*
System Name *HVAC System*	Floor Area *554*

ROOM LOAD SUMMARY

			ROOM COOLING PEAK			COIL COOLING PEAK			COIL HTG. PEAK	
Zone Name	Room Name	Mult.	CFM	Sensible	Latent	CFM	Sensible	Latent	CFM	Sensible
Living Area	*1st Floor*	*1*	*234*	*4,919*	*197*	*234*	*4,919*	*197*	*193*	*7,513*
					PAGE TOTAL	*234*	*4,919*	*197*	*193*	*7,513*
					TOTAL *	*234*	*4,919*	*197*	*193*	*7,513*

* Total includes ventilation load for zonal systems.

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CITY OF AGOURA HILLS
TITLE 24 - PLAN 1

APPROVED SET

DATE
09/28/23
SHEET
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10/17/2023 10:48:02 AM
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SITE PLAN TO BE PROVIDED BY APPLICANT

SITE PLAN LEGEND

PROPERTY LINE		(E) FENCE	
SETBACK		(E) WALLS / RETAINING WALLS	
EASEMENT			

SITE PLAN GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
2. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION
3. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY PER 2022 CRC, SECTION 310.1.
4. NOT LESS THAN 30" OF CLEARANCE IN WIDTH, DEPTH, & HEIGHT SHALL BE PROVIDED TO ACCESS EXTERIOR MECHANICAL EQUIPMENT. SHOW LOCATION ON SITE PLAN & LABEL (2022 CMC SECTION 304.1 & 2022 CPC 504.3).

CITY OF AGOURA HILLS

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SITE PLAN CHECKLIST

IF (N) ADU IS 5' - 0" OR LESS TO ANY PROPERTY LINE AND/OR ADU IS 10' - 0" OR LESS FROM ANY ADJACENT BUILDING OR STRUCTURE:

☐ **NO** ☐ **YES;** IF YES, FIRE RATED WALL & ROOF REQUIRED PER 2022 CBC, CHAPTER 2. **SEE DETAILS**: **13/A-902 & 53/A-904 OR 33/A-906 OR 44/A-908**

ELECTRICAL PANEL:
- ☐ **OPTION 1 -** NEW ELECTRICAL MAIN PANEL WITH 225 AMP MINIMUM BUSBAR RATING
- ☐ **OPTION 2 -** A NEW ELECTRICAL SUBPANEL CONNECTS TO THE ELECTRICAL MAIN PANEL OF THE PRIMARY HOME WITH A 225 AMP MINIMUM BUSBAR RATING. A SEPARATE ELECTRICAL PERMIT SHALL BE PULLED FOR THE ELECTRICAL MAIN PANEL OF THE PRIMARY HOME. ELECTRICAL LOAD CALCULATIONS IS REQUIRED.

☐ **FOOTPRINT OF ALL EXISTING AND PROPOSED BUILDINGS**
PLOT THE PROPOSED ADU BUILDING FOOTPRINT ALONG WITH ANY OTHER EXISTING BUILDINGS ONSITE. THIS INCLUDES ALL STRUCUTRES / PORCHES / GAZEBOS. IF AN OPTIONAL COVERED PATIO IS SELECTED, PLEASE PLOT THAT AS WELL.

☐ **AREA OF EXISTING BUILDING**
INDICATE THE SQUARE FOOTAGE OF THE EXISTING HOUSE.

☐ **FOOTPRINT OF PROPOSED ADU**
REFER TO LEGEND FOR FOOTPRINT AT 10'=1" SCALE

☐ **DRAWING SCALE**
SITE PLAN SHOULD BE DRAWN TO A MEASURABLE SCALE.

☐ **PROPERTY LINES**
SHOW OUTLINE OF PROPERTY USING DASHED LINE IN LEGEND. INDICATE THE BEARING AND DISTANCE OF THE PROPERTY LINE.

☐ **LABEL YARDS**
LABEL FRONT, REAR, AND SIDE YARDS, AS WELL AS DRIVEWAYS, PATIOS, AND OTHER HARDSCAPE

☐ **SETBACKS**
DIMENSION THE DISTANCE BETWEEN BUILDINGS TO ADJACENT PROPERTY LINES AND BETWEEN BUILDINGS TO OTHER STRUCTURES. SETBACKS FOR SIDE AND REAR PROPERTY SIDES SHALL BE A MINIMUM OF

☐ **EASEMENTS**
REFER TO LEGEND. MUST INCLUDE ANY APPLICABLE EASEMENTS. PROPOSED STRUCTURE SHALL COMPLY WITH EASEMENT REQUIREMENTS. IF SCE EASEMENT ON PROPERTY, PLEASE PROVIDE WRITTEN APPROVAL FOR ANY WORK LOACTED IN OR WITHIN 10' OF SCE EASEMENT.

☐ **LOCATION OF [illegible] WATER ADJACENT**
THE ROOF DRAINAGE SHOULD DRAIN AWAY FROM THE PROPERTY LINES AND INTO THE [illegible]

☐ **LANDSCAPE & SIDEWALKS**

☐ **MECHANICAL UNIT**
IS THE MECHANICAL UNIT VISIBLE FROM THE STREET, IF SO IT MUST BE SCREENED.

☐ **DIMENSION BUILDING SEPARATION**
DIMENSION THE DISTANCE BETWEEN THE PROPOSED ADU AND ANY EXISTING STRUCTURES

☐ **LOT COVERAGE CALCULATION**
TOTAL FOOTPRINT AREA FOR STRUCTURES ON SITE / LOT AREA

☐ **SWIMMING POOLS**
ALL EXISTING SWIMMING POOLS SHALL BE SHOWN ON THE SITE PLAN AND SHALL HAVE 10' MINIMUM SETBACK TO THE NEW ADU STRUCTURE.

☐ **PORCHES**
THERE SHALL BE NO MORE THAN 30 INCHES MEASURED VERITCALLY TO THE FLOOR OR GRADE BELOW (INCLUDING FLOORS, STAIRS, RAMPS, AND LANDINGS) ANYWHERE MEASURED LESS THAN 36 INCHES HORIZONTALLY TO THE EDGE OF THE PORCH/SLAB/SURFACE OF THE RAIL. INSECT SCREENING SHALL NOT BE CONSIDERED AS A GUARD.

☐ **LOCATION OF EXISTING UTILITIES**
UTILITIES, POLES, SEWER, DRAINS, ELECTRICAL, GAS METERS AND LINES AND ANY PHOTOVOLTATIC.

☐ **LOCATION OF PROPOSED UTILITIES**
PROPOSED UTILITIES SHALL CONFORM TO REQUIREMENTS OF CONTRA COSTA COUNTY SANITARY DISTRICT. SANITARY SEWER FROM ADU TO EXISTING SEWER. SEWER LINE TO THE PROPOSED ADU SHALL BE CONNECTED TO THE MAIN LATERAL AT THE PROPERTY LINE OR BEHIND THE SIDEWALK. LATERAL POINT OF CONNECTION INCLUDING REQUIRED CLEANOUTS, WATER LINE TO ADU, ELECTRIC TO ADU INCLUDING ANY NEW METERS OR SUBPANELS.

☐ **LABEL ADU AND ADDRESS LOCATION**
ADU WILL HAVE SAME ADDRESS AS THE PRIMARY RESIDENCE, AND THE LETTER SHALL BE VISIBLE FROM THE STREET.

☐ **GROUND COVER MATERIAL**
IDENTITFY GROUND COVER MATERIALS

☐ **OTHER SITE WORK**
IDENTIFY ALL SITE WORK INVOLVED E.G. STAIRS, LANDSCAPE, ETC.

FIRE-RESISTANT CONSTRUCTION

SELECT THE APPROPRIATE BOX BELOW (ONLY 1):
NOTE: EXTERIOR WALLS SHALL HAVE A MINIMUM FIRE SEPARATION DISTANCE OF 5'-0" FROM PROPERTY LINE.

NON-SPRINKLERED

☐ **FIRE SEPARATION DISTANCE: ≥5'-0"** (EXTERIOR WALLS, PROJECTIONS, OPENINGS, AND PENETRATIONS)	**NO FIRE-RESISTANCE RATING REQUIRED**
☐ **FIRE SEPARATION DISTANCE: 4'-0" TO 5'-0"** (EXTERIOR WALLS, OPENINGS, AND PENETRATIONS) **PROJECTION SEPARATION DIST.: ≥3'-0"**	
OPENINGS, AND PENETRATIONS	**NO FIRE-RESISTANCE RATING REQUIRED**
EXTERIOR WALLS AND PROJECTIONS	**1-HR FIRE-RESISTANCE**

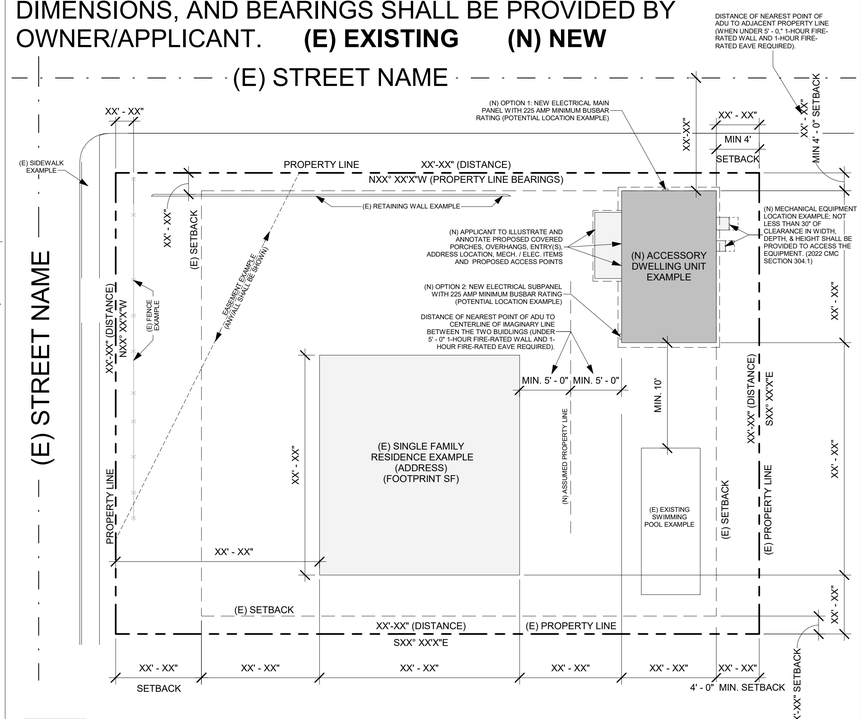
SPRINKLERED

☐ **FIRE SEPARATION DISTANCE: ≥3'-0"** (EXTERIOR WALLS, OPENINGS, AND PENETRATIONS)	**NO FIRE-RESISTANCE RATING REQUIRED**

FOUNDATION & SITE NOTES

NOTE:
1. A SURVEY CERTIFICATION IS REQUIRED TO CONFIRM THAT THE STRUCTURE IS PALCED ON THE SITE IN ACCORDANCE WITH THE APPROVED LOCATION AND SETBACK DISTANCES PRIOR TO FOUNDATION INSPECTION.
2. A FIELD MEMO FROM A SOILS ENGINEER VERIFYING COMPETENT BEARING MATERIAL AT THE BOTTOM OF THE FOUNDATION/FOOTING IS REQUIRED PRIOR TO FOUNDATION INSPECTION.

NOTE: THIS IS AN EXAMPLE SITE PLAN. EXACT LAYOUT, DIMENSIONS, AND BEARINGS SHALL BE PROVIDED BY OWNER/APPLICANT. **(E) EXISTING** **(N) NEW**



1 EXAMPLE SITE PLAN
AS-101 SCALE: 1" = 20'-0"

SITE PLAN | **SCALE:** | **NORTH ARROW**

AGOURA HILLS | ADU
CITY OF AGOURA HILLS
ARCHITECTURAL SITE PLAN

APPROVED SET

DATE 09/28/23
SHEET AS-101

10/17/2023 10:47:58 AM
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CITY OF AGOURA HILLS

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INFORMATION ONLY
NOT FOR CONSTRUCTION

APPROVED SET

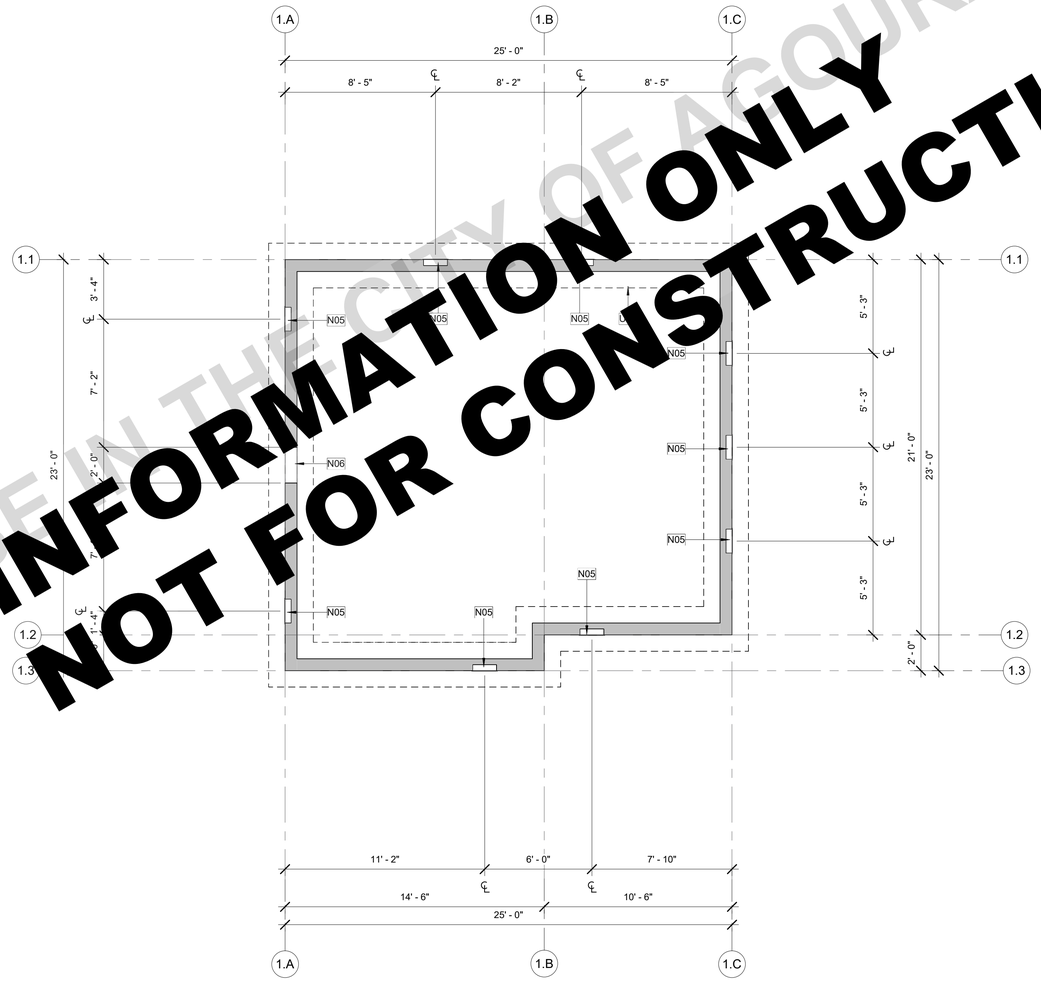
AGOURA HILLS | ADU

CITY OF AGOURA HILLS

OWNER PROVIDED SITE PLAN

DATE
09/28/23

SHEET
AS-102



1 PLAN 1 | RAISED FOUNDATION OPTION

A1-201 | A1-001 SCALE: 1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
3. ALL FURNITURE AND EQUIPMENT IS BY OWNER AND IS SHOWN FOR COORDINATION PURPOSES ONLY.
4. DIMENSIONS ARE TO FACE OF STUD UNLESS SPECIFICALLY NOTED OTHERWISE.
5. PROVIDE ADEQUATE BLOCKING IN WALLS FOR CABINETS AND OTHER WALL MOUNTED ACCESSORIES INCLUDING BUT NOT LIMITED TO HANDRAILS, SHELVING AND BATHROOM FIXTURES.
6. PROVIDE FIREBLOCKING FOR WALL CAVITIES THAT EXCEED 2019 CBC HEIGHT LIMITATIONS
7. DOOR AND WINDOW DIMENSIONS ARE CENTERED AT OPENINGS
8. WHERE DOOR IS LOCATED WITHOUT DIMENSION AT THE CORNER OF A ROOM IT SHALL BE 6" FROM FACE OF FRAMING OF ADJACENT WALL TO ROUGH DOOR OPENING
9. WHERE RECESSED FIXTURES OCCUR IN WALLS OR HORIZONTAL ASSEMBLIES, THE FIRE RATING OF THOSE ASSEMBLIES SHALL BE MAINTAINED
10. AT ALL PENETRATIONS AND INTERSECTIONS OF FIRE-RATED PARTITIONS, PROVIDE FIRE SEALANT AND/OR FIRE STOPPING TO MAINTAIN CONTINUITY OF PARTITION RATING
11. A FIELD MEMO FROM A SOILS ENGINEER VERIFYING COMPETENT BEARING MATERIAL AT THE BOTTOM OF FOUNDATION/FOOTING IS REQUIRED PRIOR TO THE FOUNDATION INSPECTION.

KEYNOTES

N05	UNDER FLOOR VENT.
N06	UNDER FLOOR ACCESS 18" X 24" MIN. PER CRC408.4.
U14	FOOTING, REFER TO STRUCTURAL.

FOUNDATION VENTING CALCS

NOTE:
PER ***CRC 408***, THE SPACE BETWEEN THE BOTTOM OF THE FLOOR JOISTS AND THE EARTH UNDER ANY BUILDING EXCEPT SPACES OCCUPIED BY BASEMENTS OR CELLARS SHALL BE PROVIDED WITH VENTILATION.

UNDER-FLOOR CALCULATION FORMULA
NFA OF AIR MOVEMENT PER VENT = 62 SQ.IN./144 IN./FT = 0.43 SF
"VENTS PROVIDED" = (TOTAL UNDER-FLOOR AREA/150) / 0.43 SF

VENT PRODUCT INFO

VENT MANUFACTURER: VULCAN
PRODUCT: *VFS814S OR VFS814FC (DEPENDING ON EXTERIOR MATERIAL) OR APPROVED EQUAL*
WWW.VULCANVENTS.COM

UNDER-FLOOR AREA (SF)	REQUIRED FOUNDATION VENTING @ 1/1500	FOUNDATION VENTS REQUIRED	FOUNDATION VENTS PROPOSED
554 SF	3.693333	9	9

FOUNDATION & SITE NOTES

NOTE:
1. A SURVEY CERTIFICATION IS REQUIRED TO CONFIRM THAT THE STRUCTURE IS PALCED ON THE SITE IN ACCORDANCE WITH THE APPROVED LOCATION AND SETBACK DISTANCES PRIOR TO FOUNDATION INSPECTION.
2. A FIELD MEMO FROM A SOILS ENGINEER VERIFYING COMPETENT BEARING MATERIAL AT THE BOTTOM OF THE FOUNDATION/FOOTING IS REQUIRED PRIOR TO FOUNDATION INSPECTION.

CITY OF AGOURA HILLS

AGOURA HILLS | ADU
CITY OF AGOURA HILLS
PLAN 1 - RAISED FOUNDATION OPTION

APPROVED SET

DATE
09/28/23

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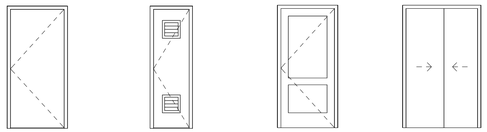
DOOR TYPES LEGEND



A. EXTERIOR - SOLID CORE WOOD DOOR

B. EXTERIOR - VENTED WATER HEATER DOOR

C. INTERIOR - HOLLOW CORE WOOD DOOR

D. INTERIOR - HOLLOW CORE BI-PASS CLOSET DOOR

DOOR SCHEDULE

MARK	TYPE	DOOR WIDTH	DOOR HEIGHT	Heat Transfer Coefficient (U)	FIRE RATING	REMARKS
101	A	3' - 0"	6' - 8"	0.2000		
102	B	2' - 0"	6' - 8"			
103	A	3' - 0"	6' - 8"			
104	D	4' - 0"	6' - 8"			

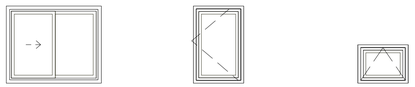
DOOR REMARKS

1. EXTERIOR DOOR.
2. GLAZING PER DOOR TYPES. REFER TO GENERAL DOOR NOTE #8
3. PROVIDE 100 SQ INCHES OF VENTING IN DOOR OR BY OTHER APPROVED MEANS.
4. OPTIONAL DOOR.

DOOR GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
2. REFER TO PLANS FOR LOCATION OF DOORS.
3. VERIFY ROUGH OPENING SIZE WITH DOOR MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO VERIFY ACTUAL DOOR SIZE TO FIT FINISH OPENING PRIOR TO FABRICATION OF DOOR AND FINISH OPENING.
5. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
6. REFER TO DOOR TYPES LEGEND FOR GLAZING.
7. REFER TO T24 REPORT FOR GLAZING ENERGY REQUIREMENTS.
8. GLAZING IN DOORS SHALL BE TEMPERED PER ***SECTION R308.4.1***.

WINDOW TYPES LEGEND



A. HORIZONTAL SLIDER

B. CASEMENT

C. AWNING

WINDOW SCHEDULE

NO.	TYPE	SIZE WIDTH	SIZE HEIGHT	HEAD HEIGHT	Heat Transfer Coefficient (U)	Solar Heat Gain Coefficient	REMARKS
101	A	5' - 0"	4' - 0"	6' - 8"	0.3000	0.23	1
102	A	5' - 0"	4' - 0"	6' - 8"	0.3000	0.23	
103	B	2' - 6"	4' - 0"	6' - 8"	0.3000	0.23	
104	B	2' - 6"	4' - 0"	6' - 8"	0.3000	0.23	
105	B	2' - 6"	3' - 0"	6' - 8"	0.3000	0.23	
106	C	2' - 6"	1' - 10"	6' - 8"	0.3000	0.23	2, 5
107	B	2' - 6"	4' - 0"	6' - 8"	0.3000	0.23	

WINDOW REMARKS

1. REQUIRED EGRESS WINDOW. REFER TO WINDOW GENERAL NOTE #7 FOR ADDITIONAL INFORMATION.
2. HAZARDOUS LOCATION. WINDOW INCLUDES BOTH PANES TEMPERED GLAZING.
3. MULLED WINDOW ASSEMBLY.
4. OPTIONAL WINDOW.
5. OBSCURE.
6. WINDOW GLAZING SHALL COMPLY WITH R.337.8.2.1.

WINDOW GENERAL NOTES

1. REFER TO GENERAL NOTES ON SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO FLOOR PLANS FOR WINDOW LOCATIONS.
3. CONTRACTOR TO VERIFY EXACT ROUGH OPENING SIZES PRIOR TO FABRICATION OF ROUGH OPENINGS.
4. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
5. REFER TO ENERGY COMPLIANCE REPORTS FOR U-FACTOR, SHGC AND ADDITIONAL WINDOW REQUIREMENTS.
6. ALL GLAZING IS DOUBLE PANE WITH A MINIMUM OF ONE TEMPERED PANE UNLESS OTHERWISE NOTED.
7. EGRESS WINDOWS SHALL HAVE A CLEAR OPENING WITH A MAX. SILL HEIGHT OF 44" AFF, MIN NET CLEAR OPENING FOR EMERGENCY ESCAPE SHALL BE 5.7 S.F. EXCEPTION: MIN 5 S.F. AT GROUND FLOOR, MINIMUM NET CLEAR OPENING DIMENSIONS: HEIGHT: 24", WIDTH: 20".

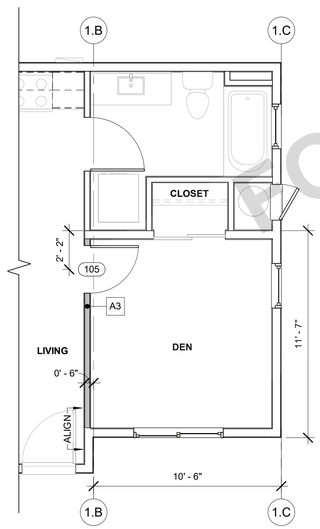
FINISH LEGEND

(CONC) - CONCRETE

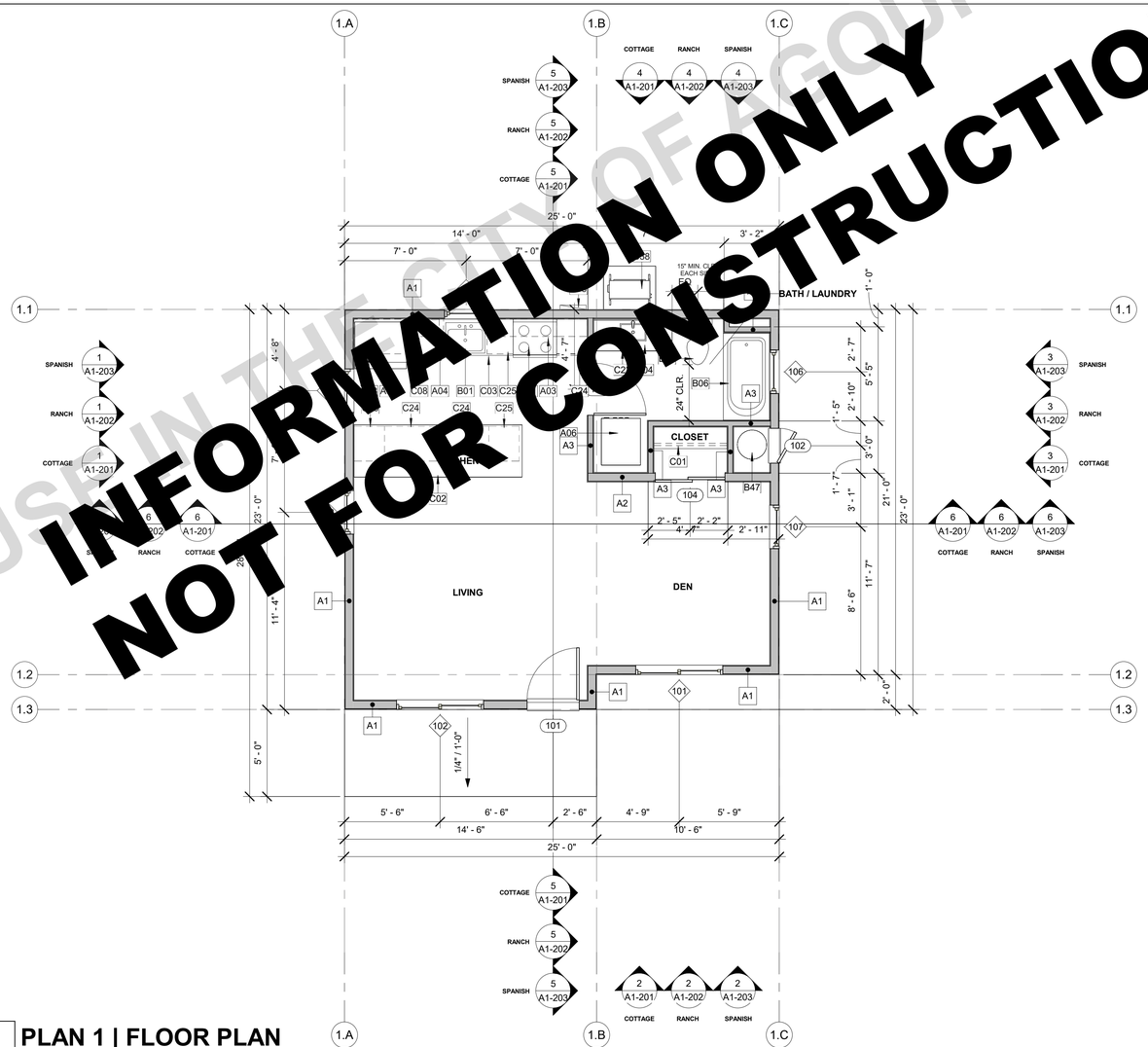
(T) - CERAMIC TILE TO BE OWNER SELECTED

(OS) - FLOORING TO BE OWNER SELECTED

FINISH SCHEDULE PLAN 1				
ROOM NAME	FLOOR	WALL	CEILING	NOTES
KITCHEN	OS	GWB	GWB	WR GWB BEHIND KITCHEN COUNTER
LIVING	OS	GWB	GWB	
DEN	OS	GWB	GWB	
BATH / LAUNDRY	T	WR GWB	WR GWB	AT CERAMIC TILE IN TUB/SHOWER AREAS, PROVIDE BACKER BOARD PER CRC TABLE R702.4.2. BATHTUB AND SHOWER FLOORS, WALLS ABOVE BATHTUBS WITH A SHOWERHEAD, AND SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE EXTENDING TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR. (R307.2)
CLOSET	OS	GWB	GWB	
WH	CONC	GWB	GWB	



2 PLAN 1 | OPTIONAL WALL
A1-201 | A1-101 SCALE: 1/4" = 1'-0"



1 PLAN 1 | FLOOR PLAN
A1-201 | A1-101 SCALE: 1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
3. REFER TO SHEET A1-301 FOR ELECTRICAL AND MECHANICAL PLANS FOR FURTHER INFORMATION.
4. ALL FURNITURE AND EQUIPMENT IS BY OWNER AND IS SHOWN FOR COORDINATION PURPOSES ONLY.
5. DIMENSIONS ARE TO FACE OF SHEATHING UNLESS SPECIFICALLY NOTED OTHERWISE. IF WALL ASSEMBLY DOESN'T INCLUDE SHEATHING, DIMENSIONS ARE TO FACE OF FRAMING.
6. PROVIDE ADEQUATE BLOCKING IN WALLS FOR CABINETS AND OTHER WALL MOUNTED ACCESSORIES INCLUDING BUT NOT LIMITED TO HANDRAILS, SHELVING AND BATHROOM FIXTURES.
7. PROVIDE FIREBLOCKING FOR WALL CAVITIES THAT EXCEED 2022 CBC HEIGHT LIMITATIONS
8. DOOR AND WINDOW DIMENSIONS ARE CENTERED AT OPENINGS
9. WHERE DOOR IS LOCATED WITHOUT DIMENSION AT THE CORNER OF A ROOM IT SHALL BE 4" FROM FACE OF FRAMING OF ADJACENT WALL TO ROUGH DOOR OPENING
10. OUTLETS, SWITCHES, AND DOORBELLS SHALL BE NO MORE THAN 48" ABOVE FINISH FLOOR PER R327.1.2
11. AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH R327.1.1. REFERENCE A-901 FOR DETAILS.

KEYNOTES

A01	30" WIDE FREE STANDING ELECTRIC RANGE OVEN. VENT TO EXTERIOR, STAINLESS STEEL.
A03	30" WIDE RANGE VENT, OWNER SELECTED. SEE MECHANICAL PLANS ON SHEET A1-301 FOR VENTING REQUIREMENTS.
A04	24" WIDE FRONT CONTROL UNDERCOUNTER DISHWASHER.
A05	REFRIGERATOR LOCATION. PROVIDE 42" SPACE WITH ROUGH PLUMBING FOR ICE MAKER (RECESS IN WALL).
A06	STACKED WASHER/DRYER MACHINE LOCATION. PROVIDE WASTE AND WATER IN RECESSED WALL BOX. PROVIDE DRYER VENT. VENT TO OUTSIDE AIR. SPECIFY CLOTHES DRYER MOISTURE EXHAUST DUCT MUST BE 4" IN DIAMETER AND LENGTH IS LIMITED TO 14' WITH TWO ELBOWS. THE DUCT LENGTH SHALL BE REDUCED BY 2' FOR EVERY ELBOW IN EXCESS OF TWO. (CMC 504.4.2)
B01	30" SINGLE COMPARTMENT UNDER-MOUNT KITCHEN SINK W/ GARBAGE DISPOSAL. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEET.
B04	LAVATORY SINK. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEETS.
B05	WATER CLOSET. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEETS. REFER TO 33/A-901 FOR AGING-IN-PLACE BLOCKING.
B06	32" x 60" x 72" TUB AND SHOWER COMBINATION. MODEL BY BUILDER. PROVIDE SHOWER ROD. REFER TO 24/A-901 FOR AGING-IN-PLACE BLOCKING.
B18	ELECTRIC PANEL TBD.
B38	MULTI-ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION, 3" MIN. ABOVE GRADE. IF MECH UNIT IS VISIBLE FROM STREE, SCREEING WILL BE REQUIRED.
B47	40 GALLON HEAT PUMP WATER HEATER. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
C01	SINGLE WOOD SHELF AND POLE.
C02	KITCHEN ISLAND COUNTERTOP. 36" A.F.F.
C03	KITCHEN COUNTER TOP. 36" A.F.F.
C08	12" DEEP UPPER CABINET
C23	21" DEEP FULL HEIGHT CABINET
C24	24" DEEP FULL HEIGHT CABINET
C25	24" DEEP FULL HEIGHT DRAWERS

WALL TYPE LEGEND

A1	**EXTERIOR**- 5 1/2" WOOD STUD W/ PLYWOOD SHEATHING, EXTERIOR FINISH PER ELEVATION, ONE LAYER GYPSUM WALL BOARD INTERIOR. PER DETAIL. FOR COTTAGE, SEE **53/A-904** . FOR RANCH, SEE **33/A-906** FOR SPANISH, SEE **44/A-908** .
A2	**INTERIOR**- 5 1/2" WOOD STUD W/ONE LAYER GYPSUM WALL BOARD EACH SIDE.
A3	**INTERIOR**- 3 1/2" WOOD STUD W/ONE LAYER GYPSUM WALL BOARD EACH SIDE.
A4	**INTERIOR**- 3 1/2" WOOD STUD W/ONE LAYER GYPSUM WALL BOARD ONE SIDE. FURRING WALL.

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AGOURA HILLS | ADU

CITY OF AGOURA HILLS

PLAN 1 - FLOOR PLAN AND DOOR & WINDOW SCHEDULE

APPROVED SET

DATE 09/28/23

SHEET A1-101

10/17/2023 10:47:43 AM
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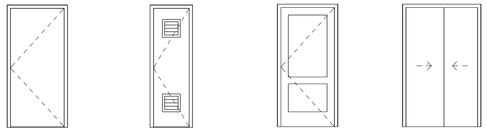
DOOR TYPES LEGEND



A. EXTERIOR - SOLID CORE WOOD DOOR

B. EXTERIOR - VENTED WATER HEATER DOOR

C. INTERIOR - HOLLOW CORE WOOD DOOR

D. INTERIOR - HOLLOW CORE BI-PASS CLOSET DOOR

DOOR SCHEDULE

MARK	TYPE	DOOR WIDTH	DOOR HEIGHT	Heat Transfer Coefficient (U)	FIRE RATING	REMARKS
101	A	3' - 0"	6' - 8"	0.2000		
102	B	2' - 0"	6' - 8"			
103	A	3' - 0"	6' - 8"			
104	D	4' - 0"	6' - 8"			

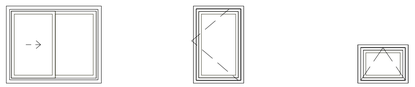
DOOR REMARKS

1. EXTERIOR DOOR.
2. GLAZING PER DOOR TYPES. REFER TO GENERAL DOOR NOTE #8
3. PROVIDE 100 SQ INCHES OF VENTING IN DOOR OR BY OTHER APPROVED MEANS.
4. OPTIONAL DOOR.

DOOR GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
2. REFER TO PLANS FOR LOCATION OF DOORS.
3. VERIFY ROUGH OPENING SIZE WITH DOOR MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO VERIFY ACTUAL DOOR SIZE TO FIT FINISH OPENING PRIOR TO FABRICATION OF DOOR AND FINISH OPENING.
5. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
6. REFER TO DOOR TYPES LEGEND FOR GLAZING.
7. REFER TO T24 REPORT FOR GLAZING ENERGY REQUIREMENTS.
8. GLAZING IN DOORS SHALL BE TEMPERED PER ***SECTION R308.4.1***.

WINDOW TYPES LEGEND



A. HORIZONTAL SLIDER

B. CASEMENT

C. AWNING

WINDOW SCHEDULE

NO.	TYPE	SIZE WIDTH	SIZE HEIGHT	HEAD HEIGHT	Heat Transfer Coefficient (U)	Solar Heat Gain Coefficient	REMARKS
101	A	5' - 0"	4' - 0"	6' - 8"	0.3000	0.23	1
102	A	5' - 0"	4' - 0"	6' - 8"	0.3000	0.23	
103	B	2' - 6"	4' - 0"	6' - 8"	0.3000	0.23	
104	B	2' - 6"	4' - 0"	6' - 8"	0.3000	0.23	
105	B	2' - 6"	3' - 0"	6' - 8"	0.3000	0.23	
106	C	2' - 6"	1' - 10"	6' - 8"	0.3000	0.23	2, 5
107	B	2' - 6"	4' - 0"	6' - 8"	0.3000	0.23	

WINDOW REMARKS

1. REQUIRED EGRESS WINDOW. REFER TO WINDOW GENERAL NOTE #7 FOR ADDITIONAL INFORMATION.
2. HAZARDOUS LOCATION. WINDOW INCLUDES BOTH PANES TEMPERED GLAZING.
3. MULLED WINDOW ASSEMBLY.
4. OPTIONAL WINDOW.
5. OBSCURE.
6. WINDOW GLAZING SHALL COMPLY WITH R.337.8.2.1.

WINDOW GENERAL NOTES

1. REFER TO GENERAL NOTES ON SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO FLOOR PLANS FOR WINDOW LOCATIONS.
3. CONTRACTOR TO VERIFY EXACT ROUGH OPENING SIZES PRIOR TO FABRICATION OF ROUGH OPENINGS.
4. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
5. REFER TO ENERGY COMPLIANCE REPORTS FOR U-FACTOR, SHGC AND ADDITIONAL WINDOW REQUIREMENTS.
6. ALL GLAZING IS DOUBLE PANE WITH A MINIMUM OF ONE TEMPERED PANE UNLESS OTHERWISE NOTED.
7. EGRESS WINDOWS SHALL HAVE A CLEAR OPENING WITH A MAX. SILL HEIGHT OF 44" AFF, MIN NET CLEAR OPENING FOR EMERGENCY ESCAPE SHALL BE 5.7 S.F. EXCEPTION: MIN 5 S.F. AT GROUND FLOOR, MINIMUM NET CLEAR OPENING DIMENSIONS: HEIGHT: 24", WIDTH: 20".

FINISH LEGEND

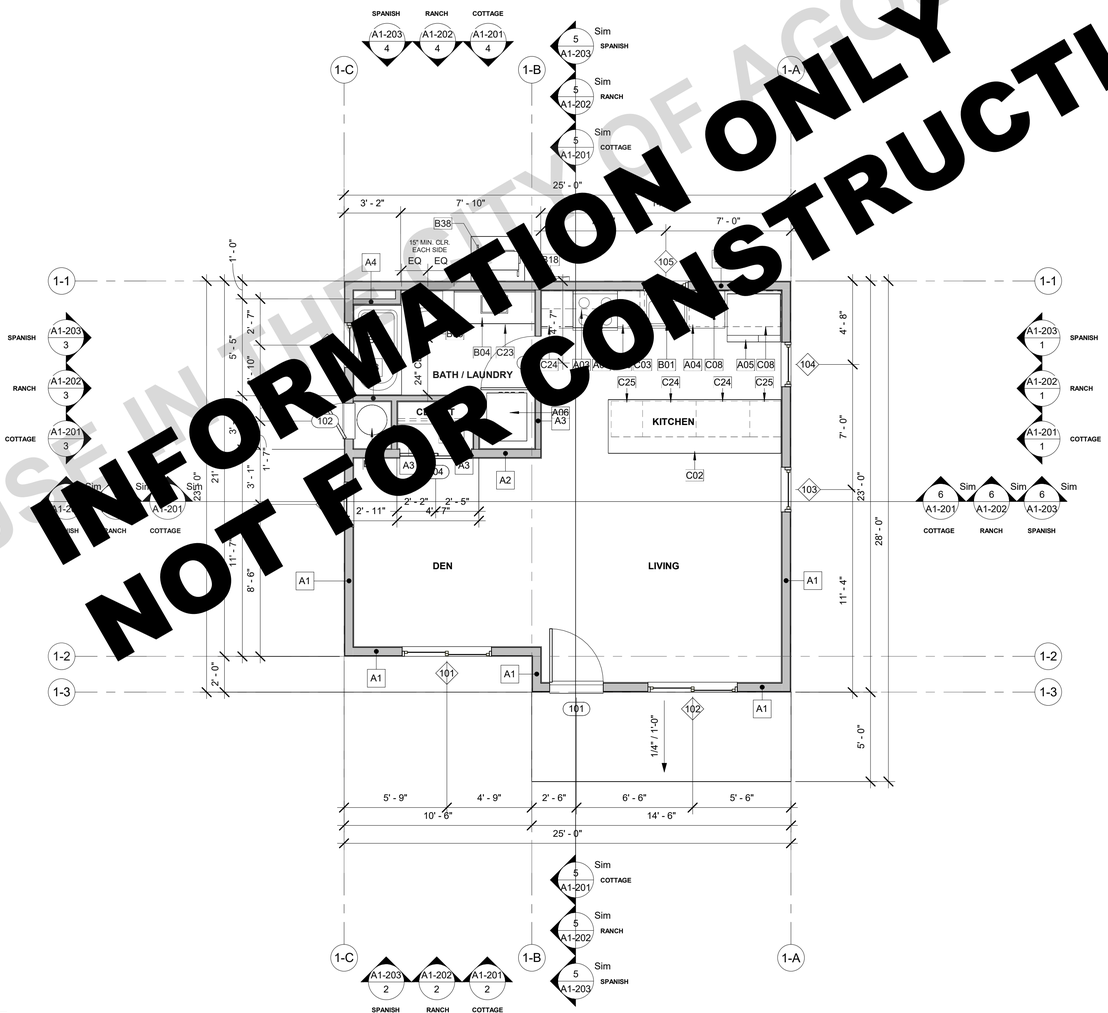
(CONC) - CONCRETE

(T) - CERAMIC TILE TO BE OWNER SELECTED

(OS) - FLOORING TO BE OWNER SELECTED

FINISH SCHEDULE PLAN 1

ROOM NAME	FLOOR	WALL	CEILING	NOTES
KITCHEN	OS	GWB	GWB	WR GWB BEHIND KITCHEN COUNTER
LIVING	OS	GWB	GWB	
DEN	OS	GWB	GWB	
BATH / LAUNDRY	T	WR GWB	WR GWB	AT CERAMIC TILE IN TUB/SHOWER AREAS, PROVIDE BACKER BOARD PER CRC TABLE R702.4.2. BATHTUB AND SHOWER FLOORS, WALLS ABOVE BATHTUBS WITH A SHOWERHEAD, AND SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE EXTENDING TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR. (R307.2)
CLOSET	OS	GWB	GWB	
WH	CONC	GWB	GWB	



1 **PLAN 1 | FLOOR PLAN - MIRROR**

A1-201 | A1-102 SCALE: 1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
3. REFER TO SHEET A1-301 FOR ELECTRICAL AND MECHANICAL PLANS FOR FURTHER INFORMATION.
4. ALL FURNITURE AND EQUIPMENT IS BY OWNER AND IS SHOWN FOR COORDINATION PURPOSES ONLY.
5. DIMENSIONS ARE TO FACE OF SHEATHING UNLESS SPECIFICALLY NOTED OTHERWISE. IF WALL ASSEMBLY DOESN'T INCLUDE SHEATHING, DIMENSIONS ARE TO FACE OF FRAMING.
6. PROVIDE ADEQUATE BLOCKING IN WALLS FOR CABINETS AND OTHER WALL MOUNTED ACCESSORIES INCLUDING BUT NOT LIMITED TO HANDRAILS, SHELVING AND BATHROOM FIXTURES.
7. PROVIDE FIREBLOCKING FOR WALL CAVITIES THAT EXCEED 2022 CBC HEIGHT LIMITATIONS
8. DOOR AND WINDOW DIMENSIONS ARE CENTERED AT OPENINGS
9. WHERE DOOR IS LOCATED WITHOUT DIMENSION AT THE CORNER OF A ROOM IT SHALL BE 4" FROM FACE OF FRAMING OF ADJACENT WALL TO ROUGH DOOR OPENING
10. OUTLETS, SWITCHES, AND DOORBELLS SHALL BE NO MORE THAN 48" ABOVE FINISH FLOOR PER R327.1.2
11. AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH R327.1.1. REFERENCE A-901 FOR DETAILS.

KEYNOTES

A01	30" WIDE FREE STANDING ELECTRIC RANGE OVEN. VENT TO EXTERIOR, STAINLESS STEEL.
A03	30" WIDE RANGE VENT, OWNER SELECTED. SEE MECHANICAL PLANS ON SHEET A1-301 FOR VENTING REQUIREMENTS.
A04	24" WIDE FRONT CONTROL UNDERCOUNTER DISHWASHER.
A05	REFRIGERATOR LOCATION. PROVIDE 42" SPACE WITH ROUGH PLUMBING FOR ICE MAKER (RECESS IN WALL).
A06	STACKED WASHER/DRYER MACHINE LOCATION. PROVIDE WASTE AND WATER IN RECESSED WALL BOX. PROVIDE DRYER VENT. VENT TO OUTSIDE AIR. SPECIFY CLOTHES DRYER MOISTURE EXHAUST DUCT MUST BE 4" IN DIAMETER AND LENGTH IS LIMITED TO 14' WITH TWO ELBOWS. THE DUCT LENGTH SHALL BE REDUCED BY 2' FOR EVERY ELBOW IN EXCESS OF TWO. (CMC 504.4.2)
B01	30" SINGLE COMPARTMENT UNDER-MOUNT KITCHEN SINK W/ GARBAGE DISPOSAL. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEET.
B04	LAVATORY SINK. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEETS.
B05	WATER CLOSET. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEETS. REFER TO 33/A-901 FOR AGING-IN-PLACE BLOCKING.
B06	32" x 60" x 72" TUB AND SHOWER COMBINATION. MODEL BY BUILDER. PROVIDE SHOWER ROD. REFER TO 24/A-901 FOR AGING-IN-PLACE BLOCKING.
B18	ELECTRIC PANEL TBD.
B38	MULTI-ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION. 3" MIN. ABOVE GRADE. IF MECH UNIT IS VISIBLE FROM STREE, SCREEING WILL BE REQUIRED.
B47	40 GALLON HEAT PUMP WATER HEATER. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
C01	SINGLE WOOD SHELF AND POLE.
C02	KITCHEN ISLAND COUNTERTOP. 36" A.F.F.
C03	KITCHEN COUNTER TOP. 36" A.F.F.
C08	12" DEEP UPPER CABINET
C23	21" DEEP FULL HEIGHT CABINET
C24	24" DEEP FULL HEIGHT CABINET
C25	24" DEEP FULL HEIGHT DRAWERS

WALL TYPE LEGEND

A1	**EXTERIOR**- 5 1/2" WOOD STUD W/ PLYWOOD SHEATHING, EXTERIOR FINISH PER ELEVATION, ONE LAYER GYPSUM WALL BOARD INTERIOR. PER DETAIL. FOR COTTAGE, SEE **53/A-904** . FOR RANCH, SEE **33/A-906** FOR SPANISH, SEE **44/A-908** .
A2	**INTERIOR**- 5 1/2" WOOD STUD W/ONE LAYER GYPSUM WALL BOARD EACH SIDE.
A3	**INTERIOR**- 3 1/2" WOOD STUD W/ONE LAYER GYPSUM WALL BOARD EACH SIDE.
A4	**INTERIOR**- 3 1/2" WOOD STUD W/ONE LAYER GYPSUM WALL BOARD ONE SIDE. FURRING WALL.

CITY OF AGOURA HILLS

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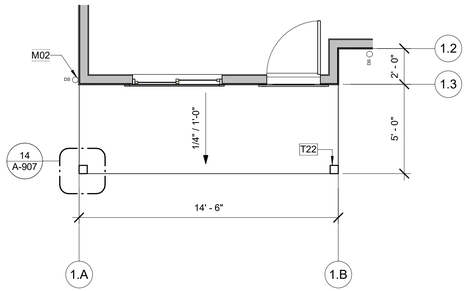
PLAN 1 - MIRROR - FLOOR PLAN AND DOOR & WINDOW SCHEDULE

APPROVED SET

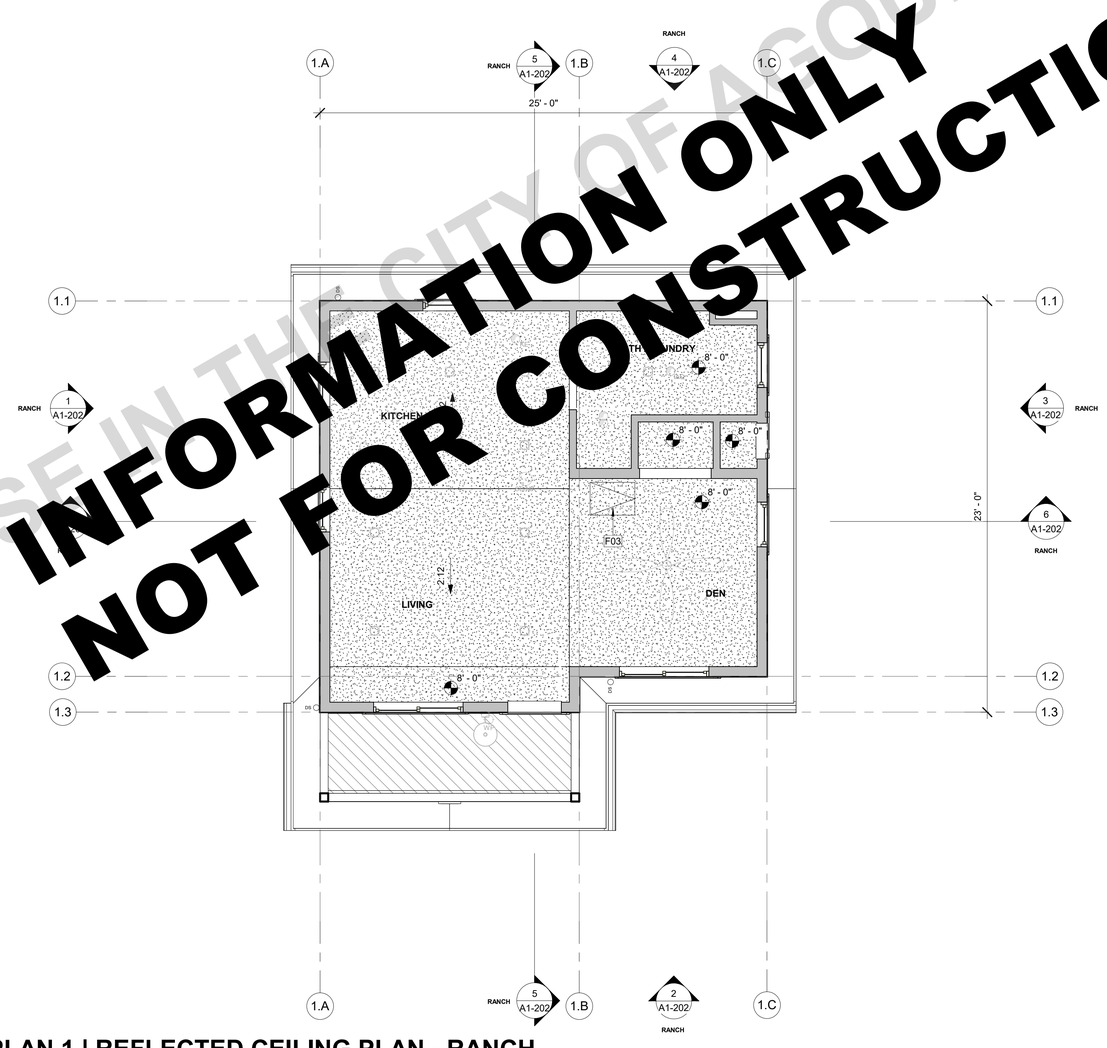
DATE 09/28/23

SHEET A1-102



2 PLAN 1 | PORCH FLOOR PLAN - RANCH

A1-201 | A1-112 SCALE: 1/4" = 1'-0"



1 PLAN 1 | REFLECTED CEILING PLAN - RANCH

A1-201 | A1-112 SCALE: 1/4" = 1'-0"

RCP GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-100 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
3. REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION.
4. REFER TO DETAILS FOR FLOOR/CEILING ASSEMBLIES.
5. HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UNO.
6. CONTRACTOR TO VERIFY DEPTH OF SOFFITS AND HOLD TIGHT TO PLUMBING, SPRINKLERS, ELECTRICAL AND MECHANICAL DUCTS
7. ALL LIGHT FIXTURES ARE TO BE INSTALLED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN.
8. LIGHT FIXTURES SHALL BE CENTERED WITHIN SPACES AND/OR WINDOW OPENING AND EVENLY ARRAYED. IF CONFLICTS OCCUR AT MECHANICAL REGISTERS OR ACCESS HATCHES, LIGHTING LOCATIONS SHALL TAKE PRECEDENCE.
9. ATTIC ACCESS TO BE 22" X 30" MIN. UNLESS THE VERTICAL HEADROOM HEIGHT OF THE ATTIC IS LESS THAN 30". OPENING TO BE LOCATED IN A HALLWAY, OR OTHER READILY ACCESSIBLE LOCATION.
10. WHERE MECHANICAL EQUIPMENT IS INTALLED IN THE ATTIC, THE MINIMUM ACCESS DIMESIONS ARE 22" X 30" AND AT LEAST AS LARGE AS THE LARGEST COMPONENT OF THE APPLIANCE.
11. ACCESS MUST BE PROVIDED TO EACH SEPARATED ATTIC AREA WITH 30" HEADROOM CLEARANCE ABOVE THE OPENING.

KEYNOTES

F03	22" X 30" MINIMUM ATTIC ACCESS. PROVIDED SWITCH AND OUTLET AT ATTIC FOR FAU. PERMANENTLY ATTACH R-38 OR GREATER INSULATION TO ATTIC ACCESS DOOR USING ADHESIVE OR MECHANICAL FASTENERS CEnC 150.0 (a)1. PROVIDE GASKETED ATTIC ACCESS TO PREVENT AIR LEAKAGE CEnC 150.0 (a)1."
M02	DOWNSPOUT. CONNECT TO STORM DRAIN SYSTEM
T22	6X6 STAINED WOOD COLUMN.

LEGEND

XX'-X"	CEILING HEIGHT (SEE PLAN FOR ACTUAL HEIGHTS)
X" / X"	CEILING SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)
	INTERIOR - GYPSUM BOARD CEILING
	EXTERIOR - CEMENT PLASTER SOFFIT
	CEILING ACCESS PANEL. PAINT TO MATCH CEILING.

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PLAN 1 - PORCH & REFLECTED CEILING PLAN - RANCH

APPROVED SET

DATE 09/28/23

SHEET A1-112

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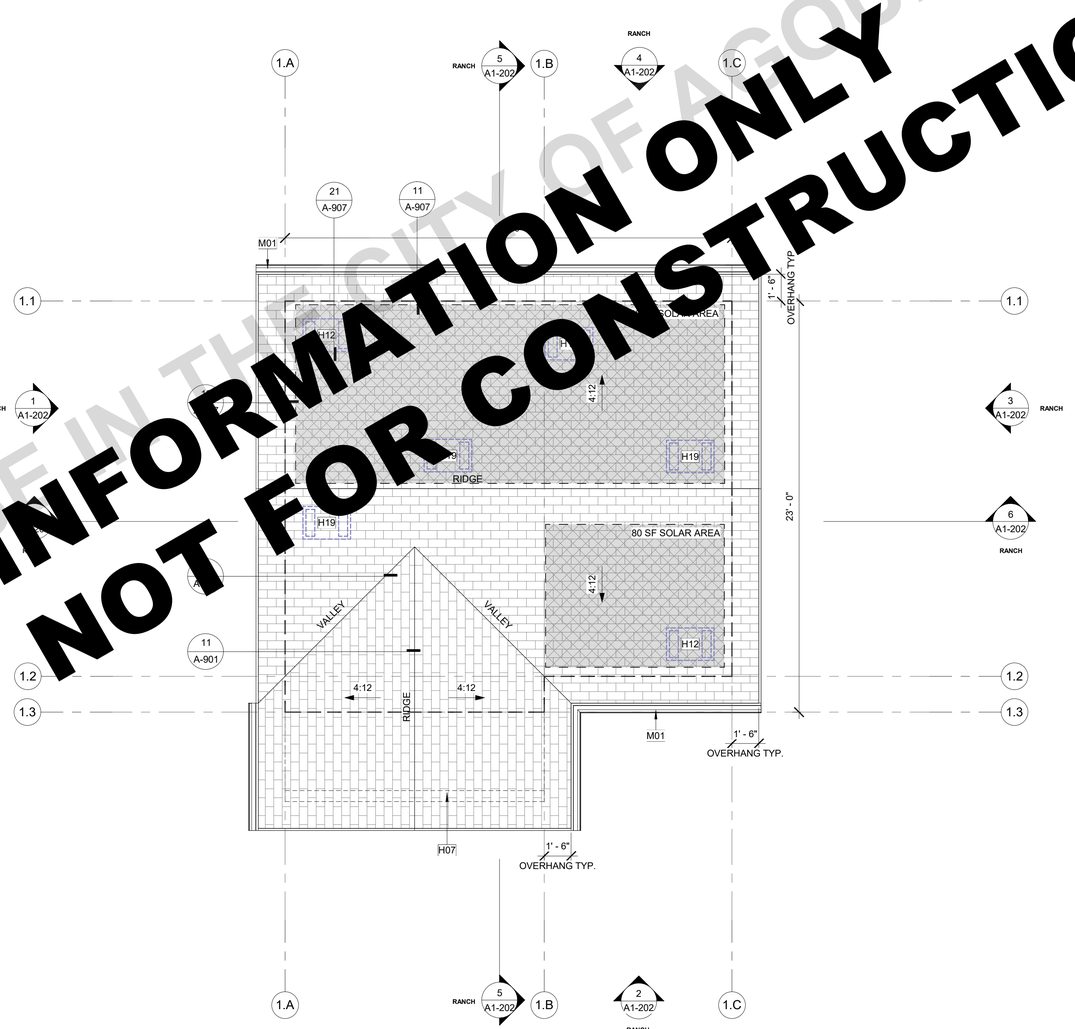

1 | A1-201 | A1-122 **PLAN 1 | ROOF PLAN - RANCH**

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

PHOTOVOLTAIC REQUIREMENTS

NO PV SYSTEM IS REQUIRED WHEN THE MINIMUM PV SYSTEM SIZE SPECIFIED BY SECTION 2022 CALIFORNIA ENERGY CODE 150.1 (C) 14 IS LESS THAN 1.8 KWDC. DETERMINED BY CLIMATE ZONE AND THE EQUATION BELOW.
KWPV = (CFA × A)/1000 +(NDU × B)

WHERE:
KWPV = KWDC SIZE OF THE PV SYSTEM
CFA = CONDITIONED FLOOR AREA
NDU = NUMBER OF DWELLING UNITS
A = CFA ADJUSTMENT FACTOR FROM TABLE 150.1-C
B = DWELLING UNIT ADJUSTMENT FACTOR FROM TABLE 150.1-C

FOR AGOURA HILLS (CLIMATE ZONE 9):
NDU = 1
A = 0.613
B = 1.36
KWPV < 1.82 WHEN CFA IS < 750SF

THUS, IF THE ADU IS LESS THAN 750SF IN AGOURA HILLS IT DOESN'T REQUIRE A PHOTOVOLTAIC SYSTEM.

ROOF PLAN GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
2. REFER TO STRUCTURAL PLANS FOR ROOF FRAMING INFORMATION INCLUDING MEMBER SIZES AND CONNECTION HARDWARE.
3. REFER TO MECHANICAL PLANS FOR ROOF MOUNTED EQUIPMENT LOCATIONS AND TYPES.
4. REFER TO ELECTRICAL PLANS FOR POWER DISTRIBUTION TO ROOF MOUNTED EQUIPMENT.
5. REFER TO SITE/GRADING PLAN FOR DOWNSPOUT DISCHARGE OR CONTINUATION.
6. PROVIDE A MINIMUM OF 1 INCH OF AIRSPACE BETWEEN THE INSULATION AND ROOF SHEATHING.
7. WHERE THE ROOF PROFILE ALLOWS A SPACE BETWEEN THE ROOF COVERING AND DECKING, THE SPACES SHALL BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS, BE FIRESTOPPED WITH APPROVED MATERIALS OR HAVE ONE LAYER OF MINIMUM 72 POUND MINERAL-SURFACED NONPERFORATED CAP SHEET OVER THE COMBUSTIBLE DECKING.
8. ALL ROOFING MATERIALS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
9. OVERHANG DIMENSIONS ARE FROM FACE OF EXTERIOR WALL FRAMING TO ROOF EDGE
10. ROOF COVERINGS AND UNDERLAYMENT SHALL BE APPLIED IN ACCORDANCE WITH (***2022 CBC 1507.1)***, AND MANUFACTURER'S INSTALLATION INSTRUCTIONS
11. WHERE PROVIDED, VENTILATION OPENINGS SHALL BE IN ACCORDANCE WITH (***2022 CBC SECTION 1202)***. EXTERIOR OPENINGS INTO THE ATTIC SPACE SHALL BE COVERED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR MATERIAL. THE OPENINGS SHALL BE A MINIMUM OF 1/16" AND SHALL NOT EXCEED 1/4" PER ***(2022 CBC 1202.2.2.)***
12. ROOF VENTS SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATIONS
13. FURNISHED DIMENSIONS FOR VENTS ARE GUIDES ONLY. INSTALL PER MANUFACTURERS SPECIFICATIONS AND ADJUST TO ACCOMMODATE TRUSS LOCATIONS, PLUMBING VENTS, AND SOLAR COLLECTORS.
14. CLASS A FIRE-RETARDANT COOL ROOF LABELED AND CERTIFIED BY THE CRRC. (1505.1 & TABLE 1505.1, R902.1)

KEYNOTES

	BUILDING LINE BELOW.
	ATTIC VENT (LOW). PAINT FINISH TO MATCH ROOF COLOR, SEE VENTING CALCS.
H19	DORMER VENT (HIGH). ATTIC VENTING OPTION 2. PAINT FINISH TO MATCH ROOF COLOR. SEE VENTING CALCS.
M01	GUTTER. CONNECT TO DOWNSPOUT. PROVIDE MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS IN GUTTER PER CRC R337.5.4

ROOF VENTING CALCULATIONS

UPPER & LOWER VENTS:

O'HAGIN HIGH PROFILE FIRE & ICE CLAY TILE
FINISH TO MATCH ROOF
97.5 SQ.IN OF AIR MOVEMENT PER VENT = 97.5 SQ.IN. / 144 = 0.67 SF

"UPPER VENTS PROVIDED" = (TOTAL ATTIC AREA/300) * (0.5) / (0.5 SF)

"LOWER VENTS PROVIDED" = (TOTAL ATTIC AREA/300) * (0.5) / (0.5 SF)

NOTE: ROOF VENTING SHALL COMPLY WITH **CRC SECTION R806.**

A) ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH MINIMUM AND 1/4 INCH MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES AND OTHER SIMILAR CREATURES.

B) THE MINIMUM NET FREE VENTILATING AREA SHALL COMPLY WITH **CRC R806.2.**

C) PER CRC R902.1.3 ROOFING REQUIREMENTS FOR STRUCTURES LOCATED IN A CITY OF AGOURA HILLS SHALL COMPLY WITH SECTION R337.5.

D) THE O'HAGIN FIRE&ICE ROOF VENT IS A CERTIFIED PRODUCT OF THE CAL-FIRE STATE FIRE MARSHAL LISTED WILDLAND URBAN INTERFACE (WUI) PRODUCT HANDBOOK.

ATTIC	AREA	REQUIRED ATTIC VENTING (NFA)	UPPER VENTING REQUIRED (NFA)	LOWER VENTING REQUIRED (NFA)
ATTIC 1	618 SF	2.06 SF	1.03 SF	1.03 SF

VENT TYPE	COUNT	VENT LENGTH	NET FREE AREA PER VENT	PROVIDED NET FREE AREA
LOWER				
O'HAGIN SHINGLE ROOF VENT (LOWER)	3	2' - 8"	0.50 SF	1.50 SF
				1.50 SF
UPPER				
O'HAGIN SHINGLE ROOF VENT (UPPER)	3	2' - 8"	0.50 SF	1.50 SF
				1.50 SF

LEGEND

- 2" / 12" — ROOF SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)
- O'HAGIN ATTIC VENT, PAINT TO MATCH ROOF COLOR.
- WALL BELOW
- GUTTER, CONNECT TO DOWNSPOUT
  DOWNSPOUT, TO ROOF OR SPLASHBLOCK BELOW U.N.O.
- POTENTIAL SOLAR ZONE. REFER TO SOLAR READY NOTES ON SHEET G-101. SOLAR PANEL CAN BE PLACED IN THESE AREAS.
  NOTE: PER CEC SECTION 110.10 (b) THE SOLAR ZONE TOTAL AREA SHALL BE COMPRISED OF AREAS THAT HAVE NO DIMENSION LESS THAN FIVE FEET AND ARE NO LESS THAN 80 SQUARE FEET EACH FOR BUILDINGS WITH ROOF AREAS LESS THAN OR EQUAL TO 10,000.

CITY OF AGOURA HILLS

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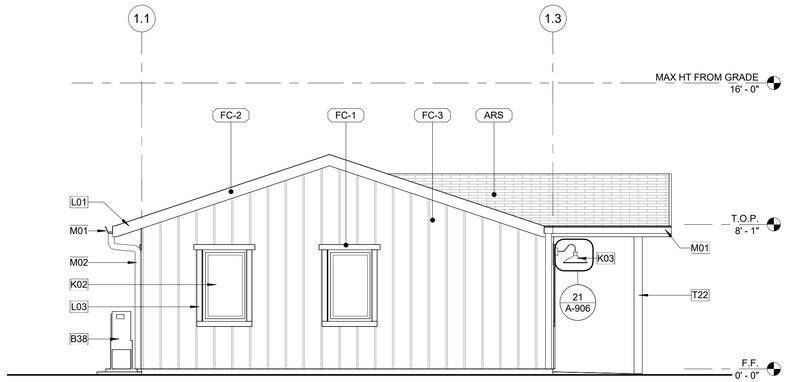
PLAN 1 - ROOF PLAN - RANCH

APPROVED SET

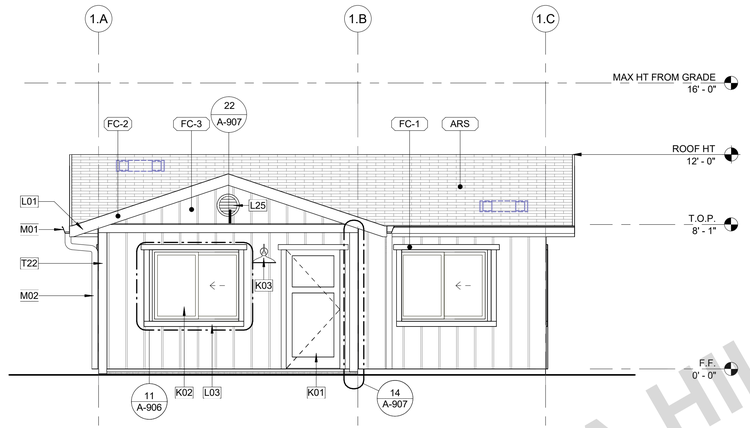
DATE
09/28/23

SHEET
A1-122



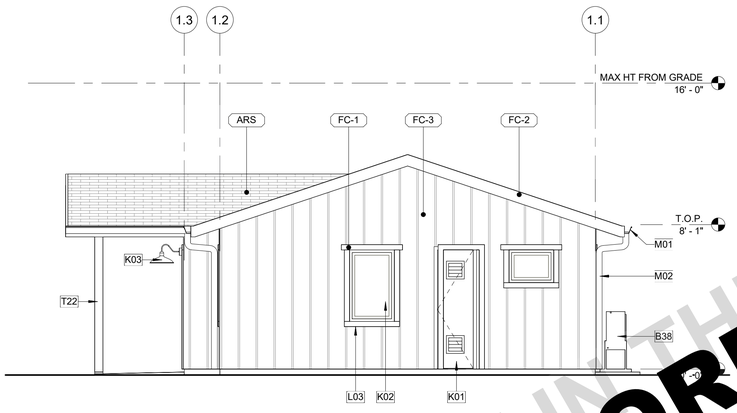
1 PLAN 1 | LEFT ELEVATION - RANCH

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



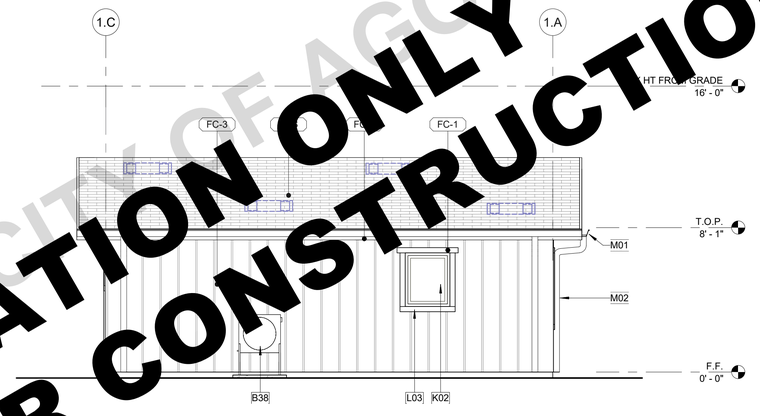
2 PLAN 1 | FRONT ELEVATION - RANCH

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



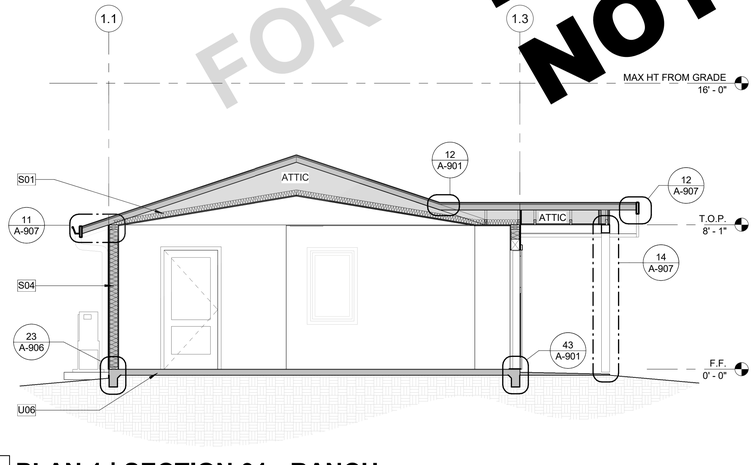
3 PLAN 1 | RIGHT ELEVATION - RANCH

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



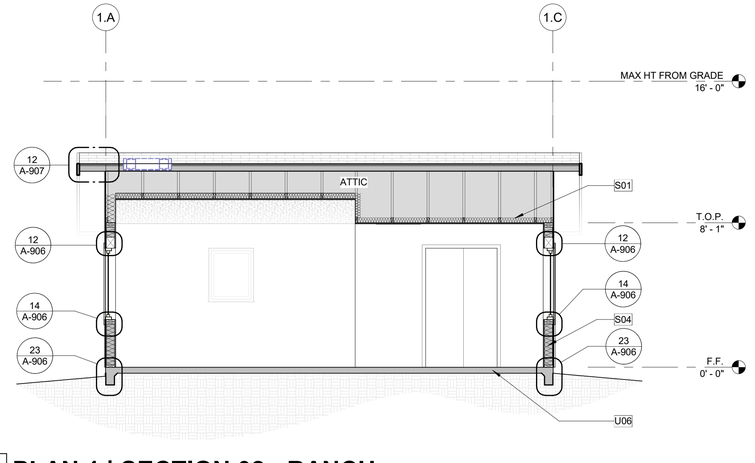
4 PLAN 1 | REAR ELEVATION - RANCH

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



5 PLAN 1 | SECTION 01 - RANCH

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



6 PLAN 1 | SECTION 02 - RANCH

A1-101 | A1-202 SCALE: 1/4" = 1'-0"

ELEVATION GENERAL NOTES

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. FRAMING ELEVATIONS, INCLUDING FLOOR PLATES AND FLOOR LEVEL ELEVATIONS ARE MEASURED FROM BUILDING FINISH FLOOR, U.N.O.
3. SEE DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
4. REFER TO ROOF PLAN FOR ROOF PITCH AND OVERHANGS. FASCIA PER DETAILS.
5. SEE ROOF PLAN FOR APPROXIMATE DOWNSPOUT LOCATIONS, U.N.O.
6. REFER TO DOOR AND WINDOW SCHEDULES AND TYPES FOR DOOR AND WINDOW INFORMATION.
7. SEE ELECTRICAL DRAWINGS FOR EXTERIOR LIGHTING
8. SEE MECHANICAL DRAWINGS FOR GRILLES AND LOUVERS. PAINT TO MATCH ADJACENT FINISH.
9. CONTRACTOR TO VERIFY COLOR SCHEME WITH OWNER BEFORE PERFORMING THE WORK.

KEYNOTES

B38	MULTI-ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION, 3" MIN. ABOVE GRADE. IF MECH UNIT IS VISIBLE FROM STREE, SCREEING WILL BE REQUIRED.
	DOOR PER PLAN
	WINDOW PER PLAN
K03	EXTERIOR WALL SCONCE
L01	1X8 FASCIA. PAINTED.
L03	RANCH - FIBER CEMENT WINDOW TRIM.
L25	FAUX CIRCULAR VENT. SEE DETAIL 22/A-907
M01	GUTTER. CONNECT TO DOWNSPOUT. PROVIDE MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS IN GUTTER PER CRC R337.5.4
M02	DOWNSPOUT. CONNECT TO STORM DRAIN SYSTEM
S01	CEILING INSULATION. REFER TO TITLE 24 (R-38 MIN.).
S04	2X6 WALL INSULATION. REFER TO TITLE 24 (R-21 MIN.)
T22	6X6 STAINED WOOD COLUMN.
U06	CONCRETE SLAB FOUNDATION PER STRUCTURAL. 10 MIL VAPOR BARRIER. REFER TO GEOTECHINCAL REPORT FOR ADDITIONAL INFORMATION. VAPOR BARRIER TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

LEGEND - RANCH

ARS	ASPHALT ROOFING SHINGLES - CLASS A ASPHALT COMPOSITE ROOF SHINGLES. ESR-1475 OR EQUAL. COLOR TO BE OWNER SELECTED.
FC-1	FIBER CEMENT - 1¼" DOOR & WINDOW TRIM, PAINTED FINISH, PAINT TO BE OWNER SELECTED.
FC-2	FIBER CEMENT - 2X8 FASCIA, PAINTED FINISH, PAINT TO BE OWNER SELECTED.
FC-3	FIBER CEMENT - BOARD AND BATTEN SIDING. ESR-1844 OR EQUAL. COLOR TO BE OWNER SELECTED.

CITY OF AGOURA HILLS

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AGOURA HILLS | ADU

CITY OF AGOURA HILLS

PLAN 1 - EXTERIOR ELEVATIONS & BLDG SECTIONS - RANCH

APPROVED SET

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09/28/23

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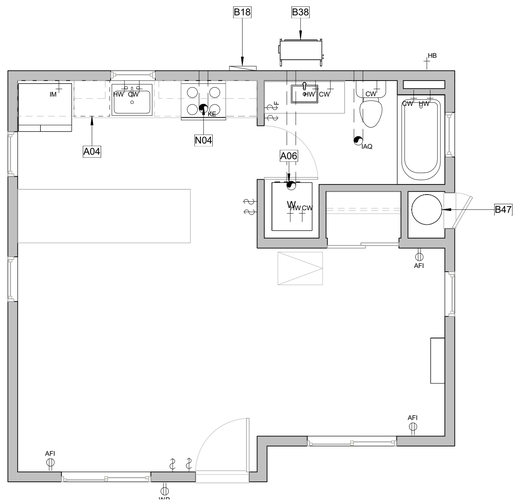
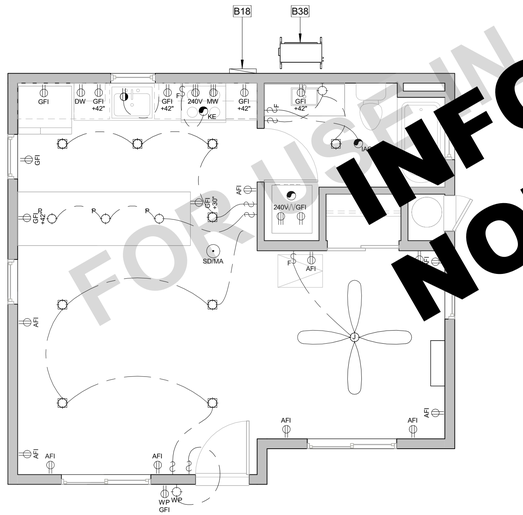


1 **PLAN 1 | MECHANICAL PLAN**
A1-201 | A1-301 SCALE: 1/4" = 1'-0"



2 **PLAN 1 | ELECTRICAL PLAN**
A1-201 | A1-301 SCALE: 1/4" = 1'-0"

ELECTRICAL GENERAL NOTES

1. CONFORM WITH CURRENT CEC, NFPA, MFR'S, AND LOCAL REQUIREMENTS.
2. ELECTRICAL SYSTEM GROUND TO BE PROVIDED PER NEC ARTICLE 250-81.
3. ALL MATERIALS TO BE U.L. LABELED.
4. METER: "SQUARE D", 120 VOLT/ 240 VOLT, 1 AND 3 WIRE GROUND OR EQUAL.
5. ELECTRICAL SUB PANEL: FLUSH MOUNT, 30" CLEARANCE. 100 AMP.
6. CONDUCTORS: TW, THW, COPPER, MINIMUM 14 AT LIGHTING, 12 AT OTHER CIRCUITS.
7. LAMPS: FOR GENERAL LIGHTING IN KITCHENS AND BATH SHALL HAVE AN EFFICIENCY OF NOT LESS THAN 40 LUMENS/ WATT. ALL SOCKETS FILLED WITH SOFT-WHITE, 55 WATT FLUORESCENT: COOL WHITE, RS, SOUND RATING "A", 40 WATT (U.O.N.).
8. ALL ELECTRICAL OUTLETS INSTALLED IN BATHROOMS, GARAGES, BASEMENTS, CRAWL SPACES, OUTDOORS, KITCHEN COUNTERS, AND AT WET BAR SINKS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION IN COMPLIANCE WITH NEC Art. 210-8, CONSISTING OF 125 VOLT, SINGLE-PHASE, 15- AND 20- AMPERE RECEPTACLES.
9. ALL BATHROOM RECEPTACLE OUTLETS SHALL BE SUPPLIED BY A MINIMUM OF ONE 120-VOLT, 20-AMPERE BRANCH CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. THIS DEDICATED CIRCUIT MAY SERVE MORE THAN ONE BATHROOM. (2022 CEC 210.11(C))
10. PROVIDE ELECTRIC OUTLET AND PUSH-BUTTON WIRE FOR GARAGE OPENER (INCLUDE OPENER).
11. THERMOSTAT SHALL BE A PROGRAMMABLE TYPE, HONEYWELL TH8320 OR EQUAL.
12. RECESSED LUMINAIRES INSTALLED IN AREAS TO RECEIVE INSULATION SHALL BE "IC" LUMINAIRES AND ARE CERTIFIED AND LABELED AS AIRTIGHT TO THE STANDARDS PRESCRIBED BY THE RESIDENTIAL ENERGY CODE.
13. CEILING-SUSPENDED (PADDLE) FANS SHALL BE SUPPORTED INDEPENDENTLY OF AN OUTLET BOX OR BY LISTATE OUTLET BOX OR OUTLET BOX SYSTEMS IDENTIFIED FOR THE USE AND INSTALLED IN ACCORDANCE WITH 2022 CEC 314.27(C) (2022 CEC 422.18).
14. ALL LUMINARIES, LAMPHOLDERS, AND RETROFIT KITS SHALL BE LISTED (2022 CEC 410.6).
15. ALL 120-VOLT, SINGLE PHASE 15- AND 20- AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, LIVING ROOMS, DINING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-F AULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. (2022 CEC 210-12(A)).
16. ALL NON-LOCKING TYPE 125-VOLT, 15 AND 20 AMPERE RECEPTACLES IN A DWELLING UNIT SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. EXCEPTIONS: (1) RECEPTACLES MORE THAN 5'6" ABOVE THE FLOOR, (2) RECEPTACLES PART OF A LUMINAIRE OR APPLIANCE, (3) A SINGLE RECEPTACLE OR A DUPLEX RECEPTACLE FOR TWO APPLIANCES THAT ARE NOT EASILY MOVED AND LOCATED WITHIN DEDICATED SPACE AND ARE CHORD-AND-PLUG CONNECTED AS PER CEC 400.7, AND (4) NON-GROUNDING RECEPTACLES USED FOR REPLACEMNETS AS PERMITTED IN CEC 406.4(D)(2)(A).
17. HIGH EFFICACY LUMINAIRES OTHER THAN OUTDOOR HID LIGHTING CONTAIN ONLY ONLY HIGH EFFICACY LAMPS AS OUTLINED IN TABLE 150-C OF THE RESIDENTIAL ENERGY CODE AND NOT CONTAIN A MEDIUM SCREW BASE SOCKET.
18. BALLAST FOR LAMPS 13 WATTS OR GREATER SHALL BE ELECTRONIC AND HAVE AN OUTPUT FREQUENCY NO LESS THAT 20 kHz.
19. SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM TH... BUILDING WIRING AND PROVIDED WITH A BATTERY BACK-UP. ALL S... DETECTORS SHALL BE INTERCONNECTED. ALL SMOKE DETECTO... SHALL MAINTAIN A MINIMUM 3 FOOT CLEARANCE TO HVAC SUPPLY OR R... AIR REGISTERS.
20. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR ... ARY POW... THE BUILDING WIRING AND PROVIDED WITH A ... TERY BACK-UP. ALL CARBON MONOXIDE ALARAMS SHALL BE INT... ED.
21. LIGHTS IN OTHER THAN KITCHENS, BATHROO... LAUNDRY ROOMS, AND UTILITY ROOMS MUST BE CONTR... D BY A DIMMER OR CONTROLLED BY A MANUAL-ON OCCUPANT ... SUCH SENSORS SHALL BE CAPABLE OF AUTOMATICALLY TURNING ... THE LIGHTS NO MORE THAN 30 MINUTES AFTER THE ROOM HAS BEEN VACATED.
22. EXHAUST FANS WITH A ... HUMIDISTAT PER THE C... BUILDING STA... CEC 150.0(O). EXHAUST FANS MUST BE SWITCHED ... TELY FROM LIGHTS *(CEngC 150.0(k)(2))*.
23. OUTDOOR LIGHTING PERMA... LY MOUNTED TO A DWELLING UNIT, BUILDING OR OTHER BUILDINGS ON THE SAME LOT SHALL BE ... CONTROLLED TO MEET THE REQUIREMENTS IN ITEM I AND THE REQUIREMENTS IN EITHER ITEM II OR ITEM III:
    - CONTROLLED BY A MANUAL **ON** AND OFF SWITCH THAT PERMITS THE OPERATION OF ITEMS II OR III BELOW; AND
    - CONTROLLED BY A PHOTOCELL AND MOTION SENSOR OR AN AUTOMATIC TIME SWITCH CONTROL; OR
    - iii) CONTROLLED BY AN ASTRONOMICAL TIME CLOCK CONTROL.

    NOTE: CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY RETURNS THE AUTOMATIC CONTROL TO NORMAL OPERATION WITHIN 6 HOURS. AN ENERGY MANAGEMENT CONTROL SYSTEM THAT PROVIDES THE SPECIFIED AUTOMATIC CONTROL FUNCTIONALITY AND COMPLIES WITH ALL REQUIREMENTS APPLICABLE TO THE SPECIFIED CONTROLS MAY BE USED TO MEET THESE REQUIREMENTS.
24. AT LEAST ONE LUMINAIRE EACH BATHROOM, LAUNDRY ROOM, AND UTILITY ROOM SHALL BE CONTROLLED BY A MANUAL ON/AUTOMATIC-OFF VACANCY SENSOR.
25. EXCEPT FOR CLOSETS LESS THAN 70 SQUARE FEET AND HALLWAYS, ALL LUMINAIRES THAT ARE INSTALLED WITH JA8-CERTIFIED LIGHT SOURCES ARE REQUIRED TO BE CONTROLLED BY EITHER A DIMMER, VACANCY SENSOR OR FAN SPEED CONTROL.
26. OUTLETS, SWITCHES, AND DOORBELLS SHALL BE NO MORE THAN 48" ABOVE THE FINISH FLOOR.

MECHANICAL NOTES

1. CONFORM WITH CURRENT ADOPTED CRC, CMC, SMACCNA, NFPA AND LOCAL REQUIREMENTS.
2. DUCTWORK: SMACCNA "LOW VELOCITY DUCT CONSTRUCTION" NFPA STANDARD #90A. ALL TRANSVERSE DUCT PLENUM AND FITTING JOINTS SHALL BE SEALED WITH PRESSURE SENSITIVE NON-CLOTH TAPE MEETING THE REQUIREMENTS OF UL181, 181A, OR 181B, OR MASTIC TO PREVENT AIR LOSS. DUCTS SHALL BE INSULATED AS REQUIRED BY THE UMC. SEE FLOOR PLAN FOR F.A.U. AND FIREPLACES. DUCTS PENETRATING A WALL OR FLOOR-CEILING BETWEEN GARAGE & DWELLING TO BE MINIMUM 26 GAUGE METAL WITHOUT OPENING IN GARAGE. FIRE DAMPER REQUIRED OTHERWISE.
3. GRILLES AND REGISTERS, DIFFUSERS, ETC: SUBJECT TO OWNERS APPROVAL. "CARNES" OR EQUAL FANS: DIRECTLY VENTED TO OUTSIDE, BACK DRAFT DAMPERS ARE REQUIRED (PER TABLE 2-53V, TITLE 24 C.A.C.).
4. THE RETURN AIR PLENUM SERVING THE MECHANICAL EQUIPMENT MUST BE FULLY DUCTED FROM THE EQUIPMENT TO THE CONDITIONED SPACE. DROP CEILINGS, WALL CAVITIES AND EQUIPMENT PLATFORMS MAY NOT BE USED AS PLENUMS.
5. LAUNDRY DRYER VENT TO EXTERIOR TO BE 4" IN DIAMETER AND LENGTH IS LIMITED TO 14 FEET MAXIMUM WITH TWO ELBOWS. THE DUCT LENGTH SHALL BE REDUCED 2 FEET FOR EVERY ELBOW IN EXCESS OF TWO PER CMC 504.4.2.
   POWER ASSISTED DEVICE IS REQUIRED.
6. BATHROOM EXHAUST FANS (BATHROOM APPLIES TO ROOMS CONTAINING BATHTUB, SHOWER, OR TUB/SHOWER COMBINATION) WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING *(2022 CGBSC SEC. 4.506.1)*:
   a. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING MIN 3' FROM OPENINGS.
   b. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.
      - HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF ≤ 50 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.
      - A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL(I.E. BUILT IN)
7. BATHROOM EXHAUST FANS SHALL PROVIDE MINIMUM 50 CFM EXHAUST RATE *(2022 CMC TABLE 403.7)*.
8. KITCHEN LOCAL EXHAUST VENTILATION REQUIRES A MINIMUM EXHAUST PER CENC T-150.G. THIS INCLUDES A MAXIMUM SOUND RATING OF 3 SONE @ 100CFM ASHRAE 62.2 SECTION 7.1. EXHAUST MUST OUTLET OUTSIDE THE DWELLING. (2022 CMC 505.4)(CEnC 150.0(O)).
9. PER 2022 CENC 150(... PORTIONS OF SUPPLY-AIR AND RETURN-AIR DUCTS AND PLENUMS INSTA... BE INSULATED TO A MINIMUM INSTALLED R-6.0 (OR ANY HIGHER LEVEL REQUIRED BY 2022 CMC ... TION) OR BE ENCLOSED ENTIRELY IN CONDITIONED SPACE.
10. MINIMUM 100 SQUARE INCHES MAKE-UP AIR FOR CLOTHES DRYERS INSTALLED IN CLOSETS (CMC 504.4.1(1)).

PLUMBING NOTES

1. PROVIDE AN **APPROVED ... ER GAP FITTING** AS PER 2022 CPC, SECTION 807.
2. **POTABLE WATER OUTLETS** WITH HOSE ATTACHMENTS, OTHER THAN WATER CLOSET ... INSTALLED ON WATER DRAINS, AND CLOTHES WASHER ... SHALL BE ... S, SHALL BE PROTECTED BY A LISTED NON-REMOVABLE ... PE BACKFLOW PREVENTER OR A LISTED ATMOSPHERIC VACUUM BREAKER AS PER 2022 CPC, SECTION 603.5.7.
3. **JOINTS** WHERE A FIXTURE COMES IN CONTACT WITH THE WALL OR FLOOR, THE JOINT BETWEEN THE FIXTURE AND THE WALL OR FLOOR SHALL BE MADE WATERTIGHT. 2022 CPC, SECTION 402.2
4. NO **UNDERFLOOR CLEANOUT** SHALL BE LOCATED MORE THAN 5 FEET FROM AN ACCESS DOOR, TRAP DOOR, OR CRAWL HOLE. 2019 CPC, SECTION 707.9.
5. **LISTED WATER HEATERS SHALL BE INSTALLED IN** ACCORDANCE WITH THEIR LISTING AND THE MANUFACTURERS' INSTRUCTIONS.
6. **UNLISTED WATER HEATERS** SHALL BE INSTALLED WITH A CLEARANCE OF 12" ON ALL SIDES AND REAR. 2019 CPC, SECTION 504.3.1 & 504.3.2.
7. ANY WATER SYSTEM CONTAINING **STORAGE WATER HEATING EQUIPMENT** SHALL BE PROVIDED WITH AN APPROVED, LISTED, AND ADEQUATELY SIZED COMBINATION PRESSURE AND TEMPERATURE RELIEF VALVE. 2022 CPC, SECTION 608.3.
8. **RELIEF VALVES LOCATED INSIDE A BUILDING** SHALL BE PROVIDED WITH A DRAIN OF GALVANIZED STEEL, HARD-DRAWN COPPER PIPING, FITTINGS, CPVC, OR LISTED VALVE DRAIN. THE DRAIN SHALL EXTEND FROM THE VALVE TO THE OUTSIDE OF THE BUILDING WITH THE END OF THE PIPE, NOT MORE THAN 2 FEET NOR LESS THAN 6 INCHES ABOVE THE GROUND AND POINTING DOWNWARD. 2019 CPC, SECTION 608.5. ***NOTE:*** NO PART OF SUCH DRAINPIPE SHALL BE TRAPPED, AND THE TERMINAL END OF THE DRAINPIPE SHALL NOT BE THREADED.
9. **WATER HEATERS SHALL BE ANCHORED OR STRAPPED** TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS. AT THE LOWER POINT, A MINIMUM DISTANCE OF 4 INCHES SHALL BE MAINTAINED ABOVE THE CONTROLS WITH THE STRAPPING. 2019 CPC, SECTION 507.2.
10. **MAXIMUM HOT WATER TEMPERATURE** DISCHARGING FROM A BATHTUB OR A WHIRLPOOL BATHRTUB FILLER SHALL NOT EXCEED 120 DEGREES FARENHEIT (CPC 408.3.2).
11. **SHOWERS AND TUB-SHOWER COMBINATIONS** IN ALL BUILDINGS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE. 2022 CPC, SECTION 408.3.
12. **UNDERGROUND WATER SUPPLY LINES** SHALL HAVE 14-AWG BLUE TRACER WIRE (METALLIC PIPE EXEMPT) (CPC 604.10.1).
13. **THE ADJACENT SPACE NEXT TO SHOWERS** WITHOUT THRESHODS SHALL BE CONSIDERED A "WET LOCATION" WHEN USING HTE CRC, CBC, AND CEC (CPC 408.5).
14. **DOMESTIC HOT WATER** LINES HSALL BE INSULATED. INSULATION SHALL BE THE THICKNESS OF THE PIP DIAMETER UP TO 2" IN SIZE AND MINIMUM 2" THICKNESS FOR PIPES LARGER THAN 2" IN DIAMETER (CPC 609.12.2).

GENERAL MEP NOTES

1. REFER TO ELECTRICAL NOTES ON SHEET G-101.
2. REFER TO MECHANICAL NOTES ON SHEET G-101.
3. REFER TO PLUMBING NOTES ON SHEET G-101.
4. REFER TO TITLE 24 COMPLIANCE NOTES ON SHEET G-101.
5. EXTERNALLY MOUNTED HEATING/COOLING UNITS SHALL BE SCREENED IF THEY ARE VISIBLE FROM A PUBLIC STREET.

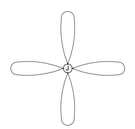
KEYNOTES

A04	24" WIDE FRONT CONTROL UNDERCOUNTER DISHWASHER.
A06	STACKED WASHER/DRYER MACHINE LOCATION. PROVIDE WASTE AND WATER IN RECESSED WALL BOX. PROVIDE DRYER VENT. VENT TO OUTSIDE AIR. SPECIFY CLOTHES DRYER MOISTURE EXHAUST DUCT MUST BE 4" IN DIAMETER AND LENGTH IS LIMITED TO 14' WITH TWO ELBOWS. THE DUCT LENGTH SHALL BE REDUCED BY 2' FOR EVERY ELBOW IN EXCESS OF TWO. (CMC 504.4.2)
B18	ELECTRIC PANEL TBD.
B38	MULTI-ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION, 3" MIN. ABOVE GRADE. IF MECH UNIT IS VISIBLE FROM STREE, SCREEING WILL BE REQUIRED.
B47	40 GALLON HEAT PUMP WATER HEATER. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
N04	HERS VERIFICATION IS REQUIRED FOR KITCHEN RANGE HOOD. CF2R FORMS ARE REQUIRED TO BE SUBMITTED TO INSPECTOR AT THE TIME OF INSPECTION.

LEGEND

NOTE: ALL OUTDOOR OUTLETS SHALL HAVE GFCI PROTECTION AND WEATHERPROOF COVERS.

- ELECTRICAL SWITCH
- 3 ELECTRICAL SWITCH-THREE WAY
- OS ELECTRICAL SWITCH-VACANCY SENSOR
- D ELECTRICAL SWITCH-DIMMER
- F ELECTRICAL SWITCH-FAN
- A ASTRONOMICAL TIME SWITCH
- EXHAUST FAN
- KE KITCHEN EXHAUST FAN
- IAQ INDOOR AIR QUALITY FAN
- P PENDANT LIGHT
- WALL MOUNTED HIGH-EFFICACY LIGHT
- WP EXTERIOR WALL MOUNTED HIGH-EFFICACY LIGHT
- RECESSED HIGH-EFFICACY DOWNLIGHT
- VP RECESSED HIGH-EFFICACY DOWNLIGHT VAPOR PROOF
- ELECTRICAL WIRING
- SA SMOKE DETECTOR/ALARM
- SD/MA COMBINATION SMOKE/CARBON MONOXIDE ALARM
- D COMPUTER DATA LOCATION
- T TELEPHONE LOCATION
- TV CABLE TELEVISION LOCATION
- J ELECTRICAL JUNCTION BOX



CEILING FAN OPTIONAL (PRE WIRE FOR CEILING FAN ONLY)

- AFI DUPLEX OUTLET ARC-FAULT CIRCUIT INTERRUPTER
- 240V DUPLEX OUTLET 240 VOLTS
- GFI DUPLEX OUTLET GROUND FAULT INTERRUPTER
- GFI WP DUPLEX OUTLET WATERPROOF GROUND FAULT INTERRUPTER
- DUPLEX OUTLET AFCI-HALF HOT
- DW DUPLEX OUTLET DISH WASHER
- RH DUPLEX OUTLET RANGE HOOD
- CW COLD WATER STUB OUT
- HW HOT WATER STUB OUT
- HB WATER HOSE BIBB
- SOV HB WATER HOSE BIBB WITH SHUT OF VALVE
- IM ICE MACHINE STUB OUT
- UNDER CABINET HIGH-EFFICACY LIGHT
- 22"X30" MIN. CEILING ACCESS PANEL
- AIR HANDLER UNIT, PROVIDE DEDICATED OUTLET

CITY OF AGOURA HILLS

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AGOURA HILLS | ADU
CITY OF AGOURA HILLS
PLAN 1 - MECHANICAL & ELECTRICAL PLANS

APPROVED SET

DATE 09/28/23

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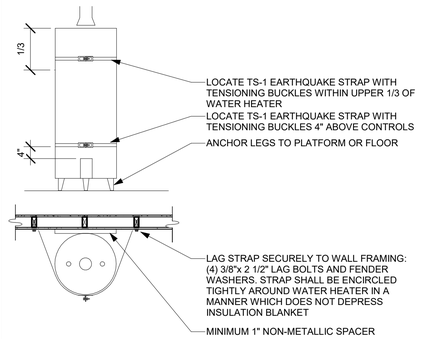
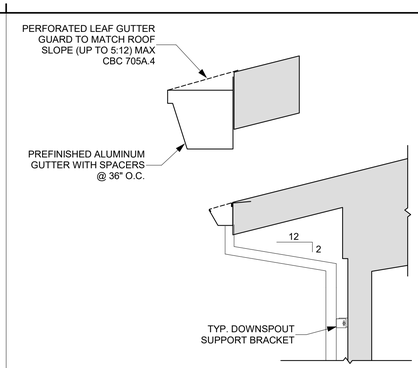


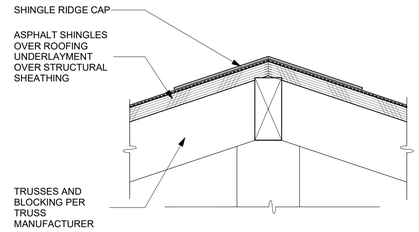
31 WATER HEATER MOUNTING

A-901 SCALE: 1/2" = 1'-0"



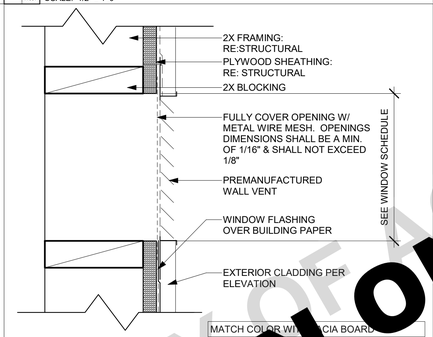
21 TYP. GUTTER TO EXT. DOWNSPOUT

A-901 SCALE: 1/2" = 1'-0"



11 TYPICAL RIDGE/HIP DETAIL

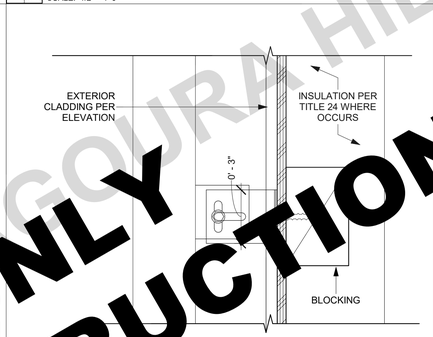
A-521 A-901 SCALE: 3" = 1'-0"



NOTE: DETAIL PROVIDED FOR ADDITI NG WHEN REQUIRED BY SPECIAL CIRCU ICE.

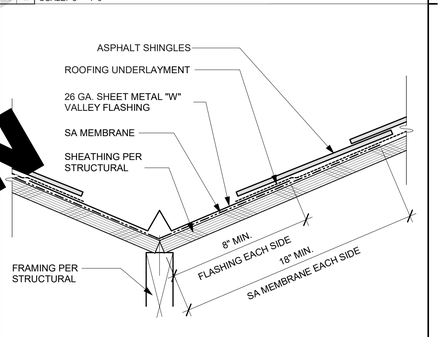
32 WALL VENT1

A-901 SCALE: 3" = 1'-0"



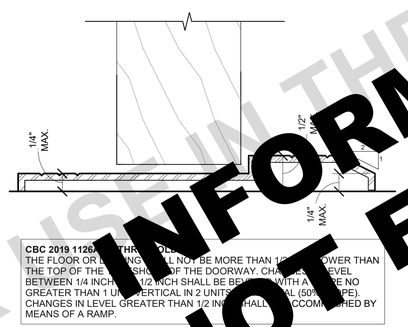
DOWNSPOUT ATTACHMENT

SCALE: 3" = 1'-0"



12 TYPICAL VALLEY DETAIL

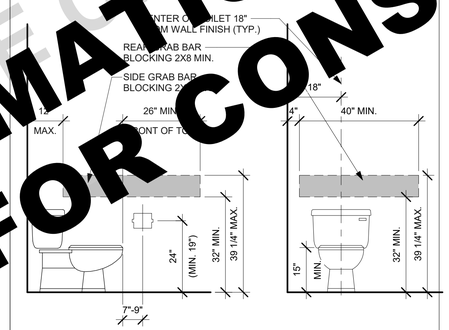
A-521 A-901 SCALE: 3" = 1'-0"



CBC 2019 1128. THRESHOLDS SHALL NOT BE MORE THAN 1/2 INCH HIGHER THAN THE FLOOR OR LANDING SILL NOT BE MORE THAN 1/2 INCH LOWER THAN THE TOP OF THE THRESHOLD OF THE DOORWAY. CHANGES IN LEVEL BETWEEN 1/4 INCH AND 1/2 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1 UNIT VERTICAL IN 2 UNITS HORIZONTAL (50% SLOPE). CHANGES IN LEVEL GREATER THAN 1/2 INCH SHALL BE ACCOMPLISHED BY MEANS OF A RAMP.

43 DOOR THRESHOLD

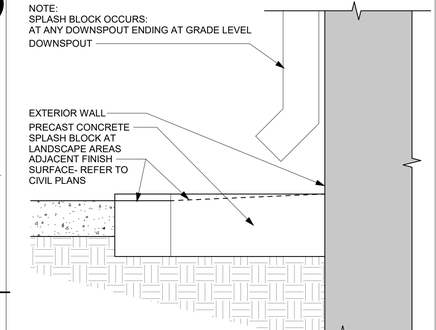
A-521 A-901 SCALE: 12" = 1'-0"



LOCATIONS FOR GRAB BAR REINFORCEMENT - PER 2022 R327.1.1

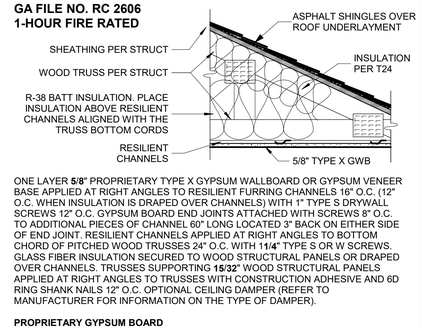
33 AGING-IN-PLACE WATER CLOSET

A-901 SCALE: 1/2" = 1'-0"



23 DOWNSPOUT TO SPLASH BLOCK

A-901 SCALE: 1 1/2" = 1'-0"

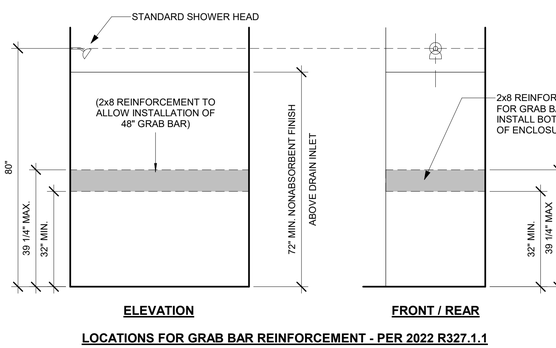


ONE LAYER **5/8"** PROPRIETARY TYPE X GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED AT RIGHT ANGLES TO RESILIENT FURRING CHANNELS 16" O.C. (12" O.C. WHEN INSULATION IS DRAPED OVER CHANNELS) WITH 1" TYPE S DRYWALL SCREWS 12" O.C. GYPSUM BOARD END JOINTS ATTACHED WITH SCREWS 8" O.C. TO ADDITIONAL PIECES OF CHANNEL 60" LONG LOCATED 3" BACK ON EITHER SIDE OF END JOINT. RESILIENT CHANNELS APPLIED AT RIGHT ANGLES TO BOTTOM CHORD OF PITCHED WOOD TRUSSES 24" O.C. WITH 1**1/4"** TYPE S OR W SCREWS. GLASS FIBER INSULATION SECURED TO WOOD STRUCTURAL PANELS OR DRAPED OVER CHANNELS. TRUSSES SUPPORTING **15/32"** WOOD STRUCTURAL PANELS APPLIED AT RIGHT ANGLES TO TRUSSES WITH CONSTRUCTION ADHESIVE AND 6D RING SHANK NAILS 12" O.C. OPTIONAL CEILING DAMPER (REFER TO MANUFACTURER FOR INFORMATION ON THE TYPE OF DAMPER).

PROPRIETARY GYPSUM BOARD
UNITED STATES GYPSUM COMPANY - **5/8"** SHEETROCK® BRAND FIRECODE® C CORE GYPSUM PANELS

13 ROOF ASSEMBLY (1-HOUR)

A-901 SCALE: 1" = 1'-0"



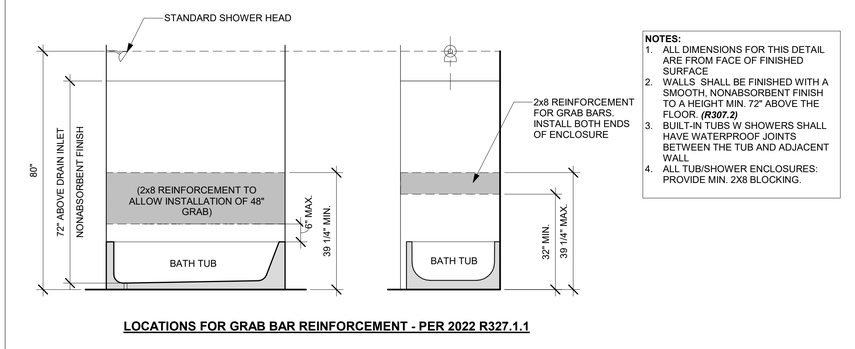
ELEVATION **FRONT / REAR**

NOTES:
1. ALL DIMENSIONS FOR THIS DETAIL ARE FROM FACE OF FINISHED SURFACE
2. WALLS SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT FINISH TO A HEIGHT MIN. 72" ABOVE THE DRAIN INLET. ***(R307.2)***
3. PRE-FAB SHOWERS SHALL HAVE WATERPROOF JOINTS BETWEEN THE ENCLOSURE AND ADJACENT WALLS.
4. ALL SHOWER ENCLOSURES: PROVIDE 2X8 BLOCKING.

LOCATIONS FOR GRAB BAR REINFORCEMENT - PER 2022 R327.1.1

44 AGING-IN-PLACE SHOWER COMPLIANCE

A-901 SCALE: 1/2" = 1'-0"



LOCATIONS FOR GRAB BAR REINFORCEMENT - PER 2022 R327.1.1

NOTES:
1. ALL DIMENSIONS FOR THIS DETAIL ARE FROM FACE OF FINISHED SURFACE
2. WALLS SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT FINISH TO A HEIGHT MIN. 72" ABOVE THE FLOOR. ***(R307.2)***
3. BUILT-IN TUBS W SHOWERS SHALL HAVE WATERPROOF JOINTS BETWEEN THE TUB AND ADJACENT WALL
4. ALL TUB/SHOWER ENCLOSURES: PROVIDE MIN. 2X8 BLOCKING.

24 AGING-IN-PLACE TUB COMPLIANCE

A-901 SCALE: 1/2" = 1'-0"

CITY OF AGOURA HILLS

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AGOURA HILLS | ADU

CITY OF AGOURA HILLS

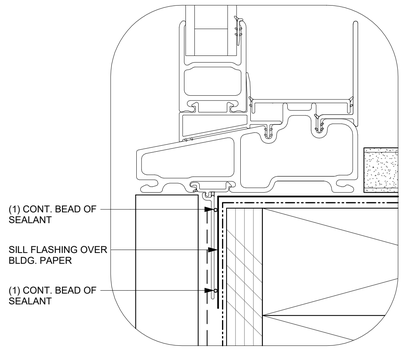
ARCHITECTURAL DETAILS - COMMON

APPROVED SET

DATE
09/28/23

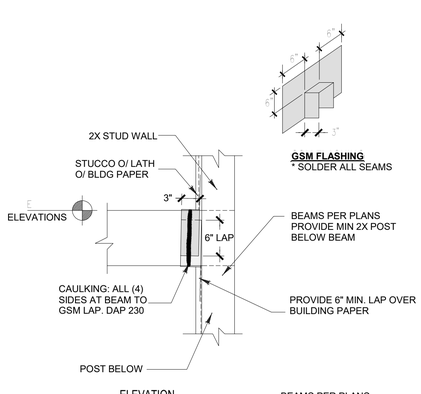
SHEET
A-901

10/17/2023 10:47:54 AM
C:\Users\jamartinez\Documents\2742-01-CU22_Agoura Hills ADUs_CENTRAL_RVT22_jamartinez%3FGU.rvt

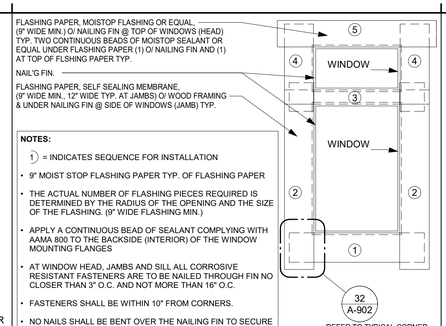


51 DETAILED SILL FLASHING

A-904 A-902 SCALE: 12" = 1'-0"



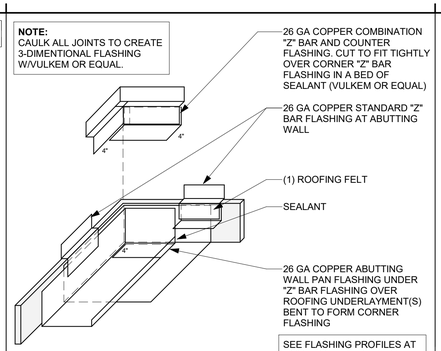
NOTE:
NO NAILS THROUGH GSM INTO BEAM
NO NAILS SHALL PENETRATE GSM WITHIN 2" OF BEAM



31 FLASHING - WINDOW TYP.

A-904 A-902 SCALE: 12" = 1'-0"

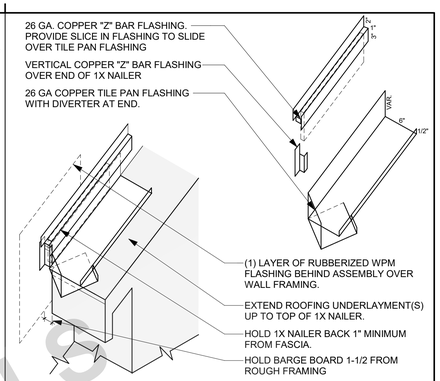
NOTE:
CAULK ALL JOINTS TO CREATE 3-DIMENTIONAL FLASHING W/VULKEM OR EQUAL.



SEE FLASHING PROFILES AT ROOF TO WALL DETAILS

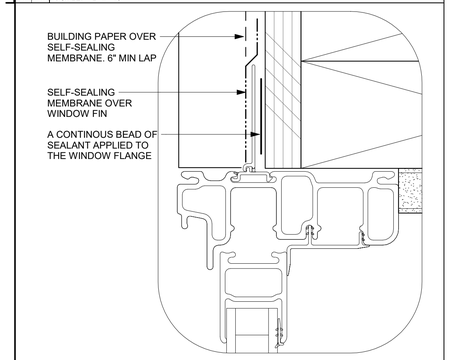
21 ROOF TO WALL TYP. FLASHING 5

A-902 SCALE: 3" = 1'-0"



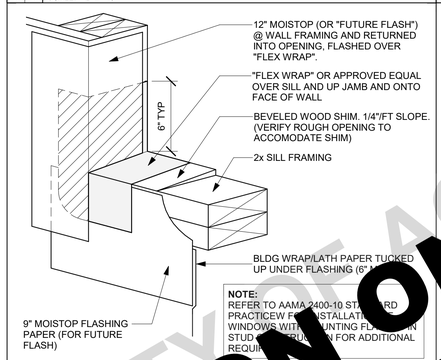
11 ROOF TO WALL TYP. FLASHING 1

A-902 SCALE: 6" = 1'-0"



52 DETAILED HEAD FLASHING

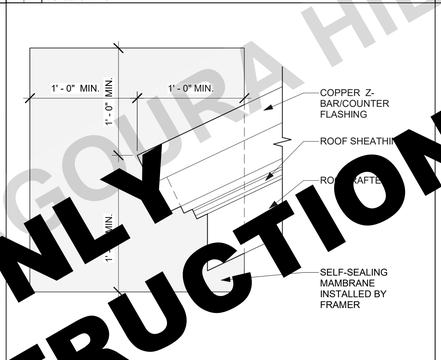
A-904 A-902 SCALE: 12" = 1'-0"



NOTE:
REFER TO AAMA 2400-10 STANDARD PRACTICEW F INSTALLAT WINDOWS WIT MOUNTING FL STUD CONSTRU FOR ADDITIONAL REQUI

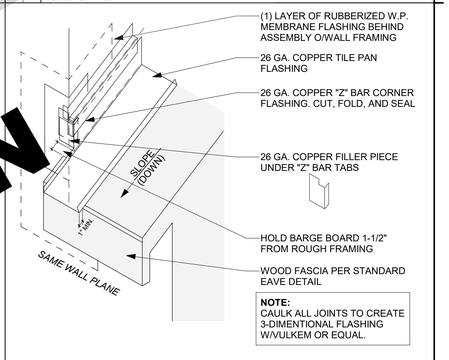
32 FLASHING - WINDOW CORNER TYP.

A-902 A-902 SCALE: 12" = 1'-0"



21 FLASHING - FASCIA TO WALL TYP.

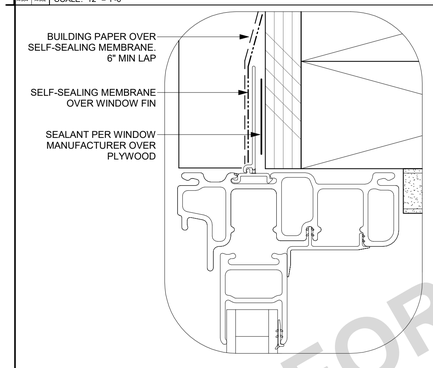
A-902 SCALE: 1 1/2" = 1'-0"



NOTE:
CAULK ALL JOINTS TO CREATE 3-DIMENTIONAL FLASHING W/VULKEM OR EQUAL.

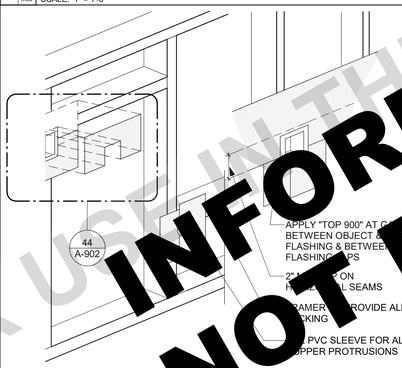
12 ROOF TO WALL TYP. FLASHING 2

A-902 SCALE: 3" = 1'-0"



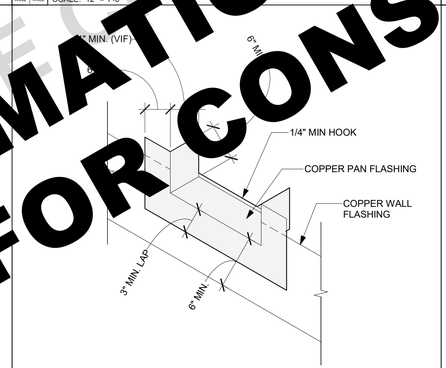
53 DETAILED JAMB FLASHING

A-904 A-902 SCALE: 12" = 1'-0"



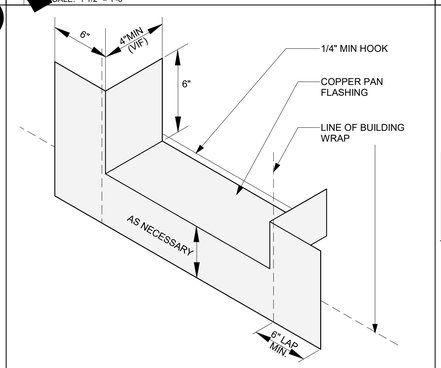
42 BEAM TO WALL FLASHING

A-902 SCALE: 1" = 1'-0"



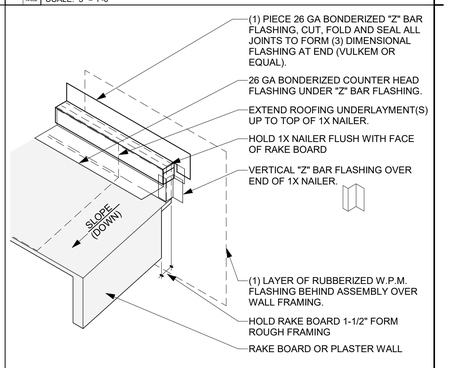
33 FLASHING - DOOR AT GRADE2

A-902 NTS



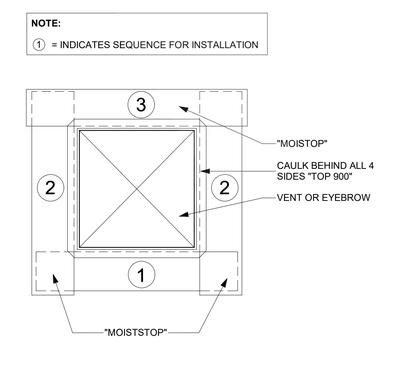
23 FLASHING PAN @ DOOR THRESHOLD

A-902 SCALE: 3" = 1'-0"



13 ROOF TO WALL TYP. FLASHING 3

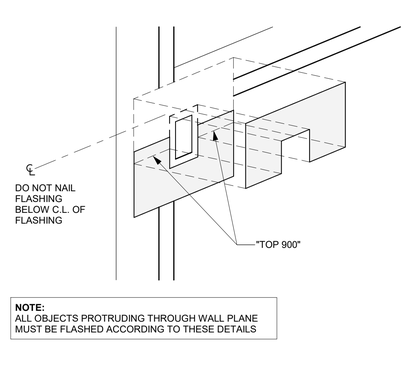
A-902 SCALE: 3" = 1'-0"



NOTE:
1 = INDICATES SEQUENCE FOR INSTALLATION

54 FLASHING - G.I. VENT

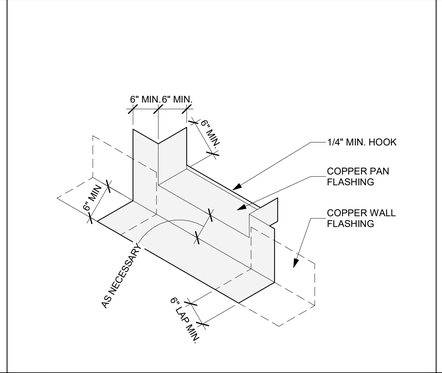
A-902 SCALE: 1" = 1'-0"



NOTE:
ALL OBJECTS PROTRUDING THROUGH WALL PLANE MUST BE FLASHED ACCORDING TO THESE DETAILS

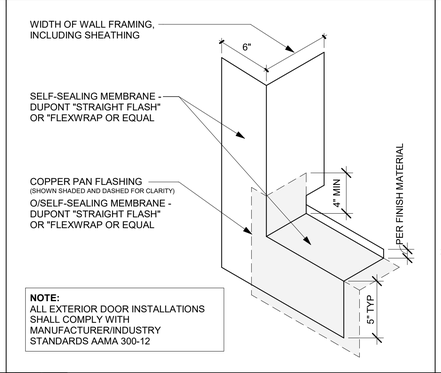
44 FLASHING - DETAILED PROTRUSION

A-902 SCALE: 1 1/2" = 1'-0"



34 FLASHING - DOOR AT W.P. DECK2

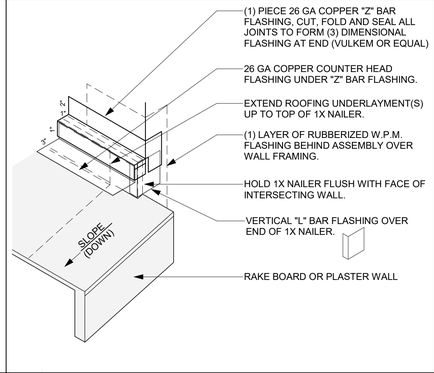
A-902 NTS



NOTE:
ALL EXTERIOR DOOR INSTALLATIONS SHALL COMPLY WITH MANUFACTURER/INDUSTRY STANDARDS AAMA 300-12

24 FLASHING - JAMB TO SILL TYP.

A-902 SCALE: 3" = 1'-0"



14 ROOF TO WALL TYP. FLASHING

A-902 SCALE: 3" = 1'-0"

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CITY OF AGOURA HILLS
ARCHITECTURAL DETAILS - COMMON

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09/28/23

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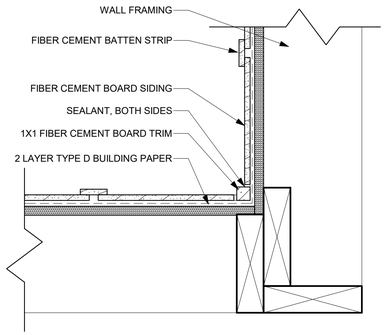
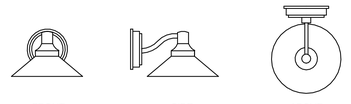


31 INSIDE CORNER TRIM

A-906 SCALE: 3" = 1'-0"

*ALL EXTERIOR LIGHTING MUST BE DARK SKY COMPLIANT

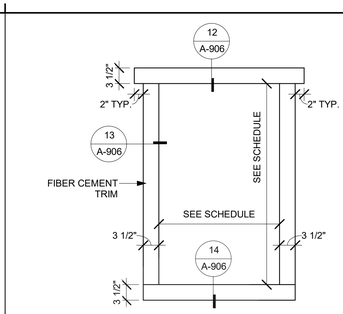


THE GREAT OUTDOORS - WALL MOUNT
KIRKHAM ASPEN BROZE
(8102-A138-L)

OR EQUAL DARK SKY COMPLIANT FIXTURE PER ZONING REGULATIONS SECTION 17.70.100.

21 TYP. LIGHTING FIXTURE

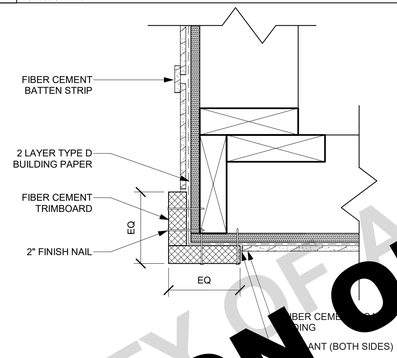
A1-202 A-906 SCALE: 1 1/2" = 1'-0"



NOTE: REFER TO HEAD/JAMB/SILL DETAILS FOR FLASHING AND MATERIAL TRANSITIONS

11 WINDOW TRIM

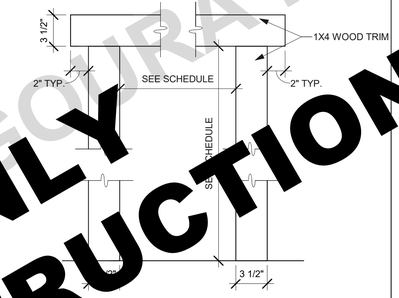
A1-202 A-906 SCALE: 3/4" = 1'-0"



32 OUTSIDE CORNER TRIM

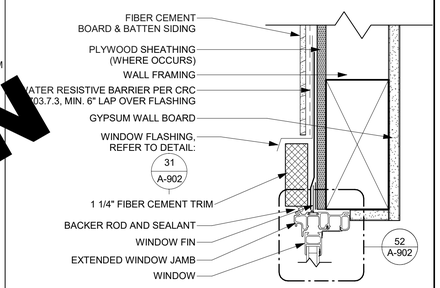
A-906 SCALE: 3" = 1'-0"

NOTE: REFER TO HEAD/JAMB DETAILS FOR FLASHING AND MATERIAL TRANSITIONS



22 DOOR TRIM - RANCH

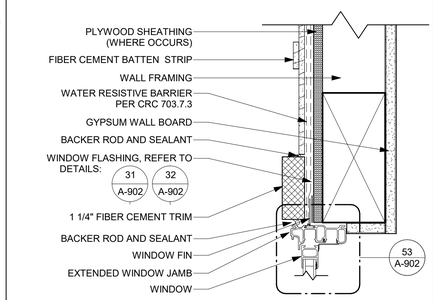
A1-202 A-906 SCALE: 1 1/2" = 1'-0"



NOTE: ALL WINDOW FLASHING SHALL COMPLY WITH MANUFACTURER/INDUSTRY STANDARDS

12 TYP. WINDOW HEAD - RANCH

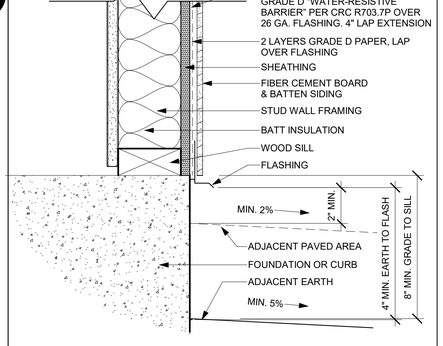
A1-202 A-906 SCALE: 3" = 1'-0"



NOTE: ALL WINDOW FLASHING SHALL COMPLY WITH MANUFACTURER/INDUSTRY STANDARDS

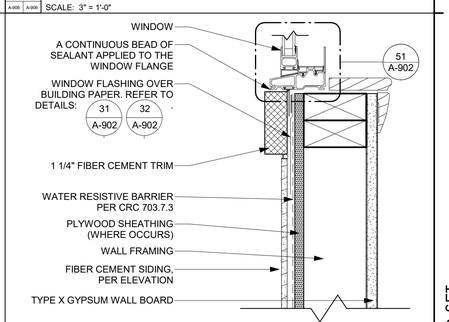
33 EXTERIOR WALL BOARD & BATTEN 1 HR

A-906 SCALE: 1 1/2" = 1'-0"



23 TYP. FOUNDATION - RANCH

A1-202 A-906 SCALE: 3" = 1'-0"



NOTE: ALL WINDOW FLASHING SHALL COMPLY WITH MANUFACTURER/INDUSTRY STANDARDS AAMA 2400-02

13 TYP. WINDOW JAMB - RANCH

A-906 A-906 SCALE: 3" = 1'-0"

14 TYP. WINDOW SILL - RANCH

A1-202 A-906 SCALE: 3" = 1'-0"

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AGOURA HILLS | ADU

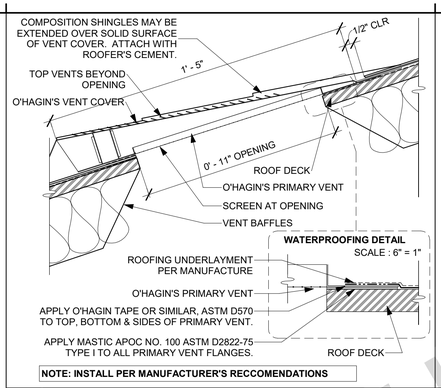
CITY OF AGOURA HILLS

ARCHITECTURAL DETAILS - RANCH

APPROVED SET

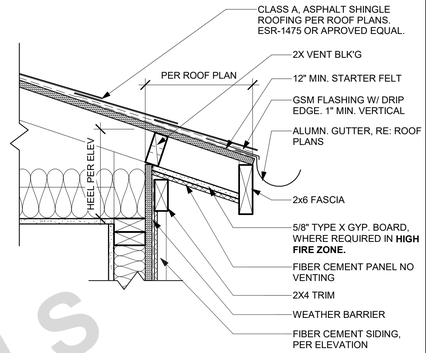
DATE
09/28/23

SHEET
A-906



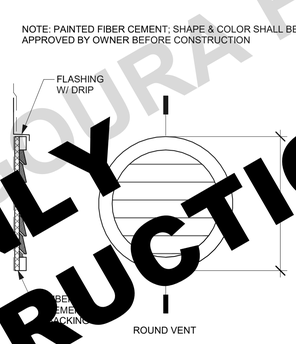
21 O'HAGIN ROOF VENT

A1-122 | A907 SCALE: 3" = 1'-0"



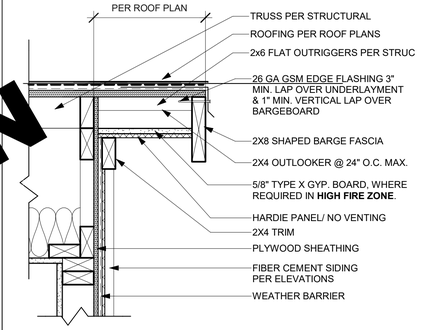
11 EAVE @ FIBER CEMENT

A5.122 | A907 SCALE: 1 1/2" = 1'-0"



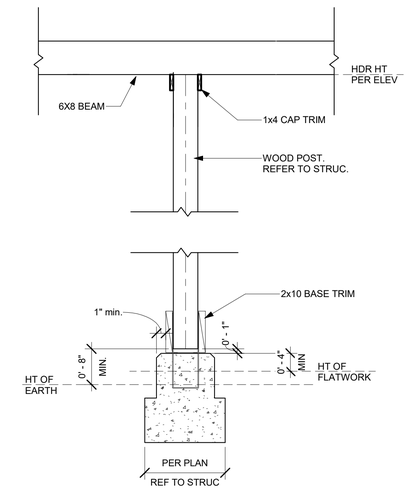
DECORATIVE FAUX VENT

A1-201 | A907 SCALE: 1 1/2" = 1'-0"



12 RAKE W/ FIBER CEMENT

A5-122 | A907 SCALE: 1 1/2" = 1'-0"



POSTS AND COLUMNS THAT ARE EITHER EXPOSED TO THE WEATHER OR LOCATED IN BASEMENTS OR CELLARS, SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS, SHALL BE PROJECTED AT LEAST 1 INCH ABOVE THE SLAB OR DECK AND 8 INCHES ABOVE EXPOSED EARTH AND SHALL BE SEPARATED BY AN IMPERVIOUS MOISTURE BARRIER (ALTERNATE, PROVIDE A PRESERVATIVE-TREATED WOOD POST OR COLUMN). 2304.12.2.2 & EXCEPTION 1 CBC

14 TYPICAL POST

A1-112 | A907 SCALE: 3/4" = 1'-0"

CITY OF AGOURA HILLS

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APPROVED SET

AGOURA HILLS | ADU

CITY OF AGOURA HILLS

ARCHITECTURAL DETAILS - RANCH

DATE 09/28/23

SHEET A-907

10/17/2023 10:47:57 AM
C:\Users\amartinez\Documents\2742-01-CU22_Agoura Hills ADUs_CENTRAL_RV722_amartinezN3FGU.rvt

SYMBOLS

DETAIL REFERENCE BUBBLE WITH LEADER

DETAIL REFERENCE BUBBLE

FULL HEIGHT SECTION INDICATOR

ELEVATION OF WALL OR FRAME

NORTH ARROW

BOT OF
EL = (-X'-X")
TOP/BOTTOM OF ELEVATIONS

SLOPE

WELDED WIRE FABRIC
(WWF LAYER)

STEPPED SURFACE; FLOOR DEPRESSION

SLOPED SURFACE

S — S
STEPPED FOOTING

SB — SB
BOTTOM STEPPED FOOTING

XX'-X"
X
INDICATES SHEAR WALL TYPE AND LENGTH, PER SHEAR WALL SCHEDULE

INDICATES SPAN AND DIRECTION OF PREFABRICATED ROOF TRUSS (BY OTHERS)

XX
INDICATES SPAN AND DIRECTION OF ROOF RAFTER OR FLOOR JOIST WITH WEB STIFFENER

XX
INDICATES SPAN AND DIRECTION OF ROOF RAFTER OR FLOOR JOIST

INDICATES EXTENTS OF FRAMING OR OTHER STRUCTURAL ELEMENT

INDICATES HEADER @ OPENING PER HEADER SCHEDULE

EARTH LAYER

INDICATES SAND OR GROUT

INDICATES GRAVEL

STEEL IN CROSS SECTION

INDICATES BEARING WALL

SHADED AREA INDICATES CALIFORNIA FRAMING

SHADED AREA INDICATES FOOTPRINT OF FLOOR ABOVE

STEEL HSS TUBE COLUMN

STEEL HSS OR PIPE COLUMN

WIDE FLANGE STEEL COLUMN

WOOD POST

(X)
INDICATES TOP PLATE SPLICE NAILING PER SCHEDULE

Ix
INDICATES SHEAR WALL STRAP / HOLDOWN TYPE PER SCHEDULE

F1
INDICATES PAD FOOTING TYPE PER SCHEDULE

C1
INDICATES CONTINUOUS FOOTING TYPE PER SCHEDULE

ANGLE BRACE

(2L)
DOUBLE ANGLE BRACE

DRAG STRUT CONNECTION

FULL HEIGHT STIFFENER CONNECTION

MOMENT CONNECTION

MEMBER SPLICE

(+3")
TOP OF STEEL ± ELEVATION

[X]
NUMBER OF EVENLY SPACED
SHEAR STUDS

[X–Y–Z]
SPECIAL STUD SPACING SEE TYPICAL
STEEL DETAILS

<3/4>
BEAM CAMBER AT MID-SPAN

WALL TYPES

INDICATES PLYWOOD SIDE FOR SHEARWALL

INDICATES BEARING WOOD WALL BELOW

INDICATES BEARING WOOD WALL ABOVE

INDICATES NON-BEARING WOOD WALL BELOW

INDICATES NON-BEARING WOOD WALL ABOVE

INDICATES EXISTING BEARING WOOD WALL

INDICATES EXISTING NON-BEARING WOOD WALL

INDICATES BEARING CMU WALL BELOW

INDICATES BEARING CMU WALL ABOVE

INDICATES NON-BEARING CMU WALL BELOW

INDICATES NON-BEARING CMU WALL ABOVE

INDICATES EXISTING BEARING CMU WALL

INDICATES EXISTING NON-BEARING CMU WALL

INDICATES BEARING CONCRETE WALL BELOW

INDICATES BEARING CONCRETE WALL ABOVE

INDICATES NON-BEARING CONCRETE WALL BELOW

INDICATES NON-BEARING CONCRETE WALL ABOVE

INDICATES EXISTING BEARING CONCRETE WALL

INDICATES EXISTING NON-BEARING CONCRETE WALL

SHEET INDEX

CITY OF AGOURA HILLS

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ABBREVIATIONS

A & B	ABOVE AND BELOW
AB	ANCHOR BOLT
ABV	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJACENT
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ANCH	ANCHOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	ENGINEERED WOOD ASSOCIATION (FORMERLY THE AMERICAN PLYWOOD ASSOCIATION)
APPVD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL; ARCHITECT
AWPA	AMERICAN WOOD PRESERVERS ASSOCIATION
AWS	AMERICAN WELDING SOCIETY
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAIL
BOT OR B	BOTTOM
BRC	BRACE
BRG	BEARING
BTWN	BETWEEN
CANT	CANTILEVER
CAM OR C	CAMBER
CC	CENTER TO CENTER
CG	CENTER OF GRAVITY
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT; CONTROL JOINT
CL	CENTER LINE
CLR	CLEARANCE; CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMP	COMPRESSION
CONC	CONCRETE
CONN	CONNECTION; CONNECT
CONSTR	CONSTRUCTION
CONT	CONTINUE; CONTINUOUS
CONTR	CONTRACTOR
CJP	COMPLETE JOINT PENETRATION WELD
CTR	CENTER
CTSK	COUNTERSINK; COUNTERSUNK
CU FT	CUBIC FOOT
d	PENNY (NAIL SIZE)
DBL	DOUBLE
DEPT	DEPARTMENT
DET	DETAIL
DF OR D.F.	DOUGLAS FIR
Ø	DIAMETER
DIAG	DIAGONAL
DIAPHRAGM	DIAPHRAGM
DIM	DIMENSION
DN	DOWN
DO	DO OVER
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMBED	EMBEDMENT
EN	EDGE NAIL
ENGR	ENGINEER
EQ	EQUAL OR EQUIVALENT
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXIST or (E)	EXISTING
EXT	EXTERIOR
FDN	FOUNDATION
FIN	FINISH
FJ	FLOOR JOIST
FLG	FLANGE
FLR	FLOOR
FN	FIELD NAIL
FOC	FACE OF CONCRETE
FOM	FACE OF MASONARY
FOS	FACE OF STUD
FOW	FACE OF WALL
FRMG	FRAMING
FT	FOOT; FEET
FTA	FLOOR TIE ABOVE
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GLB	GLUED LAMINATED BEAM
GR	GRADE
GRND	GROUND
H or HORIZ	HORIZONTAL
HGR	HANGER
HP	HIGH POINT
HSSH	HORIZONTALLY SLOTTED HOLES
HT	HEIGHT
ID	INSIDE DIAMETER
IF	INSIDE FACE
I-JST	I-JOIST
IN	INCH
INCL	INCLUDE
INFO	INFORMATION
INSP	INSPECTION
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIPS
KS	KING STUD
KP	KING POST
KSI	KIPS PER SQUARE INCH
LB(S) OR #	POUND(S)
LF	LINEAL FOOT
LIN	LINEAL; LINEAR
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LSH	LONG SLOTTED HOLES
LSL	LAMINATED STRAND LUMBER
LT WT	LIGHTWEIGHT
LVL	LEVEL OR LAMINATED VENEER LUMBER
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM; MINUTE
MISC	MISCELLANEOUS
(N)	NEW
N	NORTH
NO or #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
OSB	ORIENTED STRAND BOARD
PA	POST ABOVE
PARA OR //	PARALLEL
PC	PRECAST; PIECE
PERP	PERPENDICULAR
PI	PLYWOOD INDEX
℄ OR PL.	PLATE
PL	PROPERTY LINE
PLF	PONDS PER LINEAL FOOT
PLCS	PLACES
PLY	PLYWOOD
PROP	PROPERTY
PT	PRESSURE TREATED
PW	PLATE WASHER
PJP	PARTIAL JOINT PENETRATION WELD
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PVMT	PAVEMENT
#	POUND; NUMBER
REF	REFERENCE
REINF	REINFORCE; REINFORCING
REQD	REQUIRED
RF	ROOF
RR	ROOF RAFTER
Ø	ROUND; DIAMETER
SCHED	SCHEDULE
SECT	SECTION
SEP	SEPARATION
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SOG	SLAB ON GRADE
SN	SHEAR NAIL
SPCG	SPACING
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
SSL	SHORT SLOTTED HOLES
STD	STANDARD
STGR	STAGGER
STIFF	STIFFENERS
STIRR	STIRRUP
STL	STEEL
STRUCT	STRUCTURAL
SW	SHEAR WALL
SYM	SYMMETRICAL
TB	TIE BEAM
T & B	TOP AND BOTTOM
T & G	TONGUE & GROOVE
TO	TOP OF
TOC	TOP OF CURB; TOP OF CONCRETE
TOF	TOP OF FOOTING
TEMP	TEMPERATURE; TEMPORARY
THRU	THROUGH
THK	THICKNESS/THICK
THR	THREADED
TOP or T	TOP
TOS	TOP OF STEEL/TOP OF SLAB
TOW	TOP OF WALL
TS	TRIMMER STUD
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UT	ULTRA-SONIC TEST
VERT	VERTICAL
VSH	VERTICAL SLOTTED HOLES
W/	WITH
W/O	WITHOUT
WO	WHERE OCCURS
WD	WOOD
WP	WORK POINT; WATERPROOF
WWF	WELDED WIRE FABRIC

STRUCTURAL STEEL SHAPES

W	W SHAPE
C	AMERICAN STD CHANNEL SHAPE
MC	MISC CHANNEL SHAPE
L	ANGLE SHAPE
WT, ST, MT	STRUCT TEE SHAPE
PIPE	STANDARD PIPE SHAPE
PIPE-X	EXTRA STRONG PIPE SHAPE
PIPE-XX	DBL EXTRA STRONG PIPE SHAPE
HSS	HOLLOW STRUCTURAL SECTION

APPROVED SET

AGOURA HILLS | ADU

CITY OF AGOURA HILLS

SHEET INDEX, ABBREVIATIONS, & SYMBOLS

DATE
09/28/23

SHEET
S1-101

SAWN LUMBER

1. FRAMING LUMBER SHALL MEET THE FOLLOWING MINIMUM STANDARDS EXCEPT WHERE OTHERWISE NOTED:

SAWN LUMBER PROPERTIES

USE	SIZE	SPECIES	GRADE	REFERENCE
MUDSILLS	2 X 4	D.F.	STANDARD OR BETTER PRESSURE TREATED	2022 CBC 2303.1.9
	2 X 6 AND LARGER	D.F.	NO. 2 OR BETTER PRESSURE TREATED	
	2 X	REDWOOD	FOUNDATION GRADE	
HORIZONTAL FRAMING LUMBER				
ROOF JOISTS AND RAFTERS	2 x	D.F.	NO. 2	WCLIB & WWPA
FLOOR JOISTS	2 X	D.F.	NO. 2	
HEADERS AND BEAMS	4 X	D.F.	NO. 2	
ANY OTHER HORIZONTAL	4 X 4 AND SMALLER	D.F.	NO. 2	
	6 X 6 AND LARGER	D.F.	NO. 1	
VERTICAL FRAMING LUMBER				
TOP PLATES	2 X	D.F.	NO. 2	WCLIB & WWPA
STUDS	2 X 4 & 3 X 4	D.F.	STUD	
	2 X 6 & 2 X 8	D.F.	NO. 2	
POSTS	4 X 4 & 4 X 6 POSTS	D.F.	NO. 2	
	6 X 6 & LARGER POSTS	D.F.	NO. 1	
ALL OTHER FRAMING LUMBER				
ALL OTHER FRAMING LUMBER, UNO	ALL SIZES	D.F.	STANDARD & BETTER	WCLIB & WWPA

2. FLOOR JOISTS SHALL BE GRADE STAMPED "S-DRY" WHICH INDICATES A MOISTURE CONTENT NOT EXCEEDING 19 PERCENT.
3. ALL SOLE PLATES AND TOP PLATES SHALL BE GRADE STAMPED "KD" WHICH INDICATES KILN DRIED WITH A MOISTURE CONTENT NOT EXCEEDING 15 PERCENT.
4. STUD WALLS SHOWN ON PLANS ARE NONBEARING PARTITIONS WALLS, BEARING WALLS OR SHEAR WALLS BELOW THE FRAMING LEVEL, UNLESS NOTED OTHERWISE. STUDS SHALL BE SIZE AND SPACING AS NOTED IN THE DRAWINGS, SEE PLANS AND ARCHITECTURAL DRAWINGS. UNLESS OTHERWISE NOTED.
5. MINIMUM FRAMING NAILING SHALL CONFORM TO CBC TABLE 2304.10.2. ALL NAILS SHALL BE COMMON WIRE NAILS. PREDRILL NAIL HOLES TO 70% OF NAIL SHANK DIAMETER WHERE NAILING TENDS TO SPLIT WOOD.
6. UNLESS OTHERWISE NOTED, ALL WOOD SILL PLATES UNDER BEARING, EXTERIOR, OR SHEAR WALLS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE BOLTED TO THE CONCRETE OR MASONRY WITH 5/8" Ø X 12" BOLTS W/ 0.229" X 3" X 3" PLATE WASHER (GALV) AT 4'-0" O.C. BEGINNING AT 9" O.C. MAXIMUM FROM EACH END OF THE PLATES. THE BOLTS SHALL EXTEND A MINIMUM OF 7" INTO THE CONCRETE OR MASONRY. (POWDER DRIVEN PINS AT 1/3 OF THE BOLT SPACING OR 24" O.C. MAXIMUM MAY BE SUBSTITUTED FOR THE ANCHOR BOLTS AT INTERIOR NON-SHEAR WALLS ONLY).
7. ALL LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED LUMBER WITH AWPA TREATMENT C2 USING EITHER ALKALINE QUAT (ACQ TYPE B AND D), COPPER AZOLE (CBA-A, CA-B), OR SODIUM BORATES (SBX). ANCHOR BOLTS, FASTENERS, AND METAL FRAMING CONNECTORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED TO A RATING OF G-185 PER ASTM A653.
8. PROVIDE 2 STUDS UNDER ALL 4 X 10 AND LARGER BEAMS OR HEADERS AT SPANS 6 FEET OR LONGER, UNLESS OTHERWISE NOTED. WHERE POSTS OR MULTIPLE STUDS UNDER BEAMS OR HEADERS ARE CALLED FOR ON DRAWINGS THOSE POSTS OR MULTIPLE STUDS SHALL BE CARRIED TO THE FOUNDATION/PODIUM LEVEL.
9. PROVIDE THE FOLLOWING BLOCKING AS A MINIMUM, UNLESS SHOWN OTHERWISE:
   2" X FULL DEPTH SOLID BLOCKING BETWEEN JOISTS OVER SUPPORT.
   2" X FULL DEPTH SOLID BLOCKING BETWEEN JOISTS OVER AND BELOW PARTITION WALLS.
10. DOUBLE JOISTS UNDER PARTITIONS RUNNING PARALLEL TO JOISTS, UNLESS SUPPORTED BY A WALL BELOW OR SHOWN OTHERWISE. NAIL DOUBLED JOISTS WITH 16D AT 12" O.C., STAGGERED.
11. BRIDGING SHALL BE 2 X SOLID BLOCKS, INSTALLED AS FOLLOWS:
    ROOF JOISTS MORE THAN 10" DEPTH, 8'-0" O.C. MAXIMUM, NOT MORE THAN 8'-0" FROM SUPPORT.
    FLOOR JOISTS MORE THAN 10" DEPTH, 8'-0" O.C. MAXIMUM, NOT MORE THAN 8'-0" FROM SUPPORT.
12. JOIST HANGERS AND OTHER METAL FRAMING ACCESSORIES ARE REFERRED TO ON PLANS BY PARTICULAR TYPE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, STOCKTON, CALIFORNIA. ACCESSORIES OF OTHER MANUFACTURE WITH EQUIVALENT LOAD CARRYING CHARACTERISTICS MAY BE USED.
13. FIRE STOPPING, BACKING FOR INTERIOR FINISHES, NONBEARING WALLS, AND OTHER NON-STRUCTURAL FRAMING ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS.

HARDWARE AND CONNECTORS

GENERAL:
USE ALL SPECIFIED FASTENERS AS SPECIFIED ON PLANS. IF NOT INDICATED ON PLANS PROVIDE FASTENERS PER MFR'S APPROVED ICC-ESR REPORT OR PRODUCT LITERATURE

HOLDOWNS:
1. DO NOT OVER TIGHTEN NUTS ON TIE-DOWN ANCHOR RODS OR BOLTS. TIGHTEN ANCHOR ROD NUTS ONE-THIRD TO ONE HALF TURN BEYOND FINGER TIGHT
2. INSTALL ALL HOLDOWNS TIGHT TO END STUD/POST. DO NOT USE FILLER BLOCKS. FOR MISALIGNED ANCHOR BOLTS, EXTEND THE ANCHOR ROD AT A 1/6 (HORIZ/VERT) USING A COUPLER WITH EQUIVALENT ANCHOR ROD AND INSTALL THE HOLDOWN HIGHER ON END STUD / POST
3. FOR HOLDOWNS THAT BOLT TO END POSTS, INSTALL THE HEAD OF THE BOLT TO THE BRACKET SIDE, AND ON THE SIDE OPPOSITE THE BRACKET, INSTALL A WASHER BETWEEN THE NUT AND THE STUD / POSTS

TIE DOWN & COLLECTOR STRAPS:
1. TIE DOWN AND COLLECTOR STRAPS SHALL BE INSTALLED STRAIGHT AND TRUE. DO NOT FOLD, BEND, KINK OR OTHERWISE ALTER CONNECTOR STRAPS
2. INSTALL TIE DOWN STRAPS DIRECT TO POST IN LIEU OF OVER SHEATHING. STRAPS MAY BE INSTALLED ON THE UNSHEATHED SIDE OF THE END STUDS / POSTS

CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318-19.
2. CONCRETE MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

MATERIAL	ASTM STANDARD
PORTLAND CEMENT (TYPE II)[A]	C150
CONCRETE AGGREGATES (HARDROCK)	C33
WATER[B]	C1602
COAL FLY ASH OR POZOLLAN (CLASS F)	C618
NATURAL OR MANUFACTURED SAND	C33
SLAG	C989

   A. FOR SOILS WITH HIGH CONCENTRATIONS OF SULFATES (EXPOSURES S2 OR S3 PER ACI 318-19 TABLE 19.3.2.1) PORTLAND CEMENT SHALL BE TYPE V. VERIFY WITH PROJECT GEOTECHNICAL REPORT.
   B. WATER SHOULD ONLY BE ADDED AT THE BATCH PLANT. IN NO CASE SHALL THE DESIGN WATER/ CEMENT RATIO BE EXCEEDED.
3. CONCRETE MIXES SHALL BE PROPORTIONED BASED ON SECTION 26.4.3 OF ACI 318-19. WHICH REFERENCES ACI 301-10 ARTICLE 4.2.3. MIX DESIGNS SHALL INCLUDE DOCUMENTATION OF MIX AVERAGE COMPRESSIVE STRENGTH THROUGH FIELD TEST DATA OR TRIAL MIXTURES IN ACCORDANCE WITH ACI 301-10 ARTICLE 4.2.3.4. SCHEDULE OF STRUCTURAL CONCRETE STRENGTHS AND LOCATIONS (UNO):

LOCATION IN STRUCTURE	MINIMUM STRENGTH (PSI)	DENSITY (PCF)	MAX SLUMP (INst1)	MAX WATER/CEMENT RATIO	SLAG/ FLY ASH[A] (MAX)
CONCRETE FOUNDATIONS, GRADE BEAMS, TIE BEAMS	2,500	150	4	0.5	0.15
CONCRETE SLAB ON GRADE	2,500	150	4	0.45	0.15

   A. AS MEASURED BY CEMENTITIOUS WEIGHT

4. DEPOSITING AND CONVEYING OF CONCRETE SHALL CONFORM TO SECTION 26.5 OF ACI 318-19 AND PROJECT SPECIFICATIONS.
5. ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED SHALL BE CLEANED AND ROUGHENED TO 1/4" AMPLITUDE.
6. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
7. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED WITHOUT SEOR APPROVAL. NOTIFY THE SEOR IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS. SEE THE DRAWINGS FOR ADDITIONAL RESTRICTIONS ON THE PLACEMENT OF OPENINGS IN SLABS AND WALLS.
8. PIPES EMBEDDED IN CONCRETE:
   A. CONCRETE
      a. PIPES LARGER THAN 1-1/2" DIAMETER SHALL NOTE BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY SEOR.
      b. NO CONDUITS SHALL BE PLACED IN CONCRETE FILL OVER METAL DECK.
      c. PIPES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS.
      d. DO NOT STACK CONDUITS. SPACE EMBEDDED PIPES AND CONDUITS AT A MINIMUM OF 3 DIAMETERS CLEAR FROM OTHER EMBEDDED PIPES/CONDUITS AND REBAR.

REINFORCING STEEL

1. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318-19, ASTM A706, GRADE 60 UNO, ASTM A615 GR 60 STEEL MAY BE SUBSTITUTED FOR ASTM A706 GR60 STEEL PER ACI 318-19 SECTION 20.2.2.5 PROVIDED THE FOLLOWING CONDITIONS ARE MET:
   A. THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI.
   B. THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRESS TO THE ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
   C. WHERE REINFORCEMENT COMPLYING WITH ASTM A615 IS TO BE WELDED, CHEMICAL TESTS SHALL BE PERFORMED TO DETERMINE WELDABILITY IN ACCORDANCE WITH SECTION 26.6.4 OF ACI 318-19.
2. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
3. REINFORCING BAR LAP SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. L[illegible] BARS AT CORNERS AND INTERSECTIONS. STAGGER ALL SPLICES UNLESS NO[illegible]
   A. MINIMUM LAP SPLICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE AS PER ACI 318-19 SECTION 25.5.2 AND THE REINFORCING SCHEDULE ON SHEET S0.G.
4. REINFORCING STEEL SHALL BE ACCURATELY PLACED AND [illegible] BEFORE THE CONCRETE IS PLACED AND SHALL BE SECURED AGAI[illegible] DURING CONSTRUCTION WITHIN PERMITTED TOLERANCES. ADEQUATE SUPPORTS ARE TO BE PROVIDED TO KEEP THE REINFORCING STEEL AT THE PROPER DISTANCE FROM THE FORMS. USE ONLY APPROVED PRECAST CONCRETE SUPPORTS, SPACERS, BOLSTERS, REINFORCEMENT CHAIRS OR EQUIVALENT IN THE CRSI MANUAL OF STANDARD PRACTICE", LATEST EDITION.
5. CONCRETE PROTECTION FOR REINFORCEMENT

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE (NON-PRESTRESSED):		MINIMUM COVER, IN.
A.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
B.	CONCRETE EXPOSED TO EARTH OR WEATHER: NO.6 THROUGH NO. 18 BARS NO.5 BAR, W31 OR D31 WIRE, AND SMALLER	2 1½"
C.	CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS: NO.14 AND NO.18 BARS NO.11 BAR & SMALLER BEAMS, COLUMNS: PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS	1½" ¾" 1½"

WOOD (GENERAL)

1. PRESERVATIVE TREATMENT:

A. WOOD MEMBERS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH AITC 109-07, STANDARD FOR PRESERVATIVE TREATMENT, BASED ON THE SERVICE CONDITION PER THE USE CATEGORIES (UC#) SPECIFIED IN AWPA U1-06.
   a. UC1 - INTERIOR CONSTRUCTION, ABOVE GROUND, DRY - NO PRESERVATIVE TREATMENT REQUIRED
   b. UC2 - INTERIOR CONSTRUCTION, ABOVE GROUND, WET - PRESERVATIVE TREATMENT REQUIRED IF THE HUMIDITY OR MOISTURE CONDENSATION IS 20% OR GREATER.
   c. UC3 - EXTERIOR CONSTRUCTION ABOVE GROUND - PRESERVATIVE TREATMENT REQUIRED.

B. FOR ALL TREATED WOOD MEMBERS, ALL CUTS, HOLES AND INJURIES SUCH AS ABRASIONS OR HOLES FROM REMOVAL OF NAILS AND SPIKES WHICH MAY PENETRATE THE TREATED ZONE SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M4-06. THE FOLLOWING FIELD TREATMENTS SHALL BE USED:
   a. BORED HOLES: HOLES FOR CONNECTORS OR BOLTS MAY BE TREATED BY PUMPING COAL TAR ROOFING CEMENT MEETING ASTM D5643 INTO HOLES USING A GREASE GUN OR SIMILAR DEVICE
   b. EXTERIOR: COPPER NAPHTHENATE
   c. INTERIOR: INORGANIC BORON PRESERVATIVES LIMITED TO USE IN APPLICATIONS NOT IN CONTACT WITH GROUND AND CONTINUOUSLY PROTECTED FROM LIQUID WATER

FOUNDATION

1. GEOTECHNICAL INFORMATION AND FOUNDATION DESIGN IS BASED ON THE FOLLOWING:
   A. DESIGN LATERAL SOIL LOADS ARE IN ACCORDANCE WITH 2022 CBC TABLE 1610.1
   B. ALLOWABLE FOUNDATION BEARING AND LATERAL PRESSURES ARE IN ACCORDANCE WITH 2022 CBC TABLE 1806.2
2. SPREAD OR CONTINUOUS FOOTINGS:

ELEMENT	ALLOWABLE BEARING CAPACITY (PSF)[A]	ALLOWABLE LATERAL RESISTANCE[B]	
		PASSIVE RESISTANCE (PSF/FT BELOW GRADE)[E]	COHESION (PSF)
SHALLOW FOUNDATION	1,500	100	130

   NOTES:
   A. THE ALLOWABLE CAPACITY MAY BE INCREASED BY ONE-THIRD WHEN CONSIDERING LOADS OF SHORT DURATION SUCH AS WIND OR SEISMIC FORCES.
   B. THE ALLOWABLE LATERAL RESISTANCE CAN BE TAKEN AS THE SUM OF THE FRICTIONAL RESISTANCE AND PASSIVE RESISTANCE .
   C. THE UPPER 0 FOOT OF SOIL NOT PROTECTED BY PAVEMENT SHALL BE NEGLECTED WHEN CALCULATING PASSIVE RESISTANCE.
   D. COMPACTED FILL SHOULD BE PREPARED AS FOLLOWS: A MIN OF 12" OF COMPACTED FILL SHALL BE PROVIDED, COMPACTED TO A MIN OF 90 PERCENT MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D 1557 (2022 CBC 1804.6)
4. WHERE NOT SHOWN ON THE DRAWINGS, CONTRACTOR TO PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
5. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER AND/OR SEEPAGE.
6. EXCAVATION FOR FOOTINGS SHALL BE APPROVED BY THE INSPECTOR OR GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE AND REINFORCING.
7. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR GROUT HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.
8. EXCAVATIONS SHALL BE CUT SQUARE AND SMOOTH, WITH LEVEL BOTTOMS.
9. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT AND APPROVED BY THE GEOTECHNICAL ENGINEER. FLOODING WILL NOT BE PERMITTED. ALL FILLS USED TO SUPPORT FOUNDATIONS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER REPRESENTATIVE PER SECTION 1705.6 OF THE CODE.
10. ALL ABANDONED FOOTINGS, UTILITIES, ETC., SHALL BE REMOVED. NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS.

EXISTING CONDITIONS

1. ALL INFORMATION SHOWN ON THE PLANS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE FROM PLANS SUPPLIED BY THE OWNER, BUT WITHOUT GUARANTEE OF ACCURACY.
2. WHERE ACTUAL CONDITIONS ARE NOT IN AGREEMENT WITH THOSE SHOWN ON THE PLANS, THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY. MINOR MODIFICATIONS OF THE PLANS FOR NEW CONSTRUCTION SHALL BE MADE WITHOUT ADDITIONAL COST WHEN APPROVED BY THE ARCHITECT.

EXISTING [illegible] GROUND UTILITIES

1. [illegible] ARCHITECT AND ENGINEER ARE NOT RESPONSIBLE FOR THE LOCATION[illegible] UTILITIES OR NOT SHOWN ON THE DRAWINGS. DRILLING OR EXCAVATING [illegible] CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING [illegible] ON THE SITE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHOULD ANY SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES THAT MAY RESULT FROM HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES.
3. AN UNDERGROUND SERVICE ALERT INQUIRY IDENTIFICATION NUMBER MUST BE OBTAINED AT LEAST TWO WORKING DAYS BEFORE STARTING WORK WITH THIS PERMIT.
   A. FOR PROJECTS IN SOUTHERN CALIFORNIA TELEPHONE NO. 1-800-422-4133.
   B. FOR PROJECTS IN NORTHERN CALIFORNIA TELEPHONE NO. 1-800-227-2600.

DEMOLITION

1. ALL DEMOLITION SHALL BE CARRIED ON IN SUCH A WAY AS NOT TO DAMAGE EXISTING ELEMENTS, WHICH ARE TO REMAIN IN THE FINISHED STRUCTURE.
2. ALL ELEMENTS OF THE STRUCTURE, WHICH ARE TO REMAIN, AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDITIONAL COST. EXISTING ELEMENTS SHALL BE PROTECTED TO THE FULLEST EXTENT POSSIBLE, IN ORDER TO MITIGATE DAMAGE.
3. CONTRACTOR IS REPONSIBLE FOR REMOVAL AND REPLACEMENT OF ALL EXISTING ELEMENTS THAT ARE NECESSARY FOR THE INSTALLATION OF ALL NEW WORK.
4. WHERE EXISTING PARTITION WALLS ARE TO BE DEMOLISHED, CONTRACTOR SHALL VERIFY WALLS ARE NON-BEARING PRIOR TO DEMOLITION. IF WALLS ARE FOUND TO BE BEARING, CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY

DESIGN INFORMATION

1. FLOOR LIVE LOADS: (2022 CBC SECTION 1603.1.1)

FLOOR LIVE LOADS

OCCUPANCY OR USE	UNIFORM (PSF)	CONC. (LBS)	REFERENCE
RESIDENTIAL			
ONE- AND TWO- FAMILY DWELLINGS			
UNINHABITABLE ATTICS WITHOUT STORAGE	10	—	2022 CBC TABLE 1607.1
UNINHABITABLE ATTICS WITH STORAGE	20		
HABITABLE ATTICS AND SLEEPING AREAS	30		
ALL OTHER AREAS	40		

2. ROOF LIVE LOADS (2022 CBC SECTION 1603.1.2)

ROOF LIVE LOADS

OCCUPANCY OR USE	UNIFORM (PSF)	CONC. (LBS)	REFERENCE
ROOF ORDINARY FLAT, PITCHED AND CURVED ROOFS (THAT ARE NOT OCCUPIABLE)	20	—	2022 CBC TABLE 1607.1

3. ROOF SNOW LOADS (2022 CBC SECTION 1603.1.3):

SNOW DESIGN DATA

PARAMETER	VALUE	REFERENCE
GROUND SNOW LOAD	Pg = 0 PSF	ASCE 7-16 7.2

4. WIND DESIGN DATA (2022 CBC SECTION 1603.1.4) :

WIND DESIGN DATA

PARAMETER	VALUE	REFERENCE
ULTIMATE DESIGN WIND SPEED (3-SEC GUST)	V_{ult} = 94 MPH	2022 CBC FIG. 1609.3
NOMINAL DESIGN WIND SPEED (3-SEC GUST)	V_{ASD} = 73 MPH	2022 CBC 1609.3.1
EXPOSURE CATEGORY	C	2022 CBC 1609.4.3
INTERNAL PRESSURE COEFFICIENT	GCpi = ± 0.18	ASCE [illegible]

COMPONENTS & CLADDING WIND PRESSURES

LOCATION		EFFECTIVE WIND AREA (SQ. FT.)		
		10	100	500
ROOF	ZONE 1	-27.4	-20.9	-16.0
	ZONE 2e	-27.4	-20.9	-16.0
	ZONE 2n	-41.1	-25.8	-22.5
	ZONE 2r	-41.1	-25.8	-22.5
	ZONE 3e	-47.8	-32.3	-32.3
	ZONE 3r	16.9	16.0	16.0
OVERHANG	ZONE 1	-35.6	-33.9	-32.3
	ZONE 2e	-35.6	-33.9	-32.3
	ZONE 2n	-51.9	-41.3	-38.8
	ZONE 2r	-51.9	-41.3	-38.8
	ZONE 3e	-61.7	-42.1	-42.1
	ZONE 3r	-61.7	-42.1	-42.1
WALL	ZONE 4	-20.9	-18.1	-16.0
	ZONE 5	-25.8	-20.1	-16.0
	POSITIVE	19.3	16.0	16.0

5. EARTHQUAKE DESIGN DATA (2022 CBC SECTION 1603.1.5):

SITE AND OCCUPANCY PARAMETERS

PARAMETER	VALUE OPT 1	REFERENCE
RISK CATEGORY	II	2022 CBC TABLE 1604.5
SEISMIC IMPORTANCE FACTOR	I = 1.0	ASCE 7-16 TABLE 1.5-2
MAPPED SPECTRAL RESPONSE ACCELERATIONS:	S_S = 1.625 g S_1 = 0.60 g	2022 CBC 1613.2.1
SITE CLASS	D (DF)	2022 CBC 1613.2.2
SPECTRAL RESPONSE COEFFICIENTS:	S_{DS} = 1.30 g S_{D1} = 0.68 g	2022 CBC 1613.2.4

BUILDING PARAMETERS

PARAMETER	VALUE OPT 1	REFERENCE
SEISMIC DESIGN CATEGORY	SDC = D	2022 CBC 1613.2.5
BASIC SEISMIC FORCE RESISTING SYSTEM	LIGHT FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE	ASCE 7-16 TABLE 12.2-1
RESPONSE MODIFICATION FACTOR	R = 6½	
SYSTEM OVERSTRENGTH FACTOR	Ωo = 3	
DEFLECTION AMPLIFICATION FACTOR	Cd = 4	
DESIGN BASE SHEAR	V = S_a *W*	ASCE 7-16 12.8.1
SEISMIC RESPONSE COEFFICIENTS	Cs = 0.200	ASCE 7-16 12.8.1.1
ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE PROCEDURE	ASCE 7-16 12.8

6. GEOTECHNICAL INFORMATION (2022 CBC SECTION 1603.1.6):
   REFER TO FOUNDATION GENERAL NOTES

GENERAL

1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES AND STANDARDS:
   A. 2022 CALIFORNIA BUILDING CODE, PART 2, VOLUME 2 OF 2, AND TITLE 24 C.C.R. 2022 EDITION AND LATEST REVISIONS (INCLUDING SUPPLEMENTS AND ERRATA) HEREIN REFERRED TO AS "THE CODE".
   B. ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CAL/OSHA).
   C. CODES & STANDARDS REFERENCED IN THE CODE OR LISTED IN THESE NOTES AND SPECIFICATIONS.
2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. IN NO INSTANCE SHALL DIMENSIONS BE SCALED FROM THE DRAWINGS.
5. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
   A. SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED
   B. SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS UNLESS NOTED AND/OR DETAILED ON THE STRUCTURAL DRAWINGS
   C. SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGE IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC
   D. SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN
   E. FLOOR AND ROOF FINISHES
   F. MISCELLANEOUS DRAINAGE AND WATERPROOFING
   G. ALL FIREPROOFING REQUIREMENTS INCLUDING FIREPROOFING OF STRUCTURAL STEEL
   H. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS
6. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
   A. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
   B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
   C. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
   D. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
7. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT ETC. THE CONTRACTOR IS RESPONSIBLE FOR PROVISION OF TEMPORARY SHORING AND OTHER CONSTRUCTION AIDS, INCLUDING ALL ENGINEERING OF SUCH SYSTEMS, FOR TEMPORARY SUPPORT OF NEW AND/OR EXISTING STRUCTURAL ELEMENTS AS REQUIRED FOR ERECTION AND OTHER CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION (UNO). OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS OR CONCERN CONSTRUCTION MEANS AND METHODS OR CONSTRUCTION SAFETY.
8. BACKFILL SHALL NOT BE PLACED BEHIND EXTERIOR AND INTERIOR RETAINING WALLS UNTIL THE CONCRETE / CMU HAS ACHIEVED FULL DESIGN STRENGTH. FOR BRACED WALLS SUPPORTED BY STRUCTURAL DIAPHRAGMS, BACKFILL SHALL NOT BE PLACED BEHIND THE WALL UNTIL THE DIAPHRAGM HAS BEEN INSTALLED , AND FOR CONCRETE DIAPHRAGMS, HAS ACHIEVED FULL DESIGN STRENGTH.
9. THE CONTRACT STRUCTURAL DRAWINGS SHOW THE BUILDING IN ITS FINAL INTENDED POSITION. CONTRACTOR SHALL MAKE PROVISIONS IN THE LAYOUT OF THE BUILDING TO TAKE INTO ACCOUNTS SHRINKAGE, CREEP, SHORTENING, ETC..
10. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
11. ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE THE VERSION REFERENCED IN CHAPTER 35 OF THE CODE OR AS REFERENCED IN THE APPLICABLE DESIGN STANDARD.
12. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC.. IF ANY SUCH STRUCTURES ARE FOUND, THE STRUCT

REQUIRED VERIFICATION AND INSPECTIONS

WOOD
CODE CHAPTER 17 AND REFERENCED 2018 NDS AND AWC SDPWS-2015

SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC	CBC REFERENCE
3. WOOD LATERAL FORCE-RESISTING SYSTEM WITH FASTENER SPACING OF THE SHEATHING LESS THAN OR EQUAL TO 4" OC. - WOOD SHEAR WALLS - WOOD DIPHRAGMS - DRAG STRUTS - SHEAR PANELS - HOLD-DOWNS	___	X	1705.13.2
4. WOOD LATERAL FORCE-RESISTING SYSTEM WITH FASTENER SPACING OF THE SHEATHING GREATER THAN 4" OC (NOT REQUIRED) - WOOD SHEAR WALLS - WOOD DIAPHRAGMS - DRAG STRUTS - SHEAR PANELS - HOLD-DOWNS	___	___	1705.13.2

SOILS
CODE TABLE 1705.6

SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	___	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	___	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	___	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	___
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	___	X

CONCRETE CONSTRUCTION
CODE TABLE 1705.3

SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC	REFERENCED STANDARD	CBC REFERENCE
3. INSPECT ANCHORS CAST IN CONCRETE	___	X	ACI 318: 26.7	___
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS [B] (a) ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS (b) MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X	X	ACI 318: 26.7.1 ACI 318: 26.7.1	___ ___

STATEMENT OF SPECIAL INSPECTIONS

1. THIS STATEMENT OF SPECIAL INSPECTIONS HAS BEEN PREPARED PURSUANT TO SECTION 1704.3 OF THE CODE . THIS SECTION DETAILS BOTH REQUIRED SPECIAL INSPECTIONS AND TESTS INCLUDING TESTING PER SECTION 1705 OF THE CODE. THE FOLLOWING SHALL BE OBSERVED DURING THEIR IMPLEMENTATION:

   A. GENERAL:
      a. STRUCTURAL VERIFICATIONS, INSPECTIONS AND TESTS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE CODE AND/OR THE APPLICABLE REFERENCE STANDARD.

   B. OWNER REQUIREMENTS:
      a. THE OWNER OR OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN SECTION 1705 OF THE CODE AND IN THIS STATEMENT OF INSPECTIONS.

   C. SPECIAL INSPECTOR QUALIFICATIONS:
      a. THE SPECIAL INSPECTIONS SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING HIS OR HER COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING. THE EXPERIENCE OR TRAINING SHALL BE CONSIDERED RELEVANT WHEN THE DOCUMENTED EXPERIENCE OR TRAINING IS RELATED IN COMPLEXITY TO THE SAME TYPE OF SPECIAL INSPECTION ACTIVITIES FOR PROJECTS OF SIMILAR COMPLEXITY AND MATERIAL QUANTITIES.

   D. CONTRACTOR REQUIREMENTS:
      a. SPECIAL INSPECTION IS IN ADDITION TO THE CONTRACTOR'S QUALITY CONTROL INSPECTIONS AND TESTING. THE CONTRACTOR'S QUALITY CONTROL INSPECTIONS AND TESTING SHALL OCCUR PRIOR TO SPECIAL INFECTION AND REPORTS SHALL BE AVAILABLE TO THE SPECIAL INSPECTOR.
      b. THE CONTRACTOR SHALL ENSURE THAT THE WORK FOR WHICH SPECIAL INSPECTION IS REQUIRED REMAINS ACCESSIBLE AND EXPOSED FOR SPECIAL INSPECTION PURPOSES UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTION.
      c. ANY CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

   E. SPECIAL INSPECTOR REPORT REQUIREMENTS:
      a. THE SPECIAL INSPECTOR SHALL KEEP RECORD OF INSPECTIONS
      b. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.
      c. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS.
      d. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
      e. IF NOT CORRECTED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMPLETION OF THAT PHASE OF WORK.
      f. A FINAL REPORT DOCUMENTING SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.

SHOP FABRICATION

1. SHOP FABRICATION REQUIRES SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1704.2.5.
   EXCEPTION: SHOP SPECIAL INSPECTIONS ARE NOT REQUIRED WHEN WORK IS DONE ON THE PREMISES OF FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK IN ACCORDANCE WITH CODE SECTION 1704.2.5.1. THE FOLLOWING WORK CONDITIONS MEET THE REQUIREMENTS OF THIS EXCEPTION:

   B. WOOD BUILDING COMPONENTS:
      a. STRUCTURAL PANELS (SHEATHING) SHALL BE IDENTIFIED BY THE APA TRADEMARK.

PRE-FABRICATED WOOD TRUSS NOTES

1. THE DESIGN OF METAL PLATE CONNECTED WOOD TRUSSES SHALL BE IN ACCORDANCE WITH THE FOLLOWING
   A. CODES AND STANDARDS:
      a. THE GOVERNING CODE LISTED IN THE PROJECT GENERAL NOTES
      b. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-16)
      c. NATIONAL DESIGN STANDARD FOR WOOD CONSTRUCTION AND SUPPLEMENT (ANSI/AWC NDS-2018)
      d. SPECIAL DESIGN PROVISIONS FOR WIND & SEISMIC (AWC SDPWS-2015)
      e. THE NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION (ANSI/TPI 1-2014)
   B. DESIGN CRITERIA:
      a. TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM VERTICAL LOADS AND OTHER LOADS INDICATED ON THE CONSTRUCTION DOCUMENTS (ATTIC MECHANICAL UNITS, ETC.)

         ROOF TRUSS LOADING:
         CLAY TILE W/ GYP CEILING:
         TOP-CHORD DEAD LOAD: 20.5 PSF * (18.8 PSF SUPERIMPOSED)
         BOT CHORD DEAD LOAD: 7.5 PSF (6.2 PSF SUPERIMPOSED)
         ROOF - LIVE LOAD: 20 PSF
         CLAY TILE W/ STUCCO CEILING:
         TOP-CHORD DEAD LOAD: 20.5 PSF * (18.8 PSF SUPERIMPOSED)
         BOT CHORD DEAD LOAD: 11.5 PSF (10.2 PSF SUPERIMPOSED)
         ROOF - LIVE LOAD: 20 PSF

         DEFLECTION CRITERIA:
         DEAD + LIVE LOAD L/240
         LIVE LOAD ONLY L/360

         *INCLUDES 4 PSF ALLOWANCE FOR PV PANELS

      b. ( ) INDICATES HORIZONTAL SEISMIC/WIND LOAD ON COLLECTOR TRUSSES. THE TRUSS DESIGNER SHALL DESIGN FOR THE TRUSSES FOR THE INDICATED HORIZONTAL LOAD ACTING IN BOTH THE TOP AND BOTTOM TRUSS CHORDS AND FOR THE TRANSFER OF THE FORCE TO THE CHORDS THROUGH THE WEB.

2. CONTRACTOR REQUIREMENTS:
   A. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS LISTED IN SECTION 2.3.4 OF ANSI/TPI 1-2014 INCLUDING THE FOLLOWING:
      a. MEANS AND METHODS: THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS TECHNIQUES, SEQUENCES, PROCEDURES, PROGRAMS AND SAFETY IN CONNECTION WITH RECEIPT, STORAGE, HANDLING, INSTALLATION, RESTRAINING, AND BRACING OF THE TRUSSES REFER TO THE [illegible] TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES (BCSI-B1)
      b. TRUSS INSTALLATION SHALL COMPLY WITH INSTALLATION TOLERANCES SHOWN IN BCSI-B3
      c. TEMPORARY AND PERMANENT RESTRAINT/BRACING FOR THE TRUSSES AND THE ASSEMBLAGE OF THE TRUSS SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH BCSI-B3
      d. CONSTRUCTION LOADING ON TRUSSES SHALL BE APPLIED ACCORDING TO BCSI-B4.
      e. TRUSS DAMAGE, JOBSITE MODIFICATIONS & INSTALLATION ERRORS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR AND THE TRUSS DESIGNER REFERENCE BCSI-B5.
      f. SUBMIT THE DRAWINGS FROM THE TRUSS DESIGNER/MANUFACTURER TO THE BUILDING DEPARTMENT PRIOR TO [illegible] APPROVAL. A COPY OF THIS SUBMITTAL SHALL BE PROVIDED TO THE ENGINEER OF RECORD FOR REVIEW OF GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE CONTRACTOR SHALL INCORPORATE THE TIME REQUIRED FOR THE SUBMITTAL REVIEW PROCESS AND APPROVED BY ALL PARTIES AND SHALL HAVE THE APPROVED DRAWINGS/PLANS ON THE JOB SITE PRIOR TO FOUNDATION INSPECTION.

   TRUSS DESIGN REQUIREMENTS:
   A. THE TRUSS DESIGNER SHALL MEET ALL THE REQUIREMENTS LISTED IN SECTION 2.3.5 OF ANSI/TPI 1-2014 INCLUDING THE FOLLOWING:
      a. TRUSS DESIGNER SHALL SUPERVISE THE PREPARATION OF THE TRUSS DESIGN DRAWINGS WHICH SHALL CONTAIN THE INFORMATION LISTED IN SECTION 2.3.5.5 OF ANSI/TPI 1-2014, THIS INCLUDES ALL TRUSS TO TRUSS CONNECTIONS, AND DETAILS FOR THE "CALIFORNIA FILL" AREAS.
      b. TRUSS DESIGNER SHALL COMPLY WITH THE REFERENCED CODE AND DESIGN CRITERIA ABOVE.
      c. TRUSS DESIGNER SHALL SHOW ALL HANGERS, BRACING AND RESTRAINTS AS WELL AS METHOD OF RESTRAINT/BRACING ON THE TRUSS PLANS TO MEET ANY SEISMIC AND WIND REQUIREMENTS OF THE CODE.
      d. SUBMIT TRUSS DESIGN DRAWINGS INCLUDING ALL RELEVANT DETAILS FOR THE FABRICATION OF THE TRUSSES AND PREPARE CALCULATIONS. ALL PLANS,DETAILS AND CALCULATIONS FOR THE TRUSSES SHALL BE STAMPED AND SIGNED BY A LICENSED PROFESSIONAL ENGINEER (CIVIL OR STRUCTURAL), LICENSED TO PRACTICE IN THE STATE OF CALIFORNIA.

WOOD STRUCTURAL PANELS (SHEATHING)

1. WOOD STRUCTURAL PANELS SHALL MEET THE FOLLOWING MINIMUM STANDARDS EXCEPT WHERE OTHERWISE NOTED:

WOOD STRUCTURAL PANEL PROPERTIES

USE	PLY	BOND CLASSIFICATION [C]	SHEATHING GRADE	PERFORMANCE RATING	SPAN RATING	RATING [B]	REFERENCE [A]
ROOF	5	EXPOSURE 1	REFER TO TYPICAL DIAPHRAGM SCHEDULE			APA	2022 CBC 2303.1.5 (DOC PS 1-09 OR PS 2-10)
FLOOR	5	EXPOSURE 1				APA	
WALL [D]	5	EXPOSURE 1	REFER TO TYPICAL SHEAR WALL SCHEDULE			APA	

TABLE NOTES:

A. WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN ACCORDANCE WITH THE FOLLOWING VOLUNTARY STANDARDS BY THE ENGINEERED WOOD ASSOCIATION (APA):
   a. VOLUNTARY PRODUCT STANDARD, STRUCTURAL PLYWOOD, PS 1-09
   b. VOLUNTARY PRODUCT STANDARD, PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL-USE PANELS, PS 2-10

B. WOOD STRUCTURAL PANELS SHALL BE IDENTIFIED BY THE APA TRADEMARK INDICATING CONFORMANCE TO THE APPLICABLE VOLUNTARY STANDARD

C. WHERE PANELS ARE EXPOSED TO REPEATED WETTING AND REDRYING, LONG-TERM EXPOSURE TO WEATHER, OR CONDITIONS OF SIMILAR SEVERITY, "EXTERIOR" APA RATED PLYWOOD SHEATHING SHALL BE USED. C-D "EXPOSURE 1" APA RATED PLYWOOD SHEATHING (CDX) SHALL NOT BE USED FOR CONDITIONS INVOLVING LONG-TERM EXPOSURE TO WEATHER.
   a. EXCEPTION: WOOD STRUCTURAL PANEL ROOF SHEATHING EXPOSED TO THE OUTDOORS ON THE UNDERSIDE IS PERMITTED TO BE "EXPOSURE 1" TYPE.
   b. WOOD STRUCTURAL PANELS TO BE USED AS SIDING SHALL COMPLY WITH ANSI/APA PRP-210.

D. ORIENTED STRAND BOARD (OSB) WITH EQUIVALENT CLASSIFICATION AND RATINGS MAY BE USED IN LIEU OF PLYWOOD FOR WOOD STRUCTURAL PANEL WALL SHEATHING.

2. TRANSPORTATION, STORAGE, AND HANDLING:

   A. TRANSPORTATION
      a. IN TRANSPORTING PANELS ON OPEN TRUCK BEDS, COVER THE BUNDLES WITH A TARP.

   B. STORAGE
      a. ALWAYS STORE THE PANELS UNDER COVER WHENEVER POSSIBLE
      b. WHEN STORING PANELS OUTSIDE STACK THEM ON A LEVEL SURFACE ON TOP OF STRINGERS OR OTHER BLOCKING, THREE STRINGERS MINIMUM.
      c. NEVER LEAVE PANELS IN CONTACT WITH THE GROUND
      d. COVER THE STACK WITH A PLASTIC TARP, ENSURING THAT THE BUNDLE IS WELL VENTILATED TO PREVENT MILDEW.
      e. IF MOISTURE ABSORPTION IS EXPECTED, CUT THE STEEL BAND TO PREVENT DAMAGE
      f. KEEP SANDED OR OTHER APPEARANCE GRADE PANELS AWAY FROM HIGH TRAFFIC AREAS

   C. HANDLING
      a. ALWAYS PROTECT ENDS AND EDGES, ESPECIALLY TONGUE AND GROOVE PRODUCTS, FROM PHYSICAL DAMAGE.
      b. ACCLIMATIZE THE PANELS FOR 24 HOURS MINIMUM BEFORE INSTALLATION BY STANDING THE PANELS ON EDGE WITH A GAP BETWEEN EACH TO ALLOW FOR AIR CIRCULATION OR PER MANUFACTURER'S RECOMMENDATIONS.

3. PLYWOOD ORIENTATION

   A. ROOF AND FLOOR SHEATHING SHALL BE LAID WITH THE GRAIN OF THE OUTER PILES PERPENDICULAR TO THE FRAMING MEMBERS, SHALL BE CONTINUOUS OVER 2 JOIST BAYS MINIMUM AND END JOINTS SHALL BE JOINED OVER FRAMING AND STAGGERED. LEAVE A 1/8" GAP BETWEEN PANELS TO ALLOW FOR PANEL EXPANSION UNLESS RECOMMENDED OTHERWISE BY THE PANEL MANUF. REFER TO SPECIFIC DETAILS IN THE DRAWINGS FOR FURTHER PARAMETERS.

   B. PLYWOOD OR OSB WALL SHEATHING MAY BE APPLIED VERTICALLY OR HORIZONTALLY. ALL END JOINTS BE JOINED OVER FRAMING AND STAGGERED.

4. BLOCKING:

   A. ROOF: ALL ROOF SHEATHING SHALL BE BLOCKED UNLESS SPECIFICALLY ALLOWED ON PLANS. WHERE PERMITTED TO BE UNBLOCKED, ALL UNBLOCKED EDGES SHALL BE TONGUE AND GROOVE.

   B. ALL FLOOR SHEATHING SHALL BE BLOCKED UNLESS SPECIFICALLY ALLOWED ON PLANS. WHERE PERMITTED TO BE UNBLOCKED, ALL UNBLOCKED EDGES SHALL BE TONGUE AND GROOVE.

   C. WALLS: ALL SHEAR WALLS SHALL BE FULLY BLOCKED AT PLYWOOD EDGES.

5. FASTENERS

   A. USE SHEATHING NAILS SAME GAUGE AS COMMON WIRE NAILS WITH LENGTHS AT LEAST EQUAL TO SHEATHING THICKNESS PLUS REQUIRED PENETRATION PER AWS SDPWS TABLE 4.2A OR 4.3A (AS REQUIRED).

   B. EQUIVALENT PNEUMATIC DRIVE NAILS OR STAPLES MAY BE USED IF FASTENER MANUFACTURER HAS RECEIVED ICC OR IAPMO APPROVAL FOR THE INTENDED US. FASTENERS TO BE SUBSTITUTED SHALL BE EQUIVALENT IN LATERAL AND WITHDRAWAL STRENGTH TO THE SIZE OF COMMON NAIL SPECIFIED.

   C. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN 5/16" PLYWOOD OR OSB SHEATHING. IF NAIL HEADS PENETRATE THE OUTER PLY MORE T HAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.

   D. TYPICAL NAILING SHALL BE 10D AT 6" O.C. AT ALL SUPPORTED EDGES AND OVER SHEAR WALLS, AND 10D AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS, UNLESS OTHERWISE NOTED, SEE PLANS AND REFER TO SHEAR WALL SCHEDULE.

CITY OF AGOURA HILLS

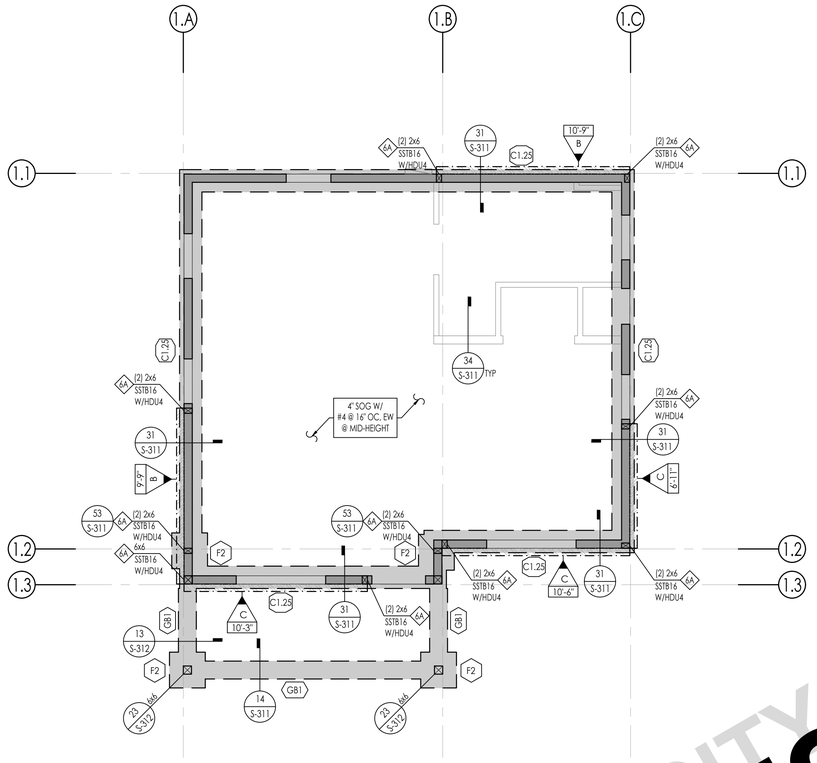
THESE PLANS ARE PROVIDED BY THE CITY OF AGOURA HILLS AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARG TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

AGOURA HILLS | ADU
CITY OF AGOURA HILLS
GENERAL NOTES, SPECIAL INSPECTION & TESTS

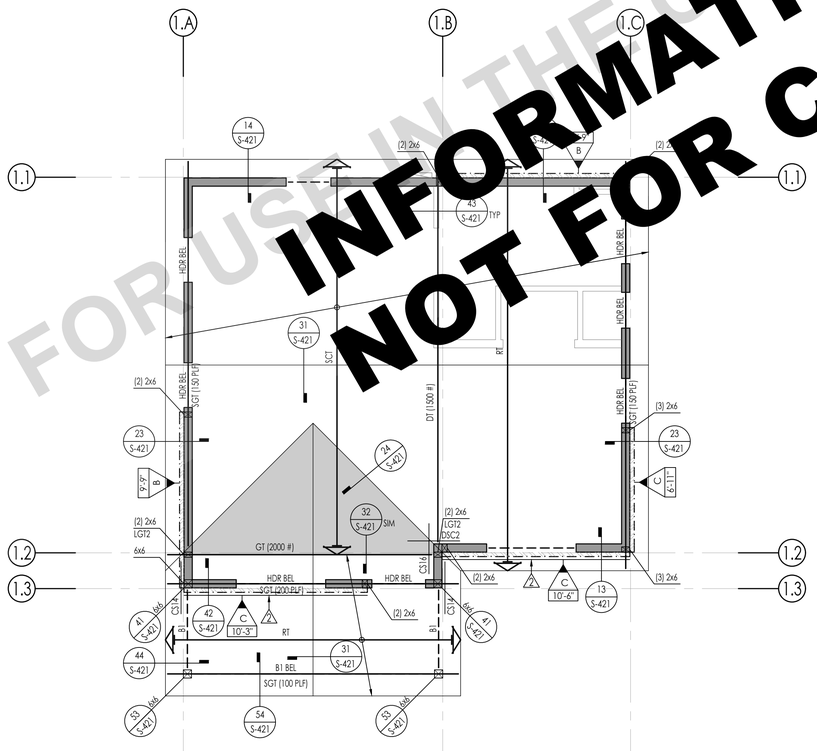
APPROVED SET

DATE 09/28/23

SHEET S1-103



1 FOUNDATION PLAN - COTTAGE & RANCH
SCALE: 1/4" = 1'-0"



2 ROOF FRAMING PLAN - COTTAGE & RANCH
SCALE: 1/4" = 1'-0"

GENERAL PLAN NOTES

GENERAL

1. SEE THE FOLLOWING SHEETS FOR GENERAL NOTES AND TYPICAL DETAILS.

DESCRIPTION	SHEET(S)
SYMBOLS AND ABBREVIATIONS	S-101
STRUCTURAL GENERAL NOTES	S-102 - S-103
TESTING AND INSPECTION	S-103
TYPICAL CONCRETE DETAILS	S-301
TYPICAL WOOD DETAILS	S-401 - S-404

2. SEE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR ELEVATIONS. REFERENCE FINISHED FLOOR ELEVATION = 0'-0" CORRESPONDS TO FINISHED FLOOR ELEVATION.
3. SEE ARCHITECTURAL DRAWINGS FOR ALL EXTERIOR CONCRETE PAVING, SLABS, BASES, CURBS, ETC.
4. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
5. ALL DIMENSIONS SHOWN ARE FROM FACE OF MASONRY, FACE OF SHEATHING, OR CENTERLINE OF COLUMN. UNLESS NOTED OTHERWISE, ALL COLUMNS ARE CENTERED IN STUD WALLS.
6. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
7. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS.
8. ALL POSTS IN 6"x WALLS SHALL BE 6x6 UNLESS NOTED OTHERWISE
   ALL POSTS IN 4"x WALLS SHALL BE 4x4 UNLESS NOTED OTHERWISE

FOUNDATION

9. SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
10. SEE ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
11. FOR TYPICAL SLAB-ON-GRADE REQUIREMENTS, INCLUDING SLAB JOINTS, SEE DETAIL 31/S-301
12. ALL POSTS IN 6"x WALLS SHALL BE 6x6 UNLESS NOTED OTHERWISE
    ALL POSTS IN 4"x WALLS SHALL BE 4x4 UNLESS NOTED OTHERWISE
13. PLATE WASHERS ARE REQUIRED FOR ALL SILL PLATE ANCHOR BOLTS
14. ALL HOLDOWN ANCHOR NUTS SHALL BE TIGHTENED TO FINGER TIGHT PLUS ONE-HALF WRENCH TURN JUST PRIOR TO COVERING
15. ALL BOLT HOLES, IN WOOD MEMBERS, SHALL BE DRILLED A MAXIMUM OF 1/16" OVERSIZED. INSPECTOR TO VERIFY
16. THE BUILDING PAD SHALL BE PREPARED AS OUTLINED IN DETAIL 53/S-301. THE BUILDING OFFICIAL SHALL REQUIRE PAD CERTIFICATION BY A GEOTECHNICAL ENGINEER AT THEIR DISCRETION.
17. BOTTOM OF FOOTING SHALL BE, UNLESS DEEPER FOUNDATIONS ARE REQUIRED BY THE BUILDING OFFICIAL:
    A. 21" BELOW PAD OR ADJACENT GRADE AT PERIMETER, WHICHEVER IS DEEPER, UNO
    B. 21" BELOW PAD OR ADJACENT GRADE AT INTERIOR GRADE BEAMS, WHICHEVER IS DEEPER, UNO
    NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE ANCHOR BOLT HOLDOWN EMBED DEPTHS
18. FOR DEEPENED FOOTING REFER TO 44/S-311. DISTANCE TO DAYLIGHT MUST BE A MINIMUM OF 10'-0" AS MEASURED FROM THE BOTTOM OF THE FOOTING. SHOULD THE SITE REQUIRE RETAINING WALLS TO FLATTEN THE LOT, REFER TO NOTES ON COVER SHEET FOR PERMITTING REQUIREMENTS.

FRAMING

19. ALL LINES OR MEMBERS INDICATED AS "STRUT" SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (BN), STAGGERED.
20. ALL INTERIOR WALLS NOT SHOWN ON THE STRUCTURAL FRAMING PLANS BUT SHOWN ON THE ARCHITECTURAL DRAWINGS SHALL BE CONSTRUCTED PER NON-BEARING PARTITION WALL DETAIL 43/S-401, UNO.
21. PLYWOOD SHEATHED DIAPHRAGM TYPES:
    ALL ROOF DIAPHRAGMS SHALL BE TYPE A, UNO
    REFER TO 12/S-403
22. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN CONCURRENCE AND APPROVAL OF A REGISTERED DESIGN PROFESSIONAL.
23. ALTERATIONS RESULTING IN THE ADDITION OF LOADS TO ANY MEMBER (E.G. HVAC EQUIPMENT, WATER HEATER) SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.

SYMBOL LEGEND

"XX"-"X" — INDICATES SHEAR WALL [illegible] PER SCHEDULE

INDICATES [illegible] OPENING [illegible] STEPPING ABOVE & BELOW [illegible] DETAIL 44/S-402

INDICATES HEADER @ OPENING. REFER TO 32/S-401 FOR HEADER SIZE, UNLESS NOTED OTHERWISE

INDICATES BEARING STUD WALL PER PLAN

X — INDICATES TOP PLATE SPLICE NAILING PER DETAILS 31/S-403. NAILING APPLIES TO ENTIRE LENGTH OF TOP PLATE. PROVIDE TYPE (C) SPLICE, ULESS NOTED OTHERWISE

DSC # — INDICATES DSC CONNECTION PER 24/S-403

CS_ / CMST_ — INDICATES STRAP PER 24/S-403 OR 34/S-403, UNO

FOUNDATION SCHEDULES

SHEARWALL HOLDOWN SCHEDULE

SPECIFIES HOLDOWN/ STRAP DETAIL	INDICATES HOLDOWN/ STRAP TYPE	DETAIL
6A	INDICATES SIMPSON HOLDOWN W/ SSTB TO: CONCRETE FOUNDATION:	12/S-311

GRADE BEAM SCHEDULE

TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL
GB1	1'-0"	1'-0"	SEE NOTE 17	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	14/S-311

CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL
C1.25	1'-3"	SEE NOTE 17	(2) #5 T&B	#3 @ 12" OC, BOT	31/S-311

PAD FOOTING SCHEDULE

TYPE	WIDTH	LENGTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	TOP REINF	BOT REINF	DETAIL
F2	2'-0"	2'-0"	1'-6"	SEE NOTE 17	(3) #5, EW	(3) #5, EW	PER PLAN

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE AB HOLDOWN EMBED DEPTHS

ROOF FRAMING SCHEDULES

ROOF BEAM SCHEDULE

MARK	SIZE	REMARKS
B1	6x12	
B2	4x10	

FLOOR RAFTER SCHEDULE

MARK	SIZE	REMARKS
J1	2x6 @ 16" OC	

HEADER SCHEDULE

MARK	SIZE	REMARKS
H1	6x8	

PREFABRICATED ROOF TRUSS

1. FOR PREFABRICATED ROOF TRUSS NOTES SEE NOTES ON SHEET S-103

ROOF TRUSS SCHEDULE

MARK	DESCRIPTION	REMARKS
RT	ROOF TRUSS (COMMON)	24" OC MAX
SGT	STRUCTURAL GABLE TRUSS	
MT	MONO PITCH TRUSS	24" OC MAX
JT	JACK TRUSS	24" OC MAX
VJT	VALLEY JACK TRUSS	24" OC MAX
CJT	CORNER JACK TRUSS	
GT	GIRDER TRUSS	
MGT	MONO PITCH GIRDER TRUSS	
DT (#*)	DRAG TRUSS	
CGT	CALIFORNIA GIRDER TRUSS	
HR	HIP RAFTER / JACK RAFTER	
CHT	CALIFORNIA HIP TRUSS	24" OC MAX
SCT	SCISSOR TRUSS	24" OC MAX, CEILING SLOPE PER ARCH

(#*) - EQUALS DRAG FORCE IN LBS. DRAG FORCE IS AT A FACTORED LEVEL (0.7E) DRAG FORCES CALCULATED IN ACCORDANCE WITH ASCE 7-16 12.10.1.1. IN STRUCTURES ENTIRELY BRACED BY LIGHT FRAME SHEAR WALLS, OR PORTIONS THEREOF. DRAG MEMBERS SHALL BE DESIGNED TO RESIST FORCES USING THE LOAD COMBINATIONS OF ASCE 7-16 SECTION 12.4.2.3 IN ALL OTHER STRUCTURES DRAGS SHALL INCLUDE THE EFFECT OF OVER STRENGTH PER ASCE 7-16 12.4.3.2

CITY OF AGOURA HILLS

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APPROVED SET

AGOURA HILLS | ADU
CITY OF AGOURA HILLS
FOUNDATION & ROOF FRAMING PLANS - COTTAGE & RANCH

DATE 09/28/23

SHEET S1-201

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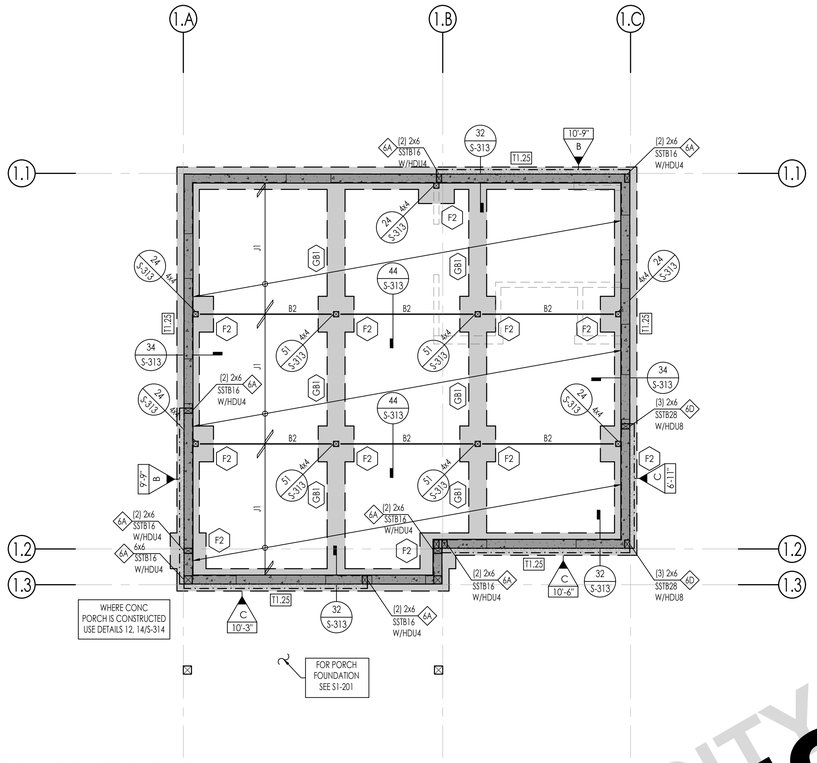
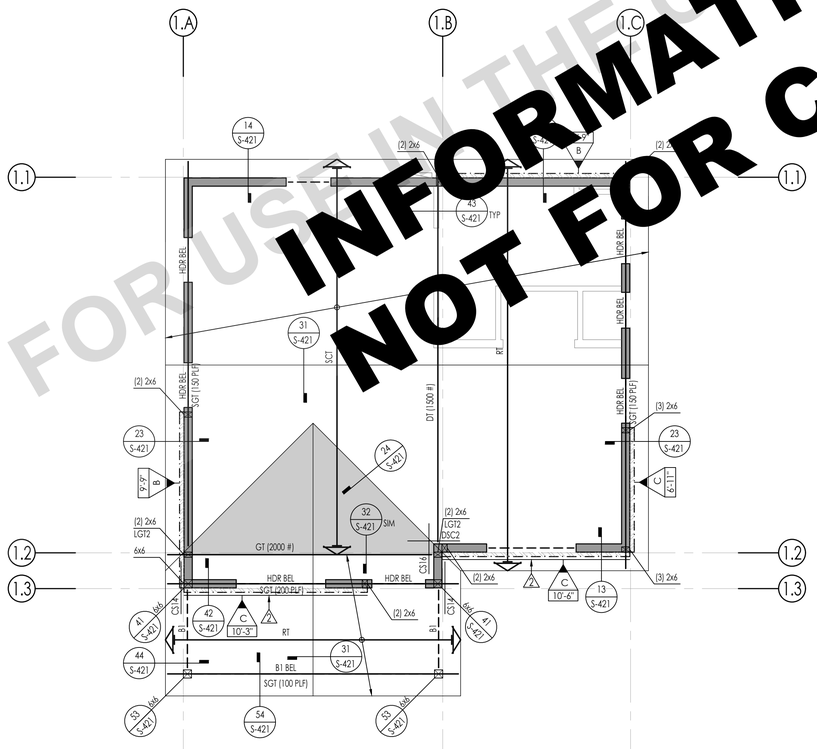


1 RAISED FLOOR FRAMING PLAN - COTTAGE & RANCH
SCALE: 1/4" = 1'-0"



2 ROOF FRAMING PLAN - COTTAGE & RANCH
SCALE: 1/4" = 1'-0"

GENERAL PLAN NOTES

GENERAL

1. SEE THE FOLLOWING SHEETS FOR GENERAL NOTES AND TYPICAL DETAILS.

DESCRIPTION	SHEET(S)
SYMBOLS AND ABBREVIATIONS	S-101
STRUCTURAL GENERAL NOTES	S-102 - S-103
TESTING AND INSPECTION	S-103
TYPICAL CONCRETE DETAILS	S-301
TYPICAL WOOD DETAILS	S-401 - S-404

2. SEE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR ELEVATIONS. REFERENCE FINISHED FLOOR ELEVATION = 0'-0" CORRESPONDS TO FINISHED FLOOR ELEVATION.
3. SEE ARCHITECTURAL DRAWINGS FOR ALL EXTERIOR CONCRETE PAVING, SLABS, BASES, CURBS, ETC.
4. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
5. ALL DIMENSIONS SHOWN ARE FROM FACE OF MASONRY, FACE OF SHEATHING, OR CENTERLINE OF COLUMN. UNLESS NOTED OTHERWISE, ALL COLUMNS ARE CENTERED IN STUD WALLS.
6. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
7. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS.
8. ALL POSTS IN 6"x WALLS SHALL BE 6x6 UNLESS NOTED OTHERWISE
   ALL POSTS IN 4"x WALLS SHALL BE 4x4 UNLESS NOTED OTHERWISE

FOUNDATION

9. SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
10. SEE ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
11. FOR TYPICAL SLAB-ON-GRADE REQUIREMENTS, INCLUDING SLAB JOINTS, SEE DETAIL 31/S-301
12. ALL POSTS IN 6"x WALLS SHALL BE 6x6 UNLESS NOTED OTHERWISE
    ALL POSTS IN 4"x WALLS SHALL BE 4x4 UNLESS NOTED OTHERWISE
13. PLATE WASHERS ARE REQUIRED FOR ALL SILL PLATE ANCHOR BOLTS
14. ALL HOLDOWN ANCHOR NUTS SHALL BE TIGHTENED TO FINGER TIGHT PLUS ONE-HALF WRENCH TURN JUST PRIOR TO COVERING
15. ALL BOLT HOLES, IN WOOD MEMBERS, SHALL BE DRILLED A MAXIMUM OF 1/16" OVERSIZED. INSPECTOR TO VERIFY
16. THE BUILDING PAD SHALL BE PREPARED AS OUTLINED IN DETAIL 53/ES-301. THE BUILDING OFFICIAL SHALL REQUIRE PAD CERTIFICATION BY A GEOTECHNICAL ENGINEER AT THEIR DISCRETION.
17. BOTTOM OF FOOTING SHALL BE, UNLESS DEEPER FOUNDATIONS ARE REQUIRED BY THE BUILDING OFFICIAL:
    A. 21" BELOW PAD OR ADJACENT GRADE AT PERIMETER, WHICHEVER IS DEEPER, UNO
    B. 21" BELOW PAD OR ADJACENT GRADE AT INTERIOR GRADE BEAMS, WHICHEVER IS DEEPER, UNO
    NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE ANCHOR BOLT HOLDOWN EMBED DEPTHS
18. FOR DEEPENED FOOTING W/21" MAX BETWEEN TOP OF SLAB AND FINISHED GRADE REFER TO 44/S-311. DISTANCE TO DAYLIGHT MUST BE A MINIMUM OF 10'-0" AS MEASURED FROM THE BOTTOM OF THE FOOTING. SHOULD THE SITE REQUIRE RETAINING WALLS TO FLATTEN THE LOT, REFER TO NOTES ON COVER SHEET FOR PERMITTING REQUIREMENTS.
19. WHERE UNDER FLOOR ACCESS IN CONC STEM WALLS IS REQUIRED, SEE DETAIL 43/S-313.

FRAMING

20. ALL LINES OR MEMBERS INDICATED AS "STRUT" SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (BN), STAGGERED.
21. ALL INTERIOR WALLS NOT SHOWN ON THE STRUCTURAL FRAMING PLANS BUT SHOWN ON THE ARCHITECTURAL DRAWINGS SHALL BE CONSTRUCTED PER NON-BEARING PARTITION WALL DETAIL 43/S-401, UNO.
22. PLYWOOD SHEATHED DIAPHRAGM TYPES:
    ALL ROOF DIAPHRAGMS SHALL BE TYPE A, UNO
    ALL FLOOR DIAPHRAGMS AT RAISED FLOOR FOUNDATIONS SHALL BE TYPE B, UNO
    REFER TO 12/S-403
23. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN CONCURRENCE AND APPROVAL OF A REGISTERED DESIGN PROFESSIONAL.
24. ALTERATIONS RESULTING IN THE ADDITION OF LOADS TO ANY MEMBER (E.G. HVAC EQUIPMENT, WATER HEATER) SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.

SYMBOL LEGEND

- "XX"-"X" — INDICATES SHEAR WALL [illegible] PER SCHEDULE
- INDICATES FLOOR OPENING [illegible] ABOVE & BELOW SEE DETAIL 44/S-402
- INDICATES HEADER @ OPENING. REFER TO 32/S-401 FOR HEADER SIZE, UNLESS NOTED OTHERWISE
- INDICATES BEARING STUD WALL PER PLAN
- (X) — INDICATES TOP PLATE SPLICE NAILING PER DETAILS 31/S-403. NAILING APPLIES TO ENTIRE LENGTH OF TOP PLATE. PROVIDE TYPE (C) SPLICE, ULESS NOTED OTHERWISE
- DSC # — INDICATES DSC CONNECTION PER 24/S-403
- CS_ CMST_ — INDICATES STRAP PER 24/S-403 OR 34/S-403, UNO
- INDICATES 8" THINK CONCRETE STEM WALL W/#4 AT 12"OC HORIZ AND VERT REINF CENTERED IN THE WALL, UNO

FOUNDATION SCHEDULES

SHEARWALL HOLDOWN SCHEDULE

SPECIFIES HOLDOWN/ STRAP DETAIL	(1) INDICATES HOLDOWN/ STRAP TYPE	DETAIL
64	INDICATES SIMPSON HOLDOWN W/ SSTB TO: CONCRETE STEM WALL:	22/S-313

GRADE BEAM SCHEDULE

TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL
GB1	1'-0"	1'-0"	SEE NOTE 17	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	14/S-311

' STEM-WALL' TYPE CONTINUOUS FOOTING SCHEDULE

TYPE	WIDTH	THICKNESS	LONG REINF	TRANS REINF	DETAIL
T1.25	1'-3"	1'-0"	(2) #4 @ T&B	#3 @ 12" OC, BOT	PER PLAN

PAD FOOTING SCHEDULE

TYPE	WIDTH	LENGTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	TOP REINF	BOT REINF	DETAIL
F2	2'-0"	2'-0"	1'-6"	SEE NOTE 17	(3) #5, EW	(3) #5, EW	PER PLAN

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE AB HOLDOWN EMBED DEPTHS

ROOF FRAMING SCHEDULES

ROOF BEAM SCHEDULE

MARK	SIZE	REMARKS
B1	6x12	
B2	4x10	

FLOOR RAFTER SCHEDULE

MARK	SIZE	REMARKS
J1	2x6 @ 16" OC	

HEADER SCHEDULE

MARK	SIZE	REMARKS
H1	6x8	

PREFABRICATED ROOF TRUSS

1. FOR PREFABRICATED ROOF TRUSS NOTES SEE NOTES ON SHEET S-103

ROOF TRUSS SCHEDULE

MARK	DESCRIPTION	REMARKS
RT	ROOF TRUSS (COMMON)	24" OC MAX
SGT	STRUCTURAL GABLE TRUSS	
MT	MONO PITCH TRUSS	24" OC MAX
JT	JACK TRUSS	24" OC MAX
VJT	VALLEY JACK TRUSS	24" OC MAX
CJT	CORNER JACK TRUSS	
GT	GIRDER TRUSS	
MGT	MONO PITCH GIRDER TRUSS	
DT (#*)	DRAG TRUSS	
CGT	CALIFORNIA GIRDER TRUSS	
HR	HIP RAFTER / JACK RAFTER	
CHT	CALIFORNIA HIP TRUSS	24" OC MAX
SCT	SCISSOR TRUSS	24" OC MAX, CEILING SLOPE PER ARCH

(#*) - EQUALS DRAG FORCE IN LBS. DRAG FORCE IS AT A FACTORED LEVEL (0.7E) DRAG FORCES CALCULATED IN ACCORDANCE WITH ASCE 7-16 12.10.1.1. IN STRUCTURES ENTIRELY BRACED BY LIGHT FRAME SHEAR WALLS, OR PORTIONS THEREOF. DRAG MEMBERS SHALL BE DESIGNED TO RESIST FORCES USING THE LOAD COMBINATIONS OF ASCE 7-16 SECTION 12.4.2.3 IN ALL OTHER STRUCTURES DRAGS SHALL INCLUDE THE EFFECT OF OVER STRENGTH PER ASCE 7-16 12.4.3.2

CITY OF AGOURA HILLS

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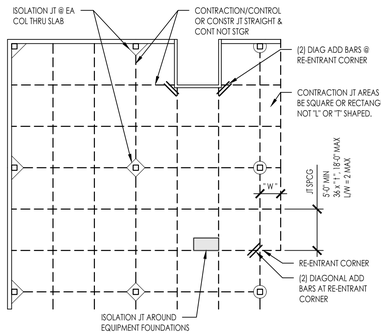
AGOURA HILLS | ADU
CITY OF AGOURA HILLS
RASIED FLOOR FRAMING PLAN & ROOF FRAMING PLANS - COTTAGE & RANCH

APPROVED SET

DATE 09/28/23
SHEET S1-203

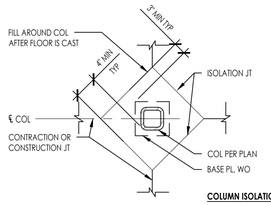


SLAB ON GRADE JOINTS

NTS

31

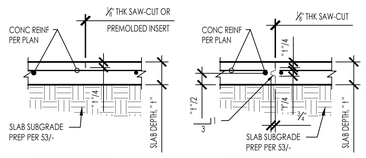
274201-CU22 - S301 - 31

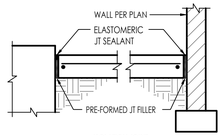


COLUMN ISOLATION JOINT

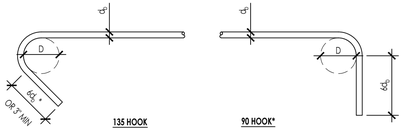
NOTES:

1. IF SAW CUT CONTRACTION OR CONTROL JOINT IS USED, SAW-CUT WITHIN 24 HOURS. EARLY ENTRY SAWS MAY BE USED WITHIN 1-4 HOURS OF POUR, AND CONVENTIONAL SAWS 4-12 HOURS OF POUR DEPENDING ON WEATHER.
2. FILL CONTRACTION JOINT WITH AN ELASTOMERIC JOINT COMPOUND RATED FOR ITS USE. FOR INDUSTRIAL FLOORS SUBJECTED TO HARD WHEELED TRAFFIC, USE SEALANTS RATED FOR SUCH APPLICATIONS BY THE MANUFACTURER.
3. DOWELS IN INDUSTRIAL FLOOR APPLICATIONS SHOULD BE SMOOTH ALIGNED, AND SUPPORTED SO THEY WILL REMAIN PARALLEL IN BOTH HORIZONTAL AND VERTICAL PLANES DURING PLACING AND FINISHING.
4. IN STEEL AND/OR CONC. BUILDINGS DO NOT POUR DIAMOND UNTIL STRUCTURAL STEEL AND CONCRETE ABOVE HAS BEEN INSTALLED.





ISOLATION JOINT



BAR SIZE	D
#3	1½"
#4	2"
#5	2½"

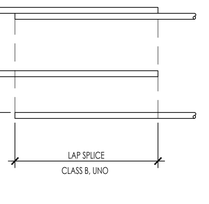
* PROVIDE 10d_b EXTENSIONS IN LIEU OF 6d_b AT ALL FRAME COLUMNS, GIRDERS, SHEAR WALLS AND SHEAR WALL BOUNDARY MEMBERS

REINF TIES AND STIRRUPS

NTS

21

274201-CU22 - S301 - 21



CITY OF AGOURA HILLS

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REINFORCING TENSION DEVELOPMENT LENGTH AND LAP SPLICE SCHEDULE

BAR SIZE	DEVELOPMENT LENGTH, ℓ_d (CLASS A LAP SPLICE)			LAP SPLICE, ℓ_s (CLASS B LAP SPLICE)		
	f'c (psi)			f'c (psi)		
	2,500	3,000	4,000	2,500	3,000	4,000
#3	1'-6"	1'-5"	1'-3"	2'-0"	1'-10"	1'-7"
#4	2'-0"	1'-10"	1'-7"	2'-8"	2'-5"	2'-1"
#5	2'-6"	2'-4"	2'-0"	3'-3"	3'-0"	2'-7"
#6	3'-0"	2'-9"	2'-5"	3'-11"	3'-7"	3'-2"
#7	4'-5"	4'-0"	3'-4"	5'-9"	5'-2"	4'-4"
#8	5'-0"	4'-7"	4'-0"	6'-6"	5'-11"	5'-2"
#9	5'-8"	5'-2"	4'-6"	7'-4"	6'-9"	5'-10"
#10	6'-5"	5'-10"	5'-1"	8'-3"	7'-7"	6'-7"
#11	7'-1"	6'-6"	5'-7"	9'-2"	8'-5"	7'-3"

VALUES ABOVE ARE FOR REINFORCEMENT WITH THE FOLLOWING PARAMETERS:
- GRADE 60 REINFORCEMENT
- NORMAL WEIGHT CONCRETE
  - a. FOR LIGHTWEIGHT CONCRETE MULTIPLY THE VALUES ABOVE BY 1.3

C. NON-EPOXY COATED REINFORCEMENT

D. HORIZONTAL BARS WITHOUT 12" OF CONCRETE BELOW (BOTTOM BARS), AND VERTICAL BARS
  - a. FOR TOP BARS WITH 12" OR MORE OF CONCRETE BELOW THE BAR MULTIPLY THE VALUES ABOVE BY 1.3

E. CLEAR SPACING NOT LESS THAN d_b, CLEAR COVER NOT LESS THAN d_b AND STIRRUPS THROUGH L_D NOT LESS THAN MIN

OR

CLEAR SPACING NO LESS THAN $2d_b$ AND CLEAR COVER NOT LESS THAN db
  - a. FOR OTHER SPACING AND COVER CONDITIONS MULTIPLY THE VALUES ABOVE BY 1.5

F. REINFORCEMENT NOT IN SHEAR WALLS
  - a. FOR REINFORCEMENT IN SHEAR WALLS MULTIPLY THE VALUES ABOVE BY 1.25

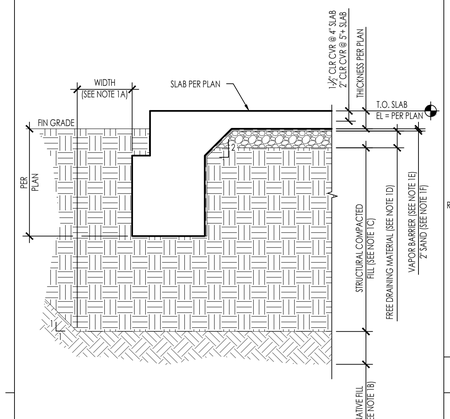
2. THE MULTIPLIERS LISTED IN NOTE 1 ABOVE ARE CUMULATIVE INCREASES IN DEVELOPMENT/LAP SPLICE LENGTH.
3. ALL LAP SPLICES REFERENCED IN THE PLANS SHALL BE CLASS B UNLESS NOTED OTHERWISE.
4. WHEN REINFORCING BARS OF TWO SIZES ARE LAP-SPLICED IN TENSION, USE THE LARGER OF THE TENSION CLASS B, LAP SPLICE LENGTH (ℓ_s) OF THE SMALLER BAR, AND THE CLASS A, TENSION DEVELOPMENT LENGTH (ℓ_d) OF THE LARGER BAR.

REINF DEVELOPMENT LENGTH AND SPLICES

NTS

12

274201-CU22 - S301 - 12



NOTES:

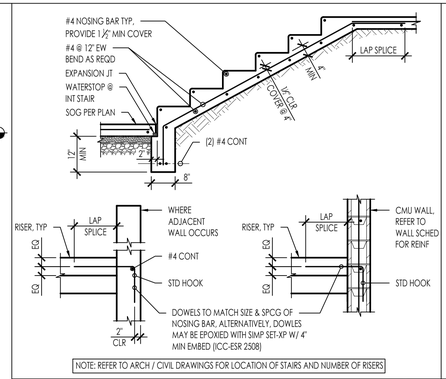
1. PREPARATION OF THE SLAB SUBGRADE SHALL BE AS FOLLOWS:
   - A. OVER-EXCAVATION SHALL EXTEND 5 FEET BEYOND PERIMETER FOUNDATION, TO PROPERTY LINES OR EXISTING IMPROVEMENTS, WHICHEVER IS LEAST.
   - B. NATIVE MATERIALS
     - a. SHALL BE OVER-EXCAVATED 36" BELOW (E) GRADE OR 18" BELOW BOTTOM OF FOOTINGS, WHICHEVER IS GREATEST.
     - b. THE EXPOSED SURFACE SHALL BE SCARIFIED TO A DEPTH OF 6". MOISTURE CONDITIONED TO 3 PERCENT OVER OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MINIMUM RELATIVE DENSITY OF 90 PERCENT (ASTM D1557)
   - C. ENGINEERED COMPACTED FILL
     - a. STRUCTURAL FILL SHALL BE PLACED IN HORIZONTAL LAYERS, EACH APPROXIMATELY 8" THICK BEFORE COMPACTION, AND SHOULD BE CONDITIONS WITH WATER TO PRODUCE A SOIL WATER CONTENT NEAR OPTIMUM MOISTURE AND COMPACTED TO A MINIMUM RELATIVE DENSITY OF 90 PERCENT (ASTM D1557)
   - D. 4" THICK, CLEAN FREE-DRAINING MATERIAL SUCH AS ¾" COARSE AGGREGATE
   - E. REFER TO ARCH DRAWINGS FOR VAPOR BARRIER (10 MIL THICKNESS MIN). INSTALL PER MANUFACTURER'S RECOMMENDATIONS FOR SEALING OF PENETRATIONS, JOINTS AND EDGES.
     - a. VAPOR BARRIER IS NOT TO BE PUNCTURED DURING CONSTRUCTION OF SLAB ON GRADE.
   - F. 2" THICK OPTIONAL SAND LAYER, SHALL BE LIGHTLY MOISTENED PRIOR TO PLACING CONCRETE.

SLAB ON GRADE EDGE AND SUBGRADE PREP

NTS

53

274201-CU22 - S301 - 53



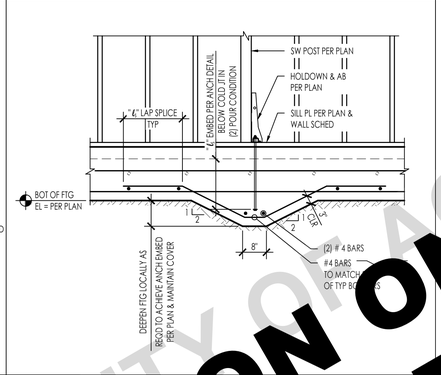
NOTE: REFER TO ARCH / CIVIL DRAWINGS FOR LOCATION OF STAIRS AND NUMBER OF RISERS.

CONC STAIRS ON GRADE

NTS

42

274201-CU22 - S301 - 42

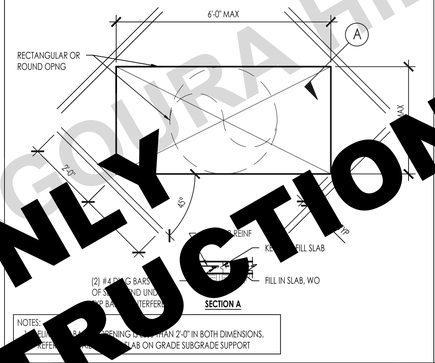


DEEPENED FTG @ ANCHOR BOLT

NTS

32

274201-CU22 - S301 - 32



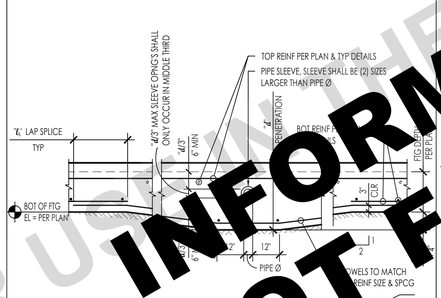
NOTES:
- ... THAN 2'-0" IN BOTH DIMENSIONS.
- ... SLAB ON GRADE SUBGRADE SUPPORT

OPNG OPENING

NTS

22

274201-CU22 - S301 - 22

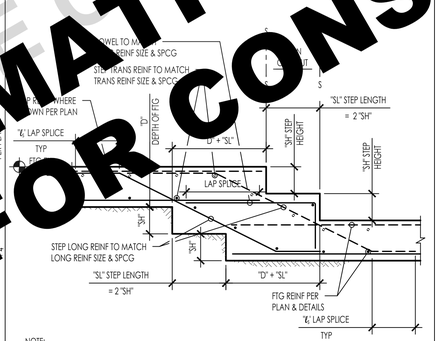


SLEEVE THROUGH FOUNDATION (SLAB TURN-DOWN)

NTS

43

274201-CU22 - S301 - 43



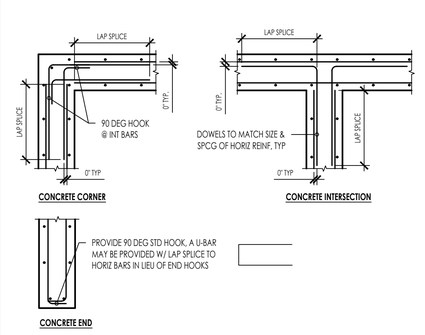
NOTE: "SH" = 1'-6" MAX

STEP FOOTING

NTS

33

274201-CU22 - S301 - 33



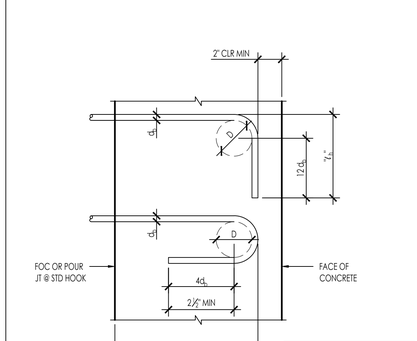
NOTE: REINFORCEMENT SHOWN ON WALL ELEVATION(S), BOUNDARY REINFORCING DETAILS, AND OTHER SPECIFICALLY REFERENCED DETAILS SHALL TAKE PRECEDENCE OVER REINFORCEMENT SHOWN HERE.

CONC REINF @ INTERSECTION

NTS

24

274201-CU22 - S301 - 24



BAR SIZE	D
#3 THRU #8	6d
#9 THRU #11	8d

STANDARD HOOK DEVELOPMENT LENGTH "ℓ_{dh}"

BAR SIZE	D	"ℓ_{dh}"	NORMAL WEIGHT		
			2,500	3,000	4,000
#3	2 1/4"	6"	0'-9"	0'-9"	0'-8"
#4	3"	8"	1'-0"	0'-11"	0'-10"
#5	3 3/4"	10"	1'-3"	1'-2"	1'-0"
#6	4 1/2"	12"	1'-6"	1'-5"	1'-3"
#7	5 1/4"	1'-2"	1'-9"	1'-8"	1'-5"
#8	6"	1'-4"	2'-0"	1'-10"	1'-7"
#9	9 1/2"	1'-7 1/2"	2'-3"	2'-1"	1'-10"
#10	10 3/4"	1'-10"	2'-7"	2'-4"	2'-1"
#11	12"	2'-0 1/2"	2'-10"	2'-7"	2'-3"

NOTES:

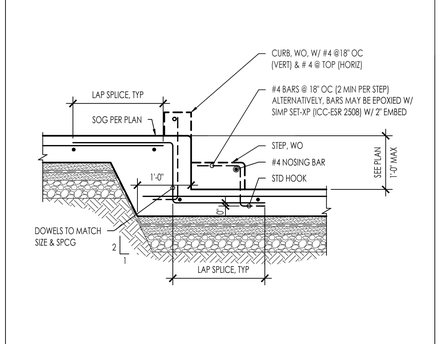
1. ALL HOOKED BARS SHALL EXTEND AS FAR AS POSSIBLE WITH A MINIMUM 2" END COVER AND WITH EMBEDMENT NOT LESS THAN SHOWN ON THE SCHEDULE UNLESS NOTED OTHERWISE ON PLANS.
2. MINIMUM SIDE COVER = 2½".
3. FOR LIGHTWEIGHT CONCRETE MULTIPLY LENGTHS IN SCHEDULE BY 1.3.

REINF HOOK DEVELOPMENT LENGTH AND BENDS

NTS

14

274201-CU22 - S301 - 14

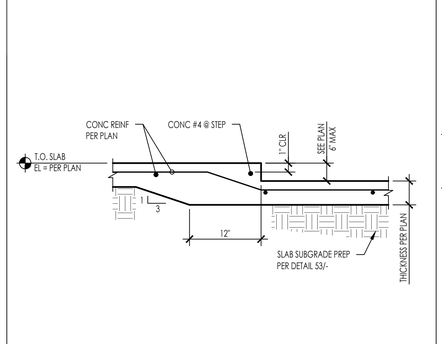


STEP IN CONCRETE SLAB ON GRADE

NTS

54

274201-CU22 - S301 - 54

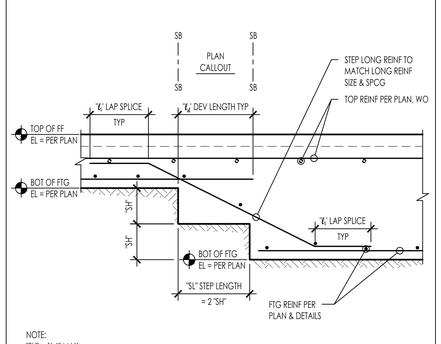


SLAB ON GRADE DEPRESSION

NTS

44

274201-CU22 - S301 - 44



NOTE: "SH" = 1'-6" MAX

STEPPED FOOTING (BOTTOM ONLY)

NTS

34

274201-CU22 - S301 - 34

APPROVED SET

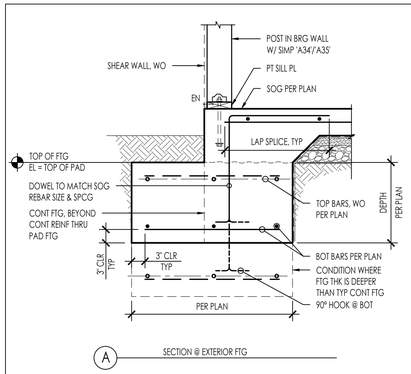
AGOURA HILLS | ADU

CITY OF AGOURA HILLS

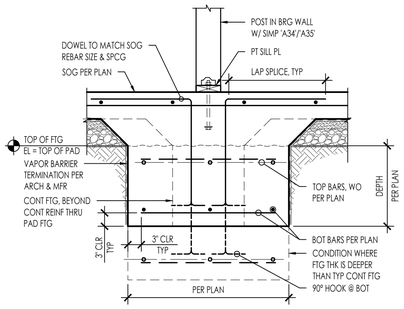
TYPICAL CONCRETE DETAILS

DATE 09/28/23

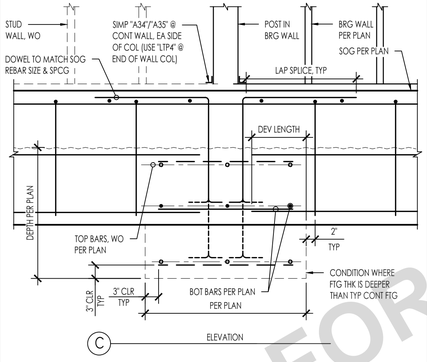
SHEET S1-301



A SECTION @ EXTERIOR FTG



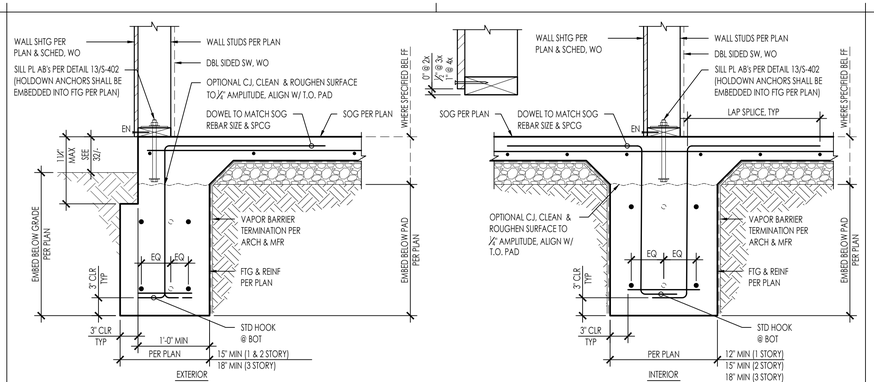
B SECTION @ INTERIOR FTG



C ELEVATION

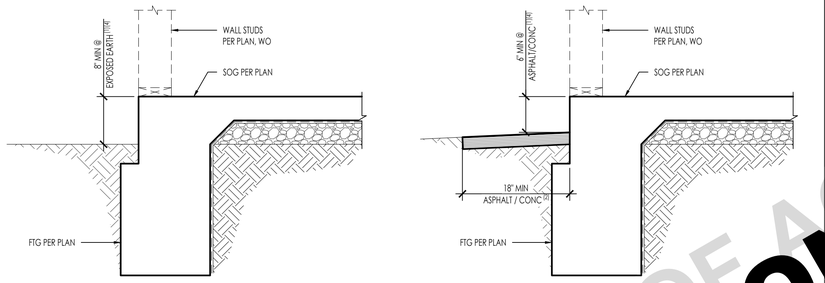
SPREAD FOOTING @ BEARING WALL POST

2742-01-CU22 - 5311 — 3/4" = 1'-0" — 53



CONTINUOUS WALL FOOTING

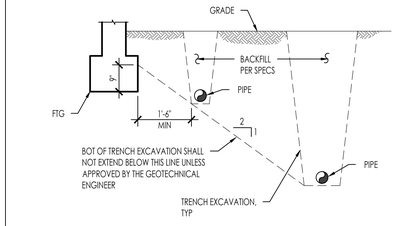
2742-01-CU22 - 5311 — NTS — 31



NOTES:
1. MIN DISTANCE TO EXPOSED EARTH APPLIES TO BOTH TURNED DOWN AND STEM WALL FOOTINGS
2. CONCRETE OR IMPERVIOUS SURFACE WITH ADEQUATE DRAINAGE AWAY FROM FOUNDATION (2% MIN SLOPE)
3. FOR BALANCE OF FOOTING INFO NOT SHOWN, SEE DETAIL 31/-
4. WHERE MINIMUM DISTANCE TO EXTERIOR FINISHED GRADE OR SURFACE CANNOT BE ACHIEVED, PROVIDE CONCRETE CURB PER DETAIL 33/-

MINIMUM DISTANCE FROM GRADE TO WOOD FRAMING

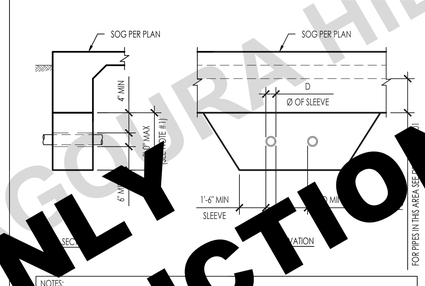
2742-01-CU22 - 5311 — NTS — 32



NOTES:
1. CONTRACTOR SHALL COORDINATE ALL PIPE LOCATIONS WITH BUILDING FOUNDATION REQUIREMENTS.
2. IF REQUIREMENTS AS SHOWN CANNOT BE MET STEP FOOTING PER TYPICAL "STEPPED FOOTING" DETAILS (33 / S-301) (34 / S-301)

PIPES PARALLEL TO FOOTINGS

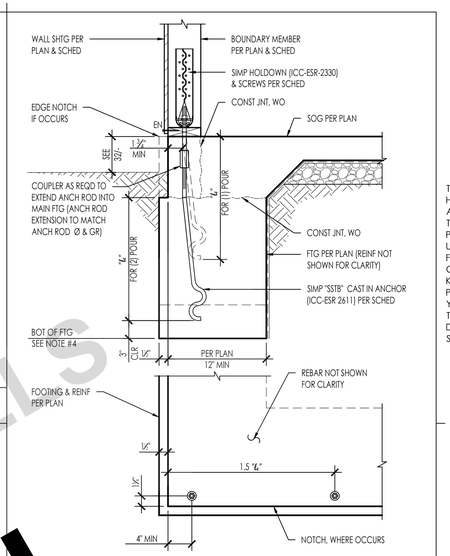
2742-01-CU22 - 5311 — NTS — 21



NOTES:
1. FOOTINGS SHALL BE STEPPED AS NEEDED SO THAT THIS DIMENSION DOES NOT EXCEED 3'-0".
2. TRENCH BELOW FOOTING SHALL BE FILLED WITH CONCRETE OR 3-SACK SLURRY BEFORE POURING FOOTING. CONCRETE SHALL BE SAME WIDTH AS FOOTING AND FULL WIDTH OF PIPE TRENCH.
3. [illegible] FOAM IN LIEU OF SLEEVING.
4. [illegible] BE RUN [illegible] OR ENCASEMENT UNDER FOOTING WITHOUT SLEEVES OR FOAM WRAP.

PIPES PERPENDICULAR TO FOOTINGS

2742-01-CU22 - 5311 - 22 — NTS — 22



HOLDOWN	ANCHOR	DIA [IN]	FASTENERS	BOUNDARY MEMBER MIN THICKNESS [IN]	MIN EMBED "h" [IN]	ALLOWABLE LOADS [lbs]	
						CORNER	MIDWALL
HDU4	HDU4-SDS2.5	SSTB16	⅞	10-SDS¼" x 2½"	3	12⅝	3,780	3,780
HDU5	HDU5-SDS2.5	SSTB20	⅞	14-SDS¼" x 2½"	3	16⅝	4,785	4,785
HDU5	HDU5-SDS2.5	SSTB24	⅞	14-SDS¼" x 2½"	3	20⅝	5,645*	5,645*
HDQ8	HDQ8-SDS3	SSTB28	⅞	20-SDS¼" x 3"	4½	24⅛	9,230*	9,230*

1. MINIMUM EDGE DISTANCE IS SHOWN ABOVE. ANCHOR LOCATIONS PER PLAN.
2. MINIMUM ANCHOR TO ANCHOR SPACING IS 3 d.
3. * = CAPACITY LIMITED BY HOLDOWN
4. DEEPEN FOOTING AT HOLDOWN ANCHOR AS REQ'D PER DETAIL 32/-

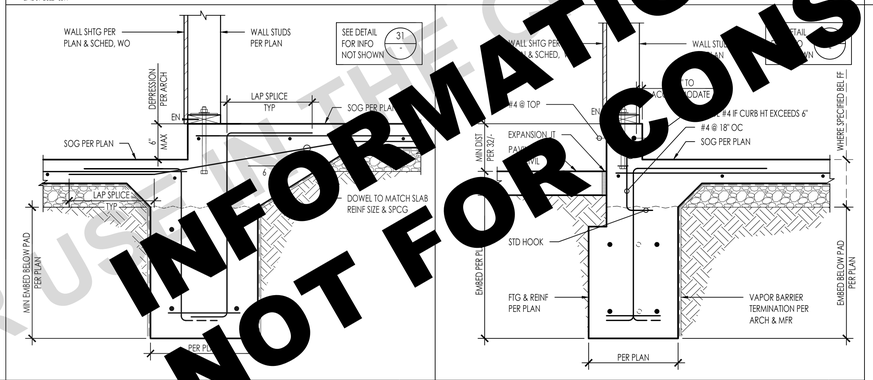
SSTB ANCHOR & HOLDOWN @ FOUNDATION

2742-01-CU22 - 5311 — NTS — 12

C ELEVATION

SPREAD FOOTING @ BEARING WALL POST

2742-01-CU22 - 5311 — 3/4" = 1'-0" — 53

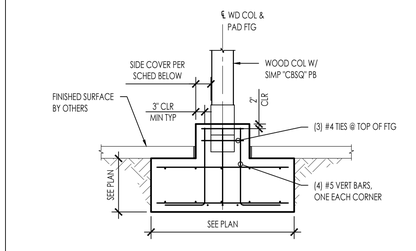


SOG DEPRESSION @ FTG

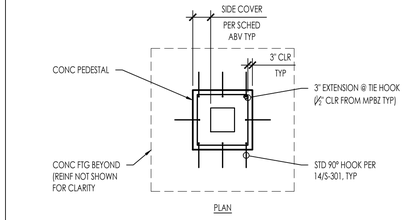
2742-01-CU22 - 5311 — NTS — 43

EXTERIOR CONTINUOUS WALL FTG W/ CURB

2742-01-CU22 - 5311 — NTS — 33

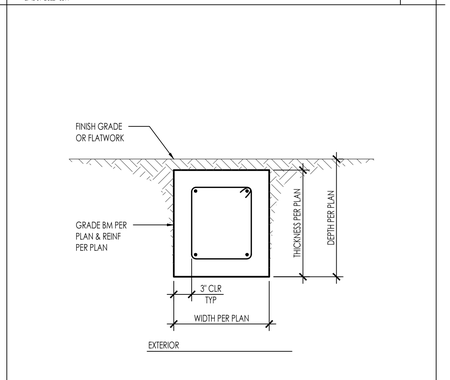


POST SIZE	MIN. SIDE COVER
4x4	0'-3"
6x6	0'-3"
8x8	0'-3"



PORCH PAD FOOTING

2727-01-CU22 - 5311 - 24 — 1/2" = 1'-0" — 24

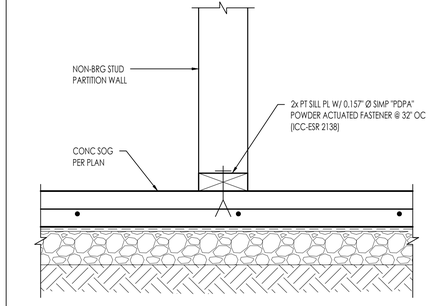


GRADE BEAM

2742-01-CU22 - 5311 - 14 — NTS — 14

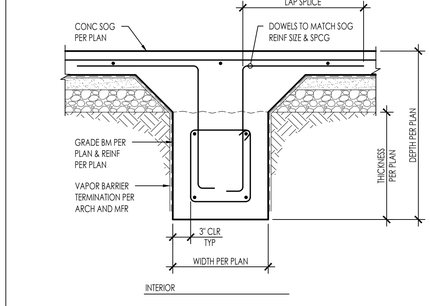
DEEPEND EXTERIOR FOOTING

2742-01-CU22 - 5311 - 44 — 3/4" = 1'-0" — 44



NON-BEARING WALL ANCHORAGE @ SOG

2742-01-CU22 - 5311 — NTS — 34



GRADE BEAM

2742-01-CU22 - 5311 - 14 — NTS — 14

CITY OF AGOURA HILLS

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AGOURA HILLS | ADU

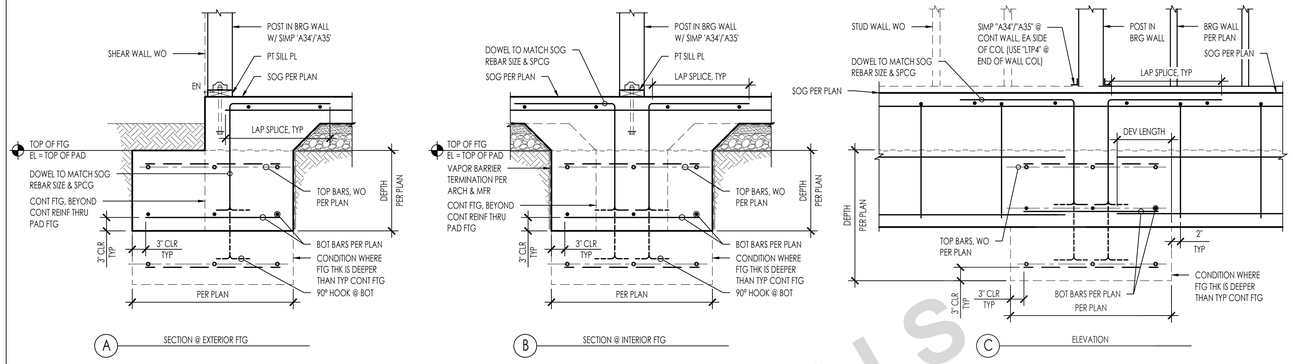
CITY OF AGOURA HILLS

CONCRETE DETAILS

APPROVED SET

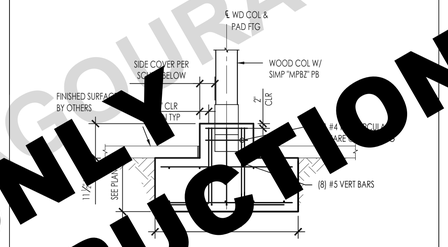
DATE 09/28/23

SHEET S1-311

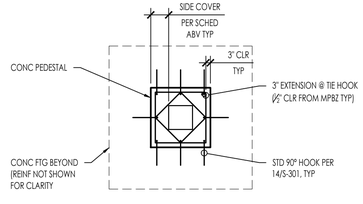


51 | 41 | SPREAD FOOTING @ BEARING WALL POST | 3/4" = 1'-0" | 11

2742-01-CU22 - S312

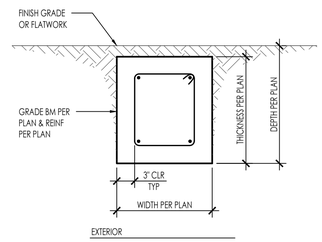


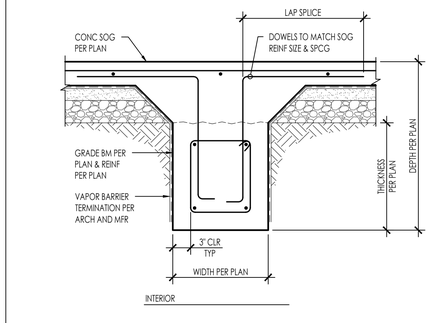
POST SIZE	MIN. SIDE COVER
4x4	0'-4"
6x6	0'-5"
8x8	0'-6"



52 | 42 | 32 | MOMENT BASE POST @ POLE FOOTING | 1/2" = 1'-0" | 22

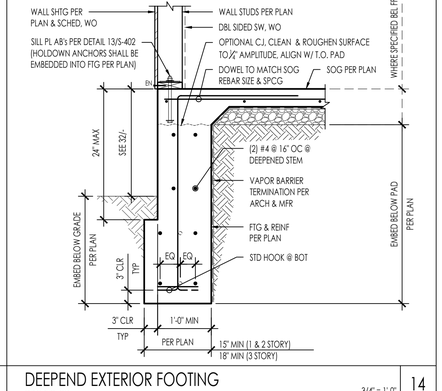
2742-01-CU22 - S312





53 | 43 | 33 | GRADE BEAM | NTS | 13

2742-01-CU22 - S312



54 | 44 | 34 | DEEPEND EXTERIOR FOOTING | 3/4" = 1'-0" | 14

2742-01-CU22 - S312

CITY OF AGOURA HILLS

AGOURA HILLS | ADU

CITY OF AGOURA HILLS

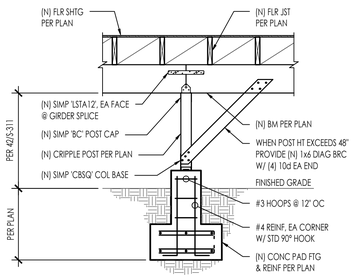
CONCRETE DETAILS

APPROVED SET

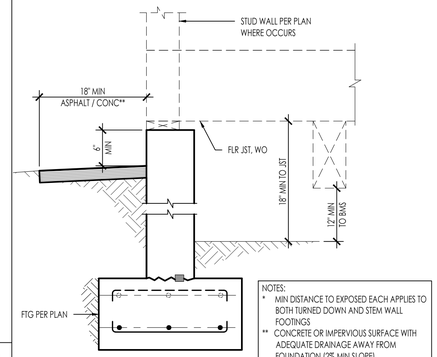
DATE
09/28/23

SHEET
S1-312

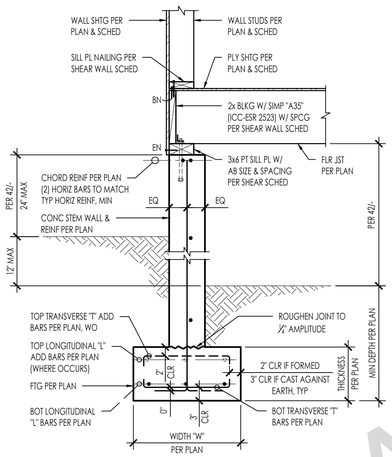
N:\2600\2742-01-CU22-Agoura-Hills-Pre-Approved-ADU\Structural\ConDocs\Sheet-Files\2742-01-CU22 - S312.dwg, PLAN 1 - S312, Oct 18, 2023 1:47pm, jdong



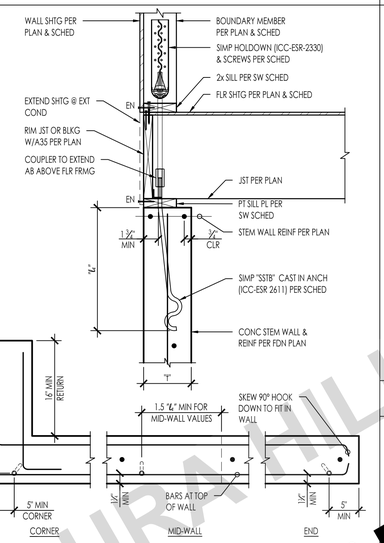
PIER FOOTING
274201-CU22 - 5313 - 51
NTS
51



MINIMUM DISTANCE FROM GRADE TO WOOD FRAMING
274201-CU22 - 5313 - 42
1" = 1'-0"
42



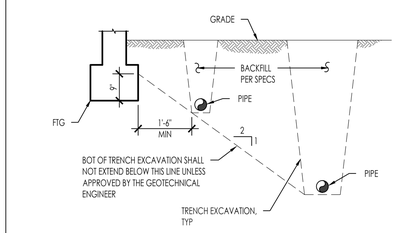
CONC WALL FOUNDATION
274201-CU22 - 5313 - 32
3/4" = 1'-0"
32



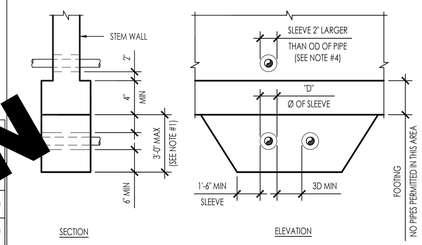
TYPE	HOLDOWN	ANCHOR	MIN EMBED "L" (IN)	DIA (IN)	FASTENERS	BOUNDARY MEMBER MIN THICKNESS [IN]	MIN EMBED "L" [IN]	ALLOWABLE LOAD (LBS) CORNER	MID	END
6x6	HDU4	SSTB16	16	⅝	6-SDS¼" x 2½"	6"	16"	2,960	3,145	2,550
6x6	HDU4-SDS2.5	SSTB16	16	⅝	6-SDS¼" x 2½"	6"	16"	2,960	3,145	2,960
6x8	HDU5-SDS2.5	SSTB24	24	⅞	10-SDS¼" x 2½"	6"	20½	3,325	3,740	3,325
6x8	HDU8-SDS2.5	SSTB28	28	1	10-SDS¼" x 2½"	4½	24½	7,315	7,870*	6,395

1. MINIMUM [illegible] INCLUDED WITH [illegible], ANCHOR LOCATIONS PER PLAN
2. MI[illegible] INCL[illegible] 3) ANC[illegible] 5.1 & 5.3.4
3. [illegible] HOLDOWN

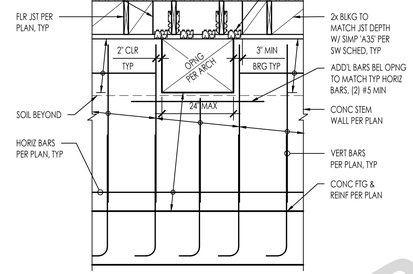
CONC WALL FOUNDATION @ STEM WALL
274201-CU22 - 5313 - 22
NTS
22



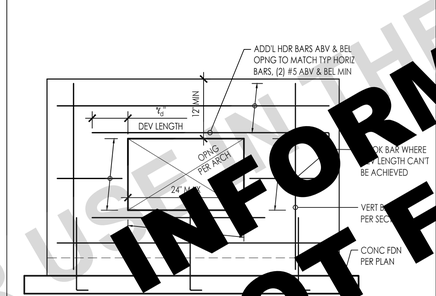
PIPES PARALLEL TO FOOTINGS
274201-CU22 - 5313 - 11
NTS
11



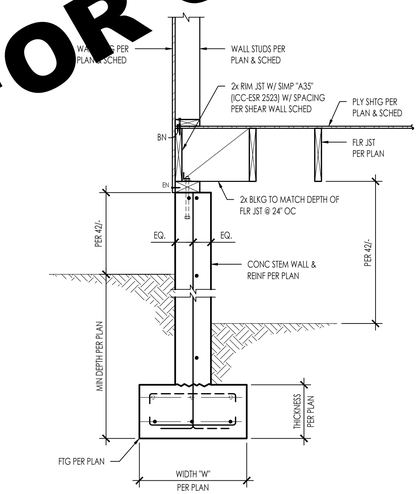
PIPES PERPENDICULAR TO FOOTINGS W/ STEM WALL
274201-CU22 - 5313 - 12
NTS
12



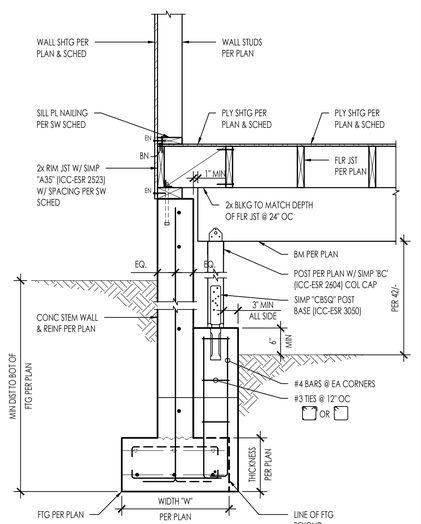
OPENING AT TOP OF CONC STEM
274201-CU22 - 5313 - 53
NTS
53



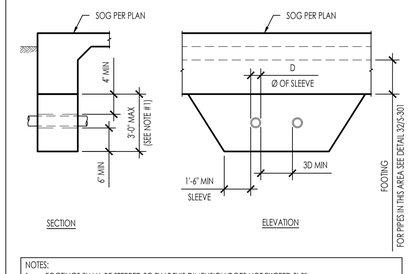
CONC WALL FOOTING @ OPENING
274201-CU22 - 5313 - 43
1/4" = 1'-0"
43



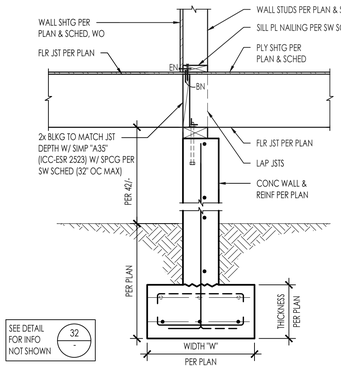
CONC WALL FOUNDATION
274201-CU22 - 5313 - 34
3/4" = 1'-0"
34



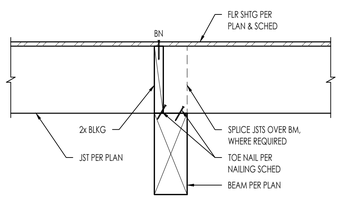
CONC WALL FOUNDATION
274201-CU22 - 5313 - 24
NTS or 3/4" = 1'-0"
24



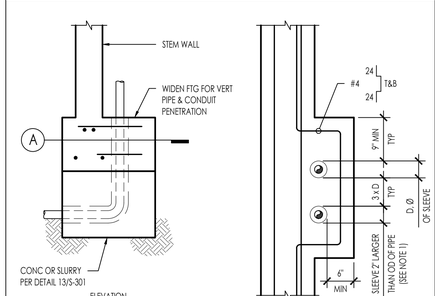
PIPES PERPENDICULAR TO FOOTINGS
274201-CU22 - 5313 - 13
NTS
13



CONC WALL FOUNDATION
274201-CU22 - 5313 - 54
3/4" = 1'-0"
54



DROPPED BEAM @ PERP JOIST
274201-CU22 - 5313 - 44
1" = 1'-0"
44



TYPICAL VERT PIPES OR COND THROUGH FOOTING
274201-CU22 - 5313 - 14
NTS
14

CITY OF AGOURA HILLS

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APPROVED SET

AGOURA HILLS | ADU

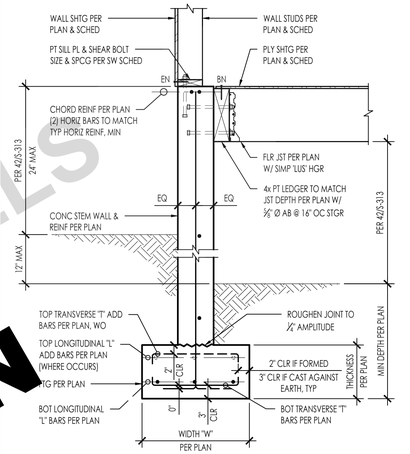
CITY OF AGOURA HILLS

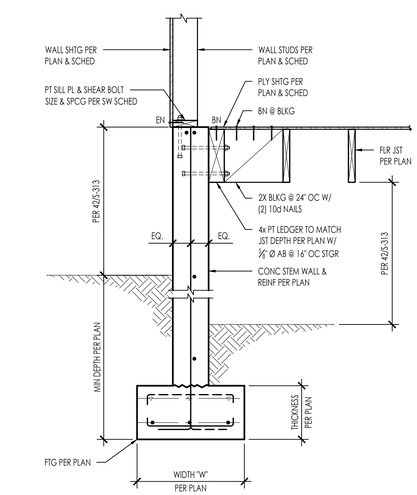
CONCRETE DETAILS

DATE
09/28/23

SHEET
S1-313

51	41	31	21	
52	42	32	22	CONC WALL FOUNDATION 2742-01-CU22 - S314 - 12 — 3/4" = 1'-0" — 12
53	43	33	23	
54	44	34	24	CONC WALL FOUNDATION 2742-01-CU22 - S314 - 14 — 3/4" = 1'-0" — 14





SEE DETAIL FOR INFO NOT SHOWN — 12 / -

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APPROVED SET

AGOURA HILLS | ADU

CITY OF AGOURA HILLS

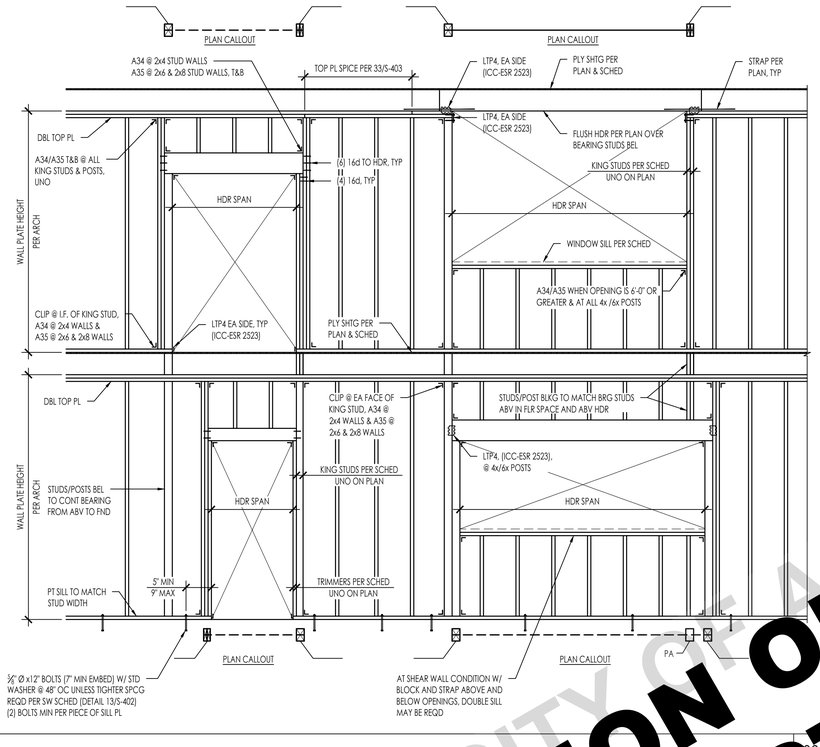
CONCRETE DETAILS

DATE
09/28/23

SHEET
S1-314

BEARING/SHEAR WALL HEADER SCHEDULE										
4 INCH WALLS					1-STORY	6 INCH WALLS				
OPENING WIDTH	4x HEADER	SILL AT WINDOW	POST / TRIMMER	KING STUDS	1-STORY	OPENING WIDTH	6x HEADER	SILL AT WINDOW	POST / TRIMMER	KING STUDS
UP TO 3'-0"	4x4	2x	2x4	2x4		UP TO 3'-0"	6x4	2x	2x6	2x6
UP TO 5'-0"	4x6	2x	2x4	2x4		3'-0" - 5'-0"	6x6	2x	2x6	2x6
UP TO 7'-0"	4x8	(2) 2x	(2) 2x4	(2) 2x4		5'-0" - 7'-0"	6x8	(2) 2x	2x6	(2) 2x6

NOTES:
1. THIS DETAIL APPLIES AT ALL EXT WALLS AND INT LOAD BEARING WALLS AND ALSO APPLIES TO SHEAR WALL FRAMING
   A. FOR SHEAR WALLS SEE 34/S-402 FOR ADD'L REQUIREMENTS.
   B. FOR INTERIOR NON-BEARING PARTITIONS SEE DETAIL 43/-
2. HEADERS, KING STUDS AND OTHER REFERENCES ON PLAN GOVERN OVER THIS TYPICAL SCHED/DETAILS
3. PROVIDE A34 @ 4" WALLS & A35 @ 6" OR GREATER WALLS (ICC-ESR 2353)



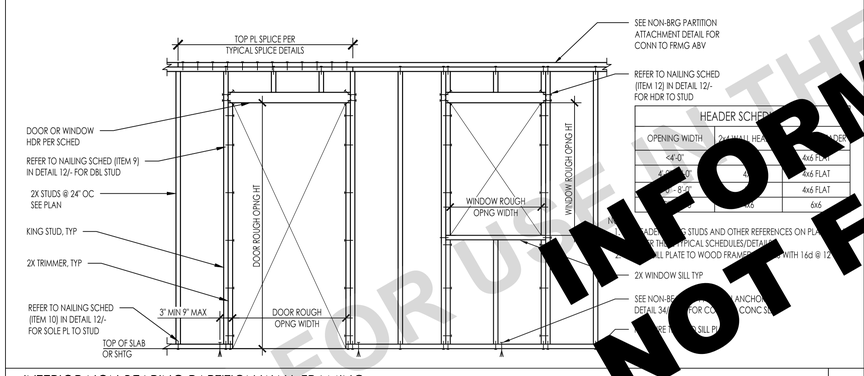
FASTENING SCHEDULE PER 2022 CBC 2304.10.1		
CONNECTION	FASTENING	LOCATION
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3-8d COMMON	EACH END, TOENAIL
2. BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TO TOP PLATE, TO RAFTER OR TRUSS	2-8d COMMON	EACH END, TOENAIL
	2-16d COMMON	END NAIL
3. FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON @ 6" OC	FACE NAIL
4. CEILING JOIST TO TOP PLATE	3-8d COMMON	EACH JOIST, TOENAIL
5. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS	3-16d COMMON	FACE NAIL
6. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	3-16d COMMON	FACE NAIL
7. COLLAR TIE TO RAFTER	3-10d COMMON	FACE NAIL
8. RAFTER OR ROOF TRUSS TO PLATE	3-10d COMMON	TOENAIL[b]
9. ROOF RAFTER TO RIDGE VALLEY OR HIP RAFTER; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	2-16d COMMON	END NAIL
	3-10d COMMON	TOENAIL
10. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS	16d COMMON	16" OC FACE NAIL
11. BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON	16" OC EACH EDGE, FACE NAIL
12. CONTINUOUS HEADER TO STUD	4-10d COMMON	TOENAIL
13. TOP PLATE TO TOP PLATE	16d COMMON	16" OC FACE NAIL
14. TOP PLATE TO TOP PLATE, AT END JOINTS	8-16d COMMON	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING	2-16d COMMON	16" OC FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	4-8d COMMON	TOENAIL
	2-16d COMMON	END NAIL
17. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16d COMMON	FACE NAIL
18. JOIST TO SILL, TOP PLATE, OR GIRDER	3-8d COMMON	TOENAIL
20. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d COMMON	6" OC, TOENAIL
21. 1"x6" SUBFLOOR OR LESS TO EACH JOIST	2-8d COMMON	FACE NAIL
22. 2" SUBFLOOR TO JOIST OR GIRDER	2-8d COMMON	FACE NAIL
23. BUILT-UP GIRDER AND BEAMS, 2" LUMBER LAYERS	[illegible]OMMON (4" x 0.192")	32" OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON APPOSITE SIDE
24. LEDGER STRIP [illegible]PORTING JOIST OR RAFTERS	[illegible]MMON	EACH JOIST OR RAFTER, FACE NAIL
26. J[illegible]IST OR RIM JOIST	3-16d COMMON	END NAIL
27. BRIDGING [illegible]CKING TO JOIST, RAFTER OR TRUSS	2-8d COMMON	EACH END, TOENAIL

NOTES:
a. [illegible] LING SHALL BE [illegible]ED IF CONDITION IS NOT OTHERWISE DETAILED OR SPECIFIED ON THE CONSTRUCTION DOCUMENTS. COMMON NAILS SHALL BE USED EXCEPT WHERE [illegible] STATE [illegible]
b. WHERE [illegible] RAFTER IS [illegible]NED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, [illegible] OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL

EXTERIOR WALL / INTERIOR WALL BEARING WALL FRAMING
2742-01-C\122 - 5401 - 32

CEILING SCHEDULE
2742-01-C\122 - 5401 - 12

NTS



HEADER SCHED	
OPENING WIDTH	2x4 WALL HEADER
<4'-0"	4x6 FLAT
4'-0" - 6'-0"	4x6 FLAT
6'-0" - 8'-0"	6x6

CEILING JOIST SCHED	
JOIST SIZE	MAX SPAN
2x4 @ 16" OC	9'-0"
2x6 @ 16" OC	14'-0"
2x8 @ 16" OC	18'-0"

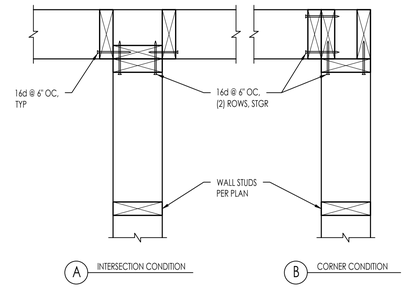
NOTE:
THIS DETAIL IS INTENDED FOR CEILING JST THAT SPAN FROM WALL TO WALL @ CONTRACTORS OPTION

INTERIOR NON-BEARING PARTITION WALL FRAMING
2742-01-C\122 - 5401 - 43

NTS

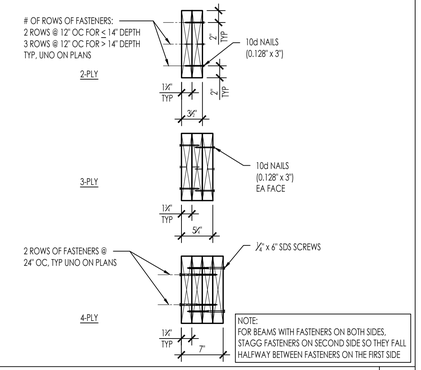
CEILING JOIST SCHED & DETAILS
2742-01-C\122 - 5401 - 33

NTS



TYPICAL WOOD STUD INTERSECTIONS
2742-01-C\122 - 5401 - 24

NTS



MULTI-PLY MEMBER CONNECTION
2742-01-C\122 - 5401 - 14

NTS

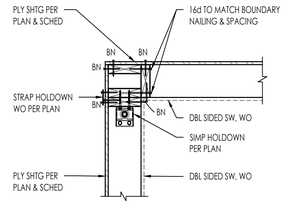
APPROVED SET

AGOURA HILLS | ADU
CITY OF AGOURA HILLS
TYPICAL WOOD DETAILS

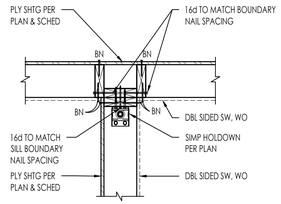
DATE
09/28/23

SHEET
S1-401

N:\2600\2742-01-C\122-Agoura-Hills-Pre-Approved-ADU\Structural\ConstDocs\Sheet Files\2742-01-C\122 - S401.dwg, PLAN 1 - S401, Oct 18, 2023 1:47pm, jdong



CORNER W/O POST



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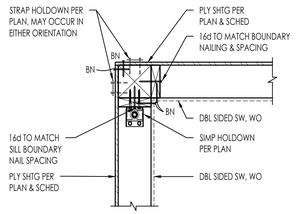

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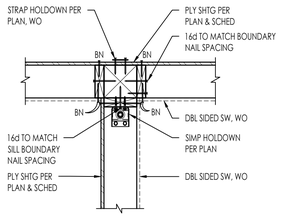
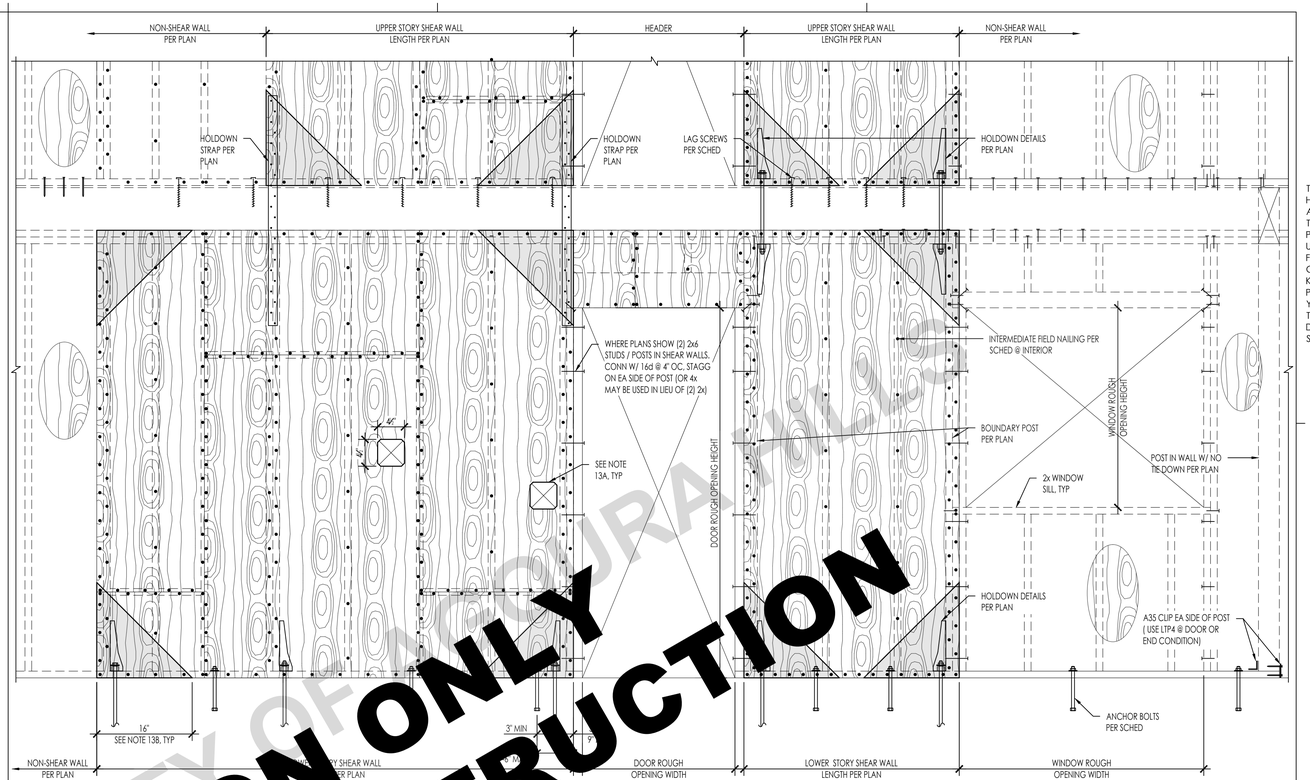


INTERSECTION W/ POST

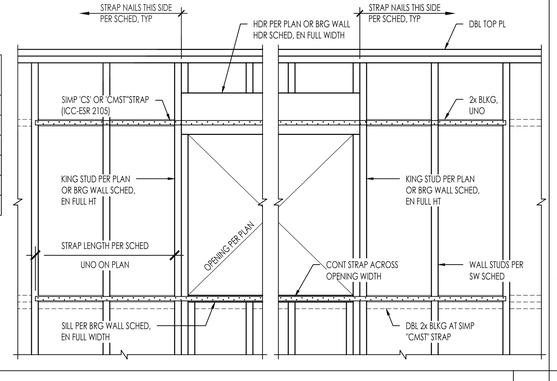
SHEAR WALL INTERSECTION
2742-01-CU22 - S402 - 42
NTS 42



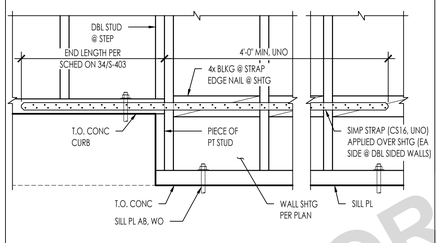
MARK	# OF BLKG	SIMPSON STRAP®	NAILS EA SIDE OF OPENING	STRAP LENGTH (IN)	ALLOWABLE TENSION LOADS (LBS)
1	1	CS20	(12) 10d x 2½"	32"	1,030
2	1	CS16	(20) 10d x 2½"		1,705
3	1	CS14	(26) 10d x 2½"		2,490
4	2	CMSTC16	(50) 10d x 3½"		4,690
5	2	CMST14	(66) 10d x 2½"	39	6,475
6	2	CMST12	(86) 10d x 2½"		9,215

NOTES:
1. 2 BAYS OR 32" MIN STRAP LENGTH
2. EDGE NAILING FROM PLYWOOD TO STUDS / FRAMING SHALL OCCUR ALL AROUND OPENINGS AT THIS CONDITION
3. SEE TYPICAL SHEAR WALL ELEVATION FOR BALANCE OF INFO NOT SHOWN

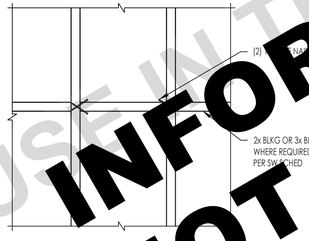
FORCE TRANSFER AROUND OPENINGS
2742-01-CU22 - S402 - 44
NTS 44



STRAP AT STEP IN SHEAR WALL SILL PLATE
2742-01-CU22 - S402 - 53
NTS 53



TYPICAL BLOCKING DETA
2742-01-CU22 - S402 - 43
NTS 43



SHEAR WALL SCHEDULE

ALL	SHEATHING MATERIAL	6 FRAMING SIZE	NAILING 7 EDGE NAILING	NAILING 7 FIELD NAILING	NAILING 7 INTERMEDIATE SUPPORTS	SILL NAILING 7 NAILS /LAG SCREWS 8	SILL NAILING 7 SDS SCREWS 14 OPTION	A35s	10, 11 ANCHOR BOLTING
	15/32" STRUCT I PLYWOOD	2x	[2] @ 9" OC	8d @ OC	8d @ 12" OC	16d @ 6" OC	12" OC	24" OC	5/8" DIA @ 48" OC
A	15/32" STRUCT I PLYWOOD	2x	10d @ 6" OC	10d @ 6" OC	10d @ 12" OC	5/8"Ø LAG SCREWS @ 16" OC	12" OC	16" OC	5/8" DIA @ 48" OC
B	15/32" STRUCT I PLYWOOD	2x	10d @ 5" OC	10d @ 4" OC	10d @ 12" OC	5/8"Ø LAG SCREWS @ 16" OC	8" OC	12" OC	5/8" DIA @ 32" OC
C	15/32" STRUCT I PLYWOOD	2x	10d @ 4" OC	10d @ 3" OC	10d @ 12" OC	5/8"Ø LAG SCREWS @ 16" OC	6" OC	8" OC	5/8" DIA @ 32" OC
D	15/32" STRUCT I PLYWOOD	2x	10d @ 3" OC	10d @ 2" OC	10d @ 12" OC	5/8"Ø LAG SCREWS @ 8" OC	4" OC	8" OC	5/8" DIA @ 24" OC
E	15/32" STRUCT I PLYWOOD [EACH FACE OF WALL]	3x	(2) 10d @ 5" OC	10d @ 4" OC	10d @ 12" OC	5/8"Ø LAG SCREWS @ 8" OC	(2) @ 8" OC *	6" OC	5/8" DIA @ 16" OC
F	15/32" STRUCT I PLYWOOD [EACH FACE OF WALL]	3x	(2) 10d @ 4" OC	10d @ 3" OC	10d @ 8" OC	5/8"Ø LAG SCREWS @ 8" OC	(2) @ 6" OC *	A34 @ 4" OC	5/8" DIA @ 16" OC
G	15/32" STRUCT I PLYWOOD [EACH FACE OF WALL]	3x	(2) 10d @ 3" OC	10d @ 2" OC	10d @ 6" OC	5/8"Ø LAG SCREWS @ 6" OC	(2) @ 4" OC *	LTP4 @ 4" OC 15	5/8" DIA @ 8" OC

NOTES:
1. ALL PLYWOOD SHALL BE 5 PLY MINIMUM WITH A SPAN RATING OF 32/16 AND ALL PANEL EDGES SHALL BE BLOCKED. PROVIDE 1/8" GAP AT ALL PANEL JOINTS.
2. 8d NAIL DEFINED AS 0.131" DIAMETER SHANK x 2 1/2" LONG x 0.281 DIAMETER HEAD. 10d NAIL DEFINED AS 0.148" DIAMETER SHANK x 3" LONG x 0.312 DIAMETER HEAD.
3. PROVIDE E.N. AT ALL END STUDS, STUDS/POSTS WITH HOLDOWNS OR TIE DOWN STRAPS, SILL PLATES AND TOP PLATES.
4. WHERE 10d NAILS ARE 3 INCHES ON CENTER OR LESS, NAILS SHALL BE STAGGERED.
5. NAILS SHALL BE 1/2 INCH MINIMUM FROM PLYWOOD PANEL EDGE AND 3/8 INCH MINIMUM FROM CONNECTING MEMBER EDGE WHERE SHEAR EXCEEDS 300 PLF.
6. USE 3x FRAMING AT BOTTOM SILL PLATES, BLOCKING AND ALL STUDS AT ADJACENT PANEL EDGES WHERE SHEAR EXCEEDS 300 PLF. STRUCTURALLY ACCEPTABLE TO USE (2) 2x INSTEAD OF 3x FRAMING AT BOTTOM SILL PLATES.
7. WHERE SILL SHEAR TRANSFER IS THROUGH LAG SCREWS, SILL PLATE SHALL BE A MINIMUM OF 2 1/2" THICK.
8. LAG SCREWS SHALL BE 6 INCHES LONG AND HOLES ARE TO BE PRE-DRILLED AS TO NOT SPLIT BLOCKING/RIM.
9. SEE ELEVATION ABOVE FOR TYPICAL CONSTRUCTION.
10. REFER TO PLATE WASHER DETAIL FOR REQUIREMENTS
11. LENGTHEN ANCHOR BOLTS AS REQUIRED FOR EMBEDMENT AND SILL PLATE THICKNESS.
12. ORIENTED STRAND BOARD (OSB) MAY BE SUBSTITUTED FOR PLYWOOD NOTED ABOVE PROVIDED IT IS RATED BY APA'S PERFORMANCE STANDARD RATING AND IS OF THE SAME NUMBER OF LAYERS AS PLYWOOD PLY INDICATED.
13. LIMITATIONS OF MECHANICAL PENETRATIONS IN SHEAR WALLS:
    A. 4 1/2" MAX PENETRATION
    B. NO CUTS OR HOLES IN SHEATHING WITHIN 16" OF CORNERS. SQUARE PENETRATIONS SHALL RADIUS EDGES. DO NOT OVER CUT HOLE WITH SAW
14. ASSUMES A 1 1/4" MIN LSL RIM BOARD. FASTENER EDGE DIST IS 5/8" MIN & 6" END DISTANCE MIN. 2" MIN PENETRATION INTO RIM BOARD.
    * WALL W/ DOUBLE SIDED PLYWOOD REQUIRE (2) RIM BOARDS.
15. SIMPSON 'LTP4' CLIP SHALL BE INSTALLED IN A HORIZONTAL ORIENTATION. IF CLIP IS INSTALLED OVER THE SHEATHING, O.131" x 2 1/2" NAILS SHALL BE USED.

TYPICAL SHEAR WALL ELEVATION AND SCHEDULE
2742-01-CU22 - S402 - 13
NTS 13

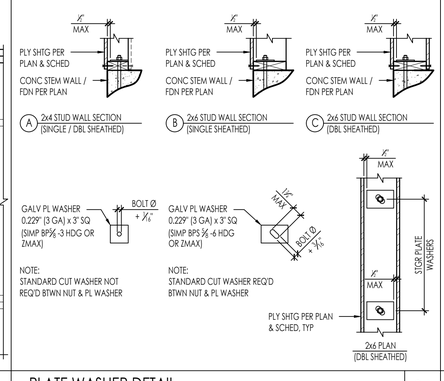
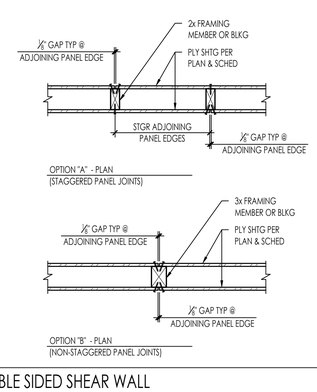
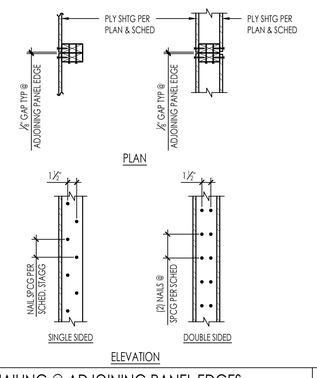


PLATE WASHER DETAIL
2742-01-CU22 - S402 - 34
NTS 34



DOUBLE SIDED SHEAR WALL
2742-01-CU22 - S402 - 24
NTS 24



2x STUD NAILING @ ADJOINING PANEL EDGES
2742-01-CU22 - S402 - 14
NTS 14

CITY OF AGOURA HILLS

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AGOURA HILLS | ADU

CITY OF AGOURA HILLS

TYPICAL WOOD DETAILS

APPROVED SET

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SHEET S1-402

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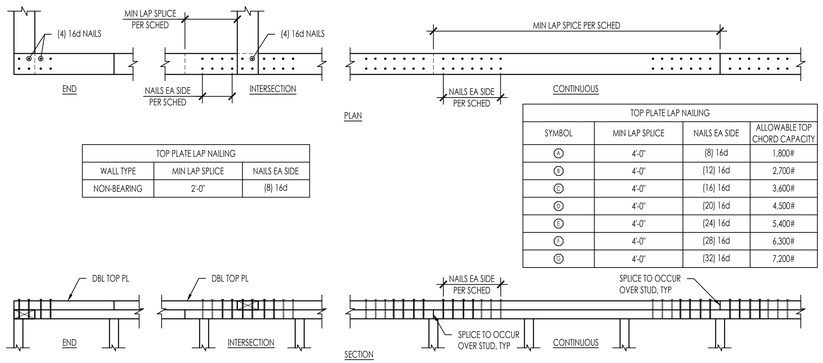


TOP PLATE LAP NAILING		
WALL TYPE	MIN LAP SPLICE	NAILS EA SIDE
NON-BEARING	2'-0"	(8) 16d

TOP PLATE LAP NAILING			
SYMBOL	MIN LAP SPLICE	NAILS EA SIDE	ALLOWABLE TOP CHORD CAPACITY
Ⓐ	4'-0"	(8) 16d	1,800#
Ⓑ	4'-0"	(12) 16d	2,700#
Ⓒ	4'-0"	(16) 16d	3,600#
Ⓓ	4'-0"	(20) 16d	4,500#
Ⓔ	4'-0"	(24) 16d	5,400#
Ⓕ	4'-0"	(28) 16d	6,300#
Ⓖ	4'-0"	(32) 16d	7,200#

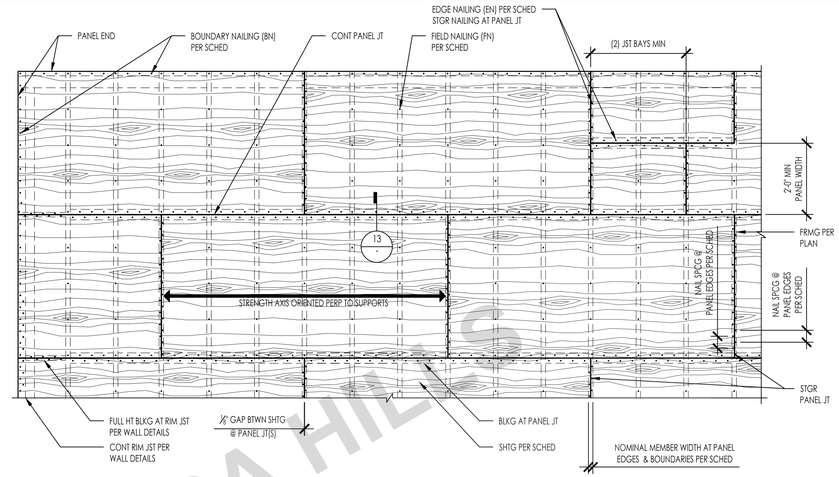
51

DBL TOP PLATE SPLICE NAILING

2742-01-CU22 - S403 - 32

NTS

32



DIAPHRAGM SCHEDULE											
TYPE	LOCATION	SHEATHING THICKNESS	SHEATHING GRADE [1]	SPAN RATING	BLOCKING	NAILS	BOUNDARY [2] (BN)	EDGE NAILING AT CONT. PANEL EDGES (EN)	EDGE NAILING AT OTHER PANEL EDGES (EN)	FIELD NAILING (FN)	PANEL EDGE SUPPORT OR NOMINAL MEMBER WIDTH AT PANEL EDGES	LINES OF FASTENERS
A	ROOF	SEE NOTE 3	SHEATHING	32 / 16	NO	[3]	[3]	-	6	12	H-CLIPS	1
B	FLOOR	23/32"	STURD-I-FLOOR	48 / 24	NO	[3]	[3]	-	6	12	T&G	1

NOTES:
1. DIAPHRAGM SHEATHING GLUED TO FLOOR FRAMING SHALL BE PER GENERAL NOTES.
2. MINIMUM EDGE DISTANCE FOR NAILS SHALL BE ½" FOR SHEATHING EDGE AND ⅜" FROM LUMBER EDGE.
3. NAILS SHALL BE DRIVEN TIGHT TO TOP OF SHEATHING SURFACE AND SHALL NOT PENETRATE THE TOP OF PLYWOOD MORE THAN COMMONLY EXPECTED WITH HAMMER DRIVEN NAILS.
4. WHERE H-CLIPS ARE SPECIFIED, THEY SHALL BE INSTALLED AS FOLLOWS:
   A. ONE H-CLIP SHALL BE PROVIDED BETWEEN ABUTTING SHEETS AT A LOCATION MIDWAY BETWEEN EACH PAIR OF TRUSSES, RAFTERS OR JOISTS, HOWEVER, (2) H-CLIPS ARE REQUIRED BETWEEN SUPPORTS WHEN SPACED 48 INCHES ON CENTER.
   B. USE THE SAME THICKNESS OF PANEL EDGE CLIPS AS PANEL THICKNESS. H-CLIPS MUST FIT SNUGLY
   C. ABUTTING WOOD PANELS SHALL BE INSTALLED AS TIGHTLY FITTED AS CLOSELY AS CLIPS PERMIT. OCCASIONAL MISFIT OF ABUTTING SHEETS MAY BE TOLERATED PROVIDING THAT GAPS DO NOT EXCEED MAXIMUM OPENING OF ⅛".
5. ROOF SHEATHING THICKNESS SHALL BE INSTALLED AS FOLLOWS:
   A. 7/16" SINGLE PLY WITH ASPHALT SHINGLES
   B. 15/32" SINGLE PLY
   C. 15/32" @ BUILT-UP TAR
   D. 7/16" IS GENERALLY ACCEPTABLE TO USE "SHEATHING" SHEATHING GRADE @ FLOOR LOCATIONS WITHOUT GYPCRETE TOPPING

52

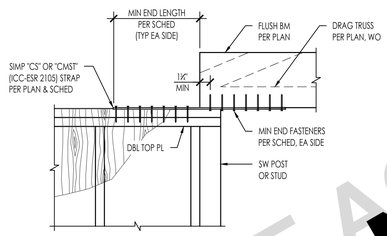
42

PLYWOOD DIAPHRAGM SHEATHING

2742-01-CU22 - S403 - 12

NTS

12



STRAP MODEL	END FASTENERS	END LENGTH (in)	ALLOWABLE TENSION LOADS (lbs)
CS16	(20) 10d	11	1,705
	(22) 8d	13	
CS14	(26) 10d	15	2,490
	(30) 8d	16	
CMSTC16	(50) 16d	20	4,690
CMST14	(56) 16d	26	6,475
	(66) 10d	30	
CMST12	(74) 16d	33	9,215
	(86) 10d	39	

53

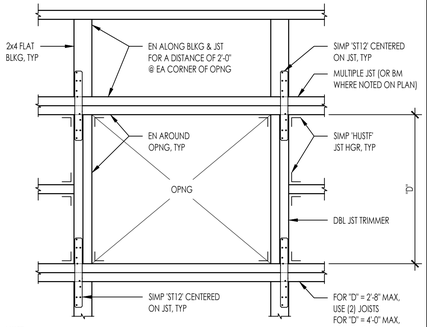
43

OPENING AT FRAMING

2742-01-CU22 - S403 - 23

NTS

23



NOTE:
FOR LARGER OPENINGS REFER TO FRAMING PLAN

54

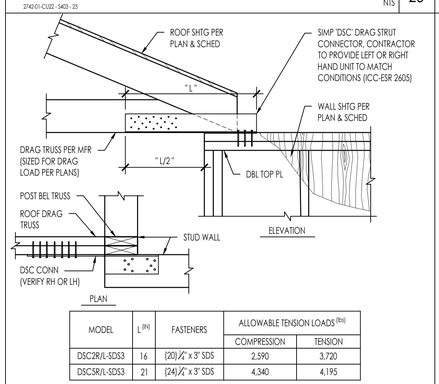
44

DRAG STRAP AT BEAM-TO-WALL

2742-01-CU22 - S403 - 34

NTS

34



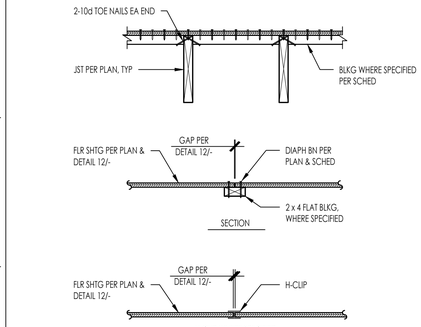
MODEL	L (IN)	FASTENERS	ALLOWABLE TENSION LOADS (lbs)	
			COMPRESSION	TENSION
DSC2R/L-SDS3	16	(20) ¼" x 3" SDS	2,590	3,720
DSC5R/L-SDS3	21	(24) ¼" x 3" SDS	4,340	4,195

DRAG TRUSS TO WALL CONNECTION

2742-01-CU22 - S403 - 24

NTS

24

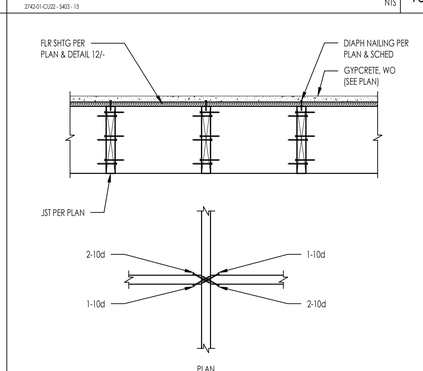


DIAPHRAGM PANEL JOINTS

2742-01-CU22 - S403 - 13

NTS

13



TYP JOIST BLOCKING

2742-01-CU22 - S403 - 14

NTS

14

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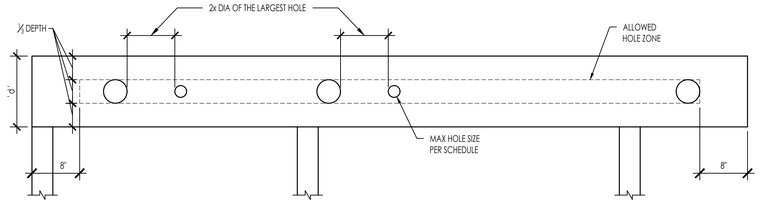
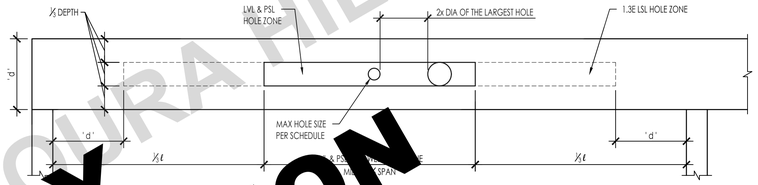


1.55E LSL BEAMS & HEADERS	
HEADER OR BEAM DEPTH	MAX ROUND HOLE SIZE
9 ¼"	3"
11 ⅞"	3 ½"
14" - 16"	4 ⅜"

1.55E LSL NOTES:
1. ALLOWED HOLE ZONE SUITABLE FOR HEADERS AND BEAMS WITH UNIFORM AND/OR CONCENTRATED LOADS ANYWHERE ALONG THE MEMBER.
2. ROUND HOLES ONLY.
3. NO HOLES IN HEAERS OR BEAMS IN PLANK ORIENTATION.

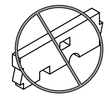
A 1.55E LSL HEADERS & BEAMS



PSL, & 1.3E LSL BEAMS & HEADERS	
HEADER OR BEAM DEPTH	X ROUND HOLE SIZE
4 X	1"
5 X	1 ¾"
7 ¼ X	2"

LVL/PSL/1.3E LSL:
1. ALLOWED HOLE ZONE SUITABLE FOR HEADERS AND BEAMS WITH UNIFORM LOADS ONLY.
2. ROUND HOLES ONLY.
3. NO HOLES IN CANTILEVERS.
4. NO HOLES IN HEADERS OR BEAMS IN PLANK ORIENTATION.

B LVL, PSL, & 1.3E LSL HEADERS & BEAMS



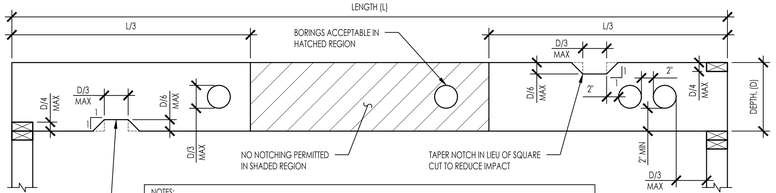
DO NOT CUT, NOTCH, OR DRILL HOLES IN HEADERS OR BEAMS EXCEPT AS INDICATED IN THE ILLUSTRATIONS AND TABLES

51 | 41 | 31

ALLOWABLE HOLES THRU ENGINEERED LUMBER HEADERS & BEAMS

2742-01-CU22 - 5404 - 12 NTS 12

52 | 42 | 32



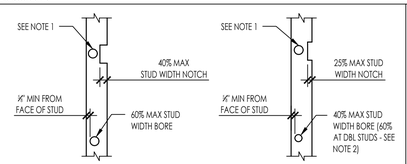
NOTES:
1. NOTCHING AND BORING NOT PERMITTED IN THE SAME JOIST CROSS SECTION WITHOUT STRUCTURAL ENGINEER'S APPROVAL.
2. NOTCH WIDTHS GREATER THAN SHOWN IN TABLE NOT PERMITTED WITHOUT STRUCTURAL ENGINEER'S APPROVAL.
3. NO NOTCHES OR HOLES PERMITTED ANYWHERE IN CANTILEVERED ELEMENTS WITHOUT STRUCTURAL ENGINEER'S APPROVAL

NOTCH AND HOLE LIMITATIONS				
JOIST SIZE	MAX HOLE	MAX NOTCH DEPTH	MAX END NOTCH	MAX NOTCH LENGTH
2X4	NONE	NONE	NONE	NONE
2X6	1 ½"	⅝"	1 ⅜"	1 ½"
2X8	2 ⅜"	1 ¼"	1 ⅞"	2 ⅜"
2X10	3"	1 ½"	2 ⅜"	3"
2X12	3 ¾"	1 ⅞"	2 ⅛"	3 ¾"

53 | 43 | 33

SAWN LUMBER AND RAFTER JOIST NOTCHING AND BORING LIMITATIONS

2742-01-CU22 - 5404 - 13 NTS 13



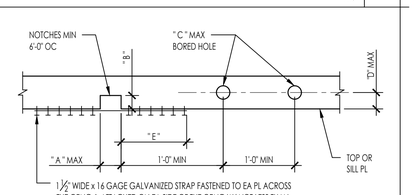
MAXIMUM BORED HOLE DIAMETER/NOTCH DEPTH			
STUD SIZE (IN)	APPLICATION	MAX HOLE DIAMETER (IN)	MAX NOTCH DEPTH (IN)
2X4	NON-BEARING	2 ⅛"	1 ⅜"
	EXTERIOR/BEARING	1 ⅜"	⅞"
2X6	NON-BEARING	3 ¼"	2 ⅜"
	EXTERIOR/BEARING	2 ⅜"	1 ⅜"

NOTES:
1. NOTCHING AND BORING NOT PERMITTED IN THE SAME STUD SECTION.
2. NO MORE THAN 2 SUCCESSIVE DBL. STUDS ARE PERMITTED TO HAVE 60% MAX BORED HOLES.

54 | 44 | 34

TYP WALL NOTCH AND BORING LIMITATIONS

2742-01-CU22 - 5404 - 24 NTS 24



NOTCH AND HOLE LIMITATIONS						
TOP PL OR SILL PL	A	B	C	D	E	F
2X4	3½"	1½"	1¼"	1½"	5¾"	6
2X6	4½"	2¼"	2¼"	2½"	8¾"	9
2X8	5½"	3"	3¼"	3½"	12¼"	12

TOP PL AND SILL NOTCH AND BORING LIMITATIONS

2742-01-CU22 - 5404 - 14 NTS 14

CITY OF AGOURA HILLS

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APPROVED SET

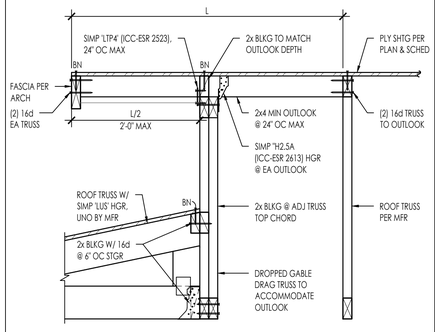
AGOURA HILLS | ADU

CITY OF AGOURA HILLS

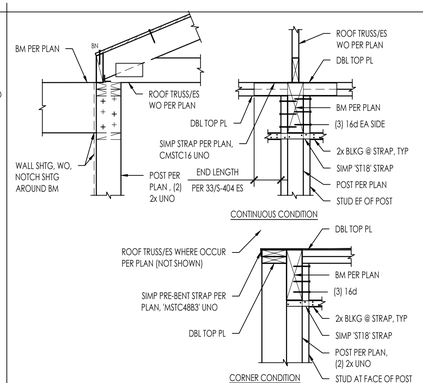
TYPICAL WOOD DETAILS

DATE
09/28/23

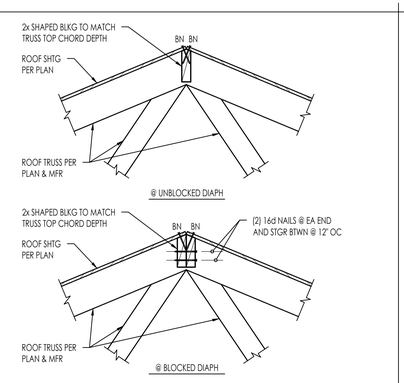
SHEET
S1-404



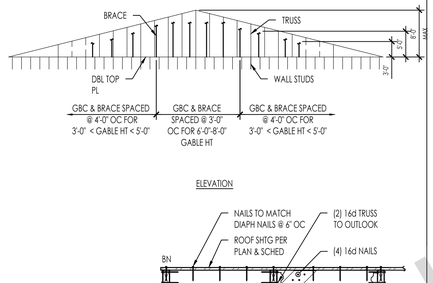
DIAPH TRANSITION W/ OVERHANG
274201-CU22 - 5421 - 51
1" = 1'-0" | 51

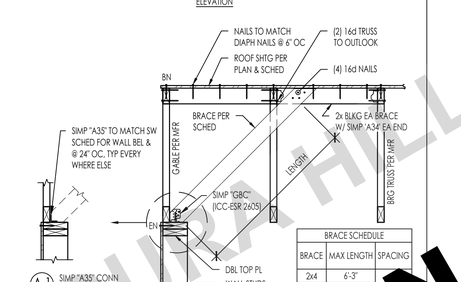


BEAM POCKET THROUGH EXTERIOR WALL
2727-01-CU22 - 5421 - 41
3/4" = 1'-0" | 41

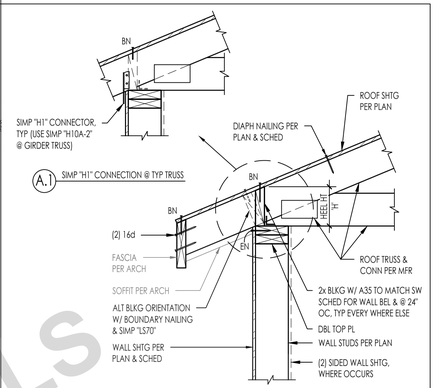


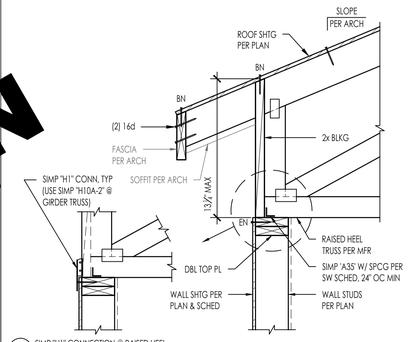
SHEATHING OVER ROOF RIDGE
274201-CU22 - 5421
1" = 1'-0" | 31

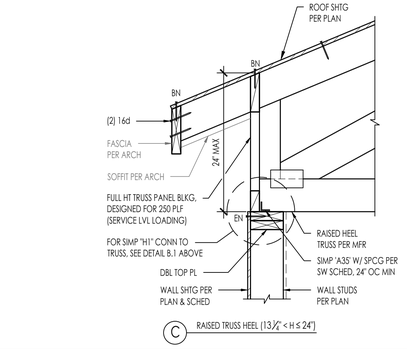




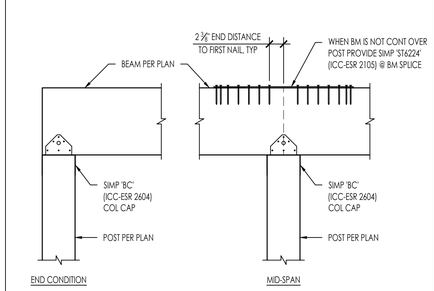
BRACE SCHEDULE		
BRACE	MAX LENGTH	SPACING
2x4	6'-3"	
3x4	10'-3"	
4x4		



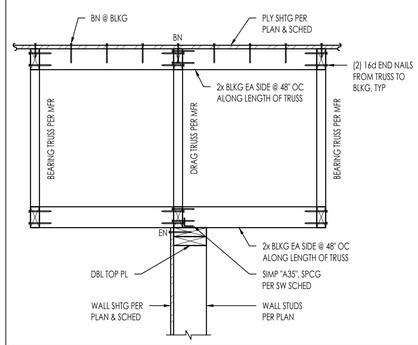




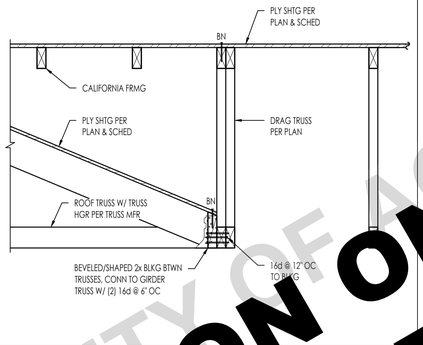
ROOF TRUSS PERP TO EXTERIOR WALL
274201-CU22 - 5421
NTS | 13



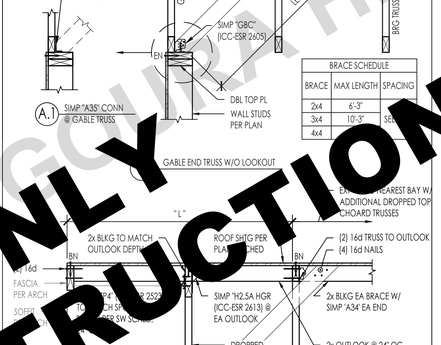
BEAM TO POST CONNECTION
274201-CU22 - 5421 - 52
1" = 1'-0" | 52



INTERIOR SHEAR WALL (ROOF TRUSS PARALLEL)
274201-CU22 - 5421
1" = 1'-0" | 42



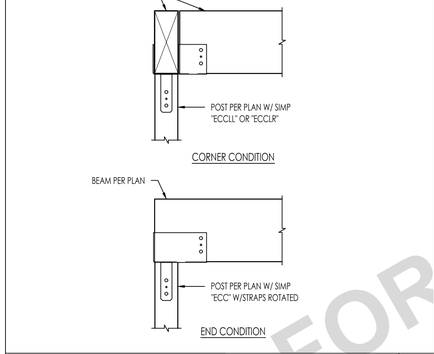
TRUSS TO GIRDER TRUSS
274201-CU22 - 5421
1" = 1'-0" | 32



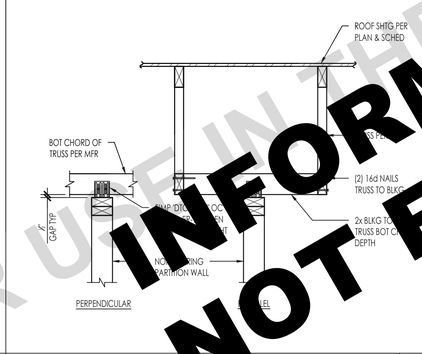
OUTLOOK DEPTH SCHEDULE	
ROOFING	DEPTH	L/2
SINGLE PLY OR ASPHALT SHINGLES	2x4	2'-0"
	2x6	4'-0"
ALL OTHERS	2x4	2'-0"
	2x6	3'-0"

NOTE: "L/2" ASSUMES NO STUCCO @ UNDERSIDE OF EAVE. IF "L/2" > 2'-0", ADDITIONAL TRUSS TOP CHORDS SHALL BE DROPPED, EXTEND TO NEAREST FULL BAY

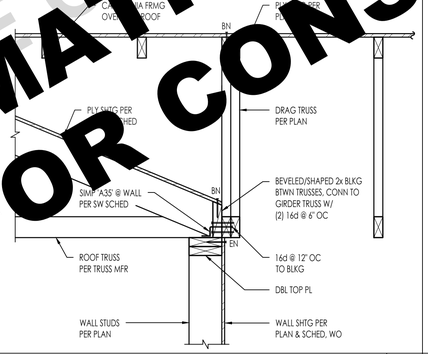
GABLE END TRUSS
274201-CU22 - 5421
NTS | 23



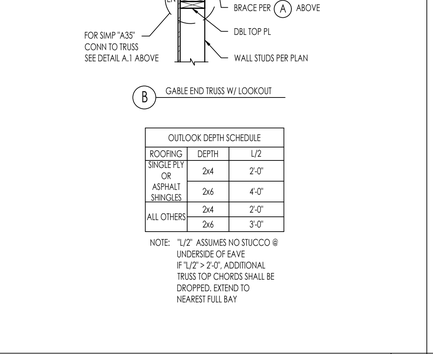
POST TO BEAM CONNECTION W/ BOLTS
274201-CU22 - 5421 - 53
NTS or 3/4" = 1'-0" | 53



TRUSS OVER NON-BEARING PARTITION
274201-CU22 - 5421
1" = 1'-0" | 43

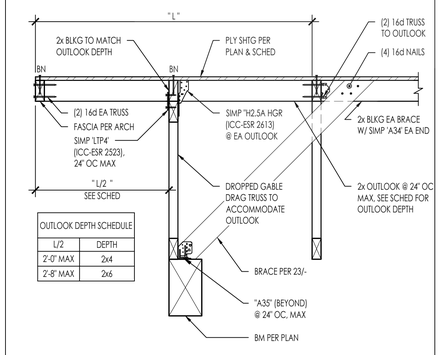


TRUSS TO GIRDER TRUSS W/ WALL BELOW
274201-CU22 - 5421
1" = 1'-0" | 33



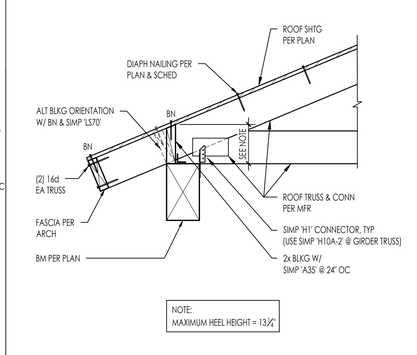
CALIFORNIA FRAMING SLEEPER
274201-CU22 - 5421
NTS | 24

ROOF TRUSS PERP TO EXTERIOR WALL
274201-CU22 - 5421 - 14
NTS | 14



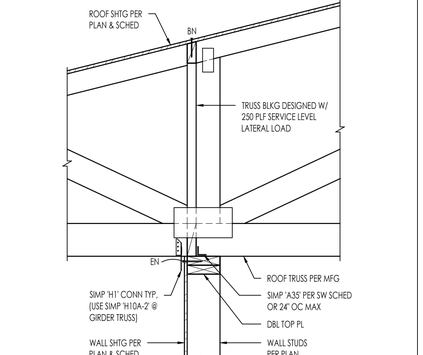
OUTLOOK DEPTH SCHEDULE	
L/2	DEPTH
2'-0" MAX	2x4
2'-8" MAX	2x6

GABLE END TRUSS W/ LOOKOUT @ BEAM
274201-CU22 - 5421
1" = 1'-0" | 54



NOTE:
MAXIMUM HEEL HEIGHT = 13 1/2"

ROOF TRUSS PERP TO BEAM
274201-CU22 - 5421
1" = 1'-0" | 44



TRUSS INTERIOR BEARING WALL
274201-CU22 - 5421
1" = 1'-0" | 34

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AGOURA HILLS | ADU

CITY OF AGOURA HILLS

ROOF FRAMING DETAILS

APPROVED SET

DATE
09/28/23

SHEET
S1-421